

Oracle Financial Services Analytical Applications Data Management Application Pack

Installation Guide

Release 8.0.9.0.0

May 2022

ORACLE
Financial Services

Oracle Financial Services Analytical Applications Data Management Application Pack

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Document Control

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1.1	May 2022	Added the Configure Tomcat for User Group Authorization, Data Mapping, and Disable WADL for the Web Service Section and removed the Configuring Tomcat for User Group Authorization and Data Mapping Section (Doc 34208582).
1.0	July 2020	Created the document with instructions for the installation of the OFS DM Release 8.0.9.0.0.

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1 Preface

This preface provides supporting information for the Oracle Financial Services Data Management (OFS DM) Pack Installation Guide and includes the following topics:

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

1.1 Summary

You can find the latest copy of this document in [OHC Documentation Library](#) which includes all the recent additions/revisions (if any) done till date.

Before you begin the installation, ensure that you have 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.

1.2 Audience

The OFS DM pack Installation and Configuration Guide is intended for Administrators, Business User, Strategists, and Data Analyst, 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 OFS DM 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:

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

- Oracle Financial Services Data Management pack components
- OFSAA Architecture
- UNIX Commands
- Database Concepts
- Web Server/ Web Application Server

1.3 Related Documents

This section identifies additional documents related to OFS DM Infrastructure. You can access Oracle documentation online from OHC Documentation Library.

- Oracle Financial Services Data Governance for US FED Regulatory User Guide Reporting Release 8.0.9.0.0 ([OHC](#))
- Oracle Financial Services Data Governance for European Central Reporting User Guide Release 8.0.8.0.0 ([OHC](#))
- Oracle Financial Services Analytical Applications Reconciliation Framework User Guide Release 8.0.8.0.0 ([OHC](#))
- Oracle Financial Services Analytical Applications Infrastructure User Guide Release 8.0.9.0.0 ([OHC](#))

1.4 Conventions and Abbreviations

The following text conventions are used in this document:

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

The following table lists the abbreviations used in this document:

Abbreviation	Meaning
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
J2EE	Java 2 Enterprise Edition
JDBC	Java Database Connectivity
JDK	Java Development Kit
JNDI	Java Naming and Directory Interface

Abbreviation	Meaning
JRE	Java Runtime Environment
JVM	Java Virtual Machine
LDAP	Lightweight Directory Access Protocol
LHS	Left Hand Side
MOS	My Oracle Support
OFS	Oracle Financial Services
OFSAAI	Oracle Financial Services Analytical Application Infrastructure OLAP
OSDC	Oracle Software Delivery Cloud
OS	Operating System
RAM	Random Access Memory
RDMS	Relational Database Management System
SFTP	Secure File Transfer Protocol
SID	System Identifier
SSL	Secure Sockets Layer
TNS	Transparent Network Substrate
URL	Uniform Resource Locator
VM	Virtual Machine
Web Archive	WAR
XML	Extensible Markup Language

2 Introduction to OFS DM Application Pack

This chapter includes the following topics:

- [About Oracle Financial Services Analytical Applications \(OFSAA\)](#)
- [About Oracle Financial Services Analytical Applications \(OFSAA\) Applications Pack](#)
- [About Oracle Financial Services Data Management Applications Pack](#)

2.1 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 (OFSAA) enable financial institutions to measure and meet risk-adjusted performance objectives, cultivate a risk management culture through transparency, lower the costs of compliance and regulation, and improve insight into customer behavior.

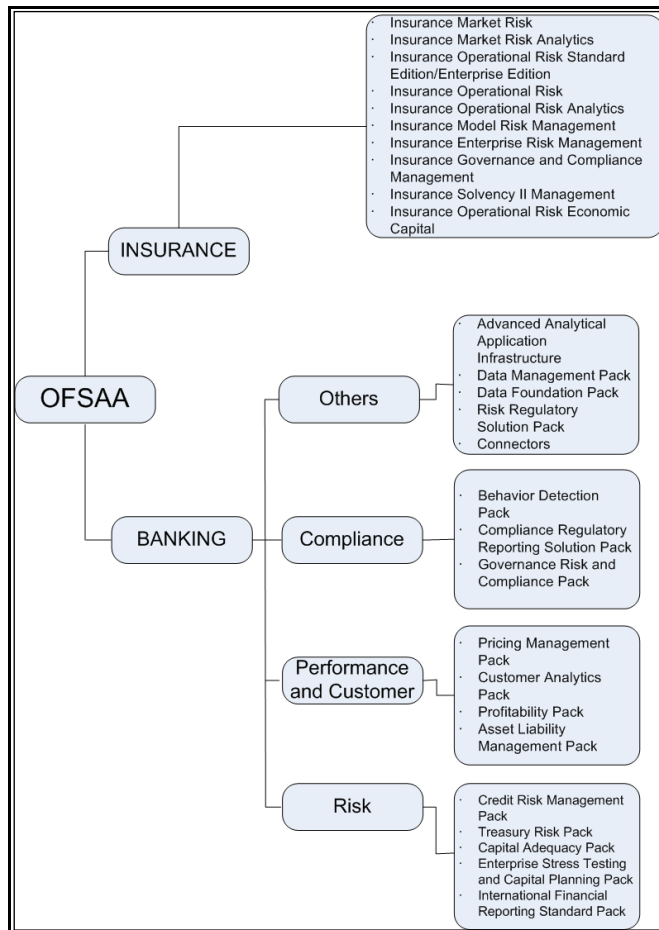
OFSAA uses industry-leading analytical methods, shared data models, and applications architecture to enable integrated risk management, performance management, customer insight, and compliance management. OFSAA actively incorporates risk into decision making, enables to achieve a consistent view of performance,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

Oracle Financial Services Analytical Applications delivers a comprehensive, integrated suite of financial services analytical applications for both banking and insurance domains.

2.2 About Oracle Financial Services Analytical Applications (OFSAA) Pack

OFSAA applications are packaged and released as Application Packs starting from 8.0 release. An Application Pack is a group of OFSAA products packaged together in a single installer and addresses specific functional areas via its products that are grouped. Packaging applications in a group ensures simplified installation, maintenance, development, and integration in an integrated deployment.

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



2.3 About Oracle Financial Services Data Management Application Pack 8.0.9.0.0

This is a fresh installer of Data Management Pack. It installs three applications OFS Reconciliation Framework 8.0.9.0.0, OFS Data Governance for European Central Reporting 8.0.9.0.0, and OFS Data Governance for US FED Regulatory Reporting 8.0.9.0.0.

OFS DM Application Pack includes the following applications:

- Oracle Financial Services Reconciliation Framework:** Reconciles the balances from the operational systems of a bank with the balances as maintained in General Ledger (hereinafter referred to as GL) of the bank. With this application banks can also reconcile between General Ledgers maintained in the bank. The balances in the GL of a bank are the ones that are audited and duly certified by the internal and external auditors. The GL balances are considered to be the final version of the truth in a bank. Therefore, all data extracted from any other operating systems of a bank must be reconciled with the balances maintained in the GL to ensure that they are complete, accurate, and comprehensive. It then acts as an authentic and reliable base for any further decision making.

- **Oracle Financial Services Data Governance for US Regulatory Reporting:** Oracle Financial Services Data Governance for US Regulatory Reporting operationalizes the data governance process. The OFSAA Data Governance for US Regulatory Reporting (DGUSRR) enables financial institutions to map multiple data sources to a standard, common business glossary. Oracle Financial Services Data Governance for US Regulatory Reporting automates and operationalizes governance for US regulatory reports to support the Data Management Office, Chief Data Officer, Chief Financial Officer, and Regulatory Reporting teams in their efforts to implement effective data management program to comply with internal and external regulatory standards. It is a content-based governance solution with an active repository themed around regulatory reporting in the United States. The solution ensures accuracy and confidence in the data and the processes used for US regulatory reporting.

The solution provides:

- Pre-packaged controls on data elements and processes around it to monitor the quality and timeliness of data
- Pre-packaged key indicators to monitor exceptions and variances in values of data elements early in the life cycle
- Pre-packaged plans for regulatory report submissions and the ability to track them to completion
- Pre-packaged OFSAA Glossary and critical data elements
- Issue and Action workflow to capture, manage and resolve exceptions in the data life cycle
- Metadata browser to show complete relationship and lineage of metadata with the ability to perform impact analysis
- **Oracle Financial Services Data Governance for European Central Reporting:** Oracle Financial Services Data Governance for European Central Reporting automates and operationalizes governance for regulatory reports to support the Data Management Office, Chief Data Officer, Chief Financial Officer, and Regulatory Reporting teams in their efforts to implement effective data management program to comply with internal and external regulatory standards. It is a content-based governance solution with an active repository themed around European Central Reporting. The solution ensures accuracy and confidence in the data and the processes used for European Central Reporting.

The solution provides:

- Pre-packaged controls on data elements and processes around it to monitor the quality and timeliness of data
- Pre-packaged key indicators to monitor exceptions and variances in values of data elements early in the life cycle
- Pre-packaged plans for regulatory report submissions and the ability to track them to completion
- Pre-packaged OFSAA Glossary and critical data elements
- Issue and Action workflow to capture, manage and resolve exceptions in the data life cycle
- Metadata browser to show complete relationship and lineage of metadata with the ability to perform impact analysis

NOTE

OFSAA DM Pack has to be used with other Application Packs such as:

- Credit Risk Management Pack
- Capital Adequacy Pack
- Treasury Pack

2.4 About OFSAA Infrastructure

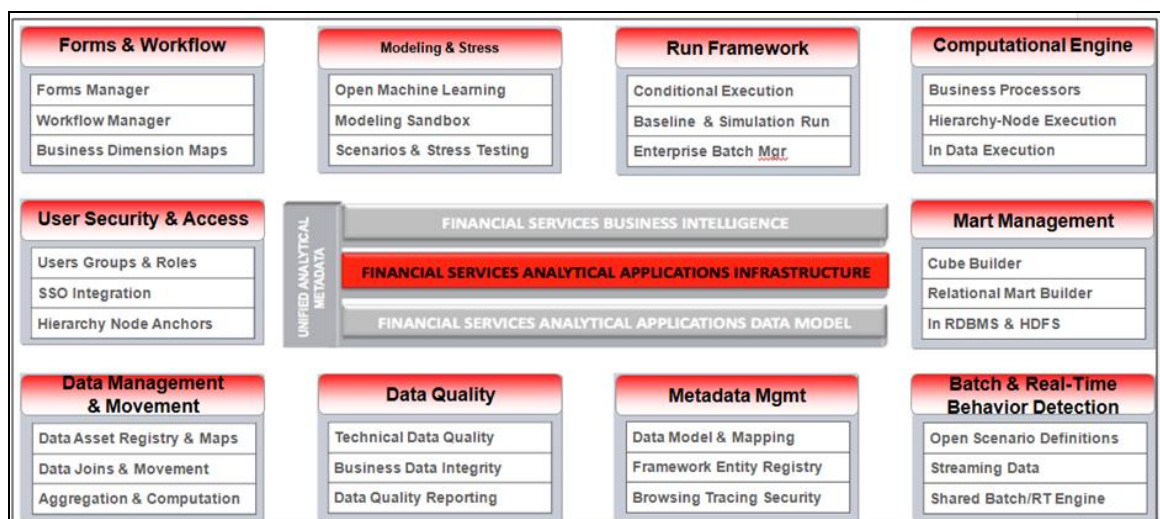
Oracle Financial Services Analytical Applications Infrastructure (OFS AAI) powers the Oracle Financial Services Analytical Applications family of products to perform the processing, categorizing, selection and manipulation of data and information needed to analyze, understand and report on specific performance, 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.

2.4.1 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:



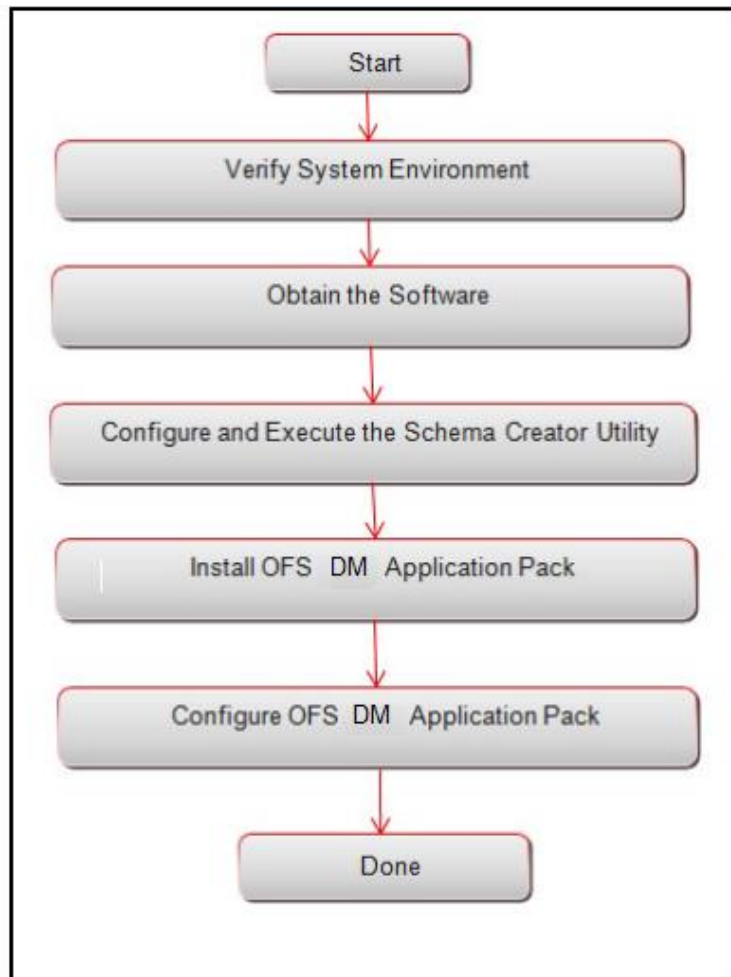
3 Understanding OFS DM Application Pack Installation

This chapter includes the following topics:

- [Installation Overview](#)
- [Deployment Topology](#)
- [Hardware and Software Requirements](#)
- [Verifying the System Environment](#)
- [Understanding Installation Modes](#)

3.1 Installation Overview

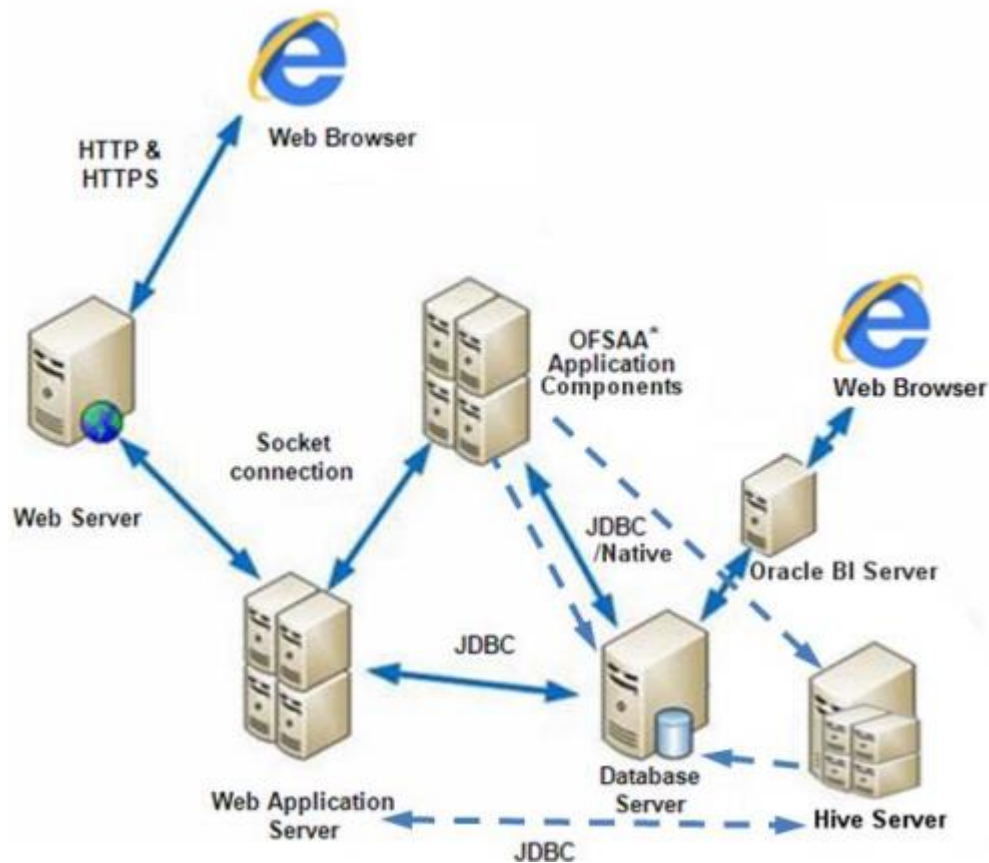
This section gives an overview of the OFS DM Application Pack Installation. The following figure shows the order of procedures you need to follow:



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

3.2 Deployment Topology

The following figure depicts the typical deployment topology implemented for OFSAA applications.



3.3 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 Oracle Financial Services DM Application Pack has been qualified.

NOTE OFS DM Application Pack installation can be performed on both Virtual and Physical servers.

3.3.1 Configurations Supported for Java 7

The following table shows the minimum hardware and software requirements for installing OFS DM Application Pack (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)/Solaris x86	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)
<p>Note: If the OS is IBM AIX 6.1, configure the size parameter setting for “Large File Support”. Refer to link http://www-01.ibm.com/support/docview.wss?uid=isg3T1000290 for more details.</p> <p>If the operating system is RHEL, install the package <code>lsb_release</code> using one of the following commands by logging in as root user:</p> <pre>yum install redhat-lsb-core yum install redhat-lsb</pre>		
Java Runtime Environment	Oracle Linux / Red Hat Enterprise Linux Oracle Solaris	Oracle Java Runtime Environment (JRE) 1.7.x - 64 bit

Requirement	Sub-Category	Value
	IBM AIX	IBM AIX Runtime, Java Technology JRE 1.7.x - 64 bit
Oracle Database Server and Client		<p>Oracle Database Server Enterprise Edition 11g Release 2 (11.2.0.3.0 +) - 64 bit RAC/ Non-RAC with/ without partitioning option</p> <p>Oracle Database Server Enterprise Edition 11g Release 2 (11.2.0.4.0 +) - 64 bit RAC/Non-RAC with/ without partitioning option, Advanced Security Option**.</p> <p>Oracle Database Server Enterprise Edition 12c Release 1 (12.1.0.1.0 +) - 64 bit RAC/ Non-RAC with/ without partitioning option, Advanced Security Option**</p> <p>Note: See the “Additional Notes” section in the 8.0.9.0.0 Tech Matrix for details.</p> <p>Oracle Client 11g Release 2 (11.2.0.3.0+) - 64 bit</p> <p>Oracle Client 12c Release 1 (12.1.0.1.0+) - 64 bit</p> <p>Oracle 11g Release 2 (11.2.0.3+) JDBC driver (Oracle thin driver)</p> <p>Oracle 12C Release 1 (12.1.0.1+) JDBC driver (Oracle thin driver)</p> <p>Oracle R Distribution (ORD) version 3.2.0/3.3.0 3.0.1 (Optional)</p> <p>Oracle R Enterprise (Server) version 1.5 with ORD 3.2.0 and version 1.5.1 with ORD 3.3.01.4 (Optional).</p> <p>Note:</p> <p>If you are upgrading the Database Server to Oracle Database 12c Release 1 or 2, see the procedure mentioned in the FAQ - How do I upgrade to Oracle Database 12c Release 1 or 2, if my previous database versions are Release 11.2.0.2+, 12.1.0.1 or 12.1.0.2?.</p>
	ORD and ORE versions compatible along with Oracle DB version	

Requirement	Sub-Category	Value															
	<table border="1"> <thead> <tr> <th>No.</th> <th>Oracle R Enterprise</th> <th>Oracle R Advanced Analytics for Hadoop</th> <th>Open source R or Oracle R Distribution</th> <th>Oracle Database Enterprise Edition</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>1.5.1</td> <td>2.7.1</td> <td>3.3.0</td> <td>11.2.0.4, 12.1.0.1, 12.1.0.2, 12.2.0.1</td> </tr> <tr> <td>2</td> <td>1.5.0</td> <td>2.5.1, 2.6.0, 2.7.0</td> <td>3.2.0</td> <td>11.2.0.4, 12.1.0.1, 12.1.0.2</td> </tr> </tbody> </table>	No.	Oracle R Enterprise	Oracle R Advanced Analytics for Hadoop	Open source R or Oracle R Distribution	Oracle Database Enterprise Edition	1	1.5.1	2.7.1	3.3.0	11.2.0.4, 12.1.0.1, 12.1.0.2, 12.2.0.1	2	1.5.0	2.5.1, 2.6.0, 2.7.0	3.2.0	11.2.0.4, 12.1.0.1, 12.1.0.2	
No.	Oracle R Enterprise	Oracle R Advanced Analytics for Hadoop	Open source R or Oracle R Distribution	Oracle Database Enterprise Edition													
1	1.5.1	2.7.1	3.3.0	11.2.0.4, 12.1.0.1, 12.1.0.2, 12.2.0.1													
2	1.5.0	2.5.1, 2.6.0, 2.7.0	3.2.0	11.2.0.4, 12.1.0.1, 12.1.0.2													
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 & 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 WebLogic Server 12.1.2.0.0 (64 bit) IBM WebSphere Application Server 8.5+ with bundled 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		MS Windows 7 / Windows 8 / Windows 10															
	Browser	Microsoft Internet Browser 11.x Chrome 57.x FireFox 52.x Oracle Java plug-in 1.7.0+ (64- bit) / Oracle Java plug-in 1.8.0+ (64- bit)															

Requirement	Sub-Category	Value
		Turn off Pop-up blocker settings. For more information, refer Internet Explorer Settings
	Office Tools	MS Office 2007/ 2010/2013 Adobe Acrobat Reader 8 or above
	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.
	<p>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.</p>	
ETL Tool	Oracle Data Integrator	11.1.1.7.0/11.1.1.9.0

3.3.2 Configurations Supported for Java 8

The following table shows the minimum hardware and software requirements for installing Oracle Financial Services Data Management Application Pack (Java 8) on each machine.

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)/Solaris x86	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)
<p>Note: If the OS is IBM AIX 6.1, configure the size parameter setting for “Large File Support”. Refer link http://www-01.ibm.com/support/docview.wss?uid=isg3T1000290 for more details.</p> <p>If the operating system is RHEL, install the package lsb_release using one of the following commands by logging in as root user:</p> <pre>yum install redhat-lsb-core yum install redhat-lsb</pre>		
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	<p>Oracle Database Server Enterprise Edition 11g Release 2 (11.2.0.3.0 +) - 64 bit RAC/ Non-RAC with/ without partitioning option</p> <p>Oracle Database Server Enterprise Edition 11g Release 2 (11.2.0.4.0 +) - 64 bit RAC/Non-RAC with/ without partitioning option, Advanced Security Option**.</p> <p>Oracle Database Server Enterprise Edition 12c Release 1 (12.1.0.1.0 +) - 64 bit RAC/ Non-RAC with/ without partitioning option, Advanced Security Option**.</p> <p>Note: See the "Additional Notes" section in the 807 Tech Matrix for details.</p> <p>Oracle Client 11g Release 2 (11.2.0.3.0+) - 64 bit</p> <p>Oracle Client 12c Release 1 (12.1.0.1.0+) - 64 bit</p> <p>Oracle 11g Release 2 (11.2.0.3+) JDBC driver (Oracle thin driver)</p> <p>Oracle 12C Release 1 (12.1.0.1+) JDBC driver (Oracle thin driver)</p> <p>Oracle R Distribution (ORD) version 3.2.0/3.3.0 (Optional)</p> <p>Oracle R Enterprise (Server) version 1.5 with ORD 3.2.0 and version 1.5.1 with ORD 3.3.0(Optional).</p> <p>ver)</p>	
	<p>Note: Ensure that the following patches are applied:</p> <p>Oracle R Enterprise 1.5 and 1.5.1 requires Oracle Database Enterprise Edition / 11.2.0.4/ 12.1.0.1/12.1.0.2/12.2.0.1.</p>	

Requirement	Sub-Category	Value			
	ORD and ORE versions compatible along with Oracle DB version				
	No.	Oracle R Enterprise	Oracle R Advanced Analytics for Hadoop	Open source R or Oracle R Distribution	Oracle Database Enterprise Edition
	1	1.5.1	2.7.1	3.3.0	11.2.0.4, 12.1.0.1, 12.1.0.2, 12.2.0.1
	2	1.5.0	2.5.1, 2.6.0, 2.7.0	3.2.0	11.2.0.4, 12.1.0.1, 12.1.0.2
	<p>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.</p>				
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 Apache Tomcat 8.0.x (64 bit) Oracle Weblogic Server 12.1.3.0.0 Note: IBM WebSphere 8.5.x (Full Profile) on Java 8 is not available.		
	<p>Note: OFSAA Infrastructure web component deployment on Oracle WebLogic Server with Oracle JRockit is not supported.</p>				
Desktop Requirements	Operating System		MS Windows 7 / Windows 8 / Windows 10		
	Browser		Microsoft Internet Browser 11.x Chrome 57.x FireFox 52.x Turn off Pop-up blocker settings. For more information, refer Internet Explorer Settings		
	Office Tools		MS Office 2007/ 2010/2013 Adobe Acrobat Reader 8 or above		
	Screen Resolution		1024*768 or 1280*1024		

Requirement	Sub-Category	Value
Other Software	Directory Services	OFSAAI is qualified on both OPEN LDAP 2.2.29+ and Oracle Internet Directory v 11.1.1.3.0. However, it can be integrated with other directory services software like MS Active Directory.
	Note: 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.	
ETL Tool	Oracle Data Integrator	11.1.1.7.0/11.1.1.9.0 - supported for Tomcat 8.x
		12.2.1.0.0 – supported for Oracle Weblogic Server 12.1.3.0.0

NOTE To upgrade an existing OFSAA 8.0.x Java 7 instance to Java 8, refer [Appendix P](#). The following table shows the minimum software requirements for running OFS DM Application Pack on each machine.

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

3.4 Verifying the System Environment

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

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

NOTE

For more details on download and usage of this utility, see *Oracle Financial Services Analytical Applications Infrastructure Environment Check Utility Guide* given in the Related Documents section.

3.5 Understanding Installation Mode

The following mode of installation is available for the OFS DM Application Pack.

3.5.1 Silent Mode

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

4 Preparing for Installation

This chapter provides necessary information to review before installing the OFS DM Pack v8.0.9.0.0.

This chapter includes the following topics:

- [Installer and Installation Prerequisites](#)
- [Obtaining the Software](#)
- [Common Installation Activities](#)

NOTE If you are installing an application pack on an environment, where another application pack is already installed, you may get a warning message such as "Object Already Exists". This message can be ignored.

NOTE Do not perform released model upload after installation. Released model upload cannot be performed after installation as it may lead to installation issues.

4.1 Installer and Installation Prerequisites

Prerequisites for Installing OFSDM 8.0.9.0.0 are:

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

Requirement	Sub-Category	Expected Value
Environment Settings	Java Settings	<p>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.</p> <p>Note: Ensure the absolute path to JRE/bin is set at the beginning of PATH variable.</p> <p>For example, <code>PATH=/usr/java/jre1.7/bin:\$ORACLE_HOME/bin:\$PATH</code></p> <p>Ensure no SYMBOLIC links to JAVA installation is being set in the PATH variable.</p>
	Enable unlimited cryptographic policy for Java	<p>For more information, see the section Enabling Unlimited Cryptographic Policy from the OFS Analytical Applications Infrastructure Administration Guide.</p>

Requirement	Sub-Category	Expected Value
	Oracle Database Settings	<p>Oracle Database Server</p> <p>TNS_ADMIN must be set in .profile file pointing to appropriate tnsnames.ora file.</p> <p>Enable Transparent Data Encryption (TDE) and/ or Data Redaction.</p> <p>Note: For more information, see Error! Reference source not found..</p> <p>OFSAA Processing Server</p> <p>ORACLE_HOME must be set in .profile file pointing to appropriate Oracle DB Client installation.</p> <p>PATH in .profile must be set to include appropriate \$ORACLE_HOME/bin path.</p> <p>Ensure that an entry (with SID/ SERVICE NAME) is added in the tnsnames.ora file.</p>
	Oracle Essbase Settings	<p>ARBORPATH, ESSBASEPATH, HYPERION_HOME to be set in the .profile pointing to an appropriate Oracle Essbase Client installation.</p> <p>Note: These settings are required only if you want to use Oracle Hyperion Essbase OLAP features.</p>
OS/ File System Settings	File Descriptor Settings	Greater than 15000
	Total Number of Process Settings	Greater than 4096
	Port Settings	Default port numbers to be enabled on the system are 6500, 6501, 6505, 6507, 6509, 6510, 6666, 9999, and 10101.
	.profile permissions	User to have 755 permission on the .profile file.
	Installation Directory	<p>A directory where the installation files will be installed.</p> <p>Set 755 permission on this directory.</p> <p>This directory needs to be set as FIC_HOME.</p>
	Temporary Directory	<p>Default temporary directory where installation files are stored for a short period of time to support faster installation.</p> <p>For installation on UNIX OS, your UNIX administrator must give you the required read-write permissions for the /tmp directory and disable the NOEXEC option</p> <p>Configure adequate space on the /tmp directory. It is recommended that you allocate more than 10 GB of space.</p> <p>Note: If NOEXEC is enabled, the extraction of files by the installer into the /tmp directory is prevented and the binaries will not execute in the directory, which will fail the installation.</p>

Requirement	Sub-Category	Expected Value
	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 775 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
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 Appendix A for WebSphere Profile Creation and WebLogic Domain Creation.
Web Server	Apache HTTP Server/ Oracle HTTP Server/ IBM HTTP Server	This is an optional requirement. HTTP Server Installation to be present. You will be required to enter the Web Server IP/ Hostname and Port details during installation. Note: Refer Appendix A for Web Server installation.
Big Data	Cloudera CDH and Cloudera JDBC Connectors	This is an optional requirement and required if Oracle Financial Services - Big Data Processing license is enabled. For more information, see Installing Cloudera CDH.
	Others	To install this release on Oracle Solaris OS, refer to the following list for version specific information: Solaris 11 – Upgrade to Oracle Solaris 11.3 with SRU09 or higher. See https://docs.oracle.com/cd/E60778_01/html/E60743/gouaw.html#scrolltoc to upgrade to SRU09 if you have a lower SRU version. Additionally, install the required runtime libraries. For more information, see Installing Only the Runtime Libraries on Oracle Solaris 11 . Solaris 10 – Install the required OS patches. For more information, see Installing the Required Oracle Solaris 10 Patches . Additionally, install the required runtime libraries. For more information, see Installing Only the Runtime Libraries on Oracle Solaris 10 .

Requirement	Sub-Category	Expected Value
Others	Oracle R/ Oracle R Enterprise	This is an optional requirement.
	Oracle Data Integrator	This is a mandatory requirement. For compatibility details refer Oracle 8.0.9 Tech Matrix .

Following step is applicable only if existing OFSAA setup version is 8.0.9.x.x and Configuration and Atomic Schema(s) were restored from exported dumps of other environment:

Login to Configuration Schema and execute the following SQL statements:

```
alter table AAI_AOM_APP_COMP_ATTR_MAPPING drop constraint
AOM_APP_COMP_ATTR_PK drop index
/

alter table AAI_AOM_APP_COMP_ATTR_MAPPING add constraint
AOM_APP_COMP_ATTR_PK primary key (APP_COMP_ATTR_MAP_ID)
```

4.2 Obtaining the Software

This release of OFS DM Application Pack v8.0.9.0.0 is available for download in MOS as Patch 31673409. You must have a valid Oracle account in order to download the software.

4.3 Common Installation Tasks

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

This section includes the following topics:

- [Identifying the Installation, Download and Metadata Repository Directories](#)
- [Downloading and Copying the OFS DM Application Pack Installer](#)
- [Copying and Extracting the Software](#)
- [Setting up the Web Server/ Web Application Server](#)

4.3.1 Identifying the Installation, Download and Metadata Repository Directories

For installation of any OFSAA Application Pack, the following directory/ 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 directory also maintains the OFSAA metadata artifacts. This is commonly referred as “FTP SHARE”.

NOTE

- Assign 755 user permission to the installation directory.
- Assign 775 user permission to the Staging Directory.
- Ensure the OFSAA staging directory is not set to the same path as the OFSAA installation directory and is not a sub-folder inside the OFSAA installation directory.

4.3.2 Downloading and Copying the OFS DM Application Pack Installer

To download the OFS DM Applications Pack Installer, follow these steps:

- This release of OFS DM Application pack v8.0.9.0.0 can be downloaded from [My Oracle Support](#) using patch **31673409**.
- Copy the downloaded installer archive to the Download Directory (in Binary mode) on the setup identified for OFSAA installation.
- For DG, log in to [My Oracle Support](#), search for the **33663417** Mandatory Patch in the **Patches & Updates** Tab and download it.

ATTENTION

On the 10th of December 2021, Oracle released Security Alert CVE-2021-44228 in response to the disclosure of a new vulnerability affecting Apache Log4J prior to version 2.15. The application of the **33663417** Mandatory Patch fixes the issue.

For details, see the My Oracle Support Doc ID [2827801.1](#).

4.3.3 Copying and Extracting the Software

Once you obtain the installer, copy the installer in Binary mode to the Download Directory.

NOTE

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

1. Download the unzip utility (OS specific) unzip_<os>.Z from the location <https://updates.oracle.com/unzips/unzips.html>, and copy it in Binary mode to the directory that is included in your PATH variable. If you already have the unzip utility to extract the contents of the downloaded archive, skip to the next step.
2. Uncompress the unzip installer file using the command:
uncompress unzip_<os>.Z

NOTE

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

3. Give EXECUTE permission to the file using the command:
`chmod 775 unzip_<os>`
4. For example, `chmod 775 unzip_sparc`
5. Extract the contents of the Oracle Financial Services Data Management Application Pack 8.0.9.0.0 to Download Directory using the following command:
6. `unzip OFS_DM_8.0.9.0.0.zip`
7. Extract and apply the patch 31673409. See the Readme available with the patch for further instructions on installing the patch.
8. Give following permission to the installer directory. Navigate to the Download Directory and execute the command:
`chmod -R 775 OFS_DM_PACK`

4.3.4 Setting up the Web Server/ Web Application Server

For setting up the environment based on your selected Web Server/ Web Application Server, refer to [Appendix A](#) for more information.

4.3.5 Installing Cloudera CDH

This is an optional step and required only if you intend to install Oracle Financial Services Advanced Analytical Infrastructure Big Data Option. Follow these steps:

1. Install CDH v5.3.3, 5.4.4 or v5.8.4. For more information, refer Cloudera 5.3.x Documentation, Cloudera 5.4.x Documentation or Cloudera 5.8.x Documentation.
2. Copy ofsaa-hive-udf.jar from installer kit (OFS_DM_PACK/OFS_AAAL_PACK/fichome/utility/DMT/UDF/lib) to HiveAuxDir of the cluster. For more information, refer [Managing User-Defined Functions \(UDFs\) with HiveServer2](#).

5 Installing OFS Data Management Application Pack

This chapter describes the steps to be followed to install the OFS DM pack.

NOTE

The Hybrid mode installation of OFS Reconciliation Framework supports only full Hive deployment for those application packs where Hive is enabled. (For example – Oracle Financial Services Data Foundation). As a part of Installation process, only Hybrid templates are to be used while installing OFS Reconciliation Framework on Hive.

The Hybrid mode installation of OFS GL supports only full Hive deployment for those application packs where Hive is enabled. (For example – Oracle Financial Services Data Foundation).

This chapter includes the following sections:

- [Schema Creator Utility](#)
- [Configuring and Executing the Schema Creator Utility](#)
- [Installing the OFS DM Application Pack Installer](#)

5.1 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 8.0.9 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:

- [About Schema Creator Utility](#)
- [Execution Modes in Schema Creator Utility](#)
- [Execution Options in Schema Creator Utility](#)

5.1.1 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.

- **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.

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

5.1.2 Execution Modes in Schema Creator Utility

The Schema Configuration Utility supports the following modes of execution:

- **Online Mode:** In the 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 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 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
For more details refer, [Executing the Schema Creator Utility in Offline Mode](#).

NOTE If there are any errors during the script execution, reconfigure the OFS_DM_SCHEMA_IN.XML file and execute the utility. This regenerates the scripts with corrected information. For more information, refer [Configuring and Executing the Schema Creator Utility](#).

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

5.1.3 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.

5.2 Configuring and Executing the Schema Creator Utility

This section includes the following topics:

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

5.2.1 Prerequisites

The following prerequisites must be ensured 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.
- It is recommended to set the PGA_AGGREGATE_LIMIT database-parameter value sufficiently, when Oracle 12c is installed.
- While installing the application on Solaris 5.10 with Java 6, ensure to mandatorily modify setup.sh line number 503 as “Line: modelsize=\$(ls -l \$dataModelFile | tr -s '\t' ' ' | cut -d ' ' -f5)”.
- You must add a TNS entry before the installation.
- For enabling Transparent Data Encryption (TDE) in your OFSAA instance during installation, perform the steps explained in the Appendix R: Enabling Transparent Data Encryption (TDE) in OFSAA.

Optionally, for HIVE installation, the prerequisites you must have before configuring the Schema Creator Utility are:

- HIVE connection credentials (For example: Kerberos connection properties).
- Hostname/IP of the HIVE Server installation.

NOTE The TNS Entry for an atomic schema should be without any special character, i.e '_'. If the atomic schema name is like 'DEV_ATOM', the TNS entry should be like 'DEVATOM'.

5.2.2 Configuring Schema Creator Utility for RDBMS Installation

Application specific schema details need to be filled in the OFS_DM_SCHEMA_IN.xml file before executing the Schema Creator Utility. For more information on the xml file, configure the following elements as described in the section Configuring OFS_DM_SCHEMA_IN.XML file. Refer **Error! Reference source not found.**

The types of schemas that can be configured are:

- **CONFIG:** - This schema holds the entities and other objects required for OFSAA setup configuration information.

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

5.2.3 Configuring Schema Creator Utility for Hive Schema

NOTE For configuring Schema Creator Utility for OFS Reconciliation Framework on Hive, rename the following files (use only HYBRID template for Hive based installation):

- OFS_DM_SCHEMA_IN.xml to OFS_DM_SCHEMA_IN.xml.bkp
- OFS_DM_CFG.dat to OFS_DM_CFG.dat.bkp
- OFS_DM_SCHEMA_BIGDATA_IN.xml.HYBRID.template to OFS_DM_SCHEMA_BIGDATA_IN.xml
- OFS_DM_CFG.dat.HYBRID.template to OFS_DM_CFG.dat

The pack specific schema details need to be filled in the OFS_DM_SCHEMA_BIGDATA_IN.xml file, before executing the utility. For more information on the xml file, see Configuring OFS_DM_SCHEMA_BIGDATA_IN.xml file.

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

- **CONFIG:** This schema holds the entities and other objects required for OFSAA setup configuration information.

NOTE There can be only one CONFIG schema per OFSAA instance. This schema is created only in RDBMS.

- **METADOM:** This schema holds the DM metadata information. One METADOM schema is attached to one Information Domain.

NOTE There can be multiple METADOM schemas per OFSAA Instance. This schema is created only in RDBMS. It has only platform entities that hold the metadata details. However, it does not hold the data model entities.

- **DATADOM:** This schema holds data model entities. One DATADOM schema is attached to one Information Domain.

NOTE There can be multiple DATADOM schemas per OFSAA Instance.

5.2.4 Configuring the Schema Creator Utility

To configure the Schema Creator Utility, perform the following steps:

1. Log in to the system as non-root user.
2. Navigate to the following path: OFS_DM_PACK/schema_creator/conf.
3. Edit the OFS_DM_SCHEMA_IN.xml file in a text editor for RDBMS and for Hybrid edit OFS_DM_SCHEMA_BIGDATA_IN.xml file. Refer **Error! Reference source not found..**

4. Configure the elements as described in the [OFS_DM_SCHEMA_IN.xml](#) .
5. On successful execution of the utility, the entered passwords in the OFS_DM_SCHEMA_IN.xml file are nullified.
6. Save the OFS_DM_SCHEMA_IN.xml file.
7. Navigate to **/bin** directory and run the schema creator utility.

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

NOTE For Java 8: Edit the VerInfo.txt file in the path /OFS_DM_PACK/OFS_AAI/bin/ to modify the value for property JAVA_VERSION to 1.8, and save the changes.

5.2.5 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](#)

5.2.5.1 Executing the Schema Creator Utility in Online Mode

In Online Mode, the Schema Creator Utility creates 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, perform the following steps:

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

```
./osc.sh -s
```

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

- The following message is displayed: *You have chosen ONLINE mode. Triggering the utility in ONLINE mode executes the DDLs directly on the Database. Do you wish to proceed? (Y/y or N/n).*

Enter Y/y to proceed with the script generation

or

Enter N/n to quit script creation.

- Enter the DB Username with SYSDBA Privileges.
For example: SYS as SYSDBA.
- Enter the User Password.

```
$ ./osc.sh
=====
You have chosen ONLINE mode
=====
Triggering the utility in ONLINE mode will execute the DDLs directly on the Database. Do you wish to proceed? (Y/y or N/n):
Y
=====
Java Validation Started ...
Java found in : /scratch/jdk1.7.0_72/bin
JAVA Version found : 1.7.0_72
JAVA Bit Version found : 64-bit
Java Validation Completed. Status : SUCCESS
=====
DB specific Validation Started ...
Enter the DB User Name With SYSDBA Privileges:
sys as sysdba
Enter the User Password:
Oracle Client version : 12.1.0.2.0. Status : SUCCESS
Oracle Server version Current value : 12.1.0.1.0. Status : SUCCESS
DB specific Validation Completed. Status : SUCCESS
=====
```

- 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).*

Enter Y/y to proceed with the schema creation.

or

Enter N/n to quit schema creation

- The following message is displayed: *You have chosen to install this Application Pack on <Name of the Infodom>. Do you want to proceed? (Y/N).*

```
=====
Schema Creation Started
=====
Checking OFSAA installation...
OFSAA installation not found.
Validating the dat file OFS_DM_CFG.dat started...
Successfully validated OFS_DM_CFG.dat file
Validating the input XML file.../scratch/ofsaapp/Kits/OFS_DM_PACK/schema_creator/conf/OFS_DM_SCHEMA_IN.xml
Input XML file validated successfully.
=====
Validating Connection URL ...jdbc:oracle:thin:@10.184.153.87:1521:DEV12C
Successfully connected to User - sys as sysdba URL - jdbc:oracle:thin:@10.184.153.87:1521:DEV12C
Connection URL successfully validated...
Parsing TABLESPACE tags...
You have chosen to install this Application Pack on "dmp_dgsatm8" ATOMIC schema. Do you want to proceed? (Y/N)
Y
```

- Enter Y/y to start the schema creation.

Or

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

```
=====
Executing TableSpace Scripts started...
Skipping the creation of tablespace DGS_INDEX_TABLE_SPACE
Skipping the creation of tablespace DGS_DATA_TABLE_SPACE
=====
Creating Schemas started...
CONFIG User dmp_dgsconf8 successfully created on Default TableSpace : USERS on Temp TableSpace : TEMP
Grants creation scripts execution started...
Grants creation scripts execution completed...
Successfully connected to User - dmp_dgsconf8 URL - jdbc:oracle:thin:@10.184.153.87:1521:DEV12C
Scripts execution for CONFIG schema started ...
Scripts execution for CONFIG schema completed ...
User dmp_dgsconf8 details updated into the dbmaster table
User dmp_dgsconf8 details updated into the I18NMASTER table
User dmp_dgsconf8 details updated into the aai_db_detail table
User dmp_dgsconf8 details updated into the aai_db_auth_alias table
User dmp_dgsatm8 details updated into the dbmaster table
User dmp_dgsatm8 details updated into the I18NMASTER table
User dmp_dgsatm8 details updated into the aai_db_detail table
User dmp_dgsatm8 details updated into the aai_db_auth_alias table
User dmp_dgsatm8 is successfully created on Default TableSpace : USERS on Temp TableSpace : TEMP
User dmp_dgsatm8 already exists in dbmaster table.
Creating Schemas completed ...
=====
Roles creation scripts execution started ...
Roles creation scripts execution completed ...
=====
Grants creation scripts execution started...
Grants creation scripts execution completed...
=====
Schemas Creation Completed
=====
Schema Creator executed Successfully.Please proceed with the installation.
```

NOTE On successful execution of schema creator utility, the console displays the following status message: *Schema Creator executed successfully. Please proceed with the installation.*

Refer log file in OFS_DM_PACK/schema_creator/logs directory for execution status. In case of any errors, contact *Oracle Support*.

NOTE Ignore the following statement in the schema creator console for Hybrid:

BadPaddingException: Given final block not properly padded

10. Make TNS entries for the created users in TNSNAMES.ORA. For details, refer [Add TNS Entries in TNSNAMES.ORA file](#).
11. Navigate to the directory OFS_AAAI_PACK/schema_creator.
12. Log in to SQLPLUS with a user having SYSDBA Privileges.

```
/scratch/ofsaapp/OFS_AAI_PACK/schema_creator/bin>cd ..  
/scratch/ofsaapp/OFS_AAI_PACK/schema_creator>acle@mediadb as sysdba <  
  
SQL*Plus: Release 11.2.0.3.0 Production on Tue Jan 13 11:01:55 2015  
Copyright (c) 1982, 2011, Oracle. All rights reserved.  
  
Connected to:  
Oracle Database 11g Enterprise Edition Release 11.2.0.3.0 - 64bit Production  
With the Partitioning, OLAP, Data Mining and Real Application Testing options  
  
SQL> @/scratch/ofsaapp/OFS_AAI_PACK/schema_creator/sysdba_output_scripts.sql  
Disconnected from Oracle Database 11g Enterprise Edition Release 11.2.0.3.0 - 64  
bit Production  
With the Partitioning, OLAP, Data Mining and Real Application Testing options
```

13. Connect to the Oracle DB Server on which the OFSAA Application Pack installation is to be performed and 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` directory to a remote server and execute the `sysdba_output_scripts.sql` file.

14. (This step is optional and applicable only for HDFS installation.) Connect to the HDFS repository using a HUE Browser. Log in to the Hue Browser with System Administrator privileges. Execute the script mentioned under `hive_output_scripts.hql` (omitting the slash (/)) in the HIVE Query Editor. For example, the query can be as follows:

```
CREATE SCHEMA IF NOT EXIST <<HIVE SCHEMA NAME>>
```

NOTE

Note: See log `sysdba_output_scripts.log` file for execution status. If there are any errors, contact Oracle Support Services. If there are no errors in the execution, the log file is empty.

5.2.5.2 Executing the Schema Creator Utility in Offline Mode

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

Prerequisites:

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

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, perform the following steps:

1. Log in to the system as non-root user.
2. Navigate to the following path: OFS_DM_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 generates the script. Do you wish to proceed? (Y/y or N/n).
5. Enter Y /y to generate the script.
6. or
7. Enter N/n to quit the schema creation.
8. Enter the DB Username with SELECT privileges.
9. 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/jdk1.7.0_72/bin
JAVA Version found : 1.7.0_72
JAVA Bit Version found : 64-bit
Java Validation Completed. Status : SUCCESS
=====
DB specific Validation Started ...
Enter the DB User Name with the following privileges:
1. CREATE SESSION
2. SELECT on DBA_ROLES
3. SELECT on DBA_USERS
4. SELECT on DBA_DIRECTORIES
5. SELECT on DBA_TABLESPACES
Enter the User Name:
sys as sysdba
Enter the User Password:
Oracle Client version : 12.1.0.2.0. Status : SUCCESS
Oracle Server version Current value : 12.1.0.1.0. Status : SUCCESS
DB specific Validation Completed. Status : SUCCESS
=====
```

10. 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).
11. Enter Y/y to start the script generation.
12. Or
13. Enter N/n if you want to quit the script generation.
14. The following message is displayed.
15. *You have chosen to install this Application Pack on <Name of the Infodom>. Do you want to proceed? (Y/N).*

```
=====
Generating Schema Creation Scripts Started
=====
Checking OFSAA installation...
OFSAA installation not found.
Validating the dat file OFS_DM_CFG.dat started...
Successfully validated OFS_DM_CFG.dat file
Validating the input XML file.../scratch/ofsaapp/Kits/OFS_DM_PACK/schema_creator/conf/OFS_DM_SCHEMA_IN.xml
Input XML file validated successfully.
=====
Validating Connection URL ...jdbc:oracle:thin:@10.184.153.87:1521:DEV12C
Successfully connected to User - sys as sysdba URL - jdbc:oracle:thin:@10.184.153.87:1521:DEV12C
Connection URL successfully validated...
Parsing TABLESPACE tags...
You have chosen to install this Application Pack on "dmp_dqsatm8" ATOMIC schema. Do you want to proceed? (Y/N)
Y
```

16. Enter Y/y to start the script generation.
17. Or
18. Enter N/n if you want to quit the script generation.

```
-----
Generating TableSpace creation Scripts started...
Skipping the creation of tablespace DGS_INDEX_TABLE_SPACE
Skipping the creation of tablespace DGS_DATA_TABLE_SPACE
-----
Generating Schema creation scripts started...
CONFIG User dmp_dgsconf8 creation script generated successfully on Default TableSpace : USERS on Temp TableSpace : TEMP
Generation of grants creation scripts started...
Generation of grants creation scripts completed...
Scripts Generation for CONFIG schema started ...
Scripts Generation for CONFIG schema completed ...
User dmp_dgsconf8 details updated into the dbmaster table
User dmp_dgsconf8 details updated into the I18NMASTER table
User dmp_dgsconf8 details updated into the sai_db_detail table
User dmp_dgsconf8 details updated into the sai_db_auth_alias table
User dmp_dgsatm8 details updated into the dbmaster table
User dmp_dgsatm8 details updated into the I18NMASTER table
User dmp_dgsatm8 details updated into the sai_db_detail table
User dmp_dgsatm8 details updated into the sai_db_auth_alias table
User dmp_dgsatm8 creation script generated successfully on Default TableSpace : USERS on Temp TableSpace : TEMP
User dmp_dgsatm8 creation is skipping as the user is already created.
Generating Schema creation scripts completed...
-----
Generating Roles creation Scripts started...
Generating Roles creation Scripts completed...
-----
Generating Grants creation scripts started...
Generating Grants creation scripts completed...
-----
Generating Schema Creation Scripts Completed
-----
Schema Creator executed Successfully.Please execute /scratch/ofsaapp/Ritz/OFS_DM_PACK/schema_creator/sysdba_output_scripts.sql before proceeding with the installation.
```

NOTE On successful execution of schema creator utility, the console displays the following status message:
Schema Creator executed successfully. Please execute `scratch/ofsaapp/OFS_DM_PACK/schema_creator/sysdba_output_scripts.sql` before proceeding with the installation.

19. Navigate to the directory: `OFS_DM_PACK/schema_creator`.
20. Login to SQLPLUS with a user having SYSDBA Privileges.
21. Execute the `sysdba_output_scripts.sql` file using the following command:
`SQL>@sysdba_output_scripts.sql`
22. Alternatively, you can copy the `sysdba_output_scripts.sql` file and SQLScripts directory to a remote server and execute `sysdba_output_scripts.sql` file, after providing appropriate execute permissions.

NOTE Refer log `sysdba_output_scripts.log` file for execution status. In case of any errors, contact Oracle Support. This log would be empty if there are no errors in the execution.

NOTE Ignore the following statement in the schema creator console for Hybrid:
BadPaddingException: Given final block not properly padded

23. Make TNS entries for the created users in TNSNAMES.ORA. For details, see [Add TNS Entries in TNSNAMES.ORA file](#).

5.2.5.3 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, perform the following steps:

1. Edit the file `OFS_DM_PACK/schema_creator/conf/OFS_DM_SCHEMA_IN.xml` in text editor.

For Example: `./osc.sh -s`.

```
$ pwd
/scratch/ofsaapp/Kits/OFS_DM_PACK/schema_creator/bin
$ ./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/jdki.7.0_72/bin
JAVA Version found : 1.7.0_72
JAVA Bit Version found : 64-bit
Java Validation Completed. Status : SUCCESS
=====
```



```

=====
Schema Creation Started
=====
Checking OFSAA installation...
OFSAA installation not found.
Validating the dat file OFS_DM_CFG.dat started...
Successfully validated OFS_DM_CFG.dat file
Validating the input XML file.../scratch/ofsaapp/Kits/OFS_DM_PACK/schema_creator/conf/OFS_DM_SCHEMA_IN.xml
Input XML file validated successfully.
=====
Validating Connection URL ...jdbc:oracle:thin:@10.184.153.87:1521:DEV12C
Successfully connected to User - sys as sysdba URL - jdbc:oracle:thin:@10.184.153.87:1521:DEV12C
Connection URL successfully validated...
Parsing TABLESPACE tags...
You have chosen to install this Application Pack on "dmp_dgsatm8" ATOMIC schema. Do you want to proceed? (Y/N)
Y
You have chosen to install this Application Pack on INFODOM "ofsdminfo". Do you want to proceed? (Y/N)
Y
=====
Executing TableSpace Scripts started...
Skipping the creation of tablespace DGS_INDEX_TABLE_SPACE
Skipping the creation of tablespace DGS_DATA_TABLE_SPACE
=====
Creating Schemas started...
CONFIG User dmp_dgsconf8 successfully created on Default TableSpace : USERS on Temp TableSpace : TEMP
Grants creation scripts execution started...
Grants creation scripts execution completed...
Successfully connected to User - dmp_dgsconf8 URL - jdbc:oracle:thin:@10.184.153.87:1521:DEV12C
Scripts execution for CONFIG schema started ...
Scripts execution for CONFIG schema completed ...
User dmp_dgsconf8 details updated into the dbmaster table
User dmp_dgsconf8 details updated into the I18NMASTER table
User dmp_dgsconf8 details updated into the aai_db_detail table
User dmp_dgsconf8 details updated into the aai_db_auth_alias table
User dmp_dgsatm8 details updated into the dbmaster table
User dmp_dgsatm8 details updated into the I18NMASTER table
User dmp_dgsatm8 details updated into the aai_db_detail table
User dmp_dgsatm8 details updated into the aai_db_auth_alias table
User dmp_dgsatm8 is successfully created on Default TableSpace : USERS on Temp TableSpace : TEMP
User dmp_dgsatm8 already exists in dbmaster table.
Creating Schemas completed ...
=====
Roles creation scripts execution started ...
Roles creation scripts execution completed ...
=====
Grants creation scripts execution started...
Grants creation scripts execution completed...
=====
Schemas Creation Completed
=====
  
```

2. Make TNS entries for the created users in TNSNAMES.ORA. For details, see [Add TNS Entries in TNSNAMES.ORA file](#).

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

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

When 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 OFS DM 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 DM Application Pack over an existing Application pack, perform the following steps:

1. Repeat the steps 1 to 8 from [Executing the Schema Creator Utility](#) section.

NOTE Ensure to use the same config schema user name as the previous Application Pack

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
 - List of Installed Application Packs
3. Enter Y/y to start the schema creation.
Or
Enter N/n if you want to quit executing the schema creation.
4. You can select the Atomic User, on which you want to install the Application Pack.
5. Make TNS entries for the created users in TNSNAMES.ORA. For details, see [Add TNS Entries in TNSNAMES.ORA file](#).

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

NOTE Refer log file in OFS_DM_PACK/schema_creator/logs directory for execution status. Refer log `sysdba_output_scripts.log` file for execution status, if executed in offline mode. This log would be empty if there are no errors in the execution. In case of any errors, contact Oracle Support.

5.2.6 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 the log file.

```
<<OFSDMAP Installer directory>>/<<OFS_DM_PACK>>/schema_creator/logs/
```

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

You may contact Oracle support anytime for assistance.

5.3 Installing the OFS DM Application Pack

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

This section includes the following topics:

- [Silent Mode Installation](#)
- [Verifying the Log File](#)

5.3.1 Prerequisites

NOTE

Before installing Data Management pack 8.0.9 Hybrid, Financial Services Data Foundation (Full Hive) pack installation must be deployed in the web application server.

5.3.2 Silent Mode Installation

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

Perform the following steps for installing the OFS DM 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=<OFSA Installation Directory>
export FIC_HOME
```
3. Execute the user `.profile`.
4. Navigate to OFS_DM_PACK directory (installer directory).
5. Edit the OFS_DM_PACK/schema_creator/conf/OFS_DM_SCHEMA_IN.xml for RDBMS file to set the appropriate attribute values. It is optional to include INFODOM = “<Infodom Name>” in OFS_DM_SCHEMA_IN.xml file. If not specified a default INFODOM name is generated.
6. See Configuring OFS_DM_SCHEMA_IN.XML for details on for RDBMS and for Hybrid edit OFS_DM_SCHEMA_BIGDATA_IN.xml file.

NOTE Ensure to make TNS entries for the created users in TNSNAMES.ORA. For details, see [Add TNS Entries in TNSNAMES.ORA file](#).

7. Execute the schema creator utility with **-s** option.

NOTE This step is mandatory and should be executed before every additional OFSAA Application Pack installation. See [Executing the Schema Creator Utility](#) for more details.

-
8. Edit the OFS_DM_PACK/conf/OFS_DM_PACK.xml to enable the product licenses. Update the attribute ENABLE=YES/NO in OFS_DM_pack.xml for licensing the App in the pack.
 9. In case of Hive based installation for OFS Reconciliation Framework, OFS_DM_PACK.xml to be renamed as backup and OFS_DM_PACK.xml.HYBRID.template to be renamed as OFS_DM_PACK.xml.

NOTE See [Configuring OFS_DM_PACK.XML](#) for details on configuring this XML file.

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

10. Edit the OFS_DM_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 8.0.9.0.0 already exists. See [Configuring OFSAAI_InstallConfig.xml](#) for details on configuring this XML file.

11. Create a copy of the Silent.template file present in the installer OFS_DM_PACK/OFS_DM/conf and rename it as Silent.props.
12. In case of Hive based installation for OFS Reconciliation Framework, please use only HYBRID template and perform the following steps:
 - a. Rename Silent.template.HYBRID.template to Silent.props.
 - b. Rename default.properties to default.properties.bkp.
 - c. Rename default.properties.HYBRID.template to default.properties.

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:

NOTE During Hybrid mode Installation of DMP 8.0.9 the following parameters in the Silent.props (after renaming from Silent.template.HYBRID.template) are to be configured as:
 UPLOAD_MODEL=1
 HIVE_UPLOAD_MODEL=1

Property Name	Description of Property	Permissible values	Comments
LOG_MODE	Mode for logging	0 = Debug 1= General	Default : 0
SEGMENT_1_CODE	Segment Code	Not Applicable	Provide a new segment code for DM Pack.
APFTP P_LOG_PATH=	Infodomain Maintenance log path(to be created) for the new RDBMS Infodomain	Not Applicable	
DBFTP_LOG_PATH	Infodomain Maintenance log path(to be created) for the new RDBMS Infodomain	Not Applicable	
HIVE_APPFTP_LOG_PATH	Infodomain Maintenance log path(to be created) for the new HIVE Infodomain	Not Applicable	Applicable only for Hybrid Installation
HIVE_DBFTP_LOG_PATH	Infodomain Maintenance log path(to be created) for the new HIVE Infodomain	Not Applicable	Applicable only for Hybrid Installation

Property Name	Description of Property	Permissible values	Comments
UPLOAD_MODEL	Specify if you want to perform Model Upload for RDBMS	1 = If you want to perform Model Upload	
MODEL_TYPE	Specify if you want to use the released datamodel or customized datamodel for model upload process for RDBMS	0 = If you want to upload the released datamodel 1 = If you want to upload the customized datamodel	
DATAMODEL	Specify the file(DATAMODEL) name for the customized datamodel for RDBMS	Not Applicable	Mandatory only if you want to upload the customized datamodel i.e you have specified MODEL_TYPE=1
DM_DIRECTORY	Specify the path (DM_DIRECTORY) for the customized datamodel for RDBMS	Not Applicable	Mandatory only if you want to upload the customized datamodel i.e you have specified MODEL_TYPE=1
HIVE_UPLOAD_MODEL	Specify if you want to perform Model Upload for HIVE	0 = If you have already performed Model Upload and want to skip model upload process 1 = If you want to perform Model Upload	Applicable only for Hybrid Installation.
HIVE_MODEL_TYPE	Specify if you want to use the released datamodel or customized datamodel for model upload process for HIVE	0 = If you want to upload the released datamodel 1 = If you want to upload the customized datamodel	Applicable only for Hybrid Installation.

Property Name	Description of Property	Permissible values	Comments
DATAMODEL_HIVE	Specify the file(DATAMODEL) name for the customized datamodel for HIVE	Not Applicable	Applicable only for Hybrid Installation. Mandatory only if you want to upload the customized datamodel i.e you have specified MODEL_TYPE=1
DM_DIRECTORY	Specify the path (DM_DIRECTORY) for the customized datamodel for HIVE	Not Applicable	Applicable only for Hybrid Installation. Mandatory only if you want to upload the customized datamodel i.e you have specified MODEL_TYPE=1
ETL_APPSRC_TYPE	Please specify if you want create new ETL Src or use an existing one	0 = If you want to create a new ETL src 1 = If you want to use an existing pair	
ETL_SRC_1_NAME	Please specify new ETL Source Name for RDBMS	Not Applicable	
ETL_SRC_2_NAME	Please specify new ETL Source Name for HIVE	Not Applicable	Applicable only for Hybrid Installation.
ETL_SRC_1_DESC	Please specify new ETL Source Description for RDBMS	Not Applicable	
ETL_SRC_2_DESC	Please specify new ETL Source Description for HIVE	Not Applicable	Applicable only for Hybrid Installation.

13. On successful execution of the schema creator utility, navigate to OFS_DM_PACK/bin/ and execute the application pack installer with **SILENT** option.
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.

```

*****
* Welcome to Oracle Financial Services Advanced Analytical Applications Infrastructure (OFS AAI) Applications Pack Installation *
*****
Checking Infrastructure installation status ...
Infrastructure installation does not exist. Proceeding with Infrastructure installation ...
Triggering Infrastructure installation ...

Please enter Infrastructure FTP/SFTP password :
*****
OFSAA APPLICATION PACK LICENSE AGREEMENT
*****
* Warning: This Software System is protected by International copyright laws. Unauthorized reproduction or distribution of this Software System, or any portion of it, may result
in severe civil and criminal penalties and will be prosecuted to the maximum extent possible under the Law.*
* Oracle Financial Services Analytical Applications (OFSAA) Application Pack is a group of OFSAA products packaged together in a single installer. Each Application Pack addresses
a specific functional domains via its products that are grouped together. The Oracle Financial Services Analytical Applications Infrastructure (OFS AAI) being the base infrastru
cture for deployment of other OFSAA products/Application Packs, is bundled with each Application Pack. With every Application Pack installation, the OFSAA Infrastructure product
would be checked for and installed if required.*
* Oracle Financial Services Enterprise Modeling (OFS AEM) and Oracle Financial Services Inline Processing Engine (OFS IPE) products are separately licensable products and shoul
d not be enabled unless it has been licensed. Oracle Financial Services Enterprise Modeling (OFS AEM) and Oracle Financial Services Inline Processing Engine (OFS IPE) products
are only part of the Oracle Financial Services Advanced Analytics Infrastructure Pack and specific OFSAA Application Packs that require these advanced analytical features of the
product. Oracle Financial Services Enterprise Modeling (OFS AEM) or Oracle Financial Services Inline Processing Engine (OFS IPE) product gets pre-selected automatically on sel
ecting any of the OFSAA products within a specific Application Pack that require these products to be enabled and configured.*
* Multiple products being grouped together under a Application Pack, mandate installation and configuration of these products by default. However, during the Application Pack in
stallation, based on the products that are being selected, it would get enabled and should be licensed for. It is important to note that products once selected (enabled) cannot
be disabled at a later stage. However, products can only be enabled at any later stage using the OFSAA Infrastructure 'Manage Application Pack License' feature.*
* Enabling a product within a Application Pack automatically implies you agree with this license agreement and the respective terms and conditions.*
*****
Are you accepting the terms and conditions mentioned above? [Y/N]:
y
    
```

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 SYSADMN	Enter the password for the System Administrator.
Please re-enter password for default Infrastructure administrator user SYSADMN	Enter the same password again to confirm its validity.
Please enter password for default Infrastructure authorizer user SYSAUTH	Enter the password for the System Authorizer.
Please enter password for default Infrastructure authorizer user SYSAUTH	Enter the same password again to confirm its validity.

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


```

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.

*****
Welcome to OFS_DM PACK Installation
*****
Starting OFSAA Service...
nohup: appending output to 'nohup.out'
OFSAA Service - OK
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...

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

```

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...

```

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

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

Installation Complete.
*****
CTRL characters removal started ...
CTRL characters removal over ...
Windows executable files removal started ...
Windows executable files removal over ...
We are now in /scratch/ofsaadb/Installations ...
*****
executing "ant"
Buildfile: /scratch/ofsaadb/Installations/DM4/ficweb/build.xml
Trying to override old definition of datatype resources

existstest:
    [echo] Checking for file /scratch/ofsaadb/Installations/DM4/ficweb/OFSAAI80.war existence

creawar:
    [echo] Creating /scratch/ofsaadb/Installations/DM4/ficweb/OFSAAI80.war freshly..
    [war] Building war: /scratch/ofsaadb/Installations/DM4/ficweb/OFSAAI80.war

BUILD SUCCESSFUL
Total time: 38 seconds
OFSAA App Layer Services start-up check started...
Starting startofsaai.sh service...
nohup: appending output to 'nohup.out'
OFSAA Service - OK
Starting icc service...
nohup: appending output to 'nohup.out'
ICC service - OK
Shutting down icc service...
nohup: appending output to 'nohup.out'
Shutting down OFSAA service...
nohup: appending output to 'nohup.out'
OFSAAI App Layer Services check Status: SUCCESSFUL.
OFSAAI DB Layer Services check started...
checking Router service...
Router Service - OK
checking AM service...
AM Service - OK
Checking MessageServer service...
DEBUG: main started.
DEBUG: TraceFileName = /scratch/ofsaadb/Installations/DM4/ficdb/log/msg_trace_file.log
DEBUG: OpenFiles done.
MessageServer Service - OK
OFSAAI DB Layer File Services check Status: SUCCESSFUL.
*****
Installation completed...
*****
$

```

21. On completion of installation, refer the installation log files. For more information, see Verifying the Log Files.
22. Install AAI mandatory 8.0.9.2.0 one off patch 31354852.
23. For DG, log in to [My Oracle Support](#), search for the **33663417** Mandatory Patch in the **Patches & Updates** Tab and download it.

ATTENTION On the 10th of December 2021, Oracle released Security Alert CVE-2021-44228 in response to the disclosure of a new vulnerability

- Verify all the database objects such as view, procedure, and functions must have been compiled without any compilation error.
- Deploy the war file and check the application screen is coming or not.

6 Disclaimer and Acknowledgements

6.1 Disclaimer

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7 Upgrading the OFS DM Application Pack

Refer to the following instructions to download, extract, install, and configure this release.

7.1 Prerequisites

1. The following entry must be done for the OFSAA_SETUP_APPLN_DTLS table in config schema:

APPNAME	APPVERSION	DSNID	SEG_MAP_ID	SEGMENT_CODE	INSTALLED_FLAG	INSTALLED_DATE
DGS	<last_version_installed>	<infodom>	COMMON	<segment_code>	Y	<ANY_DATE>
GL	<last_version_installed>	<infodom>	COMMON	<segment_code>	Y	<ANY_DATE>

NOTE For hybrid upgrade,
 DSNID for DGS would be RDBMS infodom name
 DSNID for GL would be the Hive infodom name.
 Ensure to provide the last version installed and the same infodom and segment code when DGS and GL is installed.

2. For RDBMS upgrade, the base version can be 8.0.6 and above.
3. For Hybrid upgrade, the base version should be 8.0.6.0.0.
4. Execute the following statement in Hive schema before upgrading to 8.0.9:

```
ALTER TABLE fct_ki_grp_map_details REPLACE COLUMNS( n_mis_date_skey
bigint,n_ki_def_key bigint,v_report_cd string,v_schedule_cd
string,v_cell_id
string,v_qry_string string,v_kri_qry_ref_key string,n_ki_type
int,v_mdrm_name
string,n_ki_group_skey bigint));
```

7.2 Upgrading the OFS DM Application Pack

1. Download the OFS DM Application Pack v8.0.9.0.0 archive file and copy it to your OFSAA server in the **Binary** mode. For more information on downloading and copying the OFS DM Application Pack v8.0.9.0.0 installer, see [Downloading and Copying the OFS DM Applications Pack Installer](#) section.

NOTE The archive files are different for every operating system like AIX, Solaris, and RHEL/Oracle Linux.

2. Log in to the OFSAA Server.
3. Shut down all the OFSAAI Services. For more information, see the *Start/Stop Infrastructure Services* section in [Starting/Stopping Infrastructure Services](#).
4. For DG, log in to [My Oracle Support](#), search for the **33663417** Mandatory Patch in the **Patches & Updates** Tab and download it.

ATTENTION On the 10th of December 2021, Oracle released Security Alert CVE-2021-44228 in response to the disclosure of a new vulnerability affecting Apache Log4J prior to version 2.15. The application of the **33663417** Mandatory Patch fixes the issue.

For details, see the My Oracle Support Doc ID [2827801.1](#).

5. Execute the command:

```
chmod -R 750 $FIC_HOME
```

6. If you have Unzip utility, skip to the next step. Download the Unzip utility (OS specific) and copy it in **Binary** mode to the directory that is included in your PATH variable, typically **\$HOME** path or directory in which you have copied the 8.0.9.0.0 installer.
 - 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.

- Give EXECUTE permission to the file using the command:


```
chmod 751 OFS_DM_80900_<OperatingSystem>.zip
```
7. Extract the contents of the Oracle Financial Services Data Management Application Pack 8.0.9.0.0 installer archive file, using the command:


```
unzip_<os> <name of the file to be unzipped>
```
 8. Give the EXECUTE permission for the *OFS_DM_PACK* folder using the command:


```
chmod -R 775 OFS_DM_PACK
```
 9. For **RDBMS** Upgrade,
 10. Before triggering the installation, you must update the configuration file **Silent.props**.
 11. Create a copy of the Silent.template file present in the installer **OFS_DM_PACK/OFS_DM/conf** and rename it as Silent.props.

NOTE When you are entering the values, the names must be same as the ones given in the previous full installation process. Refer to the Silent Mode Installation section.

12. Edit the `OFS_DM_PACK/conf/OFS_DM_PACK.xml` to enable the product licenses. Update the attribute `ENABLE=YES/NO` in `OFS_DM_pack.xml` for licensing the App in the pack.

NOTE Prior to installing the DM Application Pack in SILENT mode, refer to the [OFS_DM_PACK.xml](#) section in Appendix: DM Pack XML Files.

NOTE For doing fresh install of DGS 8.0.9 along with GL 8.0.9 upgrade, ensure to execute the schema creator once before triggering the upgrade. This is applicable in cases where DGS is not there in the base setup and only GL exists in the setup. It will help to install DGS as a fresh application while upgrading GL to 8.0.9.

13. For **Hybrid** Upgrade:
14. `OFS_DM_PACK.xml` to be renamed as backup and `OFS_DM_PACK.xml.HYBRID.template` to be renamed as `OFS_DM_PACK.xml`.
15. Rename `Silent.template.HYBRID.template` to `Silent.props`.
16. Rename `default.properties` to `default.properties.bkp`.
17. Rename `default.properties.HYBRID.template` to `default.properties`.
18. Execute `setup.sh` file using the following command:


```
./setup.sh SILENT
```
19. Verify if the release is applied successfully by checking the log file generated in the installation folder. You can ignore `ORA-00001`, `ORA-00955`, `ORA-02260`, and `ORA-01430` errors in the log file. In case of any other errors, contact Oracle Support.
20. For more information on securing your OFSAA Infrastructure, refer to the *OFSAA Security Guide* in [OHC Documentation Library](#).
21. After successful installation, follow these steps:
 - a. Log in to the web application server and clear the application cache. Navigate to the following path depending on the configured web application server and delete the files.

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>/<auto
generated folder>/jsp_servlet
```

In case of WebLogic version 12.2.x.x, delete the folder named ".WL_internal" present in the path <WebLogic installation location>/user_projects/domains/< Domain name >/applications/<context_name>.ear/META-INF/", if it exists.

WebSphere

```
<Websphere installation folder>/AppServer/profiles/<Profile
name>/temp/<Node name>/server1/<Application name>/<.war file name>
```

22. Execute the script in atomic schema, before re-triggering installation drop FCT_KI_GRP_ASSMENT_STATUS_808 table in atomic schema and re-trigger the installation.
23. Add unmask 0027 in the .profile of the UNIX account which manages the WEB server to ensure restricted access permissions.
24. Restart all the OFSAAI services. For more information, refer to the *Start/Stop Infrastructure Services* section in [Appendix D](#).
25. Before generating the application EAR/WAR file and deploying the application onto configured Tomcat, see [Deploying WAR Files on Tomcat](#).
26. Generate the application EAR/WAR file and redeploy the application onto your configured web application server. For more information on *generating and deploying EAR / WAR file*, refer [Appendix C](#) section.
27. *It is mandatory to upgrade or copy struts 2 libraries, refer to [2440332.1](#) for information.*
28. *Install AAI mandatory 8.0.9.2.0 one off patch 31354852.*
29. For enabling Data Redaction, see **Error! Reference source not found.**
30. Resave all GL Hierarchies starting from HGL001 to HGL013.

8 Post Installation Configuration

On successful installation of the Oracle Financial Services Data Management Application Pack, perform the post installation steps mentioned as follows.

NOTE

In case of Hybrid,

- For post install script execution, refer the file [post_install_table_list.sql](#).

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, Tomcat). For more information, see [Clearing Application Cache](#) section.
- It is recommended to save the batch execution rights (for GL Recon Admin and DGS Admin) in the Batch Execution Rights screen. The runs can be viewed under "Batch Execution" screens.

8.1 Patch OFSAA Infrastructure Installation

Oracle strongly recommends installing the latest available patch set to be up-to-date with the various releases of the OFSAA product.

For DG, apply the following mandatory patch:

- 33663417

ATTENTION

On the 10th of December 2021, Oracle released Security Alert CVE-2021-44228 in response to the disclosure of a new vulnerability affecting Apache Log4J prior to version 2.15. The application of the **33663417** Mandatory Patch fixes the issue.

For details, see the My Oracle Support Doc ID [2827801.1](#).

8.2 Configuring Data Management Application

8.2.1 Configuring Resource Reference

Configure the resource reference in the Web Application Server configured for OFSAA Applications. See [Appendix B](#) for details on configuring the resource reference in WebSphere, WebLogic, and Tomcat Application Servers.

8.2.2 Starting OFSAA Infrastructure Services

Start the OFSAA Infrastructure Services prior to deployment or accessing the OFSAA Applications. See the [Appendix D](#) for details on Start/ Stop OFSAA Services.

8.2.3 Adding 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, perform the following 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 following query:

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

8.2.4 Creating and Deploying 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, perform the following steps:

1. Navigate to `FICWEBHOME`
2. Run `ant.sh`
3. For identifying the location of the generated web archive file and for generating and deploying the web archive file at any time later, see [Appendix C](#)

NOTE See the Oracle Financial Services Forms Manager User Guide for instructions on Creating and Deploying the Forms Manager Web Archive

8.2.5 Accessing the OFSAA Application

Prior to accessing the OFSAA application ensure the [Internet Explorer Settings](#) are configured.

Refer [Appendix E](#) for details on accessing the OFSAA Application on successful deployment of the application web archive.

8.2.6 Performing Post Deployment Configurations

Prior to using the OFSAA Application perform the Post Deployment Configuration steps detailed in [Appendix F](#).

8.2.7 Changing Batch Ownership

All the seeded batches are created with SYSADMN as the owner by default. This needs to be updated with username of the user who is responsible for maintenance of the batches. This can be done by executing the below procedure in the config schema:

```
begin
AAI_OBJECT_ADMIN.TRANSFER_BATCH_OWNERSHIP('fromUser','toUser','infodom;
end;
OR
begin
AAI_OBJECT_ADMIN.TRANSFER_BATCH_OWNERSHIP('fromuser','touser');
end;
```

where “FromUser” indicates the user who currently owns the batch and “toUser” indicates the user to which ownership needs to be transferred to. “Infodom” is an optional parameter.

8.3 Configuring DGS

To configure DGS, perform the following steps for the post-installation configuration of Data Management Application Pack.

NOTE Before configuring DGS, ensure to install OFS FSDF 8.0.9.2.0.

8.3.1 Executing SQL Loader

To execute the SQL Loader, perform these steps:

1. Navigate to the following path to find the SQL loader file:
`<context>/ficweb/webroot/sqlLoaderFiles`
2. Navigate to the following path to find the `sqlloader.sh` file.
`<context>/ficdb/bin`
3. To execute the `sqlloader.sh`, open the putty session and enter the following command:
`./sqlLoader.sh <INFODOM> <COMPLETE PATH OF sqlLoaderFiles folder>`

NOTE Before loading the data into `FSI_RR_CTL_MAP` ensure that the following Index(s) are stable or in valid state.

- `FSI_RR_CTL_UDX`
- `PK_FSI_RR_CTL_MAP`

8.3.2 Executing SQL Loader for Custom Data Quality Checks

To load the Custom Data Quality Check Data to `FSI_RR_CTL_MAP` Using SQL Loader, perform these steps:

1. Navigate to OFSAA Installed path, `<<FIC_HOME>>/ficweb/webroot/sqlLoaderFiles`, and download the CSV file `fsi_rr_ctl_map.csv` to a local system.
2. Delete the existing rows in the `fsi_rr_ctl_map.csv` file and insert new rows or records for custom Data Quality Checks defined in the system. Ensure that the `N_CONTROL_KEY` is always 99999 and the rest of the columns must be populated according to the Data Quality and MDRM mappings.
3. Copy the updated `fsi_rr_ctl_map.csv` to, `<<FIC_HOME>>/ficweb/webroot/sqlLoaderFiles` folder.
4. Navigate to the following path to find the `sqlloader.sh` file
`<context>/ficdb/bin`
5. To execute the `sqlloader.sh`, open the putty session and enter the following command:
`./sqlLoader.sh <INFODOM> <COMPLETE PATH OF sqlLoaderFiles folder>`

Example: `./sqlLoader.sh DGSCINFO /scratch/ofsaadb/OFSAA/ficweb/webroot/sqlLoaderFiles`

8.3.3 Creating Application Specific Users

Create application-specific users, and map them to the respective user groups available in the application. For details see section [Mapping Application Users to User Groups](#). Whenever the user to user group mapping is created or modified, execute the batch <INFODOM>_USER_ROLES.

NOTE Do not map the group DGREPANGRP and DGREPMANGRP while mapping the group to the user.

8.3.4 Resaving Derived Entities

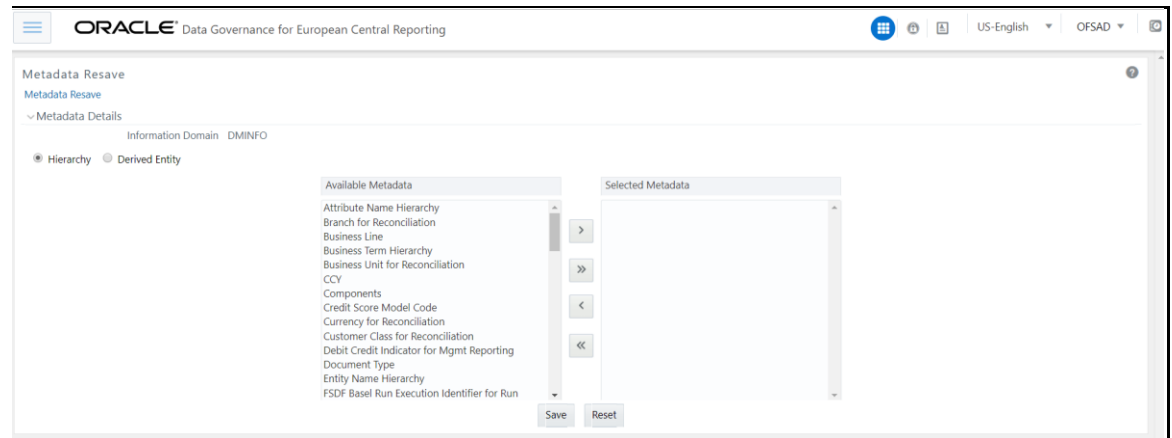
Resave the following derived entities:

- DEATNAME: DE Attribute Name
- DE Business Line
- DEGLSTERM: DE Business Term
- DE Components
- DE Document Type
- DEENNAME: DE Entity Name
- DE Frequency
- DE KI Frequency
- DE Location
- DE Measure Scale
- DE Process
- DE Risk Categories
- DE User List
- DE_GROUP
- PMREPLINK

8.3.5 Resaving the Hierarchies

To resave the hierarchies, follow these steps:

1. Resave the following hierarchies:
 - HDGENNAM: Entity Name Hierarchy
 - HDGATNAM: Attribute Name Hierarchy
 - HDGGLTRM: Business Term Hierarchy
 - Reports Hierarchy
2. Save the hierarchies in the following path **Common Tasks > Unified Analytical Metadata > Business Metadata Management > Save Metadata.**



8.3.6 Compiling the Objects

Compile the backend objects such as functions, procedures and packages which are related to DGS. Execute the following statement after replacing Atomic schema name.

```
begin
DBMS_UTILITY.compile_schema(schema => '##Atomic_schema_name##');
end;
```

8.3.7 Modifying Server.xml for Tomcat 8.5

For Tomcat 8.5, modify Server.xml with the following content and restart the servers:

```
<Connector port="##Port_number##" protocol="HTTP/1.1"
connectionTimeout="20000"
redirectPort="8443" relaxedQueryChars="{ } [ ] \ ` ~" relaxedPathChars="{ } [ ] \ ` ~" />
```

8.3.8 Enabling Metadata Browser

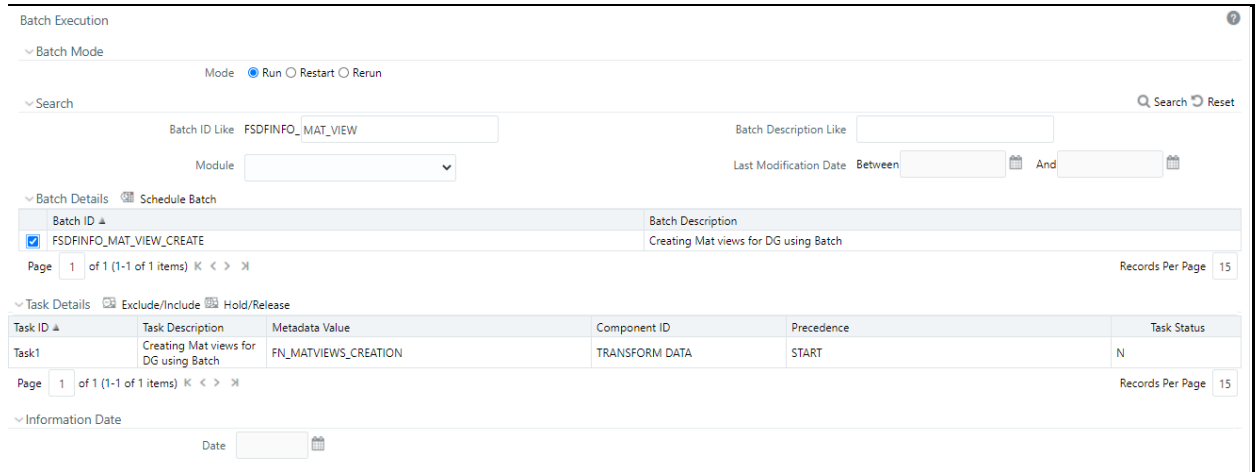
Execute the following as part of post installation step atomic schema:

```
declare
result number;
begin
result:=fn_mdb_t2t_view;
dbms_output.put_line(result);
exception
when others then
dbms_output.put_line(SQLERRM);
end;
```

8.3.9 Materialized View Creation Batch

To materialize the view creation batch, follow these steps:

1. From the **Financial Services Data Foundation** window navigate to **Operations** and select **Batch Execution**.
2. Execute the batch **##INFODOM##_MAT_VIEW_CREATE** on sysdate. This batch creates the materialized views needed.

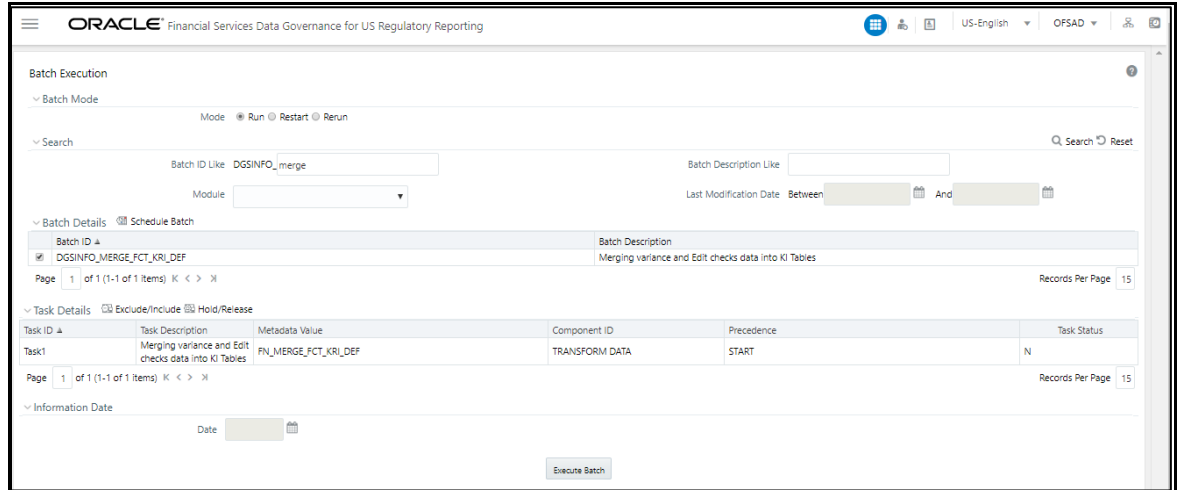


8.3.10 Upgrading Key Indicators

NOTE The following batch ensures to upgrade the Key Indicators and merges them with the existing ones.

To upgrade the Key Indicators, follow these steps:

1. From the **Financial Services Data Foundation** window navigate to **Operations** and select **Batch Execution**.
2. Execute the Batch Name as **MERGE_FCT_KRI_DEF**. This batch is used to merge the variance and edit checks into the Key Indicators.
3. Enter the current system date as the **MISDATE** for this batch.

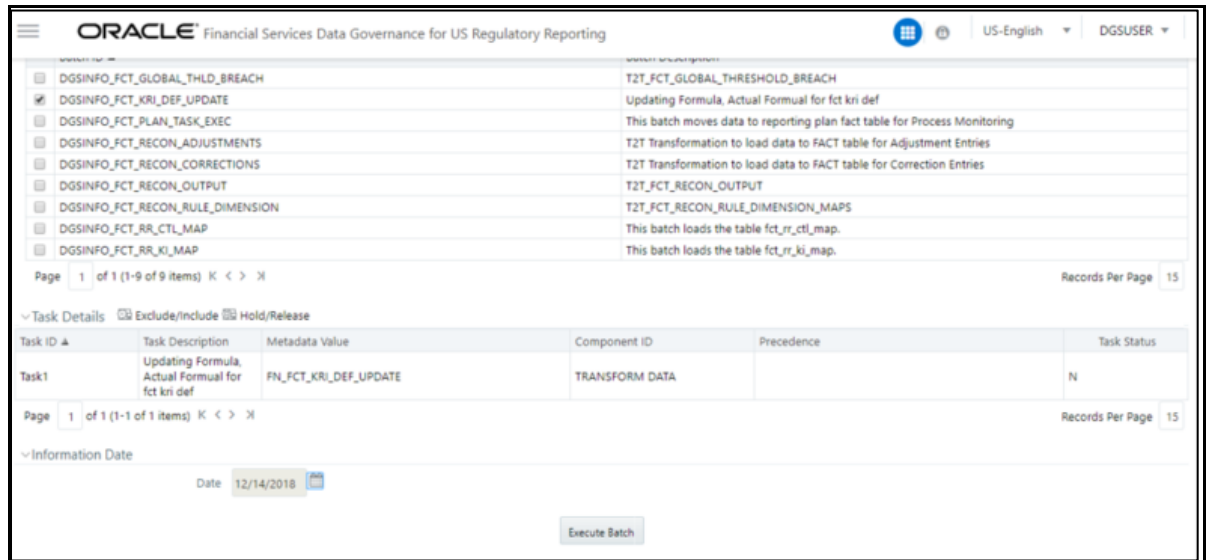


8.3.11 Updating Measures for the KI's that are Packaged

To update Measures for Key Indicators, follow these steps:

1. From the **Financial Services Data Foundation** window navigate to **Operations** and select **Batch Execution**.
2. Run the batch **##INFODOM##_FCT_KRI_DEF_UPDATE** on sysdate. This batch is used to update the measure name, map key, and measure key for the Key Indicators available in the system.
3. Enter the current system date as the MISDATE for this batch.

Figure 1: Batch Execution



8.3.12 Configuring Process Monitoring Runs and Tasks for Data Management Application Pack

As a pre-requisite, before configuring the runs and tasks, ensure the following:

- Oracle Financial Services Regulatory Reporting for US Federal Reserve or Oracle Financial Services Regulatory Reporting Solution for US Treasury or Oracle Financial Services Regulatory Reporting for European Banking Authority (OFS REG REP USFED 8.0.9.5.0 or OFS_REG_REP_USTR 8.0.7.0.0 or OFS REG REP EBA 8.0.8.0.0) is installed and configured.
- MDB Publish is performed for Oracle Financial Services Regulatory Reporting for US Federal Reserve 8.0.9.5.0.

NOTE

See Oracle Financial Services Regulatory Reporting for US Federal Reserve or Oracle Financial Services Regulatory Reporting Solution for US Treasury or Oracle Financial Services Regulatory Reporting for European Banking Authority Installation and Configuration on [OHC](#) for more details.

As part of configurations perform the following steps to load the Process Monitoring-related plans, runs, and tasks associated with OFS REG REP USFED or OFS_REG_REP_USTR or OFS REG REP EBA install.

1. Login to OFSAAI using a user having permissions for running batches.
2. From the **Financial Services Data Foundation** window navigate to **Operations** and select **Batch Execution**.

The screenshot displays the Oracle Data Governance for European Central Reporting interface. The top navigation bar shows the Oracle logo and the application name. Below the navigation bar, there are several tabs and a search bar. The main content area is titled "Batch Execution" and contains a table of batch details. The table has two columns: "Batch ID" and "Batch Description". The table lists various batch IDs and their corresponding descriptions, such as "DMINFO_ADJUSTMENT_BATCH" with description "ADJUSTMENT_BATCH" and "DMINFO_ALM" with description "Data Quality batch for ALM tables". The table is paginated, showing "Page 1 of 10 (1-15 of 142 items)".

Batch ID	Batch Description
DMINFO_ADJUSTMENT_BATCH	ADJUSTMENT_BATCH
DMINFO_ALM	Data Quality batch for ALM tables
DMINFO_BULK_KI_ASSESSMENT	This batch is to do assessment for Bulk KI for a given date.
DMINFO_CAMPAIN	Data Quality batch for CAMPAIGN tables
DMINFO_COLLATERAL	Data Quality batch for Collateral tables
DMINFO_COLLECTION_AND_RECOVERY	Data Quality batch for Collection and Recovery tables
DMINFO_CREATE_CONTROL	Create Controls
DMINFO_CREATE_CONTROL_ASSESSMENT	This Batch is used to create Assessments for the Controls
DMINFO_CREATE_OP_CONTROLS	Batch to create Operational Controls
DMINFO_CRM	Data Quality batch for CRM tables
DMINFO_CUSTOMER	Data Quality batch for Customer tables
DMINFO_DATA_FOUNDATION_SCD	Data Foundation SCD for Loading Dimension Tables
DMINFO_DATA_FOUNDATION_SCD_MLS	Data Foundation SCD for Multi Language Support Dimensions
DMINFO_DATA_REDACTION	Batch for Data Redaction
DMINFO_DE_FSI_MAP_POPULATE	This Batch Resaves the Derived Entity and them populated the FSI MAP tables.

3. Select the **MIS Date** and execute the batch **Process_Monitoring_Batch**.
4. Check and ensure that the batch is executed successfully.
5. Navigate to the **Process Monitoring** menu under Data Governance application and ensure that the Plans, Runs, and Tasks are displayed for OFS REG REP USFED, OFS REG REP EBA.

ORACLE Data Governance for US Regulatory Reporting

OFSAAD | Thursday, March 16, 2017 | OFSAA | About | Logout

Inbox | Standards & Policies | Controls | Key Indicators | **Process Monitoring** | Issues & Actions | Admin

Plans

Search | Clear | Go

ID ? Name ?

Plans (11)

Create Plan | Delete Plan | Export

ID	Name	Type	Status	Last Modified
141325	Annual regulatory report submission plan	Regulatory Report Submission	Open	21-Sep-2016
141326	Monthly regulatory report submission plan	Regulatory Report Submission	Open	21-Sep-2016
141329	Weekly regulatory report submission plan	Regulatory Report Submission	Open	21-Sep-2016
141326	Daily regulatory report submission plan	Regulatory Report Submission	Open	23-Jun-2016
141327	Quarterly regulatory report submission plan	Regulatory Report Submission	Open	23-Jun-2016

Task Definition

Close

Task Definition

Task ID: Task1

Description: Bulk KI Assessment

Components: TRANSFORM DATA

Dynamic Parameters List

Property	Value
Datastore Type	EDW
Datastore Name	DMINFO
Primary IP For Runtime Processes	10.184.156.31
Rule Name	FN_DGS_BULK_KI_ASSMNT
Parameter List	7

Audit Panel

Created By: OFSAD

Creation Date: 24 may 2016 09:30:35

Last modified by: OFSAD

Last Modification Date: 20 aug 2018 09:49:10

8.3.13 Updating DGS Configuration

To update the DGS configuration with the relevant user for the modules Issue, Action, and Control, update the n_lookup_value column in the table fsi_dgs_configuration against the following v_lookup_code with the respective users.

- ISSUE_CREATOR
- CREATOR
- ISSUE_OWNER
- ACTION_CREATOR
- OWNER

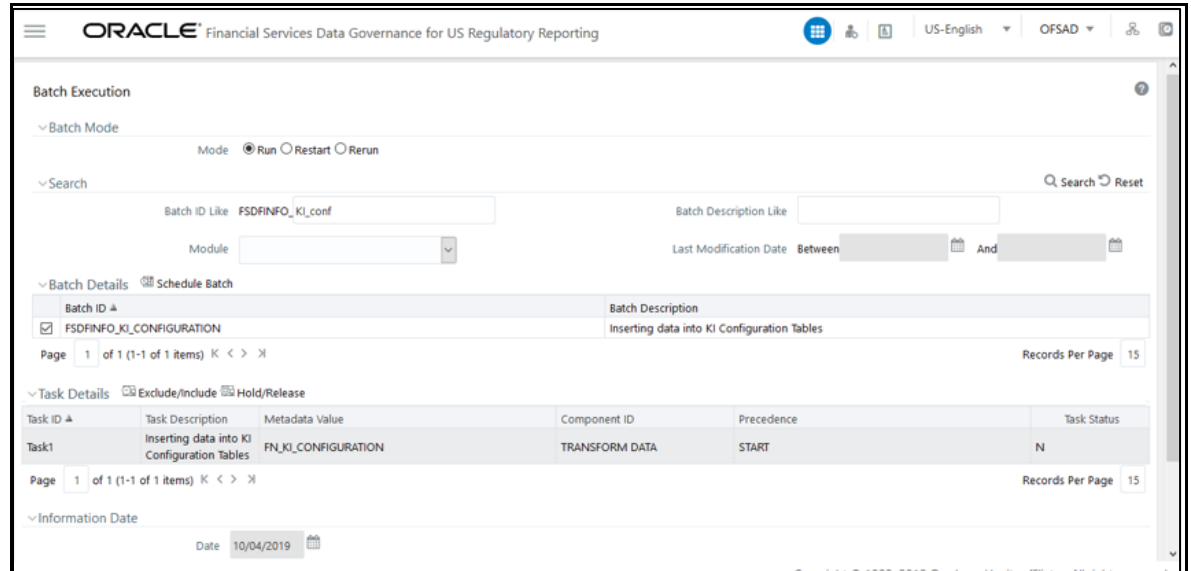
8.3.14 Key Indicator Configuration

From **Financial Services Data Foundation** window navigate to **Operations** and select **Batch Execution**. Run the batch **##INFODOM##_KI_CONFIGURATION**. This batch is used to update the

Actual Formula for the key indicator. This batch generates the report, schedule, and cells required for Key Indicator assessment configurations.

From the **Financial Services Data Governance for US Regulatory Reporting** window navigate to **Administration** and select **Key Indicator Assessment Configuration**. Here, you can select and configure the report, schedule, and cell combinations.

For more information on Key Indicator Assessment Configurations, see the *Defining the Key Indicators for Monitoring* section in the [OFS DGS US Regulatory Reporting 8.0.9.0.0 User Guide](#).



8.3.15 Create Issue Link to Open in Supported Browsers in OBIEE

To create an issue link to open in supported browsers from Variance Analysis Dashboard, perform the following steps:

1. Update the web.xml with the following tag.
 - a. Go to the path where web.xml is available, and then add the highlighted tag in the following section with the DG application URL and the OBIEE URL.

```
<filter>
  <filter-name>FilterServlet</filter-name>
  <filter-class>com.iflex.fic.filters.FilterServlet</filter-class>
  <init-param>
    <param-name>AllowHosts</param-name>
    <param-value>##OFS AAI##/##OBIEE URL##</param-value>
  </init-param>
</filter>
```

*Ensure to replace ##OFS AAI_URL##/ ##OBIEE_URL## with respective URL's upto Port Number.

2. After updating, restart the servers for the change to be reflected.

8.3.16 Performance-related Configuration Details on Account Mapper Batch

Parallel Hint for query optimization in KI Mapper can be configurable by setting up N_LOOKUP_VALUE in FSI_DGS_CONFIGURATION against the following column values(V_MODULE_NAME='MAPPER', V_LOOKUP_CODE='PARALLEL_HINT'). The default value set for parallel hint is /*+ PARALLEL(4)*/.

V_MODULE_NAME	V_LOOKUP_CODE	N_LOOKUP_VALUE	V_LOOKUP_CODE_DESC
MAPPER	PARALLEL_HINT	/*+ PARALLEL(4)*/	Parallel hint for query optimization for KI Mapper

Parallel Hint for Gather Stats optimization in KI Mapper can be configurable by setting up N_LOOKUP_VALUE in FSI_DGS_CONFIGURATION against the following column values(V_MODULE_NAME='MAPPER', V_LOOKUP_CODE='GATHER_STATS_PARALLEL_HINT'). The default value set for the parallel hint is 8.

V_MODULE_NAME	V_LOOKUP_CODE	N_LOOKUP_VALUE	V_LOOKUP_CODE_DESC
MAPPER	GATHER_STATS_PARALLEL_HINT	8	Parallel hint for Gather Stats optimization for KI Mapper

NOTE

- All the mapper tables like FSI_KICOND_ACCNT_MAP, FSI_KICOND_REPLINE_MAP, FSI_KICOND_ACCNT_WRITEOFF_MAP, FSI_KICOND_ACCNT_RECOVERY_MAP, FSI_KI_REG_FUND_LEND_EXP_MAP and FSI_KICOND_PARTY_MAP are created out of the box as non-partitioned table with index, if later they are converted into Partitioned table then the associate Index should also be recreated as a Local index else Truncate Reload partition will make the index as unstable.
- The partition created on the mapper table must be range partition type.

8.3.17 Rerun Account Mapper Batch

Truncate partitioning and sub partitioning flag are enabled to rerun the account mapper batch.

TRUNCATE_PARTITION_FLAG must be marked as Y when RUN_SKEY wise partition is used.

TRUNCATE_SUBPARTITION_FLAG must be marked as Y when truncate run skey wise sub-partition is used.

V_MODULE_NAME	V_LOOKUP_CODE	N_LOOKUP_VALUE	V_LOOKUP_CODE_DESC
MAPPER	TRUNCATE_PARTITION_FLAG	Y	Flag to truncate run key wise partition
MAPPER	TRUNCATE_SUBPARTITION_FLAG	Y	Flag to truncate run key wise sub-partition

NOTE

Before rerunning the mapper for the Run Skey, MISDATE, and ENTITY Skey, if RUNSKEY level partitioning and sub partitioning are not defined then the records in the following tables must be manually truncated for the same Run Skey, MISDATE, and ENTITY Skey.


- fsi_kicond_accnt_map
- fsi_kicond_repline_map
- fsi_kicond_accnt_writeoff_map
- fsi_kicond_accnt_recovery_map

8.3.18 Integrating AgileREPORTER with Data Governance Variance Analysis

AgileREPORTER can be integrated with Data Governance Variance Analysis reports from the AgileREPORTER - Dashboard and Analysis AgileREPORTER - Module Integration features.

8.3.18.1 AgileREPORTER - Dashboard Integration

To establish the connection in AgileREPORTER – Dashboard, follow these steps:

1. Log in to **AgileREPORTER** with valid credentials.
2. Navigate to **Settings** .
3. Select **Administration** and then select **Data Warehouse Integration**.
4. In the **Data Warehouse Integration** window, click **Add**.
5. In the **Add Contextual Button** dialog box, enter the following details:
 - a. **Name:** OFSAA Current Analysis
 - b. **Linked to:** AgileREPORTER
 - c. **URL Pattern:** Enter the following URL in the **URL Pattern** text box:

```
###OBIEEURL###/analytics/saw.dll?dashboard&PortalPath=%2Fshared%2FDGS%2FAccount%20Level%20Reports%2FAccount%2FVariance%20Analysis%20Summary%20AR&page=Variance%20Current%20Analysis%20AR&Options=rmf&Action=Navigate&P0=7&P1=eq&P2=ifnull(%22Report%20Schedule%20Reporting%20Element%22.%22Cell%20Id%20Bireport%22%2C%22Report%20Schedule%20Reporting%20Element%22.%22Reporting%20Element%22)&P3=${cellId}&P4=eq&P5=%22Report%20Schedule%20Reporting%20Element%22.%22AR%20Form%20Code%22&P6=${formCode}&P7=eq&P8=%22Dim%20Dates%22.%22Dat
```

e%20Skey%22&P9=\${referenceDate}&P10=eq&P11=%22Report%20Schedule%20Reportin
g%20Element%22.%22V_ENTITY_CODE%22&P12=\${entityCode}


NOTE

Ensure to replace the place holder **###OBIEEURL###** with OBIEE Dashboard URL up to the port number.

- d. **Description:** OFSAA Current Analysis
 - e. **Pick an icon:** Select any icon.
6. Click **Add**. The **OBIEE URL Pattern** link is now enabled in the **Dashboard** tab.

8.3.18.2 AgileREPORTER - Analysis Module Integration

To establish the connection in AgileREPORTER – Analysis Module Integration, follow these steps:

1. Log in to **AgileREPORTER** with valid credentials.
2. Navigate to **Settings** .
3. Select **Administration** and then select **Data Warehouse Integration**.
4. In the **Data Warehouse Integration** window, click **Add**.
5. In the **Add Contextual Button** dialog box enter the following details:
 - a. **Name:** OFSAA Variance Analysis
 - b. **Linked to:** Analysis Module
 - c. **URL Pattern:** Enter the following URL in the **URL Pattern** text box:

```
###OBIEEURL###/analytics/saw.dll?dashboard&PortalPath=%2Fshared%2FDGS%2FAccount%20Level%20Reports%2FAccount%2FVariance%20Analysis%20Summary%20AR&page=Variance%20Analysis%20AR&Options=rmf&Action=Navigate&P0=7&P1=eq&P2=ifnull(%22Report%20Schedule%20Reporting%20Element%22.%22Cell%20Id%20Bireport%22%2C%22Report%20Schedule%20Reporting%20Element%22.%22Reporting%20Element%22)&P3={cellId}&P4=eq&P5=%22Report%20Schedule%20Reporting%20Element%22.%22AR%20Form%20Code%22&P6=${formCode}&P7=eq&P8=%22Dim%20Dates%22.%22Date%20Skey%22&P9=${referenceDate}&P10=eq&P11=%22Report%20Schedule%20Reporting%20Element%22.%22V_ENTITY_CODE%22&P12=${entityCode}&P13=eq&P14=%22Dim%20Dates%22.%22Date%20Skey%20Prev%22&P15=${prv_referenceDate}
```

NOTE

Ensure to replace the place holder **###OBIEEURL###** with OBIEE Dashboard URL up to the port number.

- d. **Description:** OFSAA Variance Analysis
 - e. **Pick an icon:** Select any icon.
6. Click **Add**. The **OBIEE URL Pattern** link is now enabled in the **Analysis** tab.

8.4 Configuring GL Hive

8.4.1 Livy Configuration

Populate the AAI_DMT_DB_CLUSTER_PROPERTY table in the config schema to point to the livy url against all the infodoms being used. Duplicate the entries for each infodom.

V_DB_CLUSTER_ID	V_PROPERTY_NAME	V_PROPERTY_VALUE
<INFODOMNAME>	LIVY_AUTH_TYPE	DEFAULT
<INFODOMNAME>	LIVY_SERVICE_URL	<http://ofss222xxx:8998>

8.4.2 Hive Configuration

In case of Hybrid deployment, the following are the Hive configurations:

- Copy hive-site.xml from hive conf directory to SPARK2 conf directory.
- For example.

```
cp /etc/hive/conf.cloudera.hive/hive-site.xml /etc/spark2/conf.cloudera.spark2_on_yarn
```

- Edit the file to have the following entry in SPARK2 conf.

In Hive conf	In spark conf
<pre><property> <name>hive.metastore.warehouse.dir</name> <value>/user/hive/warehouse</value> </property></pre>	<pre><property> <name>spark.sql.warehouse.dir</name> <value>/user/hive/warehouse</value> </property></pre>

NOTE

For additional information please refer the AAI Installation guide [OHC](#).

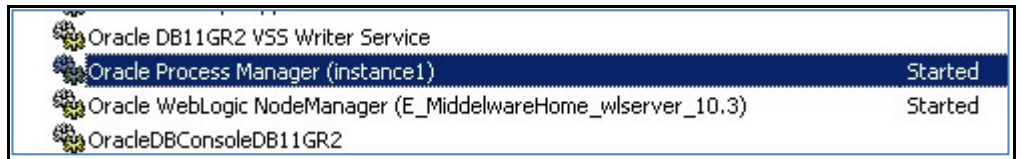
9 Oracle Reconciliation Framework Configuration

9.1 Configuring Reconciliation Framework Analytics v8.0.9.0.0 Dashboards and Reports after OBIEE installation (Server)

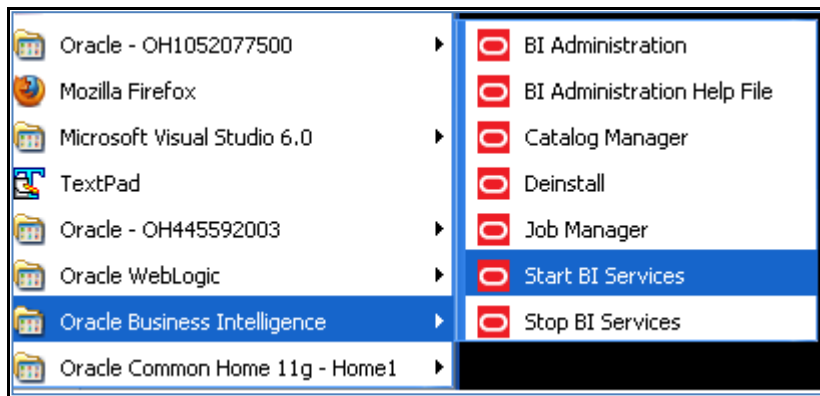
Following steps are to be followed for configuring Reconciliation Framework Analytics v8.0.9.0.0 Dashboards and Reports after OBIEE installation (Server):

1. Preliminary Installation of Software
 - a. Make sure Oracle Business Intelligence (Version 11.1.1.9.0) installation is completed and available.
 - b. If the OBIEE is installed in other than Windows environment, make sure that a standalone OBIEE Client is installed in a Windows environment.
2. Modify Repository Connection Pool Settings
 - a. For Windows Server,
 - i. For OBIEE 11.1.1.9.0, copy the Repository file from the \$FIC_HOME/GLBI and place it in the Repository folder where OBIEE is installed.
 - ii. i.e.<OBIEE Install Folder>/instances/instance1/bifoundation/OracleBIServerComponent/coreapplication_obis1/repository.
 - iii. Select Start > Programs > Oracle Business Intelligence > Administration.
 - iv. Select File > Open > Offline.
 - v. Locate the OFS GL 8.0.rpd and open.
 - vi. Provide Repository password. The Repository password is 'weblogic123'. Set the Connection Pool Properties
 - vii. In the "Physical" layer, under Database object double-click on the "Connection Pool" to update its properties.
 - viii. In the 'General' tab, edit / check the following entries:
 - ix. Call Interface: Default (OCI 10g/11g)
 - x. Update Data source name as give in the below example:
 - xi. For example:
(DESCRIPTION=(ADDRESS_LIST=(ADDRESS=(PROTOCOL=TCP)(HOST=<Database IP Address>)(PORT=<Port no>)))(CONNECT_DATA=(SID=<Database name>)))
 - xii. Enter Database Schema user name in the User Name field.
 - xiii. Enter Database Schema password in the Password field.
 - xiv. Click 'OK' to close the window and click 'Save' to save the RPD file.
 - xv. Click 'No' for the Global Consistency Message.
 - xvi. Close the RPD file (File / Exit).

- b.** For Other Servers
 - i.** Copy the Repository file from the \$FIC_HOME/GLBI and place it anywhere in the local Windows system.
 - ii.** Open the BI Administration tool in the windows environment.
 - iii.** Select Start > Programs > Oracle Business Intelligence Enterprise Edition Plus Client> Administration.
 - iv.** Select File > Open > Offline.
 - v.** Locate the file OFS GL 8.0.rpd and open.
 - vi.** Provide Repository password. The Repository password is 'weblogic123'
- c.** Set the Connection Pool Properties as described above 6-14.
- 3.** Starting Node manager and WebLogic Servers.
- 4.** Check if the Node Manager is running or not. If not then follow the below steps.
 - a.** For Windows Server
 - i.** Navigate to the services.
 - ii.** Start the Service Oracle Weblogic NodeManager.



- Alternatively you can start Node Manager and all the managed services from the All Programs - > Oracle Business Intelligence-> Start BI Services option in the start menu.



- b.** For Other Servers
 - i.** Navigate to < OBIEE Install Folder >/ wlserver_10.3/server/bin folder.
 - ii.** Run the following command: 'nohup ./startNodeManager.sh &'
- 5.** Check if the Weblogic AdminServer if running or not. If not then follow the below steps.
 - a.** For Windows Server

- iii. Navigate to < OBIEE Install Folder >/user_projects/domains/bifoundation_domain/bin
- iv. Run the following command: startWebLogic.cmd

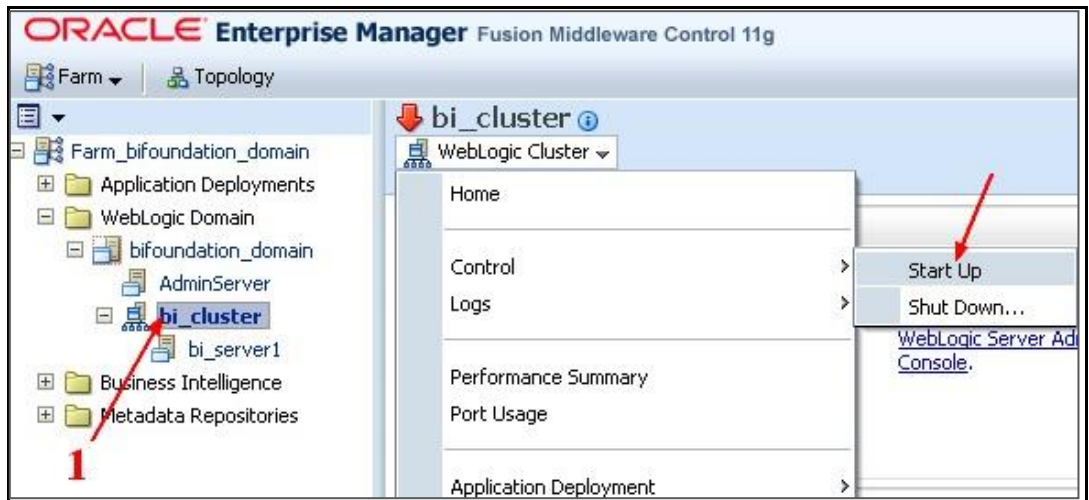
NOTE The Weblogic Admin Server would have been already started if you had started through the, All Programs -> Oracle Business Intelligence-> Start BI Services option as stated above.

- b. For Other Servers
 - i. Navigate to < OBIEE Install Folder >/user_projects/domains/bifoundation_domain/bin
 - ii. Run the following command: './startWebLogic.sh'
 - iii. Enter the weblogic credential defined during the installation.
 - iv. Bringing up this service may take a few minutes depending on your environment, wait until the command line stops scrolling and indicates server in RUNNING mode.

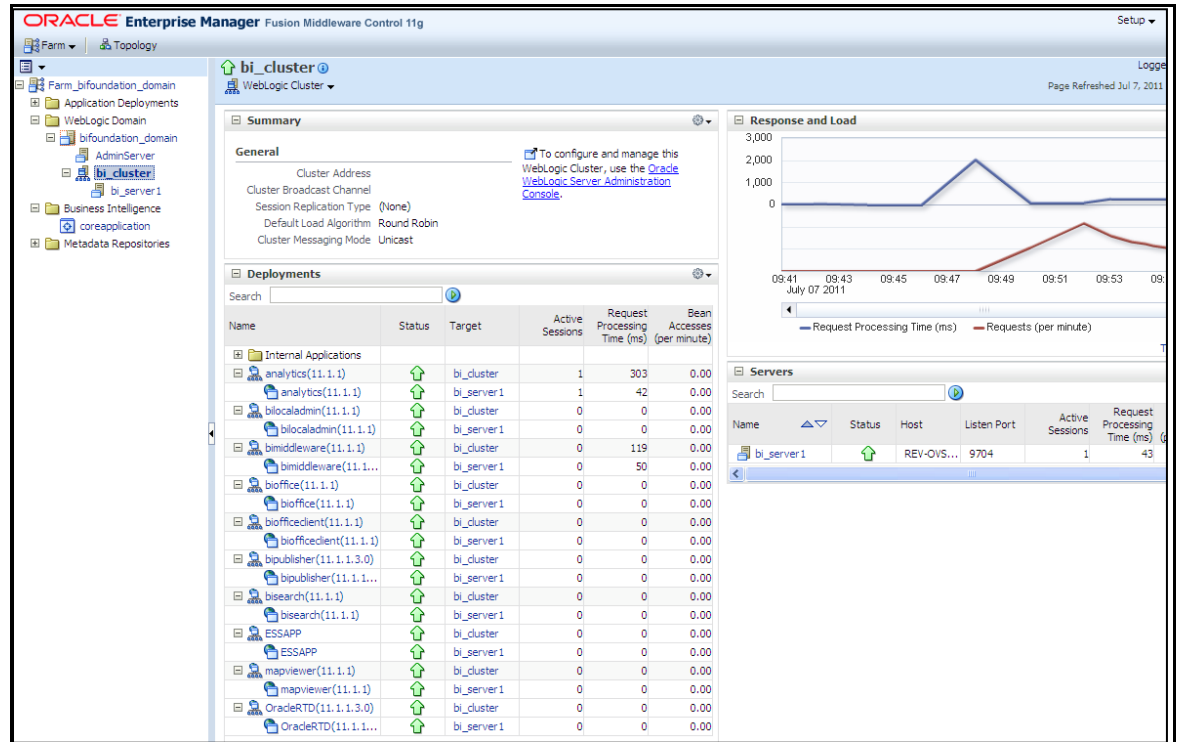
```
<Aug 25, 2010 10:32:06 AM CEST> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RUNNING>
<Aug 25, 2010 10:32:06 AM CEST> <Notice> <WebLogicServer> <BEA-000360> <Server started in RUNNING mode>
```

6. Start Weblogic Managed Server (bi_server1)

- a. Log in to Fusion Middleware Control ' http://<hostserver name or IP>:<Port No Default is 7001>/em' using the weblogic credentials defined during installation.
- b. Under the WebLogic Domain expand the bifoundation_domain node in the navigation tree, and select bi_cluster. Select bi_cluster, and click the WebLogic Cluster menu to the right of it. Select the Control option from the menu, and select Start Up to start the Managed Servers.



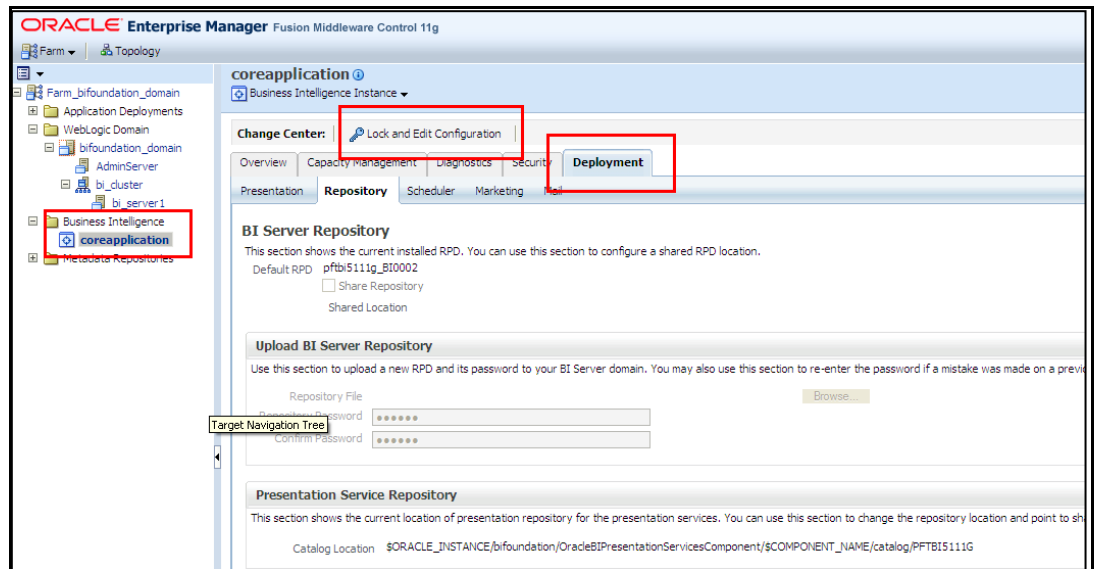
- c. Verify the status of the applications.



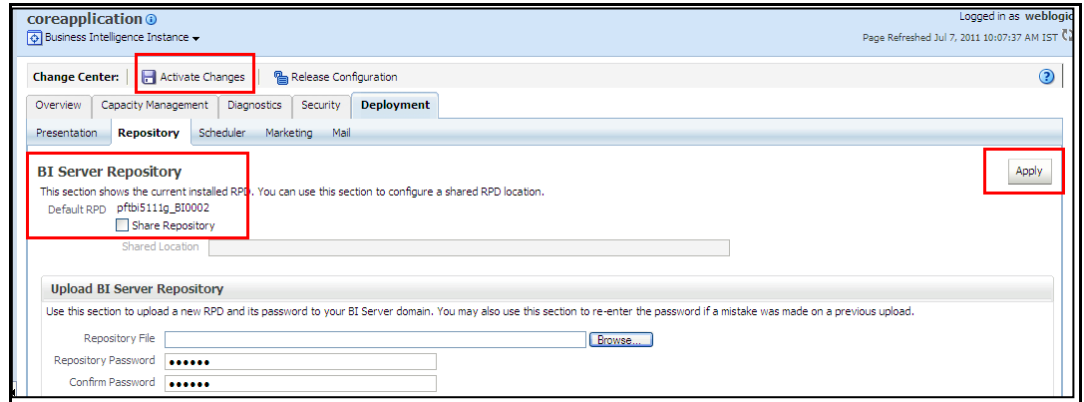
7. Deployment

a. Deploy RPD file for OBIEE 11.1.1.9.0.

- i. Log in to Fusion Middleware Control 'http://<hostserver name or IP>:<Port No Default is 7001>/em' using the weblogic credentials defined during installation.
- ii. Go to Business Intelligence folder > coreapplication > Deployment and click on Lock and Edit Configuration.



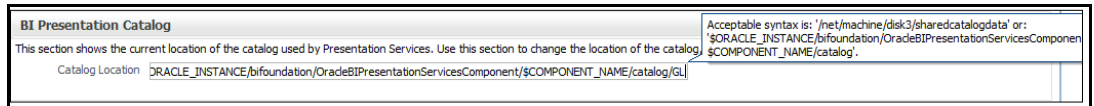
- iii. In the Upload BI Server Repository click on Browse and locate the folder where the new OFS GL 8.0.RPD which has to be deployed is present.
- iv. Now put the existing RPD Password. Then Apply > Activate Changes.
- v. You can see the new Default RPD as the OFSGL3_BI0008.0



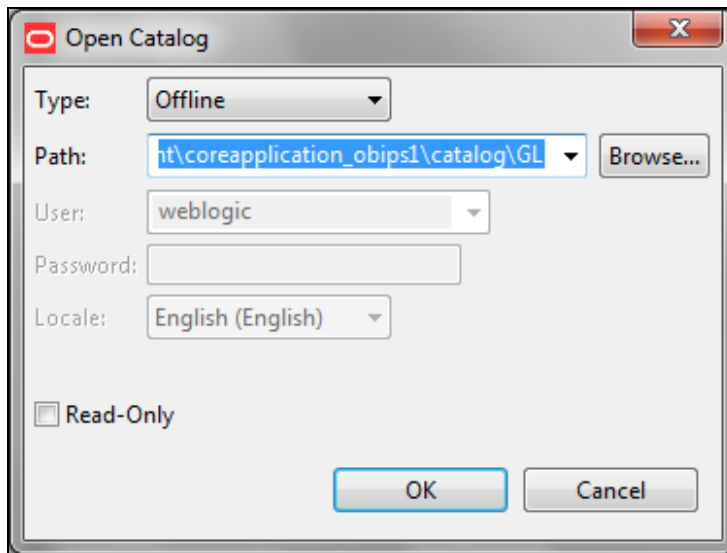
- vi. Restart the BI Server as mentioned in section E.
 - vii. Modify the NQSConfig.INI file to incorporate User Roles and Group Id changes in case any GUID related error occurs. The location is
 - viii. < OBIEE Install Folder >
/instances/instance1/config/OracleBIserverComponent/coreapplication_obis1
 - ix. Change the FMW_UPDATE_ROLE_AND_USER_REF_GUIDS to YES.
 - x. Example: FMW_UPDATE_ROLE_AND_USER_REF_GUIDS = YES;
 - xi. After modifying the file, restart the BI services again to remove the above error.
- b. Deploy RPD file for OBIEE 12.2.1.4.
- i. EM does not have any option for deployments of RPD. It is uploading repository to a specific service instance. We must use WebLogic scripting command "uploadrpd" to upload repository to Oracle BI Server.
 - ii. Execute the utility through a launcher script, datamodel.sh on UNIX and data-model-cmd.cmd on Windows. Ensure to place the RPD file anywhere in the server where OBIEE is installed before starting the upload command.
 - iii. Find the launcher script at the following location:
<Oracle_Home>/user_projects/domains/bi/bitools/bin
 - iv. Enter the following commands in shell to upload the RPD
Syntax:
uploadrpd -I <RPDname> [-W <RPDpwd>] -SI <service_instance> -U
<cred_username> [-P <cred_password>] [-S <hostname>] [-N <port_number>] [-
SSL] [-H]
For example: ./datamodel.sh uploadrpd -I </PathofRPDfile/RepositoryName.rpd> -SI
ssi -U weblogic -P weblogic123

c. Deploy Web Catalog for OBIEE 11.1.1.9.0.

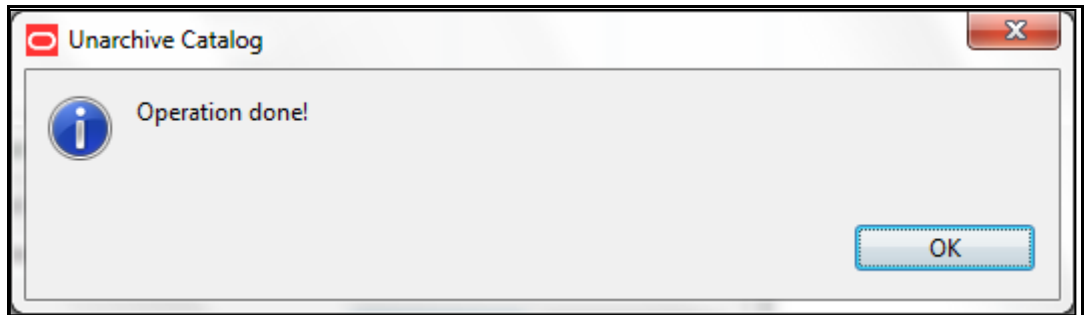
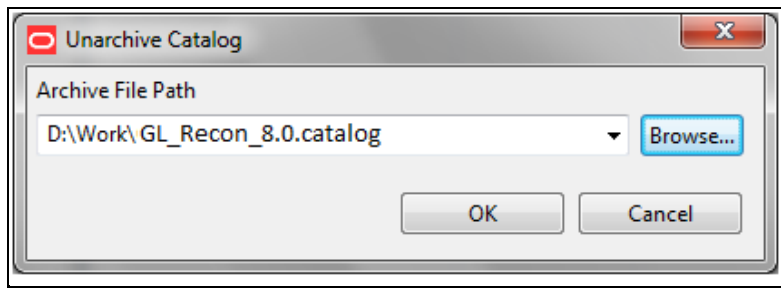
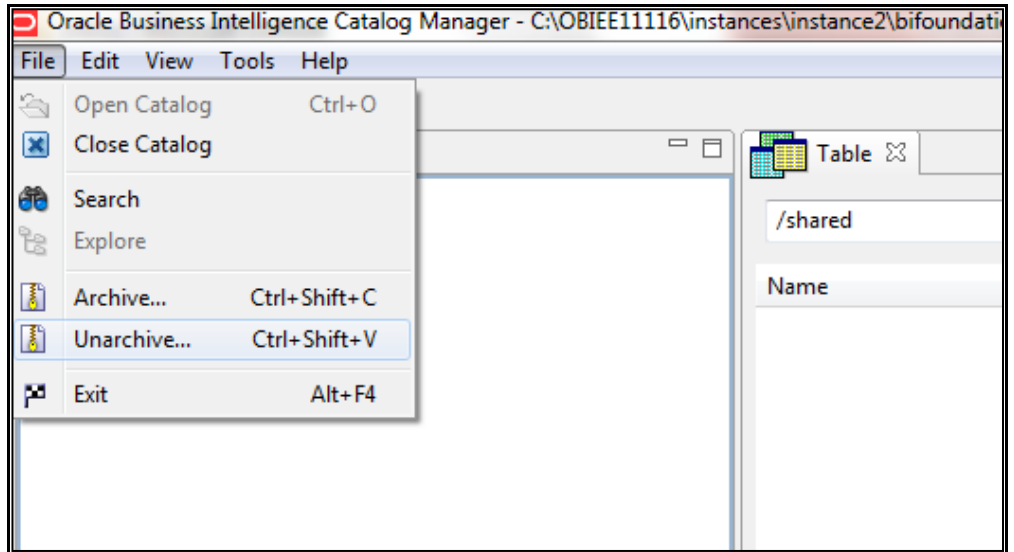
- i.** Copy the GL_Recon_8.0.catalog file from \$FIC_HOME/GLBI folder.
- ii.** Navigate to Business Intelligence folder > coreapplication> Deployment and check for the Catalog name. Change to GL then apply and activate changes. This will create a new empty catalog with the name given.
- iii.** Example:
\$ORACLE_INSTANCE/bifoundation/OracleBIPresentationServicesComponent/\$COMPONENT_NAME/catalog/GL



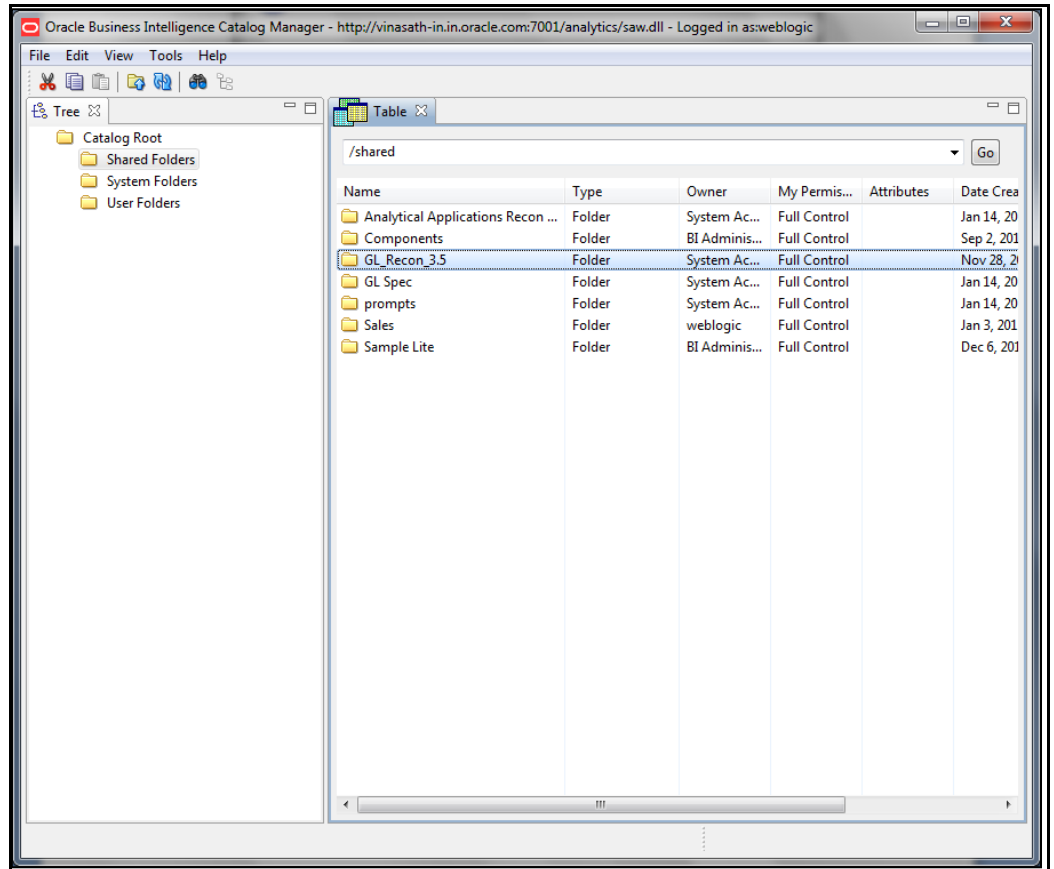
- iv.** Navigate to Catalog Manager. Open the newly created catalog. File -> Open Catalog.
- v.** Open the catalog offline -> Browse to the catalog path. Click OK.



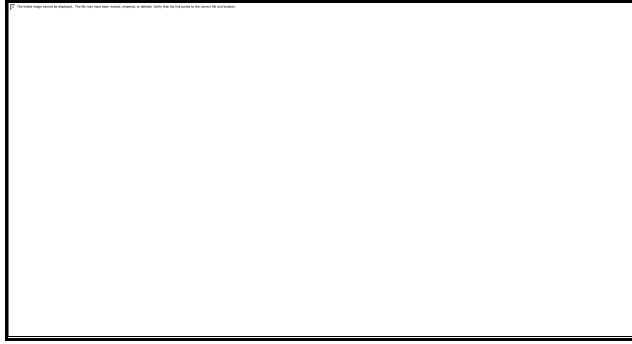
- vi.** Now navigate to the /shared folder in the catalog manager and unarchive by selecting the path where the GL_Recon_8.0.catalog was present. Then press ok.



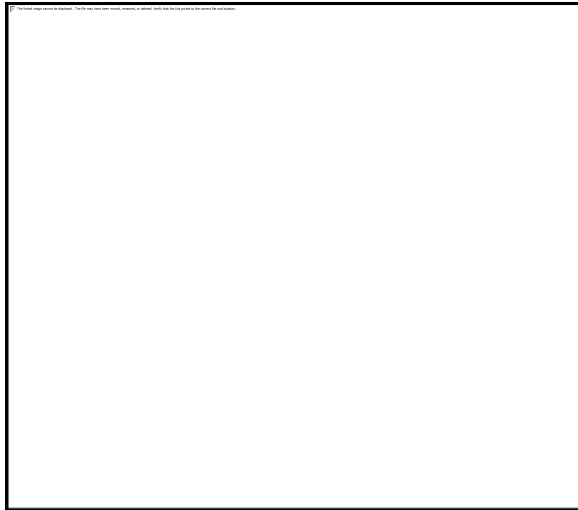
- vii. Verify that the GL folder appears under /shared folder.



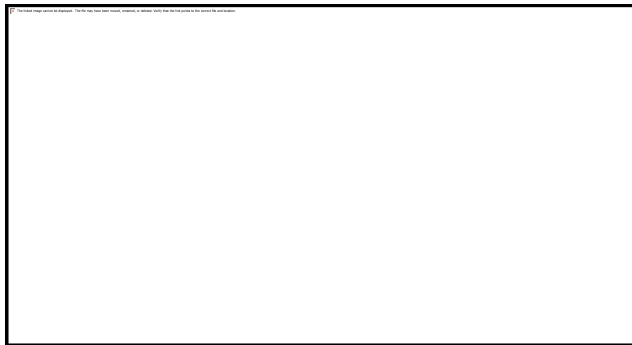
- viii. Once the Unarchive is done. Restart the BI Presentation Services (see section E) to apply the change.
 - ix. Modify the instanceconfig.xml file in case of any GUID error related to the BI Presentation Server to instruct Presentation Services to refresh GUIDs on restart.
 - x. The location of instanceconfig.xml file is < OBIEE Install Folder> /instances/instance1/config/OracleBIPresentationServicesComponent/coreapplicatio_n_obips1
 - xi. Edit the file to add the line <UpdateAccountGUIDs>UpdateAndExit</UpdateAccountGUIDs> and restart the BI presentation services once again.
 - xii. Note that the steps mentioned above will force the BI Presentation Services to shut down after updating the Account GUIDS.
 - xiii. In that case, go to instanceconfig.xml file and revert back the changes made i.e. remove the line <UpdateAccountGUIDs>UpdateAndExit</UpdateAccountGUIDs> from the instanceconfig.xml file and restart the services again.
- d. Deploy Web Catalog for OBIEE 12.2.1.4.
- i. After login to OBIEE Presentation URL, traverse to Catalog tab and Click “Shared Folders”.



- ii. Click Unarchive option on the Tasks pane.



- iii. Browse to the path of the catalog file placed in your local machine and click OK.



8. Starting the Analytics services

The Oracle Business Intelligence system components can start in any of the following manner.

e. Through OPMN controller for OBIEE 11.1.1.9.0

i. For Windows Server

Open a command prompt, navigate to <OBIEE Install Folder>/instances/instance1/bin

Run the 'opmnctl startall' command.

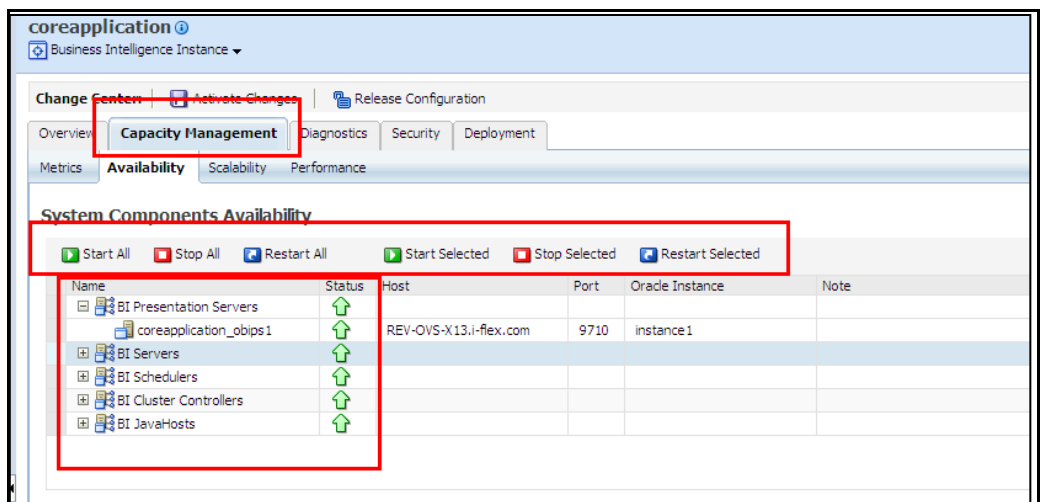
ii. For Other Servers

- Navigate to < OBIEE Install Folder > /instances/instance1/bin
- Run the command ‘ ./opmnctl startall’
- Check the status by running the command ‘ ./opmnctl status’

```
[obiee11g@REV-OVS-X13 bin]$ ./opmnctl startall
opmnctl startall: starting opmn and all managed processes...
[obiee11g@REV-OVS-X13 bin]$ ls
opmnctl
[obiee11g@REV-OVS-X13 bin]$ ./opmnctl status

Processes in Instance: instance1
-----+-----+-----+-----
ias-component          | process-type          | pid   | status
-----+-----+-----+-----
coreapplication_obicc1 | OracleBIClusterCo~   | 23604 | Alive
coreapplication_obisch1 | OracleBIScheduler~   | 23602 | Alive
coreapplication_obijh1 | OracleBIJavaHostC~   | 23606 | Alive
coreapplication_obips1 | OracleBIPresentat~   | 23603 | Alive
coreapplication_obis1  | OracleBIServerCom~   | 23605 | Alive
[obiee11g@REV-OVS-X13 bin]$
```

- f. For OBIEE 12.2.1.4
 - i. Navigate to ORACLE_HOME\user_projects\domains\bi\bitools\bin.
 - ii. Start.sh for start services.
- g. Through Enterprise Manager
 - i. Login to the EM administration screen using the url 'http://<hostserver name or IP>:<Port No Default is 7001>/em'
 - ii. Expand 'Business Intelligence' node on the left and choose Core application.
 - iii. Navigate to Capacity management > Availability.
 - iv. Click on the necessary buttons to start and stop the services.



10 Deploying Data Management Application Pack Analytics

This chapter includes the following sections:

[Managing OBIEE Activities](#)

[Deploying Data Management Application Pack Analytics](#)

10.1 Managing OBIEE Activities

This section covers following topics:

[Installing OBIEE Server](#)

[Installing OBIEE Windows Administration Client](#)

[Disabling the Cache Feature in OBIEE Server](#)

10.1.1 Installing OBIEE Server

To install Oracle Business Intelligence Enterprise Edition (OBIEE) server, refer to Oracle Fusion Middleware Installation Guide for Oracle Business Intelligence12c Release 1 (12.2.1.4.0). After installing Oracle Business Intelligence Enterprise Edition (OBIEE) server, get the Enterprise Manager URL, username, password, and OBIEE installed directory from the System Administrator.

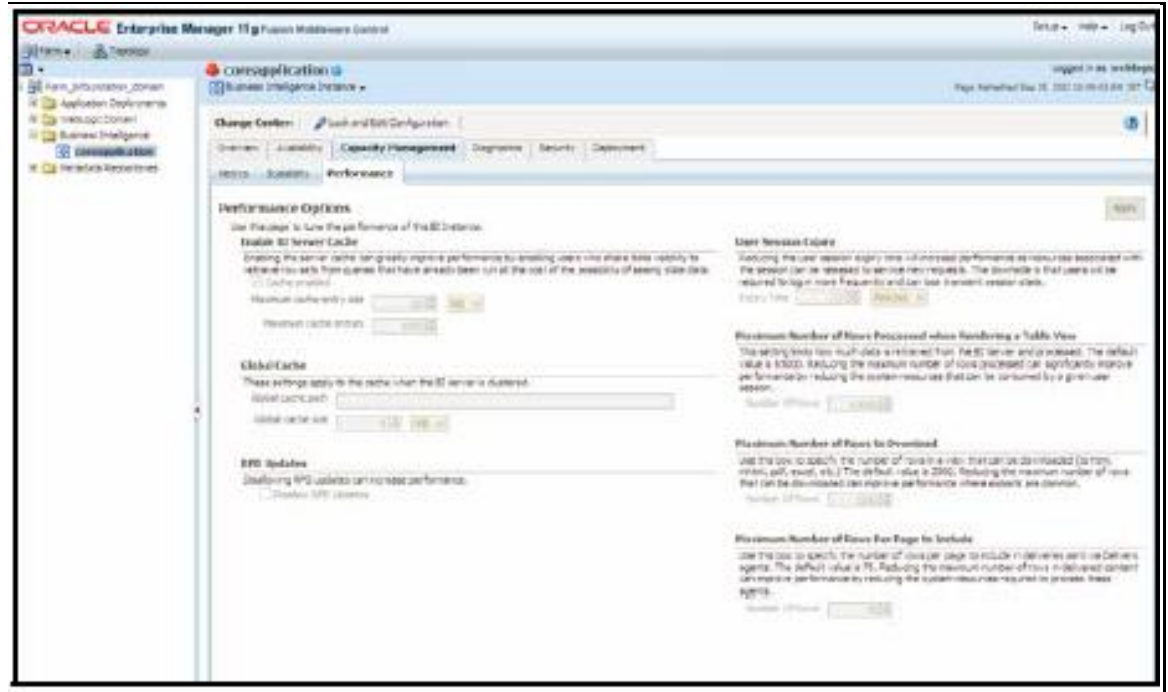
10.1.2 Installing OBIEE Windows Administration Client

To install OBIEE repository administration client for Windows machine, refer to *Oracle® Fusion Middleware Installation Guide for Oracle Business Intelligence12c Release 1 (12.2.1.4.0)*.

10.1.3 Disabling the Cache Feature in OBIEE Server

Login to **Enterprise Manager**, and perform the following steps:

1. Click **Business Intelligence** directory from left hand side menu and select **coreapplication**.



2. Select **Capacity Management** tab.
3. Select **Performance** sub tab.
4. Click **Lock and Edit Configuration** tab.
5. Uncheck the **Cache Enabled** option to disable the cache.
6. Click **Apply** → **Activate Changes**.
7. Select **Yes** when prompted.
8. Click **Restart** to apply recent changes.

10.2 Deploying Data Management Application Pack Analytics

Perform the following steps to deploy Analytic Reports:

1. Login to the OBIEE Server and stop Oracle Process Manager and Notification Server (OPMN) services by executing the following command:


```
<OBIEE Installed Directory>/instances/instance1/bin
./opmnctl stopall
```
2. Copy **DGS.rpd** from **\$FIC_HOME/DGSBI** of Web layer to windows machine where the OBIEE windows administration client is installed.

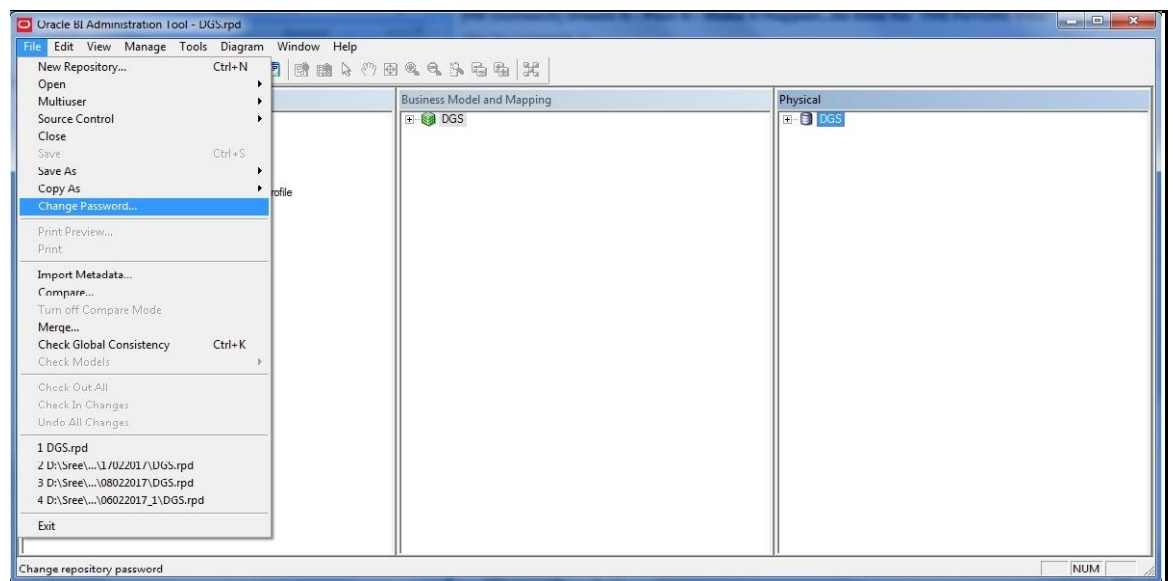
Perform the following steps to change the default password for the repository:

1. Open OBIEE Windows administration client tool.
2. Select **DGS.rpd** file and click **Open**.

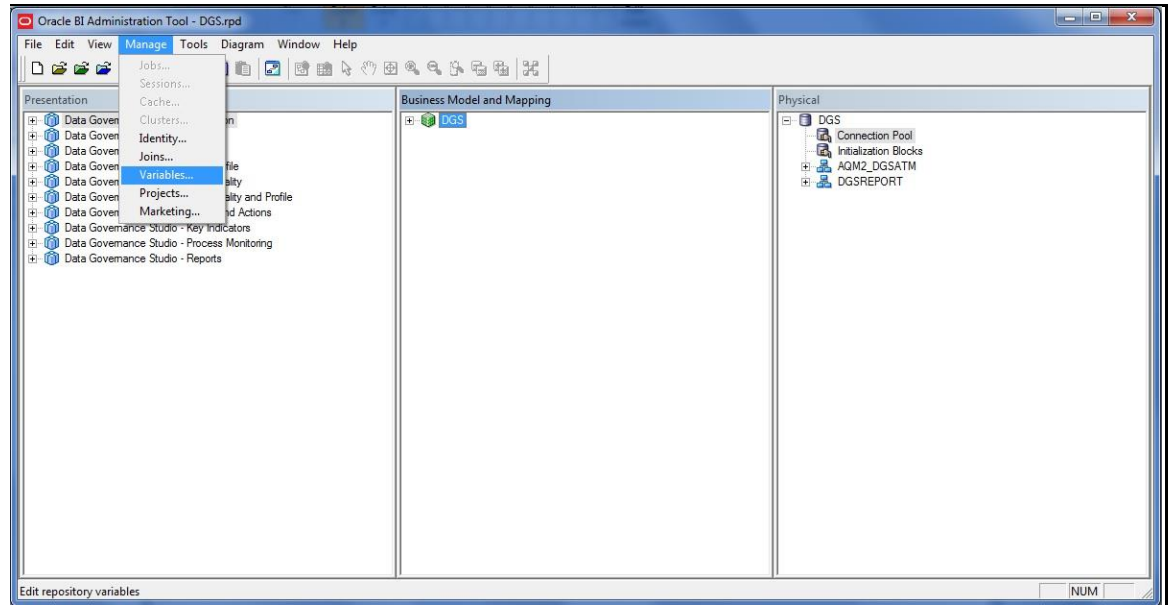
The *OBIEE Windows Administration Client* to enter Repository Default Password is displayed.



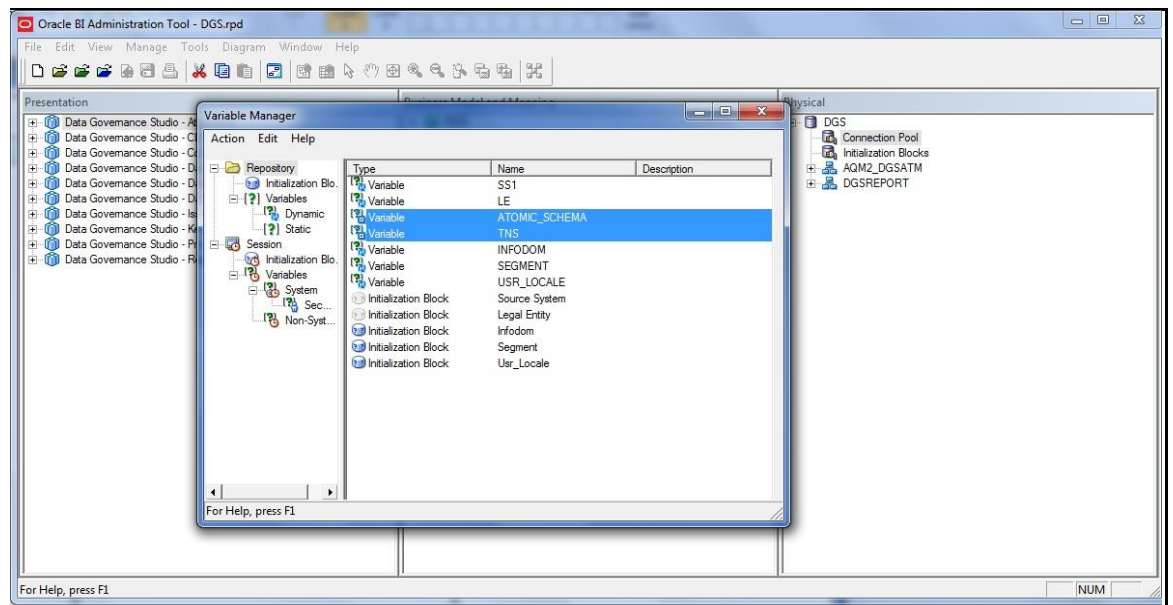
3. Enter default repository password as **password123**.
4. Click **File** menu, select **Change Password**.



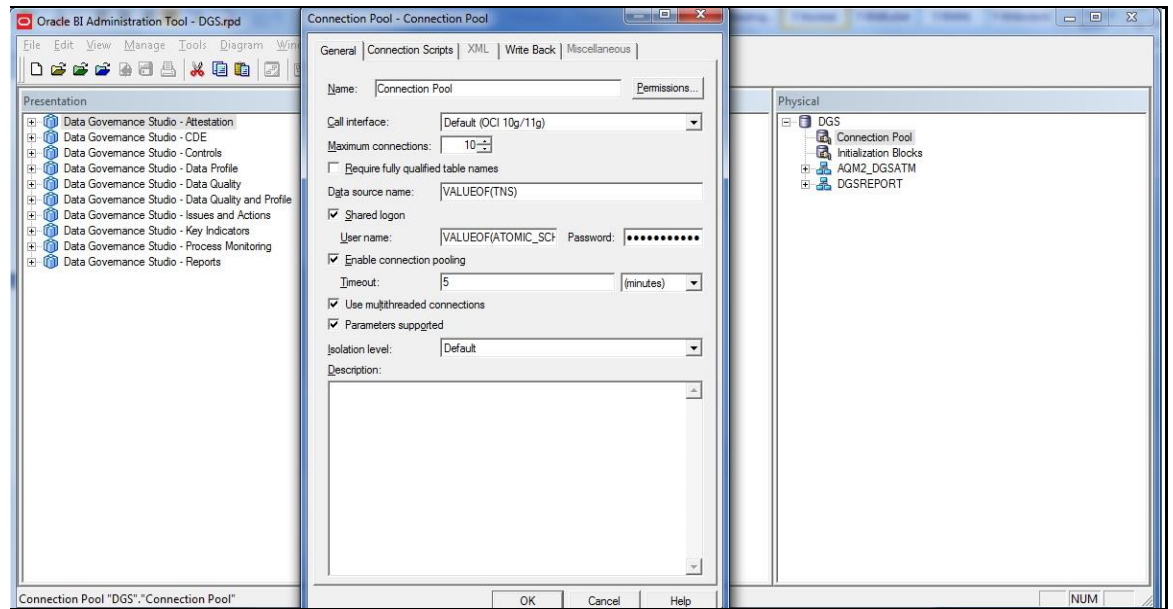
5. Enter the new password. Click **OK**.
6. Perform the following steps to configure connection pool of repository:
7. Select **Manage** → **Variables** from the menu.



8. Select **static variables** under the **Repository** section.



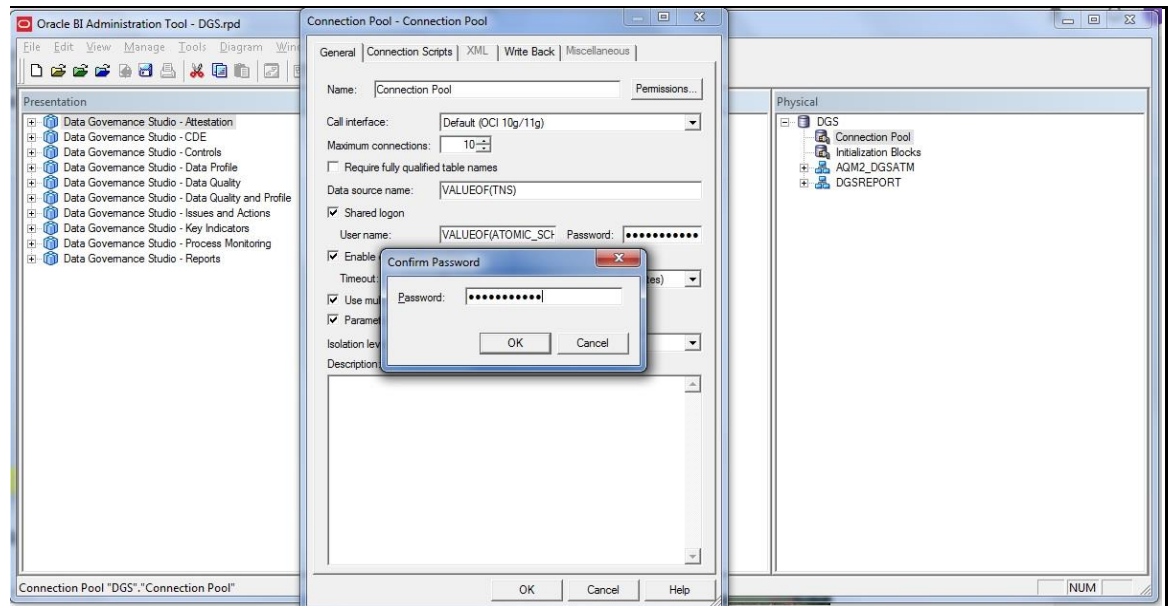
9. Select the variable **SCHEMA** and enter the schema name within single quotes under the **Default Initializer** section. Save the changes.
10. Select the variable **TNS** and enter the TNS details within single quotes under the **Default Initializer** section. Save the changes.
11. In the **Physical** section, expand DGS directory.



12. Double-click **Connection Pool** to open the **Connection Pool Properties** window.

13. Enter atomic schema user password in **Password** text box.

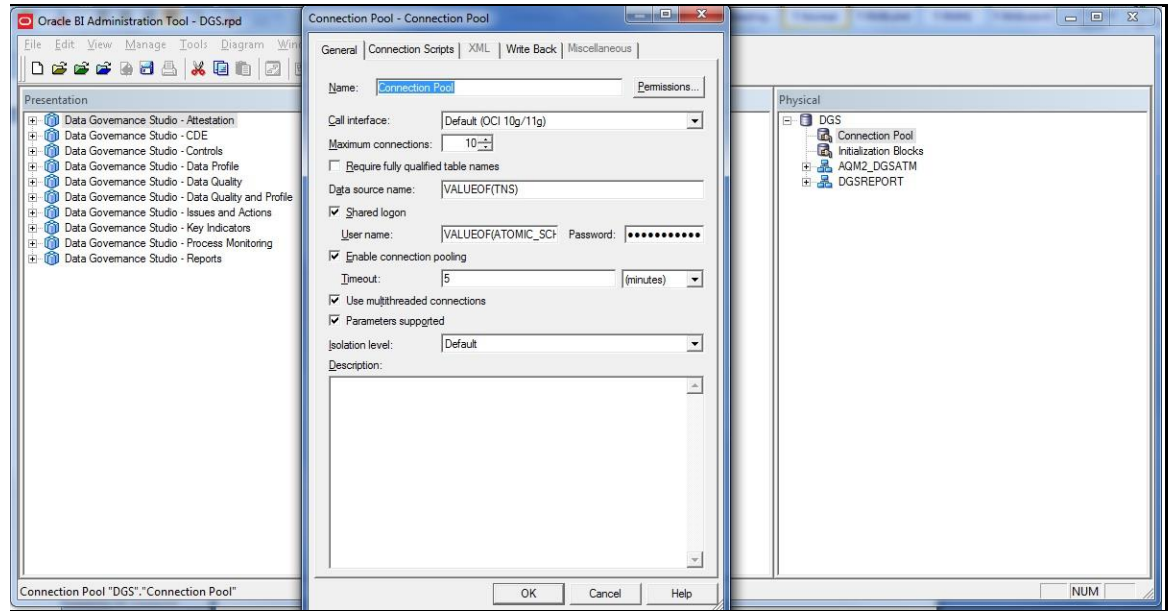
14. Click **OK**.



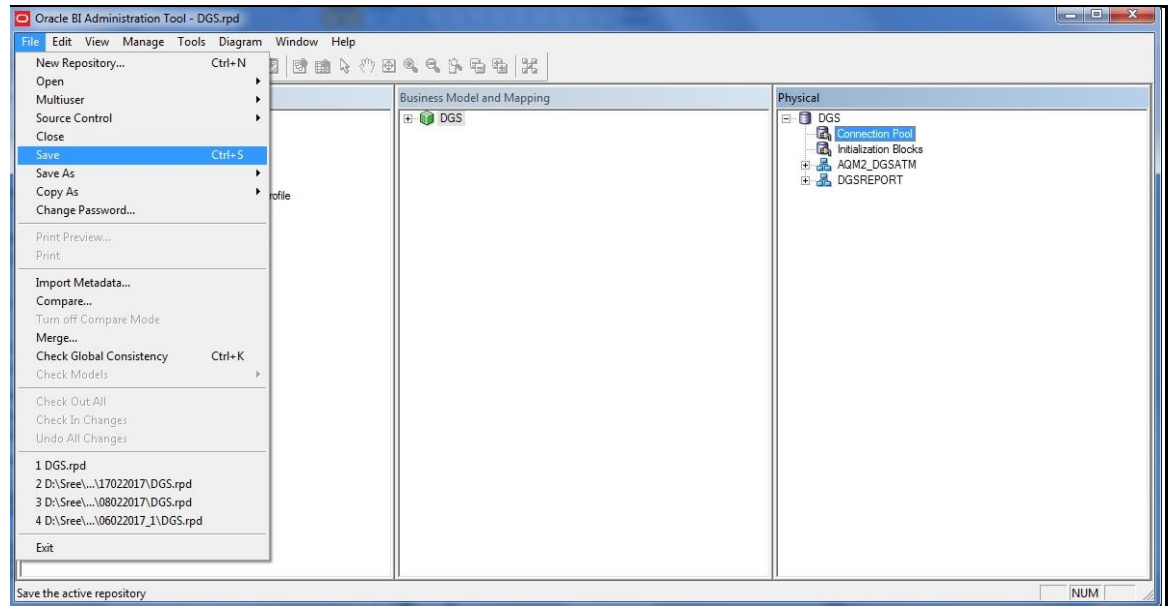
15. Double-click **Initialization Blocks** to open the Connection Pool window.

16. Enter atomic schema password in **Password** text box.

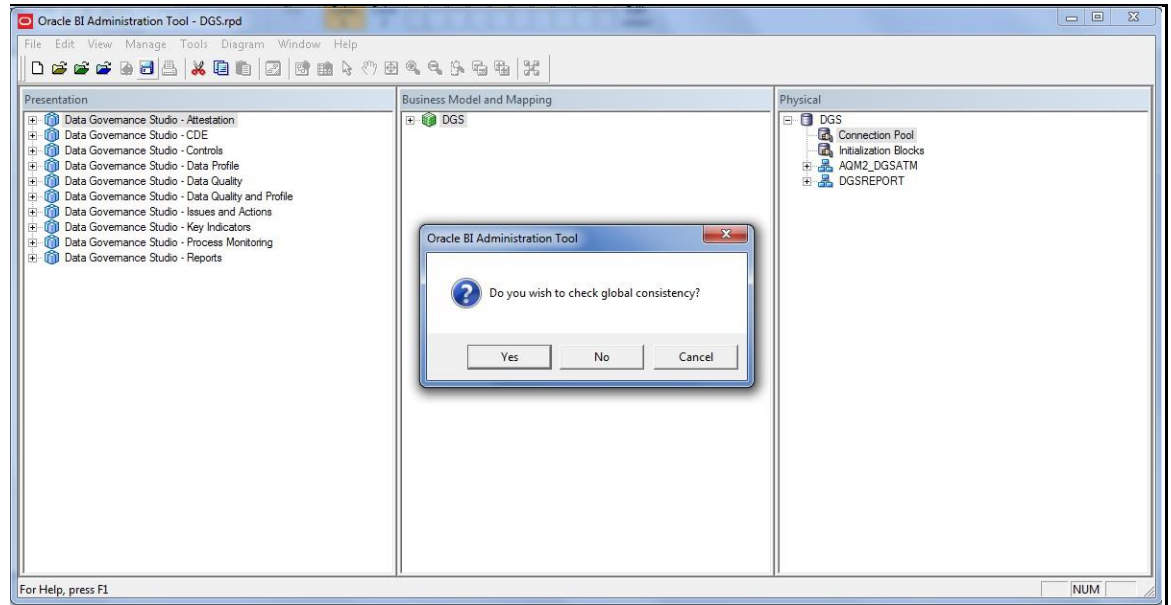
17. Click **OK**.



18. Click **File** menu and then click **Save**.

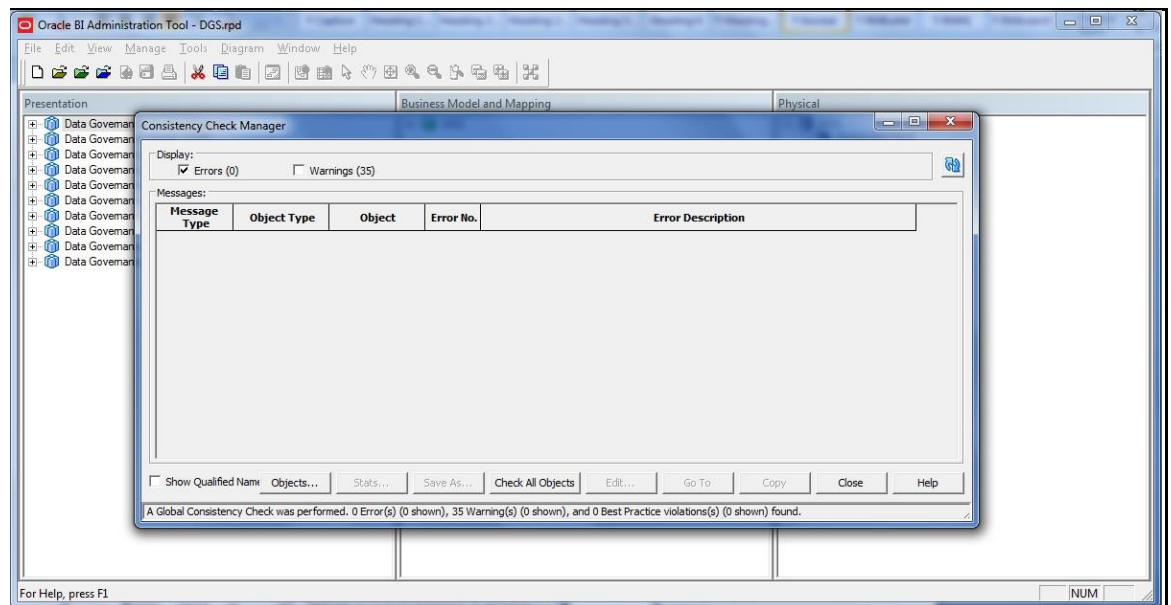


19. Click **Yes** on the pop-up message, *Do you want to check global consistency?*



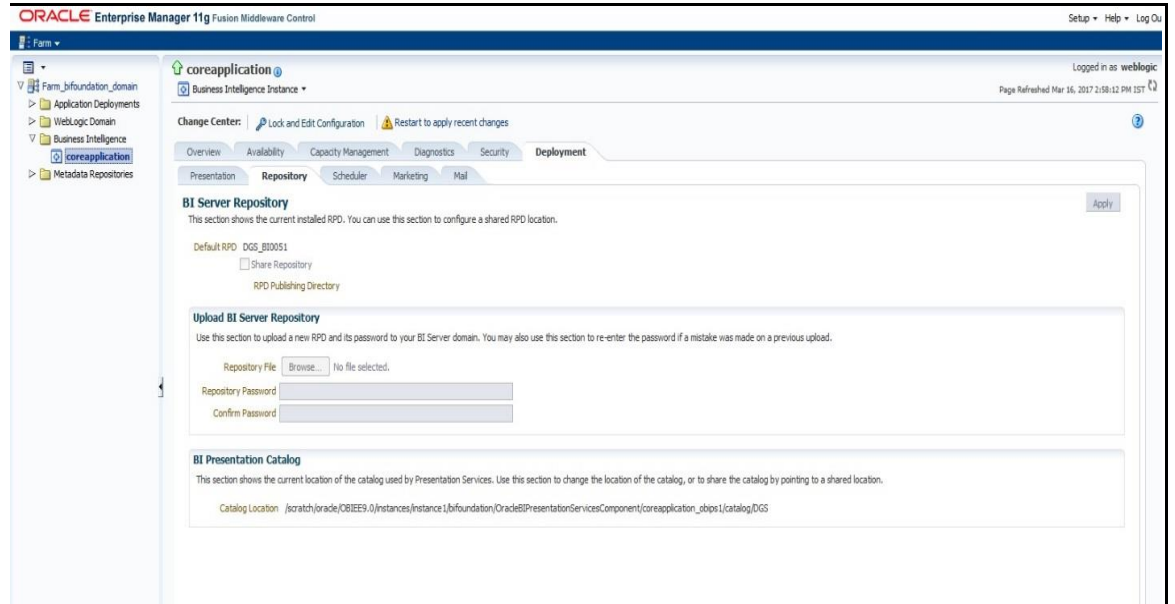
20. Click **OK**, on the pop-up message *Consistency check didn't find any errors, warning or best practices violations*.

NOTE Warnings on consistency check can be ignored.

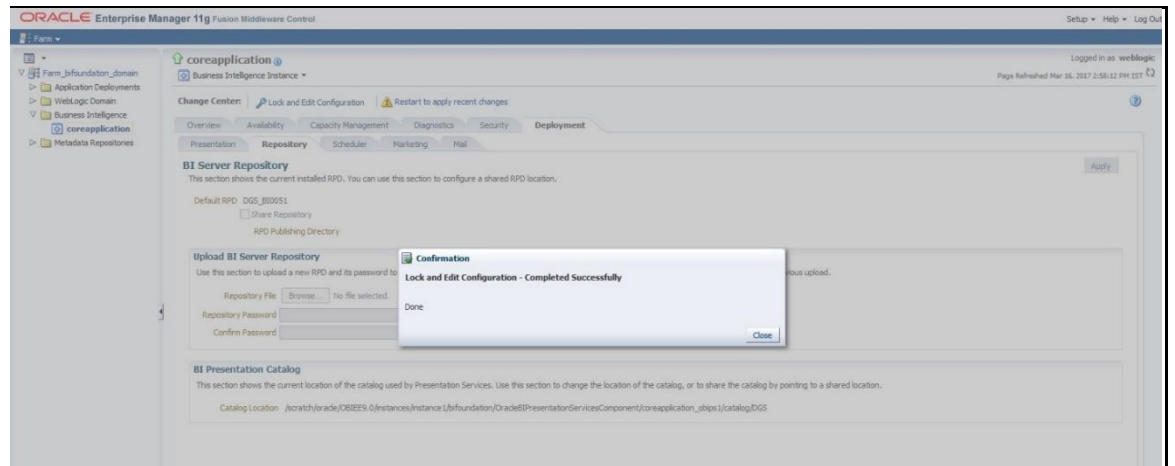


21. Copy `DGS.catalog` file from `<FIC_HOME>/DGSBI` of Web layer to your local machine.
22. Login to **Enterprise Manager**. Click **Business Intelligence** directory at LHS. Select **coreapplication** and then click **Deployment** tab.

23. Click **Repository** tab.

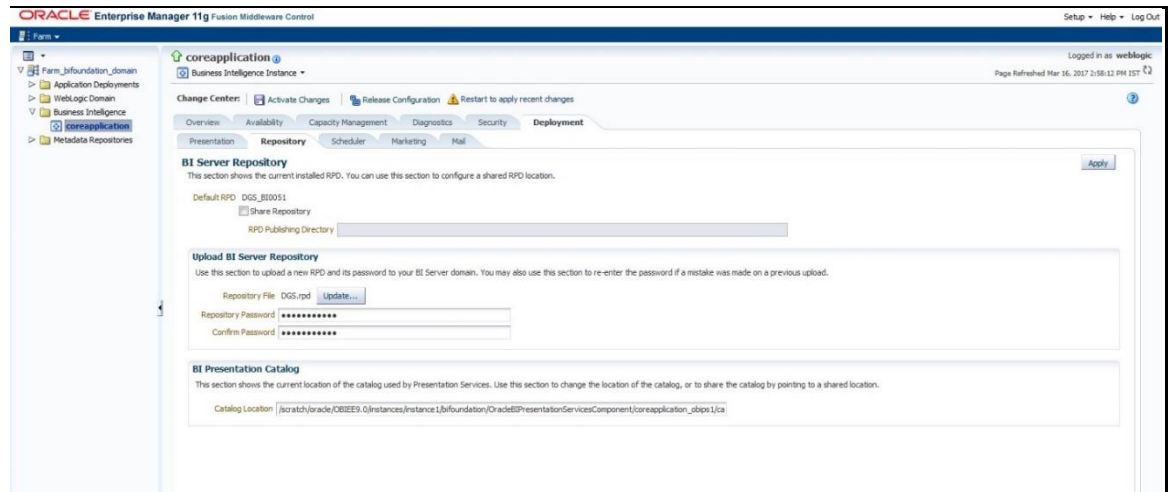


24. Click **Lock and Edit Configuration**. The *Lock and Edit Configuration Confirmation* window is displayed.



25. Click **Close**.

26. In **Upload BI Server Repository** section, browse the **DGS.rpd** file from Windows machine.



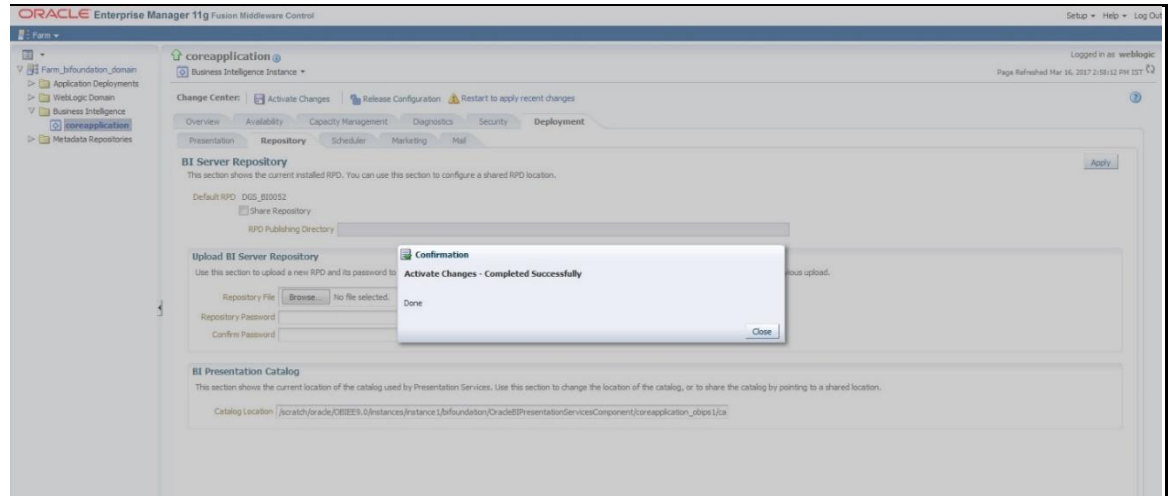
27. Enter the new repository password in **Repository Password** and **Confirm Password**.

28. In **BI Presentation Catalog** section, provide the Catalog Location as

```
<OBIEE Installed Directory>/instances/instance1/bifoundation/  
OracleBIPresentationServicesComponent/coreapplication_obips1/  
catalog/DGS
```

29. Click **Apply**.

30. Click **Activate Changes**. An *Activate Changes Confirmation* window is displayed.

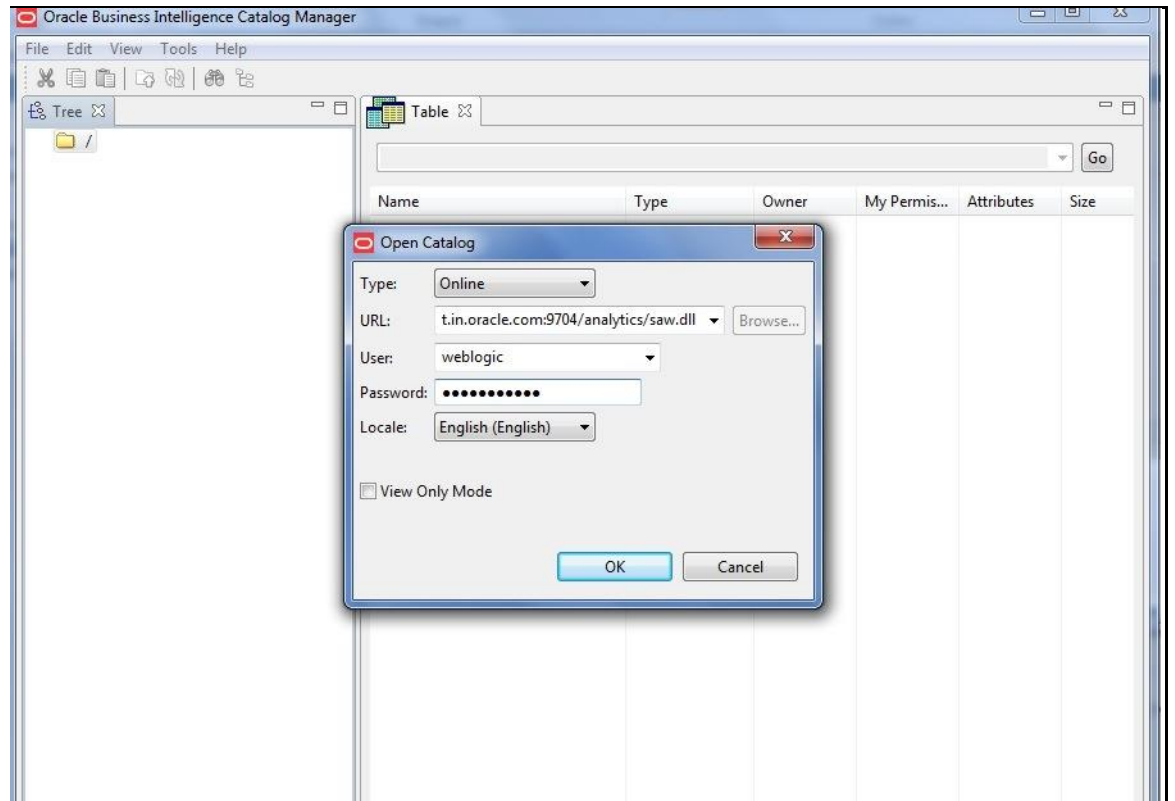


31. Click **Close**.

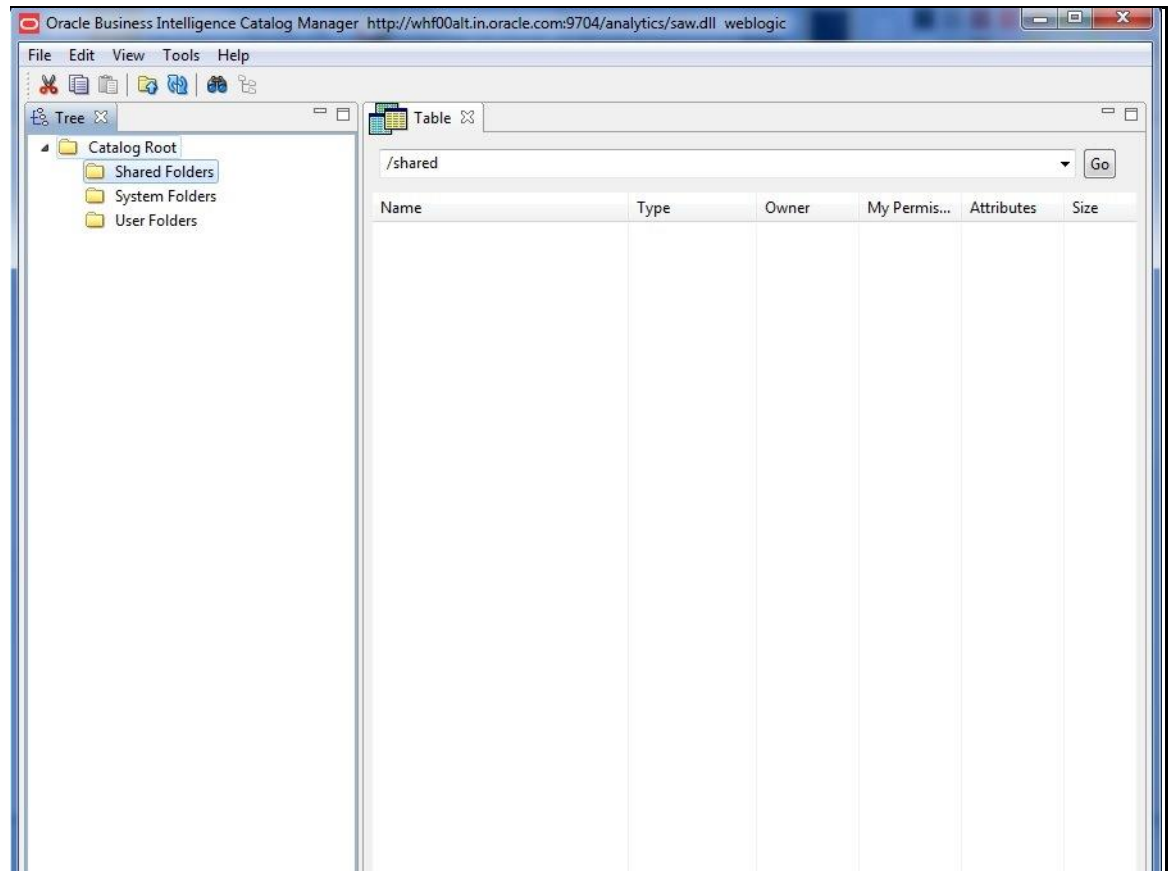
- Click **Restart to apply recent changes**.

32. You will notice a new catalog folder with the name DGS is created at the location `<OBIEE Installed Directory>/instances/instance1/bifoundation/OracleBIPresentationServicesComponent/coreapplication_obips1/catalog/`

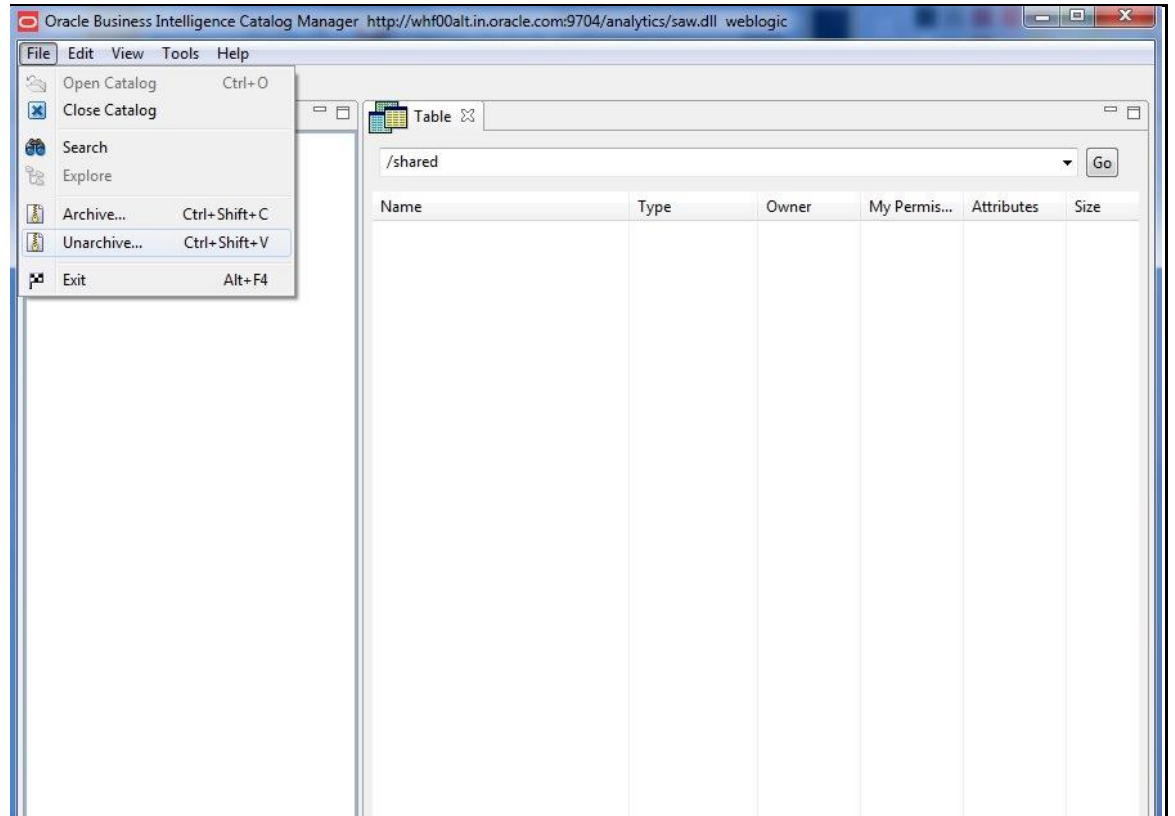
33. Select **Catalog Manager** to connect to the new catalog.



34. Once connected, expand **Catalog Root** and select **Shared Folders**.



35. Select **File** and then **Unarchive** from the drop down.



36. When prompted, click **Browse** and select the saved **DGS.catalog** file on your local machine.

37. The RPD and catalog are deployed and the application is ready to view the reports.

10.3 Updating Server Specific Parameters

This feature is used in the dashboards where in the user navigates from OBIEE dashboard links to OFSAA application. For Example: Create a new issue

Insert/update the columns of the table obiee_parameters in atomic schema with the appropriate values.

INFODOM <INFODOM>

SEGMENT <SEGMENT>

LOCALE <LOCALE>

10.4 Alias Configurations

Update the ActionFrameworkConfig.xml file with the following aliases:

```
<aliases>
<location-alias>
<alias>ofsaa_dgs_obi</alias>
<actual>##OBIEE_URL##/analytics/saw.dll</actual>
</location-alias>
```

```

<location-alias>
<alias>ofsaa_dgs</alias>
<actual>##OFS AAI URL##/formsFramework/formsrenderer/
MapRenderer.jsp</actual></location-alias>
</aliases>

```

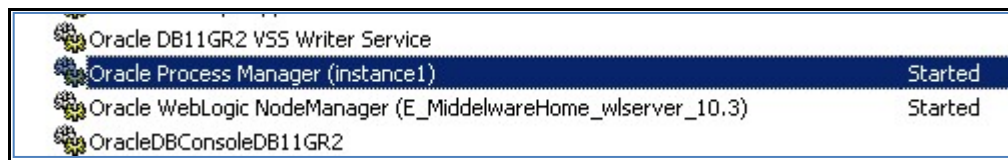
*Ensure to replace ##OBIEE URL## and ##OFS AAI URL## with the respective URLs.

10.5 Starting Node Manager and WebLogic Servers

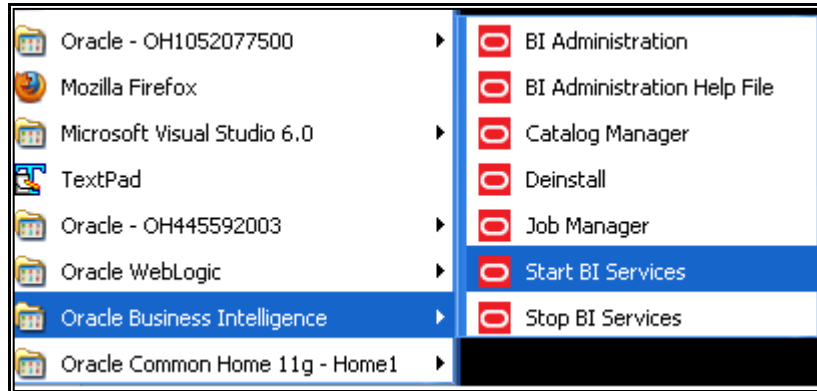
Check if the Node Manager is running or not. If not, then perform the following steps.

- **For Windows Server**

1. Navigate to **Services**.
2. Start **Service Oracle WebLogic NodeManager**.



3. Alternatively you can start Node Manager and all the managed services from the All **Programs** → **Oracle Business Intelligence** → **Start BI Services** option in the start menu.



- **For Other Servers**

4. Navigate to <OBIEE Install Directory>/wlserver_10.3/server/bin directory.
5. Run the following command:


```
nohup ./startNodeManager.sh &
tail -f nohup.out
```
6. Bringing up this service may take a few minutes depending on your environment, wait until the command line stops scrolling and indicates INFO: Secure socket listener started on port <port_no>.
7. Check if the WebLogic Admin Server is running. If not, then follow the below steps.

- **For Windows Server**

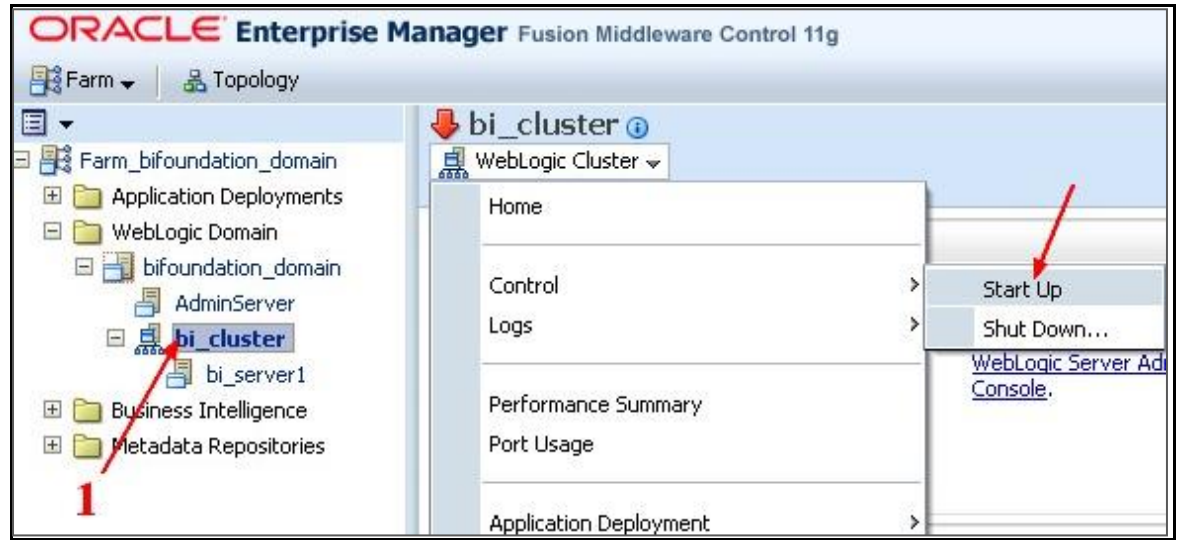
8. Navigate to <OBIEE Install Directory>/user_projects/domains/bifoundation_domain /bin directory.
9. Run the following command:
 - **startWebLogic.cmd**

NOTE The WebLogic Admin Server would have been already started if you had started through the, **All Programs → Oracle Business Intelligence → Start BI Services** as stated above.

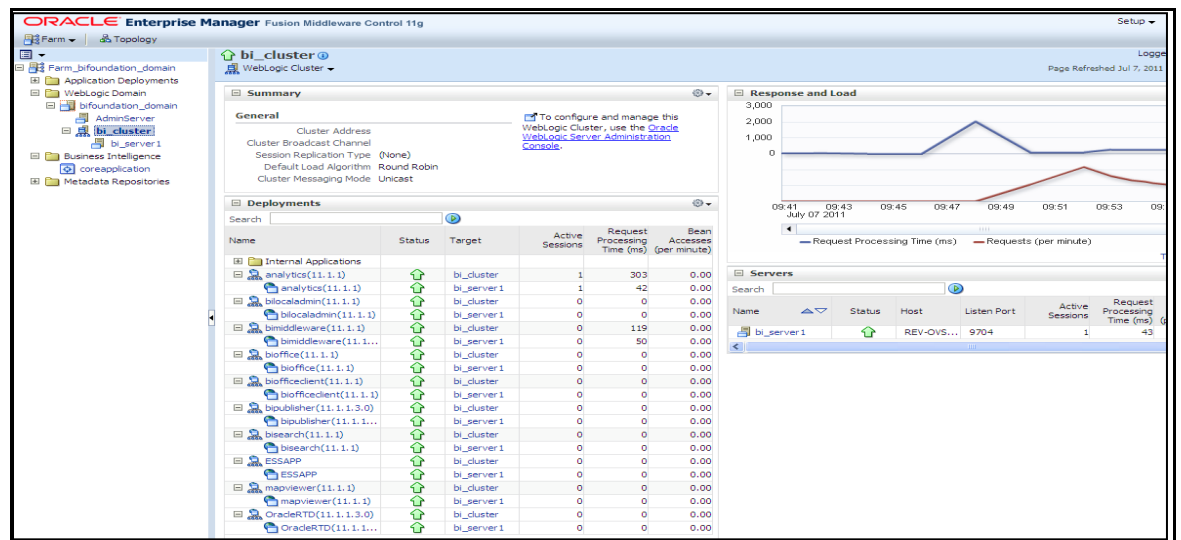
- **For Other Servers**
 - a. Navigate to <OBIEE Install Directory>/user_projects/domains/bifoundation_domain /bin directory.
 - b. Run the following command:
 - c. `nohup ./startWebLogic.sh &`
 - d. Enter the WebLogic credential defined during the installation.
 - e. Execute the following command:
 - f. `tail -f nohup.out`
 - g. Bringing up this service may take a few minutes depending on your environment, wait until the command line stops scrolling and indicates **Server started in RUNNING mode**.

```
<Aug 25, 2010 10:32:06 AM CEST> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RUNNING>  
<Aug 25, 2010 10:32:06 AM CEST> <Notice> <WebLogicServer> <BEA-000360> <Server started in RUNNING mode>
```

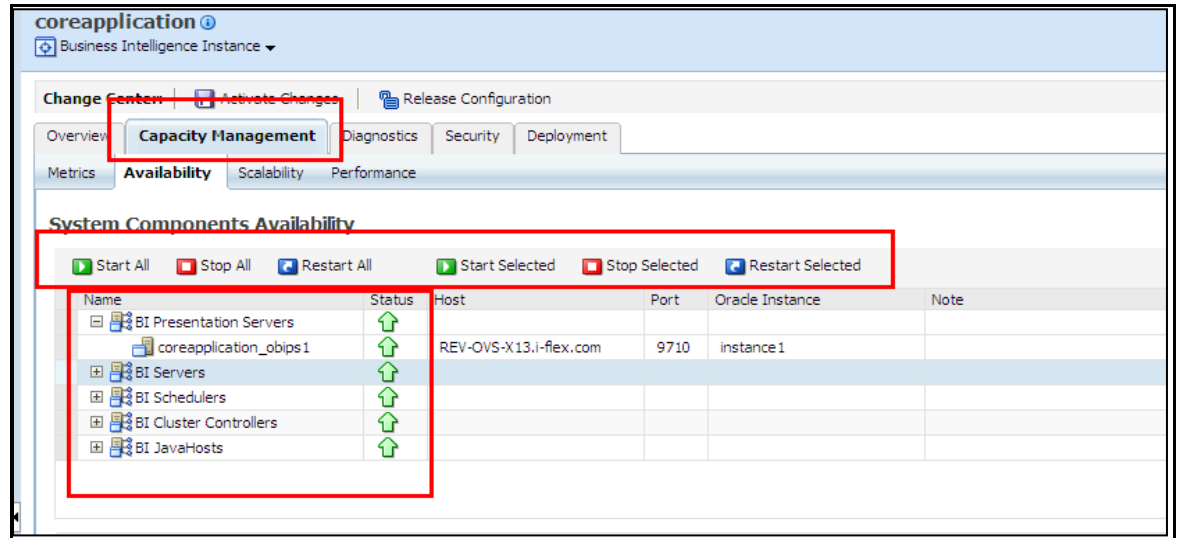
- h. Start **WebLogic Managed Server (bi_server1)**
 - i. Log in to Fusion Middleware Control ' <http://<hostserver name or IP>:<Port No Default is 7001>/em>' using the WebLogic credentials defined during installation.
 - ii. Under the WebLogic domain expand the **bifoundation_domain** node in the navigation tree, and select **bi_cluster**. Click the **WebLogic Cluster** menu to the right of it. Select **Control** from the menu, and select **Start Up** to start the Managed Servers.



iii. Verify the status of the applications.



- **Through Enterprise Manager:**
 - a. Login to the EM Administration screen using the URL 'http://<hostserver name or IP>:<Port No Default is 7001>/em'
 - b. Expand Business Intelligence node on the left pane and select coreapplication.
 - c. Navigate to Capacity Management → Availability.
 - d. Click on the necessary buttons to start and stop the services.



- e. If any problems, check for the log files present in the respective diagnostic directories of the analytics server, that is, **<OBIEE Install Directory>/instances/instance1/diagnostics/logs**.
- **Testing the Analytics Reports:**
 - a. bLog in to 'http:// <host server name or IP>:<Port No default is 7001>/analytics/saw.dll?Dashboard' using your Administrator credentials created during platform install.
 - b. Check for the reports availability.

If any problems, check for the log files present in the respective diagnostic directories of the analytics server, that is, **<OBIEE Install Directory>/instances/instance1/diagnostics/logs**

For details, see [Oracle Business Intelligence Configuration Guide](#).

11 Appendix A: Configuring Web Server

This appendix includes the following sections:

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

11.1 Configuring Web Server

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

Refer 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.

11.2 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 the following sections:

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.

11.2.1 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", in a stand-alone server use the command line option as explained below. A profile is the set of files that define the runtime environment. At least one profile must exist to run WebSphere Application Server.

11.2.1.1 Creation of New Profile in WebSphere

A new profile is created in WebSphere through the command line interface using the **manageprofiles.sh** command which resides in **<WebSphere Install directory>/AppServer/bin** directory.

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.

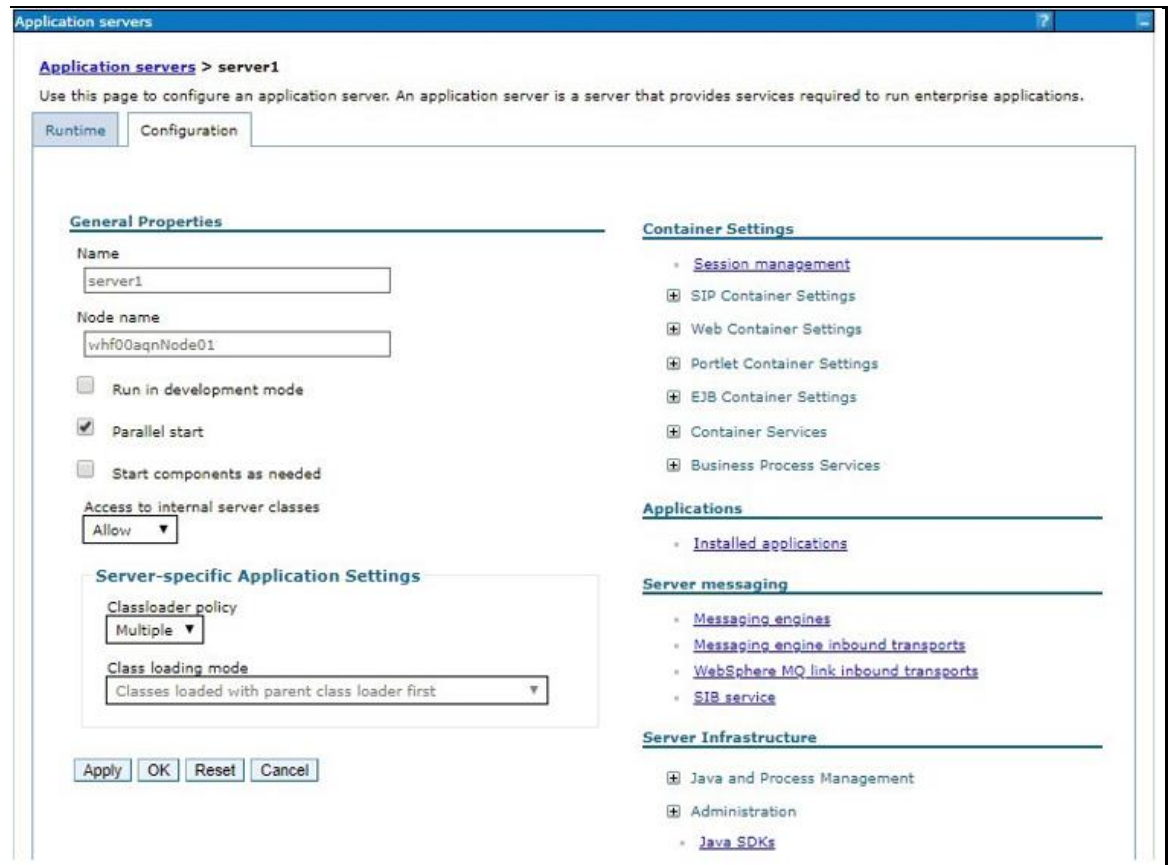
11.2.1.2 Managing IBM WebSphere SDK Java Technology Edition Versions

By default, WebSphere Application Server V8.5.5.X uses the Java 6.0 SDK. You must upgrade to Java 7.X SDK or JAVA 8.X SDK.

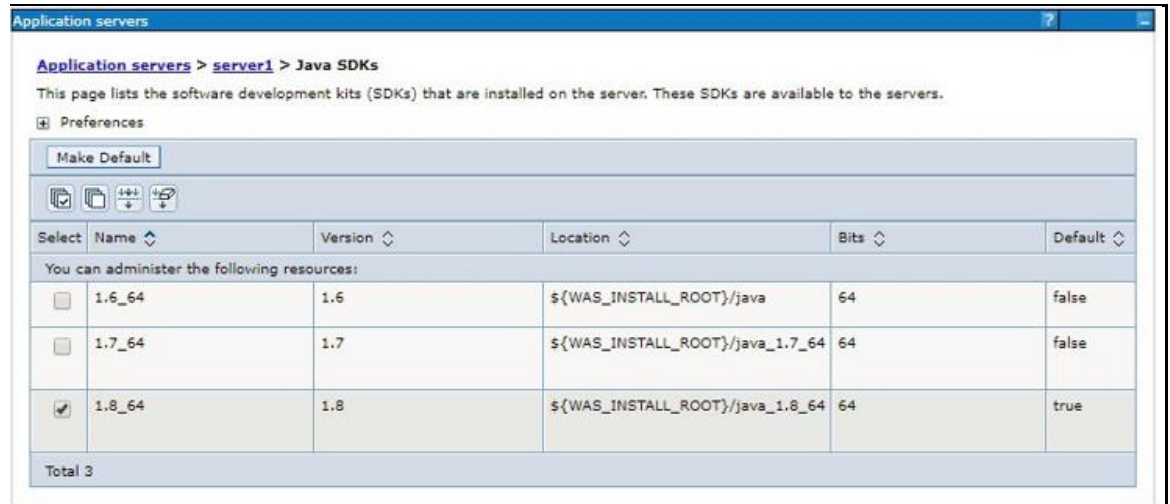
Prerequisites: Install the IBM WebSphere SDK Java Technology Edition Versions 1.7.X_64 or 1.8.X_64.

Perform the following steps to upgrade to Java 7.X SDK or JAVA 8.X SDK:

- Enter the WebSphere URL in the format `http://HOST_NAME:PORT_NUMBER/ibm/console` (use `https` if SSL is enabled.). For example, `http://192.168.1.0:9000/ibm/console`.
- Login with your administrator user ID and password.
- From the LHS menu, click Servers to expand and view the menu.
- Click Server Types to expand the menu further and then click WebSphere Enterprise Application Servers to view the Application servers window.
- On Application servers window, click the required Application Server link. For example, `server1` in the following illustration:



- Click Java SDKs link from Server Infrastructure to view the list of Java SDKs.



- Select either 1.7_64 or 1.8_64 based on the JVM version with which you plan to install OFSAA or have installed with.
- Click Make Default button and save to master repository.
- Restart the WebSphere Application Server to apply the changes to the IBM application profile.

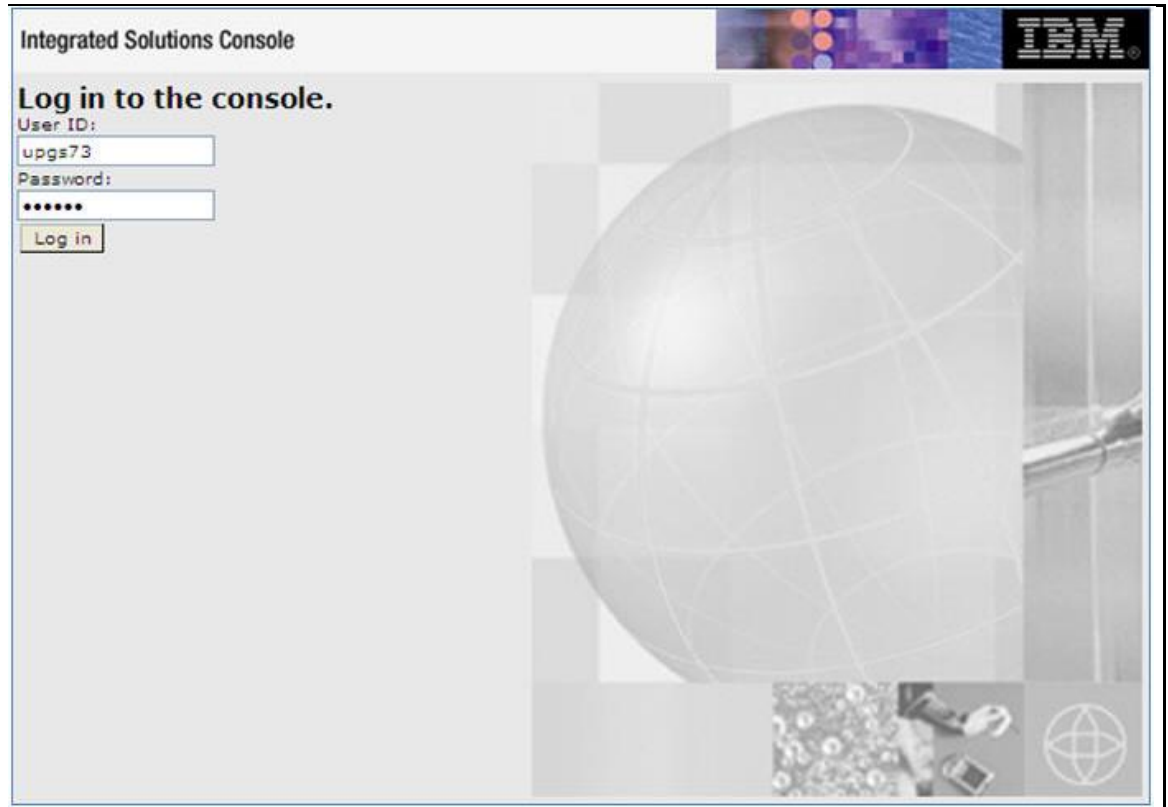
11.2.1.3 Manage Applications in WebSphere

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

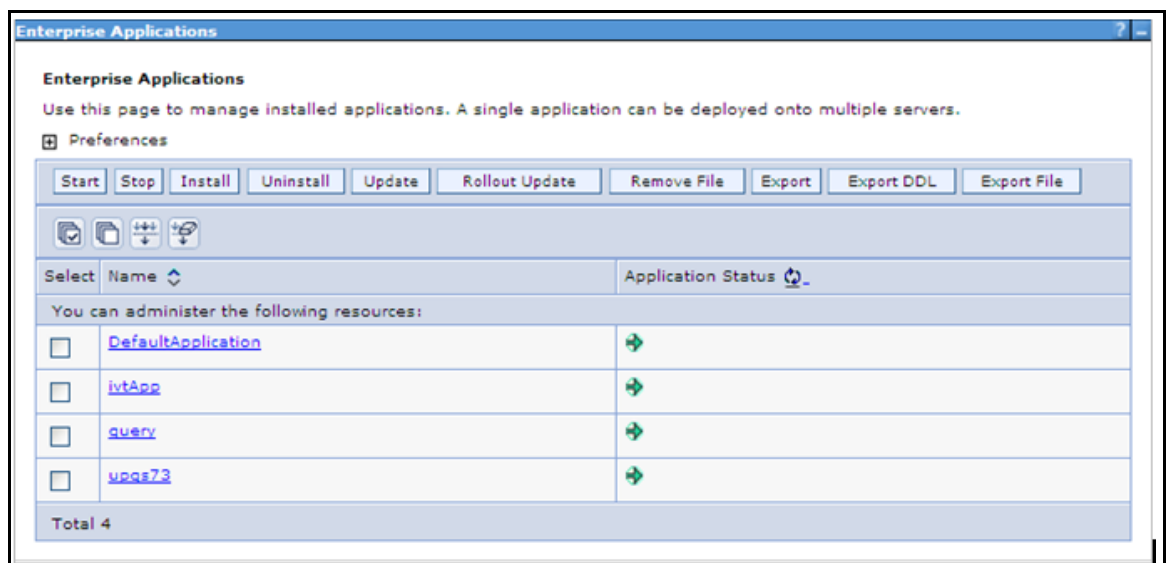
1. Open the administrator console using the following URL:
2. `http://<ipaddress>:<Administrative Console Port>/ibm/console`
 Example: `http://10.111.222.333:9003/ibm/console` (https if SSL is enabled)

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

3. The *Integrated Solutions Console Login* window is displayed.



4. Log on with the **User ID** provided with the admin rights.
5. From the LHS menu, expand the **Applications** → **Application Type** → **WebSphere Enterprise Applications**.
6. The *Enterprise Applications* screen is displayed.



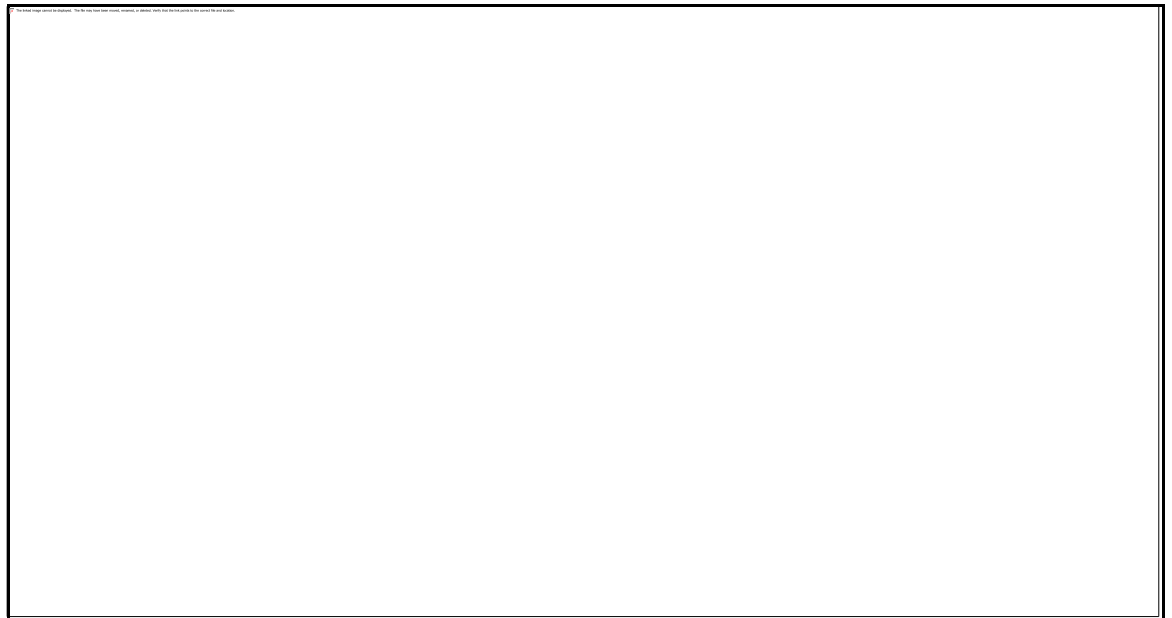
7. This *Enterprise Applications* screen helps you to:

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

11.2.1.4 Configuring WebSphere Shared Library to Support Jersey 2x and Jackson 2.9x Libraries

Perform the following configuration to set WebSphere shared library to support jersey 2x and Jackson 2.9x libraries.

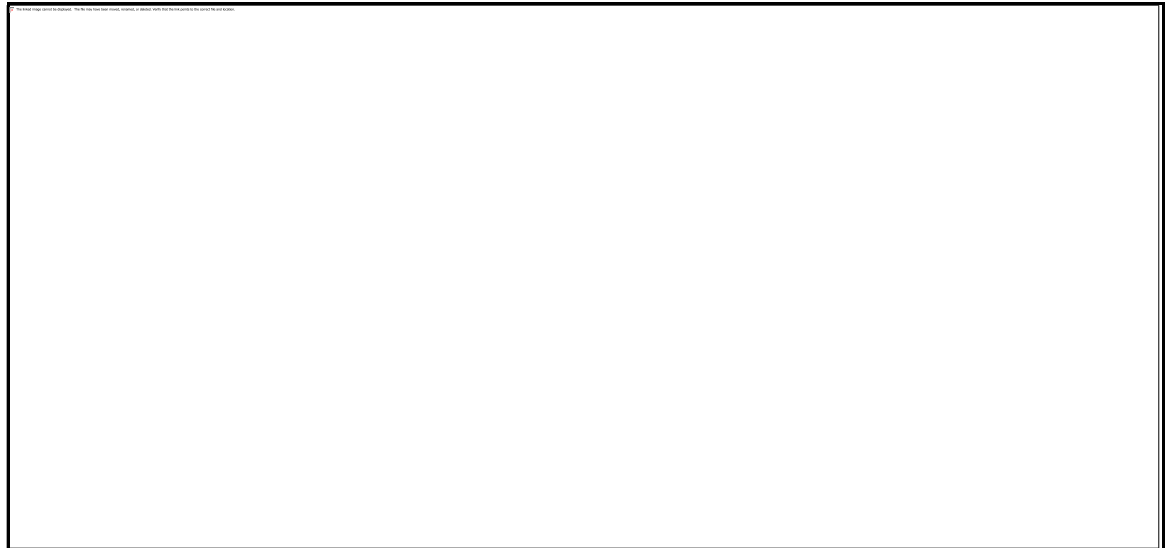
1. Click **Environment** from the menu on the left to expand and view the list. Click **Shared Libraries** to open the *Shared Libraries* window.



2. Enter details as shown in the following:
 - **Name:** Enter a unique identifiable name.
 - **Description:** Enter a valid description.
 - **Classpath:** Enter the absolute path where the JARs related to Jersey 2.x and Jackson 2.9x are copied. These jars are available in the `<OFSAA_HOME>/utility/externallib/WEB-INF/lib` directory after creation of the EAR file.
3. Select **Use an isolated class loader for this library**.
4. Click **OK** to save to master configuration.
5. Select the application or module and map the shared libraries. Click **OK**. In the following illustration, **ofsa** is selected.



6. From the *Shared Library Mapping* window, move the required shared libraries from **Available** to **Selected**. In the following illustration, JERSEY2x is selected.



7. Click **OK**.
8. Similarly, select the next application or module and repeat the procedure from steps 5 to 7.



9. Disable the built-in JAX-RS via JVM property.
10. Go to WebSphere admin console in **Servers > WebSphere Application Servers > yourServerName**.
11. In **Server Infrastructure** section, go to **Java and Process Management > Process definition > Java Virtual Machine > Custom properties**.
12. Add the following property:

```
com.ibm.websphere.jaxrs.server.DisableIBMJAXRSEngine=true
```
13. Restart the application.

11.2.1.5 Delete WebSphere Profiles

To delete a WebSphere profile, do the following:

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

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

4. Execute the command:

```
manageprofiles.sh -delete -profileName <profile_name>
```
5. Delete **profile** directory.

Example:

```
<WebSphere_Installation_Directory>/AppServer/profiles/<profile_name>
```

6. Execute the command:

```
manageprofiles.sh -validateAndUpdateRegistry
```

11.2.1.6 WebSphere HTTPS Configuration

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

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

11.2.1.7 WebSphere Memory Settings

To configure the WebSphere Memory Settings:

1. Navigate to **WebSphere Applications Server** → **Application Servers** → **Server1** → **Process Definition** → **Java Virtual Machine**.
2. Change the memory setting for Java Heap:


```
Initial heap size = 512
Maximum heap size =3072
```

11.2.1.8 Configuring WebSphere for REST Services Authorization

Configure the following in WebSphere to enable REST API authorization by OFSAA:

1. Log on to WebSphere console with the **User ID** provided with the admin rights.
2. Expand Security menu in the LHS and click Global security > Web and SIP security > General settings.
3. De-select the **Use available authentication data when an unprotected URI is accessed** checkbox.
4. Click **OK**.
5. Click **Save** to save the changes to master configuration.

11.2.1.9 Configuring Application Security in WebSphere

This is a mandatory security procedure for WebSphere to restrict the unauthorized access of configuration files in directories. For detailed information, see the [Oracle Financial Services Analytical Applications Infrastructure Security Guide](#).

11.2.2 Configuring WebLogic for Application Deployment

You can deploy multiple OFSAA applications on different domains of a stand-alone Weblogic application Server. To create a WebLogic "Domain" 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 12.1.3+ (64 bit) with Java 8, download and install patch 18729264 from My Oracle Support. Following configuration is required only if OFS Big Data Processing is licensed and enabled in your OFSAA instance and OFSAA is deployed on Oracle WebLogic Server version 12.2.x:

The `jersey-server-1.9.jar` file should be copied to <HIVE_LIB_PATH> path.

11.2.2.1 Creating Domain in WebLogic Server

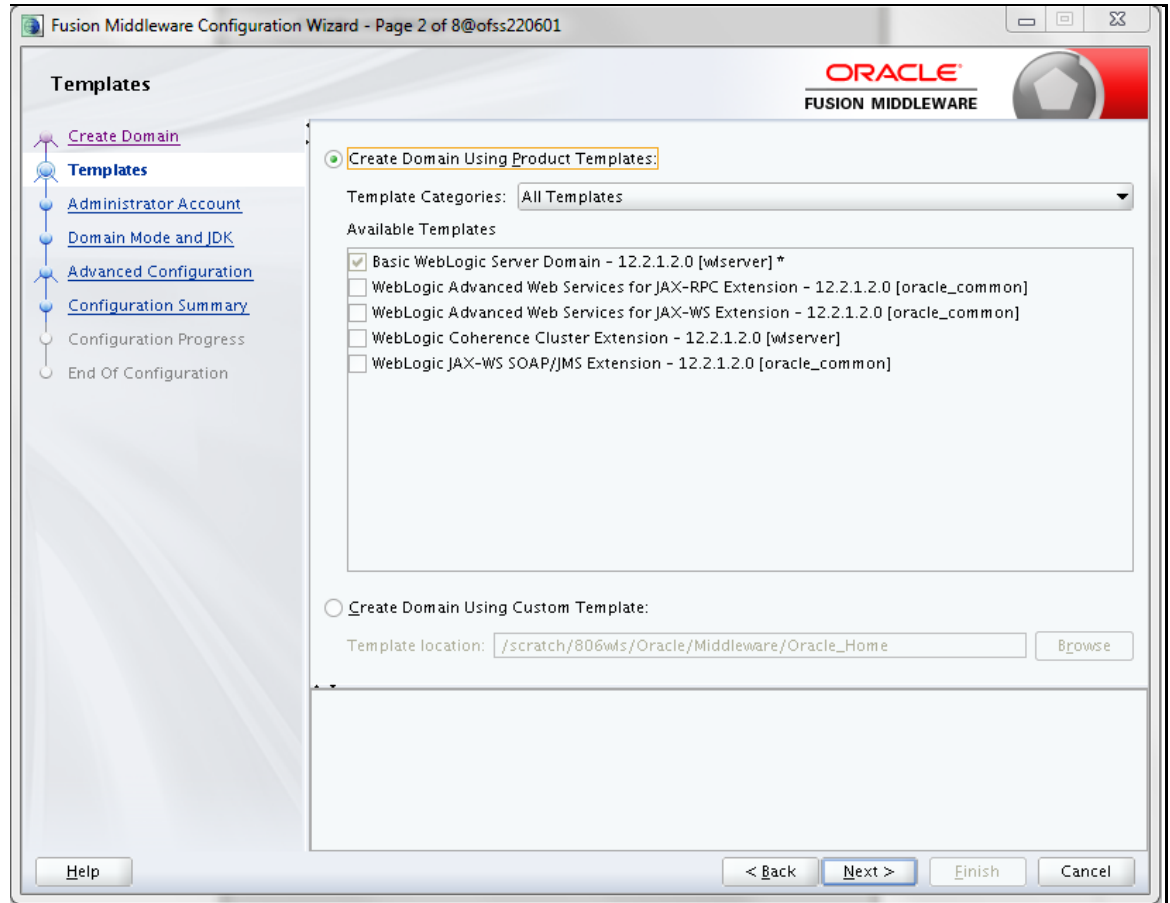
1. Navigate to the directory <WLS_HOME>/wlsserver/common/bin and execute the command:

```
./config.sh
```

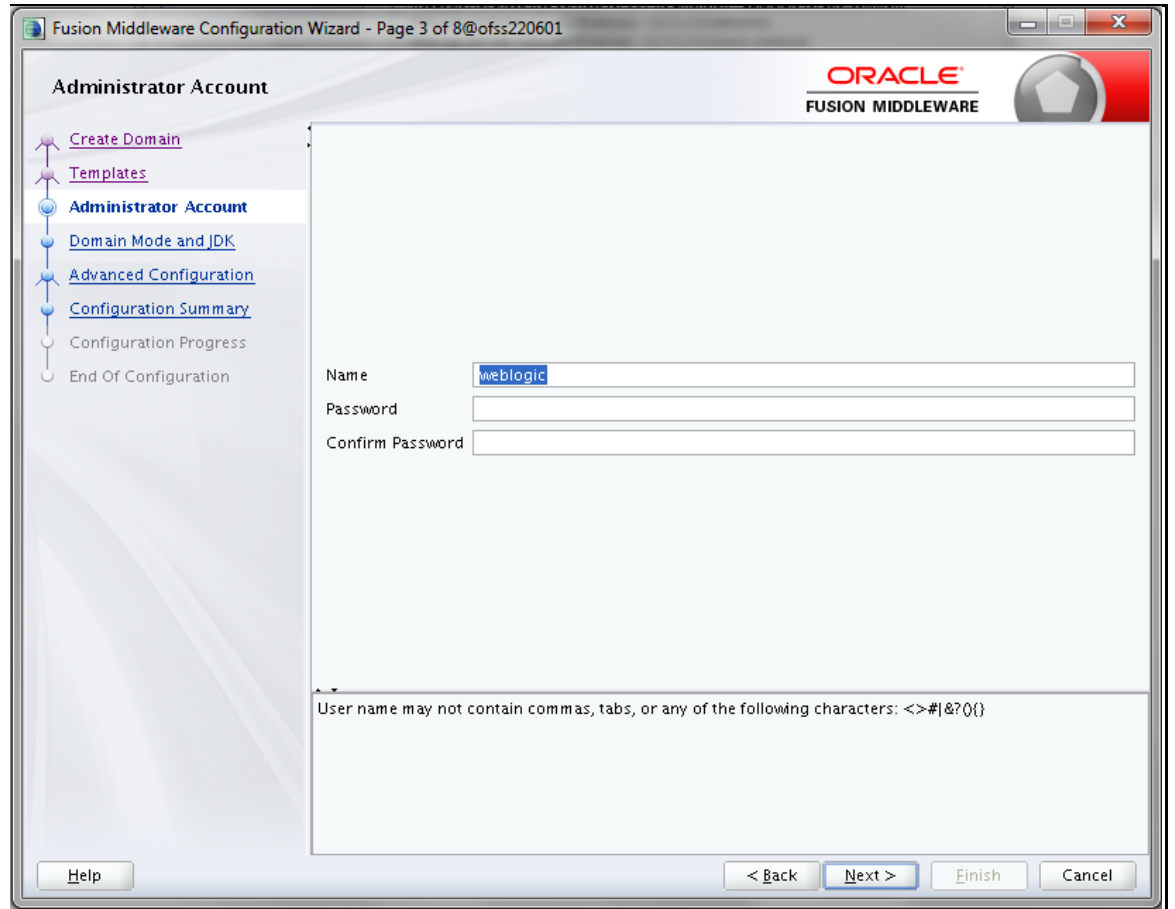
The Configuration Type window of the Configuration Wizard is displayed.



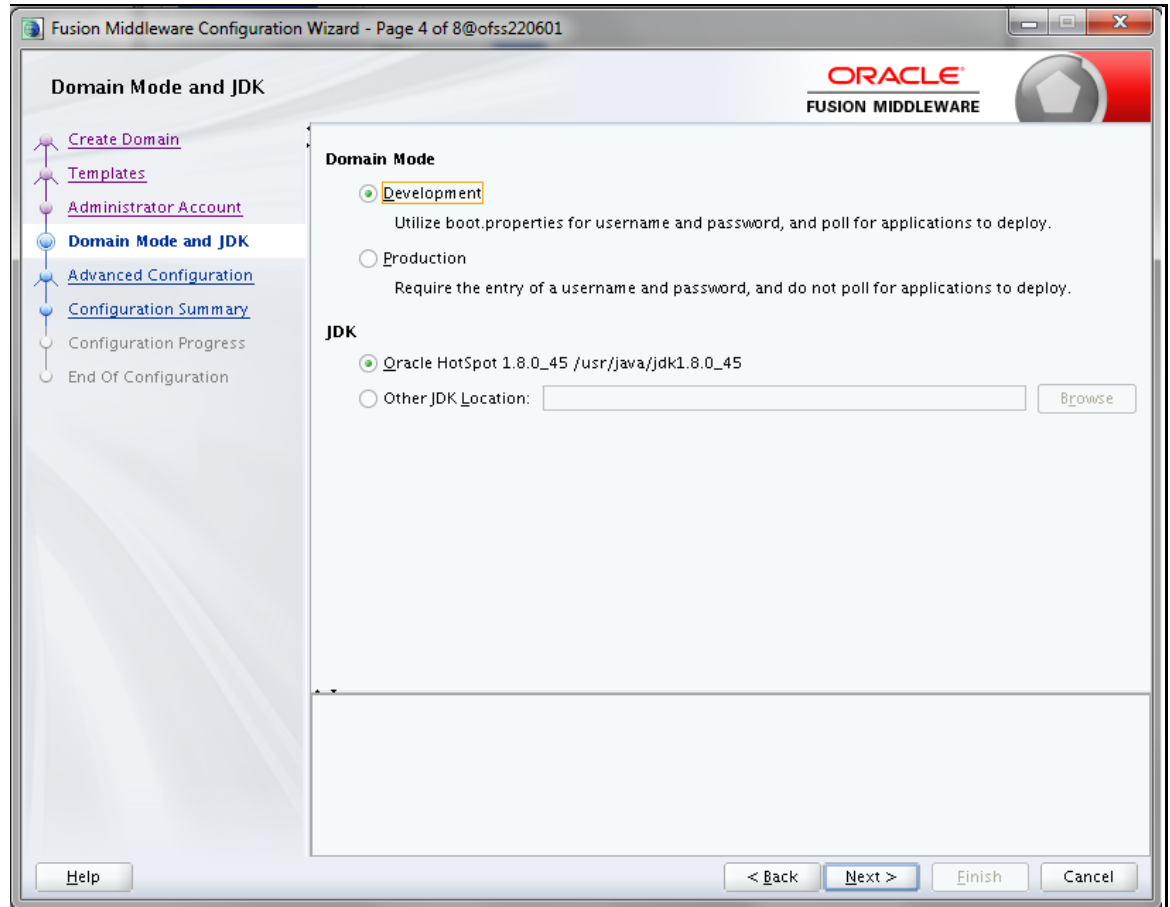
2. Select **Create a new domain** option and click **Next**. The Templates window is displayed.



3. Select the **Create Domain Using Product Templates** option and click **Next**. The Administrator Account window is displayed.

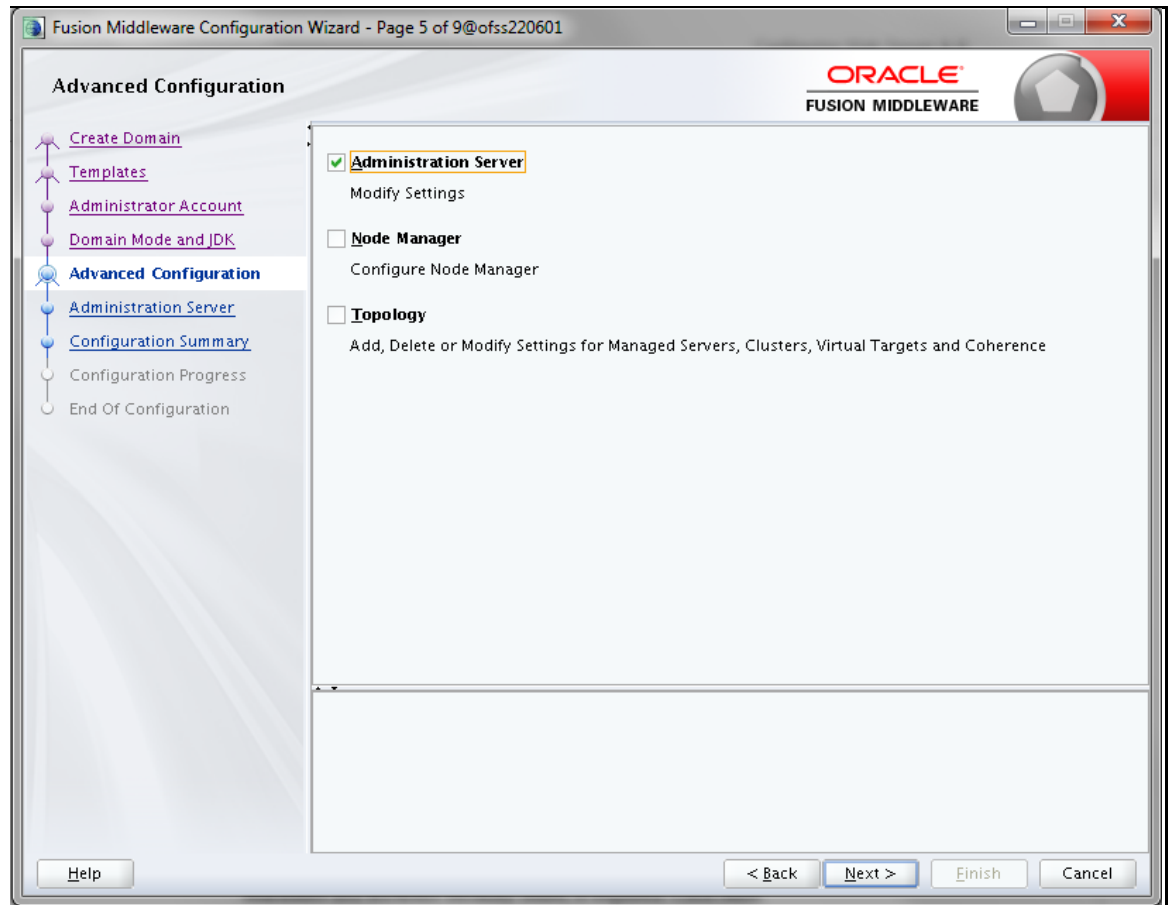


4. Enter the user name to be assigned to the administrator, the password and confirm the password. Click **Next**. The *Domain Mode and JDK* window is displayed.

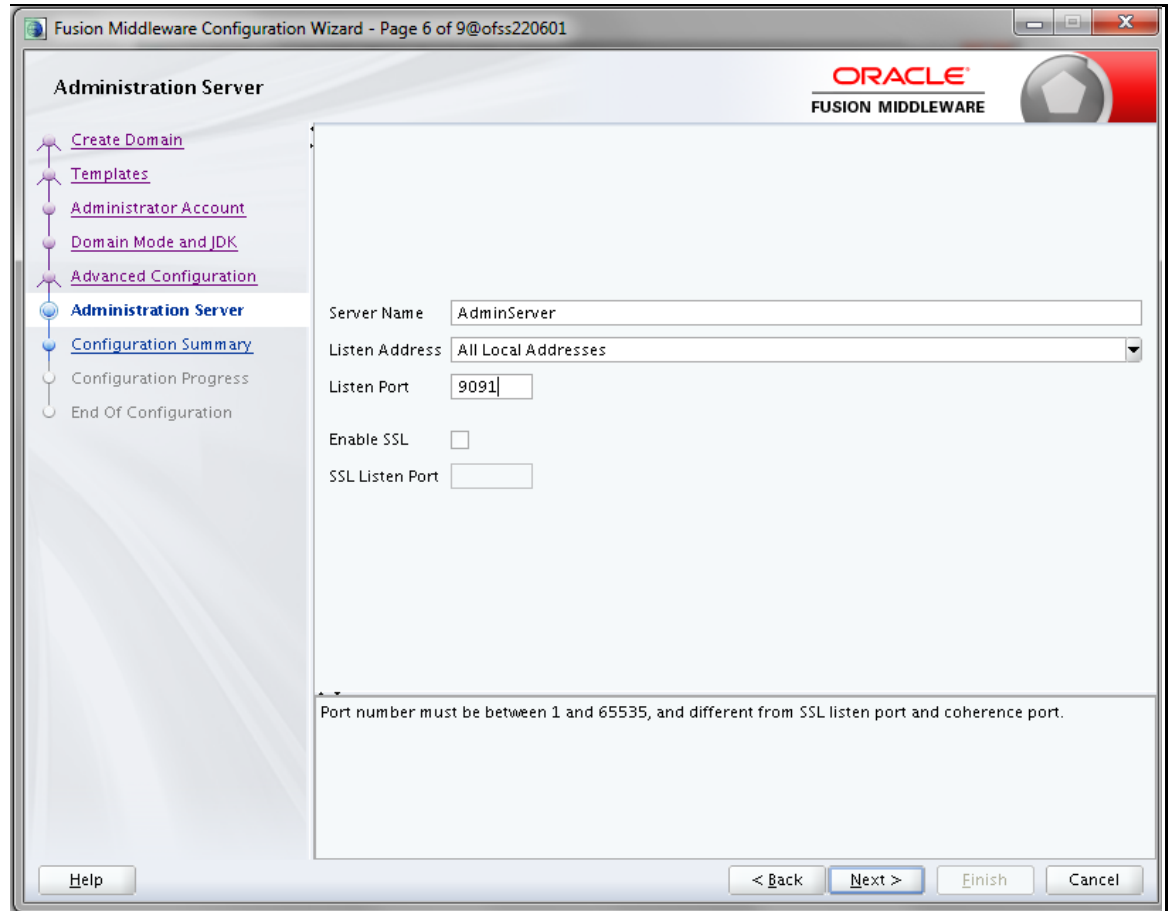


5. Select from the following options:

- In the *Domain Mode* section, select the required mode (Development or Production).
- In the *JDK* section, select the required option. If you select **Other JDK Location**, click **Browse**, navigate to the JDK location, and select. Click **Next**.
- The *Advanced Configuration* window is displayed.



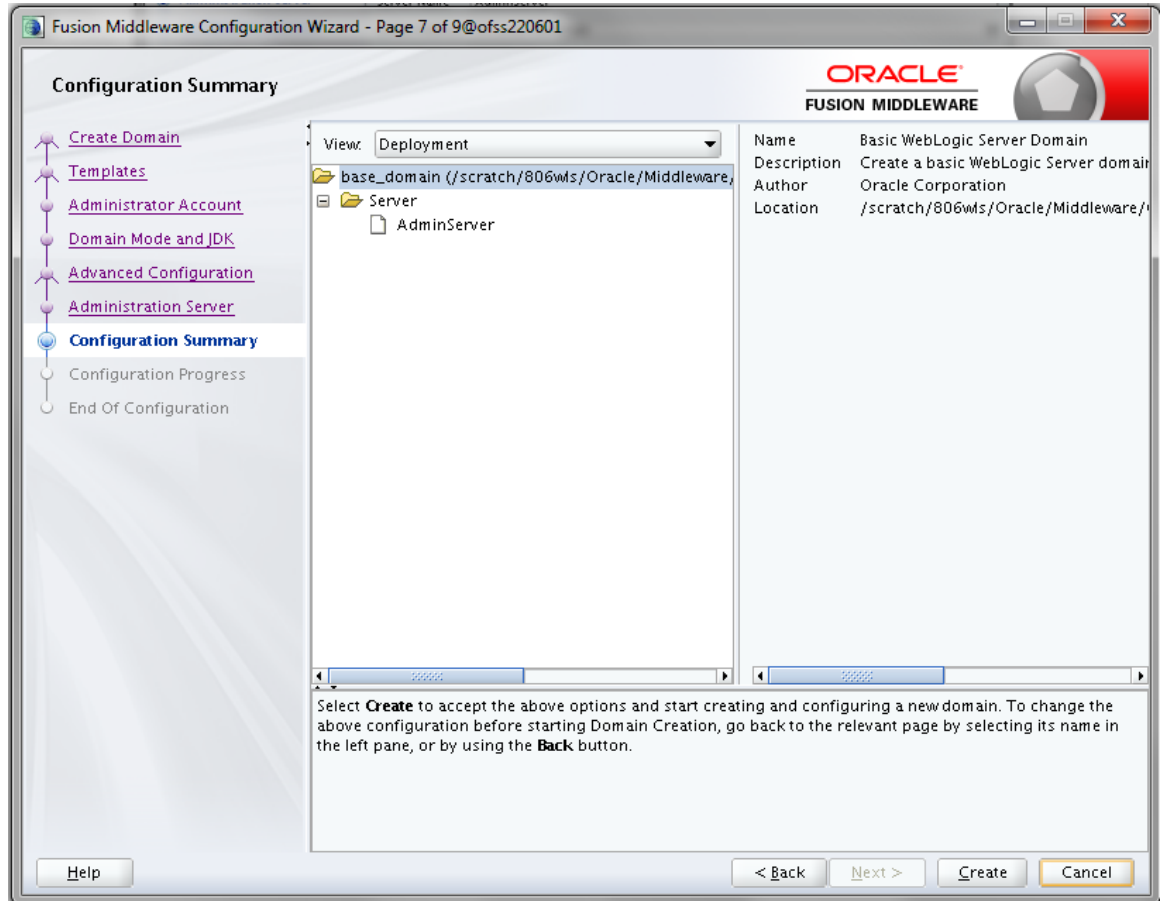
6. Select **Administration Server**. A WebLogic Server domain must have an Administration Server. You can also select **Manages Servers, Clusters and Machines** and **RDBMS Security Store**, if required. Click **Next**.
7. The *Administration Server* window is displayed.



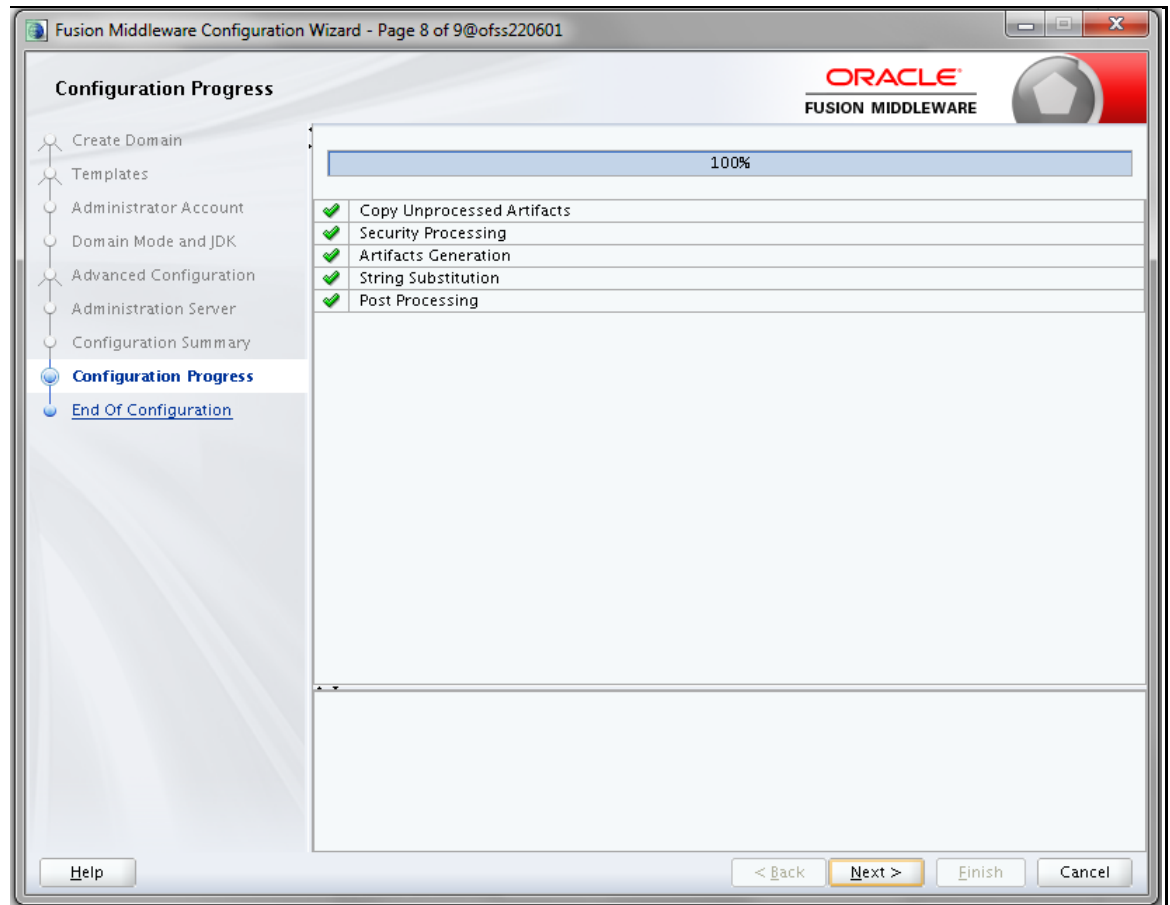
8. Enter Administration Server details such as the **Server Name**, **Listen address**, **Listen Port**, **Enable SSL**(for secure login using https, select this check box), and **SSL listen port**. Click **Next**. The *Configuration Summary* window is displayed.

NOTE

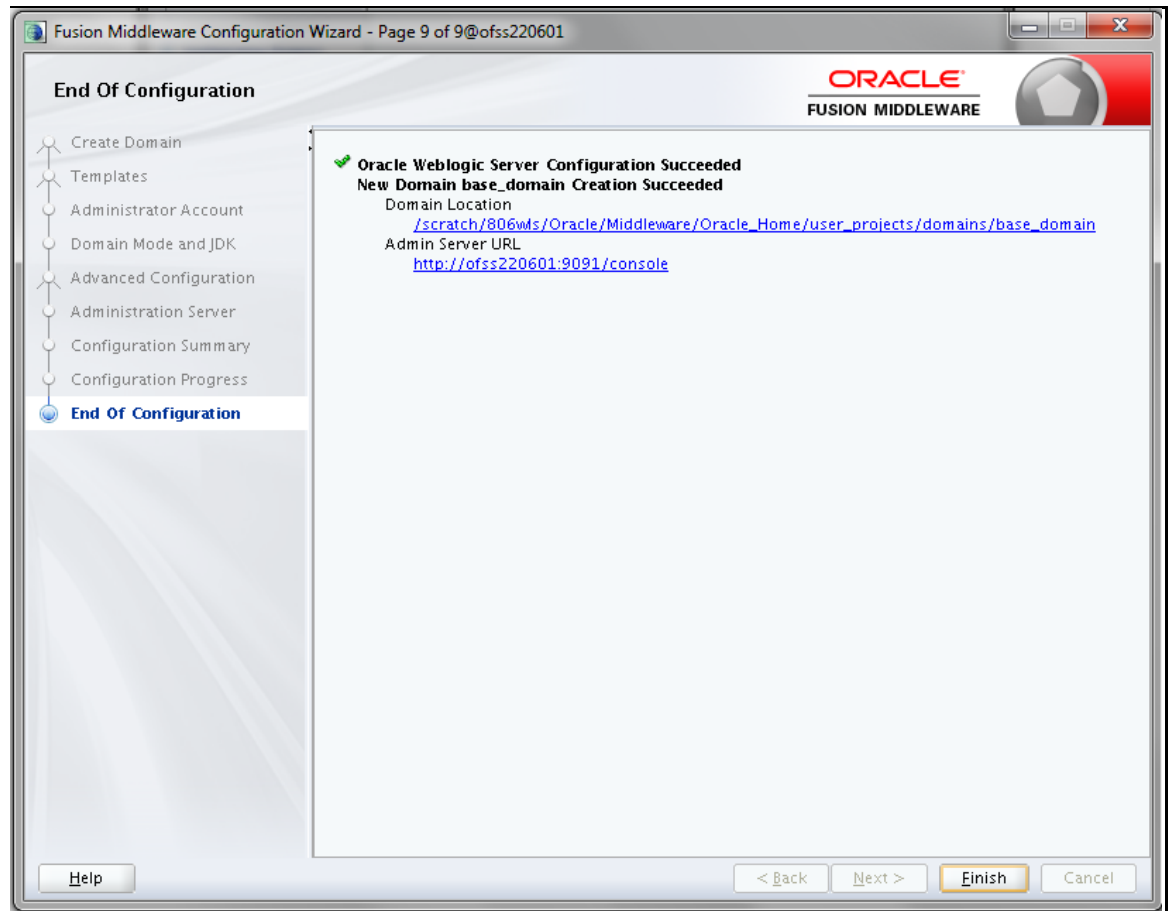
Make a note of the Listen Port or SSL Listen Port value (for example: 7007), since the same has to be re-entered in the Servlet port field during Infrastructure installation.



9. Verify the configuration details of the WebLogic domain and click **Create**. The *Configuration Progress* window is displayed with the status indication of the domain creation process.



10. Click **Next** when 100% of the activity is complete.
The *End of Configuration* window is displayed



11. Click **Finish**. 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

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

11.2.2.2 Delete Domain in WebLogic

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

3. Delete the WebLogic domain.

11.2.2.3 Configuring WebLogic Memory Settings

To configure the WebLogic Memory Settings:

1. Change the memory setting for Java Heap to `-Xms512m -Xmx3072m` in `setDomainEnv.sh` file, which resides in the directory `<DOMAIN_HOME>/bin` and in `CommEnv.sh` file which resides in the `common/bin` directory.
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"
```

11.2.3 Configuring WebLogic for REST Services Authorization

To enable REST API authorization by OFSAA in WebLogic, perform the following steps:

1. Open the `config.xml` file located in the domain where OFSAA is deployed, that is `<domain_home>/config/config.xml`.
2. Add the following in the security-configuration tag:

```
<enforce-valid-basic-auth-credentials>>false</enforce-valid-basic-auth-credentials>.
```

11.2.4 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](#)

11.2.4.1 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" file as instructed below.

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

1. Add the manager role to any one of the existing username/password combination as shown in the example above.
2. Use the same username/password to which the manager-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.

11.2.4.2 Configure Tomcat to use JAVA 64 bit Executables

1. Navigate to the \$CATALINA_HOME/bin directory.
2. Edit the **setclasspath.sh** file as explained below.
3. Replace the following block of text:

```
# Set standard commands for invoking Java.
RUNJAVA="$JRE_HOME"/bin/java
if [ "$os400" != "true" ]; then
RUNJDB="$JAVA_HOME"/bin/jdb
With:
# Set standard commands for invoking Java.
RUNJAVA="$JAVA_BIN"/java
if [ "$os400" != "true" ]; then
RUNJDB="$JAVA_BIN"/jdb
```

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

NOTE If Tomcat server is installed under different Unix profile, set **JAVA_BIN** environment variable in profile to include the Java Runtime Environment absolute path. For example:

NOTE export JAVA_BIN /usr/java6_64/jre/bin

NOTE export JAVA_BIN = /usr/java6_64/jre/bin//sparcv9 for Solaris Sparc

11.2.4.3 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 is 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.

11.2.4.4 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_directory>/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 **OFSAI_InstallConfig.xml** file for SILENT mode OFSAI installation.

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

11.2.4.5 Apache Tomcat Memory Settings

To configure the Apache Tomcat Memory Settings:

1. Locate the file `catalina.sh` which resides in the directory `<CATALINA_HOME>/bin` directory.
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
```

11.2.4.6 Uninstalling WAR Files in Tomcat

To uninstall WAR files in Tomcat, see [Uninstalling WAR Files in Tomcat](#).

11.2.4.7 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.

1. Copy the `jaxrpc.jar` file 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.

11.2.4.8 Configure Tomcat for User Group Authorization, Data Mapping, and Disable WADL for the Web Service

This section applies only if the Web Application Server Type is Tomcat.

Users with System Authorization Roles can access User Group Authorization. However, to make it available on the Tomcat Web Server, you have to perform the following configuration steps:

1. Navigate to the `$FIC_WEB_HOME/webroot/WEB-INF/` Directory and open the `web.xml` File.

2. Enter the following in the `web.xml` File.

```
<init-param>
<param-name>mappedfile</param-name>
<param-value>>false</param-value>
</init-param>
```

3. To disable the WADL for the Web Service, navigate to the following snippet in the `web.xml` file.

```
<servlet>
<servlet-name>CommonRETServlet</servlet-name>
<servlet-class>org.glassfish.jersey.servlet.ServletContainer</servlet-
class>
<init-param>
<param-name>javax.ws.rs.Application</param-name>
<param-
value>com.ofs.fsapps.commonapps.util.ApplicationResourceConfig</param-
value>
</init-param>
<load-on-startup>1</load-on-startup>
</servlet>
```

4. Add the following snippet before the `<load-on-startup>1</load-on-startup>` Attribute:

```
<init-param>
<param-name>jersey.config.server.wadl.disableWadl</param-name>
<param-value>>true</param-value>
</init-param>
```

5. Save and close the file.

6. If the Tomcat Server is already running, it requires a re-start after the preceding configuration is done.

12 Appendix B: Configuring Resource Reference in Web Application Servers

This appendix includes the following topics:

- [Configure Resource Reference in WebSphere Application Server](#)
- [Configure Resource Reference in WebLogic Application Server](#)
- [Configure Resource Reference in Tomcat Application Server](#)

12.1 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:

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

12.1.1 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

Use this page to edit properties of a JDBC provider. The JDBC provider object encapsulates the specific JDBC driver implementation class for access to the specific vendor database of your environment. Learn more about this task in a [guided activity](#). A guided activity provides a list of task steps and more general information about the topic.

Scope: Cell=GXS150REV-Zone2Node05Cell, Node=GXS150REV-Zone2Node05, Server=server1

Scope specifies the level at which the resource definition is visible. For detailed information on what scope is and how it works, [see the scope settings help](#).

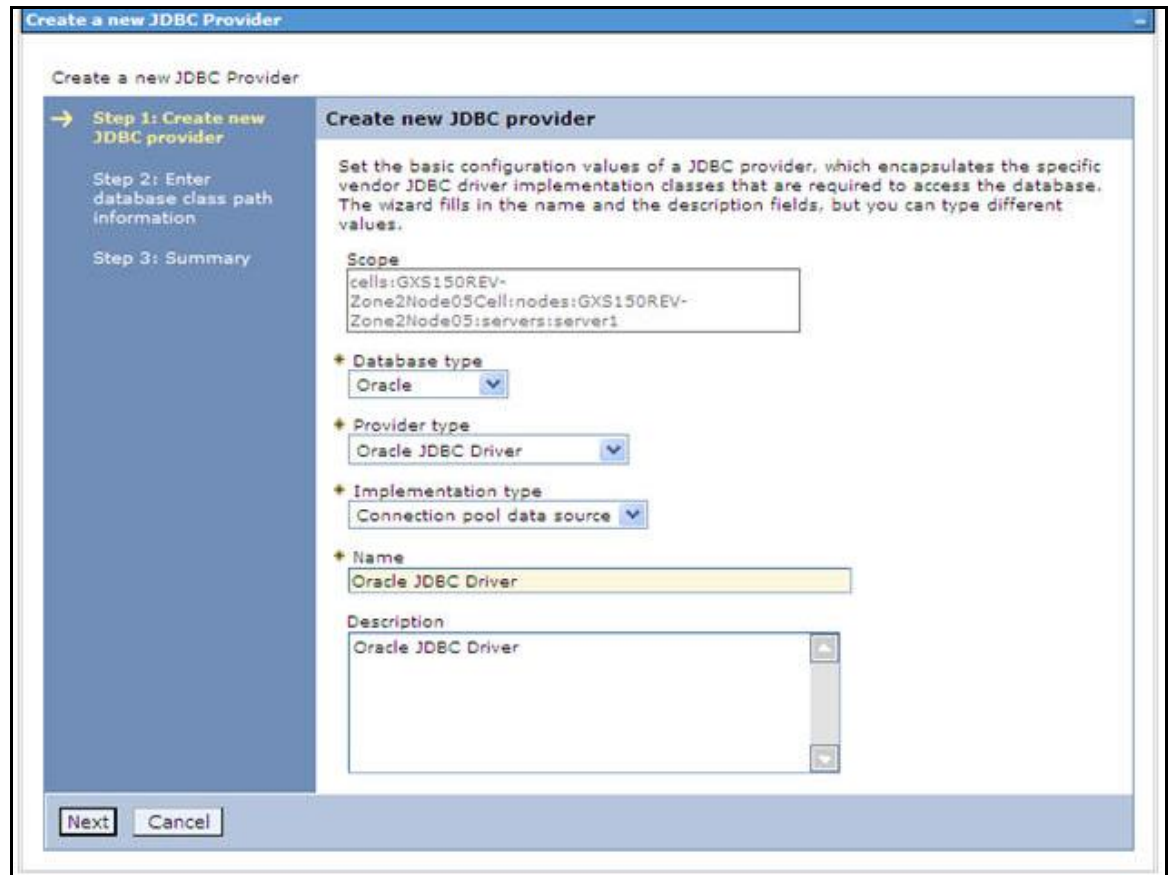
Node=GXS150REV-Zone2Node05, Server=server1

Preferences

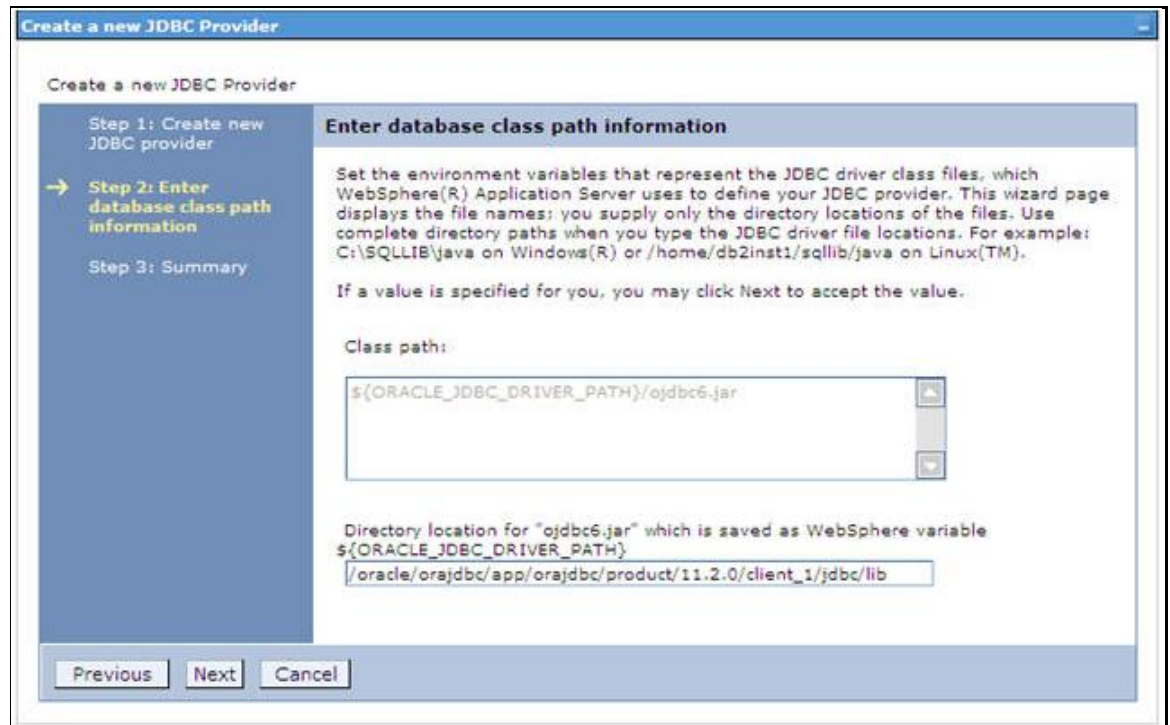
New Delete

Select	Name	Scope	Description
You can administer the following resources:			
<input type="checkbox"/>	Derby JDBC Provider	Node=GXS150REV-Zone2Node05,Server=server1	Derby embedded non-XA JDBC Provider
<input type="checkbox"/>	FICMASTER	Node=GXS150REV-Zone2Node05,Server=server1	Oracle JDBC Driver
<input type="checkbox"/>	Oracle JDBC Driver	Node=GXS150REV-Zone2Node05,Server=server1	Oracle JDBC Driver
<input type="checkbox"/>	RORFFW	Node=GXS150REV-Zone2Node05,Server=server1	RORFFW
<input type="checkbox"/>	RORPNC	Node=GXS150REV-Zone2Node05,Server=server1	RORPNC
<input type="checkbox"/>	UPGSPFT	Node=GXS150REV-Zone2Node05,Server=server1	UPGSPFT
<input type="checkbox"/>	UPGSROR	Node=GXS150REV-Zone2Node05,Server=server1	UPGSROR
<input type="checkbox"/>	UPGSSAND	Node=GXS150REV-Zone2Node05,Server=server1	UPGSSAND
Total 8			

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 a new JDBC Provider* window is displayed.



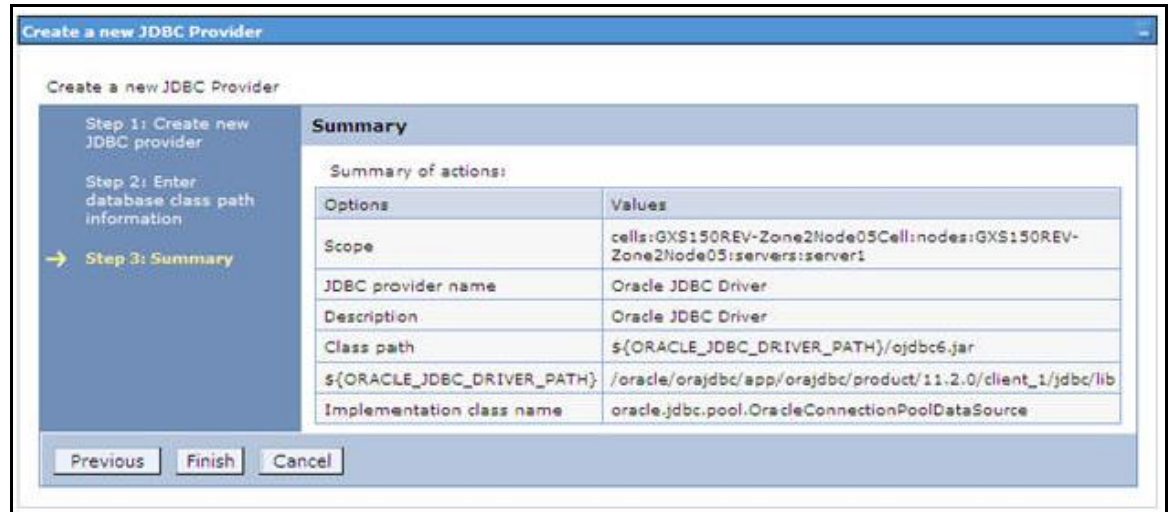
6. Enter the following details:
 - Database Type - Oracle
 - Provider Type - Oracle JDBC Driver
 - Implementation Type - Connection pool data source
 - Name - The required display name for the resource
 - Description - The optional description for the resource
7. Click **Next**.



8. Specify the directory location for `ojdbc<version>.jar` file. Ensure that you do not use the trailing slash file separators.
9. The Oracle JDBC driver can be downloaded from the following Oracle Download site:
 - Oracle Database 11g Release 2 (11.2.0.4) JDBC Drivers
 - Oracle Database 12c Release 1 (12.1.0.1) JDBC Drivers
10. Once downloaded, you need to copy the file in the required directory on the server.

NOTE See [Appendix P](#) for identifying the correct `ojdbc<version>.jar` version to be copied.

11. Once downloaded, you need to place the file in the required directory in your system. While creating the JDBC Provider, ensure that the path to the jar file in the directory is specified in the **Classpath** field in the *previous* window.
12. Click **Next**. The *Summary* window is displayed.



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

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

12.1.2 Create Data Source

The following steps are applicable for both CONFIG and ATOMIC data source creation:

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

Data sources

Use this page to edit the settings of a datasource that is associated with your selected JDBC provider. The datasource object supplies your application with connections for accessing the database. Learn more about this task in a [guided activity](#). A guided activity provides a list of task steps and more general information about the topic.

☑ Scope: Cell=GXS150REV-Zone2Node05Cell, Node=GXS150REV-Zone2Node05, Server=server1

Scope specifies the level at which the resource definition is visible. For detailed information on what scope is and how it works, [see the scope settings help](#).

Node=GXS150REV-Zone2Node05, Server=server1

☑ Preferences

New Delete Test connection Manage state...

Select	Name	JNDI name	Scope	Provider	Description	Category
You can administer the following resources:						
<input type="checkbox"/>	Default Datasource	DefaultDatasource	Node=GXS150REV-Zone2Node05,Server=server1	Derby JDBC Provider	Datasource for the WebSphere Default Application	
<input type="checkbox"/>	FICMASTER	jdbc/FICMASTER	Node=GXS150REV-Zone2Node05,Server=server1	FICMASTER	New JDBC Datasource	
<input type="checkbox"/>	RORFFW	jdbc/RORFFW	Node=GXS150REV-Zone2Node05,Server=server1	RORFFW	New JDBC Datasource	
<input type="checkbox"/>	RORPNC	jdbc/RORPNC	Node=GXS150REV-Zone2Node05,Server=server1	RORPNC	New JDBC Datasource	
<input type="checkbox"/>	UPGSPFT	jdbc/UPGSPFT	Node=GXS150REV-Zone2Node05,Server=server1	UPGSPFT	New JDBC Datasource	
<input type="checkbox"/>	UPGSROR	jdbc/UPGSROR	Node=GXS150REV-Zone2Node05,Server=server1	UPGSROR	New JDBC Datasource	
Total 6						

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

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

6. Specify the **Data Source name** and **JNDI name** for the new Data Source.
7. The **JNDI name** and **Data Source name** are case sensitive. Ensure that JNDI name is same as the Information Domain name.
8. Click **Next**. The *Select JDBC provider* window is displayed.

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

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

Create a data source

Create a data source

Step 1: Enter basic data source information

Step 2: Select JDBC provider

→ Step 3: Enter database specific properties for the data source

Step 4: Setup security aliases

Step 5: Summary

Enter database specific properties for the data source

Set these database-specific properties, which are required by the database vendor JDBC driver to support the connections that are managed through the datasource.

Name	Value
* URL	10.184.108.91:1521:ord11g
* Data store helper class name	Oracle11g data store helper

Use this data source in container managed persistence (CMP)

Previous Next Cancel

- Specify the database connection URL.

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

- 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.

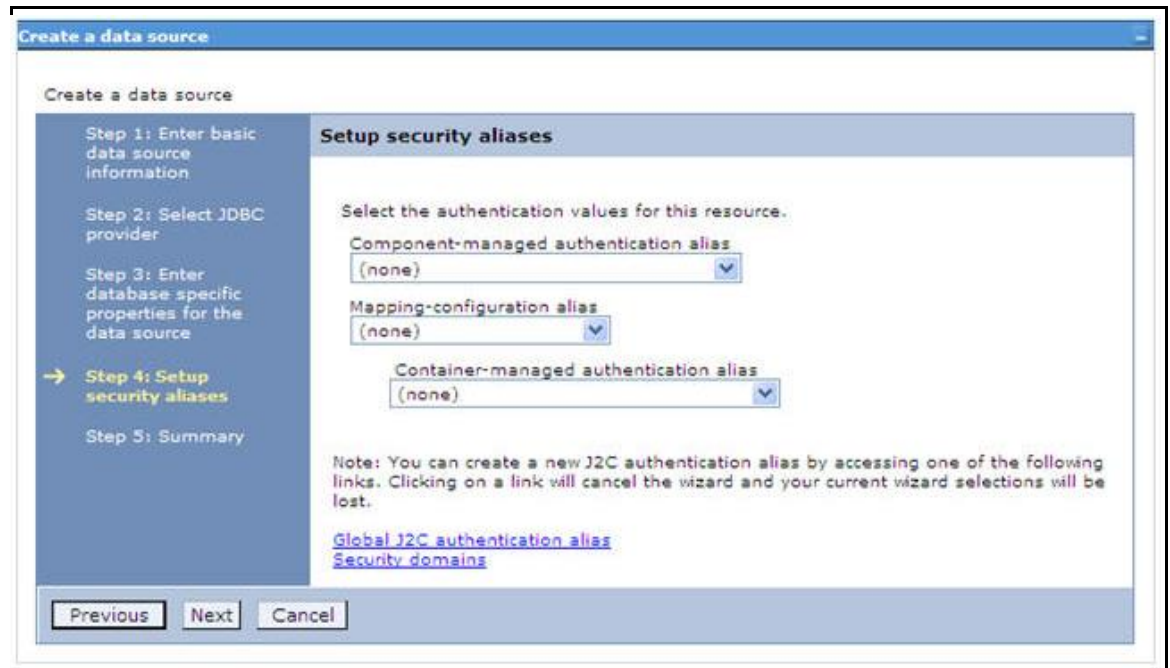
NOTE

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)))
```

- Click **Next**.



14. 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**.

Create a data source

Summary

Summary of actions:

Options	Values
Scope	cells:GXS150REV-Zone2Node05Cell:nodes:GXS150REV-Zone2Node05:servers:server1
Data source name	AtomT
JNDI name	jdbc/DRYMOCK
Select an existing JDBC provider	Oracle JDBC Driver
Implementation class name	oracle.jdbc.pool.OracleConnectionPoolDataSource
URL	jdbc:oracle:thin:@10.184.108.91:1521:ord11gr2
Data store helper class name	com.ibm.websphere.rsadapter.Oracle10gDataStoreHelper
Use this data source in container managed persistence (CMP)	true
Component-managed authentication alias	(none)
Mapping-configuration alias	(none)
Container-managed authentication alias	(none)

Previous Finish Cancel

15. You can also create and map J2C authentication alias after creating the Data Source.

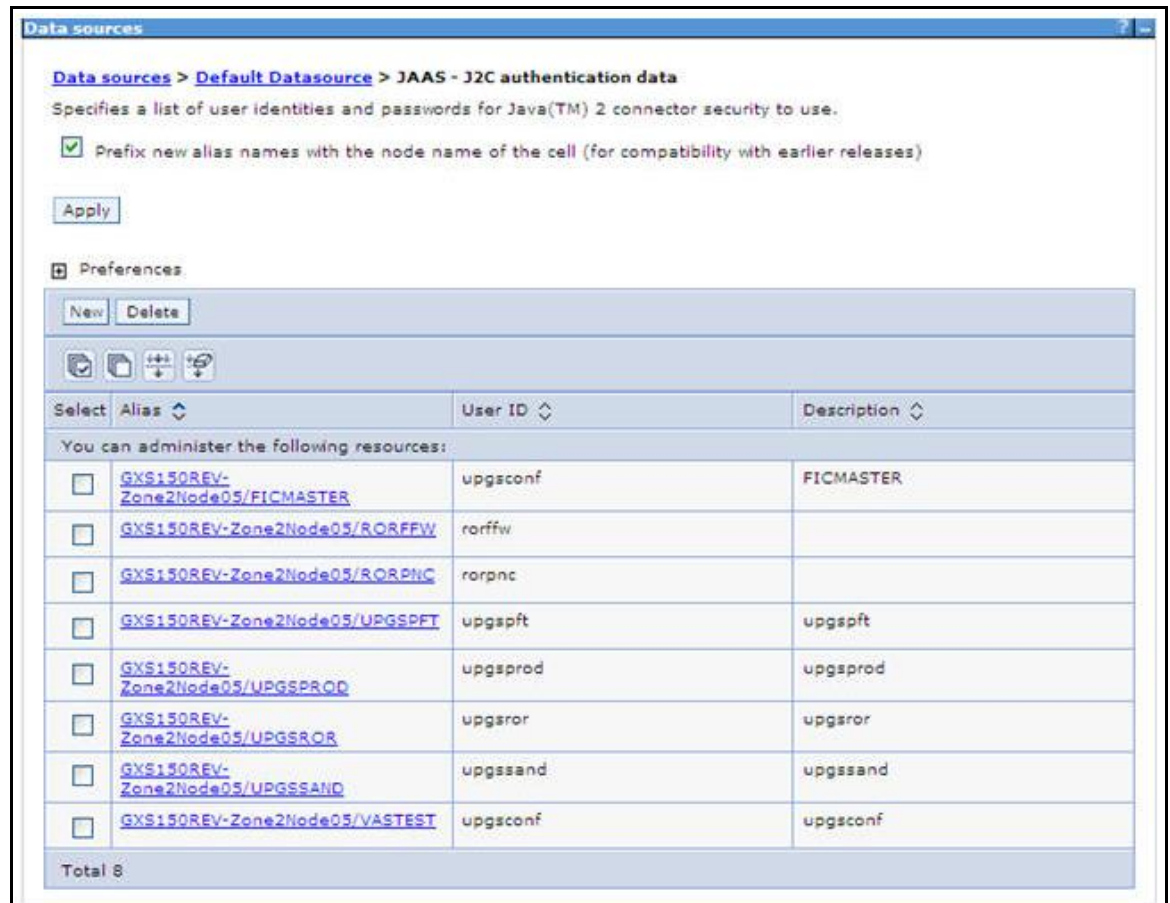
16. You must create another Data Source by following the above procedure with **jdbc/FICMASTER** as **JNDI name** pointing to the 'configuration schema' of Infrastructure.

12.1.3 J2C Authentication Details

The following steps 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**.



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



- 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.

12.1.4 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.

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

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

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

Configuration

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

Apply OK Reset Cancel

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

12.2 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](#)

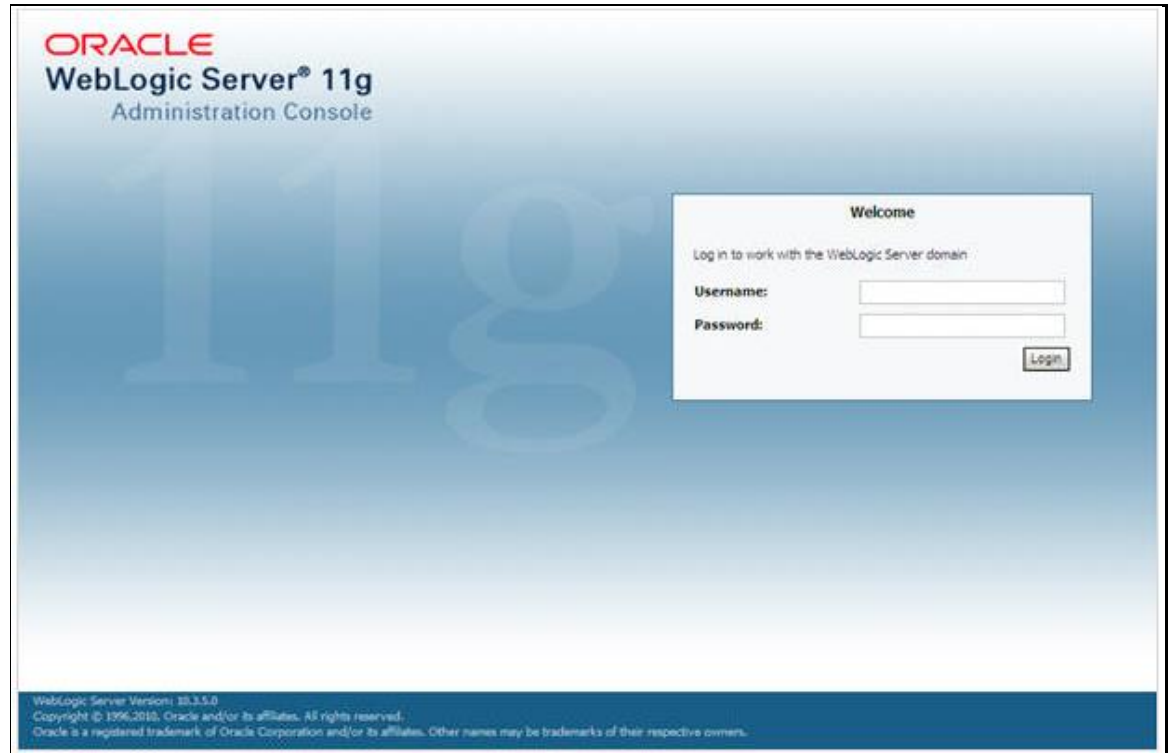
In WebLogic, you can create Data Source in the following ways:

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

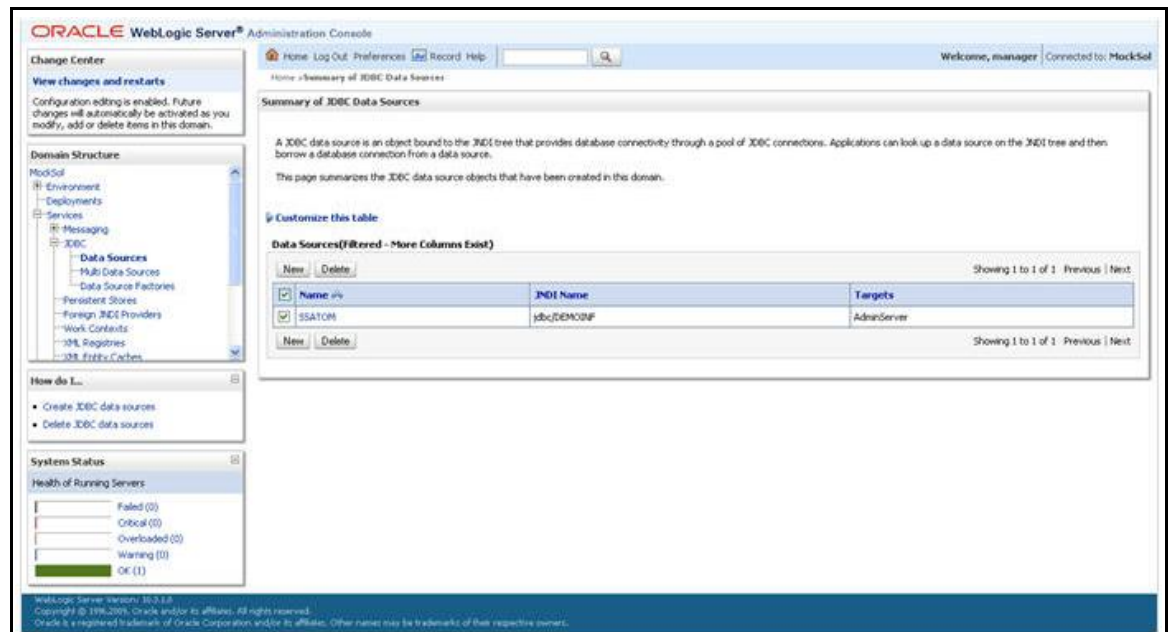
12.2.1 Create Data Source

The following steps 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**.



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



- 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.

Create a New JDBC Data Source

Back Next Finish Cancel

JDBC Data Source Properties

The following properties will be used to identify your new JDBC data source.
* Indicates required fields

What would you like to name your new JDBC data source?

Name:

What JNDI name would you like to assign to your new JDBC Data Source?

JNDI Name:

What database type would you like to select?

Database Type:

Back Next Finish Cancel

6. Enter JDBC data source **Name**, **JNDI Name**, and select the **Database Type** from the drop-down list. Click **Next**.
7. 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.

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

8. Select **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**.

The screenshot shows the 'Create a New JDBC Data Source' wizard in the Oracle WebLogic Administration Console. The current step is 'Transaction Options'. At the top, there are navigation buttons: 'Back', 'Next', 'Finish', and 'Cancel'. Below the title, a message states: 'You have selected non-XA JDBC driver to create database connection in your new data source.' A question asks: 'Does this data source support global transactions? If yes, please choose the transaction protocol for this data source.' There are three radio button options: 'Supports Global Transactions' (which is checked), 'Logging Last Resource', and 'Emulate Two-Phase Commit'. Below these options, there are three text boxes providing details for each option. At the bottom, there are navigation buttons: 'Back', 'Next', 'Finish', and 'Cancel'.

9. Select **Supports Global Transactions** checkbox and then **One-Phase Commit**.
10. Click **Next**. The *Connection Properties* window is displayed.

Create a New JDBC Data Source

Back Next Finish Cancel

Connection Properties
Define Connection Properties.

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

Database Name: fsgbu

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

Host Name: 10.184.74.80

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

Port: 1521

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

Database User Name: ssatom

What is the database account password to use to create database connections?

Password:

Confirm Password:

Back Next Finish Cancel

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

Create a New JDBC Data Source

Test Configuration Back Next Finish Cancel

Test Database Connection

Test the database availability and the connection properties you provided.

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

Driver Class Name: oracle.jdbc.OracleDriver

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

URL: jdbc:oracle:thin:@10.184.

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

Database User Name: ssatom

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

Password: [masked]

Confirm Password: [masked]

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

Properties:
user=ssatom

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

System Properties:

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

Test Table Name:
SQL SELECT 1 FROM DUAL

Test Configuration Back Next Finish Cancel

13. Verify the details and click **Test Configuration** and test the configuration settings.
14. A confirmation message is displayed stating "**Connection test succeeded**".
15. 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.

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

The screenshot shows a dialog box titled "Create a New JDBC Data Source". At the top, there are buttons for "Back", "Next", "Finish", and "Cancel". Below this is the "Select Targets" section, which includes a text box explaining that one or more targets must be selected for deployment. A table titled "Servers" lists "AdminServer" with a checked checkbox. At the bottom, there are again buttons for "Back", "Next", "Finish", and "Cancel".

17. Select **AdminServer** and click **Finish**.

12.2.2 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.

The screenshot shows a dialog box titled "Create a New JDBC GridLink Data Source". At the top, there are buttons for "Back", "Next", "Finish", and "Cancel". Below this is the "JDBC GridLink Data Source Properties" section, which includes a text box for the name (xyz) and a text box for the JNDI name (jdbc/xyz). The "Database Type" is set to "Oracle". There is a checkbox for "XA Driver" which is unchecked. At the bottom, there are buttons for "Back", "Next", "Finish", and "Cancel".

1. Enter Data Source **Name** and **JNDI Name**.
2. Ensure that the JNDI Name is specified in the format "jdbc/infodomainname" and the **XA Driver** checkbox is not selected. Click **Next**.

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

12.2.3 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

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

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

Customize this table

Multi Data Sources (Filtered - More Columns Exist)

New Delete Showing 1 to 2 of 2 Previous | Next

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

New Delete Showing 1 to 2 of 2 Previous | Next

- Click **New**. The *Create a New JDBC Multi Data Source* screen is displayed.

NOTE

Ensure that the Data Sources which must be added to new JDBC Multi Data Source are created.

Create a New JDBC Multi Data Source

Back Next Finish Cancel

Configure the Multi Data Source

The following properties will be used to identify your new JDBC multi data source.

What would you like to name your new JDBC multi data source?

Name: JDBC Multi Data Source-0

What JNDI name would you like to assign to your new JDBC multi data source?

JNDI Name: jdbc/infdomainname

What algorithm type for this JDBC Multi Data Source would you like to select?

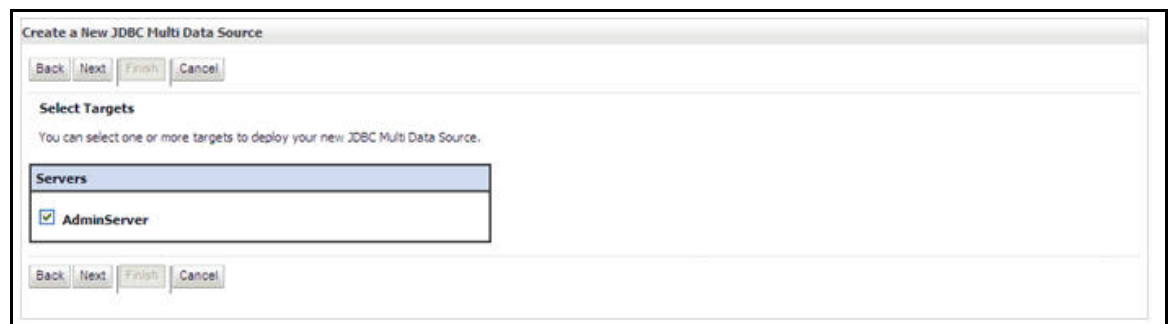
Algorithm Type: Load-Balancing

Back Next Finish Cancel

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

NOTE

The JNDI Name must be specified in the format jdbc/infodomainname.
JNDI Name of the Data Sources that are added to new JDBC Multi data source should be different from the JNDI name specified during Multi Data Source.
Same steps must 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 is mentioned in the web.xml file of OFSAAI Application.
You can select the Algorithm Type as Load-Balancing.



The screenshot shows the 'Create a New JDBC Multi Data Source' wizard. The title bar reads 'Create a New JDBC Multi Data Source'. At the top, there are navigation buttons: 'Back', 'Next', 'Finish', and 'Cancel'. The main section is titled 'Select Targets' and contains the instruction: 'You can select one or more targets to deploy your new JDBC Multi Data Source.' Below this is a table with the heading 'Servers'. The table has one row with the name 'AdminServer' and a checked checkbox to its left. At the bottom of the wizard, there are navigation buttons: 'Back', 'Next', 'Finish', and 'Cancel'.

6. Select **AdminServer** and click **Next**.



The screenshot shows the 'Create a New JDBC Multi Data Source' wizard. The title bar reads 'Create a New JDBC Multi Data Source'. At the top, there are navigation buttons: 'Back', 'Next', 'Finish', and 'Cancel'. The main section is titled 'Select Data Source Type' and contains the instruction: 'Please select type (XA or Non-XA) of data source you would like to add to your new JDBC Multi Data Source.' Below this are two radio button options: 'XA Driver' (which is unselected) and 'Non-XA Driver' (which is selected). At the bottom of the wizard, there are navigation buttons: 'Back', 'Next', 'Finish', and 'Cancel'.

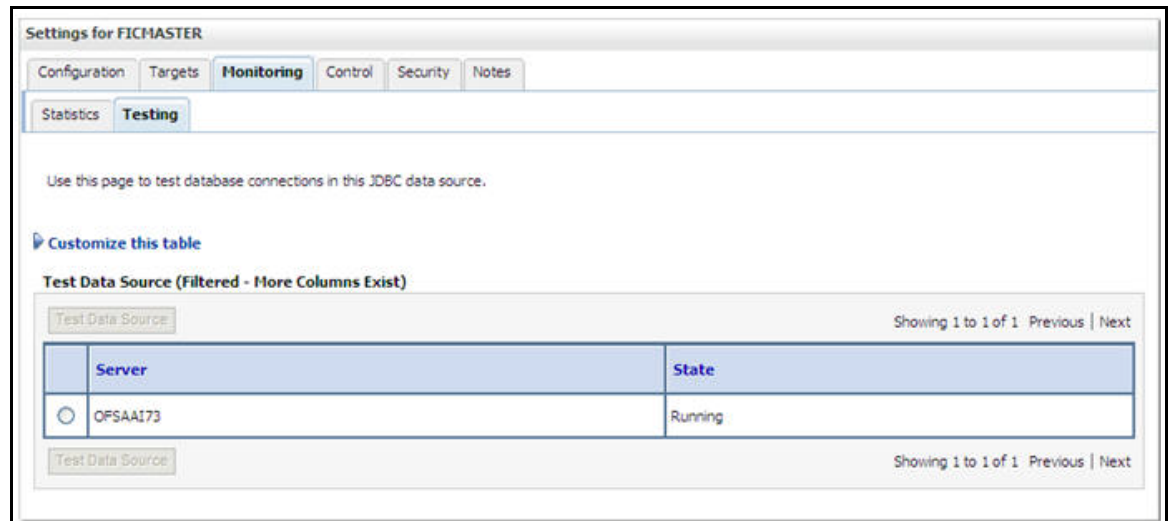
7. Select the type of data source which is added to new JDBC Multi Data Source. Click **Next**.



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

12.2.4 Advanced Settings for Data Source

1. Click the new Data Source from the *Summary of JDBC Data Sources* window. The *Settings for <Data Source Name>* window is displayed.
2. Select the **Connection Pooling** tab given under Configuration.
3. Navigate to **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**.



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.
8. If not, follow the steps given above to recreate the data source.

12.2.5 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.

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

12.3 Configure Resource Reference in Tomcat Application Server

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

This section includes the following topics:

- [Create Data Source](#)
- [JDBC Connection Pooling](#)

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

NOTE See [Appendix P](#) for identifying the correct ojdbc<version>.jar version to be copied.

12.3.1 Create Data Source

To create Data Source for OFSAA application, navigate to <Tomcat Home>/conf directory and edit the following block of text by replacing the actual values in the `server.xml` file.

NOTE

The User-IDs for configuration/ atomic schemas have the prefix of SETUPINFO NAME 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 **ofsaconf**, then the actual schema created in the database would be **DEV_ofsaconf**.

```
<Context path ="/<context name>" docBase="<Tomcat Installation
Directory>/webapps/<context name>" debug="0" reloadable="true"
crossContext="true">
<Resource auth="Container"
name="jdbc/FICMASTER"
type="javax.sql.DataSource"
driverClassName="oracle.jdbc.driver.OracleDriver"
username="<user id for the configuration schema>"
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 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 must be created and deployed in Tomcat Server.

12.3.2 JDBC Connection Pooling

To define the JDBC connection pooling, do the following:

1. Copy `$ORACLE_HOME/jdbc/lib/ojdbc<version>.jar` file to the `$TOMCAT_DIRECTORY/lib/directory`.

NOTE See [Appendix P](#) for identifying the correct “`ojdbc<version>.jar`” file version to be copied.

2. Edit the `server.xml` file present under the `$TOMCAT_DIRECTORY/conf/` directory 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:

- `$APP_DEPLOYED_PATH$` should be replaced by OFSAAI application deployed path. `$INFODOM_NAME$` should be replaced by Infodom Name.
- `$ATOMICSCHEMA_USERNAME$` should be replaced by Atomic schema database user name.
- `$ATOMICSCHEMA_PASSWORD$` should be replaced by Atomic schema database password.
- `$JDBC_CONNECTION_URL` should be replaced by JDBC connection string `jdbc:Oracle:thin:<IP>:<PORT>:<SID>`. For example, `jdbc:oracle:thin 10.80.50.53:1521:soluint`
- The User IDs for configuration/ atomic schemas have the prefix of `setupinfo` depending on the value set for `PREFIX_SCHEMA_NAME` in `<<APP Pack>>_SCHEMA_IN.XML` file of Schema Creator Utility.

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

12.3.3 Class loader configuration for Apache Tomcat

Edit the `server.xml` file available in `$TOMCAT_HOME/conf/` directory.

Add tag `<Loader delegate="true" />` within the `<Context>` tag, above the `<Resource>` tag. This is applicable only when the web application server is Apache Tomcat 8.

NOTE

This configuration is required if Apache Tomcat version is 8.

13 Appendix C: Creating and Deploying EAR/WAR File

This appendix includes the following topics:

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

13.1 Creating EAR/WAR File

To create EAR/WAR File, perform the following steps:

1. Navigate to the \$FIC_WEB_HOME directory on the OFSAA Installed server.
2. Execute `./ant.sh` to trigger the creation of EAR/ WAR file.
3. On completion of the EAR files creation, the **BUILD SUCCESSFUL** and **Total Time** taken message is displayed and you are returned to the prompt.

```

/scratch/ofsaaweb>cd /scratch/ofsaaweb/OFSAA80/ficweb
/scratch/ofsaaweb/OFSAA80/ficweb>
/scratch/ofsaaweb/OFSAA80/ficweb>ls
ant.sh                ficwebChecksum.sh
apache-ant-1.7.1     ficweb_InstalledChecksum.txt
application.xml      lib
build.xml            MANIFEST.MF
conf                 mycertificates
ficweb_Build_CheckSum.txt  OFSALMINFO_FusionMenu.xml
ficwebCheckSum.log  unix
ficwebChecksum.properties webroot
/scratch/ofsaaweb/OFSAA80/ficweb>./ant.sh
executing "ant"
Buildfile: build.xml

createwar:
  [war] Building war: /scratch/ofsaaweb/OFSAA80/ficweb/AAI80.war

createear:
  [ear] Building ear: /scratch/ofsaaweb/OFSAA80/ficweb/AAI80.ear

BUILD SUCCESSFUL
Total time: 2 minutes 8 seconds
/scratch/ofsaaweb/OFSAA80/ficweb>

```

4. 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. For OFSAA configured on Tomcat installation, <contextname>.war file is created.

13.2 Deploying EAR/WAR File

This section includes the following topics:

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

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, see [Clearing Application Cache](#) section.

13.2.1 Deploying EAR/WAR Files on WebSphere

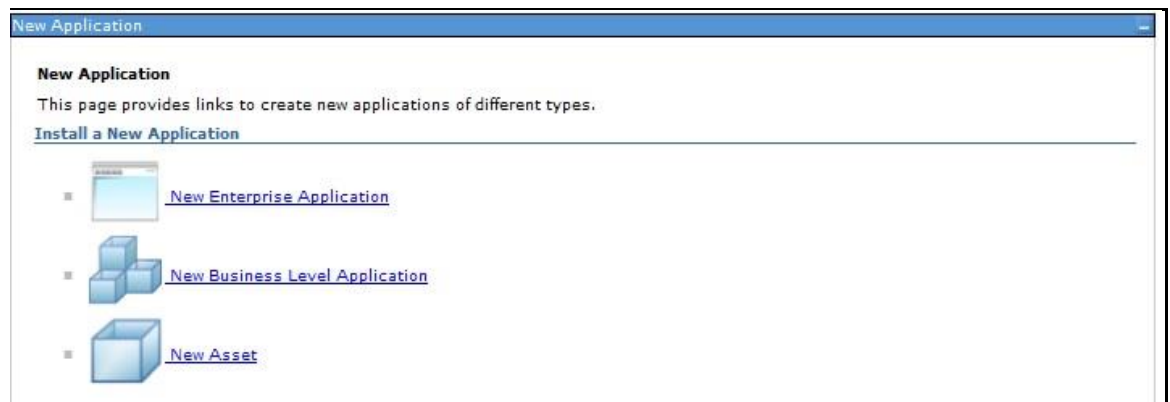
To deploy WebSphere EAR/WAR File, perform the following steps:

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

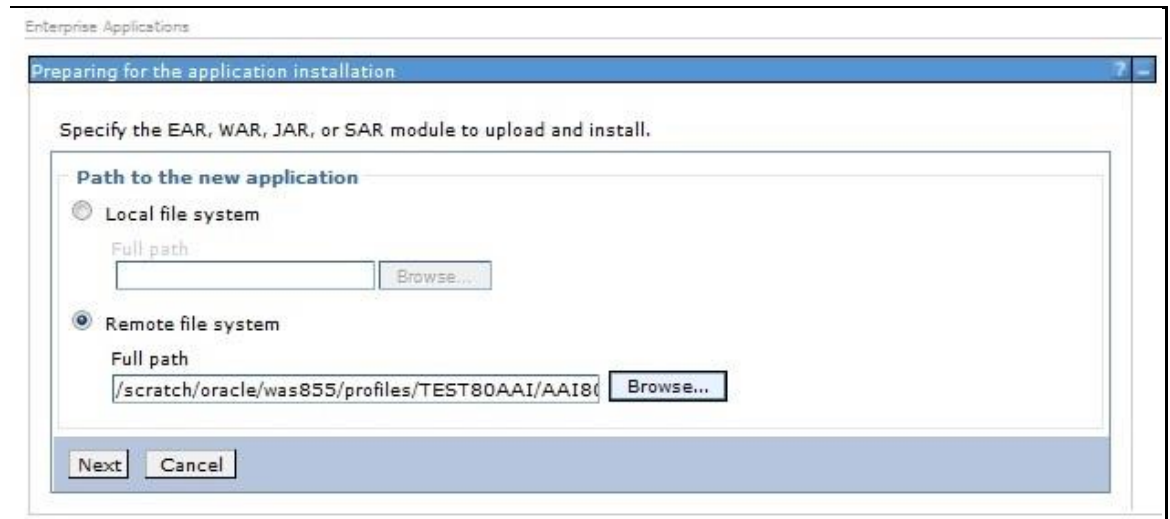
```
./startServer.sh server1
```
2. Open the following URL in the browser: `http://<ipaddress>:<Administrative Console Port>/ibm/console` (https if SSL is enabled). The login screen is displayed.



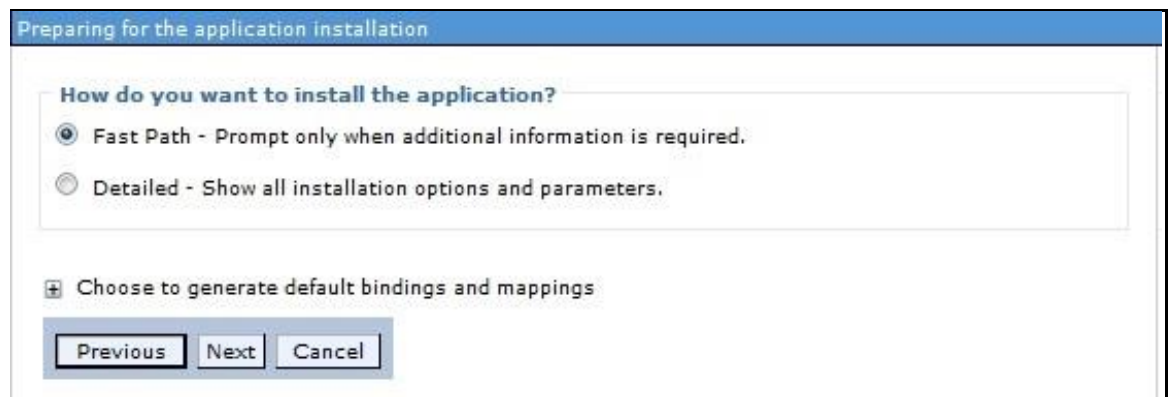
3. Enter the user credentials with admin privileges and click **Log In**.
4. From the LHS menu, select **Applications** and click **New Application**. The *New Application* window is displayed.



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



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



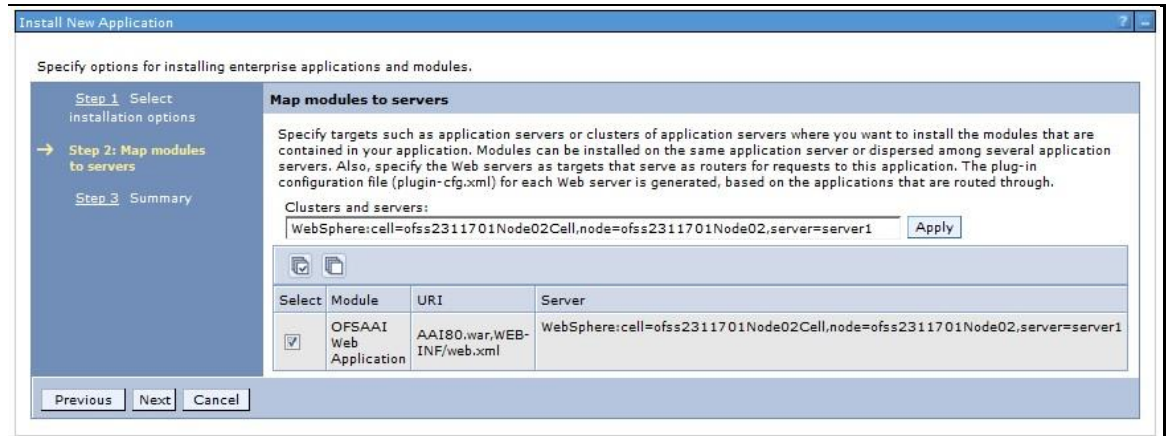
7. Select the **Fast Path** option and click **Next**. The *Install New Application* window is displayed.

The screenshot shows the 'Install New Application' dialog box, specifically the 'Select installation options' step. The dialog is titled 'Install New Application' and has a subtitle 'Specify options for installing enterprise applications and modules.' The left sidebar shows three steps: 'Step 1: Select installation options' (selected), 'Step 2: Map modules to servers', and 'Step 3: Summary'. The main area is titled 'Select installation options' and contains the following fields and checkboxes:

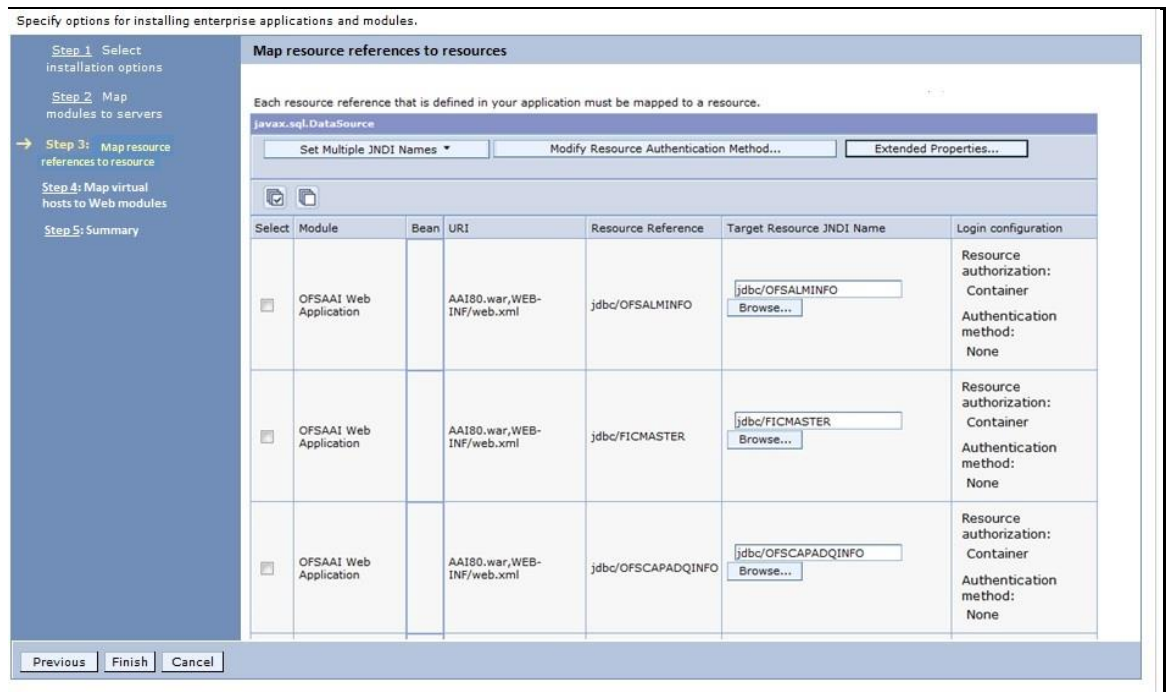
- Precompile JavaServer Pages files
- Directory to install application: []
- Distribute application
- Use Binary Configuration
- Deploy enterprise beans
- Application name: [AAI80]
- Create MBeans for resources
- Override class reloading settings for Web and EJB modules
- Reload interval in seconds: []
- Deploy Web services
- Validate Input off/warn/fail: [warn]
- Process embedded configuration
- File Permission: [Allow all files to be read but not written to, Allow executables to execute, Allow HTML and image files to be read by everyone, *.*\,dll=755#,*\,so=755#,*\,a=755#,*\,s|=755]
- Application Build ID: [Unknown]
- Allow dispatching includes to remote resources
- Allow servicing includes from remote resources
- Business level application name: [Create New BLA]
- Asynchronous Request Dispatch Type: [Disabled]
- Allow EJB reference targets to resolve automatically
- Deploy client modules
- Client deployment mode: [Isolated]
- Validate schema

At the bottom of the dialog are 'Next' and 'Cancel' buttons.

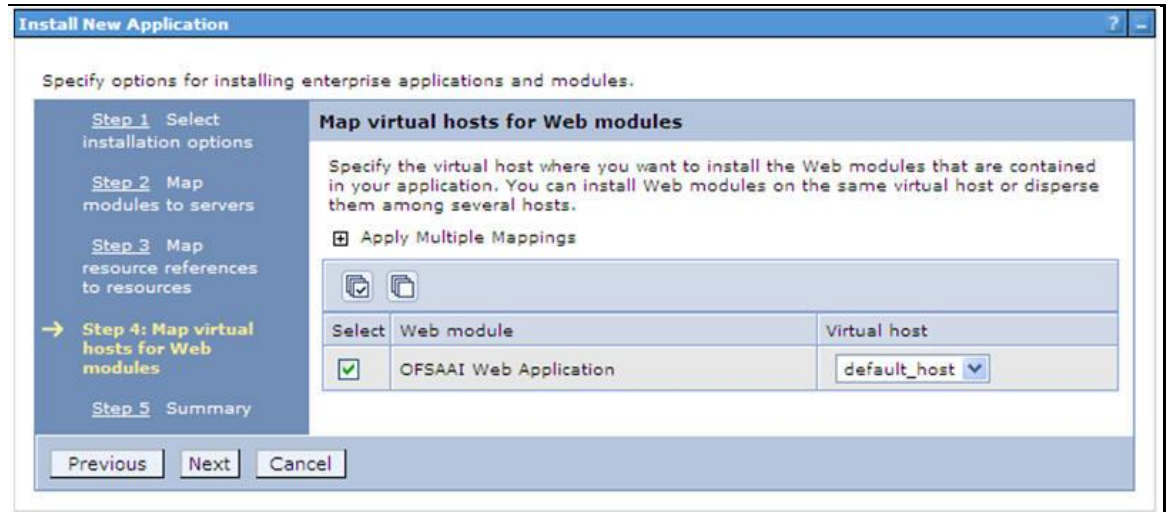
8. Enter the required information and click **Next**. The *Map Modules to Servers* window is displayed.



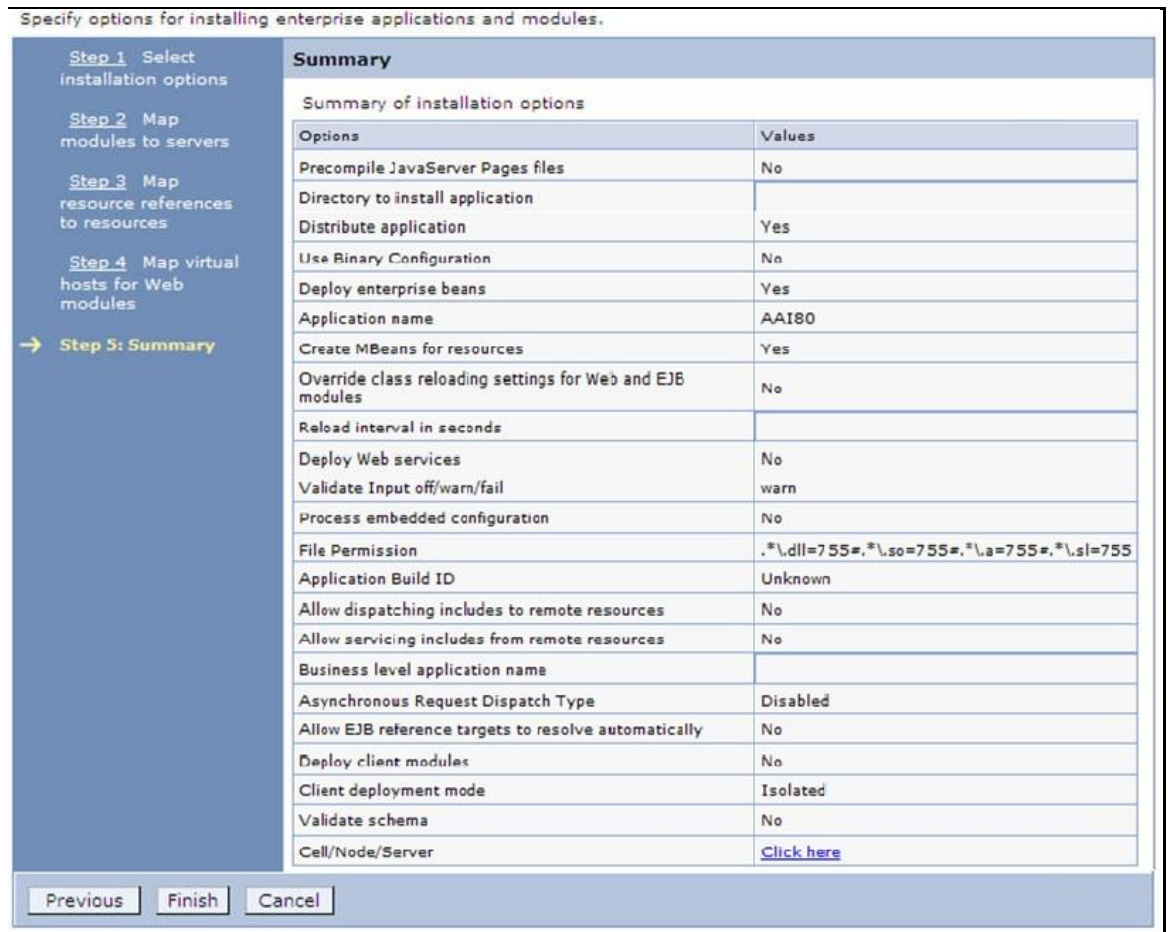
9. Select the **Web Application** and click **Next**. The *Map Resource References to Resources* window is displayed.



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 **OFSAAI Web Application** and click **Next**. The *Map Virtual hosts for Web Modules* window is displayed.



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



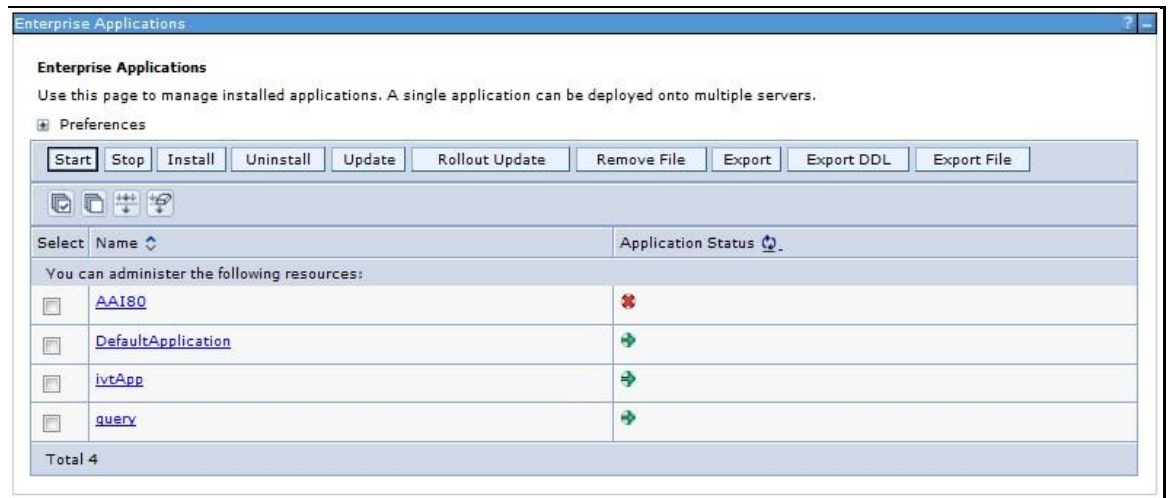
15. Click **Finish** and deploy the Infrastructure Application on WebSphere.

16. On successful installation, a message is displayed. Click **Save** and save the master file configuration. The details are displayed in the *Master File Configuration* window.

13.2.1.1.1 Start Application

To start the application, perform the following steps:

1. Expand **Applications** → **Application Type** → **WebSphere Enterprise Applications**. The *Enterprise Applications* window is displayed.



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

<context name> is the context name given during installation.

13.2.2 Deploying WAR File on WebLogic

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

1. Navigate to the <WebLogic Installation directory>/user_projects/domains/<domain name>/bin directory 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” command as mentioned in [Start Infrastructure](#).

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



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

13.2.2.1.1 Explode EAR

To explode EAR, perform the following steps:

- Create the **applications** directory under domain name. For example, /Bea/user_projects/domains/ <Domain_name>/applications.
- Create <context_name>.ear directory under applications directory.
- Copy the <\$FIC_WEB_HOME/<context_name>.ear file to <WEBLOGIC_INSTALL_DIR>/Bea/user_projects/domains/<DOMAIN_NAME>/applications/<context_name>.ear directory.
- Explode the <context_name>.ear file by executing the command:

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

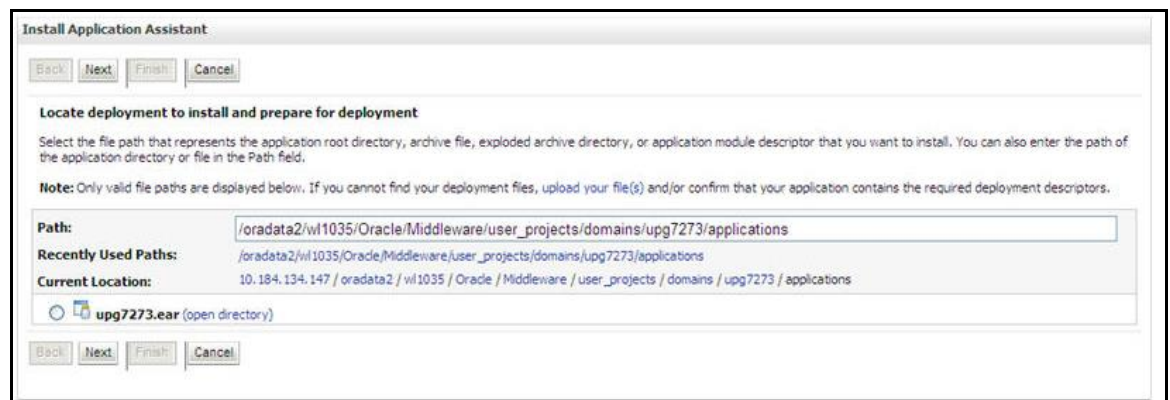
5. Delete the <context>.ear and <context>.war files (recently created) in <WEBLOGIC_INSTALL_DIR>/Bea/user_projects/domains/<DOMAIN_NAME>/applications/<context_name>.ear directory.
6. Create <context_name>.war directory under <WEBLOGIC_INSTALL_DIR>/Bea/user_projects/domains/<DOMAIN_NAME>/applications/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

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

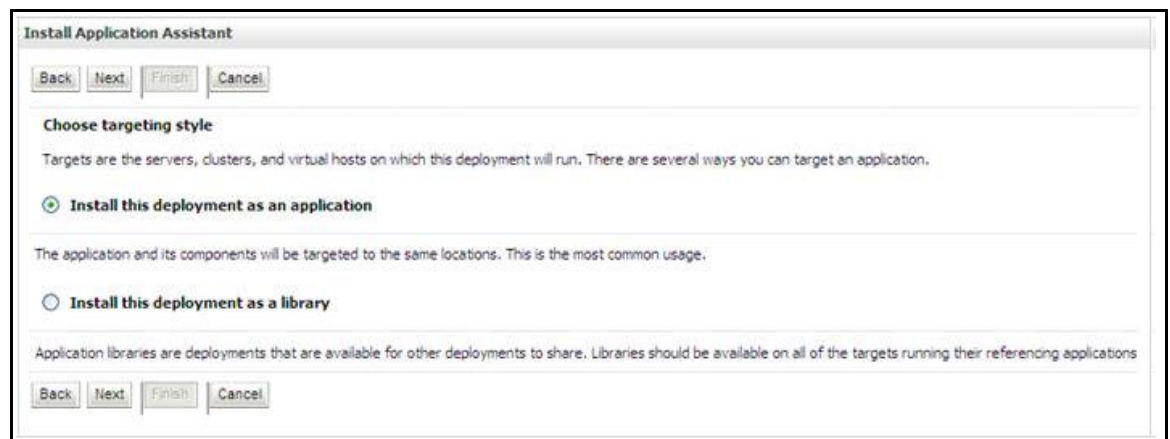
13.2.2.1.2 Install Application

To install the application, perform the following steps:

1. Open **Install Application Assistant**.



2. Click **Next**.



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

Install Application Assistant

Back Next Finish Cancel

Optional Settings
You can modify these settings or accept the defaults

General
What do you want to name this deployment?
Name:

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

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

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

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

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

Source accessibility
How should the source files be made accessible?

Use the defaults defined by the deployment's targets

Recommended selection.

Copy this application onto every target for me

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

I will make the deployment accessible from the following location

Location:

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

Back Next Finish Cancel

4. Enter a **Name** for the deployment if required.
5. Under the Security section, select the **DD only** option to specify that only roles and policies that are defined in the deployment descriptors should be used.
6. Select **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.

Install Application Assistant

Back Next Finish Cancel

Review your choices and click Finish

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

Additional configuration

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

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

No, I will review the configuration later.

Summary

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

Name: upg72733

Staging mode: Use the defaults defined by the chosen targets

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

Target Summary

Components	Targets
upg7273.ear	AdminServer

Back Next Finish Cancel

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

Settings for upg7273

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

Save

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

Name:	upg7273	The name of this Enterprise Application. More Info...
Path:	/ oradata2/vl1035/Oracle/Middleware/user_projects/domains/upg7273/applications/upg7273.ear	The path to the source of the deployable unit on the Administration Server. More Info...
Deployment Plan:	(no plan specified)	The path to the deployment plan document on Administration Server. More Info...
Staging Mode:	(not specified)	The mode that specifies whether a deployment's files are copied from a source on the Administration Server to the Managed Server's staging area during application preparation. More Info...
Security Model:	DDOnly	The security model that is used to secure a deployed module. More Info...
Deployment Order:	<input type="text" value="100"/>	An integer value that indicates when this unit is deployed, relative to other deployable units on a server, during startup. More Info...
Deployment Principal Name:	<input type="text"/>	A string value that indicates what principal should be used when deploying the file or archive during startup and shutdown. This principal will be used to set the current subject when calling out into application code for interfaces such as ApplicationLifecycleListener. If no principal name is specified, then the anonymous principal will be used. More Info...

Save

Modules and Components

Showing 1 to 1 of 1 Previous | Next

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

Showing 1 to 1 of 1 Previous | Next

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

Summary of Deployments

Control Monitoring

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

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

Customize this table

Deployments

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

<input checked="" type="checkbox"/>	Name	State	Health	Type	Deployment Order
<input checked="" type="checkbox"/>	app7273	Active	OK	Enterprise Application	100

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

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

Messages

Start requests have been sent to the selected Deployments.

Summary of Deployments

Control Monitoring

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

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

Customize this table

Deployments

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

<input type="checkbox"/>	Name	State	Health	Type	Deployment Order
<input type="checkbox"/>	app7273	Active	OK	Enterprise Application	100

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

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

13.2.3 Deploying WAR Files on Tomcat

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


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

Home Documentation Configuration Examples Wiki Mailing Lists Find Help

Apache Tomcat/7.0.57

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

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

 Recommended Reading:

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

Server Status
Manager App
Host Manager

Developer Quick Start

[Tomcat Setup](#) [Realms & AAA](#) [Examples](#) [Servlet Specifications](#)
[First Web Application](#) [JDBC DataSources](#) [Tomcat Versions](#)

Managing Tomcat

For security, access to the [manager webapp](#) is restricted. Users are defined in:

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

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

[Release Notes](#)
[Changelog](#)
[Migration Guide](#)
[Security Notices](#)

Documentation

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

Find additional important configuration information in:

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

Developers may be interested in:

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

Getting Help

[FAQ and Mailing Lists](#)

The following mailing lists are available:

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

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

For more information on upgrade, see [Upgrading the OFS DM Application Pack](#).

1. Copy the <context-name>.war file from \$FIC_WEB_HOME/<context-name.war> to <Tomcat Installation Directory>/webapps/ directory.
2. Click **Manager App**. The *Connect to* dialog box is displayed.
3. Enter the **User ID** and **Password** that has admin rights and click **OK**. (For user creation in Tomcat, see [Tomcat User Administration](#). The *Tomcat Web Application Manager* window is displayed with the list of all the applications deployed.

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

Deploy

Deploy directory or WAR file located on server

Context Path (required):

XML Configuration file URL:

WAR or Directory URL:

WAR file to deploy

Selected WAR file to upload:

Diagnostics

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

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

Server Information

Tomcat Version	JVM Version	JVM Vendor	OS Name	OS Version	OS Architecture	Hostname	IP Address
Apache Tomcat/7.0.57	1.6.0_45-b06	Sun Microsystems Inc.	Linux	2.6.39-400.211.1.el6.x86_64	amd64	ofs220354.n.oracle.com	10.134.135

Copyright © 1999-2014, Apache Software Foundation

4. In the **Deploy** section, enter the **Context Path** provided during the installation as `" /<context-name> "`.
5. Enter the path where the `<context-name>.war` file resides (by default `"$FIC_WEB_HOME/<context-name>.war"`) in the **WAR or Directory URL** field and click **Deploy**.
6. On successful application deployment, a confirmation message is displayed. Start the Tomcat server. See [Starting Web Application Servers](#) for more details.

14 Appendix D: Starting / Stopping Infrastructure Services

14.1 Starting/Stopping OFSAA Infrastructure Services

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

- [Starting Infrastructure Services](#)
- [Starting Web Application Servers](#)
- [Stopping Infrastructure Services](#)
- [Stopping Web Application Servers](#)

14.1.1 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` directory and execute the following command to start the Infrastructure Server.

```
./startofsaa.sh
```

NOTE

You can also start the Infrastructure Server by executing the command `"nohup ./ startofsaa.sh &"`. Starting the process using "nohup" and "&" returns 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: <code>./startServer.sh server1</code>
Starting WebLogic Domain	On the machine in which WebLogic is installed navigate to <WebLogic Installation directory>/user_projects/domains/<domain

Start up Option	Description
	name>/bin and execute the command: <code>startWebLogic.sh -d64</code> Note: If WebLogic is already running, access the WebLogic Admin Console. Stop and start the application <code><context name>.ear</code> .
Starting Tomcat Application	On the machine in which Tomcat is installed, navigate to <code><Tomcat_Install_Directory>/bin</code> and execute the command: <code>./catalina.sh run</code>

3. Start ICC server:

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

```
./iccserver.sh
```

NOTE Only Infrastructure Default Application Server holds 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` directory 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.

14.1.2 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 <code>[Webshpere_Install_Directory]/AppServer/<profiles>/<profile name>/bin</code> and execute the command: <code>./startServer.sh server1</code>

Start up Option	Description
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: <code>startWebLogic.sh -d64</code> 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: <code>./catalina.sh run</code>

14.1.3 Stopping Infrastructure Services

To stop Infrastructure Services:

1. On the machine in which Infrastructure Application components are installed, navigate to `$FIC_APP_HOME/common/FICServer/bin` and execute the command:
`./stopofsaai.sh`
2. To stop ICC server, on the machine in which Infrastructure default Application components are installed, navigate to `$FIC_HOME/ficapp/icc/bin` and execute the command:
`./iccserversshutdown.sh`

NOTE Only Infrastructure Default Application Server holds ICC component.

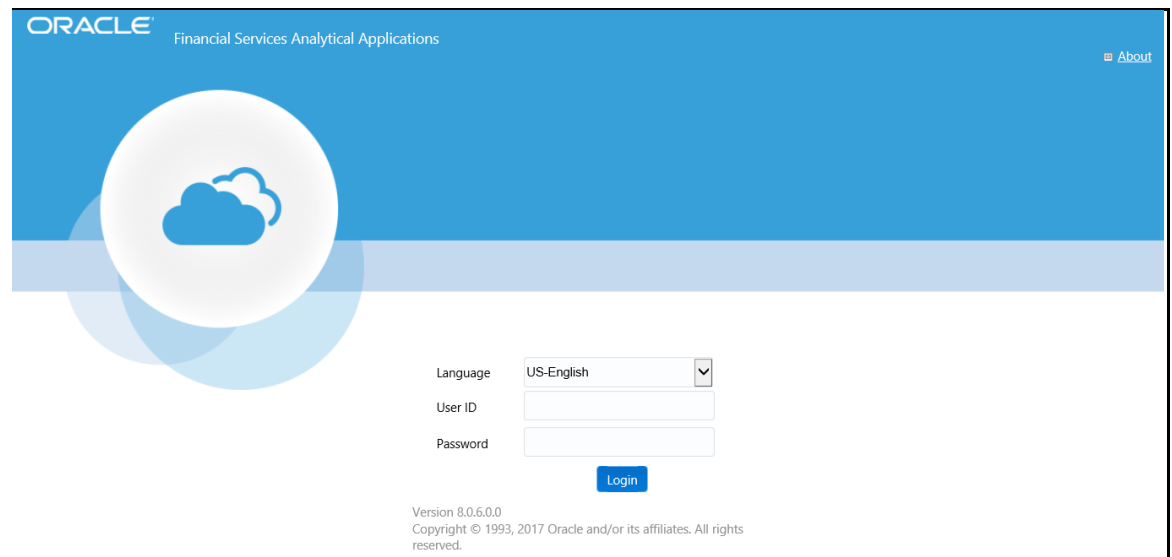
3. To stop Back-end server, on the machine in which Infrastructure database components are installed, navigate to `$FIC_DB_HOME/bin` and execute the command:
`./agentshutdown.sh`

15 Appendix E: Accessing OFSAA Application

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

15.1 Accessing the OFSAA Application

1. Open the browser and enter the URL in below format:
`<scheme>://<IP address/ hostname>:<port>/<context-name>/login.jsp`
2. For example, `https://111.222.333.444:5555/ofsaa/login.jsp`
3. The *OFSAA Login* window is displayed.



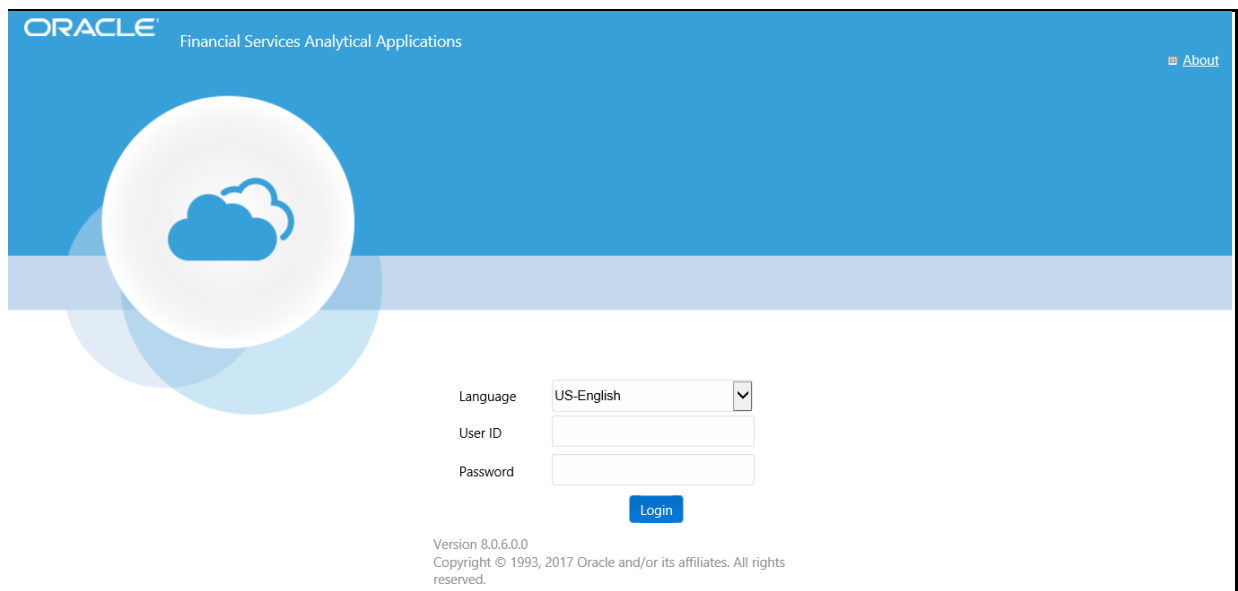
4. With installation of every OFSAA Application Pack, there are two seeded user profiles configured in the system:
 - SYSADMN – System Administrator
 - SYSAUTH – System Authorizer
5. Login to the application using the "SYSADMN" User ID. (Note that, there is no "I" in the SYSADMN login USER ID). Enter the password that was provided during installation. On the first login, you are prompted to change the password.
6. Once you have logged into the Infrastructure system, you need to perform the following additional configurations to setup the OFSAAI environment:
7. Define Server Details for Database, Application and Web Servers.
8. Add Database Details.
9. Create an Information Domain.
10. Create a Segment.
11. Create / Add User with access to all permissions.

NOTE

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

15.2 OFSAAI Login

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



ORACLE Financial Services Analytical Applications [About](#)

Language: US-English

User ID:

Password:

Login

Version 8.0.6.0.0
Copyright © 1993, 2017 Oracle and/or its affiliates. All rights reserved.

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 are 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.

16 Appendix F: Post Deployment Configurations

16.1 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](#)

16.2 Deploying the Application

This section explains steps to deploy the application. Web Layer deployment is required, For more information, see [Appendix A](#).

16.3 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**.

16.4 Creating Application Users

User Maintenance facilitates you to create user definitions, view, manage, modify, and delete user information. You can access User Maintenance by expanding User Administrator section within the tree structure of LHS menu.

The User Maintenance screen displays user details such as User ID, Name, Profile Name, Start and End dates. You can also identify the user status if enabled to access the Infrastructure system.

To add a user in the User Maintenance screen:

1. Select **+** button from the *User Maintenance* tool bar. **Add** button is disabled if you have selected any User ID in the grid. The *New User* screen is displayed.

2. Enter the user details as tabulated.

Field	Description
Fields marked in red asterisk (*) are mandatory.	
User ID*	Enter a unique user ID. Ensure that there are no special characters and extra spaces in the id entered.
User Name*	Enter the user name. The user name specified here is displayed on the Infrastructure Splash screen. Ensure that the user name does not contain any special characters or spaces except “-“, “”, and “.”.
Contact Address*	Enter the contact address of the user. It can be the physical location from where the user is accessing the system. Ensure that Contact Address does not contain any special characters except “.”, “#”, “-“, “,”.
Date Of Birth*	Specify the date of birth. You can use the popup calendar to enter the date.
Designation*	Enter the user designation. Ensure that designation does not contain any special characters except “_“, “.” and “-“.
Profile Name*	Select the profile name by clicking on the drop down list.
User Start Date*	Specify the user start date based on the day slot the user is enabled to access the system. Ensure that User Start Date is greater than today’s date. You can use the popup calendar to enter the date.
User End Date*	Specify the user end date based on month and year when the user Id expires. Ensure that user End Date is greater than User Start Date. You can use the popup calendar to enter the date.
Password*	Enter the default password for the user for the initial login. User needs to change the default password during the first login. A user is denied access in case the user has forgotten the password or enters the wrong password for the specified number of attempts (as defined in the Configuration screen). To enable access, enter a new password here.
Notification Time	(Optional) Specify the notification start and end time within which the user can be notified with alerts.

E-mail ID*	Enter the e-mail address of the user.
Mobile No	(Optional) Enter the mobile number of the user.
Pager No	(Optional) Enter the pager number of the user.
Enable User*	Select the checkbox to allow user to access the system. A deselected checkbox denies access to the user.

- Click Save to upload the user details.
- The new User details are populated in the User Authorization screen which has to be authorized by System Authorizers. Once authorized, the User details are displayed in User Maintenance screen and can then be mapped to the required user group in the User UserGroup Map screen.

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*.

16.5 Mapping Application User(s) to User Group

The **User UserGroup Map** facilitates you to map user(s) to specific user group which in turn is mapped to a specific Information Domain and role. Every UserGroup mapped to the infodom needs to be authorized. Else, it cannot be mapped to users.

The *User UserGroup Map* screen displays details such as User ID, Name, and the corresponding Mapped Groups. You can view and modify the existing mappings within the User UserGroup Maintenance screen.

Starting the OFSAA 8.0 release, with installation of DM Application Pack, preconfigured Application user groups are seeded. These user groups are unique to every OFSAA Application Pack and have application roles pre-configured.

You can access User UserGroup Map by expanding User Administrator section within the tree structure of LHS menu.

After the user is created for Reconciliation Framework, it should to be mapped to the following mentioned user groups:

- Recon Administrator
- Recon Framework Analyst
- Recon Framework Authorizer

After the user is created for Data Governance for different jurisdictions, it should to be mapped to the required user groups as per their roles:

- Data Governance for US Regulatory Reporting Application:** DGS Authorizer Group, DGS Administrator Group, DGS Analyst Group, BUO and CWS

- **Data Governance for European Central Reporting Application:** DGS EBA Authorizer Group, DGS EBA Administrator Group, DGS EBA Analyst Group, BUO and CWS
- **Glossary Module:** Glossary Approver Group, Glossary Creator Group, Glossary Owner Group, Glossary Viewer Group
- **Business Terms Module:** Glossary Term Approver Group, Glossary Term Creator Group, Glossary Term Owner Group, Glossary Term Viewer Group
- **Critical Data Element Module:** CDE Approver Group, CDE Creator Group, CDE Owner Group, CDE Viewer Group
- **Control Module:** DGCOGRP, DGCOVIEWGRP
- **Key Indicator Module:** DGSKRCODGRP, KIVCAP, DGKIVIEWGRP, DGKIVCAP
- **Issues Module:** DGISAPRGRP, DGISASRGRP
- **Actions Module:** DGAAGRP
- **Process Monitoring Module:** DGSPLANSCOPE, DGSPSI, DGPMVIEWGRP
- **Metadata Report Module:** MDR Owner Group, MDR View Group

17 **Appendix G: Cloning OFSAA Instance**

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

18 Appendix H: OFSAA Landing Page

This appendix includes the following topics:

- [Installation Checklist](#)
- [OFSAA Landing Page](#)
- [Enabling a Product within an Application](#)
- [Uninstalling the OSFAA Installation](#)

18.1 Installation Checklist

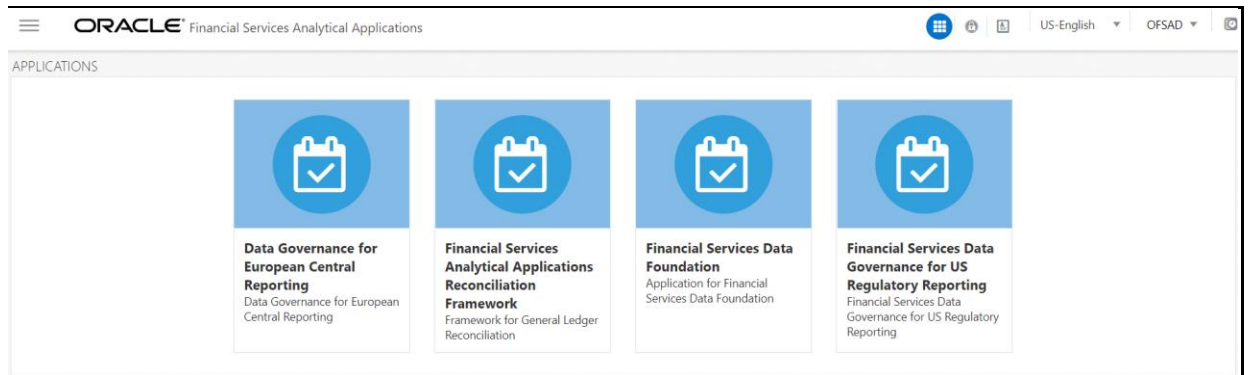
Before starting on the OFSAAI Installation Kit, ensure that the following pre-installation activities checklist is completed successfully. It is recommended to take a print out of the checklist and follow the checklist step by step.

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

Step No.	Task	Done
General		
1	Check the OFS Data Management Release Notes and Read Me document for any additional steps to be performed on OFS Data Management Pack or OFSAAI. Note: For more details, contact Oracle support.	<input type="checkbox"/>
Data Management 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.	<input type="checkbox"/>
Data Management Pack Post Installation		
1	Perform post-installation steps	<input type="checkbox"/>

18.2 OFSAA Landing Page for DM Administrator

On successful authentication, the *OFSAA 8.0.9.0.0 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.

NOTE Refer the User Manual for more details on how to operate on each tab.

18.2.1 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 provides 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: **http://<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 is in `%systemroot%\system32\drivers\etc\` directory.

18.3 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 not have access to the information of other products. However, each Sales Manager 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.

In the Oracle Infrastructure:

The users are created in Oracle Infrastructure and then, a business hierarchy (as defined above) is created.

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.

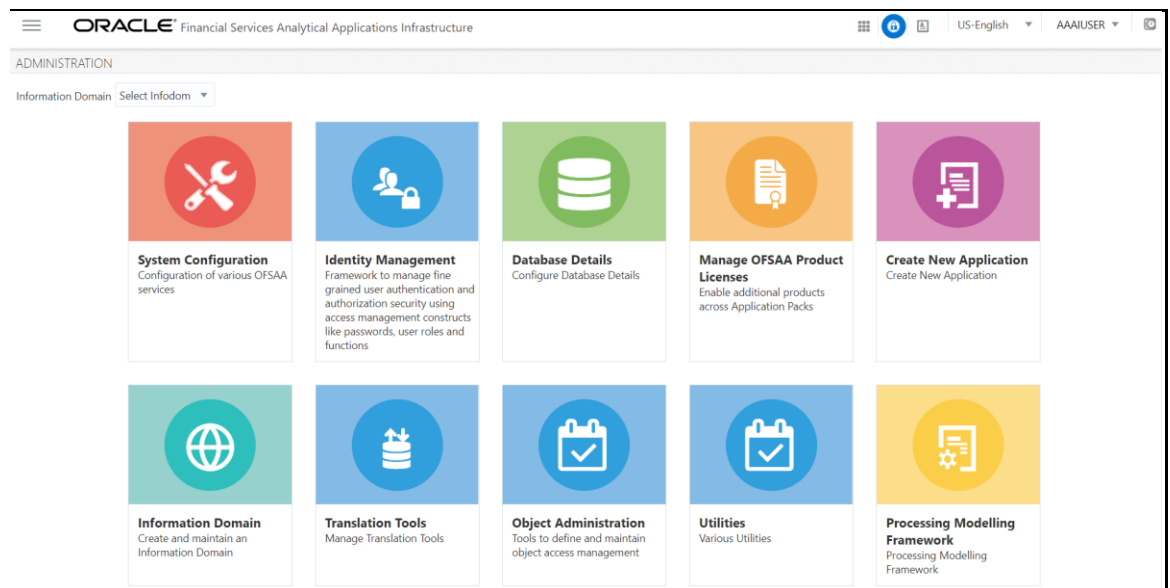
18.4 Enabling a Product within an Application Pack

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

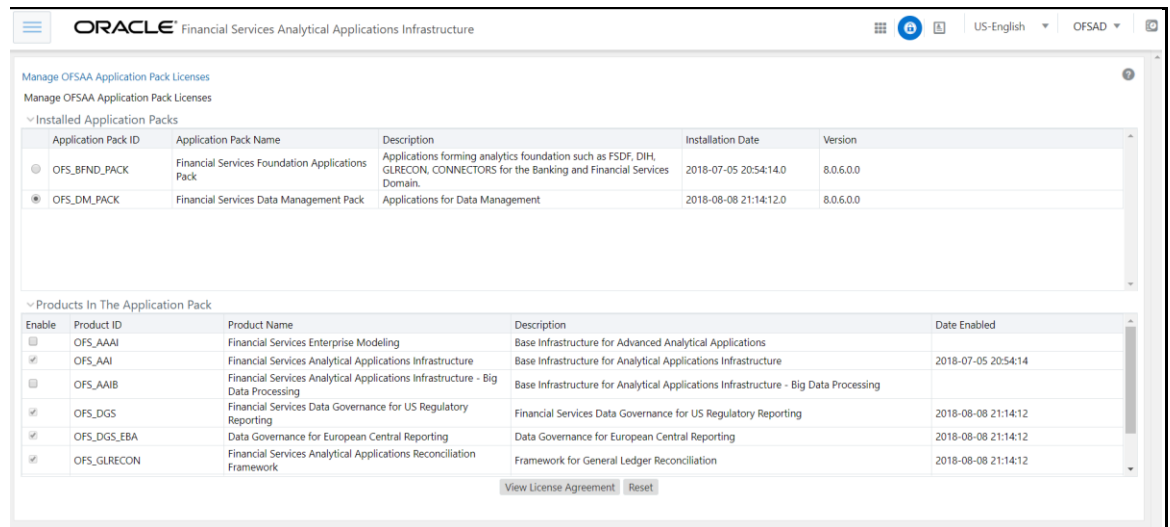
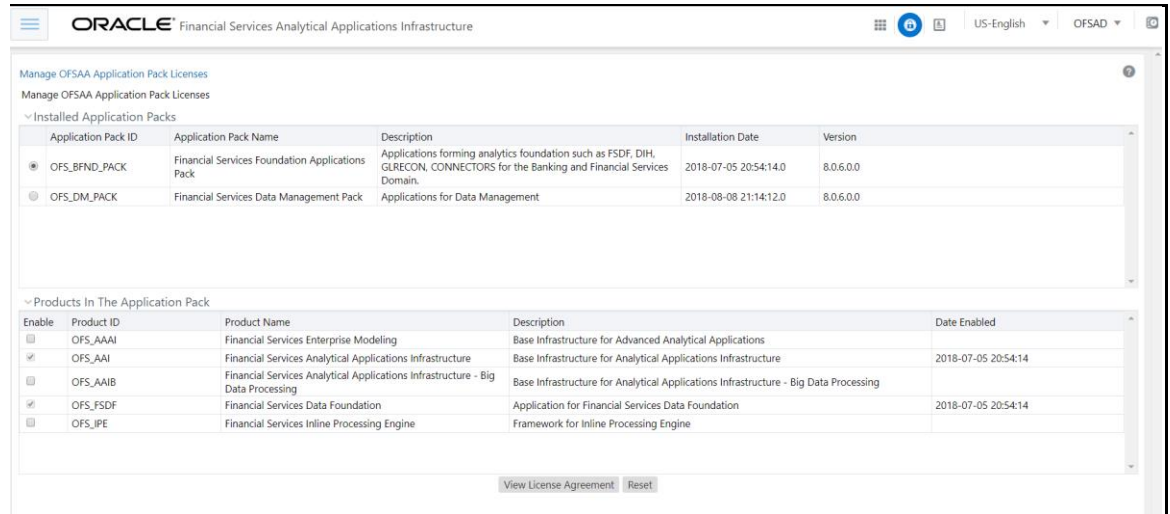
To enable a product through the application UI, Perform the following steps:

1. Login to the application as **SYSADMN** user or any user with System Administrator privileges.

2. Click  Administration.



3. Click **Manage OFSAA Product License(s)**. The *Manage OFSAA Product License(s)* page is displayed.



4. 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. The products in the application pack are displayed 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 from the **Application Pack ID** field.
8. Selecting an Application Pack displays the products within the Application Pack.
9. Products enabled during installation 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.
10. Click **RESET** to cancel the operation and refresh the screen.
11. Click **VIEW LICENSE AGREEMENT**. The *License Agreement* window is displayed.
12. Select **I ACCEPT THE LICENSE AGREEMENT**.
13. Click **ENABLE**.
14. 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.

18.5 Uninstalling OFSAA Installation

This section provides the necessary steps to uninstall the OFSAA 8.0 installation.

Before you start the uninstall process, ensure that no open connections exist to the OFSAA Configuration Schema and Atomic Schemas, and Infrastructure Services are brought down.

To uninstall OFSAA:

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 OFSAA 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>
```

Uninstall process does not uninstall the OFSAA application from the Web Application Server. This has to be done manually. The files/ directories under the file system staging area (**ftpshare**) have to be deleted manually.

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

19 Appendix I: Additional Configurations

The following sections provide detailed module specific post installation configurations.

This section includes the following topics:

- [Configuring FTP/SFTP](#)
- [Configuring Infrastructure Server Memory](#)
- [Setting Up Internet Explorer](#)
- [Retrieving Patch Information](#)
- [Configuring OLAP Data Server](#)
- [Changing IP/ Hostname, Ports, Deployed Paths of the OFSAA Instance](#)
- [Configuring Infrastructure Ports](#)
- [Fetching Tool for OFSAAI Setup Information](#)
- [Encryption Changer](#)
- [Configuring Infrastructure LDAP](#)
- [Configuring OFSAAI Web Services](#)
- [Deploying OFSAAI Web Services](#)
- [Configuring Message Details in Forms Designer](#)
- [Clearing Application Cache](#)
- [Configuring Password Changes](#)
- [Configuring Java Virtual Machine](#)
- [Configuring Internal Service \(Document Upload/ Download\)](#)

19.1 Configuring FTP/SFTP

This section details about the configurations required for FTP/SFTP.

19.1.1 Adding FTP/ SFTP Configuration for File Transfer

In OFSAA, certain modules require transfer of files from the web application server to the OFSAA server over SSH.

Follow these steps to ensure the OFSAA server recognizes the web application server during file transfers.

1. Login to the web application server.
2. Type `sftp <user>@<OFSAA Server>`
3. Specify Yes when prompted for permission.
4. *Are you sure you want to continue connecting (yes/no)?*
5. This will add an entry into the "known_hosts" file.

6. A confirmation message is displayed
Permanently added <OFSAA Server> (RSA) to the list of known hosts.

19.1.2 Setting Up SFTP Private Key

Log in to OFSAA Unix user using Putty tool, where you plan for installation and generate a pair of authentication keys using the `ssh-keygen` command. If required, set passphrase. Otherwise OFSAI_SFTP_PASSPHRASE tag in the OFSAI_InstallConfig.xml file should be set to NA.

To generate private key, enter the commands as shown:

```
ofsaapp@OFSASERVER:~> ssh-keygen -t rsa Generating public/private rsa key pair.
Enter file in which to save the key (/home/ofsaapp/.ssh/id_rsa): Created directory '/home/ofsaapp/.ssh'.
Enter passphrase (empty for no passphrase): Enter same passphrase again:
Your identification has been saved in /home/ofsaapp/.ssh/id_rsa. Your public key has been saved in /home/ofsaapp/.ssh/id_rsa.pub. The key fingerprint is:
3e:4f:05:79:3a:9f:96:7c:3b:ad:e9:58:37:bc:37:e4
ofsaapp@OFSASERVER:~> cat /home/ofsaapp/.ssh/id_rsa.pub >> /home/ofsaapp/.ssh/authorized_keys
```

In case, you are generating SFTP Private key for Hive server, append the content of `/home/ofsaapp/.ssh/id_rsa.pub` to Hiveserver `authorized_keys` file located at `$HOME_DIR_HIVE/.ssh` folder.

Ensure the following permissions exist for the given folders:

Permission of `.ssh` should be 700

Permission of `.ssh/authorized_keys` should be 640

Permission of `.ssh/id_rsa` should be 400

Permission of Unix user created should be 755

19.2 Configuring Infrastructure Server Memory

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

19.2.1 Setting Up Infrastructure Server Memory

You can configure the Infrastructure Application Memory settings as follows:

1. Locate `.profile` file.

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

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

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

NOTE

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"
```

19.3 Setting Up Internet Explorer

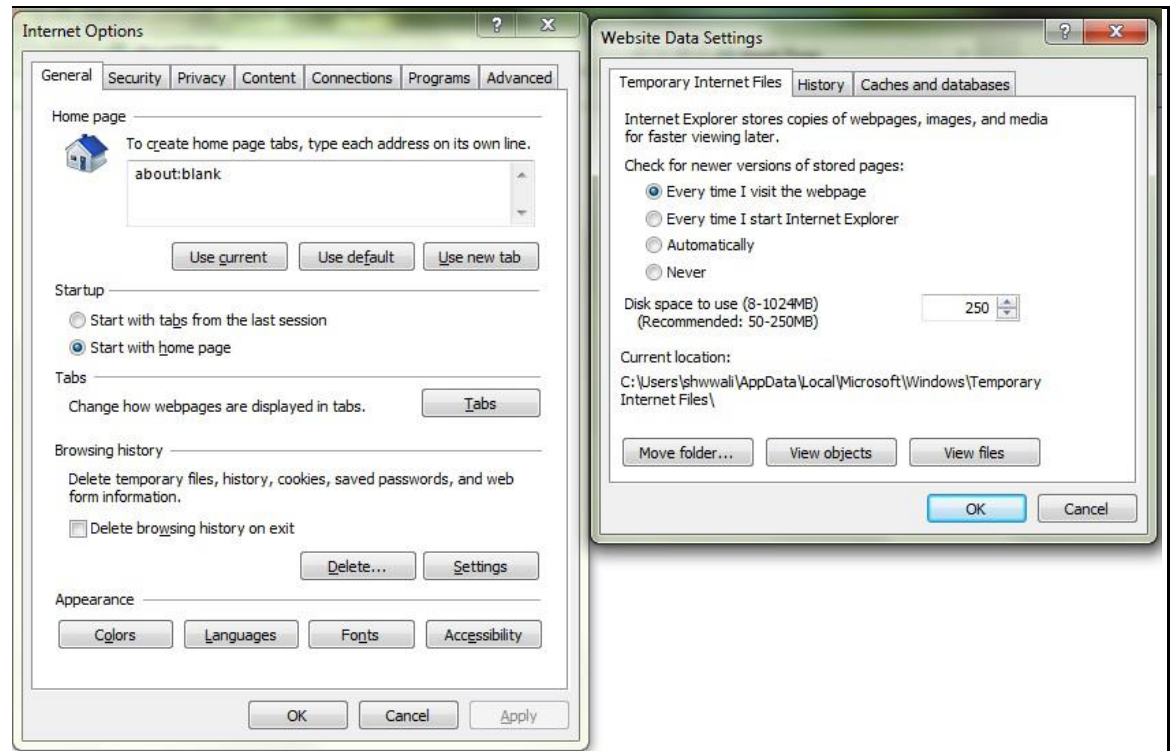
NOTE

OFSAAI supports only default zoom setting in Internet Explorer, that is, 100%.

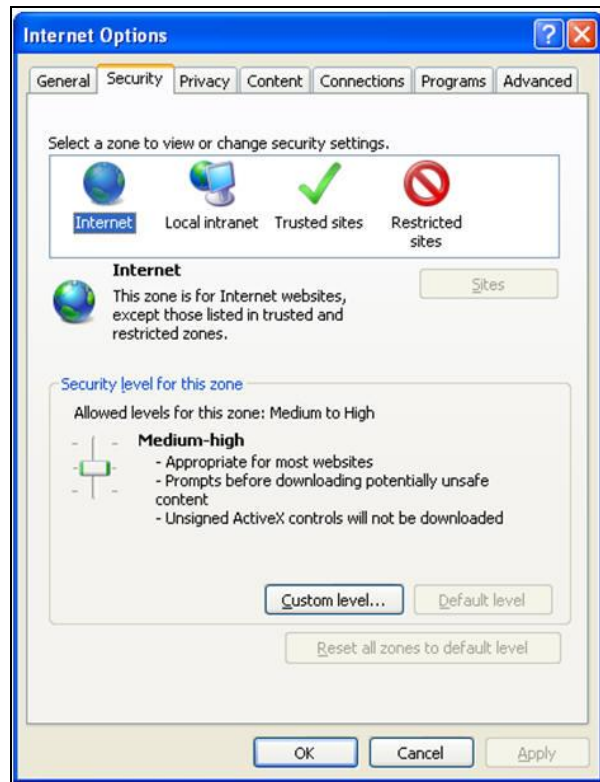
Cookies should be enabled.

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

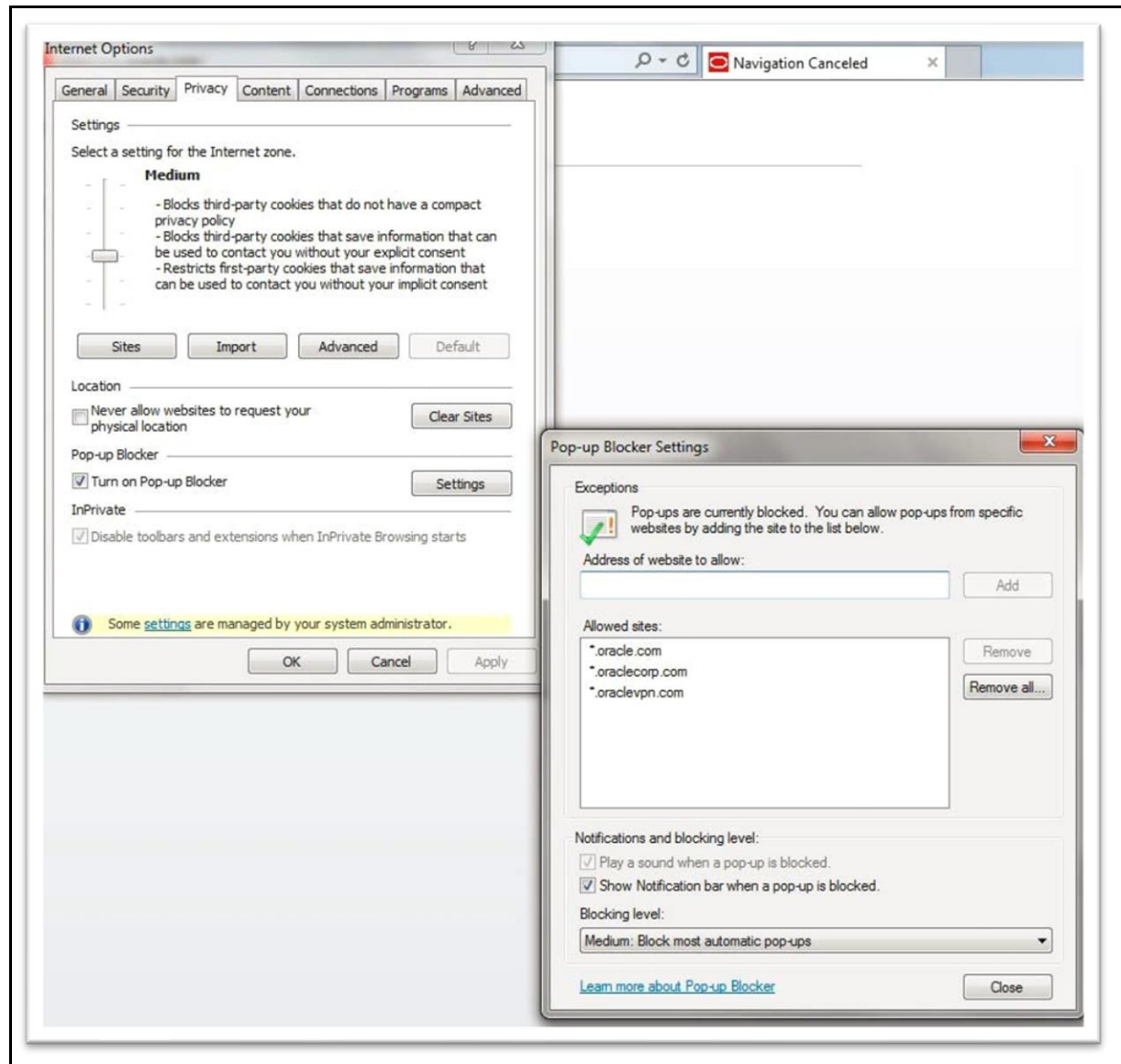
1. Open **Internet Explorer**. Select **Tools → Internet Options**. The Internet Options window is displayed.
2. Click the **Settings** button. The Settings window is displayed.
3. Select the option **Everytime I Visit the webpage** and click **OK**.



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. In the Internet Options window, select the **Privacy** tab and select the **Turn on Pop-up Blocker** option under **Pop-up Blocker** settings.



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

19.4 Retrieving Patch Information

To identify the list of patches installed on your OFSAA setup, perform the following steps:

1. Login to the OFSAA application as a user with Object AdminAdvanced Role.
2. Navigate to **Object Administration** tab.

3. Click **System Utilities**.
4. Click **Patch Information**.
5. The page displays the list of patches installed on the OFSAA setup across Applications/ Platform.

19.5 Configuring OLAP Data Server

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.

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

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

19.7 Configuring 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.

The `PortC.jar` file can be executed in two modes.

- GUI
- CMD

To execute `PortC.jar` file in GUI mode, ensure that **Hummingbird Exceed** is 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.

Configure port numbers used by OFSAAInfrastructure.

OFSAAInfrastructure install directory:
/home/setupcfg/ofsaai72.grc

Application Layer

Database Layer

Web Layer

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

Enter Database Details

Select your Database: Oracle

IP Address: 10.184.62.236

Port Number: 1521

SID: setupkit

Config schema username: sachiket

Config schema password: *****

Cancel Change

The OFSAA Infrastructure Port Changer window displays the following:

- The path in which Infrastructure components have been installed.
- The check-boxes corresponding to enable Application Layer, Database Layer, or Web Layer:
 - In the event you have performed a single-tier installation on the current machine, the check-boxes for all three components 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 are 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 change and the ports that are unchanged 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 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 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 restart of all Infrastructure servers is required.

NOTE

Do not execute the `PortC.jar` file 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.

19.8 Fetching Tool for OFSAAI Setup Information

Executing the `SetupInfo.jar` file available in the `$FIC_HOME` path helps 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.

19.9 Encryption Changer

For more information on Encryption Changer, see Key Management section in [OFSAAI Administration Guide](#).

19.10 Configuring Infrastructure LDAP

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

19.11 Configuring Enable Parallel Execution of DML statements

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

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

19.12 Configuring Message Details in Forms Designer

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

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

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

Parameter	Description
SMTP_SERVER_IP	Specify the hostname or IP address of SMTP Server.
SMTP_DEBUG_MODE	To run SMTP service in Debug mode, set value to 'true', otherwise set value to 'false'.
SMTP_AUTHORIZATION	Set to 'true' if SMTP server requires the client to be authenticated, otherwise set to 'false'.
SMTP_USERNAME	Username required for logging into SMTP server, if authentication is not required use a dummy value.

Parameter	Description
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 must 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.

19.13 Clearing Application Cache

This is applicable to all Web Servers (that is, WebSphere, WebLogic, and Tomcat).

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

- **Tomcat:** <Tomcat installation directory>/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>

19.14 Configuring Password Changes

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

19.14.1 Modifying OFSAA Infrastructure Configuration Schema Password

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

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

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

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

```
./ reveleusstartup.sh
```

5. At the prompt, enter System Password. Enter the "new Config schema" password. The service starts and initializes itself if it is able to successfully connect to the DB.
6. Post successful startup of the service, if required, the Infrastructure server can be shut down and restarted in the background using **nohup** mode.

19.14.2 Modifying OFSAA Infrastructure Atomic Schema Password

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` directory. (In case of Tomcat only Atomic <Resource> 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 are 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 must be modified).
7. If you are using WebLogic as Web server:
 - a. Login to the WebLogic Administration Console, from the left side menu
 - b. Under Domain Structure list box, expand the appropriate Domain and navigate to **Services → JDBC → Data Sources**. A list of data sources is 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 must be modified).
8. Restart the OFSAAI services.

19.15 Configuring Java Virtual Machine

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

This must be configured on all the machines or virtual machines where the OFSAAI database components (`ficdb` layer) are installed.

19.16 Configuring Internal Service (Document Upload/Download)

This step can be ignored if it has already been configured as part of any previous IR /ML installation.

The Document Upload /Download feature has undergone a change and can now be configured to use Internal service for document upload / download instead of the earlier ExeWebService.

To facilitate Internal service for document upload/ download, perform the following configurations:

1. Create the directories **download**, **upload**, **TempDocument** and **Temp** in the local path of Web application server and provide **Read/Write** permission.

- To find the exact location, execute the following query in CONFIG schema:

```
select localpath from web_server_info
```

- To create directories with Read/Write permission, execute the command:

```
mkdir -m 777 download upload TempDocument Temp
```

2. Create **DocStorage** directory in the FTPSHARE location of APP tier and provide **Read/Write** permission.

- To find the exact location, execute the query in CONFIG schema:

```
select ftpdrive from app_server_info
```

- To create directory with Read/Write permission, execute the command:

```
mkdir -m 777 DocStorage
```

20 Appendix J: Patching DM Pack Installation

Oracle strongly recommends installing the latest available patch set to be up-to-date with the various releases of the OFSAA Infrastructure product.

See <http://support.oracle.com> for more information on latest releases.

21 Appendix K: Grants for Atomic/ Config Schema

This appendix includes the following sections:

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

21.1 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 ATOMIC schema(s)

```
grant olap_user to
&database_username
```

21.2 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
/
```

21.3 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.

22 Appendix L: DM Pack XML Files

22.1 OFS_DM_PACK.xml

NOTE: In case of HIVE, rename the following files and then proceed.

OFS_DM_PACK.xml to OFS_DM_PACK.xml.bkp

OFS_DM_PACK.xml.HYBRID.template to OFS_DM_PACK.xml

The OFS_DM_PACK.xml file holds details on the various products that are packaged together in DM Application Pack.

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

```
<APP_PACK_CONFIG>
  <APP_PACK_ID>OFS_DM_PACK</APP_PACK_ID>
  <APP_PACK_NAME>Financial Services Data Management Pack</APP_PACK_NAME>
  <APP_PACK_DESCRIPTION>Applications for Data Management</APP_PACK_DESCRIPTION>
  <VERSION>8.0.9.0.0</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>8.0.9.0.0</VERSION>
  </APP>
  <APP>
    <APP_ID PREREQ="OFS_AAI" ENABLE="YES">OFS_GLRECON</APP_ID>
    <APP_NAME>Financial Services Analytical Applications Reconciliation Framework</APP_NAME>
    <APP_DESCRIPTION>Framework for General Ledger Reconciliation</APP_DESCRIPTION>
    <VERSION>8.0.9.0.0</VERSION>
  </APP>
  <APP>
    <APP_ID PREREQ="OFS_AAI" ENABLE="YES">OFS_DGS</APP_ID>
    <APP_NAME>Financial Services Data Governance for US Regulatory Reporting</APP_NAME>
    <APP_DESCRIPTION>Data Governance Studio</APP_DESCRIPTION>
    <VERSION>8.0.9.0.0</VERSION>
  </APP>
  <APP>
    <APP_ID PREREQ="OFS_AAI" ENABLE="YES">OFS_DGS_EBA</APP_ID>
    <APP_NAME>Financial Services Data Governance for EBA Regulatory Reporting</APP_NAME>
    <APP_DESCRIPTION>Data Governance Studio</APP_DESCRIPTION>
    <VERSION>8.0.9.0.0</VERSION>
  </APP>
</APP_PACK_CONFIG>
```

22.1.1 Configuring OFS_DM_PACK.XML file

The OFS_DM_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 must be updated. Prior to installing the OFSAA Application Pack in SILENT mode, it is mandatory to update this file.

Tag Name/ Attribute Name	Description	Mandatory (Y/ N)	Default Value/ Permissible Value	Comments
APP_PACK_ID	Unique Application Pack Identifier	Y	Unique Seeded Value	DO NOT modify this value.
APP_PACK_NAME	Unique Application Pack Name	Y	Unique Seeded Value	DO NOT modify this value.
APP_PACK_DESCRIPTION	Unique Application Pack Description	Y	Unique Seeded Value	DO NOT modify this value.
VERSION	Unique release version	Y	Unique Seeded Value	DO NOT modify this value.
APP	Unique Application Entries	Y	Unique Seeded Value	DO NOT remove these tags.
APP_ID	Unique Application Identifier	Y	Unique Seeded Value	DO NOT modify this value.
APP_ID/ PREREQ	Prerequisite Application/ Product	Y	Unique Seeded Value	For most applications Infrastructure is 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	Set this attribute-value to YES against every APP_ID which is licensed and

Tag Name/ Attribute Name	Description	Mandatory (Y/ N)	Default Value/ Permissible Value	Comments
			Permissible: YES or NO	should be enabled for use. Note: Application/ Product once enabled cannot be disabled. However, Application/ Product not enabled during installation can be enabled later through the Administration UI.
APP_NAME	Unique Application/ Product Name	Y	Unique Seeded Value	DO NOT modify this value.
APP_DESCRIPTION	Unique Application/ Product Name	Y	Unique Seeded Value	DO NOT modify this value.
VERSION	Unique release version	Y	Unique Seeded Value	DO NOT modify this value.

22.2 OFS_DM_SCHEMA_IN.xml

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

This section details the various tags/ parameters available in the file and the values that must be updated. Prior to executing the schema creator utility, it is mandatory to update this file.

```

<APPACKSCHEMA>
  <APP_PACK_ID>OFS_DM_PACK</APP_PACK_ID>
  <JDBC_URL></JDBC_URL>
  <JDBC_DRIVER>oracle.jdbc.driver.OracleDriver</JDBC_DRIVER>
  <HOST></HOST>
  <SETUPINFO NAME="dmp" PREFIX_SCHEMA_NAME="Y"/>
  <PASSWORD APPLYSAMEFORALL="Y" DEFAULT="" />
  <TABLESPACES>
    <TABLESPACE NAME="OFS_DGS_DATA_TBS" VALUE="DGS_DATA_TABLE_SPACE" DATAFILE="<..>/dgs_data_tablespace1.dbf" SIZE="1096M" AUTOEXTEND="OFF" />
    <TABLESPACE NAME="OFS_DGS_INDEX_TBS" VALUE="DGS_INDEX_TABLE_SPACE" DATAFILE="<..>/dgs_index_tablespace1.dbf" SIZE="1096M" AUTOEXTEND="OFF" />
  </TABLESPACES>
  <SCHEMAS>
    <SCHEMA TYPE="CONFIG" NAME="ofsaacnf" PASSWORD="" APP_ID="OFS_AAI" DEFAULTTABLESPACE="USERS" TEMPTABLESPACE="TEMP" QUOTA ="2G"/>
    <SCHEMA TYPE="ATOMIC" NAME="ofsaatm" PASSWORD="" APP_ID="OFS_GLRCON" INFODOM="" DEFAULTTABLESPACE="USERS" TEMPTABLESPACE="TEMP" QUOTA ="2G"/>
    <SCHEMA TYPE="ATOMIC" NAME="ofsaatm" PASSWORD="" APP_ID="OFS_DGS" INFODOM="" DEFAULTTABLESPACE="USERS" TEMPTABLESPACE="TEMP" QUOTA="2G"/>
    <SCHEMA TYPE="ATOMIC" NAME="ofsaatm" PASSWORD="" APP_ID="OFS_DGS_EBA" INFODOM="" DEFAULTTABLESPACE="USERS" TEMPTABLESPACE="TEMP" QUOTA="2G"/>
  </SCHEMAS>
</APPACKSCHEMA>

```

22.2.1 Configuring OFS_DM_SCHEMA_IN.XML File

Creating database schemas, object with schemas and assigning appropriate grants are the primary steps in the installation process of OFSAA Applications. The OFS_DM_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 must be updated. Prior to executing the schema creator utility, it is mandatory to update this file.

Tag Name/ Attribute Name	Description	Mandator y (Y/N)	Default Value/ Permissible Value	Comments
<APP_PACK_ID>	Unique Application Pack Identifier	Y	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.	Y	Example, jdbc:oracle:thin:@< DBSERVER IP/HOST/ IP>:<PORT>:<SID> or jdbc:oracle:thin:@//[HOST][:PORT]/SE RVICE or jdbc:oracle:thin:@(DESCRIPTION=(ADD RESS_LIST=(ADDRESS=(PROTOCOL=T CP)(HOST=[HOST]))(port=[PORT]))(ADD RESS=(PROTOCOL=TCP)(HOST=[HOST]))(PORT=[PORT]))(LOAD_BALANCE=ye s)(FAILOVER=yes)(CONNECT_DATA=(S ERVICE_NAME=[SERVICE]))) For example, jdbc:oracle:thin:@//dbhost.server.com:1 521/service1 or jdbc:oracle:thin:@//dbshost.server.com :1521/scan-1 or jdbc:oracle:thin:@(DESCRIPTION=(ADD RESS_LIST=(ADDRESS=(PROTOCOL=T CP)(HOST=dbhost1.server.com)(port=15 21))(ADDRESS=(PROTOCOL=TCP)(HOS T=dbhost2.server.com)(PORT=1521))(LO AD_BALANCE=yes)(FAILOVER=yes)(C ONNECT_DATA=(SERVICE_NAME=servi ce1)))	Ensure to add an entry (with SID/ SERVICE NAME) in the tnsnames.ora file on the OFSAA server. The entry should match with the SID/ SERVICE NAME used in the JDBC URL.

Tag Name/ Attribute Name	Description	Mandator y (Y/N)	Default Value/ Permissible Value	Comments
<JDBC_DRIVER>	By default this driver name is seeded. Note: Do not edit this attribute value.	Y	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 .	Y	Host Name/ IP Address	
<IS_HYBRID>/ VALUE = TRUE	Flag to identify the mode of installation	Y	TRUE	This flag value should be TRUE in case of Hybrid mode of installation only.
<SETUPINFO>/ NAME	Enter the acronym for the type of implementation. This information will be displayed in the OFSAA Home Page. Note: On executing the schema creator utility, this value will be prefixed with each schema name. For example: dev_ofsaconf, uat_ofsaatm.	Y	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_ofsaconf, uat_ofsaconf etc.

Tag Name/ Attribute Name	Description	Mandator y (Y/N)	Default Value/ Permissible Value	Comments
<SETUPINFO>/ PREFIX_SCHEMA _NAME	Identifies if the value specified in <SETUPINFO>/NAME attribute should be prefixed to the schema name.	N	YES or NO	Default value is YES.
<PASSWORD>/ APPLYSAMEFOR ALL	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 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.	Y	Default – N Permissible – Y or N	Note: Setting this attribute value is mandatory, If DEFAULT attribute is set.

Tag Name/ Attribute Name	Description	Mandator y (Y/N)	Default Value/ Permissible Value	Comments
<PASSWORD>/ DEFAULT*	Enter the password if you want to set a default password for all schemas. Note: You also need to set APPLYSAM EFORALL attribute as Y to apply the default password for all the schemas.	N	The maximum length allowed is 30 characters. Special characters are not allowed.	
<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 value.	Y	ATOMIC/CONFIG/SANDBOX/ADDON Note: SANDBOX AND ADDON schemas are not applicable for OFS AAI 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 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	Y	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

Tag Name/ Attribute Name	Description	Mandator y (Y/N)	Default Value/ Permissible Value	Comments
	<p>the Application Pack.</p> <p>You can edit the schema names if required.</p> <p>Note: The Schema Name will have a prefix of the SETUPINFO / NAME attribute. SCHEMA NAME must be same for all the ATOMIC Schemas of applications within an Application Pack.</p>			<p>'uat' then schema being created would be 'uat_ofsaaatm'.</p> <p>NAME should be same where APP_GRP=1 for all SCHEMA tags (Not applicable for this Application Pack).</p>
<SCHEMA>/ PASSWORD*	<p>Enter the password of the schema to be created.</p> <p>Note: If this attribute is left blank, then the password specified in the <PASSWOR D>/DEFAULT attribute is applied as the Schema Password.</p>	N	The maximum length allowed is 30 characters. Special characters are not allowed.	<p>Note: You need to mandatorily enter the password if you have set the <PASSWORD>/ APPLYSAMEFORALL attribute as N.</p>

Tag Name/ Attribute Name	Description	Mandator y (Y/N)	Default Value/ Permissible Value	Comments
<SCHEMA>/ APP_ID	By default, the Application ID is seeded based on the Application Pack. Note: Do not edit this attribute value.	Y	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.	N	Default – USERS Permissible – Any existing valid tablespace name.	Modify this value to associate any valid tablespace with the schema.
<SCHEMA>/ TEMPTABLESPACE	Enter the available temporary tablespace for the DB User. Note: If this attribute is left blank, then TEMP is set as the default tablespace.	N	Default – TEMP Permissible – Any existing valid temporary tablespace name.	Modify this value to associate any valid tablespace with the schema.
<SCHEMA>/ QUOTA	Enter the quota to be set on DEFAULTTABLESPACE attribute for the schema/	N	Example, 600M/m 20G/g UNLIMITED/unlimited	Modify this value to grant the specified quota on the mentioned tablespace to the user.

Tag Name/ Attribute Name	Description	Mandator y (Y/N)	Default Value/ Permissible Value	Comments
	user. By default, the quota size is set to 500M. Minimum: 500M or Unlimited on default Tablespace			
<SCHEMA>/ INFODOM	Enter the name of the Information Domain to associate this schema. The schema creator utility automatically derives an Information Domain Name based on the Application Pack if no value is specified for this attribute.	N (Optional for Atomic and mandatory for sandbox)	Permissible length is 16 characters and only alphanumeric characters allowed. No special characters allowed.	Enter this field in UPPERCASE. If DM media pack is first media pack installation in the setup, then INFODOM has to be specified mandatorily otherwise it is optional
<ADV_SEC_OPTIONS>	Parent tag to hold Advance Security Options.	N		Uncomment the tag and edit if you want to add security options. For example, TDE and Data Redact. For details, see the example following the table.
<ADV_SEC_OPTIONS>/TDE	Tag to enable/disable TDE.	N	Default is FALSE. To enable TDE, set this to TRUE.	Ensure this tag is not commented if you have uncommented <ADV_SEC_OPTIONS>/
<ADV_SEC_OPTIONS>/ DATA_REDACT	Tag to enable/disable Data Redaction feature.	N	Default is FALSE. To enable DATA_REDACT, set this to TRUE	Ensure this tag is not commented if you have uncommented <ADV_SEC_OPTIONS>/

Tag Name/ Attribute Name	Description	Mandator y (Y/N)	Default Value/ Permissible Value	Comments
<TABLESPACES>	Parent tag to hold <TABLESPACE> elements	N	NA	Uncomment the tag and edit. ONLY if tablespaces are to be created as part of the installation. For details, see the example following the table. Note: When TDE is TRUE in ADV_SEC_OPTIONS, then it is mandatory for the <TABLESPACES> tag to be present in the xml file.
<TABLESPACE>/ NAME	Logical Name of tablespace to be created.	Y		Name if specified should be referred in the <SCHEMA DEFAULTTABLESPACE= "##NAME##"> attribute. Note the ## syntax.
<TABLESPACE>/ VALUE	Physical Name of the tablespace to be created	Y	NA	Value if specified will be the actual name of the TABLESPACE.
<TABLESPACE>/ DATAFILE	Specifies the location of the data file on the server	Y	NA	Enter the absolute path of the file to be created.
<TABLESPACE>/ AUTOEXTEND	Specifies if the tablespace should be extensible or have a hard limit	Y	ON or OFF	Set to ON to ensure that the tablespace does not run out of space when full.
<TABLESPACE>/ ENCRYPT	Specifies if the tablespace(s) should be encrypted using TDE.	Y	ON or OFF	Set to ON to ensure that the tablespaces when created are encrypted using TDE.

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

Note: Encryption of tablespaces requires to enabling Transparent Data Encryption (TDE) on the Database Server.

Example: : (The following snippet shows that TDE is enabled and hence the tablespace has been shown with encryption ON.)

```
<ADV_SEC_OPTIONS>
<OPTION NAME="TDE" VALUE="FALSE"/>
<OPTION NAME="DATA_REDACT" VALUE="FALSE" />
</ADV_SEC_OPTIONS>
<TABLESPACES>
<TABLESPACE NAME="OFS_AAI_TBSP_1" VALUE="TS_USERS1"
DATAFILE="/scratch/ora12c/app/oracle/oradata/OFSQA12CDB/ts_users1.dbf"
SIZE="500M" AUTOEXTEND="ON" ENCRYPT="ON" />TABLESPACE NAME="OFS_AAI_TBSP_2"
VALUE="TS_USERS2"
DATAFILE="/scratch/ora12c/app/oracle/oradata/OFSQA12CDB/ts_users2.dbf"
SIZE="500M" AUTOEXTEND="ON" ENCRYPT="ON" />
</TABLESPACES>

<SCHEMAS>
<SCHEMA TYPE="CONFIG" NAME="ofsaaconf" PASSWORD="" APP_ID="OFS_AAI"
DEFAULTTABLESPACE="##OFS_AAI_TBSP_1##" TEMPTABLESPACE="TEMP"
QUOTA="unlimited"/>
<SCHEMA TYPE="ATOMIC" NAME="ofsaaatm" PASSWORD="" APP_ID="OFS_AAAI"
DEFAULTTABLESPACE="##OFS_AAI_TBSP_2##" TEMPTABLESPACE="TEMP"
QUOTA="unlimited" INFODOM="OFSAAAIIINFO"/>
</SCHEMAS>
```

22.2.2 Configuring OFS_DM_SCHEMA_BIGDATA_IN.xml file

OFS_DM_SCHEMA_IN.XML File template for DM 806 Hybrid is,

OFS_DM_SCHEMA_BIGDATA_IN.xml.HYBRID.template.

Creating HIVE schemas, objects within the schemas are the primary steps in the installation process of OFSAA Applications. The OFS_DM_SCHEMA_BIGDATA_IN.xml file contains details on the various application schemas that should be created/ referred prior to the Application Pack installation.

NOTE

This file should be configured only in case of OFS DM Application Pack installation for HDFS ONLY target. This file is not required to be configured for an RDBMS ONLY target installation.

The following table provides details about the various tags/ parameters available in the file and the values that have to be updated.

Prior to executing the schema creator utility, it is mandatory to update this file.

OFS_DM_SCHEMA_BIGDATA_IN.XML Parameters

Tag Name/ Attribute Name	Description	Mandatory (Y/N)	Default Value/ Permissible Value	Comments
<APP_PACK_ID>	Seeded unique ID for the OFSAA Application Pack	Y	Seeded	DO NOT modify this value.
<JDBC_URL>	Enter the JDBC URL Note: You can enter RAC/ NON-RAC enabled database connectivity URL.	Y	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/service 1 or jdbc:oracle:thin:@//dbhost.server.com:1521/scan-1 or jdbc:oracle:thin:@(DESCRIPTION=(ADDRESS_LIST=(ADDRESS=(PROTOCOL=TCP)(HOST=dbhost1.server.com)(port=1521))(ADDRESS=(PROTOCOL=TCP)(HOST=dbhost2.server.com)(PORT=1521))(LOAD_BALANCE=yes)(FAILOVER=yes))(CONNECT_DATA=(SERVICE_NAME=service1)))	In case of an HDFS ONLY target installation, this URL should be of the RDBMS instance that hosts the Application's METADOM.
<JDBC_DRIVER>	By default this driver name is seeded.	Y	Example, oracle.jdbc.driver.OracleDriver	Only JDBC Thin Driver is supported.

Tag Name/ Attribute Name	Description	Mandator y (Y/N)	Default Value/ Permissible Value	Comments
	Note: Do not edit this attribute value.			DO NOT modify this value.
<HOST>	Enter the Hostname/ IP Address of the system on which you are installing the OFSAA components.	Y	Host Name/ IP Address	
<SETUPINFO>/ PREFIX_ SCHEMA_ NAME	Identifies if the value specified in <SETUPINFO>/ NAME attribute should be prefixed to the schema name.	N	YES or NO	Default value is YES.
<SETUPINFO>/ NAME	Enter the acronym for the type of implementation. This information will be displayed in the OFSAA Home Page. Note: On executing the schema creator utility, this value will be prefixed with each schema name. For example: dev_ofsaconf, uat_ofsaaatm.	Y	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 example, dev_ofsaconf, uat_ofsaconf etc.
<PASSWORD>/ DEFAULT*	Enter the password if you want to set a default password for all schemas. Note: You also need to set APPLYSAMEFOR ALL attribute as Y to apply the default	N	The maximum length allowed is 30 characters. Special characters are not allowed.	Applies only to the RDBMS type METADOM schema(s).

Tag Name/ Attribute Name	Description	Mandatory (Y/N)	Default Value/ Permissible Value	Comments
	password for all the schemas.			
<PASSWORD>/ APPLYSAMEFOR ALL	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 schemas. Note: In case you have entered Y in APPLYSAMEFOR ALL attribute and also have specified individual passwords for all the schemas, then the specified individual passwords will take precedence.	Y	Default - N Permissible - Y or N	Note: Setting this attribute value is mandatory, If DEFAULT attribute is set. Applies only to the RDBMS type METADOM schema(s).
<SCHEMAS>/ TYPE=RDBMS	Identifies the RDBMS schema details.	Y	Default names for schemas within the pack would be derived in absence of any value specified.	In an HDFS ONLY target installation, the Application's METADOM (that hosts the metadata) for an application is stored in RDBMS schema and the data model entities of the application are stored in the DATADOM (which would be on Hive).
<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	Y	ATOMIC/CONFIG/SANDBOX/ADDON Note: SANDBOX AND ADDON schemas are not applicable for OFS AAI Application Pack.	Only One CONFIG schema can exist in the file. This schema identifies as the CONFIGURATION schema that holds the OFSAAI setup details and other metadata information. Multiple ATOMIC/ SANDBOX/ ADDON schemas can exist in the file.

Tag Name/ Attribute Name	Description	Mandatory (Y/N)	Default Value/ Permissible Value	Comments
	on the Application Pack. Note: Do not edit this attribute value.			ATOMIC schema refers to the METADOM within the Information Domain schema. SANDBOX 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.	Y	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 example, 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 created. Note: If this attribute is left blank, then the password specified in the <PASSWORD>/DEFAULT attribute is applied as the Schema Password.	N	The maximum length allowed is 30 characters. Special characters are not allowed.	Note: You need to mandatorily enter the password if you have set the <PASSWORD>/APPLYSAMEFORALL attribute as N.

Tag Name/ Attribute Name	Description	Mandatory (Y/N)	Default Value/ Permissible Value	Comments
<SCHEMA>/ APP_ID	By default, the Application ID is seeded based on the Application Pack. Note: Do not edit this attribute value.	Y	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.	N	Default - USERS Permissible - Any existing valid tablespace name.	Modify this value to associate any valid tablespace with the schema.
<SCHEMA>/ TEMPTABLESPACE	If this attribute is left blank, then TEMP is set as the default tablespace.	N	Default - TEMP Permissible - Any existing valid temporary tablespace name.	Modify this value to associate any valid tablespace with the schema.
<SCHEMA>/ QUOTA	Enter the quota to be set on DEFAULTTABLESPACE attribute for the schema/ user. By default, the quota size is set to 500M. Minimum: 500M or Unlimited on default Tablespace	N	Example, 600M/m 20G/g UNLIMITED/unlimited	Modify this value to grant the specified quota on the mentioned tablespace to the user.
<SCHEMAS>/ TYPE=HDFS	Type of schemas being created.	Y		Refers to the DATADOM of the Application Pack being installed.
<HIVE_ SERVER_HOST>	IP/HostName of the server where HIVE is installed	Y		
<HIVE_LIB_ PATH>	Folder path where HIVE related drivers/jar files are copied	Y		Should contain the list of jars mentioned in the section Copying Jars to OFSAA Installation Folder and krb5.conf, keytab files. Manually copy the preceding listed files

Tag Name/ Attribute Name	Description	Mandatory (Y/N)	Default Value/ Permissible Value	Comments
				from CDH distribution to this identified folder.
<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.	Y	The permissible length is 20 characters and only alphanumeric characters allowed.	Schema Name should not be the same as Schema Name specified for Schema Type ATOMIC.
<SCHEMA>/ TYPE	Identifies the type of schema where the data model entities would reside.	Y	By default, the TYPE attribute in this tag is set to DATADOM.	DO NOT modify this value.
<SCHEMA>/DB TYPE	Identifies the type of driver to be used for connection.	Y	By default, the only supported type is HIVE in this release.	In the upcoming releases, the type value can be HIVE/IMPALA etc.
<SCHEMA>/<P ROPERTY>/CO MMENT	COMMENTS for HIVE schema	N		
<SCHEMA>/<P ROPERTY>/LO CATION	You can optionally specify a location for the table data	N		
<CONNECTIO N_ PROPERTIES>/ <PROPERTY>/J DBC_DRIVER	HIVE JDBC driver details	Y	com.cloudera.hive.jdbc4.HS2Driver	The default cloudera HiveServer 2 driver name.
<CONNECTIO N_ PROPERTIES>/ <PROPERTY>/J DBC_URL	Enter HIVE JDBC URL	Y	JDBC URL format : jdbc:hive2://<FQDN>:<port>/<db>;AuthMech=1;KrbServiceName=<KrbServiceName>;KrbHostFQDN=<FQDN>;KrbRealm=<KrbRealm> Example: jdbc:hive2://abc.in.oracle.com:1000/GLDATADOM;AuthMech=1;Kr	<db> name should be same as Datadom name given in <SCHEMA>/NAME

Tag Name/ Attribute Name	Description	Mandatory (Y/N)	Default Value/ Permissible Value	Comments
			bServiceName=hive;KrbHostFQDN=abc.in.oracle.com;KrbRealm=ABC.ORACLE.COM	
<CONNECTIO N_ PROPERTIES>/ <PROPERTY>/ AUTH_TYPE	Authentication Type	Y	Permissible values: KERBEROS_WITH_KEYTAB	Only “Kerberos with keytab” based authentication supported in this release.
<CONNECTIO N_ PROPERTIES>/ <PROPERTY>/ AUTH_ALIAS	Alias name for authentication credentials	Y		An Alias name mapping to a principal and password combination specified in the following tags.
<CONNECTIO N_ PROPERTIES>/ <PROPERTY>/ PRINCIPAL	Authentication principal name	Y		Principal name used in authentication to connect to the Hive Server.
<CONNECTIO N_ PROPERTIES>/ <PROPERTY>/ PASSWORD	Authentication password	Y		Password used in authentication to connect to the Hive Server.
<CONNECTIO N_ PROPERTIES>/ <PROPERTY>/ KRB_GSSJAAS_ FILE_NAME	A keytab file containing pairs of Kerberos principals and an encrypted copy of that principal's key.	Y		This file should be copied to the location specified in <HIVE_LIB_PATH>
<CONNECTIO N_ PROPERTIES>/ <PROPERTY>/ KRB_REALM_ FILE_NAME	REALM configuration file	Y		This file should be copied to the location specified in <HIVE_LIB_PATH>

23 Appendix M: OFSAAI_InstallConfig.xml file

23.1 Configuring OFSAAI_InstallConfig.xml file

Perform the following steps to configure OFSAAI_InstallConfig.xml file:

3. Navigate to OFS_DM_PACK/OFS_AAI/conf/ directory.
4. Open the file OFSAAI_InstallConfig.xml in text editor.
5. Configure the OFSAAI_InstallConfig.xml as mentioned in the below table:
6. 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.

Interaction Variable Name	Significance and Expected Value	Mandatory
<Layer name="GENERAL">		
InteractionGroup name="WebServerType"		
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
InteractionGroup name="OFSAA Infrastructure Server Details"		
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
InteractionGroup name="Database Details"		

Interaction Variable Name	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 Appendix N for identifying the correct "ojdbc<version>.jar" version to be copied.	Yes
InteractionGroup name="OLAP Detail"		
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.		
InteractionGroup name="SFTP Details"		
SFTP_ENABLE	Identifies if the SFTP (Secure File Transfer Protocol) feature is to be enabled. The following numeric value should be set depending on the choice: For SFTP, set this field to 1 or -1. - 1 For FTP, set this field to - 0	Yes
Note: The default value for SFTP_ENABLE is 1, which signifies that SFTP will be used. Oracle recommends using SFTP instead of FTP because SFTP is considered more secure. However, a client may choose to ignore this recommendation and to use FTP by setting SFTP_ENABLE to 0. You can change this selection later by using the OFSAAI administration interface. Set SFTP_ENABLE to -1 to configure ftpshare and weblocal path as local path mounted for OFSAAI server.		

Interaction Variable Name	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 default value as 21 (FTP) if SFTP_ENABLE is 0. Alternatively, this value can be any Port configured by System Administrators to support SFTP/FTP. For example, <InteractionVariable name="FILE_TRANSFER_PORT">21</InteractionVariable>	Yes
InteractionGroup name="Locale Detail"		
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
InteractionGroup name="OFSAA Infrastructure Communicating ports" 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 65535 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
InteractionGroup name="Web Details" 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.		

Interaction Variable Name	Significance and Expected Value	Mandatory
HTTPS_ENABLE	<p>Identifies if the UI should be accessed using HTTP or HTTPS scheme. The default value set is 0. The below numeric value should be set depending on the choice:</p> <p>YES - 1 NO - 0</p> <p>For example, <InteractionVariable name="HTTPS_ENABLE">0</InteractionVariable></p>	Yes
WEB_SERVER_IP	<p>Identifies the HTTP Server IP/ Hostname or Web Application Server IP/ Hostname, to be used for accessing the UI. This IP would typically be the HTTP Server IP.</p> <p>If no separate HTTP Server is available, the value should be Web Application Server IP/Hostname.</p> <p>For example, <InteractionVariable name="WEB_SERVER_IP">10.11.12.13</InteractionVariable></p> <p>or</p> <p><InteractionVariable name="WEB_SERVER_IP">myweb.server.com</InteractionVariable></p>	No
WEB_SERVER_PORT	<p>Identifies the Web Server Port. This would typically be 80 for non SSL and 443 for SSL. If no separate HTTP Server exists, the value should be the port configured for Web Server.</p> <p>Note: The port value will not be accepted as 80 if HTTPS_ENABLE is 1 and as 443, if HTTPS_ENABLE is 0.</p> <p>For example, <InteractionVariable name="WEB_SERVER_PORT">80</InteractionVariable></p>	No
CONTEXT_NAME	<p>Identifies the web application context name which will be used to built the URL to access the OFSAA applications. The context name can be identified from a URL as below:</p> <p><scheme>://<host>:<port>/<context-name>/login.jsp</p> <p>Sample URL: https://myweb:443/ofsaadev/login.jsp</p> <p>For example, <InteractionVariable name="CONTEXT_NAME">ofsaadev</InteractionVariable></p>	Yes

Interaction Variable Name	Significance and Expected Value	Mandatory
WEBAPP_CONTEXT_PATH	<p>Identifies the absolute path of the exploded .ear file on the web application server.</p> <p>For Tomcat, specify the Tomcat directory path till /webapps, such as /oradata6/revwb7/tomcat/webapps/.</p> <p>For WebSphere, enter the WebSphere path as <WebSphere profile directory>/installedApps/<NodeCellName>. For example, /data2/test//WebSphere/AppServer/profiles/<Profile_Name>/installedApps/aix-imfNode01Cell. Where aix-imf is Host name.</p> <p>For WebLogic, provide the WebLogic home directory path as /<WebLogic home directory path>/bea/wlserver_10.3</p>	Yes
WEB_LOCAL_PATH	<p>Identifies the absolute path to any directory on the web application server that can hold temporary files being uploaded as part of the applications usage.</p> <p>Note: In case of a clustered deployment, ensure this path and directory is same on all the nodes.</p>	Yes
<p>InteractionGroup name="Weblogic Setup Details"</p> <p>InteractionVariable name="WEB_LOCAL_PATH">/scratch/dgobiee/Oracle/Middleware/Oracle_Home/user_projects/domains/DG809HOME/weblocal</InteractionVariable></p>		
WEBLOGIC_DOMAIN_HOME	<p>Identifies the WebLogic Domain Home. Specify the value only if WEBSERVERTYPE is set as 3 (WebLogic).</p> <p>For example, <InteractionVariable name="WEBLOGIC_DOMAIN_HOME">/home/weblogic/bea/user_projects/domains/mydomain</InteractionVariable></p>	No
<p>InteractionGroup name="OFSAAI FTP Details"</p>		
OFSAAI_FTPSHARE_PATH	<p>Identifies the absolute path to the directory identified as file system stage area.</p> <p>Note:</p> <p>The directory should exist on the same system on which the OFSAA Infrastructure is being installed (can be on a separate mount).</p> <p>The user mentioned in APP_SFTP_USER_ID parameter below should have RWX permission on the directory.</p> <p>For example, <InteractionVariable name="APP_FTPSHARE_PATH">>/oradata6/revwb7/ftpshare</InteractionVariable></p>	Yes

Interaction Variable Name	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
OFSAAI_SFTP_PRIVATE_KEY	Identifies the SFTP private key for OFSAAI. For example, <InteractionVariable name="OFSAAI_SFTP_PRIVATE_KEY">/home/ofsaapp/.ssh/id_rsa</InteractionVariable> By default, the value is NA, which indicates password will be prompted for the user <OFSAAI_SFTP_USER_ID> for authentication. For more information on generating SFTP Private key, see the Setting Up SFTP Private Key section.	No
OFSAAI_SFTP_PASSPHRASE	Identifies the passphrase for the SFTP private key for OFSAAI. For example, InteractionVariable name="OFSAAI_SFTP_PASSPHRASE">enter a pass phrase here</InteractionVariable> By default, the value is NA. If OFSAAI_SFTP_PRIVATE_KEY value is given and this is kept as NA, then it is assumed as empty passphrase.	No
InteractionGroup name="Hive Details" The default value set for the interaction variables under this group is set as NA. These are required only for Hive Configuration.		
HIVE_SERVER_PORT	Identifies the port used for the file transfer service. The default value set is 22 (SFTP). Set this value as 21 for FTP. For example, InteractionVariable name="HIVE_SERVER_PORT">22</InteractionVariable>	Yes, only for HIVE Configuration
HIVE_SERVER_FTPDRIVE	Identifies the absolute path to the directory identified as file system stage area of HIVE server. For example, InteractionVariable name="HIVE_SERVER_FTPDRIVE">/scratch/ofsa/ftpshare</InteractionVariable>	Yes, only for HIVE Configuration
HIVE_SERVER_FTP_USERID	Identifies the user who has RWX permissions on the directory identified under the preceding parameter HIVE_SERVER_FTPDRIVE. For example, InteractionVariable name="HIVE_SERVER_FTP_USERID">ofsa</InteractionVariable>	Yes, only for HIVE Configuration
HIVE_SERVER_FTP_PROTOCOL	If the HIVE_SERVER_PORT is 21, then set value as FTP, else set it as SFTP. For example, InteractionVariable name="HIVE_SERVER_FTP_PROTOCOL">SFTP</InteractionVariable>	Yes, only for HIVE Configuration

Interaction Variable Name	Significance and Expected Value	Mandatory
HIVE_SFTP_PRIVATE_KEY	<p>Identifies the SFTP private key for the HIVE server. For example, <code><InteractionVariable name="HIVE_SFTP_PRIVATE_KEY"/>/scratch/testuser/.ssh/id_rsa</InteractionVariable></code></p> <p>By default, the value is NA, which indicates password will be prompted for the user <code><HIVE_SERVER_FTP_USERID></code> for authentication.</p> <p>For more information on generating SFTP Private key, see the Setting Up SFTP Private Key section.</p>	Yes, only for HIVE Configuration
HIVE_SFTP_PASSPHRASE	<p>Identifies the passphrase for the SFTP private key for HIVE. For example, <code><InteractionVariable name="HIVE_SFTP_PASSPHRASE">NA</InteractionVariable></code> By default, the value is NA.</p> <p>If HIVE_SFTP_PRIVATE_KEY value is given and this is kept as NA, then it is assumed as empty passphrase.</p>	Yes, only for HIVE Configuration

24 Appendix N: Migration for Excel Upload

This appendix provides detailed instructions to migrate for excel upload.

24.1.1 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.

24.1.2 Migration for Excel Upload

To migrate, perform the following steps:

1. Open **PL/SQL Developer** and log in to the source setup's configuration (**CONFIG**) schema with assigned **Username** and **Password**.
2. Query the data of table `EXCEL_MAPPING_MASTER` in a new SQL window.
3. Open a new session in PL/SQL developer and log in to the target setup's configuration (**CONFIG**) schema with assigned **Username** and **Password**.
4. Insert the records from [Step 1](#) to this table.
5. Update the **infodom** name with the target **infodom** name in `V_INFODOM` column of `EXCEL_MAPPING_MASTER` table.

NOTE

If all the mappings can work out of the single target Infodom, update same Infodom value across all rows. If only few mappings work out of the target infodom, update the infodom value for selective records. Kindly note, excel upload mappings 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 `FTPSHARE` directory.

9. Copy the excel-entity mapping xml file(s) which are located in this directory according to their directory 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 directory according to their directory 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. Log in to a new session in WinSCP with the host name, port number, user name and password to access the target setup.
12. Copy the xml file(s) from Step 3 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.

25 Appendix O: 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 7 and JDK 8	ojdbc7.jar for JDK 7/JDK 8
11.2 or 11gR2	JDK 7 and JDK 8 supported in 11.2.0.3 and 11.2.0.4	ojdbc6.jar for JDK 7 / JDK 8

26 Appendix P: Upgrading an Existing OFSAA 8.0.x Java 7 Instance to Java 8

This section explains the configurations required to upgrade an existing OFSAA 8.0.x Java 7 instance to Java 8. It consists of the following topics:

- [Prerequisites](#)
- [Steps for upgrading OFSAA 8.0.x Java 7 instance to Java 8](#)
- [Web Application Server Configurations](#)
- [OFSAA Generic Configurations](#)
- [OFSAA Configurations for New Web Application Server Installation](#)

26.1 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.

NOTE IBM WebSphere 8.6.x (Full Profile) on Java 8 is not available.

26.2 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, perform the following steps:

- Configure Web Application Server to Java 8. For more information, see [Web Application Server Configurations](#).
- Configure the OFSAA instance to Java 8. For more information, see [OFSAA Generic Configurations](#). For a newly installed Web Application Server, see [OFSAA Configurations for New Web Application Server Installation](#)
- Restart the OFSAA services. For more information, see the Start/Stop Infrastructure Services section in [Appendix D](#)
- Generate the application EAR/WAR file and redeploy the application onto your configured web application server. For more information on generating and deploying EAR / WAR file, see [Appendix C](#).

26.3 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](#)

26.3.1 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.`
2. Edit the `product.properties` file. Set `JAVA_HOME`, `WLS_JAVA_HOME`, `JAVAHOME` properties to the new Java path and `java.vm.version` to the new Java version. For example,

```
JAVA_HOME=/usr/java/jdk1.8.0_45
WLS_JAVA_HOME=/usr/java/jdk1.8.0_45
JAVAHOME=/usr/java/jdk1.8.0_45
java.vm.version=1.8.0_45
```

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

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

4. Clear the Application cache. Navigate to the following path and delete the files:

```
<Weblogic installation location>/domains/<Domain
name>/servers/<Server name>/tmp/_WL_user/<Application
name>/qaelce/jsp_servlet
```

If you wish to install a new instance of the Oracle WebLogic Server, perform the following steps:

5. Install Oracle WebLogic Server 12.1.3.x on Java 8.
6. Perform the configurations for the newly installed WebLogic server. For more information see [Configuring Resource Reference in Weblogic Application Server](#).

NOTE

While creating WebLogic Domain, the Listen Port should be set same as that of the existing Domain. Note down the new Domain path to perform OFSAA Configurations.

26.3.2 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,x
3. `JAVA_HOME=/usr/java/jre1.8.0_45`
4. Clear the Application cache. Navigate to the following path and delete the files:
`<Tomcat installation directory>/work/Catalina/localhost/<Application name>/org/apache/jsp`

If you wish to install a new instance of the Apache Tomcat Server, perform the following steps:

1. Install Apache Tomcat Server 8 with Java 8.
2. Perform the configurations for the newly installed Tomcat server. For more information see [Configuring Resource Reference in Tomcat Application Server](#).

NOTE

Update the Connector Port in `/apache-tomcat-8.0.21/conf/server.xml` file to that of the existing Tomcat instance.
Note down the new deployment path to perform OFSAA Configurations.

26.4 OFSAA Generic Configurations

This section consists of the following topics:

- [User .profile Settings](#)

26.4.1 User .profile Settings

Perform the following configurations:

1. Login to the OFSAA Server as a non-root user.
2. Edit the user `.profile`. 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`

26.5 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. Perform the following 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

27 Appendix Q: Removing OFSAA

This appendix includes the following sections:

[Uninstalling OFSAA Infrastructure](#)

[Uninstalling EAR Files in WebSphere](#)

[Uninstalling EAR Files in WebLogic](#)

[Uninstalling WAR Files in Tomcat](#)

27.1 Uninstalling OFSAA Infrastructure

This section guides 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

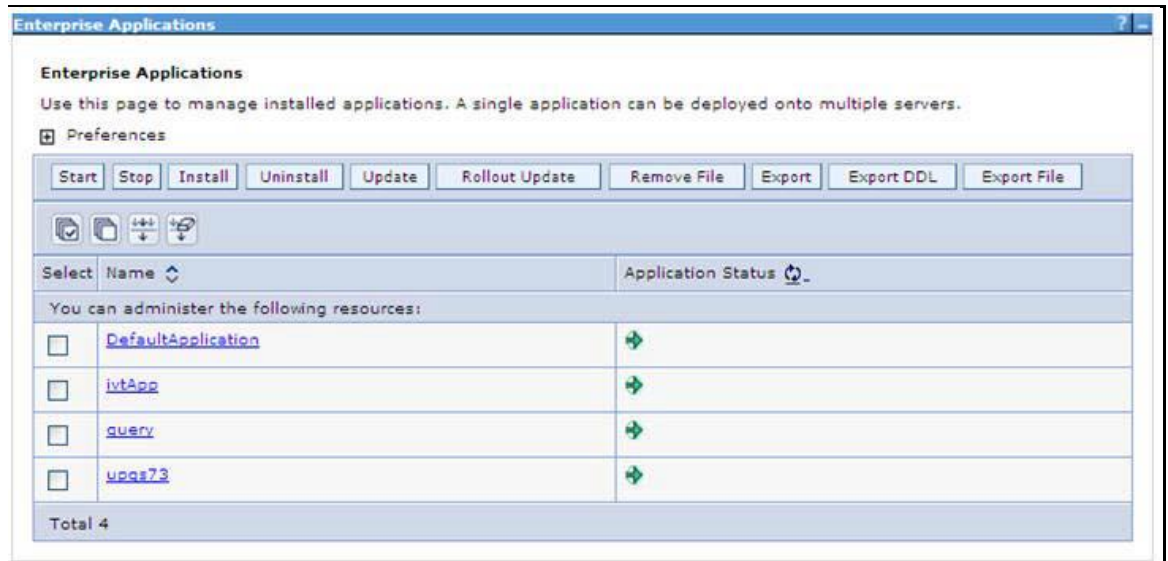
Uninstallation does not remove the Infrastructure application from the Web Application Server. This has to be done manually. The entries in the `.profile` file must be removed manually. The files/ directories under the file system staging area (ftshare) have to be deleted manually. All the Database objects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

27.2 Uninstalling EAR Files in WebSphere

Following are the steps to uninstall any previously deployed application:

Open the URL in the browser window: `http://<ipaddress>:<Administrative Console Port>/ibm/console` (https, if SSL is enabled). The Login window is displayed.

1. Login with the user ID that has admin rights.
2. Expand **Applications** → **Application Types** → **WebSphere Enterprise Applications** from the LHS. The *Enterprise Applications* window is displayed with all the deployed applications.



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

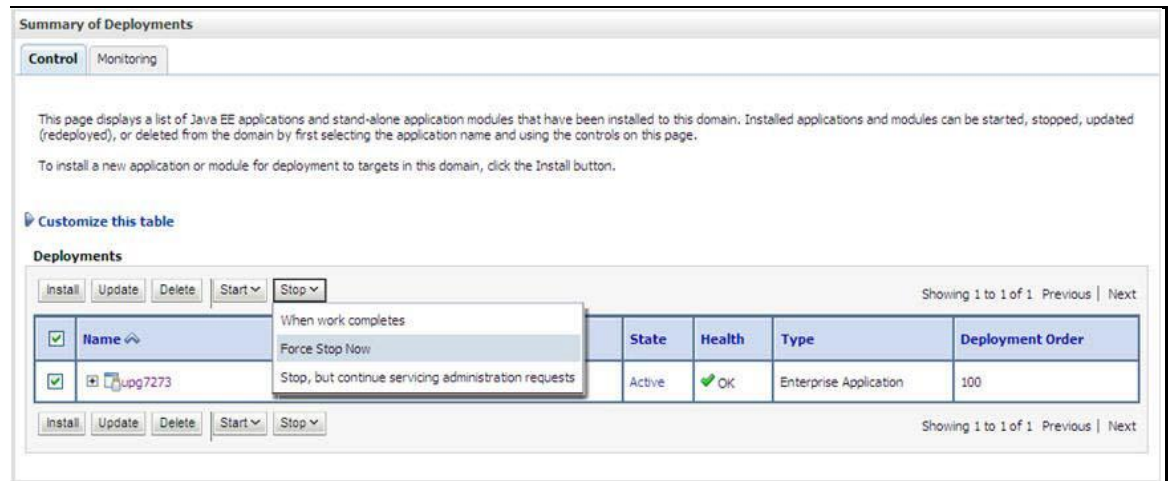


5. Click **OK** to confirm.
6. Click **Save** to save the master file configuration.

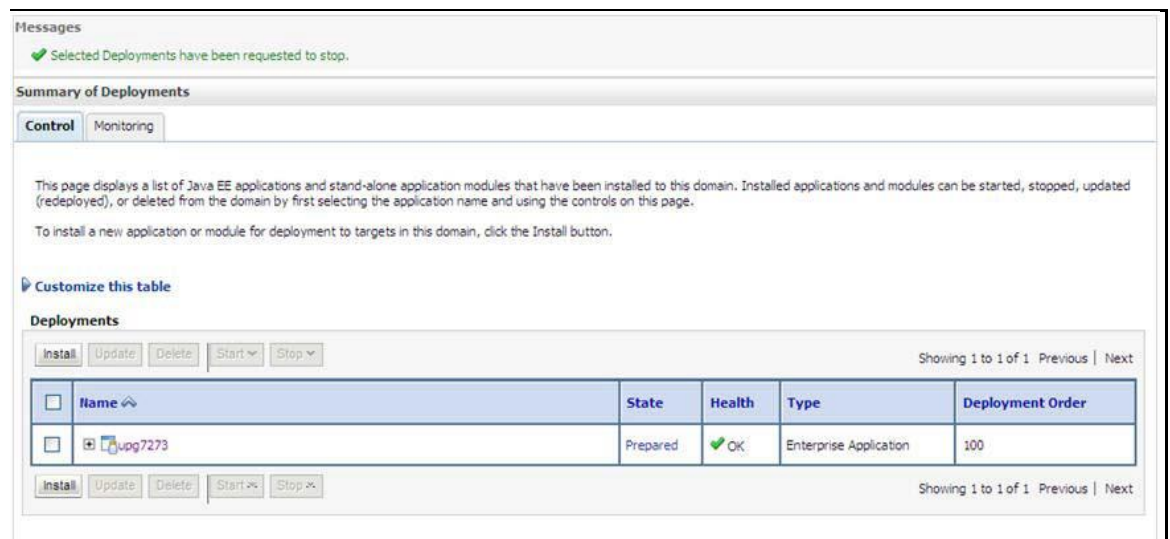
27.3 Uninstalling EAR Files in WebLogic

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.

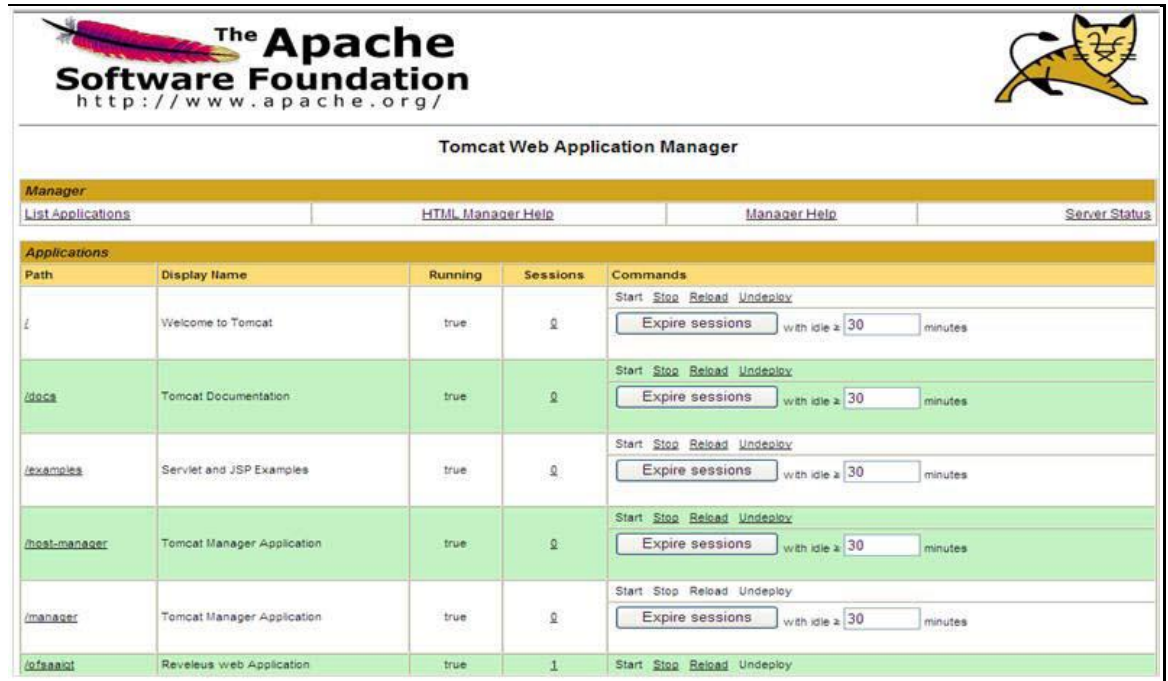
27.4 Uninstalling WAR Files in Tomcat

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

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

3. Restart the Tomcat service by doing the following:
 - Login to the "Unix server" through a terminal emulator.
 - Navigate to `$catalina_home/bin` directory.
 - Stop the tomcat services using the `./shutdown.sh` command.
 - Start the tomcat services using the `./startup.sh` command.
4. Open the URL in a browser window: `http://<IP address>:<Tomcat server port>` (https, if SSL is enabled). The *Tomcat Home* window is displayed.
5. Click **Manager App**. The *Connect To* window is displayed.
6. 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.



The Apache Software Foundation logo is at the top left, and the Tomcat logo (a yellow cat) is at the top right. The main title is "Tomcat Web Application Manager". Below the title, there are navigation links: "List Applications", "HTML Manager Help", "Manager Help", and "Server Status".

Applications				
Path	Display Name	Running	Sessions	Commands
/	Welcome to Tomcat	true	0	Start Stop Reload Undeploy <input type="button" value="Expire sessions"/> with idle ≥ <input type="text" value="30"/> minutes
/docs	Tomcat Documentation	true	0	Start Stop Reload Undeploy <input type="button" value="Expire sessions"/> with idle ≥ <input type="text" value="30"/> minutes
/examples	Servlet and JSP Examples	true	0	Start Stop Reload Undeploy <input type="button" value="Expire sessions"/> with idle ≥ <input type="text" value="30"/> minutes
/host-manager	Tomcat Manager Application	true	0	Start Stop Reload Undeploy <input type="button" value="Expire sessions"/> with idle ≥ <input type="text" value="30"/> minutes
/manager	Tomcat Manager Application	true	0	Start Stop Reload Undeploy <input type="button" value="Expire sessions"/> with idle ≥ <input type="text" value="30"/> minutes
/ofsaasat	Reveleus web Application	true	1	Start Stop Reload Undeploy

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

28 Appendix R: Configuring Transparent Data Encryption (TDE) and, Data Redaction in OFSAA

Two features comprise Oracle Advanced Security: Transparent Data Encryption and Oracle Data Redaction.

This section details about the configurations required in case you want to enable TDE or Data Redaction in OFSAA applications.

28.1 Transparent Data Encryption (TDE)

Transparent Data Encryption (TDE) enables you to encrypt sensitive data, such as Personally Identifiable Information (PII), that you store in tables and tablespaces. After the data is encrypted, this data is transparently decrypted for authorized users or applications when they access this data. To prevent unauthorized decryption, TDE stores the encryption keys in a security module external to the database, called a Keystore. For more details on TDE, see the Database Advanced Security Guide.

TDE tablespace encryption enables you to encrypt all of the data stored in a tablespace. To control the encryption, you use a Keystore and TDE master encryption key. Oracle Database supports both software keystores and hardware, or HSM-based, keystores. A software keystore is a container for the TDE master encryption key, and it resides in the software file system.

28.1.1 Configuring TDE During OFS DM Installation Using Full Installer

This section provides information on how to help enable TDE (Transparent Data Encryption) in the database. Data Redaction and its corresponding settings in OFSAA. This section consists of the following sub sections:

- Configuring Software Keystore and Encrypted Tablespace Creation
- Running the Schema Creator Utility
- Testing the Encryption

28.1.1.1 Configuring a Software Keystore and Encrypted Tablespace Creation

A software keystore is a container for the TDE master encryption key, and it resides in the software file system. You must define a location for the key in the `sqlnet.ora` file so that the database locates the keystore (one per database) by checking the keystore location in the `sqlnet.ora` file. After defining the location, create the keystore and open it. Set the TDE master key after opening it and then encrypt the data.

To find whether a wallet is already existing, check the following entries:

8. The location specified by the `ENCRYPTION_WALLET_LOCATION` parameter in the `sqlnet.ora` file.
9. The location specified by the `WALLET_LOCATION` parameter in the `sqlnet.ora` file.

Encrypted tablespaces can share the default database wallet. However, Oracle recommends that you use a separate wallet for transparent data encryption functionality by specifying the `ENCRYPTION_WALLET_LOCATION` parameter in the `sqlnet.ora` file.

NOTE You should have proper privileges to perform the following actions.

For details to configure the software keystore, perform the following steps:

Step 1: Set the Software keystore location in the `sqlnet.ora` file

The first step is to designate a location for software keystore in the `sqlnet.ora` file. The Oracle Database will check the `sqlnet.ora` file for the directory location of the keystore to determine whether it is a software keystore or a hardware module security (HSM) keystore.

NOTE Ensure that the directory location which you want to set for software keystore exists beforehand. Preferably, this directory should be empty

In a multitenant environment, the keystore location is set for the entire multitenant container database (CDB), not for individual pluggable databases (PDBs).

By default, the `sqlnet.ora` file is located in the `ORACLE_HOME/network/admin` directory or in the location set by the `TNS_ADMIN` environment variable. Ensure that you have properly set the `TNS_ADMIN` environment variable to point to the correct `sqlnet.ora` file.

To create a software keystore on a regular file system, use the following format when you edit the `sqlnet.ora` file:

```
ENCRYPTION_WALLET_LOCATION=
  (SOURCE=
    (METHOD=FILE)
    (METHOD_DATA=
      (DIRECTORY=<<path to keystore>>)))
```

Examples:

For regular file system in which the database name is `orclb`:

```
ENCRYPTION_WALLET_LOCATION=
  (SOURCE=
    (METHOD=FILE)
    (METHOD_DATA=
      (DIRECTORY=/etc/ORACLE/WALLETS/orcl)))
```

When multiple databases share the `sqlnet.ora` file:

```

ENCRYPTION_WALLET_LOCATION=
  (SOURCE=
    (METHOD=FILE)
    (METHOD_DATA=
      (DIRECTORY=/etc/ORACLE/WALLETS/orcl)))

```

When Oracle Automatic Storage Management (ASM) is configured:

```

ENCRYPTION_WALLET_LOCATION=
  (SOURCE=
    (METHOD=FILE)
    (METHOD_DATA=
      (DIRECTORY=+disk1/mydb/wallet)))

```

For ASM Diskgroup:

```

ENCRYPTION_WALLET_LOCATION=
  (SOURCE=
    (METHOD=FILE)
    (METHOD_DATA=
      (DIRECTORY=+ASM_file_path_of_the_diskgroup)))

```

Step 2: Create the Software Keystore

There are three different types of Software Keystores:

- Password-based Software Keystores
- Auto-login Software Keystores
- Local Auto-login Software Keystores

Perform the following steps to create a software keystore:

10. Login as sysdba or user with ADMINISTER KEY MANAGEMENT or SYSKM privilege.

11. Use the following command to create password-based software keystore:

```

CONN sys/password@serviceid AS SYSDBA
ADMINISTER KEY MANAGEMENT CREATE KEYSTORE 'keystore_location' IDENTIFIED BY
software_keystore_password;

```

- `keystore_location` is the path of the keystore directory you want to create
- `software_keystore_password` is the password of the keystore that you want to create.

For example, to create the keystore in the `/etc/ORACLE/WALLETS/orcl` directory:

```

ADMINISTER KEY MANAGEMENT CREATE KEYSTORE '/etc/ORACLE/WALLETS/orcl'
IDENTIFIED BY password;

```

After you run this statement, the `ewallet.p12` file, which is the keystore, appears in the keystore location.

- Alternatively, you can create an Auto-Login or Local-Login Keystore to avoid opening the Keystore manually every time. Use the following command:
- `ADMINISTER KEY MANAGEMENT CREATE [LOCAL] AUTO_LOGIN KEYSTORE FROM KEYSTORE 'keystore_location' IDENTIFIED BY keystore_password;`
- `LOCAL` enables you to create a local auto-login software keystore. Otherwise, omit this clause if you want the keystore to be accessible by other computers.

After you run this statement, the `cwallet.sso` file appears in the keystore location.

NOTE

It is important to remember the master key password (<keystore_password>) used during creation of the keystore. There are no ways to retrieve the password if forgotten.

Step 3: Open the Software Keystore

Depending on the type of keystore you create, you must manually open the keystore before you can use it.

You do not need to manually open auto-login or local auto-login software keystores. These keystore are automatically opened when it is required, that is, when an encryption operation must access the key. If necessary, you can explicitly close any of these types of keystores. You can check the status of whether a keystore is open, closed, open but with no master key, or open but with an unknown master key by querying the `STATUS` column of the `V$ENCRYPTION_WALLET` view.

NOTE

After you open a keystore, it remains open until you manually close it. Each time you restart a database instance, you must manually open the password keystore to re-enable encryption and decryption operations.

Perform the following steps to open the software wallet:

12. Login as `sysdba` or user with `ADMINISTER KEY MANAGEMENT` or `SYSKM` privilege.

13. Use the following command to open password-based software keystore:

```
CONN sys/password@serviceid AS SYSDBA
```

```
ADMINISTER KEY MANAGEMENT SET KEYSTORE OPEN IDENTIFIED BY
software_keystore_password [CONTAINER = ALL | CURRENT];
```

- `software_keystore_password` is the same password that you used to create the keystore in "Step 2: Create the Software Keystore".
- `CONTAINER` is for use in a multitenant environment. Enter `ALL` to set the keystore in all of the PDBs in this CDB, or `CURRENT` for the current PDB.

NOTE

In a CDB, open the Keystore in the ROOT (CDB\$ROOT) container and in all the associated PDBs, where TDE is enabled.

You do not need to manually open auto-login or local auto-login software Keystores.

Step 4: Set the Software TDE Master Encryption Key

Once the keystore is open, you can set a TDE master encryption key for it. The TDE master encryption key is stored in the keystore. This key protects the TDE table keys and tablespace encryption keys. By default, the TDE master encryption key is a key that Transparent Data Encryption (TDE) generates.

In a multitenant environment, you can create and manage the TDE master encryption key from either the root or the PDB.

Ensure that the database OPEN_MODE is set as READ WRITE. To find the status for a non-multitenant environment, query the OPEN_MODE column of the V\$DATABASE dynamic view. If you are using a multitenant environment, then query the V\$PDBS view. (If you cannot access these views, then connect as SYSDBA and try the query again. In order to connect as SYSKM for this type of query, you must create a password file for it. See Oracle Database Administrator's Guide for more information.)

Perform the following steps to set the encryption key:

Login as sysdba or user with ADMINISTER KEY MANAGEMENT or SYSKM privilege.

Use the following command to set the encryption key:

```
CONN sys/password@serviceid AS SYSDBA
```

```
ADMINISTER KEY MANAGEMENT SET KEY [USING TAG 'tag'] IDENTIFIED BY password
[WITH BACKUP [USING 'backup_identifier']] [CONTAINER = ALL | CURRENT];
```

tag is the associated attributes and information that you define. Enclose this setting in single quotation marks (' ').

password is the mandatory keystore password that you created when you created the keystore in "Step 2: Create the Software Keystore".

WITH BACKUP creates a backup of the keystore. You must use this option for password-based keystores. Optionally, you can use the USING clause to add a brief description of the backup. Enclose this description in single quotation marks (' '). This identifier is appended to the named keystore file (for example, ewallet_time_stamp_emp_key_backup.p12, with emp_key_backup being the backup identifier). Follow the file naming conventions that your operating system uses.

CONTAINER is for use in a multitenant environment. Enter ALL to set the key in all of the PDBs in this CDB, or CURRENT for the current PDB.

For example,

```
ADMINISTER KEY MANAGEMENT SET KEY IDENTIFIED BY password WITH BACKUP USING
'emp_key_backup';
```

Step 5: Encrypting your Data

After completing the keystore configuration, encrypt the data. You can encrypt individual columns in a table or entire tablespaces. OFSAA recommends encrypting entire tablespaces and the description in this section covers encrypting entire tablespaces.

Note the following restrictions on using Transparent Data Encryption when you encrypt a tablespace:

Transparent Data Encryption (TDE) tablespace encryption encrypts or decrypts data during read and write operations, as compared to TDE column encryption, which encrypts and decrypts data at the SQL layer. This means that most restrictions that apply to TDE column encryption, such as data type restrictions and index type restrictions, do not apply to TDE tablespace encryption.

To perform import and export operations, use Oracle Data Pump.

Encrypting data involves the following steps:

Step 1: Setting the COMPATIBLE initialization parameter for tablespace encryption

Step 2: Setting the tablespace TDE master encryption key

Step 3: Creating the Encrypted Tablespace

Step 1: Setting the COMPATIBLE initialization parameter for tablespace encryption

Prerequisite- You must set the COMPATIBLE initialization parameter for the database to 11.2.0.0 or later. Once you set this parameter to 11.2.0.0, the change is irreversible.

Perform the following steps to set the COMPATIBLE initialization parameter:

Log into the database instance. In a multitenant environment, log into the PDB.

Check the current setting of the COMPATIBLE parameter.

For example:

```
SHOW PARAMETER COMPATIBLE
```

NAME	TYPE	VALUE
compatible	string	12.0.0.0
noncdbcompatible	BOOLEAN	FALSE

If you want to change the COMPATIBLE parameter, perform the following steps:

Locate the initialization parameter file for the database instance.

UNIX systems: This file is in the ORACLE_HOME/dbs directory and is named `initORACLE_SID.ora` (for example, `initmydb.ora`).

In SQL*Plus, connect as a user who has the **SYSDBA** administrative privilege, and then shut down the database.

For example:

```
CONNECT /AS SYSDBA
```

```
SHUTDOWN
```

Edit the initialization parameter file to use the correct COMPATIBLE setting.

For example:

```
COMPATIBLE = 12.2.0.0
```

In SQL*Plus, ensure that you are connected as a user who has the SYSDBA administrative privilege, and then start the database.

For example:

```
CONNECT /AS SYSDBA
STARTUP
```

If tablespace encryption is in use, then open the keystore at the database mount. The keystore must be open before you can access data in an encrypted tablespace.

```
STARTUP MOUNT;
ADMINISTER KEY MANAGEMENT SET KEYSTORE OPEN IDENTIFIED BY password;
ALTER DATABASE OPEN;
```

Step 2: Setting the tablespace TDE master encryption key

Make sure that you have configured the TDE master encryption key as shown in Step 4: Setting the software TDE master encryption key.

Step 3: Creating the Encrypted Tablespace

After you have set the COMPATIBLE initialization parameter, you are ready to create the encrypted tablespace.

Follow the instruction given in **Error! Reference source not found.** section for configuring the schema creator file to create tablespaces.

If you are enabling TDE in case of upgrade or you did not enable it during installation and want to enable at a later point of time, see the following reference link for details on manually creating encrypted tablespaces:

https://docs.oracle.com/cloud/latest/db121/ASOAG/asotrans_config.htm#ASOAG9555

28.1.1.2 Running the Schema Creator Utility with Encryption

This section is applicable only if you want to enable TDE during installation.

Run the schema creator utility by including the encrypt=on option in the Tablespace tag in the DM_SCHEMA_IN.xml Schema in xml file. You have to perform this procedure manually as it is not a part of the schema DM_SCHEMA_IN.xml.TEMPLATE template originally.

Following is an example for OFS _AAAI_PACK_ SCHEMA_IN.xml

```
<APPPACKSCHEMA>
<APP_PACK_ID>OFS_AAAI_PACK</APP_PACK_ID>
<JDBC_URL>jdbc:oracle:thin:@whf00ajn<DB_Server_IP>:1521:OFSPQA12CDB<DB_NAME>
</JDBC_URL>
<JDBC_DRIVER>oracle.jdbc.driver.OracleDriver</JDBC_DRIVER>
<HOST>ofss220608<OFSAA_Server_IP/HOST Name></HOST>
<SETUPINFO NAME="t608<PREFIX_NAME>" PREFIX_SCHEMA_NAME="Y"/>
<PASSWORD APPLYSAMEFORALL="Y" DEFAULT="password123<PASSWORD>"/>
<TABLESPACES>
```

```

<TABLESPACE NAME="OFS_AAI_TBSP" VALUE="TS_USERS1"
DATAFILE="/scratch/ora12c/app/oracle/oradata/OFSPQA12CDB<ABSOLUTE PATH to
TABLESPACE>/ts_users1<TABLESPACE_DATA_FILE_NAME>.dbf" SIZE="500M"
AUTOEXTEND="OFF" ENCRYPT="ON" />

</TABLESPACES>

<SCHEMAS>

<SCHEMA TYPE="CONFIG" NAME="ofsaaconf" PASSWORD="" APP_ID="OFS_AAI"
DEFAULTTABLESPACE="TS_USERS1##OFS_AAI_TBSP##" TEMPTABLESPACE="TEMP"
QUOTA="unlimited"/>

<SCHEMA TYPE="ATOMIC" NAME="ofsaaatm" PASSWORD="" APP_ID="OFS_AAAI"
DEFAULTTABLESPACE="##OFS_AAI_TBSP##TS_USERS1" TEMPTABLESPACE="TEMP"
QUOTA="unlimited" INFODOM="OFSAAAIINFO"/>

<SCHEMA TYPE="ATOMIC" NAME="ofsaaatm" PASSWORD="" APP_ID="OFS_IPE"
DEFAULTTABLESPACE="##OFS_AAI_TBSP##TS_USERS1" TEMPTABLESPACE="TEMP"
QUOTA="unlimited" INFODOM="OFSAAAIINFO"/>

</SCHEMAS>

</APPPACKSCHEMA>

```

28.1.1.3 Testing the Encryption

Test the encryption by checking if a tablespace is encrypted or not. Execute the following query to check:

```
SELECT tablespace_name, encrypted FROM dba_tablespaces;
```

The following result is displayed, which indicates whether the TABLESPACE is encrypted (ENCRYPTED TS - YES) or not (ENCRYPTED TS - NO) in the ENCRYPTED column:

TABLESPACE_NAME	ENCRYPTED
-----	----
SYSTEM	NO
SYSAUX	NO
UNDOTBS1	NO
TEMP	NO
USERS	NO
ENCRYPTED_TS	YES

6 rows selected.

The above example indicates TABLESPACE ENCRYPTED_TS is created with Encryption ON.

28.1.2 Configuring TDE in case of Upgrade

This section details about the configurations required in case you want to enable TDE in OFSAA applications after upgrade to OFSAA 8.0.9.0.0 version from a previous version. Additionally, these configurations are required in case you did not enable TDE during 8.0.9.0.0 installation and want to enable at a later point of time.

1. Create a new PDB (12c)/ instance (11g) on same or different Database Server for TDE. For more information, see Configuring Software Keystore and Encrypted Tablespace Creation.
2. Shutdown the OFSAAI Services.
3. Export all Configuration, Atomic and Sandbox Schemas as per the applications installed in your OFSAA instance.

For example:

```
expdp SYSTEM/oracle@OFSAA12C2DB DIRECTORY=data_pump_dir
DUMPFILE=ofsaaconf_ofsaaatm_%U.dmp filesize=2G
SCHEMAS=ofsaaconf,ofsaaatm LOGFILE=ofsaaconf_ofsaaatm_exp.log
```

NOTE

The above command will create data dumps as files of 2GB size each (multiples). Any other commands/ tools as appropriate may be used to archive the schemas.

4. Import all schemas that are exported using the above command, into the new DB instance.

For example:

```
impdp SYSTEM/oracle@OFSAA12nDB DIRECTORY=data_pump_dir
DUMPFILE=ofsaaconf_ofsaaatm_%U.dmp SCHEMAS=ofsaaconf,ofsaaatm
LOGFILE=ofsaaconf_ofsaaatm_imp.log
```

NOTE

Restoring the exported dumps creates Configuration and Atomic Schema(s) with the same user credentials as that of the source, along with the existing grants.

NOTE

If schemas are restored using a tool/ mechanism other than as mentioned in the Step 1 and 2, retain the user credentials of Configuration and Atomic Schemas same as in the Source environment, along with the Schema grants.

5. Provide select grants on `sys.V_$parameter` to view Configuration and Atomic Schemas of Target Environment database

For example:

Login as sys user:

```
SQL> GRANT SELECT ON SYS.V_$PARAMETER TO ofsaaconf;
```

Grant succeeded

```
SQL> GRANT SELECT ON SYS.V_$PARAMETER TO ofsaaatm;
```

Grant succeeded

6. Update `.profile` for `ORACLE_SID` environment variable with new `ORACLE_SID`.

7. Update JDBC URL by executing Port Changer utility. For details on how to execute Port Changer utility, see Changing IP/ Hostname, Ports, Deployed paths, Protocol of the OFSAA Instance section under Generic Configurations chapter in [OFS Analytical Applications Infrastructure Administration Guide 8.0.9.0.0](#).
8. Navigate to the `$FIC_WEB_HOME` directory and execute the following command to trigger the creation of EAR/WAR file:

`./ant.sh`
9. The EAR/WAR file - `<contextname>.ear/.war` - is created in `$FIC_WEB_HOME` directory.
10. On completion of EAR/WAR file creation, the message "BUILD SUCCESSFUL" will be displayed.
11. Edit the existing Connection Pool settings to point to new JDBC URL and verify connections.
12. Clear the webserver cache and redeploy the application onto your configured web application server.
13. Restart the OFSAA Services. For more information, refer to the Start/Stop Infrastructure Services section in the [Oracle Financial Services Advanced Analytical Applications Infrastructure Application Pack Installation and Configuration Guide 8.0.2.0.0](#)

28.2 Data Redaction

OFSAA is enhanced to enable masking of sensitive data and Personal Identification Information (PII) to adhere to Regulations and Privacy Policies. Oracle Data Redaction provides selective, on-the-fly redaction of sensitive data in database query results prior to display by applications so that unauthorized users cannot view the sensitive data. The stored data remains unaltered, while displayed data is transformed to a pattern that does not contain any identifiable information.

28.2.1 Enabling Data Redaction in case of Upgrade

This section details about the configurations required in case you want to enable Data Redaction in OFSAA applications after upgrade to OFSAA 8.0.9.0.0 version from a previous version. Additionally, these configurations are required in case you did not enable TDE during OFS DM 8.0.9.0.0 installation and want to enable at a later point of time.

Perform the following steps:

1. Login as SYSDBA into the database.
2. Execute the file
`$FIC_HOME/utility/data_security/scripts/create_data_sec_roles.sql` only once per database (PDB in case of 12c).
3. Execute the following sql statement to find out the list of atomic users from the table:
4. `select v_schema_name from aai_db_detail where V_DB_NAME <> 'CONFIG' AND V_DB_TYPE = 'ORACLE'`
5. Execute the file
6. `$FIC_HOME/utility/data_security/scripts/grant_data_sec_roles.sql` for all atomic users found in the previous step.

7. From the Configuration window in the System Configuration module, select the Allow Data Redaction checkbox.
8. Run the Data Redaction utility. For more details on how to run the utility, see Data Redaction section under Data Security and Data Privacy chapter in OFS Analytical Applications Infrastructure Administration Guide 8.0.9.0.0.

29 Configuring Work Manager in Web Application Servers

Process Modelling framework requires creation of Work Manager and mapping it to OFSAA instance. This configuration is required for WebSphere and WebLogic Web Application Server types.

This section covers the following topics:

- [Configuring Work Manager in WebSphere Application Server](#)
- [Configuring Work Manager in WebLogic Application Server](#)

29.1 Configuring Work Manager in WebSphere Application Server

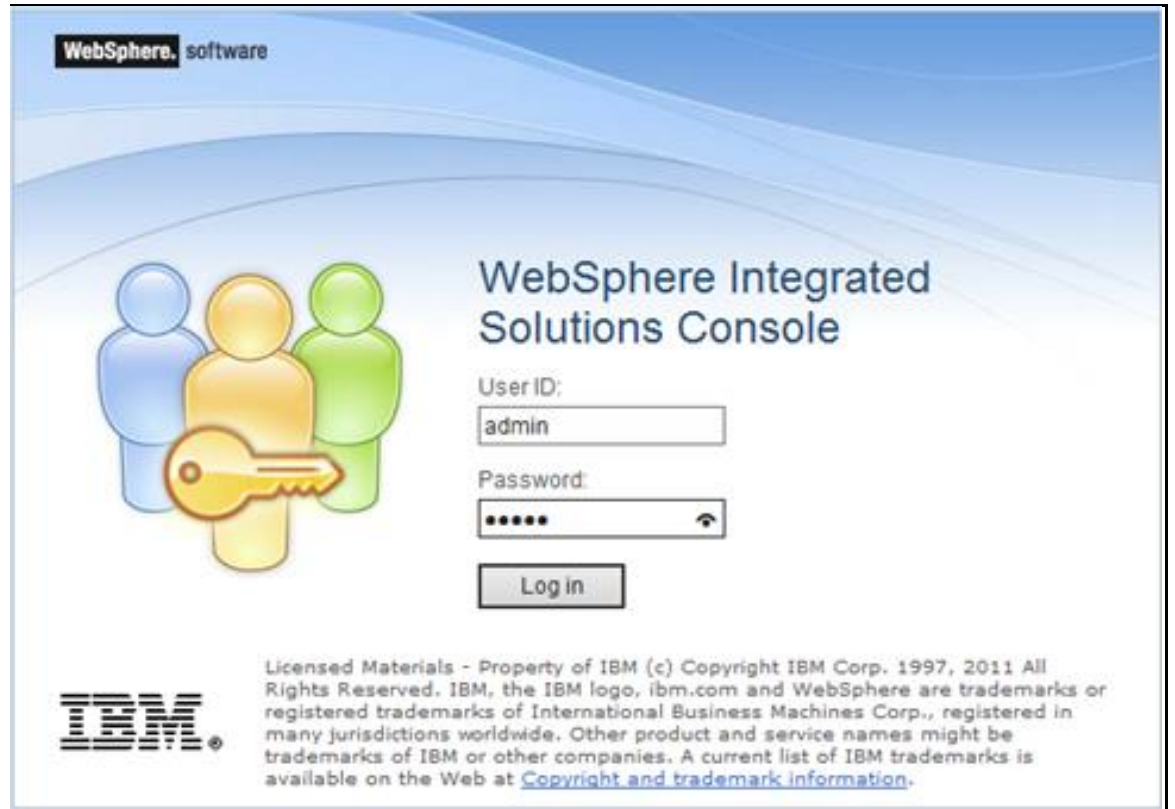
This section is applicable only when the Web Application Server type is WebSphere.

This section covers the following topics:

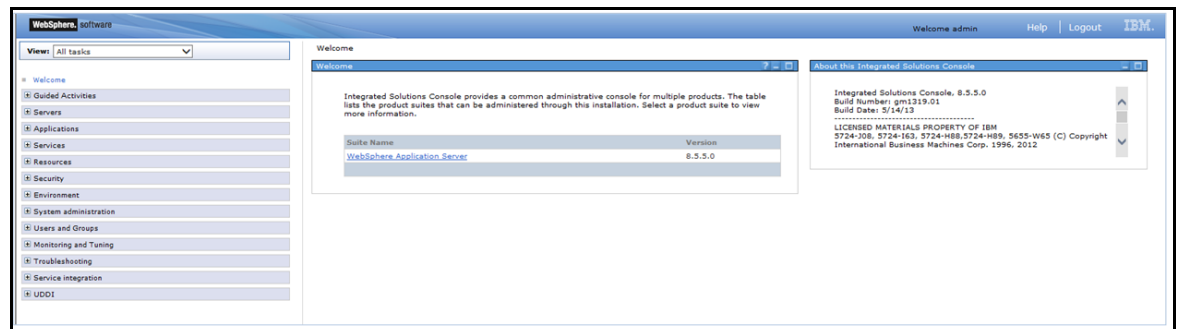
- [Creating Work Manager](#)
- [Mapping Work Manager to OFSAA WebSphere Instance](#)

29.1.1 Creating Work Manager

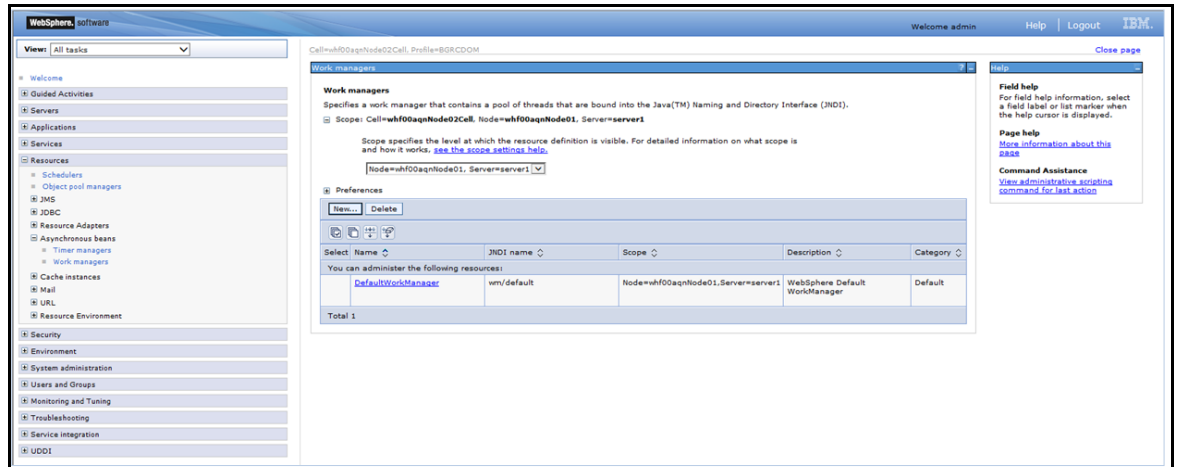
1. Open the WebSphere admin console in the browser window:
`http://<ipaddress>:<administrative console port>/ibm/console`. (https if SSL is enabled). The *Login* window is displayed.



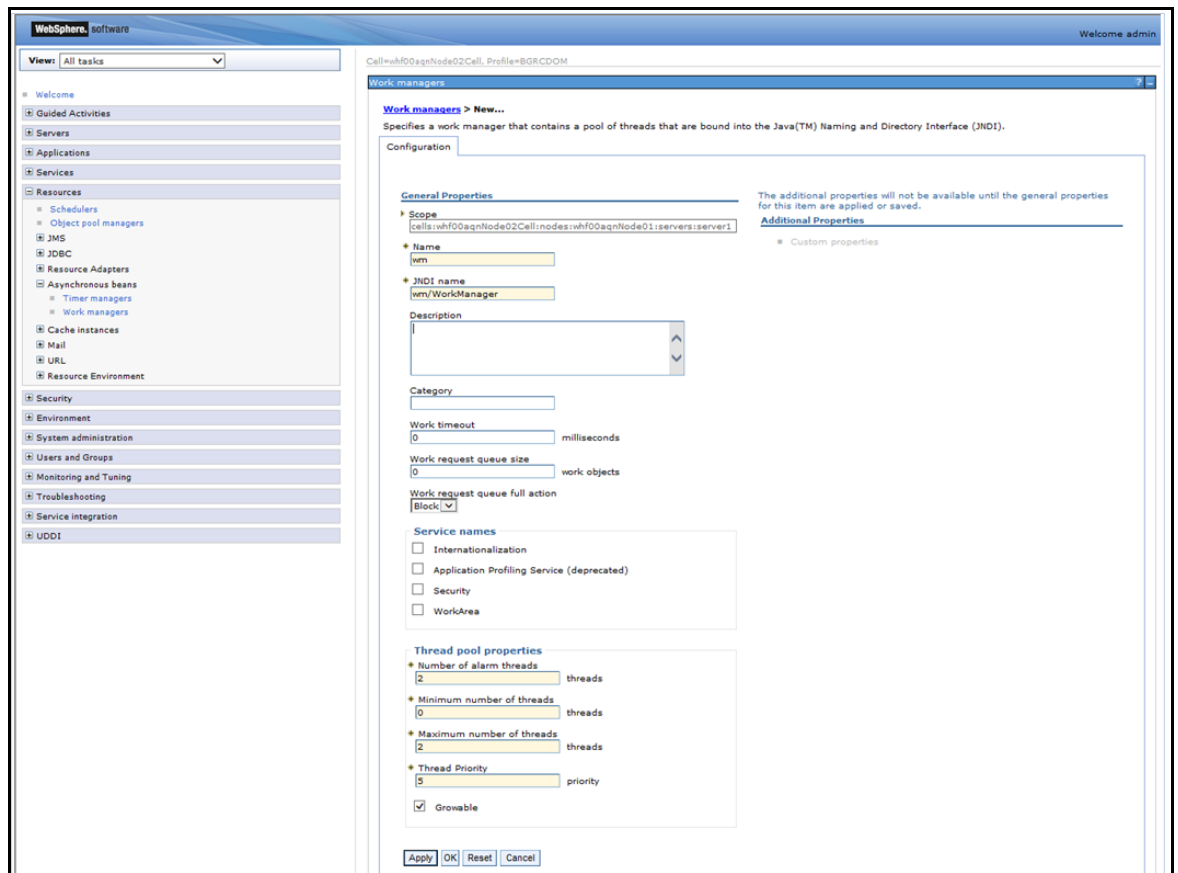
2. Login with the user id that has admin rights.



3. From the LHS menu, expand **Resources** > **Asynchronous beans** and select **Work Managers**.

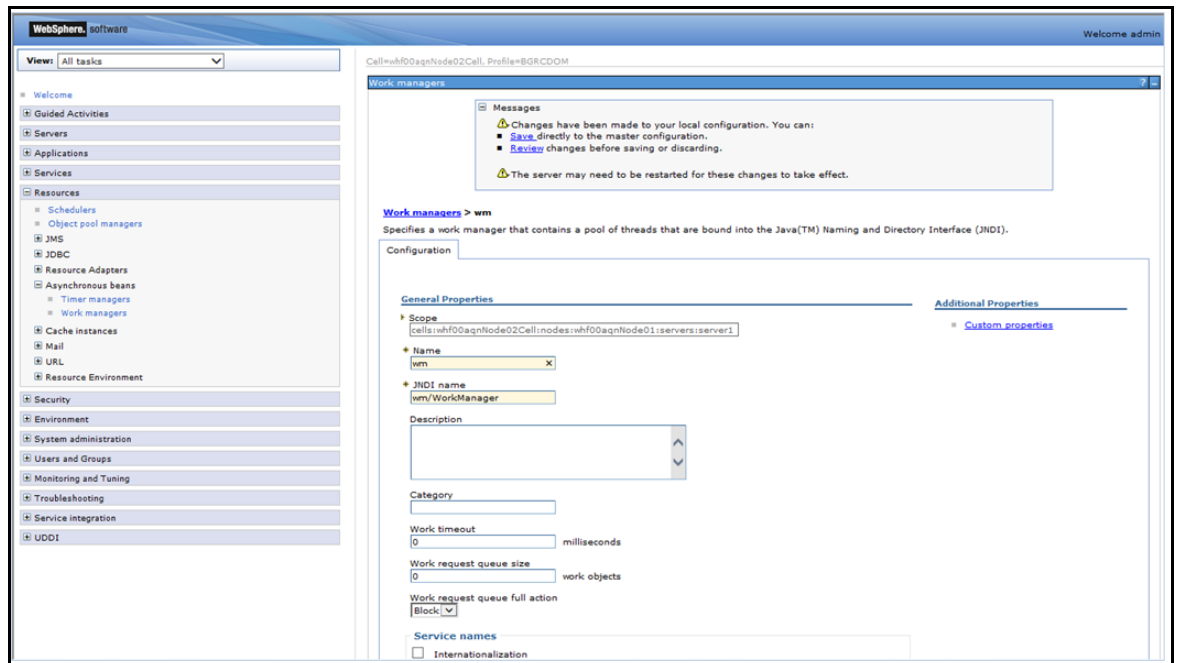


- Select the required **Scope** from the drop-down list.
For example, Node=whf00aqnNode01, Server=server1.
- Click **New** in the *Preferences* section.

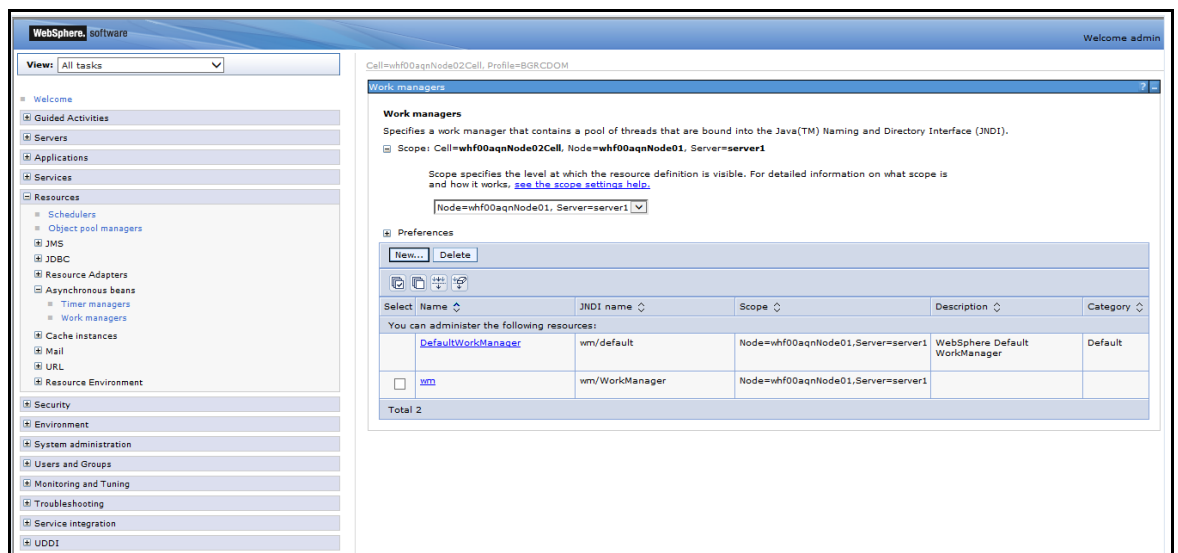


- Enter the **Name** as 'wm' and **JNDI name** as 'wm/WorkManager' in the respective fields.
- Enter the **Thread pool properties**.

8. Click **Apply**.



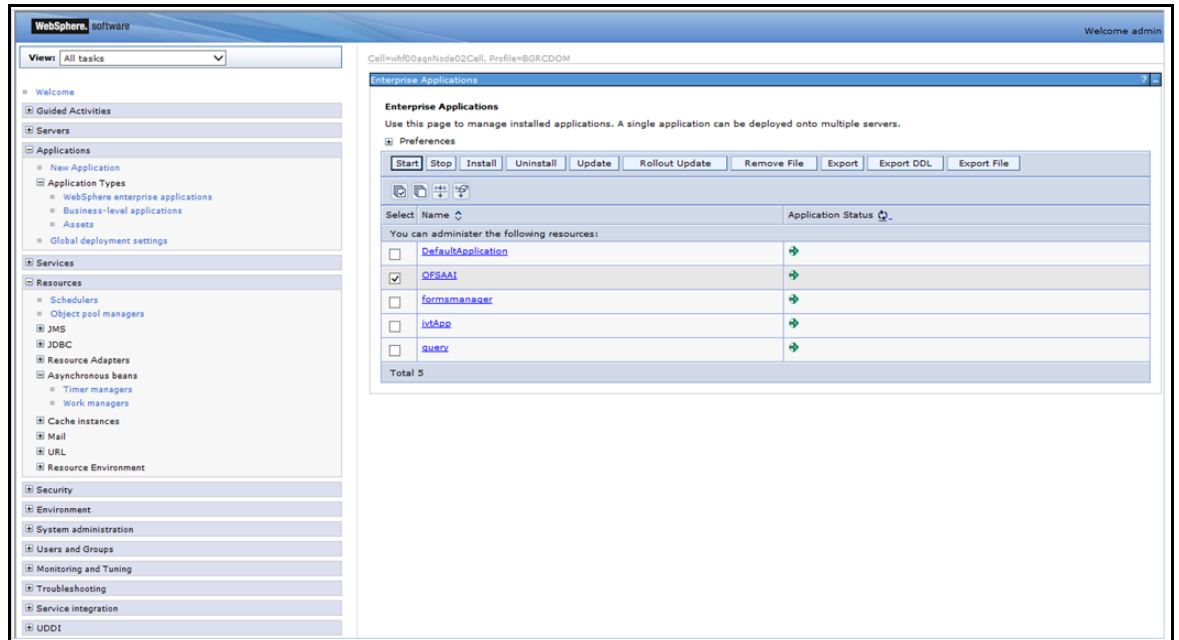
9. Click **Save**.



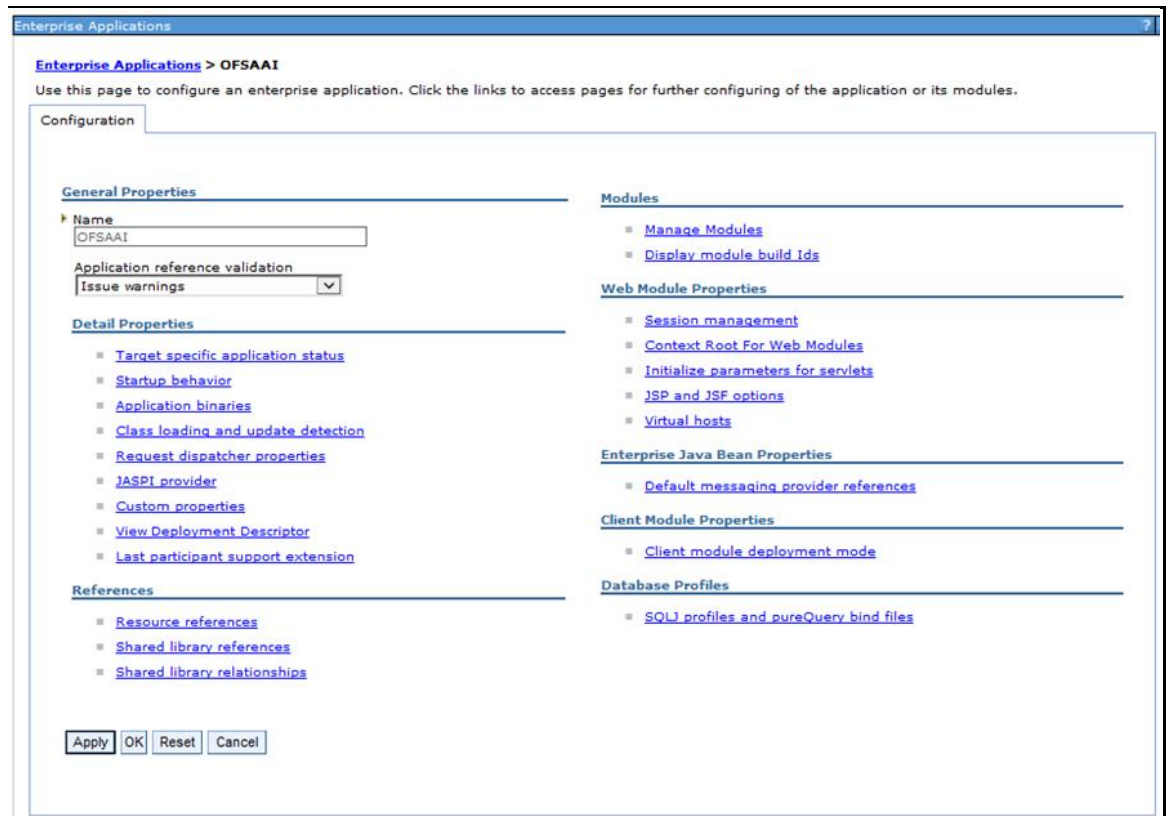
After creating work manager successfully, you have to map it to OFSAA instance.

29.1.2 Mapping Work Manager to OFSAA WebSphere Instance

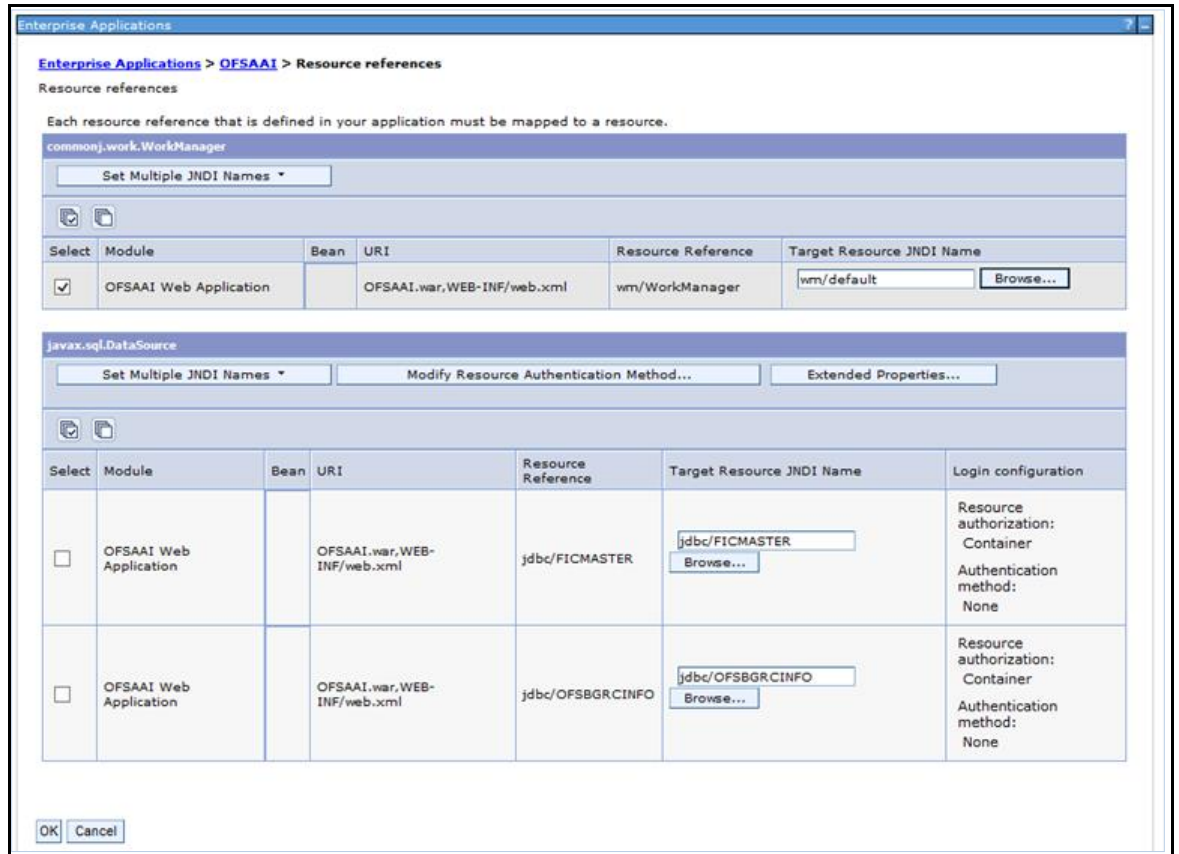
1. From the LHS menu, expand **Applications > Application Types** and select **WebSphere enterprise applications**.



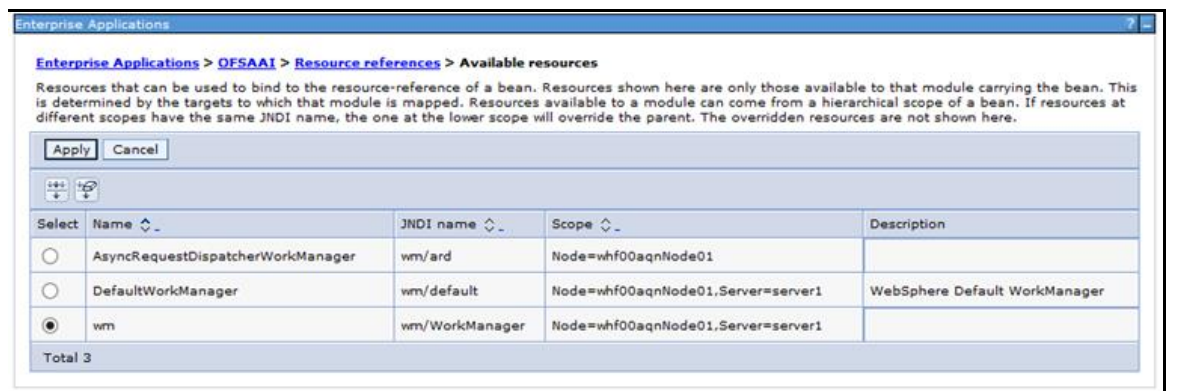
2. Click OFSAAI instance hyperlink.



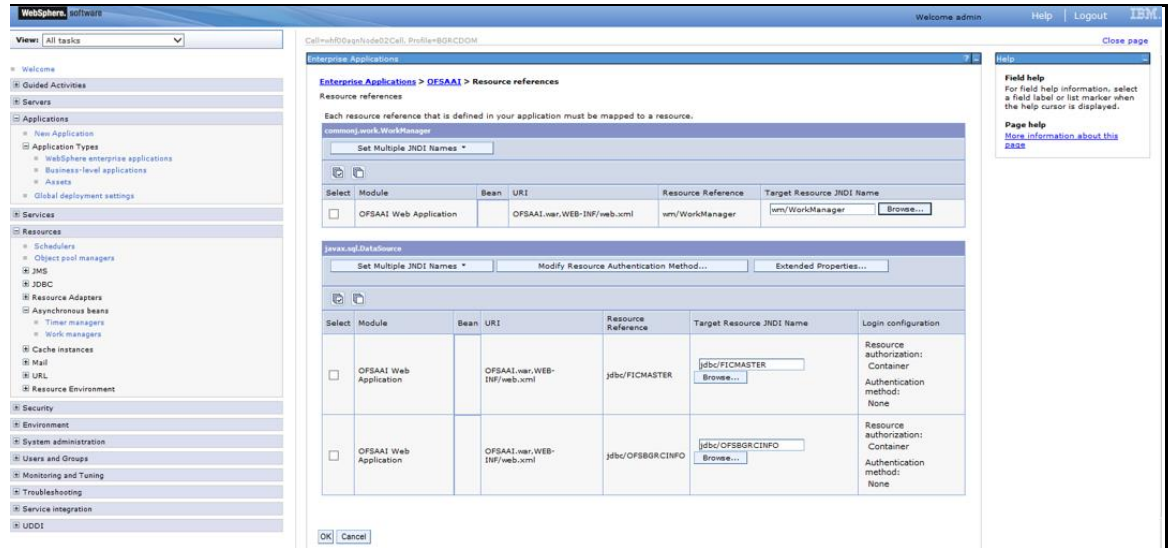
3. Click **Resource references** link under *References* section.



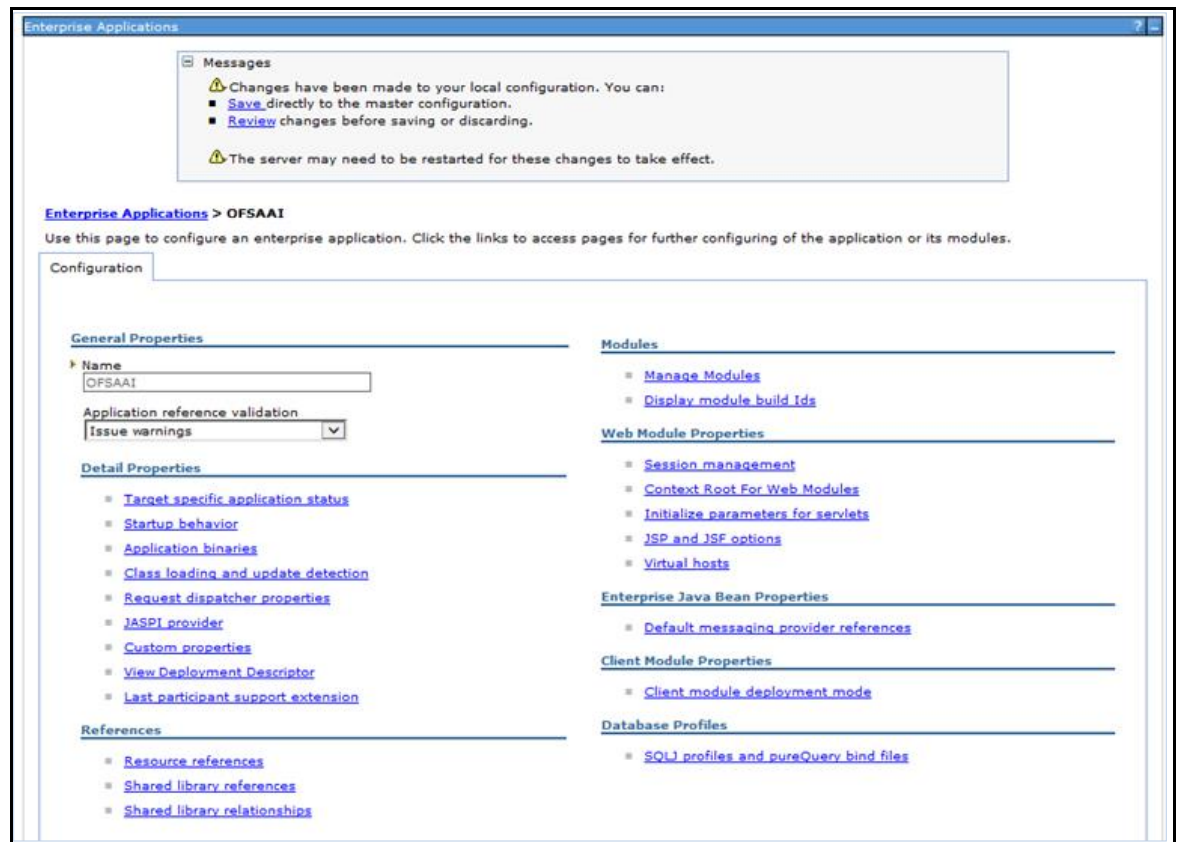
- Click **Browse** corresponding to the Work Manager Resource Reference. The available resources are displayed.



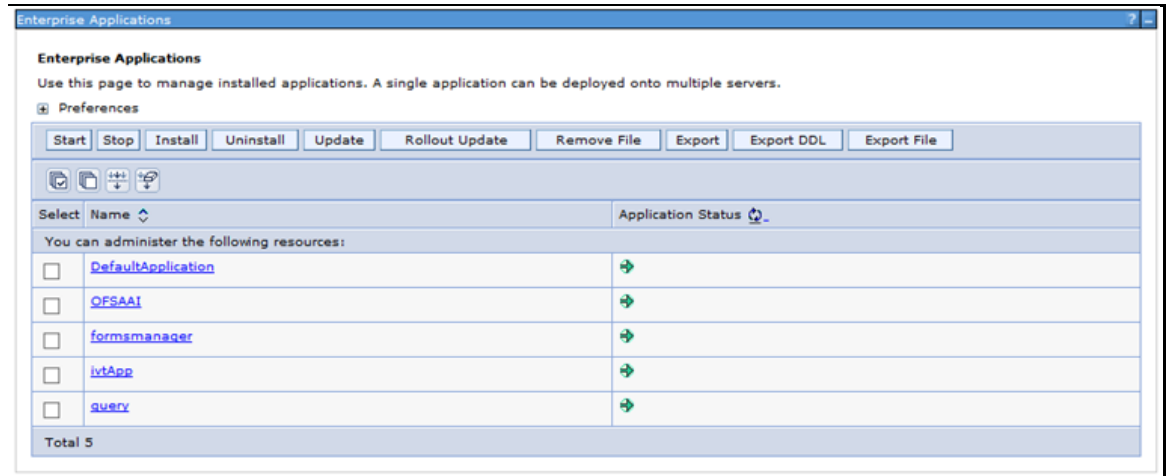
- Select the newly created Work Manager ('wm') and click **Apply**.



6. Select the Work Manager ('wm/WorkManager') and click **OK**.



7. Click **Save**.

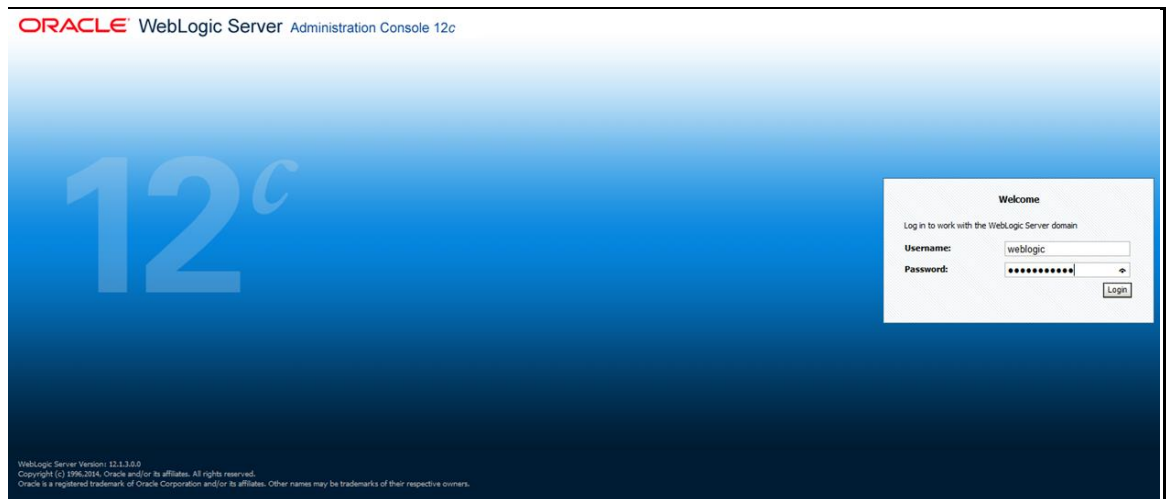


29.2 Configuring Work Manager in WebLogic Application Server

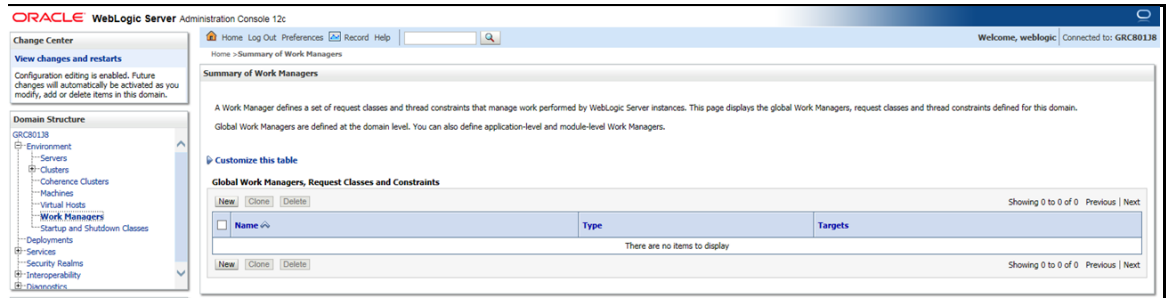
This section is applicable only when the Web Application Server type is WebLogic.

29.2.1 Creating Work Manager

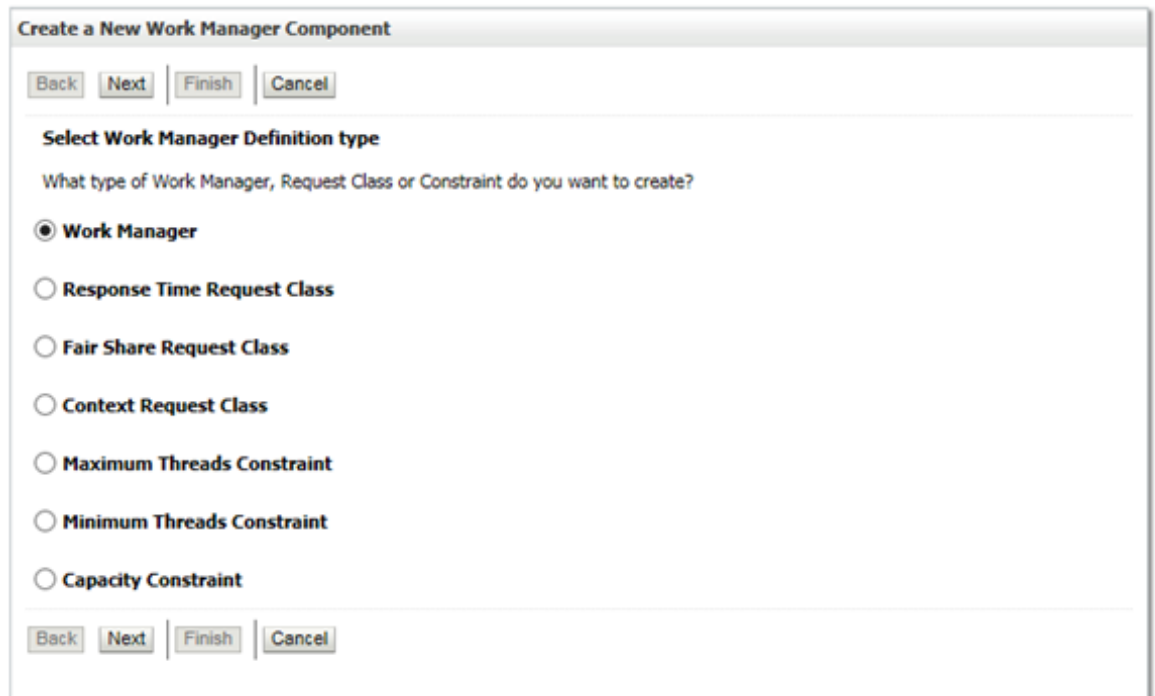
1. Open the WebLogic admin console in the browser window:
`http://<ipaddress>:<administrative console port>/console`. (https if SSL is enabled). The *Welcome* window is displayed.



2. Login with the user id that has admin rights.
3. From the *Domain Structure* menu in the LHS, expand **Environment** and select **Work Managers**. The *Summary of Work Managers* window is displayed.



4. Click **New** to create a new work manager component.



5. Select **Work Manager** and click **Next**.

Home > Summary of Work Managers

Create a New Work Manager Component

Back Next Finish Cancel

Work Manager Properties

The following properties will be used to identify your new Work Manager.
 * Indicates required fields

What would you like to name your new Work Manager?

* **Name:**

Back Next Finish Cancel

6. Enter the **Name** as 'wm/WorkManager'.
7. Click **Next**.

Create a New Work Manager Component

Back Next Finish Cancel

Select deployment targets

You can target the Work Manager to any of these WebLogic Server instances or Clusters. Select the same targets on which you will deploy applications that reference the Work Manager.

Available targets :

Servers
<input checked="" type="checkbox"/> AdminServer

Back Next Finish Cancel

8. Select the required deployment target and click **Finish**.

Home > Summary of Work Managers

Welcome, weblogic | Connected to: GRC80138

Messages

- All changes have been activated. No restarts are necessary.
- Work Manager created successfully

Summary of Work Managers

A Work Manager defines a set of request classes and thread constraints that manage work performed by WebLogic Server instances. This page displays the global Work Managers, request classes and thread constraints defined for this domain. Global Work Managers are defined at the domain level. You can also define application-level and module-level Work Managers.

Customize this table

Global Work Managers, Request Classes and Constraints

Name ↕	Type	Targets
<input type="checkbox"/> wm/WorkManager	Work Manager	AdminServer

Showing 1 to 1 of 1 Previous | Next

30 Appendix S: FAQs and Error Dictionary

This appendix 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 are displayed with an appropriate Error Code. You can refer to the Error Dictionary to find the exact cause and resolution to rectify the error.

30.1 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 8.0.9.0.0 FAQs](#)

30.1.1 OFSAAI FAQs

What are the different components that get installed during OFSAAI?

The different components of OFSAAI are illustrated in Figure in [Components of OFSAAI](#).

What are the different modes of OFSAAI installation?

OFSAAI can be installed in Silent Mode.

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

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

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

JDK is not required during installation of OFSAA and only a run time is needed. For details, see [Hardware and Software Requirements](#), Java Runtime Environment section.

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

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

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

Refer to OFSAA Technology Stack Matrices.

What are the different files required to install OFSAAI?

The following files are required:

- setup.sh.
- envCheck.sh
- preinstallcheck.sh
- VerInfo.txt
- OFSAAInfrastructure.bin
- validatedXMLinputs.jar
- MyResources_en_US.properties
- log4j.xml
- OFSAAI_PostInstallConfig.xml
- OFSAAI_InstallConfig.xml
- privileges_config_user.sql
- privileges_atomic_user.sql

What should I do if I get the following error message during installation:

"Execute Permission denied"?

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

To give execute permissions,

- Navigate to the path OFSAAI_80700 and execute the command

```
chmod 755
```

"Graphical installers are not.."

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

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

NOTE

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

"No Java virtual machine could be..."

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

- Check whether "java path" is set in PATH variable. See the Table 3-1, " Prerequisite Information" section in this document.

- Check whether sufficient temporary space is available.
- Ensure that the movement of OFSAAI Installer text files to the target system is done in the Text mode so that setup.sh file does not contain control line feed characters (^M).

What should I do if I get the following error message during installation, "OracleDriver Files Not Found, Please Choose the Right Path To Continue"?

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

What should I do if I get the following error message during installation, "User must have CREATE TABLE, CREATE VIEW, CREATE TRIGGER, CREATE INDEX, CREATE SEQUENCE, CREATE PROCEDURE" even though the oracle schema user created has the mentioned privileges?

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

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

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

Installation of OFSAAI was completed successfully! What next?

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

What is to be done when OFSAAI Installation is unsuccessful?

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

How do I completely uninstall OFSAAI?

OFSAAI can be completely uninstalled by performing the steps provided in [Uninstalling OFSAAI Infrastructure](#) section in this guide.

Can OFSAAI config and atomic schemas be on different databases?

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

How do I 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.

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

When should I run the MLS utility?

See the Multiple Language Support (MLS) Utility section in OFS AAI Administration Guide available on [OTN](#).

Does OFSAAI support Oracle Linux versions other than 5.5?

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

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

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


```
<Unix User> soft nofile 9216
```
4. After saving the changes, log in as unix user with which OFSAAI is getting installed and execute the command:


```
ulimit -n
```

The command should return the value 9216.

How do I verify if the system environment is ready for OFSAAI installation?

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

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

How do I know if the installation is completed successfully?

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

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


```
./piverify.sh
```

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

1. Backup the installation logs.
2. Share the backup logs with Oracle Support Services.

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

"Error: OFSAAI-1108

ORA-00604: error occurred at recursive SQL level 1 ORA-01882: timezone region not found"

Or

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

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

```
TZ=Asia/Calcutta
export TZ
```

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

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

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

Does OFSAA support any other web server types, other than the ones stated in Tech Matrix and Installation Guide?

No, all the supported softwares and versions are stated in the [OFSAA Technology Stack Matrices](#).

What should I do if the database connection from connection pool displays the following error message, "java.sql.SQLRecoverableException: IO Error: Connection reset"?

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

NOTE

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

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

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

This could mostly happen:

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

To correct this, follow the steps:

1. Copy the installer (in BINARY mode) to the system on which the OFSAA Infrastructure components will be installed.
2. Unzip the installer using the command:
`unzip <OFSAAI_Installer>.zip`
3. The corrupted setup.sh file would have introduced certain ^M characters into the file. You can remove ^M characters from setup.sh file by following these steps:

Login to the server where the installer is copied.

Navigate to the directory OFSAAI_80700.

Open the setup.sh file in the vi editor using the command: `vi setup.sh`.

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.

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

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

What should I do if the OFSAAI Application Server does not proceed even after providing the system password?

Ensure that, the System Password provided when prompted is "password0" 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. For details on start up parameters options, see 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 completing the installation?

The "Oracle schema" user requires the necessary grants specified before, during, and after the installation process. Grants provided should never be revoked as the application makes use of these grants all the time.

Can we have distributed OFSAAI Application Server for load balancing?

OFSAAI Application server can be scaled out/distributed across different JVM's (machines) based on the various services and Information Domains, in other words, Load balancing could be achieved with distribution of services.

Why do we need FTPSHARE 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, you 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 who has complete permissions on FTPSHARE directory, and the user 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.

Additionally, any new file that is created in the FTPSHARE folder of any installation layer should be granted specific/explicit permission.

Port Change utility can be used to have the Port number modified, which are currently being used by the Infrastructure application. For more information, refer Changing IP/ Hostname, Ports, Deployed Paths of the OFSAA Instance section in OFS Analytical Applications Infrastructure Administration Guide in [OTN](#).

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

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

- SYSADMN
- SYSAUTH
- GUEST

Does OFSAAI Application support both FTP and SFTP?

OFSAAI supports both FTP and SFTP configuration.

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

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

OFSAAI Configuration: Unable to save the server details?

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

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

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

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

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

- Verify whether connection to the Configuration Schema can be established through SQL*PLUS.
- 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 same in both the Application and Database Layers.

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

Ensure Reveleus.sec file exist under the \$FIC_HOME/conf directory where the Database components are installed.

Does OFSAAI Application support LDAP authentication?

OFSAAI supports LDAP configuration and authentication.

Does OFSAAI support multiple languages?

Yes, OFSAAI supports multiple languages.

Does OFSAAI provide any data back-up features?

OFSAAI does not have built-in back up facility. External Storage Infrastructure is recommended for back-up.

What kind of security features does the OFSAAI provide?

OFSAAI provides security at:

- Segment Level - Users can access only the segment they are mapped to.
- Application Level - Users can perform an operation only if mapped to appropriate role and functions.

Does OFSAAI have the ability to enforce periodic password change?

OFSAAI provides configurable parameters to define number of days after which the user password would expire and then the user is forced to change the password after expiration period.

What is the password policy followed in OFSAAI?

OFSAAI enforces a minimum password length with a combination of Upper and Lower case characters and alpha-numeric strings.

Which version of Erwin Data Modeller does OFSAAI support?

OFSAAI now supports ERwin version 9.2 and 9.5 generated xmls in addition to ERwin 4.1, ERwin 7.1, ERwin 7.3 and ERwin 9.0 formats.

Does OFSAAI provide the mechanism to upload Business Data model?

OFSAAI provides two mechanisms for business data model upload:

- Easy to use GUI based Model upload mechanism to upload the Business Data Model through Data Model Management -->Data Model Maintenance --> 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.

For more details, see Configuration for Model Upload Utility section of the OFS Analytical Applications Infrastructure User Guide available on [OTN](#).

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

Modified data model can be uploaded into the system and OFSAAI has the ability to compare the changes within the data model with respect to the one already present in the system and enables propagation of incremental changes in a consistent manner.

What are the different types of uploading a business data Model?

OFSAAI supports uploading of business data model from client desktop and also by picking up the data model from the server location.

Can the OFSAAI Configuration Schema password be modified post installation?

The OFSAAI Configuration Schema password can be modified post installation. OFSAAI application stores the password in the database and few configuration files, thus any changes to the Configuration Schema password will require updating in those files. For more information, see OFSAAI Infrastructure Config Schema Password Modification.

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 will require updating those files.

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. Based on the Web Server installed, follow the steps:

If you are using Apache as Web server:

- Update the <Context> -> Resource tag details in server.xml file from the \$CATALINA_HOME/conf folder. (In case of Tomcat only Atomic <Resource> will exist).

If you are using WebSphere as Web server:

- 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).
4. Restart the OFSAAI services

NOTE

If the modified passwords are not updated, OFSAAI logs display 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 Oracle Support Services for more details.

Why do the Business Metadata Management screens (Business Processors screen) in User Interface, take more time to load than other screens?

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

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

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

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

```
select count(1), t.metadata_name, m.dsn_id
from metadata_master m, metadata_type_master t
where m.metadata_type = t.metadata_type
group by t.metadata_name, m.dsn_id
```

2. The preceding query returns a list of codes with their respective metadata count. You can refer to "metadata_type_master" table to identify the metadata name.

3. View the log report to identify the metadata which is being updated/refreshed beyond the specified cache size limit. Accordingly increase the cache size limit in `Dynamicservices.xml` depending on the currently logged count for the specific metadata.

For example, if the "MEASURE_CACHE_SIZE" is set to 1000 and total measure reported in log is 1022, increase the limit to 2000 (approximately).

4. Restart Reveleus/OFSAAI servers (Web and APP) and check the issue.

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

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

```
$JAVA_CMD \  
-Xbootclasspath/a:$ejbd_bootpath \  
Xms256m -Xmx1024m \  

```

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

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

NOTE

The size requirements have to be always specified in bytes.

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

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

After configuring `struts.xml` file, generate the application EAR/WAR file and redeploy the application onto your configured web application server. For more information on generating and deploying EAR / WAR file, see Appendix C.

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

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

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

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

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

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

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

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

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

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

Model Upload Options	Size of Data Model XML File	X_ARGS_APP ENV Variable in 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"-Xms2048 m -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

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

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

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

Execute the following grant on the appropriate ATOMIC schema

```
grant olap_user to &database_username
```

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

Follow these steps to turn off unused infodoms from caching:

1. Navigate to `$FIC_HOME/conf` in the APP layer of your OFSAAI installation.
2. In the `DynamicServices.xml` file, identify the section for `<Service code="20">`.
3. Modify the value of parameter `CACHE_ON_STARTUP` to 0 (default is 1).
4. Repeat the same in the WEB layer too. Generate the application EAR/WAR file and redeploy the application onto your configured web application server. For more information on generating and deploying EAR / WAR file, see the Appendix C section.
5. Restart the OFSAAI Services (APP and WEB). For more information, see the Starting Infrastructure Services section.

NOTE

This setting will cache the Infodom metadata only for the infodoms that get accessed upon user login. Infodoms which do not get accessed, will not be cached.

Sample code is as follows:

```
<SERVICE CODE="20"
CLASS="com.iflex.fic.metadata.services.MetadataServiceProvider" NAME="BMD"
SERVERID="DEFAULT" PATH=" " LOGGERNAME="UMMLOGGER" LOGGERLEVEL="10">
<PARAMETERS>
<PARAMETER NAME="CACHE_ON_STARTUP" VALUE="0" />
<PARAMETER NAME="BACKUP_XML" VALUE="1" />
<PARAMETER NAME="MAX_BACKUP_XML" VALUE="2" />
<PARAMETER NAME="PC_NONBI_BI_SWITCH" VALUE="2048" />
<PARAMETER NAME="HIERARCHY_NODE_LIMIT" VALUE="2000" />
<PARAMETER NAME="ALIAS_CACHE_SIZE" VALUE="1000" />
<PARAMETER NAME="DATASET_CACHE_SIZE" VALUE="2000" />
<PARAMETER NAME="MEASURE_CACHE_SIZE" VALUE="2000" />
<PARAMETER NAME="HIERARCHY_CACHE_SIZE" VALUE="2000" />
<PARAMETER NAME="DIMENSION_CACHE_SIZE" VALUE="2000" />
```

```

<PARAMETER NAME="HIERARCHYATTRIBUTE_CACHE_SIZE" VALUE="1000" />
<PARAMETER NAME="CUBE_CACHE_SIZE" VALUE="1000" />
<PARAMETER NAME="RDM_CACHE_SIZE" VALUE="1000" />
<PARAMETER NAME="BUSINESSPROCESSOR_CACHE_SIZE" VALUE="2000" />
<PARAMETER NAME="DERIVEDENTITY_CACHE_SIZE" VALUE="1000" />
<PARAMETER NAME="LOG_GET_METADATA" VALUE="false" />
<PARAMETER NAME="METADATA_PARALLEL_CACHING" VALUE="0" />
</PARAMETERS>
</SERVICE>

```

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

Check if the version of Internet Explorer and JRE Plugin are as mentioned in the Desktop Requirements section of this manual. If not, use the qualified versions as mentioned.

Can multiple OFSAA Infrastructure instances share the same Config Schema?

No, only one OFSAA environment can be installed using one Config Schema.

Can Atomic Schema be shared?

Yes, it can be shared between two OFSAA instances.

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

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

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

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

Can I install already installed application in a different infodom?

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

How can I configure the OFSAA application for High Availability?

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

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

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

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

Is "ReveleusAdminConsoleAgent" applicable for OFSAAI 8.0.9.0.0 and higher versions?

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

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

This error is displayed due to the following reasons:

- The Config Schema password is already expired.
- If the Config Schema password is going to expire soon and the message like "ORA-28002: the password will expire within 6 days" displays while connecting to Config Schema through SQLPlus.
- The Config Schema password is modified.

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

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

What is the mechanism of Log File sizing and backup?

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

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

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

13. Navigate to `$FIC_HOME/conf` where OFSAA is installed.
14. Edit the following parameters in the file `RevLog4jConfig.xml`
 - `param name="file"`: Enter the path where the Logs are to be generated.

- param name="MaxFileSize" : Provide the required file size.
- param name="MaxBackupIndex" : Provide the required number of backup files to be created.

Example:

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

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

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

Can we modify the Log file path?

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

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

Follow these steps:

1. Create SSL related certificates and import to respective servers.
2. Enable SSL on a desired Port (example 9443) on your existing and already deployed web application servers.
3. Replace the protocol as https and new ssl port (FIC_SERVLET_PORT) configured and in all the URLs specified on the following files:

```
$FIC_HOME/ficapp/common/FICServer/conf/FICWeb.cfg and
$FIC_HOME/ficweb/webroot/conf/FICWeb.cfg
$FIC_HOME/ficapp/icc/conf/WSMREService.properties
$FIC_HOME/ficweb/webroot/conf/ModelExecution.properties
$FIC_HOME/ficdb/conf/MDBPublishExecution.properties
$FIC_HOME/ficdb/conf/ObjAppMap.properties
$FIC_HOME/utility/Migration/conf/WSMigration.properties
$FIC_HOME/utility/WSExecution/conf/WSExecution.properties
$FIC_HOME/EXEWebService/WebSphere/ROOT/WEB-INF/wsd1/EXEWebSe
rviceImpl.wsdl
```

```
$FIC_HOME/EXEWebService/Tomcat/ROOT/WEB-INF/wsdl/EXEWebServiceImpl.wsdl
```

```
$FIC_HOME/EXEWebService/weblogic/ROOT/WEB-INF/wsdl/EXEWebServiceImpl.wsdl
```

4. Replace XML attribute/Node values as specified on the following files:

```
$FIC_HOME/ficweb/webroot/WEB-INF/web.xml
```

```
FIC_WEBSERVER_PORT=9443
```

```
FIC_WEBPROTOCOL=https
```

```
$FIC_HOME/conf/LookUpServices.xml and $FIC_HOME/ficweb/webroot/conf/LookUpServices.xml
```

```
PORT="9443" PROTOCOL="https:"
```

5. Login to Config Schema and execute the following SQL command to replace protocol and SSL port.

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

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

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

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

What should I do if my HIVE connection fails with the following exception:

```
java.sql.SQLException: [Cloudera][HiveJDBCdriver] (500164) Error initialized or created transport for authentication:
```

```
[Cloudera][HiveJDBCdriver] (500168) Unable to connect to server: GSS initiate failed.
```

```
com.ibm.security.krb5.KrbException, status code: 37
```

```
message: PROCESS_TGS at
```

```
com.ibm.security.krb5.KrbTgsRep.<init>(KrbTgsRep.java:20)
```

This happens if there is a clock skew between the client and the KDC server. To resolve this, there are two solutions:

- Solution 1:

Synchronize the clocks between the servers. For more information, see

<http://docs.oracle.com/cd/E19253-01/816-4557/setup-192/index.html>

- Solution 2:

1. Set clockskew parameter on the server side (KDC) krb5.conf file and replace the same file in HIVE_LIBRARY_PATH folder. Parameter value should be decided on the basis of the time difference between the two machines.
2. Get the epoch time on the two servers by firing “date +%s” on the command line.
3. Clockskew param value should be chosen as a value sufficiently larger than the difference of the preceding two calculated values.

4. Set "clockskew = <value>" in the /etc/krb5.conf on the KDC server.
5. Restart Kerberos services.

What should I do if my schema creator log has the following exception:

```
Failed to detect a valid hadoop home directory java.io.IOException:
HADOOP_HOME or hadoop.home.dir are not set. at
org.apache.hadoop.util.Shell.checkHadoopHome (Shell.java:302)
```

```
at org.apache.hadoop.util.Shell.<clinit>(Shell.java:327)
```

```
at org.apache.hadoop.util.StringUtils.<clinit>(StringUtils.java:79)
```

```
at org.apache.hadoop.security.Groups.parseStaticMapping(Groups.java:130)
```

```
at org.apache.hadoop.security.Groups.<init>(Groups.java:94)
```

```
at org.apache.hadoop.security.Groups.<init>(Groups.java:74)
```

```
at org.apache.hadoop.security.Groups.getUserToGroupsMappingService(Groups.java:303)
```

```
at org.apache.hadoop.security.UserGroupInformation.initialize(UserGroupInformation.java:283)
```

```
at org.apache.hadoop.security.UserGroupInformation.setConfiguration(UserGroupInformation.java:311)
```

```
at HdfsDbUtil.connect(HdfsDbUtil.java:162)
```

```
at SchemaParserUtil.validateHiveConnection(SchemaParserUtil.java:1359) at
SchemaParserUtil.checkAllPreChecks(SchemaParserUtil.java:1011)
```

```
at Main.execute(Main.java:317)
```

```
at Main.main(Main.java:145)
```

This occurs when HADOOP_HOME environment variable is not set. You can ignore this exception since we do not mandate to install HIVE where OFSAA is installed.

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

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

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

```
<PARAMETER NAME="HIERARCHY_NODE_LIMIT" VALUE="2000"/>
```

```
<PARAMETER NAME="ALIAS_CACHE_SIZE" VALUE="1000"/>
```

```
<PARAMETER NAME="DATASET_CACHE_SIZE" VALUE="2000"/>
```

```
<PARAMETER NAME="MEASURE_CACHE_SIZE" VALUE="3000"/>
```

```
<PARAMETER NAME="HIERARCHY_CACHE_SIZE" VALUE="2000"/>
```

```
<PARAMETER NAME="DIMENSION_CACHE_SIZE" VALUE="2000"/>
```

```
<PARAMETER NAME="CUBE_CACHE_SIZE" VALUE="1000"/>
```

```
<PARAMETER NAME="BUSINESSPROCESSOR_CACHE_SIZE" VALUE="2000"/>
```

```
<PARAMETER NAME="DERIVEDENTITY_CACHE_SIZE" VALUE="1000"/>
```

Metadata count can be derived based on the following queries:

```
select count(1) from metadata_master where metadata_version=0 --- for all metadata
```

```
select count(1) from metadata_master where metadata_version=0 and metadata_type=1 --- for measure
```

```
select count(1) from metadata_master where metadata_version=0 and metadata_type=2 --- for Dimension
```

```
select count(1) from metadata_master where metadata_version=0 and metadata_type=3 -- for HCY
```

```
select count(1) from metadata_master where metadata_version=0 and metadata_type=4 --- for DATASET
```

```
select count(1) from metadata_master where metadata_version=0 and metadata_type=59 --- for BP's
```

```
select count(1) from metadata_master where metadata_version=0 and metadata_type=54 --- for Alias
```

```
select count(1) from metadata_master where metadata_version=0 and metadata_type=5 --- for CUBES
```

```
select count(1) from metadata_master where metadata_version=0 and metadata_type=856 --- for Derived Entity
```

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

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

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

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

How to relocate FTPSHARE folder?

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

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

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

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

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

NOTE

This feature is available only after applying 7.3.5.2.0 Minor Release patch.

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

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

What should I do when an entity containing many attributes (>100 columns) is selected as Source entity and the Data Mapping (T2T definition) save operation takes longer than expected with the hourglass in the UI continuously rotating?

The workaround is:

1. Locate the webserver deployed area `webroot/conf/excludeURLList.cfg` file.
2. Modify the following entries:


```
[SQLIA] ./dataIntegrator/ to [ALL] ./dataIntegrator/
[SQLIA] ./ETLExtractionServlet to [ALL] ./ETLExtractionServlet
```
3. Save the changes and restart the webserver.
4. Resave the definition.

What should I do if I get the following error message when I try to start the OLAP server:

```
./olapdataserver: error while loading shared libraries: libessapinu.so:
cannot open shared object file: No such file or directory FATAL ERROR :-
OLAP DATA SERVER start up failed.
```

This error occurs when OLAP component is not configured and OLAP feature in OFSAA is not used. However, this error can be ignored.

What should I do if I get the error "FATAL ERROR-Problem with OFSAA Service" during OFS_AAAI_PACK installation?

Increase the sleep counter (default value is 80) to a higher value in the following section of the `OFS_AAAI_PACK/OFSAAIUpdate.sh` file:

```
if [ $count -eq 0 ] ; then sleep 80;
count=` grep -i "FICServer Initialization Complete"
$FIC_HOME/ficapp/common/FICServer/bin/nohup.out|wc -l ` fi
if [[ $count -gt 0 ]] ; then echo OFSAA Service - OK
else
fi
echo FATAL ERROR-Problem with OFSAA Service exit 1
```

How do I upgrade to Oracle Database 12c Release 1 or 2, if my previous database versions are Release 11.2.0.2+, 12.1.0.1 or 12.1.0.2?

If you are upgrading the Database Server from the previous versions to the current versions mentioned in the following table:

Sl. No.	Source Database Version	Destination Database Version
1	11.2.0.2+ or 12.1.0.1	12c Release 1 (12.1.0.2)
2	11.2.0.3+, 12.1.0.1 or 12.1.0.2	12c Release 2 (12.2.0.1)

Perform the instructions mentioned in the following MOS documents:

1. Doc ID [2412630.1](#)
2. Doc ID [2075401.1](#)

30.1.2 Application Pack 8.0.9.0.0 FAQs

What is an Application pack?

An Application Pack is suite of products. For more information, see [Application Packs](#).

Can I get a standalone installer for OFSAAI 8.0?

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

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

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

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

There is no upgrade path available. However, we have migration kit / path for every product to 8.0 application pack. Further details are 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 a new environment and subsequently migration path / migration kit needs to be run to migrate from 7.x to 8.0. Please note we have migration path only from the previously released version of OFSAA products.

Where can I download OFSAA 8.0 Application Pack?

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

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

See 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 to be qualified.

How can I install OFSAA 8.0 Application Pack?

Refer to 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?

Oracle Financial Services Advanced Analytical Infrastructure Installation and Configuration Guide published in [OTN](#) lists the third party software that needs to be installed.

What languages are supported during OFSAA 8.0 Application Pack installation?

US English is the language supported.

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

OFSAA Application Packs supports Silent Mode.

Does OFSAA 8.0 Application Pack support Multi tier Installations?

OFSAA 8.0 does single tier installation.

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

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

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

Customer needs to restore the system and retrigger the installation.

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

Rollback of installation is not supported.

Does the Application pack installs all applications bundled?

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

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

You can retrigger in case of failure.

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

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

I have installed one application in 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.

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

There is no issue in installing separate OFSAAI installations, each with their own PFT/FTP installations and separate associated database instances and separate Web Server installations on the same server as long as adequate memory is allocated for each instance and as long as each OFSAAI installation is installed using a separate UNIX user and profile. Care should be taken if running multiple OFSAAI installations on a single server. Adequate memory is required for each installation as several OFSAAI processes (model upload, DEFQ services, etc) take significant amounts of memory. So it depends on your server memory.

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

Yes. However, Behavioral Detection Application Pack and Compliance Regulatory Reporting Application Pack, are the exceptions. They must 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 **Behavioral Detection Pack, Compliance Regulatory Reporting Pack, Asset Liability Management Application Pack and Profitability Application Pack** are the exceptions. They must 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.

How many Infodoms can be created over a single OFSAA Infrastructure of 8.0.1.0.0?

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

Is the 'Data Model' bundled specific to an Application Pack or to an individual application?

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

Is it possible to install OFS Enterprise Modeling later?

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

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.

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 an Application Pack Upgrade?

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

Can I upgrade AAI only?

Yes, you can upgrade AAI alone.

Can I upgrade one application within the Application Pack? That is, LRM is upgraded in Treasury Application Pack, but MR is not 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 infodm or different infodm)?

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

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 supports WebLogic 10.3.6 with Oracle 12c. WebLogic 10.3.6 supports oracle 12c with some additional configurations. See 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 be discarded", what is to be done.

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

What are the Java versions supported in OFS DM Application Pack version 8.0.9.0.0?

OFS DM Application Pack supports Java 1.6.x, 1.7.x and 1.8.x.

Is this release of the OFS DM Application Pack version 8.0.9.0.0 supported on Java 8?

Yes. To install this release of the OFS DM Application Pack version 8.0.9.0.0 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](#).

What should I do when I get "[ERROR] - Error : APP Setup bin file failed." Message during OFS_Application_PACK installation?

This is a generic error message that appears during application installation failure. You should check the installation log files for more information about what failed the installation. However, if the message is displayed and the log files are not generated, it could be that it is a temp directory issue. The resolution is that your UNIX administrator has to disable the NOEXEC option. The installers extract the installation files into the `/tmp` directory, and if NOEXEC is enabled, execution of binaries will not happen in the directory and the installation fails. Re-run the installer after the configuration is

changed. For detailed information, see the support note at <https://support.oracle.com/epmos/faces/DocumentDisplay?id=2340045.1>.

30.2 Error Dictionary

The content 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.

30.2.1 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.
3. Enter the error code that is displayed on screen during Infrastructure installation.
4. Press **Enter**. The search results are displayed and highlighted as follows.

Error code - OFSAAI-1003	
Cause	JAVA_HOME/bin not found in PATH variable.
Resolution	Import <JAVA_HOME>/bin into PATH variable. Example: PATH = \$JAVA_HOME/bin:\$PATH export PATH.

Error Dictionary

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.

30.2.2 Error Code Dictionary

30.2.2.1 Error Code - OFSAAI-1001

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

30.2.2.2 Error Code - OFSAAI-1002

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

30.2.2.3 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.

30.2.2.4 Error Code - OFSAAI-1005

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

30.2.2.5 Error Code - OFSAAI-1006

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

30.2.2.6 Error Code - OFSAAI-1007

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

30.2.2.7 Error Code - OFSAAI-1008

Cause	File <code>validateXMLInputs.jar</code> is not present in current directory.
Resolution	Copy <code>validateXMLInputs.jar</code> into installation kit directory.

30.2.2.8 Error Code - OFSAAI-1009

Cause	File <code>log4j.xml</code> is not present in current directory.
Resolution	Copy <code>log4j.xml</code> into installation kit directory.

30.2.2.9 Error Code - OFSAAI-1010

Cause	Unknown error occurred.
Resolution	Make sure to provide proper argument (SILENT) to the <code>Setup.sh</code> file.

30.2.2.10 Error Code - OFSAAI-1011

Cause	XML validation failed.
Resolution	Check <code>InfrastructurePreValidations.Log</code> for more details.

30.2.2.11 Error Code - OFSAAI-1012

Cause	Property file with locale name does not exist.
Resolution	Copy <code>MyResources_en_US.properties</code> to the setup kit directory and keep <code>en_US</code> in LOCALE tag of <code>OFSAAI_InstallConfig.xml</code>

30.2.2.12 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.

30.2.2.13 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.

30.2.2.14 Error Code - OFSAAI-1015

Cause	XML is not well formed.
Resolution	Execute the command <code>dos2unix OFSAAI_InstallConfig.xml</code> to convert plain text file from DOS/MAC format to UNIX format. OR Make sure that 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.

30.2.2.15 Error Code - OFSAAI-1016

Cause	User installation directory contain blank spaces.
Resolution	Provide an installation path that does not contain spaces. Check the tag <code>USER_INSTALL_DIR</code> in OFSAAI_InstallConfig.xml file. This path should not contain any spaces.

30.2.2.16 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.

OFSAA Support

Raise a Service Request (SR) in [My Oracle Support \(MOS\)](#) for queries related to the OFSAA applications.

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