Oracle Insurance Data Foundation Application Pack

Installation and Configuration Guide

Release 8.1.1.0.0

Nov 2021





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Document Control

| Version Number | Revision Date | Change Log |
|----------------|-------------------|--|
| 1 | 22-February-2021 | Created the document for the installation and configuration of the OIDF Release v8.1.1.0.0. |
| 2 | 05-April-2021 | Added information for installing the mandatory one-off patch 32548944 in the <u>Download the Mandatory Patches</u> , for the new installation, <u>Download the Mandatory Patches</u> for the upgrade installation, and <u>OFSAA Infrastructure Patch Installation</u> sections. |
| 3 | 09-July-2021 | Added the section <u>Upgrade the OFSAA 8.1.1.x Java 8 Instance to Java 11</u> . |
| 4 | 22-September-2021 | Added the section View OFSAA Product Licenses after the Installation of Application Pack. |
| 5 | 17-December-2021 | The OFSAAI Mandatory Patch 33663417 information is added. |
| 6 | 23-November-2023 | Java settings updated |

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1 Preface

This section provides information about the Oracle Insurance Data Foundation (OIDF) Application Pack Installation and Configuration Guide.

Topics:

- What is New in this Release for OIDF Application Pack
- Audience
- How this Guide is Organized
- Access to Oracle Support
- Related Information Sources
- Conventions
- Abbreviations

1.1 What is New in this Release for OIDF Application Pack

This section lists new features and changes in the Oracle Insurance Data Foundation (OIDF) Application Pack.

1.1.1 New Features

There are no new features in this release.

1.1.2 Deprecated Features

There are no deprecated features in this release.

1.1.3 Desupported Features

There are no desupported features in this release.

1.2 Audience

The Oracle Insurance Data Foundation (OIDF) Application Pack Installation and Configuration Guide is intended for Administrators, Business User, Strategists, and Data Analyst, who are responsible for installing and maintaining the application pack components.

- OIDF Application Pack components
- OFSAA Architecture
- UNIX Commands
- Database Concepts
- Web server/Web application server

1.3 How this Guide is Organized

The Installation Guide is organized into the following sections:

- <u>Introduction</u>: This section contains an introduction to the OFSAAI and its components, an introduction to the OIDF Application Pack, and installation scenarios that the current release supports.
- <u>Complete Installation Checklist</u>: This section lists the procedures required for a complete Oracle Insurance Data Foundation Application Pack installation.
- <u>Pre-installation</u>: This section contains the pre-installation requirements for a successful
 installation and functioning of the Oracle Insurance Data Foundation Application Pack. This
 section recommends the hardware and base software environment, and the preparatory
 procedures required before triggering the installation.
- <u>Installation</u>: This section details the steps to follow during the Oracle Insurance Data Foundation Application Pack installation.
- <u>Use Oracle Autonomous Data Warehouse as the Database for OIDF</u>: This section provides information about using the Oracle Autonomous Data Warehouse as the Database for the Oracle Insurance Data Foundation Application Pack installation and operation.
- <u>Post-installation</u>: This section details the steps that are required to be performed after a successful installation of the Oracle Insurance Data Foundation Application Pack.
- <u>Upgrade</u>: This section details the steps to follow before, during, and after the Oracle Insurance Data Foundation Application Pack upgrade installation, and different upgrade scenarios.
- <u>Additional Configuration</u>: This section contains the additional configuration after a successful installation of the Oracle Insurance Data Foundation Application Pack.
- <u>Additional Information</u>: This section contains additional information required for the installation.
- <u>Frequently Asked Questions (FAQs) and Error Dictionary</u>: This section contains a reference to the FAQs and installation error-related information.

1.4 Access to Oracle Support

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

1.5 Related Information Sources

Oracle strives to keep this and all other related documents updated regularly. Visit the OHC
Documentation Library and My Oracle Support web pages to download the latest document version available. The list of related documents is as follows:

- OHC Documentation Library for the OIDF Application Pack Release 8.1.x.x.x product documents:
 - Oracle Insurance Data Foundation Application Pack User Guide Release 8.1.1.0.0
 - Oracle Insurance Data Foundation Application Pack Release Notes 8.1.1.0.0

- OHC Documentation Library for the OIDF Application Pack Release 8.1.x.x.x other documents:
 - Oracle Insurance Data Foundation Application Pack Data Protection Implementation Guide Release 8.1.x
 - Oracle Financial Services Analytical Applications (OFSAA) Data Model Extension Guidelines
 Document Release 8.1.x
 - Oracle Financial Services Analytical Applications (OFSAA) Data Model Naming Standards
 Guide Release 8.1.x
 - Oracle Financial Services Analytical Applications (OFSAA) Data Model Document Generation Release 8.1.x
 - Oracle Insurance Data Foundation Application Pack Security Guide Release 8.1.x
 - Oracle Insurance Data Foundation Application Pack Cloning Reference Guide Release 8.1.x
 - Oracle Insurance Data Foundation Application Pack Cloning Reference Guide Release 8.0.x
- My Oracle Support for the OIDF Application Pack Release 8.1.x.x.x technical documents:
 - Run Chart
 - Changelog
 - SCD Metadata
 - T2T Metadata
- Oracle Financial Services Analytical Applications (OFSAA) Technology Matrix Release 8.1.1.0.0
- OHC Documentation Library contains the following OFS AAAI Application Pack Release 8.1.1.0.0 product documents:
 - Oracle Financial Services Advanced Analytical Applications Infrastructure Installation Guide Release 8.1.1.0.0
 - Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide Release 8.1.1.0.0
 - Oracle Financial Services Advanced Analytical Applications Infrastructure Environment Check Utility Guide Release 8.1.x
 - Oracle Financial Services Advanced Analytical Applications Infrastructure Administration and Configuration Guide Release 8.1.x
 - Oracle Financial Services Analytical Applications Infrastructure Process Modelling
 Framework Orchestration Guide Release 8.1.1.0.0
 - Oracle Financial Services Analytical Applications (OFSAA) Metadata Browser User Guide Release 8.1.0.0.0
- OHC Documentation Library contains the following OFSAA Release 8.1.x generic documents:
 - Oracle Financial Services Analytical Applications Infrastructure Security Guide Release 8.1.x
 - Oracle Financial Services Analytical Applications Infrastructure Cloning Reference Guide Release 8.1.x
- Oracle Financial Services Analytical Applications (OFSAA) Licensing Information User Manual Release 8.1.1.0.0

1.6 Conventions

The following text conventions are used in this document.

Table 1: 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 supply particular 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 the links to external websites, internal document links to sections. |

1.7 Abbreviations

The following table lists the abbreviations used in this document.

Table 2: Abbreviations

| Conventions | Description |
|-------------|-------------------------------------|
| AIX | Advanced Interactive executive |
| CDH | Cloudera Distribution Hadoop |
| DEFQ | Data Entry Forms and Queries |
| DML | Data Manipulation Language |
| EAR | Enterprise Archive |
| EJB | Enterprise JavaBean |
| ERM | Enterprise Resource Management |
| FTP | File Transfer Protocol |
| GUI | Graphical User Interface |
| HTTPS | Hypertext Transfer Protocol Secure |
| J2C | J2EE Connector |
| J2EE | Java 2 Enterprise Edition |
| JDBC | Java Database Connectivity |
| JDK | Java Development Kit |
| JNDI | Java Naming and Directory Interface |
| JRE | Java Runtime Environment |

| Conventions | Description |
|-------------|---|
| JVM | Java Virtual Machine |
| LDAP | Lightweight Directory Access Protocol |
| LHS | Left Hand Side |
| MFA | Multi-Factor Authentication |
| MOS | My Oracle Support |
| OFS | Oracle Financial Services |
| OFSAAI | Oracle Financial Services Analytical Application Infrastructure |
| OIDF | Oracle Insurance Data Foundation |
| OHC | Oracle Help Center |
| OLAP | On-Line Analytical Processing |
| OS | Operating System |
| RAM | Random Access Memory |
| RDMS | Relational Database Management System |
| SFTP | Secure File Transfer Protocol |
| SID | System Identifier |
| SSL | Secure Sockets Layer |
| TDE | Transparent Data Encryption |
| TNS | Transparent Network Substrate |
| URL | Uniform Resource Locator |
| VM | Virtual Machine |
| Web Archive | WAR |
| XML | Extensible Markup Language |

Part I

Topics:

- Pre-installation
- <u>Installation</u>
- Use Oracle Autonomous Data Warehouse as the Database for OIDF
- Post-installation

Introduction 2

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. OFSAA 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.

Insurance Allocation Manager for Enterprise Profitability Insurance Enterprise Risk Management Insurance Governance and Compliance Management Insurance Market Risk Insurance Market Risk Analytics Insurance Model Risk Management INSURANCE Insurance Operational Risk Insurance Operational Risk Analytics Insurance Operational Risk Economic Capital Insurance Operational Risk Standard / Enterprise Edition Insurance Performance Insight Insurance Solvency Management Advanced Analytical Applications Infrastructure Connectors PLATFORM, DATA, OFSAA Data Foundation Data Integration and RRR OFSAA Reconciliation Framework Risk Regulator Reporting · Adaptive Intelligence Foundation for Anti Money Laundering Anti Money Laundering Event Scoring Behavior Detection COMPLIANCE Compliance Regulatory Reporting Crime and Compliance Studio Enterprise Case Management BANKING Asset and Liability Management Balance Sheet Planning PERFORMANCE and Customer Analytics CUSTOMER INSIGHT Customer Insight Price Creation and Discovery Pack Profitability Applications Capital Adequacy Credit Risk Management International Financial Reporting Standards RISK MANAGEMENT Liquidity Risk Management Liquidity Risk Solution Market Risk Measurement and Management

Figure 1: Application Packs of OFSAA

Topics:

Oracle Financial Services Analytical Applications Infrastructure (OFSAAI)

- About the Oracle Insurance Data Foundation Application Pack
- OFS AAI Extension Pack
- Installation and Upgrade Scenarios

2.1 Oracle Financial Services Analytical Applications Infrastructure (OFSAAI)

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

2.1.1 Components of OFSAAI

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 runs on the other. The UI and presentation layer is deployed on any of the supported J2EE Servers.

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

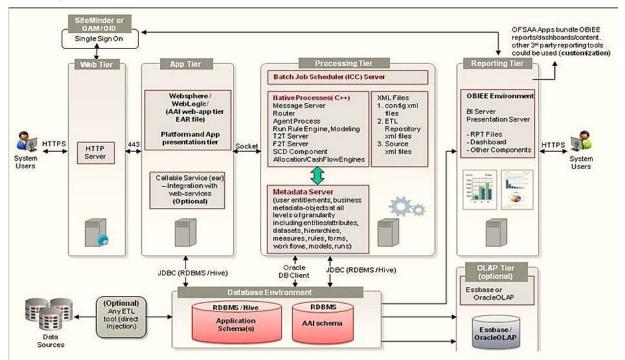


Figure 2: Components of OFSAAI

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 <u>Oracle Financial Services Analytical Applications (OFSAA) Configuration for High Availability Best Practices Guide Release 8.1.x.</u>

2.1.3 Deployment Topology

HTTP and HTTPS

Web Browser

OFSAA Application
Components

Socket
Connection

JDBC/Native

Database Server

Figure 3: The logical architecture implemented in the OFSAAAI Application Pack

2.2 About the Oracle Insurance Data Foundation Application Pack

The Oracle Insurance Data Foundation (OIDF) is an analytical data warehouse platform for the Financial Services industry. OIDF combines an industry data model for Financial Services along with a set of management and infrastructure tools that allows Financial Services Institutions to develop, deploy, and operate analytical solutions spanning key functional areas in Financial Services, including:

- Health Insurance
- Property Casualty
- Life Insurance

OIDF is a comprehensive data management platform that helps institutions to manage the analytical data life cycle from sourcing to reporting as a consistent platform and toolset.

The application pack includes a logical data model, a physical data model, and supporting scripts.

OIDF Application Pack includes the following applications:

- Financial Services Analytical Applications Infrastructure: This application 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.
- **Financial Services Big Data Processing**: This option includes, into OIDF, the capability to process data stored in Hadoop Distributed File System (HDFS). With the Big Data Processing (BDP) add-on option, all core data management frameworks within OFSAA such as Data Management Framework (T2T or F2T), Data Quality Framework, and Rules framework are enhanced to operate on both Oracle RDBMS data sources as well as Apache Hive data sources. An OFSAA Run definition can contain tasks that transform data held in the Hive. OFSAA applications that use these frameworks for expressing application logic automatically gain the ability to manage data held in the Hive. The OFSAA platform leverages HiveQL and Map Reduce in order to process data directly in the Hadoop cluster without having to stage data in a relational database.

The application pack includes a logical data model, a physical data model, and supporting scripts.

NOTE

The schema or domain for OIDF is referred to as OIDF.

2.3 OFS AAI Extension Pack

The Oracle Financial Services Analytical Applications Infrastructure Extension (OFS AAIE) Pack adds a set of new advanced features for the 8.1.1.0.0 Release across OFSAA applications. This pack can be installed on an OFSAA instance containing 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 the procurement of an additional license. For more information, see the *OFS AAIE Release Notes* and *Installation Guide* on the <u>OHC Documentation Library</u>.

2.4 Installation and Upgrade Scenarios

The OIDF Application Pack Release v8.1.1.0.0 supports various installation and upgrade scenarios. A high-level overview of the possible scenarios is provided in the following table. The detailed procedural steps are provided in the subsequent sections.

Table 3: OIDF Release 8.1.1.0.0 Installation and Upgrade Scenarios

| Scenario | Installation and Upgrade Instructions |
|--|---|
| New Installation Installing Release 8.1.1.0.0 application pack for the first time (new installation). | Prepare for the Installation. Run Schema Creator Utility. Install the OIDF Application Pack. |
| Install a new OIDF Application Pack v8.1.1.0.0 on an Existing OFSAA Instance In this scenario, you have already installed an application pack versioned v8.1.1.0.0 and now you need to install the OIDF application pack versioned v8.1.1.0.0. Example: OFS ALM Pack is already installed and now you need to install OIDF Pack. | Configure the OFS_OIDF_PACK.xml file for the newly licensed OIDF Application Pack. Configure the Silent.props file of the newly licensed pack. Run the schema creator utility ONLY for the newly licensed OIDF Application Pack. Trigger the installation. |
| Upgrade the OIDF Application Pack from v8.1.0.0.0 or 8.1.0.1.0 to v8.1.1.0.0 In this scenario, you are upgrading the OIDF Application Pack from Release v8.1.0.0.0 or v8.1.0.1.0 to Release v8.1.1.0.0. | Clone your existing environment to the OFSAA Technology Matrix v8.1.1.0.0. Run the Environment Check Utility tool and ensure that the hardware and software requirements are installed as per the OFSAA Technology Matrix v8.1.1.0.0. Update the OFS_OIDF_PACK.xml file to enable ONLY the existing installed applications. Update the Silent.props file present in the OIDF v8.1.1.0.0 installer pack. Trigger the installation. |
| Upgrade the OIDF Application Pack from v8.1.0.0.0 or 8.1.0.1.0 to v8.1.1.0.0 on an Existing OFSAA Instance In this scenario, an Application Pack of v8.1.1.0.0 is already installed and now you need to upgrade OIDF Application Pack from v.8.1.0.0.0 or 8.1.0.1.0 to v8.1.1.0.0. Example: OFS ALM v8.1.1.0.0 Application Pack is already installed and now you need to install the OIDF Application Pack. | Update the OFS_OIDF_PACK.xml file of the OIDF Application Pack. Update the Silent.props file of the OIDF Application Pack. Run the schema creator utility ONLY for the OIDF Application Pack. Trigger the installation. |

3 Complete Installation Checklist

To complete the installation process, you must perform the following steps listed in the Complete Installation Checklist table. Use this checklist to verify whether these steps are completed or not.

Table 4: Pre-installation Checklist

| Sl. No. | Activity |
|---------|--|
| 1 | Install all the prerequisite hardware and software as per the OFSAA Technology Matrix. |
| 2 | Install and configure the prerequisite hardware and software for the Big Data (Only for the Big Data installation) as per the OFSAA Technology Matrix. |
| 3 | Verify the System Environment using the Environment Check Utility. |
| 4 | Download the OIDF Application Pack installer kit. |
| 5 | Download the Data Model (optional). |
| 6 | Configure the Database Instance settings. |
| 7 | Install and configure the web application server. |
| 8 | Configure the HTTP settings on the webserver. |
| 9 | Create the Installation, Download, and Metadata Repository Directories: Installation directory Temporary directory Staging Area/Metadata Repository Download directory |
| 10 | Configure the following Operating System and File System settings: File Descriptor Total number of processes Port(s) .profile file permissions Set Up the SFTP Private Key |
| 11 | Update the following Environment Settings as required for the installation in the .profile file: • Java Settings • Oracle Database Server and Client Settings • Add TNS entries in the tnsnames.ora file • Oracle Essbase Settings • Time Zone Settings |

Table 5: Installation Checklist

| Sl. No. | Activity |
|---------|---|
| 1 | Extract the OIDF Application Pack software. |
| 2 | Configure the OFS_OIDF_PACK.xml file. |

| Sl. No. | Activity |
|---------|---|
| 3 | Configure the OFS_OIDF_SCHEMA_IN.xml file. |
| 4 | Configure the OFS_OIDF_SCHEMA_BIGDATA_IN.xml file for Stage and Results on Hive (Only for the Big Data installation). |
| 5 | Configure the OFSAAI_InstallConfig.xml file. |
| 6 | Configure the Silent.props file. |
| 7 | Backup the configuration files. |
| 8 | Execute the Schema Creator Utility in Offline, Online, or TCPS modes. |
| 9 | Verify the Schema Creator log files. |
| 10 | Trigger the OIDF Application Pack installation. |

Table 6: Post-installation Checklist

| Sl. No. | Activity |
|---------|---|
| 1 | Verify the installation logs. |
| 2 | Stop the OFSAA Infrastructure services. |
| 3 | Create and deploy EAR/WAR files. |
| | (Alternative) EAR/WAR file - Build Once and Deploy Across Multiple OFSAA Instances. |
| 4 | Start the OFSAA Infrastructure services. |
| 5 | Access the OFSAA application. |
| 6 | Explore the OFSAA landing page. |
| 7 | Configure the excludeURLList.cfg file. |
| 8 | Configure Big Data Processing. |
| 9 | Create Application Users. |
| 10 | Map the Application User(s) to User Groups. |
| 11 | Change the ICC batch ownership. |
| 12 | Add TNS entries in the tnsnames.ora file. |
| 13 | Set TDE and Data Redaction in OFSAAI. |
| 14 | Implement Data Protection in OFSAA. |

Table 7: Additional Configuration Checklist

| Sl. No. | Activity |
|---------|--------------------------|
| 1 | Configure the webserver. |

| Sl. No. | Activity |
|---------|--|
| 2 | Configure the Resource Reference in web application servers. |
| 3 | Configure the Work Manager in the web application servers. |
| 4 | Add the FTP/SFTP configuration for file transfer. |
| 5 | Configure the Process Modeling Framework. |
| 6 | Configure the Infrastructure Server Memory. |
| 7 | Change IP/Hostname, Ports, Deployed Paths of the OFSAA Instance. |
| 8 | Configure the Infrastructure LDAP. |
| 9 | Configure and deploy the OFSAAI web services. |
| 10 | Enable the parallel execution of DML statements. |
| 11 | Configure the message details in the Forms Designer. |
| 12 | Clear the application cache. |
| 13 | Configure the password changes. |
| 14 | Configure the Java Virtual Machine. |
| 15 | Configure the internal service (Document Upload/Download). |
| 16 | Migrate the Excel upload functionality. |
| 17 | Remove the OFSAA Infrastructure. |

4 Pre-installation

This section contains the pre-installation requirements for a successful installation and functioning of the Oracle Insurance Data Foundation Application Pack.

Topics:

- Pre-installation Checklist
- Hardware and Software Requirements
- Preparing for Installation
- Oracle Database Instance Settings
- Web Application Server Settings
- Web Server Settings
- Create the Installation, Download, and Metadata Directories
- Configure the OS File System Settings and Environment Settings in the .profile File

4.1 Pre-installation Checklist

To complete the pre-installation process, you must perform the following steps listed in the Pre-installation Checklist table. Use this checklist to verify whether these steps are completed or not.

Table 8: Pre-installation Checklist

| Sl. No. | Activity |
|---------|--|
| 1 | Install all the prerequisite hardware and software as per the OFSAA Technology Matrix. |
| 2 | Install and configure the prerequisite hardware and software for the Big Data (Only for the Big Data installation) as per the OFSAA Technology Matrix. |
| 3 | Verify the System Environment using the Environment Check Utility. |
| 4 | Download the OIDF Application Pack installer kit. |
| 5 | Download the Data Model (optional). |
| 6 | Configure the Database Instance settings. |
| 7 | Install and configure the web application server. |
| 8 | Configure the HTTP settings on the webserver. |
| 9 | Create the Installation, Download, and Metadata Repository Directories: Installation directory Temporary directory Staging Area/Metadata Repository Download directory |
| 10 | Configure the following Operating System and File System settings: • File Descriptor • Total number of processes |

| Sl. No. | Activity | |
|---------|---|--|
| | Port(s) | |
| | • .profile file permissions | |
| | <u>Set Up</u> the SFTP Private Key | |
| 11 | <u>Update</u> the following Environment Settings as required for the installation in the .profile file: | |
| | Java Settings | |
| | Oracle Database Server and Client Settings | |
| | Add TNS entries in the tnsnames.ora file | |
| | Oracle Essbase Settings | |
| | Time Zone Settings | |

4.2 Hardware and Software Requirements

This section describes the various Operating System, databases, web servers, and web application server versions, and other variant details on which this release of the Oracle Insurance Data Foundation Application Pack has qualified.

Topics:

- Big Data Settings
- Third-party Licensing Information
- Verify the System Environment

See the <u>OFSAA Technology Matrix</u> document for the hardware and software required for the Oracle Insurance Data Foundation Application Pack Release 8.1.1.0.0.

Table 9: Recommended Software Combination

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

4.2.1 Big Data Settings

This is an optional section and required only if you intend to install the OFSAA Big Data Processing. See the <u>OFSAA Technology Matrix</u> for the software required for the Big Data software Hadoop Distribution on the Oracle Insurance Data Foundation Application Pack Release 8.1.1.0.0.

- Install CDH. For installation information, see the Cloudera documentation at https://docs.cloudera.com/.
- Install the Apache Livy (Incubating) web service:

- **a.** Go to https://incubator.apache.org/clutch/livy.html.
- **b.** Download the livy-0.4.0-incubating zip files.
- **c.** Install livy-0.4.0-incubating for Spark 2. For installation information, see the documentation at https://docs.cloudera.com/HDPDocuments/HDP2/HDP-2.6.5/bk_command-line-installation/content/install_livy.html.

4.2.2 Third-party Licensing Information

For details on the third-party software tools used, see the <u>Oracle Financial Services Analytical Applications (OFSAA) Licensing Information User Manual Release 8.1.1.0.0</u>.

4.2.3 Verify the 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 <u>Oracle Support Services</u>.

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 details on download and usage of this utility, see the <u>Oracle Financial Services Advanced</u> <u>Analytical Applications Infrastructure Environment Check Utility Guide Release 8.1.x.</u>

4.3 Preparing for Installation

This section details the preparatory procedures that must be followed before triggering the installation.

Topics:

- Download the OIDF Application Pack Installer
- Download the Data Model
- Download the Mandatory Patches

4.3.1 Download the OIDF Application Pack Installer

To download the OIDF Application Pack installer Release v8.1.1.0.0, follow these steps:

- 1. Log in to the My Oracle Support (MOS) with a valid Oracle account.
- 2. In the **Patches & Updates** tab, search for the OIDF Application Pack installer patch **32347735** and download the patch. Copy the patch to your OFSAA server in the Binary mode in the setup identified for OIDF installation.

NOTE

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

4.3.2 Download the Data Model

To download the OIDF OOB v8.1.1.0.0 Data Model, follow these steps:

NOTE

This is an optional section, which is applicable if you are performing the customized model upload.

- 1. Log in to the My Oracle Support (MOS) with a valid Oracle account.
- 2. In the **Patches & Updates** tab, search for the OIDF Data Model installer patch **32465698** and download the patch. See the Readme available with the patch for further instructions on downloading the patch and extracting the erwin files.

NOTE

Ensure that the tablespace or tablespaces used for the database user or users are set to AUTOEXTEND ON.

4.3.3 Download the Mandatory Patches

The following table includes information about the mandatory patches that must be downloaded during the OIDF Application Pack new installation.

Table 10: Mandatory Patches

| One-Off Patch | Description |
|---------------|---|
| 32548944 | Download the OFSAAI patch. |
| 33663417 | Download this mandatory OFSAAI One-Off Patch. See the ATTENTION below. |

ATTENTION

For the Mandatory Patch ID **33663417**:

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

For details, see the My Oracle Support Doc ID <u>2827801.1</u>.

Ensure that you reapply the OFSAAI Mandatory Patch **33663417** whenever you Install or Upgrade the Application, or whenever you apply an Incremental Patch.

4.4 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

4.5 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.

Table 11: Web Application Server Settings

| Description | Example Value |
|--------------------------------|---|
| WebSphere/ WebLogic/ Tomcat | Web Application Server should be installed and the profile/domain created. |
| | You will be prompted to enter the WebSphere Profile path, the WebLogic Domain path, or the Tomcat Deployment path during OFSAAI installation. |
| | NOTE: See the <u>Configure the Web Server</u> section for WebSphere Profile and WebLogic Domain creation. |

4.6 Web Server Settings

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

Table 12: Web Server Settings

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

4.7 Create the Installation, Download, and Metadata Directories

To install the OIDF Application Pack, create the following directories:

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

- **OFSAA Installation Directory (Mandatory)**: Create an installation directory where the product binaries are installed. Assign 755 user permission to the installation directory. FIC_HOME variable to be set in the .profile pointing to this OFSAA Installation Directory.
- OFSAA Staging or Metadata Repository 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.

 OIDF Hive Directory (Mandatory for Big Data Installation): Create a directory for the file system stage area of the Hive server. This is commonly referred to as FTPSHAREH or HIVE_SERVER_FTPDRIVE. Ensure that the user permission is set to 775 on the Installation Directory.

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

Topics:

- Configure Operating System and File System Settings
- Configure the Environment Settings

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.

WARNING

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

4.8.1 Configure Operating System and File System Settings

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

Table 13: 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. |
| File Descriptor Settings | In the sysctl.conf file, to change the number of file descriptors, do the following as the root user: 1. Edit the following line in the /etc/sysctl.conf file: fs.file-max = <value> where <value> is greater than 15000 2. Apply the change by running the following command: # /sbin/ sysctl -p 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.</value></value> |
| Total Number of Process Settings | In the sysctl.conf file set the value to greater than 4096. 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.utf8 Solaris: en_US.UTF-8 To check the locale installed, execute the following command: locale -a grep -i 'en_US.utf' |

4.8.2 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 the TNSNAMES.ORA File
- Oracle Essbase Settings
- Time Zone Settings

NOTE

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

4.8.2.1 Java Settings

The following table displays the Java settings required for installation.

Table 14: Java Settings

| Description | Example Value |
|---|---|
| In the .profile file, set PATH to include the Java Runtime Environment (JRE) absolute path. Ensure that SYMBOLIC links to JAVA installation are not set in the PATH variable. | <pre>JAVA_HOME=/scratch/jdk<<version>>/jre For example: PATH=/usr/java/jre1.8.0_221/bin:\$ORACLE_ HOME/ bin:\$PATHJAVA_HOME=/scratch/jdk<<version>>/jre</version></version></pre> |
| In the .profile file, set PATH to include the Java Runtime Environment bin path. | JAVA_BIN=/scratch/< <version>>/jre/bin For example: PATH=/usr/java/jre1.8.0_221/bin:\$ORACLE_ HOME/bin:\$PATH</version> |
| 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"export JAVA_TOOL_OPTIONS |
| Enable unlimited cryptographic policy for Java. | For more information, see the <i>Enabling Unlimited Cryptographic Policy for Java</i> section from the <u>Oracle Financial Services Advanced Analytical Applications Infrastructure Administration and Configuration Guide Release 8.1.x.</u> |

4.8.2.2 Oracle Database Server and Client Settings

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

Table 15: 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_client19c/product/19.0.0/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 the appropriate Oracle DB Client installation. |
| | • PATH in the .profile file must be set to include the appropriate \$ORACLE_HOME/bin path. |
| | Ensure that an entry (with SID/SERVICE NAME) is added in the tnsnames.ora file. |

4.8.2.3 TNS entries in the TNSNAMES.ORA file for Non-TCPS and TCPS

This section provides information about the TNS entries in the TNSNAMES.ORA file.

Topics:

- Non-TCPS
- TCPS

4.8.2.3.1 Non-TCPS

Table 16: TNS entries in the TNSNAMES.ORA file for the Non-TCPS mode

| Description | Example Value |
|--|--|
| Ensure that an entry (with SID/ SERVICE NAME) is added in the tnsnames.ora file on the OFSAA server. | <pre> <sid_name> = DESCRIPTION = (ADDRESS_LIST = (ADDRESS = (PROTOCOL = TCP) (HOST = <host_name>.in.oracle.com) (PORT = 1521))) (CONNECT_DATA = (SERVICE_NAME = <sid_name>))) <atomic_schema_name> = (DESCRIPTION = (ADDRESS_LIST = (ADDRESS = (PROTOCOL = TCP) (HOST = <host_name>.in.oracle.com) (PORT = 1521))) (CONNECT_DATA = (SERVICE_NAME = <sid_name>))) </sid_name></host_name></atomic_schema_name></sid_name></host_name></sid_name></pre> |

```
(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_<App Pack>_SCHEMA_IN.xml file.

4.8.2.3.2 TCPS

Table 17: TNS entries in the TNSNAMES.ORA file for the Non-TCPS mode

| Description | Example Value |
|---|--|
| Ensure that an entry (with SID/ SERVICE NAME) is added in the tnsnames.ora file on the OFSAA server. | <pre> <sid_name> = DESCRIPTION = (ADDRESS_LIST = (ADDRESS = (PROTOCOL = TCPS) (HOST = <host_name>.in.oracle.com) (PORT = 1521))) (CONNECT_DATA = (SERVICE_NAME = <sid_name>))) <atomic_schema_name> = (DESCRIPTION = (ADDRESS_LIST = (ADDRESS = (PROTOCOL = TCPS) (HOST = <host_name>.in.oracle.com) (PORT = 1521))) (CONNECT_DATA = (SERVICE_NAME = <sid_name>))) (security=(ssl_server_cert_dn=CN=<ho st_name="">))))</ho></sid_name></host_name></atomic_schema_name></sid_name></host_name></sid_name></pre> |
| Ensure that an entry (with WALLET_HOME and wallet parameters) is added in the sqlnet.ora file on the OFSAA server must be the same as the Oracle database server running with TCPS. | NAMES.DIRECTORY_PATH= (TNSNAMES, EZCONNECT)WALLET_LOCATION = (SOURCE = (METHOD = FILE) (METHOD_DATA = (DIRECTORY = <path directory="" to="" wallet="">)))SQLNET.WALLET_OVERRIDE = TRUE SSL_CLIENT_AUTHENTICATION = FALSE SQLNET.AUTHENTICATION_SERVICES = (TCPS,NTS,BEQ) SSL_CIPHER_SUITES = (SSL_RSA_WITH_AES_256_CBC_SHA, SSL_RSA_WITH_3DES_EDE_CBC_SHA)</path> |

NOTE

The ATOMIC SCHEMA NAME must be the same as defined in the $ofs_oidf_schema_in.xml$ file, which also includes prefix without underscore. For example, DEVOFSAAATM.

4.8.2.4 Oracle Essbase Settings

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

Table 18: 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 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 export HYPERION_HOME |

4.8.2.5 Time Zone Settings

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

Table 19: Time Zone Settings

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

5 Installation

This section details the steps to be followed during the OIDF Application Pack installation.

Topics:

- <u>Installation Checklist</u>
- Extract the Software
- Configure the OFS_OIDF_PACK.xml File
- Configure the Schema Creator Utility
- Configure the OFS_OIDF_SCHEMA_IN.xml File
- Configure the OFS_OIDF_SCHEMA_BIGDATA_IN.xml File
- Configure the OFSAAI InstallConfig.xml File
- Configure the Silent.props File
- Backup the Configuration Files
- Execute the Schema Creator Utility
- Verify the Schema Creator Log Files
- Install the OIDF Application Pack
- Install a New OIDF Application Pack on an Existing OFSAA Instance

5.1 Installation Checklist

To complete the OIDF Application Pack installation process, you must perform the following steps listed in the Installation Checklist. Use this checklist to verify whether these steps are completed or not.

Table 20: Installation Checklist

| SI. No. | Activity |
|---------|---|
| 1 | Extract the OIDF Application Pack software. |
| 2 | Configure the OFS_OIDF_PACK.xml file. |
| 3 | Configure the OFS_OIDF_SCHEMA_IN.xml file. |
| 4 | Configure the OFS_OIDF_SCHEMA_BIGDATA_IN.xml file for Stage and Results on Hive (Only for the Big Data installation). |
| 5 | Configure the OFSAAI_InstallConfig.xml file. |
| 6 | Configure the Silent.props file. |
| 7 | Backup the configuration files. |
| 8 | Execute the Schema Creator Utility in Offline, Online, or TCPS modes. |
| 9 | Verify the Schema Creator log files. |

| Sl. No. | Activity |
|---------|---|
| 10 | Trigger the OIDF Application Pack installation. |

5.2 Extract the OIDF Application Pack Software

You must be logged in to the UNIX operating system as a non-root user to perform the following steps. To extract the software, follow these steps:

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

If you already have an unzip utility to extract the contents of the downloaded archive, skip this step. Uncompress the unzip installer file with the command:

NOTE

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

2. Assign 751 permission to the file with the following command:

```
chmod 751 unzip_<os>
For example, chmod 751 unzip sparc
```

3. Extract the contents of the OIDF Application Pack Release v8.1.1.0.0 installer archive file in the download directory with the following command:

```
unzip OFS OIDF 8.1.1.0.0 <Operating System>.zip
```

NOTE

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

4. Navigate to the Download Directory and assign 750 permission to the installer directory with the following command:

```
chmod -R 750 OFS OIDF PACK
```

5.3 Configure the OFS_OIDF_PACK.xml File

The $OFS_OIDF_PACK.xml$ file contains details of various OFSAA products that are packaged in the OIDF Application Pack.

To configure the OFS OIDF PACK.xml file, follow these steps:

1. Navigate to the <INSTALLER DIRECTORY>/OFS OIDF PACK/conf directory.

- For the RDBMS mode of installation, rename the file OFS_OIDF_PACK.xml.template to OFS OIDF PACK.xml.
- In the Big Data mode of installation, for Stage and Results on Hive, rename the file OFS_OIDF_PACK.xml.BIGDATA.template to OFS_OIDF_PACK.xml.
- 2. Open the OFS OIDF PACK.xml file in a text editor.
- 3. Configure the OFS OIDF PACK.xml file as mentioned in the following table.

NOTE

During the Big Data mode of installation, for Stage and Results on Hive, enable the option to **YES** for the **APP_ID** parameter with the value **OFS_AAIB** as illustrated in the sample illustration.

Figure 4: Sample of the OFS_OIDF_PACK.xml file

```
<APP PACK CONFIG>
   <APP PACK ID>OFS_OIDF_PACK</APP_PACK_ID>
   <APP PACK NAME>Financial Services Foundation Applications Pack</APP_PACK_NAME>
   <APP PACK DESCRIPTION>Applications forming analytics foundation such for the Banking and
   Financial Services Domain</APP PACK DESCRIPTION>
   <VERSION>8.1.1.0.0</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>8.1.1.0.0</VERSION>
   </APP>
   <APP>
       <APP ID PREREQ="OFS AAI" ENABLE="YES">OFS_AAIB</APP_ID>
       <APP NAME>Financial Services Analytical Applications Infrastructure Big Data Option
       </APP NAME>
       <APP DESCRIPTION>Base Infrastructure for Analytical Applications Big Data Option
       </APP DESCRIPTION>
       <VERSION>8.1.1.0.0</VERSION>
   </APP>
   <APP>
       <APP ID PREREQ="OFS AAIB" ENABLE="YES">OFS OIDF</APP ID>
       <APP NAME>Oracle Insurance Data Foundation</app NAME>
       <APP_DESCRIPTION>Data Foundation for Insurance domain</APP_DESCRIPTION>
       <VERSION>8.1.1.0.0</VERSION>
   </APP>
</APP_PACK_CONFIG>
```

Table 21: The OFS_OIDF_PACK.xml file parameters

| Tag Name or Attribute Name | Description | Mandatory? (Y or N) | Comments |
|--------------------------------|--|---------------------------------------|--|
| APP_PACK_ID | Unique Application Pack Identifier | Υ | This is a unique seeded value. DO NOT modify this value. |
| IS_OPT_INSTALL VALUE="TRUE" | Unique Application Entry | Υ | This is a unique seeded value. DO NOT modify this value. |
| APP_PACK_NAME | Unique Application Pack Name | Υ | This is a unique seeded value. DO NOT modify this value. |
| APP_PACK_DESCRIPTION | Unique Application Pack Description | Υ | This is a unique seeded value. DO NOT modify this value. |
| VERSION | Unique release version | Υ | This is a unique seeded value. DO NOT modify this value. |
| APP | Unique Application Entries | Υ | This is a unique seeded value. DO NOT modify this value. |
| APP_ID | Unique Application Identifier | Υ | This is a unique seeded value. DO NOT modify this value. |
| APP_ID/PREREQ | Prerequisite Application/ Product | Y | This is a unique seeded value. For most applications, Infrastructure is the prerequisite set. For some other applications, a required Application ID is set. DO NOT modify this value. |
| APP_ID/DEF_SEL_FLAG | Default Selected Flag | Υ | The default value is YES. In all the Application Packs, the Infrastructure sets this value set to "YES". DO NOT modify this value. |
| APP_ID/ENABLE | Enable Application/ Product | YES if installing in the SILENT mode. | The default value is YES for Infrastructure. The default value is NO for Others. The permissible values are YES and NO. Set this attribute value to YES against every APP_ID that is licensed and that you need to enable for use. NOTE: You cannot disable the Application or Product after you enable it. Only those Applications or Products, which are enabled, are installed. To enable the other licensed Applications or Products, reinstall by setting the flag to Y for the APP_ID. However, in the case of reinstallation, to enable other Applications or Products, skip the execution of the Schema Creation Utility if it does not include the creation of any additional sandbox. |

| Tag Name or Attribute Name | Description | Mandatory? (Y or N) | Comments |
|----------------------------|-------------------------------------|------------------------|--|
| APP_NAME | Unique Application/ Product Name | Υ | This is a unique seeded value. DO NOT modify this value. |
| APP_DESCRIPTION | Unique Application/ Product Name | Υ | This is a unique seeded value. DO NOT modify this value. |
| VERSION | Unique release version | Υ | This is a unique seeded value. DO NOT modify this value. |

4. Save the file.

5.4 Configure the Schema Creator Utility

Creating database users or schemas (RDBMS) is one of the primary steps in the complete 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.

The schema creator utility must be configured and executed before the installation of the OIDF Application Pack.

Topics:

- Prerequisites
- Configure the Schema Creator Utility for RDBMS Installation
- Configure the Schema Creator Utility for HDFS Schema

5.4.1 Prerequisites

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

- Oracle User ID/Password with SYSDBA privileges
- JDBC Connection URL for RAC/Non-RAC database
- The HOSTNAME/IP of the server on which OFSAA is getting installed.

In the case of the HIVE installation, you must also have the following:

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

5.4.2 Configure the Schema Creator Utility for RDBMS Installation

If the installation is being performed for RDBMS, provide the Pack specific schema details in the $OFS\ OIDF\ SCHEMA\ IN.xml$ file.

You can configure the following types of schemas:

- **CONFIG**: This schema holds the entities and other objects required for OFSAA setup configuration information. There can be only one CONFIG schema per OFSAA instance
- **ATOMIC**: This schema holds the data model entities. One ATOMIC schema is attached to one Information Domain. There can be multiple ATOMIC schemas per OFSAA Instance.

The OFS_OIDF_PACK/schema_creator/conf/ directory contains the following files:

- OFS OIDF SCHEMA IN.xml
- OFS OIDF SCHEMA BIGDATA IN.xml.template
- OFS OIDF CFG.dat.template
- OFS OIDF APP CFG.dat
- App_Pack_Bigdata_Schema_Creator.xsd
- App Pack Schema Creator.xsd

5.4.2.1 Configure the OFS_OIDF_SCHEMA_IN.xml File

Creating database schemas, objects within schemas, and assigning required grants are the primary steps in the installation process of the OFSAA Applications.

The OFS OIDF SCHEMA IN.xml file contains details of the various application schemas.

Update the values of various tags and parameters available in this file and then execute the schema creator utility.

NOTE

Configure this file only for the RDBMS ONLY target installation of the OIDF Application Pack. Do not configure this file for an HDFS ONLY target installation.

To configure the OFS OIDF SCHEMA IN.xml file, follow these steps:

- 1. Log in to the system as a non-root user.
- 2. Navigate to the OFS OIDF PACK/schema creator/conf/ directory.
- 3. Rename the file OFS OIDF SCHEMA IN.xml.template to OFS OIDF SCHEMA IN.xml.
- **4.** Edit the OFS_OIDF_SCHEMA_IN.xml file using a text editor and configure the values as mentioned in the following table.

Figure 5: Sample of the OFS_OIDF_SCHEMA_IN.xml file

```
(APPPACKSCHEMA)
   <APP PACK ID>OFS OIDF PACK</APP PACK ID>
   <IS_TCPS>FALSE</IS_TCPS>
   <JDBC_URL>jdbc:oracle:thin:@##IP_ADDRESS##:##PORT_NUMBER##:##MYDATABASE##/JDBC_URL>
   <JDBC DRIVER>oracle.jdbc.driver.OracleDriver
   <HOST>##MYHOSTNAME##</HOST>
   <SETUPINFO NAME="DEV" PREFIX_SCHEMA_NAME="N" />
   <PASSWORD APPLYSAMEFORALL="Y" DEFAULT="" />
   <ADV SEC OPTIONS>
       <OPTION NAME="TDE" VALUE="TRUE"/>
       <OPTION NAME="DATA REDACT" VALUE="TRUE" />
   </ADV SEC OPTIONS>
   <!--
   <TABLESPACES>
      <TABLESPACE NAME="OFS OIDF DATA TBSP" VALUE="OFS OIDF DATA 1"
       DATAFILE="/PATH/ofs OIDF data 1.dbf" SIZE="500M" AUTOEXTEND="ON" ENCRYPT="OFF" />
       <TABLESPACE NAME="OFS OIDF SBX TBSP" VALUE="OFS OIDF DATA 2"
       DATAFILE="/PATH/ofs OIDF data 2.dbf" SIZE="512M" AUTOEXTEND="ON" ENCRYPT="OFF" />
   </TABLESPACES>
   <SCHEMAS>
       <SCHEMA TYPE="CONFIG" NAME="##MYCONSCHEMANAME##" PASSWORD="" APP ID="OFS AAI"</pre>
       DEFAULTTABLESPACE="##OFS OIDF DATA TBSP##" TEMPTABLESPACE="TEMP" QUOTA ="" />
       <SCHEMA TYPE="ATOMIC" NAME="##MYATMSCHEMANAME##" PASSWORD="" APP_ID="OFS_OIDF" INFODOM=
       "OIDFINFO" DEFAULTTABLESPACE="##OFS OIDF DATA TBSP##" TEMPTABLESPACE="TEMP" QUOTA ="" />
   </SCHEMAS>
/APPPACKSCHEMA>
```

Figure 6: Sample of the OFS_OIDF_SCHEMA_IN.xml file (APPPACKSCHEMA Block)

Table 22: The OFS_OIDF_PACK_SCHEMA_IN.xml file (APPPACKSCHEMA Parameters)

| Tag Name or Attribute Name | Description | Mandatory? | Default Value or Permissible Value | Comments |
|-------------------------------|---|------------|--|--|
| <app_pack_id></app_pack_id> | This is a unique Application Pack identifier. | Y | This is a unique seeded value. Example: OFS_OIDF_PACK | DO NOT modify this value. |
| <is_tcps></is_tcps> | Enter the value if the TCPS configuration is required. Entering this parameter creates a secure line between the client and server when using the OIDF application. | Y | This is a seeded value. The default value is FALSE. | Modify this to TRUE, if you require the installer to uptake the configuration. |

| Tag Name or Attribute Name | Description | Mandatory? | Default Value or Permissible Value | Comments |
|-------------------------------|--|------------|--|---|
| <jdbc_url></jdbc_url> | Enter the JDBC URL. NOTE: You can enter the RAC and NON-RAC enabled database connectivity URL. | Y | Example: jdbc:oracle:thin:@ <host>:<port>:<sid> or jdbc:oracle:thin:@//[HOST][: PORT]/SERVICE or jdbc:oracle:thin:@(DESCRIPTION=(ADDRESS_LIST= (ADDRESS=(PROTOCOL=TCP)(HOST=[HOST])(port=[PORT]))(ADDRESS=(PROTOCOL=TCP)(HOST=[HOST])(PORT=[PORT]))(LOAD_BALANCE=yes)(FAILOVER=yes))(CONNECT_DATA=(SERVICE_NAME=[SERVICE]))) For example: jdbc:oracle:thin:@//dbhost.server.com:<port>/service1 or jdbc:oracle:thin:@//dbshost. server.com: <port>/scan-1 or jdbc:oracle:thin:@(DESCRIPTION=(ADDRESS_LIST=(ADDRESS=(PROTOCOL=TCP)(HOST=dbhost1.server.com)(port=<port>))(ADDRESS=(PROTOCOL=TCP)(HOST=dbhost2.server.com)(PORT=<port>))(LOAD_BALANCE=yes)(FAILOVER=yes))(CONNECT_DATA=(SERVICE_NAME=service1)))</port></port></port></port></sid></port></host> | |
| <jdbc_driver></jdbc_driver> | By default, the name of this driver is seeded. NOTE : Do not edit this attribute value. | Y | Example: oracle.jdbc.driver.OracleDriv er | Only the JDBC Thin Driver is supported. DO NOT modify this value. |
| <host></host> | Enter the Hostname or IP Address of the system on which you are installing the OFSAA components. | Υ | Host Name or IP Address | |

| Tag Name or Attribute Name | Description | Mandatory? | Default Value or Permissible Value | Comments |
|--|---|------------|---|---|
| <setupinfo>/NAME</setupinfo> | Enter the acronym for the type of implementation. This information is displayed on the OFSAA Home Page. NOTE: On executing the schema creator utility, this value is prefixed with each schema name. For example, dev_ofsaaconf, uat_ofsaaatm. | Y | Accepts strings with a minimum length of two and a maximum of four. Example: DEV, SIT, PROD | This name appears in the OFSAA Landing Page as "Connected To: XXXX" The schemas that are created, get this prefix. For example: dev_ofsaaconf, uat_ofsaaconf etc. |
| <setupinfo>/ PREFIX_SCHEMA_NA ME</setupinfo> | Identifies if the value specified in <setupinfo>/ NAME attribute needs to be prefixed to the schema name.</setupinfo> | N | The default value is Y. Permissible values are Y or N. | The default value is Y. |
| <password>/APPLY SAMEFORALL</password> | Enter as Y if you need to apply the password specified in the DEFAULT attribute for all the schemas. If you enter as N, you need to provide individual passwords for all schemas. NOTE: In case you have entered Y in APPLYSAMEFORALL attribute and have specified individual passwords for all the schemas, then the specified individual passwords take precedence. | Y | The default value is N Permissible values are Y and N. | NOTE: Setting this attribute value is mandatory. If the DEFAULT attribute is set. |
| <password>/DEFAU LT*</password> | Enter the password if you need to set a default password for all schemas. NOTE: You also need to set the APPLYSAMEFORALL 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. | |

Figure 7: Sample of the OFS_OIDF_SCHEMA_IN.xml file (ADV_SEC_OPTIONS Block)

Table 23: OFS_OIDF_PACK_SCHEMA_IN.xml file (Advance Security Options Parameters)

| Tag Name/ Attribute Name | Description | Mandatory/ Optional | Default Value/ Permissible Value | Comments |
|--|---|------------------------|---|--|
| <adv_sec_options></adv_sec_options> | Parent tag to hold Advance Security Options. | N | | Uncomment the tag and edit if you need to add security options. For example, TDE and Data Redact. For details, see the example following the table. |
| <adv_sec_options>/T DE</adv_sec_options> | Tag to enable/disable TDE. | N | The default value 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> |
| <adv_sec_options>/ data_redact</adv_sec_options> | Tag to enable/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>/</adv_sec_options> |

Figure 8: Sample of the OFS_OIDF_SCHEMA_IN.xml file (TABLESPACES Block)

Table 24: OFS_OIDF_PACK_SCHEMA_IN.xml file (Tablespaces Parameters)

| Tag Name/ Attribute Name | Description | Mandatory/ Optional | Default Value/ Permissible Value | Comments |
|---|---|------------------------|-------------------------------------|---|
| <tablespaces></tablespaces> | Parent tag to hold <tablespace> elements</tablespace> | N | NA | Uncomment the tag and edit. ONLY if tablespaces are to be created as part of the installation. For details, see the example following the table. NOTE: When TDE is TRUE in ADV_SEC_OPTIONS, then the <tablespaces> tag must be present in the XML file.</tablespaces> |
| <tablespace>/NAME</tablespace> | Create the Logical Name of the tablespace | Υ | | Name if specified should be referred to in the <schema defaulttablespace="##NAME##"> attribute. Note the ## syntax.</schema> |
| <tablespace>/VALUE</tablespace> | Create the Physical Name of the tablespace | Υ | NA | Value, if specified, is the actual name of the TABLESPACE. |
| <tablespace>/DATAFI</tablespace> | Specifies the location of the data file on the server | Υ | NA | Enter the absolute path of the file to be created. |
| <tablespace>/AUTOE XTEND</tablespace> | Specifies if the tablespace needs to be extensible or have a hard limit | Υ | ON or OFF | Set to ON to ensure that the tablespaces do not run out of space when full. |
| <tablespace>/ENCRY PT</tablespace> | Specifies if the tablespace(s) needs to 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.

Figure 9: Sample of the OFS_OIDF_SCHEMA_IN.xml file (SCHEMAS Block)

Table 25: OFS_OIDF_PACK_SCHEMA_IN.xml file (SCHEMAS Parameters)

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

| Tag Name/ Attribute Name | Description | Mandatory/ Optional | Default Value/ Permissible Value | Comments |
|--|--|------------------------|--|--|
| <schema>/NAME</schema> | By default, the schema names are seeded based on the Application Pack. You can edit the schema names if required. NOTE: The Schema Name has a prefix of the SETUPINFO/ NAME attribute. SCHEMA NAME needs to be the same for all the ATOMIC Schemas of applications within an Application Pack. | Y | The permissible length is 15 characters and only alphanumeric characters are allowed. No special characters are allowed except underscore '_'. | SETUPINFO/NAME attribute value is prefixed to the schema name that is created. For example, If the name is set as 'ofsaaatm' and setupinfo as 'uat' then the schema created is 'uat_ofsaaatm'. Example for <schema>/ NAME: ##CONFIG_USER_NAME## or ##ATOMIC_USER_NAME## NAME should be the same where APP_GRP=1 for all SCHEMA tags (Not applicable for this Application Pack).</schema> |
| <schema>/PASSWORD</schema> | Enter the password of the schema to be created. NOTE: If this attribute is left blank, then the password specified in the <password>/DEFAULT attribute is applied as the Schema Password.</password> | N | The maximum length allowed is 30 characters. Special characters are not allowed. | NOTE : You need to mandatorily enter the password if you have set the <password>/ APPLYSAMEFORALL attribute as N.</password> |
| <schema>/APP_ID</schema> | By default, the Application ID is seeded based on the Application Pack. NOTE : Do not edit this attribute value. | Y | Unique Seeded Value Example: For CONFIG schema, OFS_AAI For ATOMIC schema, OFS_OIDF | Identifies the Application or Product for which the schema is being created. DO NOT modify this value. |
| <schema>/DEFAULTT ABLESPACE</schema> | Enter the available default tablespace for DB User. NOTE: If this attribute is left blank, then USERS is set as the default tablespace. | N | Default – USERS Permissible – Any existing valid tablespace name. Example: ##OFS_OIDF_DATA_TBSP## | Modify this value to associate any valid tablespace with the schema. |

| Tag Name/ Attribute Name | Description | Mandatory/ Optional | Default Value/ Permissible Value | Comments |
|--|--|---|--|---|
| <schema>/TEMPTABL ESPA CE</schema> | Enter the available temporary tablespace for the DB User. NOTE : If this attribute is left blank, then TEMP is set as the default tablespace. | | Default – TEMP Permissible – Any existing valid temporary tablespace name. Example: ##OFS_OIDF_DATA_TBSP## | Modify this value to associate any valid tablespace with the schema. |
| <schema>/QUOTA</schema> | 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 | For example, 600M/m 20G/g UNLIMITED/unlimited | Modify this value to grant the specified quota on the mentioned tablespace to the user. |
| <schema>/INFODOM</schema> | Enter the name of the Information Domain to associate this schema. The schema creator utility automatically derives an Information Domain Name based on the Application Pack if no value is specified for this attribute. | N (Optional for Atomic and mandatory for sandbox) | Permissible length is 16 characters and only alphanumeric characters are allowed. No special characters are allowed. | |

5. Save the file.

5.4.2.1.1 Example of TDE Enablement and TABLESPACES with Encryption ON

The following snippet shows that TDE is enabled and therefore, the tablespaces are shown with the 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="/scratch/ora19c/app/oracle/oradata/OFSPQA19CDB/ts_users2.dbf" SIZE="500M" AUTOEXTEND="ON"
ENCRYPT="ON" />

</Tablespaces>

<SCHEMAS>

<SCHEMA TYPE="CONFIG" NAME="ofsaaconf" PASSWORD="" APP_ID="OFS_AAI" DEFAULTTABLESPACE="##OFS_AAI_TBSP_1##"
TEMPTABLESPACE="TEMP" QUOTA="unlimited"/>

<SCHEMA TYPE="ATOMIC" NAME="ofsaaatm" PASSWORD="" APP_ID="OFS_AAAI" DEFAULTTABLESPACE="##OFS_AAI_TBSP_2##"
TEMPTABLESPACE="TEMP" QUOTA="unlimited" INFODOM="OFSAAAIINFO"/>
```

</SCHEMAS>

5.4.3 Configure the Schema Creator Utility for HDFS Schema

If the installation is being performed for Big Data, provide the Pack specific schema details in the OFS_OIDF_SCHEMA_BIGDATA_IN.xml file.

The schema types that you can configure are:

- **CONFIG**: This schema holds the entities and other objects required for OFSAA setup configuration information. There can be only one CONFIG schema per OFSAA instance. This schema is created only in RDBMS.
- METADOM: This schema holds the Data Model entities. One METADOM schema is attached to
 one Information Domain. There can be multiple DATADOM schemas per OFSAA Instance. This
 schema is created only in RDBMS. It has only platform entities that hold the metadata details.
 However, it does not hold the Data Model entities.
- **DATADOM**: This schema holds Data Model entities. One DATADOM schema is attached to one Information Domain. There can be multiple DATADOM schemas per OFSAA Instance.

The OFS OIDF PACK/schema creator/conf/directory contains the following files:

- OFS OIDF SCHEMA IN.xml
- OFS OIDF SCHEMA BIGDATA IN.xml.template
- OFS OIDF CFG.dat.template
- OFS OIDF APP CFG.dat
- App Pack Bigdata Schema Creator.xsd
- App Pack Schema Creator.xsd

Topics:

Configure the OFS_OIDF_SCHEMA_BIGDATA_IN.xml file for Stage and Results on Hive

5.4.3.1 Configure the OFS_OIDF_SCHEMA_BIGDATA_IN.xml file for Stage and Results on Hive

Creating Hive schemas and objects within the schemas are the primary steps in the installation process of OFSAA Applications.

The OFS_OIDF_SCHEMA_BIGDATA_IN.xml file contains details about various application schemas. Update the values of the various tags and parameters available in this file before executing the Schema Creator Utility.

NOTE

Configure this file only for the HDFS ONLY target installation of the OIDF Application Pack. Do not configure this file for an RDBMS ONLY target installation.

To configure the OFS OIDF SCHEMA IN.xml file for Stage and Results on Hive, follow these steps:

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

- 2. Navigate to the OFS OIDF PACK/schema creator/conf/ directory.
 - Rename the file OFS OIDF SCHEMA IN.xml to OFS OIDF SCHEMA IN.xml.template.
 - Rename the file OFS_OIDF_SCHEMA_BIGDATA_IN.xml.template to OFS_OIDF_SCHEMA_BIGDATA_IN.xml.
- **3.** Edit the OFS_OIDF_SCHEMA_BIGDATA_IN.xml file using a text editor and configure the values as mentioned in the following table.

Figure 10: Sample of the OFS_OIDF_SCHEMA_BIGDATA_IN.xml file (Stage and Results on Hive)

```
APPPACKSCHEMA>
   <APP PACK ID>OFS OIDF PACK</APP PACK ID>
   <IS TCPS>FALSE</IS TCPS>
   <JDBC URL>jdbc:oracle:thin:@##IP ADDRESS##:##PORT NUMBER##:##MYDATABASE##</JDBC URL>
   <JDBC DRIVER>oracle.jdbc.driver.OracleDriver
   <HOST>##MYHOSTNAME##</HOST>
   <IS HYBRID VALUE="FALSE"/>
  <SETUPINFO NAME="OIDF" PREFIX SCHEMA NAME="N"/>
   <PASSWORD APPLYSAMEFORALL="Y" DEFAULT="##CONFIG META SCHEMA PASSWORD##"/>
   <SCHEMAS TYPE="RDBMS">
      <SCHEMA TYPE="CONFIG" NAME="##MYHIVECONSCHEMA##" PASSWORD="" APP ID="OFS AAI" DEFAULTTABLESPACE="USERS"</pre>
      TEMPTABLESPACE="TEMP" QUOTA="500M"/>
      <SCHEMA TYPE="ATOMIC" NAME="##MYHIVEATMSCHEMA##" PASSWORD="" APP ID="OFS OIDF" DEFAULTTABLESPACE="USERS"</pre>
      TEMPTABLESPACE="TEMP" QUOTA="10G" INFODOM="##MYHIVEINFODOM##"/>
   </SCHEMAS>
   <SCHEMAS TYPE="HDFS">
       <HIVE SERVER HOST>##MY HIVE SERVER HOST NAME OR IP##</HIVE SERVER HOST>
       <HIVE LIB PATH>##MY HIVE LIBRARY PATH##</HIVE LIB PATH>
       <SCHEMA NAME="##MYHIVEDATADOM##" TYPE="DATADOM" APP_ID="0FS_OIDF" DB_TYPE="HIVE" INFODOM="##MYHIVEINFODOM##">
           <SCHEMA PROPERTIES>
               <PROPERTY ID="COMMENT" VALUE="" />
               <PROPERTY ID="LOCATION" VALUE="" />
           </SCHEMA PROPERTIES>
           <CONNECTION PROPERTIES>
               <PROPERTY ID="JDBC DRIVER" VALUE="com.cloudera.hive.jdbc4.HS2Driver" />
               <PROPERTY ID="JDBC URL" VALUE=
               "jdbc:hive2://##MY HIVE SERVER HOST NAME OR IP##:10000/<<PREFIX>> <<SCHEMA NAME>>;AuthMech=1;KrbServi
               ceName=hive;KrbHostFQDN=##MY HIVE SERVER HOST NAME OR IP##;KrbRealm=##REALM##" />
               <PROPERTY ID="AUTH TYPE" VALUE="KERBEROS WITH KEYTAB" />
               <PROPERTY ID="AUTH ALIAS" VALUE="##ALIAS NAME FOR AUTHENTICATION##" />
               <PROPERTY ID="PRINCIPAL" VALUE="##AUTHENTICATION PRINCIPAL NAME##" />
               <PROPERTY ID="PASSWORD" VALUE="##HIVE USER PASSWORD##"/>
               <PROPERTY ID="KRB GSSJAAS FILE NAME" VALUE="##KEYTAB PATH AND FILE NAME##" />
               <PROPERTY ID="KRB REALM FILE NAME" VALUE="##REALM CONFIGURATION PATH AND FILE NAME##" />
           </CONNECTION PROPERTIES>
       </SCHEMA>
   </SCHEMAS>
</APPPACKSCHEMA>
```

Figure 11: Sample of the OFS_OIDF_SCHEMA_BIGDATA_IN.xml file (APPPACKSCHEMA Block for Stage and Results on Hive)

Table 26: OFS_OIDF_SCHEMA_BIGDATA_IN.xml file (APPPACKSCHEMA Parameters for Stage and Results on Hive)

| Tag Name/ Attribute Name | Description | Mandatory (Y/N) | Default Value/ Permissible Value | Comments |
|-----------------------------|---|--------------------|---|---|
| <app_pack_id></app_pack_id> | Seeded unique ID for the OFSAA Application Pack. | Υ | Seeded | DO NOT modify this value. |
| <is_tcps></is_tcps> | Enter if the TCPS configuration is required. This is to create a secure line between the client and server when using the OIDF application. | Υ | Seeded, with FALSE as the default value. | Modify this to TRUE if you require the installer to uptake the configuration. |
| <jdbc_url></jdbc_url> | Enter the JDBC URL. NOTE: You can enter the RAC or NON-RAC enabled database connectivity URL. | Y | Example: jdbc:oracle:thin:@ <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_</sid></port></host> | For an HDFS ONLY target installation, this URL need to be of the RDBMS instance that hosts the Application's METADOM. |

| Tag Name/ Attribute Name | Description | Mandatory (Y/N) | Default Value/ Permissible Value | Comments |
|-------------------------------|--|--------------------|---|--|
| | | | BALANCE=yes)(FAILOV ER=yes))(CONNECT_ DATA=(SERVICE_ NAME=[SERVICE]))) | |
| | | | For example, jdbc:oracle:thin:@//dbhos t.server.com: <port>/service 1</port> | |
| | | | or | |
| | | | jdbc:oracle:thin:@//dbsho st.server.com: <port>/scan-1</port> | |
| | | | or | |
| | | | jdbc:oracle:thin:@(DESCRI PTION=(ADDRESS_ LIST=(ADDRESS=(PROT OCOL=TCP)(HOST=dbho | |
| | | | st1.server.com)(port=1521) | |
| | | |)(ADDRESS=(PROTOCO | |
| | | | L=TCP)(HOST=dbhost2.s erver.com)(PORT=1521))(LOAD_ BALANCE=yes)(FAILOV ER=yes))(CONNECT_ DATA=(SERVICE_ | |
| | | | NAME=service1))) | |
| <jdbc_driver></jdbc_driver> | By default, this driver's name is seeded. NOTE : Do not edit this attribute value. | Υ | Example: oracle.jdbc.driver.OracleD river | Only JDBC Thin Driver is supported. DO NOT modify this value. |
| <host></host> | Enter the Hostname or IP Address of the system on which you are installing the OFSAA components. | Y | Host Name/ IP Address | |
| <is_hybrid>/VALUE</is_hybrid> | Tag to enable/disable HYBRID installation (Stage on Hive and Results on RDBMS). | N | The default value is FALSE | The default value is FALSE for Hive. |

| Tag Name/ Attribute Name | Description | Mandatory (Y/N) | Default Value/ Permissible Value | Comments |
|--|---|--------------------|--|---|
| <setupinfo>/ PREFIX_SCHEMA_NAM E</setupinfo> | Identifies if the value specified in the <setupinfo>/NAME attribute needs to be prefixed to the schema name.</setupinfo> | | YES or NO. | The default value is YES. |
| <setupinfo>/NAME</setupinfo> | Enter the acronym for the type of implementation. This information is displayed on the OFSAA Home Page. NOTE: On executing the schema creator utility, this value will be prefixed with each schema name. For example, dev_ ofsaaconf, uat_ofsaaatm. | Y | Accepts strings with a minimum length of two and a maximum of four. Example: OIDF | This name appears in the OFSAA Landing Page as "Connected To: XXXX". The schemas created get this prefix. For example, dev_ ofsaaconf, uat_ofsaaconf, and so on. |
| <password>/DEFAU LT*</password> | Enter the password if you need to set a default password for all schemas. NOTE: You also need to set the APPLYSAMEFORALL 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. | Applies only to the RDBMS type METADOM schema(s). |

| Tag Name/ Attribute Name | Description | Mandatory (Y/N) | Default Value/ Permissible Value | Comments |
|--|---|--------------------|---|---|
| <password>/APPLY SAMEFORALL</password> | Enter as Y if you need to apply the password specified in the DEFAULT attribute for all the schemas. If you enter as N, you need to provide individual passwords for all schemas. NOTE: If you have entered Y in the APPLYSAMEFORALL attribute and have specified individual passwords for all the schemas, then the specified individual passwords takes precedence. | | The default value is N. Permissible values are Y and N. | NOTE: Setting this attribute value is mandatory if the DEFAULT attribute is set. Applies only to the RDBMS type METADOM schema(s). |

Figure 12: Sample of the OFS_OIDF_SCHEMA_BIGDATA_IN.xml file (SCHEMA type RDBMS Block for Stage and Results on Hive)

Table 27: OFS_OIDF_SCHEMA_BIGDATA_IN.xml file (SCHEMA type RDBMS Parameters for Stage and Results on Hive)

| Tag Name/ Attribute Name | Description | Mandatory (Y/N) | Default Value/ Permissible Value | Comments |
|-------------------------------------|---|--------------------|--|--|
| <schemas>/TYPE=R DBMS</schemas> | Identifies the RDBMS schema details. | Y | Default names for schemas within the pack are derived in the absence of any value specified. | In an HDFS ONLY target installation, the Application's METADOM (that hosts the metadata) for an application is stored in the RDBMS schema and the Data Model entities of the application are stored in the DATADOM (which is on Hive). |
| <schema>/TYPE</schema> | The different types of schemas that are supported in this release are ATOMIC, CONFIG. By default, the schemas types are seeded based on the Application Pack. NOTE: Do not edit this attribute value. | Y | ATOMIC/CONFIG. | Only One CONFIG schema can exist in the file. This schema identifies as the CONFIGURATION schema that holds the OFSAA setup details and other metadata information. Multiple ATOMIC or SANDBOX or ADDON schemas can exist in the file. ATOMIC schema refers to the METADOM within the Information Domain schema. SANDBOX schema refers to the SANDBOX schema. ADDON schema refers to other miscellaneous schemas (not applicable for this Application Pack). |
| <schema>/NAME</schema> | By default, the schema names are seeded based on the Application Pack. You can edit the schema names if required. NOTE: The Schema Name has a prefix of the SETUPINFO/NAME attribute. The SCHEMA NAME must be the same for all the ATOMIC Schemas of applications within an Application Pack. | Y | The permissible length is 15 characters and only alphanumeric characters are allowed. No special characters are allowed except the Underscore '_'. | SETUPINFO/ NAME attribute value is be prefixed to the schema name created. For example, if the name is set as 'ofsaaatm' and setupinfo as 'uat' then the schema created is 'uat_ofsaaatm'. NAME needs to be the same where APP_GRP=1 for all SCHEMA tags (not applicable for this Application Pack). |

| Tag Name/ Attribute Name | Description | Mandatory (Y/N) | Default Value/ Permissible Value | Comments |
|--|--|--------------------|--|---|
| <schema>/PASSWOR D</schema> | Enter the password of the schema to be created. NOTE: If this attribute is left blank, then the password specified in the <password>/DEFAULT attribute is applied as the Schema Password.</password> | N | The maximum length allowed is 30 characters. Special characters are not allowed. | NOTE : You need to mandatorily enter the password if you have set the <password>/ APPLYSAMEFORALL attribute as N.</password> |
| <schema>/APP_ID</schema> | By default, the Application ID is seeded based on the Application Pack. NOTE : Do not edit this attribute value. | Y | Unique Seeded value. | Identifies the Application or Product for which the schema is created. DO NOT modify this value. |
| <schema>/DEFAULT TABLESPACE</schema> | Enter the available default tablespace for DB User. NOTE : If this attribute is left blank, then USERS is set as the default tablespace. | N | The default value is USERS. Permissible value is any existing valid tablespace name. | Modify this value to associate any valid tablespace with the schema. |
| <schema>/TEMPTAB LESPACE</schema> | Enter the available temporary tablespace for the DB User. NOTE : If this attribute is left blank, then TEMP is set as the default tablespace. | N | The default value is TEMP. Permissible value is any existing valid temporary tablespace name. | Modify this value to associate any valid tablespace with the schema. |
| <schema>/QUOTA</schema> | 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 | Example: 600M or 600m 20G or 20g UNLIMITED or unlimited | Modify this value to grant the specified quota on the mentioned tablespace to the user. |
| <schema>/INFODOM</schema> | Enter the name of the Information Domain to associate this schema. The schema creator utility automatically derives an Information Domain Name based | N | Permissible length is 16 characters and only alphanumeric characters are allowed. No special characters are allowed. | |

| Tag Name/ Attribute Name | Description | Mandatory (Y/N) | Default Value/ Permissible Value | Comments |
|-----------------------------|---|--------------------|----------------------------------|----------|
| | on the Application Pack if the value is not specified for this attribute. | | ##INFODOM_NAME## Example: | |
| | | | OIDFINFO | |

Figure 13: Sample of the OFS_OIDF_SCHEMA_BIGDATA_IN.xml file (SCHEMA type HDFS Block for Stage and Results on Hive)

```
<SCHEMAS TYPE="HDFS">
   <HIVE SERVER HOST>MyHIVEServerHostName/HIVE SERVER HOST>
   <hIVE LIB PATH>HiveLibraryPath</hIVE LIB PATH>
   <SCHEMA NAME="MYHIVEDATADOM" TYPE="DATADOM" APP_ID="OFS FSDF" DB_TYPE="HIVE" INFODOM=</p>
   "MYHIVEINFODOM">
       <SCHEMA PROPERTIES>
           <PROPERTY ID="COMMENT" VALUE="" />
           <PROPERTY ID="LOCATION" VALUE="" />
       </schema properties>
       <connection properties>
            <PROPERTY ID="JDBC DRIVER" VALUE="com.cloudera.hive.jdbc4.HS2Driver" />
           <PROPERTY ID="JDBC URL" VALUE=
           "jdbc:hive2://##HIVE SERVER HOST NAME OR IP##:10000/<<PREFIX>> <<SCHEMA NAME>>;AuthMech=1
            ;KrbServiceName=hive;KrbHostFQDN=##HIVE SERVER HOST NAME OR IP##;KrbRealm=##REALM##" />
           <PROPERTY ID="AUTH TYPE" VALUE="KERBEROS WITH KEYTAB" />
           <PROPERTY ID="AUTH ALIAS" VALUE="AliasNameForAuthentication" />
           <PROPERTY ID="PRINCIPAL" VALUE="AuthenticationPrincipalName" />
           <PROPERTY ID="PASSWORD" VALUE=""/>
           <PROPERTY ID="KRB GSSJAAS FILE NAME" VALUE="KEYTABPathAndFileName" />
           <PROPERTY ID="KRB REALM FILE NAME" VALUE="REALMConfigurationPathAndFileName" />
       </connection properties>
   </schema>
</schemas>
```

Table 28: OFS_OIDF_SCHEMA_BIGDATA_IN.xml file (SCHEMA type HDFS Parameters for Stage and Results on Hive)

| Tag Name/ Attribute Name | Description | Mandatory (Y/N) | Default Value/ Permissible Value | Comments |
|---------------------------------------|--|--------------------|--|---|
| <schemas>/TYPE=HDFS</schemas> | Type of schemas created. | Y | | Refers to the DATADOM of the Application Pack installed. |
| <hive_server_host></hive_server_host> | IP or HostName of the server where HIVE is installed. | Y | | |
| <hive_lib_path></hive_lib_path> | Folder path where HIVE related drivers or jar files are copied. | Y | | Needs to contain the list of jars mentioned in the section Copy the Jar Files to the OFSAA Installation Directory and krb5.conf, keytab files. Manually copy the preceding listed files from CDH distribution to this identified folder. NOTE: The Cloudera administrator provides these two files krb5.conf and keytab. |
| <schema>/NAME</schema> | By default, the schema names are seeded based on the Application Pack. You can edit the schema names if required. NOTE: The Schema Name has a prefix of the SETUPINFO/NAME attribute. | Y | The permissible length is 20 characters and only alphanumeric characters are allowed. Example: HIVEHYBDATADOM | Schema Name should not be the same as Schema Name specified for Schema Type ATOMIC. |
| <schema>/TYPE</schema> | Identifies the type of schema where the Data Model entities reside. | Υ | By default, the TYPE attribute in this tag is set to DATADOM. | DO NOT modify this value. |

| Tag Name/ Attribute Name | Description | Mandatory (Y/N) | Default Value/ Permissible Value | Comments |
|---|--|--------------------|---|---|
| <schema>/APP_ID</schema> | By default, the Application ID is seeded based on the Application Pack. | Y | The supported value is OFS_OIDF. | |
| <schema>/DB_TYPE</schema> | Identifies the type of driver to be used for the connection. | Υ | By default, the only supported type is HIVE in this release. | In the upcoming releases, the type of value can be HIVE, IMPALA, and so on. |
| <schema>/INFODOM</schema> | Enter the name of the Information Domain to associate this schema. The schema creator utility automatically derives an | N | Permissible length is 16 characters and only alphanumeric characters are allowed. No special characters are allowed. For example: ##MY_HIVE_INFODOM## | |
| | Information Domain Name based on the Application Pack if the value is not specified for this attribute. | | For Hive part in Stage on Hive and Results on RDBMS: Example: | |
| | | | OIDFHVINFO | |
| <schema_properties>/<pro PERTY>/COMMENT</pro </schema_properties> | COMMENTS for HIVE schema. | N | | |
| <schema_properties>/<pro PERTY>/LOCATION</pro </schema_properties> | You can optionally specify a location for the table data. | N | hdfs:// ##HIVE_SERVER_HOST_NAME_OR_IP##:Namenod ePort/user/hive/warehouse/< <prefix>><<sche ma_name="">>/ NOTE: The <<prefix>> prefix is applicable only if the <prefix_schema_name> tag is "Y" in the</prefix_schema_name></prefix></sche></prefix> | |
| | | | <pre><setupinfo> tag. For example: When <setupinfo name="OIDF" prefix_schema_name="Y"></setupinfo>.</setupinfo></pre> | |

| Tag Name/ Attribute Name | Description | Mandatory (Y/N) | Default Value/ Permissible Value | Comments |
|--|---------------------------|--------------------|---|--|
| | | | hdfs:// whf00bsy.in.oracle.com:8020/user/hive/warehouse /OIDF_BSYDATADOM/ | |
| <connection_properties>/ <property>/JDBC_DRIVER</property></connection_properties> | HIVE JDBC driver details. | Υ | com.cloudera.hive.j dbc4.HS2Driver | The default cloudera HiveServer 2 driver name. |
| <connection_properties>/ <property>/JDBC_URL</property></connection_properties> | Enter the HIVE JDBC URL. | Y | A valid Hive JDBC URL to be specified. jdbc:hive2://##HIVE_SERVER_HOST_NAME_OR_IP ##:10000/< <prefix>><schema_name>>;Aut hMech=1;KrbServiceName=hive;KrbHostFQDN=##H IVE_SERVER_HOST_NAME_OR_IP##;KrbRealm=## REALM## NOTE: <<prefix>> Prefix is applicable only if the <prefix_schema_name> tag is Y in <setupinfo> tag. For example, when <setupinfo name="OIDF" prefix_schema_name="Y"></setupinfo>. <<schema_name>> is the DATADOM schema name. For example: jdbc:hive2://whf00bsy.in.oracle.com:10000/OIDF_ BSYDATADOM;AuthMech=1;KrbServiceName=hive;K rbHostFQDN=whf00bsy.in.oracle.com;KrbRealm=W HFBSY.ORACLE.COM</schema_name></setupinfo></prefix_schema_name></prefix></schema_name></prefix> | Specify the Hive JDBC URL to connect to the Hive Server. |
| <connection_properties>/ <property>/AUTH_TYPE</property></connection_properties> | Authentication Type. | Υ | Permissible values: KERBEROS_WITH_ KEYTAB. | Only "Kerberos with keytab" based authentication is supported in this release. |

| Tag Name/ Attribute Name | Description | Mandatory (Y/N) | Default Value/ Permissible Value | Comments |
|---|---|--------------------|----------------------------------|--|
| <connection_properties>/ <property>/AUTH_ALIAS</property></connection_properties> | Alias name for authentication credentials. | Υ | | An Alias name mapping to a principal and password combination is specified in the following tags. |
| <connection_properties>/ <property>/PRINCIPAL</property></connection_properties> | Authentication principal name. | Υ | | Principal name used in authentication to connect to the Hive Server. |
| <connection_properties>/ <property>/PASSWORD</property></connection_properties> | Authentication password. | Υ | | Password used in authentication to connect to the Hive Server. |
| <connection_properties>/ <property>/KRB_GSSJAAS_FI LE_NAME</property></connection_properties> | A keytab file containing pairs of Kerberos principals and an encrypted copy of that principal's key. | Y | | This file needs to be copied to the location specified in < HIVE_LIB_PATH . |
| <connection_properties>/ <property>/KRB_REALM_FIL E_NAME</property></connection_properties> | REALM configuration file. | Y | | This file needs to be copied to the location specified in <hive_lib_path>.</hive_lib_path> |

4. Save the file.

5.5 Configure the OFSAAI_InstallConfig.xml File

To configure the OFS InstallConfig.xml file, follow these steps:

- 1. Navigate to the OFS OIDF 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 29: OFSAA Infrastructure Installation Tasks and Descriptions

| 14510 20 | . Of OAA IIII astracture installation rasks and bescriptions | |
|--------------------------------|--|-----------|
| InteractionVariable Name | Significance and Expected Value | Mandatory |
| <layer name="GENERAL"></layer> | | • |
| InteractionGroup name="W | ebServerType" | |
| WEBAPPSERVERTYPE | <pre>Identifies the web application server on which the OFSAA Infrastructure web components are deployed. Set the following numeric value depending on the type of web application server:</pre> | Yes |
| InteractionGroup name="Ol | SAA Infrastructure Server Details" | |
| DBSERVER_IP | Identifies the hostname or IP address of the system on which the Database Engine is hosted. NOTE: For RAC Database, the value must be NA. For example, <interactionvariable name="DBSERVER_ IP">14.15.16.17</interactionvariable> or <interactionvariable name="DBSERVER_ IP">dbhost.server.com</interactionvariable> | Yes |
| InteractionGroup name="Da | atabase Details" | |
| ORACLE_SID/SERVICE_NA ME | Identifies the Oracle DB Instance SID or SERVICE_NAME NOTE: The Oracle_SID value must be the same as it is mentioned in JDBC_URL. For example, <interactionvariable name="ORACLE_SID/SERVICE_NAME">ofsaser</interactionvariable> | Yes |
| ABS_DRIVER_PATH | Identifies the directory where the JDBC driver (ojdbc <version>.jar) exists. This is typically the \$ORACLE_HOME/jdbc/lib directory.</version> | Yes |

| InteractionVariable Name | Significance and Expected Value | Mandatory |
|--|--|------------|
| | For example, <interactionvariable name="ABS_DRIVER_PATH">">/oradata6/revwb7/ oracle </interactionvariable> | |
| | NOTE: See the <u>Hardware and Software Requirements</u> section to identify the correct ojdbc <version>.jar file version to be copied.</version> | |
| InteractionGroup name="Ol | AP 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 the choice: • YES: 1 • NO: 0 | No |
| | 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: • ARBORPATH • HYPERION_HOME • ESSBASEPATH | |
| InteractionGroup name="SF | TP Details" | |
| SFTP_ENABLE | Identifies if the SFTP (Secure File Transfer Protocol) feature is to be enabled. The following numeric value must be set depending on the choice: • SFTP: 1 • FTP: 0 | Yes |
| FTP because SFTP is more set 0 . You can change this selecti | SFTP_ENABLE is 1 , which signifies that SFTP is used. Oracle recommends using S cure. However, you can ignore this recommendation and use FTP by setting SFTP on later from the OFSAAI administration interface. | _ENABLE to |
| Set SFTP_ENABLE to -1 to co | onfigure ftpshare and weblocal path as a local path mounted for the OFSAAI serve | r. |
| FILE_TRANSFER_PORT | Identifies the port used for the file transfer service. The default value specified is 22 (SFTP). Specify the value like 21 or any other PORT value if the value for SFTP_ENABLE is 0. For example, <interactionvariable name="FILE_TRANSFER_PORT">21</interactionvariable> | Yes |
| InteractionGroup name="I | | |
| InteractionGroup name="Lo | | ., |
| LOCALE | Identifies the locale information to be used during the installation. This release of the OFSAA Infrastructure supports only US English. | Yes |
| | For example, <interactionvariable name="LOCALE">en_US</interactionvariable> | |
| InteractionGroup name="OF | SAA Infrastructure Communicating ports" | |
| set in the installation. If you ir | e used internally by the various OFSAA Infrastructure services. The default values r Itend to specify a different value, update the parameter value accordingly, ensure t 5535, and the respective port is enabled. | |
| JAVAPORT | 9999 | Yes |

| InteractionVariable Name | Significance and Expected Value | Mandatory | |
|---|---|-----------|--|
| NATIVEPORT | 6666 | Yes | |
| AGENTPORT | 6510 | Yes | |
| ICCPORT | 6507 | Yes | |
| ICCNATIVEPORT | 6509 | Yes | |
| OLAPPORT | 10101 | Yes | |
| MSGPORT | 6501 | Yes | |
| ROUTERPORT | 6500 | Yes | |
| AMPORT | 6505 | Yes | |
| InteractionGroup name="Web Details" NOTE: If 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 Yes | | | |
| | <pre>default value is set to 0. The numeric value must be set depending on the following options: YES: 1 NO: 0 For example, <interactionvariable name="HTTPS_ENABLE">0</interactionvariable></pre> | | |
| WEB_SERVER_IP | Identifies the HTTP Server IP/Hostname or Web application server IP/Hostname, to be used to access the UI. This IP is typically the HTTP Server IP. If a separate HTTP Server is not available, then the value must be Web application server IP/Hostname. For example, <interactionvariable name="WEB_SERVER_IP">10.11.12.13</interactionvariable> or <interactionvariable name="WEB_SERVER_IP">myweb.server.com</interactionvariable> | No | |
| WEB_SERVER_PORT | Identifies the Web Server Port, 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. Warning: The installer will not accept the port value as: • 80, if the HTTPS_ENABLE variable is 1 • 443, if the HTTPS_ENABLE variable is 0 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: <scheme>://<host>:<port>/<context-name>/login.jsp The following is an example:</context-name></port></host></scheme> | Yes | |

| InteractionVariable Name | Significance and Expected Value | Mandatory | | |
|--|--|---|--|--|
| | https://myweb:443/ofsaadev/login.jsp | | | |
| | For example, <interactionvariable name="CONTEXT_NAME">ofsaadev</interactionvariable> | | | |
| WEBAPP_CONTEXT_PATH | Identifies the absolute path of the exploded EAR file on the web application server. • For Tomcat, specify the Tomcat directory path till /webapps. For example, /oradata6/revwb7/tomcat/webapps/. | Yes | | |
| | • For WebSphere, specify the WebSphere path as <websphere directory="" profile="">/installedApps/<nodecellname>. For example, / data2/test//WebSphere/AppServer/profiles/<profile_name>/installedApps/aiximfNodeO1Cell, where aix-imf is the Host name.</profile_name></nodecellname></websphere> | | | |
| | • For WebLogic, specify the WebLogic home directory path. For example, / <weblogic directory="" home="" path="">/bea/wlserver_10.3</weblogic> | | | |
| | 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. Set this in the FTPSHARE location. NOTE: During a clustered deployment, ensure that this path and the directory are the same on all the nodes. | Yes | | |
| InteractionGroup name="We | | | | |
| | _ · · | l . , | | |
| WEBLOGIC_DOMAIN_HOM E | <pre>Identifies the WebLogic Domain Home. For example, <interactionvariable name="WEBLOGIC_DOMAIN_HOME">/home/weblogic/bea/user_p rojects/domains/mydomain</interactionvariable></pre> | Yes. Specify the value only if WEBAPPSER VERTYPE 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. NOTE: The directory must exist on the same system on which the OFSAA Infrastructure is being installed (can be on a separate mount). The user mentioned in the APP_SFTP_USER_ID parameter in the following example must have RWX permission on the directory. For example, <interactionvariable name="APP_FTPSHARE_PATH">">/oradata6/revwb7/ftpshare/InteractionVariable></interactionvariable> | Yes | | |
| OFSAAI_SFTP_USER_ID | Identifies the user who has RWX permissions on the directory identified for the parameter APP_FTPSHARE_PATH. | Yes | | |

| InteractionVariable Name | Significance and Expected Value | Mandatory |
|-------------------------------------|---|-----------|
| OFSAAI_SFTP_PRIVATE_KE | Identifies the SFTP private key for OFSAAI. | No |
| Υ | For example, | |
| | <interactionvariable< td=""><td></td></interactionvariable<> | |
| | <pre>name="OFSAAI_SFTP_PRIVATE_KEY">/home/ofsaapp/.ssh/id_ rsa</pre> | |
| | 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="">.</ofsaai_sftp_user_> | |
| | For more information on how to generate an SFTP Private key, see the <u>Set Up</u> <u>SFTP Private Key</u> section. | |
| OFSAAI_SFTP_PASSPHRAS | Identifies the passphrase for the SFTP private key for OFSAAI. | No |
| E | For example, | |
| | <pre>InteractionVariable name="OFSAAI_SFTP_PASSPHRASE">enter a pass phrase here</pre> | |
| | By default, the value is NA . | |
| | If the OFSAAI_SFTP_PRIVATE_KEY value is given and the OFSAAI_SFTP_PASSPHRASE value is NA , then the passphrase is identified as empty. | |
| InteractionGroup name="Hi | ve Details" | 1 |
| The default value set for the ir | nteraction variables under this group is NA. | |
| NOTE: The following values a | re 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 . | Yes |
| | For example, | |
| | <pre><interactionvariable name="HIVE SERVER PORT">22</interactionvariable></pre> | |
| HIVE_SERVER_FTPDRIVE | Identifies the absolute path to the directory identified as the file system stage area of the HIVE server. | Yes |
| | For example, | |
| | <pre><interactionvariable< pre=""></interactionvariable<></pre> | |
| | name="HIVE_SERVER_FTPDRIVE">/scratch/ofsaa/ftpshare </td <td></td> | |
| HIVE_SERVER_FTP_USERID | Identifies the user who has RWX permissions on the directory identified under the parameter HIVE SERVER FTPDRIVE. | Yes |
| | For example, | |
| | <interactionvariable< td=""><td></td></interactionvariable<> | |
| | <pre>name="HIVE_SERVER_FTP_USERID">ofsaa</pre> | |
| HIVE_SERVER_FTP_PROTO COL | If the HIVE_SERVER_PORT is 21, then set the value to FTP . If not, set it to SFTP . | Yes |
| | For example, | |
| | <pre><interactionvariable< pre=""></interactionvariable<></pre> | |
| | <pre>name="HIVE_SERVER_FTP_PROTOCOL">SFTPable></pre> | |

| InteractionVariable Name | Significance and Expected Value | Mandatory |
|--------------------------|---|-----------|
| HIVE_SFTP_PRIVATE_KEY | Identifies the SFTP private key for the HIVE server. | |
| | For example, | |
| | <pre><interactionvariable name="HIVE_SFTP_PRIVATE_ KEY">/scratch/testuser/.ssh/id_rsa</interactionvariable></pre> | |
| | 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>.</hive_server_ftp_userid> | |
| | For more information on generating SFTP Private key, see the <u>Set Up SFTP</u> <u>Private Key</u> section. | |
| HIVE_SFTP_PASSPHRASE | Identifies the passphrase for the SFTP private key for HIVE. | |
| | For example, | |
| | <pre><interactionvariable name="HIVE_SFTP_ PASSPHRASE">NA</interactionvariable></pre> | |
| | By default, the value is NA . | |
| | If the HIVE_SFTP_PRIVATE_KEY value is NA , then the passphrase is | |
| | identified as empty. | |

5.5.1 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 <code>ssh-keygen</code> command. If required, set a 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

5.6 Configure the Silent.props File

Topics:

- Silent.template for RDBMS
- Silent.BIGDATA.template for Stage and Results on Hive

ATTENTION

Do not install the new applications in the same segment if the preinstalled applications use Run Management.

5.6.1 Silent.template for RDBMS

This section is applicable for the newly licensed OIDF Application Pack Release 8.1.1.0.0 installation in the RDBMS mode.

NOTE

In an integrated environment, Oracle recommends the customers use the same Staging source in the Silent.props file for the T2Ts that load data from the Stage tables into the Result tables.

To configure the Silent.props file for the fresh or new RDBMS installation, follow these steps:

- 1. Navigate to the OFS OIDF PACK/appsLibConfig/conf/directory.
- 2. Rename the Silent.template file to Silent.props.
- **3.** Edit the Silent.props file in a text editor and mention the parameters mentioned in the following table.

Figure 14: Sample of the Silent.props file (Silent.template) for the RDBMS installation

```
# Specify Log Mode
# 1 = DEBUG Mode [Password will be printed in the log file]
# 0 = GENERAL Mode [Passwords will not be printed in the log file]
# Default is GENERAL
LOG MODE=0
# Specify the Oracle Insurance Data foundation Segment Code
SEGMENT_1_CODE=
# Specify the Infodom Maintenance log path(to be created) for the new Infodom
# Please ignore if you are doing installation on an existing information domain
APPFTP LOG PATH=
DBFTP LOG PATH=
# Specify wheter you want to perform Model Upload
# 0 = If you have already performed Model Upload and want to skip model upload process
# 1 = If you want to perform Model Upload
UPLOAD MODEL=
# Specify whether you want to use the released datamodel or customized datamodel for model upload process
# 0 = If you want to upload the released datamodel
\sharp 1 = If you want to upload the customized datamodel
MODEL TYPE=
# Specify the path(DM DIRECTORY) and file(DATAMODEL) name for the cutomized datamodel
# Mandatory only if you want to upload the customized datamodel
# i.e you have specified MODEL TYPE=1
DATAMODEL=
DM DIRECTORY=
#Please specify if you want create new ETL Src or use an existing one.
# 0 = If you want to create a new ETL src
# 1 = If you want to use an existing src
ETL APPSRC TYPE=
# Specify the ETL and Source Name into ETL Area Definitions will be deployed. This is a Mandatory Field.
# Give new ETL SRC Names, if you have specified ETL_APPSRC_TYPE=0
# Give Exisitng ETL SRC Names, if you have specified ETL_APPSRC_TYPE=1
# Specify the ETL Application and Source Name into ETL Area Definitions will be deployed
#ETL FSDF Staging Source Name
ETL SRC 1 NAME=
#ETL FSDF CAP ADO Pack Integration Source Name
ETL_SRC_2_NAME=
#ETL FSDF TR Pack Integration Source Name
ETL SRC 3 NAME=
#ETL FSDF IFRS Pack Integration Source Name
ETL_SRC_4_NAME=
# Please give description for the ETL App/Src pair
# Mandatory if you want to create new ETL app/src pair
# i.e you have specified ETL_APPSRC_TYPE=0
#ETL FSDF Staging Source Description
ETL_SRC_1_DESC=
#ETL FSDF CAP ADQ Pack Integration Source Description
ETL SRC 2 DESC=
#ETL FSDF TR Pack Integration Source Description
ETL SRC 3 DESC=
#ETL FSDF IFRS Pack Integration Source Description
ETL SRC 4 DESC=
#Support for Parallelism
#ENABLE CONCURRENCY=1
#CONCURRENCY LEVEL=10
```

Table 30: Parameters for the Silent.props File (Silent.template)

| Property Name | Description of Property | Permissible values | Comments |
|-----------------|--|---|--|
| LOG_MODE | Mode for logging | 0 = Debug 1= General | # Optional; Default: 0 |
| SEGMENT_1_CODE | Segment Code | Example: OIDFSEG | # Mandatory Segment Code must not exceed 10 characters and no special characters or extra spaces are allowed. |
| APPFTP_LOG_PATH | Information Domain Maintenance log path(to be created) for the new information Domain for App Layer | Example: /ftpshare/ <infodom_na ME>/logs</infodom_na | # Mandatory if this an App Layer Installation and need to create an Information Domain |
| DBFTP_LOG_PATH | Information Domain Maintenance log path(to be created) for the new Information Domain for DB Layer | Example: /ftpshare/ <infodom_na ME>/logs</infodom_na | # Mandatory if this an App Layer Installation and need to create an Information Domain |
| UPLOAD_MODEL | Whether you need to perform Model Upload | 0 = No 1 = Yes | # Mandatory |
| MODEL_TYPE | Released Data Model or Customized Data Model | 0 = released 1 = customized | # Mandatory only in the case of UPLOAD_MODEL=1 |
| DATAMODEL | The file name for the customized Data Model | Not Applicable | # Mandatory only in the case of uploading the customized Data Model # Option selected for MODEL_TYPE=1 |
| DM_DIRECTORY | The path for the customized Data Model | Not Applicable | # Mandatory only in the case of uploading the customized Data Model # Option selected for MODEL_TYPE=1 |
| ETL_APPSRC_TYPE | The ETL application name | 0 = New Pair 1 = Existing | # Mandatory |
| ETL_SRC_1_NAME | ETL OIDF Staging Source Name | Example: STAGING | # Mandatory |
| ETL_SRC_2_NAME | ETL OIDF CAP ADQ Pack Integration Source Name | Example: OIDF_CAP_SRC | # Mandatory |
| ETL_SRC_3_NAME | ETL OIDF TR Pack Integration Source Name | Example: OIDF_TR_SRC | # Mandatory |

| Property Name | Description of Property | Permissible values | Comments |
|--------------------|--|---|-------------|
| ETL_SRC_4_NAME | ETL OIDF IFRS Pack Integration Source Name | Example: OIDF_IFRS_SRC | # Mandatory |
| ETL_SRC_1_DESC | ETL OIDF Staging Source Description | Example: STAGING | # Mandatory |
| ETL_SRC_2_DESC | ETL OIDF CAP ADQ Pack Integration Source Description | Example: OIDF_CAP_SRC | # Mandatory |
| ETL_SRC_3_DESC | ETL OIDF TR Pack Integration Source Description | Example: OIDF_TR_SRC | # Mandatory |
| ETL_SRC_4_DESC | ETL OIDF IFRS Pack Integration Source Description | Example: OIDF_IFRS_SRC | # Mandatory |
| ENABLE_CONCURRENCY | #Support for Parallelism | 0 = No 1 = Yes | #Optional |
| CONCURRENCY_LEVEL | #Support for Parallelism | Example: CONCURRENCY_LEVEL=10 , which means 10 threads are triggered to handle the processing of fsapps. | #Optional |

4. Save the file.

5.6.2 Silent.BIGDATA.template for Stage and Results on Hive

This section is applicable for the newly licensed OIDF Application Pack Release 8.1.1.0.0 installation in the Big Data mode (Stage and Results on Hive).

To configure the Silent.props file for the fresh or new Big Data installation, follow these steps:

- **1.** Navigate to the OFS_OIDF_PACK/appsLibConfig/conf/ directory.
- 2. Rename the file Silent.BIGDATA.template to Silent.props.
- **3.** Edit the Silent.props file in a text editor and mention the parameters mentioned in the following table.

Figure 15: Sample of the Silent.props file (Silent.BIGDATA.template) for the Big Data installation

```
# Specify Log Mode
# 1 = DEBUG Mode [Password will be printed in the log file]
# 0 = GENERAL Mode [Passwords will not be printed in the log file]
# Default is GENERAL
LOG MODE=0
# Specify the Oracle Insurance Data foundation Segment Code
SEGMENT 1 CODE=
# Specify the Infodom Maintenance log path(to be created) for the new Infodom
# Please ignore if you are doing installation on an existing information domain
HIVE APPFTP LOG PATH=
HIVE_DBFTP_LOG_PATH=
# Specify wheter you want to perform Model Upload on hive infodom
# 0 = If you have already performed Model Upload and want to skip model upload process
# 1 = If you want to perform Model Upload
HIVE UPLOAD MODEL=
# Specify whether you want to use the released datamodel or customized datamodel for model upload process
# 0 = If you want to upload the released datamodel
# 1 = If you want to upload the customized datamodel
HIVE MODEL TYPE=
# Specify the path(DM DIRECTORY) and file(DATAMODEL) name for the cutomized datamodel
# Mandatory only if you want to upload the customized datamodel
# i.e you have specified MODEL TYPE=1
DATAMODEL HIVE=
DM DIRECTORY=
#Please specify if you want create new ETL Src or use an existing one.
# 0 = If you want to create a new ETL src
# 1 = If you want to use an existing src
ETL APPSRC TYPE=
# Specify the ETL and Source Name into ETL Area Definitions will be deployed. This is a Mandatory Field.
# Give new ETL SRC Names, if you have specified ETL APPSRC TYPE=0
# Give Exisitng ETL SRC Names, if you have specified ETL_APPSRC_TYPE=1
# Specify the ETL Application and Source Name into ETL Area Definitions will be deployed
#ETL StagingHive Source Name
ETL_SRC_5_NAME=
ETL_SRC_5_DESC=
```

Table 31: Parameters for the Silent.props File (Silent.BIGDATA.template)

| Property Name | Description of Property | Permissible values | Comments |
|----------------|-------------------------|-------------------------|---|
| LOG_MODE | Mode for logging | 0 = Debug 1= General | # Optional; Default: 0 |
| SEGMENT_1_CODE | Segment Code | Example: OIDFSEG | # Mandatory Segment Code must not exceed 10 characters and no special characters or extra spaces are allowed. |

| Property Name | Description of Property | Permissible values | Comments |
|----------------------|---|---|--|
| HIVE_APPFTP_LOG_PATH | Infodom Maintenance log path(to be created) for the new Infodom | Example: /scratch/ofsaa/ftpshare/OI DFINFO/logs | # Mandatory to create a new Information Domain |
| HIVE_DBFTP_LOG_PATH | Information Domain Maintenance log path (to be created) for the new Information Domain for DB Layer | Example: /scratch/ofsaa/ftpshare/OI DFINFO/logs | # Mandatory to create a new Information Domain |
| HIVE_UPLOAD_MODEL | Whether you need to perform Model Upload on Hive Infodom | 0 = No 1 = yes | # Mandatory |
| HIVE_MODEL_TYPE | Released Data Model or Customized Data Model for model upload process | 0 = released 1 = customized | # Option selected for HIVE_MODEL_TYPE=0 |
| DATAMODEL_HIVE | The file name for the customized Data Model in Hive | Not Applicable | # Mandatory only in the case of uploading the customized Data Model # Option selected for HIVE_MODEL_TYPE=1 |
| DM_DIRECTORY | The path for the customized Data Model | Not Applicable | # Mandatory only in the case of uploading the customized Data Model # Option selected for HIVE_MODEL_TYPE=1 |
| ETL_APPSRC_TYPE | The ETL application name | 0=New Pair 1=Existing | # Mandatory |
| ETL_SRC_5_NAME | ETL OIDF HIVE Staging Source Name | Example: STAGING | # Mandatory |
| ETL_SRC_5_DESC | ETL OIDF HIVE Staging Source description | Example: STAGING | # Mandatory |
| ENABLE_CONCURRENCY | #Support for Parallelism | 0 = No 1 = Yes | #Optional |
| CONCURRENCY_LEVEL | #Support for Parallelism | Example: CONCURRENCY_LEVEL=10, which means 10 threads are triggered to handle the processing of fsapps. | #Optional |

4. Save the file.

5.7 Backup the Configuration Files

Back up the following configuration files by creating a copy of the files in a separate directory. Ensure not to store this backup directory in the OIDF v8.1.1.0.0 kit:

Table 32: Directory of Files to Backup

| File Name | Directory |
|---|-----------------------------------|
| OFS_OIDF_SCHEMA_IN.xml and OFS_OIDF_SCHEMA_BIGDATA_IN.xml | OFS_OIDF_PACK/schema_creator/conf |
| OFS_OIDF_SCHEMA_OUTPUT.xml | OFS_OIDF_PACK/schema_creator/ |
| Silent.props | OFS_OIDF_PACK/appsLibConfig/conf |
| OFSAAI_InstallConfig.xml | OFS_OIDF_PACK/OFS_AAI/conf/ |

You can reuse the files in the future to upgrade the existing applications or install new applications.

5.8 Execute the Schema Creator Utility

Depending on the option selected to run the OFSAA Application Pack installer, you must select the appropriate schema creator utility execution mode from the following options: in

- Execute the Schema Creator Utility in Offline Mode
- Execute the Schema Creator Utility in Online Mode
- Execute the Schema Creator Utility in TCPS Mode
- Execute the Schema Creator Utility when Installing the subsequent Applications Pack

5.8.1 Execute the Schema Creator Utility in Offline Mode

Choose the Offline Mode option, if you do not have login credentials to the database with SYSDBA privileges. In this mode, the utility generates an SQL script with all the required DDLs for Users, Objects, and Grants. That script must be executed by the DBA on the appropriate database identified for OFSAA usage.

To execute the schema creator utility in the offline mode, you must have the following 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 OFS OIDF PACK/schema creator/bin/directory.
- **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.
- 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/N).

Figure 16: Schema Creation in the 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/N).

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

Schema Creator executed successfully. Please execute

OFS_OIDF_PACK/schema_creator/sysdba_output_scripts.sql before proceeding with the installation.

Additionally, if you have configured the OFS_OIDF_SCHEMA_BIGDATA_IN.xml file, a file called hive_output_scripts.hql is also created in the OFS_OIDF_PACK/schema_creator/directory.

NOTE

If there are any errors during the SQL script execution, reconfigure the OFS_OIDF_SCHEMA_IN.xml and/or OFS_OIDF_SCHEMA_BIGDATA_IN.xml files and repeat steps in this procedure to execute the utility. This regenerates the scripts with the correct information.

- 9. Navigate to the OFS OIDF Pack/schema creator/directory.
- **10.** Log in to the database using credentials with SYSDBA privileges.
- 11. Execute the sysdba output scripts.sql file using the following command:

```
SQL>@sysdba output scripts.sql
```

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

12. Log in to the Hue Browser with System Administrator privileges. Execute the script mentioned under hive_output_scripts.hql (omitting the slash ('/')) in the HIVE Query Editor. For example:

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

NOTE

See the <code>sysdba_output_scripts.log</code> file for execution status. If there are any errors, contact <code>Oracle Support Services</code>. If there are no errors in the execution, the log file is empty.

As a result of this procedure, the $OFS_OIDF_SCHEMA_OUTPUT$. xml file is generated. Do not modify this file.

5.8.2 Execute the Schema Creator Utility in Online Mode

Choose the Online Mode option, if you have login credentials to the database with SYSDBA privileges. In this mode, the utility connects to the database and executes the DDLs for Users, Objects, and Grants.

To execute the utility in online mode, follow these steps:

- 1. Edit the Application Schema file.
 - For the RDBMS only mode of installation, edit the file
 OFS_OIDF_PACK/schema_creator/conf/OFS_OIDF_SCHEMA_IN.xml file in a text
 editor. See the Configure the OFS_OIDF_SCHEMA_IN.xml File section for values to modify
 in the XML file.
 - For the Big Data installation (Stage and Results on Hive), edit the file OFS_OIDF_PACK/schema_creator/conf/OFS_OIDF_SCHEMA_BIGDATA_IN.xml file in a text editor. See the <u>Configure the OFS_OIDF_SCHEMA_BIGDATA_IN.xml file for Stage and</u> <u>Results on Hive</u> section for values to modify in the XML file.
- **2.** Execute the osc.sh file using the following command:

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

Figure 17: Schema Creation in the Online Mode

```
/scratch/ofsaaapp/AAI81 Kit/OFS AAAI FACK/schema creator/bin>./osh.sh -s

/scratch/ofsaaapp/AAI81 Kit/OFS AAAI PACK/schema creator/bin>cle
osc.sh
/scratch/ofsaaapp/AAI81 Kit/OFS AAAI PACK/schema creator/bin>clear
/scratch/ofsaaapp/AAI81 Kit/OFS AAAI 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 : // // java/jdkl.8.0_172/bin
JAVA Porsion found: 1.8.0_172
JAVA Bit Version found: 64-bit
Java Validation Completed. Status: SUCCESS

DB specific Validation Started ...
Enter the DB User Name With SYSDBA Privileges:
sys as sysdba
Cracle 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

Cracle Server version Current value: 18.0.0.0.0. Status: SUCCESS

DB specific Validation Completed. Status: SUCCESS

Checking OFSAA installation ...
OFSAA installation not found.
Validating the dat file OFS AAAI CFG.dat started...
The path is://scrach/offsaa/AAI8/Kit/OFS AAAI_PACK/schema_creator/conf
Successfully validated OFS AAAI CFG.dat file
Validating the input XML file:../scratch/offsaa/AAI81 Kit/OFS_AAAI_PACK/schema_creator/conf/OFS_AAAI_SCHEMA_IN.xml
Input XML file validated successfully.
```

3. 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 18: Schema Creation in the Online Mode - DDL Execution

```
Schema Creation Started

Checking OFSAA installation...

OFSAA installation not found.

Validating the dat file OFS_AAAI_CFG.dat started...

The path is:/scratch/ AAIBI_Kit/OFS_AAAI_PACK/schema_creator/conf

Successfully validated OFS AAAI_CFG.dat file

Validating the input XML file.../scratch/ AAIBI_Kit/OFS_AAAI_PACK/schema_creator/conf/OFS_AAAI_SCHEMA_IN.xml

Input XML file validated successfully.

Validating Connection URL ...jdbc:oracle:thin:@

Connection jdbc:oracle:thin:@

Successfully connected to User - sys as sysdba URL - jdbc:oracle:thin:@

Connection URL successfully validated...

localhost name -

INT_LB HOST not there in schema

IS_HYBRID not there in schema

IS_HYBRID not there in schema

IS_HYBRID not there in schema

the redaction flag is inside precheck true

Executing redaction check query

Data Redaction parameters are properly set

checking redaction dates accurity roles

Security role already present in DB

Parsing file: /scratch/ AAIBI Kit/OFS_AAAI_PACK/schema_creator/../conf/OFS_AAAI_Pack.xml

Checking: app: OFS_AAI schema_name:

Schema_type: CONFIG

Checking: app: OFS_AAI schema_name:

Schema_type: ATOMIC

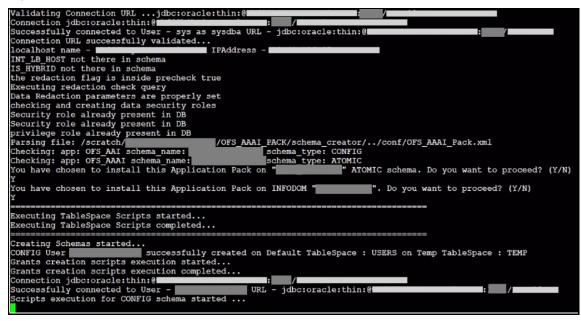
You have chosen to install this Application Pack on "ATOMIC schema. Do you want to proceed? (Y/N)
```

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 19: Schema Creation in the Online Mode - Infodom Confirmation



6. Schema is created successfully.

Figure 20: Schema Creation in the Online Mode -Successful

As a result of this procedure, the OFS_OIDF_SCHEMA_OUTPUT.xml file is generated. Do not modify this file.

5.8.3 Execute the Schema Creator Utility in TCPS Mode

If you intend to run the OIDF Application Pack Installer in the TCPS mode, it is mandatory to execute the schema creator utility in the online mode.

Prerequisite:

Configure the Oracle Wallet with trusted certificates between the DB Server with TCPS configured and the DB Client to enable communication through the SSL protocol.

NOTE

You can also use Oracle Wallet to support OFSAA for storing Config and Atomic Schema credentials. To add OFSAA Config and Atomic Schema credentials to Oracle Wallet, see the <u>Oracle Financial Services Advanced Analytical Applications Infrastructure Administration and Configuration Guide Release</u> 8.1.x.

For example, all the database utilities such as sqlplus, tnsping, and sqlldr must work between the Client and the Server.

To execute the utility, follow these steps:

- 1. Edit the Application Schema file.
 - For the RDBMS only mode of installation, edit the file OFS_OIDF_PACK/schema_creator/conf/OFS_OIDF_SCHEMA_IN.xml file in a text editor. See the Configure the OFS_OIDF_SCHEMA_IN.xml File section for values to modify in the XML file.
 - For the Big Data installation (Stage and Results on Hive), edit the file OFS_OIDF_PACK/schema_creator/conf/OFS_OIDF_SCHEMA_BIGDATA_IN.xml file in a text editor. See the <u>Configure the OFS_OIDF_SCHEMA_BIGDATA_IN.xml file for Stage and Results on Hive</u> section for values to modify in the XML file.
- **2.** Execute the osc.sh file using the following command:

```
./osc.sh -s TCPS <WALLET_HOME>
For example: ./osc.sh -s TCPS /scratch/oraofss/wallet
```

Figure 21: Execution of the Schema Creator in the TCPS Mode

3. The following message is displayed:

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.

The following message is displayed:

You have chosen to install this application pack on the "<ATOMIC_SCHEMA_NAME>" ATOMIC schema. Do you wish to proceed? (Y/y or N/n).

Figure 22: Schema Creation in the TCPS Mode - Install on Atomic Schema

- **5.** Enter **Y** to proceed.
- **6.** Schema is created successfully.

Figure 23: Successful Schema Creation in the TCPS Mode

As a result of this procedure, the OFS_OIDF_SCHEMA_OUTPUT.xml file is generated. Do not modify this file.

5.8.4 Execute the Schema Creator Utility when Installing the 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 the Online or Offline mode.

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

- 1. Edit the Application Schema file.
 - For the RDBMS only mode of installation, edit the file
 OFS_OIDF_PACK/schema_creator/conf/OFS_OIDF_SCHEMA_IN.xml file in a text
 editor. See the Configure the OFS_OIDF_SCHEMA_IN.xml File section for values to modify
 in the XML file.
 - For the Big Data installation (Stage and Results on Hive), edit the file
 OFS_OIDF_PACK/schema_creator/conf/OFS_OIDF_SCHEMA_BIGDATA_IN.xml file in

a text editor. See the <u>Configure the OFS_OIDF_SCHEMA_BIGDATA_IN.xml file for Stage and Results on Hive</u> section for values to modify in the XML file.

2. Execute the utility with the -s option.

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

Figure 24: Execution of the Schema Creator Utility to install the subsequent Applications Pack

After successful schema creation, execute the <code>sysdba_output_scripts.sql</code> file

Figure 25: Execution of the sysdba_output_scripts.sql file to install the subsequent Applications Pack

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 26: Select the Atomic Schema and Infodom to install the subsequent Applications Pack

```
Generating Schema Creation Scripts Started
Checking OFSAA installation...
Found OFSAA installation at /scratch/
                                       /OFSAAI
Validating the dat file OFS_AAAI_CFG.dat started...
Sucessfully validated OFS AAAI CFG.dat file
Parsing /scratch/
                     OFSAAI/conf/DynamicServices.xml
Successfully connected to User - dev_conf1 URL - jdbc:oracle:thin:0
Validating the input XML file.../scratch/
                                            OFS AAAI PACK/schema creator/conf/OFS AAAI SCHEMA IN.xml
Input XML file validated successfully.
Validating Connection URL ...jdbc:oracle:thin:@
Successfully connected to User - sample URL - jdbc:oracle:thin:@d
                                                                                .
Connection URL successfully validated...
You have chosen to install this Application Pack on "
                                                                      " ATOMIC sche
ma. Do you want to proceed? (Y/N)
You have chosen to install this Application Pack on INFODOM "
                                                                           ". Do y
ou want to proceed? (Y/N)
```

4. Select the Atomic User on which you need to install the Application Pack.

Figure 27: Successful Schema creation to install the subsequent Applications Pack

```
Validating Connection URL ...jdbc:oracle:thin:8
Successfully connected to User - sys as sysdba URL - jdbc:oracle:thin:@fConnection URL successfully validated...
The following Application Packs are already installed in this OFSAA setup:
                      INFOTR-
                                            "OFS TR PACK"
You have selected to install this Application Pack on "Management ATOMIC schema. To proceed enter (Y/y). To change the selection, enter (N/n).
Choose the ATOMIC schema from the below list on which you wish to install this Application Pack:
                                                "OFS TR PACK"
Enter the option number:2
Generating TableSpace creation Scripts started...
Generating TableSpace creation Scripts completed...
Generating Schema creation scripts started...
Skipping the creation of CONFIG user dev_conf1 as OFSAAI is already installed on
              details updated into the dbmaster table
               creation script generated successfully on Default TableSpace : USERS on Temp TableSpace : TEMP
              creation is skipping as the user is already created.
User
Generating Schema creation scripts completed...
Generating Roles creation Scripts started...
Generating Roles creation Scripts completed...
Generating Grants creation scripts started...
Generating Grants creation scripts completed ...
                           Generating Schema Creation Scripts Completed
Schema Creator executed Successfully.Please execute /scratch/ OFS_AAAI_PACK/schema_creator/sysdba_output_scripts.sql before proceeding with the installation.
```

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

Success. Please proceed with the installation.

NOTE

See If there are any errors, contact Oracle Support Services.

5.9 Verify the Schema Creator Log Files

See the following logs directory for more information:

- OFS_OIDF_PACK/schema_creator/logs/
- The log file sysdba_output_scripts.log in the OFS_OIDF_PACK/schema_creator/logs/ directory for execution status if executed in offline mode. This log will be empty if there are no errors in the execution.

5.10 Install the OIDF 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 the OFS_OIDF_PACK.xml File
- **3.** Configure the OFS OIDF SCHEMA IN.xml File (for RDBMS installation)
- **4.** Configure the OFS OIDF SCHEMA BIGDATA IN.xml file for Stage and Results on Hive (for Big Data installation)
- **5.** <u>Configure the OFSAAL InstallConfig.xml File</u> (do not configure this file if an installation of OFSAAL 8.1 already exists.)
- 6. Configure the Silent.props File
 - Silent.template for RDBMS
 - Silent.BIGDATA.template for Stage and Results on Hive
- 7. Execute the Schema Creator Utility

To install the OIDF Application Pack v8.1.1.0.0, 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 using the following command:
 - . ./.profile

4. For the Big Data mode of installation, give access permission using the following command:

```
chmod -R 775 ftpshare ftpshareh $FIC HOME libs
```

5. Create a folder kit/<release number> in the user's home.

```
For example: /scratch/ofsaa/kit/81100
```

6. For the Big Data mode of installation, place the installer zip folder in the path mentioned in the previous step, and then extract the installer using the following command:

```
unzip -a OFS_OIDF_8.1.1.0.0_<Operating_System>.zip
```

NOTE

After the extraction, if you have a space issue, delete the .zip file.

- 7. For the Big Data mode of installation, ensure that the ofsaa-hive-udf.jar file is present in the HiveAuxDir directory and spark2 lib is present in the CDH installed server. If it is a cluster, then each node must consist of the file in these locations:
 - /scratch/ofsaa/kit/<Release_Version>/OFS_OIDF_PACK/OFS_AAAI_PACK/fic home/utility/DMT/UDF/lib/ofsaa-hive-udf.jar
 - SPARK2 lib directory
- **8.** If you are installing on the Big Data infodom, then navigate to the OFS_OIDF_PACK/OFS_OIDF/conf/ directory:
 - For Stage and Results on Hive, do the following:
 - i. Rename the default.properties file to default.properties RDBMS.template.
 - **ii.** Rename the default.properties.BIGDATA.template file to default.properties.
- **9.** Navigate to the following directory:

```
OFS OIDF Pack/bin/
```

10. Execute the OIDF Application Pack installer in the SILENT mode using the following command:

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

Figure 28: Execute the OIDF installer in the SILENT mode

```
/scratch/_____/kit/OFS_OIDF_PACK/bin>clear
/scratch/____/kit/OFS_OIDF_PACK/bin>./setup.sh SILENT
Current OS Type ---- Linux
FIC_HOME : /scratch/____/OFSAAI
Environment check utility started...
```

The installer proceeds with the Pre-installation Checks.

Figure 29: Pre-installation Checks

```
nvironment Variables Validation Completed. Status : SUCCESS
OS specific Validation Started ...
Checking en_US.utf8 locale. Status : SUCCESS
Unix shell found : /bin/ksh. Status : SUCCESS
Total file descriptors : 65535. Status : SUCCESS
Total number of process : 4096. Status : SUCCESS
OS version: 7. Status: SUCCESS
OS specific Validation Completed. Status : SUCCESS
OB specific Validation Started ..
Oracle Client version: 18.0.0.0.0. Status: SUCCESS
client version 18.0
Successfully connected to schema fsdf8latm. Status : SUCCESS
CREATE SESSION has been granted to user. Status : SUCCESS
CREATE PROCEDURE has been granted to user. Status : SUCCESS
CREATE VIEW has been granted to user. Status : SUCCESS
CREATE TRIGGER has been granted to user. Status : SUCCESS
CREATE MATERIALIZED VIEW has been granted to user. Status : SUCCESS
CREATE TABLE has been granted to user. Status : SUCCESS
CREATE SEQUENCE has been granted to user. Status : SUCCESS
SELECT privilege is granted for NLS INSTANCE PARAMETERS view. Current value : READ. Status : SUCCESS
NLS_LENGTH_SEMANTICS : BYTE. Current value : BYTE. Status : SUCCESS
NLS CHARACTERSET : AL32UTF8. Current value : AL32UTF8. Status : SUCCESS
SELECT privilege is granted for V_$parameter view. Current value : SELECT. Status : SUCCESS
Open cursor value is greater than 1000. Current value : 1000. Status : SUCCESS
SELECT privilege is granted for USER_TS_QUOTAS view. Current value : READ. Status : SUCCESS
Schema is granted with at least 500 \overline{	ext{MB}} table space. Current value : Unlimited. Status : SUCCESS
Oracle db version 18
OB specific Validation Completed. Status : SUCCESS
Environment check utility Status : SUCCESS
```

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

Figure 30: OFSAA Processing Tier FTP/SFTP Password Prompt

```
* Welcome to Oracle Financial Services Analytical Applications Infrastructure (OFS AAI) Installation 

**********************

Checking Infrastructure installation status ...

Infrastructure installation does not exist. Proceeding with Infrastructure installation ...

Triggering Infrastructure installation ...

Please enter Infrastructure Application/Database component FTP/SFTP password :
```

NOTE

Enter the password to access the Product Staging/Metadata repository directory FTPSHARE in the application server.

For the Big Data mode of installation, enter the Hive Server SFTP/FTP password value, when prompted at the command prompt.

NOTE

Enter the password to access the OIDF Hive directory FTPSHAREH in the application server.

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

Figure 31: The OFSAA License Agreement

```
OFSAA APPLICATION FACK LICENSE AGREEMENT

* Otacle Financial Services Analytical Applications (OFSAA) application packs are groups of OFSAA products packaged together into a single installer. Each application pack ack contains OFSAA applications that address specific functional domains.*

* Every application pack also includes the following OFSAA infrastructure application options which are automatically installed by every application pack installer:

1. Oracle Financial Services Interprise Modeling

3. Oracle Financial Services Enterprise Modeling

* Oracle Financial Services Analytical Applications Infrastructure (OFS AAI) is the base infrastructure for all OFSAA applications and is therefore automatically installed and enabled by the application pack installer.*

* The application pack installer always installs Oracle Financial Services Enterprise Modeling, Oracle Financial Services In-line Processing Engine and Oracle Financial alservices Big Data Frocessing application options along with the application pack applications in that requires their functionality is enabled.*

* Any OFSAA application that is enabled must be licensed for use. Oracle Financial Services Analytical Applications Infrastructure, Oracle Financial Services Enterprise Modeling, Oracle Financial Services In-line Processing application options.*

* Application products once enabled cannot be disabled. Application products on enabled on installation, may later be enabled using the "Manage OFSAA Product License (a)" feature of the platform.*

**Application products once enabled cannot be disabled. Application products on enabled on installation, may later be enabled using the "Manage OFSAA Product License (a)" feature of the platform.*

**Application products once enabled cannot be disabled. Application products on enabled on installation, may later be enabled using the "Manage OFSAA Product License (a)" feature of the platform.*
```

13. The installer installs the OFSAAI application.

Figure 32: OFSAAI Silent Mode Installation

```
taller

2. Oracle Financial Services Analytical Applications Infrastructure
2. Oracle Financial Services Enterprise Modeling
3. Oracle Financial Services Big Data Processing
4 Oracle Financial Services Analytical Applications Infrastructure (OFS AAI) is the base infrastructure for all OFSAA applications and is therefore automatically installed and enabled by the application pack installer.

4 The application pack installer always installer always installer.

5 The application pack installer always installer always installer.

6 The application pack installer always installer always installer.

7 The application pack installer always installer always installer.

8 The application pack installer always installer always installer.

8 The application pack installer always installer.

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1 The application optical pack installer always installer.

2 The application optical pack installer archive...

5 The application optical pack installer archive...

6 The application optical pack installer archive...

7 The application optical pack installer archive...

8 The application optical pack installer archive...

9 The application optical pack installer archive...

9 The application optical pack installer archive...

9 The application optical pack installer and installer archive...

9 The application optical pack installer archive...

1 The application optical pack installer.

1 The application optical pack installer archive...

1 The application optical pack in a pack in a
```

14. After OFSAAI is installed, the OIDF Application Pack installation begins.

Figure 33: OIDF Application Pack Installation

```
installation Complete.
THE OS VERSION IS: 7
THE CLIENT VERSION IS: 19
Copying done for BE files ....
heapsize == 8192
/scratch/
           /kit/OFS OIDF PACK/bin
datamodel file = ../DataModel/Manifest.xml ../DataModel/OFS_OIDF_Datamodel.xml
model == 66154337
630
checking version
VersionToBeApplied: 8.1.1.0.0
Fresh installation
Welcome to OFS OIDF PACK Installation
Starting OFSAA Service...
```

NOTE

- The Data Model upload may take several hours to complete. You can check the installation logs in the /OFS_OIDF_PACK/OFS_OIDF/logs/ directory.
- For the existing customers, with the DB XML, the time taken for the Data Model upload will be significantly reduced. You can upload the warehouse data from the operational systems to the database schema using the erwin XML or Database XML file. Using the stand-alone command-line utility for the TransformErwin.sh file, you can transform erwin XML into Database XML, and use the DB XML instead of erwin XML to speed up the model upload process. For more information, see the Command Line Utility for Transforming erwin XML to Database XML section in the Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide Release 8.1.1.0.0.

Figure 34: OIDF Application Pack Installation Complete

```
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)
Installing...
Installation Complete.
failurecount --- 0
Core Installation completed successfully
cempdir ---- /scratch/
                         /kit/OFS OIDF PACK
Checking for hive app.
********** Checking for Fresh app : OFS_OIDF **********
path before app installation: /scratch/ /kit/OFS OIDF PACK
inside checkappstatus-app OFS_OIDF /scratch/
                                                /kit/OFS_OIDF_PACK/bin
all value /scratch/_____/kit/OFS OIDF PACK/bin
In app value
[AppStatusCheck] Checking for app installation OFS_OIDF
[AppStatusCheck] app is selected and ENABLED in db
app status returned: 0
current directory after app installation: /scratch/www./kit/OFS_OIDF_PACK/OFS_OIDF
Checking for available options...
List of options available:
Pack Name found is: OFS OIDF PACK
Utility triggered for XML files
```

- **15.** When the installation is complete, the following message is displayed in the console: Installation completed...
- **16.** The OFSAA Infrastructure installation performs a post-install health check automatically on the successful installation of the product.
- **17.** To verify if the release is applied successfully, check the log files mentioned in the section <u>Verify</u> the Log File Information.
- **18.** For the Big Data installation mode of installation (Stage and Results on Hive), follow these steps:

NOTE

During both of the Big Data installation processes, for the Big Data SQL to refresh the data, ensure to truncate the Stage tables during the second time and onwards, and then load the data. Truncation is not required during the first time.

- If the OIDF installation machine and the Cloudera machine are different, then follow these steps:
 - i. Create a folder in the Cloudera machine.

NOTE

For the list of CSV files, see the <u>Oracle Insurance Data Foundation</u> <u>Application Pack Runchart Release 8.1.1.0.0</u> file.

- **iii.** Copy the shell script load-csv-hdfs-run.sh from the \$FIC_DB/bin/ directory to the Cloudera machine folder mentioned in the first step.
- **iv.** Log in as the user having access to Hive in the Cloudera machine, and provide 775 permission to the <code>load-csv-hdfs-run.sh</code> file using the following command:

chmod -R 775 load-csv-hdfs-run.sh

- If the OIDF installation machine and the Cloudera machine are the same, then follow steps:
 - **i.** Create a directory in the Hive user's home and place the required CSV files in that directory.

NOTE

For the list of CSV files, see the <u>Oracle Insurance Data Foundation</u> <u>Application Pack Runchart Release 8.1.1.0.0</u> file.

- **iii.** Copy the shell script file load-csv-hdfs-run.sh from the \$FIC_DB/bin/ directory to the Cloudera machine folder mentioned in the first step.
- **iv.** Log in as the user having access to Hive in the Cloudera machine, and provide 775 permission to the <code>load-csv-hdfs-run.sh</code> file using the following command:

```
chmod -R 775 load-csv-hdfs-run.sh
```

v. To load the seeded data, run the following command:

```
./load-csv-hdfs-run.sh <HDFS TEMP DIR> <HIVE SCHEMA NAME>
```

For example:

./load-csv-hdfs-run.sh /user/ofsaa/load datadom810

NOTE

HDFS_TEMP_DIR is not the Hive warehouse directory. Also, ensure that the path is not the Hive Metastore directory.

The script requires two parameters. They are HDFS TEMP DIR and

HIVE DATABASE NAME.

Here, HDFS TEMP DIR is /user/<Cloudera hive user name>/<Any Name>.

19. Perform the steps mentioned in the <u>Post-installation</u> section. For additional configuration information, see the <u>Additional Configuration</u> section.

5.11 Install a New OIDF Application Pack on an Existing OFSAA Instance

This is an installation scenario, where you have already installed an application pack from Release v8.1.1.0.0 and now you need to install the OIDF Application Pack from Release v8.1.1.0.0. For example, the OFS ALM Application Pack v8.1.1.0.0 is already installed and now you need to install the OIDF Application Pack v8.1.1.0.0.

- 1. Configure the OFS_OIDF_PACK.xml File.
- 2. Configure the Schema Creator Utility:
 - Configure the OFS_OIDF_SCHEMA_IN.xml File (for RDBMS installation)
 - Configure the OFS_OIDF_SCHEMA_BIGDATA_IN.xml file for Stage and Results on Hive (for Big Data installation)

NOTE

Configuring the OFSAAI_InstallConfig.xml file is not required in this scenario.

- 3. Configure the Silent.props File
 - Silent.template for RDBMS
 - Silent.BIGDATA.template for Stage and Results on Hive
- 4. Execute the Schema Creator Utility

NOTE

While defining the schema details for the application packs, provide the same schema details given in the previous v8.1.1.0.0 installation of the other application pack. The output file

 ${\tt OFS_OIDF_SCHEMA_OUTPUT.xml}$ is generated as a result of the schema creation process.

- **5.** <u>Trigger the Installation</u>.
- **6.** Verify the Log File Information.
- **7.** Do the <u>Post-installation</u> steps. For additional configuration information, see the <u>Additional Configuration</u> section.

6 Use Oracle Autonomous Data Warehouse as the Database for OIDF

This section explains the deployment procedure of Oracle Insurance Data Foundation (OIDF) on Oracle Autonomous Data Warehouse (ADW).

Topics:

- Oracle Autonomous Data Warehouse
- Deployment Architecture for ADW Certification
- Download Client Credentials (Wallet)
- Using a JDBC URL Connection String with JDBC Thin Driver
- Installation Notes Specific to ADW
- Loading Data into OIDF
- Additional Note

6.1 Oracle Autonomous Data Warehouse

Oracle Autonomous Database is Oracle's new, fully managed database tuned and optimized for both data warehouse and transaction processing workloads with the market-leading performance of the Oracle Database. It delivers a completely new, comprehensive cloud experience for data warehousing and transaction processing workloads that is easy, fast, and elastic and requires no database administration.

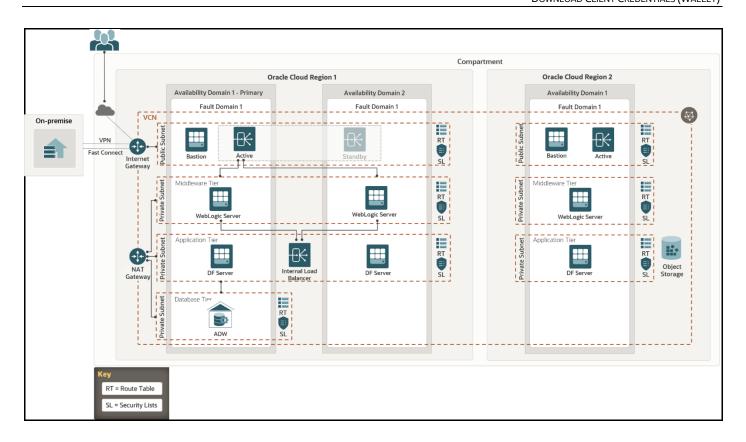
OIDF being an analytical data warehouse platform, it is qualified for ADW.

When you create an Autonomous Data Warehouse database, you can deploy it to one of two kinds of Exadata infrastructure:

- **Shared:** A simple and elastic choice. Oracle autonomously operates all aspects of the database life cycle from database placement to backup and updates.
- Dedicated: A private cloud in public cloud choice. A completely dedicated compute, storage, network and database service for only a single tenant. Dedicated infrastructure provides for the highest levels of security isolation and governance. The customer has customizable operational policies to guide Autonomous Operations for workload placement, workload optimization, update scheduling, availability level, over provisioning and peak usage.

6.2 Deployment Architecture for ADW Certification

The following illustration depicts the deployment architecture used for the ADW certification.



The deployment architecture consists of two Availability Domains used for OFSAA and WebLogic Server in the same Oracle Cloud Infrastructure (OCI) Compartment. Oracle Identity Cloud Service (IDCS) can be used to log in. The Load Balancer (LB) redirects the request to respective compute.

Both Availability Domain 1 and Availability Domain 2 computes use the ID-RSA key to transact between the nodes. The WebLogic Servers and DF Servers are configured to connect the ADW OFSAA schemas with the Wallet files.

Currently, Autonomous Database (ADB) provides 99.95% availability during any calendar month. For customers that need high availability, Autonomous Data Guard provides failover protection.

6.3 Download Client Credentials (Wallet)

Oracle client credentials (wallet files) are downloaded from Autonomous Data Warehouse by a service administrator. If you are not an Autonomous Data Warehouse administrator, your administrator must provide you with the client credentials.

To download the client instance (Wallet), you can use the following consoles:

- Oracle Cloud Infrastructure (OCI) console
- Autonomous Data Warehouse Service console

See the **Download Client Credentials (Wallets)** for more information.

6.4 Using a JDBC URL Connection String with JDBC Thin Driver

The connection string is found in the file thshames.ora which is a part of the client credentials download. The thshames.ora file contains the predefined services identifiable as high, medium, and low. Each service has its own TNS alias and connection string. See Predefined Database Service Names for Autonomous Data Warehouse for more information.

The following is a sample entry with <code>dbname_low</code> as the TNS alias and a connection string in the <code>tnsnames.ora</code> file:

```
dbname_low= (description=
  (address=(protocol=tcps) (port=1522) (host=adw.example.oraclecloud.com)) (conne
  ct_data=(service_name=adw_jdbctest_high.oraclecloud.com)) (security=(ssl_serv
  er_cert_dn="CN=adw.oraclecloud.com,OU=OracleUS,O=Oracle
  Corporation,L=Redwood City,ST=California,C=US")))
```

6.5 Installation Notes Specific to ADW

This section provides additional steps applicable to the installation on ADW in OFSAA for OIDF.

6.5.1 Hardware and Software Requirements

For OIDF qualification on ADW, the following software are used:

- Database is ADW
- Web application server is Oracle WebLogic Server 14.x

See the <u>Oracle Financial Services Analytical Applications (OFSAA) Technology Matrix Release 8.1.1.0.0</u> for the hardware and software required for the installation of OIDF Application Pack Release 8.1.0.0.0.

6.5.2 Configure the Schema Creator Utility

The modifications applicable to configuring the schema creator utility for the OIDF installation on ADW are provided in this section.

NOTE

The schema creator utility configuration is applicable for the OIDF installation on ADW also. See the <u>Configure the Schema Creator Utility</u> section for more information. The modifications applied to the OIDF installation on ADW are mentioned in this section.

The ADW specific modifications are as follows:

- When configuring the OFS OIDF SCHEMA IN.xml file for ADW, follow these modifications:
 - Set the <IS_TCPS> tag to TRUE:

```
<IS TCPS>TRUE</IS TCPS>
```

NOTE

The connections to ADW is through the ADW Wallet. Therefore, the <IS_TCPS> tag must be always set to TRUE for OIDF installation on ADW.

- The tag <OPTION NAME="TDE" VALUE="TRUE"/> can be commented out because ADW is secure by default.
- Tha tag <TABLESPACES> can be commented out because ADW does not consider the TABLESPACES inputs.
- This is a sample of the <JDBC_URL> tag for connecting to the ADW: <JDBC_URL>jdbc:oracle:thin::@##dbname## low</JDBC_URL>

See the sections <u>Using a JDBC URL Connection String with JDBC Thin Driver</u>, <u>JDBC Thin Connections and Wallets</u> and <u>Predefined Database Service Names for Autonomous Data Warehouse</u> for more information about the predefined database service names for ADW.

6.5.3 OFSAAI Installation Notes Specific to ADW

The additional steps applicable to the OFSAAI installation on ADW are as follows:

NOTE

OFSAAI installation is applicable for the OFSAAI on ADW also. See the <u>Oracle Financial Services Advanced Analytical Applications Infrastructure Installation Guide Release 8.1.1.0.0</u> for the detailed installation procedure. The additional steps applicable to the OFSAAI installation on ADW are mentioned in this section.

1. Extract the Wallet_<databasename>.zip folder into the directory path \$HOME/Wallet_<databasename>, where you are going to install OIDF on the OCI OEL 7.X virtual machine instance. This directory is also called as the WALLET_HOME. For information about downloading the Wallet for ADW, see Download Client Credentials (Wallets).

```
WALLET_HOME=/home/Wallet_<databasename>.zip
```

Example:

```
/u02/ofsa/Wallet_OFSADB
```

2. For the above-mentioned directory, set the TNS_ADMIN in the .profile file. Edit the sqlnet.ora file for the Wallet path and other directives.

Example:

The contents of the sqlnet.ora files are as following:

```
SQLNET.WALLET_OVERRIDE = TRUE
WALLET_LOCATION = (SOURCE = (METHOD = file) (METHOD_DATA =
(DIRECTORY="/u02/ofsa/Wallet_OFSADB")))
SSL SERVER DN MATCH=yes
```

3. For the above-mentioned directory, set the parameter **IS_ADW=TRUE** in the .profile file, and point the ORACLE_HOME parameter to the Oracle Database 19c Client installation path.

Example:

Sample of the .profile file contents for OIDF with ADW on OCI is follows:

```
export FIC_HOME=/u02/ofsa/OFSAHOME
export TNS_ADMIN=/u02/ofsa/Wallet_OFSADB
export ORACLE_HOME=/u01/app/oracle/product/19.3.0/client_1
export JAVA_HOME=/usr/java/jdk1.8.0_121
export JAVA_BIN=/usr/java/jdk1.8.0_121/bin
export LD_LIBRARY_PATH=$ORACLE_HOME/lib:$LD_LIBRARY_PATH
export PATH=$ORACLE_HOME/bin:$JAVA_HOME:$JAVA_BIN:$PATH
export IS ADW=TRUE
```

- **4.** Follow the OFSAAI 8.1.0.0.0 installation procedure that supports TCPS. See the <u>Oracle Financial Services Advanced Analytical Applications Infrastructure Installation Guide Release 8.1.1.0.0</u>.
 - **d.** Before excecuting the Schema Creator utility, ensure to <u>Configure the Schema Creator</u> <u>Utility</u>.
 - **e.** Execute the Schema Creator utility:

```
Example:
```

```
$./osc.sh -s TCPS /u02/ofsa/Wallet OFSADB
```

This prompts you to enter USER having SYSDBA privileges.

Enter the ADMIN and password details provided to you during the ADW provisioning.

See the <u>Oracle Financial Services Advanced Analytical Applications Infrastructure Installation Guide</u>
<u>Release 8.1.1.0.0</u> for more information.

6.5.4 OIDF Installation Notes Specific to ADW

The additional steps applicable to the OIDF installation on ADW are mentioned in this section.

NOTE

OIDF installation is applicable for the OIDF on ADW also. See the Install the OIDF Application Pack section for the detailed installation procedure. The additional steps applicable to the OIDF installation on ADW are mentioned in this section.

The ModelUpgrade utility was triggered using the TCPS mode during installation on ADW because the connections to ADW is through the ADW Wallet.

The files configured for the OIDF installation are same for the OIDF installation on ADW also.

When configuring the OFSAAI InstallConfig.xml file for ADW, follow these modifications:

- The <InteractionGroup name="OLAP Detail"> tag is not supported in ADW.
- Ensure to provide ADW database details similar to the following sample of the <InteractionGroup name="Database Details"> tag:

```
<InteractionGroup name="Database Details"><InteractionVariable
name="ORACLE_SID/SERVICE_NAME">##dbname##_low</InteractionVariable><Int
eractionVariable</pre>
```

name="ABS_DRIVER_PATH">/u01/app/oracle/product/19.3.0/client_1/jdbc/lib
</InteractionVariable></InteractionGroup>

6.5.5 Installation of OIDF on ADW

Follow the OFSAAI 8.1.0.0.0 installation procedure and OIDF 8.1.0.0.0 installation procedure.

Execute the ./setup.sh command.

See the <u>OFS Advanced Analytical Applications Infrastructure Installation and Configuration Guide</u> <u>Release 8.1.0.0.0</u> for installation and post-installation procedure required for OFSAAI with TCPS.

See the <u>Install the OIDF Application Pack</u> section for installation and the <u>Post-installation</u> section for the post-installation procedure required for OIDF with TCPS.

6.6 Loading Data into OIDF

For the OIDF deployment on ADW, the Object Store mechanism has been used as the repository for the inbound data.

The following steps were performed to load data to the OIDF schema on the ADW environment and to execute the OIDF batches:

- Importing Data into OIDF on ADW Using the OCI Object Storage
- Batch Execution in OIDF

6.6.1 Importing Data into OIDF on ADW Using the OCI Object Storage

To import data into OIDF using the Object Storage, follow these steps:

- 1. To create an Object Storage in the OCI and load data into ADW, see Import Data Using Oracle
 Data Pump on Autonomous Data Warehouse.
- 2. To choose appropriate mode to import data into schema, see Examples of Using Data Pump Import for the data pump examples with all the possible ways to import data.

6.6.2 Batch Execution in OIDF

To execute the OIDF batches, follow these steps:

- 1. Log in to ADW OFSAA schemas and check the load status.
- **2.** Execute the OIDF batches. The tasks executed and data moved successfully to target as are follows:
 - ##INFODOM## POP DATES DIM
 - ##INFODOM##_MASTER
 - ##INFODOM## DATA FOUNDATION SCD
 - ##INFODOM## DIM ACCOUNT SCD
 - ##INFODOM## POP MAPPER DATA
 - OIDF Source Run

■ OIDF Exe Run

See the <u>Oracle Insurance Data Foundation Application Pack User Guide Release 8.1.1.0.0</u> for more information about the OIDF batch execution.

6.7 Additional Note

Currently, OIDF Release 8.1.1.0.0 is the qualified for deployment on the ADW.

For more information, log a service request on My Oracle Support (MOS).

7 Post-installation

This section provides information for Post-installation required for the OIDF Application Pack.

Topics:

- OFSAA Infrastructure Patch Installation
- Verify the Log File Information
- Stop the Infrastructure Services
- Create and Deploy the EAR/WAR Files
- EAR/WAR File Build Once and Deploy Across Multiple OFSAA Instances
- Start the Infrastructure Services
- Access the OFSAA Application
- OFSAA Landing Page
- View OFSAA Product Licenses after the Installation of Application Pack
- Configure the excludeURLList.cfg File
- Configure the Big Data Processing
- Create the Application Users
- Map the Application User(s) to User Group
- Change the ICC Batch Ownership
- Add TNS entries in the TNSNAMES.ORA File
- Configure Transparent Data Encryption (TDE) and Data Redaction in OFSAA
- Implement Data Protection in OFSAA

NOTE

See the *Post-Installation* section in the <u>Oracle Financial Services Advanced</u> <u>Analytical Applications Infrastructure Installation Guide Release 8.1.1.0.0</u> to complete these procedures.

For additional configuration information, see the <u>Additional Configuration</u> section.

7.1 OFSAA Infrastructure Patch Installation

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

After the installation of OIDF Application Pack 8.1.1.0.0:

- Apply the **32548944** patch. See the ReadMe packaged with the patch for further instructions about how to install the patch.
- Apply the OFSAAI Mandatory Patch 33663417.

ATTENTION

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

For details, see the My Oracle Support Doc ID 2827801.1.

Ensure that you reapply the OFSAAI Mandatory Patch **33663417** whenever you Install or Upgrade the Application, or whenever you apply an Incremental Patch.

For the Patch download information, see the **Download the Mandatory Patches** Section in <u>Pre-installation</u> for a new installation and in <u>Upgrade</u> for an upgrade installation.

See My Oracle Support (MOS) for more information about the latest release.

7.2 Verify the Log File Information

See the following logs files for more information:

- Pack Install.log file in the OFS OIDF PACK/logs/directory.
- OFS_OIDF_installation.log file and the OFS_OIDF_installation.err file in the OFS_OIDF_PACK/OFS_OIDF/logs_directory.
- Infrastructure installation log files in the OFS OIDF PACK/OFS AAI/logs/directory.
- OFSAAInfrastucture Install.log file in the \$FIC HOME directory.

ATTENTION

- You can ignore the "ORA-00001: unique constraint" error, and
 Object already exists and Table has a primary key
 warnings for the OFSA_CATALOG_OF_LEAVES table in the log
 file
- In case of any other errors, contact My Oracle Support (MOS).

7.3 Stop the Infrastructure Services

See the <u>Stop the Infrastructure Services</u> section in the *OFSAAI Release 8.1.1.0.0 Installation and Configuration Guide* for details.

7.4 Create and Deploy the EAR/WAR Files

See the <u>Create and Deploy the EAR/WAR Files</u> section in the *OFSAAI Release 8.1.1.0.0 Installation and Configuration Guide* for details.

7.5 EAR/WAR File - Build Once and Deploy Across Multiple OFSAA Instances

See the <u>EAR/WAR File - Build Once and Deploy Across Multiple OFSAA Instances</u> section in the *OFSAAI Release 8.1.1.0.0 Installation and Configuration Guide* for details.

7.6 Start the Infrastructure Services

See the <u>Start the Infrastructure Services</u> section in the *OFSAAI Release 8.1.1.0.0 Installation and Configuration Guide* for details.

7.7 Access the OFSAA Application

See the <u>Access the OFSAA Application</u> section in the *OFSAAI Release 8.1.1.0.0 Installation and Configuration Guide* for details.

7.8 OFSAA Landing Page

See the <u>OFSAA Landing Page</u> section in the *OFSAAI Release 8.1.1.0.0 Installation and Configuration Guide* for details.

7.9 View OFSAA Product Licenses after the 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 <u>Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide Release 8.1.1.0.0</u>.

7.10 Configure the excludeURLList.cfg File

See the section <u>Configure the excludeURLList.cfg File</u> in the *OFSAAI Release 8.1.1.0.0 Installation and Configuration Guide* for details.

7.11 Configure the Big Data Processing

This section is not applicable if you have enabled Financial Services Big Data Processing during the installation of OIDF 8.1.1.0.0 full installer. Follow instructions in this section if you intend to enable Big Data Processing.

Topics:

- Copy the Jar Files to the OFSAA Installation Directory
- Copy the KEYTAB and KRB5 Files in OFSAAI
- Configure the Apache Livy Interface

7.11.1 Copy the Jar Files to the OFSAA Installation Directory

- 1. Download the supported <u>Cloudera HIVE JDBC Connectors</u> and copy the following jars files to the <code>\$FIC_HOME/ext/lib/</code> and <code>\$FIC_WEB_HOME/webroot/WEB-INF/lib/</code> directory. For the latest supported versions, see <u>OFSAA Technology Matrix</u> v8.1.1.0.0.
 - hive service.jar
 - hive metastore.jar
 - HiveJDBC4.jar
 - zookeeper-3.4.6.jar
 - TCLIServiceClient.jar
- 2. Copy the following jars files from the <Cloudera Installation Directory>/jars/directory based on the CDH version to the \$FIC_HOME/ext/lib/ and \$FIC WEB HOME/webroot/WEB-INF/lib/ directories.
 - CDH v5.13.0:

```
— commons-collections-3.2.2.jar
```

- commons-configuration-1.7.jar
- commons-io-2.4.jar
- commons-logging-1.2.jar
- hadoop-auth-2.6.0-cdh5.13.0.jar
- hadoop-common-2.6.0-cdh5.13.0.jar
- hadoop-core-2.6.0-mr1-cdh5.13.0.jar
- hive-exec-1.1.0-cdh5.13.0.jar
- httpclient-4.3.jar
- httpcore-4.3.jar
- libfb303-0.9.3.jar
- libthrift-0.9.3.jar
- slf4j-api-1.7.5.jar
- slf4j-log4j12-1.7.5.jar
- CDH v6.3.0:
 - commons-collections-3.2.2.jar
 - commons-configuration2-2.1.1.jar
 - commons-io-2.6.jar
 - commons-logging-1.2.jar
 - hadoop-auth-3.0.0-cdh6.3.0.jar
 - hadoop-common-3.0.0-cdh6.3.0.jar
 - hive-exec-2.1.1-cdh6.3.0.jar

```
— httpclient-4.5.3.jar
```

- httpcore-4.4.6.jar
- libfb303-0.9.3.jar
- libthrift-0.9.3.jar
- slf4j-api-1.7.25.jar
- slf4j-log4j12-1.7.25.jar

7.11.2 Copy the KEYTAB and KRB5 Files in OFSAAI

A Keytab is a file containing pairs of Kerberos principals and encrypted keys (these are derived from the Kerberos password). The krb5.conf file contains Kerberos configuration information, including the locations of KDCs and admin servers for the Kerberos realms of interest, defaults for the current realm, and Kerberos applications, and mappings of hostnames onto Kerberos realms.

If the Authentication is configured as KERBEROS_WITH_KEYTAB for the Hive database, then you must use the Keytab file to login to Kerberos. The Keytab and Kerberos files must be copied to $FIC_HOME/conf$ and $FIC_WEB_HOME/webroot/conf$ of the OFSAAAI installation directory.

Generate the application EAR/WAR file and redeploy the application onto your configured web application server.

Restart the Web application server and the OFSAAAI Application Server. For more information, see the <u>Start the Infrastructure Services</u> section.

7.11.3 Configure the Apache Livy Interface

Apache Livy is an Interface service that enables easy interaction with a Spark cluster over a REST interface.

Topics:

- Configure Spark
- Set metastore Path for Spark
- <u>Cluster Configuration</u>

Do the following configuration for the Big Data mode of installation.

7.11.3.1 Configure Spark

To configure Spark, you must configure crossJoin.

NOTE

This section is applicable only during the Stage and Results on Hive installation.

To configure crossJoin, follow these steps:

1. Open the Cloudera Manager application.

2. Navigate to SPARK2 select Configuration, and search the spark-defaults.conf file.

For example:

/etc/spark2/conf.cloudera.spark2_on_yarn/spark-defaults.conf

- 3. Set the parameter **spark.sql.crossJoin.enabled** to **true**.
- 4. Set the parameter spark.executor.memory to 10g.

NOTE

When the Spark memory settings are set to low values, T2T execution fails. To resolve this, adjust the value of the spark.executor.memory variable.

7.11.3.2 Set metastore Path for Spark

To set the metastore path for Spark, follow these steps:

NOTE

This section is applicable during both the installation processes in Big Data.

1. Copy the hive-site.xml file from the hive conf directory to the SPARK2 conf directory.

For example:

cp /etc/hive/conf.cloudera.hive/hive-site.xml
/etc/spark2/conf.cloudera.spark2 on yarn

2. Edit the hive-site.xml file to add the following entries in the SPARK2 conf directory:

Table 33: Edit the hive-site.xml File

| On hive conf | In SPARK2 conf |
|---|---|
| <pre><pre><pre><pre><pre><pre><pre><name>hive.metastore.warehouse.dir</name></pre> e> <value>/user/hive/warehouse</value> </pre> </pre> </pre></pre></pre></pre> | <pre><pre><pre><pre><pre><pre><name>spark.sql.warehouse.dir <value>/user/hive/warehouse</value> </name></pre></pre></pre></pre></pre></pre> |

NOTE

When Cloudera is configured for a cluster, then all the nodes must adhere to this configuration.

7.11.3.3 Cluster Configuration

Configure DMT to provide Apache Livy Interface details.

NOTE

This section is applicable only during the Stage and Results on Hive installation.

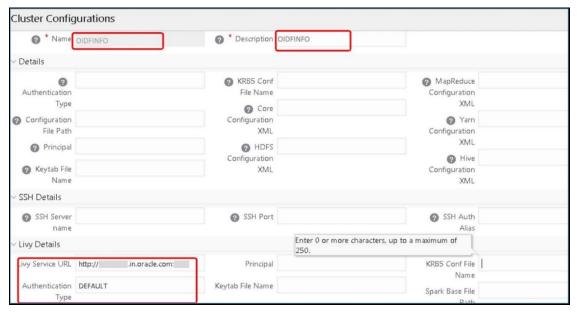
Ensure that you have the appropriate User Role to access this screen. To add a New Cluster, add the appropriate role to the user:

NOTE

To add a new cluster and then register it, the user must have the DMTADMIN (Data Management Admin) role. Therefore, assign the DMTADMIN role to the user, and ensure to map the DMTADMIN role to the OIDFADMIN user group.

- 1. From the OIDF Home, select **Data Management Framework**, select **Data Management Tools**, select **DMT Configuration**, select **Register Cluster**, and click **Add Cluster**.
- **2.** Enter the details as shown in the image. In the Livy Service URL field, enter the Livy Server URL of your environment.

Figure 35: Cluster Configuration



- **3.** To populate data in the DIM_DATES table, navigate to the **Batch Execution** screen. Perform these steps:
 - a. Run the batch OIDFINFO_POP_DATES_DIM_HIVE.
 SCD batches (OIDFINFO_DATA_FOUNDATION_SCD, OIDFINFO_DIM_ACCOUNT_SCD) are sequenced with wait mode Yes enabled.

NOTE

OIDFINFO_DATA_FOUNDATION_SCD and OIDFINFO_DIM_ACCOUNT_SCD batches are made sequential.

- b. Click Execute Batch.
- 4. Monitor the status of the batch in the **Batch Monitor** screen of OFSAAI.
- **5.** Execute T2T Batches in the **Process Modelling Framework**.

NOTE

In the Process Modelling Framework, the OIDF_SOURCED_RUN Runs are made sequential to each other.

7.12 Create the Application Users

Create the application users in the OFSAA setup before use.

For details, see the <u>User Administrator</u> section in the *Oracle Financial Services Analytical Applications Infrastructure User Guide Release 8.1.1.0.0*.

7.13 Map the Application User(s) to User Group

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

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

Starting with the OFSAA 8.1 release, with the installation of the OIDF Application Pack, preconfigured Application user groups are seeded. These user groups are unique to every OFSAA Application Pack and have application roles pre-configured.

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

Table 34: Seeded User Groups

| Name | Description |
|-------------------|---|
| OIDF Admin | A user mapped to this group will have access to all the menu items for the entire OIDF Application. The exclusive menus which are available only to this group of users are Application Preference and Global Preference under Settings Menu. |
| OIDF Data Modeler | A user mapped to this group will have access only to Data Model Management and Metadata Browser Menus. |
| OIDF Analyst | A user mapped to this group will have access to Data Management Framework, Dimension Management, and Metadata Browser Menus. |
| OIDF Operator | A user mapped to this group will have access to Rule Run Framework and Operations Menus. |

7.14 Change the ICC Batch Ownership

All the seeded Batches in the OIDF application are automatically assigned to the SYSADMN user during installation. To see 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.

Example:

```
begin
AAI_OBJECT_ADMIN.TRANSFER_BATCH_OWNERSHIP
('SYSADMN','OIDFOP','OFSOIDFINFO');
end;
```

7.15 Add TNS entries in the TNSNAMES.ORA File

See the <u>Add TNS entries in the TNSNAMES.ORA File</u> section in the *OFSAAI Release 8.1.1.0.0 Installation and Configuration Guide* for details.

7.16 Configure Transparent Data Encryption (TDE) and Data Redaction in OFSAA

See the <u>Configure Transparent Data Encryption (TDE) and Data Redaction in OFSAA</u> section in the *OFSAAI Release 8.1.1.0.0 Installation and Configuration Guide* for details.

7.17 Implement Data Protection in OFSAA

See the <u>Oracle Insurance Data Foundation Application Pack Data Protection Implementation Guide Release 8.1.x</u> for details.

Part II

Topics:

• <u>Upgrade</u>

8 Upgrade

Topics:

- Upgrade Scenarios
- Prepare for Upgrade
- Upgrade from OIDF v8.0.7.0.0 or higher versions to OIDF v8.1.1.0.0
- Upgrade the OIDF Application Pack from v8.1.0.0.0 or 8.1.0.1.0 to v8.1.1.0.0
- Upgrade the OIDF Application Pack from v8.1.0.0.0 or 8.1.0.1.0 to v8.1.1.0.0 on an Existing OFSAA Instance

NOTE

- The user profile executing the installation must have the permission on /tmp before installation.
- Sufficient space must be available in /tmp before installation, else the installation will terminate, and logs are not generated.

8.1 Upgrade Scenarios

ATTENTION

Ensure you run the upgrade installer only on the cloned environment.

Table 35: OIDF Release 8.1.1.0.0 Upgrade Scenarios

| Scenario | Installation and Upgrade Instructions | | | |
|--|---------------------------------------|--|--|--|
| Upgrade the OIDF Application Pack from v8.1.0.0.0 or 8.1.0.1.0 to v8.1.1.0.0 | 1. | <u>Clone</u> your existing environment to the <u>OFSAA Technology Matrix</u> v8.1.1.0.0. | | |
| In this scenario, you are upgrading the OIDF Application Pack from Release v8.1.0.0.0 or v8.1.0.1.0 to Release v8.1.1.0.0. | | Run the Environment Check Utility tool and ensure that the hardware and software requirements are installed as per the OFSAA Technology Matrix v8.1.1.0.0. | | |
| | 3. | $\underline{\text{Update}}$ the <code>OFS_OIDF_PACK.xml</code> file to enable ONLY the existing installed applications. | | |
| | 4. | <u>Update</u> the Silent.props file present in the OIDF v8.1.1.0.0 installer pack. | | |
| | 5. | <u>Trigger</u> the installation. | | |
| Upgrade the OIDF Application Pack from | 1. | Update the OFS_OIDF_PACK.xml file of the OIDF Application Pack. | | |
| v8.1.0.0.0 or 8.1.0.1.0 to v8.1.1.0.0 on an Existing OFSAA Instance | 2. | Update the Silent.props file of the OIDF Application Pack. | | |
| | 3. | Run the schema creator utility ONLY for the OIDF Application Pack. | | |
| In this scenario, an Application Pack of v8.1.1.0.0 is already installed and now you need | 4. | Trigger the installation. | | |
| to upgrade OIDF Application Pack from v.8.1.0.0.0 or 8.1.0.1.0 to v8.1.1.0.0. | | | | |

| Scenario | Installation and Upgrade Instructions |
|---|---------------------------------------|
| Example: OFS ALM v8.1.1.0.0 Application Pack is already installed and now you need to install the OIDF Application Pack. | |

8.2 Prepare for Upgrade

This section provides information about the preparations that need to be done before proceeding with the upgrade installation.

Topics:

- Download the OIDF Application Pack Installer and Data Model
- Prepare the Environment for Upgrade

8.2.1 Download the OIDF Application Pack Installer and Data Model

This section provides the details of the download that you need to complete before triggering the application installation.

Topics:

- Download the OIDF Application Pack Installer
- Download the Data Model
- Download the Mandatory Patches

8.2.1.1 Download the OIDF Application Pack Installer

To download the OIDF Application Pack installer Release v8.1.1.0.0, follow these steps:

- 1. Log in to the My Oracle Support (MOS) with a valid Oracle account.
- 2. In the **Patches & Updates** tab, search for the OIDF Application Pack installer patch **32347735** and download the patch. Copy the patch to your OFSAA server in the Binary mode in the setup identified for OIDF installation.

NOTE

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

8.2.1.2 Download the Data Model

To download the OIDF OOB v8.1.1.0.0 Data Model, follow these steps:

NOTE

This is an optional section that is applicable if you are performing the customized model upload.

- 1. Log in to the My Oracle Support (MOS) with a valid Oracle account.
- 2. In the **Patches & Updates** tab, search for the OIDF Data Model installer patch **32465698** and download the patch. See the Readme available with the patch for further instructions on downloading the patch and extracting the erwin files.

8.2.1.3 Download the Mandatory Patches

The following table includes information about the mandatory patches that must be downloaded during the OIDF Application Pack new installation.

Table 36: Mandatory Patches

| One-Off Patch | Description |
|---------------|---|
| 32548944 | Download the OFSAAI patch. |
| 33663417 | Download this mandatory OFSAAI One-Off Patch. See the ATTENTION below. |

| ATTENTION | For the Mandatory Patch ID 33663417 : |
|-----------|--|
| | On the 10th of December 2021, Oracle released the Security Alert CVE-2021-44228 in response to the disclosure of a new vulnerability affecting Apache Log4J prior to version 2.15. The application of the 33663417 Mandatory Patch fixes the issue. |
| | For details, see the My Oracle Support Doc ID <u>2827801.1</u> . |
| | Ensure that whenever any New or Upgrade or an Incremental Installation Release is applied, the OFSAAI Mandatory Patch 33663417 for Log4J must be reapplied. |

8.2.2 Prepare the Environment for Upgrade

Before you plan to upgrade any of your application packs to Release 8.1.1.0.0, ensure that all the application packs in your current OFSAA instance are available in the Release 8.1.1.0.0 version. Contact My Oracle Support (MOS) for more information about the release version details.

- 1. Backup the following environment file from the OFS_OIDF_PACK/conf/ directory:
 - OFS_OIDF_PACK.xml
- **2.** Backup the following environment files from the OFS_OIDF_PACK/schema_creator/conf/directory:
 - DBMASTER SC.xml
 - OFS_OIDF_SCHEMA_IN.xml
 - OFS OIDF SCHEMA BIGDATA IN.xml
- 3. Backup the following environment file from the OFS OIDF PACK/OFS AAI/conf/ directory:
 - OFSAAI InstallConfig.xml

- **4.** Ensure that the following property files are present in the OFS OIDF PACK/appsLibConfig/conf/ directory and make a backup:
 - Silent_upgrade_to_811.template
- **5.** See OFSAA Technology Matrix for the hardware and software required to upgrade to the OIDF Application Pack Release 8.1.1.0.0.
- **6.** Enable unlimited cryptographic policy for Java. For more information, see the *Enabling Unlimited Cryptographic Policy* section in the <u>Oracle Financial Services Advanced Analytical Applications Infrastructure Administration and Configuration Guide Release 8.1.x.</u>
- **7.** Clone your environment. For more information, see the <u>Oracle Financial Services Analytical Applications Infrastructure Cloning Reference Guide Release 8.1.x.</u>
- **8.** Execute the following SQL query in the Atomic Schema:

```
update rev_tables_b set version=0 where version is null;
commit;
```

8.3 Upgrade the OIDF Application Pack from v8.1.0.0.0 or 8.1.0.1.0 to v8.1.1.0.0

In this scenario, you are upgrading the OIDF Application Pack from v8.1.0.0.0 or 8.1.0.1.0 to v8.1.1.0.0.

NOTE

If you are upgrading the OFSAA Application Pack to the release v8.1.1.0.0, to ensure successful deployment, you must upgrade the other packs installed in the same environment to the release v8.1.1.0.0.

Topics:

- Clone Your Existing Environment
- Extract the Software
- Update the OFS_OIDF_PACK.xml File
- Update the Silent.props File
- Execute the Schema Creator Utility
- Trigger the Installation
- Verify the Log File Information
- Post-installation Steps
- Additional Configuration

8.3.1 Clone Your Existing Environment

Clone your existing environment to the v8.1.1.0.0 of <u>OFSAA Technology Matrix</u>. For more information, see the <u>Oracle Financial Services Analytical Applications Infrastructure Cloning Reference Guide</u>
Release 8.1.x.

| ATTENTIO | Ν |
|----------|---|
|----------|---|

This step is required if you need to move from the Linux 7 to Linux 8 version.

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

8.3.2 Extract the Software

You need to be logged in to the UNIX Operating System as a non-root user to perform the following steps. To extract the OIDF Application Pack software, follow these steps:

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

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

2. Assign the 751 permission to the file using the following command:

```
chmod 751 unzip_<os>
For example, chmod 751 unzip sparc
```

3. Extract the contents of the OIDF Application Pack Release v8.1.1.0.0 installer archive file in the download directory using the following command:

```
unzip OFS_OIDF_8.1.1.0.0_<Operating_System>.zip
```

NOTE

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

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

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

5. Navigate to the Download Directory and assign the 750 permission to the Installer Directory using the following command:

```
chmod -R 750 OFS OIDF PACK
```

8.3.3 Update the OFS_OIDF_PACK.xml File

Update the OFS OIDF PACK.xml file to enable the existing installed Application Packs.

To configure the OFS OIDF PACK.xml file, follow these steps:

- 1. Navigate to the OFS OIDF PACK/conf/directory.
- 2. Rename the file OFS OIDF PACK.xml to OFS OIDF PACK.xml.template.
- 3. Open the OFS OIDF PACK.xml file in a text editor.
- **4.** Update the OFS_OIDF_PACK.xml file in the text editor as mentioned in the following table only for the specified parameter.

NOTE

For the Big Data mode of installation, enable the option as **YES** for the **APP_ID** parameter with the value **OFS_AAIB** as illustrated in the sample.

Figure 36: Sample OFS_OIDF_PACK.xml File with the Update for Upgrade

```
<APP PACK CONFIG>
   <APP PACK ID>OFS OIDF PACK</APP PACK ID>
   <APP PACK NAME>Financial Services Foundation Applications Pack</APP PACK NAME>
   <APP_PACK_DESCRIPTION>Applications forming analytics foundation such for the Banking and
   Financial Services Domain</APP_PACK_DESCRIPTION>
   <VERSION>8.1.1.0.0</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
       <VERSION>8.1.1.0.0</VERSION>
   </APP>
   <APP>
       <APP ID PREREQ="OFS AAI" ENABLE="YES">OFS_AAIB</APP_ID>
       <APP NAME>Financial Services Analytical Applications Infrastructure Big Data Option
       </APP NAME>
       <APP DESCRIPTION>Base Infrastructure for Analytical Applications Big Data Option
       </APP DESCRIPTION>
       <VERSION>8.1.1.0.0</VERSION>
   </APP>
   <APP>
       <APP ID PREREQ="OFS AAIB" ENABLE="YES">OFS OIDF</APP ID>
       <APP NAME>Oracle Insurance Data Foundation</aPP NAME>
       <APP DESCRIPTION>Data Foundation for Insurance domain</APP DESCRIPTION>
       <VERSION>8.1.1.0.0</VERSION>
   </APP>
</APP PACK CONFIG>
```

| Tag Name | Attribute Name | Description | Mandatory (Y/N) | Comments |
|----------|----------------|---|---------------------------------------|--|
| APP_ID | ENABLE | Enable the Application or Product | YES if installing in the SILENT mode. | The default value is YES for Infrastructure. The default value is NO for Others. Permissible values are YES and NO. Set this attribute value to YES against every APP_ID, which is licensed and should be enabled for the upgrade. NOTE: You cannot disable the Application or Product after you enable it. However, the Application or Product not enabled during installation can be enabled later through the Administration UI. |

Table 37: Update Specific Parameters in the OFS_OIDF_PACK.xml file

5. Save the file.

8.3.4 Update the Silent.props File

Topics:

• Silent Upgrade to OIDF v8.1.1.0.0 for RDBMS

8.3.4.1 Silent Upgrade to OIDF v8.1.1.0.0 for RDBMS

This section is applicable only for the RDBMS mode of OIDF Application Pack v8.1.1.0.0 upgrade installation.

NOTE

In an integrated environment, Oracle recommends the customers use the same Staging source in the Silent.props file for the T2Ts that load data from the Stage tables into the Result tables.

To configure the Silent.props file to upgrade to the OIDF Application Pack Release 8.1.1.0.0, follow these steps:

- 1. Navigate to the installer kit OFS_OIDF_PACK/appsLibConfig/conf/ directory.
- 1. Rename the file Silent upgrade to 811.template to Silent.props.
- 2. Open the Silent.props file in a text editor.
- 3. Update the Silent.props file and mention the following parameters:

Figure 37: Sample of the Silent.props file (Silent_upgrade_to_811.template for RDBMS) for upgrade installation

```
# Specify Log Mode
# 1 = DEBUG Mode [Password will be printed in the log file]
# 0 = GENERAL Mode [Passwords will not be printed in the log file]
# Default is GENERAL
LOG_MODE=0
# Specify the Oracle Insurance Data foundation Segment Code
SEGMENT 1 CODE=
# Specify the Infodom Maintenance log path(to be created) for the new Infodom
# Please ignore if you are doing installation on an existing information domain
APPFTP LOG PATH=
DBFTP LOG PATH=
# Specify wheter you want to perform Model Upload
# 0 = If you have already performed Model Upload and want to skip model upload process
# 1 = If you want to perform Model Upload
UPLOAD MODEL=
# Specify whether you want to use the released datamodel or customized datamodel for model upload process
# 0 = If you want to upload the released datamodel
\sharp 1 = If you want to upload the customized datamodel
MODEL TYPE=
# Specify the path(DM DIRECTORY) and file(DATAMODEL) name for the cutomized datamodel
# Mandatory only if you want to upload the customized datamodel
# i.e you have specified MODEL_TYPE=1
DATAMODEL=
DM DIRECTORY=
#Please specify if you want create new ETL Src or use an existing one.
# 0 = If you want to create a new ETL src
# 1 = If you want to use an existing src
ETL APPSRC TYPE=1
ETL_NEW_SRCS_REQUIRED=N
```

Table 38: Parameters for the Silent.props File (Silent_upgrade_to_811.template for RDBMS)

| Property Name | Description of Property | Permissible values | Comments |
|-----------------|--|--|--|
| LOG_MODE | Mode for logging | 1 = Debug 0= General | # Optional; Default: 0 |
| SEGMENT_1_CODE | Segment Code | Example: OIDFSEG | # Mandatory Segment Code must be the same as the code that is used during the first OIDF installation (Base Pack) |
| APPFTP_LOG_PATH | Information Domain Maintenance log path (to be created) for the new Information Domain for App Layer | Example: /ftpshare/ <infodom_na me="">/logs</infodom_na> | # Mandatory Information Domain Maintenance log path must be the same as the log path that is used during the first OIDF installation (Base Pack) |

| Property Name | Description of Property | Permissible values | Comments |
|---------------------------|---|--|--|
| DBFTP_LOG_PATH | Information Domain Maintenance log path (to be created) for the new Information Domain for DB Layer | Example: /ftpshare/ <infodom_na me="">/logs</infodom_na> | # Mandatory Information Domain Maintenance log path must be the same as the log path that is used during the first OIDF installation (Base Pack) |
| UPLOAD_MODEL | Whether you need to perform Model Upload | 0 = No 1 = Yes | # Mandatory |
| MODEL_TYPE | Released Data Model or Customized Data Model | 0 = released Data Model 1 = customized Data Model | # Mandatory only in the case of UPLOAD_MODEL=1 |
| DATAMODEL | The file name for the customized Data Model | Not Applicable | # Mandatory only in the case of uploading the customized Data Model # Option selected for MODEL_TYPE=1 |
| DM_DIRECTORY | The path for the customized Data Model | Not Applicable | # Mandatory only in the case of uploading the customized Data Model # Option selected for MODEL_TYPE=1 |
| ETL_APPSRC_TYPE | The ETL application name | 0=New Pair 1=Existing | # Mandatory |
| ETL_NEW_SRCS_REQUIR ED | Whether ETL new sources are required | N | # Mandatory |
| ENABLE_CONCURRENCY | #Support for Parallelism | 0 = No 1 = Yes | #Optional |
| CONCURRENCY_LEVEL | #Support for Parallelism | Example: CONCURRENCY_LEVEL=10, which means 10 threads are triggered to handle the processing of fsapps. | #Optional |

4. Save the file.

8.3.5 Execute the Schema Creator Utility

To execute the Schema Creator Utility, follow these steps:

NOTE

While defining the schema details for the Application Packs, provide the same schema details given in the previous installation. The output file $\texttt{OFS_OIDF_SCHEMA_OUTPUT.xml} \ is \ generated \ as \ a \ result \ of \ the schema \ creation \ process.$

- 1. Configure the Schema Creator Utility:
 - For the RDBMS installation, edit the OFS_OIDF_PACK/schema_creator/conf/OFS_OIDF_SCHEMA_IN.xml file in a text editor. See the Configure the OFS_OIDF_SCHEMA_IN.xml File section to modify the values in the XML file.
- **2.** Execute the utility with the -s option.

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

For more information, see the **Execute the Schema Creator Utility** section.

8.3.6 Trigger the Installation

In this upgrade installation process, an Application Pack of v8.1.1.0.0 is already installed and now you need to upgrade OIDF Application Pack from v.8.1.0.0.0 or 8.1.0.1.0 to v8.1.1.0.0.

To upgrade the OIDF Application Pack to Release 8.1.1.0.0 on an existing v8.1.1.0.0 OFSAA instance, follow these steps:

- 1. Ensure that you completed the following procedures:
 - a. Download the installer.
 - **b.** Perform the prerequisites for installation.
 - **c.** Prepare for Upgrade.
 - **d.** Extract the software.
 - e. Update the OFS OIDF PACK.xml file.
 - f. Update the Silent.props file.
 - g. Execute the Schema Creator Utility.
- **2.** Execute the following command in the console to initiate the OIDF Application Pack installation in the Silent mode:

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

- **3.** The installer proceeds with the Pre-installation Checks.
- **4.** Enter the OFSAA Processing Tier FTP or SFTP password value and proceed, when prompted in the command prompt.

Figure 38: OFSAA Processing Tier FTP or SFTP Password Prompt

```
* Welcome to Oracle Financial Services Analytical Applications Infrastructure (OFS AAI) Installation 
* Checking Infrastructure installation status ...

Infrastructure installation does not exist. Proceeding with Infrastructure installation ...

Triggering Infrastructure installation ...

Please enter Infrastructure Application/Database component FTP/SFTP password :
```

NOTE

Enter the password to access the Product Staging or Metadata repository directory FTPSHARE in the application server.

5. The process displays the OFSAA License. Enter Y and proceed.

Figure 39: Accept the OFSAA License Agreement

```
OFSAA APPLICATION PACK LICENSE AGREPHENT

* Oracle Financial Services Analytical Applications (OFSAA) application packs are groups of OFSAA products packaged together into a single installer. Each application pack ack contains OFSAA applications that address specific functional domains.*

* Every application pack also includes the following OFSAA infrastructure application options which are automatically installed by every application pack installer:

1. Oracle Financial Services Interprise Modeling

3. Oracle Financial Services Interprise Modeling

* Oracle Financial Services Analytical Applications Infrastructure (OFS AAI) is the base infrastructure for all OFSAA applications and is therefore automatically installed and enabled by the application pack installer.*

* The application pack installer always installs Oracle Financial Services Big Data Forcessing Engine and Oracle Financial al Services Big Data Forcessing Engine and Oracle Financial Interprise Modeling, Oracle Financial Services In-line Processing Engine and Oracle Financial Interprise Modeling, Oracle Financial Services Inter
```

6. The installer installs the OFSAAI application.

Figure 40: OFSAAI Silent Mode Installation

```
1. Oracle Financial Services Analytical Applications Infrastructure
2. Oracle Financial Services Kneeprise Modeling
3. Oracle Financial Services Higher Argoessing
4. Oracle Financial Services Higher Argoessing Infrastructure (OFS ANI) is the base infrastructure for all OFSAA applications and is therefore automat
4. Oracle Financial Services Analytical Applications Infrastructure (OFS ANI) is the base infrastructure for all OFSAA applications and is therefore automat
5. Oracle Financial Services Higher Argoessing Engline and Oracle Financial Services Big Data Processing Engline and Oracle Financial Services Incline Financial Services Big Data Processing Engline and Oracle Financial Services Big Data Processing Engline Analysis and Oracle Financial Services Big Data Processing Engline Analysis and Oracle Financial Services Big Data Processing Engline Analysis and Data Processing Engline Analysis and Data Processing English English Processing English Processing English Processing English Pr
```

7. After OFSAAI is installed, the OIDF Application Pack installation begins.

Figure 41: OIDF Application Pack Installation

```
Installation Complete.
THE OS VERSION IS: 7
THE CLIENT VERSION IS: 19
Copying done for BE files....
heapsize == 8192
/scratch/
           /kit/OFS OIDF PACK/bin
datamodel file = ../DataModel/Manifest.xml ../DataModel/OFS_OIDF_Datamodel.xml
model == 66154337
630
checking version
VersionToBeApplied: 8.1.1.0.0
Fresh installation
Welcome to OFS OIDF PACK Installation
Starting OFSAA Service...
```

NOTE

- The Data Model upload may take several hours to complete. You can check the installation logs in the /OFS_OIDF_PACK/OFS_OIDF/logs/ directory.
- For the existing customers, with the DB XML, the time taken for the Data Model upload will be significantly reduced. You can upload the warehouse data from the operational systems to the database schema using the erwin XML or Database XML file. Using the stand-alone command-line utility for the TransformErwin.sh file, you can transform erwin XML into Database XML, and use the DB XML instead of erwin XML to speed up the model upload process. For more information, see the Command Line Utility for Transforming erwin XML to Database XML section in the Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide Release 8.1.1.0.0.

Figure 42: OIDF Application Pack Installation Complete

```
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)
Installing...
Installation Complete.
failurecount --- 0
Core Installation completed successfully
tempdir ---- /scratch/
                         /kit/OFS OIDF PACK
Checking for hive app.
********** Checking for Fresh app : OFS_OIDF **********
path before app installation: /scratch/ /kit/OFS OIDF PACK
inside checkappstatus-app OFS_OIDF /scratch/____/kit/OFS_OIDF_PACK/bin
all value /scratch/ /kit/OFS_OIDF_PACK/bin
In app value
[AppStatusCheck] Checking for app installation OFS_OIDF
[AppStatusCheck] app is selected and ENABLED in db
app status returned: 0
current directory after app installation: /scratch/www./kit/OFS_OIDF_PACK/OFS_OIDF
Checking for available options...
List of options available:
Pack Name found is: OFS OIDF PACK
Utility triggered for XML files
```

- **8.** When the installation is complete, the following message is displayed in the console: Installation completed...
- **9.** The OFSAA Infrastructure installation performs a post-install health check automatically on the successful installation of the product.
- **10.** To verify if the release is applied successfully, check the log files mentioned in the section <u>Verify</u> the Log File Information.

NOTE

If any applications are installed on top of the OFS AAAI Application Pack 8.1.1.0.0 version, execute the script

 $\label{local_params.sql} $$ update_dq_batches_optional_params.sql, which is available in the folder $FIC_HOME/Post_AAI_Migration, after the installation of the applications.$

- **11.** For more information on securing your OFSAA Infrastructure, refer to the <u>Oracle Financial Services Analytical Applications Infrastructure Security Guide Release 8.1.x.</u>
- **12.** After successful installation, perform the Post-installation procedures. For detailed information, see the <u>Post-installation</u> section.
- **13.** Perform the necessary <u>Additional Configuration</u>.

8.3.7 Verify the Log File Information

See the following logs files for more information:

- The Pack Install.log file in the OFS OIDF PACK/logs/directory.
- The OFS_OIDF_installation.log file and the OFS_OIDF_installation.err file in the OFS_OIDF_PACK/OFS_OIDF/logs directory.
- The Infrastructure installation log files in the OFS_OIDF_PACK/OFS_AAI/logs/ directory.
- The OFSAAInfrastucture Install.log file in the \$FIC HOME directory.

ATTENTION

- You can ignore the "ORA-00001: unique constraint" error, and
 Object already exists and Table has a primary key
 warnings for the OFSA_CATALOG_OF_LEAVES table in the log
 file.
- In case of any other errors, contact My Oracle Support (MOS).

8.3.8 Post-installation Steps

Follow the steps mentioned in the **Post-installation** section.

8.3.9 Additional Configuration

For additional configuration information, see the <u>Additional Configuration</u> section.

8.4 Upgrade the OIDF Application Pack from v8.1.0.0.0 or 8.1.0.1.0 to v8.1.1.0.0 on an Existing OFSAA Instance

In this upgrade installation scenario, an Application Pack of v8.1.1.0.0 is already installed and now you need to upgrade OIDF Application Pack from v.8.1.0.0.0 or 8.1.0.1.0 to v8.1.1.0.0. For example, OFS ALM v8.1.1.0.0 Application Pack is already installed and now you need to install the OIDF Application Pack.

NOTE

If you are upgrading the OFSAA Application Pack to the release v8.1.1.0.0, to ensure successful deployment, you must upgrade the other packs installed in the same environment to the release v8.1.1.0.0.

Topics:

- Extract the Software
- Update the OFS_OIDF_PACK.xml File
- Update the Silent.props File
- Execute the Schema Creator Utility Only for the OIDF Application Pack
- Trigger the Installation
- Verify the Log File Information
- Post-installation Steps
- Additional Configuration

8.4.1 Extract the Software

You must be logged in to the UNIX operating system as a non-root user to perform the following steps. To extract the OIDF Application Pack software, follow these steps:

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

If you already have an unzip utility to extract the contents of the downloaded archive, skip this step. Uncompress the unzip installer file with the command:

```
uncompress unzip <os>.Z
```

NOTE

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

2. Assign 751 permission to the file with the following command:

```
chmod 751 unzip_<os>
For example, chmod 751 unzip sparc
```

3. Extract the contents of the OIDF Application Pack Release v8.1.1.0.0 installer archive file in the download directory with the following command:

```
unzip OFS_OIDF_8.1.1.0.0_<Operating_System>.zip
```

NOTE

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

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

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

5. Navigate to the Download Directory and assign 750 permission to the installer directory with the following command:

```
chmod -R 750 OFS OIDF PACK
```

8.4.2 Update the OFS_OIDF_PACK.xml File

Update the OFS OIDF PACK.xml file to enable only the existing installed Application Packs.

To configure the OFS OIDF PACK.xml file, follow these steps:

- 1. Navigate to the OFS OIDF PACK/conf/ directory.
- 2. Rename the file OFS OIDF PACK.xml to OFS_OIDF_PACK.xml.template
- 3. Open the OFS OIDF PACK.xml file in a text editor.
- **4.** Update the OFS_OIDF_PACK.xml file as mentioned in the following table only for the specified parameter.

NOTE

For the Big Data mode of installation, enable the option as **YES** for the **APP_ID** parameter with the value **OFS_AAIB** as illustrated in the sample.

Figure 43: Sample OFS_OIDF_PACK.xml File with the Update for Upgrade

```
<APP PACK CONFIG>
   <APP PACK ID>OFS OIDF PACK</APP PACK ID>
   <APP PACK NAME>Financial Services Foundation Applications Pack</APP PACK NAME>
   <APP PACK DESCRIPTION>Applications forming analytics foundation such for the Banking and
   Financial Services Domain</APP PACK DESCRIPTION>
   <VERSION>8.1.1.0.0</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
       <VERSION>8.1.1.0.0</VERSION>
   </APP>
   <APP>
       <APP ID PREREQ="OFS AAI" ENABLE="YES">OFS_AAIB</APP_ID>
       <APP NAME>Financial Services Analytical Applications Infrastructure Big Data Option
       </APP NAME>
       <APP DESCRIPTION>Base Infrastructure for Analytical Applications Big Data Option
       </APP DESCRIPTION>
       <VERSION>8.1.1.0.0</VERSION>
   </APP>
   <APP>
       <APP ID PREREQ="OFS AAIB" ENABLE="YES">OFS OIDF</APP ID>
       <APP NAME>Oracle Insurance Data Foundation</app NAME>
       <APP_DESCRIPTION>Data Foundation for Insurance domain</APP_DESCRIPTION>
       <VERSION>8.1.1.0.0</VERSION>
   </APP>
</APP PACK CONFIG>
```

| Tag Name | Attribute Name | Description | Mandatory (Y/N) | Comments |
|----------|----------------|---|-------------------------------------|--|
| APP_ID | ENABLE | Enable the | YES if installing in | The default value is YES for Infrastructure. |
| | | Application or Product the SILENT mode. | The default value is NO for Others. | |
| | | | | Permissible values are YES and NO. |
| | | | | Set this attribute value to YES against every APP_ID, which is licensed and should be enabled for the upgrade. |
| | | | | NOTE : You cannot disable the Application or Product after you enable it. However, the Application or |
| | | | | Product not enabled during installation can be enabled later through the Administration UI. |

Table 39: Update Specific Parameters in the OFS_OIDF_PACK.xml file

5. Save the file.

8.4.3 Update the Silent.props File

Topics:

• Silent Upgrade to OIDF v8.1.1.0.0 for RDBMS

ATTENTION

Do not install the new applications in the same segment if the preinstalled applications use Run Management.

8.4.3.1 Silent Upgrade to OIDF v8.1.1.0.0 for RDBMS

This section is applicable only for the RDBMS mode of OIDF v8.1.1.0.0 upgrade installation.

NOTE

In an integrated environment, Oracle recommends the customers use the same Staging source in the Silent.props file for the T2Ts that load data from the Stage tables into the Result tables.

To configure the Silent.props file to upgrade to the OIDF Application Pack Release 8.1.1.0.0, follow these steps:

- **1.** Navigate to the installer kit OFS_OIDF_PACK/appsLibConfig/conf/ directory.
- 2. Rename the Silent upgrade to 811.template file to Silent.props.
- 3. Update the Silent.props file and mention the following parameters:

Figure 44: Sample of the Silent.props file (Silent_upgrade_to_811.template for RDBMS) for upgrade installation

```
# Specify Log Mode
# 1 = DEBUG Mode [Password will be printed in the log file]
# 0 = GENERAL Mode [Passwords will not be printed in the log file]
# Default is GENERAL
LOG MODE=0
# Specify the Oracle Insurance Data foundation Segment Code
SEGMENT 1 CODE=
# Specify the Infodom Maintenance log path(to be created) for the new Infodom
# Please ignore if you are doing installation on an existing information domain
APPFTP LOG PATH=
DBFTP LOG PATH=
# Specify wheter you want to perform Model Upload
# 0 = If you have already performed Model Upload and want to skip model upload process
# 1 = If you want to perform Model Upload
UPLOAD MODEL=
# Specify whether you want to use the released datamodel or customized datamodel for model upload process
# 0 = If you want to upload the released datamodel
# 1 = If you want to upload the customized datamodel
MODEL_TYPE=
# Specify the path(DM DIRECTORY) and file(DATAMODEL) name for the cutomized datamodel
# Mandatory only if you want to upload the customized datamodel
# i.e you have specified MODEL TYPE=1
DATAMODEL=
DM DIRECTORY=
#Please specify if you want create new ETL Src or use an existing one.
# 0 = If you want to create a new ETL src
# 1 = If you want to use an existing src
ETL_APPSRC_TYPE=1
ETL NEW SRCS REQUIRED=N
```

Table 40: Parameters for the Silent.props File (Silent_upgrade_to_811.template for RDBMS)

| Property Name | Description of Property | Permissible values | Comments |
|-----------------|--|--|--|
| LOG_MODE | Mode for logging | 1 = Debug 0= General | # Optional; Default: 0 |
| SEGMENT_1_CODE | Segment Code | Example: OIDFSEG | # Mandatory Segment Code must be the same as the code that is used during the first OIDF installation (Base Pack) |
| APPFTP_LOG_PATH | Information Domain Maintenance log path (to be created) for the new Information Domain for App Layer | Example: /ftpshare/ <infodom_na me="">/logs</infodom_na> | # Mandatory Information Domain Maintenance log path must be the same as the log path that is used during the first OIDF installation (Base Pack) |

| Property Name | Description of Property | Permissible values | Comments |
|------------------------|---|--|--|
| DBFTP_LOG_PATH | Information Domain Maintenance log path (to be created) for the new Information Domain for DB Layer | Example: /ftpshare/ <infodom_na me="">/logs</infodom_na> | # Mandatory Information Domain Maintenance log path must be the same as the log path that is used during the first OIDF installation (Base Pack) |
| UPLOAD_MODEL | Whether you need to perform Model Upload | 0 = No 1 = Yes | # Mandatory |
| MODEL_TYPE | Released Data Model or Customized Data Model | 0 = released Data Model 1 = customized Data Model | # Mandatory only in the case of UPLOAD_MODEL=1 |
| DATAMODEL | The file name for the customized Data Model | Not Applicable | # Mandatory only in the case of uploading the customized Data Model # Option selected for |
| DM_DIRECTORY | The path for the customized Data Model | Not Applicable | # Model_Type=1 # Mandatory only in the case of uploading the customized Data Model # Option selected for Model_Type=1 |
| ETL_APPSRC_TYPE | The ETL application name | 0=New Pair 1=Existing | # Mandatory |
| ETL_NEW_SRCS_REQUIR ED | Whether ETL new sources are required | N | # Mandatory |
| ENABLE_CONCURRENCY | #Support for Parallelism | 0 = No 1 = Yes | #Optional |
| CONCURRENCY_LEVEL | #Support for Parallelism | Example: CONCURRENCY_LEVEL=10, which means 10 threads are triggered to handle the processing of fsapps. | #Optional |

4. Save the file.

8.4.4 Execute the Schema Creator Utility Only for the OIDF Application Pack

To execute the schema creator utility, follow these steps:

NOTE

While defining the schema details for the application packs, provide the same schema details given in the previous installation. The output file $\texttt{OFS_OIDF_SCHEMA_OUTPUT.xml} \ \ \textbf{is generated as a result of the schema creation process.}$

- 1. Configure the Schema Creator Utility:
 - For the RDBMS installation, edit the OFS_OIDF_PACK/schema_creator/conf/OFS_OIDF_SCHEMA_IN.xml file in a text editor. See the <u>Configure the OFS_OIDF_SCHEMA_IN.xml File</u> section to modify the values in the XML file.
- **2.** Execute the utility with the -s option.

For Example: ./osc.sh -s

For more information, see the **Execute the Schema Creator Utility** section.

8.4.5 Trigger the Installation

In this upgrade installation process, an Application Pack of v8.1.1.0.0 is already installed and now you need to upgrade OIDF Application Pack from v.8.1.0.0.0 or 8.1.0.1.0 to v8.1.1.0.0.

To upgrade the OIDF Application Pack to Release 8.1.1.0.0 on an existing v8.1.1.0.0 OFSAA instance, follow these steps:

- 1. Ensure that you completed the following procedures:
 - **a.** Download the installer.
 - **b.** Perform the prerequisites for installation.
 - c. Prepare for Upgrade.
 - **d.** Extract the software.
 - e. Update the OFS OIDF PACK.xml file.
 - f. Update the Silent.props file.
 - **g.** Execute the Schema Creator Utility.
- **2.** Enter the following command in the console to execute the OIDF Application Pack installer with the Silent option:

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

- **3.** The installer proceeds with the Pre-installation Checks.
- **4.** Enter the OFSAA Processing Tier FTP/SFTP password value and proceed, when prompted in the command prompt.

Figure 45: OFSAA Processing Tier FTP/SFTP Password Prompt

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

* Welcome to Oracle Financial Services Analytical Applications Infrastructure (OFS AAI) Installation *

*****************

Checking Infrastructure installation status ...

Infrastructure installation does not exist. Proceeding with Infrastructure installation ...

Triggering Infrastructure installation ...

Please enter Infrastructure Application/Database component FTP/SFTP password :
```

NOTE

Enter the password to access the Product Staging or Metadata repository directory FTPSHARE in the application server.

5. The process displays the OFSAA License. Enter ${\bf Y}$ and proceed.

Figure 46: Accept the OFSAA License Agreement

```
OFSAA APPLICATION PACK LICENSE AGREEMENT

'Oracle Financial Services Analytical Applications (OFSAA) application packs are groups of OFSAA products packaged together into a single installer. Each application pack contains OFSAA applications that address specific functional domains.

'Every application pack also includes the following OFSAA infrastructure application options which are automatically installed by every application pack installer:

1. Oracle Financial Services Analytical Applications Infrastructure

2. Oracle Financial Services Enterprise Modeling

3. Oracle Financial Services Big Data Processing

'Oracle Financial Services Analytical Applications Infrastructure (OFS AAI) is the base infrastructure for all OFSAA applications and is therefore automatically installed and enabled by the application pack installer.

'The application pack installer always installs Oracle Financial Services Enterprise Modeling, Oracle Financial Services In-line Processing Engine and Oracle Financial alservices slip Data Frocessing application options along with the application pack applications, but enabled them only if any application that requires their function in the processing application options of the processing application options on the processing application options on the processing application options once enabled on the processing property of the processing property once enabled cannot be disabled. Application pack application, may later be enabled using the "Manage OFSAA Product License (s)" feature of the platform.

Are you accepting the terms and conditions mentioned above? [Y/N]:
```

6. The installer installs the OFSAAI application.

Figure 47: OFSAAI Silent Mode Installation

```
taller:

1. Oracle Financial Services Analytical Applications Infrastructure
2. Oracle Financial Services Enterprise Modeling

4. Oracle Financial Services Analytical Applications Infrastructure (OFS AAI) is the base infrastructure for all OFSAA applications and is therefore automatically installed and enabled by the application pack installer.

* The application pack installer always installs Oracle Financial Services Enterprise Modeling, Oracle Financial Services Enterprise Analytical Applications and is therefore automatically installer always installer always installer.

* The application pack installer always installer oracle Financial Services Enterprise Modeling, Oracle Financial Services Installer and Oracle Financial Services Installer and Oracle Financial Services Installer.

* The substaller oracle Financial Services Installer oracle Financial Services Malytical Applications Infrastructure, Oracle Financial Services Big Data Processing are individually licensable application products once enabled cannot be disabled. Application products on tenabled on installation, may later be enabled using the "Manage OFSAA Product License(s)" feature of the platform.

* Application products once enabled cannot be disabled. Application products not enabled on installation, may later be enabled using the "Manage OFSAA Product License(s)" feature of the platform.

* Application products occuld be found for logger (org.apache.commons.vfs2.impl.StandardFileSystemManager).

* Logi; HARRN Please initialize the logi; system properly.

* Logi; HARRN Please initialize the logi; system properly.

* Logi; HARRN Please initialize the logi; system properly.

* Proparing to install...

* Extracting the installation resources from the installer archive...

* Configuring the installation resources from the installer archive...

* Configuring the installation resources from the installer archive...

* Configuring the installer or this system's environment...

* Installing...

* Installing...

* Installing...

* Installing...

* Ins
```

7. After OFSAAI is installed, the OIDF Application Pack installation begins.

Figure 48: OIDF Application Pack Installation

```
Installation Complete.
THE OS VERSION IS: 7
THE CLIENT VERSION IS: 19
Copying done for BE files....
heapsize == 8192
/scratch/
           /kit/OFS OIDF PACK/bin
datamodel file = ../DataModel/Manifest.xml ../DataModel/OFS_OIDF_Datamodel.xml
model == 66154337
630
checking version
VersionToBeApplied: 8.1.1.0.0
Fresh installation
Welcome to OFS OIDF PACK Installation
Starting OFSAA Service...
```

NOTE

- The Data Model upload may take several hours to complete. You can check the installation logs in the /OFS_OIDF_PACK/OFS_OIDF/logs/ directory.
- For the existing customers, with the DB XML, the time taken for the Data Model upload will be significantly reduced. You can upload the warehouse data from the operational systems to the database schema using the erwin XML or Database XML file. Using the stand-alone command-line utility for the TransformErwin.sh file, you can transform erwin XML into Database XML, and use the DB XML instead of erwin XML to speed up the model upload process. For more information, see the Command Line Utility for Transforming erwin XML to Database XML section in the Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide Release 8.1.1.0.0.

Figure 49: OIDF Application Pack Installation Complete

```
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)
Installing...
Installation Complete.
failurecount --- 0
Core Installation completed successfully
tempdir ---- /scratch/
                         /kit/OFS OIDF PACK
Checking for hive app.
********** Checking for Fresh app : OFS_OIDF **********
path before app installation: /scratch/ /kit/OFS OIDF PACK
inside checkappstatus-app OFS_OIDF /scratch/____/kit/OFS_OIDF_PACK/bin
all value /scratch/ /kit/OFS_OIDF_PACK/bin
In app value
[AppStatusCheck] Checking for app installation OFS_OIDF
[AppStatusCheck] app is selected and ENABLED in db
app status returned: 0
current directory after app installation: /scratch/www./kit/OFS_OIDF_PACK/OFS_OIDF
Checking for available options...
List of options available:
Pack Name found is: OFS OIDF PACK
Utility triggered for XML files
```

- **8.** When the installation is complete, the following message is displayed in the console: Installation completed...
- **9.** The OFSAA Infrastructure installation performs a post-install health check automatically on the successful installation of the product.
- **10.** To verify if the release is applied successfully, check the log files mentioned in the section <u>Verify</u> the Log File Information.

NOTE

If any applications are installed on top of the OFS AAAI Application Pack 8.1.1.0.0 version, execute the script

 $\label{local_params.sql} $$ update_dq_batches_optional_params.sql, which is available in the folder $FIC_HOME/Post_AAI_Migration, after the installation of the applications.$

- **11.** For more information on securing your OFSAA Infrastructure, refer to the <u>Oracle Financial Services Analytical Applications Infrastructure Security Guide Release 8.1.x.</u>
- **12.** After successful installation, perform the Post-installation procedures. For detailed information, see the <u>Post-installation</u> section.
- **13.** Perform the necessary <u>Additional Configuration</u>.

8.4.6 Verify the Log File Information

See the following logs files for more information:

- The Pack Install.log file in the OFS OIDF PACK/logs/directory.
- The OFS_OIDF_installation.log file and the OFS_OIDF_installation.err file in the OFS_OIDF_PACK/OFS_OIDF/logs directory.
- The Infrastructure installation log files in the OFS_OIDF_PACK/OFS_AAI/logs/ directory.
- The OFSAAInfrastucture Install.log file in the \$FIC HOME directory.

ATTENTION

- When upgrading the OIDF Application Pack to v8.1.1.0.0 in an integrated environment, you can ignore the Object already exists and the Table has a primary key warnings for the OFSA_CATALOG_OF_LEAVES table in the log file.
- You can ignore the "ORA-00001: unique constraint" error.
- In case of any other errors, contact My Oracle Support (MOS).

8.4.7 Post-installation Steps

Follow the steps mentioned in the **Post-installation** section.

8.4.8 Additional Configuration

For additional configuration information, see the <u>Additional Configuration</u> section.

Part III

Topics:

- Additional Configuration
- Frequently Asked Questions (FAQs) and Error Dictionary

9 Additional Configuration

This section provides information about the additional configuration required after the OIDF Application Pack installation. See the *Additional Configuration* section in the <u>Oracle Financial Services Advanced Analytical Applications Infrastructure Installation Guide Release 8.1.1.0.0</u> to complete the procedures listed in the following table.

NOTE

OIDF uses the Process Modeling Framework (PMF) to execute two ready-to-use Runs (OIDF Sourced Run and OIDF Execution Run) for data loading. For more information about the Process Modeling Framework configuration, see the <u>Oracle Financial Services Advanced Analytical Applications Infrastructure Administration and Configuration Guide Release 8.1.x and the <u>Oracle Financial Services Analytical Applications Infrastructure Process Modelling Framework Orchestration Guide Release 8.1.1.0.0</u>.</u>

Table 41: Additional Configuration Checklist

| Sl. No. | Activity |
|---------|--|
| 1 | Configure the webserver. |
| 2 | Configure the Resource Reference in web application servers. |
| 3 | Configure the Work Manager in the web application servers. |
| 4 | Add the FTP/SFTP configuration for file transfer. |
| 5 | Configure the Process Modeling Framework. |
| 6 | Configure the Infrastructure Server Memory. |
| 7 | Change IP/Hostname, Ports, Deployed Paths of the OFSAA Instance. |
| 8 | Configure the Infrastructure LDAP. |
| 9 | Configure and deploy the OFSAAI web services. |
| 10 | Enable the parallel execution of DML statements. |
| 11 | Configure the message details in the Forms Designer. |
| 12 | Clear the application cache. |
| 13 | Configure the password changes. |
| 14 | Configure the Java Virtual Machine. |
| 15 | Configure the internal service (Document Upload/Download). |
| 16 | Migrate the Excel upload functionality. |
| 17 | Remove the OFSAA Infrastructure. |

10 Additional Information

This section provides additional information required for the OIDF Application Pack installation.

Topics:

• Update the OFSAA 8.1.1.x Java 8 Instance to Java 11

10.1 Update the OFSAA 8.1.1.x Java 8 Instance to Java 11

The following prerequisites need to be matched before you can update the OIDF 8.1.1.x Java 8 instance to Java 11:

- **1.** Java 11 need to be installed on the OFSAA Server and Web Application Server.
- **2.** OFSAAl Release 8.1.1.1.0 need to be installed and configured.
 - For the installation of OFSAAI v8.1.1.1.0, see the <u>Oracle Financial Services Advanced Analytical Applications Infrastructure Installation Guide Release 8.1.1.0.0</u>.
- 3. OIDF Release 8.1.1.1.0.must be the minimum patch level installed.
 - For the installation of OIDF v8.1.1.1.0, see the <u>Oracle Insurance Data Foundation Application</u> Pack Installation and Configuration Guide Release 8.1.1.1.0.

For more information about the configuration required to update an existing OFSAA 8.1.1.x Java 8 instance to Java 11, see the section *Update the OFSAA 8.1.1.x Java 8 Instance to Java 11* in the <u>Oracle Financial Services Advanced Analytical Applications Infrastructure Installation Guide Release 8.1.1.0.0</u>.

Frequently Asked Questions (FAQs) and Error Dictionary

For FAQs and installation error-related information, see the section <u>Frequently Asked Ouestions</u> (FAQs) and <u>Error Dictionary</u> in the <u>Oracle Financial Services Advanced Analytical Applications Infrastructure Installation Guide Release 8.1.1.0.0</u>.

OFSAA Support

Raise a Service Request (SR) in My Oracle Support (MOS) for queries related to the OFSAA applications.

Send Us Your Comments

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If you find any errors or have any other suggestions for improvement, indicate the title and part number of the documentation along with the chapter/section/page number (if available) and contact the Oracle Support.

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