

Oracle Financial Services Enterprise Case Management

Installation Guide

Release 8.1.2.0.0

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Financial Services

OFS Enterprise Case Management Installation Guide

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Document Control

Table 1 lists the conventions used in this document.

Table 1: Revision History

Revision Number	Revision Date	Change Log
2.0	September 2023	The following sections are created/updated: <ul style="list-style-type: none">• Updating WebLogic Server• Creating Domain in WebLogic Server for Java option entry to disable HTTP2.
1.0	March 2022	The following sections are updated in this release. <ul style="list-style-type: none">• Hardware and Software Requirements• Upgrading ECM Applications Pack• Deploying Analytic Reports and Threshold Analyzer

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1 Preface

This section provides supporting information for the Oracle Financial Services Enterprise Case Management Application Pack (OFS ECM) Installation Guide.

Topics:

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

1.1 Summary

You can find the latest copy of this document in Oracle Help Centre ([OHC](#)) Library which includes all the recent additions/revisions (if any) done to date. Before you begin the installation, ensure that you have access to the Oracle Support Services 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 Services.

1.2 Audience

Oracle Financial Services Enterprise Case Management (OFS ECM) Pack Installation Guide is intended for administrators and implementation consultants who are responsible for installing and maintaining the Application Pack components.

1.2.1 Prerequisites for the Audience

The following are the prerequisites for the administrators installing Oracle Financial Services Enterprise Case Management (OFS ECM) Pack. This document assumes that you have experience in installing Enterprise components and basic knowledge about the following:

- OFS ECM pack components
- Oracle Financial Services Analytical Application (OFSAA) Architecture
- UNIX Commands
- Database Concepts
- Web server/Web application server

1.3 Related Documents

This section identifies additional documents related to Oracle Financial Services Enterprise Case Management (OFS ECM).

Topics:

- [OFSAAI Related Documents](#)
- [OFS ECM Application Related Documents](#)

1.3.1 OFSAAI Related Documents

The following documents are available in [OHC](#).

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

1.3.2 OFS ECM Application Related Documents

The following documents are available in [OHC](#):

- [Oracle Financial Services Enterprise Case Management Administration Guide](#)
- [Oracle Financial Services Enterprise Case Management User Guide](#)
- [Oracle Financial Services Enterprise Case Management Configuration Guide](#)
- [Oracle Financial Services Enterprise Case Management Release Notes](#)

The following document is available in [My Oracle Support \(MOS\)](#). You must have Single Sign-ON (SSO) credentials to access MOS:

- [Oracle Financial Services Analytical Applications Infrastructure Security Guide](#)

1.4 Conventions

[Table 2](#) lists the conventions used in this document.

Table 2: Convention Used in this Guide

Conventions	Meaning
<i>Italics</i>	<ul style="list-style-type: none"> • Names of books as references • Emphasis • Substitute input values
Bold	<ul style="list-style-type: none"> • Menu names, field names, options, button names • Commands typed at a prompt • User input
Monospace	<ul style="list-style-type: none"> • Directories and subdirectories • File names and extensions • Process names • Code sample, including keywords and variables within the text and as separate paragraphs, and user-defined program elements within the text
Hyperlink	<ul style="list-style-type: none"> • Hyperlink type indicates links to the external websites and internal document links to sections
Asterisk (*)	<ul style="list-style-type: none"> • Mandatory fields in User Interface
<Variable>	<ul style="list-style-type: none"> • Substitute input value

1.5 Abbreviations

Table 3 lists the abbreviations used in this guide.

Table 3: Abbreviations used in this guide

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

2 About OFSAA and OFSAA Applications Packs

This chapter provides details about the Oracle Financial Services Analytical Application (OFSAA) and its Application Packs.

NOTE

With the release of Behavior Detection Framework (BDF) version 8.0.5, dis-positioning alert through Alert Management is no longer supported. Alert Management is only applicable to Trading Compliance and Broker Compliance. For Anti Money Laundering (AML) and Fraud alerts, The Event Correlation module in ECM must be used to automatically correlate events from the Financial Crime and Compliance Management (FCCM) Behavior Detection engine or those ingested from external applications. Alert Management can only be used as read-only for viewing historical alerts. It is not supported for alert disposition. Implementations must use the provided data handler jobs to automatically move Alerts from BDF into ECM and then use event correlation/promote to a case in order to create cases and being the review and investigation. If this updated process is not clear to your implementation team, it is advised that you contact Oracle Partner Network or Oracle Consulting to be trained.

Topics:

- [About OFSAA](#)
- [Introduction to OFS ECM Application](#)
- [About OFSAA Infrastructure](#)
- [About Data Security Configurations](#)

2.1 About OFSAA

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

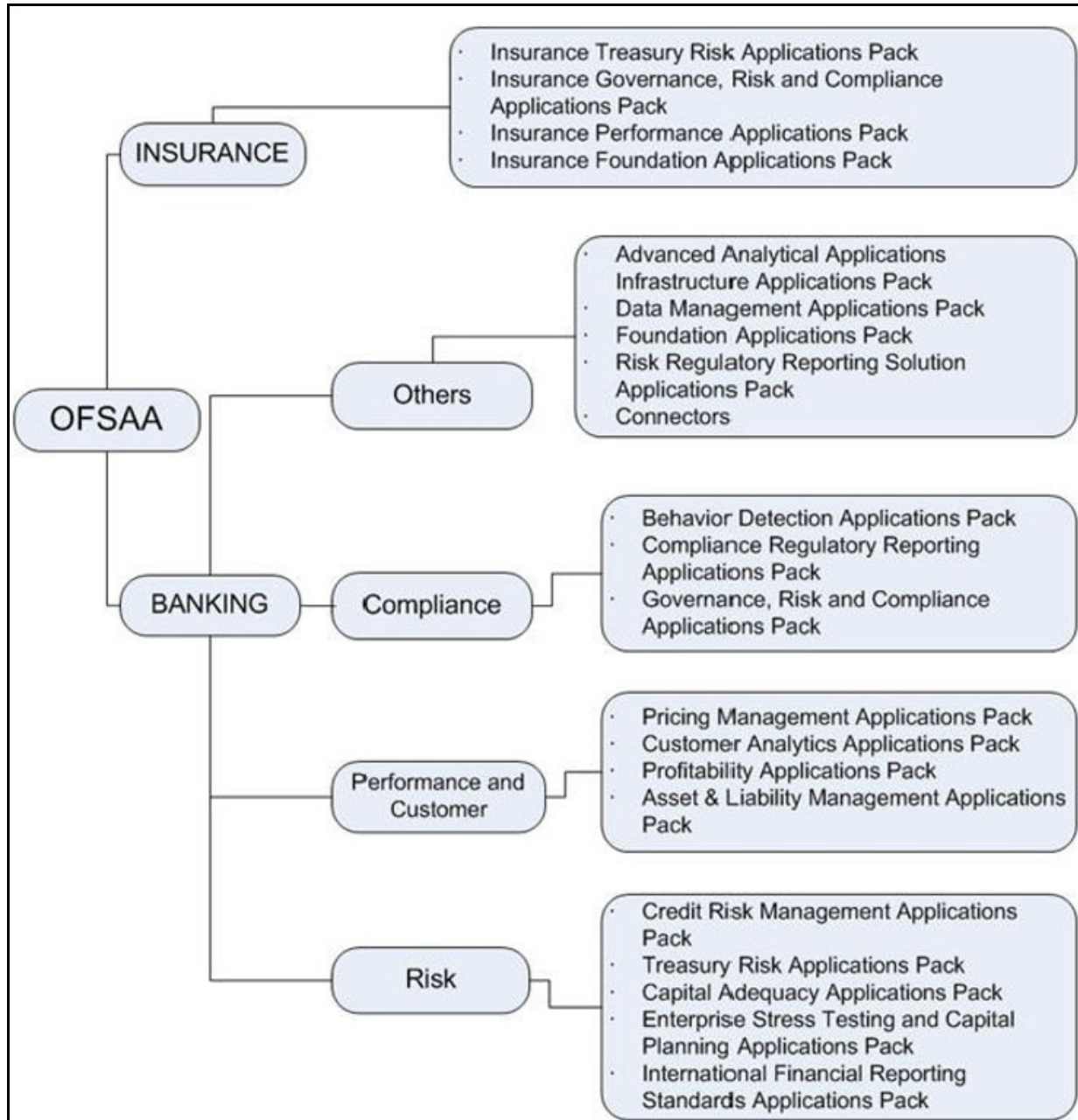
OFSAA uses industry-leading analytical methods, shared data model, and applications architecture to enable integrated risk management, performance management, customer insight, and compliance management. OFSAA actively incorporates risk into decision-making, enables to achieve a consistent view of performance,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

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

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

Figure 1 depicts the various Applications Packs that are available across the OFSAA Banking and Insurance domains:

Figure 1: OFSAA Applications Packs



2.2 Introduction to OFS ECM Application

Oracle Financial Services Enterprise Case Management (OFS ECM) Application Pack includes the following applications:

- Oracle Financial Services Analytical Applications Infrastructure (OFSAAI) powers the Oracle Financial Services Analytical Applications family of products to perform the processing, categorizing, selection, and manipulation of data and information required 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.
- Oracle Financial Services Inline Processing Engine (OFS IPE) provides real-time monitoring, detection, and interdiction of single and complex fraud events across multiple channels and lines of business.
 - Oracle Financial Services Enterprise Case Management (OFS ECM) supports the investigation and resolution of ML, KYC, Customer Screening, TBAML, FATCA, and third-party events. A newly created case passes through various statuses as part of the investigation and reaches closure through resolution actions. Enterprise Case Management supports the modification of the case details and the associated business data. Investigation workflows can vary based upon the type of case being investigated. The case investigation and resolution are supported by various actions, which may be specific to the case type. Access to types of cases and actions are controlled based on the user role and access permissions. Cases are generated from various sources and cases are also manually created in the ECM. Enterprise Case Management supports product default case types that drive the Investigation workflow. Case types are configurable and can be defined by firms to meet their business need. ECM allows designing workflows using Process Modelling Framework.

2.3 About OFSAA Infrastructure

Oracle Financial Services Analytical Applications Infrastructure (OFSAAI) powers the Oracle Financial Services Analytical Applications family of products to perform the processing, categorizing, selection, and manipulation of data and information required 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.

Topics:

- [Components of OFSAAI](#)
- [OFSAA Infrastructure High Availability](#)

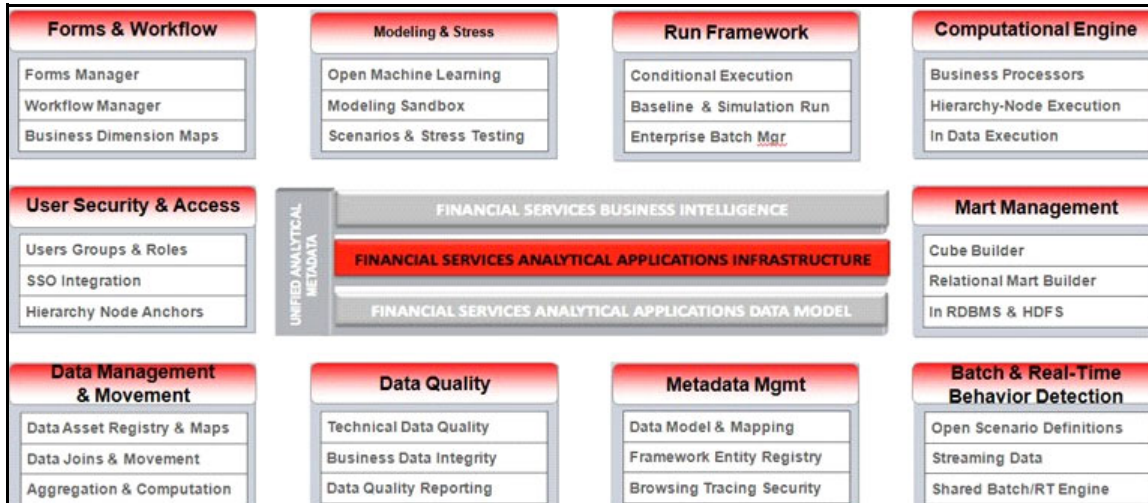
2.3.1 Components of OFSAAI

The OFSAA Infrastructure includes frameworks that operate 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 as 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 [Figure 2](#) depicts the various frameworks and capabilities that make up the OFSAA Infrastructure:

Figure 2: Components of OFSAAI



2.3.2 OFSAA Infrastructure High Availability

The current release of the OFSAA Infrastructure supports only “Single Instance” installation for the Infrastructure components. However, the High Availability (HA) for the Database Server and/or the Web application server clustering and deployment is supported in this release.

This release supports the Active-Passive model of implementation for OFSAAI components. For more information, see [Oracle Financial Services Analytical Applications Configuration for High Availability-Best Practices Guide](#).

2.4 About Data Security Configurations

Data Security refers to the protection of data against unauthorized access and data theft. OFSAA ensures Data Security with the following features:

- Multi-Factor Authentication (MFA)
- Transparent Data Encryption (TDE)
- Data Redaction
- Key Management
- HTTPS
- Logging

For more details on the features in the previous list, see [Appendix R: Configuring Transparent Data Encryption \(TDE\) in OFSAA](#).

3 Understanding OFS ECM Application Pack

This chapter provides information before you prepare for installation of Oracle Financial Services Enterprise Case Management (OFS ECM) application pack.

Topics:

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

3.1 Installation Overview

The OFS ECM Application Pack version 8.1.2.0.0 allows the Users/Administrators to install a new OFS ECM Application Pack version 8.1.2.0.0 instance.

[Figure 3](#) shows the order of procedures required to follow to install a new OFS ECM Application Pack version 8.1.2.0.0 instance.

Figure 3: Installation Overview

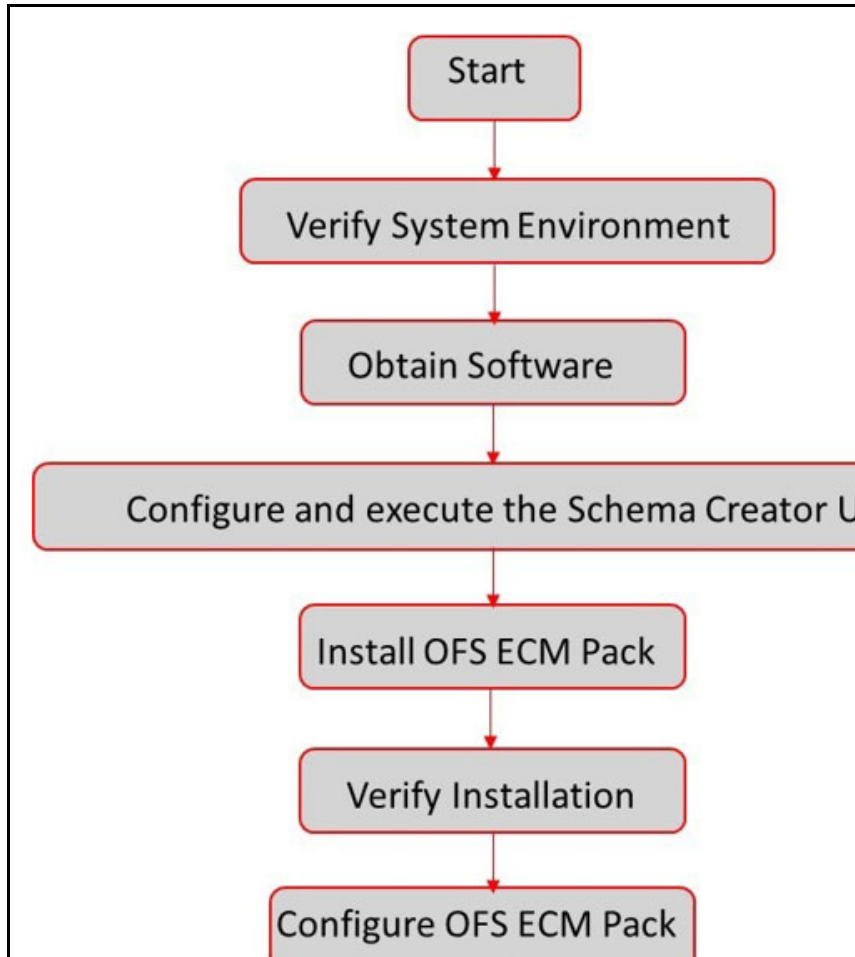


Table 4 provides additional information and links to specific documentation for each task in the flowchart.

Table 4: OFS ECM Application Pack Installation Tasks and Descriptions

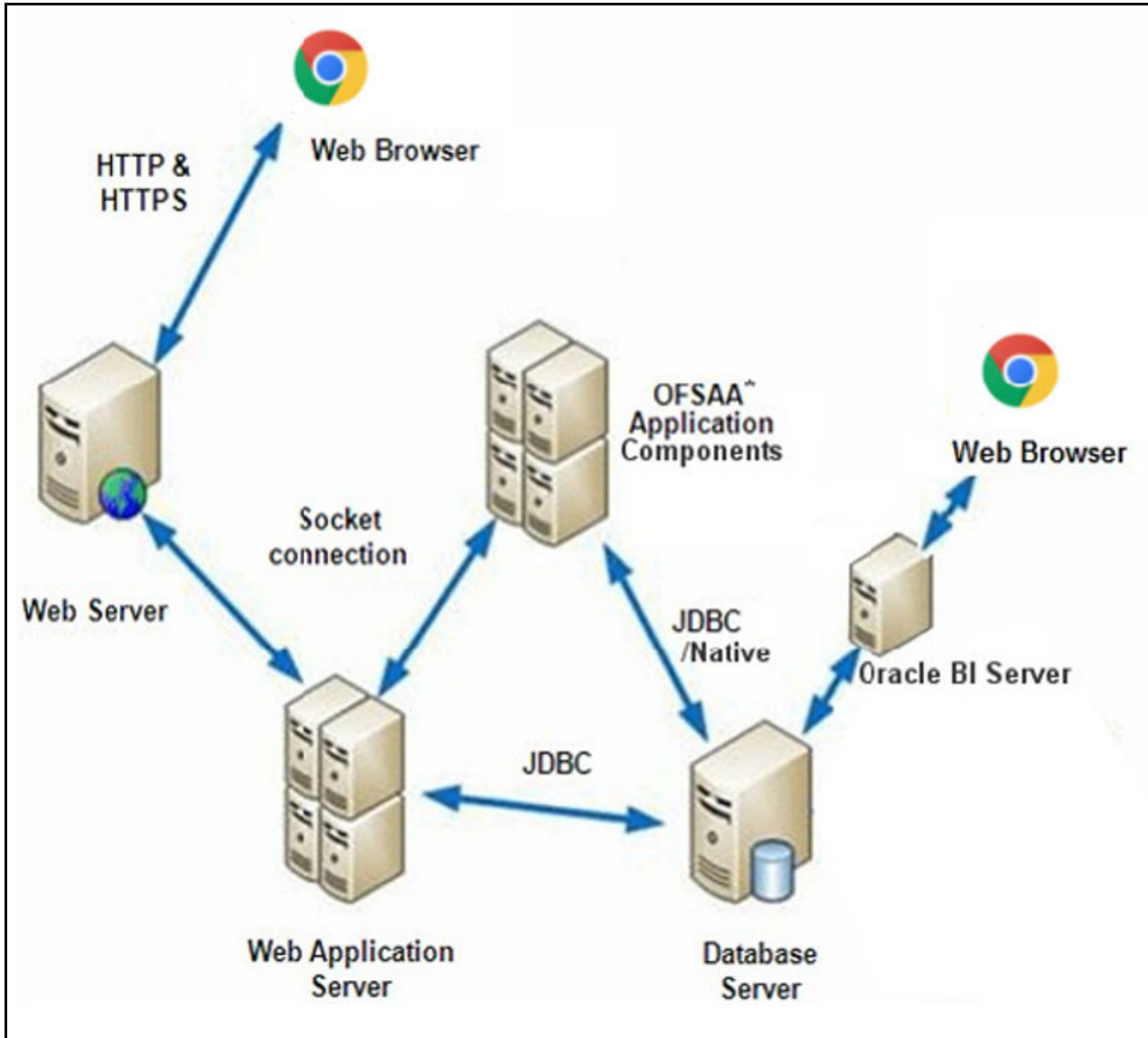
Tasks	Details and Documentation
Verify Systems Environment	To verify that your system meets the minimum necessary requirements for installing and hosting the OFS ECM Application Pack, see Verifying System Environment .
Obtain the software	To access and download the OFS ECM Application Pack, see Obtaining Software .
Configure and Execute the Schema Creator Utility	To create the database schema, see Configuring and Executing Schema Creator Utility .
Install OFS ECM Pack	To install the OFS ECM Application Pack, see Installing OFS ECM Application Pack .

Tasks	Details and Documentation
Configure OFS ECM Pack after installation	To configure the OFS ECM Application Pack post installation, see Post Installation Configuration .

3.2 Deployment Topology

Figure 4 shows the logical architecture implemented for OFS ECM Application Pack.

Figure 4: Deployment Topology



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 OFS ECM Application Pack has been qualified.

NOTE

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

3.3.1 Supported Configurations for Java 8

For more information on Technology Stack (8.1.2.0.0), see [OFSAA Technology Stack Matrices](#).

Table 5 shows the minimum hardware and software requirements for installing OFS ECM Application Pack and provides the recommended software combinations for OFS ECM Application Pack deployment.

Table 5 describes the versions of various operating systems.

Table 5: Configurations Supported for Java 8: Operating System

Operating System	Version
Oracle Linux / Red Hat Enterprise Linux (x86-64)	Oracle Linux Server release 7.5 and above - 64 bit Oracle Linux Server release 8 - 64 bit NOTE: Same version of RHEL is supported.
Oracle Solaris (SPARC)	11.3+- 64 bit
Shell	KORN Shell (KSH)
NOTE: If the operating system is RHEL, install the package lsb_release with one of the following commands by logging in as root user: <ul style="list-style-type: none"> ■ yum install redhat-lsb-core ■ yum install redhat-lsb 	

Table 6 describes the Java Runtime Environment.

Table 6: Configurations Supported for Java 8: Java Runtime Environment

Operating System	Version
Oracle Linux / Red Hat Enterprise Linux	Oracle Java Runtime Environment (JRE) 1.8.x - 64 bit
Oracle Database Server and Client	Oracle Database Server Client 19.3+ Oracle Database Server Enterprise Edition 19.3+ - 64 bit RAC/ Non-RAC with/ without partitioning option

Table 7 describes the OLAP versions.

Table 7: Configurations Supported for Java 8: OLAP

Operating System/Version
V 11.1.2.1+ (Server and Client) with Oracle 11g Database
V 11.1.2.3+ (Server and Client) with Oracle 12c Database
V 11.2.0.3+ with Oracle 11g Database
V 12.1.0.1+ with Oracle 12c Database

Table 8 describes the various operating systems with versions for Web Server/Web Application Server.

Table 8: Configurations Supported for Java 8: Web Server/Application Server

Operating System	Version
Oracle Linux / Red Hat Enterprise Linux/ IBM Solaris	Oracle HTTP Server 11.1.1.1/ Apache HTTP Server 2.2.x/ IBM HTTP Server. Oracle WebLogic Server 12.2.x and 14.1.x - 64 bit IBM WebSphere Application Server 9.0.0.x with bundled IBM Java Runtime - 64 bit Apache Tomcat v9.0.x - 64 bit
<p>NOTE: OFSAA Infrastructure web component deployment on Oracle WebLogic Server with Oracle JRockit is not supported. For deployment on Oracle WebLogic Server (64 bit) with Java 8, download from My Oracle Support.</p>	

Table 9 describes the desktop requirements.

Table 9: Desktop Requirements

Particulars	Version
Operating System	Windows 10
Browser	<ul style="list-style-type: none"> ● Chrome Version 90.0.4430.212 ● Firefox Version 78.10.1esr ● Microsoft Edge Version 90.0.818.62 Turn off Pop-up blocker settings. For more information, see Configuring Internet Explorer Settings .
Office Tools	<ul style="list-style-type: none"> ● MS Office 2010/2013 ● Adobe Acrobat Reader 8 or above
Screen Resolution	Minimum screen resolution & Scaling must be 1366 * 768 with 100% scaling.

Table 10 describes the directory services.

Table 10: Other Software

Particular	Version
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 such as MS Active Directory.
<p>NOTE:</p> <ul style="list-style-type: none"> • Configuration of Directory services software for OFSAAI installation is optional. For more information on configuration, see Setting Infrastructure LDAP Configuration. • Open LDAP must be installed on MS Windows Server machine. 	

3.3.2 Supported Configurations for Java 11

For more information on Technology Stack (8.1.2.0.0), see [OFSAA Technology Stack Matrices](#).

[Table 11](#) shows the minimum hardware and software requirements for installing OFS ECM Application Pack and provides the recommended software combinations for OFS ECM Application Pack deployment.

[Table 11](#) describes the versions of various operating systems.

Table 11: Configurations Supported for Java 11: Operating System

Operating System	Version
Oracle Linux / Red Hat Enterprise Linux (x86-64)	<p>Oracle Linux Server release 7.5 and above - 64 bit</p> <p>Oracle Linux Server release 8 - 64 bit</p> <p>NOTE: Same version of RHEL is supported.</p>
Oracle Solaris (SPARC)	11.3+- 64 bit
Shell	KORN Shell (KSH)
<p>NOTE: If the operating system is RHEL, install the package lsb_release with one of the following commands by logging in as root user:</p> <ul style="list-style-type: none"> ■ yum install redhat-lsb-core ■ yum install redhat-lsb 	

[Table 12](#) describes the Java Runtime Environment.

Table 12: Configurations Supported for Java 11: JDK

Operating System	Version
Oracle Linux / Red Hat Enterprise Linux	Oracle Java Development Kit (JDK) 11.0.x - 64 bit
Oracle Database Server and Client	Oracle Database Server Client 19.3+ Oracle Database Server Enterprise Edition 19.3+ - 64 bit RAC/ Non-RAC with/ without partitioning option

Table 13 describes the OLAP versions.

Table 13: Configurations Supported for Java 11: OLAP

Operating System/Version
V 12.1.0.1+ with Oracle 19c Database

Table 14 describes the various operating systems with versions for Web Server/Web Application Server.

Table 14: Configurations Supported for Java 11: Web Server/Application Server

Operating System	Version
Oracle Linux / Red Hat Enterprise Linux/ IBM Solaris	Oracle HTTP Server 11.1.1.1/ Apache HTTP Server 2.2.x/ IBM HTTP Server. Oracle WebLogic Server 12.2.x and 14.1.x - 64 bit IBM WebSphere Application Server 9.0.0.x with bundled IBM Java Runtime - 64 bit Apache Tomcat v9.0.x - 64 bit
NOTE: OFSAA Infrastructure web component deployment on Oracle WebLogic Server with Oracle JRockit is not supported. For deployment on Oracle WebLogic Server (64 bit) with Java 11, download from My Oracle Support .	

Table 15 describes the desktop requirements.

Table 15: Desktop Requirements

Particulars	Version
Operating System	Windows 10
Browser	<ul style="list-style-type: none"> • Chrome Version 90.0.4430.212 • Firefox Version 78.10.1esr • Microsoft Edge Version 90.0.818.62 Turn off Pop-up blocker settings. For more information, see Configuring Internet Explorer Settings .
Office Tools	<ul style="list-style-type: none"> • MS Office 2013/2016 • Adobe Acrobat Reader 8 or above
Screen Resolution	Minimum screen resolution & Scaling must be 1366 * 768 with 100% scaling.

Table 16 describes the directory services.

Table 16: Other Software

Particular	Version
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 such as MS Active Directory.
NOTE: <ul style="list-style-type: none"> • Configuration of Directory services software for OFSAAI installation is optional. For more information on configuration, see Setting Infrastructure LDAP Configuration. • Open LDAP must be installed on MS Windows Server machine. 	

3.4 Verifying System Environment

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

However, 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](#) section.

3.5 Understanding the Installation Mode

The following mode of installation are available for the OFS ECM Application Pack.

3.5.1 Installing in 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 ECM Application Pack version 8.1.2.0.0.

NOTE

- Starting from version 8.0.5.0.0, OFS ECM is available as a standalone application. If OFS ECM has to be installed with another FCCM application, ensure that you install both the applications on same Schema/Infodom
- Release version 8.1.2.0.0 of OFS ECM is not fully backward compatible with earlier versions of FCCM applications. You must upgrade all of your FCCM applications from existing version 8.0.x to version 8.1.2.0.0 version and cannot choose to upgrade only selective application packs to version 8.1.2.0.0.

Topics:

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

4.1 Installer and Installation Prerequisites

Table 17 provides the list of prerequisites required before beginning the installation for OFS ECM application. The Environment Check utility notifies you if any requirements are not met.

Table 17: Prerequisite Information

Category	Sub-Category	Expected Value
Environment Settings	User Permission	User to have 755 permission on the directory identified for installation (FIC_HOME). NOTE: User to have 755 permission on the .profile file.

Table 17: Prerequisite Information

Category	Sub-Category	Expected Value
	Java Settings	<ul style="list-style-type: none"> The path in the <i>.profile</i> file must be set to include the Java Runtime Environment absolute path. The path must include Java version 8 based on the configuration. Set the Java tool options in the <i>.profile</i> file for all JDK 11.0.20 and later updates. For example: <pre>JAVA_TOOL_OPTIONS=" Djdk.util.zip.disableZip64ExtraFieldValidation=true" export JAVA_TOOL_OPTIONS</pre> <p>NOTE: Ensure that the absolute path to JRE/bin is set at the beginning of PATH variable. For example: <code>PATH=/usr/java/jre1.8/bin:\$ORACLE_HOME/bin:\$PATH</code> Ensure that no SYMBOLIC links to JAVA installation are not set in the PATH variable.</p>
	Oracle Database Settings	<p>Oracle Database Server TNS_ADMIN must be set in .profile file pointing to appropriate tnsnames.ora file. Enable Transparent Data Encryption (TDE) and/or Data Redaction**. For more information, see Appendix R: Configuring Transparent Data Encryption (TDE) in OFSAA.</p> <p>OFSAA Processing Server ORACLE_HOME must be set in .profile file pointing to appropriate Oracle DB Client installation. PATH in the .profile file must be set to include appropriate \$ORACLE_HOME/bin path. Ensure that an entry (with SID/ SERVICE NAME) is added in the tnsnames.ora file on the OFSAA server.</p>

Table 17: Prerequisite Information

Category	Sub-Category	Expected Value
OS/File System Settings	OS Level Settings	You must set your locale to UTF-8 locale (LANG, NLS_LANG to be set in.profile). Specifying a locale depends on your data and the operating system installed on your system. For example: For Linux OS: export LANG=en_US.utf8. You can determine the locale on your system using the locale -a command export, NLS_LANG=AMERICAN_AMERICA.AL32UTF8.
	File Descriptor Settings	Greater than 15000.
	Total Number of Process Settings	Greater than 4096.
	tmp space	Prior to installation, ensure that sufficient free temp space (minimum 1 GB free) is available in / tmp directory of unix server hosting OFSECM.
	Port Settings	Default port numbers to be enabled on the system are 6500, 6501, 6505, 6507, 6509, 6510, 6666, 9999, and 10101.
	Staging Area/ Metadata Repository	A directory to hold the application meta-data artifacts and additionally act as staging area. The directory must exist on the same system as the OFSAA Infrastructure (can be configured on different mount). However, the owner of the installation directory mentioned above must have RWX (read, write, and execute) permissions on this folder. Set 775 permission on this folder. NOTE: This directory is also referred as FTPSHARE folder.
	Installation Directory	A directory where the product files will be installed. Assign User permission to 755 on the installation directory.

Table 17: Prerequisite Information

Category	Sub-Category	Expected Value
OS/File System Settings	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>
	Download Directory	<p>A directory where the product installer file will be downloaded/ copied.</p> <p>Ensure user permission is set to 755 on the Download directory.</p>
	OS Locale	<p>To check the locale installed, execute the following command:</p> <pre>Linux: en_US.utf8 Solaris: en_US. Preparing for Installation 3-15 UTF-8</pre>
Database Settings	Database Instance Settings	<p>NLS_CHARACTERSET to be AL32UTF8. NLS_LENGTH_SEMANTICS to be BYTE . AVAILABLE OPEN CURSORS limit to be greater than 4096.</p> <p>For an Oracle Database installation, set your Oracle NLS_LANG environment variable to an appropriate UTF-8 character set. For example:</p> <pre>setenv NLS_LANG AMERICAN_ AMERICA.AL32UTF8</pre> <p>NOTE: For other database tunable parameters required for OFS ECM, see Appendix S: Tunable Database Parameters.</p> <p>Ensure that the OLAP_USER role is available in the database.</p>

Table 17: Prerequisite Information

Category	Sub-Category	Expected Value
Web application server	WebSphere/ WebLogic/ Tomcat	<p>Web application server must be installed and profile/domain created.</p> <p>You are prompted to enter the WebSphere Profile path, WebLogic Domain path, or Tomcat Deployment path during OFSAAI installation.</p> <p>NOTE: See Appendix A: Configuring the Web Server for WebSphere Profile and WebLogic Domain creation.</p> <p>For deployment on Oracle WebLogic Server 12.2+ and Oracle WebLogic Server 14.0+ (64 bit) with Java 8, download and install from, My Oracle Support.</p>
Web server	Apache HTTP Server/ Oracle HTTP Server/ IBM HTTP Server.	<p>This is an optional requirement. HTTP Server Installation to be available. You are prompted to enter the Web server IP/Hostname and Port details during installation.</p> <p>NOTE: See Appendix A: Configuring the Web Server for Web server installation.</p>
Operating System	Solaris 11	<p>Upgrade to Oracle Solaris 11.3+ with SRU09 or higher. See Oracle Solaris 11.3+ with SRU09 or higher 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.</p> <p>NOTE: Before you install the OFS ECM Application pack, ensure that all the dependency packs have been upgraded to version 8.1.2.0.0.</p>

4.2 Obtaining Software

The version 8.1.2.0.0 release of OFS ECM Application Pack can be downloaded from [My Oracle Support](#). You must have a valid Oracle account to download the software.

4.3 Performing Common Pre-Installation Tasks

The following are the common Pre-Installation activities that you must carry out before installing the OFS ECM Application Pack.

Topics:

- [Identifying Installation, Download and Meta-data Repositories](#)
- [Downloading and Copying the OFS ECM Application Pack Installer](#)
- [Extracting the Software](#)
- [Setting Up Web Application Server](#)

4.3.1 Identifying Installation, Download and Meta-data Repositories

This section describes the Installation, Download, and Meta-data Repositories. To install OFSAA Application packs, create the following directories:

- `OFS ECM Download Directory` (Optional) - Create a download directory and copy the OFS ECM Application Pack Installer File (archive). This is the directory where the downloaded installer/patches can be copied.
- `OFS ECM Installation Directory` (Mandatory) - Create an installation directory and copy the installation files. Perform the installation from this directory. Set the `FIC_HOME` variable in the `.profile` file to point to the OFS ECM Installation Directory.
- `OFS ECM Staging/Meta-data Directory` (Mandatory) - Create a Staging/Meta-data Directory to copy data loading files, save data extracts and so on. Additionally, this directory also maintains the OFSAA meta-data artifacts. This directory is also referred to as `FTP SHARE`.

NOTE

- Assign 755 user permission to the Installation and Download Directory.
- Assign 755 user permission to the Staging Directory.

4.3.2 Downloading and Copying the OFS ECM Application Pack Installer

To download and copy the OFS ECM Application Pack Installer, follow these steps:

1. To download OFS ECM version 8.1.2.0.0, login to [My Oracle Support](#) with a valid Oracle account.
2. Enter **OFS ECM** in the search box to search.
3. Download the installer archive into the Download Directory (in Binary mode) in the setup identified for OFS ECM version 8.1.2.0.0 installation.

4.3.3 Extracting the Software

To extract the software, follow these steps:

1. Download the unzip utility (OS specific) `unzip_<os>.Z` and copy it in Binary mode to the directory that is included in your PATH variable.

NOTE

- You must be logged in to the UNIX operating system as a non-root user.
- If you already have the unzip utility to extract the contents of the downloaded archive, skip this step.

2. Uncompress the unzip installer file with the command: `uncompress unzip_<os>.Z`.

NOTE

If an error message *uncompress: not found [No such file or directory]* is displayed when the package is not installed, contact your UNIX administrator.

3. Assign `EXECUTE` permission to the file with the command: `chmod 751 unzip_<OS>`.
For example: `chmod 751 unzip_sparc`.
4. Extract the contents of the OFS ECM Application Pack version 8.1.2.0.0 installer archive file in the download directory with the command: `unzip OFS_ECM_PACK.zip`.

NOTE

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

5. Navigate to the download directory and assign execute permission to the installer directory with the command: `chmod -R 755 OFS_ECM_PACK`.

4.3.4 Setting Up Web Application Server

For setting up the environment based on your selected Web Application Server, see [Appendix B: Configuring Resource Reference in Web Servers](#).

5 Installing OFS ECM Application Pack

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

NOTE If you are installing an Application Pack on an environment, where another Applications Pack is already installed, you may sometimes get a warning message such as *Object Already Exists*. This message can be ignored.

Topics:

- [About Schema Creator Utility](#)
- [Configuring and Executing Schema Creator Utility](#)
- [Installing OFS ECM Application Pack](#)
- [Verifying Installation](#)

5.1 About Schema Creator Utility

Creating database users/schemas is one of the primary steps in the complete OFS ECM installation. This release of OFSAA provides a utility to quickly get started with the OFSAA 8.1.2.0.0. Installation by allowing easier and faster creation of database User(s)/Schema(s), assign the necessary GRANT(s), and so on. Additionally, it also creates the required entities in the schemas and so on.

The Schema creator utility must be configured and executed before installation of any OFSAA Application Pack.

Topics:

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

5.1.1 Configuring Schema Creator Utility

You must configure and execute the Schema Creator utility every time prior to installation of any OFSAA Applications Pack.

You can configure the following types of schemas:

- **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.

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

NOTE There can be multiple ATOMIC Schemas per OFSAA Instance and an Information Domain can have only one ATOMIC Schema.

5.1.2 Selecting Execution Modes in Schema Creator Utility

This section describes execution modes of the Schema Creator utility. The utility supports the following modes of execution:

- **Online Mode:** In this mode, the utility connects to the database and executes the Data Definition Language (DDL) for User, Entities, and GRANTS.

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

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

For running the SQL script generated in offline mode, the script must reside in the same directory where the `SQLScripts` directory is available.

1. To execute the utility in offline mode, you must connect as a user with the following GRANTS (alternatively, you can also connect as a user with `SYSDBA` privileges):
 - SELECT ON DBA_ROLES
 - SELECT ON DBA_USERS
 - SELECT ON DBA_DIRECTORIES
 - SELECT ON DBA_TABLESPACES
 - CREATE SESSION
2. Do not modify the `OFS_ECM_SCHEMA_OUT.XML` file generated after the execution of this utility.
3. If there are any errors during the SQL script execution, reconfigure the `OFS_ECM_SCHEMA_IN.xml` file and execute the utility. This regenerates the scripts with corrected information. For more information, see [Configuring OFS_ECM_SCHEMA_IN.xml File](#).
4. Do not modify the `OFS_ECM_SCHEMA_OUT.xml` file generated after the execution of this utility.
5. Do not keep any backup files of XMLs in the `Download` directory.

Current offline installation throws *Columns already exist* error while running the SQL in Schema.

5.1.3 Selecting Execution Options in Schema Creator Utility

Depending on the option selected to run the OFSAA Applications Pack installer, you must select the appropriate Schema creator utility execution option. To run the OFSAA Applications Pack installer in Silent mode, it is mandatory to execute the Schema creator utility with `-s` option.

5.2 Configuring and Executing Schema Creator Utility

This section describes how to configure and execute the Schema Creator utility.

Topics:

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

- [Verifying the Schema Creator Log Files](#)

NOTE If you intend to use the *Oracle OLAP* feature, execute the following grant on all Atomic Schema(s):

```
grant olap_user to &database_username.
```

5.2.1 Prerequisites

The prerequisites you must have before configuring the Schema Creator utility are:

- Oracle User ID/Password with SYSDBA privileges
- JDBC Connection URL for RAC/Non RAC database
- HOSTNAME/IP of the server on which OFSAA is being installed
- TNSNames.ora must have entry for the database planning to install the Database objects
- For enabling Transparent Data Encryption (TDE) in your OFSAA instance during installation, perform the steps described in the [Appendix R: Configuring Transparent Data Encryption \(TDE\) in OFSAA](#).

5.2.2 Configuring Schema Creator Utility

This section describes the steps to configure the Schema Creator utility.

NOTE The extracted media pack folder name must not be changed.

To configure the Schema Creator utility, follow these steps:

1. Log in to the system as non-root user.
2. Navigate to the following path: `OFS_ECM_PACK/schema_creator/conf` directory.
3. Edit the `OFS_ECM_SCHEMA_IN.xml` file in a text editor.
4. Configure the elements as described in the section [Configuring OFS_ECM_SCHEMA_IN.xml File](#).
5. Save the `OFS_ECM_SCHEMA_IN.xml` file.

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

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

While editing the `OFS_ECM_SCHEMA_IN.xml`, ensure only the mentioned values/tag attributes must be modified and do not modify the other tags.

Do not modify the following list of attributes:

- APP_PACK_ID
- SCHEMA.APP_ID
- SCHEMA.DEFAULTTABLESPACE
- SCHEMA.TYPE
- TABLESPACE.NAME

5.2.3 Executing Schema Creator Utility

You can execute the Schema creator utility in Online mode or Offline mode.

Topics:

- [Executing Schema Creator Utility in Online Mode](#)
- [Executing Schema Creator Utility in Offline Mode](#)
- [Executing Schema Creator Utility with -s Option](#)
- [Executing Schema Creator Utility while Installing Subsequent Applications Pack](#)

5.2.3.1 Executing Schema Creator Utility in Online Mode

In Online mode, the Schema Creator utility creates all the Schemas, Schema Objects, Tables Spaces, Grants, and Roles in the database during the execution process.

To execute the Schema Creator utility in Online mode, follow these steps:

1. Log in to the system as non-root user.
2. Navigate to: `OFS_ECM_PACK/schema_creator/bin/`.
3. Execute the `osc.sh` file using the command: `./osc.sh`.
4. The message is displayed: *You have chosen ONLINE mode. Triggering the utility in ONLINE mode will execute the DDLs directly on the Database. Do you wish to proceed? (Y/y or N/n).*
5. Enter **Y/y** to proceed with the script generation.
6. Enter the DB User name with `SYSDBA` privileges. For example: `SYS as SYSDBA`.
7. Enter the User password.

Figure 5: Schema Creation - Online Mode

```
$ ./osc.sh -s
profile Executed
/scratch/ofsaaweb/ECM813/ECM813
=====
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/N):
Y
=====
Java Validation Started ...
Java found in : /scratch/jre1.8.0_261/bin
JAVA Version found : 1.8.0_261
JAVA Bit Version found : 64-bit
Java Validation Completed. Status : SUCCESS
=====
DATABASENAME = Ti3019L64
DB specific Validation Started ...
Enter the DB User Name With SYSDBA Privileges:
sys as sysdba
Enter the User Password:
user name is sys
Oracle Client version : 19.0.0.0.0. Status : SUCCESS
Oracle Server version Current value : 19.0.0.0.0. Status : SUCCESS
DB specific Validation Completed. Status : SUCCESS
=====
                          Schema Creation Started
=====
Checking OFSAA installation...
OFSAA installation not found.
Validating the dat file OFS_ECM_CFG.dat started...
The path is:/scratch/ofsaaweb/ECM813/installer/OFS_ECM_PACK/schema_creator/conf
Successfully validated OFS_ECM_CFG.dat file
Validating the input XML file.../scratch/ofsaaweb/ECM813/installer/OFS_ECM_PACK/schema_creator/conf/OFS_ECM_SCHEMA_IN.xml
Input XML file validated successfully.
=====
Validating Connection URL ...jdbc:oracle:thin:@whf000xx.in.oracle.com:1521:Ti3019L64
Connection jdbc:oracle:thin:@whf000xx.in.oracle.com:1521:Ti3019L64
Successfully connected to User - sys as sysdba URL - jdbc:oracle:thin:@whf000xx.in.oracle.com:1521:Ti3019L64
Connection URL successfully validated...
localhost name - whf000xu IPAddress - 10.40.160.50
INT_LB_HOST not there in schema
IS_HYBRID not there in schema
Parsing TABLESPACE tags...
Parsing file: /scratch/ofsaaweb/ECM813/installer/OFS_ECM_PACK/schema_creator/./conf/OFS_ECM_PACK.xml
```


Figure 6: Grants Creation Scripts Execution Completed

```

Parsing file: /scratch/ofsaaweb/ECM813/installer/OFS_ECM_PACK/schema_creator/./conf/OFS_ECM_PACK.xml
Checking: app: OFS_AAI schema name: E81_CONF813 schema_type: CONFIG
Checking: app: OFS_IPE schema name: E81_ATOM813 schema_type: ATOMIC
Checking: app: OFS_NGECM schema name: E81_ATOM813 schema_type: ATOMIC
You have chosen to install this Application Pack on "e81_atom813" ATOMIC schema. Do you want to proceed? (Y/N)
Y
You have chosen to install this Application Pack on INFODOM "813ecminfo". Do you want to proceed? (Y/N)
Y
=====
Executing TableSpace Scripts started...
Skipping the creation of tablespace COMM_DATA_TBSP
Skipping the creation of tablespace DATA_CM_TBSP
Skipping the creation of tablespace DATA_CONF_TBSP
Skipping the creation of tablespace IDX_CM_TBSP
=====
Creating Schemas started...
CONFIG User e81_conf813 successfully created on Default TableSpace : DATA_CONF_TBSP on Temp TableSpace : TEMP
Grants creation scripts execution started...
Grants creation scripts execution completed...
Connection jdbc:oracle:thin:@whf000xx.in.oracle.com:1521:Ti3019L64
Successfully connected to User - e81_conf813 URL - jdbc:oracle:thin:@whf000xx.in.oracle.com:1521:Ti3019L64
Scripts execution for CONFIG schema started ...
Scripts execution for CONFIG schema completed ...
User e81_conf813 details updated into the dbmaster table
User e81_conf813 details updated into the I18NMASTER table
User e81_conf813 details updated into the aai_db_detail table
User e81_conf813 details updated into the aai_db_auth_alias table
Skipping the creation of AAI/IPE app.
User e81_atom813 details updated into the dbmaster table
User e81_atom813 details updated into the I18NMASTER table
User e81_atom813 details updated into the aai_db_detail table
User e81_atom813 details updated into the aai_db_auth_alias table
User e81_atom813 is successfully created on Default TableSpace : DATA_CM_TBSP on Temp TableSpace : TEMP
Executing specific IPE table create
Execution of specific IPE table creation completed
Creating Schemas completed ...
=====
Roles creation scripts execution started ...
Roles creation scripts execution completed ...
the value of redaction flag in atomic schema isfalse
=====
Grants creation scripts execution started...
Grants creation scripts execution completed...
=====

```

Figure 7: Schema Creator Executed Successfully

```

User e81_atom813 is successfully created on Default TableSpace : DATA_CM_TBSP on Temp TableSpace : TEMP
Executing specific IPE table create
Execution of specific IPE table creation completed
Creating Schemas completed ...
=====
Roles creation scripts execution started ...
Roles creation scripts execution completed ...
the value of redaction flag in atomic schema isfalse
=====
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.

See the log file in OFS_ECM_PACK/schema_creator/logs directory for execution status. If there are any errors, contact [My Oracle Support](#).

5.2.3.2 Executing Schema Creator Utility in Offline Mode

In Offline Mode, the Schema Creator utility creates an output in the SQL file format. This script must be executed manually by logging as database user with `SYSDBA` privileges. The SQL file contains the creation of Schemas, Schema Objects, and Roles.

5.2.3.2.1 Prerequisites

To execute the utility in Offline mode, you must connect a database user with the following GRANTS (Alternatively, you can also connect as a user with `SYSDBA` privileges):

- `SELECT ON DBA_ROLES`
- `SELECT ON DBA_USERS`
- `SELECT ON DBA_DIRECTORIES`
- `SELECT ON DBA_TABLESPACES`
- `CREATE SESSION`

NOTE Explicit GRANTS to the user are required. GRANTS assigned through Roles are not supported.

To execute the Schema creator utility in Offline mode, follow these steps:

1. Log in to the system as non-root user.
2. Navigate to the `OFS_ECM_PACK/schema_creator/bin` directory.
3. Execute the `osc.sh` file using the command: `./osc.sh -o`.
4. Enter **Y /y** to generate the script.
5. The message: *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)* is displayed.
6. Enter the DB User name with `SELECT` privileges.
7. Enter the User password.

Figure 8: Schema Creation - Offline Mode

```

$ ./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/ofsaajdk1.6.0_25/jre/bin
JAVA Version found : 1.6.0_25
JAVA Bit Version found : 64-bit
Java Validation Completed. Status : SUCCESS
=====
DB specific Validation Started ...
Enter the DB User Name with SELECT privileges on following tables
1. DBA_ROLES
2. DBA_USERS
3. DBA_DIRECTORIES
4. DBA_TABLESPACES
sys as sysdba
Enter the User Password:
Oracle Client version : 11.2.0.3.0. Status : SUCCESS
Oracle Server version Current value : 11.2.0.3.0. Status : SUCCESS
DB specific Validation Completed. Status : SUCCESS

```

8. The console runs the initial validation checks and displays the message: *You have chosen to install this Applications Pack on <Name of the Atomic Schema>ATOMIC Schema. Do you want to proceed? (Y/N).*
9. Enter Y/y to start the script generation. The following message is displayed: *You have chosen to install this Applications Pack on <Name of the Infodom>. Do you want to proceed? (Y/N).*

NOTE On successful execution of Schema creator utility, the console displays the following status message:
Success. Execute OFS_ECM_PACK/schema_creator/sysdba_output_scripts.sql before proceeding with the installation

Figure 9: Schema Creation - Offline Mode

```

All the prechecks execution completed successfully.
=====
Generating TableSpace creation Scripts started...
Generating TableSpace creation Scripts completed...
=====
Generating Schema creation scripts started...
CONFIG User dev_conf14 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 dev_conf14 details updated into the dbmaster table
User dev_atm14 details updated into the dbmaster table
User dev_atm14 creation script generated successfully on Default TableSpace : USERS on Temp TableSpace : TEMP
User dev_atm14 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
=====

```

10. Navigate to the directory: OFS_ECM_PACK/schema_creator.
11. Open the sysdba_output_scripts.sql file and modify SET PAGESIZE 0 FEEDBACK OFF VERIFY OFF HEADING OFF ECHO OFF to SET PAGESIZE 0 FEEDBACK OFF VERIFY OFF HEADING OFF ECHO OFF SQLBLANKLINES ON.
12. Login to SQLPLUS with SYSDBA privileges.
13. Connect to the Oracle DB Server on which the OFS ECM Application Pack installation is to be performed and execute the sysdba_output_scripts.sql file using the command:
SQL>@sysdba_output_scripts.sql.

Figure 10: Schema Creator - Offline Mode

```

SQL> user-name: sys/##### as sysdba

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

SQL> @sysdba_output_scripts.sql

Warning: Package Body created with compilation errors.

SQL>

Disconnected from Oracle Database 12c Enterprise Edition Release 12.1.0.2.0 - 64bit Production
with the Partitioning, OLAP, Advanced Analytics and Real Application Testing options

```

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.

NOTE See the log `sysdba_output_scripts.log` file for execution status. If there are any errors, contact Oracle Support Services. The `SQL Scripts` folder and `SQL` file must be in the same folder.

Once the above file is executed, a warning is displayed as shown in [Figure 10](#).

14. Run the following scripts in Config Schema:

- a. Navigate to the `<OFS_ECM_PACK>/schema_creator/SQLScripts/oracle` folder.
- b. Connect to the Config Schema through `sqlplus`.
- c. Execute the `@compile_objects.sql` command.
- d. Commit the change.

5.2.3.3 Executing Schema Creator Utility with -s Option

If you want to run the OFS ECM Application Pack Installer in Silent mode, it is mandatory to execute the Schema creator utility with `-s` option.

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

1. Edit the `OFS_ECM_PACK/schema_creator/conf/OFS_ECM_SCHEMA_IN.xml` file in text editor.
2. Execute the utility with `-s` option. For example: `./osc.sh -s`

Figure 11: Schema Creator with -s option

```

$ ./osc.sh -s
profile Executed
/scratch/ofsaaweb/ECM913/ECM913
=====
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/N) :
Y
=====
Java Validation Started ...
Java found in : /scratch/jre1.8.0_261/bin
JAVA Version found : 1.8.0_261
JAVA Bit Version found : 64-bit
Java Validation Completed. Status : SUCCESS
=====
DATABASENAME = T13019L64
DB specific Validation Started ...
Enter the DB User Name With SYSDBA Privileges:
sys as sysdba
Enter the User Password:
user name is sys
Oracle Client version : 19.0.0.0.0. Status : SUCCESS
Oracle Server version Current value : 19.0.0.0.0. Status : SUCCESS
DB specific Validation Completed. Status : SUCCESS
=====
Schema Creation Started
=====
Checking OFSAA installation...
OFSAA installation not found.
Validating the dat file OFS_ECM_CFG.dat started...
The path is:/scratch/ofsaaweb/ECM913/installer/OFS_ECM_PACK/schema_creator/conf
Successfully validated OFS_ECM_CFG.dat file
Validating the input XML file.../scratch/ofsaaweb/ECM913/installer/OFS_ECM_PACK/schema_creator/conf/OFS_ECM_SCHEMA_IN.xml
Input XML file validated successfully.
=====
Validating Connection URL ...jdbc:oracle:thin:@whf000xx.in.oracle.com:1521:T13019L64
Connection jdbc:oracle:thin:@whf000xx.in.oracle.com:1521:T13019L64
Successfully connected to User = sys as sysdba URL = jdbc:oracle:thin:@whf000xx.in.oracle.com:1521:T13019L64
Connection URL successfully validated...
localhost name = whf000xx IPAddress = 10.40.160.50
INT_LB_HOST not there in schema
IS_THERID not there in schema
Parsing TABLESPACE tags...
Parsing file: /scratch/ofsaaweb/ECM913/installer/OFS_ECM_PACK/schema_creator../conf/OFS_ECM_PACK.xml

```

NOTE To execute the utility in Offline mode with Silent option, type `./osc.sh -o -s`.

5.2.3.4 Executing Schema Creator Utility while Installing Subsequent Applications Pack

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

To execute the Schema Creator utility while installing OFS ECM Pack over an existing Application Pack, follow these steps:

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

NOTE

- On successful execution of Schema Creator utility, the console displays the following status message:
Success. Please proceed with the installation.
- See the log file in `OFS_ECM_PACK/schema_creator/logs` directory for execution status, if scripts are executed in online mode.
- See the `log sysdba_output_scripts.log` for execution status, if executed in offline mode.
- If there are any errors, contact [My Oracle Support](#).

5.2.4 Verifying the Schema Creator Log Files

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

5.3 Installing OFS ECM Application Pack

This section provides instructions to install the OFS ECM Application Pack depending on the mode of installation.

5.3.1 Installing in Silent Mode

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

Topics:

- [Configuring OFSAAI_InstallConfig.xml](#)
- [Configuring default.properties](#)
- [Running Installer in Silent Mode](#)
- [Completing Installation in Silent Mode](#)

5.3.1.1 Configuring OFSAAI_InstallConfig.xml

Perform the following instructions to configure `OFSAAI_InstallConfig.xml` file:

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

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

3. Execute the user **.profile**.
4. Navigate to the file: `OFS_ECM_PACK/OFS_AAI/conf/OFSAAI_InstallConfig.xml`.
5. Configure the `OFSAAI_InstallConfig.xml` as mentioned in [Appendix M: Configuring OFSAAI_InstallConfig.xml File](#). Set the `InteractionVariable` parameter values manually as mentioned in the table. If a value is not applicable, enter **NA** and ensure that the value is not entered as **NULL**.

5.3.1.2 Configuring default.properties

This section describes how to configure `default.properties`. To configure the `default.properties`, follow these steps:

1. Navigate to the file: `OFS_ECM_PACK/OFS_ECM/conf/default.properties` file.

Table 18: default.properties Parameters

Placeholder Name	Significance and Expected Value	Mandatory
<code>##OFS_ECM_BASE_COUNTRY##</code>	ISO country code to use during data ingestion to record institution-derived geography risk on parties on transactions that are internal to the OFSECM client. For example: <code>base_country=US base_country=US</code>	Yes
<code>##OFS_ECM_DEFAULT_JURISDICTION##</code>	Jurisdiction to assign the derived entities and derived addresses. For example: <code>default_jurisdiction=AMEA</code>	Yes
<code>##OFS_ECM_SMTP_HOST##</code>	Hostname of the e-mail gateway to be used by the application for e-mail notifications. For example: <ul style="list-style-type: none"> • <code>smtp_host=mailhost.domain.com</code> • <code>smtp_host=mailhost.domain.com</code> 	Yes
<code>##OFS_ECM-NLS_LENGTH_SEMANTICS##</code>	<code>##OFS_AML-NLS_LENGTH_SEMANTICS##NLS_LENGTH_SEMANTICS</code> database variable for executing the DDL scripts. Applicable values are CHAR/BYTE. NOTE: Recommendation to go with CHAR.	Yes
<code>##OFS_ECM_ANALYST_DATA_SOURCE##</code>	Name of the Analyst Data source used for Admin Tools Configurations. For example: Create a data source with name ANALYST.	Yes
<code>##OFS_ECM_MINER_DATA_SOURCE##</code>	Name of the Miner Data source used for Admin Tools Configurations. For example: Create a data source with name MINER.	Yes

Table 18: default.properties Parameters

Placeholder Name	Significance and Expected Value	Mandatory
##FSDF_UPLOAD_MODEL##	This flag indicates if FSDF data model need to be executed just before and just after the data model upload Applicable value is 1 else keep value to 0.	Yes
##OFS_ECM_CONFIGURE_OBIEE##	Mention flag as 1 to configure <i>ORACLE ANALYTIC SERVER (OAS) 5.9 URL</i> . Otherwise mention as 0 .	Yes
##OFS_ECM_OBIEE_URL##	In case ##OFS_AML_CONFIGURE_ORACLE ANALYTIC SERVER (OAS) 5.9_URL## mentioned as 1 provide the URL in the pattern.	Yes
##OFS_ECM_AML_SOURCE## ##OFS_ECM_AML_LOADTYPE##	If the data is from same database, then pass the schema name: For example, Atomic Schema: AML_ATOM then, AMLSOURCE=AML_ATOM AMLLOADTYPE= If the data is from different database, then pass the 'DBLINK_NAME'....LOADTYPE = DBLINK For example, AMLSOURCE=AMLDL AMLLOADTYPE=DBLINK Similarly, configure the following placeholders depending on your requirement: ##OFS_ECM_AML_SOURCE## ##OFS_ECM_AML_LOADTYPE## ##OFS_ECM_KYC_SOURCE## ##OFS_ECM_KYC_LOADTYPE## ##OFS_ECM_CS_SOURCE## ##OFS_ECM_CS_LOADTYPE## ##OFS_ECM_EXTERNALSYSTEMSOURCE## ##OFS_ECM_EXTERNALSYSTEMLOADTYPE## ##OFS_ECM_TBAML_SOURCE## ##OFS_ECM_TBAML_LOADTYPE## ##OFS_ECM_FATCA_SOURCE## ##OFS_ECM_FATCA_LOADTYPE##	Yes

Table 18: default.properties Parameters

Placeholder Name	Significance and Expected Value	Mandatory
##OFSECM_DATASRCNAME##	This is the name of the datasource pointing to the schema.	Mandatory only if KYC Onboarding is used.
##COMN_GATEWAY_DS##	If OFS BD application is installed and already configured for common gateway, then enter the data source name pointing to the OFS BD Schema else update with the ECM INFODOM name.	Yes
##CREATE_JSON_SERVICE_PROTOCOL_SERVER_PORT##	PROTOCOL://HOSTNAME:WEB_SERVER_PORT	Yes
##JSON_TO_TABLE_PROTOCOL_SERVER_PORT##	This is the URL of JSON To Table Service deployed as part of OFS BD. For example: PROTOCOL://HOSTNAME:WEB_SERVER_PORT	Yes, if ECM is integrated with OFS KYC. If not, value must be <i>J2TURL</i> .
##COMMON_GATEWAY_PROTOCOL_SERVER_PORT##	This is the URL of Common Gateway Service till the port. For example: PROTOCOL://HOSTNAME:WEB_SERVER_PORT	Yes
##KYC_RISK_SCORE_URL##	This is the URL of OFS BD Application till the context name. For example: PROTOCOL://HOSTNAME:WEB_SERVER_PORT/CONTEXT_NAME	Yes, if ECM is integrated with OFS KYC. If not, value must be <i>BDURL</i> .
##OFSS_WLS_PROTOCOL_SERVER_PORT##	This is the URL of OFS Watchlist Application till the port. For example: PROTOCOL://HOSTNAME:WEB_SERVER_PORT	Yes
##AAI_URL##	If OFS BD application is installed and already configured for common gateway, then give the OFS BD Application URL till the context name else give the OFS ECM Application URL till the context name. For example: PROTOCOL://HOSTNAME:WEB_SERVER_PORT/CONTEXT_NAME	Yes, if KYC Onboarding is used. Else, use literal <i>AAI_URL</i> .

Table 18: default.properties Parameters

Placeholder Name	Significance and Expected Value	Mandatory
##CS_PROTOCOL_SERVER_PORT##	This is the URL of OFS Customer Screening Application till the port. For example: PROTOCOL://HOSTNAME:WEB_SERVER_PORT	Yes, if OFS CS is installed. If not, value must be CS_URL.
##ARACHNYS_NNS_SERV- VICE_URL##	PROTOCOL://HOSTNAME:WEB_SERVER_PORT/ CONTEXT_NAME	Yes

5.3.1.3 Running Installer in Silent Mode

This section describes how to install the OFSAA Infrastructure in Silent mode.

To install the OFSAA Infrastructure in Silent mode for Java 8, perform these steps:

1. Navigate to the OFS_ECM_PACK/bin folder.
2. In the Console, execute: ./setup.sh SILENT.

Post Schema creation, the OFS_IPE tag appears in OFS_ECM_SCHEMA_OUTPUT.xml as:

```
<SCHEMA>
<APP_ID>OFS_IPE</APP_ID>
<USERNAME>qa_atm875</USERNAME>
<PASSWORD/>
<TYPE>PRODUCTION</TYPE>
<DEFTABSPACE>##OFS_AML_DATA_MANTS_TBSP##</DEFTABSPACE>
<INFODOM>p16k21CPfkHkgv6MFb4u0A==</INFODOM>
</SCHEMA>
```

3. You must manually update the Password (copy Password from the other App IDs (Encrypted Passwords will not change for App IDs)). Post update the OFS_IPE tag appears as:

```
<SCHEMA>
<APP_ID>OFS_IPE</APP_ID>
<USERNAME>qa_atm875</USERNAME>
<PASSWORD/>q1m04rJt6a/yT+magFXisQ==</PASSWORD>
<TYPE>PRODUCTION</TYPE>
<DEFTABSPACE>##OFS_AML_DATA_MANTS_TBSP##</DEFTABSPACE>
<INFODOM>p16k21CPfkHkgv6MFb4u0A==</INFODOM>
</SCHEMA>
```

5.3.1.4 Completing Installation in Silent Mode

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

NOTE

The above table item is asked if environment check utility is executed in the standalone mode.

Figure 12: Completing the installation in Silent Mode

```
$ ./setup.sh SILENT
profile Executed
/scratch/ofsaaweb/ECM813/ECM813
Current OS Type ---- Linux
  FIC_HOME : /scratch/ofsaaweb/ECM813/ECM813
Environment check utility started...
=====
Java Validation Started ...
  Java found in : /scratch/jre1.8.0_261/bin
  org ver =1.8,11.0
  REQUIRED_VERSION =108,1100
  orgVersion =1.8.0_261
  ORG JAVA =1.8
  VERSION =108
  ORG_REQUIRED_VERSION = 1.8
  JCE IS true
  JAVA Version found : 1.8.0_261
  JAVA Bit Version found : 64-bit
Java Validation Completed. Status : SUCCESS
=====
Environment Variables Validation Started ...
  ORACLE_HOME : /scratch/oraofss/app/product/19.0.0/client_1
  TNS_ADMIN : /scratch/ofsaapp
Environment Variables Validation Completed. Status : SUCCESS
=====
OS specific Validation Started ...
  Checking en_US.utf8 locale. Status : SUCCESS
  Unix shell found : /bin/ksh. Status : SUCCESS
  Total file descriptors : 65536. Status : SUCCESS
  Total number of process : 4096. Status : SUCCESS
  OS version : 7. Status : SUCCESS
OS specific Validation Completed. Status : SUCCESS
=====
DB specific Validation Started ...
  Oracle Client version : 19.0.0.0.0. Status : SUCCESS
  client version 19.0
  Successfully connected to schema e81_atom813. Status : SUCCESS
  CREATE SESSION has been granted to user. Status : SUCCESS
  CREATE PROCEDURE has been granted to user. Status : SUCCESS
  CREATE VIEW has been granted to user. Status : SUCCESS
  CREATE TRIGGER has been granted to user. Status : SUCCESS
  CREATE MATERIALIZED VIEW has been granted to user. Status : SUCCESS
  CREATE TABLE has been granted to user. Status : SUCCESS
  CREATE SEQUENCE has been granted to user. Status : SUCCESS
```

NOTE

- Enter the Infrastructure FTP/SFTP password value, when prompted at the command prompt to access Product Staging/Metadata repository directory in the application server
- When prompted to add host key fingerprint, always *ENTER*.

Figure 13 displays the OFSAAI License Agreement:

Figure 13: OFSAAI License Agreement Page

```
/scratch/ofsaaweb/ECM813/ECM813
inside checkappstatus-app OFS_NGECM /scratch/ofsaaweb/ECM813/installer/OFS_ECM_PACK/bin
all value /scratch/ofsaaweb/ECM813/installer/OFS_ECM_PACK/bin
In app value
[AppPreCheck] Checking for app installation OFS_NGECM
[AppPreCheck] app OFS_NGECM is ENABLED
=====
                Start of Environment Checks
=====
/scratch/ofsaaweb/ECM813/installer/OFS_ECM_PACK/OFS_NGECM/conf
File log4j.xml not found. Using default logging settings
=====
=====Validating JAVA Version=====
Current JAVA Version is: 1.8.0_261
Required JAVA Version is: 1.8
JAVA Version validation status: SUCCESS
=====
=====Checking OS=====
OS Type: LINUX
OS Supported: TRUE
Current OS Version:7.7
Supported OS Version:7.1
OS Version Validation Status: SUCCESS
=====
=====Checking Disk Space=====
Available Disk Space is :165605
Required Disk Space is :700 MB
Validation for category DISK SPACE. STATUS : SUCCESS
=====
=====Checking Temp Space=====
Available Temp Space is 25794 MB
Required Temp Space is 700 MB
Validation for category TEMP SPACE. STATUS : SUCCESS
=====
=====Checking RAM=====
Available RAM in MB 19395
Required RAM in MB 700 MB
Validation for category RAM. STATUS : SUCCESS
=====
                End of Environment Checks
=====
continuing precheck for next app
```

1. Enter **Y/y** to accept the License Agreement.

NOTE

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

Figure 14: Loading the Installer

```

Launching installer...
Preparing SILENT Mode Installation...
=====
OFSAAInfrastructure                               (created with InstallAnywhere)
=====
Installing...
-----
[=====|=====|=====|=====]
[-----|-----|-----|-----]
Installation Complete.
THE OS VERSION IS: 7
THE CLIENT VERSION IS: 19
Copying done for BE files...
profile Executed
/scratch/ofsaaweb/ECM813/ECM813
heapsize = 8192
/scratch/ofsaaweb/ECM813/installer/OFS_ECM_PACK/bin
profile Executed
/scratch/ofsaaweb/ECM813/ECM813
checking version
VersionToBeApplied: 8.1.1.0.0
Fresh installation
Y
*****
Welcome to OFS ECM PACK Installation
*****
Starting OFSAA Service...
OFSAA Service - OK
Preparing to install...
Extracting the installation resources from the installer archive...
Configuring the installer for this system's environment...
Launching installer...

```

Figure 15: Installation Completed

```

Execution completed for PMF update Pipeline
profile Executed
/scratch/ofsaaweb/ECM813/ECM813
executing "ant"
Buildfile: /scratch/ofsaaweb/ECM813/ECM813/ficweb/build.xml
createwar:
[war] Building war: /scratch/ofsaaweb/ECM813/ECM813/ficweb/ECM813.war
createear:
[ear] Building ear: /scratch/ofsaaweb/ECM813/ECM813/ficweb/ECM813.ear
BUILD SUCCESSFUL
Total time: 58 seconds
Shutdown of OFSAAI services started...
nohup: appending output to 'nohup.out'
Shutdown of OFSAAI services done.
OFSAA App Layer Services start-up check started...
Starting startofsaai.sh service...
OFSAA Service - OK
Starting icc service...
ICC service - OK
Shutting down icc service...
Shutting down OFSAA service...
OFSAAI App Layer Services check Status: SUCCESSFUL.
OFSAAI DB Layer Services check started...
profile Executed
/scratch/ofsaaweb/ECM813/ECM813
Calling agentshutdown.sh to check and kill, if any of the server is running...
MESSAGE Server service is not running.
AM service is not running.
ROUTER service is not running.
Starting ROUTER Service
ROUTER service started in background mode.
Starting AM Service
AM service started in background mode.
Starting MESSAGE SERVER Service
MESSAGE SERVER service started in background mode.
Stop MESSAGE Server service with Procs ID : 27956
stop AM service with Procs ID : 27938
stop ROUTER service with Procs ID : 27926
OFSAAI DB Layer File Services check Status: SUCCESSFUL.
Installation completed...
$

```

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

Execute `.profile` from user home directory after the installation is completed.

2. Perform the steps mentioned in the [Verifying Installation](#) section.

5.4 Verifying Installation

Verify the following log files for more information:

- See the `Pack_install1.log` file in the folder: `/OFS_ECM_PACK/logs`
- See the OFSAA logs under `/OFS_ECM_PACK/OFS_AAI/logs`

NOTE The warning message, *name is already used by an existing object* is displayed after successful Pack on Pack installation. Ignore the warning.

- See the `ECM_log` files located in the folder: `/OFS_ECM_PACK/OFS_ECM/logs` for OFS ECM Application Pack Installation log file.

NOTE If there are any errors, do not proceed with further installation and contact [My Oracle Support](#).

6 Upgrading ECM Applications Pack

This chapter describes how to upgrade to the ECM version 8.1.2.0.0 and post-upgradation steps.

Topics:

- [Upgrading from Older FCCM Versions to FCCM Version 8.1.2.0.0](#)
- [Standalone Upgrade of ECM 8.1.1.0.0 to ECM 8.1.2.0.0](#)
- [Pack on Pack In-Place/Cloning Upgrade from BD 8.1.1.0.0, ECM 8.1.1.0.0 and CRR 8.1.1.0.0 to BD 8.1.2.0.0, ECM 8.1.2.0.0, and CRR 8.1.2.0.0](#)
- [Standalone Upgrade of ECM 8.1.1.1.0 to ECM 8.1.2.0.0](#)
- [Pack on Pack In-Place/Cloning Upgrade from BD 8.1.1.1.0, ECM 8.1.1.1.0 and CRR 8.1.1.1.0 to BD 8.1.2.0.0, ECM 8.1.2.0.0 and CRR 8.1.2.0.0](#)
- [Post Upgradation Steps](#)

As part of a UI refresh, the Narrative and Audit tabs have been moved to pop-ups. Entity IDs 4 and 5 correspond to these tabs and hence these Entity mapping entries need to be removed before an upgrade to Oracle Financial Services Enterprise Case Management (OFS ECM) version 8.1.2.0.0. Post OFS ECM version 8.1.2.0.0 installation, these Case Type to Entity scripts need not be run as they will no longer appear as Tabs, per the new UI design.

To upgrade to OFS ECM 8.1.2.0.0, follow these steps:

1. Login to Atomic Schema.
2. Replace `##Customized Case Types##` with the Customized Case types that the customer has. Backup the following entries.

```
SELECT * FROM KDD_CASETYPE_ENTITY_MAP T WHERE T.ENTITY_ID IN (4,5) and  
T.CASE_TYPE_SUBTYPE_CD IN (##Customized Case Types##)
```

3. Replace `##Customized Case Types##` with the Customized Case types that the Customer has. Delete the entries using the following sql and Commit.

```
DELETE FROM KDD_CASETYPE_ENTITY_MAP T WHERE T.ENTITY_ID IN (4,5) and  
T.CASE_TYPE_SUBTYPE_CD IN (##Customized Case Types##)
```

NOTE

- If an Oracle patch or upgrade updates customized meta data, you must re-apply the customization after the patch/upgrade
- Modify and save the existing meta data to customize the default meta data. In the confirmation message, *[16499] Do you want to save this rule as new version?*, select **No** to save the modified Rule. The changes will then override the existing version.

6.1 Upgrading from Older FCCM Versions to FCCM Version 8.1.2.0.0

Open the attached excel to view the detailed Upgrade from older FCCM versions to FCCM 8.1.2.0.0.

6.1.1 8.1.2.0.0 Upgrade Paths

The following are the prerequisites for the Standalone and Pack on Pack Upgrades:

- OFS ECM 8.1.1.0.0 to OFS ECM 8.1.2.0.0
- OFS ECM 8.1.1.1.0 to OFS ECM 8.1.2.0.0
- PACK ON PACK Upgrades from 8.1.1.0.0 to 8.1.2.0.0
- PACK ON PACK Upgrades from 8.1.1.1.0 to 8.1.2.0.0
- PACK ON PACK Upgrades from 8.1.1.1.0 to 8.1.2.0.0

Table 19 describes the Upgrade Paths.

Table 19: Upgrade Paths

Upgrades	Pack	Standalone ECM In-Place/ Cloning Upgrade	PACK on PACK In-Place/ Cloning Upgrade
8.1.1	AAI 8.1.1.3.0	33578231	33578231
	BD 8.1.1.0.3	NA	33767866
	ECM 8.1.1.0.5	33751645	33751645
	CRR 8.1.1.0.0	NA	NA
8.1.1.1	AAI 8.1.1.3.0	33578231	33578231
	BD 8.1.1.1.0	NA	33767914
	ECM 8.1.1.1.1	33751667	33751667
	CRR 8.1.1.1.0	NA	NA

6.2 Standalone Upgrade of ECM 8.1.1.0.0 to ECM 8.1.2.0.0

Perform the Standalone Upgrade of OFS ECM version 8.1.1.0.0 to OFS ECM version 8.1.2.0.0 via In-Place Upgrade and Cloning Upgrade.

NOTE

- Ensure to take the backup of File System (`FIC_HOME/FTP SHARE`), Atomic Schema, and Config Schema before performing upgrade
- Ensure that the dispatcher is not running. If the dispatcher is running, stop and then start the upgrading process
- Ensure that you end all the batches before you start the upgrade process
- Ensure that you Run the `END_MANTAS_BATCH` before starting the upgrade
- For enabling the unlimited Cryptographic Policy for Java, see [Enabling Unlimited Cryptographic Policy for Java](#).

6.2.1 In-Place/Cloning Upgrade of ECM 8.1.1.0.0 to ECM 8.1.2.0.0

Prerequisite:

Minimum Patch level is required for performing Oracle Financial Services Enterprise Case Management (OFS ECM) version 8.1.1.0.0 to OFS ECM version 8.1.2.0.0 for In-Place Upgrade with OFS ECM version 8.1.2.0.0 [Tech Stack](#).

- The minimum AAI patch level must be Bug 33578231
- The minimum NGECEM patch level must be Bug 33751645
- Database Version 19.0+
- Oracle Linux Server release 7 and 8
- Red Hat Enterprise Linux release 7 and 8
- IBM WebSphere Application Server 9.0.0.x
- Apache Tomcat v9.0.x
- Oracle WebLogic Server 12.2.x
- Oracle WebLogic Server 14.1.x

6.2.1.1 Upgrading to ECM Version 8.1.2.0

This section describes how to upgrade to OFS ECM version 8.1.2.0.

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

To upgrade to OFS ECM version 8.1.2.0, follow these steps:

1. Download [Bug 33939235](#) and unzip the OFS ECM 8.1.2.0.0 Installer from [My Oracle Support](#).
2. Navigate to OFS_ECM_PACK and grant execute (755) permission for all executables `$chmod 755 *`.
3. Modify `PatchConfig.xml` under OFS_ECM_PACK/OFS_ECM/conf/PatchConfig.xml with appropriate values as described in the following table.

[Table 20](#) provides the values for PatchConfig files.

Table 20: PatchConfig.xml

Placeholder Name	Significance and Expected Value	Mandatory
##OFS_ECM_SAVE_METADATA##	This attribute is used by the installer to decide whether to execute hierarchy <i>Resave</i> . Applicable value is ALL.	Yes
##EXECUTE_PRE_AND_POST_SCRIPTS##	This flag indicates if certain scripts need to be executed just before and just after the data model upload Applicable value is 1.	Yes (Value = 1)
##OFS_ECM_ANALYST_DATA_SOURCE##	Name of the Analyst Data source used for Admin Tools Configurations. For example: Create a data source with name ANALYST.	Yes

Table 20: PatchConfig.xml

Placeholder Name	Significance and Expected Value	Mandatory
##OFS_ECM_MINER_DATA_SOURCE##	Name of the Miner Data source used for Admin Tools Configurations. For example: Create a data source with name MINER.	Yes
##BASE_COUNTRY##	ISO country code to use during data ingestion to record institution-derived geography risk on parties on transactions that are internal to the OFSECM client. For example: base_country=US base_country=US	Yes
##DEFAULT_JURISDICTION##	Jurisdiction to assign the derived entities and derived addresses. For example: default_jurisdiction=AMEA	Yes
##TNS_ADMIN##	This attribute refers to the path where TNSNAMES.ORA is placed. For example: /scratch/ofsaapp	Yes
##BIG_DATA_ENABLE##	Placeholder to enable Big Data. Enter FALSE.	Yes
##FSDF_UPLOAD_MODEL##	This flag indicates if FSDF data model need to be executed just before and just after the data model upload Applicable value is 1 else keep value to 0.	Yes
##OFS_ECM_DATA_CM_TBSP##	This attribute refers to the Data Tablespace values available in OFS_ECM_SCHEMA_OUTPUT.xml which was generated at the time of installation.	Yes
##OFS_ECM_IDX_CM_TBSP##	This attribute refers to the Data Tablespace values available in OFS_ECM_SCHEMA_OUTPUT.xml which was generated at the time of installation.	Yes

Table 20: PatchConfig.xml

Placeholder Name	Significance and Expected Value	Mandatory
<p>OFS_ECM_CS_SOURCE## ##OFS_ECM_CS_LOADTYPE##</p> </p>	<p>If the data is from same database then pass the schema name: For example: Atomic Schema: CS_ATOM then, <Variable name="CSSOURCE">CS_ATOM</Variable> <Variable name="CSLOADTYPE"></Variable> If the data is from different database then pass the 'DBLINK_NAME'.....LOADTYPE = DBLINK For example: <Variable name="AMLSOURCE">AMLDBL</Variable> <Variable name="AMLLOADTYPE">DBLINK</Variable> Similarly, configure the following placeholders depending on your requirement: ##OFS_ECM_AML_SOURCE## ##OFS_ECM_AML_LOADTYPE## ##OFS_ECM_KYC_SOURCE## ##OFS_ECM_KYC_LOADTYPE## ##OFS_ECM_CS_SOURCE## ##OFS_ECM_CS_LOADTYPE## ##OFS_ECM_EXTERNALSYSTEM_SOURCE## ##OFS_ECM_EXTERNALSYSTEM_LOADTYPE## ##OFS_ECM_TBAML_SOURCE## ##OFS_ECM_TBAML_LOADTYPE## ##OFS_ECM_FATCA_SOURCE## ##OFS_ECM_FATCA_LOADTYPE##</p>	<p>Yes</p>
<p>NOTE: Onboarding specific entries.</p>		
<p>##OFS_COMM_DATA_TBSP##</p>	<p>Name of the Comm Tablespace where the third party table must be created. For example: COMM_DATA_TBSP</p>	<p>Yes</p>
<p>##CommonGateway_DATA_SOURCE##</p>	<p>If OFS BD application is installed and already configured for common gateway, then enter the data source name pointing to the OFS BD Atomic schema else update with the ECM INFODOM name.</p>	<p>Yes</p>

Table 20: PatchConfig.xml

Placeholder Name	Significance and Expected Value	Mandatory
##CommonGateway_T2J_DATA_SOURCE##	Parameter value must be updated with the ECM INFODOM name.	Yes
##CommonGateway_INPUT_WEB_PROTOCOL_SERVER_PORT##	This is the URL of <i>createJSON Service</i> till the port. For example: <PROTOCOL://HOSTNAME:WEB_SERVER_PORT/CONTEXT_NAME>	Yes
##JSON_TABLE_WEB_PROTOCOL_SERVER_PORT##	This is the URL of <i>JSON To Table Service</i> deployed as part of OFS BD. For example: <PROTOCOL://HOSTNAME:WEB_SERVER_PORT>	Yes, if ECM is integrated with OFS KYC. If not, value must be J2URL.
##CommonGateway_PROTOCOL_SERVER_PORT##	This is the URL of <i>Common Gateway Service</i> till the port. For example: <PROTOCOL://HOSTNAME:WEB_SERVER_PORT>	Yes
##KYC_RISK_SCORE_URL##	This is the URL of OFS BD Application till the context name. For example: <PROTOCOL://HOSTNAME:WEB_SERVER_PORT/CONTEXT_NAME>	Yes, if ECM is integrated with OFS KYC. If not, value must be BDURL.
##OFSS_WLS_PROTOCOL_SERVER_PORT##	This is the URL of OFS Watchlist Application till the port. For example: <PROTOCOL://HOSTNAME:WEB_SERVER_PORT>	Yes
##AAI_URL##	If OFS BD application is installed and already configured for common gateway, then enter the OFS BD Application URL till the context name else enter the OFS ECM Application URL till the context name. For example: <PROTOCOL://HOSTNAME:WEB_SERVER_PORT/CONTEXT_NAME>	If KYC Onboarding is used, then yes. Else, use literal AAI_URL.
##CS_PROTOCOL_SERVER_PORT##	This is the URL of OFS Customer Screening Application till the port. For example: <PROTOCOL://HOSTNAME:WEB_SERVER_PORT>	Yes, if OFS CS is installed. If not, value must be CS_URL.

4. Navigate to the OFS_ECM_PACK/bin folder.
5. Execute the setup.sh file using the command: `./setup.sh SILENT`.
6. After installation is successful, under `$FIC_HOME/ECM_Duplicate_Jar_Removal.sh` execute the script as part of this file; we are removing older version log4j/Spring jars & Lib_pgx folder.

7. Apply the platform patch (Bug 33738222 - Standard Upgrade of Libraries For Common Usage in OFSAA on V8.1.2 - JAN-2022).
8. Apply the AAI THP mandatory Patch (Bug 33649681 - Consolidated Fix For New Wave Theme on V812).
9. Navigate to `FIC_HOME/ficweb` and Run the `ant .sh` file to build a new EAR/WAR.
10. Deploy `OFSAA EAR/WAR` and restart the OFSAA App Server and Web Server.

6.3 Pack on Pack In-Place/Cloning Upgrade from BD 8.1.1.0.0, ECM 8.1.1.0.0 and CRR 8.1.1.0.0 to BD 8.1.2.0.0, ECM 8.1.2.0.0, and CRR 8.1.2.0.0

Performing Pack on Pack In-Place/Cloning Upgrade from versions OFS BD 8.1.1.0.0, OFS ECM 8.1.1.0.0, and OFS CRR 8.1.1.0.0 to OFS BD 8.1.2.0.0, OFS ECM 8.1.2.0.0, and OFS CRR 8.1.2.0.0.

NOTE

- Ensure to take the backup of File System (`FIC_HOME/FTP SHARE`), Atomic Schema, and Config Schema before performing upgrade
- Ensure that the dispatcher is not running. If the dispatcher is running, stop and then start the upgrading process
- Ensure that you end all the batches before you start the upgrade process
- Ensure that you run the `END_MANTAS_BATCH` before starting the upgrade. For enabling the unlimited Cryptographic Policy for Java, see [Enabling Unlimited Cryptographic Policy for Java](#).

6.3.1 Pack on Pack Upgrade Sequence

Use the following pack upgrade sequence:

- [OFS BD 8.1.1.0.0 to OFS BD 8.1.2.0.0](#)
- [ECM 8.1.1.0.0 to ECM 8.1.2.0.0](#)
- [OFS CRR 8.1.1.0.0 to OFS CRR 8.1.2.0.0](#)

6.3.1.1 OFS BD 8.1.1.0.0 to OFS BD 8.1.2.0.0

Prerequisite:

- The minimum AAI patch level must be Bug 33578231
- The minimum BD patch level must be Bug 33767866

To upgrade to OFS BD version 8.1.2.0, follow these steps:

1. To download and copy the OFS BD Applications Pack version 8.1.2.0.0 archive file, see [Downloading and Copying the OFS BD Applications Pack Installer](#).

NOTE

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

2. Login to the OFSAA Server with user credentials that was used to install OFSAA.
3. Shut down all the OFSAAI Services. For more information, see the *Start/Stop Infrastructure Services* section in [Appendix E: Starting/Stopping Infrastructure Services](#).
4. Download *Bug 33940349* and unzip the OFS BD 8.1.2.0.0 Installer from [My Oracle Support](#).
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 8.1.1.0.0 installer.
7. 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.

8. Extract the contents of the Oracle Financial Services Behavior Detection Applications Pack 8.1.2.0.0 installer archive file using the command: `unzip_<os> <name of the file to be unzipped>.`
9. Enter the EXECUTE permission to the archive file `OFS_BD_PACK` as in the sample command: `chmod -R 750 OFS_BD_PACK.`
10. Update the `PatchConfig.xml` file and grant permission to the `.sh` files as described in the following table.

[Table 21](#) provides the values for PatchConfig files:

Table 21: PatchConfig.xml Parameters

Placeholder Name	Significance and Expected Value	Mandatory
##OFS_AML_SW_RMI-PORT##	The Scenario Wizard uses this attribute. It must consist of a proper port number and not be used by any other application. For example: 7623 or 8204.	Yes
##OFS_AML_SAVE_METADATA#	The installer to decide whether to execute hierarchy <i>Resave</i> uses this attribute. The applicable value is ALL.	Yes
##EXECUTE_PRE_AND_POST_SCRIPTS##	This flag indicates if certain scripts need to be executed just before and just after the data model upload Applicable value is 1.	Yes (Value = 0)
##SCHEMA_OUT_XML_PATH##	This attribute refers to the path, which needs to be pointed to <code>OFS_BD_SCHEMA_OUTPUT.xml</code> , which was generated at the time of installation. For example: <code>/scratch/ofsaapp/Installer/OFS_BD_PACK/schema_creator/OFS_BD_SCHEMA_OUTPUT.xml.</code>	Yes

Table 21: PatchConfig.xml Parameters

Placeholder Name	Significance and Expected Value	Mandatory
##OFS_FCCM_LOAD- ER_ROLE##	This attribute role is used when OFS BD version 8.0.1.0.0/8.0.4.0.0 is installed. The value will be available in OFS_BD_SCHEMA_OUTPUT.xml and is generated at the time of 8.1.1.0.0 installation.	Yes
##OFS_AML_ANALYST_DATA_ SOURCE##	Name of the Analyst Data source used for Admin Tools Configurations. For example: Create a data source with name ANALYST.	Yes
##OFS_AML_MINER_ DATA_SOURCE##	Name of the Miner Data source used for Admin Tools Configurations. For example: Create a data source with name MINER.	Yes
##BASE_COUNTRY##	ISO country code to use during data ingestion to record institution-derived geography risk on parties on transactions that are internal to the OFSBD client. For example: base_country=US base_country=US.	Yes
##DEFAULT_JURIS- DICTION##	Jurisdiction to assign the derived entities and derived addresses. For example: default_jurisdiction=AMEA.	Yes
##TNS_ADMIN##	This attribute refers to the path where TNSNAMES.ORA is placed. For example: /scratch/ofsaapp.	Yes
##BIG_DATA_ ENABLE##	Placeholder to enable Big Data. Enter FALSE.	Yes
##FSDF_UPLOAD_ MODEL##	This flag indicates if FSDF data model needs to be executed just before and just after the data model upload. Applicable value is 1 else keep value to 0.	Yes
##OFS_AML_SQOOP_ WORKING_DIR##	Placeholder to provide SQOOP working directory for AML.	Mandatory only if big data is enabled.
##OFS_AML_SSH_AU- TH_ALIAS##	Placeholder to provide SSH authorization alias for AML.	Mandatory only if big data is enabled.
##OFS_AM- L_SSH_HOST_NAME##	Placeholder to provide SSH host name for AML.	Mandatory only if big data is enabled.
##OFS_AML_SSH_ PORT##	Placeholder to provide SSH port name for AML.	Mandatory only if big data is enabled.

Table 21: PatchConfig.xml Parameters

Placeholder Name	Significance and Expected Value	Mandatory
<p>NOTE: KYC Onboarding requires the following additional deployments:</p> <ul style="list-style-type: none"> • Initiate Onboarding Service (InitiateOnboardingService.war) • Table To JSON Service (TabletoJSONService.war) • JSON To Table Service (JSONToTablePersistenceUtility.war) • Common Gateway Service (CommonGatewayService.war) • Generate Case Input Service (GenerateCaseInputService.war) • Create JSON Service (createJSONService.war) <p>The above .war files are available in the FIC_HOME path post-installation. For information on deploying the .war files, see Post Installation Configuration. These deployments are in addition to the Application Pack deployment, that is, OFSBD; Watchlist Service deployment and RAOR deployments that are mandatory for KYC Onboarding. For information on the services, see Know Your Customer Service Guide.</p>		
<p>NOTE: The following parameters are applicable for KYC Onboarding:</p>		
##OBDATASRCNAME# #	This is the name of the datasource pointing to the Atomic schema.	Mandatory only if KYC Onboarding is used. If not, value must be OBDATASRC-NAME.
##COMN_GATEWAY_DS##	This is the name of the datasource pointing to the Atomic schema.	Mandatory only if KYC Onboarding is used. If not, value must be COMN_GATEWAY_DS.
##AAI_AUTH_URL##	This is the URL of the BD application till the context name. For example: <PROTOCOL:/HOSTNAME:PORT/CONTEXT_NAME>.	Mandatory only if KYC Onboarding is used. If not, value must be AAI_URL.
##TABLE_TO_JSON_PROTOCOL_SERVER_PORT##	This is the URL of Table To JSON Service till the port number. For example: <PROTOCOL:/HOSTNAME:PORT>.	Mandatory only if KYC Onboarding is used. If not, value must be T2J_URL.
##JSON_TO_TABLE_PROTOCOL_SERVER_PORT##	This is the URL of JSON To Table Service till the port number. For example: <PROTOCOL:/HOSTNAME:PORT>.	Mandatory only if KYC Onboarding is used. If not, value must be J2T_URL.

Table 21: PatchConfig.xml Parameters

Placeholder Name	Significance and Expected Value	Mandatory
##OB_PROTOCOL_SERVER_PORT##	This is the URL of Initiate Onboarding service till the port number. For example: <PROTOCOL:/HOSTNAME:PORT>.	Mandatory only if KYC Onboarding is used. If not, value must be OB_URL.
##ECM_APP_URL##	This is the URL of the ECM application till the context name. For example: <PROTOCOL:/HOSTNAME:PORT/CONTEXT_NAME>.	Mandatory only if KYC Onboarding is used. If not, value must be ECM_CASE_URL.
##CASE_INPUT_PROTOCOL_SERVER_PORT##	This is the URL of the Generate Case Input Service till the port number. For example: <PROTOCOL:/HOSTNAME:PORT>.	Mandatory only if KYC Onboarding is used. If not, value must be GCI_URL.
##COMMON_GATEWAY_PROTOCOL_SERVER_PORT##	This is the URL of the Common Gateway Service till the port number. For example: <PROTOCOL:/HOSTNAME:PORT>.	Mandatory only if KYC Onboarding is used. If not, value must be CMNGT-WYURL.
##SCORING_PROTOCOL_SERVER_PORT##	This is the URL of the RAOR Application till the port number. For example: <PROTOCOL:/HOSTNAME:PORT>.	Mandatory only if KYC Onboarding is used. If not, value must be SCORING_URL.
##OFSS_WLS_PROTOCOL_SERVER_PORT##	This is the URL of the OFS Watchlist application till the port number. For example: <PROTOCOL:/HOSTNAME:PORT>.	Mandatory only if KYC Onboarding is used. If not, value must be OFSS_WLS_URL.
##CS_PROTOCOL_SERVER_PORT##	This is the URL of the OFS Customer Screening Application till the port number. For example: <PROTOCOL:/HOSTNAME:PORT>.	Mandatory only if KYC Onboarding is used. If not, value must be CS_URL.
##COMM_LOG_PATH##	This is the path of the KYC Onboarding log file. For example: /scratch/ofsaapp/KYC808DEV/apache-tomcat-8.0.47/logs.	Mandatory only if KYC Onboarding is used.

Table 21: PatchConfig.xml Parameters

Placeholder Name	Significance and Expected Value	Mandatory
##QTNR_RESP_URL##	This is the URL of the OFS KYC Onboarding service. The URL is <PROTOCOL:/HOST-NAME:PORT/CONTEXT_NAME>/questionnaire_api/questionnaires/resume/<INFODOM>/en_US?appCode=OFS_KYC.	Mandatory only if KYC Onboarding is used. If not, value must be ##QTNR_RESP_URL##.
##OFS_COMM_DATA_TBSP##	This is the table space for the common gateway. The value is COMM_DATA_TBSP.	Mandatory only if KYC Onboarding is used. If not, value must be ##OFS_COMM_DATA_TBSP##.

11. Navigate to OFS_BD_PACK/bin.
12. Execute the command: ./setup.sh SILENT.

NOTE

The DMT migration utility is executed during BD installation, to migrate the DMT meta data (PLC/Data Source/Data Mapping/Data File Mapping) to be persisted in tables instead of XML. You may be required to re-run the DMT migration utility in some scenarios. To identify whether to run the utility, how to run and how to handle migration issues, see [OFSAA DMT Metadata Migration Guide](#).

For more information on securing your OFSAA Infrastructure, see the Security Guide in [OHC Library](#).

13. Add `umask 0027` in the `.profile` of the UNIX account which manages the Web server to ensure restricted access permissions.
14. Restart all the OFSAAI services. For more information, see the *Start/Stop Infrastructure Services* section in [Appendix E: Starting/Stopping Infrastructure Services](#).
15. 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 D: Creating and Deploying EAR/WAR File](#).
16. Deploy the RPD and catalog ORACLE ANALYTIC SERVER (OAS) 5.9 files available under the `$FIC_HOME/ORACLE ANALYTIC SERVER (OAS) 5.9` folder.
17. For enabling TDE in case of a new installation, see the *Configuring TDE in case of Upgrade* section in [Appendix R: Configuring Transparent Data Encryption \(TDE\) in OFSAA](#).
18. For enabling Data Redaction in case of a new installation, see *Enabling Data Redaction*, in case of Upgrade section in [Appendix R: Configuring Transparent Data Encryption \(TDE\) in OFSAA](#).

6.3.1.2 ECM 8.1.1.0.0 to ECM 8.1.2.0.0

Prerequisite:

- The minimum AAI patch level must be Bug 33578231
- The minimum NGECEM patch level must be Bug 33751645

NOTE

- The archive files are different for every operating system like, Solaris Sparc, and RHEL/Oracle Linux
- Ensure to take the backup of File System (`FIC_HOME/FTPSHARE`), Atomic schema, and Config schema before performing upgrade
- Ensure that the dispatcher is not running. If the dispatcher is running, stop and then start the upgrading process
- Ensure that you end all the batches before you start the upgrade process
- Ensure that you run the `END_MANTAS_BATCH` before starting the upgrade. For enabling the unlimited Cryptographic Policy for Java, see [Enabling Unlimited Cryptographic Policy for Java](#).

To upgrade to OFS ECM version 8.1.2.0, follow these steps:

1. Login to the OFSAA Server with user credentials that was used to install OFSAA.
2. Shut down all the OFSAAI Services. For more information, see the *Start/Stop Infrastructure Services* section in [Appendix E: Starting/Stopping Infrastructure Services](#).
3. Download Bug 33939235 and unzip the OFS ECM 8.1.2.0.0 Installer from [My Oracle Support](#).
4. Navigate to `OFS_ECM_PACK` and grant the `execute (755)` permission for all executables `$chmod 755 *`.
5. Modify `PatchConfig.xml` under `OFS_ECM_PACK/OFS_ECM/conf/PatchConfig.xml` with appropriate values as described in the following table.

[Table 22](#) provides the values for PatchConfig files:

Table 22: PatchConfig.xml

Placeholder Name	Significance and Expected Value	Mandatory
<code>##OFS_ECM_SAVE_METADATA##</code>	This attribute is used by the installer to decide whether to execute hierarchy <i>Resave</i> . Applicable value is ALL.	Yes
<code>##EXECUTE_PRE_AND_POST_SCRIPTS##</code>	This flag indicates if certain scripts need to be executed just before and just after the data model upload. Applicable value is 1.	Yes (Value = 1)

Table 22: PatchConfig.xml

Placeholder Name	Significance and Expected Value	Mandatory
##OFS_ECM_ ANA- LYST_DATA_ SOURCE##	Name of the Analyst Data source used for Admin Tools Configurations. For example: Create a data source with name ANA-LYST.	Yes
##OFS_ECM_MINER_ DATA_SOURCE##	Name of the Miner Data source used for Admin Tools Configurations. For example: Create a data source with name MINER.	Yes
##BASE_COUNTRY##	ISO country code to be used during data ingestion to record institution-derived geography risk on parties on transactions that are internal to the OFSECM client. For example: base_country=US base_country=US.	Yes
##DEFAULT_ JURIS- DICTION##	Jurisdiction to assign the derived entities and derived addresses. For example: default_jurisdiction=AMEA.	Yes
##TNS_ADMIN##	This attribute refers to the path where TNSNAMES.ORA is placed. For example: /scratch/ofsaapp.	Yes
##BIG_DATA_ ENABLE##	Placeholder to enable Big Data. Enter FALSE.	Yes
##FSDF_UPLOAD_ MODEL##	This flag indicates if FSDF data model needs to be executed just before and just after the data model upload. Applicable value is 1 else keep value to 0.	Yes
##OFS_ECM_DATA_ CM_TBSP##	This attribute refers to the Data Tablespace values available in OFS_ECM_SCHEMA_OUTPUT.xml which was generated at the time of installation.	Yes
##OFS_ECM_IDX_ CM_TBSP##	This attribute refers to the Data Tablespace values available in OFS_ECM_SCHEMA_OUTPUT.xml which was generated at the time of installation.	Yes

Table 22: PatchConfig.xml

Placeholder Name	Significance and Expected Value	Mandatory
<p>OFS_ECM_CS_SOURCE## ##OFS_ECM_CS_LOADTYPE##</p> </p>	<p>If the data is from same database, then pass the schema name. For example: Atomic Schema: CS_ATOM then, <Variable name="CSSOURCE">CS_ATOM</Variable> <Variable name="CSLOADTYPE"></Variable> If the data is from different database, then pass the 'DBLINK_NAME'...LOADTYPE = DBLINK For example: <Variable name="AMLSOURCE">AMLDBL</Variable> <Variable name="AMLLOADTYPE">DBLINK</Variable> Similarly, configure the following placeholders depending on your requirement: ##OFS_ECM_AML_SOURCE## ##OFS_ECM_AML_LOADTYPE## ##OFS_ECM_KYC_SOURCE## ##OFS_ECM_KYC_LOADTYPE## ##OFS_ECM_CS_SOURCE## ##OFS_ECM_CS_LOADTYPE## ##OFS_ECM_EXTERNALSYSTEM_SOURCE## ##OFS_ECM_EXTERNALSYSTEM_LOADTYPE## ##OFS_ECM_TBAML_SOURCE## ##OFS_ECM_TBAML_LOADTYPE## ##OFS_ECM_FATCA_SOURCE## ##OFS_ECM_FATCA_LOADTYPE##</p>	<p>Yes</p>
<p>NOTE: Onboarding specific entries.</p>		
<p>##OFS_COMM_DATA_TBSP##</p>	<p>Name of the Comm Tablespace where the third party table must be created. For example: COMM_DATA_TBSP.</p>	<p>Yes</p>
<p>##CommonGateway_DATA_SOURCE##</p>	<p>If OFS BD application is installed and already configured for common gateway, then enter the data source name pointing to the OFS BD Atomic schema, else update with the ECM_INFODOM name.</p>	<p>Yes</p>

Table 22: PatchConfig.xml

Placeholder Name	Significance and Expected Value	Mandatory
##CommonGateway_ T2J_DATA_SOURCE##	Parameter value must be updated with the ECM_INFODOM name.	Yes
##CommonGateway_ INPUT_WEB_PROTO- COL_SERVER_PORT##	This is the URL of createJSON Service till the port. For example: <PROTOCOL://HOSTNAME:WEB_SERVER_PORT/CONTEXT_NAME>.	Yes
##JSON_TABLE_WEB_ PROTOCOL_SERVER_ PORT##	This is the URL of JSON To Table Service deployed as part of OFS BD. For example: <PROTOCOL://HOSTNAME:WEB_SERVER_PORT>.	Yes, if ECM is integrated with OFS KYC. If not, value must be J2TURL.
##CommonGateway_ PROTOCOL_SERVER_ PORT##	This is the URL of Common Gateway Service till the port. For example: <PROTOCOL://HOSTNAME:WEB_SERVER_PORT>.	Yes
##KYC_RISK_SCORE_ URL##	This is the URL of OFS BD Application till the context name. For example: <PROTOCOL://HOSTNAME:WEB_SERVER_PORT/CONTEXT_NAME>.	Yes, if ECM is integrated with OFS KYC. If not, value must be BDURL.
##OFSS_WLS_PROTO- COL_SERVER_PORT##	This is the URL of OFS Watchlist Application till the port. For example: <PROTOCOL://HOSTNAME:WEB_SERVER_PORT>.	Yes
##AAI_URL##	If OFS BD application is installed and already configured for common gateway, then enter the OFS BD Application URL till the context name, else enter the OFS ECM Application URL till the context name. For example: <PROTOCOL://HOSTNAME:WEB_SERVER_PORT/CONTEXT_NAME>.	Yes, if KYC Onboarding is used. Else, use literal AAI_URL.
##CS_PROTOCOL_ SERVER_PORT##	This is the URL of OFS Customer Screening Application till the port. For example: <PROTOCOL://HOSTNAME:WEB_SERVER_PORT>.	Yes, if OFS CS is installed. Else, value must be CS_URL.

6. Navigate to the OFS_ECM_PACK/bin folder.
7. Execute the setup.sh file using the command: \$. /setup.sh SILENT.

6.3.1.3 OFS CRR 8.1.1.0.0 to OFS CRR 8.1.2.0.0

Prerequisite:

- The minimum AAI patch level must be Bug 33578231

NOTE

- The archive files are different for every operating system like, Solaris Sparc, and RHEL/Oracle Linux
- Ensure to take the backup of File System (FIC_HOME/FTP SHARE), Atomic schema, and Config schema before performing upgrade
- Ensure that the dispatcher is not running. If the dispatcher is running, stop and then start the upgrading process
- Ensure that you end all the batches before you start the upgrade process
- Ensure that you run the END_MANTAS_BATCH before starting the upgrade. For enabling the unlimited Cryptographic Policy for Java, see [Enabling Unlimited Cryptographic Policy for Java](#).

To upgrade to OFS CRR version 8.1.2.0, follow these steps:

1. Login to the OFSAA Server with user credentials that was used to install OFSAA.
2. Shut down all the OFSAAI Services. For more information, see the *Start/Stop Infrastructure Services* section in [Appendix E: Starting/Stopping Infrastructure Services](#).
3. Download Bug 33940400 and unzip the OFS CRR 8.1.2.0.0 Installer from [My Oracle Support](#).
4. Modify PatchConfig.xml under /OFS_CRR_PACK/OFS_RRS/conf/PatchConfig.xml with appropriate values as described in the following table.

[Table 23](#) provides the values for PatchConfig files:

Table 23: PatchConfig.xml

Placeholder Name	Significance and Expected Value	Mandatory
<Variable name="RR_UPLOAD_MODEL">##</Variable>	Update the ## Value as 0/1: 0 - Data model upload does not occur 1 - Data model upload occurs <Variable name="RR_UPLOAD_MODEL">1</Variable>.	Yes
<Variable name="DATA_TABLE_SPACE">##OFS_RRS_DATA_TBSP##</Variable>	This attribute refers to the Index Tablespace values available in OFS_RRS_SCHEMA_OUTPUT.xml which was generated at the time of installation.	Yes

Table 23: PatchConfig.xml

Placeholder Name	Significance and Expected Value	Mandatory
<pre><Variable name="INDEX_TABLE _SPACE">##OFS_RRS _INDEX_TBSP##</ Variable></pre>	This attribute refers to the Index Tablespace values available in OFS_RRS_SCHEMA_OUTPUT.xml which was generated at the time of installation.	Yes
<pre><Variable name="BIG_DATA_EN ABLE">FALSE</ Variable></pre>	Placeholder to enable Big Data. Enter FALSE.	Yes

5. Navigate to the OFS_CRR_PACK/bin folder.
6. Execute the setup.sh file using the command: `./setup.sh SILENT`.
7. After the upgrade of *BD+ECM+CRR* under `$FIC_HOME/ECM_Duplicate_Jar_Removal.sh` successful, execute the script as part of this file; we are removing older version `log4j/Spring jars & Lib_pgx` folder.
8. Apply the platform patch (Bug 33738222 - Standard Upgrade of Libraries For Common Usage in OFSAA on V8.1.2 - JAN-2022).
9. Apply the AAI THP mandatory patch (Bug 33649681 - Consolidated Fix For New Wave Theme on V812).
10. Navigate to `FIC_HOME/ficweb` and Run the `ant.sh` file to build a new EAR/WAR.
11. Deploy OFSAA EAR/WAR and restart the OFSAA App Server and Web Server.

6.4 Standalone Upgrade of ECM 8.1.1.1.0 to ECM 8.1.2.0.0

Perform the Standalone Upgrade of OFS ECM version 8.1.1.1.0 to OFS ECM version 8.1.2.0.0 via In-Place/Cloning Upgrade.

Prerequisite:

- The minimum AAI patch level must be Bug 33578231

- The minimum NGECM patch level must be Bug 33751667

NOTE

- Ensure to take the backup of File System (`FIC_HOME/FTP SHARE`), Atomic schema, and Config schema before performing upgrade
- Ensure that the dispatcher is not running. If the dispatcher is running, stop and then start the upgrading process
- Ensure that you end all the batches before you start the upgrade process
- Ensure that you run the `END_MANTAS_BATCH` before starting the upgrade. For enabling the unlimited Cryptographic Policy for Java, see [Enabling Unlimited Cryptographic Policy for Java](#).

6.4.1 In-Place/Cloning Upgrade of ECM 8.1.1.1.0 to ECM 8.1.2.0.0

Prerequisite:

- Database Version 19.0+
- Oracle Linux Server release 7 and 8
- Red Hat Enterprise Linux release 7 and 8
- IBM WebSphere Application Server 9.0.0.x
- Apache Tomcat v9.0.x
- Oracle WebLogic Server 12.2.x
- Oracle WebLogic Server 14.1.x

6.4.1.1 Upgrading from ECM 8.1.1.1.0 to ECM 8.1.2.0.0

To upgrade to OFS ECM version 8.1.2.0, follow these steps:

NOTE

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

1. Download Bug 33939235 and unzip the OFS ECM 8.1.2.0.0 Installer from [My Oracle Support](#).
2. Navigate to `OFS_ECM_PACK` and grant the `execute (755)` permission for all executables `$chmod 755 *`.
3. Modify `PatchConfig.xml` under `OFS_ECM_PACK/OFS_ECM/conf/PatchConfig.xml` with appropriate values as described in the following table.

Table 24 provides the values for PatchConfig files:

Table 24: PatchConfig.xml

Placeholder Name	Significance and Expected Value	Mandatory
##OFS_ECM_SAVE_METADATA##	This attribute is used by the installer to decide whether to execute hierarchy <i>Resave</i> . Applicable value is ALL.	Yes
##EXECUTE_PRE_AND_POST_SCRIPTS##	This flag indicates if certain scripts need to be executed just before and just after the data model upload. Applicable value is 1.	Yes (Value = 1)
##OFS_ECM_ANALYST_DATA_SOURCE##	Name of the Analyst Data source used for Admin Tools Configurations. For example: Create a data source with name ANALYST.	Yes
##OFS_ECM_MINER_DATA_SOURCE##	Name of the Miner Data source used for Admin Tools Configurations. For example: Create a data source with name MINER.	Yes
##BASE_COUNTRY##	ISO country code to use during data ingestion to record institution-derived geography risk on parties on transactions that are internal to the OFSECM client. For example: base_country=US base_country=US.	Yes
##DEFAULT_JURISDICTION##	Jurisdiction to assign the derived entities and derived addresses. For example: default_jurisdiction=AMEA.	Yes
##TNS_ADMIN##	This attribute refers to the path where TNSNAMES.ORA is placed. For example: /scratch/ofsaapp.	Yes
##BIG_DATA_ENABLE##	Placeholder to enable Big Data. Enter FALSE.	Yes
##FSDF_UPLOAD_MODEL##	This flag indicates if FSDF data model need to be executed just before and just after the data model upload. Applicable value is 1, else keep value to 0.	Yes
##OFS_ECM_DATA_CM_TBSP##	This attribute refers to the Data Tablespace values available in OFS_ECM_SCHEMA_OUTPUT.xml which was generated at the time of installation.	Yes

Table 24: PatchConfig.xml

Placeholder Name	Significance and Expected Value	Mandatory
##OFS_ECM_IDX_CM_TBSP##	This attribute refers to the Data Tablespace values available in OFS_ECM_SCHEMA_OUTPUT.xml which was generated at the time of installation.	Yes
OFS_ECM_CS_SOURCE## ##OFS_ECM_CS_LOADTYPE##</	<p>If the data is from same database, then pass the schema name: For example: Atomic Schema: CS_ATOM then, <Variable name="CSSOURCE">CS_ATOM</Variable><Variable name="CSLOADTYPE"></Variable></p> <p>If the data is from different database, then pass the 'DBLINK_NAME'.....LOADTYPE = DBLINK For example: <Variable name="AML-SOURCE">AMLDBL</Variable> <Variable name="AMLLOADTYPE">DBLINK</Variable></p> <p>Similarly, configure the following placeholders depending on your requirement: ##OFS_ECM_AML_SOURCE## ##OFS_ECM_AML_LOADTYPE## ##OFS_ECM_KYC_SOURCE## ##OFS_ECM_KYC_LOADTYPE## ##OFS_ECM_CS_SOURCE## ##OFS_ECM_CS_LOADTYPE## ##OFS_ECM_EXTERNALSYSTEM-SOURCE## ##OFS_ECM_EXTERNAL-SYSTEMLOADTYPE## ##OFS_ECM_TBAML_SOURCE## ##OFS_ECM_TBAML_LOADTYPE## ##OFS_ECM_FATCA_SOURCE## ##OFS_ECM_FATCA_LOADTYPE##</p>	Yes
NOTE: Onboarding specific entries.		
##OFS_COMM_DATA_TBSP##	<p>Name of the Comm Tablespace where the third party table must be created. For example: COMM_DATA_TBSP.</p>	Yes

Table 24: PatchConfig.xml

Placeholder Name	Significance and Expected Value	Mandatory
##CommonGateway_ DATA_SOURCE##	If OFS BD application is installed and already configured for common gateway, then enter the data source name pointing to the OFS BD Atomic schema else update with the ECM INFODOM name.	Yes
##CommonGateway_ T2J_DATA_SOURCE##	Parameter value must be updated with the ECM INFODOM name.	Yes
##CommonGateway_ INPUT_WEB_ PROTO- COL_SERVER_ PORT##	This is the URL of createJSON Ser- vice till the port. For example: <PROTO- COL://HOSTNAME:WEB_SERVER_ PORT/CONTEXT_NAME>.	Yes
##JSON_TABLE_WEB_ PROTOCOL_SERVER_ PORT##	This is the URL of JSON To Table Ser- vice deployed as part of OFS BD. For example: <PROTOCOL://HOST- NAME:WEB_SERVER_PORT>.	Yes, if ECM is integrated with OFS KYC. If not, value must be J2TURL.
##CommonGateway_ PROTOCOL_SERVER_ PORT##	This is the URL of Common Gateway Service till the port. For example: <PROTOCOL://HOSTNAME:WEB_ SERVER_PORT>.	Yes
##KYC_RISK_SCORE_ URL##	This is the URL of OFS BD Application till the context name. For example: <PROTO- COL://HOSTNAME:WEB_SERVER_ PORT/CONTEXT_NAME>.	Yes, if ECM is integrated with OFS KYC. If not, value must be BDURL.
##OFSS_WLS_ PROTO- COL_SERVER_ PORT##	This is the URL of OFS Watchlist Application till the port. For example: <PROTOCOL:// HOSTNAME:WEB_SERVER_PORT>.	Yes
##AAI_URL##	If OFS BD application is installed and already configured for common gateway, then enter the OFS BD Application URL till the context name else, enter the OFS ECM Application URL till the context name. For example: <PROTOCOL://HOSTNAME:WEB_ SERVER_PORT/CONTEXT_NAME>.	If KYC Onboarding is used, then Yes. Else, use literal AAI_URL.
##CS_PROTOCOL_ SERVER_PORT##	This is the URL of OFS Customer Screening Application till the port. For example: <PROTOCOL://HOSTNAME:WEB_ SERVER_PORT>.	Yes, if OFS CS is installed. If not, value must be CS_ URL.

4. Navigate to the `OFS_ECM_PACK/bin` folder.
5. Execute the `setup.sh` file using the command: `./setup.sh SILENT`.
6. After Installation is successful, under `$FIC_HOME/ECM_Duplicate_Jar_Removal.sh` execute the script as part of this file; we are removing older version `log4j/Spring jars & Lib_pgx` folder.
7. Apply the platform patch (Bug 33738222 - Standard Upgrade of Libraries For Common Usage in OFSAA on V8.1.2 - JAN-2022).
8. Apply the AAI THP mandatory Patch (Bug 33649681 - Consolidated Fix For New Wave Theme on V812).
9. Navigate to `FIC_HOME/ficweb` and Run the `ant.sh` file to build a new EAR/WAR.
10. Deploy OFSAA EAR/WAR and restart the OFSAA App Server and Web Server.

6.5 Pack on Pack In-Place/Cloning Upgrade from BD 8.1.1.1.0, ECM 8.1.1.1.0 and CRR 8.1.1.1.0 to BD 8.1.2.0.0, ECM 8.1.2.0.0 and CRR 8.1.2.0.0

Performing Pack on Pack In-Place/Cloning Upgrade from OFS BD version 8.1.1.1.0, OFS ECM version 8.1.1.1.0, and OFS CRR version 8.1.1.1.0 to OFS BD version 8.1.2.0.0, OFS ECM version 8.1.2.0.0, and OFS CRR version 8.1.2.0.0.

NOTE

- Ensure to take the backup of File System (`FIC_HOME/FTPSHARE`), Atomic schema, and Config schema before performing upgrade
- Ensure that the dispatcher is not running. If the dispatcher is running, stop and then start the upgrading process
- Ensure that you end all the batches before you start the upgrade process
- Ensure that you run the `END_MANTAS_BATCH` before starting the upgrade. For enabling the unlimited Cryptographic Policy for Java, see [Enabling Unlimited Cryptographic Policy for Java](#).

6.5.1 Pack on Pack Upgrade Sequence

Use the following pack upgrade sequence:

- [OFS BD 8.1.1.1.0 to OFS BD 8.1.2.0.0](#)
- [ECM 8.1.1.1.0 to ECM 8.1.2.0.0](#)
- [OFS CRR 8.1.1.1.0 to OFS CRR 8.1.2.0.0](#)

6.5.1.1 OFS BD 8.1.1.1.0 to OFS BD 8.1.2.0.0

Prerequisite:

- The minimum AAI patch level must be Bug 33578231
- The minimum BD patch level must be Bug 33767914

To upgrade to OFS BD version 8.1.2.0, follow these steps:

1. To download and copy the OFS BD Applications Pack version 8.1.2.0.0 archive file, see [Downloading and Copying the OFS BD Applications Pack Installer](#).

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

2. Login to the OFSAA Server with user credentials that was used to install OFSAA.
3. Shut down all the OFSAAI Services. For more information, see the *Start/Stop Infrastructure Services* section in [Appendix E: Starting/Stopping Infrastructure Services](#).
4. Download Bug 33940349 and unzip the OFS BD 8.1.2.0.0 Installer from [My Oracle Support](#).
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 8.1.1.0.0 installer.
7. 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.

8. Extract the contents of the Oracle Financial Services Behavior Detection Applications Pack 8.1.2.0.0 installer archive file using the command: `unzip_<os> <name of the file to be unzipped>`.
9. Allow the EXECUTE permission to the archive file OFS_BD_PACK as in the sample command: `chmod -R 750 OFS_BD_PACK`.
10. Update `PatchConfig.xml` and grant permission to the `.sh` files as described in the following table.

[Table 25](#) provides the values for PatchConfig files:

Table 25: PatchConfig.xml Parameters

Placeholder Name	Significance and Expected Value	Mandatory
##OFS_AML_SW_RMI-PORT##	The Scenario Wizard uses this attribute. It must consist of a proper port number and not be used by any other application. For example: 7623 or 8204.	Yes
##OFS_AML_SAVE_METADATA#	The installer to decide whether to execute hierarchy <i>Resave</i> uses this attribute. The applicable value is ALL.	Yes
##EXECUTE_PRE_AND_POST_SCRIPTS##	This flag indicates if certain scripts need to be executed just before and just after the data model upload Applicable value is 1.	Yes (Value = 0)

Table 25: PatchConfig.xml Parameters

Placeholder Name	Significance and Expected Value	Mandatory
##SCHEMA_OUT_XML_PATH##	This attribute refers to the path, which needs to be pointed to OFS_BD_SCHEMA_OUTPUT.xml, which was generated at the time of installation. For example: /scratch/ofsaapp/Installer/OFS_BD_PACK/schema_creator/OFS_BD_SCHEMA_OUTPUT.xml.	Yes
##OFS_FCCM_LOADER_ROLE##	This attribute role is used when OFS BD version 8.0.1.0/8.0.4.0.0 is installed. The value will be available in OFS_BD_SCHEMA_OUTPUT.xml and is generated at the time of 8.1.1.0.0 installation.	Yes
##OFS_AML_ANALYST_DATA_SOURCE##	Name of the Analyst Data source used for Admin Tools Configurations. For example: Create a data source with name ANALYST.	Yes
##OFS_AML_MINER_DATA_SOURCE##	Name of the Miner Data source used for Admin Tools Configurations. For example: Create a data source with name MINER.	Yes
##BASE_COUNTRY##	ISO country code to use during data ingestion to record institution-derived geography risk on parties on transactions that are internal to the OFSBD client. For example: base_country=US base_country=US.	Yes
##DEFAULT_JURISDICTION##	Jurisdiction to assign the derived entities and derived addresses. For example: default_jurisdiction=AMEA.	Yes
##TNS_ADMIN##	This attribute refers to the path where TNSNAMES.ORA is placed. For example: /scratch/ofsaapp.	Yes
##BIG_DATA_ENABLE##	Placeholder to enable Big Data. Enter FALSE.	Yes
##FSDF_UPLOAD_MODEL##	This flag indicates if FSDF data model needs to be executed just before and just after the data model upload. Applicable value is 1 else keep value to 0.	Yes
##OFS_AML_SQOOP_WORKING_DIR##	Placeholder to provide SQOOP working directory for AML.	Mandatory only if big data is enabled.

Table 25: PatchConfig.xml Parameters

Placeholder Name	Significance and Expected Value	Mandatory
##OFS_AML_SSH_AUTH_ALIAS##	Placeholder to provide SSH authorization alias for AML.	Mandatory only if big data is enabled.
##OFS_AML_SSH_HOST_NAME##	Placeholder to provide SSH host name for AML.	Mandatory only if big data is enabled.
##OFS_AML_SSH_PORT##	Placeholder to provide SSH port name for AML.	Mandatory only if big data is enabled.
<p>NOTE: KYC Onboarding requires the following additional deployments:</p> <ul style="list-style-type: none"> • Initiate Onboarding Service (InitiateOnboardingService.war) • Table To JSON Service (TabletoJSONService.war) • JSON To Table Service (JSONToTablePersistenceUtility.war) • Common Gateway Service (CommonGatewayService.war) • Generate Case Input Service (GenerateCaseInputService.war) • Create JSON Service (createJSONService.war) <p>The above .war files are available in the FIC_HOME path post-installation. For information on deploying the .war files, see Post Installation Configuration. These deployments are in addition to the Application Pack deployment, that is, OFSBD; Watchlist Service deployment and RAOR deployments that are mandatory for KYC Onboarding. For information on the services, see Know Your Customer Service Guide.</p>		
<p>NOTE: The following parameters are applicable for KYC Onboarding:</p>		
##OBDATASRCNAME# #	This is the name of the datasource pointing to the Atomic schema.	Mandatory only if KYC Onboarding is used. If not, value must be OBDATASRC-NAME.
##COMN_GATEWAY_DS##	This is the name of the datasource pointing to the Atomic schema.	Mandatory only if KYC Onboarding is used. If not, value must be COMN_GATEWAY_DS.
##AAI_AUTH_URL##	This is the URL of the BD application till the context name. For example: <PROTOCOL:/HOST-NAME:PORT/CONTEXT_NAME>.	Mandatory only if KYC Onboarding is used. If not, value must be AAI_URL.

Table 25: PatchConfig.xml Parameters

Placeholder Name	Significance and Expected Value	Mandatory
##TABLE_TO_JSON_PROTOCOL_SERVER_PORT##	This is the URL of Table To JSON Service till the port number. For example: <PROTOCOL:/HOSTNAME:PORT>.	Mandatory only if KYC Onboarding is used. If not, value must be T2J_URL.
##JSON_TO_TABLE_PROTOCOL_SERVER_PORT##	This is the URL of JSON To Table Service till the port number. For example: <PROTOCOL:/HOSTNAME:PORT>.	Mandatory only if KYC Onboarding is used. If not, value must be J2T_URL.
##OB_PROTOCOL_SERVER_PORT##	This is the URL of Initiate the Onboarding service till the port number. For example: <PROTOCOL:/HOSTNAME:PORT>.	Mandatory only if KYC Onboarding is used. If not, value must be OB_URL.
##ECM_APP_URL##	This is the URL of the ECM application till the context name. For example: <PROTOCOL:/HOSTNAME:PORT/CONTEXT_NAME>.	Mandatory only if KYC Onboarding is used. If not, value must be ECM_CASE_URL.
##CASE_INPUT_PROTOCOL_SERVER_PORT##	This is the URL of the Generate Case Input Service till the port number. For example: <PROTOCOL:/HOSTNAME:PORT>.	Mandatory only if KYC Onboarding is used. If not, value must be GCI_URL.
##COMMON_GATEWAY_PROTOCOL_SERVER_PORT##	This is the URL of the Common Gateway Service till the port number. For example: <PROTOCOL:/HOSTNAME:PORT>.	Mandatory only if KYC Onboarding is used. If not, value must be CMNGT-WYURL.
##SCORING_PROTOCOL_SERVER_PORT##	This is the URL of the RAOR Application till the port number. For example: <PROTOCOL:/HOSTNAME:PORT>.	Mandatory only if KYC Onboarding is used. If not, value must be SCORING_URL.
##OFSS_WLS_PROTOCOL_SERVER_PORT##	This is the URL of the OFS Watchlist application till the port number. For example: <PROTOCOL:/HOSTNAME:PORT>.	Mandatory only if KYC Onboarding is used. If not, value must be OFSS_WLS_URL.

Table 25: PatchConfig.xml Parameters

Placeholder Name	Significance and Expected Value	Mandatory
##CS_PROTOCOL_SERVER_PORT##	This is the URL of the OFS Customer Screening Application till the port number. For example: <PROTOCOL:/HOSTNAME:PORT>.	Mandatory only if KYC Onboarding is used. If not, value must be CS_URL.
##COMM_LOG_PATH##	This is the path of the KYC Onboarding log file. For example: /scratch/ofsaapp/KYC808DEV/apache-tomcat-8.0.47/logs.	Mandatory only if KYC Onboarding is used.
##QTNR_RESP_URL##	This is the URL of the OFS KYC Onboarding service. The URL is <PROTOCOL:/HOST-NAME:PORT/CONTEXT_NAME>/questionnaire_api/questionnaires/resume/<INFODOM>/en_US?appCode=OFS_KYC.	Mandatory only if KYC Onboarding is used. If not, value must be ##QTNR_RESP_URL##.
##OFS_COMM_DATA_TBSP##	This is the table space for the common gateway. The value is COMM_DATA_TBSP.	Mandatory only if KYC Onboarding is used. If not, value must be ##OFS_COMM_DATA_TBSP##.

11. Navigate to OFS_BD_PACK/bin.
12. Execute the command: ./setup.sh SILENT.

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 [My Oracle Support](#).

NOTE

The DMT migration utility is executed during BD installation, to migrate the DMT meta data (PLC/Data Source/Data Mapping/Data File Mapping) to be persisted in tables instead of XML. You may be required to re-run the DMT migration utility in some scenarios. To identify whether to run the utility, how to run and how to handle migration issues, see [OFSAA DMT Metadata Migration Guide](#).

13. For more information on securing your OFSAA Infrastructure, see the Security Guide in [OHC Library](#).
14. Add `umask 0027` in the `.profile` of the UNIX account which manages the Web server to ensure restricted access permissions.

15. Restart all the OFSAAI services. For more information, see the *Start/Stop Infrastructure Services* section in [Appendix E: Starting/Stopping Infrastructure Services](#).
16. 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 D: Creating and Deploying EAR/WAR File](#).
17. Deploy the RPD and catalog `ORACLE_ANALYTIC_SERVER (OAS) 5.9` files available under the `$FIC_HOME/ORACLE_ANALYTIC_SERVER (OAS) 5.9` folder.
18. For enabling TDE in case of a new installation, see the *Configuring TDE in case of Upgrade* section in [Appendix R: Configuring Transparent Data Encryption \(TDE\) in OFSAA](#).
19. For enabling Data Redaction in case of a new installation, see *Enabling Data Redaction*, in case of Upgrade section in [Appendix R: Configuring Transparent Data Encryption \(TDE\) in OFSAA](#).

6.5.1.2 ECM 8.1.1.1.0 to ECM 8.1.2.0.0

Prerequisite:

- The minimum AAI patch level must be Bug 33578231
- The minimum NGECEM patch level must be Bug 33751667

NOTE

- The archive files are different for every operating system like, Solaris Sparc, and RHEL/Oracle Linux
- Ensure to take the backup of File System (`FIC_HOME/FTPSHARE`), Atomic schema, and Config schema before performing upgrade
- Ensure that the dispatcher is not running. If the dispatcher is running, stop and then start the upgrading process
- Ensure that you end all the batches before you start the upgrade process
- Ensure that you run the `END_MANTAS_BATCH` before starting the upgrade. For enabling the unlimited Cryptographic Policy for Java, see [Enabling Unlimited Cryptographic Policy for Java](#).

To upgrade to OFS ECM version 8.1.2.0, follow these steps:

1. Login to the OFSAA Server with user credentials that was used to install OFSAA.
2. Shut down all the OFSAAI Services. For more information, see the *Start/Stop Infrastructure Services* section in [Appendix E: Starting/Stopping Infrastructure Services](#).
3. Download Bug 33939235 and unzip the OFS ECM 8.1.2.0.0 Installer from [My Oracle Support](#).
4. Navigate to `OFS_ECM_PACK` and grant the `execute (755)` permission for all executables `$chmod 755 *`.
5. Modify `PatchConfig.xml` under `OFS_ECM_PACK/OFS_ECM/conf/PatchConfig.xml` with appropriate values as described in the following table.

Table 26 provides the values for PatchConfig files:

Table 26: PatchConfig.xml Parameters

Placeholder Name	Significance and Expected Value	Mandatory
##OFS_ECM_SAVE_METADATA##	This attribute is used by the installer to decide whether to execute hierarchy <i>Resave</i> . Applicable value is ALL.	Yes
##EXECUTE_PRE_AND_POST_SCRIPTS##	This flag indicates if certain scripts need to be executed just before and just after the data model upload. Applicable value is 1.	Yes (Value = 1)
##OFS_ECM_ANALYST_DATA_SOURCE##	Name of the Analyst Data source used for Admin Tools Configurations. For example: Create a data source with name ANALYST.	Yes
##OFS_ECM_MINER_DATA_SOURCE##	Name of the Miner Data source used for Admin Tools Configurations. For example: Create a data source with name MINER.	Yes
##BASE_COUNTRY##	ISO country code to be used during data ingestion to record institution-derived geography risk on parties on transactions that are internal to the OFSECM client. For example: <code>base_country=US</code> <code>base_country=US</code> .	Yes
##DEFAULT_JURISDICTION##	Jurisdiction to assign the derived entities and derived addresses. For example: <code>default_jurisdiction=AMEA</code> .	Yes
##TNS_ADMIN##	This attribute refers to the path where <code>TNSNAMES.ORA</code> is placed. For example: <code>/scratch/ofsaapp</code> .	Yes
##BIG_DATA_ENABLE##	Placeholder to enable Big Data. Enter FALSE.	Yes
##FSDF_UPLOAD_MODEL##	This flag indicates if FSDF data model needs to be executed just before and just after the data model upload. Applicable value is 1 else keep value to 0.	Yes

Table 26: PatchConfig.xml Parameters

Placeholder Name	Significance and Expected Value	Mandatory
##OFS_ECM_DATA_CM_TBSP##	This attribute refers to the Data Tablespace values available in OFS_ECM_SCHEMA_OUTPUT.xml which was generated at the time of installation.	Yes
##OFS_ECM_IDX_CM_TBSP##	This attribute refers to the Data Tablespace values available in OFS_ECM_SCHEMA_OUTPUT.xml which was generated at the time of installation.	Yes
<p>OFS_ECM_CS_SOURCE##</p> <p>##OFS_ECM_CS_LOADTYPE##</</p>	<p>If the data is from same database, then pass the schema name. For example:</p> <p>Atomic Schema: CS_ATOM then,</p> <pre><Variable name="CSSOURCE">CS_ATOM</Variable> <Variable name="CSLOADTYPE"></Variable></pre> <p>If the data is from different database, then pass the 'DBLINK_NAME'LOADTYPE = DBLINK</p> <p>For example:</p> <pre><Variable name="AMLSOURCE">AMLDBL</Variable> <Variable name="AMLLOADTYPE">DBLINK</Variable></pre> <p>Similarly, configure the following placeholders depending on your requirement:</p> <pre>##OFS_ECM_AML_SOURCE## ##OFS_ECM_AML_LOADTYPE## ##OFS_ECM_KYC_SOURCE## ##OFS_ECM_KYC_LOADTYPE## ##OFS_ECM_CS_SOURCE## ##OFS_ECM_CS_LOADTYPE## ##OFS_ECM_EXTERNALSYSTEMSOURCE## ##OFS_ECM_EXTERNALSYSTEMLOADTYPE## ##OFS_ECM_TBAML_SOURCE## ##OFS_ECM_TBAML_LOADTYPE## ##OFS_ECM_FATCA_SOURCE## ##OFS_ECM_FATCA_LOADTYPE##</pre>	Yes
<p>NOTE: Onboarding specific entries.</p>		

Table 26: PatchConfig.xml Parameters

Placeholder Name	Significance and Expected Value	Mandatory
##OFS_COMM_DATA_TBSP##	Name of the Comm Tablespace where the third party table must be created. For example: COMM_DATA_TBSP.	Yes
##CommonGateway_DATA_SOURCE##	If OFS BD application is installed and already configured for common gateway, then enter the data source name pointing to the OFS BD Atomic schema, else update with the ECM_INFODOM name.	Yes
##CommonGateway_T2J_DATA_SOURCE##	Parameter value must be updated with the ECM_INFODOM name.	Yes
##CommonGateway_INPUT_WEB_PROTOCOL_SERVER_PORT##	This is the URL of createJSON Service till the port. For example: <PROTOCOL://HOSTNAME:WEB_SERVER_PORT/CONTEXT_NAME>.	Yes
##JSON_TABLE_WEB_PROTOCOL_SERVER_PORT##	This is the URL of JSON To Table Service deployed as part of OFS BD. For example: <PROTOCOL://HOSTNAME:WEB_SERVER_PORT>.	Yes, if ECM is integrated with OFS KYC. If not, value must be J2TURL.
##CommonGateway_PROTOCOL_SERVER_PORT##	This is the URL of Common Gateway Service till the port. For example: <PROTOCOL://HOSTNAME:WEB_SERVER_PORT>.	Yes
##KYC_RISK_SCORE_URL##	This is the URL of OFS BD Application till the context name. For example: <PROTOCOL://HOSTNAME:WEB_SERVER_PORT/CONTEXT_NAME>.	Yes, if ECM is integrated with OFS KYC. If not, value must be BDURL.
##OFSS_WLS_PROTOCOL_SERVER_PORT##	This is the URL of OFS Watchlist Application till the port. For example: <PROTOCOL://HOSTNAME:WEB_SERVER_PORT>.	Yes
##AAI_URL##	If OFS BD application is installed and already configured for common gateway, then enter the OFS BD Application URL till the context name, else enter the OFS ECM Application URL till the context name. For example: <PROTOCOL://HOSTNAME:WEB_SERVER_PORT/CONTEXT_NAME>.	Yes, if KYC Onboarding is used. Else, use literal AAI_URL.

Table 26: PatchConfig.xml Parameters

Placeholder Name	Significance and Expected Value	Mandatory
##CS_PROTOCOL_SERVER_PORT##	This is the URL of OFS Customer Screening Application till the port. For example: <PROTOCOL://HOSTNAME:WEB_SERVER_PORT>.	Yes, if OFS CS is installed. Else, value must be CS_URL.

6. Navigate to the OFS_ECM_PACK/bin folder.
7. Execute the setup.sh file using the command: `./setup.sh SILENT`.

6.5.1.3 OFS CRR 8.1.1.1.0 to OFS CRR 8.1.2.0.0

Prerequisite:

- The minimum AAI patch level must be Bug 33578231

NOTE

- The archive files are different for every operating system like, Solaris Sparc, and RHEL/Oracle Linux
- Ensure to take the backup of File System (FIC_HOME/FTPSHARE), Atomic schema, and Config schema before performing upgrade
- Ensure that the dispatcher is not running. If the dispatcher is running, stop and then start the upgrading process
- Ensure that you end all the batches before you start the upgrade process
- Ensure that you run the END_MANTAS_BATCH before starting the upgrade. For enabling the unlimited Cryptographic Policy for Java, see [Enabling Unlimited Cryptographic Policy for Java](#).

To upgrade to OFS CRR version 8.1.2.0, follow these steps:

1. Login to the OFSAA Server with user credentials that was used to install OFSAA.
2. Shut down all the OFSAAI Services. For more information, see the *Start/Stop Infrastructure Services* section in [Appendix E: Starting/Stopping Infrastructure Services](#).
3. Download Bug 33940400 and unzip the OFS CRR 8.1.2.0.0 Installer from [My Oracle Support](#).
4. Modify PatchConfig.xml under /OFS_CRR_PACK/OFS_RRS/conf/PatchConfig.xml with appropriate values as described in the following table.

Table 27 provides the values for PatchConfig files:

Table 27: PatchConfig.xml Parameters

Placeholder Name	Significance and Expected Value	Mandatory
<Variable name="RR_UPLOAD_MODEL">##</Variable>	Update the ## Value as 0/1: 0 - Data model upload does not occur 1 - Data model upload occurs <Variable name="RR_UPLOAD_MODEL">1</Variable>.	Yes
<Variable name="DATA_TABLE_SPACE">##OFS_RRS_DATA_TBSP##</Variable>	This attribute refers to the Index Tablespace values available in OFS_RRS_SCHEMA_OUTPUT.xml which was generated at the time of installation.	Yes
<Variable name="INDEX_TABLE_SPACE">##OFS_RRS_INDEX_TBSP##</Variable>	This attribute refers to the Index Tablespace values available in OFS_RRS_SCHEMA_OUTPUT.xml which was generated at the time of installation.	Yes
<Variable name="BIG_DATA_ENABLED">FALSE</Variable>	Placeholder to enable Big Data. Enter FALSE.	Yes

5. Navigate to the OFS_CRR_PACK/bin folder.
6. Execute the setup.sh file using the command: `./setup.sh SILENT`.
7. After the upgrade of *BD+ECM+CRR* under `$FIC_HOME/ECM_Duplicate_Jar_Removal.sh` successful, execute the script as part of this file; we are removing older version `log4j/Spring jars & Lib_pgx` folder.
8. Apply the platform patch (Bug 33738222 - Standard Upgrade of Libraries For Common Usage in OFSAA on V8.1.2 - JAN-2022).
9. Apply the AAI THP mandatory patch (Bug 33649681 - Consolidated Fix For New Wave Theme on V812).
10. Navigate to `FIC_HOME/ficweb` and Run the `ant.sh` file to build a new EAR/WAR.
11. Deploy OFSAA EAR/WAR and restart the OFSAA App Server and Web Server.

6.6 Post Upgradation Steps

This section describes the steps you undertake after successful upgrade.

To perform a post-upgrade, follow these steps:

1. Execute the following Queries under sys user, replacing with the Atomic Schema name:
 - GRANT execute on sys.dbms_crypto to ATOMIC_SCHEMA_NAME;
 - GRANT execute on sys.dbms_java to ATOMIC_SCHEMA_NAME;
 - GRANT execute on sys.dbms_utility to ATOMIC_SCHEMA_NAME;
2. Login to Atomic Schema and select the following packages from the *Package Bodies* by right-clicking:
 - PKG_FCC_DM
 - PKG_FCC_DM_FTP
3. Click **Compile** to compile the package.
4. If standalone ECM (upgraded from version 8.0.7.X.X/ +8.1.1.0.0+8.1.1.0+OFSECM 8.1.1.1 to OFSECM version 8.1.2.0.0) the following XML Tags must be commented from web.xml:

```

<!-- THE FOLLOWING TAGS MUST BE COMMENTED FROM WEB.XML -->
<context-param>
  <param-name>contextConfigLocation</param-name>
  <param-value>
    <!-- /WEB-INF/acegi-base.xml, /WEB-INF/dataAccessContext.xml-->
    /WEB-INF/applicationContext.xml
  </param-value>
</context-param>
<resource-ref>
<description>Data source for Analyst</description>
<res-ref-name>jdbc/##ANALYST_DATA_SOURCE##</res-ref-name>
<res-type>javax.sql.DataSource</res-type>
<res-auth>Container</res-auth>
</resource-ref>

<resource-ref>
<description>Data source for Miner</description>
<res-ref-name>jdbc/##MINER_DATA_SOURCE##</res-ref-name>
<res-type>javax.sql.DataSource</res-type>
<res-auth>Container</res-auth>
</resource-ref>

```



```

<filter>
    <filter-name>UTF8Filter</filter-name>
    <filter-class>com.mantas.platform.servlet.UTF8Filter</filter-
class>
</filter>

<filter>
    <filter-name>RequestValidatorFilter</filter-name>
    <filter-
class>com.mantas.platform.admin.filter.RequestValidatorFilter</filter-
class>
    <init-param>
        <param-name>excluded-urls</param-name>
        <param-value></param-value>
    </init-param>
</filter>
<filter-mapping>
    <filter-name>UTF8Filter</filter-name>
    <url-pattern>/*</url-pattern>
</filter-mapping>

<filter-mapping>
    <filter-name>RequestValidatorFilter</filter-name>
    <url-pattern>/app/request/*</url-pattern>
</filter-mapping>

<listener>
    <listener-
class>org.springframework.web.context.ContextLoaderListener</listener-
class>
</listener>

<servlet id="Servlet_1046464107434">
    <servlet-name>RequestServlet</servlet-name>
    <servlet-class>com.mantas.platform.web.RequestServlet</servlet-
class>
</servlet>
<servlet>

```

```
<servlet-name>AdminInitServlet</servlet-name>
<!--<display-name>AdminInitServlet</display-name> -->
<servlet-class>com.mantas.platform.admin.AdminInitServlet</servlet-
class>
<load-on-startup>1</load-on-startup>
</servlet>
```

```
    <servlet-mapping id="ServletMapping_1046465055267">
        <servlet-name>RequestServlet</servlet-name>
        <url-pattern>/app/request/*</url-pattern>
    </servlet-mapping>
```

```
<servlet>
    <servlet-name>Test</servlet-name>
<servlet-class>com.Test</servlet-class>
</servlet>
```

```
<servlet-mapping>
    <servlet-name>Test</servlet-name>
    <url-pattern>/admin_tools/Test</url-pattern>
</servlet-mapping>
```

```
<welcome-file-list id="WelcomeFileList_1046465055277">
    <welcome-file>index.jsp</welcome-file>
</welcome-file-list>
```

```
    <jsp-config>
<taglib id="TagLibRef_1046465055277">
<taglib-uri>/WEB-INF/tags/ui-taglib.tld</taglib-uri>
<taglib-location>/WEB-INF/tags/ui-taglib.tld</taglib-location>
</taglib>
</jsp-config>
```

5. If Sanction pack is installed, then execute the following query in the Config schema and commit:

```
MERGE INTO AAI_AOM_APP_COMP_ATTR_MAPPING T USING ( SELECT '1'
APP_COMP_ATTR_MAP_ID, '1' N_ATTRIBUTE_ID, 'Action' V_ATTR_CODE, '1002'
N_ATTR_TYPE_ID, 'select t.action_cd,t.action_nm from kdd_action t where
t.action_category_code is not null and t.action_category_code not in
```

```

('ENT','PR','EXP','AS','DD','OBS') V_ATTRIBUTE_VALUE1, ''
V_ATTRIBUTE_VALUE2,'OFS_NGECM' N_APP_ID, '-1' N_COMP_ID, '' V_UDP_CODE,
''V_ATTR_CONTROL_TYPE FROM DUAL) S

ON ( T.APP_COMP_ATTR_MAP_ID = S.APP_COMP_ATTR_MAP_ID AND T.N_APP_ID =
S.N_APP_ID )

WHEN NOT MATCHED THEN INSERT

(APP_COMP_ATTR_MAP_ID,N_ATTRIBUTE_ID,V_ATTR_CODE,N_ATTR_TYPE_ID,V_ATTRIB
UTE_VALUE1,V_ATTRIBUTE_VALUE2,N_APP_ID,N_COMP_ID,V_UDP_CODE,V_ATTR_CONTR
OL_TYPE)VALUES

(S.APP_COMP_ATTR_MAP_ID,S.N_ATTRIBUTE_ID,S.V_ATTR_CODE,S.N_ATTR_TYPE_ID,
S.V_ATTRIBUTE_VALUE1,S.V_ATTRIBUTE_VALUE2,S.N_APP_ID,S.N_COMP_ID,S.V_UDP
_CODE,S.V_ATTR_CONTROL_TYPE)

/

MERGE INTO AAI_AOM_APP_COMP_ATTR_MAPPING T USING ( SELECT '2'
APP_COMP_ATTR_MAP_ID, '2' N_ATTRIBUTE_ID, 'Status' V_ATTR_CODE, '1002'
N_ATTR_TYPE_ID, 'select t.status_cd,t.status_nm from kdd_status t where
t.viewd_result_status_cd is null or t.viewd_result_status_cd <>
'OBS'' V_ATTRIBUTE_VALUE1, '' V_ATTRIBUTE_VALUE2,'OFS_NGECM' N_APP_ID,
'-1' N_COMP_ID, '' V_UDP_CODE, ''V_ATTR_CONTROL_TYPE FROM DUAL) S

ON ( T.APP_COMP_ATTR_MAP_ID = S.APP_COMP_ATTR_MAP_ID AND T.N_APP_ID =
S.N_APP_ID )

WHEN NOT MATCHED THEN INSERT

(APP_COMP_ATTR_MAP_ID,N_ATTRIBUTE_ID,V_ATTR_CODE,N_ATTR_TYPE_ID,V_ATTRIB
UTE_VALUE1,V_ATTRIBUTE_VALUE2,N_APP_ID,N_COMP_ID,V_UDP_CODE,V_ATTR_CONTR
OL_TYPE)VALUES

(S.APP_COMP_ATTR_MAP_ID,S.N_ATTRIBUTE_ID,S.V_ATTR_CODE,S.N_ATTR_TYPE_ID,
S.V_ATTRIBUTE_VALUE1,S.V_ATTRIBUTE_VALUE2,S.N_APP_ID,S.N_COMP_ID,S.V_UDP
_CODE,S.V_ATTR_CONTROL_TYPE)

/

MERGE INTO AAI_AOM_APP_COMP_ATTR_MAPPING T USING ( SELECT '9'
APP_COMP_ATTR_MAP_ID, '9' N_ATTRIBUTE_ID, 'NextStatus' V_ATTR_CODE,
'1002' N_ATTR_TYPE_ID, 'select t.status_cd,t.status_nm from kdd_status t
where t.viewd_result_status_cd is null or t.viewd_result_status_cd <>
'OBS'' V_ATTRIBUTE_VALUE1, '' V_ATTRIBUTE_VALUE2,'OFS_NGECM' N_APP_ID,
'-1' N_COMP_ID, '' V_UDP_CODE, ''V_ATTR_CONTROL_TYPE FROM DUAL) S

ON ( T.APP_COMP_ATTR_MAP_ID = S.APP_COMP_ATTR_MAP_ID AND T.N_APP_ID =
S.N_APP_ID )

WHEN NOT MATCHED THEN INSERT

(APP_COMP_ATTR_MAP_ID,N_ATTRIBUTE_ID,V_ATTR_CODE,N_ATTR_TYPE_ID,V_ATTRIB
UTE_VALUE1,V_ATTRIBUTE_VALUE2,N_APP_ID,N_COMP_ID,V_UDP_CODE,V_ATTR_CONTR
OL_TYPE)VALUES

```

```
(S.APP_COMP_ATTR_MAP_ID,S.N_ATTRIBUTE_ID,S.V_ATTR_CODE,S.N_ATTR_TYPE_ID,  
S.V_ATTRIBUTE_VALUE1,S.V_ATTRIBUTE_VALUE2,S.N_APP_ID,S.N_COMP_ID,S.V_UDP  
_CODE,S.V_ATTR_CONTROL_TYPE)
```

/

7 Post Deployment Configuration

This chapter provides detailed information about the Post Deployment Configurations which lists the various configurations must be completed before you start using the Oracle Financial Services Analytical Application (OFSAA) Applications.

Topics:

- [Creating Application Users](#)
- [Mapping Application User\(s\) to User Group](#)
- [Performing Administrative Activities for ECM](#)
- [Performing Configurations for ECM](#)
- [Setting ECM UI as Home Page of OFSAAI for a Particular User](#)

7.1 Creating Application Users

If you have already configured users in the OFSAA setup, this step might not be necessary.

For more information, see the *User Creation* section in [Oracle Financial Services Analytical Applications Infrastructure User Guide](#).

7.2 Mapping Application User(s) to User Group

Pre-configured application user groups are seeded with the installation of each Oracle Financial Services Analytical Application (OFSAA) Applications Pack beginning with the OFSAA 8.0 release. These user groups are unique to each OFSAA Applications Pack and come pre-configured with application roles.

[Table 28](#) lists the User Groups seeded with the OFS ECM Application Pack.

Table 28: Seeded User Groups

Name	Description
Modeler Group	Users mapped to this group have access to all the menu items for Enterprise modeling, but do not have authorization rights for sandbox population, model deployment, and modeling technique authorization.
Modeling Administrator Group	Users mapped to this group have access to all the menu items for Enterprise modeling and authorization rights for sandbox population, model deployment, and modeling technique authorization.
Inline Processing Admin Group	Users mapped to this group have access to all the menu items and actions for Inline Processing module.
Business Administrator	Users mapped to this group have access to all the menu items and actions for advanced operations of meta data objects.
Business Authorizer	Users mapped to this group have access to all the menu items and actions for authorization of changes to meta-data objects.
Business Owner	Users mapped to this group have access to all the menu items and actions to read and write meta-data objects
Business User	Users mapped to this group have access to all the menu items and actions to access and read meta-data objects.

Table 28: Seeded User Groups

Name	Description
Identity Administrator	Users mapped to this group have access to all the menu items to manage User entitlements, User Group Entitlements and Access Management configurations.
Identity Authorizer	Users mapped to this group have access to all the menu items to authorize User entitlements, User Group Entitlements and Access Management configurations.
System Administrator	Users mapped to this group have access to all menu items to manage the setup configurations.
Object Administrator	Users mapped to this group have access to all menu items to manage object migration and meta-data traceability using meta-data browser.
Guest Group	Users mapped to this group have access to certain menu items with view only access privileges.

Map the application user(s) to the respective Application User Group(s) and subsequently authorize the entitlements by logging in as *SYSAUTH* (System Authorizer) user.

NOTE

- In case the User Groups related to OFS ECM are not mapped, ensure that you map it accordingly in ORACLE ANALYTIC SERVER (OAS) 5.9 catalog for Statement View report
- In order to view the MIS reports in ECM Standalone, map the Case Analyst2 User Group in the application.

For more information, see the *Mapping/Unmapping Users* section in [Oracle Financial Services Analytical Applications Infrastructure User Guide](#).

7.3 Performing Administrative Activities for ECM

This section describes how to perform administrative activities for OFS ECM. To perform the administrative activities you must access the OFS ECM UI as ECMAP Administrator. For more information, see the following sections in the [Administration and Configuration Guide](#):

- About Configuring Access Control Meta data
- Mapping Users To Access Control Meta data
- About Scenario Manager Login Accounts
- About Changing Passwords for System Accounts
- About Configuring File Type Extensions
- About Configuring File Size
- About Configuring Status To User Role Table

NOTE

Once Security Attributes mapping is completed for the ECMAP Administrator user, restart the OFSAAI and Web Application servers before accessing the Admin Tools application.

7.4 Performing Configurations for ECM

This section describes how to perform configuration-related activities for OFS ECM. To perform the configuration-related activities you must access the OFS ECM UI as ECMAP Administrator. For more information, see the following sections in the [Administration and Configuration Guide](#):

- Configuring the Base Time Zone
- Configuring the Default Currency Code
- Configuring E-mail
- Configuring XML Export
- Configuring Case Correlation Owner
- Configuring Default Case Owner

7.5 Setting ECM UI as Home Page of OFSAAI for a Particular User

This section describes how the ECM Administrator/Supervisor can set the OFS ECM UI as homepage of OFSAAI for a particular user.

To set the OFS ECM UI as homepage of OFSAAI, follow these steps:

1. Log in as an ECM Administrator/Supervisor user.
2. Navigate to *Homepage*.
3. Click on logged-in user name in the right top corner.
4. Click **Preferences** and a new page is displayed.
5. Select **Enterprise Case Management** as your default page and click **Save**.

8 Post Installation Configuration

This chapter describes the how to configure the OFS ECM Application Pack.

Topics:

- [Deploying ECM Application Pack](#)
- [Deploying Analytic Reports and Threshold Analyzer](#)

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

8.1 Deploying ECM Application Pack

This section describes how deploy the OFS ECM Application Pack.

To create and deploy the Applications Pack Web Archive, follow these steps:

1. Navigate to the `$FIC_WEB_HOME` directory.
2. Execute the command: `./ant.sh`.
3. This triggers the creation of EAR/WAR file - `<contextname>.<extn>`. Here `<contextname>` is the context name entered during installation.

NOTE Creating EAR/WAR files are done by the installer automatically. If the files are not created, user can execute these steps.

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

NOTE This process overwrites any existing version of EAR/WAR file in the path. If the Web Application Server is Apache Tomcat, the `<contextname>.war` file is created.

6. Deploy the generated EAR/WAR file on to the Web Application Server. For more information, see [Deploying EAR/WAR File](#).

8.2 Deploying Analytic Reports and Threshold Analyzer

This section describes how to deploy Analytics on Oracle Business Intelligence Enterprise Edition (ORACLE ANALYTIC SERVER (OAS) version 5.9) and integrate Analytic Reports and Threshold Analyzer in the OFSECM UI.

Topics:

- [Installing OAS Version 5.9](#)
- [Installing OAS Version 5.9 Windows Administration Client](#)
- [Disabling Cache Feature in OAS Version 5.9](#)

- [Change Default Repository Password](#)
- [Configuring OAS Version 5.9 Connection Pool](#)
- [Deploying ECM Report Analytics](#)
- [Configuring TreeMap Graph](#)
- [Disabling Single Sign On](#)
- [Accessing Reports Through ECM Application](#)
- [Configuring OAS with ECM](#)
- [Enabling Table Authentication in OAS Version 5.9](#)
- [Deploying createJSONService and CommonGatewayService](#)
- [Configuring Resource Reference](#)
- [Configuring Web Application Server](#)
- [Configurations for Java 8](#)
- [Enabling Unlimited Cryptographic Policy for Java](#)
- [Configuring Fonts](#)

8.2.1 Installing OAS Version 5.9

To install the ORACLE ANALYTIC SERVER (OAS) version 5.9, follow these steps:

1. Download the software from [ORACLE ANALYTIC SERVER \(OAS\) 5.9 server](#).
2. After installation, get the Enterprise Manager URL, User name, Password, and ORACLE ANALYTIC SERVER (OAS) version 5.9 installed directory from your System Administrator.

NOTE

- You must map the BI Admin Reporter Role with Atomic Schema INFODOM
- The BI Admin Reporter Role must be mapped to any group (for example, CASESUPERVISOR).

8.2.2 Installing OAS Version 5.9 Windows Administration Client

You can download and install the Oracle Analytic Server (OAS) version 5.9 Windows Administration Client from here.

8.2.3 Disabling Cache Feature in OAS Version 5.9

This section describes how to disable the Cache feature in the Oracle Analytic Server (OAS) version 5.9. To disable the Cache feature, follow these steps:

1. Login to the Enterprise Manager.
2. Click the **Target Navigation** icon.
3. Expand the **Business Intelligence** section and then click **biinstance**.
4. Click the **Configuration** tab.

5. Click the **Lock** icon and then click **Lock & Edit** to enable the **Cache Enabled** check-box.
6. Under the **Performance** tab, in the **Enable Bi Server Cache** section, deselect the **Cache Enabled** check-box and make the required changes.
7. Click the **Lock** icon and then click **Release Configuration** to save the changes made.

8.2.4 Change Default Repository Password

Copy the `FCCM81.rpd` from `$FIC_HOME/ORACLE_ANALYTIC_SERVER (OAS) 5.9/Repository` to the Windows machine where the Oracle Analytic Server (OAS) 5.9 Windows Administration Client is installed.

To change the default password for the repository, follow these steps:

1. Open the Repository using the OAS Windows Administration client from Windows machine.
2. From the **File** menu, select **Open**, and click **Offline**.
3. Browse to the Repository on Windows machine. The *Oracle BI Administration Tool - FCCM810.rpd* window is displayed.
4. Enter default Repository password: `FCCM$810`.

To change the default password, follow these steps:

1. From the **File** menu, choose **Change Password**.
2. Enter the new password and click **OK**.

8.2.5 Configuring OAS Version 5.9 Connection Pool

This section describes how to configure the Oracle Analytic Server (OAS) version 5.9 Connection Pool. To configure the Connection Pool of the repository, follow these steps:

1. Open the same Repository (as in the previous step) on the Windows machine. The *Oracle BI Administration Tool - FCCM81.rpd* window is displayed.
2. Expand the `FCCM` folder in the **Physical** section.
3. Double-click **Connection Pool** to open the *Connection Pool Properties* window.
4. Enter the following in the **Data Source Name** text box of the *Connection Pool Properties* window after modifying `<Database Server Host Name>` and `<Database Name>` Data Source Name = (DESCRIPTION=(ADDRESS=(PROTOCOL=TCP) (HOST=<Database Server HostName>) (PORT=1521)) (CONNECT_DATA=(SERVER=DEDICATED) (SERVICE_NAME=<Database Name>))).
5. Enter the Atomic Schema **user name** and **password** in respective fields.
6. Click **OK**.
7. Expand the folder.
8. Right-click on any one table name and select **View Data**.
9. Perform similar changes in the **Connection Pools** for all remaining folders in the **Physical Layer** by providing the following schema details for all Connection Pools:
 - KYC Analytics > Atomic Schema

NOTE

Both the initial block and the connection pool must point to the Atomic Schema.

- UIC_73 > CaseMng Connection Pool >Atomic SchemaUIC_73 > Security Connection Pool > Atomic Schema
 - TA > Atomic Schema
 - CTRBI > Atomic Schema
 - ORCL > Atomic Schema
 - FCCM > Atomic Schema
10. From the **File** menu, select **Save**. The message: *Do you want to check global consistency?* is displayed.
 11. Click **Yes**. The message: *Consistency check didn't find any errors, warning or best practices violations.* is displayed.
 12. Click **OK**.

8.2.6 Deploying ECM Report Analytics

This section describes how to deploy the OFS ECM Report Analytics.

To deploy Reports Analytics, follow these steps:

1. Change the value in the `Nqsconfig.ini` file located at `<FMW_HOME>/user_projects/domains/bi/config/fmwconfig/biconfig/OBIS`.
Change from `EVALUATE_SUPPORT_LEVEL = 0` to `EVALUATE_SUPPORT_LEVEL =2`.
2. Update the `instanceconfig.xml` file available in the `<Oracle Analytic Server (OAS) 5.9_home>/user_projects/domains/bi/config/fmwconfig/biconfig/OBIPS` location as detailed here.

Replace the following script:

```
<Security>
<!--This Configuration setting is managed by Oracle Enterprise Manager
Fusion
Middleware Control-->
<ClientSessionExpireMinutes>210</ClientSessionExpireMinutes>
</Security>
```

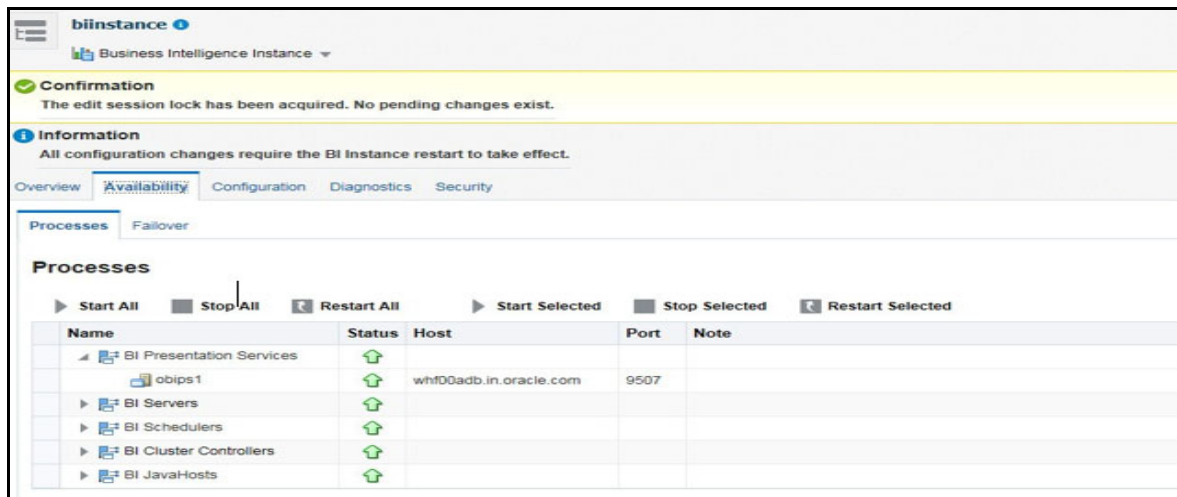
With the following:

```
<Security>
<!--This Configuration setting is managed by Oracle Enterprise Manager
Fusion
Middleware Control-->
<ClientSessionExpireMinutes>210</ClientSessionExpireMinutes>
<EnableSavingContentWithHTML>>true</EnableSavingContentWithHTML>
</Security>
```

3. Copy the `FCCM808.rpd` file in the working directory.
4. Navigate to the working directory and execute the following script:

- ```
<Oracle Analytic Server (OAS) 5.9_home>/user_projects/domains/bi/
bitools/bin/datamodel.sh uploadrpd -I FCCM807.rpd -SI ssi -U <user> -P
<password>
```
5. Restart the *Oracle Analytic Server (OAS) 5.9* from *Enterprise Manager* by following these steps: (see [Figure 16](#))
    - a. Click the **Target Navigation** icon.
    - b. Expand the **Business Intelligence** section and then click **biinstance**.
    - c. Click the **Availability** tab.
    - d. Click **Stop All**.
    - e. Execute the command: `./importarchive.sh ssi <working location>/FCCM_ANALYTICS.bar encryptionpassword='FCCM$810'`.
    - f. Click **Start All**.

**Figure 16: Restarting Oracle Analytic Server (OAS) 5.9**



## 8.2.7 Configuring TreeMap Graph

This section describes how to configure the TreeMap Graph.

To configure the TreeMap Graph, follow these steps:

1. Login to Oracle Analytic Server (OAS) 5.9.
2. Navigate to *ORACLE ANALYTIC SERVER (OAS) 5.9 Home* and execute the command: `cd <Oracle Analytic Server (OAS) 5.9_home>`.

**NOTE** ORACLE ANALYTIC SERVER (OAS) 5.9 Home is the ORACLE ANALYTIC SERVER (OAS) 5.9 installed path.

3. Execute the command to find the available `treemap-canvas.js`: `find -name treemap-canvas.js`.  
Four different files, all named `treemap-canvas.js` are displayed.
4. Back up these four files.

5. Edit **window.top.console** to console in these four files and save.

## 8.2.8 Disabling Single Sign On

This section describes how to disable the Single Sign On feature. To disable Single Sign On, execute the following command:

```
<Oracle Analytic Server (OAS) 5.9_Home>/oracle_common/common/bin/wlst.sh
disableBISingleSignOn('<Oracle Analytic Server (OAS) 5.9_Home>/
user_projects/domains/bi')
```

## 8.2.9 Accessing Reports Through ECM Application

This section describes how to access reports through the Oracle Financial Services Enterprise Case Management Pack (OFS ECM) application.

For more information on Accessing Reports, see [Alert Management User Guide](#).

## 8.2.10 Configuring OAS with ECM

This section describes how to configure the Oracle Analytic Server (OAS) with Enterprise Case Management (ECM).

After installing the OAS server, follow these steps (applicable only for PACK ON PACK):

1. Log in as *OFS BD Admin User* with valid user name and password.  
The *OFS BD Homepage* is displayed.
2. Click **FCCM**.
3. Click the **Administration** menu and then select **Manage Parameters** and click **Manage Common Parameters**.
4. Choose **Parameter Category** as **UI** and **Parameter Name** as **OBIEE**.
5. Set **Attribute 2 Value** = <PROTOCOL>://<OBIEE\_SERVER\_NAME>:<PORT>.

### NOTE

- <PROTOCOL> is the web page access PROTOCOL (http or https)  
<OBIEE\_SERVER\_NAME> is the FQN (fully qualified name)/host name of the server, where OBIEE is installed.  
<PORT> is the PORT number used in OBIEE installation. It may change based on the OBIEE version. Enter the correct PORT number, if it is not 9704.
- Placeholder variables are mentioned between angle brackets. Update the placeholders with actual value
- You must provide Fully Qualified host name.

Verify **Attribute 4 Value**. It must be the OFS BD application URL. If the same OFS BD application is deployed on different machines, then modify the OFS BD application URL in **Attribute 4 Value** appropriately.

6. After installing the OAS server, perform the following step (applicable only for ECM):

Set **Attribute 2 Value** = <PROTOCOL>://<OBIEE\_SERVER\_NAME>:<PORT>.

For more information, see the **NOTE** under step 5.

### 8.2.11 Enabling Table Authentication in OAS Version 5.9

This section describes how to enable the Table Authentication feature in Oracle Analytic Server (OAS) 5.9.

To enable the Table Authentication feature, follow these steps:

1. Navigate to `<DOMAIN_HOME (OAS Server Domain home)>`

`/config/fmwconfig/biconfig/OBIPS/incubation.properties` (if this file does not exist, create it)

2. Add/update the `incubation.properties` file with the following line:

- `oracle.bips.auth.nextGenAuth=false`

3. Restart the OBIPS process(es).

For example:

- `<DOMAIN_HOME>/bitools/bin/stop.sh -i obips1`
- `<DOMAIN_HOME>/bitools/bin/start.sh -i obips1`

### 8.2.12 Deploying createJSONService and CommonGatewayService

This section describes how to deploy the `createJSONService` and `CommonGatewayService` services.

To deploy the `createJSONService` and `CommonGatewayService` services, follow these steps:

1. Navigate to `$FIC_HOME/CommonGateway`.
2. Trigger the `ant.sh` file.

The `createJSONService.war` and `CommonGatewayService.war` files are generated in the same path.

3. Deploy the generated WAR file on to the Web Application Server. For more information, see [Appendix D: Creating and Deploying EAR/WAR File](#).

### 8.2.13 Configuring Resource Reference

This section describes the details for configuring the resource reference in WebSphere, WebLogic, and Tomcat Application Servers. For more information, see [Appendix B: Configuring Resource Reference in Web Servers](#).

### 8.2.14 Configuring Web Application Server

This section describes the details to configure the different web application servers for OFSAA Infrastructure deployment namely, IBM WebSphere, Oracle WebLogic, and Apache Tomcat Servers. For more information, see [Appendix A: Configuring the Web Server](#).

#### NOTE

If you are installing CRR version 8.11.0.0 for the Tomcat 9.x version and performing Pack on Pack installation of BD, ECM, and CRR (goAML STR), see the *Post Installation Chapter and Configuring Web Application Server* section in [OFS CRR Installation Guide](#).

## 8.2.15 Configurations for Java 8

This section describes how to set configurations for Java 8.

To set configurations for Java 8, follow these steps:

1. Extract the Patch.
2. Follow the instructions given in the `ReadMe` file to apply the patch.
3. If the Oracle Database version is 12c, copy `ojdbc7.jar` from `$ORACLE_HOME/jdbc/lib` into the following locations:
  - `$FIC_HOME/utility/OFSAAGenerateRepository/lib/`
  - `$FIC_HOME/realtime_processing/WebContent/WEB-INF/lib/`
  - `$FIC_HOME/ficdb/lib/`
  - `$FIC_HOME/ficapp/icc/lib/`
  - `$FIC_HOME/ficapp/common/FICServer/lib/`
  - `$FIC_HOME/FMStandalone/FormsManager/WEB-INF/lib/`
  - `$FIC_HOME/ficweb/webroot/WEB-INF/lib/`

**NOTE** If `ojdbc6.jar` is already available in any of the aforementioned folders, you must remove it.

4. If the Oracle Database version is 11g, copy `ojdbc6.jar` from `$ORACLE_HOME/jdbc/lib` into the following locations:
  - `$FIC_HOME/utility/OFSAAGenerateRepository/lib/`
  - `$FIC_HOME/realtime_processing/WebContent/WEB-INF/lib/`
  - `$FIC_HOME/ficdb/lib/`
  - `$FIC_HOME/ficapp/icc/lib/`
  - `$FIC_HOME/ficapp/common/FICServer/lib/`
  - `$FIC_HOME/FMStandalone/FormsManager/WEB-INF/lib/`
  - `$FIC_HOME/ficweb/webroot/WEB-INF/lib/`

## 8.2.16 Enabling Unlimited Cryptographic Policy for Java

Enabling unlimited cryptographic policy for Java enables you to use AES-256 keys for encryption. The JCE Policy JAR files, for the current Java versions required for OFSAA and also for later versions, are available in [Java Bug Database](#).

For Java versions, where unlimited cryptographic policy is not enabled by default. To enable, follow these steps:

1. Download the JCE Policy-related JARs `local_policy.jar` and `US_export_policy.jar`.
  - For Oracle Java, download it from <http://www.oracle.com/technetwork/java/javase/downloads/jce-7-download-432124.html>
  - For IBM Java, download it from <https://www14.software.ibm.com/webapp/iwm/web/preLogin.do?source=jcesdk>

2. Copy (or replace) the downloaded JCE Policy-related JARs `local_policy.jar` and `US_export_policy.jar` into the `/jre/lib/security` directory of Java installation directory used for OFSAAI and the Web Application Servers.

### 8.2.17 Configuring Fonts

This section describes how to configure fonts.

To configure the fonts, follow these steps:

1. Copy the directory `Fonts` from `$FIC_HOME/Fonts` into `<##JDKHOME##>/jdk1.8.0_161/jre/lib/` or `<##JRE_HOME##>/lib/`.
2. Edit the `fop_cs.xml` file available under directory `$FIC_HOME/ficweb/webroot/WEB-INF/classes/Reports/Input`.

from:

```
<font-base> </font-base>
```

to:

```
<font-base><##JDKHOME##>/jdk1.8.0_161/jre/lib/Fonts</font-base>
```

For example: `<##JDKHOME##>/jdk1.8.0_161/jre/lib/Fonts`.

3. Once the above steps are done, recreate the *OFSAA EAR/WAR* file and redeploy this new WAR on the Web Application Server.



## 9 GDPR Compliance

The General Data Protection Regulation (GDPR) is a regulation in EU law on data protection and privacy in the European Union (EU) and the European Economic Area (EEA).

### 9.1 Configuring Data Redaction

Oracle Financial Services Analytical Application (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 before display by applications so that unauthorized users cannot view the sensitive data. The stored data remains unaltered, while displayed data is transformed into a pattern that does not contain any identifiable information.

To enable Data Redaction, follow these steps:

1. Log in as `SYSDBA` into the database.
2. Execute the `$FIC_HOME/utility/data_security/scripts/create_data_sec_roles.sql` file only once per database (PDB in case of 18c/19c).
3. Execute the following SQL statement to find out the list of Atomic users from the table:  

```
select v_schema_name from aai_db_detail where V_DB_NAME <> 'CONFIG' AND V_DB_TYPE = 'ORACLE'.
```
4. Execute the `$FIC_HOME/utility/data_security/scripts/grant_data_sec_roles.sql` file for all Atomic users found in the previous step.
5. From the **Configuration** window in the **System Configuration** module, select the **Allow Data Redaction** checkbox.
6. Run the Data Redaction utility.

For more details on enabling Data Redaction, see the *Data Redaction* section in the *Data Security and Data Privacy* topic in the [OFS Analytical Applications Infrastructure Administration Guide](#).

#### Topics:

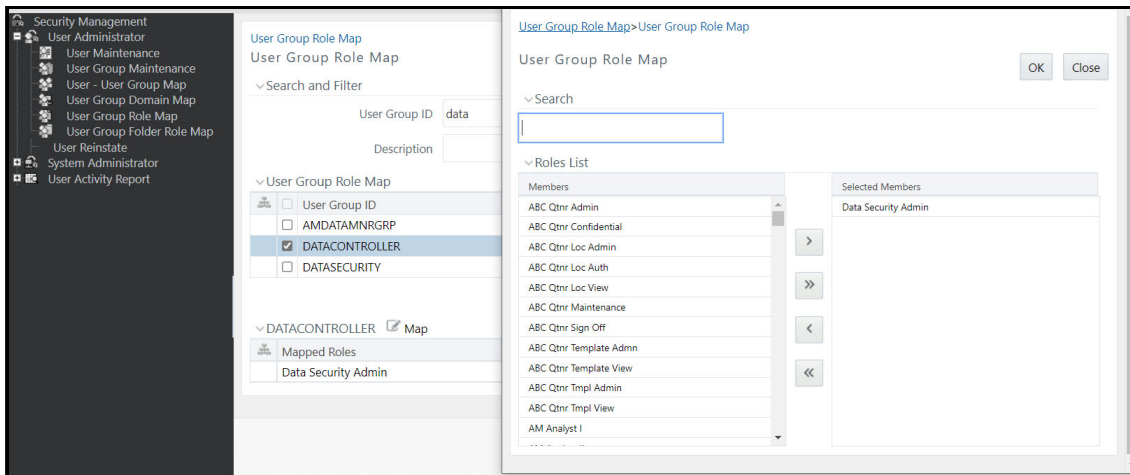
- [Prerequisites](#)
- [Input for Data Redaction](#)
- [Data Redaction Utility](#)
- [Creating Batch for Executing Data Redaction Utility](#)
- [Logs](#)
- [Disabling Data Redaction](#)
- [Enabling Data Redaction in Case of Upgrade](#)

#### 9.1.1 Prerequisites

1. Install the patch **32581255** - GDPR Redaction Requirement For FFW.
2. Ensure the required Oracle Database Server versions are installed:
  - Oracle Database Server Enterprise Edition 18c Release 3 - 64 bit RAC/Non-RAC with/without partitioning option, Advanced Security option

- Oracle Database Server Enterprise Edition 19c Release 3 - 64 bit RAC/Non-RAC with/without partitioning option, Advanced Security option.
3. You must have performed all configurations mentioned in the *Data Redaction* section in [Oracle Financial Services Analytical Applications Infrastructure Installation and Configuration Guide](#).
  4. The *DATASECURITYADMIN* user role must be mapped to the user to run the Data Redaction utility.
  5. From the **Configuration** window in the **System Configuration** module, select the **Allow Data Redaction** checkbox. For more information, see **Configuration** section in the [OFS Analytical Applications Infrastructure User Guide](#).

**Figure 17: Configuration window**



## 9.1.2 Input for Data Redaction

Table 29 lists the table names that are seeded as part of Data Redaction.

**Table 29: Data Redaction Table Name and Their Description**

| Table Name                  | Description                                                                                                                                                                                                                                                                                                                   |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AAI_DRF_FUNCTION_MASTER     | This table holds the Redaction function definitions. Generic Functions can be email, card number, phone number etc.                                                                                                                                                                                                           |
| AAI_DRF_FUNCTION_COLUMN_MAP | This table holds the Redaction Function- Column mappings. The columns will be redacted according to the Function mapping.                                                                                                                                                                                                     |
| AAI_DRF_TABLE_ACCESS_CD_MAP | This table holds the mapping of tables having columns marked for redaction to the Access codes. These access codes are SMS function codes and are expected to be mapped to the role <i>DATASECURITY</i> . The policy expression would be created based on this role and would be evaluated in order to access unreacted data. |

### 9.1.3 Data Redaction Utility

This utility can be executed by running the seeded Batch with Batch Name as `##INFODOM##_DATA_REDACTION` if it is available as part of application common metadata. If it is not available, you must create a new Batch as described in the [Creating Batch for Executing Data Redaction Utility](#) section.

The task in the Batch has three parameters: `dataredaction.sh`, `true/false` and OFSAA User ID:

- **true/false flag**
  - False- By default, `false` is seeded. False indicates policy scripts will be generated and executed.
  - True- Specify true to generate policy scripts, but will not be executed. You can use this option if the logged-in user does not have script execution rights on Atomic schema. See [Executing Data Redaction Utility with TRUE Flag](#) to execute the scripts later.
- **User ID**- OFSAA user who is the batch owner

**NOTE** If any application specific database roles are granted to Atomic schema, they must be granted as default roles after enabling data redaction.

```
Alter user << atomic schema user >> default role
<<role1>>, <<role2>>.
```

For example:

*RQADMIN* database role is granted to Atomic schema user for *ORE* executions. In this case, post enabling data redaction, *RQADMIN* must be granted as a default role to Atomic schema.

```
Alter user <<atomic schema user>> default role
RQADMIN
```

**Topics:**

- [Executing Data Redaction Utility with FALSE Flag](#)
- [Executing Data Redaction utility with TRUE Flag](#)

#### 9.1.3.1 Executing Data Redaction Utility with FALSE Flag

To execute Data Redaction utility with FALSE flag, follow these steps:

1. From the **Batch Execution** window, search for Batch Name as `##INFODOM##_DATA_REDACTION`.
2. Select the Batch and click **Execute Batch**.

All policy scripts will be generated and executed in the Atomic schema and the identified table data will be redacted.

#### 9.1.3.2 Executing Data Redaction utility with TRUE Flag

To execute Data Redaction utility with TRUE flag, follow these steps:

1. From the **Configuration** window of the **System Configuration** module, enter the absolute path where the encryption key is stored in the **Encryption Key Path** field. If this is not provided, default key will be used which is available in the `$fic_home/conf` folder.
2. From the **Batch Maintenance** window, search for Batch ID as `##INFODOM##_DATA_REDACTION`.

3. Select the Batch.
4. Select the task from the **Task Details** pane and click **Edit**.
5. In the **Executable** field in the **Dynamic Parameters List**, specify as `dataredaction.sh,true,<<ofsa user id>>`.
6. Click **Save**.
7. From the **Batch Execution** window, search for Batch ID as **<>>**.
8. Select the Batch and click **Execute Batch**.
9. Navigate to the `FTPshare/DataRedaction` folder. You can find two folders named *Scripts* and *Postscripts* inside the `DataRedaction` folder.
10. Decrypt *create scripts* in the `FTPshare/DataRedaction/scripts` folder using `dmtfileencryption.sh` with the following arguments:

```
./dmtfileencryption.sh decrypt_file <INPUTFILE> <OUTPUTFILE> <KEYFILE>
```

- `<INPUTFILE>`- Provide the absolute path of the input file. Since all *create scripts* in the `scripts` folder need to be decrypted, you can provide the folder path, that is, `FTPshare/DataRedaction/scripts`.
- `<OUTPUTFILE>`- Provide the absolute path of the input file.
- `<KEYFILE>`- Provide the absolute path of key file with key file name. This must be same as that is provided in the **Configuration** window. If nothing was provided in the **Configuration** window, specify the default key path as `$fic_home/conf/ofsa8xkey.ext`.

For more details, see the *Command Line Utility for DMT File Encryption* section in [OFS Analytical Applications Infrastructure User Guide](#).

11. Execute the decrypted `create scripts` in the Atomic schema.
12. Execute scripts in the `FTPshare/DataRedaction/postscripts` folder for populating the required OFSAA metadata.

The identified table data will be redacted.

## 9.1.4 Creating Batch for Executing Data Redaction Utility

This section describes how to create a batch for executing the Data Redaction utility. If the seeded Batch is not available, create a batch to execute the Data Redaction utility.

To create a batch, follow these steps:

1. From the **Batch Maintenance** window, click **+ Add** in the **Batch Name** tool bar. The **Add Batch Definition** window is displayed.
2. Enter **Batch Name** and **Batch Description**.

**Figure 18: Task Definition**

The screenshot shows a 'Task Definition' window with the following details:

- Task ID:** Task1
- Description:** null
- Components:** RUN EXECUTABLE
- Dynamic Parameters List:**

| Property                         | Value                            |
|----------------------------------|----------------------------------|
| Datastore Type                   | EDW                              |
| Datastore Name                   | BE8111INFO                       |
| Primary IP For Runtime Processes | whf00oye.in.oracle.com           |
| Executable                       | dataredaction.sh, FALSE/ECMADMIN |
| Wait                             | N                                |
| Batch Parameter                  | Y                                |
| Optional Parameters              | NULL                             |
- Audit Panel:**
  - Created By: ECMADMIN
  - Creation Date: 02.aug.2021 16:40:20
  - Last modified by: ECMADMIN
  - Last Modification Date: NaN

3. Click **Save**. The newly added Batch will be listed in the **Batch Maintenance** window.
4. Select the Batch and click **+ Add** from the **Task Details** tool bar. The **Add Task Definition** window is displayed.
5. Enter **Task Description** and select **Component** as **RUN EXECUTABLE** from the drop-down list.
6. In the **Executable** field, in the **Dynamic Parameters List**, specify as `dataredaction.sh, false/true, <<ofsa user id>>`.
7. See **Adding Task Details** section in the **Operations** chapter in the [OFS Analytical Applications Infrastructure User Guide](#) for details on other fields.

### 9.1.5 Logs

You can find the logs in the `/ftpshare/logs/<ExecutionDate>/<Infodom Name>/RUN EXECUTABLE` folder.

### 9.1.6 Disabling Data Redaction

To disable data redaction, follow these steps:

1. From the **Configuration** window in the **System Configuration** module, deselect the **Allow Data Redaction** checkbox.
2. Run the Data Redaction utility. For more details, see [Data Redaction Utility](#).

### 9.1.7 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 upgrading to OFSAA version 8.1.1.0.0 from a previous version. Additionally, these configurations are required in case you did not enable TDE during ECM Application Pack version 8.1.0.0.0 installation and want to enable at a later point of time.

To enable data redaction, follow these steps:

1. Log in to the database as `SYSDBA`.
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:  

```
select v_schema_name from aai_db_detail where V_DB_NAME <> 'CONFIG' AND
V_DB_TYPE = 'ORACLE'.
```
4. Execute the file `$FIC_HOME/utility/data_security/scripts/grant_data_sec_roles.sql` for all Atomic users found in the previous step.
5. From the **Configuration** window in the **System Configuration** module, select the **Allow Data Redaction** checkbox.
6. Run the Data Redaction utility. For more details on how to run the utility, see the *Data Redaction* section under the *Data Security and Data Privacy* chapter in [OFS Analytical Applications Infrastructure Administration Guide 8.1.0.0.0](#).

## 10 Appendix A: Configuring the Web Server

This appendix describes how to configure the web server.

This step assumes the installation of a web server exists as per the prerequisites.

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

### NOTE

See the [Oracle Financial Services Analytical Applications Infrastructure Security Guide](#) for configurations to secure your web server.

You must enable a sticky session/affinity session configuration on the web server. See the respective product-specific Configuration Guide for more details. Additionally, you also must enable the sticky session/ affinity session configuration at the Load Balancer level if you have configured a Load Balancer in front of the web server.

This step assumes the installation of a web application server exists as per the prerequisites. To configure the Web Application server for Oracle Financial Services Analytical Application (OFSAA) Deployment refer to the following topics.

Topics:

- [Configuring WebSphere Application Server for Application Deployment](#)
- [Configuring WebLogic for Application Deployment](#)
- [Configuring Apache Tomcat Server for Application Deployment](#)
- [Additional Configurations for Web Servers](#)

### 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 the web server is not configured)
- Add **umask 0027** in the `.profile` of the UNIX account which manages the WEB server to ensure restricted access permissions
- See the OFSAA Secure Configuration Guide/Security Guide mentioned in the [Related Documents](#) section for additional information on securely configuring your web server.

## 10.1 Configuring WebSphere Application Server for Application Deployment

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

Topics:

- [Creating a New Profile in WebSphere](#)
- [Managing IBM WebSphere SDK Java Technology Edition Versions](#)
- [Managing Applications in WebSphere](#)
- [Configuring WebSphere Application Server to Initialize Filters](#)
- [Configuring WebSphere Application Server Persistence to JPA Specification 2.0](#)
- [Configuring WebSphere Application Server to Use a Load Balancer or Proxy Server](#)
- [Deleting WebSphere Profiles](#)
- [Configuring WebSphere HTTPS](#)
- [Configuring WebSphere Memory Settings](#)
- [Configuring WebSphere for Rest Services Authorization](#)

### 10.1.1 Creating a New Profile in WebSphere

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

Use the following command to create a profile without admin security through the `command line`:

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

For 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>"
```

For 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 to the *WebSphere manageprofiles* command.

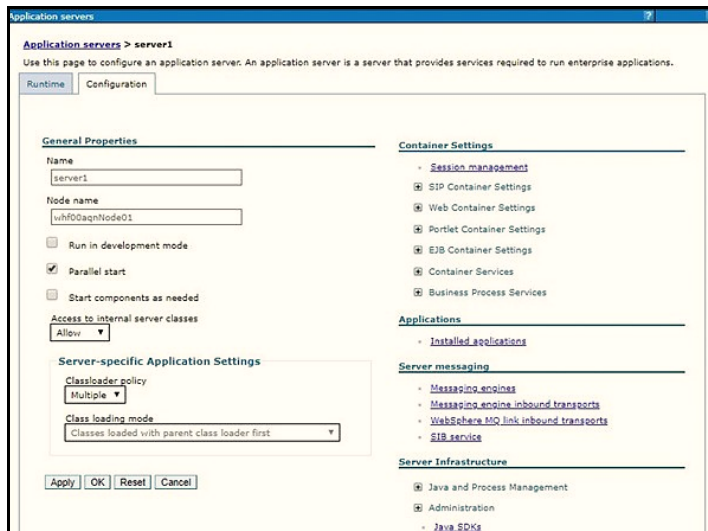
## 10.1.2 Managing IBM WebSphere SDK Java Technology Edition Versions

This section describes how to check the Java version and set it to Java 8.X SDK.

To check the Java version and set it to Java 8.X SDK, follow these steps:

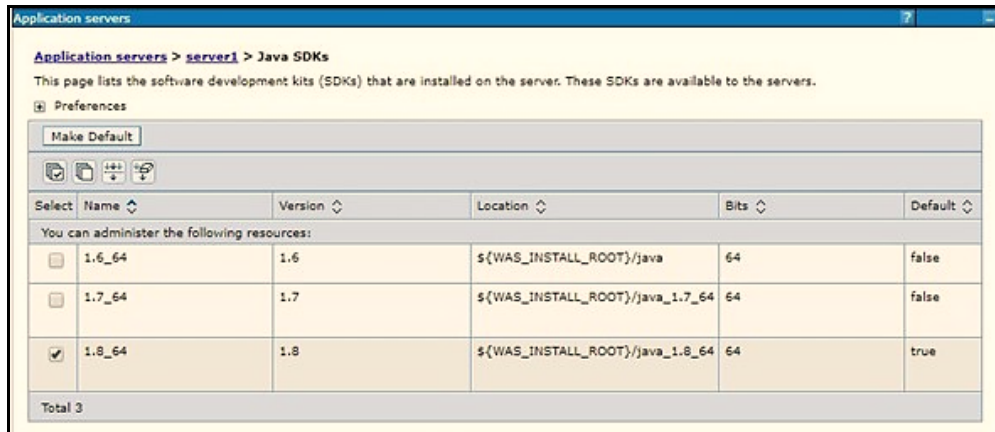
1. Enter the WebSphere URL in the format `http://HOST_NAME:PORT_NUMBER/ibm/console`  
For example: `http://192.168.1.0:9000/ibm/console`. (use `https`, if SSL is enabled)
2. Log in with your administrator user ID and password.
3. From the LHS menu, click **Servers** to expand and view the menu.
4. Click **Server Types** to expand the menu further and then click **WebSphere Enterprise Application Servers** to view the **Application servers** window.
5. On the **Application servers** window, click the required **Application Server** link. For example: `server1` in [Figure 19](#) :

**Figure 19: Application Server Java SDKs**



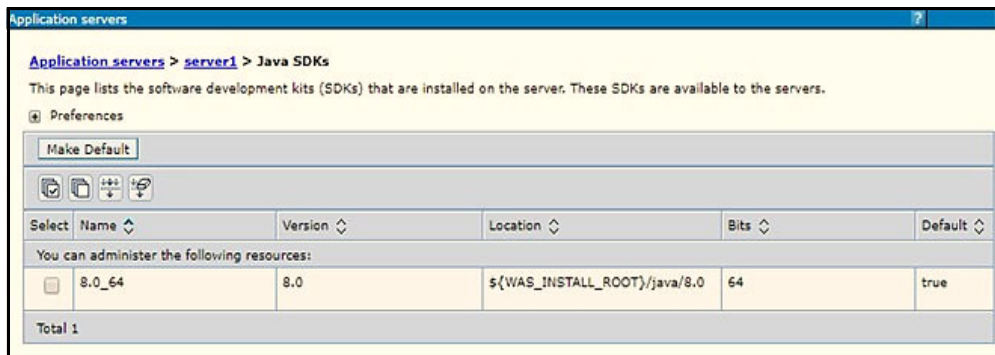
6. Click the **Java SDKs** link from the **Server Infrastructure** section to view the list of Java SDKs.

Figure 20: Application Server List of Java SDKs



7. Select **8.0\_64**.

Figure 21: Java SDK 8.0\_64



8. Click **Make Default** and save to master repository.
9. Restart the WebSphere Application Server to apply the changes to the IBM application profile.

### 10.1.3 Managing Applications in WebSphere

This section describes how to manage the installed applications in WebSphere.

To manage the installed applications in WebSphere, follow these steps:

1. Open the Administrator console using the following URL:

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

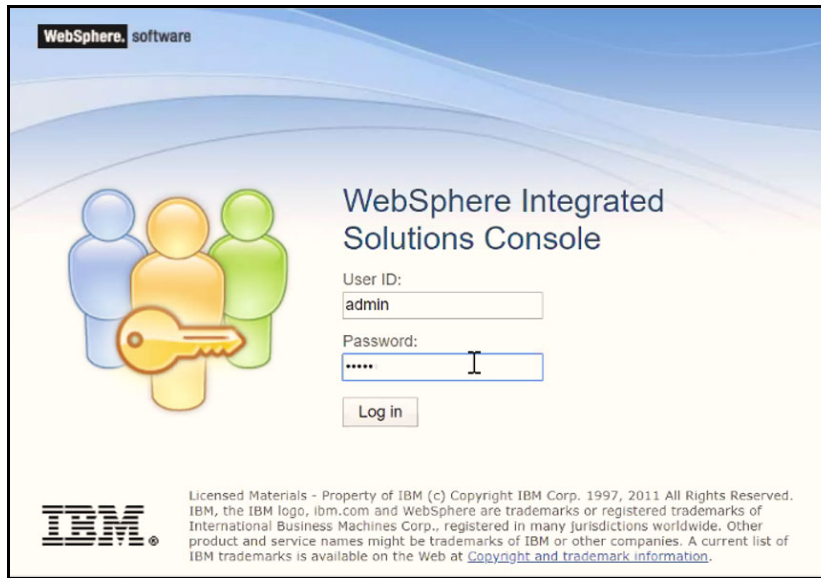
For example: `http://10.111.222.333:9003/ibm/console` (use https, if SSL is enabled.)

#### NOTE

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

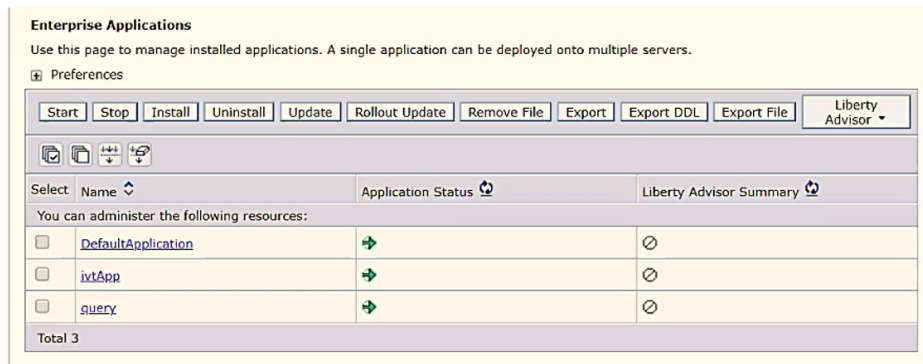
The Integrated Solutions Console Login window is displayed.

Figure 22: Integrated Solutions Console Login



2. Log in with the *User ID* provided with admin rights.
3. From the LHS menu, expand the **Applications**.
4. Click **Application Type** and then click **WebSphere Enterprise Applications**. The **Enterprise Applications** window is displayed.

Figure 23: Enterprise Applications



This Enterprise Applications window helps you to:

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

## 10.1.4 Configuring WebSphere Application Server to Initialize Filters

The custom configuration information in this section initializes the filters before initializing load-onstartup servlets and allows empty servlet maps when you start an application.

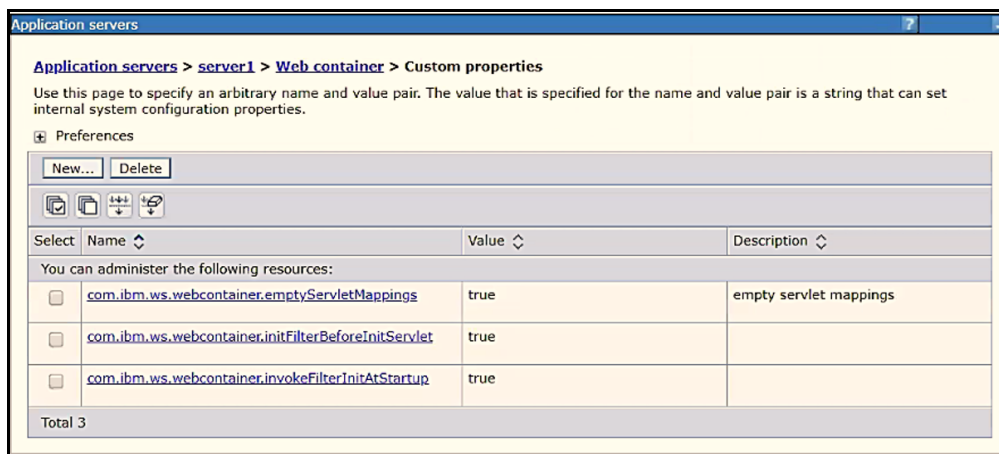
### NOTE

This is a mandatory configuration for OFSAA with WebSphere for both fresh and upgrade installation.

To configure custom properties for filters, follow these steps:

1. 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`.
2. Log in with your Administrator user ID and password.
3. From the left menu, click **Servers** to expand the menu.
4. Click **Server Types** to expand the menu further and then click **WebSphere Enterprise Application Servers** to view the **Application servers** window.
5. On the **Application servers** window, click the required **Application Server** link.
6. Click **Web Container Settings** and then **Custom Properties** to view the **Custom Properties** window.

**Figure 24: Web Container Initialize Filters Before Servlet**



7. Click **New** and enter the following properties:
  - `com.ibm.ws.webcontainer.initFilterBeforeInitServlet` to `true`
  - `com.ibm.ws.webcontainer.invokeFilterInitAtStartup` to `true`
  - `com.ibm.ws.webcontainer.emptyServletMappings` to `true`.
8. Click **OK** and then click **Save** on the Console to save the customized configurations.
9. Restart the WebSphere Application Server to apply the changes.

### 10.1.5 Configuring WebSphere Application Server Persistence to JPA Specification 2.0

The persistence configuration information in this section sets JPA 2.0 specification in WebSphere over the default JPA 2.1 specification.

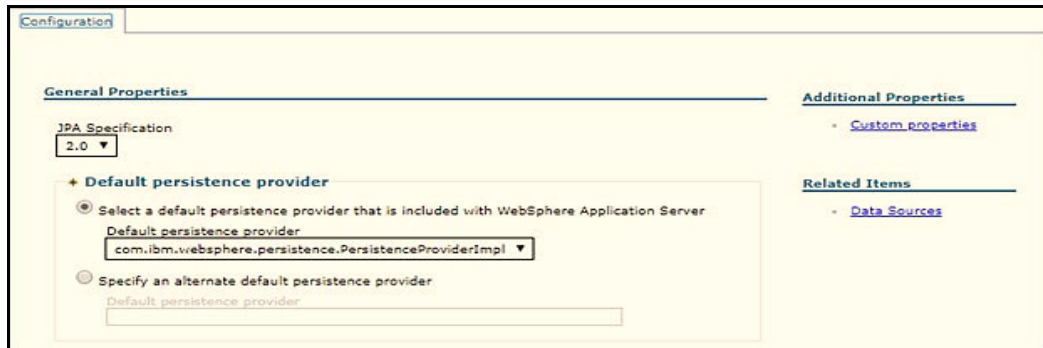
**NOTE** This is a mandatory configuration for OFSAA with WebSphere for both fresh and upgrade installation.

To set the JPA 2.0 as the default persistence provider, follow these steps:

1. 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`.

2. Log in with your Administrator user ID and password.
3. From the LHS menu, click **Servers** to expand the menu.
4. Click **Server Types** to expand the menu further and then click **WebSphere Enterprise Application Servers** to view the **Application servers** window.
5. On the **Application servers** window, click the required **Application Server** link.
6. Click **Container Services** and then click **Default Java Persistence API** settings to display the **Configuration** window.

Figure 25: Default Java Persistence Settings JPA Specification 2.0



7. From the **JPA Specification** drop-down, select **2.0** to change the default JPA Specification from 2.1 to 2.0.
8. Click **OK** and then click **Save** on the console to save the customized configurations.
9. Restart the WebSphere Application Server to apply the changes.

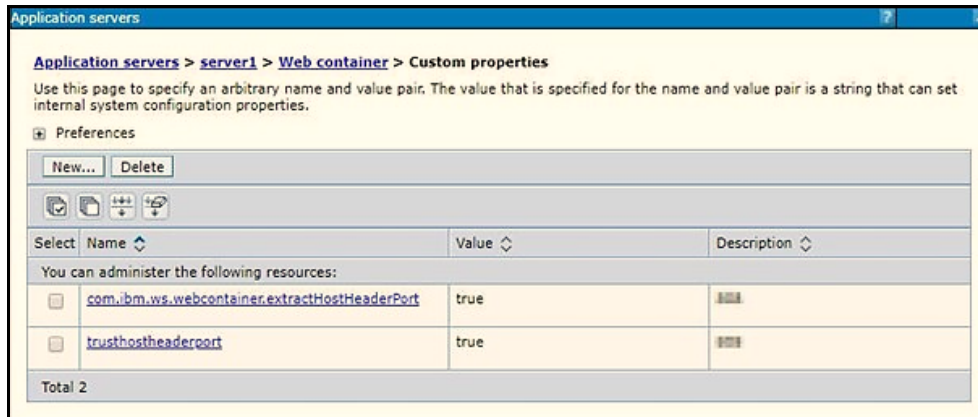
### 10.1.6 Configuring WebSphere Application Server to Use a Load Balancer or Proxy Server

The configuration prevents the process server from redirecting to an internal port when using a load balancer or proxy server.

To configure the WebSphere Application Server to use a load balancer or proxy server, follow these steps:

1. 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`.
2. Log in with your Administrator user ID and password.
3. From the left menu, click **Servers** to expand the menu.
4. Click **Server Types** to expand the menu further and then click **WebSphere Enterprise Application Servers** to view the **Application servers** window.
5. On the **Application servers** window, click the required **Application Server** link.
6. Click **Web Container Settings** and then **Custom Properties** to view the **Custom Properties** window.

**Figure 26: Application Servers Load Balancer Proxy Server**



7. Click **New** and enter the following properties:
  - com.ibm.ws.webcontainer.extractHostHeaderPort: true
  - Trustostheaderport: true
8. Click **OK** and then click **Save** on the console to save the customized configurations.
9. Restart the WebSphere Application Server to apply the changes.

### 10.1.7 Deleting WebSphere Profiles

This section describes how to delete a WebSphere profile.

To delete a WebSphere profile, follow these steps:

1. Select the check-box 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 the profile directory.

For example: <WebSphere\_Installation\_ Directory>/AppServer/profiles/  
 <profile\_name>

6. Execute the command:

```
manageprofiles.sh -validateAndUpdateRegistry
```

### 10.1.8 Configuring WebSphere HTTPS

This section describes how to configure an HTTPS Transport on WebSphere.

To configure an HTTPS Transport on WebSphere, follow these steps:

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

**NOTE** Record the https port specified during this process and use it as a servlet port or web server port during OFSAAI installation.

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

### 10.1.9 Configuring WebSphere Memory Settings

This section describes how to configure the WebSphere Memory Settings.

To configure the WebSphere Memory Settings, follow these steps:

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

### 10.1.10 Configuring WebSphere for Rest Services Authorization

This section provides information for generic configurations required for OFSAA deployed on WebSphere server.

For more information on how to configure WebSphere for Rest Services Authorization, see the *Configuring WebSphere* section in [OFS Analytical Applications Infrastructure Administration Guide](#).

## 10.2 Configuring WebLogic for Application Deployment

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

Topics:

- [Updating WebLogic Server](#)
- [Creating Domain in WebLogic Server](#)
- [Deleting Domain in WebLogic](#)
- [Configuring WebLogic Memory Settings](#)

### 10.2.1 Updating WebLogic Server

Before proceeding with the domain creation, download and install the latest WLS PSU for 14.1.1 from [My Oracle Support](#).

After applying this patch, set the java option flag `-Dweblogic.http.disablehttp2=true` before starting servers..

For more information, see *Configure WebLogic for Application Deployment* in [AAI installation Guide](#).

## 10.2.2 Creating Domain in WebLogic Server

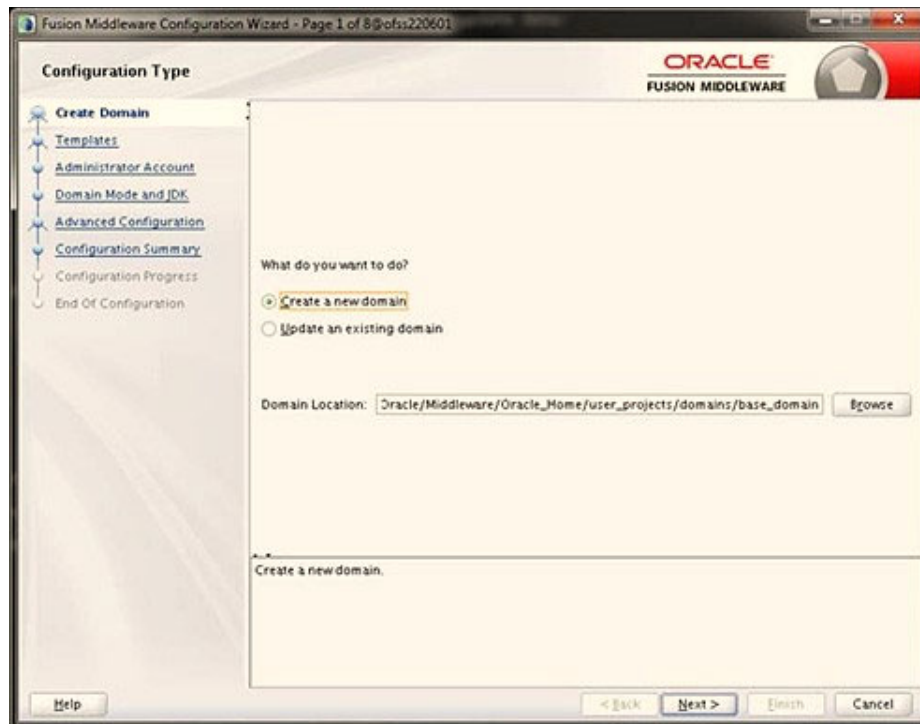
This section describes how to create a new domain using Configuration Wizard in WebLogic.

To create a new domain using Configuration Wizard in WebLogic, follow these steps:

1. Navigate to the `<WLS_HOME>/wlserver/common/bin` directory and execute the command:  
`./config.sh.`

The Welcome window of the Configuration Wizard is displayed.

**Figure 27: Configuration Type**



2. Select **Create a new domain** and click **Next** to the **Templates** window.

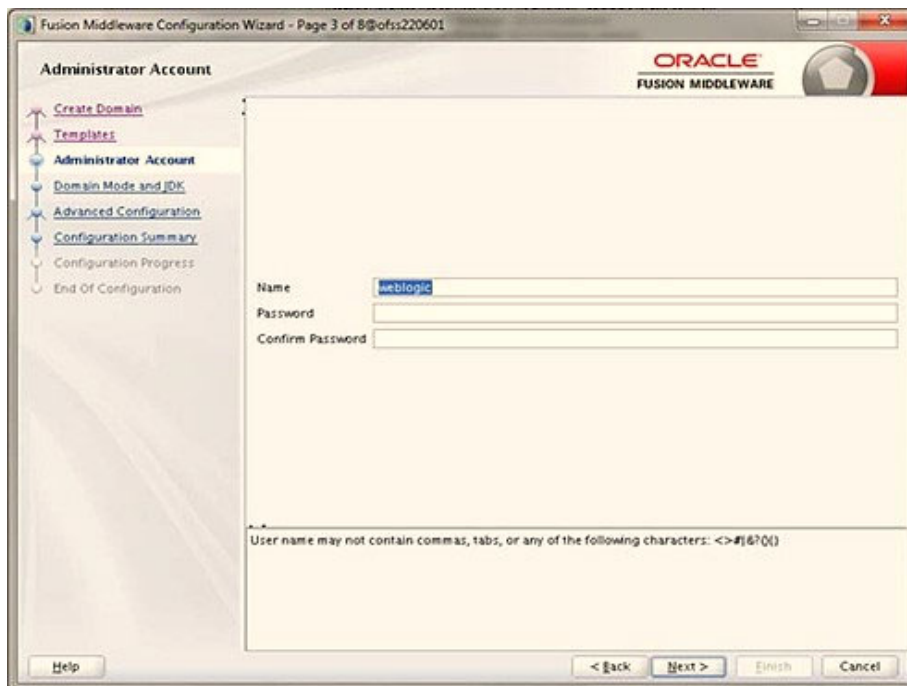


Figure 28: Templates



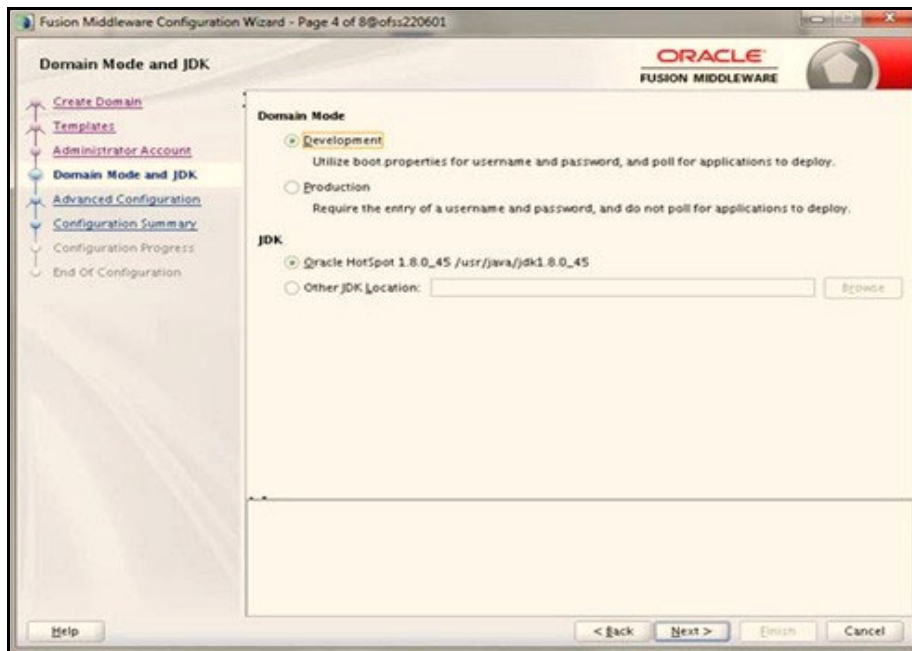
3. Select the **Create Domain Using Product Templates** option and click **Next** to display the **Administrator Account** window.

Figure 29: Administrator Account



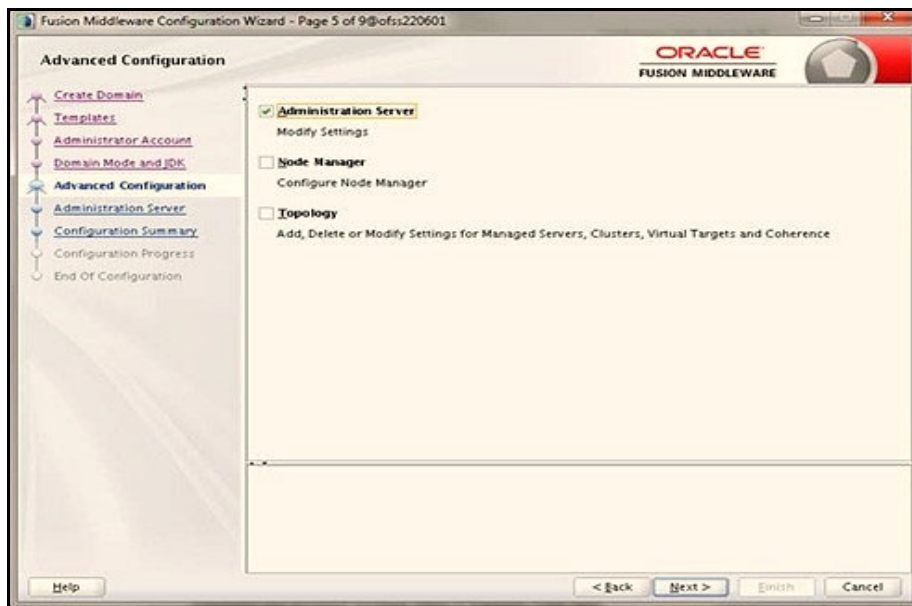
4. Enter the user name to be assigned to the administrator, the password, and confirm the password. Click **Next** to the Domain Mode and JDK window.

Figure 30: Domain Mode and JDK



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** to display the **Advanced Configuration** window.

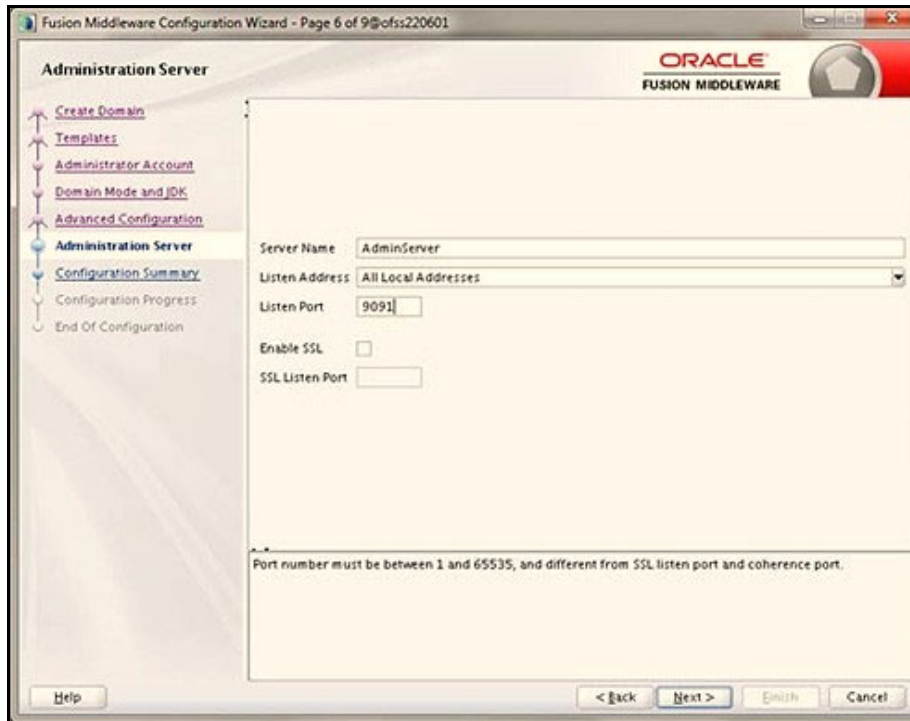
Figure 31: Advanced Configuration



6. Select the **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.

7. Click **Next** to display the Administration Server window.

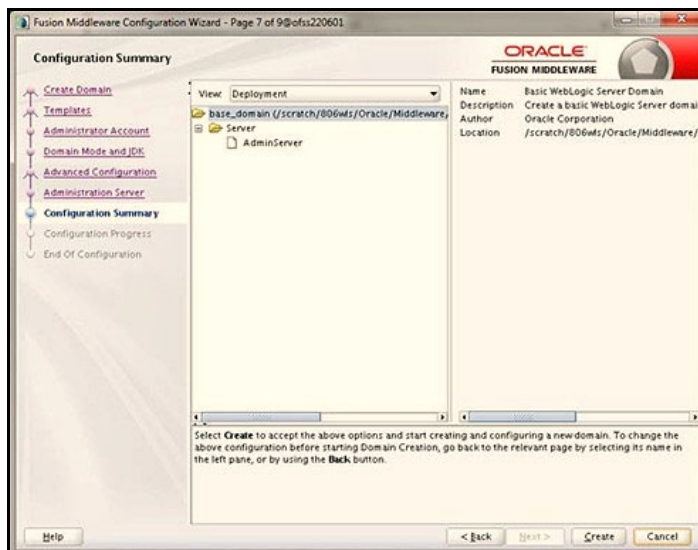
**Figure 32: Administration Server**



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** to display the Configuration Summary window.

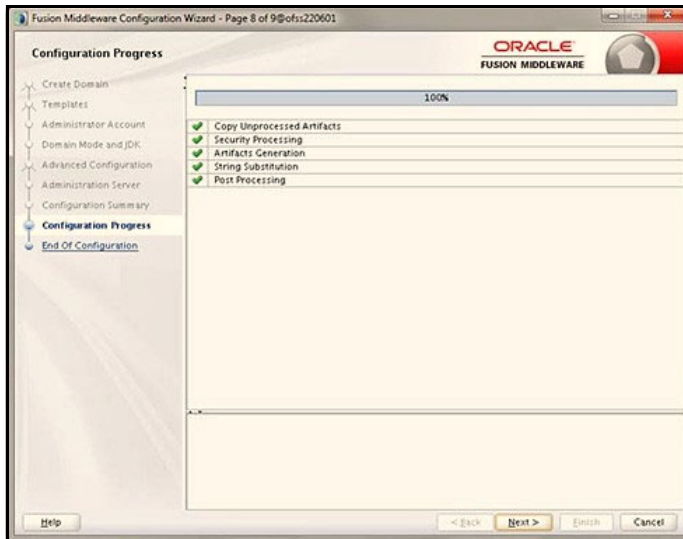
**NOTE** Make a note of the Listen Port or SSL Listen Port value (for example: 7007) since the same has to be re-entered in the **Servlet port** field during Infrastructure installation.

**Figure 33: Configuration Summary**



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

**Figure 34: Creating Domain**



10. Click **Next** when the activity is completed. The End of Configuration window is displayed.

**Figure 35: End of Configuration**



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

**NOTE**

- Record the HTTPS port specified during this process and use it as a 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 the `WLS_HOME/bin/setDomainEnv.sh` file (required only if a self-signed certificate is used).
13. Add a Java option entry `-Dweblogic.http.disablehttp2=true` in the `WLS_HOME/bin/setDomainEnv.sh` file, to ensure that the HTTP2 is disabled and only HTTP 1.1 is used as a protocol.

### 10.2.3 Deleting Domain in WebLogic

This section describes how to delete a domain in WebLogic.

To delete a domain in WebLogic, follow these steps:

1. Navigate to the following directory:

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

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

### 10.2.4 Configuring WebLogic Memory Settings

This section describes how to configure the WebLogic Memory Settings.

To configure the WebLogic Memory Settings, follow these steps:

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

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"
```

## 10.3 Configuring Apache Tomcat Server for Application Deployment

This section is applicable only when the Web application server type is Tomcat.

Topics:

- [Tomcat User Administration](#)
- [Configuring Servlet Port](#)
- [Configuring Apache Tomcat Memory Settings](#)
- [Configuring Apache Tomcat Memory Settings](#)
- [Configure Tomcat for User Group Authorization](#)
- [Uninstall WAR Files in Tomcat](#)

### 10.3.1 Tomcat User Administration

The Tomcat administration and manager application does not provide a default login. You are required to edit `$(CATALINA_HOME)/conf/tomcat-users.xml` as follows:

This file contains an XML `<user>` for each user that will display the username and password used by the admin to log in to Tomcat and the role names to which the admin user is associated with.

For example: `<user name="admin" password="admin" roles="standard,manager"/>`

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

### 10.3.2 Configuring Servlet Port

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

If you must use a different port number, you must first configure the port in the `server.xml` file in the `conf` directory of the Tomcat Installation directory.

To configure the Servlet Port, follow these steps:

1. Navigate to `$(CATALINA_HOME)/conf`. Open `server.xml` and locate the tag: Define a non-SSL HTTP/1.1 Connector on port 8080.

Against this tag, a parameter is specified `Connector port = 8080`. Edit this value to the new port number that was used during the Infrastructure installation process.

2. Save your changes in the `server.xml` file.

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

### 10.3.3 Configuring SSL Port

If you must 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 the `<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 is required during the installation of the OFSAA Application Pack
- To enable https configuration on Infrastructure, assign value **1** to `HTTPS_ENABLE` in the `OFSAAI_InstallConfig.xml` file for SILENT mode OFSAAI installation.

For more information related to SSL Configuration on Tomcat, see [Apache Tomcat](#).

### 10.3.4 Configuring Apache Tomcat Memory Settings

This section describes how to configure the Apache Tomcat Memory Settings.

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

1. Locate the `catalina.sh` file that resides in the `<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`. For example:

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

### 10.3.5 Configure Tomcat for User Group Authorization

Users with system authorization roles can access User Group Authorization. However, to make it available on the Tomcat web server, you must follow these configuration steps:

1. Navigate to the `$CATALINA_HOME/conf` 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. Save and close the file.

### 10.3.6 Uninstall WAR Files in Tomcat

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

## 10.4 Additional Configurations for Web Servers

This section provides information for additional configuration required for the web servers on OFSAAAI.

**NOTE** The instructions in this section are applicable if you are upgrading from an earlier version of OFSAAI to 8.1.1.0.0.

- **Configuration for WebSphere:** To configure WebSphere, see [Configuring WebSphere Application Server for Application Deployment](#). Additionally, configure for REST services. For details, see the *Configuring WebSphere for REST Services Authorization* section in [OFS Analytical Applications Infrastructure Administration Guide](#).
  - Additionally, you must configure the Work Manager in WebSphere and map it to the OFSAA instance. For details, see the *Work Manager Configurations* section in [OFS Analytical Applications Infrastructure Administration Guide](#).
- **Configuration for WebLogic:** To configure WebLogic, see [Configuring WebLogic for Application Deployment](#). Additionally, configure for REST services. For details, see the *Configuring WebLogic for REST Services Authorization* section in [OFS Analytical Applications Infrastructure Administration Guide](#).
  - Additionally, you must configure the Work Manager in WebLogic. For details, see the *Work Manager Configurations* section in [OFS Analytical Applications Infrastructure Administration Guide](#).
- **Configuration for Tomcat:** For the successful execution of Data Mapping in Tomcat, perform the configurations mentioned in the *Configuration for Tomcat* section in [OFS Analytical Applications Infrastructure Administration Guide](#).

For additional configurations, see [Configuring Apache Tomcat Server for Application Deployment](#).

### 10.4.1 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 [Oracle Financial Services Analytical Applications Infrastructure Security Guide](#).



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

This section describes how to configure the WebSphere Shared library to support Jersey 2x and Jackson 2.9x libraries.

To configure the WebSphere shared library to support jersey 2x and Jackson 2.9x libraries, follow these steps:

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

**Figure 36: WebSphere Shared Libraries**

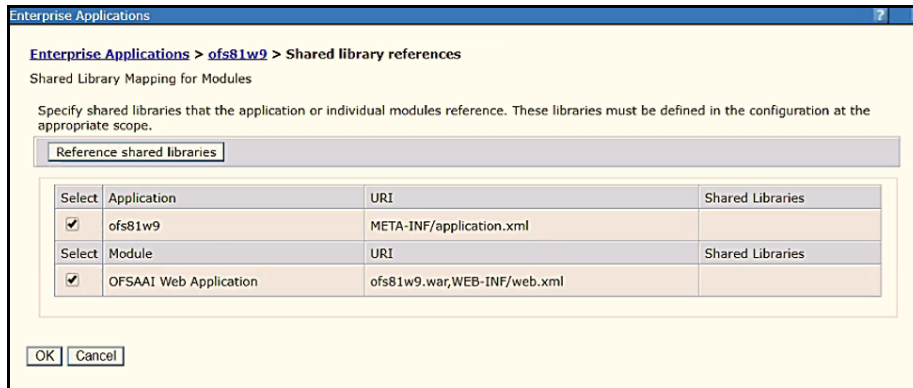
The screenshot shows the 'Shared Libraries' configuration window for 'JERSEY2x'. The window title is 'Shared Libraries' and the breadcrumb is 'Shared Libraries > JERSEY2x'. Below the title, there is a description: 'Use this page to define a container-wide shared library that can be used by deployed applications.' The main configuration area is titled 'Configuration' and contains several sections:

- General Properties:**
  - Scope:** cells:whf00cywNode01Cell:nodes:whf00cywNode01:servers:server1
  - Name:** JERSEY2x
  - Description:** shared Lib
  - Classpath:** /scratch/IBM/WebSphere/AppServer/profiles/AppSrv01/installedApps/whf00cywNode01Cell/ofs81w9.ear/ofs81w9.war/externalib/WEB-INF/lib/
  - Native Library Path:** (empty field)
- Class Loading:**
  - Use an isolated class loader for this shared library

At the bottom of the window, there are buttons for 'Apply', 'OK', 'Reset', and 'Cancel'.

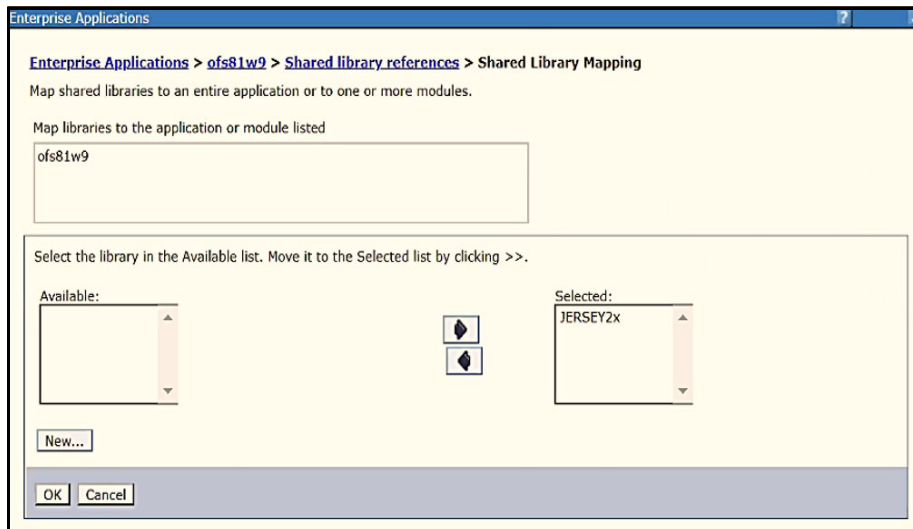
2. Enter the following details:
  - **Name:** Enter a uniquely identifiable name.
  - **Description:** Enter a valid description.
  - **Classpath:** Enter the absolute path where the JARs related to Jersey 2.x and Jackson 2.9x are copied. These jars are available in the <OFSAA\_HOME>/ficweb/webroot/externallib/WEBINF/lib/ directory after creation of the EAR file. Another format of representation of the path is <ofsaa\_deployed\_area\_location>/externallib/WEBINF/lib/.
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 figure, **ofsa** is selected.

**Figure 37: WebSphere Shared Library References**



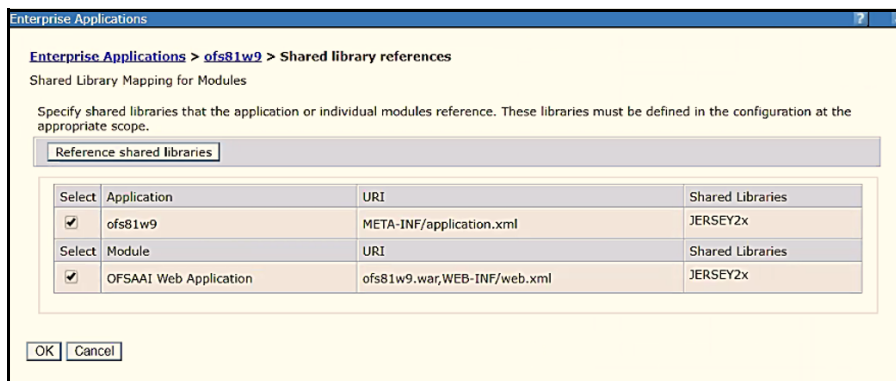
- From the **Shared Library Mapping** window, move the required shared libraries from **Available** to **Selected**. In the following figure, **JERSEY2x** is selected.

**Figure 38: WebSphere Shared Libraries Mapping Selection**



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

**Figure 39: WebSphere Shared Libraries Select Next Application**



- Disable the built-in *JAX-RS* via *JVM* property.

- a. Navigate to the WebSphere Admin Console in **Servers > WebSphere Application Servers > yourServerName**.
  - b. In the **Server Infrastructure** section, go to **Java** and **Process Management > Process definition > Java Virtual Machine > Custom properties**.
  - c. Add the following property:  
`com.ibm.websphere.jaxrs.server.DisableBMJAXREngine=true`.
10. Restart the application.

## 11 Appendix B: Configuring Resource Reference in Web Servers

This appendix describes how to configure resource reference on web servers.

### Topics:

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

### 11.1 Configuring Resource Reference in WebSphere Application Server

This section is applicable only when the Web application server type is WebSphere.

#### Topics:

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

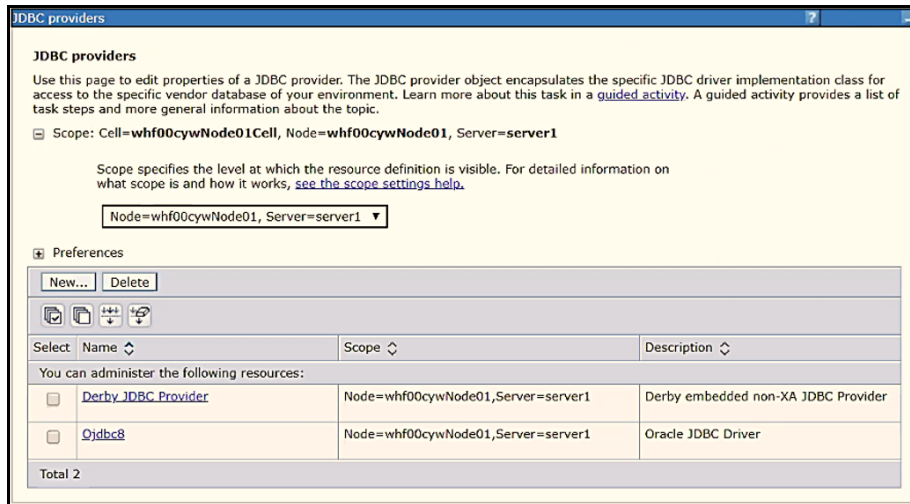
#### 11.1.1 Creating a JDBC Provider

This section describes how to create a JDBC provider in WebSphere Application Server.

To create a JDBC Provider in WebSphere Application Server, follow these steps:

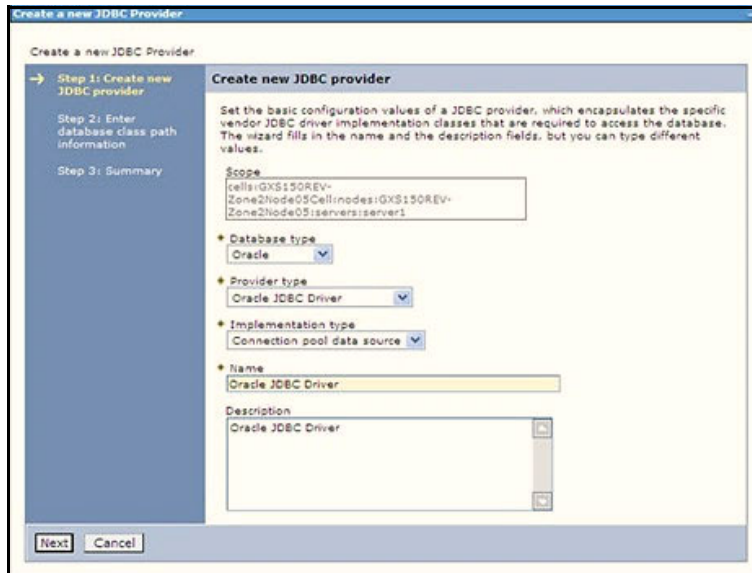
1. Open the **WebSphere** Admin Console in your browser: `http://<ipaddress>:<administrative console port>/ibm/console` (https, if SSL is enabled). The **Login** window is displayed.
2. Log in with the user ID with administrative privileges.
3. From LHS menu, expand the **Resources** option, click **JDBC** and then click **JDBC Providers** to display the JDBC Providers window.

**Figure 40: JDBC Providers**



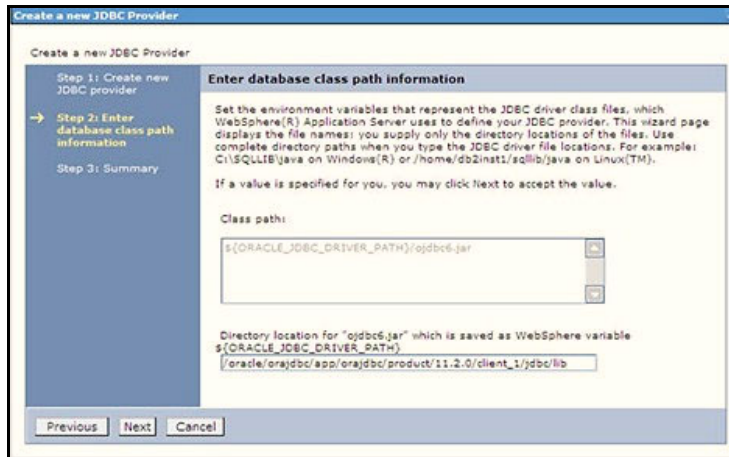
4. Select **Scope** from the drop-down list. The *Scope* specifies the level at which the resource definition is visible.
5. Click **New** to add the new JDBC Provider under the **Preferences** section. The Create new JDBC Provider window is displayed.

**Figure 41: Create a new JDBC Provider**



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

Figure 42: Enter Database Class Path Information



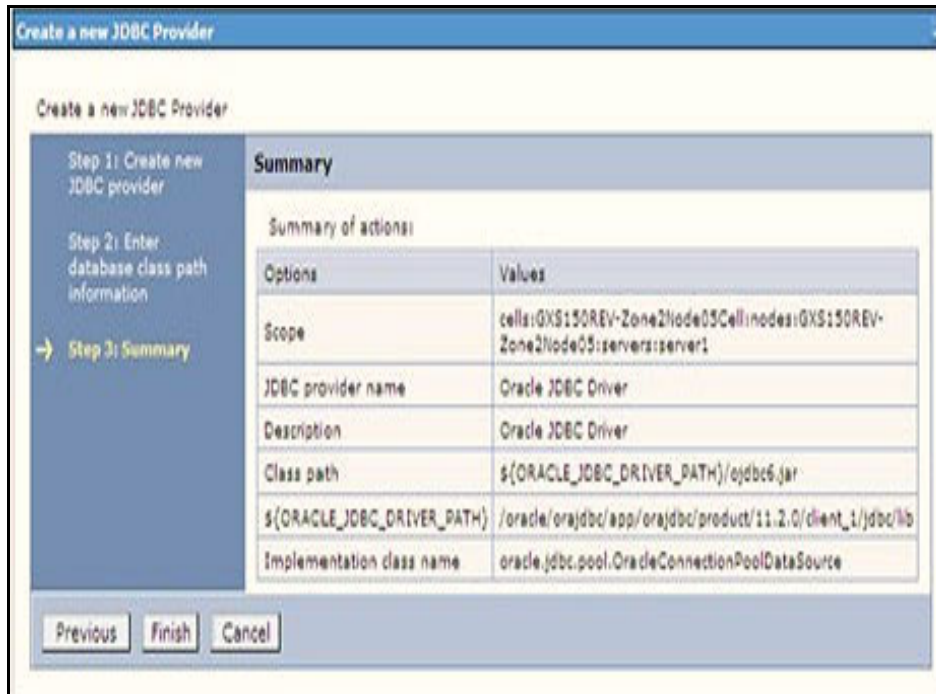
8. Specify the directory location for the `ojdbc<version>.jar` file. Do not use the trailing slash file separators.
9. The Oracle JDBC driver can be downloaded from the following Oracle Download site:
  - Oracle Database 18cg Release 3 JDBC Drivers
  - Oracle Database 19c Release 3 JDBC Drivers

After downloading, you must copy the file in the required directory on the server.

**NOTE** See [Hardware and Software Requirements](#) to identify the correct `ojdbc<version>.jar` file version to be copied.

10. Click **Next** to display the Summary window.

Figure 43: Summary



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

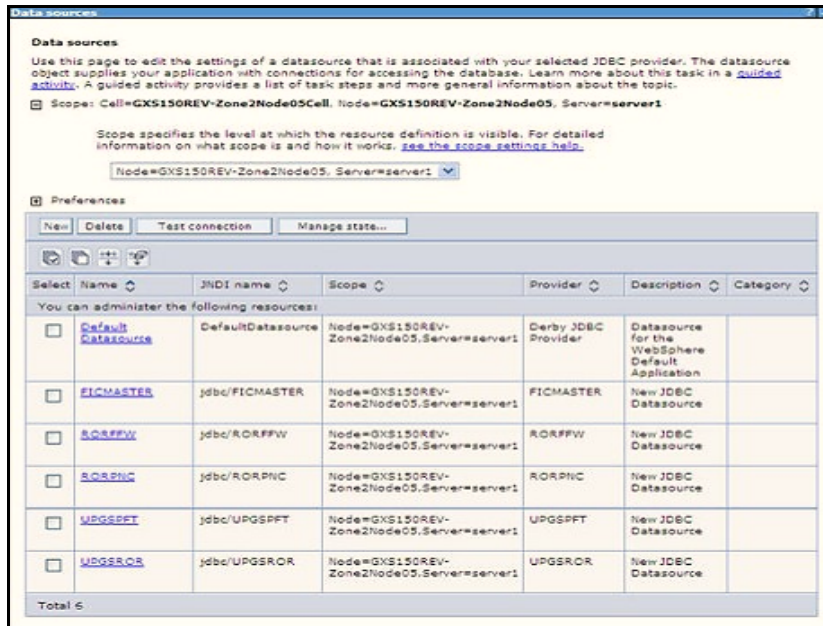
### 11.1.2 Creating a Data Source

This section describes how to create a data source. The following steps apply to both Config and Atomic data source creation.

To create the data source, follow these steps:

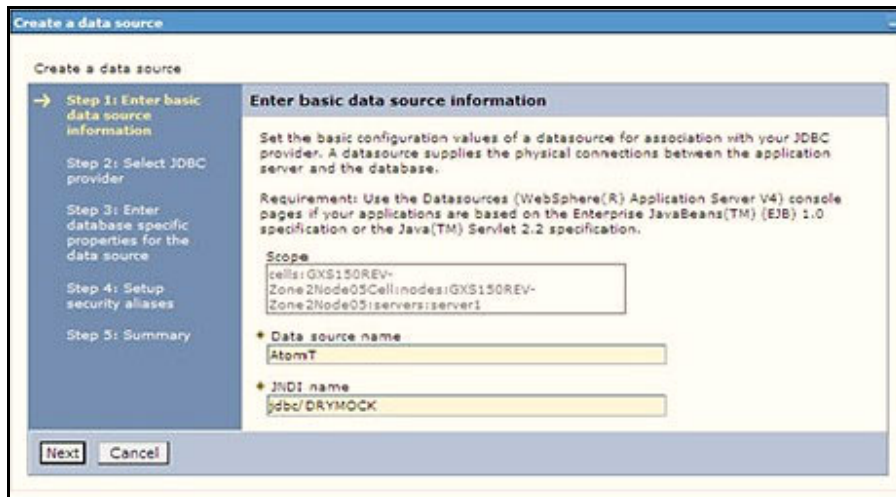
1. Open the URL in your browser: `http://<ipaddress>:<administrative console port>/ibm/console` (https, if SSL is enabled). The **Login** window is displayed.
2. Log in with the user ID with administrative privileges.
3. Expand the **Resources** option in the LHS menu and click **JDBC > Data Sources** to display the Data Sources window.

Figure 44: Data Sources



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

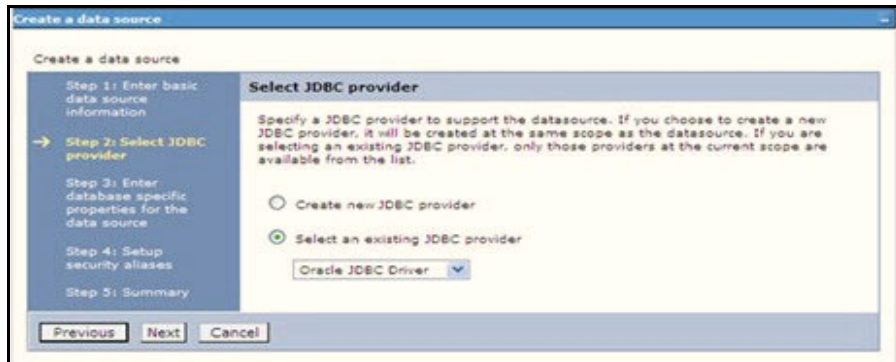
Figure 45: Create Data Source



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 and ensure that JNDI name is the same as the *Information Domain* name.
8. Click **Next** to display the select **JDBC provider** window.

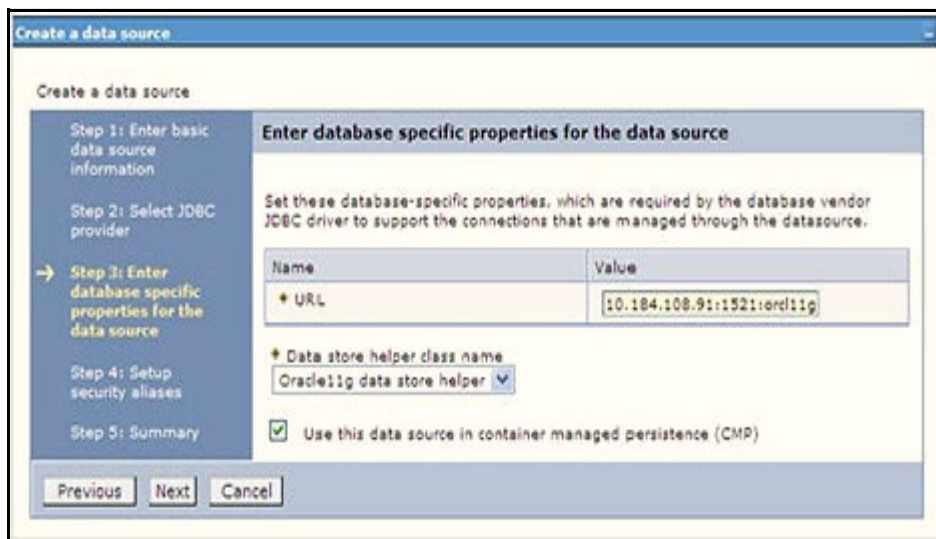


**Figure 46: Select JDBC Provider**



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

**Figure 47: Enter Database Specific Properties**



10. Specify the database connection URL.  
 For example: `jdbc:oracle:thin:@<DB_SERVER_IP>:<DB_SERVER_PORT>:<SID>`
11. Select **Data Store Helper Class Name** from the drop-down list and ensure that the **Use this data source in container managed persistence (CMP)** check-box is selected.

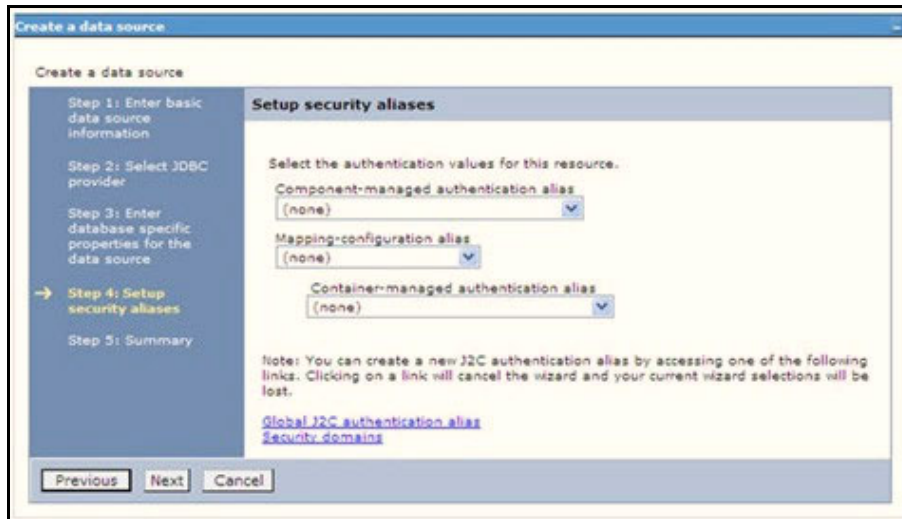
**NOTE** For RAC configuration, provide the RAC URL specified during installation.

For example:

```
jdbc:oracle:thin:@(DESCRIPTION=(ADDRESS_
LIST=(ADDRESS=(PROTOCOL=TCP)(HOST=10.11.12.13)(port=1521))(ADDRESS=(PRO
TOCOL=TCP)(HOST=10.11.12.14)(PORT=1521))(LOAD_
BALANCE=no)(FAILOVER=yes))(CONNECT_DATA=(SERVICE_NAME=pqadb))
```

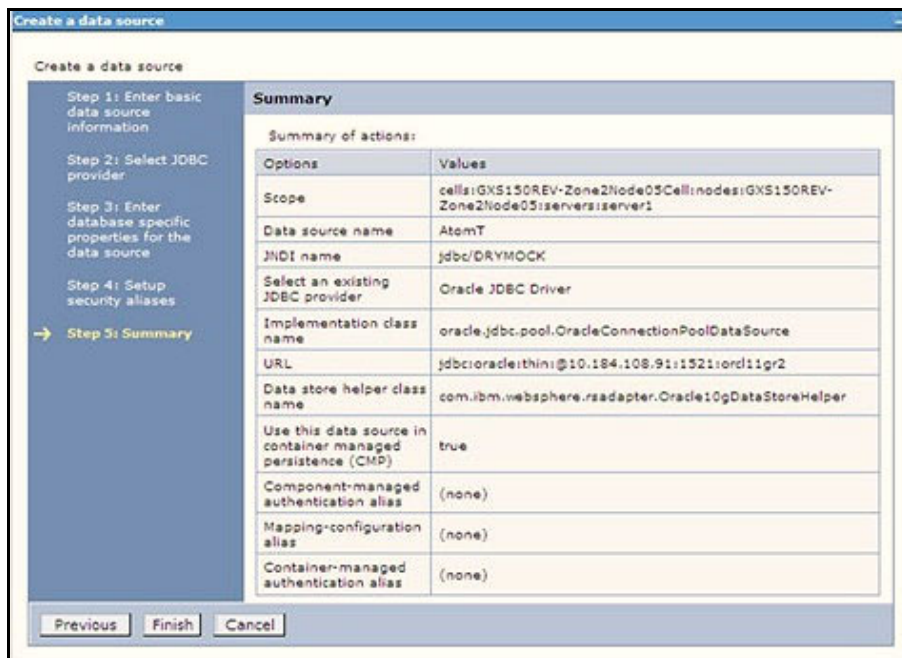
12. Click **Next**.

**Figure 48: Enter Database Specific Properties (Next)**



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

**Figure 49: Summary**



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

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

### 11.1.3 Creating J2C Authentication Details

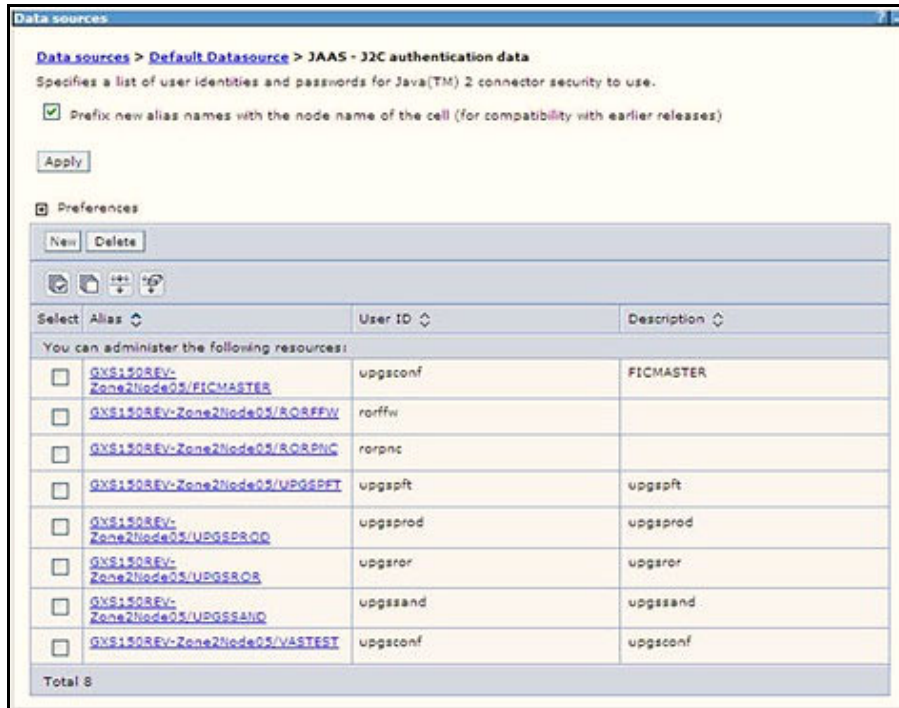
The section describes how to create the J2C Authentication details.

The following steps apply to create both Config and Atomic J2C Authentication.

To create J2C Authentication details, follow these steps:

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

Figure 50: JAASJ2C Authentication Data



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

Figure 51: JAASJ2C authentication data New



3. Enter the Alias, User ID, Password, and Description fields. Verify that the user ID is the Oracle user ID created for the respective Config and Atomic schemas for the *Information Domain*.

Specify the Config database user ID and password information for the `jdbc/FICMASTER` data source, and 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.

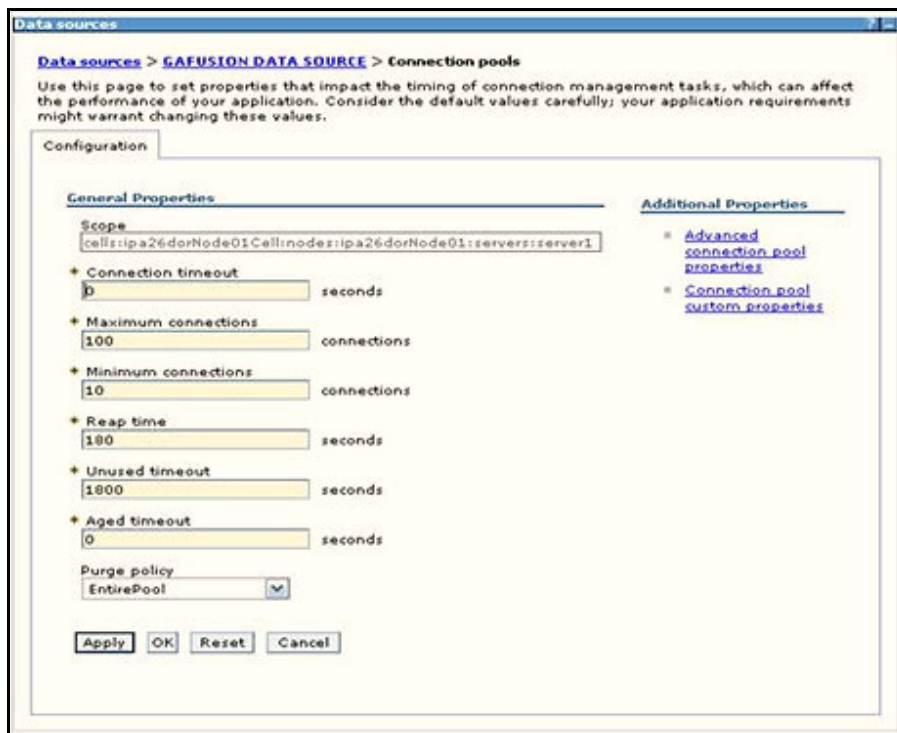
## 11.1.4 Defining JDBC Connection Pooling

This section describes how to define the 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.

To define the JDBC connection pooling, follow these steps:

1. Expand the **Resources** option in the LHS menu and click **JDBC > Data sources** option to display the **Data sources** window.
2. Click the newly created Data Source `$DATA_SOURCE$` and select: **Data sources > GAFUSION DATA\_SOURCE > Connection pools**.

Figure 52: Connection Pools



3. Set the following values:
  - Connection timeout: 0
  - Maximum connections: 100
  - Minimum connections: 10

You can also define **Reap time**, **Unused timeout**, and **Aged timeout** as required.

## 11.2 Configuring Resource Reference in WebLogic Application Server

This section applies only when the Web application server type is WebLogic. In the WebLogic server, You can create a Data Source in the following ways:

- For a non-RAC Database instance, a Generic Data Source must be created
- For a RAC Database instance, a Gridlink Data Source must be created
- When Load Balancing/Fail over is required, a Multi Data Source must be created.

### Topics:

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

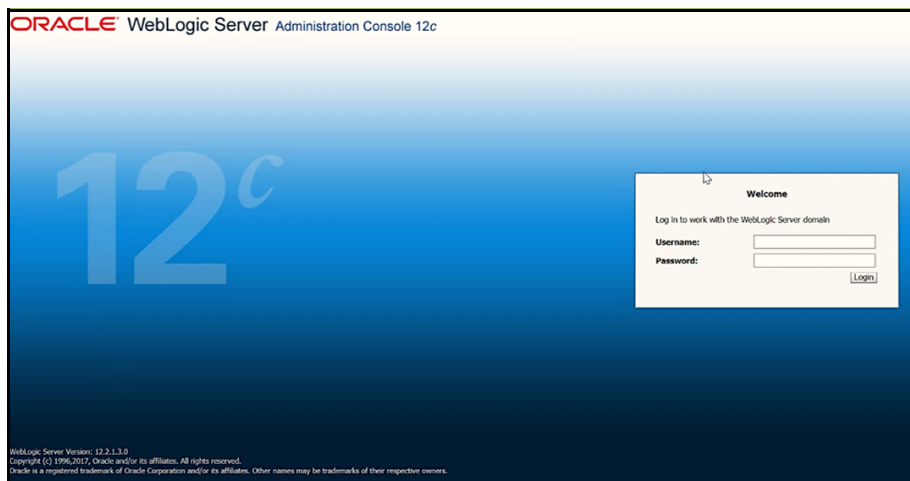
### 11.2.1 Creating Data Source

The following steps apply to both Config and Atomic data source creation.

To create a data source, follow these steps:

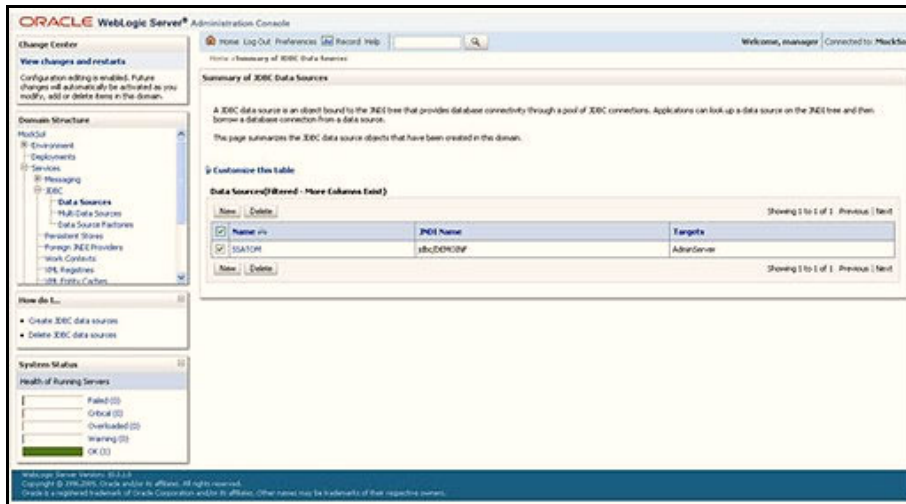
1. Open the URL in your the browser: **http://<ipaddress>:<administrative console port>/console**. (https, if SSL is enabled). The **Welcome** window is displayed.
2. Log in with the Administrator **Username** and **Password**.

**Figure 53: Welcome**



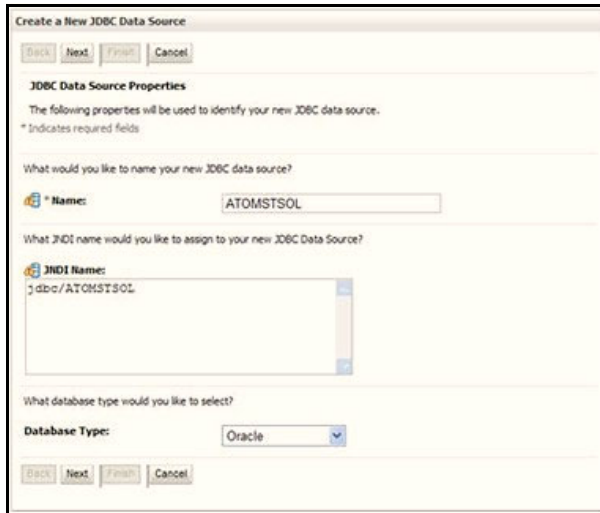
3. From the LHS menu (Domain Structure), click **Services > Data Sources** to display the **Summary of JDBC Data Sources** window.

Figure 54: Summary of JDBC Data Sources



4. Click **New** and select **Generic Data Source** to display the **Create a New JDBC Data Source** window.

Figure 55: Create a New JDBC Data Source



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

Figure 56: JDBC Data Source Properties



5. Enter **JDBC data source Name, JNDI Name**, and select the **Database Type** from the drop-down list.
6. Ensure the following:
  - The JNDI Name field must be in the format `jdbc/informationdomain`
  - The same steps must 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 the `web.xml` file of the OFSAAI application
  - Required *Database Type* and *Database Driver* must be selected.Data sources must be created for Atomic and Atomiccnf schemas following the same steps.
7. Click **Next**.

**Figure 57: Transaction Options**

The screenshot shows the 'Transaction Options' section of the 'Create a New JDBC Data Source' wizard. It includes a 'Back', 'Next', 'Finish', and 'Cancel' button bar at the top. The main text asks, 'Does this data source support global transactions? If yes, please choose the transaction protocol for this data source.' There are four radio button options: 'Supports Global Transactions' (which is selected), 'Logging Last Resource', 'Emulate Two-Phase Commit', and 'One-Phase Commit'. Each option has a brief explanatory text below it. A second 'Back', 'Next', 'Finish', and 'Cancel' button bar is at the bottom.

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

**Figure 58: Database Name**

The screenshot shows the 'Connection Properties' section of the 'Create a New JDBC Data Source' wizard. It includes a 'Back', 'Next', 'Finish', and 'Cancel' button bar at the top. The main text asks, 'Define Connection Properties. What is the name of the database you would like to connect to?'. Below this are several input fields: 'Database Name' (containing 'fsgbu'), 'Host Name' (containing '10.104.74.80'), 'Port' (containing '1521'), 'Database User Name' (containing 'ssatom'), 'Password' (masked with asterisks), and 'Confirm Password' (masked with asterisks). A second 'Back', 'Next', 'Finish', and 'Cancel' button bar is at the bottom.

9. Select the **Supports Global Transactions** check-box and the **One-Phase Commit** option.
10. Click **Next** to display the **Connection Properties** window.

**Figure 59: Database Details**

The screenshot shows the 'Test Database Connection' window of the 'Create a New JDBC Data Source' wizard. It contains several input fields and sections:

- Driver Class Name:** oracle.jdbc.OracleDriver
- URL:** jdbc:oracle:thin:@10.184.1.1:1521:orcl
- Database User Name:** ssaatom
- Password:** [Redacted]
- Confirm Password:** [Redacted]
- Properties:** List of properties with values like 'user=ssaatom'.
- System Properties:** Empty list.
- Test Table Name:** SQL: SELECT 1 FROM DUAL

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

**Figure 60: Select Targets**

The screenshot shows the 'Select Targets' window of the 'Create a New JDBC Data Source' wizard. It features a list of servers with a checkbox next to each:

- AdminServer

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



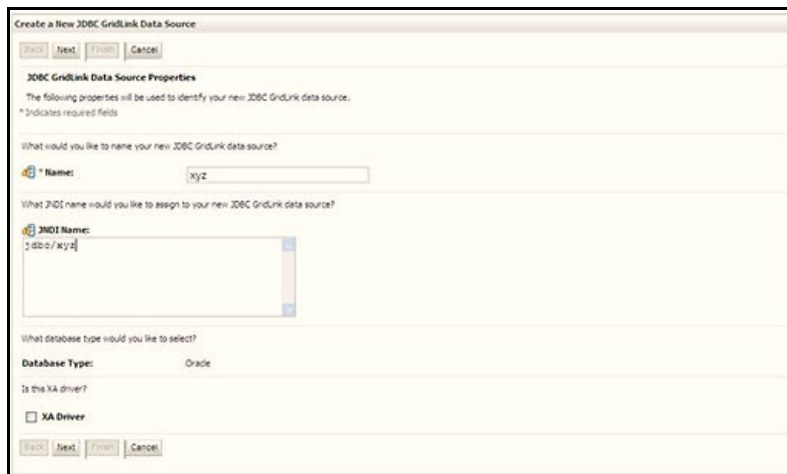
14. Click **Finish**. The created *Data Source* is displayed in the list of Data Sources.

**NOTE**

- *User ID* is the Oracle user ID that is created for the respective *Information Domain*
- *User ID* specified for a data source with *FICMASTER* as *JNDI* name must be the Oracle user ID created for the *Configuration schema*.

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

**Figure 61: Data Source**

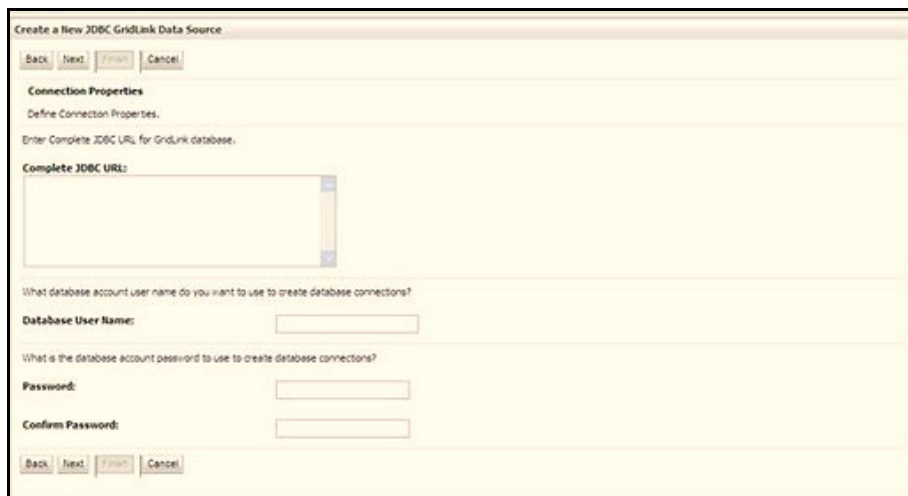


16. Select the **AdminServer** option and click **Finish**.

## 11.2.2 Creating GridLink Data Source

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

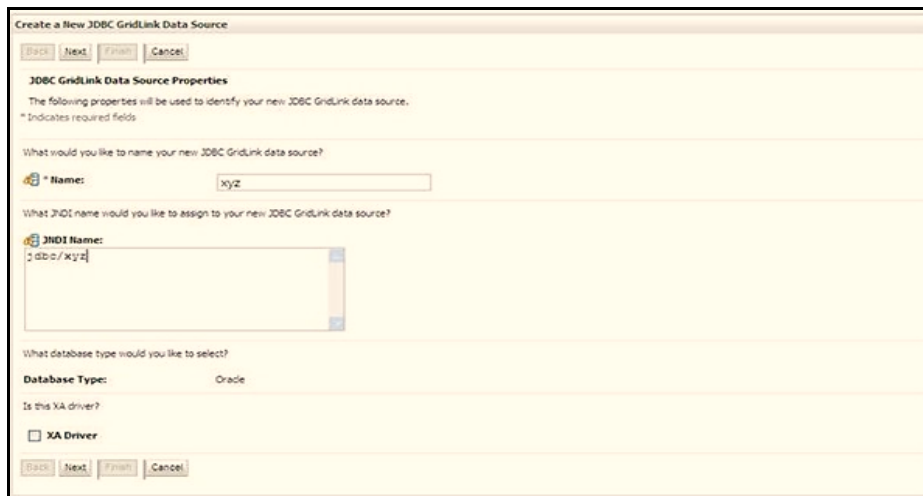
**Figure 62: GridLink Data Source**



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

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

**Figure 63: JNDI Name**



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

### 11.2.3 Configuring Multi-data Sources

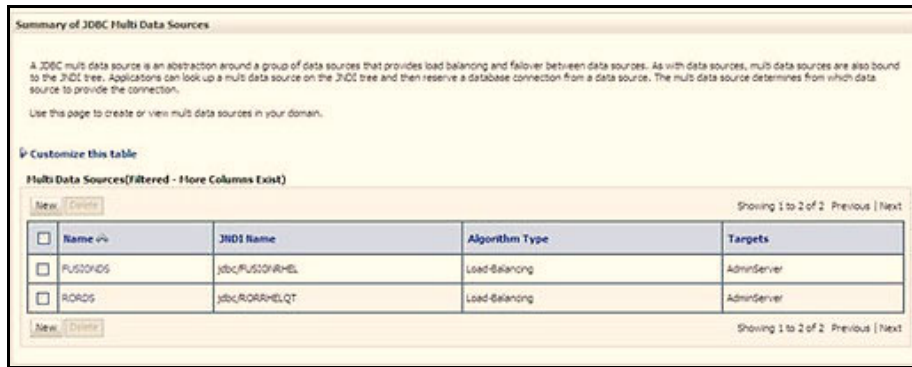
A JDBC multi-data source is an abstraction around a group of data sources that provides load balancing and failover between data sources. As with data sources, multi-data sources are also bound to the JNDI tree. Applications can look up a multi-data source on the JNDI tree and then reserve a database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

To configure the multi-data sources, follow these steps:

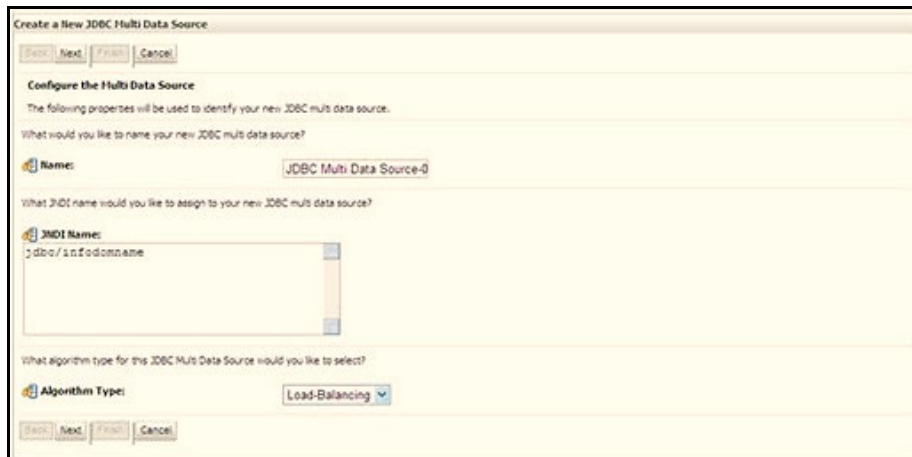
1. Open the WebLogic Admin Console in your browser: `http://<ipaddress>:<administrative console port>/console`. (https if SSL is enabled). The **Login** window is displayed.
2. Log in with the user ID with administrative privileges.
3. In the LHS menu (Domain Structure), select **Services > JDBC > Multi Data Sources** to display the **Summary of JDBC Multi Data Sources** window.

**Figure 64: Multi Data Sources**



4. Click **New** to display the **New JDBC Multi Data Source** window.

**Figure 65: Configure Multi Data Source**



**NOTE**

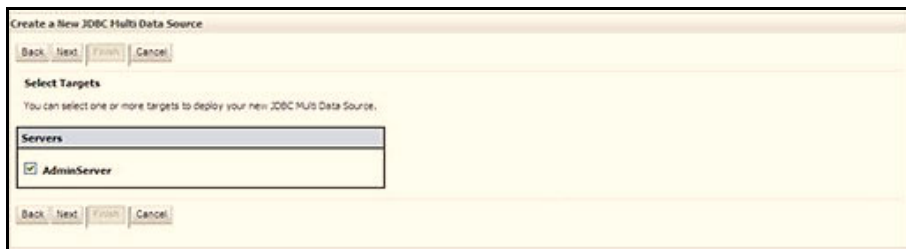
Ensure that the Data Sources which must be added to the new JDBC Multi Data Source are created.

5. 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/infodomain*
- The JNDI Name of the Data Sources that is added to the new JDBC Multi data source must be different from the JNDI name specified during Multi Data Source
- The 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
- The JNDI Name provided in the multi-data source must be the same name that is mentioned in the `web.xml` file of the OFSAAI Application
- You can select the **Algorithm Type** as **Load-Balancing**.

**Figure 66: Select Targets**



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

**Figure 67: Select Data Source Type**



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

Figure 68: Add Data Sources



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

## 11.2.4 Configuring Advanced Settings for Data Source

This section describes how to configure the advanced setting for data source.

To configure the advanced setting for data source, follow these steps:

1. Click the new *Data Source* from the **Summary of JDBC Data Sources** window to display the **Settings for Data Source Name** window.
2. Select the **Connection Pooling** tab under **Configuration**.
3. Navigate to the **Advanced** option at the bottom of the window, and check the **Test Connection of Reserve** check-box (enables WebLogic Server to test a connection before giving it to a client).
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**. A message is displayed indicating that the test was successful.

After the *Data Source* is created successfully, the following messages are displayed:

*All changes are activated. No restart is necessary.*

*Settings updated successfully.*

If not, follow these same steps to recreate the data source.

## 11.2.5 Configuring JDBC Connection Pooling

This section describes how to configure the JDBC connection pooling. To define the JDBC connection pooling, ensure that you have created the *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** and select **JDBC >Summary of JDBC Data Sources >JDBC Data Source-<INFODDOM\_NAME>**.
2. Set the following values:
  - Initial Capacity: 10
  - Maximum Capacity: 100
  - Capacity Increment: 1

- **Statement Cache Type:** LRU
  - **Statement Cache Size:** 10
3. Click **Save**.

## 11.2.6 Creating Workmanager

A Workmanager is used to re-trigger failed messages.

To create a Workmanager, perform these steps:

- The **Name** field must have the value `wm/WorkManager-TFLT`
- The **Type** field must have the value `Work Manager`.
- The **Targets** field must have the value `AdminServer`
- The **Scope** field must have the value `Global`
- The **Stuck Thread Action** field must have the value `Ignore stuck threads`. Click **Save**.

Figure 69: WorkManager Screen 1

The screenshot shows the configuration page for a WorkManager. The title is "Settings for wm/WorkManager-TFLT". There are tabs for "Configuration", "Targets", and "Notes". A "Save" button is at the top left. Below the tabs, there is a "Save" button and a note: "Use this page to define the request classes and constraints for the selected Work Manager." The configuration fields are as follows:

- Name:** `wm/WorkManager-TFLT` (The user-specified name of this MBean instance. More Info...)
- Scope:** `Global` (The scope in which this Work Manager is created. More Info...)
- Request Class:** `(None configured)` (New) (A request class associated with this Work Manager. This may be a FairShareRequestClass, ResponseTimeRequestClass, or a ContextRequestClass. More Info...)
- Minimum Threads Constraint:** `(None configured)` (New) (The minimum number of threads allocated to resolve deadlocks. More Info...)
- Maximum Threads Constraint:** `(None configured)` (New) (The maximum number of concurrent threads that can be allocated to execute requests. More Info...)
- Capacity Constraint:** `(None configured)` (New) (The total number of requests that can be queued or executing before WebLogic Server begins rejecting requests. More Info...)
- Stuck Thread Action:** `Ignore stuck threads` (Specify how stuck threads should be detected, and what action to take should they occur. More Info...)
- Max Stuck Thread Time:** `0` (Time after which an executing thread is declared as stuck. More Info...)
- Stuck Thread Count:** `0` (Number of stuck threads after which the WorkManager is shutdown. More Info...)
- Resume When Unstuck:** (Whether to resume work manager once the stuck threads were cleared. More Info...)

A "Save" button is at the bottom left.

Figure 70: Workmanager Screen 2

The screenshot shows the "Summary of Work Managers" page. There is a "Save" button at the top left. Below it, a note states: "A Work Manager defines a set of request classes and thread constraints that manage work performed by WebLogic Server instances. This page displays the Work Managers, request classes and thread constraints defined for this domain. Work Managers are defined at the domain and partition level. You can also define application-level and module-level Work Managers." Below this note is a "Partition Fair Share" field with the value `50`. A detailed description of this field is provided: "A desired percentage of thread usage by a partition compared to the thread usage by all partitions. It is recommended that the sum of this value for all the partitions running in a WLS domain add up to 100, but it is not strictly enforced. When they do not add up to 100, WLS assigns thread-usage times to different partitions based on their relative values. This attribute is for use in the global domain only. Use the PartitionWorkManager MBean for specifying partition fair share values for partitions. More Info...". Below this is another "Save" button. At the bottom, there is a section titled "Work Managers, Request Classes and Constraints" with a table. The table has columns for Name, Type, Targets, Scope, and Domain Partitions. The table shows one entry: "wm/WorkManager-TFLT" with Type "Work Manager", Targets "AdminServer", and Scope "Global". There are "New", "Clone", and "Delete" buttons for each row. The table is showing 1 to 1 of 1 items.

## 11.3 Configuring Resource Reference in Tomcat Application Server

This section is applicable only when the Web application server type is Tomcat.

### Topics:

- [Creating Data Source](#)
- [Defining JDBC Connection Pooling](#)
- [Configuring ClassLoader for Apache Tomcat](#)

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

See [Hardware and Software Requirements](#) to identify the correct `ojdbc<version>.jar` file version to be copied.

### 11.3.1 Creating Data Source

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

<b>NOTE</b>	<p>The User-IDs for Configuration/Atomic schemas have the prefix of setup info depending on the value set for <code>PREFIX_SCHEMA_NAME</code> in the <code>&lt;&lt;APP Pack&gt;&gt;_SCHEMA_IN.XML</code> file of the Schema Creator Utility.</p> <p>For example: If the value set for <code>PREFIX_SCHEMA_NAME</code> is <code>DEV</code> and the schema name is mentioned as <code>ofsaacnf</code>, then the actual schema created in the database is <b>DEV_ofsaacnf</b>.</p>
-------------	---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

```
<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 configuration, the WAR file must be created and deployed in Tomcat.

### 11.3.2 Defining JDBC Connection Pooling

This section describes how to define the JDBC connection pooling.

To define the JDBC connection pooling, follow these steps:

1. Copy the \$ORACLE\_HOME/jdbc/lib/ojdbc<version>.jar file to the path \$TOMCAT\_DIRECTORY/lib/ directory.

See [Hardware and Software Requirements](#) to identify the correct ojdbc<version>.jar file version to be copied.

2. Edit the server.xml file available under the \$TOMCAT\_DIRECTORY/conf/ directory with the following 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"

maxTotal="300" maxIdle="30" maxWaitMillis="10000"
removeAbandonedOnBorrow="true" removeAbandonedTimeout="60"
logAbandoned="true"/>

</Context>
```

**NOTE**

- \$APP\_DEPLOYED\_PATH\$ must be replaced by the OFSAAI application deployed path
- \$INFODOM\_NAME\$ must be replaced by Infodom Name
- \$ATOMICSCHEMA\_USERNAME\$ must be replaced by an Atomic schema database user name
- \$ATOMICSCHEMA\_PASSWORD\$ must be replaced by an Atomic schema database password
- \$JDBC\_CONNECTION\_URL must be replaced by JDBC connection string jdbc:Oracle:thin:<IP>:<PORT>:<SID>  
 For example: jdbc:oracle:thin  
 192.168.0.1:1521:soluint

The User-IDs for Configuration/Atomic schemas have the prefix of setupinfo depending on the value set for PREFIX\_SCHEMA\_NAME in the <<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 is mentioned as *ofsaacnf*, then the actual schema created in the database is *DEV\_ofsaacnf*.

### 11.3.3 **Configuring ClassLoader for Apache Tomcat**

This section describes how to configure the ClassLoader for Apache Tomcat.

To configure the ClassLoader for Apache Tomcat, follow these steps:

1. Edit the `server.xml` file available in `$TOMCAT_HOME/conf/` directory.
2. Add the tag `<Loader delegate="true" />` within the `<Context>` tag, above before the `<Resource>` tag. This is applicable only when the web application server is Apache Tomcat 8.

## 12 Appendix C: Configuring Work Manager in Web Application Servers

This appendix describes how to configure Work Manager in Web Application Servers.

The process Modelling framework requires creating a Work Manager and mapping it to the OFSAA instance. This configuration is required for WebSphere and WebLogic Web application server types.

### Topics:

- [Configuring Work Manager in WebSphere Application Server](#)
- [Configuring Work Manager in WebLogic Application Server](#)

### 12.1 Configuring Work Manager in WebSphere Application Server

#### Topics:

- [Creating Work Manager](#)
- [Mapping Work Manager to OFSAA WebSphere Instance](#)

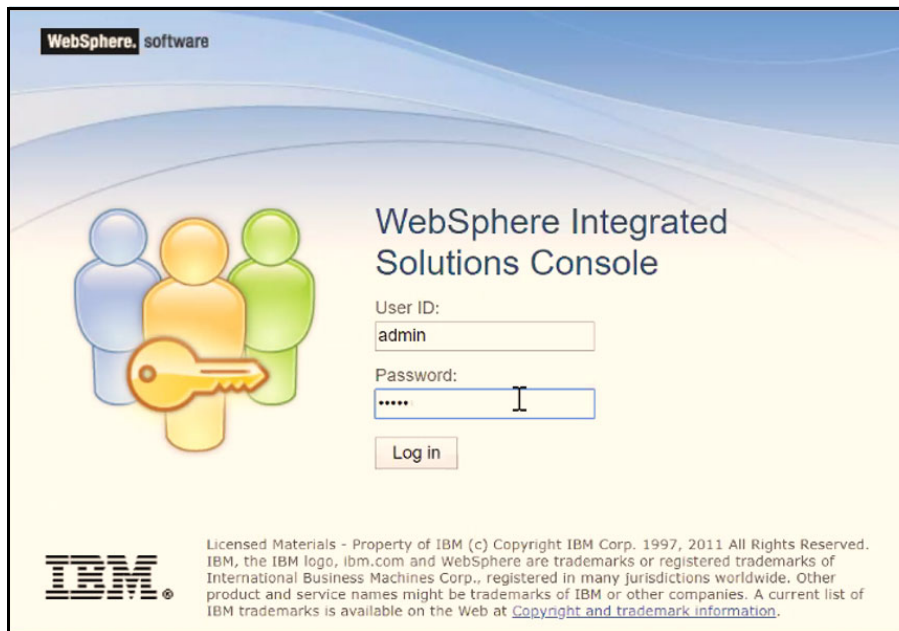
#### 12.1.1 Creating Work Manager

This section describes how to create the Work Manager.

To create the Work Manager, follow these steps:

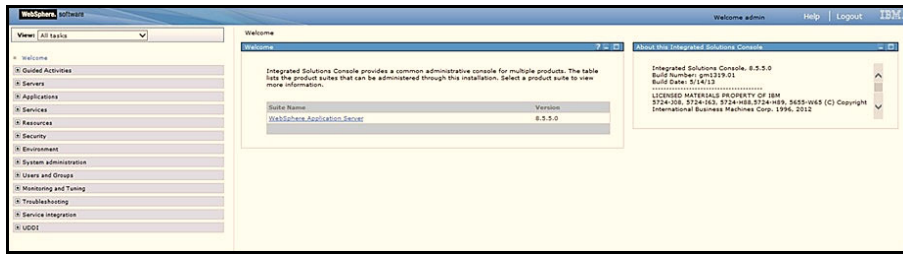
1. Open the WebSphere Admin Console in your browser: **http://<ipaddress>:<administrative console port>/ibm/console**. (*https*, if SSL is enabled). The **Login** window is displayed..

Figure 71: WebSphere Login page



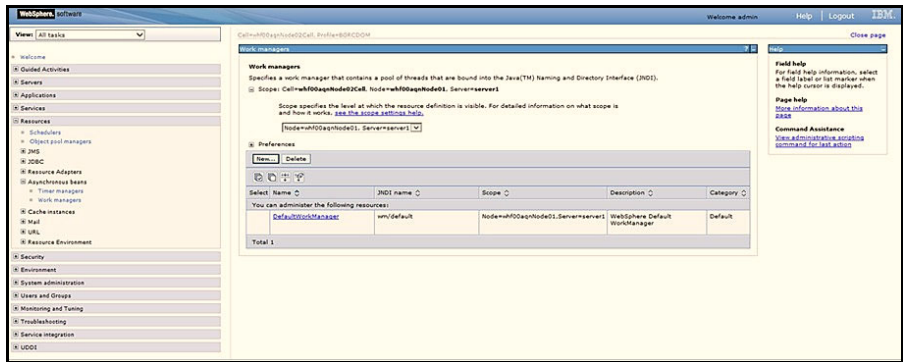
2. Log in with the user ID with administrative privileges.

Figure 72: Home page



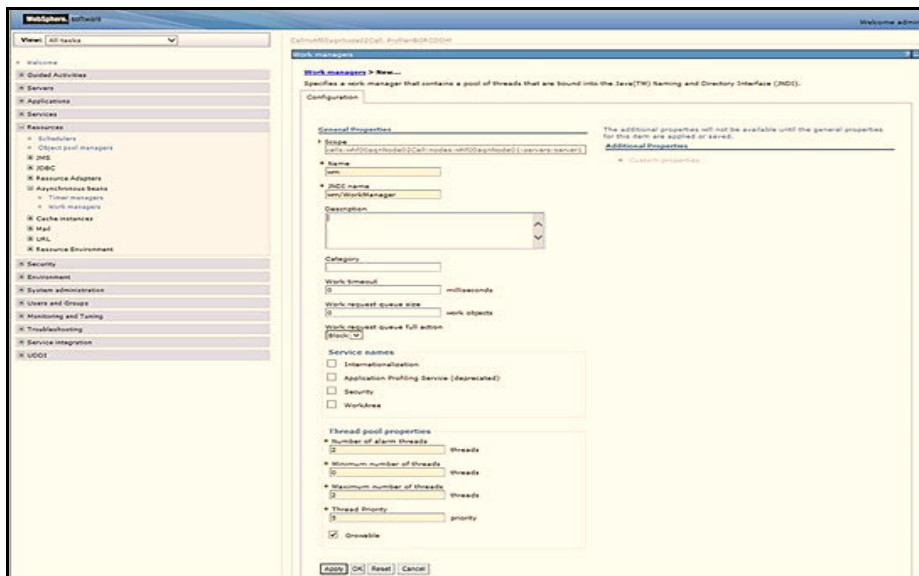
- From the LHS menu, expand **Resources** and select **Work Managers** under **Asynchronous beans**.

Figure 73: Work Managers



- Select the required *Scope* from the drop-down list.  
For example: *Node=whf00aqaNode01, Server=server1*.
- Click **New** in the **Preferences** section.

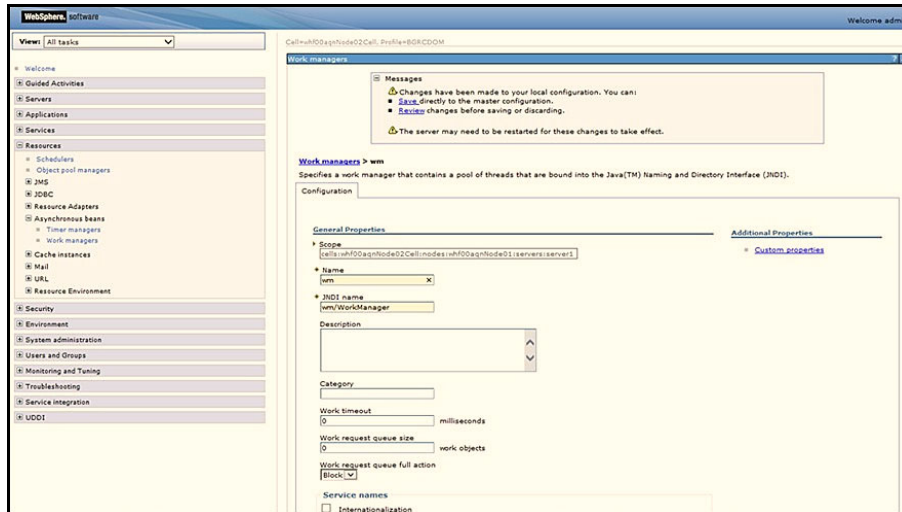
Figure 74: New Work Managers



- Enter the **Name** as *wm* and JNDI name as *wm/WorkManager* in the respective fields.
- Enter the **Thread pool properties**.

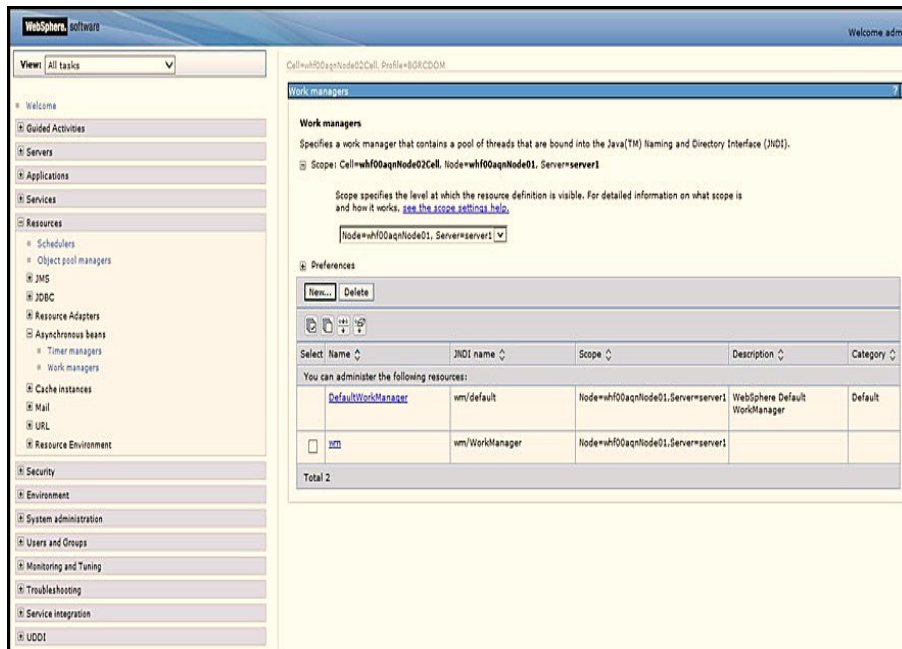
8. Click **Apply**.

**Figure 75: Configure Work Managers**



9. Click **Save**.

**Figure 76: Work Managers Preferences**



After creating the work manager, you must map it to an OFSAA instance.

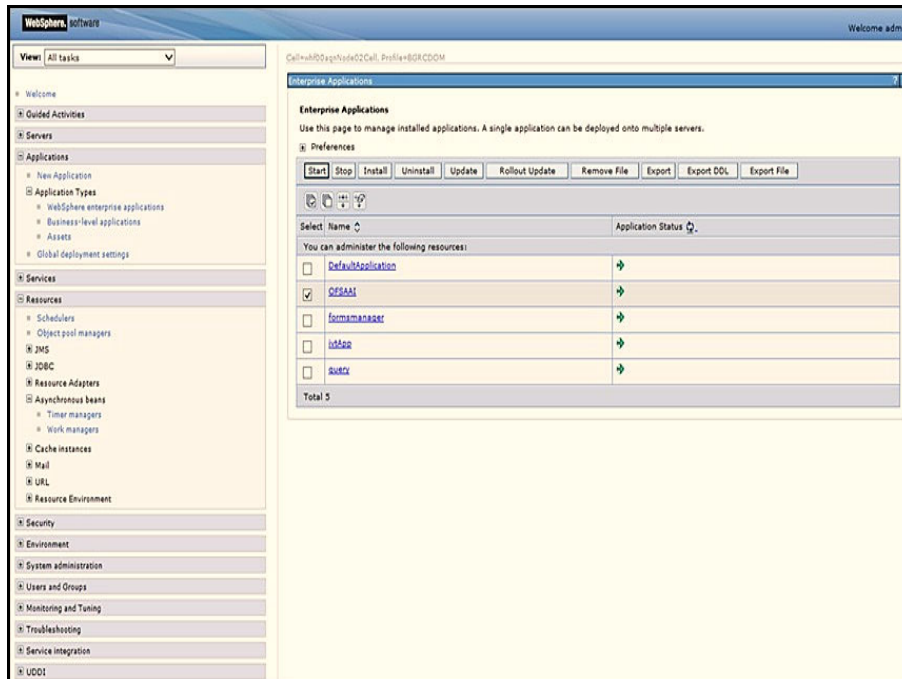
## 12.1.2 Mapping Work Manager to OFSAA WebSphere Instance

This section describes how to map the Work Manager to an OFSAA WebSphere Instance.

To map the Work Manager to an OFSAA WebSphere Instance, follow these steps:

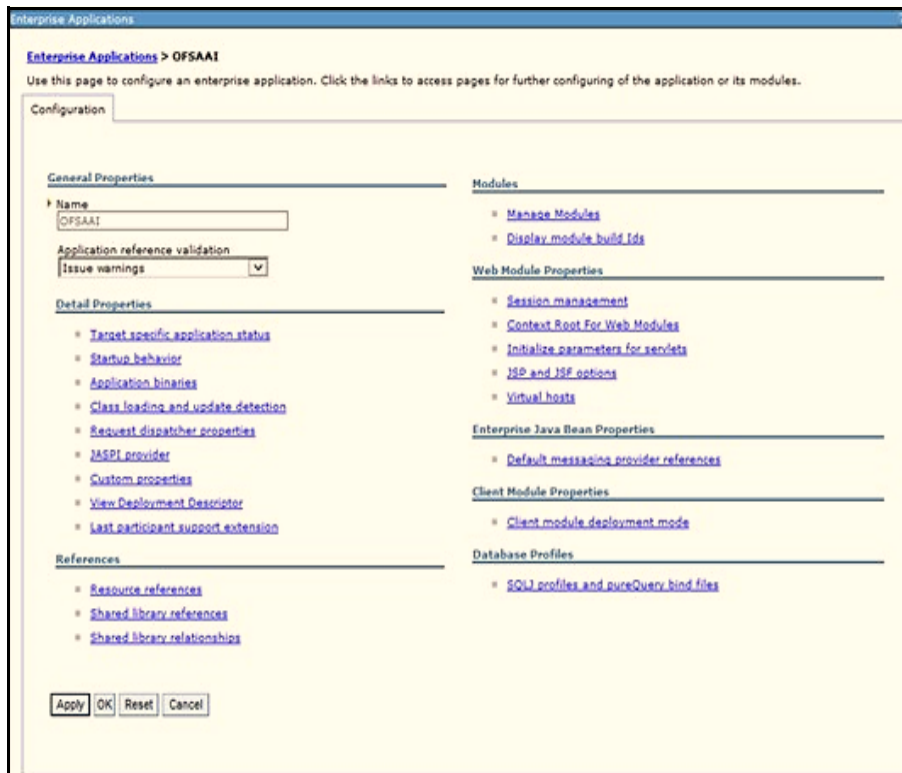
1. From the LHS menu, expand **Applications > Application Types** and click WebSphere enterprise applications.

Figure 77: Enterprise Applications



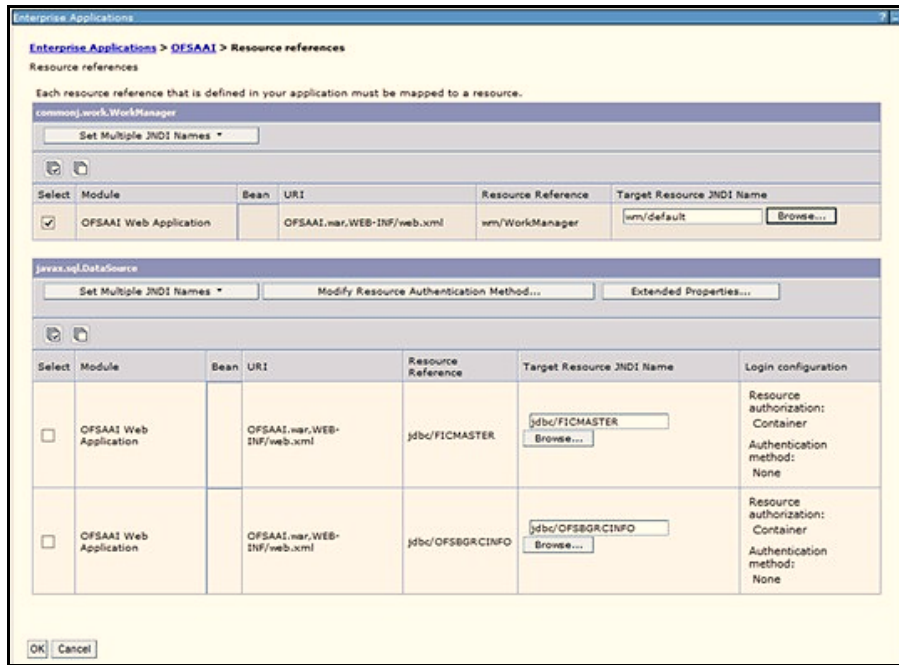
2. Click the **OFSAAI** instance Hyperlink.

Figure 78: OFSAAI



3. Click the **Resource** references link under the **References** section.

Figure 79: Resource References



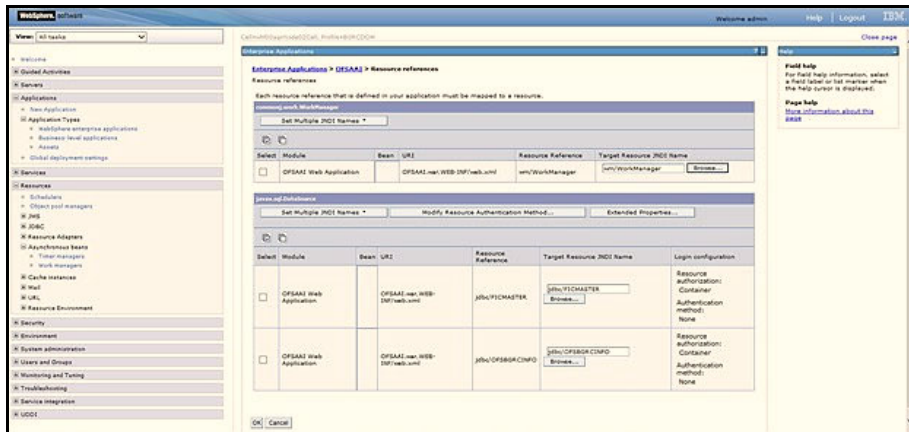
4. Click **Browse** corresponding to **Work Manager Resource Reference**. The available resources are displayed.

Figure 80: Available Resources



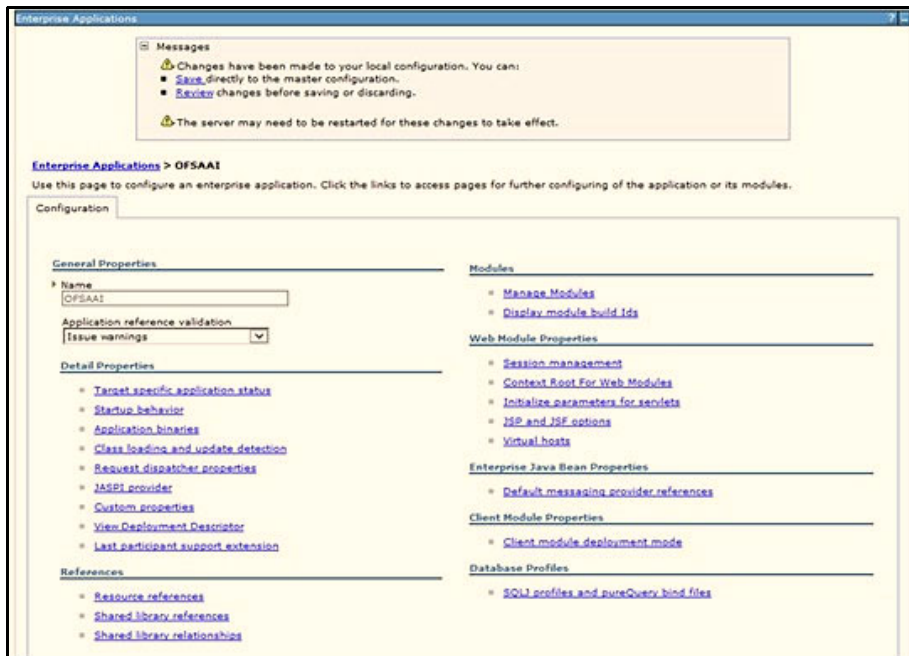
5. Select the newly created Work Manager (**wm**) and click **Apply**.

Figure 81: Select Work Manager



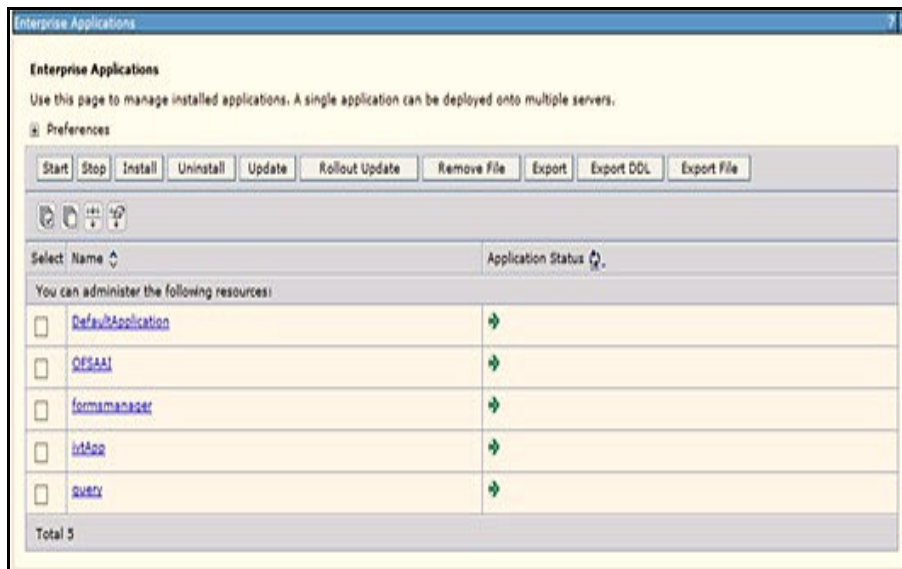
6. Select the Work Manager (**wm/WorkManager**) and click **OK**.

Figure 82: OFSAAI Configuration



7. Click **Save**.

Figure 83: Enterprise Applications Preferences



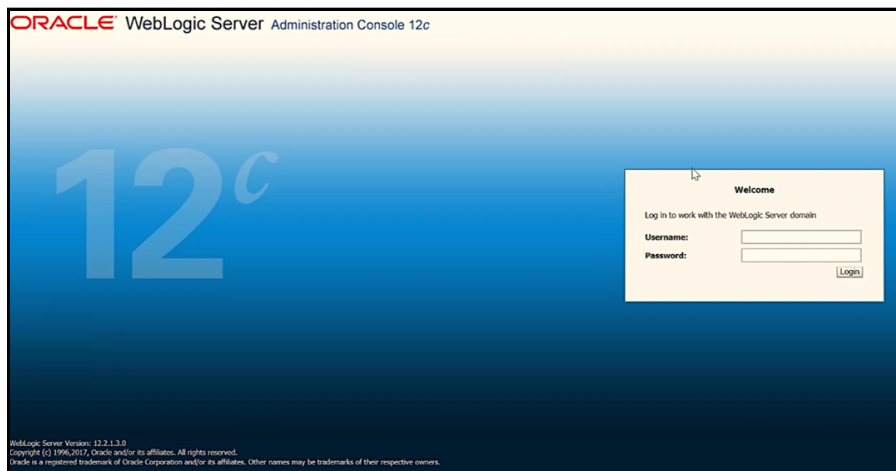
## 12.2 Configuring Work Manager in WebLogic Application Server

This section describes how to create the Work Manager in WebLogic application server.

To create the Work Manager in WebLogic application server, follow these steps:

1. Open the WebLogic Admin Console in your browser: **http://<ipaddress>:<administrative console port>/console**. (https, if SSL is enabled). The **Welcome** window is displayed.

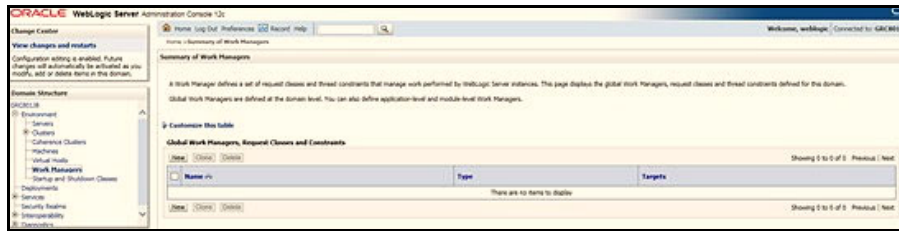
Figure 84: WebLogic Login page



2. Log in with the user ID with administrative privileges.
3. In the LHS menu (Domain Structure), expand **Environment** and select **Work Managers** to display the **Summary of Work Managers** window.

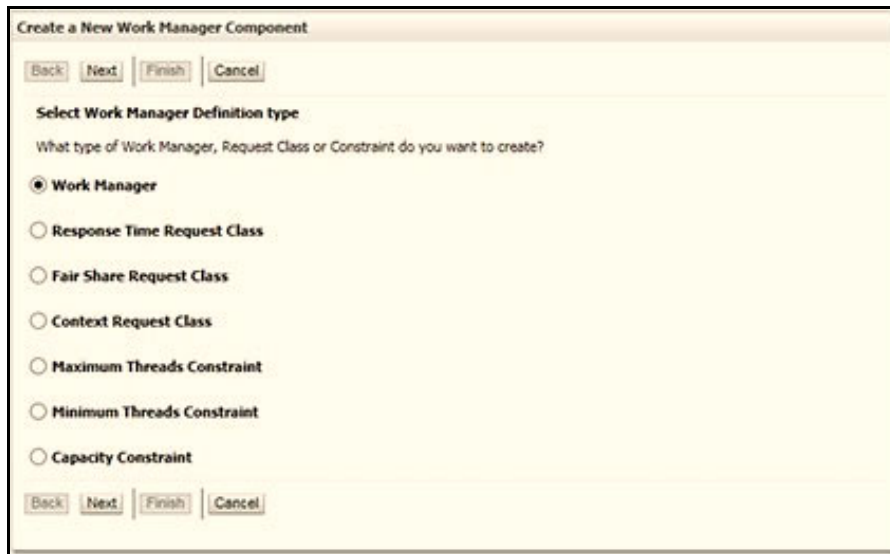


Figure 85: Work Manager



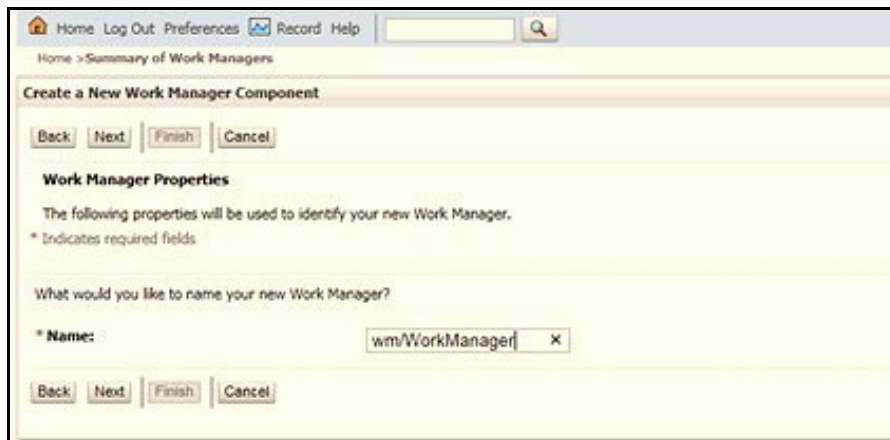
4. Click **New** to create a new Work Manager component.

Figure 86: New Work Manager



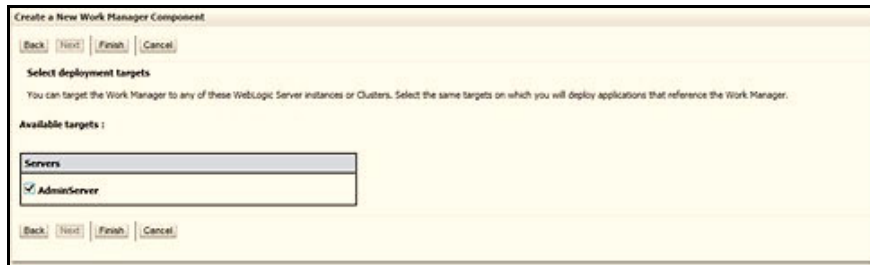
5. Select the *Work Manager* and click **Next**.

Figure 87: Work Manager



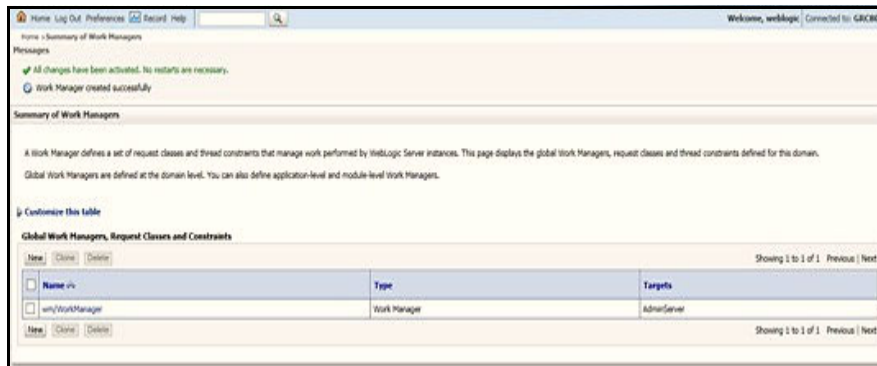
6. Enter the Name as *wm/WorkManager* and click **Next**.

Figure 88: Select Deployment Targets



7. Select the required deployment target and click **Finish**.

Figure 89: Summary of Work Managers



## 13 Appendix D: Creating and Deploying EAR/WAR File

This appendix describes how to create and deploy the EAR/WAR file.

### Topics:

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

### 13.1 Creating EAR/WAR File

This section describes how to create EAR/WAR File.

To create EAR/WAR File, follow these 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 `Time taken` messages are displayed and you will be returned to the prompt.

Figure 90: Creating EAR/WAR File

```
/scratch/ofsaaweb>cd /scratch/ofsaaweb/OFSA80/ficweb
/scratch/ofsaaweb/OFSA80/ficweb>
/scratch/ofsaaweb/OFSA80/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/OFSA80/ficweb>./ant.sh
executing "ant"
Buildfile: build.xml

createwar:
 [war] Building war: /scratch/ofsaaweb/OFSA80/ficweb/AAI80.war

createear:
 [ear] Building ear: /scratch/ofsaaweb/OFSA80/ficweb/AAI80.ear

BUILD SUCCESSFUL
Total time: 2 minutes 8 seconds
/scratch/ofsaaweb/OFSA80/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.

In case of OFSAA configured on Tomcat installation, `<contextname>.war` is created.

## 13.2 Deploying EAR/WAR File

This section describes how to deploy the EAR/WAR file.

**NOTE** Remove the existing Admin Tools deployment (which is integrated with the OFS ECM pack).

### Topics:

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

**NOTE** Ensure that you clear the application cache prior to the deployment of Applications Pack Web Archive. This is applicable to all Web servers (WebSphere, WebLogic, and Tomcat). For more information, see [Clearing Application Cache](#).

### 13.2.1 Deploying EAR/WAR Files on WebSphere

This section describes how to deploy the EAR/WAR files on WebSphere.

To deploy Infrastructure application in WebSphere, follow these steps:

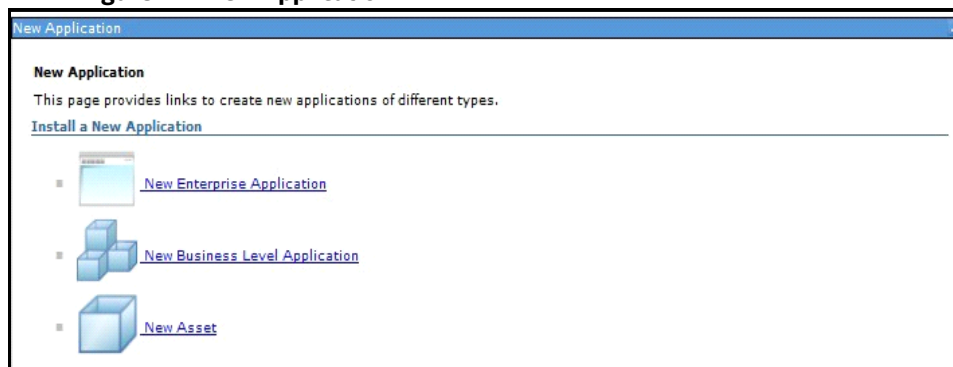
1. Start WebSphere Profile by navigating to the path `/<WebSphere_Installation_Directory>/IBM/WebSphere/AppServer/profiles/<Profile_Name>/bin/` and execute the command: `./startServer.sh server1`.
2. Open the URL in your browser: **http://<ipaddress>:<Administrative Console Port>/ibm/console**. (https, if SSL is enabled). The **Login** screen is displayed.

Figure 91: Login Screen



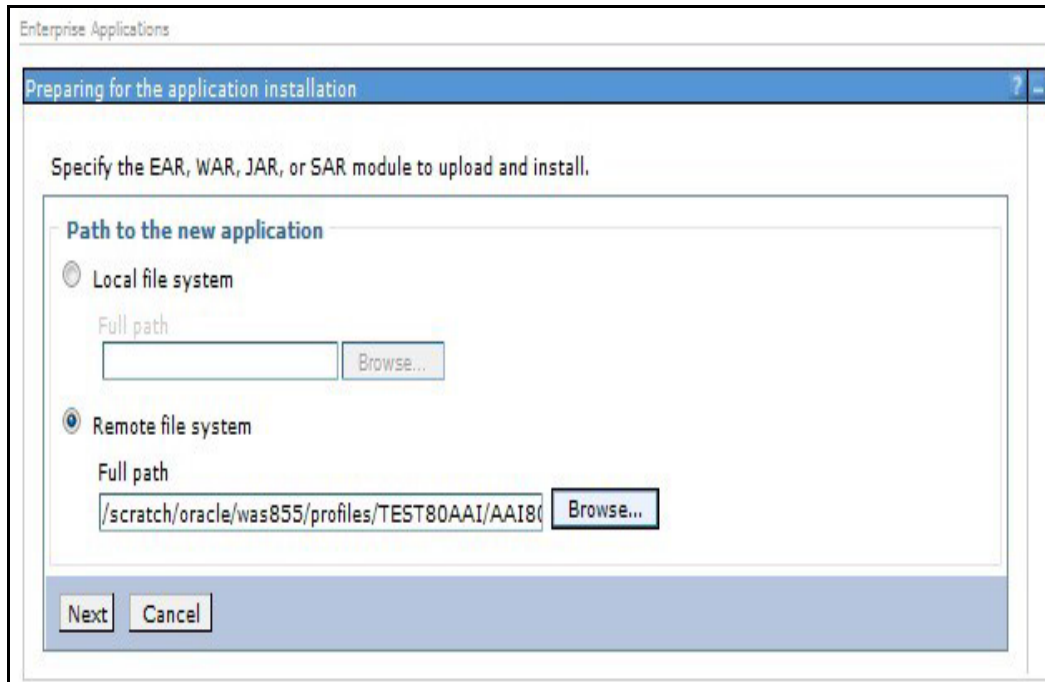
3. Enter the user credentials which has administrator rights and click **Log In**.
4. From the LHS menu, select *Applications* and click **New Application**. The **New Application** window is displayed.

Figure 92: New Application



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

**Figure 93: Preparing for the Application Installation**



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

**Figure 94: Installation Options**



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

Figure 95: Install New Application

Specify options for installing enterprise applications and modules.

→ **Step 1: Select installation options**  
[Step 2: Map modules to servers](#)  
[Step 3: Summary](#)

### Select installation options

Specify the various options that are available for your application.

- Precompile JavaServer Pages files

Directory to install application

- Distribute application
- Use Binary Configuration
- Deploy enterprise beans

Application name

- Create MBeans for resources
- Override class reloading settings for Web and EJB modules

Reload interval in seconds

- Deploy Web services

Validate Input off/warn/fail  
warn ▼

- Process embedded configuration

#### File Permission

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

Application Build ID

- Allow dispatching includes to remote resources
- Allow servicing includes from remote resources

Business level application name  
Create New BLA ▼

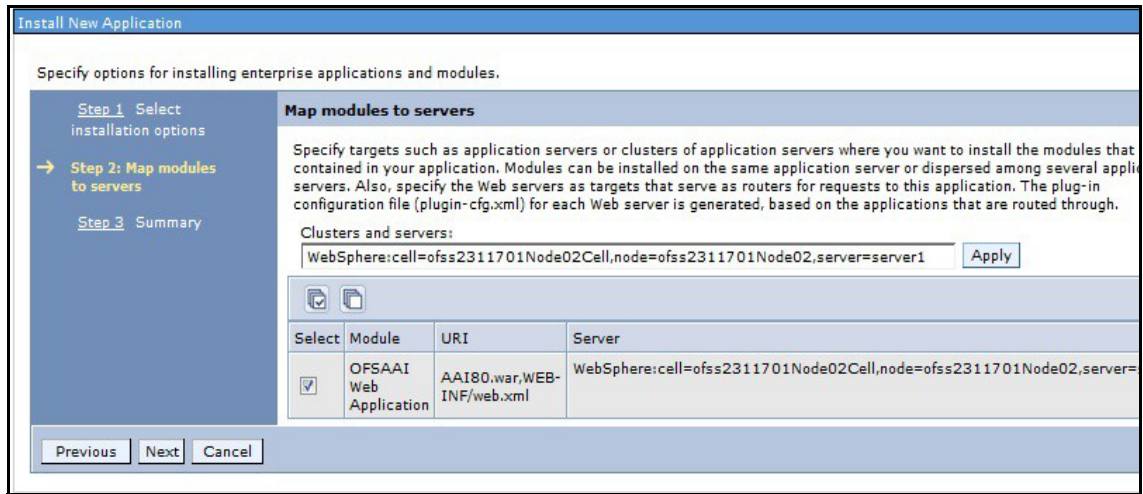
Asynchronous Request Dispatch Type  
Disabled ▼

- Allow EJB reference targets to resolve automatically
- Deploy client modules  
Client deployment mode  
Isolated ▼
- Validate schema

Next Cancel

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

**Figure 96: Map Modules to Servers**



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



Figure 97: Map Resource References to Resources

Specify options for installing enterprise applications and modules.

**Map resource references to resources**

Each resource reference that is defined in your application must be mapped to a resource.

commonj.work.WorkManager

Set Multiple JNDI Names ▾

Select	Module	Bean	URI	Resource Reference	Target Resource JNDI Name
<input type="checkbox"/>	OFSAAI Web Application		BD801Q.war,WEB-INF/web.xml	wm/WorkManager	<input type="text" value="Browse..."/>

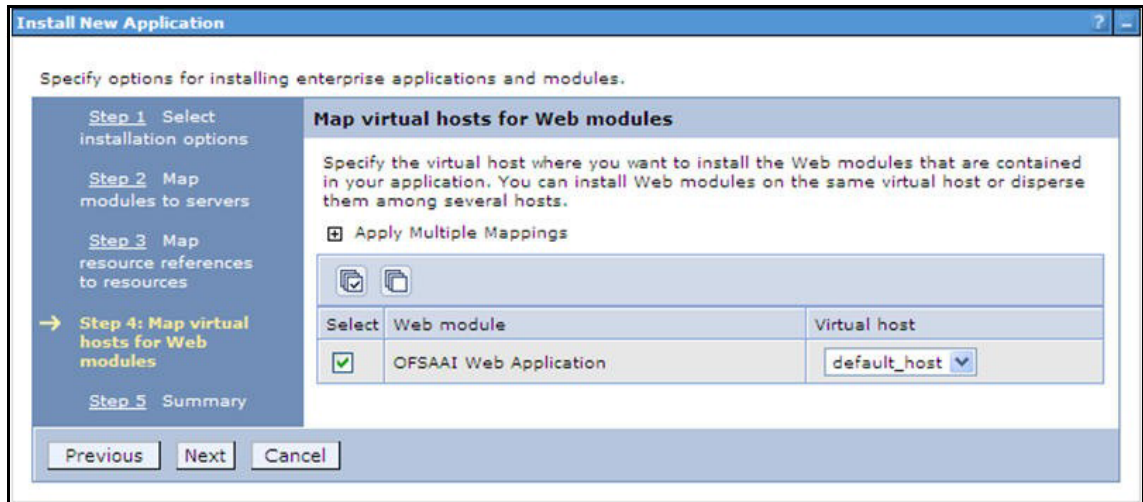
javax.sql.DataSource

Set Multiple JNDI Names ▾    Modify Resource Authentication Method...    Extended Properties...

Select	Module	Bean	URI	Resource Reference	Target Resource JNDI Name	Login configuration
<input type="checkbox"/>	OFSAAI Web Application		BD801Q.war,WEB-INF/web.xml	jdbc/FICMASTER	<input type="text" value="Browse..."/>	Resource authorization: Container Authentication method: None
<input type="checkbox"/>	OFSAAI Web Application		BD801Q.war,WEB-INF/web.xml	jdbc/analyst	<input type="text" value="Browse..."/>	Resource authorization: Container Authentication method: None
<input type="checkbox"/>	OFSAAI Web Application		BD801Q.war,WEB-INF/web.xml	jdbc/miner	<input type="text" value="Browse..."/>	Resource authorization: Container Authentication method: None
<input type="checkbox"/>	OFSAAI Web Application		BD801Q.war,WEB-INF/web.xml	jdbc/BD801QT	<input type="text" value="Browse..."/>	Resource authorization: Container Authentication method: None

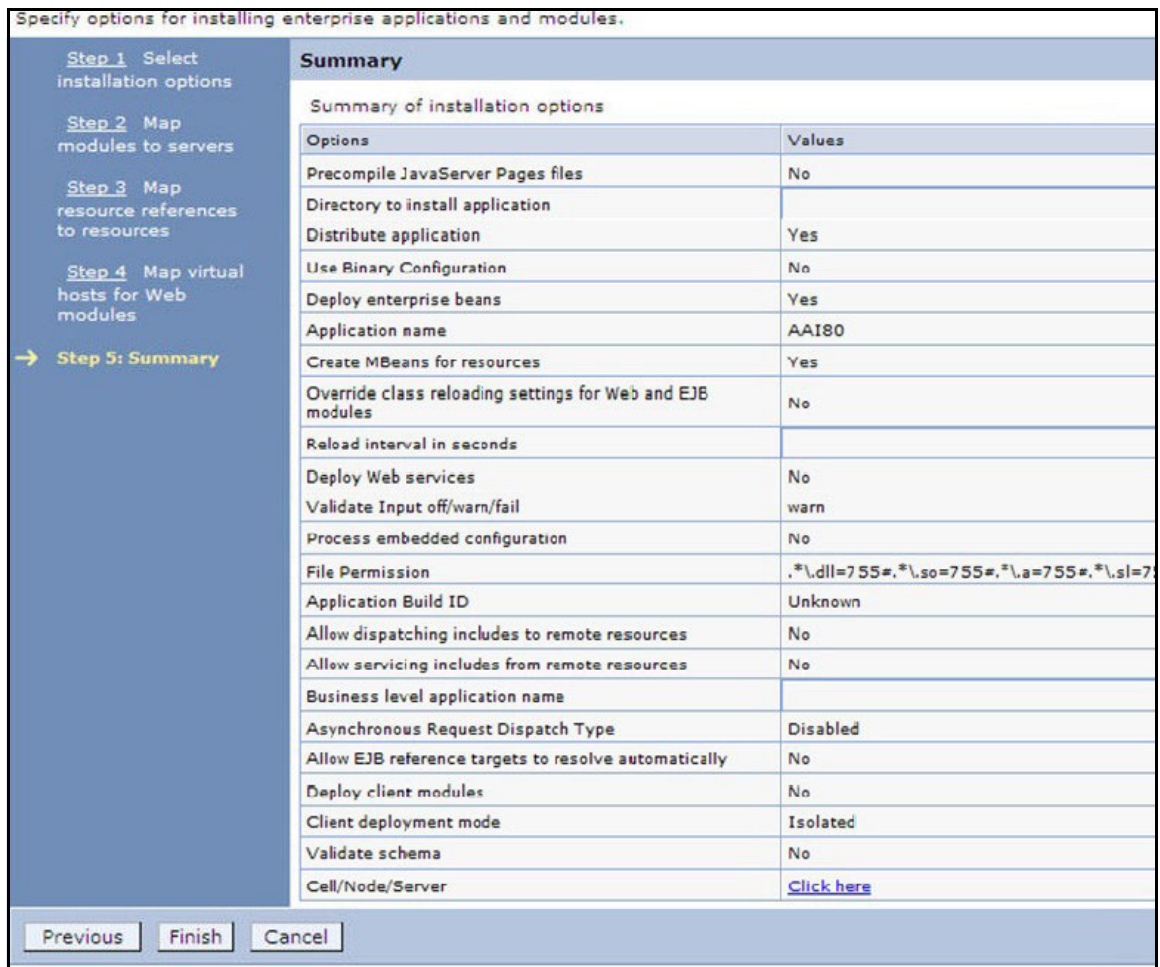
10. Map each resource defined in the application to a resource JNDI name defined earlier.
11. Click **Modify Resource Authentication Method** and specify the authentication method created earlier.  
You can specify *config* for FICMASTER resource or *Atomic* for Atomic resource as the authentication method.
12. Select the **OFSAAI Web Application** check-box and click **Next**. The **Map Virtual hosts for Web Modules** window is displayed.

Figure 98: Map Virtual host for Modules



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

Figure 99: Summary



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

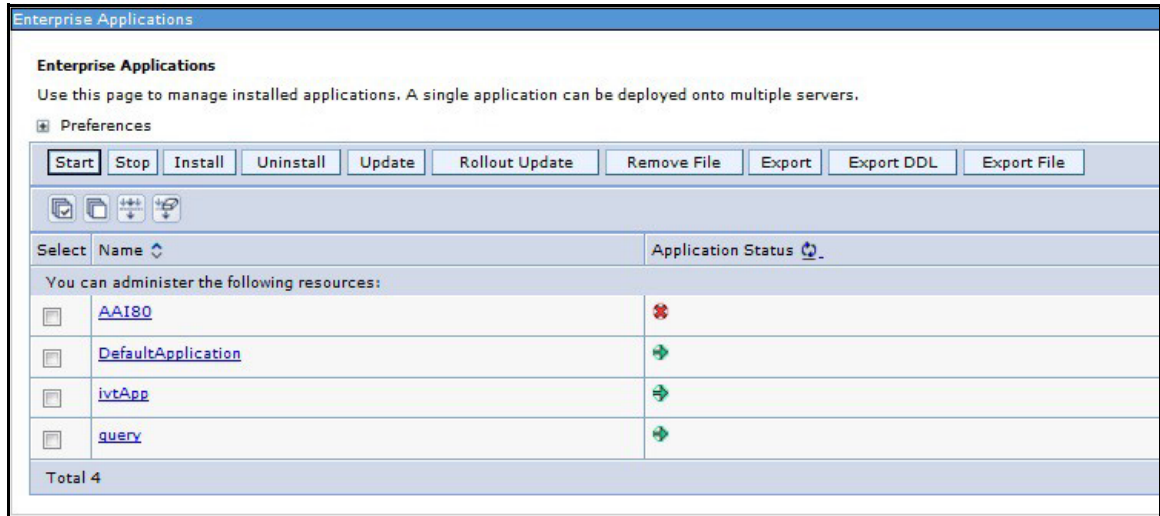
### 13.2.1.1 Starting the Application

This section describes how to start the application.

To start the application, follow these steps:

- Go to **Expand Applications > Application Type > WebSphere enterprise applications**. The **Enterprise Applications** window is displayed.

**Figure 100: Enterprise Application**



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

#### NOTE

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

### 13.2.2 Deploying EAR/WAR files for WebLogic

This section describes how to configure the EAR/WAR files for WebLogic.

For deploying Infrastructure application that would be created during installation, follow these steps:

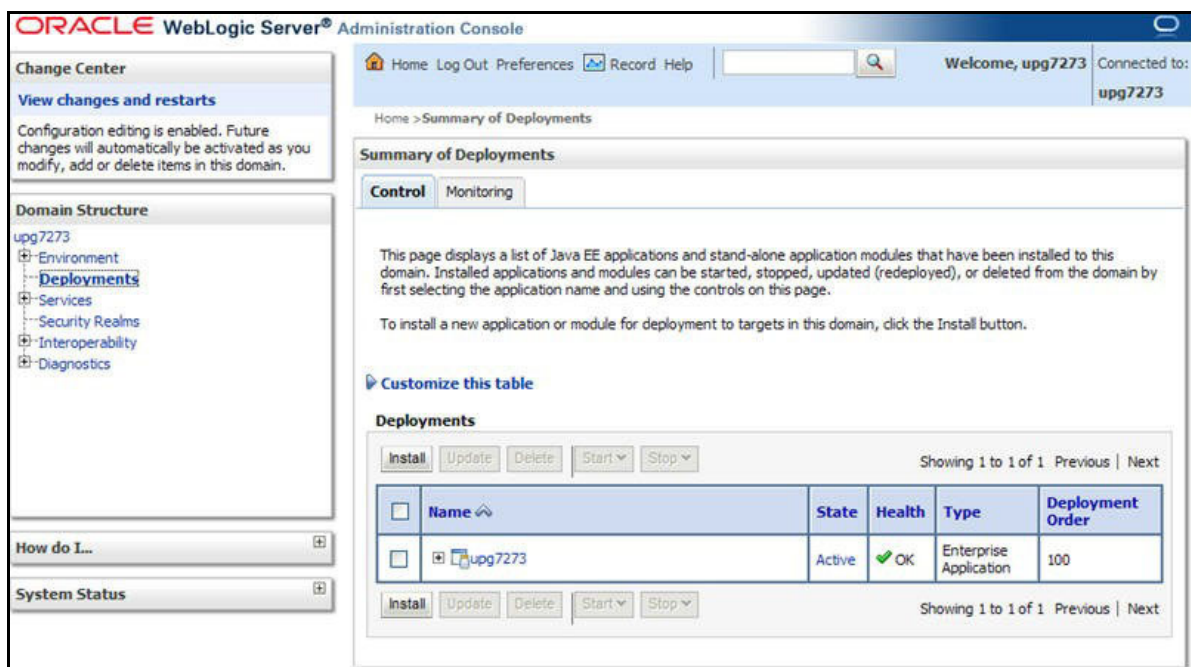
- Navigate to the path `<WebLogic Installation directory>/user_projects/domains/<domain name>/bin` in the machine in which *WebLogic* is installed.
- Start WebLogic by executing the command: `./startWebLogic.sh -d64` file.

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

**NOTE** Ensure that you have started Infrastructure Server by executing **./startofsaai.sh** as described in the [Starting Infrastructure Services](#) section.

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

**Figure 101: Summary of Deployments**



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

### 13.2.2.1 Exploding EAR File

This section describes how to explode the EAR file.

To explode the EAR file, follow these steps:

- Create the **applications** folder under domain name. For example: `/Bea/user_projects/domains/<Domain_name>/applications`.
- Create `<context_name>.ear` folder under **applications** folder.
- Copy the `<$FIC_WEB_HOME/<context_name>.ear` file to `<WEBLOGIC_INSTALL_DIR>/Bea/user_projects/domains/<DOMAIN_NAME>/applications/<context_name>.ear`.

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

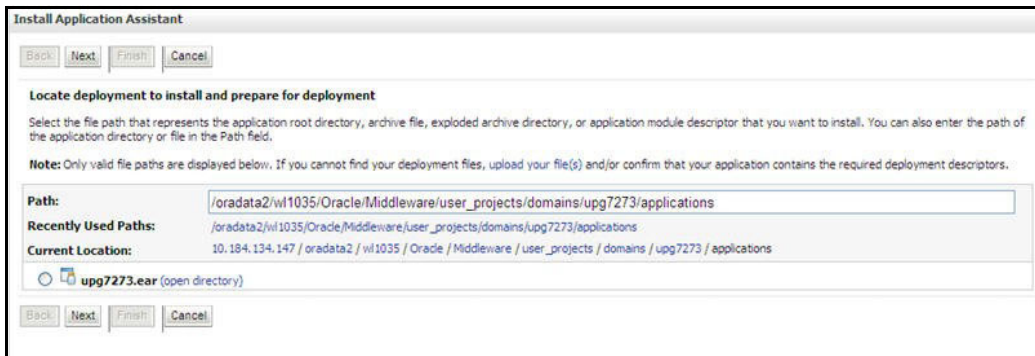
### 13.2.2.2 Installing Application

This section describes how to install the application.

To install the application, follow these steps:

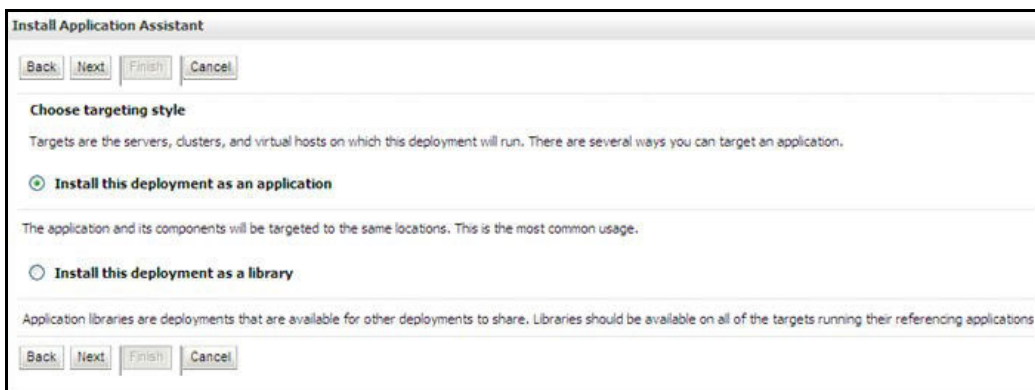
1. Open the Install Application Assistant.

**Figure 102: Install Application Assistant**



2. Click **Next**.

**Figure 103: Install Application Assistant - Next**



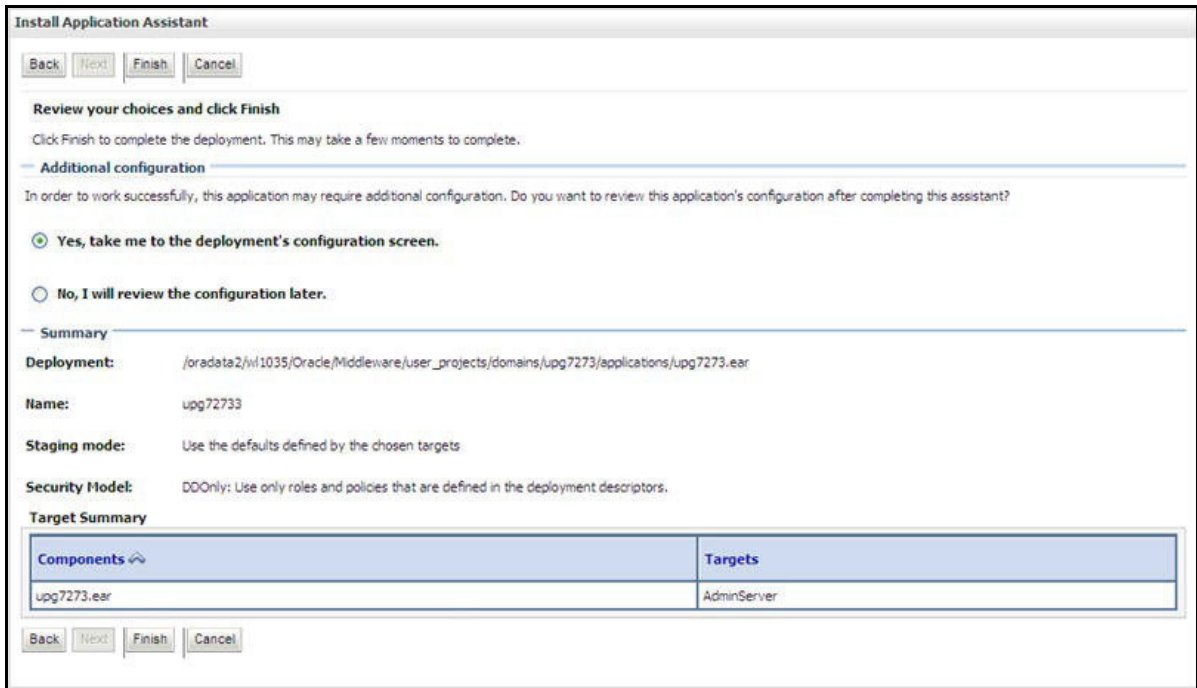
3. From the **Choose targeting style** section, select the **Install this deployment as an application** option and click **Next**. The **Optional Settings** window is displayed.

Figure 104: Optional Settings

The screenshot shows the 'Optional Settings' window of the 'Install Application Assistant'. It is divided into several sections: 'General' with a 'Name' field containing 'upg7273'; 'Security' with four radio button options, the first of which is selected; 'Source accessibility' with two radio button options, the first of which is selected; and a 'Recommended selection' section with one radio button option that is selected. Below this is a section for specifying a location, with a text field containing a file path. Navigation buttons 'Back', 'Next', 'Finish', and 'Cancel' are present at the top and bottom of the window.

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 must be used.
6. Select the **I will make the deployment available from the following location** option under the **Source accessibility** section.
7. Click **Next** to continue. The **Deployment Summary** window is displayed.

Figure 105: Deployment Summary



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

Figure 106: Settings for Deployment Name

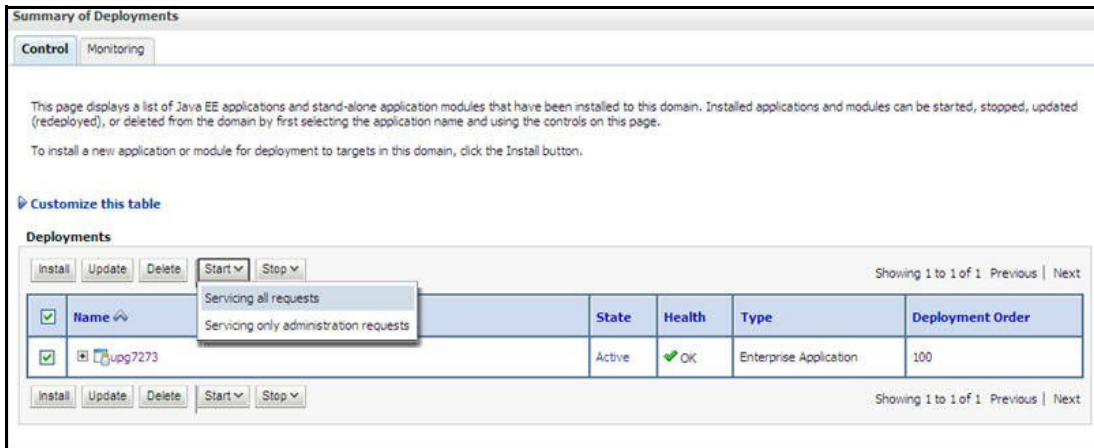


Figure 107: Settings for Deployment Name (Next Page)

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/w1035/Oracle/Middleware/user\_projects/domains/upg7273/applications/upg7273.ear The path to the source of the deployable unit on the Administration Server. [More Info...](#)

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

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

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

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

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

Save

**Modules and Components** Showing 1 to 1 of 1 Previous | Next

Name	Type
[-] upg7273	Enterprise Application
[-] EJBs	
[-] StatelessCacheBeanBean	EJB
[-] Modules	
[-] /upg7273	Web Application
[-] beanache.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.
12. Select the newly deployed Infrastructure application and click **Start > Servicing all requests**. Ensure that the Infrastructure server is up and running.



**Figure 108: Summary of Deployments**

Messages  
 ✓ Start requests have been sent to the selected Deployments.

**Summary of Deployments**

Control Monitoring

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

Customize this table

**Deployments**

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

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

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

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

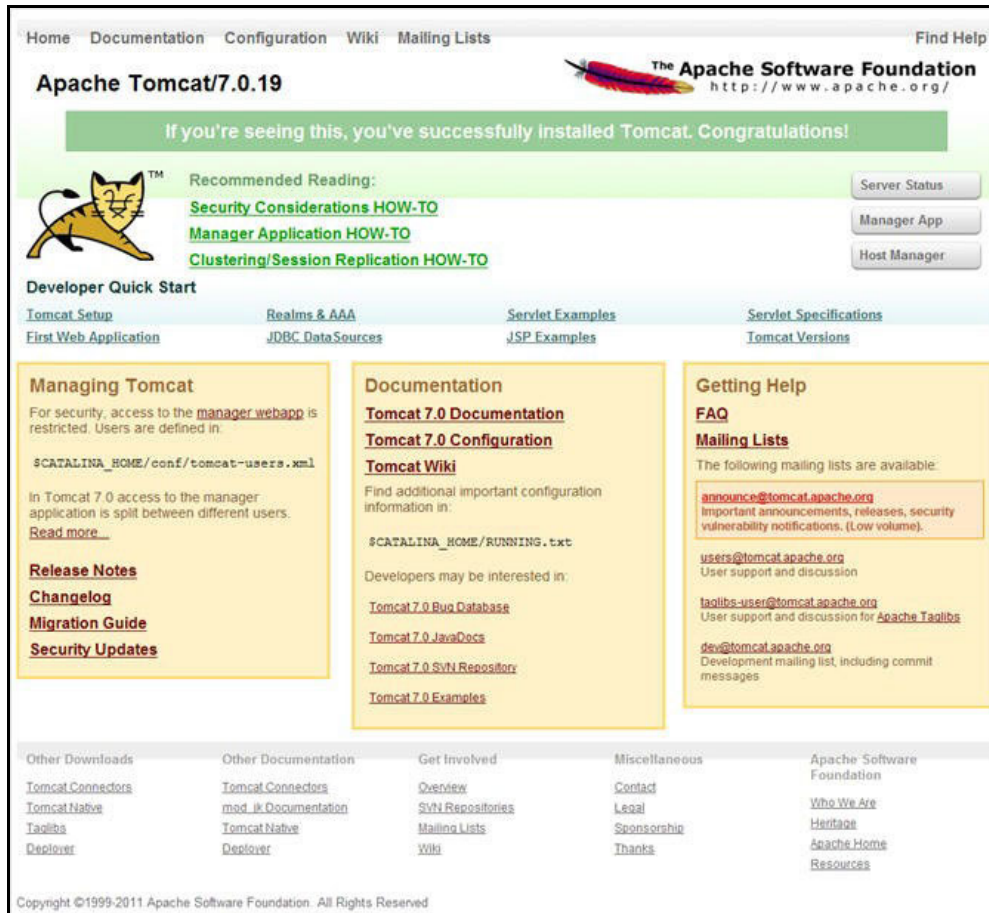
### 13.2.3 Deploying Tomcat WAR Files on Tomcat

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

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

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

Figure 109: Tomcat Homepage



2. Click **Manager App**. The **Connect to** dialog box is displayed.
3. Log in with the user ID with administrative privileges and click **OK**. (For user creation in tomcat, see Tomcat User Administration.) The **Tomcat Web Application Manager** window is displayed with the list of all the applications deployed.

Figure 110: Tomcat Web Application Manager

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

**Deploy**

Deploy directory or WAR file located on server

Context Path (required):

XML Configuration file URL:

WAR or Directory URL:

**WAR file to deploy**

Select WAR file to upload

**Diagnostics**

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

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

**Server Information**

Tomcat Version	JVM Version	JVM Vendor	OS Name	OS Version	OS Architecture	Hostname	IP Address
Apache Tomcat/7.0.57	1.6.0_45-b06	Sun Microsystems Inc.	Linux	2.6.39-400.211.1.el6uek.x86_64	amd64	ofss220354.in.oracle.com	10.184.13...

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. For more details, see the [Starting Infrastructure Services](#) section.

## 14 Appendix E: Starting/Stopping Infrastructure Services

This appendix describes how to start and stop the Infrastructure services.

### Topics:

- [Starting Infrastructure Services](#)
- [Stopping Infrastructure Services](#)
- [Cleaning up the Environment](#)

### 14.1 Starting Infrastructure Services

Once the installation of Infrastructure is 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 following servers mentioned 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.

To start the Infrastructure services, follow these steps:

1. On the machine in which *Infrastructure Application* components are installed, navigate to `$FIC_APP_HOME/common/FICServer/bin` and execute the command to start the Infrastructure Server: `./startofsaai.sh`.

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

2. Start the ICC server:
  - a. On the machine in which Infrastructure default application components are been installed, navigate to `$FIC_HOME/ficapp/icc/bin`.
  - b. Execute the command: `./iccserver.sh`.

**NOTE** Only Infrastructure Default Application Server holds the ICC component.

3. Start Back-end Services:
  - a. On the machine on which Infrastructure Database components are installed, navigate to `$FIC_DB_HOME/bin` and execute the command to start Agent server: `./ agentstartup.sh`

Or

  - b. 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.

## 14.2 Starting Web Application Servers

This section describes how to start the web application servers. Start the Web application server depending on the type from the following table.

Table 30 describes the Web Server Start Up Options.

**Table 30: Web Server Start Up Options**

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

## 14.3 Stopping Infrastructure Services

This section describes how to stop the Infrastructure services.

To stop the Infrastructure services, follow these steps:

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 the 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 the 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.

## 14.4 Cleaning up the Environment

This section describes how to clean up the environment.

To clean up the environment, follow these steps:

1. Navigate to `$FIC_HOME`.
2. Execute `./Uninstall.sh`.
3. When prompted, enter the OFSAI Configuration Schema password. This will delete `$FIC_HOME` and drop all the objects from Configuration schema.
4. Navigate to the `ftpshare` folder.
5. Delete the `Infodom` folders `$ rm -rf <INFODOM>`.
6. Drop Configuration and Atomic schemas from the database.

## 15 Appendix F: Accessing OFSAA Application

This appendix describes how to access the OFSAA application.

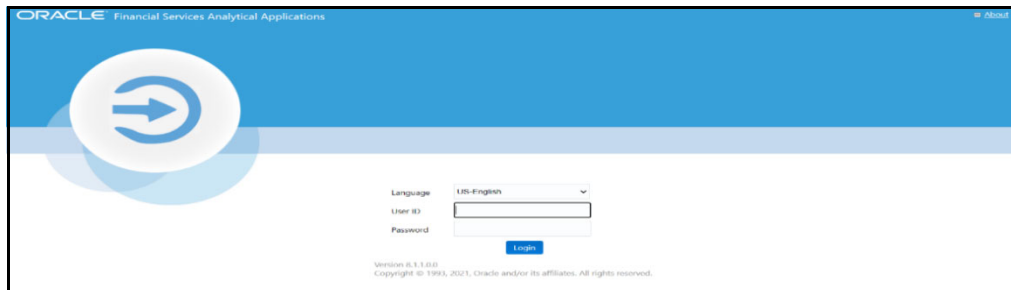
To access the OFSAA application, follow these steps:

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

**<scheme>://<IP address/ hostname>:<port>/<context-name>/login.jsp** For example:  
**https://111.222.333.444:5555/ofsaa/login.jsp**

The **OFSAA** login page is displayed.

Figure 111: OFSAA Login Page



### NOTE

- With installation of every OFSAA Applications Pack, there are two seeded user profiles configured in the system:
  - SYSADMN - System Administrator
  - SYSAUTH - System Authorizer
- For *SYSADMN* and *SYSAUTH*, the default password is **password0**.

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

## 16 **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](#).



## 17 Appendix H: OFSAA Landing Page

This appendix describes how to navigate to the OFSAA landing page and enable a product within an application pack.

### Topics:

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

### 17.1 OFSAA Landing Page

On successful authentication, the Oracle Financial Services Analytical Application (OFSAA) Landing Page is displayed. This is a common landing page for all users until a preferred application landing page is set by the user in preferences.

The landing page includes multiple tabs and each tab contains specific links to the 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 the 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.

The following tabs are available in the Landing Page:

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

#### 17.1.1 Applications Tab

This tab lists the various OFSAA Applications that are installed in the setup.

The **<Select Application>** drop-down lists the OFSAA Applications based on the user logged in and User Group(s) mapped to the OFSAA Application.

Selecting an Application from the drop-down refreshes the menus/ links.

#### 17.1.2 Sandbox Tab

This tab lists the various OFSAA Sandboxes created in the setup.

The **<Select Sandbox>** drop-down lists the OFSAA Sandboxes based on the user logged in and User Group(s) mapped to the OFSAA Application.

Selecting a Sandbox from the drop-down refreshes the menus/ links.

#### 17.1.3 Object Administration Tab

This tab lists the various OFSAA Information Domains created in the setup.

The **<Select Information Domain>** drop-down lists the OFSAA Information Domains based on the user logged in and User Group(s) mapped to the OFSAA Application.

Selecting an Information Domain from the drop-down refreshes the menus/ links.

## 17.1.4 System Configuration and Identity Management Tab

This tab lists the OFSAA Infrastructure System Configuration and Identity Management modules. These modules work across Applications/ Information Domains and hence there are no Application/ Information Domain drop-down list in this tab.

### NOTE

For more details on how to operate on each tab, see [OFS Analytical Applications Infrastructure User Guide. User Guide.](#)

## 17.2 Enabling a Product within an Applications Pack

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

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

1. Login to the application as *SYSADMN* user or any user with System Administrator privileges.
2. Navigate to the **System Configurations & Identity Management** tab and expand **Financial Services Analytical Applications Infrastructure > Administration and Configuration > System Configuration**.
3. Click **Manage OFSAA Product License(s)**.
4. The **Manage OFSAA Product License(s)** page is displayed which includes the following sections:
  - INSTALLED Applications Packs
  - PRODUCTS IN THE Applications Pack

**Figure 112: Manage OFSAA Product License(s)**

The screenshot shows the 'Manage OFSAA Product License(s)' page. It contains two main sections:

**INSTALLED APPLICATION PACKS**

APPLICATION PACK ID	APPLICATION PACK NAME	DESCRIPTION	INSTALL DATE
S_AAAL_PACK	Financial Services Advanced Analytics Infrastructure Pack	Applications for Advanced Analytics using Oracle R, Modeling & Stress Testing Framework and Inline Processing Engine	2014-12-02 14:22:33.0
S_CAP_ADDO_PACK	Financial Services Capital Adequacy Applications Pack	Applications for Basel Basic, IRB & Analytic, Operational Risk Economic Capital & Analytic and Retail Portfolio Risk Models and Pooling in Banking and Financial Services Domain	2014-12-02 17:59:58.0

**PRODUCTS IN THE APPLICATION PACK**

PRODUCT ID	PRODUCT NAME	DESCRIPTION	ENABLE DATE
OFS_AAAL	Financial Services Enterprise Modeling	Base Infrastructure for Advanced Analytical Applications	2014-12-02 14:22:33.0
OFS_IPE	Financial Services Inline Processing Engine	Framework for Inline Processing Engine	

At the bottom of the page, there are two buttons: 'VIEW LICENSE AGREEMENT' and 'RESET'.

Table 31 describes the fields which are displayed in the **INSTALLED Applications Packs** section:

**Table 31: Installed Applications Pack - Field Description**

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

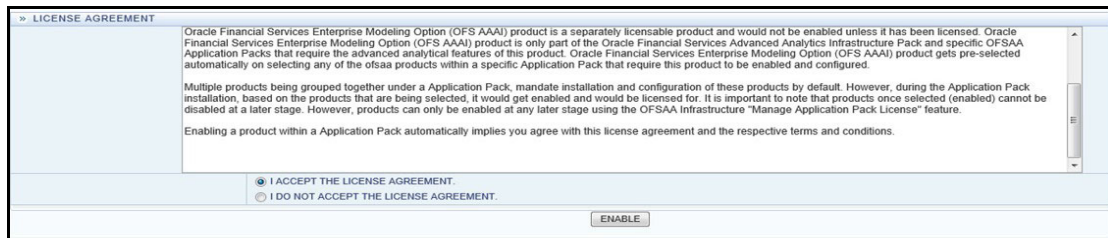
**Table 32** describes the fields which are displayed in the **PRODUCTS IN THE Applications Packs** section:

**Table 32: PRODUCTS IN THE Applications Packs**

Field	Description
Enable	Select the check-box to enable a product within an Applications 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.

5. Select an Applications Pack by clicking the radio button next to the **Applications Pack ID** field. Selecting an Applications Pack displays the products within the Applications Pack.
6. Products which were enabled at the time of installation will have the *ENABLE* check-box disabled. You can enable any product within the selected Applications Pack by clicking the **ENABLE** check-box against the respective Product ID.
7. Click **RESET** to cancel the operation and refresh the screen.
8. Click **VIEW LICENSE AGREEMENT**. The **License Agreement** section is displayed. **Figure 113** shows the License Agreement screen.

**Figure 113: License Agreement**



9. Select **I ACCEPT THE LICENSE AGREEMENT**.
10. Click **ENABLE**.

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 must map your application users to the appropriate product specific *User\_Group(s)* and subsequently, authorize the actions by logging in as *System Authorizer*.

- For more information, see the *Mapping/Unmapping Users* section in [Oracle Financial Services Analytical Applications Infrastructure User Guide](#).
- To identify the newly enabled product specific UserGroups/ Applications Pack specific User\_Groups, see the respective Applications Pack specific Installation and Configuration Guide/User Manual.

## 18 Appendix I: Additional Configuration

This appendix describes the additional configuration for the Oracle Financial Services Analytical Application (OFSAA) Installation.

### Topics:

- [Configuring FTP/SFTP](#)
- [Configuring Infrastructure Server Memory](#)
- [Configuring Internet Explorer Settings](#)
- [Retrieving Patch Information](#)
- [Setting OLAP Data Server Configuration](#)
- [Changing IP/Hostname, Ports, and Deployed Paths of OFSAA Instance](#)
- [Executing OFSAAI Setup Information Fetching Tool](#)
- [Executing Encryption Changer](#)
- [Setting Infrastructure LDAP Configuration](#)
- [Enabling Parallel Execution of DML statements](#)
- [Configure Message Details in Forms Designer](#)
- [Clearing Application Cache](#)
- [Configuring Password Changes](#)
- [Configuring Internal Service \(Document Upload/ Download\)](#)

### 18.1 Configuring FTP/SFTP

This section describes the configurations required for FTP/SFTP.

#### 18.1.1 Adding FTP/SFTP Configuration for File Transfer

In Oracle Financial Services Analytical Application (OFSAA), certain modules require transfer of files from the web application server to the OFSAA server over SSH.

To ensure the OFSAA server recognizes the web application server during file transfers, follow these steps:

1. Log in to the web application server.
2. Type `sftp <user>@<OFSAA Server>`.
3. Specify **Yes** when prompted for permission.  
*Are you sure you want to continue connecting (Yes/No)?*  
This will add an entry into the `known_hosts` file.
4. A confirmation message is displayed:  
Permanently added <OFSAA Server> RSA) to the list of known hosts.

## 18.1.2 Setting Up SFTP Private Key

This section describes how to set up the SFTP private key.

To set up the SFTP private key, follow these steps:

1. Log in to OFSAA Unix user using the *Putty* tool, where you plan for installation and generate a pair of authentication keys using the `ssh-keygen` command. If required, set *passphrase*. Otherwise the `OFSAAI_SFTP_PASSPHRASE` tag in the `OFSAAI_InstallConfig.xml` file must be set to *NA*.
2. To generate private key, enter the commands: `ofsaapp@OFSASERVER:~> ssh-keygen -t rsa` generating `public/private rsa key pair`.
3. Enter a file to save the key to (`/home/ofsaapp/.ssh/id_rsa`): `/home/ofsaapp/.ssh` directory is created.
4. 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`
5. 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 in the `$HOME_DIR_HIVE/.ssh` folder.
6. Ensure the following permissions exist for the given folders:
  - Permission of `.ssh` must be 700
  - Permission of `.ssh/authorized_keys` must be 640
  - Permission of `.ssh/id_rsa` must be 400
  - Permission of Unix user created must be 755

## 18.2 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 described in the following section. These settings are base minimum and must be incremented considering the deployment metrics into account. The increments are usually handled in multiples of 128 MB for heap and 64 MB for stack.

### 18.2.1 Configuring Infrastructure Application Server Memory Settings

This section describes how to configure the Infrastructure Application Memory settings.

To configure the Infrastructure Application Memory settings, follow these steps:

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

This has a default value `X_ARGS=-Xms200m X_ARGS=" "$X_ARGS" $DELIM -Xmx2048m`.

**NOTE** This parameter is modified in **7.3.2 IR** and you must modify the `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"
```

## 18.3 Configuring Internet Explorer Settings

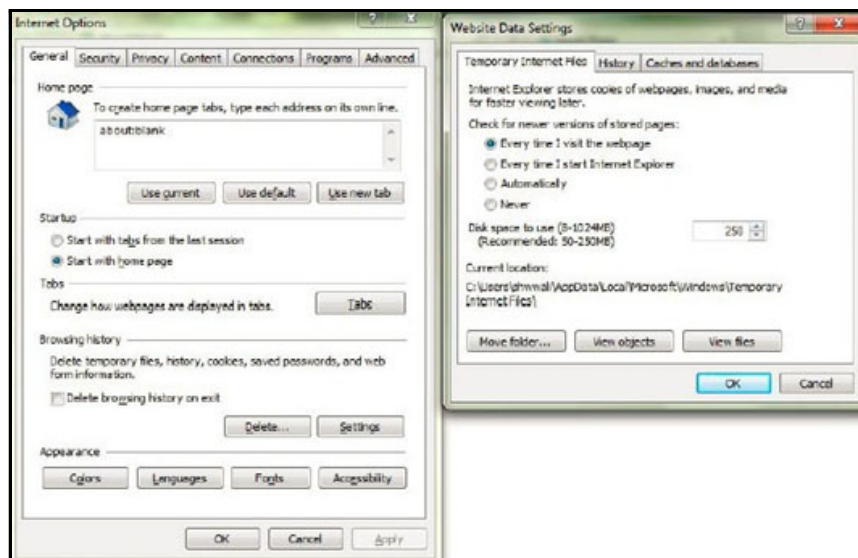
**NOTE** OFSAAI supports only default zoom setting in Internet Explorer, that is, 100%. You must enable Cookies.

This section describes how to configure Internet Explorer settings. The following browser settings must be specified at every client machine prior to accessing the Infrastructure application.

To configure Internet Explorer settings, follow these steps:

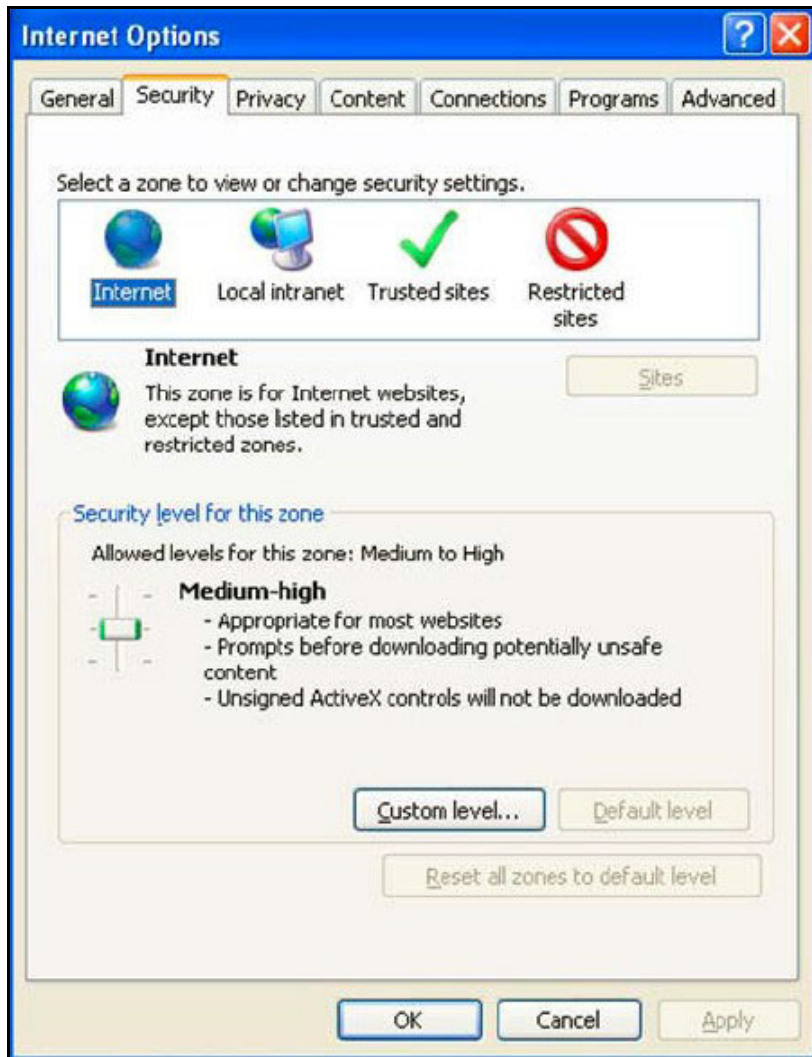
- Open Internet Explorer.
- Select **Tools** and then select **Internet Options**. The **Internet Options** window is displayed.
- Click **Settings**. The **Settings** window is displayed.
- Select **Every time I Visit the webpage** and click **OK**.

Figure 114: Internet Options



5. 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**.
6. Click **Default Level** under **Security level for this zone**. Figure 115 shows the Internet Options - Security Tab screen.

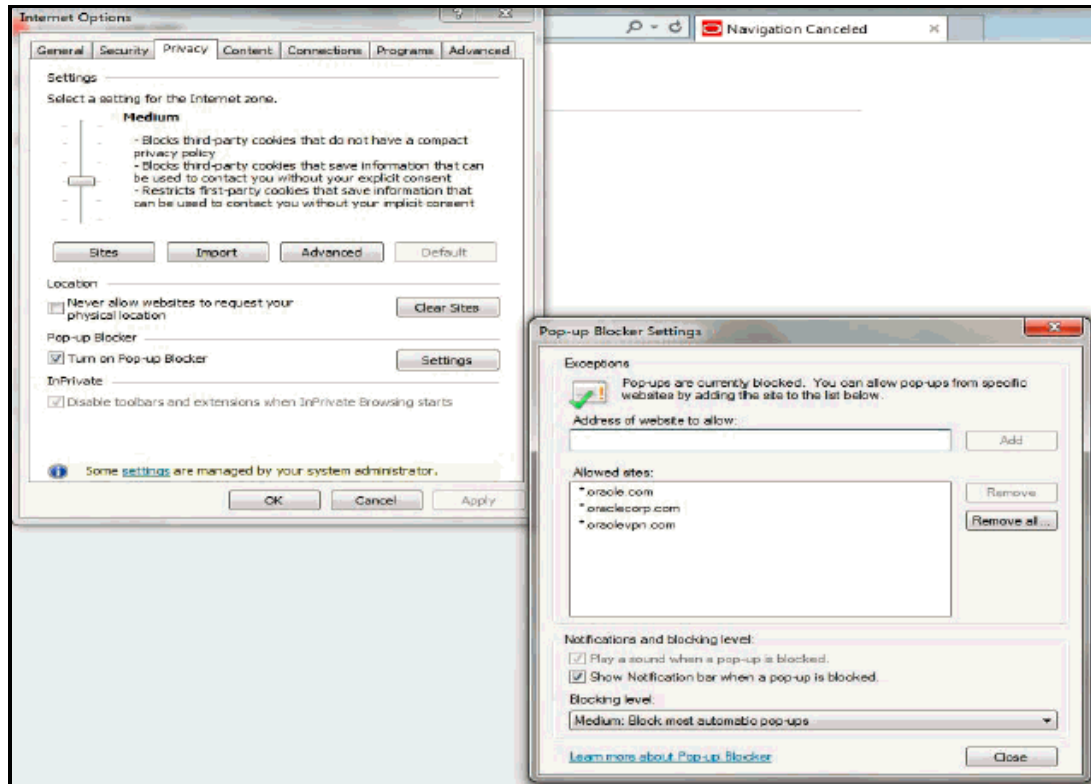
Figure 115: Internet Options - Security Tab



7. Click **Apply** to save.
8. Open Internet Explorer.
9. Select **Tools** and the select **Compatibility View Settings**.
10. Enter the OFSAA setup URL in the **Add this website** field.
11. Click **Add**.
12. Ensure the URL is listed under Websites you have added to Compatibility View.
13. In the **Internet Options** window, select the **Privacy** tab and select **Turn on Pop-up Blocker** under **Pop-up Blocker Settings**.



Figure 116: Internet Options- Pop-up Blocker Settings



14. Click **Settings**. The **Pop-up Blocker Settings** window is displayed.
15. Enter the *URL* of the OFSAA Application in the **Address** of website to allow: field.
16. Click **Add**. The *OFSAA URL* is displayed in the **Allowed sites** section.
17. Click **Close**.
18. Click **OK** in the **Internet Options** window.

## 18.4 Retrieving Patch Information

This section describes how to identify the list of patches installed on your Oracle Financial Services Analytical Application (OFSAA) setup.

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

1. Log in to the OFSAA application as a user with **Object AdminAdvanced Role**.
2. Navigate to the **Object Administration** tab.
3. Select **System Utilities > Patch Information**.

The page displays the list of patches installed on the OFSAA setup across Applications/Platform.

## 18.5 Setting OLAP Data Server Configuration

This section is applicable if you are using the OLAP feature of Oracle Financial Services Analytical Application Infrastructure (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 must be specified based on the expected load at each implementation site. For 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.

## 18.6 Changing IP/Hostname, Ports, and Deployed Paths of OFSAA Instance

For information, see [OFS Analytical Applications Infrastructure Administration User Guide](#).

## 18.7 Executing OFSAAI Setup Information Fetching Tool

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, follow these steps:

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.

## 18.8 Executing Encryption Changer

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

## 18.9 Setting Infrastructure LDAP Configuration

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

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

## 18.11 Configure Message Details in Forms Designer

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

Ensure that the *Authorized User Details* for whom you need to configure the Message details are included under the User Maintenance window. Navigate to **Administration > Security Management > User Administrator > User Maintenance** window.

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

Table 33 describes the `NotificationConfig.cfg` file.

**Table 33: NotificationConfig.cfg File**

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

## 18.12 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, clear the cache. Navigate to the following path depending on the WebServer configured 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>/qaelce/jsp_servlet`
- **WebSphere:** `<WebSphere installation directory>/AppServer/profiles/<Profile name>/temp/<Node name>/server1/<Application name>/<.war file name>`

## 18.13 Configuring Password Changes

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

### Topics:

- [Modifying OFSAA Infrastructure Config Schema Password](#)
- [Modifying OFSAA Infrastructure Atomic Schema password](#)

### 18.13.1 Modifying OFSAA Infrastructure Config Schema Password

To change the Config Schema password, follow these steps:

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

```
cd $FIC_APP_HOME/common/FICServer/bin
./stopofsaai.sh
```
4. Start the Infrastructure Server in foreground directly on the server or through X-Windows software using the command: `./startofsaai.sh`.
5. At the prompt, enter System Password. Enter the *new Config schema* password. The service will start and initialize itself if it is able to successfully connect to the DB.
6. Post successful startup of the service, if required, the Infrastructure server may be shut down and restarted in the background using the *nohup* mode.

### 18.13.2 Modifying OFSAA Infrastructure Atomic Schema password

To change the Atomic Schema password, follow these steps:

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

If you are using *WebSphere* as *Web Server*:

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

If you are using *WebLogic* as *Web Server*:

- a. From the left side menu, log in to the WebLogic Administration Console:
  - 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 need to be modified).
6. Restart the OFSAAI services.

## 18.14 **Configuring Internal Service (Document Upload/ Download)**

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

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

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

1. Create the folders **Download**, **Upload**, **TempDocument**, and **Temp** in the local path of Web application server and provide Read/Write permission.
  - To find the exact location, execute the following query in CONFIG schema: `select localpath from web_server_info`
  - To create folders with Read/Write permission, execute the command: `mkdir -m 777 Download Upload TempDocument Temp`
2. Create the **DocStorage** folder in the *FTP SHARE* location of APP tier and provide Read/Write permission.
  - To find the exact location, execute the query in CONFIG schema: `select ftpdrive from app_server_info`
  - To create folder with Read/Write permission, execute the command: `mkdir -m 777 DocStorage`

## **19 Appendix J: OFSAA Infrastructure Installation**

Oracle strongly recommends installing the latest available patchset so as to be up to date with the various releases of the Oracle Financial Services Analytical Application (OFSAA) product.

For more information on latest release, see [My Oracle Support](#).

## 20 Appendix K: Grants for Atomic/Config Schema

This appendix describes the various grants required for the CONFIG and ATOMIC schemas.

### Topics:

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

### 20.1 Configuring Grants for Atomic Schema

Atomic schema creation requires certain grants for object creation. This can be located in the

`$FIC_HOME/privileges_atomic_user.sql` file. The following are the Grants for Atomic schema:

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

#### NOTE

If you intend to use the **Oracle OLAP** feature, execute the following grant on all Atomic schema(s) `grant olap_user to &database_username.`

## 20.2 Configuring Grants for Config Schema

Config schema creation requires certain grants for object creation. This can be located in the `$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 select on SYS.V_$PARAMETER to &database_username
/
grant create SYNONYM to &database_username
/
```

## 20.3 Configuring Grants for Config Schema Entities for Atomic Users

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



## 21 Appendix L: Configuring Application Pack XML Files

This appendix describes how to configure the `OFS_ECM_PACK.xml` and `OFS_ECM_SCHEMA_IN.xml` files.

### Topics:

- [Configuring OFS\\_ECM\\_PACK.xml File](#)
- [Configuring OFS\\_ECM\\_SCHEMA\\_IN.xml File](#)

### 21.1 Configuring OFS\_ECM\_PACK.xml File

The `OFS_ECM_PACK.xml` file holds details on the various Oracle Financial Services Analytical Application (OFSAA) products that are packaged in a particular Applications Pack.

[Table 34](#) describes the various tags/parameters available in the file and the values that need to be updated. Prior to installing the OFSAA Applications Pack in Silent mode, it is mandatory to update this file.

**Table 34: OFS\_ECM\_PACK.XML Parameters**

Tag Name/ Attribute Name	Description	Manda- tory (Y/N)	Default Value/Per- missible Value	Comments
APP_PACK_ID	Unique Applications Pack Identifier	Y	Unique Seeded Value	Do not modify this value.
APP_PACK_NAME	Unique Applications Pack Name	Y	Unique Seeded Value	Do not modify this value.
APP_PACK_DESCRIPTION	Unique Applications Pack Description	Y	Unique Seeded Value	Do not modify this value.
VERSION	Unique Application Pack release version	Y	Unique Seeded Value	Do not modify this value.
APP	Unique Application Entries	Y	Unique Seeded Value	Do not remove these tags.
APP_ID	Unique Application Identifier	Y	Unique Seeded Value	Do not modify this value.
APP_ID/ PREREQ	Prerequisite Application/Product	Y	Unique Seeded Value	For most applications, Infrastructure would be the prerequisite set. Other applications, an appropriate Application ID will be set. Do not modify this value.
APP_ID/ DEF_SEL_FLAG	Default Selected Flag	Y	Default - YES	In all Applications Packs, Infrastructure would have this value set to YES. Do not modify this value.

Tag Name/ Attribute Name	Description	Manda- tory (Y/N)	Default Value/Per- missible Value	Comments
APP_ID/ ENABLE	Enable Application/ Product	YES, if installing in Silent mode.	Default - YES for Infrastructure NO for Others  Permissible - YES or NO	Set this attribute-value to YES against every APP_ID, which is licensed and must 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_DESCR IPTION	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.

## 21.2 Configuring OFS\_ECM\_SCHEMA\_IN.xml File

Creating database schemas, objects within schemas and assigning appropriate grants are the primary steps in the installation process of Oracle Financial Services Analytical Application (OFSA) Applications. The OFS\_ECM\_SCHEMA\_IN.xml file contains details on the various application schemas that must be created prior to the Applications Pack installation.

Table 35 describes the various tags/parameters available in the file and the values to be updated. Prior to executing the schema creator utility, it is mandatory to update this file.

**Table 35: OFS\_ECM\_SCHEMA\_IN.XML Parameters**

Tag Name/ Attri- bute Name	Description	Manda- tory (Y/ N)	Default Value/Permis- sible Value	Comments
APP_PA CK_ID	Unique Applications Pack Identifier	Y	Unique Seeded Value	Do not modify this value.
<IS_TC PS>	Enter if the TCPS configuration is required.	Y	Seeded, with FALSE as the default value.	Modify this to TRUE if you require the installer to uptake the configuration.

**Table 35: OFS\_ECM\_SCHEMA\_IN.XML Parameters**

Tag Name/Attribute Name	Description	Mandatory (Y/N)	Default Value/Permissible Value	Comments
<JDBC_URL>	Enter the JDBC URL  <b>NOTE:</b> You can enter RAC and NON-RAC enabled database connectivity URL.	Y	For example: <pre>jdbc:oracle:thin:@&lt; DBSERVER IP/HOST&gt;:&lt;PORT&gt;:&lt;SID&gt;</pre> or <pre>jdbc:oracle:thin:@//[HOST] [:PORT] /SERVICE</pre> OR <pre>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]))))</pre> For example: <pre>jdbc:oracle:thin:@//dbhost.server.com:1521/service1</pre>	Ensure to add an entry (with <i>SID/SERVICE NAME</i> ) in the <i>tnsnames.ora</i> file on the OFSAA server. The entry must match with the <i>SID/SERVICE NAME</i> used in the JDBC URL.

**Table 35: OFS\_ECM\_SCHEMA\_IN.XML Parameters**

Tag Name/Attribute Name	Description	Mandatory (Y/N)	Default Value/Permissible Value	Comments
<JDBC_DRIVER>	By default, this driver name is seeded.  <b>NOTE:</b> Do not edit this attribute value.	Y	For example: <code>oracle.jdbc.driver.OracleDriver</code>	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	
<SETUP_INFO>/NAME	Enter the acronym for the type of implementation. This information will be displayed in the OFSAA Home Page.  <b>NOTE:</b> On executing the schema creator utility, this value will be prefixed with each schema name. For example: <code>dev_ofsaaconf</code> , <code>uat_ofsaaatm</code> .	Y	Accepts strings with a minimum length of two and maximum of four.  For example: DEV, SIT, and PROD.	This name appears in the OFSAA Landing Page as <i>Connected To</i> : xxxx  The schemas being created would get this prefix. For example: <code>dev_ofsaaconf</code> , <code>uat_ofsaaconf</code> etc.
<SETUP_INFO>/PREFIX - SCHEMA - NAME	Identifies if the value specified in <SETUP_INFO>/NAME attribute must be Prefixed to the schema name.	N	YES or NO	Default value is YES.

**Table 35: OFS\_ECM\_SCHEMA\_IN.XML Parameters**

Tag Name/Attribute Name	Description	Mandatory (Y/N)	Default Value/Permissible Value	Comments
<PASSWORD>/DEFAULT*	<p>Enter the password if you want to set a default password for all schemas.</p> <p>You also need to set APPLYSAMEFORALL</p> <p>Attribute as Y to apply the default password for all the schemas.</p>	N	The maximum length allowed is 30 characters. Special characters are not allowed.	
<PASSWORD>/APPLYSAMEFORALL	<p>Enter as Y if you want to apply the password specified in DEFAULT attribute for all the schemas.</p> <p>If you enter as N, you must provide individual passwords for all schemas.</p> <p><b>NOTE:</b> In case you have entered Y in the APPLYSAMEFORALL attribute and also have specified individual passwords for all the schemas, then the specified individual passwords will take precedence.</p>	Y	Default - N Permissible - Y or N	<p>If set to N, need to specify PASSWORD value for every SCHEMA.</p> <p><b>NOTE:</b> If the DEFAULT attribute is set, setting the attribute value is mandatory.</p>
ROLE/NAME	Database Role Name attribute used to update place holders	Y	Unique Seeded value	Do not modify this value.

**Table 35: OFS\_ECM\_SCHEMA\_IN.XML Parameters**

Tag Name/Attribute Name	Description	Mandatory (Y/N)	Default Value/Permissible Value	Comments
DIRECTORY/ID	<p>External Directory ID value used to update placeholders.</p> <p>External directory must be created in DB server as:</p> <pre>&lt;DIRECTORIES&gt; &lt;DIRECTORY ID="OFS_BD_PACK_EXTERNAL_DIRECTORY_1"NAME="\$OFS_AML_SCHEMA_NAME_DIRECTORY"VALUE="/users/fccms/802/AAI_802/bdf/inbox" /&gt;&lt;/DIRECTORIES&gt;</pre>	Y	Unique Seeded value	Do not modify this value.
<SCHEMA>/TYPE	<p>The different types of schemas that are supported in this release are <i>ATOMIC</i>, <i>CONFIG</i>, <i>SANDBOX</i>, and <i>ADDON</i>.</p> <p>By default, the schemas types are seeded based on the Applications Pack.</p> <p><b>NOTE:</b> Do not edit this attribute value.</p>	Y	<p>ATOMIC/CONFIG/SANDBOX/ADDON</p> <p><b>NOTE:</b> SANDBOX and ADDON Schemas are not applicable for OFS AAI Applications Pack.</p>	<p>Only one CONFIG schema can exist in the file.</p> <p>This schema identifies as the CONFIGURATION schema that holds the OFSAA setup details and other metadata information.</p> <p>Multiple ATOMIC/SANDBOX/ADDON Schemas can exist in the file.</p> <p>ATOMIC schema refers to the Information Domain schema. SANDBOX schema refers to the SANDBOX schema. ADDON schema refers to other miscellaneous schema (not applicable for this Applications Pack).</p>

**Table 35: OFS\_ECM\_SCHEMA\_IN.XML Parameters**

Tag Name/ Attribute Name	Description	Mandatory (Y/N)	Default Value/Permissible Value	Comments
<SCHEMA.>/NAME	<p>By default, the schemas names are seeded based on the Applications Pack.</p> <p>You can edit the schema names if required.</p> <p><b>NOTE:</b> The Schema Name will have a prefix of the <i>SETUPINFO/NAME</i> attribute.</p> <p>SCHEMA NAME must be same for all the ATOMIC Schemas of applications within an Applications Pack.</p>	Y	The permissible length is 15 characters and only alphanumeric characters allowed. No special characters allowed except underscore '_'.	<p>The <i>SETUPINFO/NAME</i> attribute value will be prefixed to the schema name being created.</p> <p>For example: If name is set as <i>ofsaatm</i> and <i>setupinfo</i> as <i>uat</i> then schema, being created will be <i>uat_ofsaatm</i>.</p> <p>NAME must be same where APP_GRP=1 for all SCHEMA tags (Not applicable for this Applications Pack).</p> <p><b>NOTE:</b> For example:  <pre>&lt;Variable name="DATABASE NAME"&gt;KYCDB.oracle.com &lt;/Variable&gt;</pre> </p> <p>A TNS entry must be made in <i>tnsnames.ora</i> with <i>tnsname</i> same as the value provided for KYC Database Name. If the <i>sqlnet.ora</i> file is configured with a value in <i>NAMES.DEFAULT_DOMAIN</i> then ensure to use the same domain while defining Database Name. It is required for KYC Batch processing. This name must be unique.</p> <p>Perform the same above steps for FATCA and CTR.</p> <p>A restart of web and app servers are necessary whenever any changes are done to the Config schema.</p>

**Table 35: OFS\_ECM\_SCHEMA\_IN.XML Parameters**

Tag Name/ Attribute Name	Description	Mandatory (Y/N)	Default Value/Permissible Value	Comments
<SCHEMA>/ PASSWORD*	Enter the password of the schema to be created.  <b>NOTE:</b> 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.	You must enter the password if you have set the <PASSWORD>/APPLYSAMEFORALL attribute as N.  Takes precedence over DEFAULT attribute value of the <PASSWORD> tag.
<SCHEMA>/ APP_ID	By default, the Application ID is seeded based on the Applications Pack.  <b>NOTE:</b> 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>/ DEFAULT TABLESPACE	Enter the available default TABLESPACE for DB User.  <b>NOTE:</b> 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>/ TEMP TABLESPACE	Enter the available temporary TABLESPACE for the DB User.  <b>NOTE:</b> 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.



**Table 35: OFS\_ECM\_SCHEMA\_IN.XML Parameters**

Tag Name/Attribute Name	Description	Mandatory (Y/N)	Default Value/Permissible Value	Comments
<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	For example: 600M/m 20G/g UNLIMITED/ unlimited	Modify this value to grant the specified quota on the mentioned TABLESPACE to the user.
SCHEMA / INFODOM	Infodom Name Associated with each ATOMIC and ADDON Schemas.	Y	Enter the name of the Information Domain to associate this schema. The schema creator utility automatically derives an Information Domain Name based on the Applications Pack if no value is specified for this attribute. Permissible length is 16 characters and only alphanumeric characters allowed. No special characters allowed.	Valid string with up to 11 characters. Mandatory for Silent Installation Mode.
<ADV_SECURITY_OPTIONS>	Parent tag to hold Advance Security Options.	N		Uncomment the tag and edit if you want to add the security options. For example: TDE and Data Redact. For details, see the <b>NOTE</b> just after this table.
<ADV_SECURITY_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_SECURITY_OPTIONS>.

**Table 35: OFS\_ECM\_SCHEMA\_IN.XML Parameters**

Tag Name/Attribute Name	Description	Mandatory (Y/N)	Default Value/Permissible Value	Comments
<ADV_SEC_OPTIONS>/DATA_REDACT	Tag to enable/disable Data Redaction feature.	N	Default is FALSE. To enable <i>DATA_REDACT</i> , set this to TRUE.	Ensure this tag is not commented if you have uncommented <ADV_SEC_OPTIONS>.
<TABLESPACES>	Parent tag to hold <TABLESPACE> elements	N	NA	If the Database Admin creates the TABLESPACES, specific entries can be created in the respective tags.  For details, see the <b>NOTE</b> just after this table.  <b>NOTE:</b> When <i>TDE</i> is TRUE in <i>ADV_SEC_OPTIONS</i> , then it is mandatory for the <TABLESPACES> tag to be available in the xml file.
<TABLESPACE>/NAME	Logical Name of TABLESPACE to be created.	Y		Name if specified must be referred in the <SCHEMA_DEFAULTTABLESPACE= "##NAME##"> attribute. Make a note of 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 must 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.

**Table 35: OFS\_ECM\_SCHEMA\_IN.XML Parameters**

Tag Name/ Attribute Name	Description	Mandatory (Y/N)	Default Value/Permissible Value	Comments
<TABLESPACE> / ENCRYPT	Specifies if the TABLESPACE(s) must be encrypted using TDE.	Y	ON or OFF	Set to ON to ensure that the TABLESPACES when created are encrypted using TDE.

Encryption of TABLESPACES requires to enabling Transparent Data Encryption (TDE) on the Database Server. For 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_ECM_DATA_CM_TBSP" VALUE="DATA_CM_TBSP"
DATAFILE="/scratch/oraofss/app/oradata/Ti26012L64/case_data_01.dbf"
SIZE="512M" AUTOEXTEND="OFF" ENCRYPT="OFF"/>
<TABLESPACE NAME="OFS_ECM_IDX_CM_TBSP" VALUE="IDX_CM_TBSP"
DATAFILE="/scratch/oraofss/app/oradata/Ti26012L64/case_idx_01.dbf"
SIZE="512M" AUTOEXTEND="OFF" ENCRYPT="OFF" />
<TABLESPACE NAME="OFS_COMM_DATA_TBSP" VALUE="COMM_DATA_TBSP"
DATAFILE="/scratch/oraofss/app/oradata/Ti26012L64/comm_data_01.dbf"
SIZE="512M" AUTOEXTEND="OFF" ENCRYPT="OFF"/>
<TABLESPACE NAME="OFS_ECM_DATA_CONF_TBSP" VALUE="DATA_CONF_TBSP"
DATAFILE="/scratch/oraofss/app/oradata/Ti26012L64/comm_data_01.dbf"
SIZE="1024M" AUTOEXTEND="OFF" ENCRYPT="OFF"/>
</TABLESPACES>
<SCHEMAS>
<SCHEMA TYPE="CONFIG" NAME="ofsaaconf" PASSWORD="" APP_ID="OFS_AAI"
DEFAULTTABLESPACE="##OFS_ECM_DATA_CONF_TBSP##" TEMPTABLESPACE="TEMP"
QUOTA="10G"/>
<SCHEMA TYPE="ATOMIC" NAME="ofsaaecm" PASSWORD="" APP_ID="OFS_IPE"
DEFAULTTABLESPACE="##OFS_ECM_DATA_CM_TBSP##" TEMPTABLESPACE="TEMP"
QUOTA="10G" INFODOM="ECMINFO"/>
<SCHEMA TYPE="ATOMIC" NAME="ofsaaecm" PASSWORD="" APP_ID="OFS_NGECM"
DEFAULTTABLESPACE="##OFS_ECM_DATA_CM_TBSP##" TEMPTABLESPACE="TEMP"
QUOTA="10G" INFODOM="ECMINFO"/>
</SCHEMAS>
```

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## Appendix M: Configuring OFSAAI\_InstallConfig.xml File

This appendix describes how to configure the OFSAAI\_InstallConfig.xml file.

To configure the OFSAAI\_InstallConfig.xml file, follow these steps:

1. Navigate to the OFS\_AAII\_PACK/OFS\_AAII/conf/ directory.
2. Open the OFSAAI\_InstallConfig.xml file in text editor.
3. Configure the OFSAAI\_InstallConfig.xml as described in [Table 36](#).
4. You must manually set the InteractionVariable parameter values as described in [Table 36](#). If a value is not applicable, enter *NA* and ensure that the value is not entered as *NULL*.

**Table 36: OFSAA Infrastructure Installation Tasks and Descriptions**

InteractionVariable Name	Significance and Expected Value	Mandatory
<code>&lt;Layer name="GENERAL"&gt;</code>		
<code>InteractionGroup name="WebServerType"</code>		
WEBAPPSERVERTYPE	<p>Identifies the web application server on which the OFSAA Infrastructure web components will be deployed.</p> <p>The following numeric value must be set depending on the type:</p> <p><i>Apache Tomcat = 1</i></p> <p><i>IBM WebSphere Application Server = 2</i></p> <p><i>Oracle WebLogic Server = 3</i></p> <p>For example: <code>&lt;InteractionVariable name="WEBAPPSERVERTYPE"&gt;3&lt;/InteractionVariable&gt;</code></p>	Yes
<code>InteractionGroup name="OFSAA Infrastructure Server Details"</code>		
DBSERVER_IP	<p>Identifies the hostname or IP address of the system on which the Database Engine is hosted.</p> <p><b>NOTE:</b> For RAC Database, the value must be NA.</p> <p>For example: <code>&lt;InteractionVariable name="DBSERVER_IP"&gt;14.15.16.17&lt;/InteractionVariable&gt;</code> or <code>&lt;InteractionVariable name="DBSERVER_IP"&gt;dbhost.server.com&lt;/InteractionVariable&gt;</code></p>	Yes
<code>InteractionGroup name="Database Details"</code>		

InteractionVariable Name	Significance and Expected Value	Mandatory
ORACLE_SID/ SERVICE_ NAME	Identifies the Oracle DB Instance SID or SERVICE_NAME  <b>NOTE:</b> The Oracle_SID value must 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 will typically be the \$ORACLE_HOME/jdbc/lib. For example: <InteractionVariable name="ABS_DRIVER_PATH">">/oradata6/revwb7/oracle </InteractionVariable>  <b>NOTE:</b> Refer Appendix O 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 following numeric value must be set depending on the choice:  YES - 1 NO - 0	No
<b>NOTE:</b> If value for OLAP_SERVER_IMPLEMENTATION is set to 1, it checks for following environment variables are set in.profile: <b>ARBORPATH, HYPERION_HOME and ESSBASEPATH.</b>		
InteractionGroup name="SFTP Details"		
SFTP_ENABLE	Identifies if the SFTP (Secure File Transfer Protocol) feature is to be enabled. The following numeric value must be set depending on the choice:  For SFTP -1. For FTP - 0	Yes
<b>NOTE:</b> 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.		

InteractionVariable Name	Significance and Expected Value	Mandatory
FILE_TRANSFER_PORT	<p>Identifies the port used for the file transfer service. The default value specified is 22 (SFTP). Specify default value as 21 (FTP) if <i>SFTP_ENABLE</i> is 0.</p> <p>Alternatively, this value can be any Port configured by System Administrators to support SFTP/FTP.</p> <p>For example: <code>&lt;InteractionVariable name="FILE_TRANSFER_PORT"&gt;21&lt;/InteractionVariable&gt;</code></p>	Yes
InteractionGroup name="Locale Detail"		
LOCALE	<p>Identifies the locale information to be used during the installation. This release of the OFSAA Infrastructure supports only US English.</p> <p>For example: <code>&lt;InteractionVariable name="LOCALE"&gt;en_US&lt;/InteractionVariable&gt;</code></p>	Yes
<p>InteractionGroup name="OFSAA Infrastructure Communicating ports"</p> <p><b>NOTE:</b> The following ports are used internally by the various OFSAA Infrastructure services. The default values mentioned are set in the installation. If you intend to specify a different value, update the parameter value accordingly and ensure this port value is in the range of 1025 to 65535 and the respective port is enabled.</p>		
JAVAPORT	9999	Yes
NATIVEPORT	6666	Yes
AGENTPORT	6510	Yes
ICCPORT	6507	Yes
ICCNATIVEPORT	6509	Yes
OLAPPORT	10101	Yes
MSGPORT	6501	Yes
ROUTERPORT	6500	Yes
AMPORT	6505	Yes
<p>InteractionGroup name="Web Details"</p> <p><b>NOTE:</b> If value for <i>HTTPS_ENABLE</i> is set to 1, ensure you have a valid certificate available from a trusted CA and the same is configured on your web application server.</p>		

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

InteractionVariable 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</p> <pre>/oradata6/revwb7/tomcat/webapps/.</pre> <p>For WebSphere, enter the WebSphere path as &lt;WebSphere profile directory&gt;/installedApps/&lt;NodeCellName&gt;. For example:</p> <pre>/data2/test//WebSphere/AppServer/profiles/&lt;Profile_Name&gt;/installedApps/aix-imfNode01Cell.</pre> <p>Where <i>aix-imf</i> is Host name.</p> <p>For WebLogic, provide the WebLogic home directory path as /&lt;WebLogic home directory path&gt;/bea/wlserver_10.3</p> <p><b>NOTE:</b> For WebLogic, value specified for this attribute is ignored and value provided against attribute WEBLOGIC_DOMAIN_HOME is considered.</p>	Yes
WEB_LOCAL_PATH	<p>Identifies the absolute path to any directory on the web application server that can hold temporary files being uploaded as part of the applications usage.</p> <p><b>NOTE:</b> In case of a clustered deployment, ensure this path and directory is same on all the nodes.</p>	Yes
InteractionGroup name="Weblogic Setup Details"		
WEBLOGIC_DOMAIN_HOME	<p>Identifies the WebLogic Domain Home.</p> <p>For example: &lt;InteractionVariable name="WEBLOGIC_DOMAIN_HOME"/&gt;/home/weblogic/bea/user_projects/domains/mydomain&lt;/InteractionVariable&gt;</p>	Yes. Specify the value only if WEBSERVERTYPE is set as 3 (WebLogic).
InteractionGroup name="OFSAAI FTP Details"		



InteractionVariable Name	Significance and Expected Value	Mandatory
OFSAAI_FTPSHARE_PATH	<p>Identifies the absolute path to the directory identified as file system stage area.</p> <p><b>NOTE:</b> The directory must exist on the same system on which the OFSAA Infrastructure is being installed (can be on a separate mount). The user mentioned in the following <i>APP_SFTP_USER_ID</i> parameter must have the RWX permission on the directory. For example: <code>&lt;InteractionVariable name="APP_FTPSHARE_PATH"&gt;&gt;/oradata6/revwb7/ftpshare&lt;/InteractionVariable&gt;</code></p>	Yes
OFSAAI_SFTP_USER_ID	<p>Identifies the user who has RWX permissions on the directory identified under the preceding parameter <i>APP_FTPSHARE_PATH</i>.</p>	Yes
OFSAAI_SFTP_PRIVATE_KEY	<p>Identifies the SFTP private key for OFSAAI. For example: <code>&lt;InteractionVariable name="OFSAAI_SFTP_PRIVATE_KEY"&gt;/home/ofsaapp/.ssh/id_rsa&lt;/InteractionVariable&gt;</code> By default, the value is <i>NA</i>, which indicates password will be prompted for the user <code>&lt;OFSAAI_SFTP_USER_ID&gt;</code> for authentication. For more information on generating the SFTP Private key, see Setting Up SFTP Private Key.</p>	No
OFSAAI_SFTP_PASSPHRASE	<p>Identifies the passphrase for the SFTP private key for OFSAAI. For example: <code>InteractionVariable name="OFSAAI_SFTP_PASSPHRASE"&gt;enter a pass phrase here&lt;/InteractionVariable&gt;</code> By default, the value is <i>NA</i>. If <i>OFSAAI_SFTP_PRIVATE_KEY</i> value is given and this is kept as <i>NA</i>, then it is assumed as empty passphrase.</p>	No
<p>InteractionGroup name="Hive Details" The default value set for the interaction variables under this group is set as <i>NA</i>. These are required only for Hive Configuration.</p>		
HIVE_SERVER_PORT	<p>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: <code>InteractionVariable name="HIVE_SERVER_PORT"&gt;22&lt;/InteractionVariable&gt;</code></p>	Yes, only for HIVE Configuration.

InteractionVariable Name	Significance and Expected Value	Mandatory
HIVE_SERVER_ FTPDRIVE	<p>Identifies the absolute path to the directory identified as file system stage area of HIVE server.</p> <p>For example:</p> <pre>InteractionVariable name="HIVE_SERVER_ FTPDRIVE"&gt;/scratch/ofsa/ftpshare&lt;/ InteractionVariable&gt;</pre>	Yes, only for HIVE Configuration.
HIVE_SERVER_ FTP_ USERID	<p>Identifies the user who has RWX permissions on the directory identified under the preceding parameter HIVE_SERVER_ FTPDRIVE.</p> <p>For example:</p> <pre>InteractionVariable name="HIVE_SERVER_ FTP_ USERID"&gt;ofsa&lt;/InteractionVariable&gt;</pre>	Yes, only for HIVE Configuration.
HIVE_SERVER_ FTP_ PROTOCOL	<p>If the <i>HIVE_SERVER_PORT</i> is 21, then set value as <i>FTP</i>, else set it as <i>SFTP</i>. For example:</p> <pre>InteractionVariable name="HIVE_SERVER_ FTP_ PROTOCOL"&gt;SFTP&lt;/ InteractionVariable&gt;</pre>	Yes, only for HIVE Configuration.
HIVE_SFTP_ PRIVATE_ KEY	<p>Identifies the SFTP private key for the HIVE server. For example:</p> <pre>&lt;InteractionVariable name="HIVE_SFTP_ PRIVATE_ KEY"&gt;/scratch/ testuser/.ssh/id_rsa&lt;/ InteractionVariable&gt;</pre> <p>By default, the value is <i>NA</i>, which indicates password will be prompted for the user <i>&lt;HIVE_SERVER_ FTP_ USERID&gt;</i> for authentication.</p> <p>For more information on generating SFTP Private key, see Setting Up SFTP Private Key.</p>	Yes, only for HIVE Configuration.
HIVE_SFTP_ PASSPHRASE	<p>Identifies the passphrase for the SFTP private key for HIVE. For example:</p> <pre>&lt;InteractionVariable name="HIVE_SFTP_ PASSPHRASE"&gt;NA&lt;/InteractionVariable&gt;</pre> <p>By default, the value is <i>NA</i>. If <i>HIVE_SFTP_ PRIVATE_ KEY</i> value is given and this is kept as <i>NA</i>, then it is assumed as empty passphrase.</p>	Yes, only for HIVE Configuration.

## 23

## Appendix N: Migrating Excel Upload Functionality

This appendix provides detailed instructions on how to migrate the excel upload functionality.

**ATTENTION** The following are the prerequisites for migration:

- *Data model* in ATOMIC schemas must be same on the source and target setups
- *OFSAAI (platform)* patch level version must 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.

To migrate the excel upload functionality, follow these steps:

1. Open PL/SQL Developer and log in to the source setup's configuration (CONFIG) schema by entering the appropriate username and password.
2. In a new **SQL** window query the data of table `EXCEL_MAPPING_MASTER`.
3. Open a new session in PL/SQL developer and log in to the target setup's configuration (CONFIG) schema by entering the appropriate username and password.
4. Insert the records from *Step 1* above in to this table.
5. In **V\_INFODOM** column of the `EXCEL_MAPPING_MASTER` table update the Infodom name with the target Infodom name.

**NOTE** If all the mappings can work out of the single target Infodom, update same *Infodom* value across all rows. If only few mappings will work out of the target Infodom, update the *Infodom* value for selective records. Note that the excel upload mappings will work only if the target Infodom has same data model entities as used in the mappings defined on source setup.

6. Update `V_CREATED_BY` column with the name of any user available in the target setup that has appropriate roles to perform Excel Upload tasks.

**NOTE** You must update values for the **V\_INFODOM** and **V\_CREATED\_BY** columns.

7. Open WinSCP and login a new session by entering the host name, port number, user name and password to access the source setup.
8. Navigate to the folder `FTPSHARE`.
9. Copy the excel-entity mapping xml file(s) which are located in this folder according to their folder structure on to your desktop. For example:

`/ftpshare/STAGE/ExcelUpload/$SOURCE_INFODOM_NAME/$EXCEL_FILE_NAME.xml`

**NOTE** Actual file name of Excel Sheet is mentioned in the `V_EXCEL_NAME` column of `EXCEL_MAPPING_MASTER` table.

- 
10. Copy the excel template (.xls/ .xlsx) file(s) which are located in this folder according to their folder structure on to your desktop. For example:

**/ftpshare/STAGE/ExcelUpload/TEMPLATE/\*.xls or \*.xlsx**

---

**NOTE** Ignore this step if files are not available at the location.

11. Login a new session in WinSCP by entering the host name, port number, user name and password to access the target setup.
12. Copy the xml file(s) from *Step 3* to the following location in the target setup. For example:

**/ftpshare/STAGE/ExcelUpload/\$TARGET\_INFODOM\_NAME/\$EXCEL\_FILE\_NAME.xml**

---

**NOTE** The *\$TARGET\_INFODOM\_NAME* must be target setup Infodom in which you have uploaded the appropriate data model and the name must 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 following location in target setup. For example:

**/ftpshare/STAGE/ExcelUpload/TEMPLATE/\*.xls or \*.xlsx**

---

**NOTE** Ignore this step if files are not available at the location.

## 24 Appendix O: JDBC Jar Files

The `ojdbc<version>.jar` file must be copied based on the Oracle Database version and the supported Java (JRE/JDK) versions.

Table 37 lists the JDBC Jar file details.

**Table 37: JDBC Jar files version details**

Oracle Database Version	JDK/JRE Version Supported	JDBC Jar files specific to the release
12.1 or 12cR1	JDK 8, JDK 7 and JDK 8	ojdbc7.jar for JDK 7/JDK 8 ojdbc6.jar for JDK 6
11.2 or 11gR2	JDK 6 & JDK 5 JDK 7 supported in 11.2.0.3 and 11.2.0.4	ojdbc6.jar for JDK 7 ojdbc6.jar for JDK 6 ojdbc5.jar for JDK 5

## 25 Appendix P: Upgrading an Existing OFSAA 8.0.x JAVA 7 Instance to Java 8

This appendix describes the configurations required to upgrade an existing OFSAA 8.0.x Java 7 instance to Java 8.

### Topics:

- [Upgrading OFSAA 8.0.x Java 7 Instance to Java 8](#)
- [Configuring Web Application Server](#)
- [Upgrading Oracle WebLogic Server](#)
- [Upgrading Apache Tomcat Server](#)
- [Configuring User .profile Settings](#)
- [Configuring OFSAA for New Web Application Server Installation](#)

**ATTENTION** The following are the prerequisites for upgrading OFSAA 8.0.x Java 7 instance to Java 8:

- Java 8 must be installed on the OFSAA server and Web application server.
- Oracle WebLogic Server must be 12.1.3.0 or above. Download and install patch **18729264** from [My Oracle Support](#).

### 25.1 Upgrading OFSAA 8.0.x Java 7 Instance to Java 8

To upgrade OFSAA 8.0.x Java 7 instance to Java 8, follow these steps:

1. Configure Web application server to Java 8. For more information, see c.
2. Configure the OFSAA instance to Java 8. For more information. For a newly installed Web application server, see [Configuring OFSAA for New Web Application Server Installation](#).
3. Restart the OFSAA services. For more information, see the *Start/Stop Infrastructure Services* section in Appendix E
4. Generate the application EAR/WAR file and redeploy the application onto your configured web application server. For more information on generating and deploying EAR/WAR file, see Appendix D.

### 25.2 Configuring Web Application Server

This section describes the changes to be made in the Web application server. The following are the two options to perform Web application server configuration:

- Upgrade the existing Web application server installation to Java 8
- Install a new instance of the Web application server with Java 8

### Topics:

- [Upgrading Oracle WebLogic Server](#)

- [Upgrading Apache Tomcat Server](#)

## 25.2.1 Upgrading Oracle WebLogic Server

To upgrade the existing WebLogic server instance to Java 8, follow these steps:

1. Navigate to `<WLS_HOME>/Middleware/Oracle_Home/wlserver.`
2. Edit the `product.properties` file. Set `JAVA_HOME`, `WLS_JAVA_HOME`, `JAVAHOME` properties to the new Java path and `java.vm.version` to the new Java version. For example:

```
JAVA_HOME=/usr/java/jre1.8.0_45 WLS_JAVA_HOME=/usr/java/jre1.8.0_45
JAVAHOME=/usr/java/jre1.8.0_45 java.vm.version=1.8.0_45
```

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

```
SUN_JAVA_HOME="/usr/java/jre1.8.0_45" DEFAULT_SUN_JAVA_HOME="/usr/java/
jre1.8.0_45" JAVA_HOME="/usr/java/jre1.8.0_45"
```

4. Clear the Application cache. Navigate to the following path and delete the files:

```
<WebLogic installation location>/domains/<Domain name>/servers/<Server
name>/tmp/_WL_user/<Application name>/qaelce/jsp_servlet
```

If you wish to install a new instance of the Oracle WebLogic Server, follow these steps:

1. Install Oracle WebLogic Server 12.1.3.x on Java 8.
2. Perform the configurations for the newly installed WebLogic server. For more information, see [Configuring Resource Reference in WebLogic Application Server](#).

### NOTE

While creating WebLogic Domain, the *Listen Port* must be set same as that of the existing Domain. Make a note of the new Domain path to perform OFSAA Configurations.

## 25.2.2 Upgrading Apache Tomcat Server

Perform the following configurations to upgrade the existing Apache Tomcat Server from Java 7 to Java 8:

1. Login to the Apache Tomcat Server as a non-root user.
2. Edit the user `.profile`. Update the value for `JAVA_HOME` from *JRE 1.7* to *JRE 1.8*. For Example:

```
JAVA_HOME=/usr/java/jre1.8.0_45
```

3. Clear the Application cache. Navigate to the following path and delete the files:

```
<Tomcat installation folder>/work/Catalina/localhost/<Application name>/
org/apache/jsp
```

If you wish to install a new instance of the Apache Tomcat Server, follow these steps:

1. Install Apache Tomcat Server 8 with Java 8.

2. Perform the configurations for the newly installed Tomcat server. For more information, see Configuring Resource Reference in Tomcat Application Server.

**NOTE** Update the Connector Port in the `/apache-tomcat-8.0.21/conf/server.xml` file to that of the existing Tomcat instance.

Make a note of the new deployment path to perform OFSAA Configurations.

## 25.3 Configuring User .profile Settings

For user .profile configurations, follow these steps:

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/jre 1.8.0\_45/jre JAVA\_BIN=/usr/java/jre 1.8.0\_45/jre/bin**  
**LD\_LIBRARY\_PATH=\$LD\_LIBRARY\_PATH:/usr/java/jre 1.8.0\_45/jre/lib/amd64/server**

## 25.4 Configuring OFSAA 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.

To configure the OFSAA for new Web Application Server installation, follow these steps:

1. Modify the following parameters in the Configuration table available 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.xmlExportLog4jConfig.xml, RFDLogger.xml, PR2Logger.xml



## 26 Appendix Q: Removing OFSAA

This appendix describes how to uninstall the OFSAA Infrastructure and EAR files in WebSphere, WebLogic, and Tomcat.

### Topics:

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

### 26.1 Uninstalling OFSAA Infrastructure

This section will guide you through the necessary steps to uninstall the Oracle Financial Services Analytical Application (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 the OFSAA Infrastructure, follow these steps:

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.

Figure 117: Uninstalling OFSAA Infrastructure

```
/scratch/ofsadb/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/ofsadb/OFSAAI>
```

**NOTE**

- Uninstallation does not remove the Infrastructure application from the Web application server. It must be done manually
- The entries in the `.profile` file must be removed manually
- The files/folders under the file system staging area (ftpsare) must be deleted manually
- All the Database objects from Atomic Schemas must be dropped manually.

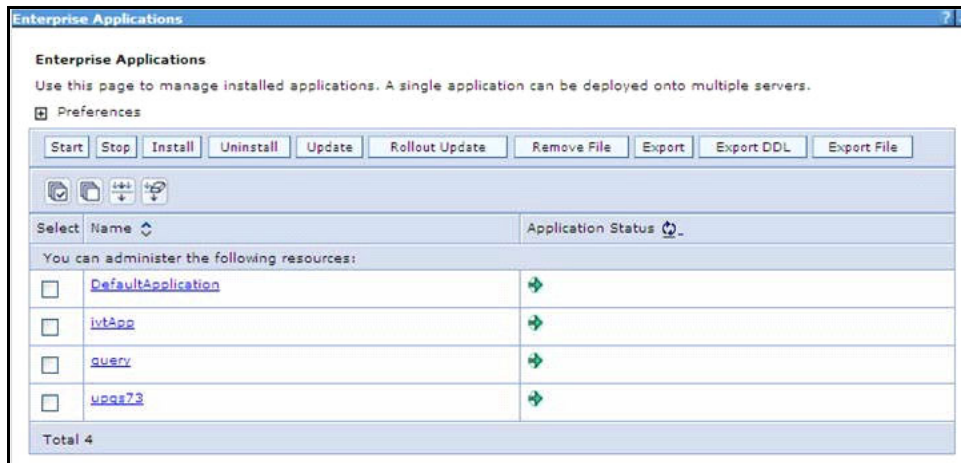
## 26.2 Uninstalling EAR Files in WebSphere

This section describes how to uninstall EAR files in WebSphere.

To uninstall the EAR files, follow these steps:

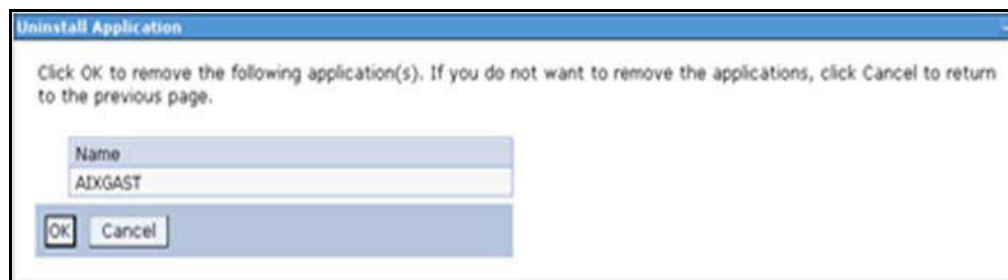
1. Open the URL in your browser: **http://<ipaddress>:<Administrative Console Port>/ibm/console** (https, if SSL is enabled). The **Login** window is displayed.
2. Log in with the user ID with administrative privileges.
3. Expand **Applications > Application Types > WebSphere** enterprise applications from the LHS. The **Enterprise Applications** window is displayed with all the deployed applications.

**Figure 118: Enterprise Applications**



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

**Figure 119: Uninstall Application**



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

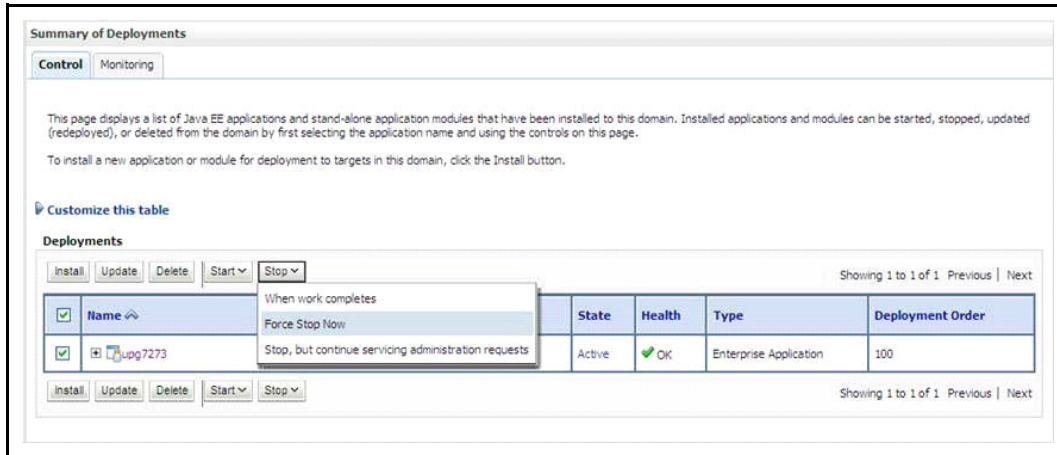
## 26.3 Uninstalling EAR Files in WebLogic

This section describes how to uninstall EAR files in WebLogic.

To uninstall the EAR files, follow these steps

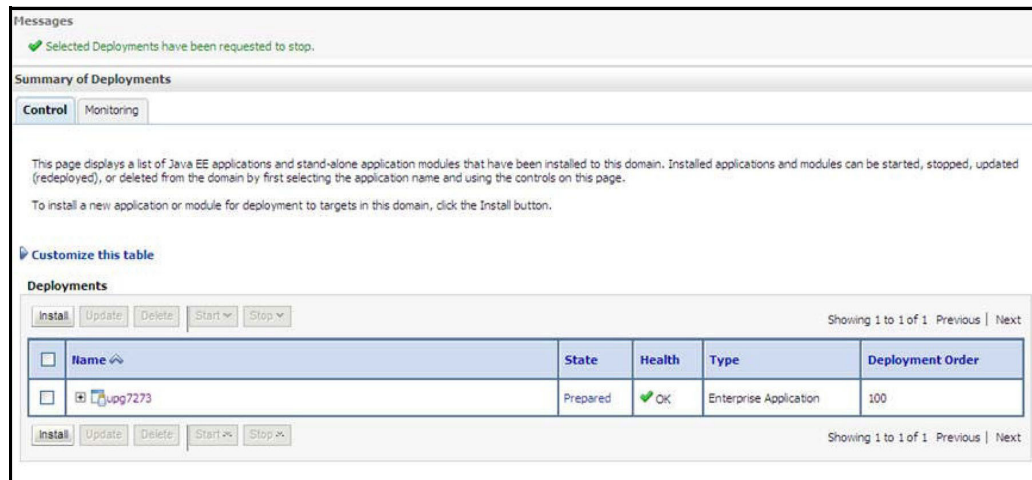
1. Open the URL in your browser: **http://<ipaddress>:<admin server port>/console** (https, if SSL is enabled). The **Login** window of the WebLogic Server Administration Console is displayed.
2. Login with the WebLogic user credentials having administrator privileges.
3. From the **Domain Structure**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

Figure 120: Summary of Deployments



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

Figure 121: Summary of Deployments - Messages



6. Select the check-box 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.

## 26.4 Uninstalling WAR Files in Tomcat

To uninstall the WAR file, follow these steps:

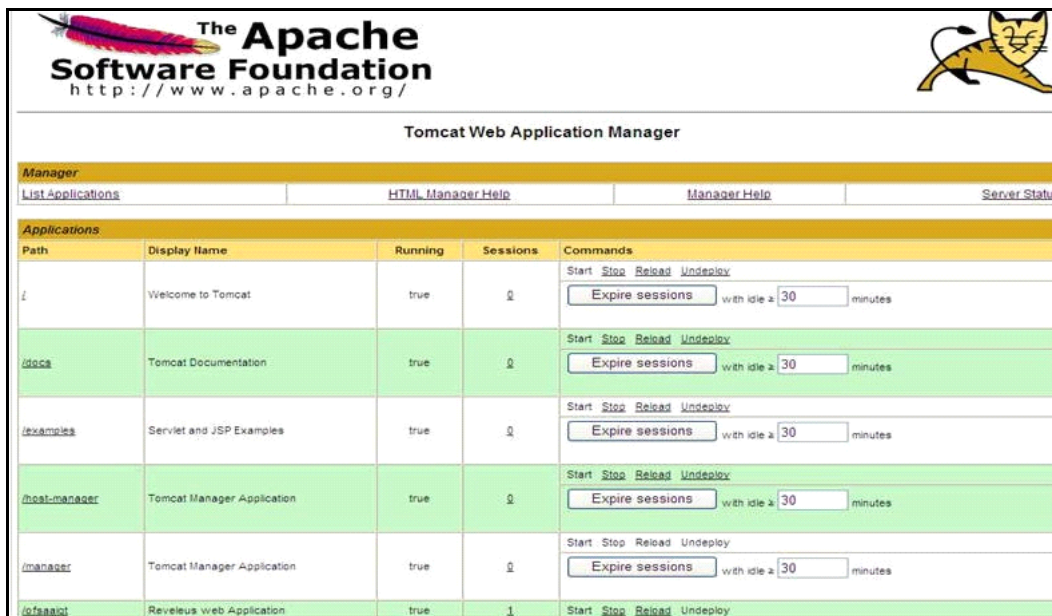
1. Comment out the **Context path** section from `server.xml` file in the `$CATALINA_HOME/conf` directory to avoid conflict during undeploy and re-deploy of the WAR file. Place comment `<!-- -->` in between the context path section. For example:

```
<!--
```

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

2. Restart the Tomcat service by doing the following:
  - d. Log in to the *Unix server* through a terminal emulator.
  - e. Navigate to the `$catalina_home/bin` directory.
  - f. Stop the tomcat services using the command: `./shutdown.sh`
  - g. Start the tomcat services using the command: `./startup.sh`
3. Open the URL in your browser: **http://<IP address>:<Tomcat server port>**. (https, if SSL is enabled). The **Tomcat home** window is displayed.
4. Click the **Manager App**. The **Connect to** window is displayed.
5. Log in with the user ID with administrative privileges. The **Tomcat Web Application Manager** window is displayed with the list of all applications deployed in Tomcat.

Figure 122: Tomcat Web Application Manager



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

## 27 Appendix R: Configuring Transparent Data Encryption (TDE) in OFSAA

This appendix describes how to configure Transparent Data Encryption (TDE) in Oracle Financial Services Analytical Application (OFSAA) applications.

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 [Database Advanced Security Guide](#). The 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.

The Oracle Advanced Security (OAS) comprises of the Transparent Data Encryption and Oracle Data Redaction features.

### Topics:

- [Configuring TDE During Enterprise Case Management Installation Using Full Installer](#)
- [Configuring TDE in Case of Upgrade](#)

### 27.1 Configuring TDE During Enterprise Case Management Installation Using Full Installer

This section describes how to enable TDE (Transparent Data Encryption) in the database.

#### Topics:

- [Configuring/Creating Software Keystore](#)
- [Running the Schema Creator Utility With Encryption](#)
- [Testing the Encryption](#)

#### 27.1.1 Configuring/Creating Software Keystore

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.

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. To find whether a wallet is already existing, check the following locations:

- Specified by the `ENCRYPTION_WALLET_LOCATION` parameter in the `sqlnet.ora` file
- Specified by the `WALLET_LOCATION` parameter in the `sqlnet.ora` file.

**NOTE** You must have required privileges to perform the following actions.

To configure the software keystore, follow these steps:

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 must be empty.
  - In a multi-tenant environment, the keystore location is set for the entire multi-tenant 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 set this 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)))
```

## 2. Create the Software Keystore.

There are following types of Software Keystores:

- Password-based Software Keystores
- Auto-login Software Keystores
- Local Auto-login Software Keystores

To create a software keystore, follow these steps:

- a. Login as *sysdba* or user with *ADMINISTER KEY MANAGEMENT* or *SYSKM* privilege.
- b. 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 that 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.

## 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 keystores 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.

4. Open the software wallet.

To open the software wallet, follow these steps:

- a. Login as *sysdba* or user with *ADMINISTER KEY MANAGEMENT* or *SYSKM* privilege.
- b. 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 multi-tenant 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 are not required to manually open auto-login or local auto-login software Keystores.

## 27.1.2 Creating Encrypted Tablespace

This section describes how to set the Software TDE Master Encryption Key.

To set the Software TDE Master Encryption Key, follow these steps:

1. 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 multi-tenant 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-multi-tenant environment, query the **OPEN\_MODE** column of the **V\$DATABASE** dynamic view. If you are using a multi-tenant 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. For more information, see Oracle Database Administrator's Guide.)

To set the encryption key, follow these steps:

- a. Login as *sysdba* or user with *ADMINISTER KEY MANAGEMENT* or *SYSKM* privilege.
- b. 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 multi-tenant 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';
```

### 27.1.3 Encrypting Data

This section describes how to encrypt 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

Make a note of 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:
  - Setting the COMPATIBLE initialization parameter for tablespace encryption
  - Setting the tablespace TDE master encryption key
  - Creating the Encrypted Tablespace

For more information, see [Encrypting Data Steps](#).

### 27.1.3.1 Encrypting Data Steps

**Topics:**

- [Setting the COMPATIBLE Initialization Parameter for Tablespace Encryption](#)
- [Setting the Tablespace TDE Master Encryption Key](#)
- [Creating the Encrypted Tablespace](#)

#### 27.1.3.1.1 Setting the COMPATIBLE Initialization Parameter for Tablespace Encryption

**ATTENTION** 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.

To set the COMPATIBLE initialization parameter, follow these steps:

1. Log into the database instance.
2. In a multi-tenant environment, log into the PDB.
3. Check the current setting of the `COMPATIBLE` parameter. For example:

**Table 38: Show Parameter Compatible**

Name	Type	Value
Compatible	String	12.0.0.0
noncdbcompatible	Boolean	False

4. If you want to change the `COMPATIBLE` parameter, follow these steps:
  - a. 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**).
  - b. 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**
  - c. Edit the initialization parameter file to use the correct *COMPATIBLE* setting. For example:  
**COMPATIBLE = 12.2.0.0**
  - d. 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**
  - e. 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;**

### 27.1.3.1.2 Setting the Tablespace TDE Master Encryption Key

**ATTENTION** Make sure that you have configured the TDE master encryption key as described in [Creating Encrypted Tablespace](#).

### 27.1.3.1.3 Creating the Encrypted Tablespace

After you have set the COMPATIBLE initialization parameter, you are ready to create the encrypted tablespace.

Follow the instructions described in [Running the Schema Creator Utility With Encryption](#) 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](https://docs.oracle.com/cloud/latest/db121/ASOAG/asotrans_config.htm#ASOAG9555)

## 27.1.4 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 <<APP PACK>>\_SCHEMA\_IN.xml file. You must perform this procedure manually as it is not a part of the <<APP PACK>>\_SCHEMA\_IN.xml.TEMPLATE originally.

The 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:@<DB_Server_IP>:1521:<DB_NAME></JDBC_URL>
<JDBC_DRIVER>oracle.jdbc.driver.OracleDriver</JDBC_DRIVER>
<HOST><OFSAA_Server_IP/HOST Name></HOST>
<SETUPINFO NAME="<PREFIX_NAME>" PREFIX_SCHEMA_NAME="Y"/>
<PASSWORD APPLYSAMEFORALL="Y" DEFAULT="<PASSWORD>"/>
<TABLESPACES>
<TABLESPACE NAME="OFS_AAI_TBSP" VALUE="TS_USERS1" DATAFILE="<ABSOLUTE PATH to
TABLESPACE>/<TABLESPACE_DATA_FILE_NAME>.dbf" SIZE="500M" AUTOEXTEND="OFF"
ENCRYPT="ON" />
</TABLESPACES>
<SCHEMAS>
<SCHEMA TYPE="CONFIG" NAME="ofsaconf" PASSWORD="" APP_ID="OFS_AAI"
DEFAULTTABLESPACE="##OFS_AAI_TBSP##" TEMPTABLESPACE="TEMP"
QUOTA="unlimited"/>
<SCHEMA TYPE="ATOMIC" NAME="ofsaatm" PASSWORD="" APP_ID="OFS_AAAI"
DEFAULTTABLESPACE="##OFS_AAI_TBSP##" TEMPTABLESPACE="TEMP" QUOTA="unlimited"
INFODOM="OFSAAAIINFO"/>
```

```
<SCHEMA TYPE="ATOMIC" NAME="ofsaaatm" PASSWORD="" APP_ID="OFS_IPE"
DEFAULTTABLESPACE="##OFS_AAI_TBSP##" TEMPTABLESPACE="TEMP" QUOTA="unlimited"
INFODOM="OFSAAAIINFO"/>
</SCHEMAS>
</APPPACKSCHEMA>
```

## 27.1.5 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;**

**Table 39** which is displayed after entering the query indicates whether the *TABLESPACE* is encrypted or not in the **ENCRYPTED** column.

**Table 39: TABLESPACE Encrypted**

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.

## 27.2 Configuring TDE in Case of Upgrade

This section details about the configurations required in case you want to enable Transparent Data Encryption (TDE) in Oracle Financial Services Analytical Application (OFSAA) applications after upgrade to OFSAA version 8.0.8.0.0 from a previous version. Additionally, these configurations are required in case you did not enable TDE during version 8.0.8.0.0 installation and want to enable at a later point of time.

To configure the TDE in case of upgrade, follow these steps:

1. Create a new PDB (12c)/ instance (11g) on same or different Database Server for TDE. For more information, see [Creating Encrypted Tablespace](#).
2. Shutdown the OFSAI 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=ofsaacnf_ofsaatm_%U.dmp filesize=2G SCHEMAS=ofsaacnf,ofsaatm
LOGFILE=ofsaacnf_ofsaatm_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=ofsaacnf_ofsaatm_%U.dmp SCHEMAS=ofsaacnf,ofsaatm
LOGFILE=ofsaacnf_ofsaatm_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.

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 ofsaacnf;
```

Grant succeeded

```
SQL> GRANT SELECT ON SYS.V_$PARAMETER TO ofsaatm;
```

Grant succeeded

6. Update `.profile` for the `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, and Protocol of the OFSAA Instance.
8. Navigate to the `$FIC_WEB_HOME` directory and execute the following command to trigger the creation of EAR/WAR file: `./ant.sh`.  
The EAR/WAR file - `<contextname>.ear/.war` - is created in the `$FIC_WEB_HOME` directory.  
On completion of EAR/WAR file creation, the message `BUILD SUCCESSFUL` is displayed.
9. Edit the existing *Connection Pool* settings to point to new JDBC URL and verify connections.
10. Clear the *webserver* cache and redeploy the application onto your configured web application server.
11. 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 Appendix S: Tunable Database Parameters

This appendix contains the Tunable Database Parameters.

**NOTE** Review the Oracle recommended guidelines in setting the `SGA_TARGET`, `SGA_MAX_SIZE` and `PGA_AGGREGATE_TARGET` parameters. The values for these memory parameters can vary significantly based on database server specifications and estimated data volume. For values of `PGA_AGGREGATE_TARGET` parameter Oracle recommends that they be kept at a minimum of 1024 MB.

Table 40 lists the Database Tunable Parameters.

**Table 40: Tunable Database Parameters**

Tunable Database Parameters		Parameter Values			
Category	Parameter Name	Type	Default	Oracle Recommended	Oracle Recommended for Exadata
Parameters affecting database creation (not tunable through the <code>init.ora</code> file)	CHARACTER SET	string	AL32UTF8	AL32UTF8	AL32UTF8
	NLS_LENGTH_SCHEMATICS	string	byte	byte	byte
	NLS_SORT	binary	binary	binary	binary
	MAXDATAFILES	integer	254		
	MASXINSTANCES	integer	1		
	MAXLOGFILES	integer	32		
	MAXLOGHISTORY	integer	24794		
	MAXLOGMEMBERS	integer	2	4	4
	REDO LOG SIZE	integer	10M	3G	16G

Tunable Database Parameters		Parameter Values			
Parameters affecting I/O operation	DB_BLOCK_SIZE	integer	2048	8192	8192
	DB_FILE_MULTIBLOCK_READ_COUNT	integer	The default value corresponds to the maximum I/O size that can be efficiently performed and is platform-dependent.	32	32
	DB_FILES	integer	200		
	DISK_ASYNC_IO	boolean	TRUE		
	TAPE_ASYNC_IO	boolean	TRUE		
	DB_WRITER_PROCESSES	integer	1	4	4
Parameters affecting resource consumption and parallel operations	FAST_START_PARALLEL_ROLLBACK	string	LOW	HIGH	HIGH
	LOG_BUFFER	integer	7M	10000000	10000000
	LOG_CHECKPOINT_INTERVAL	integer	0	10000	10000
	LOG_CHECKPOINT_TIMEOUT	integer	0	0	0
	OPEN_CURSORS	integer	50	4096	4096
	PARALLEL_EXECUTION_MESSAGE_SIZE	integer	2148	16384	16384
	PARALLEL_MAX_SERVERS	integer	10 * No of CPUs	Set if you are configuring DOP manually at site and PARALLEL_DEGREE_POLICY is set to MANUAL.	Do not set or change



Tunable Database Parameters		Parameter Values			
	PARALLEL_MIN_SERVERS	integer	0	Set if you are configuring DOP manually at site and PARALLEL_DEGREE_POLICY is set to MANUAL.	Do not set or change
	PROCESSES	integer	150	600	600
	LARGE_POOL_SIZE	integer	0	512M	
	PARALLEL_MIN_PERCENT	integer	0	Set if you are configuring DOP manually at site and PARALLEL_DEGREE_POLICY is set to MANUAL.	Do not set or change.
	PARALLEL_THREADS_PER_CPU	integer	2		

Tunable Database Parameters		Parameter Values			
Additional needed parameters	OPTIMIZER_MODE	string	ALL_ROWS	ALL_ROWS	ALL_ROWS
	COMPATIBLE	string		11.2.0 (for Oracle 11gR2)	11.2.0.3.0(if using Oracle 11.2.0.3.0) otherwise 11.2.0.2.0
	GLOBAL_NAMES	string	FALSE	TRUE	TRUE
	PRE_PAGE_SGA	string	FALSE	TRUE	TRUE
	UNDO_MANAGEMENT	string	AUTO	AUTO	AUTO
	UNDO_TABLESPACE	string		Set as Per Site Values	Set as Per Site Values
	UNDO_RETENTION	integer	900	10800	18000
	TIMED_STATISTICS	boolean	TRUE	TRUE	TRUE
	OPTIMIZER_INDEX_CACHING	integer	0		
	OPTIMIZER_INDEX_COST_ADJ	integer	100	30	
	QUERY_REWRITE_ENABLED	string	TRUE	FALSE	FALSE
	STAR_TRANSFORMATION_ENABLED	string	FALSE	FALSE	FALSE

## 29 Appendix T: FAQs and Error Dictionary

This appendix consists of resolution to the frequently asked questions and error codes noticed during Oracle Financial Services Analytical Application Infrastructure (OFSAAI) installation.

### Topics:

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

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

### 29.1 Frequently Asked Questions

You can see the Frequently Asked Questions which has been developed with the interest to help you resolve some of the Oracle Financial Services Analytical Application Infrastructure (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.

### Topics:

- [OFSAAI FAQs](#)
- [Applications Pack 8.1.1.0.0 FAQs](#)
- [Forms Framework FAQs](#)

#### 29.1.1 OFSAAI FAQs

##### **What are the different components that get installed during OFSAAI?**

The different components of OFSAAI are illustrated 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 the Java Runtime Environment section in [Hardware and Software Requirements](#).

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

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

##### **How do I know what is the Operating system, webservers and other software versions that OFSAA supports?**

See [OFSAAI Technology Stack Matrices](#).

### What are the different files required to install OFSAAI?

The following files are required:

- setup.sh
- envCheck.sh
- preinstallcheck.sh
- VerInfo.txt
- OFSAAInfrastructure.bin
- validatedXMLinputs.jar
- MyResources\_en\_US.properties
- log4j.xml
- OFSAAI\_PostInstallConfig.xml
- OFSAAI\_InstallConfig.xml
- privileges\_config\_user.sql
- privileges\_atomic\_user.sql
- XML\_UTILITY.jar

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

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

To grant execute permissions,

- Navigate to the path OFSAAI\_80000 and execute the command: `chmod 755`

*"Graphical installers are not..."*

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

For example: **Hummingbird Exceed is started and configured to Graphical mode installation.**

<b>NOTE</b>	Type <b>xclock</b> in the prompt and this must 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 the `PATH` variable. For more information, see [Prerequisite Information](#).
- 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. For more information, see [Prerequisite Information](#).

**Installation of OFSAAI was completed successfully! What next?**

Post successful completion of the OFSAAI installation, users must perform the Post Installation steps. See [Post Installation Configuration](#).

**What is to be done when OFSAAI Installation is unsuccessful?**

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

**How do I completely uninstall OFSAAI?**

OFSAAI can be completely uninstalled by performing the steps provided in [Uninstalling OFSAA Infrastructure](#).

**Can OFSAAI config and atomic schemas be on different databases?**

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

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

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

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

**When should I run the MLS utility?**

See the *Multiple Language Support (MLS) Utility* section in [OFS AAI Administration Guide](#) available on OTN.

**Does OFSAAI support Oracle Linux versions other than 5.5?**

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

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

1. Login as root user on the Unix machine where OFSAAI is getting installed.
2. Navigate to `/etc/security/`.
3. Edit the `limits.conf` file 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 must 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 [My Oracle Support](#).

See [Verifying System Environment](#) 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, follow these steps:

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

#### **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 there are any exceptions or errors in installation and how to proceed?**

1. Backup the installation logs.
2. Share the backup logs with [My Oracle Support](#).

#### **What should I do if the installation process is abruptly terminated or aborted?**

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

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

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

No, all the supported softwares and versions are described in [OFSAA Technology Stack Matrices](#).

#### **What should I do if the database connection from connection pool displays the following error message, "java.sql.SQLException: IO Error: Connection reset"?**

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

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

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

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

This can mostly happen:

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

To fix this, follow these 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`

The corrupted `setup.sh` file might have introduced certain `^M` characters into the file. You can remove `^M` characters from `setup.sh` file by performing the following steps:

- a. Login to the server where the installer is copied.
- b. Navigate to the directory `OFSAAI_80000`.
- c. Open the `setup.sh` file in the `vi` editor using the command: `vi setup.sh`.
- d. Inside the *vi editor* in *Esc* mode, type in: `%s/^M//g`

**NOTE** To enter `^M`, hold the **CTRL** key then press **V** and **M** in succession.

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

### Does OFSAA support Oracle DB 19c Standard edition?

The OCI client and the JDBC driver do not change depending on whether it is a standard or enterprise edition. So, OFSAAI works 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 the `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 Login page does not open and I get the following error message, "Could not retrieve list of locales"?**

This can be due to two reasons:

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

To fix, follow these steps:

1. Steps to replace the hostnames with IP address:
  - a. Stop all the OFSAA services. For more information, see [Stopping Infrastructure Services](#).
  - b. Replace all the hostnames with the IP address in all the places mentioned in the document (Where to find port, IP address, HTTPS Configuration for OFSAAI 7.2 Installation (DOC ID **1500479.1**)).
  - c. Restart all the OFSAAI services. For more information, see [Starting Infrastructure Services](#).
2. Steps to correct the port number conflicts:
  - a. Stop all the OFSAA services.
  - b. See the port numbers stated in the document (Where to find port, IP address, HTTPS Configuration for OFSAAI 7.2 Installation (DOC ID **1500479.1**)) and check on the discrepancy in the port numbers and correct them. You can also see [Installer and Installation Prerequisites](#).
  - c. Restart all the OFSAAI services.

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

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

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

Ensure OFSAAI servers have been started and are running successfully. On the server start up parameters options, see [Starting Infrastructure Services](#).

For more details on the issue, see 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 must 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 FTPSHAREFTPSHARE on all the layers? Can we have FTPSHARE on another machine other than the machines where OFSAAI is installed?**

The FTPSHARE is a Metadata Repository directory. All the metadata related files used in Infrastructure are stored in the FTPSHARE directory. FTPSHARE contains folders for each Information Domain, with



each Information Domain folders holding Erwin, log, and scripts folder. The transfer of data among the Web, Application, and Database servers in Infrastructure takes place through FTP/SFTP.

You need to configure FTP/SFTP and enable communication between the servers by providing App server's FTP/SFTP credentials to the Web server and DB server users.

Yes, we can have FTPSHARE on another machine other than the machines where OFSAAI is installed.

**Is it mandatory to provide the FTP/SFTP password?**

Yes, OFSAAI needs credentials of the user which has complete permissions on the FTPSHARE directory, and must 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 (multi-tier installation).

In case of single tier installation, 770 permissions can be provided if the unix users of OFSAAI and web server belong to the same unix group.

And on any new file that is created in the *FTPSHARE* folder of any installation layer must 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, see [Changing IP/Hostname, Ports, and Deployed Paths of OFSAA Instance](#).

**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.

1. SYSADMN
2. SYSAUTH
3. 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 prerequisite 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 needs to exist.

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

- Verify whether connection to the *Configuration schema* can be established through sqlplus.
- Verify *Configuration schema* password is modified post installation.

- Ensure Oracle database alias name created for Oracle instance and Oracle service name are same.
- On a multi-tier Installation mode, ensure TNSNAME and SID are the same in both the Application and Database Layers.

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

Ensure that the `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 Modeler does OFSAAI support?**

OFSAAI framework supports Data Modeler Erwin versions 9.0, 9.2, 9.6, and 9.7 for backward compatibility. However, the data models shipped with version 8.1.1.0.0 of the application packs are compatible with Erwin 9.5, 9.6.4, and 9.7.

**Does OFSAAI provide the mechanism to upload Business Data model?**

OFSAAI provides two mechanisms for business data model upload:

- Easy to use GUI based Model upload mechanism to upload the Business Data Model through Unified Metadata Manager --> Import Model.
- OFSAAI also provides a model upload utility `upload.sh` for uploading the business data model through the command line parameter by executing this shell script file under the path `<FIC_HOME>/ficapp/common/FICServer/bin`.

See the section Run Model Upload Utility of the [OFS Analytical Applications Infrastructure User Guide](#) available on OTN for details.

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

Modified data model can be uploaded into the system and OFSAAI has the ability to compare the changes within the data model with respect to the one already available in the system and enables propagation of incremental changes in a consistent manner.

### **What are the different types of uploading a business data Model?**

OFSAAI supports uploading of business data model from client desktop and also by picking up the data model from the server location.

### **Can the OFSAAI "Configuration Schema" password be modified post installation?**

The OFSAAI *Configuration schema* password can be modified post installation. OFSAAI application stores the password in the database and few configuration files, thus any changes to the *Configuration schema* password would necessitate updating in these.

Contact OFSAAI support for more details.

### **Can the OFSAAI Atomic Schema password be modified?**

The OFSAAI *Atomic Schema* password can be modified. OFSAAI application stores the Atomic schema password in the database and few configuration files, thus any change to the atomic schema password would necessitate updating the password.

To change the Atomic Schema password, follow these steps:

1. Login to OFSAA.
2. Navigate to **System Configuration > Database Details** window. Select the appropriate connection, provide the modified password and save.
3. Navigate to **Unified Metadata Manager > Technical Metadata > Data Integrator > Define Sources** window. Update the appropriate Source details.
  - a. If you are using Apache Tomcat as Web server:
    - i. Update the `<Context>` -> Resource tag details in server.xml file from the `§CATALINA_HOME/conf` folder. (In case of Tomcat only *Atomic <Resource>* exists).
  - b. If you are using WebSphere as Web server:
    - i. Login to the WebSphere Administration Console from the left side menu.
    - ii. Navigate to **Resources > JDBC > Data Sources**. A list of data sources will be populated on the right side.
    - iii. Select the appropriate Data Source and edit the connection details. (In this case, both Config and Atomic data sources need to be modified).
  - c. If you are using WebLogic as Web server:
    - i. Login to the WebLogic Administration Console from the left side menu.
    - ii. 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.
    - iii. Select the appropriate Data Source and edit the connection details. (In this case, both Config and Atomic data sources need to be modified).
    - iv. Restart the OFSAAI services.

---

**NOTE**

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

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

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

### Why do the Business Metadata Management screens (Business Processors screen) in the User Interface, take more time to load than other screens?

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

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

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

1. Generate the Log report by executing the 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
```

The above query returns a list of codes with their respective metadata count. You can see `metadata_type_master` table to identify the metadata name.

View the log report to identify the metadata which is being updated/refreshed beyond the specified cache size limit. Accordingly increase the cache size limit in `DynamicServices.xml` depending on the currently logged count for the specific metadata.

For example, if the `MEASURE_CACHE_SIZE` is set to 1000 and total measure reported in log is 1022, increase the limit to 2000 (approximately).

2. 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 available under `<WebSphere Install directory>/AppServer/deploytool/itp`.

For example:

```
$JAVA_CMD \
-Xbootclasspath/a:$ejbd_bootpath \ Xms256m -Xmx1024m \
```

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

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

**NOTE** Size requirements must always be specified in bytes.

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

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

After configuring `struts.xml`, 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 D: Creating and Deploying EAR/WAR File](#).

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

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

See [Support Note](#) for the workaround.

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

No, you cannot install an Applications Pack on existing Atomic Schema/Information Domain created manually. Applications Packs can be installed only on Atomic Schemas/Information Domain created using schema creator utility and/or the Applications 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 screen. This folder needs to be created under the local path on every node, in case of web application server clustering.

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

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

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

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

**Table 41: Optimized Memory Settings 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"-Xms2048m -Xmx2048m
	336 MB	"-Xms4096m -Xmx4096m
	815 MB	"-Xms4096m -Xmx4096m
	1243 MB	"-Xms6144m -Xmx6144m
Save New Erwin File In Server	106 MB	"-Xms1024m -Xmx1024m
	336 MB	"-Xms2048m -Xmx2048m
		"-Xms4096m -Xmx4096m
		"-Xms6144m -Xmx6144m

**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 described 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?**

To turn off unused infodoms from caching, follow these steps:

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 [Appendix D: Creating and Deploying EAR/WAR File](#).
5. Restart the OFSAAI Services (APP and WEB). For more information, see [Appendix E: Starting/Stopping Infrastructure Services](#).

**NOTE**

This setting helps cache the Infodom metadata only for the infodoms that get accessed after user login. Infodoms which are not accessed, are not cached.

Sample code is as follows:

```
<SERVICE CODE="20"
CLASS="com.iflex.fic.metadata.services.MetadataServiceProvider" NAME="BMD"
SERVERID="DEFAULT" PATH=" " LOGGERNAME="UMMLOGGER" LOGGERLEVEL="10">
<PARAMETERS>
<PARAMETER NAME="CACHE_ON_STARTUP" VALUE="0" />
<PARAMETER NAME="BACKUP_XML" VALUE="1" />
<PARAMETER NAME="MAX_BACKUP_XML" VALUE="2" />
<PARAMETER NAME="PC_NONBI_BI_SWITCH" VALUE="2048" />
<PARAMETER NAME="HIERARCHY_NODE_LIMIT" VALUE="2000" />
<PARAMETER NAME="ALIAS_CACHE_SIZE" VALUE="1000" />
<PARAMETER NAME="DATASET_CACHE_SIZE" VALUE="2000" />
<PARAMETER NAME="MEASURE_CACHE_SIZE" VALUE="2000" />
<PARAMETER NAME="HIERARCHY_CACHE_SIZE" VALUE="2000" />
<PARAMETER NAME="DIMENSION_CACHE_SIZE" VALUE="2000" />
<PARAMETER NAME="HIERARCHYATTRIBUTE_CACHE_SIZE" VALUE="1000" />
<PARAMETER NAME="CUBE_CACHE_SIZE" VALUE="1000" />
<PARAMETER NAME="RDM_CACHE_SIZE" VALUE="1000" />
<PARAMETER NAME="BUSINESSPROCESSOR_CACHE_SIZE" VALUE="2000" />
<PARAMETER NAME="DERIVEDENTITY_CACHE_SIZE" VALUE="1000" />
<PARAMETER NAME="LOG_GET_METADATA" VALUE="false" />
<PARAMETER NAME="METADATA_PARALLEL_CACHING" VALUE="0" />
</PARAMETERS>
</SERVICE>
```

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

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

**Can Multiple OFSAA Infrastructure instances share the same Config Schema?**

No, only one OFSAA environment can be installed using one Config Schema.

**Can Atomic Schema be shared?**

Yes, it can be shared between two OFSAA instances.

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

The OFSAA Servlet port which is same as Web server port must be open. Also the web application port must 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, see [Configuring OFSAA in Clustered Environment 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 must enter the Web server IP Address/Hostname and Port details during OFSAA installation. Here the Servlet port must 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 must be same as the Web application Server port.

**Is "ReveleusAdminConsoleAgent" applicable for OFSAAI 8.1.1.0.0 and higher versions?**

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

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

This error is displayed due to the following reasons:

- The Config Schema password is already expired
- If the Config Schema password is going to expire soon and the message such as *ORA-28002: the password will expire within 6 days* displays while connecting to Config Schema through sqlplus.
- The Config Schema password is Modified.



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

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

### What is the mechanism of Log File sizing and backup?

OFSAAI Log files created under `$FIC_APP_HOME/common/FICServer/logs` &

`<OFSAAI_DEPLOYED_AREA>/<CONTEXT.war>/logs` is configurable in `RevLog4jConfig.xml`.

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

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

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

For example:

```
<appender name="REVERSERVERAPPENDER"
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 the <EAR/WAR Deploy area>/conf folder.
2. Repeat *Step 2* from the above section.

**Can we modify the Log file path?**

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

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

For more details, see the *HTTPS* section in [OFSAAI Administration Guide](#).

**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 Entit
```

**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, see the Changing IP/Hostname, Ports, and *Deployed Paths of the OFSAA Instance* section in [OFSAAI Admin Guide](#) available on OTN.

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

Navigate to `$FIC_HOME` directory on target.

**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`.

## 29.1.2 Applications Pack 8.1.1.0.0 FAQs

**What is an Applications Pack?**

An Applications Pack is suite of products. For more information, see [About OFSAA](#).

**Can I get a standalone installer for OFSAAI 8.1.1.0.0?**

No. AAI is part of every Applications Pack and installs automatically.

**How does OFSAA 8.1.1.0.0 Applications Pack relate to OFSAA 7.x series?**

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

**Can existing OFSAA 7.x customers upgrade to OFSAA 8.1.1.0.0 Applications Pack?**

There is no upgrade path available. However, we will have migration kit/path for every product to **8.1.1.0.0** Applications Pack. For more information, contact [My Oracle Support](#).

**Does OFSAA 8.1.1.0.0 Applications Pack UPGRADE automatically to existing environments?**

No. OFSAA **8.1.1.0.0** Applications 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 **8.1.1.0.0**. Note that the objects can be migrated only from the previously released version of OFSAA products.

**Where can I download OFSAA 8.1.1.0.0 Applications Pack?**

You can download the OFSAAI **8.1.1.0.0** Applications Pack from [Oracle Software Delivery Cloud \(OSDC\)](#).

**What are the minimum system and software requirements for OFSAA 8.1.1.0.0 Applications Pack?**

See installation guide section [Hardware and Software Requirements](#).

**Is my environment compatible with OFSAA 8.1.1.0.0 Applications Pack?**

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

**Does the OFSAA 8.1.1.0.0 Applications Pack support all Operating systems?**

OFSAA 8.1.1.0.0 Applications Pack supports the operating systems - LINUX, AIX, SOLARIS. See [Technology Matrix](#) for the technology matrix that OFSAA suite products are qualified on.

**How can I install OFSAA 8.1.1.0.0 Applications Pack?**

See Oracle Financial Services Advanced Analytical Infrastructure Installation And Configuration Guide published in [OTN](#) for the Applications Pack installers.

**Does this installation require any Third party Softwares?**

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 8.1.1.0.0 Applications Pack installation?**

US English is the language supported.

**What mode of installations OFSAA Applications Pack supports?**

OFSAA Applications Packs supports Silent Mode.

**Does OFSAA 8.1.1.0.0 Applications Pack support Multi tier Installations?**

OFSAA 8.1.1.0.0 supports only single tier installation. For more information see [OFSAAI FAQs](#).

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

Yes. The prerequisite checks are done by the respective Applications Pack installer.

**What happens if it aborts during installation of any application with in Applications Pack?**

You must restore the system and retrigger the installation.

**Does this Applications Pack 'Roll Back' if any application installation fails due to errors?**

Rollback of installation is not supported.

**Does the Applications Pack install all applications bundled?**

All Applications Pack system files are installed but there is an option to enable the licensed products.

**Can I re-install any of the Applications Packs?**

You can retrigger in case of failure.

**Does this Applications Pack allow enabling/disabling any of the applications installed?**

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

**I have installed one application in an Applications Pack, can I install any of new application within the Applications Pack later?**

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

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

There is no issue in installing separate OFSAAI installations, each with their own PFT/FTP installations and separate associated database instances and separate Web server installations on the same server as long as adequate memory is allocated for each instance and as long as each OFSAAI installation is installed using a separate UNIX user and profile. Care must be taken if running multiple OFSAAI installations on a single server. Adequate memory will be required for each installation as several OFSAAI processes (model upload, DEFQ services, etc) take significant amounts of memory. So it depends on your server memory.

**Is it possible to Install OFSAA 8.1.1.0.0 Applications Pack on an existing 'Infodom' where another OFSAA 8.1.1.0.0 application is installed?**

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

**Can I select an Infodom in Applications Pack during installation?**

Yes. You can select or change the required infodom.

**Can I install all Applications Packs in a 'Single Infodom'?**

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

**Is it possible to install applications on different Infodom within the Applications Pack? (For example, I want to install LRM & MR in two infodoms)**

Applications within Applications 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 8.1.1.0.0?**

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

**Is the 'Data Model' bundled specific to an Applications Pack or to an individual application?**

A merged data model for all applications within the Applications 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 Applications Pack that bundles Enterprise Modeling.

**Does the Applications Pack create sandbox automatically for the required applications?**

Yes, Sandbox creation is part of application install process.

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

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

**Can I upgrade AAI only?**

Yes, you can upgrade AAI alone.

**Can I upgrade one application within the Applications Pack? (For example, I want to upgrade LRM in the Treasury Applications Pack, but not MR.)**

No, an upgrade is applied to all applications in the Applications Pack.

**Is it possible to uninstall any Application from the Applications Pack?**

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

**Can I uninstall entire Applications Pack?**

No, you cannot uninstall the Applications 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 Applications Pack contain all Language Packs supported?**

Language Packs need to be installed on 8.1.1.0.0 Applications Packs.

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

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

**Can I use an existing manually created schema as information domain for Applications Pack installation?**

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

**What should I do if I get the following error message while running the schema creator utility, "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 available in the `/etc/hosts` file.

**What are the Java versions supported in OFS AAI Applications Pack version 8.1.1.0.0?**

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

**Is OFS AAI Applications Pack version 8.1.1.0.0 supported on Java 8?**

Yes. To install this release of the OFS AAI Applications Pack version 8.1.1.0.0 on Java 8. For more information, see specific notes mentioned in the sections [Installer and Installation Prerequisites](#), [Supported Configurations for Java 8](#), [Configuring Schema Creator Utility](#), and [Installing in Silent Mode](#).

**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 must 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 must 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>.

### 29.1.3 Forms Framework FAQs

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

It is recommended to use BIP reports or ORACLE ANALYTIC SERVER (OAS) 5.9 reports if you have to export large volume of data.

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

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

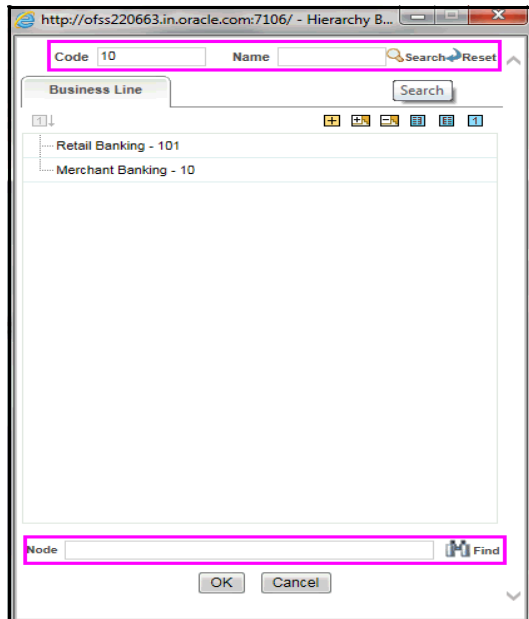
**'Expand All/ Collapse All' button is not visible in the Hierarchy Browser window. What should I do?**

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

**What is the difference between the two Searches available in the Hierarchy Browser window?**

In the new **Hierarchy Browser** window introduced from 7.3.5.1.0 version, there are two search options available as highlighted in [Figure 123](#) :

**Figure 123: Hierarchy Browser**



**DB Search (Top search container):** It will search the required node in database and displays the result as shown below. This search is performed on full hierarchy nodes.

**UI search (Below the hierarchy):** This search will find the required node in the UI and shows in tree structure.

**NOTE**

In case the hierarchy nodes are more than 50 and if it is a non-custom hierarchy, then the UI search does not show the required node in tree structure, until all the nodes are expanded and loaded manually in the UI.

**What is a Custom Hierarchy?**

Custom hierarchies does have the parameter configuration *customQuery* as shown below and the customized query is taken from the `HIERARCHY_FILTER_MASTER` table.

Configuration in xml:

```
<CONTROL ID="1003" TYPE="41">
<CONTROLPROPS>
<EXTRAPARAMETERS>
<PARAMETER NAME="customQuery" VALUE="Yes"/>
</EXTRAPARAMETERS>
</CONTROLPROPS>
</CONTROL>
```

For custom hierarchy, all the hierarchy nodes are loaded in UI without any limit.

So, even if the hierarchy nodes are more than 50, the UI search shows the required node in tree structure and the **ExpandAll** and **ExpandBranch** images are enabled.

## 29.2 Error Dictionary

This contents of this section has been created with the interest to help you resolve the installation issues if any. There is a compilation of all the possible errors that might arise during the installation process with the possible cause and the resolution to quickly fix the issue and proceed further with the installation.

### Topics:

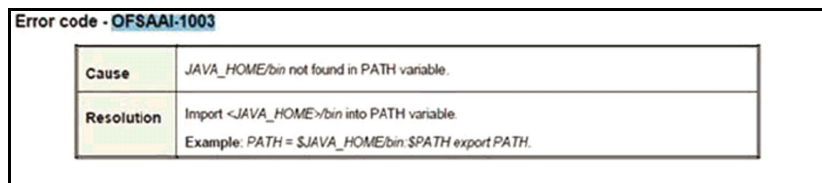
- [Accessing Error Dictionary](#)
- [Error Code Dictionary](#)

### 29.2.1 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**.  
The **Find** dialog is displayed as indicated.
2. Enter the error code that is displayed on screen during Infrastructure installation.
3. Press **Enter**. The search results are displayed and highlighted as indicated in [Figure 124](#).

**Figure 124: Error Code**



Error code - OFSAAI-1003	
<b>Cause</b>	JAVA_HOME/bin not found in PATH variable.
<b>Resolution</b>	Import <JAVA_HOME>/bin into PATH variable. Example: PATH = \$JAVA_HOME/bin:\$PATH export PATH.

View the details of the issues, its cause, and resolution specific to the error code. Repeat the step to find an answer to any other errors that you notice during installation. If you are not able to resolve the issue even after following the steps provided in resolution, you can contact [My Oracle Support](#) along with log files and appropriate screen shots.

### 29.2.2 Error Code Dictionary

This section describes various error codes with their causes and resolutions.

#### 29.2.2.1 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 the `/etc/passwd` file.

##### NOTE

`chsh` command is not available in Solaris OS.



#### **29.2.2.2 Error code - OFSAAI-1002**

**Cause:**

No proper arguments are available.

**Resolution:**

Provide proper arguments. Invoke **Setup.sh** using Silent mode.

For example: `./Setup.sh SILENT`

#### **29.2.2.3 Error code - OFSAAI-1004**

**Cause:**

The **.profile** is not available in `$HOME`.

**Resolution:**

Create the **.profile** file in `$HOME`, i.e. in the home directory of user.

#### **29.2.2.4 Error code - OFSAAI-1005**

**Cause:**

The `OFSAAIInfrastructure.bin` file is not available in current folder.

**Resolution:**

Copy the `OFSAAIInfrastructure.bin` file into installation kit directory.

#### **29.2.2.5 Error code - OFSAAI-1006**

**Cause:**

The `CustReg.DAT` file is not available in current folder.

**Resolution:**

Copy the `CustReg.DAT` file into installation kit directory.

#### **29.2.2.6 Error code - OFSAAI-1007**

**Cause:**

The `OFSAAI_InstallConfig.xml` file is not available in current folder.

**Resolution:**

Copy the `OFSAAI_InstallConfig.xml` file into installation kit directory.

#### **29.2.2.7 Error code - OFSAAI-1008**

**Cause:**

The `validateXMLInputs.jar` file is not available in current folder.

**Resolution:**

Copy the `validateXMLInputs.jar` file into installation kit directory.

#### **29.2.2.8 Error code - OFSAAI-1009**

**Cause:**

The `log4j.xml` file is not available in current folder.

**Resolution:**

Copy the `log4j.xml` file into installation kit directory.

#### **29.2.2.9 Error code - OFSAAI-1010**

**Cause:**

Unknown error occurred.

**Resolution:**

Make sure to provide proper argument (Silent) to the **Setup.sh** file.

#### **29.2.2.10 Error code - OFSAAI-1011**

**Cause:**

XML validation failed.

**Resolution:**

Check the `InfrastructurePreValidations.Log` for more details.

#### **29.2.2.11 Error code - OFSAAI-1012**

**Cause:**

Property file with locale name does not exist.

**Resolution:**

Copy `MyResources_en_US.properties` to the setup kit directory and keep `en_US` in *LOCALE* tag of `OFSAAI_InstallConfig.xml`.

#### **29.2.2.12 Error code - OFSAAI-1013**

**Cause:**

The `OFSAAI_InstallConfig.xml/OFSAAI_PostInstallConfig.xml` file not found.

**Resolution:**

Copy the `OFSAAI_InstallConfig.xml/OFSAAI_PostInstallConfig.xml` file to the setup kit directory.

#### **29.2.2.13 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.

#### **29.2.2.14 Error code - OFSAAI-1015**

**Cause:**

XML is not well formed.

**Resolution:**

Execute the command `dos2unix OFSAAI_InstallConfig.xml` to convert plain text file from DOS/MAC format to UNIX format. OR

Make sure that `OFSAAI_InstallConfig.xml` is valid. Try to open the file through Internet Explorer for a quick way to check validity. If it is not getting opened, create new `OFSAAI_InstallConfig.xml` using the `XML_UTILITY.jar`.

#### **29.2.2.15 Error code - OFSAAI-1016**

**Cause:**

User installation directory contain blank spaces.

**Resolution:**

Provide an installation path that does not contain spaces. Check the tag `USER_INSTALL_DIR` in the `OFSAAI_InstallConfig.xml` file. This path must not contain any spaces.

#### **29.2.2.16 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 the `OFSAAI_InstallConfig.xml` file.

## **OFSAA Support Contact Details**

Raise a Service Request (SR) in [My Oracle Support \(MOS\)](#) for queries related to OFSAA applications.

## Send Us Your Comments

Oracle welcomes your comments and suggestions on the quality and usefulness of this publication. Your input is an important part of the information used for revision.

- Did you find any errors?
- Is the information clearly presented?
- Do you need more information? If so, where?
- Are the examples correct? Do you need more examples?
- What features did you like most about this manual?

If you find any errors or have any other suggestions for improvement, indicate the title and part number of the documentation along with the chapter/section/page number (if available) and contact the Oracle Support.

Before sending us your comments, you might like to ensure that you have the latest version of the document wherein any of your concerns have already been addressed. You can access My Oracle Support site which has all the revised/recently released documents.

