# Oracle Financial Services Liquidity Risk Solution

**Installation Guide**

**Release 8.1.0.0.0**

**Nov 2023**

**F26023-01**

**ORACLE**
Financial Services

**ORACLE**

**OFS Liquidity Risk Solution Installation Guide**

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# Document Control

**Table 1: Document Version Control**

| Version Number | Revision Date | Change Log |
|---|---|---|
| 1.0 | Jun 2020 | Created the document with instructions for the installation of the OFS LRS Release 8.1.0.0.0. |
| 2.0 | Aug 2020 | Added information for the mandatory one-off patches 31605076 and 31545589 in the <u>Mandatory Patches</u>, <u>Extract the Software</u> sections. |
| 3.0 | Aug 2020 | Added a note for OS migration in Upgrade section. |
| 4.0 | Oct 2020 | Updated Step 9 in section 9.5.3 Initializing the Upgrade. |
| 5.0 | Dec 2020 | • Updated the APP_ID/ ENABLE attribute in the Table: OFS_<APP PACK>.xml File Parameters<br>• Added a note in the Compatibility Matrix section.<br>• Added a note in the Verify the Log File Information for Upgrade section. |
| 6.0 | Jan 2021 | • Updated note regarding installing LRS 8.1 with Linux 8 in the Verifying the Log File Information section (New installation and Upgrade installation) |
| 7.0 | Mar 2021 | Added a note regarding Weblogic in the Additional Configurations for Web servers section. |
| 8.0 | September 2021 | Added section - View OFSAA Product Licenses after Installation of Application Pack |
| 9.0 | December 2021 | Added the information about the patch release for log4j release. |
| 10.0 | June 2022 | Added information about Configuring Tomcat for User Group Authorization, Data Mapping, and Disabling WADL for the Web Service. |
| 11.0 | May 2023 | Added information about removing the `LRMService` endpoint in the `sun-jaxws.xml` file. |
| 12.0 | November 2023 | Updated Java tool options to be included in the .profile file for all versions JDK 11.0.20 and above updates (36018169). |

# Table of Contents

# 1 Preface

This section provides supporting information for the Oracle Financial Services Liquidity Risk Solution Pack Installation Guide.

You can find the latest copy of this document in the OHC Documentation Library which includes all the recent additions or revisions (if any) done to date.

Before you begin the installation, ensure that you have access to My Oracle Support with the required login credentials to quickly notify us of any issues at any stage.

**Topics:**

- Intended Audience

- Related Information Sources

- Conventions

- Abbreviations

## 1.1 Intended Audience

The OFS LRS Installation Guide is intended for administrators, business users, strategists, data analysts, and implementation consultants who are responsible for installing and maintaining the application pack components.

This document assumes that you have experience installing enterprise components and basic knowledge of the following:

- Oracle Financial Services Liquidity Risk Solution Pack components

- OFSAA architecture

- UNIX commands

- Database concepts

- Web server or web application server

## 1.2 Related Documents

We strive to keep this document and all other related documents updated regularly; visit the OHC Documentation Library to download the latest version available. The list of related documents is provided here:

- OHC Documentation Library **for OFS Liquidity Risk Solution:**

    For existing customers of OFS Liquidity Risk Management (LRM):

    - *OFS Liquidity Risk Solution Application Pack 8.1.0.0.0 Release*

    - *OFS Liquidity Risk Solution Application Pack 8.1.0.0.0 Installation Guide*

    - *OFS Liquidity Risk Measurement and Management Release 8.1.0.0.0 Analytics User Guide*

    - *OFS Liquidity Risk Measurement and Management Release 8.1.0.0.0 User Guide*

- *OFS Liquidity Risk Regulatory Calculations for Reserve Bank of India 8.1.0.0.0 User Guide*

- *OFS Liquidity Risk Regulatory Calculations for US Federal Reserve 8.1.0.0.0 User Guide*

- *OFS Liquidity Risk Regulatory Calculations for European Banking Authority 8.1.0.0.0 User Guide*

For new customers of OFS Liquidity Risk Solution (LRS):

- *OFS Liquidity Risk Solution Application Pack 8.1.0.0.0 Release Notes*

- *OFS Liquidity Risk Solution Application Pack 8.1.0.0.0 Installation Guide*

- *OFS Liquidity Risk Measurement and Management Release 8.1.0.0.0 Analytics User Guide*

- *OFS Liquidity Risk Measurement and Management Release 8.1.0.0.0 User Guide*

- *OFS Liquidity Risk Regulatory Calculations for Reserve Bank of India 8.1.0.0.0 User Guide*

- *OFS Liquidity Risk Regulatory Calculations for US Federal Reserve 8.1.0.0.0 User Guide*

- *OFS Liquidity Risk Regulatory Calculations for European Banking Authority 8.1.0.0.0 User Guide*

- *OFS Liquidity Risk Regulatory Calculations for Bank of Thailand 8.1.0.0.0 User Guide*

- *OFS Liquidity Risk Regulatory Calculations for Bank Negara Malaysia 8.1.0.0.0 User Guide*

- *OFS Liquidity Risk Regulatory Calculations for Monetary Authority of Singapore 8.1.0.0.0 User Guide*

- *OFS Liquidity Risk Regulatory Calculations for Hong Kong Monetary Authority 8.1.0.0.0 User Guide*

- *OFS Deposit Insurance Calculations for Liquidity Risk Management 8.1.0.0.0 User Guide*

- OHC Documentation Library **for OFS AAAI Application Pack:**

  - *OFS Advanced Analytical Applications Infrastructure (OFS AAAI) Application Pack Installation and Configuration Guide*

  - *OFS Analytical Applications Infrastructure User Guide*

  - *OFS Analytical Applications Infrastructure Administration Guide*

  - *Oracle Financial Services Analytical Applications Infrastructure Environment Check Utility Guide*

- **Additional Reference Documents:**

  - OFSAA Licensing User Manual, Release 8.1.0.0.0

  - OFS Analytical Applications 8.1.0.0.0 Technology Matrix

  - OFS Analytical Applications Infrastructure Security Guide

  - OFS LRS Security Guides Release 8.1.x

  - Oracle Financial Services Analytical Applications Infrastructure Cloning Guide

  - OFS LRS Cloning Guide release 8.0.x

  - OFS LRS Cloning Guide Release 8.1.x

  - OFS LRS Performance Tuning Guide

- Oracle Financial Services Data Foundation Technical Documents (MOS Doc ID: 2170313.1). See the relevant version of the metadata sheet available in the MOS document (For CAS refer T2T Metadata Staging, and for SCD components refer SCD Metadata sheet).

## 1.3     Conventions

The following text conventions are used in this document.

**Table 2: Document Conventions**

| Convention | Meaning |
|---|---|
| **boldface** | Boldface type indicates graphical user interface elements associated with an action or terms defined in text or the glossary. |
| *italic* | Italic type indicates book titles, emphasis, or placeholder variables for which you need to update specific values. |
| `monospace` | Monospace type indicates commands within a paragraph, URLs, code in examples, file names, text that appears on the screen, or text that you enter. |
| Hyperlink | Hyperlink type indicates links to external websites and internal document links. |

## 1.4     Abbreviations

The following table lists the abbreviations used in this document.

**Table 3: Abbreviations**

| Abbreviation | Meaning |
|---|---|
| BDP | Big Data Processing |
| DBA | Database Administrator |
| DDL | Data Definition Language |
| DEFQ | Data Entry Forms and Queries |
| DML | Data Manipulation Language |
| EAR | Enterprise Archive |
| EJB | Enterprise JavaBean |
| ERM | Enterprise Resource Management |
| FTP | File Transfer Protocol |
| HDFS | Hadoop Distributed File System |
| HTTPS | Hypertext Transfer Protocol Secure |
| J2C | J2EE Connector |
| J2EE | Java 2 Enterprise Edition |

| Abbreviation | Meaning |
|---|---|
| JCE | Java Cryptography Extension |
| JDBC | Java Database Connectivity |
| JDK | Java Development Kit |
| JNDI | Java Naming and Directory Interface |
| JRE | Java Runtime Environment |
| JVM | Java Virtual Machine |
| LDAP | Lightweight Directory Access Protocol |
| LHS | Left Hand Side |
| MFA | Multi-Factor Authentication |
| MOS | My Oracle Support |
| OFSAA | Oracle Financial Services Analytical Applications |
| OFSAAI | Oracle Financial Services Analytical Application Infrastructure |
| OFSAAAI | Oracle Financial Services Advanced Analytical Applications Infrastructure Application Pack |
| OFS LRM | Oracle Financial Services Liquidity Risk Management |
| OFS LRS | Oracle Financial Services Liquidity Risk Solution |
| OHC | Oracle Help Center |
| OLAP | On-Line Analytical Processing |
| OLH | Oracle Loader for Hadoop |
| ORAAH | Oracle R Advanced Analytics for Hadoop |
| OS | Operating System |
| RAM | Random Access Memory |
| RDBMS | Relational Database Management System |
| RHEL | Red Hat Enterprise Linux |
| SFTP | Secure File Transfer Protocol |
| SID | System Identifier |
| SSL | Secure Sockets Layer |
| TNS | Transparent Network Substrate |
| URL | Uniform Resource Locator |
| VM | Virtual Machine |
| WAR | Web Archive |
| XML | Extensible Markup Language |

# Part I

**Topics:**

- [Introduction](#)
- [Complete Installation Checklist](#)
- [Hardware and Software Requirements](#)
- [Pre-installation](#)
- [Installation](#)
- [Post-installation](#)
- [Remove OFSAA Infrastructure](#)

# 2      Introduction

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

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

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

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

**Figure 1: OFSAA Application Packs**
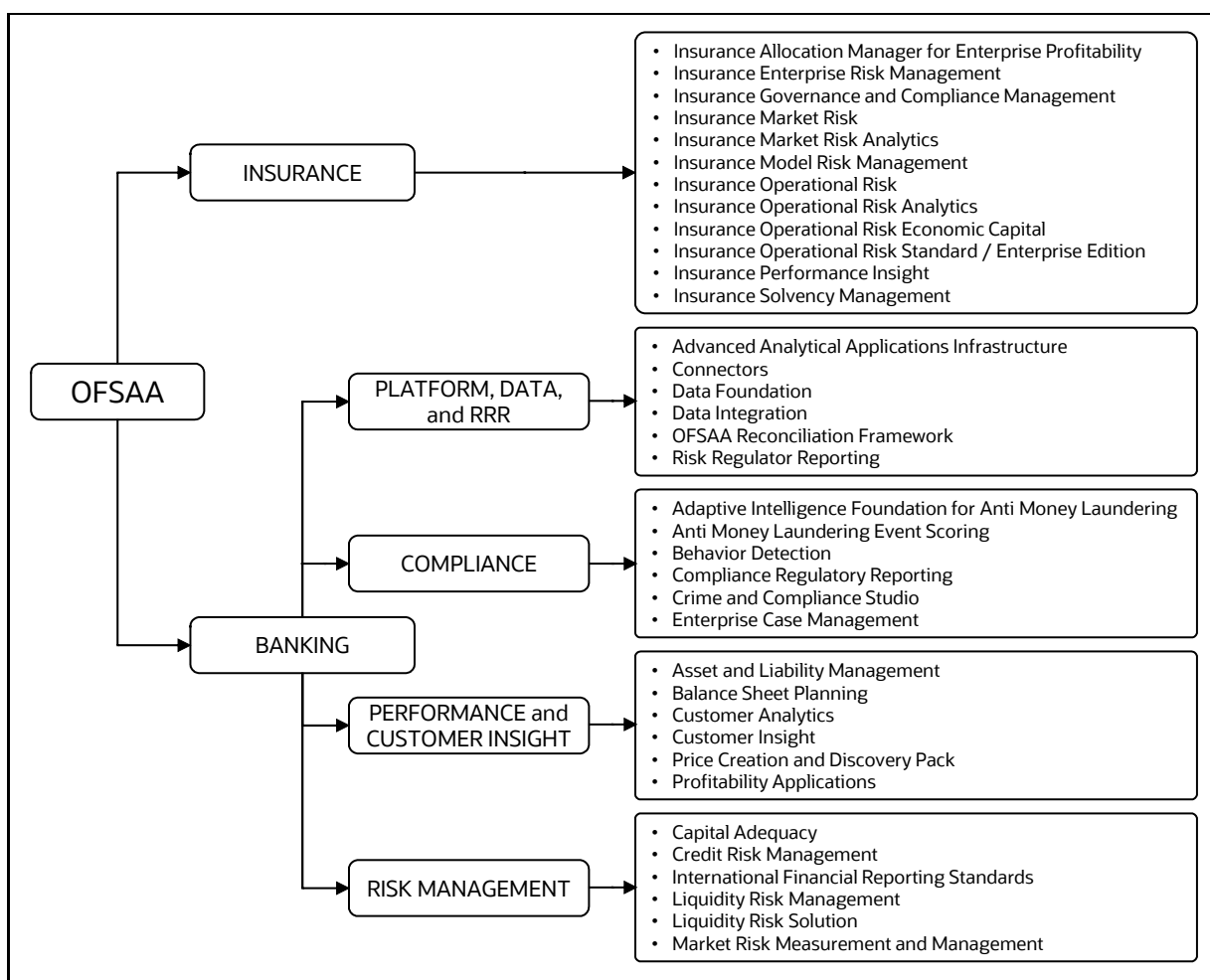
**Topics**:

- Oracle Financial Services Analytical Applications Infrastructure (OFS AAI)
- About OFS Liquidity Risk Solution Application Pack
- Installation Overview
- Installation and Upgrade Scenarios
- Compatibility Matrix

## 2.1 Oracle Financial Services Analytical Applications Infrastructure (OFS AAI)

Oracle Financial Services Analytical Applications Infrastructure (OFS AAI) powers the Oracle Financial Services Analytical Applications family of products to perform the processing, categorizing, selection and manipulation of data and information 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 OFSAA Infrastructure
- OFSAA Infrastructure High Availability
- Deployment Topology

### 2.1.1 Components of OFSAA Infrastructure

The OFSAA Infrastructure includes frameworks that operate on and with the Oracle Financial Services Analytical Applications Data Model and forms the array of components within the Infrastructure.

The OFSAA Infrastructure components or frameworks are installed as two layers; primarily, the metadata server and Infrastructure services run on one layer, while the UI and presentation logic run on the other. The UI and presentation layer are deployed on any of the supported J2EE Servers.

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

**Figure 2: Components of OFSAAI**
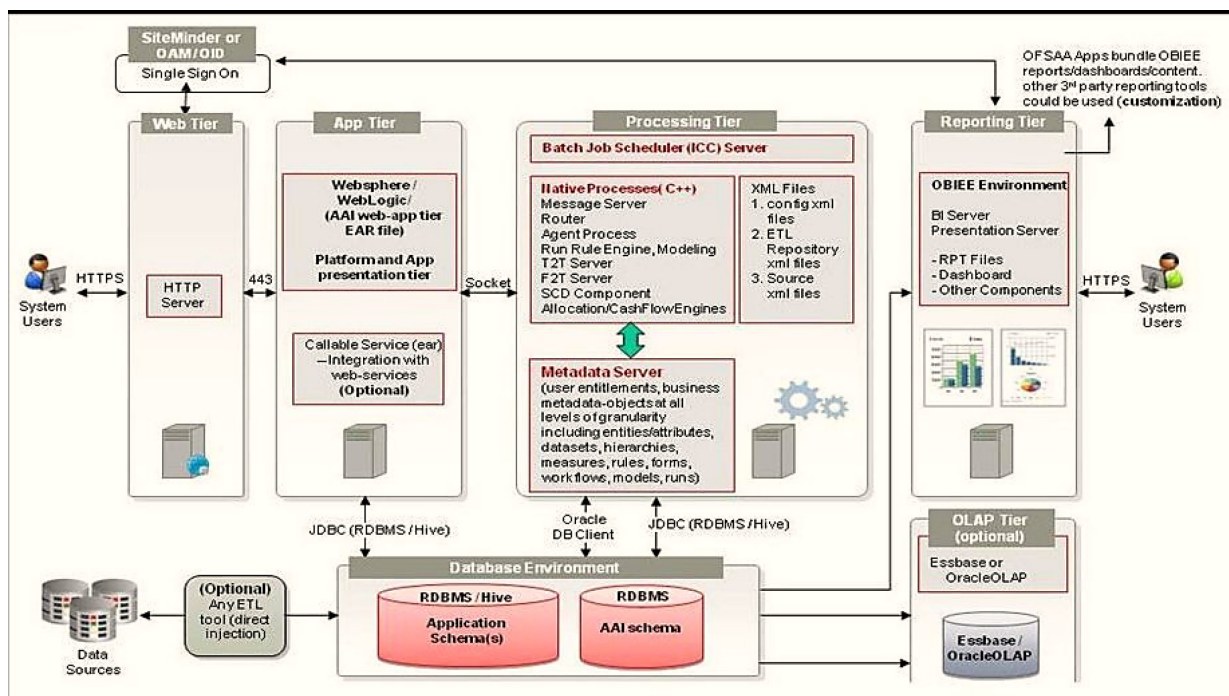


## 2.1.2    OFSAA Infrastructure High Availability

The current release of the OFSAA Infrastructure supports only the 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 the Oracle Financial Services Analytical Applications Configuration for High Availability Best Practices Guide.

## 2.1.3    Deployment Topology

The following figure illustrates the deployment topology of OFSAA application packs.

**Figure 3: Logical Architecture Implemented for OFSAA Application Packs**
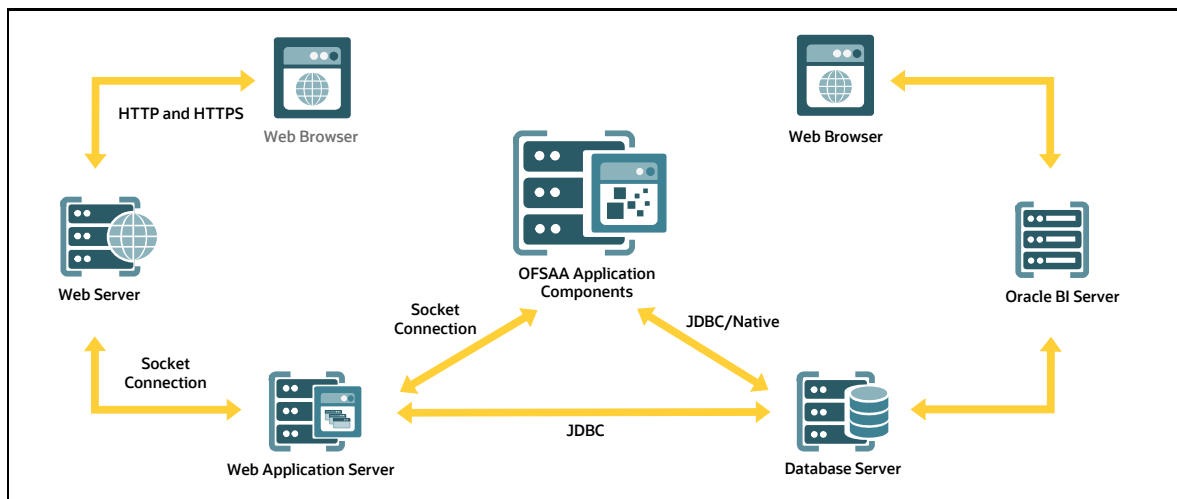


# 2.2    About OFS Liquidity Risk Solution Application Pack

OFS LRS Application Pack Release 8.1.0.0.0 includes the following products:

- **Oracle Financial Services Liquidity Risk Measurement and Management (OFS LRMM)**:

  This application comprehensively addresses an organization's liquidity risk requirements, both regulatory and management. It covers non-regulatory calculations required for managing liquidity risk within the bank itself, including stress testing, counterbalancing, liquidity gap calculation, comprehensive dashboard reporting and so on. Additionally, it includes base regulatory calculations such as Liquidity Coverage Ratio (LCR) and Net Stable Funding Ratio (NSFR), based on the guidelines issued by the Bank for International Settlements (BIS).

- **Oracle Financial Services Liquidity Risk Regulatory Calculations for US Federal Reserve (OFS LRRCUSFR):**

  This application includes liquidity computations that address guidelines issued by the U.S. Federal Reserve covering Liquidity Coverage Ratio, 5G Reporting calculations, Regulation YY Calculations, and non-regulatory features such as Forward LCR calculations.

- **Oracle Financial Services Liquidity Risk Regulatory Calculations for Reserve Bank of India (OFS LRRCRBI):**

  The application includes liquidity computations that address guidelines issued by the Reserve Bank of India (RBI), covering Liquidity Coverage Ratio, Net Stable Funding Ratio, and Forecasting.

- **Oracle Financial Services Liquidity Risk Regulatory Calculations for European Banking Authority (OFS LRRCEBA):**

  The application includes liquidity computations that address guidelines issued by the European Banking Authority (EBA) covering Liquidity Coverage Ratio for both the Capital Requirements Regulation (CRR) and the Delegated Act (DA).

- **Oracle Financial Services Liquidity Risk Regulatory Calculations for Bank of Thailand (OFS LRRCBOT):**

  The application includes liquidity computations that address guidelines issued by the Bank of Thailand (BOT) covering Liquidity Coverage Ratio and Net Stable Funding Ratio.

- **Oracle Financial Services Deposit Insurance Calculations for Liquidity Risk Management (OFS DICLRM):**

  OFS Deposit Insurance Calculations for Liquidity Risk Management covers deposit insurance calculations for liquidity coverage ratio and other calculations required for liquidity risk management.

- **Oracle Financial Services Liquidity Risk Regulatory Calculations for Bank Negara Malaysia (OFS LRRCBNM):**

  The application includes liquidity computations that address guidelines issued by the Bank Negara Malaysia (BNM) covering Liquidity Coverage Ratio and Net Stable Funding Ratio.

- **Oracle Financial Services Liquidity Risk Regulatory Calculations for Monetary Authority of Singapore (OFS LRRCMAS):**

  The application includes liquidity computations that address guidelines issued by the Monetary Authority of Singapore (MAS) covering Liquidity Coverage Ratio, Net Stable Funding Ratio, and Minimum Liquid Assets Ratio.

- **Oracle Financial Services Liquidity Risk Regulatory Calculations for Hong Kong Monetary Authority (OFS LRRCHKMA):**

  The application includes liquidity computations that address guidelines issued by the Hong Kong Monetary Authority (HKMA) covering Liquidity Coverage Ratio, Liquidity Maintenance Ratio, Net Stable Funding Ratio, and Core Funding Ratio.

## 2.3 Installation Overview

To install an OFS LRS application pack 8.1.0.0.0 instance, users and administrators must download this installer. The following figure displays the order of procedures you will need to follow to install a new OFS LRS Pack 8.1.0.0.0 instance.

| NOTE | This installer supports both upgrade (from OFS Liquidity Risk Management (LRM) 8.0.6 0.2 onwards) and fresh installation of OFS LRS 8.1.0.0.0. |
|------|------|

**Figure 4: Installation Flow**

```
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│   ┌─────────────────────────────────────────────────┐   │
│   │           Verify System Environment             │   │
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│   ┌─────────────────────────────────────────────────┐   │
│   │              Obtain the Software                │   │
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│   ┌─────────────────────────────────────────────────┐   │
│   │   Configure and Execute the Schema Creator Utility │
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│   ┌─────────────────────────────────────────────────┐   │
│   │         Install the OFS Application Pack         │   │
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│   ┌─────────────────────────────────────────────────┐   │
│   │        Configure the OFS Application Pack        │   │
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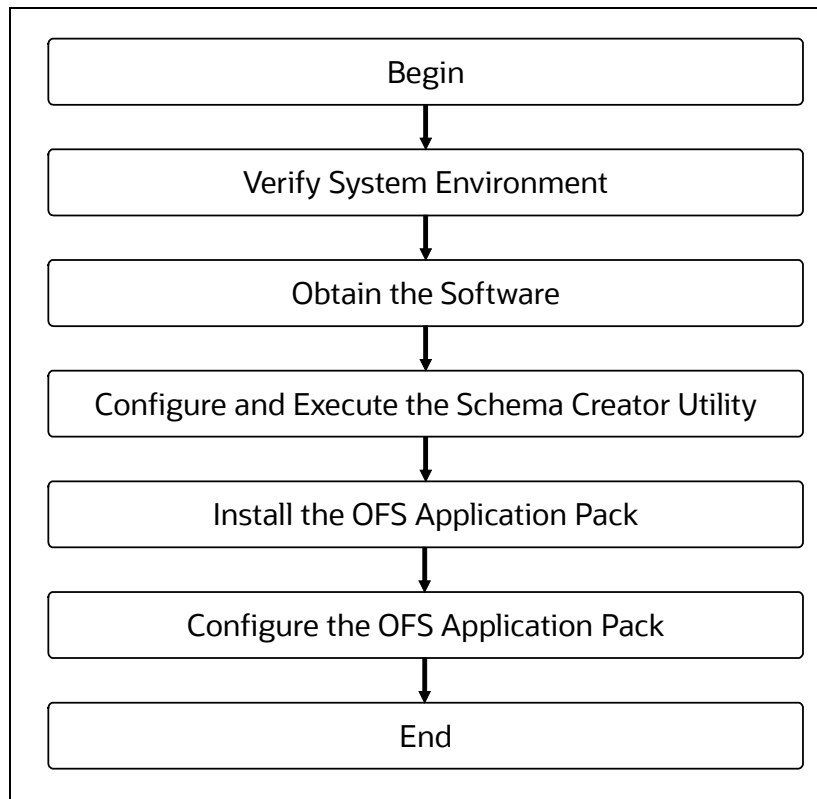
## 2.4    OFS AAI Extension Pack

The Oracle Financial Services Analytical Applications Infrastructure Extension (OFS AAIE) Pack adds a set of new advanced features for 8.1.0.0.0 Release across OFSAA applications. This pack can be installed on an OFSAA instance having one or more OFSAA application packs.

The Oracle Financial Services Analytical Applications Infrastructure Extension Pack includes the following advanced features and functionalities:

- Distributed Processing Capabilities

- Analytic Pipeline and Process models

- Attribution Analysis

- Content Management Interoperability Services

| NOTE | The pack is enabled by procurement of an additional license. For more information, see the OFS AAIE Release Notes and Installation Guide on the OHC Documentation Library. |
| --- | --- |

# 2.5    Installation and Upgrade Scenarios

Release 8.1.0.0.0 of OFS LRS supports various installation and upgrade scenarios. A high-level overview of the possible scenarios is provided in the following table. Detailed procedural steps are provided in the succeeding sections of this document.

**Table 4: OFS LRS Release 8.1.0.0.0 Installation and Upgrade Scenarios**

| Scenario | Installation and Upgrade Instructions |
|---|---|
| **New Installation** | |
| Installing Release 8.1.0.0.0 application pack for the first time (new installation). | 1. Prepare for the Installation.<br>2. Execute the Schema Creator Utility.<br>3. Install the OFS LRS Application Pack. |
| **Install a new product of the OFS LRS 8.1.0.0.0 pack on an existing OFSAA Instance with OFS LRS installed**<br><br>You have installed some applications from the Release 8.1.0.0.0 pack and in the future, you decide to include other applications from OFS LRS pack.<br><br>Example: You have installed the LRMM (includes BIS) and RBI SKU using the LRS Pack installer 8.1.x. Later, you decide to license the DICLRM application and want to install using the same LRS Pack installer 8.1.x. | **If the schema creator output file (OFS_LRS_SCHEMA_OUTPUT.xml) EXISTS**:<br>1. Update the `OFS_LRS_PACK.xml` file to disable the existing applications and enable the newly licensed applications.<br>2. Update the `Silent.props` file present in the Release 8.1.x pack ONLY for the newly licensed applications.<br>3. Trigger the Release 8.1.0.0.0 installation.<br>**If the schema creator output file DOES NOT EXIST**:<br>1. Run the schema creator utility.<br>   **NOTE**: While defining the schema details for the applications, provide the same schema details given in the previous installation. The output file (`OFS_LRS_SCHEMA_OUTPUT.xml`) is generated in the path `/OFS_LRS_PACK/schema_creator/` as a result of the schema creation process.<br>2. Update the `OFS_LRS_PACK.xml` file to disable the existing applications and enable the newly licensed applications.<br>3. Update the `Silent.props` file.<br>4. Trigger the Release 8.1.0.0.0 installation.<br>**NOTE**: Configuring the OFSAAI_InstallConfig.xml file is not required. |
| **Install OFS LRS Application Pack v8.1.0.0.0 on an Existing OFSAA Instance**<br><br>You have already installed an application pack from release 8.1.x.0.0 and now you want to install another application pack from Release 8.1.0.0.0.<br><br>Example: OFS ALM Pack is already installed and now you want to install OFS LRS Pack. | 1. Run the schema creator utility ONLY for the new pack.<br>2. Update the `OFS_LRS_PACK.xml` file for the newly licensed pack.<br>3. Update the `Silent.props` file of the newly licensed pack.<br>4. Trigger the Release 8.1.0.0.0 installation. |

| Scenario | Installation and Upgrade Instructions |
|---|---|
| **Upgrade Installation** | |
| **Upgrade from Release v8.0.x of OFS LRM or OFS LRS on AIX or Solaris x86 Operating System** | Release v8.1.0.0.0 of OFS LRS is not certified for AIX and Solaris x86 Operating Systems. If you are currently running OFSAA v8.0.x on AIX or Solaris x86 Operating Systems and plan to upgrade to Release v8.1.0.0.0, then you must migrate from AIX or Solaris x86 to Linux or Solaris SPARC. See the MOS Doc ID 2700084.1 for details. |
| **Upgrade from OFS LRM Release Prior to Release 8.0.6.0.2 to OFS LRS Release 8.1.0.0.0**<br><br>In this scenario, you are upgrading the application pack from a OFS LRM release before Release 8.0.6.0.2 to OFS LRS Release 8.1.0.0.0.<br><br>Example: You are on OFS LRM Release 8.0.5.0.0 and now want to upgrade to OFS LRS Release 8.1.0.0.0. | 1. Upgrade to OFS LRM 8.0.6.0.2 or later.<br>2. Follow the steps for upgrading from OFS LRM 8.0.6.0.2 to OFS LRS 8.1.0.0.0. |
| **Upgrade from OFS LRM Release 8.0.6.0.2 (or later OFS LRM 8.0.6.0.x One-Off Patches) to OFS LRS Release 8.1.0.0.0**<br><br>Example: You are on OFS LRM Release 8.0.6.0.2 and now want to upgrade it to Release 8.1.0.0.0 | 1. Run the Environment Check Utility tool and ensure that the hardware and software requirements are installed as per the OFS Analytical Applications Technology Matrix. See the OFSAA Environment Check Utility Guide for detailed steps.<br>2. Clone your existing environment to the 8.1.0.0.0 OFS Analytical Applications Technology Matrix.<br>3. Update the OFS_LRS.PACK.xml file.<br>4. Run the schema creator utility.<br>5. Update the `Silent.props` file present in the Release 8.1.0.0.0 pack.<br>6. Trigger the Release 8.1.0.0.0 installation. |
| **Upgrade from OFS LRS Release 8.0.7.0.0 or later to OFS LRS Release 8.1.0.0.0**<br><br>Example: You are using an OFS LRS Release 8.0.7.0.0 and now want to upgrade it to Release 8.1.0.0.0 | 1. Run the Environment Check Utility tool and ensure that the hardware and software requirements are installed as per the OFS Analytical Applications Technology Matrix. See the OFSAA Environment Check Utility Guide for detailed steps.<br>2. Clone your existing environment to the 8.1.0.0.0 OFS Analytical Applications Technology Matrix.<br>3. Update the OFS_LRS.PACK.xml file to enable ONLY the existing installed applications.<br>4. Update the `Silent.props` file present in the Release 8.1.0.0.0 pack.<br>5. Trigger the Release 8.1.0.0.0 installation. |
| **Upgrade an already installed OFS LRS 8.0.7.0.0 or later application and add new SKU from the same pack**<br><br>You have OFS LRS Liquidity Coverage Ratio (LCR) SKUs from Release 8.0.7.0.0 . You want to | 1. Run the Environment Check Utility tool and ensure that the hardware and software requirements are installed as per the OFS Analytical Applications Technology Matrix. See the OFSAA Environment Check Utility Guide for detailed steps.<br>2. Clone your existing environment to the 8.1.0.0.0 OFS Analytical Applications Technology Matrix. |

| Scenario | Installation and Upgrade Instructions |
|---|---|
| enable additional SKUs on Release 8.1.0.0.0.<br><br>Example: You have installed OFS LRMM and LRRCRBI SKU from Release 8.0.7.0.0/ 8.0.8.0.0. Now you additionally want to install LRRCBOT in Release 8.1.0.0.0. | 3. Update `OFS_LRS_PACK.xml` file to enable ONLY the newly licensed applications.<br>4. Update the `Silent.props` file for the sections related to the newly licensed applications.<br>5. Trigger the Release 8.1.0.0.0 installation.<br>    **NOTE**: Configuring the `OFSAAI_InstallConfig.xml` file is not required.<br>6. This process upgrades the existing applications and installs the newly licensed applications. |
| **Install a New Application on an Existing OFSAA Instance from the Same Pack**<br>You have installed some applications from the OFS LRS pack Release 8.1.0.0.0; in the future, you decide to include new applications from OFS LRS.<br><br>Example: You have installed LRMM and RBI SKU using the LRS Pack installer 8.1.x. Later, you decide to license the product DICLRM and want to install it using the same LRS Pack installer 8.1.x. | If the schema creator output file (`OFS_LRS_SCHEMA_OUTPUT.xml`) EXISTS:<br>1. Update the `OFS_LRS_PACK.xml` file to disable the existing applications and enable the newly licensed applications.<br>2. Update the `Silent.props` file present in the Release 8.1.x pack ONLY for the newly licensed applications.<br>3. Trigger the installation.<br>If the schema creator output file DOES NOT EXIST:<br>1. Update the `OFS_LRS_PACK.xml` file to disable the existing applications and enable the newly licensed applications.<br>2. Run the schema creator utility.<br>3. **ATTENTION**: While defining the schema details for the applications, provide the same schema details as given in the previous installation. The output file (OFS_LRS_SCHEMA_OUTPUT.xml) is generated in the path `/OFS_LRS_PACK/schema_creator/` as a result of the schema creation process.<br>4. Update the `Silent.props` file present in the Release 8.1.x pack ONLY for the newly licensed applications.<br>5. Trigger the Release 8.1.0.0.0 installation.<br>    **NOTE**: Configuring the `OFSAAI_InstallConfig.xml` file is not required |
| **Install a New Application Pack on an Existing OFSAA Instance (pack-on-pack)**<br>You have already installed a Release 8.1.0.0.0 application pack and now you want to install another application pack from Release 8.1.0.0.0.<br><br>Example: OFS ALM Pack is already installed and now you want to install OFS LRS Pack. | 1. Run the schema creator utility ONLY for the new pack.<br>2. Update the `OFS_LRS_PACK.xml` file for the newly licensed pack.<br>3. Update the `Silent.props` file of the newly licensed pack.<br>4. Trigger the Release 8.1.0.0.0 installation. |

## 2.6    Compatibility Matrix

This table lists the applications or app-combinations that must not be installed on a single infodom.

**Table 5: LRS 8.1 Application Compatibility Matrix**

| If you are installing | Do not Install the Listed Application in the Same Environment |
| --- | --- |
| OFS_LRS_PACK | None |

| | |
| --- | --- |
| **NOTE** | If you are upgrading the OFSAA Application Pack to release v8.1.0.0.0, you must upgrade the other packs installed in the same environment to release v8.1.0.0.0, to ensure successful deployment. |

# 3     Complete Installation Checklist

For a successful installation, perform the steps listed in the Complete Installation Checklist. You can use this checklist to have a quick glance at everything that you will be doing to install this application. The link provided in each step takes you to a section either within this document or to another referenced document.

**Table 6: Complete Installation Checklist**

| Sl. No. | Pre-installation Activity |
| --- | --- |
| 1 | Install all the prerequisite hardware and software given in the OFS Analytical Applications Technology Matrix. |
| 2 | Verify the System Environment using the Environment Check Utility. |
| 3 | Configure the Database Instance settings. |
| 4 | Install and configure the web application server. |
| 5 | Configure the HTTP settings on the web server. |
| 6 | Create the Installation, Download, and Metadata Repository Directories:<br>• Installation directory<br>• Temporary directory<br>• Staging Area/Metadata Repository directory<br>• Download directory |
| 7 | Configure the following Operating System and File System settings:<br>• File Descriptor<br>• Total number of processes<br>• Port(s)<br>• `.profile` file permissions<br>• Add FTP/SFTP configuration for file transfer |
| 8 | Update the following Environment Settings required for the installation in the `.profile` file:<br>• Java settings<br>• Oracle Database Server and Client settings<br>• Add TNS entries in the `TNSNAMES.ORA` file<br>• Oracle Essbase settings<br>• Time Zone settings |
| 9 | Download the OFS LRS installer kit and erwin data model. |
| 10 | Extract the installer kit. |

| Sl. No. | Installation Activity |
|---------|----------------------|
| 1 | Configure the OFS_LRS_PACK.xml file. |
| 2 | Configure the OFS_LRS_SCHEMA_IN.xml file. |
| 3 | Execute the Schema Creator Utility in Online, Offline, modes and verify the log file. |
| 4 | Configure the Silent.props file. |
| 5 | Configure the OFSAAI_InstallConfig.xml file. |
| 6 | Trigger the application installation. |
| 7 | Verify the installation logs. |

| Sl. No. | Post-installation Activity |
|---------|---------------------------|
| 1 | Verify that all patches are successfully installed. |
| 2 | Back up the OFS_LRS_SCHEMA_IN.xml, OFS_LRS_SCHEMA_OUTPUT.xml, and Silent.props files. |
| 3 | Stop the OFSAA Infrastructure services. |
| 4 | Start the OFSAA Infrastructure services. |
| 5 | Configure the webserver. |
| 6 | Configure the Resource Reference in web application servers. |
| 7 | Configure the Work Manager in the web application servers. |
| 8 | Create and Deploy EAR or WAR files. |
| 9 | EAR/WAR File - Build Once and Deploy Across Multiple OFSAA Instances. |
| 10 | Access the OFSAA application. |
| 11 | Configure the excludeURLList.cfg file. |
| 12 | Configure Tomcat. |
| 13 | Change the ICC batch ownership. |
| 14 | Add TNS entries in the tnsnames.ora file. |
| 15 | Update OBIEE URL. |
| 16 | Configure Data Source. |
| 17 | Set Data Redaction in OFS LRS. |
| 18 | Implement Data Protection in OFSAA. |
| 19 | Post-deployment Configuration.<br>• OBIEE Configuration – Deploy OFS LRS Analytics.<br>• Logging as System Administrator.<br>• Create Application Users.<br>• Map the Application User(s) to User Groups. |

| Sl. No. | Post-installation Activity |
|---------|---------------------------|
| | • LRS Pack User Group Names. |

| Sl. No | Additional Configuration Activity |
|--------|-----------------------------------|
| 1 | Add FTP/SFTP Configuration for File Transfer. |
| 2 | Configure the Infrastructure Server Memory. |
| 3 | Retrieve Patch Information. |
| 4 | Set OLAP Data Server Configuration. |
| 5 | Change IP or Hostname, Ports, Deployed Paths of the OFSAA Instance. |
| 6 | Configure the Infrastructure LDAP Configuration. |
| 7 | Configure and Deploy the OFSAAI web services. |
| 8 | Enable Parallel Execution of DML statements |
| 9 | Configure the Message Details in the Forms Designer. |
| 10 | Clear the application cache. |
| 11 | Configure password changes. |
| 12 | Configure Java Virtual Machine. |
| 13 | Configure Internal Service (Document Upload/Download). |

# 4     Hardware and Software Requirements

For a list of all the hardware and software requirements including operating systems, database, web servers, and web application server versions for which this release of the OFS LRS Applications Pack is qualified see the OFS Analytical Applications Technology Matrix.

**Topics**:

- Third-Party Licensing Information
- Verify System Environment

> **NOTE**     OFS LRS Application Pack installation can be performed on both Virtual and Physical servers.

OFS LRS application pack recommends the following software combinations for deployment.

**Table 7: Recommended Software Combination**

| Operating System | Database | Web Application Server | Web Server |
|---|---|---|---|
| Oracle Linux | Oracle Database | Oracle WebLogic Server/ Apache Tomcat Server/ IBM WebSphere Application Server | Oracle HTTP Server/ Apache HTTP Server/ IBM HTTP Server |
| Oracle Solaris | Oracle Database | Oracle WebLogic Server /Apache Tomcat Server | Oracle HTTP Server/ Apache HTTP Server |

## 4.1     Third-party Licensing Information

For more information about the third-party software tools used in OFS LRS, see the OFSAA Licensing Information User Manual Release 8.1.0.0.0.

## 4.2     Verify 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 My Oracle Support.

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

For more information about downloading and using this utility, see the OFSAA Environment Check Utility Guide.

# 5    Pre-installation

This chapter provides the necessary information to review before installing the OFS LRS Pack 8.1.0.0.0.

**Topics**:

- Pre-installation Checklist
- Oracle Database Instance Settings
- Web Application Server Settings
- Web Server Settings
- Create the Installation, Download, and Metadata Repository Directories
- Configure the OS File System Settings and Environment Settings in the .profile File
- Download the OFS LRS Applications Pack Installer and erwin Data Model
- Extract the Software

| | |
|---|---|
| **NOTE** | When merging the lower version of an application with an integrated data model, retain the larger size of column length. |

## 5.1    Pre-installation Checklist

You can use this checklist to have a quick glance at everything that you will be doing prior to installing this application. The link provided in each step takes you to a section either within this document or to another referenced document.

The Installer Environment Check utility notifies you if any requirements are not met.

**Table 8: Pre-Installation Checklist**

| Sl. No. | Pre-installation Activity |
|---|---|
| 1 | Install all the prerequisite hardware and software given in the OFS Analytical Applications Technology Matrix. |
| 2 | Verify the System Environment using the Environment Check Utility. |
| 3 | Configure the Database Instance settings. |
| 4 | Install and configure the web application server. |
| 5 | Configure the HTTP settings on the web server. |
| 6 | Create the Installation, Download, and Metadata Repository Directories:<br>• Installation directory<br>• Temporary directory<br>• Staging Area/Metadata Repository directory<br>• Download directory |

| Sl. No. | Pre-installation Activity |
|---------|---------------------------|
| **7** | Configure the following Operating System and File System settings: <br>• File Descriptor <br>• Total number of processes <br>• Port(s) <br>• `.profile` file permissions <br>• Add FTP/SFTP configuration for file transfer |
| **8** | Update the following Environment Settings required for the installation in the `.profile` file: <br>• Java settings <br>• Oracle Database Server and Client settings <br>• Add TNS entries in the `TNSNAMES.ORA` file <br>• Oracle Essbase settings <br>• Time Zone settings |
| **9** | Download the OFS LRS installer kit and erwin data model. |
| **10** | Extract the installer kit. |

## 5.2    Oracle Database Instance Settings

Ensure that the following database instance settings are configured:

- NLS_CHARACTERSET to AL32UTF8
- NLS_LENGTH_SEMANTICS to BYTE
- OPEN CURSORS limit to greater than 1000

## 5.3    Web Application Server Settings

Ensure that the web application server is installed and the profile (when using WebSphere) or domain (when using WebLogic) is created.

Note the path values as shown in the following table as you will be prompted to enter the WebSphere Profile path, the WebLogic Domain path, or the Tomcat Deployment path during OFSAAI installation.

**Table 9: Web Application Server Settings**

| Description | Example Value |
|-------------|---------------|
| For WebSphere, specify the WebSphere path as `<WebSphere profile directory>/installedApps/ <NodeCellName>`. | `/data2/test//WebSphere/AppServer/profiles/ <Profile_Name>/installedApps/aiximfNode01C ell`, where aix-imf is the Host name. |
| For WebLogic, specify the WebLogic home directory path. | `/<WebLogic home directory path>/bea/wlserver_10.3` |

| Description | Example Value |
|---|---|
| For Tomcat, specify the Tomcat directory path till `/webapps`. | `/oradata6/ revwb7/tomcat/webapps/` |

> **NOTE**      See Configure the Web Server for WebSphere Profile and WebLogic Domain creation.

## 5.4      Web Server Settings

This is an optional requirement. If you have installed an HTTP Server, then configure the appropriate HTTP server settings:

**Table 10: Web Server Settings**

| Description | Example Value |
|---|---|
| Apache HTTP Server, Oracle HTTP Server, or IBM HTTP Server | Configure the HTTP Server and note down the IP or Hostname and Port details as you will be prompted to enter these details during installation. **NOTE:** See Configure the Web Server for web server configuration. |

## 5.5      Create the Installation, Download, and Metadata Repository Directories

To install OFS LRS, create the following directories:

- **OFSAA Download Directory (Optional)**: This is the directory where the downloaded installer or patches can be copied. Create a download directory and copy the OFSAA Application Pack Installer File (archive). Assign 755 permission to this directory.

- **Temporary Directory**: Default temporary directory where the installation files are stored for a short time to support faster installation. Configure adequate space on the `/tmp` directory. It is recommended that you allocate more than 10 GB of space. Assign 755 permission to this directory with NOEXEC option disabled.

> **NOTE**      If NOEXEC option 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.

- **OFSAA Installation Directory (Mandatory)**: Create an installation directory where the product binaries are installed. Set the variable FIC_HOME in the .profile file to point to the OFSAA Installation Directory. Assign 755 user permission to the installation directory.

- **OFSAA Staging or Metadata Directory (Mandatory)**: A directory to hold the application metadata artifacts and additionally act as the staging area for the flat files. This directory is also

referred to as "FTPSHARE". Create a Staging or Metadata Repository Directory to copy data files, save data extracts, and so on.

The directory must exist on the same system as the OFSAA Installation. This directory can be configured on a different mount or under a different user profile. However, the owner of the installation directory must have RWX (775) permissions to this directory.

| NOTE | Ensure the OFSAA staging directory is not set to the same path as the OFSAA installation directory and is not a subdirectory inside the OFSAA installation directory. |
|------|---|

## 5.6 Configure the OS File System Settings and Environment Settings in the .profile File

A `.profile` file is a start-up file of a UNIX user. Create the `.profile` file at the home directory of the logged-in user if it is not already available. The user must have 755 permission on the file to execute it. This file consists of various parameters for Environment Settings, OS, and File System Settings.

To set the parameters for the `.profile` file, login as a non-root user, and configure the environment settings.

**Topics:**

- Configure Operating System and File System Settings

- Configure the Environment Settings

| WARNING | Do not modify any other parameters other than the parameters mentioned in the following subsections. |
|------|---|

### 5.6.1 Configure Operating System and File System Settings

The following table displays the required settings for operating system and file system.

Table 11: Configure Operating System and File System Settings

| Parameter | Configuration Action |
|---|---|
| Installation Directory | In the `.profile` file, set the variable FIC_HOME to point to the OFSAA Installation Directory. |

| Parameter | Configuration Action |
|---|---|
| File Descriptor Settings | In the `sysctl.conf` file, to change the number of file descriptors, do the following as the root user:<br>1. Edit the following line in the `/etc/sysctl.conf` file:<br>`fs.file-max = <value>`<br>where `<value>` is greater than 15000<br>2. Apply the change by running the following command:<br>`# /sbin/ sysctl -p`<br>**NOTE:** The value specified here is the minimum value to be set for the installation process to go forward. For other modules, this value may depend on the available resources and the number of processes executed in parallel. |
| Total Number of Process Settings | In the `sysctl.conf` file, set the value to greater than 4096.<br>**NOTE:** The value specified here is the minimum value to be set for the installation process to go forward. For other modules, this value may depend on the available resources and the number of processes executed in parallel. |
| Port Settings | Default port numbers to be enabled on the system are 6500, 6501, 6505, 6507, 6509, 6510, 6666, 9999, and 10101. |
| .profile permissions | You must have 755 permission on the `.profile` file. |
| OS Locale | **Linux**: en_US.UTF-8<br>**Solaris**: en_US.UTF-8<br>To check the locale installed, execute the following command:<br>`locale -a | grep -i en_US.utf` |

## 5.6.2    Configure the Environment Settings

This section provides information to configure the environment settings before installation.

**Topics:**

- Java Settings
- Oracle Database Server and Client Settings
- TNS Entries in TNSNAMES.ORA File
- Oracle Essbase Settings
- Time Zone Settings
- Mandatory Patches

### 5.6.2.1 Java Settings

The following table displays the Java settings required for installation.

**Table 12: Java Settings**

| Description | Example Value |
|---|---|
| In the `.profile` file, set PATH to include the Java Runtime Environment (JRE) absolute path.<br><br>Ensure that SYMBOLIC links to JAVA installation are not set in the PATH variable. | For example: `PATH=/usr/java/jre1.8.0_221/bin:$ORACLE_HOME/bin:$PATH`<br>`export PATH`<br>**NOTE:** OFSAA does not support OpenJDK and JRE. |
| In the .profile file, set the Java tool options for all versions JDK 11.0.20 and above updates. | `JAVA_TOOL_OPTIONS=" Djdk.util.zip.disableZip64ExtraFieldValidation=true"`<br>`export JAVA_TOOL_OPTIONS` |
| In the `.profile` file, set PATH to include the Java Runtime Environment bin path. | `JAVA_BIN=/scratch/<<version>>/jre/bin`<br>For example:<br>`PATH=/usr/java/jre1.8.0_221/bin:$ORACLE_HOME/bin:$PATH` |
| Enable unlimited cryptographic policy for Java. | For more information, see the *Enabling Unlimited Cryptographic Policy* section from the OFS Analytical Applications Infrastructure Administration Guide. |

### 5.6.2.2 Oracle Database Server and Client Settings

The following table displays the Oracle Database server and client settings required for installation.

**Table 13: Oracle Database Server and Client Settings**

| Description | Example Value |
|---|---|
| In the `.profile` file, set TNS_ADMIN pointing to the appropriate `tnsnames.ora` file. | `TNS_ADMIN=$HOME/tns` |
| In the `.profile` file, set ORACLE_HOME pointing to the appropriate Oracle Client installation. | `ORACLE_HOME=/scratch/oraofss/app_client18c/product/18.0.0/client_1` |

| Description | Example Value |
|---|---|
| In the `.profile` file, set PATH to include the appropriate `$ORACLE_HOME/bin` path. | `PATH=$JAVA_HOME/bin:$ORACLE_HOME/bin` |
| OFSAA Processing Server | ORACLE_HOME must be set in the `.profile` file and point to appropriate Oracle DB Client installation. <br><br> PATH in the .profile file must be set to include the appropriate `$ORACLE_HOME/bin` path. <br><br> Ensure that an entry (with SID or SERVICE NAME) is added in the `tnsnames.ora` file. |

## 5.6.2.3    TNS Entries in the TNSNAMES.ORA File

The section includes information about the TNS entries in the TNSNAMES.ORA file.

**Table 14: TNS entries in the TNSNAMES.ORA file**

| Description | Example Value |
|---|---|
| Ensure that an entry (with SID or SERVICE NAME) is added in the `tnsnames.ora` file on the OFSAA server. | `<SID_NAME> = DESCRIPTION =(ADDRESS_LIST = (ADDRESS = (PROTOCOL = TCP)(HOST = <HOST_NAME>)(PORT = 1521)))(CONNECT_DATA = (SERVICE_NAME = <SID_NAME>)))<ATOMIC_SCHEMA_NAME> = (DESCRIPTION =(ADDRESS_LIST = (ADDRESS = (PROTOCOL = TCP)(HOST = <HOST_NAME>)(PORT = 1521)))(CONNECT_DATA = (SERVICE_NAME = <SID_NAME>)))` |

```
<SID NAME> =
  (DESCRIPTION =
    (ADDRESS_LIST =
      (ADDRESS = (PROTOCOL = TCP)(HOST = <HOST NAME>)(PORT = <PORT
NUMBER>))
    )
    (CONNECT_DATA =
      (SERVICE_NAME = <SID NAME>)
    )
  )

<ATOMICSCHEMANAME> =
  (DESCRIPTION =
    (ADDRESS_LIST =
      (ADDRESS = (PROTOCOL = TCP)(HOST = <HOST NAME>)(PORT = <PORT
NUMBER>))
    )
    (CONNECT_DATA =
      (SERVICE_NAME = <SID NAME>)
```

```
    )
  )
```

| NOTE | The ATOMIC SCHEMA NAME must be the same as defined in the `OFS_LRS_SCHEMA_IN.xml` file. |

### 5.6.2.4 Oracle Essbase Settings

In the `.profile` file, set the following parameters if you want to use Oracle Hyperion Essbase OLAP features.

**Table 15: Oracle Essbase Settings**

| Description | Example Value |
|---|---|
| ARBORPATH to point to an appropriate Oracle Essbase Client installation. | `PATH=$PATH:$ARBORPATH/bin` |
| ESSBASEPATH to point to an appropriate Oracle Essbase Client installation. | `ESSBASEPATH=/scratch/essps3/Oracle/MiddlewareHome/EPMSystem11R1/common/EssbaseRTC-64/11.1.2.0`<br>`export ESSBASEPATH` |
| HYPERION_HOME to point to an appropriate Oracle Essbase Client installation. | `HYPERION_HOME=/scratch/essps3/Oracle/MiddlewareHome/EPMSystem11R1/common/EssbaseRTC-64/11.1.2.0`<br>`export HYPERION_HOME` |

### 5.6.2.5 Time Zone Settings

In the `.profile` file, set the Time Zone parameter to indicate the time zone of your region or location.

**Table 16: Time Zone Settings**

| Description | Example Value |
|---|---|
| Time Zone | TZ=Asia/Calcutta |

### 5.6.2.6 Mandatory Patches

The following table includes information about the mandatory patches that must be applied.

**Table 17: Mandatory Patches**

| One-Off Patch | Description |
|---|---|
| **31509494** | This is a mandatory OFS AAI one-off patch.<br>If you are using Solaris OS and upgrading from 8.0.x to 8.1 version, download the one-off patch from <u>My Oracle Support</u>. See the Readme packaged with the patch for further instructions on how to install the patch. |

| One-Off Patch | Description |
|---|---|
| 31605076 | This is a mandatory OFS AAI post-installation one-off patch. |
| | Access to features owing to the additional license functionality that gets installed through the OFS AAI Extension Pack. |
| 31545589 | This is a mandatory OFS AAI pre-installation one-off patch for pack-on-pack installation on new atomic schema. |

| NOTE | Ensure that the tablespace (or tabespaces) used for the database user (or users) is set to AUTOEXTEND ON. |
|---|---|

## 5.7 Download the OFS LRS Application Pack Installer and Erwin Data Model

To download the OFS LRS Applications Pack Installer Release 8.1.0.0.0 (Bug Number: **31383894**), follow these steps:

1. Log in to the Oracle Software Delivery Cloud (OSDC) with a valid Oracle account.

   **Figure 5: OSDC Login Window**
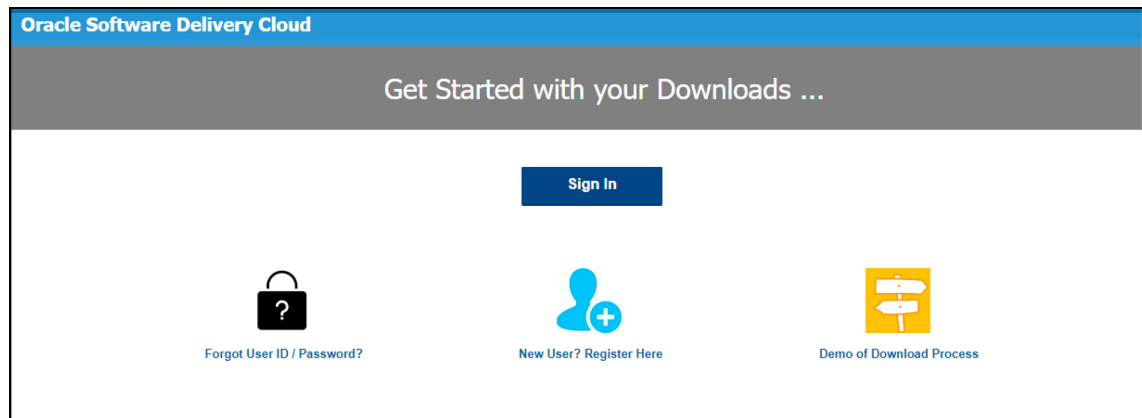
   

2. Enter *Oracle Financial Services Liquidity Risk Solution* in the search box.

**Figure 6: OSDC - Search Results**
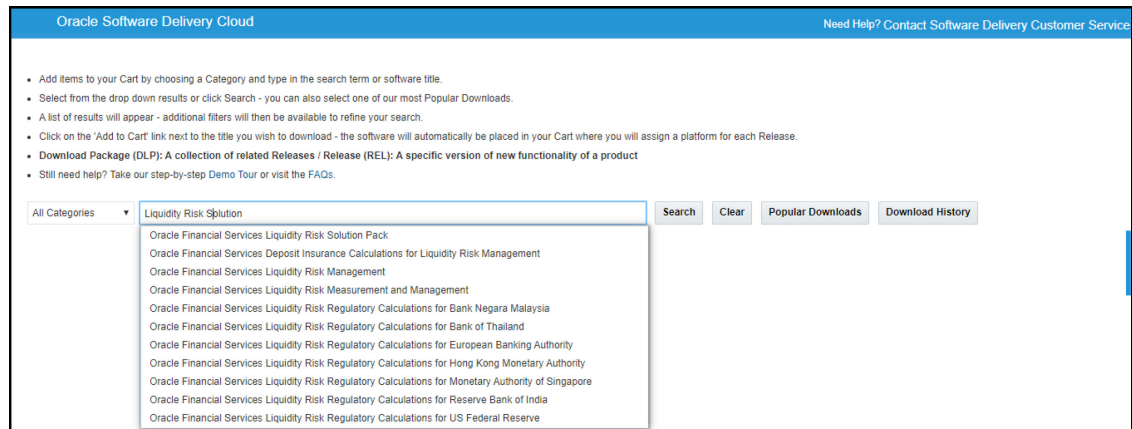


3. Download the installer archive and copy (in Binary mode) to the download directory that exists in the OFS LRS installation setup.

| NOTE | Download the OFS LRS erwin data model patch **31347044** from My Oracle Support. You can search for the patch number in the **Patches and Updates** tab and download. |
|------|---|

## 5.8 Extract the Software

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

   If you already have an unzip utility to extract the contents of the downloaded archive, skip this step.

2. Uncompress the unzip installer file using the following command:

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

| NOTE | If an error message: *uncompress: not found [No such file or directory]* is displayed, contact your UNIX administrator. |
|------|---|

3. Assign execute (751) to the file using the following command:

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

   For example: `chmod 751 unzip_sparc`

4. Extract the contents of the OFS LRS Application Pack Release 8.1.0.0.0 installer archive file in the download directory using the following command:

   ```
   unzip OFS_LRS_PACK.zip
   ```

5.  Download and extract the following one-off patches in the download directory:

    ▪ 31545589

    ▪ 31605076

6.  Navigate to the download directory and assign execute permission to the installer directory using the following command:

    ```
    chmod -R 750 OFS_LRS_Pack
    ```

# 5.9    Install Pre-installation Patches

Before installing OFS LRS 8.1.0.0.0, apply the **31545589** one-off patch. See the **Readme** packaged with the patch for further instructions on how to install.

See My Oracle Support for more information on the latest release.

# 6      Installation

This section provides detailed steps to install the OFS LRS Application Pack.

**Topics**:

- Configure the OFS_LRS_PACK.xml File
- Configure the Schema Creator Utility
- Execute the Schema Creator Utility
- Configure the OFSAAI_InstallConfig.xml File
- Install the OFS LRS Application Pack

## 6.1     Installation Checklist

You can use this checklist to have a quick glance at everything that you will be doing to install this application. The link provided in each step takes you to a section either within this document or to another referenced document.

**Table 18: Installation Checklist**

| Sl. No. | Installation Activity |
|---------|----------------------|
| 1 | Configure the `OFS_LRS_PACK.xml` file. |
| 2 | Configure the `OFS_LRS_SCHEMA_IN.xml` file. |
| 3 | Execute the Schema Creator Utility in Online, Offline, modes and verify the log file. |
| 4 | Configure the `Silent.props` file. |
| 5 | Configure the `OFSAAI_InstallConfig.xml` file. |
| 6 | Trigger the application installation. |
| 7 | Verify the installation logs. |

## 6.2     Configure the OFS_LRS_PACK.xml File

The `OFS_LRS_PACK.xml` file contains details on the various products that are packaged in the OFS LRS Application Pack. This section details the various tags and parameters available in the file and the values that must be updated. Before installing the LRS Application Pack, it is mandatory to update this file.

> **NOTE**     Enable licenses as per your Service Level Agreement (SLA).

To configure the `OFS_LRS_PACK.xml` file, follow these steps:

1.  Navigate to the `OFS_LRS_PACK/conf` directory.
2.  Open the `OFS_LRS_PACK.xml` file in a text editor.

**Figure 7: Sample OFS_LRS_PACK.xml File**

```xml
<APP_PACK_CONFIG>
    <APP_PACK_ID>OFS_LRS_PACK</APP_PACK_ID>
    <IS_OPT_INSTALL VALUE="TRUE" />
    <APP_PACK_NAME>Financial Services Liquidity Risk Solutions Pack</APP_PACK_NAME>
    <APP_PACK_DESCRIPTION>Application for Liquidity Risk Solutions </APP_PACK_DESCRIPTION>
    <VERSION>8.1.0.0.0</VERSION>
    <APP>
        <APP_ID PREREQ="" DEF_SEL_FLG="YES" ENABLE="YES">OFS_AAI</APP_ID>
        <APP_NAME>Financial Services Analytical Applications Infrastructure</APP_NAME>
        <APP_DESCRIPTION>Base Infrastructure for Analytical Applications</APP_DESCRIPTION>
        <VERSION>8.1.0.0.0</VERSION>
    </APP>
    <APP>
        <APP_ID PREREQ="OFS_AAI" DEF_SEL_FLG="YES" ENABLE="">OFS_AAAI</APP_ID>
        <APP_NAME>Financial Services Enterprise Modeling</APP_NAME>
        <APP_DESCRIPTION>Base Infrastructure for Analytical Applications</APP_DESCRIPTION>
        <VERSION>8.1.0.0.0</VERSION>
    </APP>
    <APP>
        <APP_ID PREREQ="OFS_AAAI" ENABLE="">OFS_LRM_LCR</APP_ID>
        <APP_NAME>Financial Services Liquidity Risk Measurement and Management</APP_NAME>
        <APP_DESCRIPTION>Core application for Liquidity Risk Solutions LCR</APP_DESCRIPTION>
        <VERSION>8.1.0.0.0</VERSION>
        <OPTIONS>
            <OPTION ID="OFS_LRM_LCR_EBA" PREREQ="OFS_LRM_LCR" ENABLE="">OFS_LRM_LCR_EBA</OPTION>
            <OPTION ID="OFS_LRM_LCR_USFED" PREREQ="OFS_LRM_LCR" ENABLE="">OFS_LRM_LCR_USFED</OPTION>
            <OPTION ID="OFS_LRM_LCR_BOT" PREREQ="OFS_LRM_LCR" ENABLE="">OFS_LRM_LCR_BOT</OPTION>
            <OPTION ID="OFS_LRM_LCR_RBI" PREREQ="OFS_LRM_LCR" ENABLE="">OFS_LRM_LCR_RBI</OPTION>
            <OPTION ID="OFS_LRM_LCR_BNM" PREREQ="OFS_LRM_LCR" ENABLE="">OFS_LRM_LCR_BNM</OPTION>
            <OPTION ID="OFS_LRM_LCR_MAS" PREREQ="OFS_LRM_LCR" ENABLE="">OFS_LRM_LCR_MAS</OPTION>
            <OPTION ID="OFS_LRM_LCR_HRMA" PREREQ="OFS_LRM_LCR" ENABLE="">OFS_LRM_LCR_HRMA</OPTION>
        </OPTIONS>
    </APP>
    <APP>
        <APP_ID PREREQ="OFS_AAAI" ENABLE="">OFS_LRM_DIC</APP_ID>
        <APP_NAME>Financial Services Deposit Insurance Calculations for Liquidity Risk Solutions Pack</APP_NAME>
        <APP_DESCRIPTION>Core application for Liquidity Risk Solutions Insurance</APP_DESCRIPTION>
        <VERSION>8.1.0.0.0</VERSION>
        <OPTIONS>
            <OPTION ID="OFS_LRM_DIC_USFED" PREREQ="OFS_LRM_DIC" ENABLE="">OFS_LRM_DIC_USFED</OPTION>
            <OPTION ID="OFS_LRM_DIC_BNM" PREREQ="OFS_LRM_DIC" ENABLE="">OFS_LRM_DIC_BNM</OPTION>
            <OPTION ID="OFS_LRM_DIC_MAS" PREREQ="OFS_LRM_DIC" ENABLE="">OFS_LRM_DIC_MAS</OPTION>
            <OPTION ID="OFS_LRM_DIC_HRMA" PREREQ="OFS_LRM_DIC" ENABLE="">OFS_LRM_DIC_HRMA</OPTION>
        </OPTIONS>
    </APP>
</APP_PACK_CONFIG>
```

3. Configure the `OFS_LRS_PACK.xml` file as mentioned in the following table.

**Table 19: OFS_LRS_PACK.xml File Parameters**

| Tag Name or Attribute Name | Description | Mandatory (Y or N) | Comments |
|---|---|---|---|
| APP_PACK_ID | Unique Application Pack Identifier | Y | Unique Seeded Value. Do not modify this value. |

| Tag Name or Attribute Name | Description | Mandatory (Y or N) | Comments |
|---|---|---|---|
| IS_OPT_INSTALL VALUE="TRUE" | Unique Application Entry | Y | Unique Seeded Value. Do not modify this value. |
| APP_PACK_NAME | Unique Application Pack Name | Y | Unique Seeded Value. Do not modify this value. |
| APP_PACK_DESCRIPTION | Unique Application Pack Description | Y | Unique Seeded Value. Do not modify this value. |
| VERSION | Unique release version | Y | Unique Seeded Value. Do not modify this value. |
| APP | Unique Application Entries | Y | Unique Seeded Value. Do not modify this value. |
| APP_ID | Unique Application Identifier | Y | Unique Seeded Value. Do not modify this value. |
| APP_ID/ PREREQ | Prerequisite Application or Product | Y | Unique Seeded Value. For most applications, the prerequisite that is set is OFSAAAI. For all other applications, the default Application ID is set to none. You can set it for the applications you want to install. Do not modify this value. |
| APP_ID/ DEF_SEL_FLAG | Default Selected Flag | Y | In all Application Packs, Infrastructure requires this value to be set to YES. Do not modify this value. |
| APP_ID/ ENABLE | Enable Application or Product | Y | • Default YES for Infrastructure<br>• NO for Others<br>Set this attribute-value to YES against every APP_ID which is licensed and must be enabled for use.<br>**NOTE:** The Application or Product cannot be disabled once enabled. Only Applications/Products which are enabled are installed. In order to enable other licensed Applications/Products, you need to reinstall by making the flag as Y for the App_ID. However, in case of reinstallation to enable the other Applications/Products, execution of the schema creation utility must be skipped if it does not include any additional sandboxes to be created. |

| Tag Name or Attribute Name | Description | Mandatory (Y or N) | Comments |
|---|---|---|---|
| APP_NAME | Unique Application or Product Name | Y | Unique Seeded Value. Do not modify this value. |
| APP_DESCRIPTION | Unique Application or Product Name | Y | Unique Seeded Value. Do not modify this value. |
| VERSION | Unique release version | Y | Unique Seeded Value. Do not modify this value. |

## 6.3      Configure the Schema Creator Utility

Creating database users or schemas (RDBMS) is one of the primary steps in the complete OFS LRS installation process. The Schema Creator utility enables you to quickly get started with the installation by creating Database User(s) or Schema(s) (RDBMS), assigning the necessary GRANT(s), creating the required entities in the schemas and so on.

Configure and execute the schema creator utility before installing the OFSAA Application Pack.

**Topics:**

- [Prerequisites](#)
- [Configure Schema Creator Utility for RDBMS Installation](#)

### 6.3.1      Prerequisites

Ensure you have the following before configuring the Schema Creator Utility:

- Oracle User ID and Password with SYSDBA privileges
- JDBC Connection URL for RAC or Non-RAC database
- The HOSTNAME or IP of the server on which OFSAA is being installed.
- It is recommended to set the PGA_AGGREGATE_LIMIT database-parameter value sufficiently when Oracle 18c or 19c is installed.
- You must add a TNS entry before the installation.
- You must create a directory named `ftpshare`.

### 6.3.2      Configure the Schema Creator Utility for RDBMS Installation

If the installation is being performed for RDBMS, provide the Pack specific schema details in the `OFS_LRS_SCHEMA_IN.xml` file.

You can configure the following types of schemas:

- **CONFIG**: This schema holds the entities and other objects required for OFSAA setup configuration information. Only one CONFIG schema per OFSAA instance is permitted.

- **ATOMIC**: This schema holds the data model entities. One ATOMIC schema is attached to one Information Domain. You can have multiple ATOMIC schemas for a single OFSAA instance.

### 6.3.2.1 Configure the OFS_LRS_SCHEMA_IN.xml File

This section describes how to create database schemas, objects within schemas, and assigning appropriate grants.

Specify the database schemas required for the installation in the OFS_LRS_SCHEMA_IN.xml file. Update the values of the various tags and parameters available in this file before executing the schema creator utility.

This file must be configured only if the database is RDBMS.

To configure the OFS_LRS_SCHEMA_IN.xml file, follow these steps:

1. Log in to the system as a non-root user.

2. Navigate to the OFS_LRS_PACK/schema_creator/conf directory.

3. Edit the OFS_LRS_SCHEMA_IN.xml file using a text editor.

**Figure 8: Sample OFS_LRS_SCHEMA_IN.xml File**

```
<APPPACKSCHEMA>
    <APP_PACK_ID>OFS_LRS_PACK</APP_PACK_ID>
    <IS_TCPS>FALSE</IS_TCPS>
    <JDBC_URL></JDBC_URL>
    <JDBC_DRIVER>oracle.jdbc.driver.OracleDriver</JDBC_DRIVER>
    <HOST></HOST>
    <SETUPINFO NAME="REG" PREFIX_SCHEMA_NAME="N"/>
    <PASSWORD APPLYSAMEFORALL="Y" DEFAULT="oracle123"/>
    <ADV_SEC_OPTIONS>
        <OPTION NAME="TDE" VALUE="FALSE"/>
        <OPTION NAME="DATA_REDACT" VALUE="TRUE" />
    </ADV_SEC_OPTIONS>
    <SCHEMAS>
        <SCHEMA TYPE="CONFIG" NAME="OFSCONFIG" PASSWORD="" APP_ID="OFS_AAI" DEFAULTTABLESPACE="USERS" TEMPTABLESPACE="TEMP" QUOTA="UNLIMITED"/>
        <SCHEMA TYPE="ATOMIC" NAME="OFSATOMIC" PASSWORD="" APP_ID="OFS_AAAI" APP_GRP="1" DEFAULTTABLESPACE="USERS" TEMPTABLESPACE="TEMP" QUOTA="UNLIMITED" INFODOM="OFSINFDOM"/>
        <SCHEMA TYPE="ATOMIC" NAME="OFSATOMIC" PASSWORD="" APP_ID="OFS_LRM_LCR" APP_GRP="1" DEFAULTTABLESPACE="USERS" TEMPTABLESPACE="TEMP" QUOTA="UNLIMITED" INFODOM="OFSINFDOM"/>
        <SCHEMA TYPE="ATOMIC" NAME="OFSATOMIC" PASSWORD="" APP_ID="OFS_LRM_DIC" APP_GRP="1" DEFAULTTABLESPACE="USERS" TEMPTABLESPACE="TEMP" QUOTA="UNLIMITED" INFODOM="OFSINFDOM"/>
    </SCHEMAS>
</APPPACKSCHEMA>
```

4. Configure the values as mentioned in the following table and save the file.

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

**Table 20: OFS_LRS_SCHEMA_IN.xml file Parameters**

| Tag Name or Attribute Name | Description | Mandatory (Y or N) | Default Value or Permissible Value | Comments |
|---|---|---|---|---|
| <APP_PACK_ID> | Seeded unique ID for the OFSSAA Application Pack | Y | OFS_LRS_PACK | Do not modify this value. |
| <IS_TCPS> | Enter if the TCPS configuration is required. | Y | Seeded, with FALSE as the default value. | Do not modify this value. |
| <JDBC_URL> | Enter the JDBC URL. **NOTE:** You can enter the following JDBC URL type: RAC or NON-RAC enabled database connectivity URL. | Y | **Example**: jdbc:oracle:thin:@< DBSERVER IP/ HOST/ IP>:<PORT>:<SID> or jdbc:oracle:thin:@//[HOS T][:PORT]/ SERVICE or jdbc:oracle:thin:@(DESCRI PTION=(ADDRESS_ LIST=(ADDRESS=(PROT OCOL=TCP)(HOST=[HO ST])(port=[PORT]))(ADD RESS=(PROTOCOL=TCP) (HOST=[HOST])(PORT=[ PORT]))(LOAD_ BALANCE=yes)(FAILOV ER=yes))(CONNECT_ DATA=(SERVICE_ NAME=[SERVICE]))) For example: jdbc:oracle:thin:@//dbhos t.server.com:1521/service 1 or jdbc:oracle:thin:@//dbsho st.server.com:1521/scan-1 or jdbc:oracle:thin:@(DESCRI PTION=(ADDRESS_ LIST=(ADDRESS=(PROT | Ensure that you add an entry (with SID or SERVICE NAME) in the `tnsnames.ora` file on the OFSAA server. The entry must match the SID or SERVICE NAME used in the JDBC URL. Ensure that you have configured the JDBC URL as follows: `jdbc:oracle:thin:/@` |

| Tag Name or Attribute Name | Description | Mandatory (Y or N) | Default Value or Permissible Value | Comments |
|---|---|---|---|---|
| | | | OCOL=TCP)(HOST=dbhost1.server.com)(port=1521))(ADDRESS=(PROTOCOL=TCP)(HOST=dbhost2.server.com)(PORT=1521))(LOAD_BALANCE=yes)(FAILOVER=yes))(CONNECT_DATA=(SERVICE_NAME=service1)))<br><br>or<br><br><JDBC_URL>jdbc:oracle:thin:@(DESCRIPTION = (ADDRESS = (PROTOCOL =TCPS)(HOST = dbhost.server.com)(PORT = 2484)) (CONNECT_DATA =(SERVER = DEDICATED) (SERVICE_NAME=SERVICEID))(security=(ssl_server_cert_dn=CN=dbhost)))<br><br>or<br><br>jdbc:oracle:thin:/@ | |
| <JDBC_DRIVER> | The name of the driver is seeded. | Y | **Example**: oracle.jdbc.driver.OracleDriver | Only JDBC Thin Driver is supported.<br>Do not modify this value. |
| <HOST> | Enter the Hostname or IP Address of the system on which you are installing the OFSAA components. | Y | Hostname or IP Address | |
| <SETUPINFO>/PREFIX_SCHEMA_NAME | Identifies whether the value specified in <SETUPINFO>/NAME attribute must be prefixed to the schema name. | N | Y or N | The default value is N. |

| Tag Name or Attribute Name | Description | Mandatory (Y or N) | Default Value or Permissible Value | Comments |
|---|---|---|---|---|
| <SETUPINFO>/NAME | Enter the acronym for the type of implementation. This information is displayed in the OFSAA Home Page. On executing the schema creator utility, this value is prefixed with each schema name. For example: dev_ofsaaconf, uat_ofsaatm. | Y | Seeded, with REG PREFIX_SCHEMA_NAME="N as the default value. Accepts strings with a minimum length of two and a maximum of four. **Example**: DEV, SIT, PROD | This message appears in the OFSAA Landing Page as "Connected To: xxxx". The schemas that are created get this prefix. For example, dev_ofsaaconf, uat_ofsaaconf, and so on. |
| <PASSWORD>/ DEFAULT* | Enter the password if you want to set a default password for all schemas. You also must set the APPLYSAME-FORALL attribute as Y to apply the default password for all the schemas. | N | The maximum length allowed is 30 characters. Special characters are not allowed. | On successful execution of the utility, the entered password in the `OFS_LRS_SCHEMA_IN.xml` file is cleared. |
| <PASSWORD>/ APPLYSAMEFORALL | If you have entered Y in APPLYSAME-FORALL attribute and have specified individual passwords for all the schemas, then the specified individual passwords will take precedence. | Y | Default N Permissible: Y or N. Enter Y if you want to apply the password specified in the DEFAULT attribute for all the schemas. If you enter N, provide individual passwords for all schemas. | Setting this attribute value is mandatory if the DEFAULT attribute is set. |

| Tag Name or Attribute Name | Description | Mandatory (Y or N) | Default Value or Permissible Value | Comments |
|---|---|---|---|---|
| <SCHEMA>/TYPE | The types of schemas supported in this release are ATOMIC, CONFIG, SANDBOX, and ADDON. By default, the schema types are seeded based on the Application Pack. | Y | ATOMIC or CONFIG | Only One CONFIG schema can exist in the file. Do not edit this attribute value. This schema identifies as the CONFIGURATION schema that holds the OFSAA setup details and other Metadata information. Multiple ATOMIC schemas can exist in the file. |
| <SCHEMA>/NAME | The schemas' names are seeded based on the Application Pack by default. You can edit the schema names if required. The Schema Name will have a prefix of the SETUPINFO/ NAME attribute. SCHEMA NAME must be the same for all the ATOMIC Schemas of the applications within an Application Pack. | Y | Seeded, with OFSCONFIG as the default value. The permissible length is 15 characters and only alphanumeric characters are allowed. No special characters allowed except underscore '_'. | SETUPOINFO/NAME attribute value is prefixed to the schema name being created. For example, if a name is set as 'ofsaatm' and setupinfo as 'uat', then schema created is 'uat_ofsaatm'. NAME must be the same where APP_GRP=1 for all SCHEMA tags (Not applicable for this Application Pack). |
| <SCHEMA>/PASSWORD | Enter the password of the schema to be created. If this attribute is left blank, then the password specified in the <PASSWORD>/DEFAULT attribute is taken as the Schema Password. | N | The maximum length allowed is 30 characters. Special characters are not allowed. | It is mandatory to enter the password if you have set the <PASSWORD>/ APPLYSAMEFORALL attribute as N. |

| Tag Name or Attribute Name | Description | Mandatory (Y or N) | Default Value or Permissible Value | Comments |
|---|---|---|---|---|
| <SCHEMA>/APP_ID | The Application ID is seeded based on the Application Pack. | Y | Unique seeded values are: OFS_AAI OFS_AAAI OFS_LRM_LCR OFS_LRM_DIC | Identifies the Application or Product for which the schema is being created. Do not modify this attribute value. |
| <SCHEMA>/DEFAULT TABLESPACE | Enter the available default tablespace for DB User. If this attribute is left blank, then USERS is set as the default tablespace. | N | Seeded, with USERS as the default value. Any existing valid tablespace name is Permissible. | Modify this value to associate any valid tablespace with the schema. |
| <SCHEMA>/TEMPTA BLESPACE | Enter the available temporary tablespace for DB User. If this attribute is left bank, TEMP is set as the default tablespace. | N | Seeded, with TEMP as the default value. Any existing valid temporary tablespace name is Permissible. | Modify this value to associate any valid tablespace with the schema. |
| <SCHEMA>/QUOTA | Enter the quota to be set on the DEFAULTTABLESPACE attribute for the schema or user. By default, the quota size is set to 500M. Minimum: 500M or Unlimited on default Tablespace. | N | Seeded, with UNLIMITED as the default value. **Example**: 600M/m 20G/g UNLIMITED/unlimited | Modify this value to grant the specified quota on the mentioned tablespace to the user. |

| Tag Name or Attribute Name | Description | Mandatory (Y or N) | Default Value or Permissible Value | Comments |
|---|---|---|---|---|
| <SCHEMA>/ INFODOM | Enter the name of the Information Domain to associate this schema.<br><br>The schema creator utility automatically derives an Information Domain Name based on the Application Pack if no value is specified for this attribute. | N | Seeded, with OFSINFDOM as the default value.<br><br>Permissible length is 16 characters and only alphanumeric characters are allowed. No special characters are allowed. | |
| <ADV_SEC_OPTIONS>/ | Parent tag to hold Advance Security Options. | N | | Uncomment the tag and edit if you want to add security options. For example, TDE and Data Redact.<br><br>For details, see the example in the comments for the <TABLESPACE>/ENCRYPT tag. |
| <ADV_SEC_OPTIONS>/TDE | Tag to enable or disable TDE. | N | The default is FALSE. To enable TDE, set this to TRUE. | Ensure this tag is not commented if you have uncommented <ADV_SEC_OPTIONS> |
| <ADV_SEC_OPTIONS>/DATA_REDACT | Tag to enable or disable the Data Redaction feature. | N | The default is FALSE. To enable DATA_REDACT, 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 | Uncomment the tag and edit. ONLY if tablespaces are to be created as part of the installation.<br><br>For details, see the example following the table.<br><br>When TDE is TRUE in ADV_SEC_OPTIONS, then the <TABLESPACES> tag must be present in the XML file. |
| <TABLESPACE>/NAME | Logical Name of the tablespace to be created. | Y | | Name, if specified, must be referred in the <SCHEMA DEFAULTTABLESPACE= "##NAME##"> attribute.<br><br>Note the ## syntax. |

| Tag Name or Attribute Name | Description | Mandatory (Y or N) | Default Value or Permissible Value | Comments |
|---|---|---|---|---|
| <TABLESPACE>/VALUE | Physical Name of the tablespace to be created. | Y | NA | Value, if specified, is 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. |
| <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. **NOTE**: Encryption of tablespaces requires enabling Transparent Data Encryption (TDE) on the Database Server. **Example**: The following snippet shows that TDE is enabled and hence the tablespace is shown with encryption ON. `<ADV_SEC_OPTIONS>` `<OPTION NAME="TDE" VALUE="FALSE"/>` `<OPTION NAME="DATA_REDACT" VALUE="FALSE" />` `</ADV_SEC_OPTIONS>` `<TABLESPACES>` `<TABLESPACE NAME="OFS_AAI_TBSP_1" VALUE="TS_USERS1" DATAFILE="/scratch/ora19c/app/oracle/oradata/OFSPQA19cDB/ts_users1.dbf" SIZE="500M" AUTOEXTEND="ON" ENCRYPT="ON" />` `<TABLESPACE NAME="OFS_AAI_TBSP_2" VALUE="TS_USERS2" DATAFILE="/` |

| Tag Name or Attribute Name | Description | Mandatory (Y or N) | Default Value or Permissible Value | Comments |
|---|---|---|---|---|
| | | | | scratch/ora19c/app/oracle/ora data/OFSPQA19cDB/ts_users2.db f" SIZE="500M" AUTOEXTEND="ON" ENCRYPT="ON" /> </TABLESPACES> <SCHEMAS> <SCHEMA TYPE="CONFIG" NAME="ofsaaconf" PASSWORD="" APP_ID="OFS_AAI" DEFAULTTABLESPACE="##OFS_AAI_ TBSP_1##" TEMPTABLESPACE="TEMP" QUOTA="unlimited"/> <SCHEMA TYPE="ATOMIC" NAME="ofsaaatm" PASSWORD="" APP_ID="OFS_AAAI" DEFAULTTABLESPACE="##OFS_AAI_ TBSP_2##" TEMPTABLESPACE="TEMP" QUOTA="unlimited" INFODOM="OFSAAAIINFO"/> </SCHEMAS> |

## 6.4 Execute the Schema Creator Utility

Depending on the option selected, select the appropriate schema creator utility execution option.

- Execute the Schema Creator Utility in Offline Mode
- Execute the Schema Creator Utility in Online Mode
- Execute the Schema Creator Utility while Installing Subsequent Applications Pack

> **NOTE** If upgrading in an Application-on-Application scenario, you must provide the same schema details you provided earlier.

After creating the schema, proceed to Configure the OFSAAI_InstallConfig.xml File.

## 6.4.1 Execute the Schema Creator Utility in Offline Mode

In the Offline mode, the utility generates an SQL script with all the required DDLs for Users, Objects, and Grants. This script must be executed by the DBA on the appropriate database identified for OFSAA usage. If you do not have the SYSDBA privileges, you can execute the Schema Creator Utility in Offline mode and generate the script file that contains the Schemas, Objects, and Grants information. Subsequently, an SYSDBA user can execute the script file manually. To run the OFSAA Application Pack installer in Silent mode, it is mandatory to execute the schema creator utility with -s option.

To execute the utility in Offline mode, you must have 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 the offline mode, follow these steps:

1. Log in to the system as a non-root user.

2. Navigate to the following path: `OFS_LRS_PACK/schema_creator/bin`.

3. Execute the `osc.sh` file using the following command:

   ```
   ./osc.sh –s –o
   ```

   The following message is displayed:

*You have chosen OFFLINE mode. Triggering the utility in OFFLINE mode will generate the script. Do you wish to proceed? (Y/y or N/n).*

**4.** Enter Y to proceed.

**5.** Enter the DB Username with SELECT privileges.

**6.** Enter the User Password.

**Figure 9: Schema Creation in Offline Mode**



**7.** The console runs the initial validation checks and displays the following message:

*You have chosen to install this Application Pack on <Name of the Atomic Schema> ATOMIC schema. Do you want to proceed? (Y or N).*

**Figure 10: Schema Creation in Offline Mode Script Generation**



**8.** Enter Y to start the script generation. The following message is displayed:

*You have chosen to install this Application Pack on <Name of the Infodom>. Do you want to proceed? (Y or N).*

**Figure 11: Schema Creation in Offline Mode Successful**



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

Schema Creator executed successfully. Please execute
`scratch/ofsaaapp/OFS_LRS_PACK/schema_creator/sysdba_output_scripts.sql`
before proceeding with the installation.

| NOTE | If there are any errors during the SQL script execution, reconfigure the `OFS_LRS_SCHEMA_IN.xml,` and repeat steps in this procedure to execute the utility. This regenerates the scripts with the correct information. |
|------|---|

9. Navigate to the `OFS_LRS_PACK/schema_creator` directory.

10. Log in to SQLPLUS as a user having SYSDBA Privileges.

**Figure 12: Schema Creation in Offline Mode – Execute sysdba_output_scripts.sql**



11. Execute the `sysdba_output_scripts.sql` file using the following command:

   `SQL>@sysdba_output_scripts.sql`

   Alternatively, you can copy the `sysdba_output_scripts.sql` file and `SQLScripts` directory to a remote server and execute the `sysdba_output_scripts.sql` file, after providing appropriate execute permissions.

12. Make a TNS entry for the new users created. For details, see Add the TNS entries in TNSNAMES.ORA file section.

| NOTE | See the `sysdba_output_scripts.log` file for execution status. If there are any errors, contact <u>My Oracle Support</u>. If there are no errors in the execution, the log file is empty. |
|------|---|

As a result of this task the `OFS_LRS_SCHEMA_OUTPUT.XML` file is generated. Do not modify this file.

After creating the schema, proceed to <u>Configure the OFSAAI_InstallConfig.xml File</u> section.

## 6.4.2    Execute the Schema Creator Utility in Online Mode

In Online mode, the utility connects to the database and executes the DDLs for Users, Objects, and Grants. If you have SYSDBA privileges you can execute the Schema Creator Utility in Online mode and thereby create the Users, Objects, and Grants during the execution process. To execute the utility in the Online mode, you must connect as <User> AS SYSDBA.

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

To execute the utility with -s option in online mode, follow these steps:

1.  Edit the file `OFS_LRS_PACK/schema_creator/conf/OFS_LRS_SCHEMA_IN.xml` in a text editor. See <u>Configure the OFS_LRS_SCHEMA_IN.xml File</u> section for values to modify in the XML file.

2.  Execute the utility with -s option. For Example: `./osc.sh -s`

3.  Make a TNS entry for the new users created. For details, see <u>Add the TNS entries in TNSNAMES.ORA file.</u>

**Figure 13: Schema Creation in Online Mode**

```
/scratch/lrs81user/OFS_LRS_PACK/schema_creator/bin>./osc.sh -s
======================================================
You have chosen ONLINE mode
======================================================
Triggering the utility in ONLINE mode will execute the DDLs directly on the Database. Do you wish to proceed? (Y/N):

/scratch/lrs81user/OFS_LRS_PACK/schema_creator/bin>clear
/scratch/lrs81user/OFS_LRS_PACK/schema_creator/bin>./osc.sh -s
======================================================
You have chosen ONLINE mode
======================================================
Triggering the utility in ONLINE mode will execute the DDLs directly on the Database. Do you wish to proceed? (Y/N):
Y
======================================================
Java Validation Started ...
Java found in : /scratch/jdk1.8.0_181/bin
JAVA Version found : 1.8.0_181
JAVA Bit Version found : 64-bit
Java Validation Completed. Status : SUCCESS
======================================================
DATABASENAME = NXGPDB18C
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 : 18.0.0.0.0. Status : SUCCESS
Oracle Server version Current value : 18.0.0.0.0. Status : SUCCESS
DB specific Validation Completed. Status : SUCCESS
=============================================================
                     Schema Creation Started
=============================================================
Checking OFSAA installation...
OFSAA installation not found.
Validating the dat file OFS_LRS_CFG.dat started...
The path is:/scratch/lrs81user/OFS_LRS_PACK/schema_creator/conf
Sucessfully validated OFS_LRS_CFG.dat file
Validating the input XML file.../scratch/lrs81user/OFS_LRS_PACK/schema_creator/conf/OFS_LRS_SCHEMA_IN.xml
Input XML file validated successfully.
```

The following message is displayed:

*You have chosen ONLINE mode. Triggering the utility in ONLINE mode will execute the DDLs directly on the Database. Do you wish to proceed? (Y/y or N/n).*

4. Enter Y to proceed.

**Figure 14: Schema Creation in Online Mode – DDL Execution**



The following message is displayed:

*You have chosen to install this application pack on INFODOM "<INFODOM_NAME>". Do you wish to proceed? (Y/y or N/n).*

5. Enter Y to proceed.

**Figure 15: Schema Creation in Online Mode – Infodom Confirmation**



6. After Schema creation is successful, proceed to Configure the OFSAAI_InstallConfig.xml File.

**Figure 16: Schema Creation in Online Mode –Successful**



As a result of this task is the `OFS_LRS_SCHEMA_OUTPUT.XML` file is generated. Do not modify this file.

## 6.4.3    Execute the Schema Creator Utility while Installing Subsequent Applications Pack

When executing the schema creator utility during the installation of a subsequent Applications Pack, you can choose to install the pack either on the same Information Domain or Atomic Schema of the existing application pack or on a new Information Domain or Atomic Schema. You can execute the schema creator utility either in Online or Offline mode.

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

1.  Edit the file `OFS_LRS_PACK/schema_creator/conf/OFS_LRS_SCHEMA_IN.xml` in a text editor. See the [Configure the OFS_LRS_SCHEMA_IN.xml File](#) section for values you must modify in the XML file.

2.  Execute the utility with -s option. For Example: `./osc.sh –s –o`

**Figure 17: Execute the Schema Creator Utility to Install Subsequent Applications Pack**



After successful schema creation, execute the `sysdba_output_scripts.sql` file

**Figure 18: Install Subsequent Applications Pack– Execute sysdba_output_scripts.sql**



| NOTE | You must use the same config schema user name as the previous application pack. |
|------|---------------------------------------------------------------------------------|

3. The utility identifies the application packs that are already installed on the current OFSAA setup and displays the following on the console:

  ▪ Atomic schema of the existing application pack

  ▪ Information Domain Name of the existing pack

  ▪ List of installed application packs

**Figure 19: Install Subsequent Applications Pack– Select Atomic Schema and Infodom**



4. Enter Y or y to start the schema creation.

5. If you enter N or n, the list of Atomic Users is displayed.

6. Select the Atomic User on which you want to install the application pack.

7. Make a TNS entry for the new users created. For details, see Add the TNS entries in TNSNAMES.ORA file section.

**Figure 20: Install Subsequent Applications Pack– Select Atomic Schema and Infodom**



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

*Success. Please proceed with the installation.*

| NOTE | 1. See the log file in the `OFS_LRS_PACK/schema_creator/logs` directory for the execution status. |
|------|----|
|  | 2. See the log file `sysdba_output_scripts.log` for the execution status if executed in offline mode. The log will be empty if there are no errors in the execution. |
|  | 3. If there are any errors, contact My Oracle Support. |

# 6.5 Configure the OFSAAI_InstallConfig.xml File

To configure the `OFS_InstallConfig.xml` file, follow these steps:

1. Navigate to the `OFS_LRS_PACK/OFS_AAI/conf/` directory.

2. Open the `OFSAAI_InstallConfig.xml` file in a text editor.

3. Configure the `OFSAAI_InstallConfig.xml` file as mentioned in the following table.

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

**Table 21: OFSAAI_InstallConfig.xml file Parameters**

| InteractionVariable Name | Significance and Expected Value | Mandatory |
|--------------------------|--------------------------------|-----------|
| **<Layer name="GENERAL">** |  |  |

| InteractionVariable Name | Significance and Expected Value | Mandatory |
|---|---|---|
| **InteractionGroup name="WebServerType"** | | |
| WEBAPPSERVERTYPE | Identifies the web application server on which the OFSAA Infrastructure web components are deployed. <br><br> Set the following numeric value depending on the type of web application server: <br> • Apache Tomcat = 1 <br> • IBM WebSphere Application Server = 2 <br> • Oracle WebLogic Server = 3 <br><br> For example, `<InteractionVariable name="WEBAPPSERVERTYPE">3</InteractionVari able>` | Yes |
| **InteractionGroup name="OFSAA Infrastructure Server Details"** | | |
| DBSERVER_IP | Identifies the hostname or IP address of the system on which the Database Engine is hosted. <br><br> **NOTE:** For RAC Database, the value must be NA. For example, `<InteractionVariable name="DBSERVER_ IP">14.15.16.17</InteractionVariable>` or <br><br> `<InteractionVariable name="DBSERVER_ IP">dbhost.server.com</InteractionVariable>` | Yes |
| **InteractionGroup name="Database Details"** | | |
| ORACLE_SID/SERVICE_NA ME | Identifies the Oracle DB Instance SID or SERVICE_NAME <br><br> **NOTE:** The `Oracle_SID` value must be the same as it is mentioned in `JDBC_URL`. <br><br> 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 is typically the `$ORACLE_HOME/jdbc/lib` directory. <br><br> For example, `<InteractionVariable name="ABS_DRIVER_ PATH">">/oradata6/revwb7/ oracle </InteractionVariable>` <br><br> **NOTE:** See Hardware and Software Requirements to identify the correct `ojdbc<version>.jar` file version to be copied. | Yes |
| **InteractionGroup name="OLAP Detail"** | | |
| OLAP_SERVER_ IMPLEMENTATION | Identifies whether the OFSAA Infrastructure OLAP component must be configured. It depends on whether you intend to use the OLAP feature. The following numeric value must be set depending on your choice: <br> • YES: 1 <br> • NO: 0 <br><br> **NOTE:** If the value for `OLAP_SERVER_IMPLEMENTATION` is set to 1, the installer checks if the following environment variables are set in the `.profile` file: | No |

| InteractionVariable Name | Significance and Expected Value | Mandatory |
|---|---|---|
| | • ARBORPATH <br> • HYPERION_HOME <br> • ESSBASEPATH | |
| **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 your choice: <br> • SFTP: 1 <br> • FTP: 0 | Yes |
| **NOTE:** The default value for SFTP_ENABLE is **1**, which signifies that SFTP is used. Oracle recommends using SFTP instead of FTP because SFTP is more secure. However, you can ignore this recommendation and use FTP by setting SFTP_ENABLE to **0**. You can change this selection later from the OFSAAI administration interface. <br><br> Set SFTP_ENABLE to **-1** to configure ftpshare and weblocal path as a local path mounted for the OFSAAI server. | | |
| FILE_TRANSFER_PORT | Identifies the port used for the file transfer service. The default value specified is **22** (SFTP). Specify a value as **21** or any other PORT value if the value for SFTP_ENABLE is **0**. <br><br> For example, `<InteractionVariable name="FILE_TRANSFER_PORT">21</InteractionVariable>` | Yes |
| **InteractionGroup name="Locale Detail"** | | |
| LOCALE | Identifies the locale information to be used during the installation. This release of the OFSAA Infrastructure supports only US English. <br><br> For example, `<InteractionVariable name="LOCALE">en_US</InteractionVariable>` | Yes |
| **InteractionGroup name="OFSAA Infrastructure Communicating ports"** <br> **NOTE:** The following ports are used internally by the various OFSAA Infrastructure services. The default values mentioned are set in the installation. If you intend to specify a different value, update the parameter value accordingly, ensure that the port value is in the range 1025 to 65535, and the respective port is enabled. | | |
| JAVAPORT | 9999 | Yes |
| NATIVEPORT | 6666 | Yes |
| AGENTPORT | 6510 | Yes |
| ICCPORT | 6507 | Yes |
| ICCNATIVEPORT | 6509 | Yes |
| OLAPPORT | 10101 | Yes |
| MSGPORT | 6501 | Yes |
| ROUTERPORT | 6500 | Yes |
| AMPORT | 6505 | Yes |

| InteractionVariable Name | Significance and Expected Value | Mandatory |
|---|---|---|
| **InteractionGroup name="Web Details"** <br> **NOTE:** If the value for HTTPS_ENABLE is set to **1**, ensure that you have a valid certificate available from a trusted CA and it is configured on your web application server. | | |
| HTTPS_ENABLE | Identifies whether the UI must be accessed using HTTP or HTTPS scheme. The default value is set to **0**. The numeric value must be set depending on the following options: <br> • YES: 1 <br> • NO: 0 <br> For example, `<InteractionVariable name="HTTPS_ENABLE">0</InteractionVariable>` | Yes |
| WEB_SERVER_IP | Identifies the HTTP server IP or Hostname or web application server IP or Hostname, to be used to access the UI. This IP is typically the HTTP server IP. <br> If a separate HTTP server is not available, then the value must be Web application server IP or Hostname. <br> For example, `<InteractionVariable name="WEB_SERVER_IP">10.11.12.13</InteractionVariable>` <br> or <br> `<InteractionVariable name="WEB_SERVER_IP">myweb.server.com</InteractionVariable>` | No |
| WEB_SERVER_PORT | Identifies the web server port, which is typically 80 for non-SSL and 443 for SSL. If a separate HTTP server exists, the port value must be the value configured for the web server. <br> **WARNING:** The installer will not accept the port value as: <br> • 80, if the HTTPS_ENABLE variable is 1 <br> • 443, if the HTTPS_ENABLE variable is 0 <br> For example, `<InteractionVariable name="WEB_SERVER_PORT">80</InteractionVariable>` | No |
| CONTEXT_NAME | Identifies the web application context name which is used to build the URL to access the OFSAA application. You can identify the context name from the following URL format: <br> `<scheme>://<host>:<port>/<context-name>/login.jsp` <br> For example: <br> `https://myweb:443/ofsaadev/login.jsp` <br> For example, `<InteractionVariable name="CONTEXT_NAME">ofsaadev</InteractionVariable>` | Yes |
| WEBAPP_CONTEXT_PATH | Identifies the absolute path of the exploded EAR file on the web application server. <br> • For Tomcat, specify the Tomcat directory path till `/webapps`. For example, `/oradata6/ revwb7/tomcat/webapps/`. <br> • For WebSphere, specify the WebSphere path as `<WebSphere profile directory>/installedApps/<NodeCellName>`. | Yes |

| InteractionVariable Name | Significance and Expected Value | Mandatory |
|---|---|---|
| | For example, `/data2/test//WebSphere/AppServer/profiles/<Profile_Name>/installedApps/aiximfNode01Cell`, where aix-imf is the Hostname.<br><br>• For WebLogic, specify the WebLogic home directory path. For example, `/<WebLogic home directory path>/bea/wlserver_10.3`<br><br>**NOTE:** For WebLogic, the value specified for this attribute is ignored and the value provided against the attribute `WEBLOGIC_DOMAIN_HOME` is considered. | |
| WEB_LOCAL_PATH | Identifies the absolute path to any directory on the web application server that can hold temporary files, which are uploaded as part of the usage of the application.<br><br>Set this in the FTPSHARE location.<br><br>**NOTE:** During a clustered deployment, ensure that this path and the directory are the same on all the nodes. | Yes |
| **InteractionGroup name="Weblogic Setup Details"** | | |
| WEBLOGIC_DOMAIN_HOME | Identifies the WebLogic Domain Home.<br><br>For example, `<InteractionVariable name="WEBLOGIC_DOMAIN_HOME">/home/weblogic/bea/user_ projects/ domains/mydomain</InteractionVariable>` | Yes.<br>Specify the value only if WEBAPPSERVERTYPE is set as 3 (WebLogic) |
| **InteractionGroup name="OFSAAI FTP Details"** | | |
| OFSAAI_FTPSHARE_PATH | Identifies the absolute path of the directory that is identified as the file system stage area.<br><br>**NOTE:** The directory must exist on the same system on which the OFSAA Infrastructure is being installed (can be on a separate mount).<br><br>The user mentioned in the APP_SFTP_USER_ID parameter in the following example must have RWX permission on the directory.<br><br>For example, `<InteractionVariable name="APP_FTPSHARE_PATH">">/oradata6/revwb7/ftpshare</ InteractionVariable>` | Yes |
| OFSAAI_SFTP_USER_ID | Identifies the user who has RWX permissions on the directory identified for the parameter APP_FTPSHARE_PATH. | Yes |
| OFSAAI_SFTP_PRIVATE_KEY | Identifies the SFTP private key for OFSAAI.<br>For example,<br>`<InteractionVariable name="OFSAAI_SFTP_PRIVATE_KEY">/home/ofsaapp/.ssh/id_rsa</InteractionVariable>`<br><br>By default, the value is **NA**, which indicates that, for authentication, you are prompted to enter the password for the user <OFSAAI_SFTP_USER_ID>. | No |

| InteractionVariable Name | Significance and Expected Value | Mandatory |
|---|---|---|
| | For more information on how to generate an SFTP Private key, see the [Set Up SFTP Private Key](#) section. | |
| OFSAAI_SFTP_PASSPHRASE | Identifies the passphrase for the SFTP private key for OFSAAI.<br>For example,<br>`InteractionVariable name="OFSAAI_SFTP_PASSPHRASE">enter a pass phrase here</InteractionVariable>`<br>By default, the value is **NA**.<br>If the `OFSAAI_SFTP_PRIVATE_KEY` value is given and the `OFSAAI_SFTP_PASSPHRASE` value is **NA**, then the passphrase is identified as empty. | No |
| **InteractionGroup name="Hive Details"**<br>The default value set for the interaction variables under this group is NA.<br>**NOTE:** The following values are required only for Hive Configuration. | | |
| HIVE_SERVER_PORT | Identifies the port used for the file transfer service. The default value is **22** (SFTP). To use this port for FTP, set this value to **21**.<br>For example,<br>`<InteractionVariable name="HIVE_SERVER_PORT">22</InteractionVariable>` | Yes |
| HIVE_SERVER_FTPDRIVE | Identifies the absolute path to the directory identified as the file system stage area of the HIVE server.<br>For example,<br>`<InteractionVariable name="HIVE_SERVER_FTPDRIVE">/scratch/ofsaa/ftpshare</InteractionVariable>` | Yes |
| HIVE_SERVER_FTP_USERID | Identifies the user who has RWX permissions on the directory identified under the parameter `HIVE_SERVER_FTPDRIVE`.<br>For example,<br>`<InteractionVariable name="HIVE_SERVER_FTP_USERID">ofsaa</InteractionVariable>` | Yes |
| HIVE_SERVER_FTP_PROTOCOL | If the `HIVE_SERVER_PORT` is 21, then set the value to **FTP**. If not, set it to **SFTP**.<br>For example,<br>`<InteractionVariable name="HIVE_SERVER_FTP_PROTOCOL">SFTP</InteractionVariable>` | Yes |
| HIVE_SFTP_PRIVATE_KEY | Identifies the SFTP private key for the HIVE server.<br>For example,<br>`<InteractionVariable name="HIVE_SFTP_PRIVATE_KEY">/scratch/testuser/.ssh/id_rsa</InteractionVariable>` | |

| InteractionVariable Name | Significance and Expected Value | Mandatory |
|---|---|---|
| | By default, the value is **NA**, which indicates that, for authentication, you are prompted to enter the password for the user <HIVE_SERVER_FTP_USERID>.<br><br>For more information on generating SFTP Private key, see the <u>Set Up SFTP Private Key</u> section. | |
| HIVE_SFTP_PASSPHRASE | Identifies the passphrase for the SFTP private key for HIVE.<br>For example,<br>`<InteractionVariable name="HIVE_SFTP_ PASSPHRASE">NA</InteractionVariable>`<br>By default, the value is **NA**.<br>If the `HIVE_SFTP_PRIVATE_KEY` value is **NA**, then the passphrase is identified as empty. | |

## 6.5.1   Set Up the SFTP Private Key

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 must be set to NA.

To generate a private key, enter the commands as shown:

```
ssh-keygen -t rsa

Generating public/private rsa key pair.

Enter file in which to save the key (/home/ofsaapp/.ssh/id_rsa):

Created directory '/home/ofsaapp/.ssh'.

Enter passphrase (empty for no passphrase):

Enter same passphrase again:

Your identification has been saved in /home/ofsaapp/.ssh/id_rsa.

Your public key has been saved in /home/ofsaapp/.ssh/id_rsa.pub.

The key fingerprint is:

3e:4f:05:79:3a:9f:96:7c:3b:ad:e9:58:37:bc:37:e4

ofsaapp@OFSASERVER:~> cat /home/ofsaapp/.ssh/id_rsa.pub >>
/home/ofsaapp/.ssh/authorized_keys
```

Ensure the following permissions exist for the given directories:

- permissions of .ssh must be 700

- permissions of .ssh/authorized_keys must be 640

- permission of .ssh/id_rsa must be 400

- Permission of UNIX User created must be 755

## 6.6    Install the OFS LRS Application Pack

| | |
|---|---|
| **ATTENTION** | Before you begin the installation, configure and execute the following files: |

1. Configure the OS File System Settings and Environment Settings in the .profile File

2. Configure OFS_LRS_PACK.xml File

3. Configure OFS_LRS_SCHEMA_IN.xml

4. Configure the OFSAAI_InstallConfig.xml File (Do not configure this file if an installation of OFSAAI 8.1 already exists.)

5. Execute the Schema Creator Utility

| | |
|---|---|
| **NOTE** | • For enabling the Right to be Forgotten, see Right to be Forgotten. |
| | • For enabling Data Redaction, see the Data Redaction section . For more details, see Data Redaction section, under Data Security and Data Privacy chapter in the OFS Analytical Applications Infrastructure Administration Guide. |

| NOTE | The LRS installer includes Liquidity Coverage Ratio (LCR) and Deposit Insurance Calculation (DIC) products. The installer is split into Stock Keeping Units (SKUs) based on the jurisdiction. The following Liquidity Coverage Ratio (LCR) SKUs are available in the OFS_LRM_LCR directory: |
|------|-----------|

- OFS_LRM_LCR_USFED
- OFS_LRM_LCR_RBI
- OFS_LRM_LCR_EBA
- OFS_LRM_LCR_BOT
- OFS_LRM_LCR_BNM
- OFS_LRM_LCR_MAS
- OFS_LRM_LCR_HKMA

The following Deposit Insurance Calculation (DIC) SKUs are available in the OFS_LRM_DIC directory:

- OFS_LRM_DIC_USFED
- OFS_LRM_DIC_BNM
- OFS_LRM_DIC_MAS
- OFS_LRM_DIC_HKMA

In the `OFS_LRS_PACK.xml,` ensure that you enable only the licensed products.

For example, if you have licensed for RBI and EBA, then enable OFS_LRM_LCR, OFS_LRM_LCR_EBA, and OFS_LRM_LCR_RBI, and if you have licensed for DIC only, then enable OFS_LRM_DIC and OFS_LRM_DIC_USFED

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

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

Ensure that you reapply the 33663417 Mandatory Patch whenever you install or upgrade the application, or apply an incremental patch.

To install the OFS LRS Application Pack, follow these steps:

1. Log in to the system as a non-root user.

2. Identify a directory for installation and set the same in the user `.profile` file as follows:

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

3.  Execute the user `.profile` file.

4.  Navigate to the `OFS_LRS_PACK` directory.

5.  Execute the schema creator utility with `-s` option.

6.  Navigate to the path `OFS_LRS_PACK/conf/OFS_LRS_PACK.xml`, and enter YES in the enable tag for OFS_AAI and OFS_AAAI.

7.  From Release 8.1 onwards, LRS supports a single `Silent.template` file available in the path `OFS_LRS_PACK/appsLibConfig/conf`. The `Silent.template` file is populated with default values. Ensure to modify the template in the directory. Create a copy of this file and rename it as `Silent.props`.

8.  Installation is achieved through the properties file (`Silent.props`) that must be updated with proper values, before attempting to install using silent mode. Edit the parameters in the `Silent.props` file and specify the parameters as per the requirements.

| NOTE | The default values for LCR and DIC are the same. If you modify the values, you must have the same values for LCR and DIC parameters. |
|------|-----|

The following table lists all the properties that must be specified:

**Table 2: Parameters for the Silent.props File**

| Property Name | Description of Property | Permissible values | Comments |
|---|---|---|---|
| LOG_MODE | Specify Log Mode. | 1 = Debug Mode [Password will be printed in the log file] <br><br> 0 = General Mode [Passwords will not be printed in the log file] | The default value is 0. |
| APPFTP_LOG_PATH | Specify the Infodom Maintenance log path (to be created) for the new Infodom. Ignore if you are doing the installation on an existing information domain. | User Input | |
| DBFTP_LOG_PATH | Specify the Infodom Maintenance log path (to be created) for the new Infodom. Ignore if you are doing the installation on an existing information domain. | User Input | |

| Property Name | Description of Property | Permissible values | Comments |
|---|---|---|---|
| UPLOAD_MODEL | Specify whether you want to perform Model Upload. | 0 = If you have already performed Model Upload and want to skip the model upload process.<br>1 = If you want to perform Model Upload. | The default value is 1. |
| MODEL_TYPE | Specify whether you want to use the released datamodel or customized datamodel for the model upload process. | 0 = If you want to upload the released datamodel.<br>1 = If you want to upload the customized datamodel. | The default value is 0. |
| DATAMODEL<br><br>DM_DIRECTORY | Specify the path (DM_DIRECTORY) and file (DATAMODEL) name for the customized datamodel. Mandatory only if you want to upload the customized datamodel, that is, you have specified MODEL_TYPE=1. | User Input | |
| OFS_LRM_LCR_SEGMENT_1_CODE | Specify OFS_LRM_LCR Segment Code. | LRSSEGMNT | The default value is LRSSEGMNT. |
| OFS_LRM_LCR_ETL_APPSRC_TYPE | Specify if you want to create a new ETL App or Src pair or use an existing one. | 0 = If you want to create a new ETL App or Src pair.<br>1 = If you want to use an existing pair. | The default value is 0. |
| OFS_LRM_LCR_ETL_SRC_1_DESC | ETL OFS_LRM_LCR source description. | Describe the ETL Src.<br>Mandatory if you want to create new ETL Src if you have specified ETL_APPSRC_TYPE=0. | The default value is LRS Source. |
| OFS_LRM_LCR_ETL_SRC_2_DESC | ETL Staging source description. | Describe the ETL Src.<br>Mandatory if you want to create new ETL Src if you have specified ETL_APPSRC_TYPE=0. | The default value is Staging Source. |

| Property Name | Description of Property | Permissible values | Comments |
|---|---|---|---|
| OFS_LRM_LCR_ETL_SRC_1_NAME | ETL OFS_LRM_LCR source name. | User Input | The default value is LRSSRC.<br>Specify the ETL Source Name into ETL Area Definitions to be deployed. |
| OFS_LRM_LCR_ETL_SRC_2_NAME | ETL Staging source name. | User Input | The default value is STGSRC.<br>Specify the ETL Source Name into ETL Area Definitions to be deployed. |
| OFS_LRM_DIC_SEGMENT_1_CODE | Specify OFS_LRM_DIC Segment Code. | User Input | The default value is LRSSEGMNT. |
| OFS_LRM_DIC_ETL_APPSRC_TYPE | Specify if you want to create a new ETL App or Src pair or use an existing one. | Specify if you want to create a new ETL App or Src pair or use an existing one.<br>0 = If you want to create a new ETL App or Src pair.<br>1 = If you want to use an existing pair. | The default value is 0. |
| OFS_LRM_DIC_ETL_SRC_1_DESC | ETL OFS_LRM_DIC source description. | Describe the ETL Src.<br>Mandatory if you want to create new ETL Src if you have specified ETL_APPSRC_TYPE=0. | The default value is LRS Source. |
| OFS_LRM_DIC_ETL_SRC_2_DESC | ETL Staging source description. | Describe the ETL Src.<br>Mandatory if you want to create new ETL Src if you have specified ETL_APPSRC_TYPE=0. | The default value is Staging Source. |
| OFS_LRM_DIC_ETL_SRC_1_NAME | ETL OFS_LRM_DIC source name. | Specify the ETL Source Name into ETL Area Definitions to be deployed. | The default value is Staging LRSSRC. |
| OFS_LRM_DIC_ETL_SRC_2_NAME | ETL Staging source name. | Specify the ETL Source Name into ETL Area Definitions to be deployed. | The default value is Staging STGSRC. |

> **ATTENTION**   Do not install new packs in the same segment if the
> preinstalled applications use the Run Management
> functionality of OFSAAI.

9.  Enter the following command in the console to execute the application pack installer with the Silent option.

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

10. The installer proceeds with Pre-Installation Checks.

    **Figure 21: Silent Mode of Installation**

    

11. Enter the OFSAA Processing Tier FTP or SFTP password value and proceed, when prompted in the command prompt.

    **Table 22: Console Prompt: Enter the OFSAA Processing Tier FTP/SFTP Password**

    | Console Prompts | User Inputs |
    |---|---|
    | Please enter OFSAA Processing Tier FTP or SFTP password | Enter the password to access the processing tier in the application server.<br><br>**NOTE**: If the prompt reads as follows, enter the username and password for accessing the product Staging or Metadata Repository FTPSHARE:<br><br>• Kerberos username [user]<br>• Kerberos password for user |

**Figure 22: OFSAA Processing Tier FTP or SFTP Password Prompt**



**12.** The process displays the OFSAA License. Enter **Y** and proceed.

**Figure 23: Accept the OFSAA License Agreement**



**13.** The installer installs the AAI application.

**Figure 24: OFSAA Silent Mode Installation**



**14.** After the platform is installed, the OFS LRS installation begins.

**Figure 25: LRS Silent Mode Installation**



**15.** After Data Model Upload is complete, verify the installation logs in the log directories mentioned in the [Verify the Log File Information](#) section.

**Figure 26: Silent Mode Installation In Progress**

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

Installation Complete.
Installation terminated...66
 THE OS VERSION IS: 7
 THE CLIENT VERSION IS: 18
 Copying done for BE files....
heapsize == 8192
/scratch/lrmm81/OFS_LRS_PACK/bin
datamodel file =  ../DataModel/Manifest.xml ../DataModel/OFS_TR_Datamodel.xml
model == 31315247
290
checking version
VersionToBeApplied: 8.1.0.0.0
Fresh installation


********************************************************************************
 Welcome to OFS_LRS 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...

Preparing SILENT Mode Installation...


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

**Figure 27: Silent Mode Installation Build Successful**

```
Utility triggered for XML files
[ParseXml] inserting into configuration
***************************************************
CTRL characters removal started ...
CTRL characters removal over ...
Windows executable files removal started ...
Windows executable files removal over ...
We are now in /scratch/lrmm81 ...
***************************************************
FIC_PHYSICAL_HOME_LOC value is not set
TOMCAT
executing "ant"
Buildfile: /scratch/lrmm81/OFSAAI81/ficweb/build.xml
Trying to override old definition of datatype resources

existtest:
     [echo] Checking for file /scratch/lrmm81/OFSAAI81/ficweb/OFSAAI81.war existense

createwar:
     [echo] Creating /scratch/lrmm81/OFSAAI81/ficweb/OFSAAI81.war freshly..
      [war] Building war: /scratch/lrmm81/OFSAAI81/ficweb/OFSAAI81.war

BUILD SUCCESSFUL
Total time: 42 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...
```

16. After successful LRS pack installation, the WAR file is generated and all the servers are verified and the installation complete message is displayed.

**Figure 28: Silent Mode Installation Complete**

```
createwar:
     [echo] Creating /scratch/lrmm81/OFSAAI81/ficweb/OFSAAI81.war freshly..
      [war] Building war: /scratch/lrmm81/OFSAAI81/ficweb/OFSAAI81.war

BUILD SUCCESSFUL
Total time: 42 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...
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 Proces ID : 18487
Stop AM service with Proces ID : 18470
Stop ROUTER service with Proces ID : 18454
OFSAAI DB Layer File Services check Status: SUCCESSFUL.
*******************************************************
Installation completed...
*******************************************************
/scratch/lrmm81/OFS_LRS_PACK/bin>
```

**17.** The OFSAA Infrastructure installation performs a post-install health check automatically on the successful installation of the product.

**18.** On completion of the installation, verify the installation log files mentioned in the Verify the Log File Information section.

| NOTE | • Perform steps mentioned in the Post-Installation section. |
|------|------------------------------------------------------------|
|      | • Ensure that the OFS_LRS_PACK installer directory with its contents is preserved, for enabling additional products in the future. |

## 6.6.1  Verify the Log File Information

See the following logs files for more information:

• See the log files in the following locations, for OFS LRS Application Pack installation, as per the SKUs licensed.

**Table 23: OFS LRS Installation Log File Paths**

| Product | Installation Log Path | Debug Log Path |
|---------|----------------------|----------------|
| LCR | OFS_LRS_PACK/OFS_LRM_LCR/logs | OFS_LRS_PACK/OFS_LRM_LCR/logs |
| DIC | OFS_LRS_PACK/OFS_LRM_DIC/logs | OFS_LRS_PACK/OFS_LRM_DIC/logs |
| LCR-USFED | OFS_LRS_PACK/OFS_LRM_LCR/OFS_LRM_LCR_USFED/logs | |

| Product | Installation Log Path | Debug Log Path |
|---------|----------------------|----------------|
| LCR-RBI | OFS_LRS_PACK/OFS_LRM_LCR/OFS_LRM_LCR_RBI/logs | |
| LCR-EBA | OFS_LRS_PACK/OFS_LRM_LCR/OFS_LRM_LCR_EBA/logs | |
| LCR-BOT | OFS_LRS_PACK/OFS_LRM_LCR/OFS_LRM_LCR_BOT/logs | |
| LCR-BNM | OFS_LRS_PACK/OFS_LRM_LCR/OFS_LRM_LCR_BNM/logs | |
| LCR-MAS | OFS_LRS_PACK/OFS_LRM_LCR/OFS_LRM_LCR_MAS/logs | |
| LCR-HKMA | OFS_LRS_PACK/OFS_LRM_LCR/OFS_LRM_LCR_HKMA/logs | |
| DIC-USFED | OFS_LRS_PACK/OFS_LRM_DIC/OFS_LRM_DIC_USFED/logs | |
| DIC-BNM | OFS_LRS_PACK/OFS_LRM_DIC/OFS_LRM_DIC_BNM/logs | |
| DIC-MAS | OFS_LRS_PACK/OFS_LRM_DIC/OFS_LRM_DIC_MAS/logs | |
| DIC-HKMA | OFS_LRS_PACK/OFS_LRM_DIC/OFS_LRM_DIC_HKMA/logs | |

| **NOTE** | If you are installing LRS 8.1 in an environment with Oracle Linux 8, ignore the error in the OFS_LRM_LCR_installation.log file and OFS_LRM_DIC_installation.log file, available in the /OFS_LRS_PACK/OFS_LRM_LCR/logs and /OFS_LRS_PACK/OFS_LRM_DIC/logs directory respectively: |
|---|---|
| | *FICDB LIBRARIES WILL NOT BE DEPLOYED AS DEFAULT COMBINATION linux7/oracle19.0 IS NOT AVAILABLE IN KIT.* |

- See the log file (or files) in the OFS_LRS_PACK/OFS_AAI/logs/ directory for Infrastructure installation log.

- See the OFSAAInfrastucture_Install.log file located at the $FIC_HOME directory for the Infrastructure installation log.

- See the pack.install log file in the OFS_LRS_PACK/logs directory.

After the installation OFS LRS 8.1.0.0.0 is succesful, complete the required Post-installation steps.

# 7    Post-installation

On successful installation of the Oracle Financial Services LRS application pack, follow the post-installation procedures mentioned in Post-installation Checklist.

| ATTENTION | In an integrated environment, when ALM is to be installed after LRS, to resolve the screen loading issues in the Holiday Calendar, Time Buckets, Business Assumption and Run Management windows, you must execute the following SQL statement after LRS installation and before ALM installation. |
|---|---|
| | `UPDATE rev_app_user_preferences a`<br><br>`SET a.sys_id_num =`<br>`FSI_OBJECT_DEN_SEQ_NUM.nextval`<br><br>`WHERE a.appid IN ('OFS_LRM_LCR','OFS_LRM_DIC');` |

| NOTE | You must clear the application cache before deploying the Application Pack web archive file. This applies to all web servers (WebSphere, WebLogic, Tomcat). For more information, see the Clear Application Cache section. |
|---|---|

**Topics:**

- Post-installation Checklist
- Patch OFSAA Infrastructure Installation
- Backup the OFS_LRS_SCHEMA_IN.xml, OFS_LRS_SCHEMA_OUTPUT.xml, and Silent.props Files
- Stop the Infrastructure Services
- Start the Infrastructure Services
- Configure the Web Server
- Configure Resource Reference in Web Servers
- Configure Work Manager in Web Application Servers
- Create and Deploy the EAR or WAR Files
- Build EAR or WAR file once and Deploy Across Multiple OFSAA Instances
- Access the OFSAA Application
- Configure the excludeURLList.cfg File
- View OFSAA Product Licenses after Installation of Application Pack
- Configure Tomcat
- Change the ICC Batch Ownership
- Add TNS entries in the TNSNAMES.ORA File

- [Update OBIEE URL](#)

- [Configure Data Source](#)

- [Configure Data Redaction in OFSAA](#)

- [Data Protection Implementation in OFSAA](#)

- [Post-Deployment Configurations](#)

| NOTE | In the Integration Process, if more than one OFSAA Application exists in the same environment, then the output of one OFSAA application can be consumed by another OFSAA application. If OFS Capital Adequacy Application Pack (OFS CAP or BASEL) or OFS Liquidity Risk Solution Application Pack (OFS LRS) is not installed in the same environment as the OFSDF Application Pack, then execute the Integration Utility to enable the Integration process provided in the OFSDF Application Pack v8.1.0.0.0 release. |
|------|---|
| | See the *Enable Integration T2Ts* section in the [Oracle Financial Services Data Foundation Application Pack Installation and Configuration Guide](#) for more details. |

## 7.1 Post-Installation Checklist

You can use this checklist to have a quick glance at everything that you will be doing post installing this application. The link provided in each step takes you to a section either within this document or to another referenced document.

| NOTE | See the *Post-Installation* section in the [OFS AAI Release 8.1.0.0.0 Installation and Configuration Guide](#) to complete the following checklist procedures. |
|------|---|

**Table 24: Post-installation Checklist**

| Sl. No. | Post-installation Activity |
|---------|---------------------------|
| 1 | [Verify ](#)that all patches are successfully installed. |
| 2 | [Back up](#) the `OFS_LRS_SCHEMA_IN.xml`, `OFS_LRS_SCHEMA_OUTPUT.xml`, and `Silent.props` files. |
| 3 | [Stop](#) the OFSAA Infrastructure services. |
| 4 | [Start](#) the OFSAA Infrastructure services. |
| 5 | [Configure](#) the webserver. |
| 6 | [Configure](#) the Resource Reference in web application servers. |
| 7 | [Configure](#) the Work Manager in the web application servers. |

| Sl. No. | Post-installation Activity |
|---------|---------------------------|
| 8 | Create and Deploy EAR or WAR files. |
| 9 | EAR/WAR File - Build Once and Deploy Across Multiple OFSAA Instances. |
| 10 | Access the OFSAA application. |
| 11 | Configure the `excludeURLList.cfg` file. |
| 12 | Configure Tomcat. |
| 13 | Change the ICC batch ownership. |
| 14 | Add TNS entries in the `tnsnames.ora` file. |
| 15 | Update OBIEE URL. |
| 16 | Configure Data Source. |
| 17 | Set Data Redaction in OFS LRS. |
| 18 | Implement Data Protection in OFSAA. |
| 19 | Post-deployment Configuration.<br>• OBIEE Configuration – Deploy OFS LRS Analytics.<br>• Logging as System Administrator.<br>• Create Application Users.<br>• Map the Application User(s) to User Groups.<br>• LRS Pack User Group Names. |

## 7.2    Patch OFS LRS Installation

Oracle strongly recommends installing the latest available patch set to be up-to-date with the various releases of the OFSAA product. For the mandatory patches, see Mandatory Patches section.

Contact My Oracle Support. for more information on the latest release.

## 7.3    Backup the OFS_LRS_SCHEMA_IN.xml, OFS_LRS_SCHEMA_OUTPUT.xml, and Silent.props Files

Backup the `OFS_LRS_SCHEMA_IN.xml`, `OFS_LRS_SCHEMA_OUTPUT.xml`, and `Silent.props` files as they can be reused when upgrading existing applications or installing new applications.

**Table 25: Directory of Files to Backup**

| File Name | Directory |
|-----------|-----------|
| `OFS_LRS_SCHEMA_IN.xml` | `OFS_LRS_PACK/schema_creator/conf` |
| `OFS_LRS_SCHEMA_OUTPUT.xml` | `OFS_LRS_PACK/schema_creator/` |

| File Name | Directory |
|---|---|
| Silent.props | `OFS_LRS_PACK/appsLibConfig/conf` |

## 7.4 Stop the Infrastructure Services

See Stop the Infrastructure Services in OFS AAI Release 8.1.0.0.0 Installation and Configuration Guide for details.

## 7.5 Start the Infrastructure Services

See Start the Infrastructure Services in OFS AAI Installation Guide for details.

## 7.6 Configure the Web Server

This step assumes the installation of a web server exists as per the prerequisites. If an installation already exists, skip, and proceed to the next step. Webserver configuration includes the following activities.

See the Configure the Web Server section in the OFS AAI Release 8.1.0.0.0 Installation and Configuration Guide to complete these procedures.

- Configure WebSphere Application Server for Application Deployment
  - Create a New Profile in WebSphere
  - Manage IBM WebSphere SDK Java Technology Edition Versions
  - Manage Applications in WebSphere
  - Configure WebSphere Application Server to Initialize Filters before Initializing Load-On Startup Servlets
  - Configure WebSphere Application Server Persistence to JPA Specification 2.0
  - Configure WebSphere Application Server to Use a Load Balancer or Proxy Server
  - Delete WebSphere Profiles
  - Configure WebSphere HTTPS
  - Configure WebSphere Memory Settings
- Configure WebLogic for Application Deployment
  - Create Domain in WebLogic Server
  - Delete Domain in WebLogic
  - Configure WebLogic Memory Settings
- Configure Apache Tomcat Server for Application Deployment
  - Tomcat User Administration
  - Configure Servlet Port

- ▪ Configure SSL Port

- ▪ Configure Apache Tomcat Memory Settings

- ▪ Configure Tomcat for User Group Authorization

- ▪ Uninstall WAR Files in Tomcat

| **NOTE** | • See the Oracle Financial Services Analytical Applications Infrastructure Security Guide for configurations to secure your web server. |
|---|---|
| | • You must enable a sticky session or 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 or affinity session configuration at the Load Balancer level if you have configured a Load Balancer in front of the web server. |
| | • Make a note of the IP Address or 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 or Security Guide mentioned in the Related Documents section for additional information on securely configuring your web server. |

## 7.6.1 Additional Configurations for Web Servers

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

| **NOTE** | The instructions in this section are applicable if you are upgrading from an earlier version of OFS LRS to Release 8.1.0.0.0. |
|---|---|

- **Configuration for WebSphere**: To configure WebSphere, see the Configure WebSphere Application Server for Application Deployment section. Additionally, configure for REST services. For details, see the *Configuring WebSphere for the REST Services Authorization* section in the 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 the OFS Analytical Applications Infrastructure Administration Guide.

- **Configuration for WebLogic**: To configure WebLogic, see the Configure WebLogic for Application Deployment section. Additionally, configure for REST services. For details, see the *Configuring WebLogic for the REST Services Authorization* section in the OFS Analytical Applications Infrastructure Administration Guide.

  Additionally, you must configure the Work Manager in WebLogic. For details, see the *Work Manager Configurations* section in the OFS Analytical Applications Infrastructure Administration Guide.

  | NOTE | If you are using Weblogic as the web server, add the tag `<enforce-valid-basic-auth-credentials>false</enforce-valid-basic-auth-credentials>` under the `security-configuration` tag in the config.xml file, available in the path `<domain>/config/`. |
  |---|---|

- **Configuration for Tomcat**: For the successful execution of Data Mapping in Tomcat, perform the configurations mentioned in the Configuration for Tomcat section in the OFS Analytical Applications Infrastructure Administration Guide.

  For additional configurations, see the Configure Apache Tomcat Server for Application Deployment section.

### 7.6.1.1 Configure Application Security in WebSphere

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

### 7.6.1.2 Configure WebSphere Shared Library to Support Jersey 2x and Jackson 2.9x Libraries

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

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

**Figure 29: WebSphere Shared Libraries**
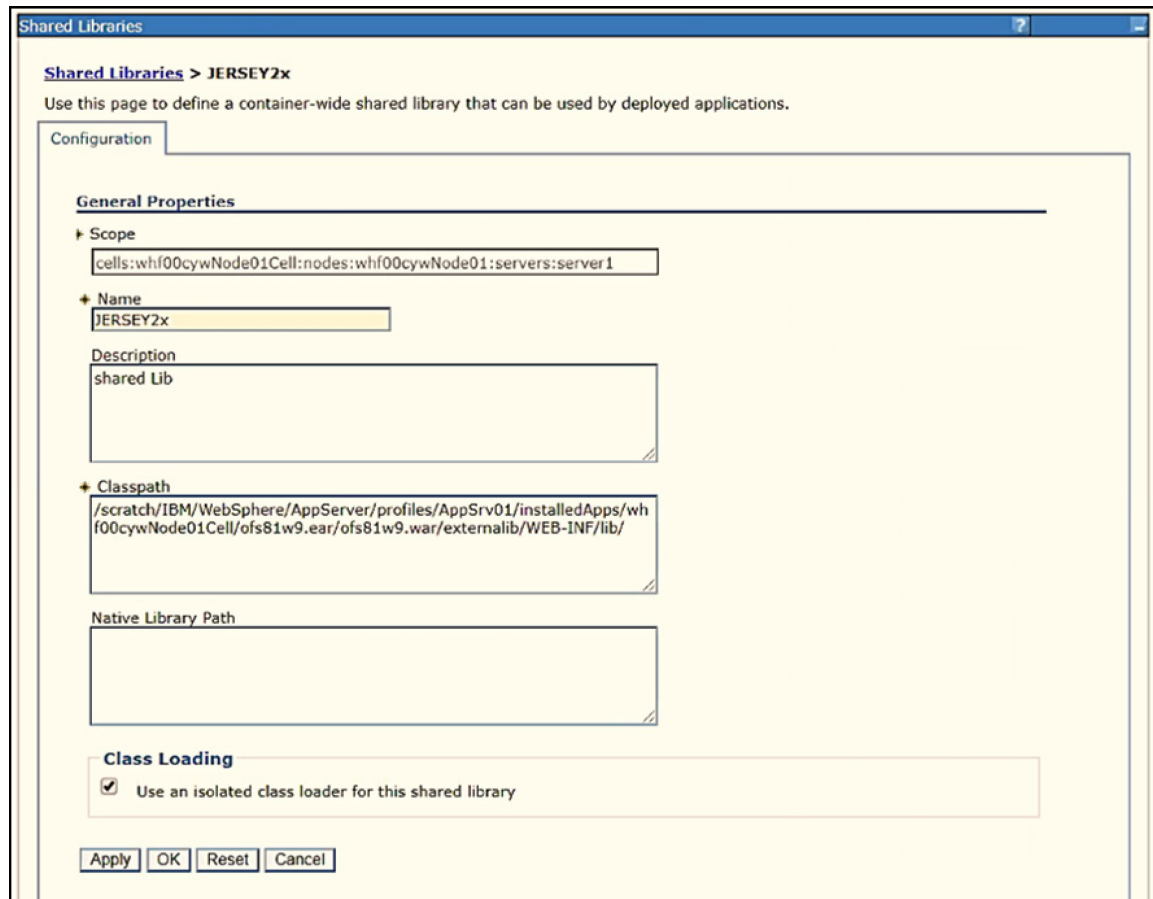


2. Enter the following details:

   ▪ **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 30: WebSphere Shared Library References**
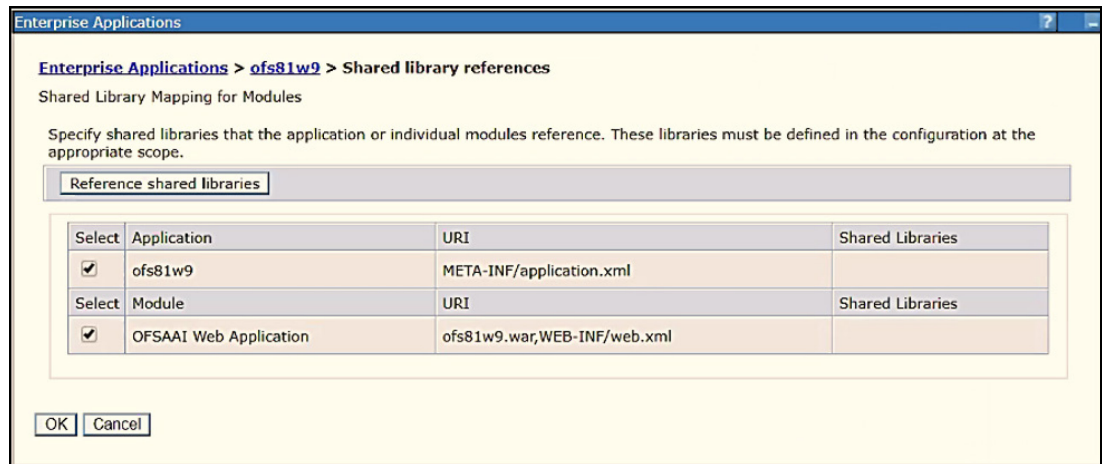


6. From the Shared Library Mapping window, move the required shared libraries from **Available** to **Selected**. In the following figure, JERSEY2x is selected.

**Figure 31: WebSphere Shared Libraries Mapping Selection**
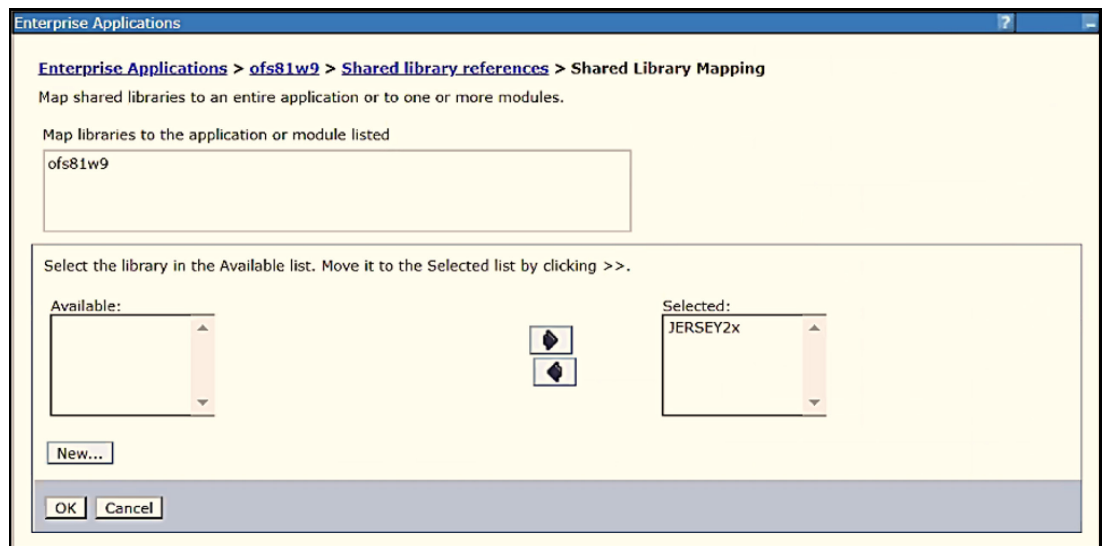


7. Click **OK**.

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

**Figure 32: WebSphere Shared Libraries Select Next Application**
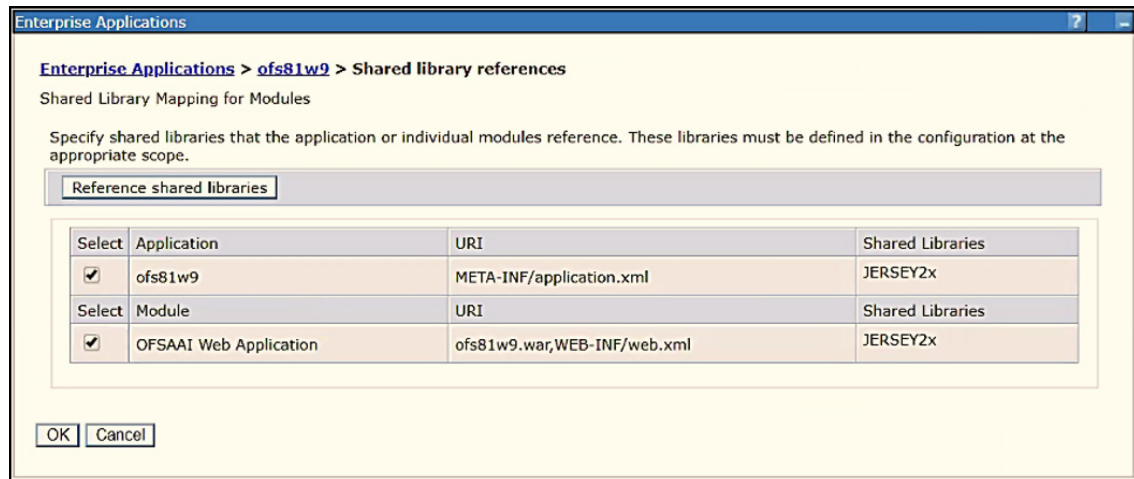


9. Disable the built-in JAX-RS via JVM property.

   a. Navigate to the WebSphere admin console in the **Servers** select **WebSphere Application Servers** then select **yourServerName**.

   b. In the Server Infrastructure section, go to Java and **Process Management** select **Process definition**, select **Java Virtual Machine** then select **Custom properties**.

   c. Add the following property:

   com.ibm.websphere.jaxrs.server.DisableIBMJAXRSEngine=true

   | NOTE | If the application does not come up post the steps mentioned above,  then, navigate to **Application Servers** select **server 1**, select **Web container** then select **Custom properties** and modify the following property to **True**: `com.ibm.ws.webcontainer.emptyServletMappings` = true |
   |------|------|

**Figure 33: Set Web Container Custom Properties**
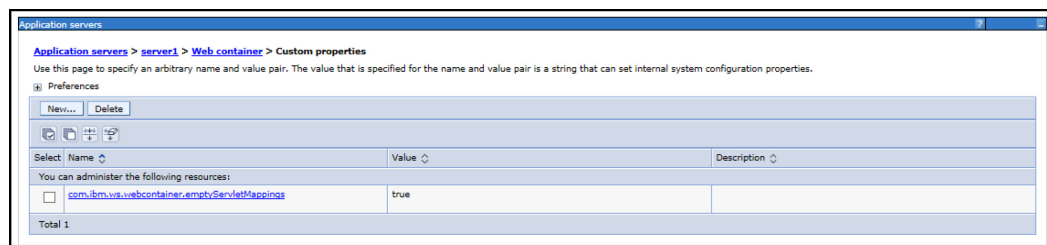


10. Restart the application.

## 7.7 Configure Resource Reference in Web Servers

Configuring resource reference in webservers includes the following activities. See Configure Resource Reference in Web Servers section in the OFS AAI Release 8.1.0.0.0 Installation and Configuration Guide to complete these procedures.

- Configure Resource Reference in WebSphere Application Server
    - Create a JDBC Provider
    - Create Data Source
    - Create J2C Authentication Details
    - Define JDBC Connection Pooling
- Configure Resource Reference in WebLogic Application Server
    - Create Data Source
    - Create GridLink Data Source
    - Configure Multi Data Sources
    - Configure Advanced Settings for Data Source
    - Configure JDBC Connection Pooling
    - Create Work Manager
- Configure Resource Reference in Tomcat Application Server
    - Create Data Source
    - Define JDBC Connection Pooling
    - Configure ClassLoader for Apache Tomcat

## 7.8 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.

Configuring Work Manager in web application servers includes the following activities. See Configure Work Manager in Web Application Servers section in the OFS AAI Release 8.1.0.0.0 Installation and Configuration Guide to complete these procedures.

- Configure Work Manager in WebSphere Application Server
    - Creating a Work Manager
    - Mapping Work Manager to OFSAA WebSphere Instance
- Configure Work Manager in WebLogic Application Server

## 7.9 Create and Deploy the EAR or WAR Files

See Create and Deploy the EAR or WAR Files in OFS AAI Release 8.1.0.0.0 Installation and Configuration Guide for details.

# 7.10 EAR or WAR File - Build Once and Deploy Across Multiple OFSAA Instances

See EAR or WAR File - Build Once and Deploy Across Multiple OFSAA Instances in OFS AAI Release 8.1.0.0.0 Installation and Configuration Guide for details.

# 7.11 Access the OFSAA Application

To access the OFSAA application, follow these steps:

1. Open a browser and enter the URL in the following format:

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

   For example, `https://192.0.2.2/ofsaa/login.jsp`

   The **OFSAA Login** window is displayed.

   **Figure 34: OFSAA Login Window**
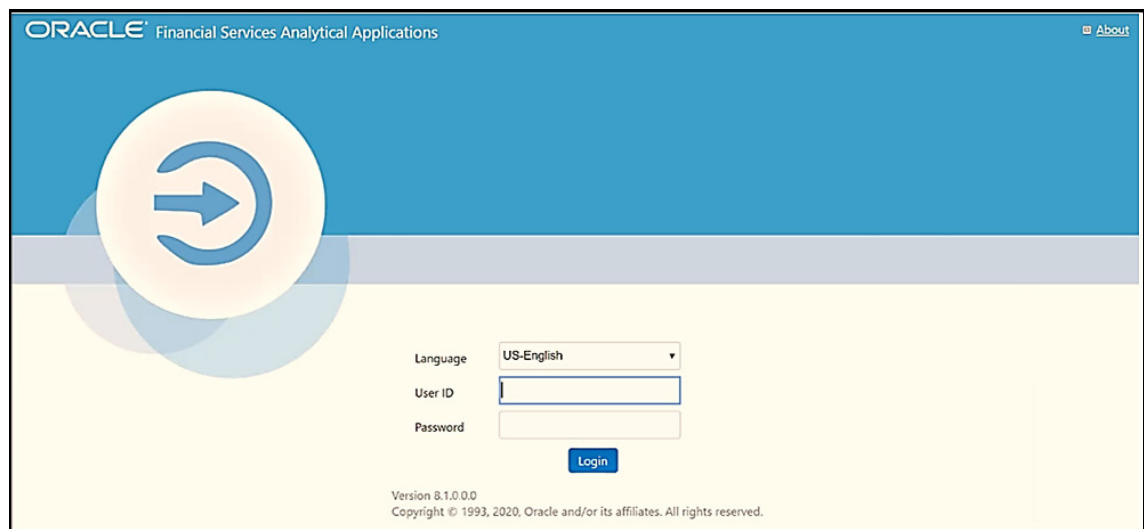
   

   With the installation of every OFSAA Application Pack, there are two seeded user profiles configured in the system:

   - SYSADMN System Administrator
   - SYSAUTH System Authorizer

   The SYSADMN and SYSAUTH users are configured with a default password, which you will require to login for the first time. See the MOS Doc ID: 2691681.1 for the password.

2. Log in to the application using the SYSADMN User ID and the default password. After the first login, you are prompted to change the password.

   | ATTENTION | The password change is required only for a new installation scenario and not for upgrade scenarios. |
   |-----------|----|

## 7.11.1    OFSAA Landing Page

On successful login, the **OFSAA Landing** screen is displayed.

**Figure 35: OFSAA Landing screen**
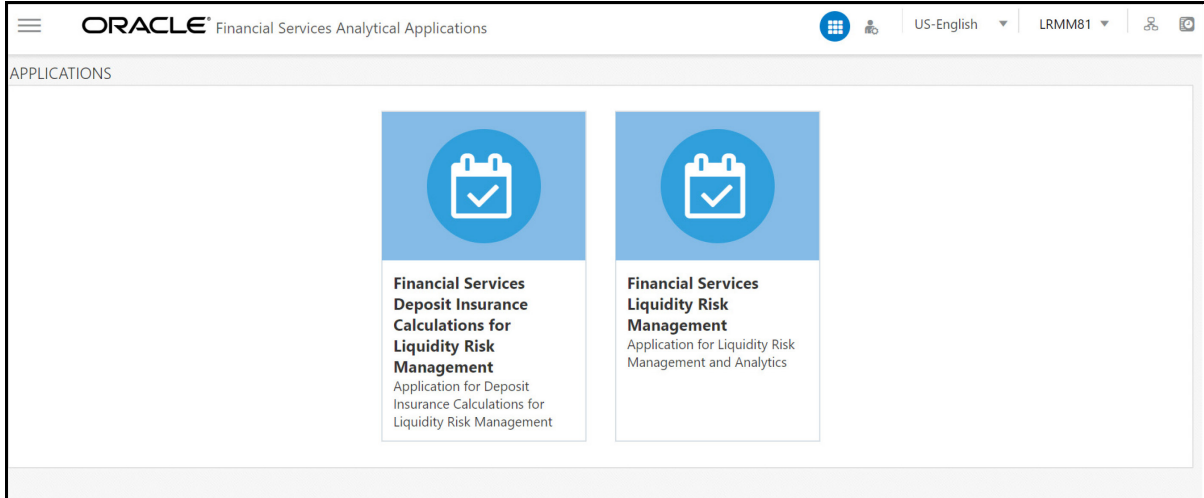


OFSAA Landing screen shows the available Applications as tiles, for which a user has access to. Clicking the respective Application tile launches that particular application. You can change the landing page based on your preference.

### 7.11.1.1    Masthead

This section describes the user interface components in the OFSAA Landing page.

**Figure 36: User Interface Components**
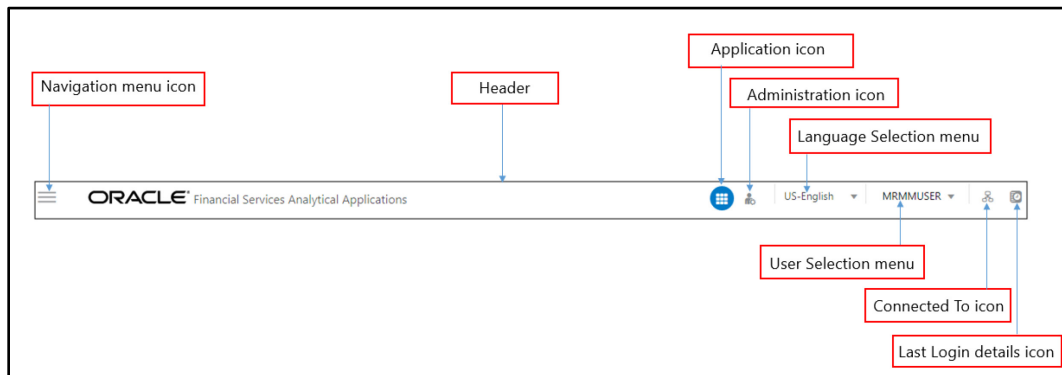


- **Navigation Menu**: This icon is used to trigger the Application Navigation Drawer.

- **Application Icon**: This icon is used to show the available Applications installed in your environment at any time.

- **Administration Icon**: This icon is used to go to the Administration window. The Administration window displays modules like System Configuration, Identity Management, Database Details, manage OFSAA Product Licenses, Create New Application, Information Domain, Translation Tools, and process Modelling Framework as Tiles.

- **Reports Icon**: This icon is used to launch various User Reports such as user Status Report, User Attribute Report, User Admin Activity Report, User Access Report, and Audit Trial Report.

- **Language Menu**: It displays the language you selected in the OFSAA Login Screen. The language options displayed in the Language Menu are based on the language packs installed in your OFSAA instance. Using this menu, you can change the language at any point in time.

- **User Menu**: Clicking this icon displays the following menu:

**Figure 37: User Menu**
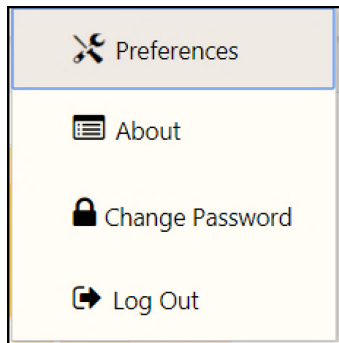


- **Preferences**: To set the OFSAA Landing Page.

- **Change Password**: To change your password. For more information, see the *Change Password* section in the OFS AAI User Guide. This option is available only if SMS Authorization is configured.

- **Log Out**: To log out from OFSAA applications.

- **Last Login Details**: This displays the last login details as shown.

**Figure 38: Last Login Details**



Last Login Date : 05/13/2018 20:28:46 PM
Last Failed Login Date : 05/11/2018 09:27:26 AM

## 7.11.1.2    Navigation Drawer

To launch the navigation drawer, follow these steps:

1. Click the **Navigation menu** ☰ to launch the Navigation Drawer as shown.

**Figure 39: Navigation Drawer**
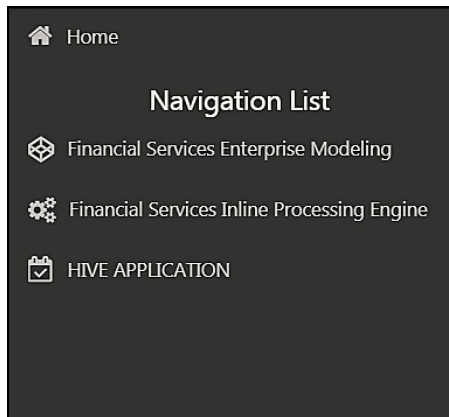


Here the navigation items appear as a list. The First Level menu shows the installed applications. Clicking an application displays the second-level menu with the application name and Common tasks menu. The arrangement of the menu depends on your installed application.

2. Clicking an item in the menu displays the next level sub-menu and so on. For example, to display Data Sources, click **Financial Services Enterprise Modeling** select **Data Management** select **Data Management Framework,** select **Data Management Tools** and then select **Data Sources.**

**Figure 40: Navigation Drawer Menus and Submenus**
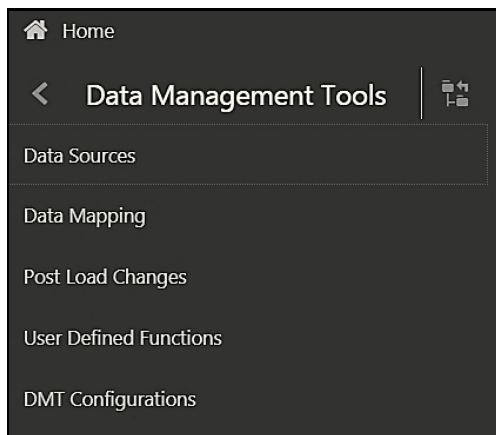


3. Click  **Hierarchical Menu** to display the navigation path of the current submenu as shown.

**Figure 41: Navigation Submenu**
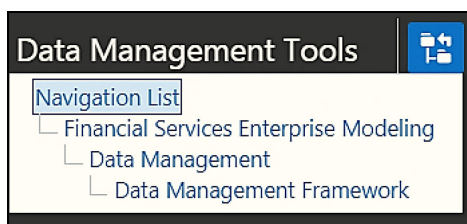


4. The RHS Content Area shows the Summary page of Data Sources. Click anywhere in the Content Area to hide the Navigation Drawer. To launch it back, click the Navigation menu .

5. Click **Home** to display the OFSAA Landing Screen.

## 7.11.1.3 System Configuration

The Administration and Configuration section allows the System Administrators to configure the Server details, Database details, OLAP details, and Information Domain along with the other Configuration process such as segment and metadata mapping, and mapping segment to security. System Configuration is mostly an onetime activity which helps the System administrator to make the Infrastructure system operational for usage.

### 7.11.1.3.1 Navigate to System Configuration

Click the **Administration Icon** 🔵 from the header to display the Administration tools in the Tiles menu. Click **System Configuration** from the Tiles menu to view a submenu list.

| NOTE | After you have accessed a tool from the submenu, the options are also available in the Navigation List to the left. Click the **Navigation menu** ≡ to access the Navigation List. |
|------|------|

**Figure 42: System Configuration Submenu**
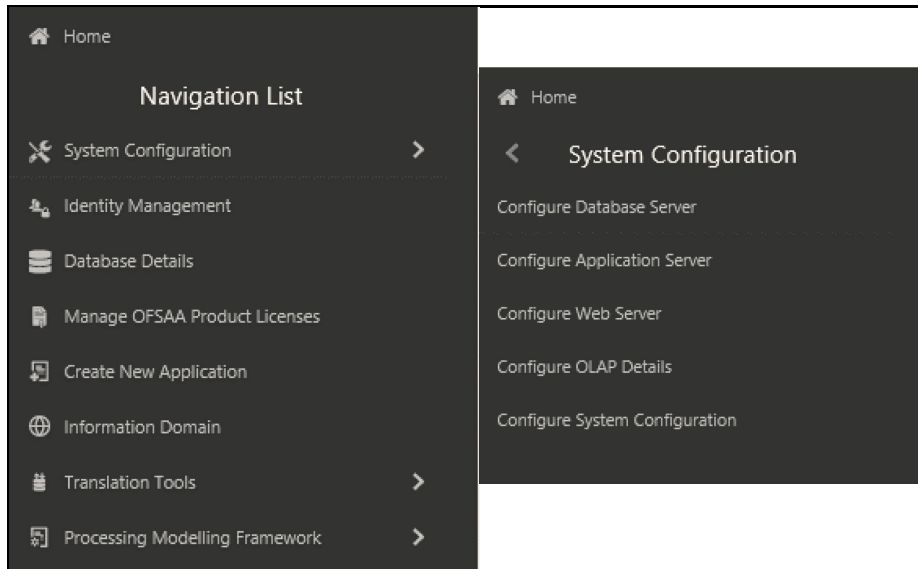


You (System Administrator) must have full access rights to ftpshare directory with appropriate User ID and password to add and modify the server details.

**7.11.1.3.2    Components of System Configuration**

System Configuration consists of the following sections.

- Database Server
- Application Server
- Web Server
- Database Details
- OLAP Details
- Information Domain
- Configuration
- Create Application

# 7.12    Configure the excludeURLList.cfg File

See Configure the excludeURLList.cfg File in OFS AAI Installation Guide for details.

# 7.13    View OFSAA Product Licenses after Installation of Application Pack

In an integrated environment, where you have multiple applications installed on the same domain or infrastructure, OFSAAI allows you to see the other licensed applications through the UI. For more information, see the View OFSAA Product Licenses after Installation of Application Pack in the OFS Analytical Applications Infrastructure User Guide Release 8.1.0.0.0.

## 7.13.1    Configuring Tomcat for User Group Authorization, Data Mapping, and Disabling WADL for the Web Service

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

1. Navigate to the $FIC_WEB_HOME/webroot/WEB-INF/ folder and open web.xml file.

2. Enter the following in the web.xml file.

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

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

```
<servlet>
<servlet-name>CommonRESTServlet</servlet-name>
<servlet-class>org.glassfish.jersey.servlet.ServletContainer</servlet-class>
<init-param>
```

```
<param-name>javax.ws.rs.Application</param-name>

<param-
value>com.ofs.fsapps.commonapps.util.ApplicationResourceConfig</param-value>

</init-param>

<load-on-startup>1</load-on-startup>

</servlet>
```

4. Add the following snippet before the <load-on-startup>1</load-on-startup> attribute.

```
<init-param>

<param-name>jersey.config.server.wadl.disableWadl</param-name>

<param-value>true</param-value>

</init-param>
```

5. Save and close the file.

## 7.14 Change the ICC Batch Ownership

All seeded Batches in the OFS LRS pack are automatically assigned to the SYSADMN user during installation. To view the batches in the Batch Maintenance menu, you must execute the following query in the Config Schema of the database:

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

Where:

- `fromUser` indicates the user who currently owns the batch

- `toUser` indicates the user to whom the ownership must be transferred

- `infodom` is an optional parameter. If specified, the ownership of the batches of that Infodom will be changed.

## 7.15 Add TNS entries in the TNSNAMES.ORA File

Add TNS entries in the `tnsnames.ora` file for every schema created for the Application Pack. For details see Add TNS entries in the TNSNAMES.ORA file section.

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

1. Log in to the application using System Administrator privileges.

2. Navigate to **System Configuration & Identity Management** tab.

3. Click **Administration and Configuration**, select **System Configuration**, and **click Database Details**.

4. Expand Name to get the list of TNS entry names.

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

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

## 7.16 Update OBIEE URL

To access the respective Business Intelligence Analytics Application, you must update the OBIEE URL in the AAI_MENU_B table after the OBIEE environment is up and running. Use the following command:

```
UPDATE AAI_MENU_B

SET V_MENU_URL = '&obieeURL'

WHERE V_MENU_ID IN ('OFS_LRM_BI')

/

COMMIT

/
```

## 7.17 Configure Data Source

This section details the configurations required for Data Sources in the OFSAA applications.

- Create a connection pool in the Information Domain. For more information, see the OFS AAI Release 8.1.0.0.0 Installation and Configuration Guide.

- JNDI name of the connection pool must be <res-ref-name> as mentioned in the `web.xml` file. For example: jdbc/OFSINFDOM

- Create and deploy the web components into the web server. For more information on deploying the web components, see the OFS AAI Release 8.1.0.0.0 Installation and Configuration Guide.

- The following tag must be added manually in web.xml if not already present in the `web.xml` file.

```
<resource-ref>

<!-- description>DB Connection INFODOM</description -->

<res-ref-name>jdbc/ INFODOM</res-ref-name>

<res-type>javax.sql.DataSource</res-type>

<res-auth>Container</res-auth>

</resource-ref>
```

## 7.18 Configure Data Redaction in OFSAA

This section details the configurations required in case you want to enable Data Redaction in the OFSAA applications.

**Topics**:

- Prerequisites

- [Data Redaction](#)
- [Enable Data Redaction in case of an Upgrade](#)

## 7.18.1 Prerequisites

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.

## 7.18.2 Data Redaction

OFSAA is enhanced to enable masking of sensitive data and Personal Identification Information (PII) to adhere to Regulations and Privacy Policies. Oracle Data Redaction provides selective, on-the-fly redaction of sensitive data in database query results 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, perform the following 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 and Configuration Guide](#).

## 7.18.3 Enable Data Redaction in case of Upgrade

This section details the configurations required in case you want to enable Data Redaction in OFSAA applications after upgrade to OFSAA 8.1.0.0.0 version from a previous version. Additionally, these configurations are required in case you did not enable TDE during OFS LRS 8.1.0.0.0 installation and want to enable at a later point of time.

Perform the following steps:

1. From the Configuration window in the System Configuration module, select the **Allow Data Redaction** checkbox.

2. 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.

## 7.19    Data Protection Implementation in OFSAA

Data Protection implementation in OFSAA applications includes the following:

- Right to be Forgotten
- Data Portability
- Pseudonymization
- Notice and Consent
- Data Archival
- Data Redaction

See the OFSDF Data Protection Implementation Guide for details.

### 7.19.1    Right to be Forgotten

Right to be Forgotten is the task of removing Personally Identifiable Information (PII) of a Data Subject for the given Party. The financial institution can delete PII for those Data Subjects who have requested this Right to be Forgotten functionality.

The Data Subjects may have made significant financial transactions, and/or financial information may be required for regulatory or compliance reporting. Deleting the complete record that consists of PII may lead to issues in data reconciliation. In OFSAA, the PII data will be replaced with randomized values and therefore, the complete Data Subject record is retained. As a result, financial information is retained; however, the associated Party PII is removed permanently.

#### 7.19.1.1    Configuring Right to be Forgotten During OFS LRS Installation

To configure Right to be Forgotten, follow these steps:

1. Ensure that you assign the role Data Controller to the LRM user.

2. Edit the task of the batch `<Infodom_name>_RightToForget`. By default the parameter is SYSADMN. Modify the user ID in the Metadata Value field to the LRM Data Controller user ID from Step 1.

POST-INSTALLATION

**Figure 43: Configure Right to be Forgotten for OFS LRS**
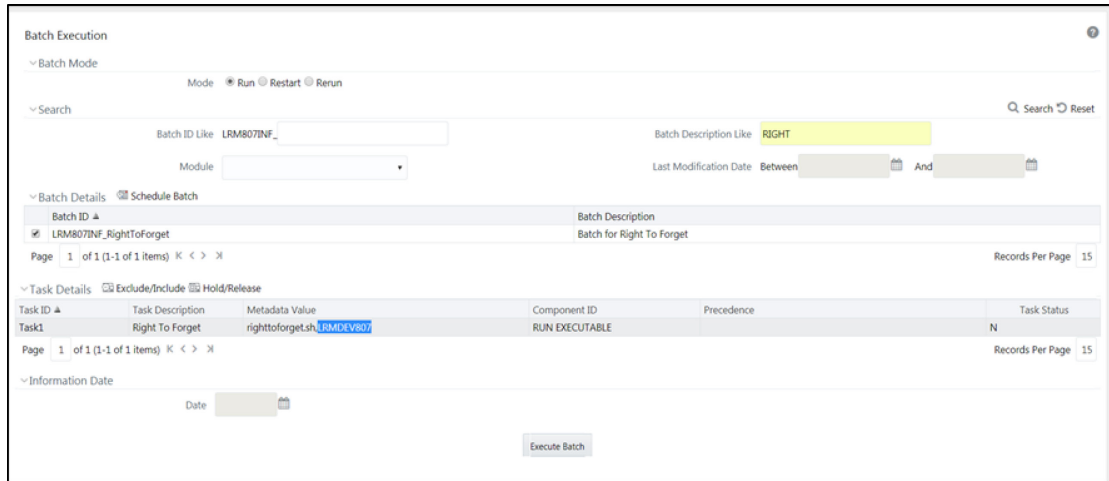


3. Add the party IDs entries for the Right to Forget in the FSI_PARTY_RIGHT_TO_FORGET table.

4. Execute the batch `<Infodom_name>_RightToForget`, for the specific FIC MIS date mentioned in the FSI_PARTY_RIGHT_TO_FORGET table.

# 7.20    Post-deployment Configurations

This section includes the post-deployment configuration steps.

**Topics**:

- Deploy the OFS LRS Analytics
- Logging as System Administrator
- Creating Application Users
- Mapping Application User (or Users) to User Group
- LRS Pack User Group Names

## 7.20.1    OBIEE Configuration - Deploy OFS LRM Analytics

The OFS LRM Analytics application release 8.1.0.0.0 is based upon a dedicated reporting mart built from the new Fusion Financial Services Data Model. OFS LRM Analytics 8.1.0.0.0 leverages several components of Oracle Business Intelligence Enterprise Edition (OBIEE) or Oracle Analytics Server (OAS) technology including Dashboards and Answers. It also includes various Dashboards and Reports for the user to carry out various Liquidity Gap based analytics.

Follow these steps to configure the OFS LRM Analytics:

1. Make sure Oracle Business Intelligence 12.2.1.4.0 or OAS 5.5.0 installation is completed and available. See Installing and Configuring Oracle Business Intelligence 12c (12.2.1.4) (E91876-03) or Installing and Configuring Oracle Analytics Server 5.5.0 (F27232-03) for more details.

2. Configure the ODBC data source to connect to the Oracle BI Server:

a. Navigate to **Control Panel**, select **Administrative Tools**, and then select **Data Sources (ODBC)**.

b. Select the **System DSN** tab and click **Add**.

c. Select a driver-specific to **Oracle BI Server 2.2.1.4.0** or **OAS 5.5** and click **Finish**.

d. Enter the **Name** and **Server** details (specify the Hostname or IP Address of the BI Server) and click **Next**.

e. Enter the Oracle BI Server login ID and password (Enter the User Name and Password created at the time of OBIEE or OAS installation). Update the port with the port number available for the BI Server in the **Availability** tab of Business Intelligence in the Enterprise Manager.

For example: In the following figure, the port number is 9514.

**Figure 44: Update Port Number in the BI Server**
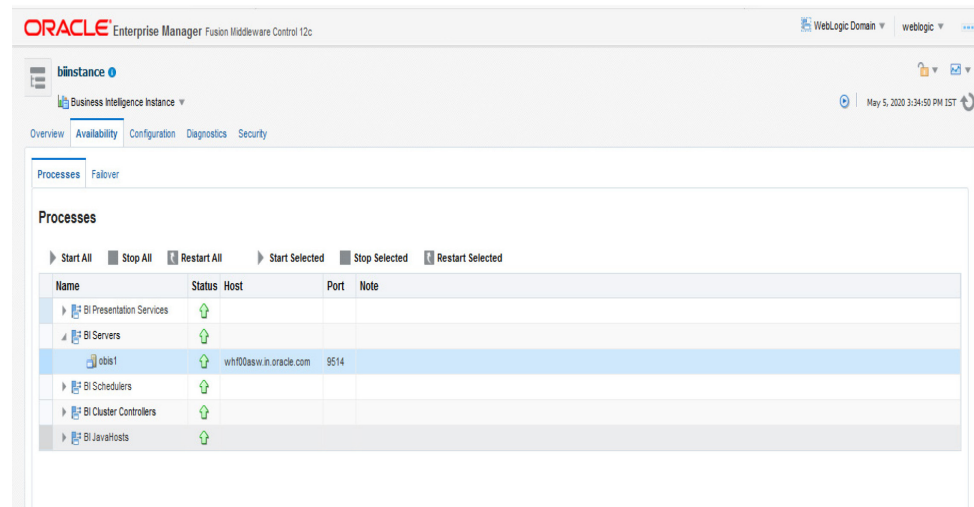


f. Click **Next.**

g. Navigate to the RPD and Catalog folders available in the following directories. Copy the RPD and required Catalog files (as per the license agreement) in the server where the BI client tools are installed:

— `$FIC_HOME/OFS_LRM_DASHBOARDS/12.2.1.4.0/datamodel` directory containing the `Liquidity_Risk_Management_Pack.rpd` file in the data model directory.

— `Liquidity_Risk_Management_Pack.catalog,` `Bank of Thailand.catalog,` `BNM.catalog,` `Deposit Insurance.catalog` and `HKMA LMR.catalog` files in the `$FIC_HOME/OFS_LRM_DASHBOARDS/12.2.1.4.0/content/catalog` directory.

h. Click **Finish**.

3. Modify the connection pool and set the properties.

a. Open the OBI Administration tool.

b. Select **Start**, **s**elect **Programs**, select **Oracle Business Intelligence**, and then select **BI Administration**.

c. Select **File**, select **Open**, select **Offline**, and then select the `Liquidity_Risk_Management_Pack.rpd` file.

d. In the **Open** dialog box, select and open the `Liquidity_Risk_Management_Pack.rpd` file.

e. Enter the Repository password. See the MOS Doc ID: [2691681.1](#) for the password.

f. In the **Physical** layer, double-click the **Connect Pool**: *LRMBI* to open its properties.

g. In the **General** tab, edit and check the following entries:

   **i.** **Call Interface**: (OCI 10g/11g).

   **ii.** **Data source name**: `<TNS Entry connecting to OFSAA atomic schema>`

   For example:
   ```
   (DESCRIPTION=(ADDRESS_LIST=(ADDRESS=(PROTOCOL=TCP)(HOST=<Databas
   e IP address>)(PORT=1521)))(CONNECT_DATA=(SERVICE_NAME=<Database
   Name>)))
   ```

   **iii.** **User name**: <enter atomic db user name>.

   **iv.** **Password**: <enter atomic db user password>.

   **v.** Confirm the password and click **OK** to close the window.

   **vi.** Similarly, configure the connection pools for *LRMBITRANS* and *LRMBI_INIT_BLOCK* and *LRMBI*.

   — Check **Global Consistency**, that is, press *Ctrl+k*.

   — Double-click on the warning (if you are using OAS).

   — Click **Reset to defaults** and click **OK**.

   **vii.** Click **Save**.

h. Click **Yes** for the Global Consistency Message. No warnings should be generated at this stage.

i. Close the RPD file (close the file and exit).

**4.** Log in to the OFS LRM Analytics application using the

URL: `http:// <ipaddress>:<port>/analytics` (replace the port number based on your setup).

**5.** Follow these steps to configure the BI publisher Data Source:

a. Log in to the OFS LRM Analytics application.

b. Navigate to **Administration**, select **BI Publisher**, and then select **Manage BI Publisher**.

c. Click **JDBC Connection** from Data Sources.

d. Click **Add Data Source**.

e. Enter the Data Source name as **LRM**.

f. Add Database details in the Connection string, that is the hostname (IP address), port number, and SID.

g. Enter the username (schema name) and password.

h. Click **Test Connection**.

i. Ensure that the connection successfully established. Click **Apply**.

6. Follow these steps to implement the Writeback feature:

a. Add the tag `<LightWriteback>true</LightWriteback>` in between
`<ServerInstance></ServerInstance>` in the `instanceconfig.xml` file.

For example:

```
<ServerInstance>

<LightWriteback>true</LightWriteback>

……………………. .

………………………

</ServerInstance>
```

b. Copy the `writeback.xml` file available in the
`$FIC_HOME/OFS_LRM_DASHBOARDS/12.2.1.4.0/content/msgdb/` directory to the
following OBIEE server directories. If the customMessages directory is not present, create
the directory manually.

Path1: `<BI Domain Home>/bidata/components/OBIPS/custommessages`

```
For example:
/scratch/oraobiee/Oracle/Middleware/Oracle_Home/user_projects/domain
s/bi/bidata/components/OBIPS/custommessages
```

Path2: `<BI Domain`
`Home>/bidata/service_instances/ssi/metadata/content/msgdb/l_en/custo`
`mMessages`

For example:

```
/scratch/oraobiee/Oracle/Middleware/Oracle_Home/user_projects/domain
s/bi/bidata/service_instances/ssi/metadata/content/msgdb/l_en/custom
Messages
```

c. Restart the **BI Services**.

d. Login to **OBIEE Analytics** and navigate to the **Administration** section on the right top
corner.

e. Click **Manage Privileges** and scroll down to **Writeback**.

f. Grant **Writeback to Database** privilege to Authenticated User and BI Administrator roles.

7. Perform the following OBIEE presentation server configuration steps:

a. Navigate to the `<<Oracle BI Instance`
`Home>/config/fmwconfig/biconfig/OBIPS` directory.

b. Edit the `instanceconfig.xml` file.

c. Insert the following code within the XML tag `<Views>` `</Views>`.

```
<Charts>

<MaxVisibleColumns>50000</MaxVisibleColumns>

<MaxVisiblePages>25000</MaxVisiblePages>
```

```
<MaxVisibleRows>10000000</MaxVisibleRows>

<MaxVisibleSections>50000</MaxVisibleSections>

<JavaHostReadLimitInKB>10240</JavaHostReadLimitInKB>

</Charts>
```

d. Insert the following code within the XML tag `<Views> </Views>`.

```
<Table>

<DefaultRowsDisplayedInDelivery>75</DefaultRowsDisplayedInDelivery>

<DefaultRowsDisplayedInDownload>6500</DefaultRowsDisplayedInDownload
>

<MaxCells>4000000</MaxCells>

<MaxVisibleRows>140000</MaxVisibleRows>

</Table>

<Narrative>

<MaxRecords>500000</MaxRecords>

<DefaultRowsDisplayed>25</DefaultRowsDisplayed>

</Narrative>
```

e. Save the file and restart the BI services.

> **NOTE** Take a backup of the `instanceconfig.xml` file before making any changes.

### 7.20.1.1 RPD and Catalog Deployment

This section includes steps for the RPD and Catalog deployment.

#### 7.20.1.1.1 Deploying the RPD

For RPD deployment, follow these steps:

1. Connect to the OBIEE server.

2. Create a folder. For example, `tmp` in the following directory:

   ```
   <Oracle_Home>/user_projects/domains/domain_name
   ```

3. Copy the `Liquidity_Risk_Management_Pack.rpd` from the local directory (where you have saved the RPD) to the folder created in the preceding step.

4. Open the command prompt, and navigate to the following directory:

   ```
   /scratch/<mount_name>/Middleware/Oracle_Home/user_projects/domains/bi/b
   itools/bin
   ```

5. Execute the following command:

   ```
   ./datamodel.sh  uploadrpd -I <RPDfilepath> -W <RPDpassword> -SI ssi -U
   <username> -P <password>
   ```

   For example:

```
./datamodel.sh  uploadrpd -I
/scratch/obiee12c/Middleware/Oracle_Home/user_projects/domains/bi/tmp/L
iquidity_Risk_Management_Pack.rpd -W Administrator1 -SI ssi -U weblogic
-P weblogic123
```



#### 7.20.1.1.2    Deploying the Web Catalog

For web catalog deployment, follow these steps:

1. Open the catalog manager, navigate to the File menu and open the catalog online by giving the necessary credentials based on your setup:

   - Type: Online

   - URL: http://<ipaddress>:<port>/analytics-ws

2. After the catalog is opened, it will display a directory structure on the left-hand side. Select the *Catalog Root and select Shared Folders* in the LHS tree structure.

   a. Go to the **File** menu and select **Unarchive**. It will ask for the path for a file.

   b. Browse the path of the archived catalog file saved in your local directory using the **Browse** button and click **OK**.

   c. The catalog must be extracted in the Shared Folders directory for the reports to display. A successful operation message is displayed.

   | NOTE | In **OAS**, the following error occurs in the **Catalog Manager** after unarchiving *Liquidity_Risk_Management_pack.catalog* file. |
   |---|---|

**Figure 45: Error in OAS Catalog Manager**
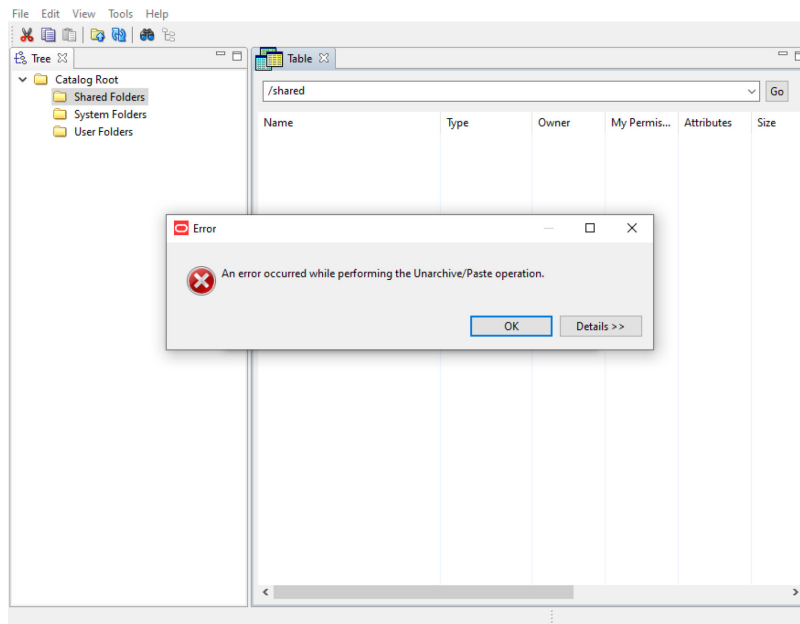


d.   To retrieve the catalog folders, follow these steps:

   **i.**   Click on the **Refresh** icon to view the unarchived catalog folders.

**Figure 46: Refresh to View the Unarchived Catalog Folders**
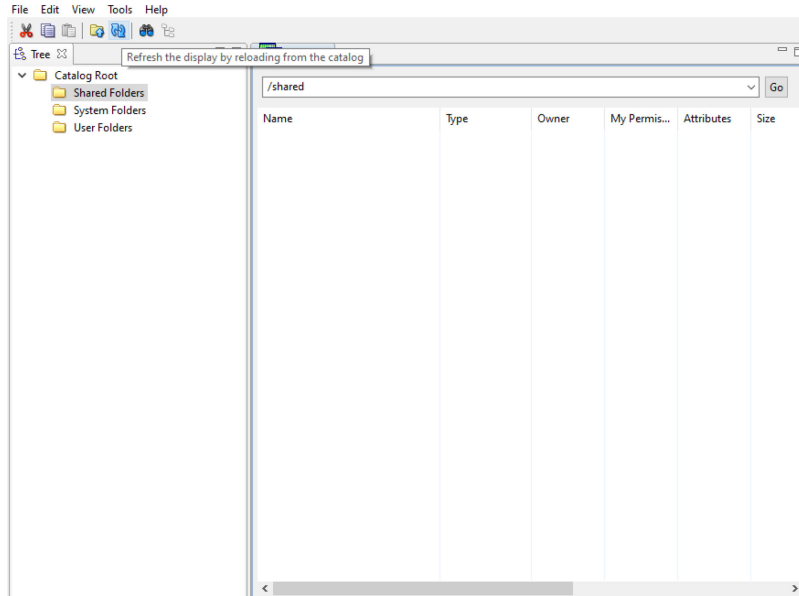


   **ii.**   The unarchived catalog folders are displayed.

**Figure 47: Unarchived Catalog Folders Displayed after Refresh**
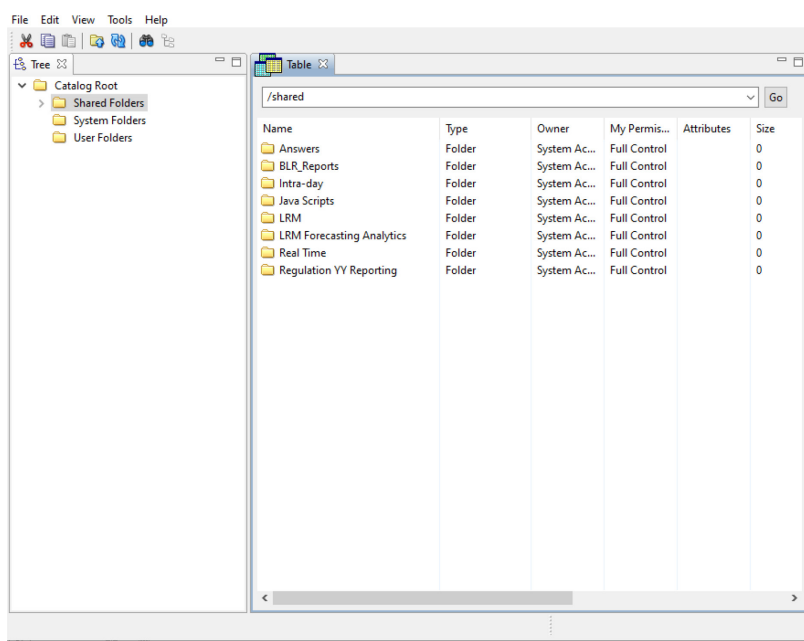


e.  Restart the presentation services once again.

f.  Open the analytics OBIEE URL (http://<ipaddress>:<port>/analytics).

g.  Login with credentials based on your setup, and verify that the catalog is available.

   **i.**  Click on catalog in the OBIEE application right top menu list.

   **ii.**  In the LHS menu, navigate to shared directories and verify all the directories are available.

#### 7.20.1.1.3 Starting and Stopping Services in OBIEE

Follow the below steps to start and stop OBIEE services:

1.  Connect to the OBIEE server.

2.  Navigate to the `/scratch/<mount_name>/Middleware/Oracle_Home/user_projects/domains/bi/bitools/bin` directory.

3.  Execute the following commands:

    a.  Command to stop service: `./stop.sh`

    b.  Command to start service: `./start.sh`

#### 7.20.1.1.4 OBIEE Configurations Post-Deployment of RPD and Catalog Files

For Post-deployment of RPD and Catalog files, follow these steps:

1.  For Intraday RBI reporting template, ensure that you update the following SQL query in the setup master table:

    a.  Name of the Bank

```
UPDATE SETUP_MASTER SET V_COMPONENT_VALUE = '<<Bank Name>>' WHERE
V_COMPONENT_CODE = 'INTRA_DAY_BANK';
```

b.  Whether the Bank provides Correspondent banking services (Y/N)

```
UPDATE SETUP_MASTER SET V_COMPONENT_VALUE = '<<Y or N>>' WHERE
V_COMPONENT_CODE = 'PROVIDE_CORRESPONDENT_BANKING_SERVICES';
```

2.  Perform the following RPD changes, to set the Early Warning Indicators 1 and 2:

    a.  Open the **Repository** in Online or Offline mode.

    b.  Select **Manage** and then select **Variables**.

    c.  Navigate to hierarchy **Repository**, select **Variables**, and then select **Static**.

    d.  Modify EARLYWARNIND1 and EARLYWARNIND2 variable values as required.

    e.  Save and commit the changes to RPD.

        **NOTE**: You must redeploy the RPD on BI server if you have made changes in the offline mode.

3.  For OBIEE reporting, configure the following:

    *a.* Navigate to the `<<obiee <<Oracle BI Instance Home>/config/fmwconfig/biconfig/OBIJH` directory.

    b.  Modify the `config.xml` file.

    c.  Increase parameter value for the following tag:

        `<XMLP>`

        `<InputStreamLimitInKB>40000</InputStreamLimitInKB>`

        `<ReadRequestBeforeProcessing>true</ReadRequestBeforeProcessing>`

        `</XMLP>`

        `<DVT>`

        `<InputStreamLimitInKB>40000</InputStreamLimitInKB>`

        `</DVT>`

    d.  Save the `config.xml` file.

    *e.* Navigate to the `<<obiee <<Oracle BI Instance Home>/config/fmwconfig/biconfig/OBIPS` directory.

    f.  Modify the `instanceconfig.xml` file.

    g.  Increase the parameter value for tag if already exists or add the following code:

        `<Charts>`

        `<MaxVisibleColumns>50000</MaxVisibleColumns>`

        `<MaxVisiblePages>25000</MaxVisiblePages>`

        `<MaxVisibleRows>100000</MaxVisibleRows>`

        `<MaxVisibleSections>50000</MaxVisibleSections>`

        `<JavaHostReadLimitInKB>10240</JavaHostReadLimitInKB>`

        `</Charts>`

```
and

<Pivot>

<MaxCells>1920000</MaxCells>

<MaxPagesToRollOutInDelivery>10000</MaxPagesToRollOutInDelivery>

<MaxVisibleColumns>50000</MaxVisibleColumns>

<MaxVisiblePages>100000</MaxVisiblePages>

<MaxVisibleRows>10000000</MaxVisibleRows>

<MaxVisibleSections>50000</MaxVisibleSections>

<DefaultRowsDisplayed>100000</DefaultRowsDisplayed>

</Pivot>

under <Views> tag
```

h. Save the `instanceconfig.xml` file.

i. Restart the BI Services.

4. To configure the real-time intraday reporting, Auto Refresh Dashboard Interval to perform the following steps:

a. Log in to the respective server where LRM analytics is deployed.

b. After successful login, select **Liquidity Risk**, and then select **Intraday Real Time Monitoring**.

c. Select **Edit Dashboard** from **Page** options in **Intraday Real Time Monitoring Dashboard**.

d. In the **Intraday Real Time Auto Dashboard Refresh** section from the **Edit Dashboard** page, select **Properties** from the text object (which is to the top right corner of the text object).

e. From the HTML code in the **Properties** dialog box, edit the auto-refresh interval in the **setInterval** method to the required time.

| NOTE | This value must be edited in terms of **seconds*1000**. For example, If the required refresh interval is 5 minutes (5*60 = 300 seconds), then the refresh time in the set Interval method should be **300*1000 = 300000** and the HTML code should be as follows, "setInterval('refreshTheFrame()',"300000");" in the text object properties. |

f. After editing is completed, submit and save the Dashboard.

g. Open the required dashboard and verify whether the dashboard is refreshed automatically in the given interval.

5. Intraday BIS reports are configured with data source *LRM*. You can create a new data source *LRM DB* in case it is needed that these reports populate from other database sources.

a. Steps to configure Intraday BIS reports with new data sources:

i. Create a data source with name **LRM DB** in the system.

**ii.** Edit the data model for the report you wish to change the data source.

**Figure 48: Edit Data Model**
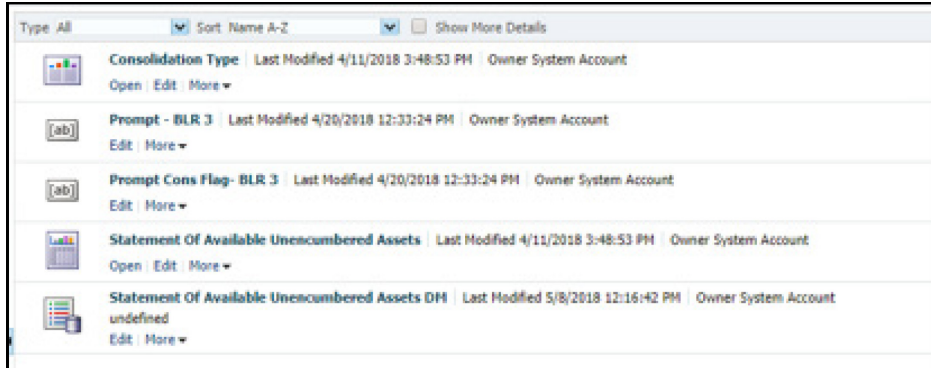


**iii.** Click the group present in the data set and edit the dataset properties. The **Edit Data Set** dialog box is displayed.

**Figure 49: Edit Data Set**
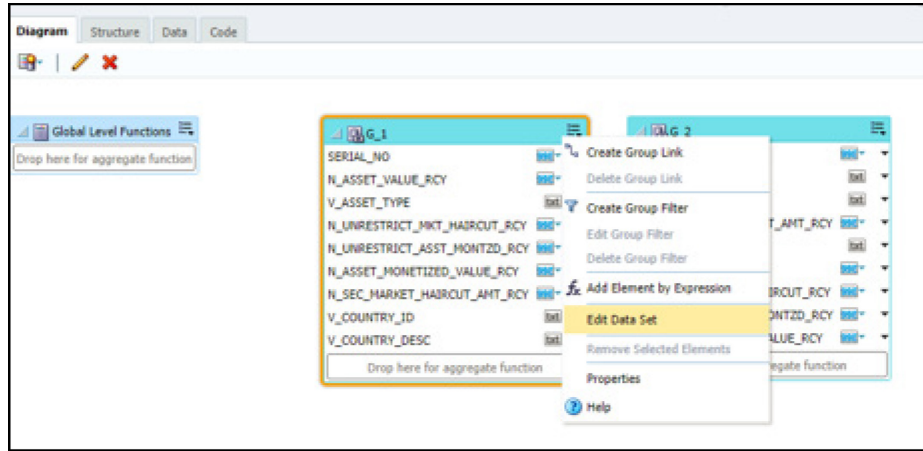


**iv.** Choose the data source **LRM DB**. Click **OK** and save the Data model.

| NOTE | Since these reports are pointing to the LRM DB data source by default, an error message appears if the LRM DB data source is not created in the system. This error can be ignored, and you can proceed to the next step. |
|---|---|

**Figure 50: Edit Data Set -  BIS-Direct Participants**
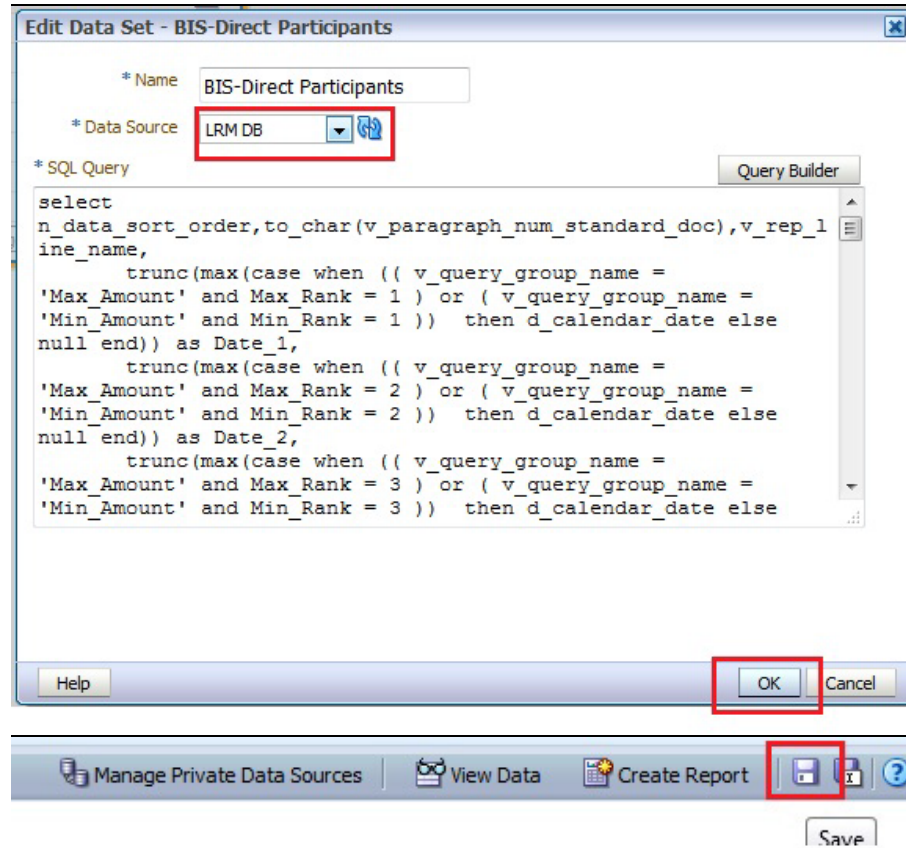


v. Perform this step for all the reports you wish to change the data source.

**NOTE**: Data model to be changed for Intraday BIS reports in the `/Shared Folders/Intra-day/ directory` are as follows:

— DM - BIS-Direct Participants

— DM - BIS-Correspondent Banks

— DM - BIS-Respondent banks

b. You do not require to configure OBIEE if you are using the existing data source, that is, LRM which is used by other regulatory reports.

## 7.20.2 Logging as System Administrator

This section includes provides information about the system administrator roles and privileges.

**Topics:**

- Role of an Administrator
- Function Maintenance
- Role Maintenance
- Function - Role Mapping

- [User Group Role Mapping](#)

### 7.20.2.1 Role of an Administrator

There are two types of Administrators as defined by the OFS Analytical Applications Infrastructure: A User Administrator and System Administrator.

- System Administration: refers to a process of managing, configuring, and maintaining confidential data in a multi-user computing environment. A System Administrator creates functions, roles, and mapping functions to specific roles. A System Administrator also maintains segment information, holiday list, and restricted passwords to ensure security within the application. The following are the activities of a System Administrator:
    - Function Maintenance
    - Role Maintenance
    - Function-Role Mapping
- User Administration: is one of the core functions of Security Management which involves administrators to create user definitions, user groups, maintain profiles, authorize users and user groups, and map users to groups, domains, and roles. A User Administrator controls the user privileges in accessing the application and is based on business requirements to provide access to view, create, edit, or delete confidential data.

A User Administrator grants permissions based on user roles and requirements.

The respective roles must be mapped to administrative user SYSADMN.

### 7.20.2.2 Function Maintenance

For details, see the *System Administrator* section in the [Oracle Financial Services Analytical Applications Infrastructure User Guide.](#)

### 7.20.2.3 Role Maintenance

For details, see the *System Administrator* section in the [Oracle Financial Services Analytical Applications Infrastructure User Guide.](#)

### 7.20.2.4 Function - Role Mapping

For details, see the *System Administrator* section in the [Oracle Financial Services Analytical Applications Infrastructure User Guide.](#)

### 7.20.2.5 User Group Role Map

For details, see the *User Group Role Map* section in [Oracle Financial Services Analytical Applications Infrastructure User Guide.](#)

## 7.20.3 Creating Application Users

Create the application users in the OFSAA setup before use.

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

## 7.20.4 Mapping Application User (or Users) to User Group

For details, see the *User Administrator* section in the Oracle Financial Services Analytical Applications Infrastructure User Guide.

Starting the OFSAA 8.1.0 release, with the installation of the LRS application pack, preconfigured Application user groups are seeded. These user groups are unique to every OFSAA Application Pack and have application roles preconfigured.

For more information on seeded User Groups, see LRS Pack User Group Names.

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

For details, see the *Mapping or Unmapping Users* section in the Oracle Financial Services Analytical Applications Infrastructure User Guide.

## 7.20.5 LRS Pack User Group Names

The section provides information about the User Group names seeded as part of the OFS LRS application pack.

To access the LRS application, you can map the created users to the following user groups:

- **LRMADMINGRP** - LRM Admin Group
- **LRMANALYSTGRP** - LRM Analyst Group
- **LRMAPPROVERGRP** - LRM Approver Group

These are the user roles for Deposit Insurance Calculation:

- **DICANALYST** - DIC Analyst Group
- **DICAPROVER** - DIC Approver Group

# 8      Remove OFSAA Infrastructure

See the Remove OFSAA Infrastructure section in the OFS AAI Release 8.1.0.0.0 Installation and Configuration Guide to complete these procedures:

- Uninstall the OFSAA Infrastructure

- Uninstall the EAR Files

    - Uninstall the EAR Files in WebSphere

    - Uninstall the EAR Files in WebLogic

    - Uninstall the EAR Files in Tomcat

- Clean Up the Environment

# Part II

**Topics:**

- [Upgrade](#)

# 9     Upgrade

This section includes the procedures for the various upgrade scenarios supported by OFS LRS Release 8.1.0.0.0.

**Topics:**

- [Upgrade Scenarios](#)
- [Prepare for Upgrade](#)
- [Upgrade from a OFS LRM Release Prior to version 8.0.6.0.2 to OFS LRS Release 8.1.0.0.0](#)
- [Upgrade from OFS LRM Release 8.0.6.0.2 (or later OFS LRM 8.0.6.0.x One-Off Patches) to OFS LRS Release 8.1.0.0.0](#)
- [Upgrade from OFS LRS Release 8.0.7.0.0 or later to OFS LRS Release 8.1.0.0.0](#)
- [Upgrade an Already Installed OFS LRS 8.0.7.0.0 or later application and Add a New LRS SKU](#)
- [Upgrade an Already Installed OFS LRS 8.0.7.0.0 or later application and Add another LRS Application](#)
- [Install OFS LRS Application Pack v8.1.0.0.0 on an Existing OFSAA Instance](#)

## 9.1     Upgrade Scenarios

> **ATTENTION**      Always ensure you run the upgrade installer only on the cloned environment.

**Table 26: Upgrade Scenarios**

| Scenario | Upgrade Instructions |
|---|---|
| **Upgrade from Release v8.0.x of OFS LRM or OFS LRS on AIX or Solaris x86 Operating System** | Release v8.1.0.0.0 of OFS LRS is not certified for AIX and Solaris x86 Operating Systems. If you are currently running OFSAA v8.0.x on AIX or Solaris x86 Operating Systems and plan to upgrade to Release v8.1.0.0.0, then you must migrate from AIX or Solaris x86 to Linux or Solaris SPARC. See the MOS Doc ID [2700084.1](#) for details. |
| **Upgrade from an OFS LRM Release Prior to version 8.0.6.0.2 to OFS LRS 8.1.0.0.0**<br><br>In this scenario, you are upgrading the application pack from an OFS LRM release before Release 8.0.6.0.2 to OFS LRS Release 8.1.0.0.0.<br><br>Example: You are on Release OFS LRM version 8.0.5.0.0 and | 1. Upgrade to OFS LRM 8.0.6.0.2 or later.<br>2. Follow the steps for [Upgrading from LRM 8.0.6.0.2 to LRS 8.1.0.0.0](#) |

| | |
|---|---|
| now want to upgrade to OFS LRS Release 8.1.0.0.0**.** | |
| **Upgrade from OFS LRM Release 8.0.6.0.2 (or later OFS LRM 8.0.6.0.x One-Off Patches) to OFS LRS Release 8.1.0.0.0**<br><br>Example: You are using an OFS LRM Release 8.0.6.0.2 and now want to upgrade it to Release 8.1.0.0.0 | 1. Run the Environment Check Utility tool and ensure that the hardware and software requirements are installed as per the OFS Analytical Applications Technology Matrix. See the OFSAA Environment Check Utility Guide for detailed steps.<br>2. Clone your existing environment to the 8.1.0.0.0 OFS Analytical Applications Technology Matrix.<br>3. Update the OFS_LRS_PACK.xml file.<br>4. Run the schema creator utility.<br>5. Update the Silent.props file present in the Release 8.1.0.0.0 pack.<br>6. Trigger the Release 8.1.0.0.0 installation. |
| **Upgrade from OFS LRS Release 8.0.7.0.0 or later to OFS LRS Release 8.1.0.0.0**<br><br>Example: You are using an OFS LRS Release 8.0.7.0.0 and now want to upgrade it to Release 8.1.0.0.0 | 1. Run the Environment Check Utility tool and ensure that the hardware and software requirements are installed as per the OFS Analytical Applications Technology Matrix. See the OFSAA Environment Check Utility Guide for detailed steps.<br>2. Clone your existing environment to the 8.1.0.0.0 OFS Analytical Applications Technology Matrix.<br>3. Update the OFS_LRS_PACK.xml file to enable ONLY the existing installed applications.<br>4. Update the Silent.props file present in the Release 8.1.0.0.0 pack.<br>5. Trigger the Release 8.1.0.0.0 installation. |
| **Upgrade an already installed OFS LRS 8.0.7.0.0 or later application and add new LRS SKU**<br><br>You have OFS LRS Liquidity Coverage Ratio (LCR) SKUs from Release 8.0.7.0.0 . You want to enable additional SKUs on Release 8.1.0.0.0.<br><br>Example: You have installed OFS LRMM and LRRCRBI SKU from Release 8.0.7.0.0 or 8.0.8.0.0. Now you additionally want to install LRRCBOT in Release 8.1.0.0.0. | 1. Run the Environment Check Utility tool and ensure that the hardware and software requirements are installed as per the OFS Analytical Applications Technology Matrix. See the OFSAA Environment Check Utility Guide for detailed steps.<br>2. Clone your existing environment to the 8.1.0.0.0 OFS Analytical Applications Technology Matrix.<br>3. Update OFS_LRS_PACK.xml file to enable ONLY the newly licensed applications.<br>4. Update the Silent.props file for the sections related to the newly licensed applications.<br>5. Trigger the Release 8.1.0.0.0 installation.<br>    **NOTE**: Configuring the OFSAAI_InstallConfig.xml file is not required.<br>6. This process upgrades the existing applications and installs the newly licensed applications. |
| **Upgrade an Already Installed OFS LRS 8.0.7.0.0 or later application and Add another LRS Application**<br><br>You have installed some applications from the OFS LRS pack Release 8.1.0.0.0; in the future, you decide to install new | If the schema creator output file (OFS_LRS_SCHEMA_OUTPUT.xml) EXISTS:<br>1. Update the OFS_LRS_PACK.xml file to disable the existing applications and enable the newly licensed applications.<br>2. Update the Silent.props file present in the Release 8.1.x pack ONLY for the newly licensed applications.<br>3. Trigger the Release 8.1.0.0.0 installation.<br>If the schema creator output file DOES NOT EXIST: |

| | |
|---|---|
| applications from the same pack.<br><br>Example: You have installed LRMM and RBI SKU using the LRS Pack installer 8.1.x. Later, you decide to license DICLRM and want to install it using the same LRS Pack installer 8.1.x. | 1. Update the `OFS_LRS_PACK.xml` file to disable the existing applications and enable the newly licensed applications.<br>2. Run the schema creator utility.<br>**ATTENTION**: While defining the schema details for the applications, provide the same schema details given in the previous installation. The output file OFS_LRS_SCHEMA_OUTPUT.xml is generated in the path `/OFS_LRS_PACK/schema_creator/` as a result of the schema creation process.<br>3. Update the Silent.props file present in the Release 8.1.x pack ONLY for the newly licensed applications.<br>4. Trigger the Release 8.1.0.0.0 installation.<br>**NOTE**: Configuring the `OFSAAI_InstallConfig.xml` file is not required |
| **Install OFS LRS Application Pack v8.1.0.0.0 on an Existing OFSAA Instance**<br><br>You have already installed an application pack from Release 8.1.0.0.0 and now you want to install another application pack from Release 8.1.0.0.0.<br><br>Example: OFS ALM Pack is already installed and now you want to install OFS LRS Pack. | 1. Run the schema creator utility ONLY for the new pack.<br>2. Update the OFS_LRS_PACK.xml file for the newly licensed pack.<br>3. Update the Silent.props file of the newly licensed pack.<br>4. Trigger the Release 8.1.0.0.0 installation. |

| NOTE | If you are adding an additional application, you must run the schema creator utility. |
|---|---|

## 9.2 Prepare for Upgrade

Before you plan to install or upgrade any of your application packs to Release 8.1.0.0.0, ensure that all the application packs in your current OFSAA instance are available in the Release 8.1.0.0.0 version. Contact My Oracle Support for more information about the release version details.

| NOTE | • Ensure to revert any customized data model changes done without performing data model upload before upgrading.<br><br>• If you have defined any custom run purpose, ensure to take a backup of the tables FSI_LRM_LOOKUP_TL and FSI_LRM_PROCESS_PURPOSE_MAP, before you run the upgrade. |
|---|---|

> **ATTENTION**  The minimum supported version is 8.0.6.0.2. If upgrading from a release before 8.0.6.0.2, then first upgrade to 8.0.6.0.2 or later. After this step, you can upgrade to 8.1.0.0.0 or later.

1. Backup the following environment files from their respective directories:
   - Database schema
   - `OFS_LRS_PACK.xml`
   - `OFS_LRS_SCHEMA_IN.xml`
   - `OFSAAI_InstallConfig.xml`

2. See the OFS Analytical Applications Technology Matrix for the hardware and software required to upgrade to OFS LRS Release 8.1.0.0.0.

3. Enable unlimited cryptographic policy for Java. For more information, see the *Enabling Unlimited Cryptographic Policy* section in the OFS Analytical Applications Infrastructure Administration Guide.

4. Clone your environment.

   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, see the Clone your Existing Environment section.

## 9.3  Upgrade from Release v8.0.x of OFS LRM or OFS LRS on AIX or Solaris x86 Operating System

Release v8.1.0.0.0 of OFS LRS is not certified for AIX and Solaris x86 Operating Systems. If you are currently running OFSAA v8.0.x on AIX or Solaris x86 Operating Systems and plan to upgrade to Release v8.1.0.0.0, then you must migrate from AIX or Solaris x86 to Linux or Solaris SPARC. See the MOS Doc ID 2700084.1 for details.

## 9.4  Upgrade from an OFS LRM Release Prior to version 8.0.6.0.2 to OFS LRS Release 8.1.0.0.0

Follow the steps in this section if you are upgrading from a release before OFS LRM version 8.0.6.0.2.

For example, you are using Release OFS LRM 8.0.5.0.0 and now want to upgrade to OFS LRS Release 8.1.0.0.0.

> **NOTE**  **The minimum supported version for OFS AAI is Release 8.0.6.1**.
>
> However, OFS LRM One-Off Patches 8.0.6.0.2 and later require OFS AAI 8.0.6.3 as a prerequisite. Therefore, the minimum supported version for OFS LRS upgrade is OFS LRM 8.0.6.0.2 (or later OFS LRM 8.0.6.0.x One-Off Patches).

1. Upgrade to OFS LRM 8.0.6.0.2 (or later 8.0.6.0.x One-Off patches). For the installation documents, see:

   - OFS LRM OHC Documentation Library, or

   - OFS LRS OHC Documentation Library

2. Upgrade from 8.0.6.0.2 (or later 8.0.6.0.x One-Off patches) to 8.1.0.0.0. For more information, see the Upgrade from OFS LRM Release 8.0.6.0.2 (or later OFS LRM 8.0.6.0.x One-Off Patches) to OFS LRS Release 8.1.0.0.0 section.

## 9.5 Upgrade from OFS LRM Release 8.0.6.0.2 (or later OFS LRM 8.0.6.0.x One-Off Patches) to OFS LRS Release 8.1.0.0.0

You are upgrading the OFS LRM application pack from Release 8.0.6.0.2 or later patches to OFS LRS Release 8.1.0.0.0.

For example: You are using release OFS LRM Release 8.0.6.0.5 and now want to upgrade to OFS LRS Release 8.1.0.0.0.

| NOTE | If upgrading from a release prior to OFS LRM 8.0.6.0.2, then first upgrade to OFS LRM 8.0.6.0.2 or later. To upgrade to 8.0.6.0.2, see the installation guides at OFS Liquidity Risk Management OHC Documentation Library. |

### 9.5.1 Clone Your Existing Environment

Clone your existing environment to the OFS Analytical Applications Technology Matrix.

For more information about the cloning procedure, see the OFS LRS Cloning Reference Guide Release 8.0.x.

### 9.5.2 Prerequisites for Upgrade from 8.0.6.0.2 to 8.1.0.0.0

Follow the steps mentioned in the MOS Doc ID 2676989.1.

### 9.5.3 Initializing the Upgrade

To initialize the upgrade, follow these steps:

1. Download the OFS LRS Application Pack Release 8.1.0.0.0 installer from Oracle Software Delivery Cloud.

2. Copy the archive file to your OFSAA server in Binary mode.

| NOTE | The archive files are different for every operating system such as Solaris, and RHEL or Oracle Linux. |

3. Log in to the OFSAA Server with user credentials that were used to install OFSAA.

4. Shut down all the OFSAAI Services. See the <u>Stop the Infrastructure Services</u> and <u>Start the Infrastructure Services</u> section in the OFS AAI Release 8.1.0.0.0 Installation and Configuration Guide for details.

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 8.1.0.0.0 installer.

Uncompress the unzip installer file using the command:

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

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

7. Give execute permission to the file using the command:

```
chmod 751 OFS_LRS_81000_<OperatingSystem>.zip
```

8. Extract the contents of the Oracle Financial Services Liquidity Risk Solution Application Pack 8.1.0.0.0 in the Download Directory installer archive file using the command:

```
Unzip <name of the file to be unzipped>
```

> **NOTE**    For Solaris OS, download, extract and apply the one-off patch **31509494** from <u>My Oracle Support</u>. See the Readme packaged with the patch for further instructions on how to install the patch.

9. Log in to OFSAA Infrastructure Config Schema and execute the following SQL query:

```
ALTER TABLE CONFIGURATION MODIFY PARAMNAME VARCHAR2 (100 CHAR);
```

10. Give execute permission to the archive file. Navigate to the path where the directory OFS_LRS_PACK exists and execute the command:

```
chmod -R 755 OFS_LRS_PACK
```

11. Execute the user `.profile` file.

12. Navigate to the `/OFS_LRS_PACK/schema_creator/conf` directory and modify the `OFS_LRS_SCHEMA_IN.xml` file by providing the existing values to the parameters JDBC_URL, JDBC_DRIVER, Host, Setupinfo name, schema names (config and atomic), password, default tablespace, Infodom, Quota as per the previous version.

**13.** Navigate to the `/OFS_LRS_PACK/schema_creator/bin` directory and execute the `osc.sh` file using the following command:

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

> **NOTE**    Step 11 and 12 are required to generate the `OFS_LRS_SCHEMA_OUTPUT.xml` file.

## 9.5.4    Update the OFS_LRS_PACK.xml File

Update the `OFS_LRS_PACK.xml` file. Enable only the existing installed applications.

The `OFS_LRS_PACK.xml` file contains details on the various products that are packaged in the OFS LRS application pack. This section provides information about the various tags and parameters available in the file and the values that you must update. Before installing OFS LRS, it is mandatory to update this file.

To configure the `OFS_LRS_PACK.xml` file, follow these steps:

1. Navigate to the `OFS_LRS_PACK/conf` directory.

2. Open the `OFS_LRS_PACK.xml` file in a text editor.

   **Figure 51: Sample OFS_LRS_PACK.xml File**

```
<APP_PACK_CONFIG>
    <APP_PACK_ID>OFS_LRS_PACK</APP_PACK_ID>
    <IS_OPT_INSTALL VALUE="TRUE" />
    <APP_PACK_NAME>Financial Services Liquidity Risk Solutions Pack</APP_PACK_NAME>
    <APP_PACK_DESCRIPTION>Application for Liquidity Risk Solutions </APP_PACK_DESCRIPTION>
    <VERSION>8.1.0.0.0</VERSION>
    <APP>
        <APP_ID PREREQ="" DEF_SEL_FLG="YES" ENABLE="YES">OFS_AAI</APP_ID>
        <APP_NAME>Financial Services Analytical Applications Infrastructure</APP_NAME>
        <APP_DESCRIPTION>Base Infrastucture for Analytical Applications</APP_DESCRIPTION>
        <VERSION>8.1.0.0.0</VERSION>
    </APP>
    <APP>
        <APP_ID PREREQ="OFS_AAI" DEF_SEL_FLG="YES" ENABLE="">OFS_AAAI</APP_ID>
        <APP_NAME>Financial Services Enterprise Modeling</APP_NAME>
        <APP_DESCRIPTION>Base Infrastucture for Analytical Applications</APP_DESCRIPTION>
        <VERSION>8.1.0.0.0</VERSION>
    </APP>
    <APP>
        <APP_ID PREREQ="OFS_AAAI" ENABLE="">OFS_LRM_LCR</APP_ID>
        <APP_NAME>Financial Services Liquidity Risk Measurement and Management</APP_NAME>
        <APP_DESCRIPTION>Core application for Liquidity Risk Solutions LCR</APP_DESCRIPTION>
        <VERSION>8.1.0.0.0</VERSION>
        <OPTIONS>
            <OPTION ID="OFS_LRM_LCR_EBA" PREREQ="OFS_LRM_LCR" ENABLE="">OFS_LRM_LCR_EBA</OPTION>
            <OPTION ID="OFS_LRM_LCR_USFED" PREREQ="OFS_LRM_LCR" ENABLE="">OFS_LRM_LCR_USFED</OPTION>
            <OPTION ID="OFS_LRM_LCR_BOT" PREREQ="OFS_LRM_LCR" ENABLE="">OFS_LRM_LCR_BOT</OPTION>
            <OPTION ID="OFS_LRM_LCR_RBI" PREREQ="OFS_LRM_LCR" ENABLE="">OFS_LRM_LCR_RBI</OPTION>
            <OPTION ID="OFS_LRM_LCR_BNM" PREREQ="OFS_LRM_LCR" ENABLE="">OFS_LRM_LCR_BNM</OPTION>
            <OPTION ID="OFS_LRM_LCR_MAS" PREREQ="OFS_LRM_LCR" ENABLE="">OFS_LRM_LCR_MAS</OPTION>
            <OPTION ID="OFS_LRM_LCR_HKMA" PREREQ="OFS_LRM_LCR" ENABLE="">OFS_LRM_LCR_HKMA</OPTION>
        </OPTIONS>
    </APP>
    <APP>
        <APP_ID PREREQ="OFS_AAAI" ENABLE="">OFS_LRM_DIC</APP_ID>
        <APP_NAME>Financial Services Deposit Insurance Calculations for Liquidity Risk Solutions Pack</APP_NAME>
        <APP_DESCRIPTION>Core application for Liquidity Risk Solutions Insurance</APP_DESCRIPTION>
        <VERSION>8.1.0.0.0</VERSION>
        <OPTIONS>
            <OPTION ID="OFS_LRM_DIC_USFED" PREREQ="OFS_LRM_DIC" ENABLE="">OFS_LRM_DIC_USFED</OPTION>
            <OPTION ID="OFS_LRM_DIC_BNM" PREREQ="OFS_LRM_DIC" ENABLE="">OFS_LRM_DIC_BNM</OPTION>
            <OPTION ID="OFS_LRM_DIC_MAS" PREREQ="OFS_LRM_DIC" ENABLE="">OFS_LRM_DIC_MAS</OPTION>
            <OPTION ID="OFS_LRM_DIC_HKMA" PREREQ="OFS_LRM_DIC" ENABLE="">OFS_LRM_DIC_HKMA</OPTION>
        </OPTIONS>
    </APP>
</APP_PACK_CONFIG>
```

3. Configure the `OFS_LRS_PACK.xml` file as mentioned in the following table.

**Table 27: OFS_LRS_PACK.xml File Parameters**

| Tag Name | Attribute Name | Value you must enter | Comments |
|---|---|---|---|
| APP_ID | ENABLE | YES for existing applications that you want to upgrade. For example: ENABLE as YES for the required APP_IDs - OFS_AAI, OFS_AAAI, OFS_LRM_LCR, and OFS_LRM_DIC, based on the licensing. | Set this attribute-value to YES for every APP_ID which you want to install or upgrade. |

## 9.5.5    Update the Silent.props File in Release 8.1.0.0.0 Pack

Update the `Silent.props` file present in the Release 8.1.0.0.0 pack. Most parameters in the `Silent.props` file for 8.1.0.0.0 have default values. Before triggering the installation, ensure that you review them thoroughly and update as required.

1. Navigate to the `OFS_LRS_PACK/appsLibConfig/conf` directory.

2. From Release 8.1 onwards, LRS supports a single `Silent.template` file available in the `OFS_LRS_PACK/appsLibConfig/conf` directory. The `Silent.template` is populated with default values.

3. Ensure to modify the template in the directory. Create a copy of this file and rename the copy as `Silent.props`.

4. Edit the `Silent.props` file and specify the parameters as per the requirements.

    SILENT installation is achieved through a properties file (`Silent.props`) that must be updated with proper values, before attempting to install using the silent mode. The following table lists all the properties that need to be specified.

    The default values for LCR and DIC are the same. In case you modify the values, ensure to have the same values for LCR and DIC.

5. Configure the `Silent.props` file as mentioned in the following table. Open the `Silent.props` file and edit only the following parameters.

Table 28: Parameters for the Silent.props File

| Property Name | Description of Property | Permissible values | Comments |
|---|---|---|---|
| UPLOAD_MODEL | Specify whether you want to perform Model Upload. | 0 = If you have already performed Model Upload and want to skip the model upload process.<br>1 = If you want to perform Model Upload. | The default value is 1. |
| MODEL_TYPE | Specify whether you want to use the released datamodel or customized datamodel for the model upload process. | 0 = If you want to upload the released datamodel.<br>1 = If you want to upload the customized datamodel. | The default value is 0. |
| DATAMODEL<br>DM_DIRECTORY | Specify the path (DM_DIRECTORY) and file (DATAMODEL) name for the customized datamodel. Mandatory only if you want to upload the customized datamodel, that is, you have specified MODEL_TYPE=1. | User Input | |

| Property Name | Description of Property | Permissible values | Comments |
|---|---|---|---|
| OFS_LRM_LCR_SEGMENT_1_CODE | Specify OFS_LRM_LCR Segment Code. | LRSSEGMNT | The default value is LRSSEGMNT. |
| OFS_LRM_LCR_ETL_APPSRC_TYPE | Specify if you want to create a new ETL App or Src pair or use an existing one. | 0 = If you want to create a new ETL App or Src pair.<br>1 = If you want to use an existing pair. | The default value is 0. |
| OFS_LRM_LCR_ETL_SRC_1_DESC | ETL OFS_LRM_LCR source description. | Describe the ETL Src.<br>Mandatory if you want to create new ETL Src if you have specified ETL_APPSRC_TYPE=0. | The default value is LRS Source. |
| OFS_LRM_LCR_ETL_SRC_2_DESC | ETL Staging source description. | Describe the ETL Src.<br>Mandatory if you want to create new ETL Src if you have specified ETL_APPSRC_TYPE=0. | The default value is Staging Source. |
| OFS_LRM_LCR_ETL_SRC_1_NAME | ETL OFS_LRM_LCR source name. | User Input | The default value is LRSSRC.<br>Specify the ETL Source Name into ETL Area Definitions to be deployed. |
| OFS_LRM_LCR_ETL_SRC_2_NAME | ETL Staging source name. | User Input | The default value is STGSRC.<br>Specify the ETL Source Name into ETL Area Definitions to be deployed. |
| OFS_LRM_DIC_SEGMENT_1_CODE | Specify OFS_LRM_DIC Segment Code. | User Input | The default value is LRSSEGMNT. |
| OFS_LRM_DIC_ETL_APPSRC_TYPE | Specify if you want to create a new ETL App or Src pair or use an existing one. | Specify if you want to create a new ETL App or Src pair or use an existing one.<br>0 = If you want to create a new ETL App or Src pair.<br>1 = If you want to use an existing pair. | The default value is 0. |

| Property Name | Description of Property | Permissible values | Comments |
|---|---|---|---|
| OFS_LRM_DIC_ETL_SRC_1_DESC | ETL OFS_LRM_DIC source description. | Describe the ETL Src. Mandatory if you want to create new ETL Src if you have specified ETL_APPSRC_TYPE=0. | The default value is LRS Source. |
| OFS_LRM_DIC_ETL_SRC_2_DESC | ETL Staging source description. | Describe the ETL Src. Mandatory if you want to create new ETL Src if you have specified ETL_APPSRC_TYPE=0. | The default value is Staging Source. |
| OFS_LRM_DIC_ETL_SRC_1_NAME | ETL OFS_LRM_DIC source name. | Specify the ETL Source Name into ETL Area Definitions to be deployed. | The default value is Staging LRSSRC. |
| OFS_LRM_DIC_ETL_SRC_2_NAME | ETL Staging source name. | Specify the ETL Source Name into ETL Area Definitions to be deployed. | The default value is Staging STGSRC. |

## 9.5.6 Trigger the Upgrade Installation

To trigger the installation, follow these steps:

1. Navigate to the path `OFS_LRS_PACK/bin` and enter the following command in the console to execute the application pack installer with the Silent option.

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

2. The installer proceeds with the pre-installation checks and starts the upgrade installation process.

3. The OFS LRS installation or upgrade begins. After the installation is complete, an *Installation Successful* message is displayed.

4. Verify the log files. See section <u>Verify the Log File Information for Upgrade</u> for details.

## 9.5.7 Verify the Log File Information for Upgrade

See the following logs paths for more information:

- Verify if the release is applied successfully by checking the log file generated in the locations mentioned in section <u>Verify the Log File Information</u>.

| NOTE | If you are installing LRS 8.1 in an environment with Oracle Linux 8, ignore the error in the `OFS_LRM_LCR_installation.log` file and `OFS_LRM_DIC_installation.log` file, available in the `/OFS_LRS_PACK/OFS_LRM_LCR/logs` and `/OFS_LRS_PACK/OFS_LRM_DIC/logs` directory respectively:<br><br>*FICDB LIBRARIES WILL NOT BE DEPLOYED AS DEFAULT COMBINATION linux7/oracle19.0 IS NOT AVAILABLE IN KIT.* |
|---|---|

- You can also verify the OFSAAI log files from the `OFS_LRS_PACK/OFS_AAAI_PACK/logs` directory.

- Verify the Model Upload log file available in the `ftpshare/<INFODOM>/logs` directory.

- You can ignore ORA-00001, ORA-00955, ORA-02260, ORA-01430, ORA-02298 errors in the log file. For any other errors, contact [My Oracle Support](#).

  You can ignore the ORA-00001 error in the log file available in the path `OFS_LRS_PACK/schema_creator/logs`.

| NOTE | • Ignore all the warnings in the installation log. For any issues contact [My Oracle Support](#).<br><br>• After upgrading any OFSAA Application or OFSAA Application Pack to the 8.1.0.0.0 version, if the *invalid identifier* error occurs with the error code ORA-00904 for the *update-description-msg-oth.sql* seeded script file, ignore the error. |
|---|---|

- Verify if the Data Model is uploaded successfully by checking the log file generated as per the directory or path mentioned in the `Silent.props` file.

## 9.5.8 Post-installation Steps for Upgrade

Perform the following post-installation steps:

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

2. After successful installation, follow these steps:

   a. Clear the application cache. Navigate to the following path depending on the configured web application server and delete the files.

      — **Tomcat**:
      ```
      <Tomcat installation
      directory>/work/Catalina/localhost/<Application
      name>/org/apache/jsp
      ```

      — **WebLogic**:
      ```
      <WebLogic installation location>/domains/<Domain
      ```

```
name>/servers/<Server name>/tmp/_WL_user/<Application
name>/<auto generated directory>/jsp_servlet
```

For WebLogic version 12.2.x.x, delete the directory named `.WL_internal` present in the `<WebLogic installation location>/user_projects/domains/< Domain name >/applications/<context_name>.ear/META-INF/` directory, if it exists.

— **WebSphere**:
```
<WebSphere installation directory>/AppServer/profiles/<Profile
name>/temp/<Node name>/server1/<Application name>/<.war file
name>
```

b. Deploy the RPD and catalog file(s):

   **NOTE**: Ensure that OBIEE 12.2.1.4.0 or OAS 5.5.0 is up and running.

   Take a backup of the deployed `Liquidity_Risk_Management_Pack.rpd` and `Liquidity_Risk_Management_Pack.catalog` files from the OBIEE environment.

   **i.** Navigate to the following RPD and catalog folders. Copy the RPD and required Catalog files (as per the license agreement) in the server where the BI client tools are installed:

   — `$FIC_HOME/OFS_LRM_DASHBOARDS/12.2.1.4.0/datamodel` directory containing the `Liquidity_Risk_Management_Pack.rpd` in the datamodel directory and archived.

   — `Liquidity_Risk_Management_Pack.catalog`, `Bank of Thailand.catalog`, `BNM.catalog`, `Deposit Insurance.catalog` and `HKMA LMR.catalog` files in the `$FIC_HOME/OFS_LRM_DASHBOARDS/12.2.1.4.0/content/catalog` directory.

   **ii.** Modify the connection pool and set the properties.

   **iii.** Any customizations performed on the older rpd and web catalog files must be manually carried over to the newer ones post-deployment.

   **iv.** Clear OBIEE cache, if enabled.

   **v.** For more information on deploying RPD and webcatalog files, see the [Deploying RPD and Webcatalog Files](#) section.

3. Add umask 0027 in the `.profile` of the UNIX account which manages the web server to ensure restricted access permissions.

4. Follow these steps to remove `ContextDocLoader` from the `web.xml` file:

   a. Navigate to `$FIC_WEB_HOME/webroot/WEB-INF` folder.

   b. Open the `web.xml` file in a text editor.

   c. Search for `ContextDocLoader` parameter and remove the following servlet entry:

   ```
   <servlet>

   <servlet-name>context</servlet-name>

   <servlet-
   class>com.ofs.fsapps.commonapps.core.summary.common.ContextDocLoade
   ```

```
r</servlet-class>

<load-on-startup>1</load-on-startup>

</servlet>
```

5. Generate the application EAR or WAR file and redeploy the application onto your configured web application server. See Create and Deploy the EAR or WAR Files, for more information on generating and deploying the EAR/WAR files.

6. Follow these steps to remove entry point from the sun-jaws.xml file:

   a. Navigate to the following path: `deployed-location/webapps/fichome/WEB-INF`

   b. Open the `sun-jaxws.xml` file.

   c. Search for the following LRMService endpoint entry and remove it:

   ```
   <endpoint name="LRMService" implementation="com.ofs.lrm.aai.LRMService"
   url-pattern="/lrmService" />
   ```

7. Restart all the OFSAAI services. See the Stop the Infrastructure Services and Start the Infrastructure Services sections in the OFS AAI Release 8.1.0.0.0 Installation and Configuration Guide for details.

8. Resave the hierarchies HLRM454, HLRM0482, HLRM0471, HLRM205.

9. To configure OBIEE or OAS, follow the steps mentioned in the BI Analytics - OBIEE Server Configuration Steps section.

### 9.5.8.1   Post-installation Steps for Upgrade from 8.0.6.0.2 to 8.1.0.0.0

Follow the steps mentioned in the MOS Doc ID 2676989.1.

### 9.5.8.2   OBIEE Server Configuration for Upgrade

Perform the following OBIEE server configuration steps. You can ignore the steps if OBIEE is already configured in your setup.

1. Execute the following steps to implement the Writeback feature:

   a. Add the tag `<LightWriteback>true</LightWriteback>` in between `<ServerInstance></ServerInstance>` in the `instanceconfig.xml` file.

   For example:

   ```
   <ServerInstance>

   <LightWriteback>true</LightWriteback>

   …………………..

   ………………………

   </ServerInstance>
   ```

   b. Copy the `writeback.xml` file available in the `$FIC_HOME/OFS_LRM_DASHBOARDS/12.2.1.4.0/content/msgdb/` directory to the following OBIEE server directories. If customMessages directory is not present, create the directory manually.

   Path1: `<BI Domain Home>/bidata/components/OBIPS/custommessages`

```
For example:
/scratch/oraobiee/Oracle/Middleware/Oracle_Home/user_projects/domain
s/bi/bidata/components/OBIPS/custommessages
```

Path2: `<BI Domain`
`Home>/bidata/service_instances/ssi/metadata/content/msgdb/l_en/custo`
`mMessages`

For example:

```
/scratch/oraobiee/Oracle/Middleware/Oracle_Home/user_projects/domain
s/bi/bidata/service_instances/ssi/metadata/content/msgdb/l_en/custom
Messages
```

c. Restart BI Services.

d. Login to **OBIEE Analytics** and navigate to **Administration** section on the right top corner.

e. Click **Manage Privileges** and scroll down to **Writeback**.

f. Grant **Writeback to Database** privilege to Authenticated User and BI Administrator roles.

2. Perform the following OBIEE presentation server configuration steps:

a. Navigate to the `<<Oracle BI Instance`
`Home>/config/fmwconfig/biconfig/OBIPS` directory.

a. Edit the file `instanceconfig.xml`.

b. Insert the following code within the XML tag `<Views> </Views>`.

```
<Charts>
<MaxVisibleColumns>50000</MaxVisibleColumns>
<MaxVisiblePages>25000</MaxVisiblePages>
<MaxVisibleRows>10000000</MaxVisibleRows>
<MaxVisibleSections>50000</MaxVisibleSections>
<JavaHostReadLimitInKB>10240</JavaHostReadLimitInKB>
</Charts>
```

c. Insert the following code within the XML tag `<Views> </Views>`.

```
<Table>
<DefaultRowsDisplayedInDelivery>75</DefaultRowsDisplayedInDelivery>
<DefaultRowsDisplayedInDownload>6500</DefaultRowsDisplayedInDownload
>
<MaxCells>4000000</MaxCells>
<MaxVisibleRows>140000</MaxVisibleRows>
</Table>
<Narrative>
<MaxRecords>500000</MaxRecords>
<DefaultRowsDisplayed>25</DefaultRowsDisplayed>
</Narrative>
```

d.   Save the file and restart the BI services.

> **NOTE**   Take a backup of the `instanceconfig.xml` file before making any changes.

3.  For Intraday RBI reporting template, ensure that you update the following SQL query in the setup master table:

    a.   Name of the Bank:

    ```
    UPDATE SETUP_MASTER SET V_COMPONENT_VALUE = '<<Bank Name>>' WHERE
    V_COMPONENT_CODE = 'INTRA_DAY_BANK';
    ```

    b.   Whether the Bank provides Correspondent banking services (Y or N)

    ```
    UPDATE SETUP_MASTER SET V_COMPONENT_VALUE = '<<Y or N>>' WHERE
    V_COMPONENT_CODE = 'PROVIDE_CORRESPONDENT_BANKING_SERVICES';
    ```

4.  Perform the following RPD changes, to set the Early Warning Indicators 1 and 2:

    a.   Open the **Repository** in Online or Offline mode.

    b.   Select **Manage** and then select **Variables**.

    c.   Navigate to hierarchy **Repository,** select **Variables**, and then select **Static**.

    d.   Modify EARLYWARNIND1 and EARLYWARNIND2 variable values as required.

    e.   Save and commit the changes to RPD.

    **NOTE**: You must redeploy the RPD on BI server if you have made changes in the offline mode.

5.  For OBIEE reporting, configure the following:

    a.   Navigate to the `<<obiee <<Oracle BI Instance Home>/config/fmwconfig/biconfig/OBIJH` directory.

    b.   Modify the `config.xml` file.

    c.   Increase parameter value for the following tag:

    ```
    <XMLP>
    <InputStreamLimitInKB>40000</InputStreamLimitInKB>
    <ReadRequestBeforeProcessing>true</ReadRequestBeforeProcessing>
    </XMLP>
    <DVT>
    <InputStreamLimitInKB>40000</InputStreamLimitInKB>
    </DVT>
    ```

    d.   Save the `config.xml` file.

    e.   Navigate to the `<<obiee <<Oracle BI Instance Home>/config/fmwconfig/biconfig/OBIPS` directory.

    f.   Modify the `instanceconfig.xml` file.

g.  Increase the parameter value for tag if already exists or add the following code:

```
<Charts>
<MaxVisibleColumns>50000</MaxVisibleColumns>
<MaxVisiblePages>25000</MaxVisiblePages>
<MaxVisibleRows>100000</MaxVisibleRows>
<MaxVisibleSections>50000</MaxVisibleSections>
<JavaHostReadLimitInKB>10240</JavaHostReadLimitInKB>
</Charts>
and
<Pivot>
<MaxCells>1920000</MaxCells>
<MaxPagesToRollOutInDelivery>10000</MaxPagesToRollOutInDelivery>
<MaxVisibleColumns>50000</MaxVisibleColumns>
<MaxVisiblePages>100000</MaxVisiblePages>
<MaxVisibleRows>10000000</MaxVisibleRows>
<MaxVisibleSections>50000</MaxVisibleSections>
<DefaultRowsDisplayed>100000</DefaultRowsDisplayed>
</Pivot>
under <Views> tag
```

h.  Save the `instanceconfig.xml` file.

i.  Restart the BI Services.

6.  To configure the real-time intraday reporting Auto Refresh Dashboard Interval to perform the following steps:

a.  Log in to the respective server where LRM analytics is deployed.

b.  After successful login, select **Liquidity Risk**, and then select **Intraday Real Time Monitoring**.

c.  Select **Edit Dashboard** from **Page** options in **Intraday Real Time Monitoring** Dashboard.

d.  In the **Intraday Real Time Auto Dashboard Refresh** section from the **Edit Dashboard** page, select **Properties** from the text object (which is to the top right corner of the text object).

e.  From the HTML code in the **Properties** dialog box, edit the auto-refresh interval in the *setInterval* method to the required time.

| NOTE | This value must be edited in terms of **seconds\*1000**. For example, If the required refresh interval is 5 minutes (5\*60 = 300 seconds), then the refresh time in the set Interval method should be **300\*1000 = 300000** and the HTML code should be as follows, "setInterval('refreshTheFrame()',"300000");" in the text object properties. |
|---|---|

f.   After editing is completed, submit and save the Dashboard.

g.   Open the required dashboard and verify whether the dashboard is refreshed automatically in the given interval.

7.   Intraday BIS reports are configured with data source *LRM*. You can create a new data source **LRM DB** in case it is needed that these reports populate from other database sources.

a.   Steps to configure Intraday BIS reports with new data sources:

   **i.**   Create a data source with name **LRM DB** in the system

   **ii.**   Edit the data model for the report you wish to change the data source.

**Figure 52: Edit Data Model**
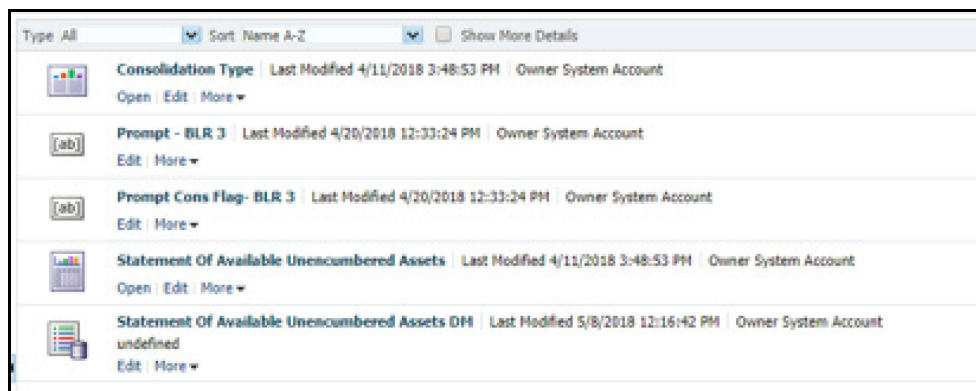


**iii.**   Click the group present in the data set and edit the dataset properties. The **Edit Data set** dialog box is displayed.

**Figure 53: Edit Data Set**
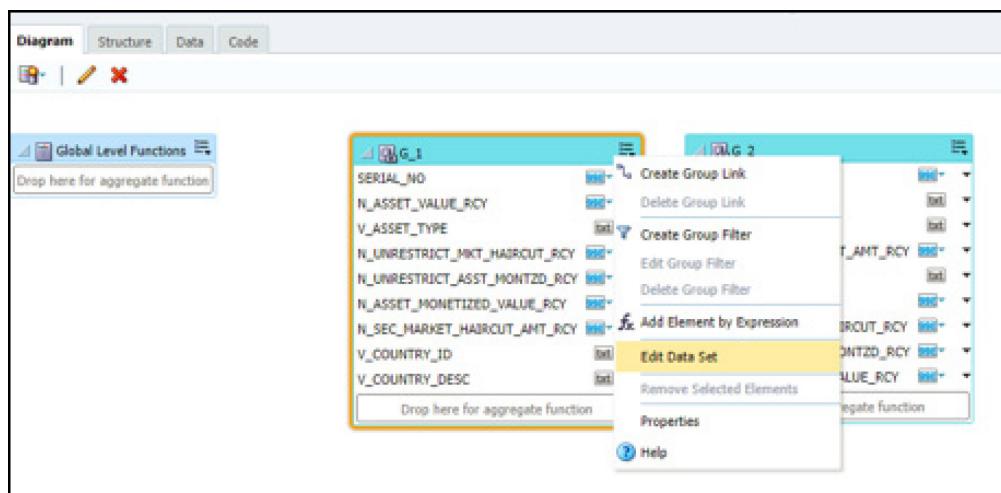


**iv.** Choose the data source **LRM DB**. Click **OK** and save the Data model.

| NOTE | Since these reports are pointing to the *LRM DB* data source by default, an error message appears if the *LRM DB* data source is not created in the system. This error can be ignored and you can proceed to the next step. |
|------|--------|

**Figure 54: Edit Data Set – BIS-Direct Participants**
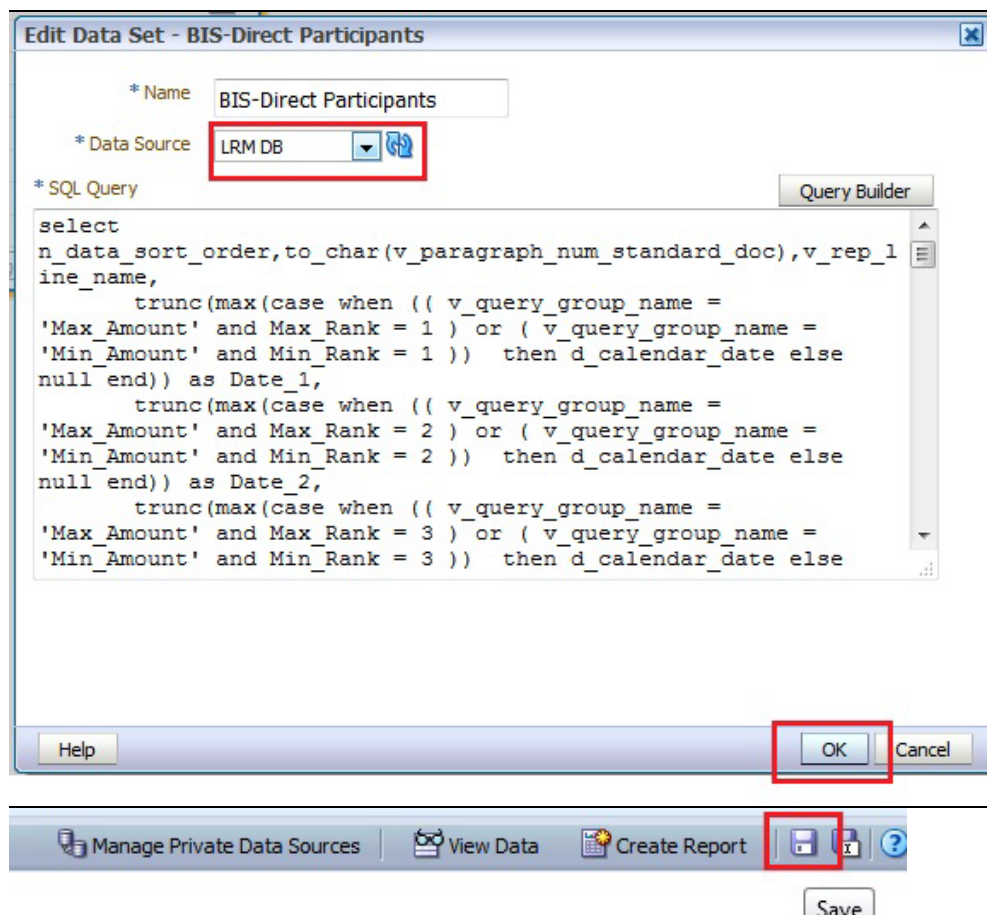


v.  Perform this step for all the reports you wish to change the data source.

> **NOTE**: Data model to be changed for Intraday BIS reports in the `/Shared Folders/Intra-day/` directory are as follows:

— DM - BIS-Direct Participants

— DM - BIS-Correspondent Banks

— DM - BIS-Respondent banks

b.  You do not require to configure OBIEE if you are using the existing data source that is LRM which is used by other regulatory reports

| NOTE | • For enabling the Right to be Forgotten, see Right to be Forgotten. |
| --- | --- |
| | • For enabling Data Redaction, see Data Redaction section, and Data Redaction section under Data Security and Data Privacy chapter in OFS Analytical Applications Infrastructure Administration Guide. |

### 9.5.8.3 View OFSAA Product Licenses after Installation of Application Pack

In an integrated environment, where you have multiple applications installed on the same domain or infrastructure, OFSAAI allows you to see the other licensed applications through the UI. For more information, see the View OFSAA Product Licenses after Installation of Application Pack in the OFS Analytical Applications Infrastructure User Guide Release 8.1.0.0.0.

## 9.6 Upgrade from OFS LRS Release 8.0.7.0.0 or later to OFS LRS Release 8.1.0.0.0

You are upgrading the OFS LRS application pack from Release 8.0.7.0.0 or later to OFS LRS Release 8.1.0.0.0.

For example: You are using an OFS LRS Release 8.0.7.0.0 or Release 8.0.8.0.0 version and now want to upgrade it to Release 8.1.0.0.0.

### 9.6.1 Clone Your Existing Environment

Clone your existing environment to the OFS Analytical Applications Technology Matrix.

For more information about the cloning procedure, see the OFS LRS Cloning Reference Guide Release 8.0.x.

### 9.6.2 Initializing the Upgrade

To initialize the upgrade, follow these steps:

1. Download the OFS LRS Application Pack Release 8.1.0.0.0 installer from Oracle Software Delivery Cloud.

2. Copy the archive file to your OFSAA server in Binary mode.

   > **NOTE** The archive files are different for every operating system such as Solaris, and RHEL or Oracle Linux.

3. Log in to the OFSAA Server with user credentials that were used to install OFSAA.

4. Shut down all the OFSAAI Services. See the Stop the Infrastructure Services and Start the Infrastructure Services sections in the OFS AAI Release 8.1.0.0.0 Installation and Configuration Guide for details.

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 8.1.0.0.0 installer.

   Uncompress the unzip installer file using the command:

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

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

7. Give execute permission to the file using the command:

```
chmod 751 OFS_LRS_81000_<OperatingSystem>.zip
```

8. Extract the contents of the Oracle Financial Services Liquidity Risk Solution Application Pack 8.1.0.0.0 in the Download Directory installer archive file using the command:

```
Unzip <name of the file to be unzipped>
```

> **NOTE**     For Solaris OS, download, extract and apply the one-off patch **31509494** from My Oracle Support. See the Readme packaged with the patch for further instructions on how to install the patch.

9. Give execute permission to the archive file. Navigate to the path where the OFS_LRS_PACK directory exists and execute the command:

```
chmod –R 755 OFS_LRS_PACK
```

10. Execute the user `.profile` file.

## 9.6.3   Update the OFS_LRS_PACK.xml File

Update the `OFS_LRS_PACK.xml` file. Enable only the existing installed applications.

The `OFS_LRS_PACK.xml` file contains details on the various products that are packaged in the OFS LRS application pack. This section provides information about the various tags and parameters available in the file and the values that you must update. Before installing OFS LRS, it is mandatory to update this file.

To configure the `OFS_LRS_PACK.xml` file, follow these steps:

1. Navigate to the `OFS_LRS_PACK/conf` directory.

2. Open the `OFS_LRS_PACK.xml` file in a text editor.

**Figure 55: Sample OFS_LRS_PACK.xml File**



3. Configure the `OFS_LRS_PACK.xml` file as mentioned in the following table.

**Table 29: OFS_LRS_PACK.xml File Parameters**

| Tag Name | Attribute Name | Value you must enter | Comments |
|---|---|---|---|
| APP_ID | ENABLE | YES for existing applications that you want to upgrade. For example: ENABLE as YES for the required APP_IDs - OFS_AAI, OFS_AAAI, OFS_LRM_LCR, and OFS_LRM_DIC, based on the licensing. | Set this attribute-value to YES for every APP_ID which you want to install or upgrade. |

## 9.6.4    Update the Silent.props File in Release 8.1.0.0.0 Pack

Update the `Silent.props` file present in the Release 8.1.0.0.0 pack. Most parameters in the `Silent.props` file for 8.1.0.0.0 have default values. Before triggering the installation, ensure that you review them thoroughly and update as required.

1.  Navigate to the `OFS_LRS_PACK/appsLibConfig/conf` directory.

2.  From Release 8.1 onwards, LRS supports a single `Silent.template` file available in the `OFS_LRS_PACK/appsLibConfig/conf` directory. The `Silent.template` is populated with default values.

3.  Ensure to modify the template in the directory. Create a copy of this file and rename the copy as `Silent.props`.

4.  Edit the `Silent.props` file and specify the parameters as per the requirements.

    SILENT installation is achieved through a properties file (`Silent.props`) that must be updated with proper values, before attempting to install using the silent mode. The following table lists all the properties that need to be specified.

    The default values for LCR and DIC are the same. In case you modify the values, ensure to have the same values for LCR and DIC.

5.  Configure the `Silent.props` file as mentioned in the following table. Open the `Silent.props` file and edit only the following parameters.

Table 30: Parameters for the Silent.props File

| Property Name | Description of Property | Permissible values | Comments |
|---|---|---|---|
| UPLOAD_MODEL | Specify whether you want to perform Model Upload. | 0 = If you have already performed Model Upload and want to skip the model upload process.<br>1 = If you want to perform Model Upload. | The default value is 1. |
| MODEL_TYPE | Specify whether you want to use the released datamodel or customized datamodel for the model upload process. | 0 = If you want to upload the released datamodel.<br>1 = If you want to upload the customized datamodel. | The default value is 0. |
| DATAMODEL DM_DIRECTORY | Specify the path (DM_DIRECTORY) and file (DATAMODEL) name for the customized datamodel. Mandatory only if you want to upload the customized datamodel, that is, you have specified MODEL_TYPE=1. | User Input | |

| Property Name | Description of Property | Permissible values | Comments |
|---|---|---|---|
| OFS_LRM_LCR_SEGMENT_1_CODE | Specify OFS_LRM_LCR Segment Code. | LRSSEGMNT | The default value is LRSSEGMNT. |
| OFS_LRM_LCR_ETL_APPSRC_TYPE | Specify if you want to create a new ETL App or Src pair or use an existing one. | 0 = If you want to create a new ETL App or Src pair.<br>1 = If you want to use an existing pair. | The default value is 0. |
| OFS_LRM_LCR_ETL_SRC_1_DESC | ETL OFS_LRM_LCR source description. | Describe the ETL Src.<br>Mandatory if you want to create new ETL Src if you have specified ETL_APPSRC_TYPE=0. | The default value is LRS Source. |
| OFS_LRM_LCR_ETL_SRC_2_DESC | ETL Staging source description. | Describe the ETL Src.<br>Mandatory if you want to create new ETL Src if you have specified ETL_APPSRC_TYPE=0. | The default value is Staging Source. |
| OFS_LRM_LCR_ETL_SRC_1_NAME | ETL OFS_LRM_LCR source name. | User Input | The default value is LRSSRC.<br>Specify the ETL Source Name into ETL Area Definitions to be deployed. |
| OFS_LRM_LCR_ETL_SRC_2_NAME | ETL Staging source name. | User Input | The default value is STGSRC.<br>Specify the ETL Source Name into ETL Area Definitions to be deployed. |
| OFS_LRM_DIC_SEGMENT_1_CODE | Specify OFS_LRM_DIC Segment Code. | User Input | The default value is LRSSEGMNT. |
| OFS_LRM_DIC_ETL_APPSRC_TYPE | Specify if you want to create a new ETL App or Src pair or use an existing one. | Specify if you want to create a new ETL App or Src pair or use an existing one.<br>0 = If you want to create a new ETL App or Src pair.<br>1 = If you want to use an existing pair. | The default value is 0. |

| Property Name | Description of Property | Permissible values | Comments |
|---|---|---|---|
| OFS_LRM_DIC_ETL_SRC_1_DESC | ETL OFS_LRM_DIC source description. | Describe the ETL Src. Mandatory if you want to create new ETL Src if you have specified ETL_APPSRC_TYPE=0. | The default value is LRS Source. |
| OFS_LRM_DIC_ETL_SRC_2_DESC | ETL Staging source description. | Describe the ETL Src. Mandatory if you want to create new ETL Src if you have specified ETL_APPSRC_TYPE=0. | The default value is Staging Source. |
| OFS_LRM_DIC_ETL_SRC_1_NAME | ETL OFS_LRM_DIC source name. | Specify the ETL Source Name into ETL Area Definitions to be deployed. | The default value is Staging LRSSRC. |
| OFS_LRM_DIC_ETL_SRC_2_NAME | ETL Staging source name. | Specify the ETL Source Name into ETL Area Definitions to be deployed. | The default value is Staging STGSRC. |

## 9.6.5 Trigger the Upgrade Installation

To trigger the installation, follow these steps:

1. Navigate to the path `OFS_LRS_PACK/bin`, and enter the following command in the console to execute the application pack installer with the Silent option:

   `./setup.sh SILENT`

2. The installer proceeds with the pre-installation checks and starts the upgrade installation process.

3. The OFS LRS installation or upgrade begins. After the installation is complete, *Installation Successful* message is displayed.

4. Verify the log files. See Verify the Log File Information for Upgrade section for details.

## 9.6.6 Verify the Log File Information for Upgrade

Verify the log files in the locations mentioned in section Verify the Log File Information.

## 9.6.7 Post-installation Steps

Follow the steps mentioned in the Post-installation Steps section.

## 9.7 Upgrade an Already Installed OFS LRS 8.0.7.0.0 or later application and Add a New LRS SKU

You have any of the OFS LRS Liquidity Coverage Ratio (LCR) SKUs from Release 8.0.7.0.0 . You want to enable additional SKUs on Release 8.1.0.0.0.

For example: You have installed OFS LRMM and LRRCRBI SKU from Release 8.0.7.0.0 or 8.0.8.0.0. Now you want to install LRRCBOT in Release 8.1.0.0.0.

### 9.7.1 Clone Your Existing Environment

Clone your existing environment to the OFS Analytical Applications Technology Matrix.

For more information about the cloning procedure, see the OFS LRS Cloning Reference Guide Release 8.0.x.

### 9.7.2 Initializing the Upgrade

To initialize the upgrade, follow these steps:

1. Download the OFS LRS Application Pack Release 8.1.0.0.0 installer from Oracle Software Delivery Cloud.

2. Copy the archive file to your OFSAA server in Binary mode.

   > **NOTE** The archive files are different for every operating system such as Solaris, and RHEL or Oracle Linux.

3. Log in to the OFSAA Server with user credentials that were used to install OFSAA.

4. Shut down all the OFSAAI Services. See the Stop the Infrastructure Services and Start the Infrastructure Services section in the OFS AAI Release 8.1.0.0.0 Installation and Configuration Guide for details.

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 8.1.0.0.0 installer.

   Uncompress the unzip installer file using the command:

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

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

7. Give execute permission to the file using the command:

```
chmod 751 OFS_LRS_81000_<OperatingSystem>.zip
```

8. Extract the contents of the Oracle Financial Services Liquidity Risk Solution Application Pack 8.1.0.0.0 in the Download Directory installer archive file using the command:

```
Unzip <name of the file to be unzipped>
```

> **NOTE**　For Solaris OS, download, extract and apply the one-off patch **31509494** from My Oracle Support. See the Readme packaged with the patch for further instructions on how to install the patch.

9. Give execute permission to the archive file. Navigate to the path where the OFS_LRS_PACK directory exists and execute the command:

```
chmod -R 755 OFS_LRS_PACK
```

10. Execute the user `.profile` file.

## 9.7.3　Update the OFS_LRS_PACK.xml File

Update the `OFS_LRS_PACK.xml` file. Enable only the new applications.

The `OFS_LRS_PACK.xml` file contains details on the various products that are packaged in the OFS LRS application pack. This section provides information about the various tags and parameters available in the file and the values that you must update. Before installing OFS LRS, it is mandatory to update this file.

To configure the OFS_LRS_PACK.xml file, follow these steps:

1. Navigate to the `OFS_LRS_PACK/conf` directory.

2. Open the `OFS_LRS_PACK.xml` file in a text editor.

**Figure 56: Sample OFS_LRS_PACK.xml File**

```xml
<APP_PACK_CONFIG>
    <APP_PACK_ID>OFS_LRS_PACK</APP_PACK_ID>
    <IS_OPT_INSTALL VALUE="TRUE" />
    <APP_PACK_NAME>Financial Services Liquidity Risk Solutions Pack</APP_PACK_NAME>
    <APP_PACK_DESCRIPTION>Application for Liquidity Risk Solutions </APP_PACK_DESCRIPTION>
    <VERSION>8.1.0.0.0</VERSION>
    <APP>
        <APP_ID PREREQ="" DEF_SEL_FLG="YES" ENABLE="YES">OFS_AAI</APP_ID>
        <APP_NAME>Financial Services Analytical Applications Infrastructure</APP_NAME>
        <APP_DESCRIPTION>Base Infrastructure for Analytical Applications</APP_DESCRIPTION>
        <VERSION>8.1.0.0.0</VERSION>
    </APP>
    <APP>
        <APP_ID PREREQ="OFS_AAI" DEF_SEL_FLG="YES" ENABLE="">OFS_AAAI</APP_ID>
        <APP_NAME>Financial Services Enterprise Modeling</APP_NAME>
        <APP_DESCRIPTION>Base Infrastructure for Analytical Applications</APP_DESCRIPTION>
        <VERSION>8.1.0.0.0</VERSION>
    </APP>
    <APP>
        <APP_ID PREREQ="OFS_AAAI" ENABLE="">OFS_LRM_LCR</APP_ID>
        <APP_NAME>Financial Services Liquidity Risk Measurement and Management</APP_NAME>
        <APP_DESCRIPTION>Core application for Liquidity Risk Solutions LCR</APP_DESCRIPTION>
        <VERSION>8.1.0.0.0</VERSION>
        <OPTIONS>
            <OPTION ID="OFS_LRM_LCR_EBA" PREREQ="OFS_LRM_LCR" ENABLE="">OFS_LRM_LCR_EBA</OPTION>
            <OPTION ID="OFS_LRM_LCR_USFED" PREREQ="OFS_LRM_LCR" ENABLE="">OFS_LRM_LCR_USFED</OPTION>
            <OPTION ID="OFS_LRM_LCR_BOT" PREREQ="OFS_LRM_LCR" ENABLE="">OFS_LRM_LCR_BOT</OPTION>
            <OPTION ID="OFS_LRM_LCR_RBI" PREREQ="OFS_LRM_LCR" ENABLE="">OFS_LRM_LCR_RBI</OPTION>
            <OPTION ID="OFS_LRM_LCR_BNM" PREREQ="OFS_LRM_LCR" ENABLE="">OFS_LRM_LCR_BNM</OPTION>
            <OPTION ID="OFS_LRM_LCR_MAS" PREREQ="OFS_LRM_LCR" ENABLE="">OFS_LRM_LCR_MAS</OPTION>
            <OPTION ID="OFS_LRM_LCR_HKMA" PREREQ="OFS_LRM_LCR" ENABLE="">OFS_LRM_LCR_HKMA</OPTION>
        </OPTIONS>
    </APP>
    <APP>
        <APP_ID PREREQ="OFS_AAAI" ENABLE="">OFS_LRM_DIC</APP_ID>
        <APP_NAME>Financial Services Deposit Insurance Calculations for Liquidity Risk Solutions Pack</APP_NAME>
        <APP_DESCRIPTION>Core application for Liquidity Risk Solutions Insurance</APP_DESCRIPTION>
        <VERSION>8.1.0.0.0</VERSION>
        <OPTIONS>
            <OPTION ID="OFS_LRM_DIC_USFED" PREREQ="OFS_LRM_DIC" ENABLE="">OFS_LRM_DIC_USFED</OPTION>
            <OPTION ID="OFS_LRM_DIC_BNM" PREREQ="OFS_LRM_DIC" ENABLE="">OFS_LRM_DIC_BNM</OPTION>
            <OPTION ID="OFS_LRM_DIC_MAS" PREREQ="OFS_LRM_DIC" ENABLE="">OFS_LRM_DIC_MAS</OPTION>
            <OPTION ID="OFS_LRM_DIC_HKMA" PREREQ="OFS_LRM_DIC" ENABLE="">OFS_LRM_DIC_HKMA</OPTION>
        </OPTIONS>
    </APP>
</APP_PACK_CONFIG>
```

3. Configure the `OFS_LRS_PACK.xml` file as mentioned in the following table.

**Table 31: OFS_LRS_PACK.xml File Parameters**

| Tag Name | Attribute Name | Value you must enter | Comments |
|---|---|---|---|
| APP_ID | ENABLE | YES for existing applications that you want to upgrade. For example: ENABLE as YES for the required APP_IDs - OFS_AAI, OFS_AAAI, OFS_LRM_LCR, and OFS_LRM_DIC, based on the licensing. | Set this attribute-value to YES for every APP_ID which you want to install or upgrade. |

## 9.7.4 Update the Silent.props File in the Release 8.1.0.0.0 Pack

Update the `Silent.props` file present in the Release 8.1.0.0.0 pack.

Most parameters in the `Silent.props` file for 8.1.0.0.0 have default values. Before triggering the installation, ensure that you review them thoroughly and update as required.

1. Navigate to the `OFS_LRS_PACK/appsLibConfig/conf` directory.

2. From Release 8.1 onwards, LRS supports a single `Silent.template` file available in the `OFS_LRS_PACK/appsLibConfig/conf` directory. The `Silent.template` is populated with default values.

3. Ensure to modify the template in the directory. Create a copy of this file and rename the copy as `Silent.props`.

4. Edit the `Silent.props` file and specify the parameters as per the requirements.

   SILENT installation is achieved through a properties file (`Silent.props`) that must be updated with proper values, before attempting to install using the silent mode. The following table lists all the properties that need to be specified.

   The default values for LCR and DIC are the same. In case you modify the values, ensure to have the same values for LCR and DIC.

5. Configure the `Silent.props` file as mentioned in the following table. Open the `Silent.props` file and edit only the following parameters.

Table 32: Parameters for the Silent.props File

| Property Name | Description of Property | Permissible values | Comments |
|---|---|---|---|
| UPLOAD_MODEL | Specify whether you want to perform Model Upload. | 0 = If you have already performed Model Upload and want to skip the model upload process.<br>1 = If you want to perform Model Upload. | The default value is 1. |
| MODEL_TYPE | Specify whether you want to use the released datamodel or customized datamodel for the model upload process. | 0 = If you want to upload the released datamodel.<br>1 = If you want to upload the customized datamodel. | The default value is 0. |

| Property Name | Description of Property | Permissible values | Comments |
|---|---|---|---|
| DATAMODEL DM_DIRECTORY | Specify the path (DM_DIRECTORY) and file (DATAMODEL) name for the customized datamodel. Mandatory only if you want to upload the customized datamodel, that is, you have specified MODEL_TYPE=1. | User Input | |
| OFS_LRM_LCR_SEGMENT_1_CODE | Specify OFS_LRM_LCR Segment Code. | LRSSEGMNT | The default value is LRSSEGMNT. |
| OFS_LRM_LCR_ETL_APPSRC_TYPE | Specify if you want to create a new ETL App or Src pair or use an existing one. | 0 = If you want to create a new ETL App or Src pair. 1 = If you want to use an existing pair. | The default value is 0. |
| OFS_LRM_LCR_ETL_SRC_1_DESC | ETL OFS_LRM_LCR source description. | Describe the ETL Src. Mandatory if you want to create new ETL Src if you have specified ETL_APPSRC_TYPE=0. | The default value is LRS Source. |
| OFS_LRM_LCR_ETL_SRC_2_DESC | ETL Staging source description. | Describe the ETL Src. Mandatory if you want to create new ETL Src if you have specified ETL_APPSRC_TYPE=0. | The default value is Staging Source. |
| OFS_LRM_LCR_ETL_SRC_1_NAME | ETL OFS_LRM_LCR source name. | User Input | The default value is LRSSRC. Specify the ETL Source Name into ETL Area Definitions to be deployed. |
| OFS_LRM_LCR_ETL_SRC_2_NAME | ETL Staging source name. | User Input | The default value is STGSRC. Specify the ETL Source Name into ETL Area Definitions to be deployed. |
| OFS_LRM_DIC_SEGMENT_1_CODE | Specify OFS_LRM_DIC Segment Code. | User Input | The default value is LRSSEGMNT. |

| Property Name | Description of Property | Permissible values | Comments |
|---|---|---|---|
| OFS_LRM_DIC_ETL_APP SRC_TYPE | Specify if you want to create a new ETL App or Src pair or use an existing one. | Specify if you want to create a new ETL App or Src pair or use an existing one.<br>0 = If you want to create a new ETL App or Src pair.<br>1 = If you want to use an existing pair. | The default value is 0. |
| OFS_LRM_DIC_ETL_SRC_ 1_DESC | ETL OFS_LRM_DIC source description. | Describe the ETL Src.<br>Mandatory if you want to create new ETL Src if you have specified ETL_APPSRC_TYPE= 0. | The default value is LRS Source. |
| OFS_LRM_DIC_ETL_SRC_ 2_DESC | ETL Staging source description. | Describe the ETL Src.<br>Mandatory if you want to create new ETL Src if you have specified ETL_APPSRC_TYPE= 0. | The default value is Staging Source. |
| OFS_LRM_DIC_ETL_SRC_ 1_NAME | ETL OFS_LRM_DIC source name. | Specify the ETL Source Name into ETL Area Definitions to be deployed. | The default value is Staging LRSSRC. |
| OFS_LRM_DIC_ETL_SRC_ 2_NAME | ETL Staging source name. | Specify the ETL Source Name into ETL Area Definitions to be deployed. | The default value is Staging STGSRC. |

## 9.7.5  Trigger the Upgrade Installation

To trigger the installation, follow these steps:

1. Navigate to the path `OFS_LRS_PACK/bin`, and enter the following command in the console to execute the application pack installer with the Silent option.

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

2. The installer proceeds with the pre-installation checks and starts the upgrade installation process.

3. The installer proceeds with the pre-installation checks and starts the upgrade installation process.

4. The OFS LRS installation or upgrade begins. After the installation is complete, an *Installation Successful* message is displayed.

5. Verify the log files. See Verify the Log File Information for Upgrade section for details.

## 9.7.6 Verify the Log File Information for Upgrade

Verify the log files in the locations mentioned in section Verify the Log File Information.

## 9.7.7 Post-installation Steps

Follow the steps mentioned in the Post-installation Steps section.

## 9.8 Upgrade an Already Installed OFS LRS 8.0.7.0.0 or later application and Add another LRS Application

You have installed some applications from the OFS LRS pack Release 8.1.0.0.0; in the future, you decide to install a new application from OFS LRS.

For example: You have installed OFS LRMM and LRRCRBI SKU using the OFS LRS Pack installer 8.1.x. Later, you decide to license OFS DICLRM and want to install it using the same LRS Pack installer 8.1.x

### 9.8.1 Clone Your Existing Environment

Clone your existing environment to the OFS Analytical Applications Technology Matrix.

For more information about the cloning procedure, see the OFS LRS Cloning Reference Guide Release 8.0.x.

### 9.8.2 Initializing the Upgrade

To initialize the upgrade, follow these steps:

1. Download the OFS LRS Application Pack Release 8.1.0.0.0 installer from Oracle Software Delivery Cloud.

2. Copy the archive file to your OFSAA server in Binary mode.

   | NOTE | The archive files are different for every operating system such as Solaris, and RHEL or Oracle Linux. |

3. Log in to the OFSAA Server with user credentials that were used to install OFSAA.

4. Shut down all the OFSAAI Services. See the Stop the Infrastructure Services and Start the Infrastructure Services section in the OFS AAI Release 8.1.0.0.0 Installation and Configuration Guide for details.

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 8.1.0.0.0 installer.

   Uncompress the unzip installer file using the command:

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

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

7. Give execute permission to the file using the command:

   ```
   chmod 751 OFS_LRS_81000_<OperatingSystem>.zip
   ```

8. Extract the contents of the Oracle Financial Services Liquidity Risk Solution Application Pack 8.1.0.0.0 in the Download Directory installer archive file using the command:

   ```
   Unzip <name of the file to be unzipped>
   ```

   | NOTE | For Solaris OS, download, extract and apply the one-off patch **31509494** from My Oracle Support. See the Readme packaged with the patch for further instructions on how to install the patch. |
   |------|------|

9. Give execute permission to the archive file. Navigate to the path where the OFS_LRS_PACK directory exists and execute the command:

   ```
   chmod –R 755 OFS_LRS_PACK
   ```

10. Execute the user `.profile` file.

11. Navigate to the path `/OFS_LRS_PACK/schema_creator/conf` and modify the file `OFS_LRS_SCHEMA_IN.xml` by providing the existing values to the parameters JDBC_URL, JDBC_DRIVER, Host, Setupinfo name, schema names (config and atomic), password, default tablespace, Infodom, Quota as per the previous version.

12. Navigate to the `/OFS_LRS_PACK/schema_creator/bin` directory and execute the `osc.sh` file using the following command:

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

    | NOTE | Step 11 and 12 are required to generate the `OFS_LRS_SCHEMA_OUTPUT.xml` file. |
    |------|------|

## 9.8.3 If the Schema Creator Output file (OFS_LRS_SCHEMA_OUTPUT.xml) EXISTS

If the Schema Creator Output file (`OFS_LRS_SCHEMA_OUTPUT.xml`) is available, follow the steps mentioned in the following sections.

### 9.8.3.1 Update the OFS_LRS_PACK.xml file

Update the `OFS_LRS_PACK.xml` file. Enable only the new applications.

The `OFS_LRS_PACK.xml` file contains details on the various products that are packaged in the OFS LRS application pack. This section provides information about the various tags and parameters available in the file and the values that you must update. Before installing OFS LRS, it is mandatory to update this file.

To configure the `OFS_LRS_PACK.xml` file, follow these steps:

1. Navigate to the `OFS_LRS_PACK/conf` directory.

2. Open the `OFS_LRS_PACK.xml` file in a text editor.

**Figure 57: Sample OFS_LRS_PACK.xml File**



3.  Configure the `OFS_LRS_PACK.xml` file as mentioned in the following table.

**Table 33: OFS_LRS_PACK.xml File Parameters**

| Tag Name | Attribute Name | Value you must enter | Comments |
|---|---|---|---|
| APP_ID | ENABLE | • YES for applications you want to install.<br>   For example, OFS_LRM_DIC<br>• NO for applications that are already installed.<br>   For example, OFS_AAI, OFS_AAAI, OFS_LRM_LCR | Set this attribute-value to YES for every APP_ID which you want to install or upgrade. |

## 9.8.3.2 Update the Silent.props File

Update the `Silent.props` file present in the Release 8.1.0.0.0 pack.

Most parameters in the `Silent.props` file for 8.1.0.0.0 have default values. Before triggering the installation, ensure that you review them thoroughly and update as required.

1. Navigate to the `OFS_LRS_PACK/appsLibConfig/conf` directory.

2. From Release 8.1 onwards, LRS supports a single `Silent.template` file available in the `OFS_LRS_PACK/appsLibConfig/conf` directory. The `Silent.template` is populated with default values.

3. Ensure to modify the template in the directory. Create a copy of this file and rename the copy as `Silent.props`.

4. Edit the `Silent.props` file and specify the parameters as per the requirements.

    SILENT installation is achieved through a properties file (`Silent.props`) that must be updated with proper values, before attempting to install using the silent mode. The following table lists all the properties that need to be specified.

    The default values for LCR and DIC are the same. In case you modify the values, ensure to have the same values for LCR and DIC.

5. Configure the `Silent.props` file as mentioned in the following table. Open the `Silent.props` file and edit only the following parameters.

**Table 34: Parameters for the Silent.props File**

| Property Name | Description of Property | Permissible values | Comments |
|---|---|---|---|
| UPLOAD_MODEL | Specify whether you want to perform Model Upload. | 0 = If you have already performed Model Upload and want to skip the model upload process.<br>1 = If you want to perform Model Upload. | The default value is 1. |
| MODEL_TYPE | Specify whether you want to use the released datamodel or customized datamodel for the model upload process. | 0 = If you want to upload the released datamodel.<br>1 = If you want to upload the customized datamodel. | The default value is 0. |
| DATAMODEL DM_DIRECTORY | Specify the path (DM_DIRECTORY) and file (DATAMODEL) name for the customized datamodel. Mandatory only if you want to upload the customized datamodel, that is, you have specified MODEL_TYPE=1. | User Input | |

| Property Name | Description of Property | Permissible values | Comments |
|---|---|---|---|
| OFS_LRM_LCR_SEGMENT_1_CODE | Specify OFS_LRM_LCR Segment Code. | LRSSEGMNT | The default value is LRSSEGMNT. |
| OFS_LRM_LCR_ETL_APPSRC_TYPE | Specify if you want to create a new ETL App or Src pair or use an existing one. | 0 = If you want to create a new ETL App or Src pair.<br>1 = If you want to use an existing pair. | The default value is 0. |
| OFS_LRM_LCR_ETL_SRC_1_DESC | ETL OFS_LRM_LCR source description. | Describe the ETL Src.<br>Mandatory if you want to create new ETL Src if you have specified ETL_APPSRC_TYPE=0. | The default value is LRS Source. |
| OFS_LRM_LCR_ETL_SRC_2_DESC | ETL Staging source description. | Describe the ETL Src.<br>Mandatory if you want to create new ETL Src if you have specified ETL_APPSRC_TYPE=0. | The default value is Staging Source. |
| OFS_LRM_LCR_ETL_SRC_1_NAME | ETL OFS_LRM_LCR source name. | User Input | The default value is LRSSRC.<br>Specify the ETL Source Name into ETL Area Definitions to be deployed. |
| OFS_LRM_LCR_ETL_SRC_2_NAME | ETL Staging source name. | User Input | The default value is STGSRC.<br>Specify the ETL Source Name into ETL Area Definitions to be deployed. |
| OFS_LRM_DIC_SEGMENT_1_CODE | Specify OFS_LRM_DIC Segment Code. | User Input | The default value is LRSSEGMNT. |
| OFS_LRM_DIC_ETL_APPSRC_TYPE | Specify if you want to create a new ETL App or Src pair or use an existing one. | Specify if you want to create a new ETL App or Src pair or use an existing one.<br>0 = If you want to create a new ETL App or Src pair.<br>1 = If you want to use an existing pair. | The default value is 0. |

| Property Name | Description of Property | Permissible values | Comments |
|---|---|---|---|
| OFS_LRM_DIC_ETL_SRC_1_DESC | ETL OFS_LRM_DIC source description. | Describe the ETL Src. Mandatory if you want to create new ETL Src if you have specified ETL_APPSRC_TYPE=0. | The default value is LRS Source. |
| OFS_LRM_DIC_ETL_SRC_2_DESC | ETL Staging source description. | Describe the ETL Src. Mandatory if you want to create new ETL Src if you have specified ETL_APPSRC_TYPE=0. | The default value is Staging Source. |
| OFS_LRM_DIC_ETL_SRC_1_NAME | ETL OFS_LRM_DIC source name. | Specify the ETL Source Name into ETL Area Definitions to be deployed. | The default value is Staging LRSSRC. |
| OFS_LRM_DIC_ETL_SRC_2_NAME | ETL Staging source name. | Specify the ETL Source Name into ETL Area Definitions to be deployed. | The default value is Staging STGSRC. |

### 9.8.3.3 Trigger the Installation

To trigger the installation, follow these steps:

1. Navigate to the path `OFS_LRS_PACK/bin`, and enter the following command in the console to execute the application pack installer with the Silent option.

   `./setup.sh SILENT`

2. The installer proceeds with the pre-installation checks and starts the upgrade installation process.

3. The OFS LRS installation or upgrade begins. After the installation is complete, an *Installation Successful* message is displayed.

4. Verify the log files. See Verify the Log File Information for Upgrade section for details.

## 9.8.4 Verify the Log File Information for Upgrade

Verify the log files in the locations mentioned in section Verify the Log File Information.

## 9.8.5 Post-installation Steps

Follow the steps mentioned in the Post-installation Steps section.

## 9.8.6   If the Schema Creator Output File DOES NOT EXIST

When executing the schema creator utility during the installation of a subsequent Applications Pack, you can choose to install the pack either on the same Information Domain or Atomic Schema of the existing application pack or on a new Information Domain or Atomic Schema. You can execute the schema creator utility either in Online or Offline mode.

1. Execute the schema creator utility, by following these steps:

> **NOTE**   While defining the schema details for the applications, provide the same schema details given in the previous installation. The output file (`OFS_LRS_SCHEMA_OUTPUT.xml`) is generated as a result of the schema creation process.

   a. Edit the `OFS_LRS_PACK/schema_creator/conf/OFS_LRS_SCHEMA_IN.xml` file in a text editor. See the Configure OFS_LRS_SCHEMA_IN.xml file for values to modify in the XML file.

   b. Execute the utility with -s option using the following command:

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

2. Follow the steps given in the If the schema creator output file (OFS_LRS_SCHEMA_OUTPUT.xml) EXISTS section.

## 9.9   Install OFS LRS Application Pack v8.1.0.0.0 on an Existing OFSAA Instance

You have already installed an application pack from Release 8.1.0.0.0 and now you want to install another application pack from Release 8.1.0.0.0.

For example: OFS ALM Pack is already installed and now you want to install OFS LRS Pack.

> **NOTE**   You must check the Compatibility Matrix to see if the new application to be installed is compatible with the installed applications.

### 9.9.1   Execute the Schema Creator Utility only for the New Pack

To execute the schema creator utility, follow these steps:

> **NOTE**   While defining the schema details for the applications, provide the same schema details given in the previous installation. The output file (`OFS_LRS_SCHEMA_OUTPUT.xml`) is generated as a result of the schema creation process.

1. Edit the `OFS_LRS_PACK/schema_creator/conf/OFS_LRS_SCHEMA_IN.xml` file in a text editor. See the [Configure OFS_LRS_SCHEMA_IN.xml](#) file for values to modify in the XML file.

2. Execute the utility with -s option.

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

3. Follow the steps given in the [If the schema creator output file (OFS_LRS_SCHEMA_OUTPUT.xml) EXISTS](#) section.

4. Configuring the `OFSAAI_InstallConfig.xml` file is not required.

## 9.9.2 Update the OFS_LRS_PACK.xml File of the Newly Licensed Pack

The `OFS_LRS_PACK.xml` file holds details on the various products that are packaged together in OFS LRS application pack.

Update the `OFS_LRS_PACK.xml` file. Enable only the existing installed applications.

The `OFS_LRS_PACK.xml` file contains details on the various products that are packaged in the OFS LRS application pack. This section provides information about the various tags and parameters available in the file and the values that you must update. Before installing OFS LRS, it is mandatory to update this file.

To configure the `OFS_LRS_PACK.xml` file, follow these steps:

1. Navigate to the `OFS_LRS_PACK/conf` directory.

2. Open the `OFS_LRS_PACK.xml` file in a text editor.

**Figure 58: Sample OFS_LRS_PACK.xml File**

```
<APP_PACK_CONFIG>
    <APP_PACK_ID>OFS_LRS_PACK</APP_PACK_ID>
    <IS_OPT_INSTALL VALUE="TRUE" />
    <APP_PACK_NAME>Financial Services Liquidity Risk Solutions Pack</APP_PACK_NAME>
    <APP_PACK_DESCRIPTION>Application for Liquidity Risk Solutions </APP_PACK_DESCRIPTION>
    <VERSION>8.1.0.0.0</VERSION>
    <APP>
        <APP_ID PREREQ="" DEF_SEL_FLG="YES" ENABLE="YES">OFS_AAI</APP_ID>
        <APP_NAME>Financial Services Analytical Applications Infrastructure</APP_NAME>
        <APP_DESCRIPTION>Base Infrastructure for Analytical Applications</APP_DESCRIPTION>
        <VERSION>8.1.0.0.0</VERSION>
    </APP>
    <APP>
        <APP_ID PREREQ="OFS_AAI" DEF_SEL_FLG="YES" ENABLE="">OFS_AAAI</APP_ID>
        <APP_NAME>Financial Services Enterprise Modeling</APP_NAME>
        <APP_DESCRIPTION>Base Infrastructure for Analytical Applications</APP_DESCRIPTION>
        <VERSION>8.1.0.0.0</VERSION>
    </APP>
    <APP>
        <APP_ID PREREQ="OFS_AAAI" ENABLE="">OFS_LRM_LCR</APP_ID>
        <APP_NAME>Financial Services Liquidity Risk Measurement and Management</APP_NAME>
        <APP_DESCRIPTION>Core application for Liquidity Risk Solutions LCR</APP_DESCRIPTION>
        <VERSION>8.1.0.0.0</VERSION>
        <OPTIONS>
            <OPTION ID="OFS_LRM_LCR_EBA" PREREQ="OFS_LRM_LCR" ENABLE="">OFS_LRM_LCR_EBA</OPTION>
            <OPTION ID="OFS_LRM_LCR_USFED" PREREQ="OFS_LRM_LCR" ENABLE="">OFS_LRM_LCR_USFED</OPTION>
            <OPTION ID="OFS_LRM_LCR_BOT" PREREQ="OFS_LRM_LCR" ENABLE="">OFS_LRM_LCR_BOT</OPTION>
            <OPTION ID="OFS_LRM_LCR_RBI" PREREQ="OFS_LRM_LCR" ENABLE="">OFS_LRM_LCR_RBI</OPTION>
            <OPTION ID="OFS_LRM_LCR_BNM" PREREQ="OFS_LRM_LCR" ENABLE="">OFS_LRM_LCR_BNM</OPTION>
            <OPTION ID="OFS_LRM_LCR_MAS" PREREQ="OFS_LRM_LCR" ENABLE="">OFS_LRM_LCR_MAS</OPTION>
            <OPTION ID="OFS_LRM_LCR_HKMA" PREREQ="OFS_LRM_LCR" ENABLE="">OFS_LRM_LCR_HKMA</OPTION>
        </OPTIONS>
    </APP>
    <APP>
        <APP_ID PREREQ="OFS_AAAI" ENABLE="">OFS_LRM_DIC</APP_ID>
        <APP_NAME>Financial Services Deposit Insurance Calculations for Liquidity Risk Solutions Pack</APP_NAME>
        <APP_DESCRIPTION>Core application for Liquidity Risk Solutions Insurance</APP_DESCRIPTION>
        <VERSION>8.1.0.0.0</VERSION>
        <OPTIONS>
            <OPTION ID="OFS_LRM_DIC_USFED" PREREQ="OFS_LRM_DIC" ENABLE="">OFS_LRM_DIC_USFED</OPTION>
            <OPTION ID="OFS_LRM_DIC_BNM" PREREQ="OFS_LRM_DIC" ENABLE="">OFS_LRM_DIC_BNM</OPTION>
            <OPTION ID="OFS_LRM_DIC_MAS" PREREQ="OFS_LRM_DIC" ENABLE="">OFS_LRM_DIC_MAS</OPTION>
            <OPTION ID="OFS_LRM_DIC_HKMA" PREREQ="OFS_LRM_DIC" ENABLE="">OFS_LRM_DIC_HKMA</OPTION>
        </OPTIONS>
    </APP>
</APP_PACK_CONFIG>
```

3. Configure the `OFS_LRS_PACK.xml` file as mentioned in the following table.

**Table 35: OFS_LRS_PACK.xml File Parameters**

| Tag Name | Attribute Name | Value you must enter | Comments |
|---|---|---|---|
| APP_ID | ENABLE | • YES for applications you want to install.<br>  For example, OFS_LRS in the preceding illustration.<br>• NO for applications that are already installed. | Set this attribute-value to YES for every APP_ID which you want to install or upgrade. |

## 9.9.3     Update the Silent.Props File of the Newly Licensed Pack

Update the `Silent.props` file in the Release 8.1.x pack ONLY for the newly licensed applications.

> **NOTE**     In an integrated environment, it is mandatory for the customers to use the same Staging source in the `Silent.props` file for the T2Ts that load data from the Stage tables into the Result tables.

Most parameters in the `Silent.props` file for 8.1.0.0.0 have default values. Before triggering the installation, ensure that you review them thoroughly and update as required.

1. Navigate to the `OFS_LRS_PACK/appsLibConfig/conf` directory.

2. From Release 8.1 onwards, LRS supports a single `Silent.template` file available in the `OFS_LRS_PACK/appsLibConfig/conf` directory. The `Silent.template` is populated with default values.

3. Ensure to modify the template in the directory. Create a copy of this file and rename the copy as `Silent.props`.

4. Edit the `Silent.props` file and specify the parameters as per the requirements.

   SILENT installation is achieved through a properties file (`Silent.props`) that must be updated with proper values, before attempting to install using the silent mode. The following table lists all the properties that need to be specified.

   The default values for LCR and DIC are the same. In case you modify the values, ensure to have the same values for LCR and DIC.

5. Configure the `Silent.props` file as mentioned in the following table. Open the `Silent.props` file and edit only the following parameters:

**Table 36: Parameters for the Silent.props File**

| Property Name | Description of Property | Permissible values | Comments |
|---|---|---|---|
| UPLOAD_MODEL | Specify whether you want to perform Model Upload. | 0 = If you have already performed Model Upload and want to skip the model upload process.<br>1 = If you want to perform Model Upload. | The default value is 1. |
| MODEL_TYPE | Specify whether you want to use the released datamodel or customized datamodel for the model upload process. | 0 = If you want to upload the released datamodel.<br>1 = If you want to upload the customized datamodel. | The default value is 0. |

| Property Name | Description of Property | Permissible values | Comments |
|---|---|---|---|
| DATAMODEL<br><br>DM_DIRECTORY | Specify the path (DM_DIRECTORY) and file (DATAMODEL) name for the customized datamodel. Mandatory only if you want to upload the customized datamodel, that is, you have specified MODEL_TYPE=1. | User Input | |
| OFS_LRM_LCR_SEGMENT_1_CODE | Specify OFS_LRM_LCR Segment Code. | LRSSEGMNT | The default value is LRSSEGMNT. |
| OFS_LRM_LCR_ETL_APPSRC_TYPE | Specify if you want to create a new ETL App or Src pair or use an existing one. | 0 = If you want to create a new ETL App or Src pair.<br>1 = If you want to use an existing pair. | The default value is 0. |
| OFS_LRM_LCR_ETL_SRC_1_DESC | ETL OFS_LRM_LCR source description. | Describe the ETL Src.<br>Mandatory if you want to create new ETL Src if you have specified ETL_APPSRC_TYPE=0. | The default value is LRS Source. |
| OFS_LRM_LCR_ETL_SRC_2_DESC | ETL Staging source description. | Describe the ETL Src.<br>Mandatory if you want to create new ETL Src if you have specified ETL_APPSRC_TYPE=0. | The default value is Staging Source. |
| OFS_LRM_LCR_ETL_SRC_1_NAME | ETL OFS_LRM_LCR source name. | User Input | The default value is LRSSRC.<br>Specify the ETL Source Name into ETL Area Definitions to be deployed. |
| OFS_LRM_LCR_ETL_SRC_2_NAME | ETL Staging source name. | User Input | The default value is STGSRC.<br>Specify the ETL Source Name into ETL Area Definitions to be deployed. |
| OFS_LRM_DIC_SEGMENT_1_CODE | Specify OFS_LRM_DIC Segment Code. | User Input | The default value is LRSSEGMNT. |

| Property Name | Description of Property | Permissible values | Comments |
|---|---|---|---|
| OFS_LRM_DIC_ETL_APP SRC_TYPE | Specify if you want to create a new ETL App or Src pair or use an existing one. | Specify if you want to create a new ETL App or Src pair or use an existing one. 0 = If you want to create a new ETL App or Src pair. 1 = If you want to use an existing pair. | The default value is 0. |
| OFS_LRM_DIC_ETL_SRC_ 1_DESC | ETL OFS_LRM_DIC source description. | Describe the ETL Src. Mandatory if you want to create new ETL Src if you have specified ETL_APPSRC_TYPE= 0. | The default value is LRS Source. |
| OFS_LRM_DIC_ETL_SRC_ 2_DESC | ETL Staging source description. | Describe the ETL Src. Mandatory if you want to create new ETL Src if you have specified ETL_APPSRC_TYPE= 0. | The default value is Staging Source. |
| OFS_LRM_DIC_ETL_SRC_ 1_NAME | ETL OFS_LRM_DIC source name. | Specify the ETL Source Name into ETL Area Definitions to be deployed. | The default value is Staging LRSSRC. |
| OFS_LRM_DIC_ETL_SRC_ 2_NAME | ETL Staging source name. | Specify the ETL Source Name into ETL Area Definitions to be deployed. | The default value is Staging STGSRC. |

## 9.9.4  Trigger the Installation

To trigger the installation, follow these steps:

1. Navigate to the path `OFS_LRS_PACK/bin`, and enter the following command in the console to execute the application pack installer with the Silent option.

   `./setup.sh SILENT`

2. The installer proceeds with the pre-installation checks and starts the upgrade installation process.

3. The OFS LRS installation or upgrade begins. After the installation is complete, an *Installation Successful* message is displayed.

4. Verify the log files.

## 9.9.5    Verify the Log File Information

Verify the log files in the locations mentioned in section <u>Verify the Log File Information for Upgrade</u>.

## 9.9.6    Post Installation Steps

Follow the steps mentioned in the <u>Post Installation Steps</u> section.

# Part III

**Topics:**

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-
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# 10    Additional Configurations

This section provides information for additional configurations required for the OFSAA application packs.

To complete the configuration process, you may require to perform the following steps listed in the Additional Configuration Checklist. Use this checklist to verify whether these steps are completed or not. See the Additional Information section in the OFS AAAI Release 8.1.0.0.0 Installation and Configuration Guide to complete these procedures.

**Table 37: Additional Configuration Checklist**

| Sl. No | Additional Configuration Activity |
|---|---|
| 1 | Add FTP/SFTP Configuration for File Transfer. |
| 2 | Configure the Infrastructure Server Memory. |
| 3 | Retrieve Patch Information. |
| 4 | Set OLAP Data Server Configuration. |
| 5 | Change IP or Hostname, Ports, Deployed Paths of the OFSAA Instance. |
| 6 | Configure the Infrastructure LDAP Configuration. |
| 7 | Configure and Deploy the OFSAAI web services. |
| 8 | Enable Parallel Execution of DML statements |
| 9 | Configure the Message Details in the Forms Designer. |
| 10 | Clear the application cache. |
| 11 | Configure password changes. |
| 12 | Configure Java Virtual Machine. |
| 13 | Configure Internal Service (Document Upload/Download). |

# 11     Migrate Excel Upload Functionality

See the Migrate Excel Upload Functionality section in the OFS AAAI Release 8.1.0.0.0 Installation and Configuration Guide to complete the procedures.

# 12 Frequently Asked Questions (FAQs) and Error Dictionary

For FAQs and installation error-related information, see the section Frequently Asked Questions (FAQs) and Error Dictionary in the OFS AAAI Release 8.1.0.0.0 Installation and Configuration Guide.

## 12.1 Application Pack 8.1.0.0.0 FAQs

You can see the Frequently Asked Questions which is developed with the interest to help you resolve some of the OFS LRS 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.

1. **What is an Application pack?**

   An Application Pack is a suite of products.

2. **Can I get a standalone installer for OFSAAI 8.1?**

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

3. **Where can I download OFS LRS 8.1.0.0.0 Application Pack?**

   You can download the OFSAAI 8.1.0.0.0 Application Pack from Oracle Software Delivery Cloud (OSDC).

4. **What are the minimum system and software requirements for the OFS LRS 8.1 Application Pack?**

   See the Hardware and Software Requirements for more information.

5. **Is my environment compatible with OFS LRS 8.1.0.0.0 Application Pack?**

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

6. **Does the OFS LRS 8.1.0.0.0 Application Pack support all Operating systems?**

   See the Hardware and Software Requirements section.

7. **How can I install the OFS AAI 8.1.0.0.0 Application Pack?**

   See the OFS AAAI Release 8.1.0.0.0 Installation and Configuration Guide.

8. **Does this installation require any Third-party Software?**

   For details on the third-party software tools used, see the OFSAA Licensing Information user Manual *Release 8.1.0.0.0*.

9. **What languages are supported during the OFSAA 8.1.0.0.0 Application Pack installation?**

   US English is the language supported.

10. **What mode of installations OFSAA Application Pack supports [that is., Silent, GUI]?**

    OFSAA Application Packs support only Silent Mode.

11. **Does OFSAA 8.1.0.0.0 Application Pack support Multi-tier Installations?**

OFSAA 8.1.0.0.0 supports only a single-tier installation. For more information, see the Frequently Asked Questions (FAQs) and Error Dictionary section.

12. **Does this Application Pack validate all prerequisites required for this installation like Memory, Disk Space, and so on?**

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

13. **What happens if it aborts during the installation of any application or products within an Application pack?**

You must restore the system and retrigger the installation

14. **Does this Application pack 'Roll Back' if any application installation fails due to errors?**

The rollback of installation is not supported.

15. **Does the Application pack install all applications bundled?**

Only Application pack system which are enabled are installed. In order to enable other licensed Applications, you need to reinstall by making the flag as Y. See the Table OFS_<APP PACK>.xml File Parameters, APP_ID/ ENABLE attribute for information on how to enable. However, in case of reinstallation to enable the other Applications, execution of the schema creation utility must be skipped if it does not include any additional sandboxes to be created.

16. **Can I re-install any of the Application Packs?**

You can retrigger in case of failure.

17. **Does this Application pack allow enabling or disabling any of the applications installed?**

Yes, you can enable but you cannot disable once the product is enabled in an environment.

18. **I have installed one application in an Application pack, can I install any of the new applications within the Application pack later?**

Yes. the installation of additional applications is by making the flag as Y. See the Table OFS_<APP PACK>.xml File Parameters, APP_ID/ ENABLE attribute for information on how to enable. However, in case of reinstallation to enable the other Applications, execution of the schema creation utility must be skipped if it does not include any additional sandboxes to be created.

19. **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 when running multiple OFSAAI installations on a single server. Adequate memory is required for each installation as several OFSAAI processes (model upload, DEFQ services, and so on) take significant amounts of memory. So it depends on your server's memory.

20. **Is it possible to install OFSAA 8.1.0.0.0 Application pack on an existing 'Infodom' where another OFSAA 8.1.0.0.0 application is installed?**

Yes. However, the Behavioral Detection Application Pack and Compliance Regulatory Reporting Application pack are the exceptions. They must be installed in a different Infodom.

21. **Can I select an Infodom for the Application pack during installation?**

Yes. You can select or change the required infodom.

22. **Can I install all Application Packs in a Single Infodom?**

    Yes. But, the Behavioral Detection Application Pack and Compliance Regulatory Reporting Application Pack are the exceptions. They must be installed in a different Infodom.

23. **Is it possible to install applications on different Infodom within the Application pack (for example, I want to install LRM and MR in two infodoms)?**

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

24. **How many Infodoms can be created over a single OFSAA Infrastructure of 8.1.0.0.0?**

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

25. **Is the 'Data Model' bundled specifically to an Application pack or an individual application?**

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

26. **Is it possible to install OFS Enterprise Modeling later?**

    OFS Enterprise Modeling is a separate product and can be enabled as an option later from any application pack that bundles Enterprise Modeling. For more information, see Enable Financial Services Enterprise Modeling on Another Application Pack section in the OFS AAAI Release 8.1.0.0.0 Installation and Configuration Guide.

27. **Does the Application pack create a sandbox automatically for the required applications?**

    Yes, Sandbox creation is part of the application install process.

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

29. Maintenance Level (ML) Release and Minor Release upgrades are available across all applications.

30. **Can I upgrade AAI only?**

    Yes, you can upgrade AAI alone.

31. **Can I upgrade one application within the Application Pack (for example, I want to upgrade LRM in the Treasury Application pack, but not MR.)?**

    No, an upgrade is applied to all applications in the application pack.

32. **Is it possible to uninstall any Application from the Application pack?**

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

33. **Can I uninstall the entire Application Pack?**

    No, you cannot uninstall the Application Pack.

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

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

35. **Does Application Pack contain all Language Packs supported?**

    Language Packs must be installed on the application packs.

36. **Can I install an Application Pack over another Application Pack (that is the same infodom or different infodom)?**

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

37. **What should I do if I get the error message: *HostName in the input XML file is not matching with the local hostname* while running the schema creator utility?**

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

38. **What are the Java versions supported in OFS LRS Application Pack version 8.1.0.0.0?**

See the Hardware and Software Requirements section.

39. **Is OFSAAAI Application Pack version 8.1.0.0.0 supported on Java 9 and Java 11?**

For information about supported Java versions, see the Hardware and Software Requirements section

40. **What should I do when I get the message: "*[ERROR] - Error: APP Setup bin file failed.*" 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, this can be a temp directory issue. The resolution is that your UNIX administrator has to disable the NOEXEC option. The installers extract the installation files into the `/tmp` directory, and if NOEXEC is enabled, the 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.

# OFSAA Support

Raise a Service Request (SR) in [My Oracle Support (MOS)](My Oracle Support (MOS)) for queries related to the OFSAA applications.

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