Oracle Financial Services Data Foundation Application Pack

Installation and Configuration Guide

Release 8.1.0.0.0

Jan 2022

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Document Control

Version Number	Revision Date	Change Log
1.0	30-April-2020	Created the document and redesigned with instructions for the installation and configuration of the OFSDF Release 8.1.0.0.0.
2.0	12-June-2020	• Converted this Installation and Configuration Guide into a concise form. • Added information for applying the OFSAAI one-off patch 31509494 in the Download and Install the Mandatory Patches section.
3.0	27-July-2020	Added information for installing the mandatory OFSDF one-off patch 31544548 for the RDBMS mode of installation in the Download and Install the Mandatory Patches section.
4.0	10-August-2020	• Added information for installing the mandatory one-off patch 31545589 in the Download and Install the Mandatory Patches and *Extract the Software* sections. • Added information for installing the mandatory one-off patch 31605076 in the Download and Install the Mandatory Patches, *Extract the Software*, and OFSAA Infrastructure Patch Installation sections.
5.0	27-October-2020	Added configuration information for OFSDF data model upload when OFS PFT Applications Pack is present in the same environment.
6.0	04-November-2020	Added the section Use Oracle Autonomous Data Warehouse as the Database for OFSDF.
7.0	22-September-2021	Added the section View OFSAA Product Licenses after the Installation of Application Pack.
8.0	17-December-2021	The OFSAAI Mandatory Patch **33663417** information is added.
9.0	04-January-2022	Updated the Section Prepare the Environment for Upgrade.
10	23-Nov-2023	Java Settings updated

Table of Contents

1   Preface

This section provides information about the Oracle Financial Services Data Foundation (OFSDF) Application Pack Installation and Configuration Guide.

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1.1   What is New in this Release for OFSDF Application Pack

This section lists new features and changes in the OFSDF Application Pack.

1.1.1   New Features

This section lists the new features described in this manual.

- All Runs are configured in the Process Modeling Framework (PMF) for the RDBMS mode of installation.
- Introduction of the ModelUpgrade utility to restore the metadata of the custom model.
- Enablement of the integration T2Ts based on the application pack (OFS CAP and OFS LRS) installation status.
- Facilitated loading of the Seeded data using the SQL*Loader utility.

1.1.2   Deprecated Features

There are no deprecated features in this release.

1.1.3   Desupported Features

The desupported feature in this release is:

- Run Management

1.2   Audience

The Oracle Financial Services Data Foundation (OFSDF) 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.

- OFSDF 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:

- Introduction: This section contains an introduction to the OFSAAI and its components, introduction to the OFSDF Application Pack, and installation scenarios that the current release supports.

- Complete Installation Checklist: This section lists the procedures required for a complete OFS Data Foundation Application Pack installation.

- Pre-installation: This section contains the pre-installation requirements for a successful installation and functioning of the OFS Data Foundation Application Pack. This section recommends the hardware and base software environment, and the preparatory procedures required before triggering the installation.

- Installation: This section details the steps to follow during the OFS Data Foundation Application Pack installation.

- Use Oracle Autonomous Data Warehouse as the Database for OFSDF: This section provides information about using the Oracle Autonomous Data Warehouse as the Database for the OFS Data Foundation Application Pack installation and operation.

- Post-installation: This section details the steps that are required to be performed after a successful installation of the OFS Data Foundation Application Pack.

- Upgrade: This section details the steps to follow before, during, and after the OFS Data Foundation Application Pack upgrade installation, and different upgrade scenarios.

- Additional Configuration: This section contains the additional configuration after a successful installation of the OFS Data Foundation Application Pack.

- Frequently Asked Questions (FAQs) and Error Dictionary: 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 Documents

Oracle strives to keep this and all other related documents updated regularly; visit the OHC Documentation Library and My Oracle Support to download the latest version available there. The following is the list of related documents:

- OHC Documentation Library for the OFSDF Application Pack Release 8.1.x.x.x product documents:

    - Oracle Financial Services Data Foundation Application Pack User Guide Release 8.1.0.0.0

    - Oracle Financial Services Data Foundation Application Pack Release Notes 8.1.0.0.0

    - Oracle Financial Services Data Foundation Application Pack Release Notes 8.1.0.0.1

    - Oracle Financial Services Data Foundation Application Pack Upgrade Guide Release 8.1.x.x

- OHC Documentation Library for the OFSDF Application Pack Release 8.1.x.x.x other documents:

    - 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 Financial Services Data Foundation Application Pack Cloning Reference Guide Release 8.1.x

    - Oracle Financial Services Data Foundation Application Pack Security Guide Release 8.1.x

    - Oracle Financial Services Data Foundation Application Pack Data Protection Implementation Guide Release 8.1.x

- Oracle Financial Services Data Foundation Application Pack Cloning Reference Guide Release 8.0.x

- My Oracle Support for the OFSDF Application Pack Release 8.1.x.x.x technical documents:

    - *Data Model Difference Reports*

    - *Changelog*

    - *SCD Metadata*

    - *T2T Metadata*

    - *Run Chart*

- Oracle Financial Services Analytical Applications (OFSAA) Technology Matrix Release 8.1.0.0.0

- OHC Documentation Library for the OFS AAAI Application Pack Release 8.1.0.0.0 product documents:

    - Oracle Financial Services Advanced Analytical Applications Infrastructure Installation Guide Release 8.1.0.0.0

    - Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide Release 8.1.0.0.0

- ▪ [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 8.1.0.0.0](#)
        - ▪ [Oracle Financial Services Analytical Applications (OFSAA) Metadata Browser User Guide Release 8.1.0.0.0](#)
    - • [OHC Documentation Library](#) for the 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 8.1.0.0.0](#)

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

Conventions	Description
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
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
OFSDF	Oracle Financial Services 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

Conventions	Description
Web Archive	WAR
XML	Extensible Markup Language

Part I

Topics:

- [Pre-installation](#)
- [Installation](#)
- [Use Oracle Autonomous Data Warehouse as the Database for OFSDF](#)
- [Post-installation](#)

2   Introduction

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

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

Figure 1: Application Packs of OFSAA
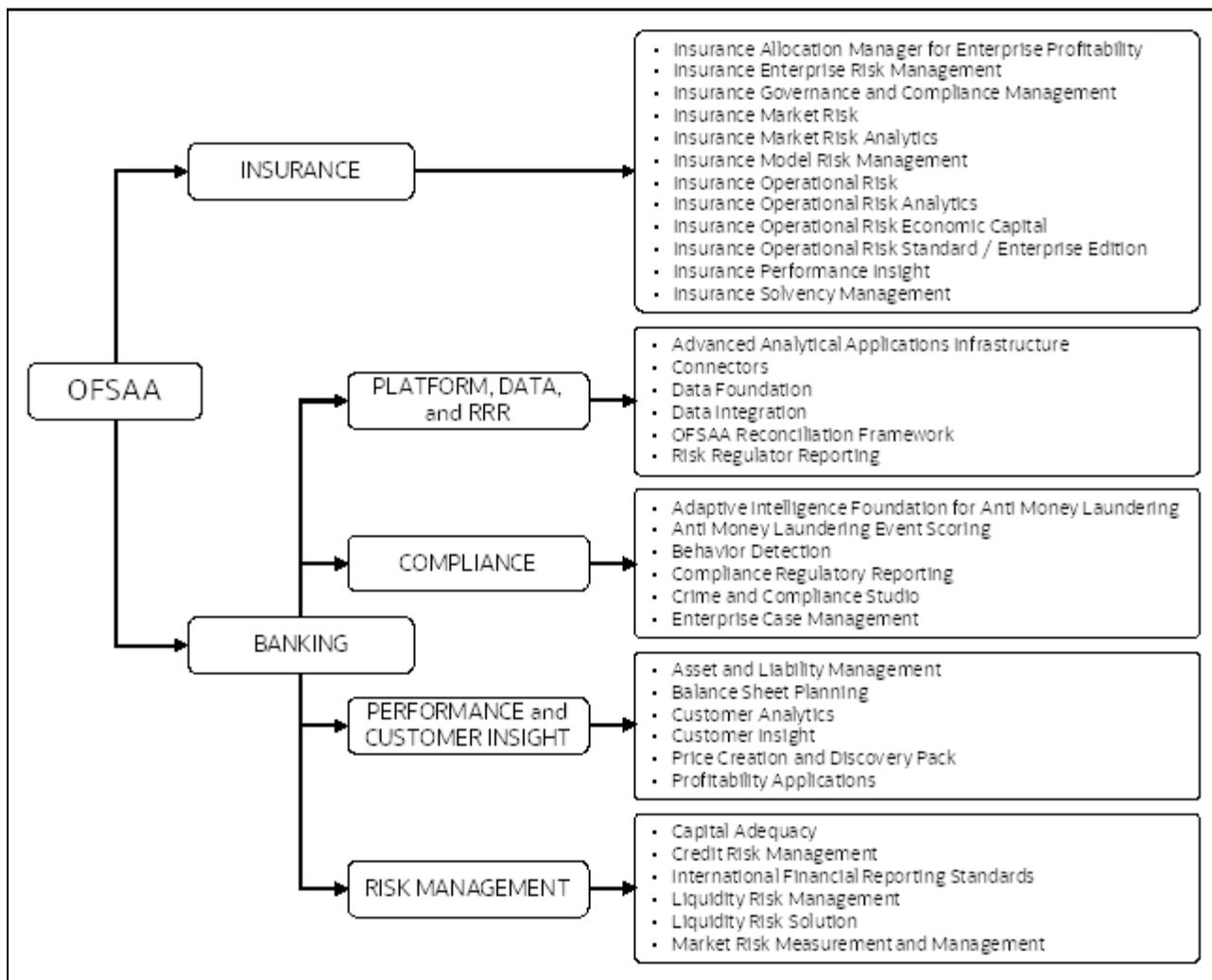
Topics:

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

- [About the Oracle Financial Services 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
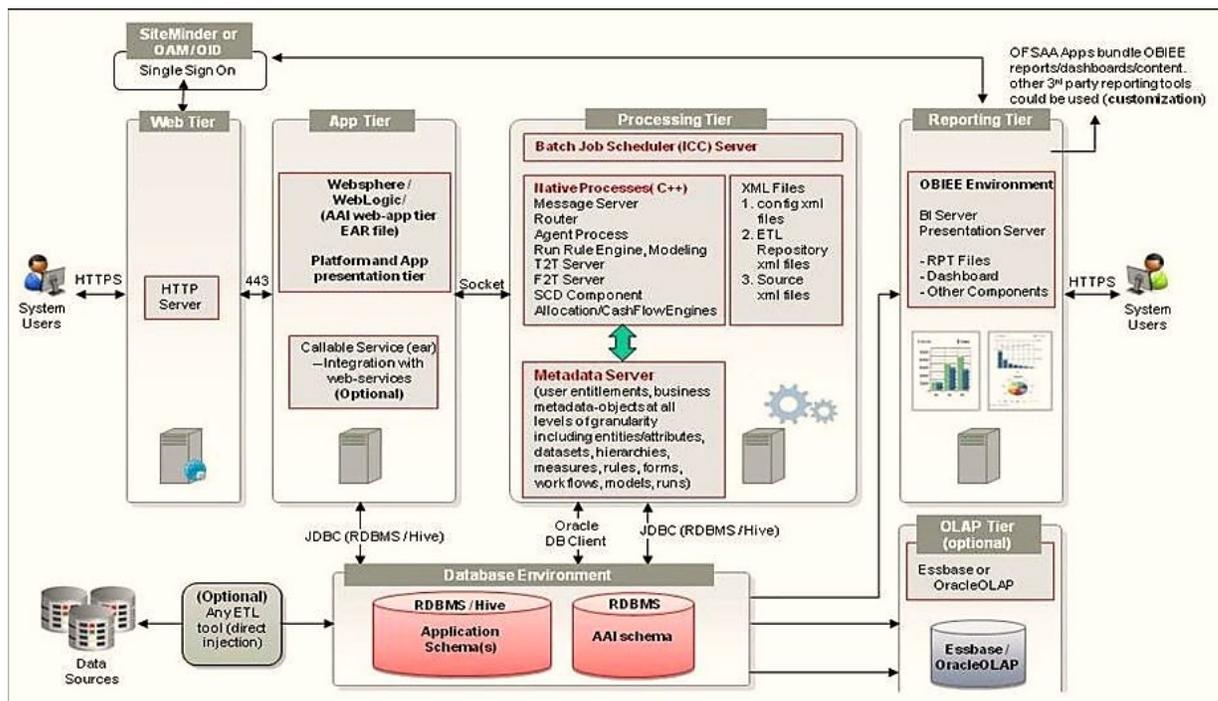
2.1.2 OFSAA Infrastructure High Availability

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

2.1.3 Deployment Topology

Figure 3: The logical architecture implemented in the OFSAAAI Application Pack
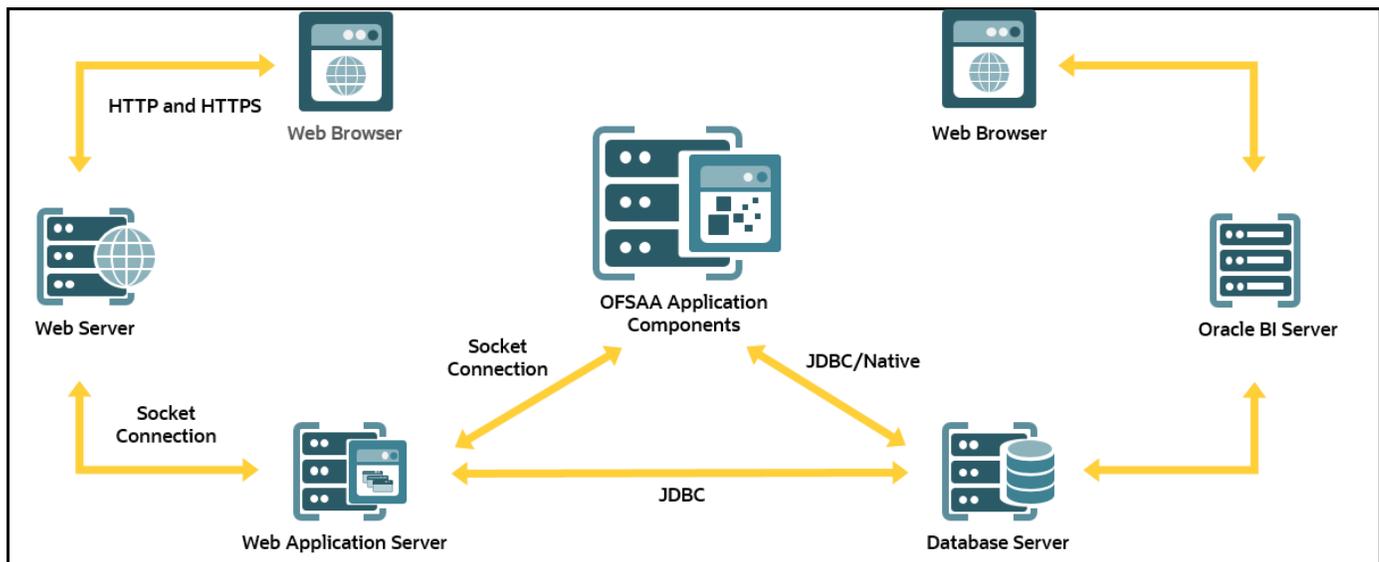
2.2 About the Oracle Financial Services Data Foundation Application Pack

Oracle Financial Services Data Foundation (OFSDF) Application Pack provides integrated stress testing and modeling capabilities that you can readily apply across multiple risk areas enabling institutions to devise appropriate enterprise-wide and holistic risk and economic capital strategies.

OFSDF enables you to comply with regulatory requirements on stress testing, enables advanced customer and portfolio analytics, utilize multiple industry-standard techniques, test, and model with complete data integrity.

OFSDF 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 OFSDF, 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/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 FSDF is referred to as BFND.

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 8.1.0.0.0 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 procurement of an additional license. For more information, see the *OFS AAIE Release Notes* and *Installation Guide* on the OHC Documentation Library.

2.4 Installation and Upgrade Scenarios

The OFSDF Application Pack Release v8.1.0.0.0 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: OFSDF Release 8.1.0.0.0 Installation and Upgrade Scenarios

Scenario	Installation and Upgrade Instructions
New Installation Installing Release 8.1.0.0.0 application pack for the first time (new installation).	1. Prepare for the Installation. 2. Run Schema Creator Utility. 3. Install the OFSDF Application Pack.
Install a new OFSDF Application Pack v8.1.0.0.0 on an Existing OFSAA Instance In this scenario, you have already installed an application pack versioned v8.1.0.0.0 and now you want to install the OFSDF application pack versioned v8.1.0.0.0. **Example:** OFS ALM Pack is already installed and now you want to install OFSDF Pack.	1. Configure the `OFS_BFND_PACK.xml` file for the newly licensed OFSDF Application Pack. 2. Configure the `Silent.props` file of the newly licensed pack. 3. Run the schema creator utility ONLY for the newly licensed OFSDF Application Pack. 4. Trigger the installation.
Upgrade from OFS Data Foundation Application Pack Release v8.0.x on AIX or Solaris x86 Operating System	Release v8.1.0.0.0 of OFS Data Foundation Application Pack is not certified for AIX and Solaris x86 Operating Systems. If you are currently running OFSAA v8.0.x on AIX or Solaris x86 Operating Systems and plan to upgrade to Release v8.1.0.0.0, then you must migrate from AIX or Solaris x86 to Linux or Solaris SPARC. See the MOS Doc ID 2700084.1 for details.
Upgrade from OFSDF v8.0.6.0.0 or earlier versions to OFSDF v8.0.6.1.0 or a higher version In this scenario, you are upgrading the OFSDF application pack from the Release v8.0.6.0.0 or an earlier version to the Release v8.1.0.0.0. **Example**: You are using the OFSDF v8.0.5.0.0 release and now want to upgrade to the OFSDF v8.1.0.0.0**.**	1. Upgrade your current OFSDF version to the OFSDF v8.0.6.1.0 or later versions. 2. Clone your existing environment to the OFSAA Technology Matrix v8.1.0.0.0. 3. Upgrade from OFSDF v8.0.6.1.0 or a later version to OFSDF v8.1.0.0.0. 4. Run the Environment Check Utility tool and ensure that the hardware and software are installed as per the OFSAA Technology Matrix v8.1.0.0.0. 5. Update the `OFS_BFND_PACK.xml` file to enable ONLY the existing installed applications. 6. Update the `Silent.props` file present in the OFSDF v8.1.0.0.0 installer pack. 7. Trigger the installation.
Upgrade from OFSDF v8.0.6.1.0 or a Higher Version to OFSDF v8.1.0.0.0 In this scenario, you are upgrading the OFSDF application pack from the Release v8.0.6.1.0 or a later version to the Release v8.1.0.0.0. **Example**: You are using the OFSDF v8.0.7.0.0 and now want to upgrade it to the OFSDF v8.1.0.0.0.	1. Perform the data model upload outside of the installer (Execute the `ModelUpgrade.sh` file for the Prescripts to backup and delete the data, and then to backup and delete the metadata). 2. Clone your existing environment to the OFSAA Technology Matrix v8.1.0.0.0. 3. Run the Environment Check Utility tool and ensure that the hardware and software requirements are installed as per the OFSAA Technology Matrix v8.1.0.0.0. 4. Update the `OFS_BFND_PACK.xml` file to enable ONLY the existing installed applications. 5. Update the `Silent.props` file present in the OFSDF v8.1.0.0.0 installer pack. 6. Trigger the installation.

Scenario	Installation and Upgrade Instructions
	7. Execute the `ModelUpgrade.sh` file for the Postscripts to restore the data and then metadata.
Install OFSDF Application Pack v8.1.0.0.0 on an Existing OFSAA Instance In this scenario, you have already installed an application pack versioned v8.1.0.0.0 and now you want to install the OFSDF application pack versioned v8.1.0.0.0. **Example:** OFS ALM Pack is already installed and now you want to install OFSDF Pack.	1. Perform the data model upload outside of the installer (Execute the `ModelUpgrade.sh` file for the Prescripts to backup and delete the data, and then to backup and delete the metadata). 2. Update the `OFS_BFND_PACK.xml` file for the newly licensed OFSDF Application Pack. 3. Update the `Silent.props` file of the newly licensed pack. 4. Run the schema creator utility ONLY for the newly licensed OFSDF Application Pack. 5. Trigger the installation. 6. Execute the `ModelUpgrade.sh` file for the Postscripts to restore the data and then metadata.

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).
3	Verify the System Environment using the Environment Check Utility.
4	Download the OFSDF Application Pack installer kit.
5	Download the Data Model (optional).
6	Download the mandatory patches.
7	Configure the Database Instance settings.
8	Install and configure the web application server.
9	Configure the HTTP settings on the webserver.
10	Create the Installation, Download, and Metadata Repository Directories: • Installation directory • Temporary directory • Staging Area/Metadata Repository • Download directory
11	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
12	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 OFSDF Application Pack software.

Sl. No.	Activity
2	Configure the `OFS_BFND_PACK.xml` file.
3	Configure the `OFS_BFND_SCHEMA_IN.xml` file.
4	Configure the `OFS_BFND_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 OFSDF 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.
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	Execute the OFSAAI setup information fetching tool.
9	Execute the Encryption Changer.
10	Configure the Infrastructure LDAP.
11	Configure and deploy the OFSAAI web services.
12	Enable the parallel execution of DML statements.
13	Configure the message details in the Forms Designer.
14	Clear the application cache.
15	Configure the password changes.
16	Configure the Java Virtual Machine.
17	Configure the internal service (Document Upload/Download).
18	Migrate the Excel upload functionality.
19	Remove the OFSAA Infrastructure.

4   Pre-installation

This section contains the pre-installation requirements for a successful installation and functioning of the OFS 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).
3	Verify the System Environment using the Environment Check Utility.
4	Download the OFSDF Application Pack installer kit.
5	Download the Data Model (optional).
6	Download the mandatory patches.
7	Configure the Database Instance settings.
8	Install and configure the web application server.
9	Configure the HTTP settings on the webserver.
10	Create the Installation, Download, and Metadata Repository Directories: • Installation directory • Temporary directory • Staging Area/Metadata Repository • Download directory
11	Configure the following Operating System and File System settings: • File Descriptor

Sl. No.	Activity
	• Total number of processes • Port(s) • `.profile` file permissions • Set Up the SFTP Private Key
12	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

4.2 Hardware and Software Requirements

This section describes the various Operating System, database, web server, and web application server version and other variant details on which this release of the Oracle Financial Services Data Foundation Application Pack has qualified.

Topics:

- Big Data Settings

- Third-party Licensing Information

- Verify the System Environment

See the OFSAA Technology Matrix document for the hardware and software required for the Oracle Financial Services Data Foundation Application Pack Release 8.1.0.0.0.

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 OFSAA Technology Matrix for the software required for the Big Data software Hadoop Distribution on the Oracle Financial Services Data Foundation Application Pack Release 8.1.0.0.0.

- 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 Oracle Financial Services Analytical Applications (OFSAA) Licensing Information User Manual Release 8.1.0.0.0.

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 Oracle Support Services.

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 Oracle Financial Services Advanced Analytical Applications Infrastructure Environment Check Utility Guide Release 8.1.x.

4.3 Preparing for Installation

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

Topics:

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

4.3.1 Download the OFSDF Application Pack Installer

To download the OFSDF Application Pack installer Release v8.1.0.0.0, follow these steps:

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

Figure 4: Oracle Software Delivery Cloud Login Page
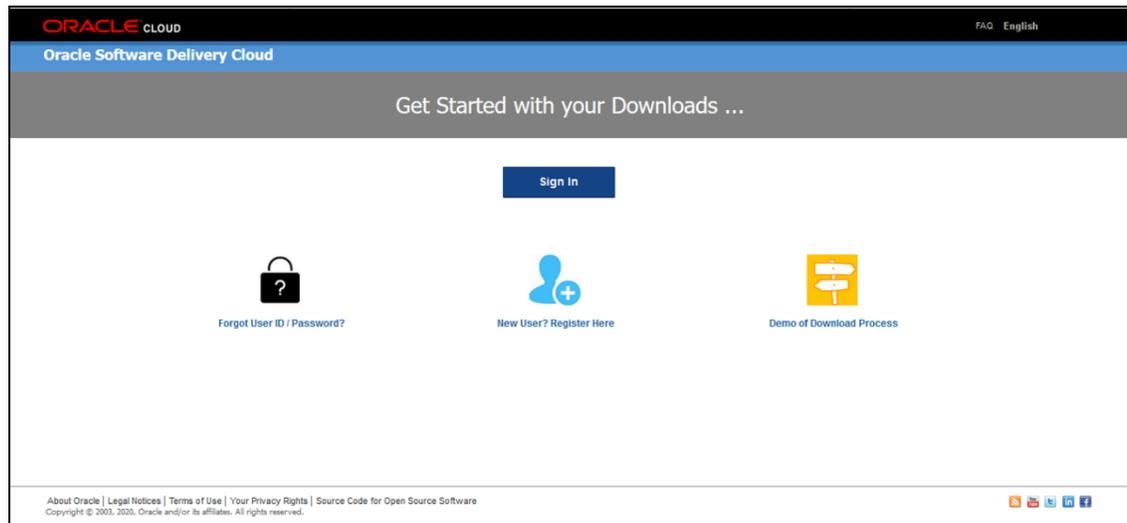
2. Search for the full product name **Oracle Financial Services Data Foundation** and download the installer archive.

Figure 5: Oracle Software Delivery Cloud Page
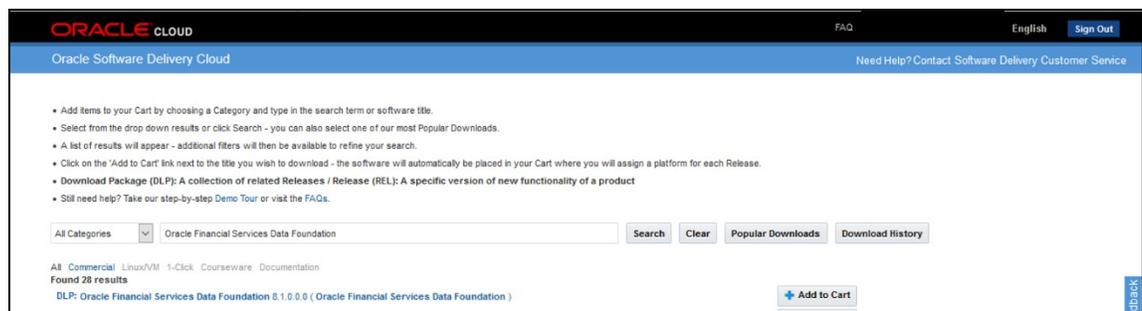
3. Copy the installer archive into the download directory (in Binary mode) in the setup identified for the OFSDF Application Pack installation.

4.3.2   Download the Data Model

To download the OFSDF OOB v8.1.0.0.0 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 OFSDF Data Model installer patch **30812072** and download the patch. See the Readme available with the patch for further instructions on downloading the patch and extracting the erwin files.

4.3.3 Download the Mandatory Patches

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

Table 10: Mandatory Patches

One-Off Patch	Description
31544548	Download this OFSDF one-off patch for the fresh installation of the OFSDF Application Pack 8.1.0.0.0 release. This patch is applicable only to the RDBMS mode of installation.
31605076	Access to features owing to the additional license functionality that gets installed through the OFS AAI Extension Pack.
31545589	For pack-on-pack installation on a new atomic schema.
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 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.

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

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 Configure the Web Server 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 OFSDF Application Pack, create the following directories:

- **OFSDF Download Directory (Optional)**: Create a download directory and copy the OFSDF Application Pack Installer File (archive). This is the directory where the downloaded installer/ 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/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/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. |

- **OFSDF 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.

Parameter	Configuration Action

File Descriptor Settings	In the `sysctl.conf` file, to change the number of file descriptors, do the following as the root user:
	
	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.

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` • AIX: `EN_US.UTF-8` • 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 on 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.	`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`

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`

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 *Enabling Unlimited Cryptographic Policy for Java* section from the OFS Analytical Applications Infrastructure Administration Guide.

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=$HOME/tns`
In the `.profile` file, set ORACLE_HOME pointing to the appropriate Oracle Client installation.	`ORACLE_HOME=/scratch/oraofss/app_client18c/product/18.0.0/client_1`
In the `.profile` file, set PATH to include the appropriate `$ORACLE_HOME/bin` path.	`PATH=$JAVA_HOME/bin:$ORACLE_HOME/bin`

Description	Example Value
OFSAA Processing Server	• `ORACLE_HOME` must be set in the `.profile` file and point to 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.	`<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> =
  (DESCRIPTION =
    (ADDRESS_LIST =
      (ADDRESS = (PROTOCOL = TCP)(HOST = <HOST NAME>)(PORT = <PORT NUMBER>))
    )
    (CONNECT_DATA =
      (SERVICE_NAME = <SID NAME>)
    )
  )

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

```
       (SERVICE_NAME = <SID NAME>)
    )
  )
```

> **NOTE**   The ATOMIC SCHEMA NAME must be the same as defined in
> the `OFS_<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.	`<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=<HOST_NAME>))))`
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 TO WALLET DIRECTORY>)))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)`

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

(security=(ssl_server_cert_dn=CN=<HOST NAME>))
    )
  )

<ATOMICSCHEMANAME> =
  (DESCRIPTION =
    (ADDRESS_LIST =
      (ADDRESS = (PROTOCOL = TCPS)(HOST = <HOST NAME>)(PORT = <PORT
NUMBER>))
    )
```

```
      (CONNECT_DATA =
        (SERVICE_NAME = <SID NAME>)


(security=(ssl_server_cert_dn=CN=<HOST NAME>))       )
  )
```

> **NOTE**　　The ATOMIC SCHEMA NAME must be the same as defined in the
> `OFS_BFND_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 want 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/MiddlewareHo me/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 OFSDF Application Pack installation.

Topics:

- [Installation Checklist](#)
- [Extract the Software](#)
- [Install the Pre-installation Patches](#)
- [Configure the OFS_BFND_PACK.xml File](#)
- [Configure the Schema Creator Utility](#)
- [Configure the OFS_BFND_SCHEMA_IN.xml File](#)
- [Configure the OFS_BFND_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 OFSDF Application Pack](#)
- [Install a New OFSDF Application Pack on an Existing OFSAA Instance](#)

5.1   Installation Checklist

To complete the OFSDF 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

Sl. No.	Activity
1	[Extract](#) the OFSDF Application Pack software.
2	[Configure](#) the `OFS_BFND_PACK.xml` file.
3	[Configure](#) the `OFS_BFND_SCHEMA_IN.xml` file.
4	[Configure](#) the `OFS_BFND_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.

Sl. No.	Activity
9	Verify the Schema Creator log files.
10	Trigger the OFSDF Application Pack installation.

5.2 Extract the OFSDF 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:

   ```
   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 OFSDF Application Pack Release v8.1.0.0.0 installer archive file in the download directory with the following command:

   ```
   unzip OFS_BFND_8.1.0.0.0_<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_BFND_PACK
   ```

5. Extract the following patches in the download directory:

   - **31545589** – OFSAAI mandatory one-off patch. See the ReadMe packaged with the patch for further instructions about how to extract the patch.

   - **31544548** - OFSDF mandatory one-off patch. See the Oracle Financial Services Data Foundation Application Pack Release Notes 8.1.0.0.1 for further instructions about how to extract the patch. This patch is applicable only to the RDBMS mode of installation.

▪ **31605076** – OFSAAI mandatory one-off patch. See the ReadMe packaged with the patch for further instructions about how to extract the patch.

5.3   Install the Pre-installation Patches

Before installing OFSDF Application Pack 8.1.0.0.0, apply the **31545589** one-off patch. See the ReadMe packaged with the patch for further instructions about how to install the patch.

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

5.4   Configure the OFS_BFND_PACK.xml File

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

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

1. Navigate to the `<INSTALLER_DIRECTORY>/OFS_BFND_PACK/conf` directory.

   ▪ For the RDBMS installation, rename the file `OFS_BFND_PACK.xml.template` to `OFS_BFND_PACK.xml`

   ▪ In the Big Data mode of installation, for Stage and Results on Hive, rename the file `OFS_BFND_PACK.xml.BIGDATA.template` to `OFS_BFND_PACK.xml`

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

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

| 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 6: Sample of the OFS_BFND_PACK.xml File

```
<APP_PACK_CONFIG>
    <APP_PACK_ID>OFS_BFND_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>8.1.0.0.0</VERSION>
    <APP>
        <APP_ID PREREQ="" DEF_SEL_FLG="YES" ENABLE="YES">OFS_AAI</APP_ID>
        <APP_NAME>Financial Services Analytical Applications Infrastructure</APP_NAME>
        <APP_DESCRIPTION>Base Infrastructure for Analytical Applications</APP_DESCRIPTION>
        <VERSION>8.1.0.0.0</VERSION>
    </APP>
    <APP>
        <APP_ID PREREQ="OFS_AAI" 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>8.1.0.0.0</VERSION>
    </APP>
    <APP>
        <APP_ID PREREQ="OFS_AAIB" ENABLE="YES">OFS_FSDF</APP_ID>
        <APP_NAME>Financial Services Data Foundation</APP_NAME>
        <APP_DESCRIPTION>Data Foundation for Banking and Financial Services domain on Big Data
        </APP_DESCRIPTION>
        <VERSION>8.1.0.0.0</VERSION>
    </APP>
</APP_PACK_CONFIG>
```

Table 21: The OFS_BFND_PACK.xml file parameters

Tag Name/ Attribute Name	Description	Mandatory (Y/N)	Comments
APP_PACK_ID	Unique Application Pack Identifier	Y	Unique Seeded Value. DO NOT modify this value.
IS_OPT_INSTALL VALUE="TRUE"	Unique Application Entry	Y	Unique Seeded Value. DO NOT modify this value.
APP_PACK_NAME	Unique Application Pack Name	Y	Unique Seeded Value. DO NOT modify this value.
APP_PACK_DESCRIPTION	Unique Application Pack Description	Y	Unique Seeded Value. DO NOT modify this value.
VERSION	Unique release version	Y	Unique Seeded Value. DO NOT modify this value.
APP	Unique Application Entries	Y	Unique Seeded Value. DO NOT modify this value.
APP_ID	Unique Application Identifier	Y	Unique Seeded Value. DO NOT modify this value.

Tag Name/ Attribute Name	Description	Mandatory (Y/N)	Comments
APP_ID/PREREQ	Prerequisite Application/ Product	Y	Unique Seeded Value. For most applications Infrastructure would be the prerequisite set. For certain other applications, an appropriate Application ID would be set. DO NOT modify this value.
APP_ID/DEF_SEL_FLAG	Default Selected Flag	Y	The default value is YES. In all Application Packs, Infrastructure would have this value set to "YES". DO NOT modify this value.
APP_ID/ENABLE	Enable Application/ Product	YES if installing in 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 use. **NOTE**: The Application or Product cannot be disabled once enabled. Only those Applications or Products, which are enabled, are installed. To enable the other licensed Applications or Products, you must reinstall by setting the flag to Y for the APP_ID. However, in 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.
APP_NAME	Unique Application/ Product Name	Y	Unique Seeded Value. DO NOT modify this value.
APP_DESCRIPTION	Unique Application/ Product Name	Y	Unique Seeded Value. DO NOT modify this value.
VERSION	Unique release version	Y	Unique Seeded Value. DO NOT modify this value.

4. Save the file.

5.5   Configure the Schema Creator Utility

Creating database users/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)/ 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 OFSDF Application Pack.

Topics:

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

5.5.1   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

5.5.2   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_BFND_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.

5.5.2.1   Configure the OFS_BFND_SCHEMA_IN.xml File

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

The `OFS_BFND_SCHEMA_IN.xml` file contains details of the various application schemas.

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

NOTE	This file must be configured only in the case of the OFSDF Application Pack installation for RDBMS ONLY target. This file is not required to be configured for an HDFS ONLY target installation.

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

1. Log in to the system as a non-root user.
2. Navigate to the `OFS_BFND_PACK/schema_creator/conf/` directory.
3. Rename the `OFS_BFND_SCHEMA_IN.xml.template` file to `OFS_BFND_SCHEMA_IN.xml`.

4. Edit the `OFS_BFND_SCHEMA_IN.xml` file using a text editor and configure the values as mentioned in the following table.

Figure 7: Sample of the OFS_BFND_SCHEMA_IN.xml file

```
<APPPACKSCHEMA>
    <APP_PACK_ID>OFS_BFND_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</JDBC_DRIVER>
    <HOST>MYHOSTNAME</HOST>
    <SETUPINFO NAME="ABC" PREFIX_SCHEMA_NAME="Y" />
    <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_BFND_DATA_TBSP" VALUE="OFS_BFND_DATA_1"
        DATAFILE="/PATH/ofs_bfnd_data_1.dbf" SIZE="500M" AUTOEXTEND="ON" ENCRYPT="OFF" />
        <TABLESPACE NAME="OFS_BFND_SBX_TBSP" VALUE="OFS_BFND_DATA_2"
        DATAFILE="/PATH/ofs_bfnd_data_2.dbf" SIZE="512M" AUTOEXTEND="ON" ENCRYPT="OFF" />
    </TABLESPACES>
    -->
    <SCHEMAS>
        <SCHEMA TYPE="CONFIG" NAME="MYCONSCHEMANAME" PASSWORD="" APP_ID="OFS_AAI"
        DEFAULTTABLESPACE="USERS" TEMPTABLESPACE="TEMP" QUOTA ="UNLIMITED" />
        <SCHEMA TYPE="ATOMIC" NAME="MYATMSCHEMANAME" PASSWORD="" APP_ID="OFS_FSDF" INFODOM=
        "MYINFODOMNAME" DEFAULTTABLESPACE="USERS" TEMPTABLESPACE="TEMP" QUOTA ="UNLIMITED" />
    </SCHEMAS>

</APPPACKSCHEMA>
```

Figure 8: Sample of the OFS_BFND_SCHEMA_IN.xml file (APPPACKSCHEMA Block)

```
<APPPACKSCHEMA>
    <APP_PACK_ID>OFS_BFND_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</JDBC_DRIVER>
    <HOST>MYHOSTNAME</HOST>
    <SETUPINFO NAME="ABC" PREFIX_SCHEMA_NAME="Y" />
    <PASSWORD APPLYSAMEFORALL="Y" DEFAULT="" />
```

Table 22: OFS_BFND_PACK_SCHEMA_IN.xml file (APPPACKSCHEMA Parameters)

Tag Name/ Attribute Name	Description	Mandatory/ Optional	Default Value/ Permissible Value	Comments
<APP_PACK_ID>	Unique Application Pack Identifier	Y	Unique Seeded Value Example: OFS_BFND_PACK	DO NOT modify this value.
<IS_TCPS>	Enter if the TCPS configuration is required. This is to create a secure line between the client and server when using the OFSDF application.	Y	Seeded, with FALSE as the default value.	Modify this to TRUE if you require the installer to uptake the configuration.

Tag Name/ Attribute Name	Description	Mandatory/ Optional	Default Value/ Permissible Value	Comments
<JDBC_URL>	Enter the JDBC URL. **NOTE**: You can enter 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)))	Ensure to add an entry (with SID/ SERVICE NAME) in the tnsnames.ora file on the OFSAA server. The entry should match with the SID/ SERVICE NAME used in the JDBC URL.
<JDBC_DRIVER>	By default, this driver's name is seeded. **NOTE**: Do not edit this attribute value.	Y	Example: oracle.jdbc.driver.OracleDriv er	Only JDBC Thin Driver is supported. DO NOT modify this value.
<HOST>	Enter the Hostname/ IP Address of the system on which you are installing the OFSAA components.	Y	Host Name/ IP Address	

Tag Name/ Attribute Name	Description	Mandatory/ Optional	Default Value/ Permissible Value	Comments
<SETUPINFO>/NAME	Enter the acronym for the type of implementation. This information is displayed in the OFSAA Home Page. **NOTE**: On executing the schema creator utility, this value will be prefixed with each schema name. For example, dev_ofsaaconf, uat_ofsaaatm.	Y	Accepts strings with a minimum length of two and a maximum of four. Example: DEV, SIT, PROD	This name would appear in the OFSAA Landing Page as "Connected To: XXXX" The schemas being created gets this prefix. For example: dev_ofsaaconf, uat_ofsaaconf etc.
<SETUPINFO>/ PREFIX_SCHEMA_NAME	Identifies if the value specified in <SETUPINFO>/ NAME attribute should be prefixed to the schema name.	N	The default value is Y. Permissible values are Y or N.	The default value is Y.
<PASSWORD>/APPLYSAMEFORALL	Enter as Y if you want 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 also have specified individual passwords for all the schemas, then the specified individual passwords will 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>/DEFAULT*	Enter the password if you want 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 9: Sample of the OFS_BFND_SCHEMA_IN.xml file (ADV_SEC_OPTIONS Block)

```
<ADV_SEC_OPTIONS>
    <OPTION NAME="TDE" VALUE="TRUE"/>
    <OPTION NAME="DATA_REDACT" VALUE="TRUE" />
</ADV_SEC_OPTIONS>
```

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

Tag Name/ Attribute Name	Description	Mandatory/ Optional	Default Value/ Permissible Value	Comments
<ADV_SEC_OPTIONS>	Parent tag to hold Advance Security Options.	N		Uncomment the tag and edit if you want to add security options. For example, TDE and Data Redact. For details, see the example following the table.
<ADV_SEC_OPTIONS>/TDE	Tag to enable/disable TDE.	N	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>/ DATA_REDACT	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>/

Figure 10: Sample of the OFS_BFND_SCHEMA_IN.xml file (TABLESPACES Block)

```
<TABLESPACES>
    <TABLESPACE NAME="OFS_BFND_DATA_TBSP" VALUE="OFS_BFND_DATA_1"
    DATAFILE="/PATH/ofs_bfnd_data_1.dbf" SIZE="500M" AUTOEXTEND="ON" ENCRYPT="OFF" />
    <TABLESPACE NAME="OFS_BFND_SBX_TBSP" VALUE="OFS_BFND_DATA_2"
    DATAFILE="/PATH/ofs_bfnd_data_2.dbf" SIZE="512M" AUTOEXTEND="ON" ENCRYPT="OFF" />
</TABLESPACES>
```

Table 24: OFS_BFND_PACK_SCHEMA_IN.xml file (Tablespaces Parameters)

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

NOTE	Encryption of tablespaces requires enabling Transparent Data Encryption (TDE) on the Database Server.

Figure 11: Sample of the OFS_BFND_SCHEMA_IN.xml file (SCHEMAS Block)

```
<SCHEMAS>
    <SCHEMA TYPE="CONFIG" NAME="MYCONSCHEMANAME" PASSWORD="" APP_ID="OFS_AAI"
    DEFAULTTABLESPACE="USERS" TEMPTABLESPACE="TEMP" QUOTA ="UNLIMITED" />
    <SCHEMA TYPE="ATOMIC" NAME="MYATMSCHEMANAME" PASSWORD="" APP_ID="OFS_FSDF" INFODOM=
    "MYINFODOMNAME" DEFAULTTABLESPACE="USERS" TEMPTABLESPACE="TEMP" QUOTA ="UNLIMITED" />
</SCHEMAS>
```

Table 25: OFS_BFND_PACK_SCHEMA_IN.xml file (SCHEMAS Parameters)

Tag Name/ Attribute Name	Description	Mandatory/ Optional	Default Value/ Permissible Value	Comments
<SCHEMA>/TYPE	The different types of schemas that are supported in this release are ATOMIC, CONFIG, SANDBOX, and ADDON. By default, the schemas types are seeded based on the Application Pack. **NOTE**: Do not edit this attribute value.	Y	ATOMIC/CONFIG/SANDBOX/ADDON **NOTE**: SANDBOX AND ADDON schemas are not applicable for OFSDF 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	By default, the schema names are seeded based on the Application Pack. You can edit the schema names if required. **NOTE**: The Schema Name will have a prefix of the SETUPINFO/ NAME attribute. SCHEMA NAME must be the same for all the ATOMIC Schemas of applications within an Application Pack.	Y	The permissible length is 15 characters and only alphanumeric characters allowed. No special characters allowed except underscore '_'.	SETUPINFO/NAME attribute value is prefixed to the schema name being created. For Example, If the name is set as 'ofsaaatm' and setupinfo as 'uat' then schema being created would be 'uat_ofsaaatm'. Example for <SCHEMA>/ NAME: ##CONFIG_USER_NAME## or ##ATOMIC_USER_NAME## NAME should be same where APP_GRP=1 for all SCHEMA tags (Not applicable for this Application Pack).
<SCHEMA>/PASSWORD	Enter the password of the schema to be created. **NOTE**: If this attribute is left blank, then the password specified in the <PASSWORD>/DEFAULT attribute is applied as the Schema Password.	N	The maximum length allowed is 30 characters. Special characters are not allowed.	**NOTE**: You need to mandatorily enter the password if you have set the <PASSWORD>/ APPLYSAMEFORALL attribute as N.
<SCHEMA>/APP_ID	By default, the Application ID is seeded based on the Application Pack. **NOTE**: Do not edit this attribute value.	Y	Unique Seeded Value Example: For CONFIG schema, OFS_AAI For ATOMIC schema, OFS_FSDF	Identifies the Application/ Product for which the schema is being created. DO NOT modify this value.
<SCHEMA>/DEFAULTT ABLESPACE	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_BFND_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	Enter the available temporary tablespace for the DB User. **NOTE**: If this attribute is left blank, then TEMP is set as the default tablespace.	N	Default – TEMP Permissible – Any existing valid temporary tablespace name. Example: ##OFS_BFND_DATA_TBSP##	Modify this value to associate any valid tablespace with the schema.
<SCHEMA>/QUOTA	Enter the quota to be set on the DEFAULTTABLESPACE attribute for the schema or user. By default, the quota size is set to 500M. Minimum: 500M or Unlimited on default Tablespace	N	Example, 600M/m 20G/g UNLIMITED/unlimited	Modify this value to grant the specified quota on the mentioned tablespace to the user.
<SCHEMA>/INFODOM	Enter the name of the Information Domain to associate this schema. The schema creator utility automatically derives an Information Domain Name based on the Application Pack if no value is specified for this attribute.	N (Optional for Atomic and mandatory for sandbox)	Permissible length is 16 characters and only alphanumeric characters allowed. No special characters allowed.	Enter this field in UPPERCASE.

5. Save the file.

5.5.2.1.1 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>
```

5.5.3   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_BFND_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.

5.5.3.1   Configure the OFS_BFND_SCHEMA_BIGDATA_IN.xml file for Stage and Results on Hive

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

The `OFS_BFND_SCHEMA_BIGDATA_IN.xml` file contains details on the various application schemas. Update the values of the various tags and parameters available in this file before executing the schema creator utility.

NOTE	This file must be configured only for the OFSDF Application Pack installation for the HDFS ONLY target. Do not configure this file for an RDBMS ONLY target installation.

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

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

2. Navigate to the `OFS_BFND_PACK/schema_creator/conf/` directory.

   - Rename the file `OFS_BFND_SCHEMA_BIGDATA_IN.xml.template` to `OFS_BFND_SCHEMA_BIGDATA_IN.xml`.

   - Rename the file `OFS_BFND_SCHEMA_IN.xml` to `OFS_BFND_SCHEMA_IN.xml.template`.

3. Edit the `OFS_BFND_SCHEMA_BIGDATA_IN.xml` file using a text editor and configure the values as mentioned in the following table.

Figure 12: Sample of the OFS_BFND_SCHEMA_BIGDATA_IN.xml file

```xml
<APPPACKSCHEMA>
    <APP_PACK_ID>OFS_BFND_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</JDBC_DRIVER>
    <HOST>MYHOSTNAME</HOST>
    <IS_HYBRID VALUE="FALSE"/>
    <SETUPINFO NAME="ABC" PREFIX_SCHEMA_NAME="Y"/>
    <PASSWORD APPLYSAMEFORALL="Y" DEFAULT=""/>
    <SCHEMAS TYPE="RDBMS">
        <SCHEMA TYPE="CONFIG" NAME="MYHIVECONSCHEMA" PASSWORD="" APP_ID="OFS_AAI" DEFAULTTABLESPACE=
        "USERS" TEMPTABLESPACE="TEMP" QUOTA="UNLIMITED"/>
        <SCHEMA TYPE="ATOMIC" NAME="MYHIVEATMSCHEMA" PASSWORD="" APP_ID="OFS_FSDF" DEFAULTTABLESPACE=
        "USERS" TEMPTABLESPACE="TEMP" QUOTA="UNLIMITED" INFODOM="MYHIVEINFODOM"/>
    </SCHEMAS>

    <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=
        "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>
</APPPACKSCHEMA>
```

Figure 13: Sample of the OFS_BFND_SCHEMA_BIGDATA_IN.xml file (APPPACKSCHEMA Block)

```
<APPPACKSCHEMA>
    <APP_PACK_ID>OFS_BFND_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</JDBC_DRIVER>
    <HOST>MYHOSTNAME</HOST>
    <IS_HYBRID VALUE="FALSE"/>
    <SETUPINFO NAME="ABC" PREFIX_SCHEMA_NAME="Y"/>
    <PASSWORD APPLYSAMEFORALL="Y" DEFAULT=""/>
```

Table 26: OFS_BFND_SCHEMA_BIGDATA_IN.xml file (APPPACKSCHEMA Parameters)

Tag Name/ Attribute Name	Description	Mandatory (Y/N)	Default Value/ Permissible Value	Comments
<APP_PACK_ID>	Seeded unique ID for the OFSAA Application Pack.	Y	Seeded	DO NOT modify this value.
<IS_TCPS>	Enter if the TCPS configuration is required. This is to create a secure line between the client and server when using the OFSDF application.	Y	Seeded, with FALSE as the default value.	Modify this to TRUE if you require the installer to uptake the configuration.
<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_ BALANCE=yes)(FAILOV ER=yes))(CONNECT_ DATA=(SERVICE_ NAME=[SERVICE]))) For example, jdbc:oracle:thin:@//dbhos t.server.com:<port>/service 1	For an HDFS ONLY target installation, this URL should be of the RDBMS instance that hosts the Application's METADOM.

Tag Name/ Attribute Name	Description	Mandatory (Y/N)	Default Value/ Permissible Value	Comments
			or jdbc:oracle:thin:@//dbsho st.server.com:\<port\>/scan-1 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\>	By default, this driver's name is seeded. **NOTE**: Do not edit this attribute value.	Y	Example: oracle.jdbc.driver.OracleD river	Only JDBC Thin Driver is supported. DO NOT modify this value.
\<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	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.
\<SETUPINFO\>/ PREFIX_SCHEMA_NAM E	Identifies if the value specified in the \<SETUPINFO\>/NAME attribute should be prefixed to the schema name.	N	YES or NO.	The default value is YES.
\<SETUPINFO\>/NAME	Enter the acronym for the type of implementation. This information	Y	Accepts strings with a minimum length of two and a maximum of four. Example: BFND	This name would appear in the OFSAA Landing Page as "Connected To: XXXX".

Tag Name/ Attribute Name	Description	Mandatory (Y/N)	Default Value/ Permissible Value	Comments
	will be displayed in the OFSAA Home Page. **NOTE**: On executing the schema creator utility, this value will be prefixed with each schema name. For example, dev_ ofsaaconf, uat_ofsaaatm.			The schemas being created would get this prefix. For example, dev_ ofsaaconf, uat_ofsaaconf, and so on.
<PASSWORD>/DEFAULT*	Enter the password if you want to set a default password for all schemas. **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).
<PASSWORD>/APPLYSAMEFORALL	Enter as Y if you want 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 APPLYSAMEFORALL attribute and also have specified individual passwords for all the schemas, then the specified individual passwords will 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. Applies only to the RDBMS type METADOM schema(s).

Figure 14: Sample of the OFS_BFND_SCHEMA_BIGDATA_IN.xml file (SCHEMA type RDBMS Block)

```
<SCHEMAS TYPE="RDBMS">
    <SCHEMA TYPE="CONFIG" NAME="MYHIVECONSCHEMA" PASSWORD="" APP_ID="OFS_AAI" DEFAULTTABLESPACE=
    "USERS" TEMPTABLESPACE="TEMP" QUOTA="UNLIMITED"/>
    <SCHEMA TYPE="ATOMIC" NAME="MYHIVEATMSCHEMA" PASSWORD="" APP_ID="OFS_FSDF" DEFAULTTABLESPACE=
    "USERS" TEMPTABLESPACE="TEMP" QUOTA="UNLIMITED" INFODOM="MYHIVEINFODOM"/>
</SCHEMAS>
```

Table 27: OFS_BFND_SCHEMA_BIGDATA_IN.xml file (SCHEMA type RDBMS Parameters)

Tag Name/ Attribute Name	Description	Mandatory (Y/N)	Default Value/ Permissible Value	Comments
<SCHEMAS>/TYPE=RDBMS	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	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).

Tag Name/ Attribute Name	Description	Mandatory (Y/N)	Default Value/ Permissible Value	Comments
<SCHEMA>/NAME	By default, the schema names are seeded based on the Application Pack. You can edit the schema names if required. **NOTE**: The Schema Name will have a prefix of the SETUPINFO/NAME attribute. SCHEMA NAME must be 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 being created. For example, if the name is set as 'ofsaaatm' and setupinfo as 'uat' then schema being created would be 'uat_ofsaaatm'. NAME should be the same where APP_GRP=1 for all SCHEMA tags (not applicable for this Application Pack).
<SCHEMA>/PASSWORD	Enter the password of the schema to be created. **NOTE**: If this attribute is left blank, then the password specified in the <PASSWORD>/DEFAULT attribute is applied as the Schema Password.	N	The maximum length allowed is 30 characters. Special characters are not allowed.	**NOTE**: You need to mandatorily enter the password if you have set the <PASSWORD>/ APPLYSAMEFORALL attribute as N.
<SCHEMA>/APP_ID	By default, the Application ID is seeded based on the Application Pack. **NOTE**: Do not edit this attribute value.	Y	Unique Seeded value.	Identifies the Application or Product for which the schema is being created. DO NOT modify this value.
<SCHEMA>/DEFAULTTABLESPACE	Enter the available default tablespace for DB User. **NOTE**: If this attribute is left blank, then USERS is set as the default tablespace.	N	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>/TEMPTABLESPACE	Enter the available temporary tablespace for the DB User. **NOTE**: If this attribute is left blank, then TEMP is set as the default tablespace.	N	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.

Tag Name/ Attribute Name	Description	Mandatory (Y/N)	Default Value/ Permissible Value	Comments
<SCHEMA>/QUOTA	Enter the quota to be set on the DEFAULTTABLESPACE attribute for the schema or user. By default, the quota size is set to 500M. Minimum: 500M or Unlimited on default Tablespace.	N	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	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	Permissible length is 16 characters and only alphanumeric characters allowed. No special characters allowed. ##INFODOM_NAME## Example: FSDFINFO	

Figure 15: Sample of the OFS_BFND_SCHEMA_BIGDATA_IN.xml file (SCHEMA type HDFS Block)

```
<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=
    "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_BFND_SCHEMA_BIGDATA_IN.xml file (SCHEMA type HDFS Parameters)

Tag Name/ Attribute Name	Description	Mandatory (Y/N)	Default Value/ Permissible Value	Comments
<SCHEMAS>/TYPE=HDFS	Type of schemas being created.	Y		Refers to the DATADOM of the Application Pack being installed.
<HIVE_SERVER_HOST>	IP or HostName of the server where HIVE is installed.	Y		

Tag Name/ Attribute Name	Description	Mandatory (Y/N)	Default Value/ Permissible Value	Comments
<HIVE_LIB_PATH>	Folder path where HIVE related drivers or jar files are copied.	Y		Should contain the list of jars mentioned in the section Copying Jars to OFSAA Installation Folder and krb5.conf, keytab files. Manually copy the preceding listed files from CDH distribution to this identified folder. **NOTE**: The Cloudera administrator will provide these two files krb5.conf and keytab.
<SCHEMA>/NAME	By default, the schema names are seeded based on the Application Pack. You can edit the schema names if required. **NOTE**: The Schema Name will have a prefix of the SETUPINFO/NAME attribute.	Y	The permissible length is 20 characters and only alphanumeric characters allowed. Example: HIVEHYBDATADOM	Schema Name should not be the same as Schema Name specified for Schema Type ATOMIC.
<SCHEMA>/TYPE	Identifies the type of schema where the data model entities would reside.	Y	By default, the TYPE attribute in this tag is set to DATADOM.	DO NOT modify this value.
<SCHEMA>/APP_ID	By default, the Application ID is seeded based on the Application Pack.	Y	The supported value is OFS_FSDF.	
<SCHEMA>/DBTYPE	Identifies the type of driver to be used for the connection.	Y	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_PROPERTIES>/<PROPERTY>/COMMENT	COMMENTS for HIVE schema.	N		
<SCHEMA_PROPERTIES>/<PROPERTY>/LOCATION	You can optionally specify a location for the table data.	N	hdfs:// ##HIVE_SERVER_HOST_NAME_OR_IP##:Namenod	

Tag Name/ Attribute Name	Description	Mandatory (Y/N)	Default Value/ Permissible Value	Comments
			ePort/user/hive/warehouse/<<PREFIX>>__<<SCHEMA_NAME>>/ **NOTE**: The <<PREFIX>> prefix is applicable only if the <PREFIX_SCHEMA_NAME> tag is "Y" in the <SETUPINFO> tag. For example: When <SETUPINFO NAME="BFND" PREFIX_SCHEMA_NAME="Y"/>. <<SCHEMA_NAME>> is the DATADOM schema name. Example: hdfs:// whf00bsy.in.oracle.com:8020/user/hive/warehouse /BFND_BSYDATADOM/	
<CONNECTION_PROPERTIES>/ <PROPERTY>/JDBC_DRIVER	HIVE JDBC driver details.	Y	com.cloudera.hive.j dbc4.HS2Driver	The default cloudera HiveServer 2 driver name.
<CONNECTION_PROPERTIES>/ <PROPERTY>/JDBC_URL	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="BFND" PREFIX_SCHEMA_NAME="Y"/>. <<SCHEMA_NAME>> is the DATADOM schema name. For example: jdbc:hive2://whf00bsy.in.oracle.com:10000/BFND_ BSYDATADOM;AuthMech=1;KrbServiceName=hive;K rbHostFQDN=whf00bsy.in.oracle.com;KrbRealm=W HFBSY.ORACLE.COM	Specify the Hive JDBC URL to connect to the Hive Server.

Tag Name/ Attribute Name	Description	Mandatory (Y/N)	Default Value/ Permissible Value	Comments
<CONNECTION_PROPERTIES>/ <PROPERTY>/AUTH_TYPE	Authentication Type.	Y	Permissible values: KERBEROS_WITH_ KEYTAB.	Only "Kerberos with keytab" based authentication supported in this release.
<CONNECTION_PROPERTIES>/ <PROPERTY>/AUTH_ALIAS	Alias name for authentication credentials.	Y		An Alias name mapping to a principal and password combination specified in the following tags.
<CONNECTION_PROPERTIES>/ <PROPERTY>/PRINCIPAL	Authentication principal name.	Y		Principal name used in authentication to connect to the Hive Server.
<CONNECTION_PROPERTIES>/ <PROPERTY>/PASSWORD	Authentication password.	Y		Password used in authentication to connect to the Hive Server.
<CONNECTION_PROPERTIES>/ <PROPERTY>/KRB_GSSJAAS_FI LE_NAME	A keytab file containing pairs of Kerberos principals and an encrypted copy of that principal's key.	Y		This file should be copied to the location specified in <HIVE_LIB_PATH>.
<CONNECTION_PROPERTIES>/ <PROPERTY>/KRB_REALM_FIL E_NAME	REALM configuration file.	Y		This file should be copied to the location specified in <HIVE_LIB_PATH>.

4. Save the file.

5.6   Configure the OFSAAI_InstallConfig.xml File

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

1. Navigate to the `OFS_BFND_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

InteractionVariable Name	Significance and Expected Value	Mandatory
<Layer name="GENERAL">		
InteractionGroup name="WebServerType"		
WEBAPPSERVERTYPE	Identifies the web application server on which the OFSAA Infrastructure web components are deployed. Set the following numeric value depending on the type of web application server: • Apache Tomcat = 1 • IBM WebSphere Application Server = 2 • Oracle WebLogic Server = 3 For example, `<InteractionVariable name="WEBAPPSERVERTYPE">3</InteractionVari able>`	Yes
InteractionGroup name="OFSAA Infrastructure Server Details"		
DBSERVER_IP	Identifies the hostname or IP address of the system on which the Database Engine is hosted. **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="Database Details"		
ORACLE_SID/SERVICE_NAME	Identifies the Oracle DB Instance SID or SERVICE_NAME **NOTE:** The `Oracle_SID` value must be exactly the same as it is mentioned in `JDBC_URL`. For example, `<InteractionVariable name="ORACLE_SID/SERVICE_ NAME">ofsaser</InteractionVariable>`	Yes
ABS_DRIVER_PATH	Identifies the directory where the JDBC driver (`ojdbc<version>.jar`) exists. This is typically the `$ORACLE_HOME/jdbc/lib` directory.	Yes

InteractionVariable Name	Significance and Expected Value	Mandatory
	For example, `<InteractionVariable name="ABS_DRIVER_PATH">">/oradata6/revwb7/ oracle </InteractionVariable>` **NOTE:** See <u>Hardware and Software Requirements</u> to identify the correct `ojdbc<version>.jar` file version to be copied.	
InteractionGroup name="OLAP Detail		
OLAP_SERVER_ IMPLEMENTATION	Identifies whether the OFSAA Infrastructure OLAP component must be configured. It depends on whether you intend to use the OLAP feature. The following numeric value must be set depending on the choice: • YES: 1 • NO: 0 **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	No
InteractionGroup name="SFTP Details"		
SFTP_ENABLE	Identifies if the SFTP (Secure File Transfer Protocol) feature is to be enabled. The following numeric value must be set depending on the choice: • SFTP: 1 • FTP: 0	Yes
NOTE: The default value for `SFTP_ENABLE` is **1**, which signifies that SFTP is used. Oracle recommends using SFTP instead of FTP because SFTP is more secure. However, you can ignore this recommendation and use FTP by setting `SFTP_ENABLE` to **0**. You can change this selection later from the OFSAAI administration interface. Set `SFTP_ENABLE` to **-1** to configure ftpshare and weblocal path as a local path mounted for the OFSAAI server.		
FILE_TRANSFER_PORT	Identifies the port used for the file transfer service. The default value specified is **22** (SFTP). Specify 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="Locale Detail"		
LOCALE	Identifies the locale information to be used during the installation. This release of the OFSAA Infrastructure supports only US English. For example, `<InteractionVariable name="LOCALE">en_US</InteractionVariable>`	Yes
InteractionGroup name="OFSAA Infrastructure Communicating ports"		
NOTE: The following ports are used internally by the various OFSAA Infrastructure services. The default values mentioned are set in the installation. If you intend to specify a different value, update the parameter value accordingly, ensure that the port value is in the range 1025 to 65535, and the respective port is enabled.		
JAVAPORT	9999	Yes

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 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>`	Yes
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:	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/`. • For WebSphere, specify the WebSphere path as `<WebSphere profile directory>/installedApps/<NodeCellName>`. For example, `/data2/test//WebSphere/AppServer/profiles/<Profile_Name>/installedApps/aiximfNode01Cell`, where aix-imf is the Host name. • For WebLogic, specify the WebLogic home directory path. For example, `/<WebLogic home directory path>/bea/wlserver_10.3` **NOTE:** For WebLogic, the value specified for this attribute is ignored and the value provided against the attribute `WEBLOGIC_DOMAIN_HOME` is considered.	Yes
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="Weblogic Setup Details"		
WEBLOGIC_DOMAIN_HOME	Identifies the WebLogic Domain Home. For example, `<InteractionVariable name="WEBLOGIC_DOMAIN_HOME">/home/weblogic/bea/user_projects/domains/mydomain</InteractionVariable>`	Yes. Specify the value only if WEBAPPSERVERTYPE is set as 3 (WebLogic)
InteractionGroup name="OFSAAI FTP Details"		
OFSAAI_FTPSHARE_PATH	Identifies the absolute path of the directory that is identified as the file system stage area. **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>`	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_KEY	Identifies the SFTP private key for OFSAAI. For example, `<InteractionVariable name="OFSAAI_SFTP_PRIVATE_KEY">/home/ofsaapp/.ssh/id_rsa</InteractionVariable>` By default, the value is **NA**, which indicates that, for authentication, you are prompted to enter the password for the user <OFSAAI_SFTP_USER_ID>. For more information on how to generate an SFTP Private key, see the <u>Set Up SFTP Private Key</u> section.	No
OFSAAI_SFTP_PASSPHRASE	Identifies the passphrase for the SFTP private key for OFSAAI. For example, `InteractionVariable name="OFSAAI_SFTP_PASSPHRASE">enter a pass phrase here</InteractionVariable>` By default, the value is **NA**. If the `OFSAAI_SFTP_PRIVATE_KEY` value is given and the `OFSAAI_SFTP_PASSPHRASE` value is **NA**, then the passphrase is identified as empty.	No
InteractionGroup name="Hive Details" The default value set for the interaction variables under this group is NA. **NOTE:** The following values are required only for Hive Configuration.		
HIVE_SERVER_PORT	Identifies the port used for the file transfer service. The default value is **22** (SFTP). To use this port for FTP, set this value to **21**. For example, `<InteractionVariable name="HIVE_SERVER_PORT">22</InteractionVariable>`	Yes
HIVE_SERVER_FTPDRIVE	Identifies the absolute path to the directory identified as the file system stage area of the HIVE server. For example, `<InteractionVariable name="HIVE_SERVER_FTPDRIVE">/scratch/ofsaa/ftpshare</InteractionVariable>`	Yes
HIVE_SERVER_FTP_USERID	Identifies the user who has RWX permissions on the directory identified under the parameter `HIVE_SERVER_FTPDRIVE`. For example, `<InteractionVariable name="HIVE_SERVER_FTP_USERID">ofsaa</InteractionVariable>`	Yes
HIVE_SERVER_FTP_PROTOCOL	If the `HIVE_SERVER_PORT` is 21, then set the value to **FTP**. If not, set it to **SFTP**. For example, `<InteractionVariable name="HIVE_SERVER_FTP_PROTOCOL">SFTP</InteractionVariable>`	Yes

InteractionVariable Name	Significance and Expected Value	Mandatory
HIVE_SFTP_PRIVATE_KEY	Identifies the SFTP private key for the HIVE server. For example, `<InteractionVariable name="HIVE_SFTP_PRIVATE_ KEY">/scratch/testuser/.ssh/id_rsa</InteractionVariab le>` 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>. For more information on generating SFTP Private key, see the [Set Up SFTP Private Key](#) section.	
HIVE_SFTP_PASSPHRASE	Identifies the passphrase for the SFTP private key for HIVE. For example, `<InteractionVariable name="HIVE_SFTP_ PASSPHRASE">NA</InteractionVariable>` By default, the value is **NA**. If the `HIVE_SFTP_PRIVATE_KEY` value is **NA**, then the passphrase is identified as empty.	

5.6.1   Set Up the SFTP Private Key

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

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

```
ssh-keygen -t rsa

Generating public/private rsa key pair.

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

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

Enter passphrase (empty for no passphrase):

Enter same passphrase again:

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

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

The key fingerprint is:

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

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

Ensure the following permissions exist for the given directories:

- permissions of .ssh must be 700
- permissions of .ssh/authorized_keys must be 640
- permission of .ssh/id_rsa must be 400

- Permission of UNIX User created must be 755

5.7 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.

5.7.1 Silent.template for RDBMS

This section is for the fresh/new RDBMS installation of the OFSDF Application Pack Release 8.1.0.0.0.

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

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

1. Navigate to the `OFS_BFND_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 16: 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 Financial Services 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=

# 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 ADQ 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=
```

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: BFNDSEG	# Mandatory Segment Code should not exceed 10 characters and there should not be special characters or extra spaces
APPFTP_LOG_PATH	Information Domain Maintenance log path(to be created) for the new Information Domain for App Layer	Example: /ftpshare/<INFODOM_NAME>/logs	# Mandatory if this an App Layer Installation and want to create a new Information Domain
DBFTP_LOG_PATH	Information Domain Maintenance log path(to be created) for the new Information Domain for DB Layer	Example: /ftpshare/<INFODOM_NAME>/logs	# Mandatory if this an App Layer Installation and want to create a new Information Domain
UPLOAD_MODEL	Whether you want 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 FSDF Staging Source Name	Example: STAGING	# Mandatory
ETL_SRC_2_NAME	ETL FSDF CAP ADQ Pack Integration Source Name	Example: FSDF_CAP_SRC	# Mandatory
ETL_SRC_3_NAME	ETL FSDF TR Pack Integration Source Name	Example: FSDF_TR_SRC	# Mandatory

Property Name	Description of Property	Permissible values	Comments
ETL_SRC_4_NAME	ETL FSDF IFRS Pack Integration Source Name	Example: FSDF_IFRS_SRC	# Mandatory
ETL_SRC_1_DESC	ETL FSDF Staging Source Description	Example: STAGING	# Mandatory
ETL_SRC_2_DESC	ETL FSDF CAP ADQ Pack Integration Source Description	Example: FSDF_CAP_SRC	# Mandatory
ETL_SRC_3_DESC	ETL FSDF TR Pack Integration Source Description	Example: FSDF_TR_SRC	# Mandatory
ETL_SRC_4_DESC	ETL FSDF IFRS Pack Integration Source Description	Example: FSDF_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.

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

This section is for the Big Data mode of installation (Stage and Results on Hive) of the OFSDF Application Pack.

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

1. Navigate to the `OFS_BFND_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 17: 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 Financial Services 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: FSDFSEG	# Mandatory Segment Code should not exceed 10 characters and there should not be special characters or extra spaces

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/FSDFINFO/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/FSDFINFO/logs	# Mandatory to create a new Information Domain
HIVE_UPLOAD_MODEL	Whether you want 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 FSDF HIVE Staging Source Name	Example: STAGING	# Mandatory
ETL_SRC_5_DESC	ETL FSDF 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.

5.8   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 OFSDF v8.1.0.0.0 kit:

Table 32: Directory of Files to Backup

File Name	Directory
`OFS_BFND_SCHEMA_IN.xml` and `OFS_BFND_SCHEMA_BIGDATA_IN.xml`	`OFS_BFND_PACK/schema_creator/conf`
`OFS_BFND_SCHEMA_OUTPUT.xml`	`OFS_BFND_PACK/schema_creator/`
`Silent.props`	`OFS_BFND_PACK/appsLibConfig/conf`
`OFSAAI_InstallConfig.xml`	`OFS_BFND_PACK/OFS_AAI/conf/`

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

5.9   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

5.9.1   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_BFND_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 18: 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_BFND_PACK/schema_creator/sysdba_output_scripts.sql` before proceeding with the installation.

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

> **NOTE**
>
> If there are any errors during the SQL script execution, reconfigure the `OFS_BFND_SCHEMA_IN.xml` and/or `OFS_BFND_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_BFND_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 `sysdba_output_scripts.sql` file and `SQLScripts` directory to a remote server and execute the `sysdba_output_scripts.sql` file, after providing appropriate execute permissions.

12. 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 `sysdba_output_scripts.log` file for execution status. If there are any errors, contact [Oracle Support Services](#). If there are no errors in the execution, the log file is empty.

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

5.9.2   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 file `OFS_BFND_PACK/schema_creator/conf/OFS_BFND_SCHEMA_IN.xml` file in a text editor. See the [Configure the OFS_BFND_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_BFND_PACK/schema_creator/conf/OFS_BFND_SCHEMA_BIGDATA_IN.xml` file in a text editor. See the [Configure the OFS_BFND_SCHEMA_BIGDATA_IN.xml File](#) section for values to modify in the XML file.

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

    `./osc.sh -s`

Figure 19: Schema Creation in the Online Mode

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 20: Schema Creation in the Online Mode – DDL Execution

The following message is displayed:

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

5. Enter **Y** to proceed.

Figure 21: Schema Creation in the Online Mode – Infodom Confirmation

6. Schema is created successfully.

Figure 22: Schema Creation in the Online Mode –Successful

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

5.9.3   Execute the Schema Creator Utility in TCPS Mode

If you intend to run the OFSDF 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 Oracle Financial Services Advanced Analytical Applications Infrastructure Administration and Configuration Guide Release 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 file `OFS_BFND_PACK/schema_creator/conf/OFS_BFND_SCHEMA_IN.xml` in the text editor. See the tables in the Configure the OFS_BFND_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_BFND_PACK/schema_creator/conf/OFS_BFND_SCHEMA_BIGDATA_IN.xml` file in a text editor. See the Configure the OFS_BFND_SCHEMA_BIGDATA_IN.xml File 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 23: 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 "<ATOMIC_SCHEMA_NAME>" ATOMIC schema. Do you wish to proceed? (Y/y or N/n).

Figure 24: Schema Creation in the TCPS Mode – Install on Atomic Schema

```
0430: 58 8D 05 B2 02 0F 2D 01    0C 00 00 00 00 00 00 04    X.....-..........
0440: 01 01 02 23 E4 00 02 05    7B 00 00 01 0C 01 0E 03    ...#............
0450: 00 00 00 00 00 00 00 00    00 00 00 00 10 00 01 01    ................
0460: 00 00 00 00 02 05 7B 00    19 4F 52 41 2D 30 31 34    .........ORA-014
0470: 30 33 3A 20 6E 6F 20 64    61 74 61 20 66 6F 75 6E    03: no data foun
0480: 64 0A 61 1D D5 6D 51 10    60 C1 A6 85 B4 88 52 0F    d.a..mQ.`.....R.
0490: A4 F8 CA 1B 2C F2 09 09    09 09 09 09 09 09 09 09    ....,...........
You have chosen to install this Application Pack on "          " ATOMIC schema. Do you want to proceed? (Y/N)
Y
```

5. Enter **Y** to proceed.

6. Schema is created successfully.

Figure 25: Successful Schema Creation in the TCPS Mode

```
0030: 05 02 24 2C 00 00 00 00    01 10 00 2B 00 00 00 00    ..$,.......+....
0040: 00 00 00 00 00 00 00 00    58 00 01 01 00 00 00 00    ........X.......
0050: 00 00 EE 63 D9 C7 F0 3C    A2 23 E1 34 68 01 68 96    ...c...<.#.4h.h.
0060: 4F 69 FD 59 9F 23 09 09    09 09 09 09 09 09 09 09    Oi.Y.#..........
Grants creation scripts execution completed...
==============================================================================
                        Schemas Creation Completed
==============================================================================
Schema Creator executed Successfully.Please proceed with the installation.
/scratch/          /OFS AAAI PACK/schema_creator/bin>
```

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

5.9.4 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 /Atomic Schema of the existing application pack or on a new Information Domain / 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 file OFS_BFND_PACK/schema_creator/conf/OFS_BFND_SCHEMA_IN.xml in the text editor. See the tables in the Configure the OFS_BFND_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_BFND_PACK/schema_creator/conf/OFS_BFND_SCHEMA_BIGDATA_IN.xml file in a text editor. See the Configure the OFS_BFND_SCHEMA_BIGDATA_IN.xml File section for values to modify in the XML file.

2. Execute the utility with -s option.

   For Example: ./osc.sh –s –o

Figure 26: Execution of the Schema Creator Utility to install the subsequent Applications Pack

```
/scratch/        /OFS_AAAI_PACK/schema_creator/bin>./osc.sh -s -o
hello1
============================================================
You have chosen OFFLINE mode
============================================================
Triggering the utility in OFFLINE mode will generate the script. Do you wish to proceed? (Y/N):
Y
============================================================
Java Validation Started ...
Java found in : /scratch/        /jdk1.8.0_202/bin
JAVA Version found : 1.8.0_202
JAVA Bit Version found : 64-bit
Java Validation Completed. Status : SUCCESS
============================================================
DB specific Validation Started ...
Enter the DB User Name with the following privileges:
1. CREATE SESSION
2. SELECT on DBA_ROLES
3. SELECT on DBA_USERS
4. SELECT on DBA_DIRECTORIES
5. SELECT on DBA_TABLESPACES
Enter the User Name:
sys as sysdba
Enter the User Password:
Oracle Client version : 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
============================================================
FALSE -O
============================================================
                     Generating Schema Creation Scripts Started
============================================================
Checking OFSAA installation...
OFSAA installation not found.
Validating the dat file OFS_AAAI_CFG.dat started...
The path is:/scratch/        /OFS_AAAI_PACK/schema_creator/conf
Sucessfully validated OFS_AAAI_CFG.dat file
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:                          :    /
Connection trial jdbc:oracle:thin:@                  :    /          (user=sys as sysdba, password=          )
Successfully connected to User - sys as sysdba URL - jdbc:oracle:thin:@                  :    /
Connection URL successfully validated...
```

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

Figure 27: Execution of the sysdba_output_scripts.sql file to install the subsequent Applications Pack

```
INT_LB_HOST not there in schema
IS_HYBRID not there in schema
Parsing file: /scratch/▓▓▓▓▓/OFS_AAAI_PACK/schema_creator/../conf/OFS_AAAI_Pack.xml
Enabled appList: [OFS_AAIB, OFS_AAAI]
Enabled appList: [OFS_AAIB, OFS_AAAI]
Checking: app: OFS_AAI schema_name: ▓▓▓▓▓▓▓▓  schema_type: CONFIG
Checking: app: OFS_AAAI schema_name:▓▓▓▓▓▓▓  schema_type: ATOMIC
You have chosen to install this Application Pack on "▓▓▓▓▓▓▓▓" ATOMIC schema. Do you want to proceed? (Y/N)
Y
You have chosen to install this Application Pack on INFODOM "▓▓▓▓▓▓▓". Do you want to proceed? (Y/N)
Y
==========================================================================
Generating TableSpace creation Scripts started...
Generating TableSpace creation Scripts completed...
==========================================================================
Generating Schema creation scripts started...
CONFIG User ▓▓▓▓▓▓▓▓ creation script generated successfully on Default TableSpace : USERS on Temp TableSpace : TEMP
Generation of grants creation scripts started...
Generation of grants creation scripts completed...
Scripts Generation for CONFIG schema started ...
Scripts Generation for CONFIG schema completed ...
User ▓▓▓▓▓▓▓ details updated into the dbmaster table
User ▓▓▓▓▓▓▓ details updated into the I18NMASTER table
User ▓▓▓▓▓▓▓ details updated into the aai_db_detail table
User ▓▓▓▓▓▓▓ details updated into the aai_db_auth_alias table
User ▓▓▓▓▓ details updated into the dbmaster table
User ▓▓▓▓▓ details updated into the I18NMASTER table
User ▓▓▓▓▓ details updated into the aai_db_detail table
User ▓▓▓▓▓ details updated into the aai_db_auth_alias table
User ▓▓▓▓▓ creation script generated successfully on Default TableSpace : USERS on Temp TableSpace : TEMP
Generating Schema creation scripts completed...
==========================================================================
Generating Roles creation Scripts started...
Generating Roles creation Scripts completed...
the value of redaction flag in atomic schema isfalse
==========================================================================
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.
/scratch/▓▓▓▓▓/OFS_AAAI_PACK/schema_creator/bin>
```

> **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 28: Select the Atomic Schema and Infodom to install the subsequent Applications Pack

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

Figure 29: Successful Schema creation to install the subsequent Applications Pack

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 <u>Oracle Support Services</u>.

5.10   Verify the Schema Creator Log Files

See the following logs directory for more information:

- `OFS_BFND_PACK/schema_creator/logs/`
- The log file `sysdba_output_scripts.log` in the `OFS_BFND_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.

5.11   Install the OFSDF Application Pack

> **ATTENTION**   Before you begin the installation, configure and execute the following files:
>
> 1. <u>Configure the OS File System Settings and Environment Settings in the .profile File</u>
> 2. <u>Configure the OFS_BFND_PACK.xml File</u>
> 3. <u>Configure the OFS_BFND_SCHEMA_IN.xml File</u> (for RDBMS installation)
> 4. <u>Configure the OFS_BFND_SCHEMA_BIGDATA_IN.xml File</u> (for Big Data installation)
> 5. <u>Configure the OFSAAI_InstallConfig.xml File</u> (do not configure this file if an installation of OFSAAI 8.1 already exists.)
> 6. <u>Configure the Silent.props File</u> (<u>Silent.template</u> file for RDBMS installation and <u>Silent.BIGDATA.template</u> file for Stage and Results on Hive)
> 7. <u>Execute the Schema Creator Utility</u>

To install the OFSDF Application Pack v8.1.0.0.0, 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/81000`

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

```
unzip -a OFS_BFND_8.1.0.0.0_<Operating_System>.zip
```

> **NOTE** After the extraction, if you have space issue, delete the .zip file.

7. For the Big Data mode of installation, ensure that `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_BFND_PACK/OFS_AAAI_PACK/fic home/utility/DMT/UDF/lib/ofsaa-hive-udf.jar`

   - In SPARK2 lib directory, the path is:

     `/scratch/cloudera/opt/cloudera/parcels/SPARK2-2.1.0.cloudera2-1.cdh5.7.0.p0.171658/lib/spark2/jars/`

8. If you are installing on the Big Data (Stage and Results on Hive) infodom, then navigate to the `OFS_BFND_PACK/OFS_FSDF/conf/` directory, and do the following:

   a. Rename the `default.properties` file to `default.properties_RDBMS.template`.

   b. Rename the `default.properties.BIGDATA.template` file to `default.properties`.

9. Navigate to the following directory:

   `OFS_BFND_Pack/bin/`

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

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

Figure 30: Execute the OFSDF installer in the SILENT mode

11. The installer proceeds with the Pre-installation Checks.

Figure 31: Pre-installation Checks

```
Environment Variables Validation Completed. Status : SUCCESS
=============================================================
OS specific Validation Started ...
 Checking en_US.utf8 locale. Status : SUCCESS
 Unix shell found : /bin/ksh. Status : SUCCESS
 Total file descriptors : 65535. Status : SUCCESS
 Total number of process : 4096. Status : SUCCESS
 OS version : 7. Status : SUCCESS
OS specific Validation Completed. Status : SUCCESS
=============================================================
DB specific Validation Started ...
 Oracle Client version : 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 MB table space. Current value : Unlimited. Status : SUCCESS
Oracle db version 18
Oracle db R2 version 18.0
 Oracle Server version Current value : 18.0.0.0.0. Status : SUCCESS
DB specific Validation Completed. Status : SUCCESS
=============================================================
Environment check utility Status : SUCCESS
=============================================================
```

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

Figure 32: 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.

13. 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 OFSDF Hive directory FTPSHAREH in the application server.

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

Figure 33: The OFSAA License Agreement

15. The installer installs the OFSAAI application.

Figure 34: OFS AAI Silent Mode Installation

16. After OFSAAI is installed, the OFSDF Application Pack installation begins.

Figure 35: OFSDF Application Pack Installation

```
 THE OS VERSION IS: 7
 THE CLIENT VERSION IS: 19
 Copying done for BE files....
heapsize == 8192
/scratch/        /kit/OFS_BFND_PACK/bin
datamodel file =  ../DataModel/Manifest.xml ../DataModel/OFS_BFND_Datamodel.xml
model == 66697865
630
checking version
VersionToBeApplied: 8.1.0.0.0
Fresh installation


**************************************************************************
 Welcome to OFS_BFND PACK Installation
**************************************************************************
Starting OFSAA Service...


Preparing SILENT Mode Installation...


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




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


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

Installation Complete.
failurecount --- 0
Core Installation completed successfully
Checking for hive app.

************* Checking for Fresh app : OFS_FSDF *************
path before app installation: /scratch/      /kit/OFS_BFND_PACK
inside checkappstatus-app OFS_FSDF /scratch/      /kit/OFS_BFND_PACK/bin
all value /scratch/      /kit/OFS_BFND_PACK/bin
In app value
[AppStatusCheck] Checking for app installation OFS_FSDF
[AppStatusCheck] app is selected and ENABLED in db
app status returned: 0
current directory after app installation: /scratch/      /kit/OFS_BFND_PACK/OFS_FSDF
Checking for available options...
List of options available:
Pack Name found is:  OFS_BFND_PACK
[DynamicServiceManager][GlobalParameters.ISWEB]false
FIC_HOME:/scratch/      /      /
Pack ID got for Synch is OFS_BFND_PACK
SLF4J: Failed to load class "org.slf4j.impl.StaticLoggerBinder".
SLF4J: Defaulting to no-operation (NOP) logger implementation
SLF4J: See http://www.slf4j.org/codes.html#StaticLoggerBinder for further details.
configConnection :          , URL=jdbc:oracle:thin:        :    :        , UserName=            , Oracle JDBC driver
configConnection :          , URL=jdbc:oracle:thin:        :    :        , UserName=            , Oracle JDBC driver
---------------------------------------------------------------------------
```

NOTE	• The data model upload may take several hours to complete. You can check the installation logs in the `/OFS_BFND_PACK/OFS_FSDF/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 OFS AAAI User Guide Release 8.1.0.0.0.

Figure 36: OFSDF Application Pack Installation Complete

```
BUILD SUCCESSFUL
Total time: 39 seconds
Shutdown of OFSAAI services started...
nohup: appending output to 'nohup.out'
Shutdown of OFSAAI services done.
OFSAA App Layer Services start-up check started...
Starting startofsaai.sh service...
OFSAA Service - OK
Starting icc service...
ICC service - OK
Shutting down icc service...
Shutting down OFSAA service...
OFSAAI App Layer Services check Status: SUCCESSFUL.
OFSAAI DB Layer Services check started...
Calling agentshutdown.sh to check and kill, if any of the server is running...
MESSAGE Server service is not running.
AM service is not running.
ROUTER service is not running.
Starting ROUTER Service
ROUTER service started in background mode.
Starting AM Service
AM service started in background mode.
Starting MESSAGE SERVER Service
MESSAGE SERVER service started in background mode.
Stop MESSAGE Server service with Proces ID : 21493
Stop AM service with Proces ID : 21468
Stop ROUTER service with Proces ID : 21453
OFSAAI DB Layer File Services check Status: SUCCESSFUL.
****************************************************
Installation completed...
****************************************************
/scratch/▒▒▒▒▒/kit/OFS_BFND_PACK/bin>
--------------------------------------------------------------------------------
```

17. When the installation is complete, the following message is displayed in the console:

    Installation completed…

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

19. To verify if the release is applied successfully, check the log files mentioned in the section Verify the Log File Information.

20. Install the OFSDF mandatory one-off patch **31544548**. See the ReadMe packaged with the patch for further instructions about how to install the patch. This patch is applicable only to the RDBMS mode of installation.

21. 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 OFSDF installation machine and the Cloudera machine are *different*, then follow these steps:

  i. Create a folder in the Cloudera machine.

  ii. Copy all the required `csv` files from the `<INSTALLER_KIT>/OFS_BFND_PACK/OFS_FSDF/bin/scripts/atomic/insert/hive/` directory to the Cloudera machine folder mentioned in the first step:

  > | **NOTE** | For the list of `CSV` files, see the complete-csvs.txt 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 `load-csv-hdfs-run.sh` file using the following command:

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

- If the OFSDF 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 complete-csvs.txt file. |
  > |---|---|

  ii. Copy all the required `csv` files from the `<INSTALLER_KIT>/OFS_BFND_PACK/OFS_FSDF/bin/scripts/atomic/insert/hive/` directory to the Cloudera machine folder mentioned in the first step.

  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 `load-csv-hdfs-run.sh` 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>`.

22. Perform the steps mentioned in the [Post-installation](#) section. For additional configuration information, see the [Additional Configuration](#) section.

5.12　Install a New OFSDF Application Pack on an Existing OFSAA Instance

This is an installation scenario, where you have already installed an application pack from the Release v8.1.0.0.0 and now you want to install the OFSDF Application Pack from the Release v8.1.0.0.0. For example, the OFS ALM Application Pack v8.1.0.0.0 is already installed and now you want to install the OFSDF Application Pack v8.1.0.0.0.

1. [Configure the OFS_BFND_PACK.xml File](#).

2. Configure the Schema Creator Utility:

   ▪ [Configure the OFS_BFND_SCHEMA_IN.xml File](#) (for RDBMS installation)

   ▪ [Configure the OFS_BFND_SCHEMA_BIGDATA_IN.xml File](#) (for Big Data installation)

> **NOTE**　　　Configuring the `OFSAAI_InstallConfig.xml` file is not required in this scenario.

3. [Configure the Silent.props File](#).

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 v8.1.0.0.0 installation of the other application pack. The output file `OFS_BFND_SCHEMA_OUTPUT.xml` is generated as a result of the schema creation process.

5. [Trigger the Installation](#).

6. [Verify the Log File Information](#).

7. Do the Post-installation steps. For additional configuration information, see the Additional Configuration section.

6 Use Oracle Autonomous Data Warehouse as the Database for OFSDF

This section provides information about using Oracle Autonomous Data Warehouse as the database for OFSDF installation and deployment.

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 OFSDF
- 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.

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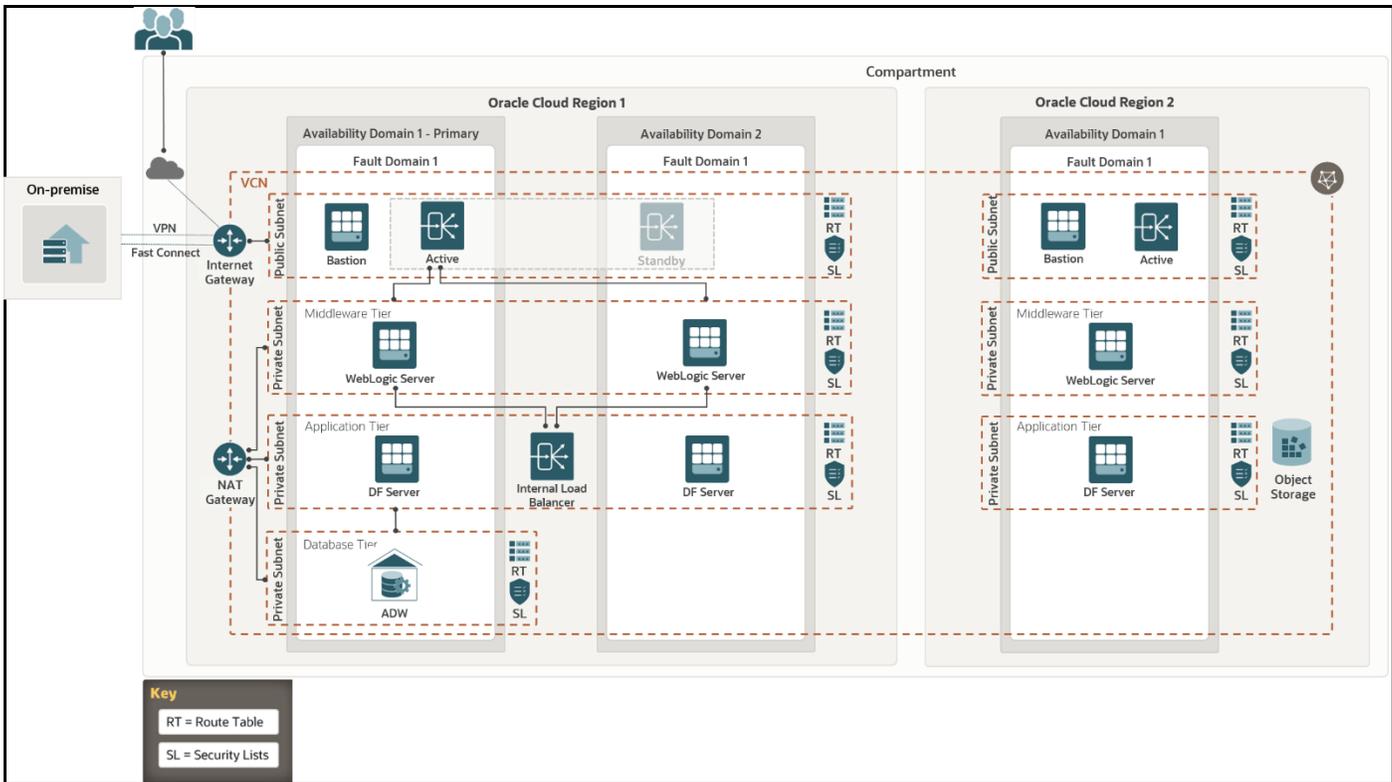
The deployment architecture consists of two Availability Domains used for OFSAA and WebLogic Server in the same Oracle Cloud Infrastructure (OCI) Compartment. Oracle Identity Cloud Service (IDCS) can be used to log in. The Load Balancer (LB) redirects the request to respective compute.

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 `tnsnames.ora` which is a part of the client credentials download. The `tnsnames.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 `dbname_low` as the TNS alias and a connection string in the `tnsnames.ora` 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 OFSDF.

6.5.1 Hardware and Software Requirements

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

- Database is ADW
- Web application server is Oracle WebLogic Server 12.2.x

See the Oracle Financial Services Analytical Applications (OFSAA) Technology Matrix Release 8.1.0.0.0 for the hardware and software required for the installation of OFSDF 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 OFSDF installation on ADW are provided in this section.

NOTE	The schema creator utility configuration is applicable for the OFSDF installation on ADW also. See the *Configure the Schema Creator Utility* section in the OFS Data Foundation Application Pack Installation and Configuration Guide Release 8.1.0.0.0 for more information. The modifications applicable to the OFSDF installation on ADW are mentioned in this section.

The ADW specific modifications are as follows:

- When configuring the `OFS_BFND_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 OFSDF 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 Using a JDBC URL Connection String with JDBC Thin Driver, JDBC Thin Connections and Wallets and Predefined Database Service Names for Autonomous Data Warehouse 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 OFS Advanced Analytical Applications Infrastructure Installation and Configuration Guide Release 8.1.0.0.0 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 OFSDF 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).

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

   Example:

   `/u02/ofsa/Wallet_OFSADB`

3. 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
   ```

4. 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 OFSDF 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
```

5. Follow the OFSAAI 8.1.0.0.0 installation procedure that supports TCPS. See the OFS Advanced Analytical Applications Infrastructure Installation and Configuration Guide Release 8.1.0.0.0.

    a. Before excecuting the Schema Creator utility, ensure to Configure the Schema Creator Utility.

    b. 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 OFS Advanced Analytical Applications Infrastructure Installation and Configuration Guide Release 8.1.0.0.0 for more information.

6.5.4   OFSDF Installation Notes Specific to ADW

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

NOTE	OFSDF installation is applicable for the OFSDF on ADW also. See the OFS Data Foundation Application Pack Installation and Configuration Guide Release 8.1.0.0.0 for the detailed installation procedure. The additional steps applicable to the OFSDF 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 OFSDF installation are same for the OFSDF 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
    ```

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

6.5.5 Installation of OFSDF on ADW

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

Execute the ./setup.sh command.

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

See the OFS Data Foundation Application Pack Installation and Configuration Guide Release 8.1.0.0.0 for installation and post-installation procedure required for OFSDF with TCPS.

6.6 Loading Data into OFSDF

For the OFSDF 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 OFSDF schema on the ADW environment and to execute the OFSDF batches:

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

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

To import data into OFSDF 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 OFSDF

To execute the OFSDF batches, follow these steps:

1. Log in to ADW OFSAA schemas and check the load status.

2. Execute the OFSDF 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`
   - `FSDF Source Run`

- ▪ `FSDF Exe Run`

See the OFS Data Foundation Application Pack User Guide Release 8.1.0.0.0 for more information about the OFSDF batch execution.

6.7   Additional Note

Currently, OFSDF Release 8.1.0.0.0 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 OFSDF 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
- Enable Integration T2Ts

> | **NOTE** | See the *Post-Installation* section in the Oracle Financial Services Advanced Analytical Applications Infrastructure Installation Guide Release 8.1.0.0.0 to complete these procedures. |
> |---|---|
> | | For additional configuration information, see the Additional Configuration 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 OFSDF Application Pack 8.1.0.0.0:

- Apply the **31605076** one-off 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 Pre-installation for a new installation and in Upgrade 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_BFND_PACK/logs/` directory.
- `OFS_FSDF_installation.log` file and the `OFS_FSDF_installation.err` file in the `OFS_BFND_PACK/OFS_FSDF/logs` directory.
- Infrastructure installation log files in the `OFS_BFND_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 Stop the Infrastructure Services section in the *OFSAAI Release 8.1.0.0.0 Installation and Configuration Guide* for details.

7.4   Create and Deploy the EAR/WAR Files

See the Create and Deploy the EAR/WAR Files section in the *OFSAAI Release 8.1.0.0.0 Installation and Configuration Guide* for details.

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

See the EAR/WAR File - Build Once and Deploy Across Multiple OFSAA Instances section in the *OFSAAI Release 8.1.0.0.0 Installation and Configuration Guide* for details.

7.6 Start the Infrastructure Services

See the Start the Infrastructure Services section in the *OFSAAI Release 8.1.0.0.0 Installation and Configuration Guide* for details.

7.7 Access the OFSAA Application

See the Access the OFSAA Application section in the *OFSAAI Release 8.1.0.0.0 Installation and Configuration Guide* for details.

7.8 OFSAA Landing Page

See the OFSAA Landing Page section in the *OFSAAI Release 8.1.0.0.0 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 Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide Release 8.1.0.0.0.

7.10 Configure the excludeURLList.cfg File

See the section Configure the excludeURLList.cfg File in the *OFSAAI Release 8.1.0.0.0 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 OFSDF 8.1.0.0.0 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 [Cloudera HIVE JDBC Connectors](#) and copy the following jars files to the `$FIC_HOME/ext/lib/` and `$FIC_WEB_HOME/webroot/WEB-INF/lib/` directory. For the latest supported versions, see [OFSAA Technology Matrix v8.1.0.0.0](#).

   - `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 Start the Infrastructure Services 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
- Cluster Configuration

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 (Stage and Results on Hive, and Stage on Hive and Results on RDBMS). |

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

`<property>`
`<name>hive.metastore.warehouse.dir</name>`
`<value>/user/hive/warehouse</value>`
`</property>`
	`<property>`
	`<name>spark.sql.warehouse.dir</name>`
	`<value>/user/hive/warehouse</value>`
	`</property>`

> | **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 FSDFADMIN user group.

1. From the OFSDF 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 37: Cluster Configurations
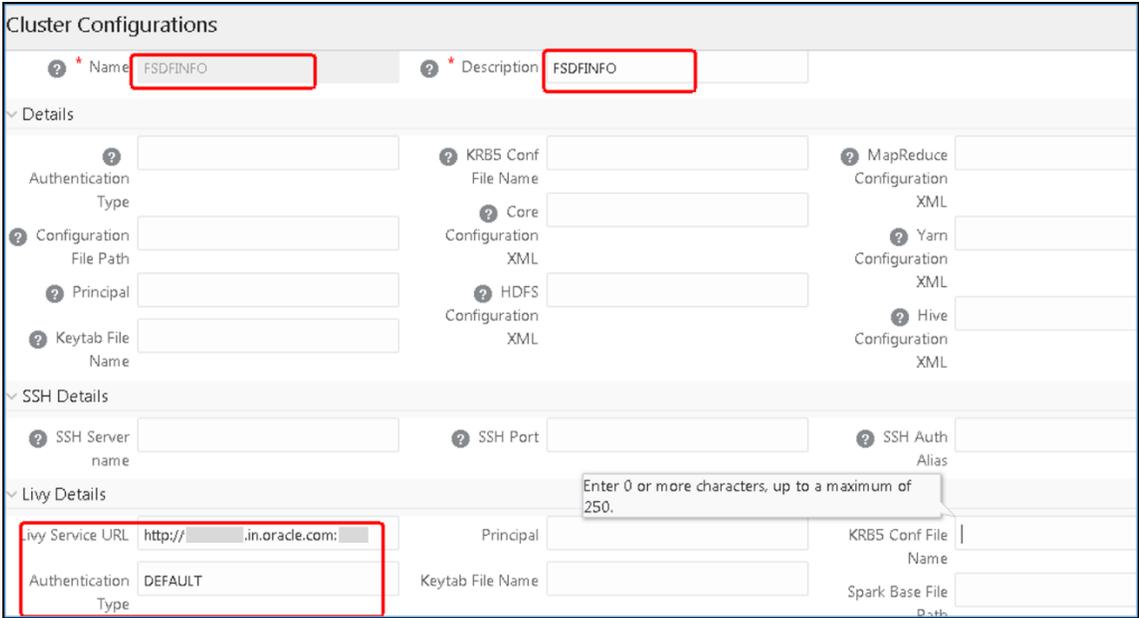
3. To populate data in the DIM_DATES table, navigate to the **Batch Execution** screen. Perform these steps:

   a. Run the batch FSDFINFO_POP_DATES_DIM_HIVE.

      SCD batches (FSDFINFO_DATA_FOUNDATION_SCD, FSDFINFO_DIM_ACCOUNT_SCD) are sequenced with wait mode **Yes** enabled.

NOTE	FSDFINFO_DATA_FOUNDATION_SCD and FSDFINFO_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 FSDF_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 User Administrator section in the *Oracle Financial Services Analytical Applications Infrastructure User Guide Release 8.1.0.0.0*.

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 OFSDF 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
FSDF Admin	A user mapped to this group will have access to all the menu items for the entire FSDF Application. The exclusive menu's which are available only to this group users are Application Preference and Global Preference under Settings Menu.
FSDF Data Modeler	A user mapped to this group will have access only for Data Model Management and Metadata Browser Menus.
FSDF Analyst	A user mapped to this group will have access to Data Management Framework, Dimension Management, and Metadata Browser Menus.
FSDF 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 OFSDF 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','FSDFOP','OFSBFNDINFO');

end;
```

7.15   Add TNS entries in the TNSNAMES.ORA File

See the Add TNS entries in the TNSNAMES.ORA File section in the *OFSAAI Release 8.1.0.0.0 Installation and Configuration Guide* for details.

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

See the Configure Transparent Data Encryption (TDE) and Data Redaction in OFSAA section in the *OFSAAI Release 8.1.0.0.0 Installation and Configuration Guide* for details.

7.17   Implement Data Protection in OFSAA

See the Oracle Financial Services Data Foundation Application Pack Data Protection Implementation Guide Release 8.1.x for details.

7.18   Enable Integration T2Ts

In the Integration Process, if more than one OFSAA Application exists in the same environment, then the output of one OFSAA application can be consumed by another OFSAA application. For example, if in one environment the OFSDF Application Pack, OFS Capital Adequacy Application Pack (OFS CAP or

BASEL), or OFS Liquidity Risk Solution Application Pack (OFS LRS) are present, then OFS LRS can consume OFS CAP computed outputs.

If OFS Capital Adequacy Application Pack (OFS CAP or BASEL) or OFS Liquidity Risk Solution Application Pack (OFS LRS) is already installed in the same environment as the OFSDF Application Pack, then the integration process is implicitly available.

If OFS Capital Adequacy Application Pack (OFS CAP or BASEL) or OFS Liquidity Risk Solution Application Pack (OFS LRS) is *not* installed in the same environment as the OFSDF Application Pack, then execute the Integration Utility to enable the Integration process provided in the OFSDF Application Pack v8.1.0.0.0 release.

7.18.1   Execute the Integration Utility

To enable the Integration process, you must execute the Integration Utility. Follow these steps:

1. Navigate to the `$FIC_HOME/utility/` directory.

2. Assign the `755` permission to the `IntegUtil` directory using the following command:

   `chmod -R 755 IntegUtil`

3. Execute the `enableIntT2T.sh` file, using the following command:

   `./enableIntT2T.sh`

4. Verify the log file `EnableIntegT2TStatus_<timestamp>.log` in the `$FIC_HOME/utility/IntegUtil/logs/` directory.

The Integration Utility is executed successfully.

NOTE	The Integration process is enabled only after the respective application pack is installed successfully.

For additional configuration information, see the Additional Configuration section.

Part II

Topics:

- [Upgrade](#)

8 Upgrade

Topics:

- Upgrade Scenarios

- Perform the Data Model Upload Outside of the Installer

- Prepare for Upgrade

- Upgrade from OFS Data Foundation Application Pack Release v8.0.x on AIX or Solaris x86 Operating System

- Upgrade from OFSDF v8.0.6.0.0 or Earlier Versions to OFSDF v8.0.6.1.0 or a Higher Version

- Upgrade from OFSDF v8.0.6.1.0 or a Higher Version to OFSDF v8.1.0.0.0

- Install OFSDF Application Pack v8.1.0.0.0 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	Always ensure you run the upgrade installer only on the cloned environment.

Table 35: OFSDF Release 8.1.0.0.0 Upgrade Scenarios

Scenario	Upgrade Instructions
Upgrade from OFS Data Foundation Application Pack Release v8.0.x on AIX or Solaris x86 Operating System	Release v8.1.0.0.0 of OFS Data Foundation Application Pack is not certified for AIX and Solaris x86 Operating Systems. If you are currently running OFSAA v8.0.x on AIX or Solaris x86 Operating Systems and plan to upgrade to Release v8.1.0.0.0, then you must migrate from AIX or Solaris x86 to Linux or Solaris SPARC. See the MOS Doc ID 2700084.1 for details.
Upgrade from OFSDF v8.0.6.0.0 or earlier versions to OFSDF v8.0.6.1.0 or a higher version In this scenario, you are upgrading the OFSDF application pack from the Release v8.0.6.0.0 or an earlier version to the Release v8.1.0.0.0. **Example**: You are using the OFSDF v8.0.5.0.0 release and now want to upgrade to the OFSDF v8.1.0.0.0**.**	1. Upgrade your current OFSDF version to the OFSDF v8.0.6.1.0 or later versions. 2. Clone your existing environment to the OFSAA Technology Matrix v8.1.0.0.0. 3. Upgrade from OFSDF v8.0.6.1.0 or a later version to OFSDF v8.1.0.0.0. 4. Run the Environment Check Utility tool and ensure that the hardware and software are installed as per the OFSAA Technology Matrix v8.1.0.0.0.

Scenario	Upgrade Instructions
	5. Update the `OFS_BFND_PACK.xml` file to enable ONLY the existing installed applications. 6. Update the `Silent.props` file present in the OFSDF v8.1.0.0.0 installer pack. 7. Trigger the installation.
Upgrade from OFSDF v8.0.6.1.0 or a Higher Version to OFSDF v8.1.0.0.0 In this scenario, you are upgrading the OFSDF application pack from the Release v8.0.6.1.0 or a later version to the Release v8.1.0.0.0. **Example**: You are using the OFSDF v8.0.7.0.0 and now want to upgrade it to the OFSDF v8.1.0.0.0.	1. Perform the data model upload outside of the installer (Execute the `ModelUpgrade.sh` file for the Prescripts to backup and delete the data, and then to backup and delete the metadata). 2. Clone your existing environment to the OFSAA Technology Matrix v8.1.0.0.0. 3. Run the Environment Check Utility tool and ensure that the hardware and software requirements are installed as per the OFSAA Technology Matrix v8.1.0.0.0. 4. Update the `OFS_BFND_PACK.xml` file to enable ONLY the existing installed applications. 5. Update the `Silent.props` file present in the OFSDF v8.1.0.0.0 installer pack. 6. Trigger the installation. 7. Execute the `ModelUpgrade.sh` file for the Postscripts to restore the data and then metadata.
Install OFSDF Application Pack v8.1.0.0.0 on an Existing OFSAA Instance In this scenario, you have already installed an application pack versioned v8.1.0.0.0 and now you want to install the OFSDF application pack versioned v8.1.0.0.0. **Example:** OFS ALM Pack is already installed and now you want to install OFSDF Pack.	1. Perform the data model upload outside of the installer (Execute the `ModelUpgrade.sh` file for the Prescripts to backup and delete the data, and then to backup and delete the metadata). 2. Update the `OFS_BFND_PACK.xml` file for the newly licensed OFSDF Application Pack. 3. Update the `Silent.props` file of the newly licensed pack. 4. Run the schema creator utility ONLY for the newly licensed OFSDF Application Pack. 5. Trigger the installation. 6. Execute the `ModelUpgrade.sh` file for the Postscripts to restore the data and then metadata.

8.2   Perform the Data Model Upload Outside of the Installer

This section is applicable if you are performing the OFSDF v8.1 OOB data model upload outside of the installer. A utility is introduced in the Release v8.1.0.0.0 called as the ModelUpgrade utility, which is packaged in this release of the OFSDF OOB Data Model patch. This utility enables the Upgrade installation using the Incremental model upload process. The two execution processes supported in the ModelUpgrade utility are as follows:

- Execute the ModelUpgrade.sh File for the Prescripts
- Execute the ModelUpgrade.sh File for the Postscripts

8.2.1   Execute the ModelUpgrade.sh File for the Prescripts

Execute the OFSDF `ModelUpgrade.sh` file for the Prescripts to backup and delete the data, and then to backup and delete the metadata. Then proceed with the merged model upload and the OFSDF Application Pack upgrade to v8.1.0.0.0.

For detailed information, see the *Execute the ModelUpgrade.sh file for the Prescripts* and *OFSDF Application Pack Upgrade Process* sections in the Oracle Financial Services Data Foundation Application Pack Upgrade Guide Release 8.1.x.x.

8.3   Prepare for Upgrade

This section provides information about the preparations that must be done before proceeding with the Upgrade installation.

Topics:

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

8.3.1   Download the OFSDF Application Pack Installer and Data Model

This section provides the details of the download that must be completed before triggering the application installation.

Topics:

- Download the OFSDF Application Pack Installer
- Download the Data Model
- Download and Install the Mandatory Patches

8.3.1.1   Download the OFSDF Application Pack Installer

To download the OFSDF Application Pack installer Release v8.1.0.0.0, follow these steps:

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

Figure 38: Oracle Software Delivery Cloud Login Page
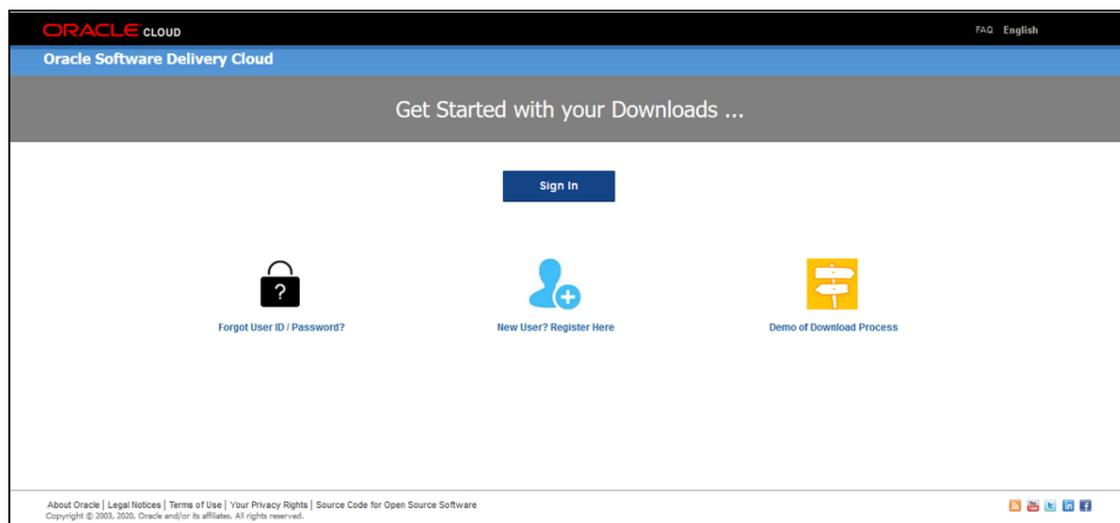
2. Search for the full product name **Oracle Financial Services Data Foundation** and download the installer archive.

Figure 39: Oracle Software Delivery Cloud Page
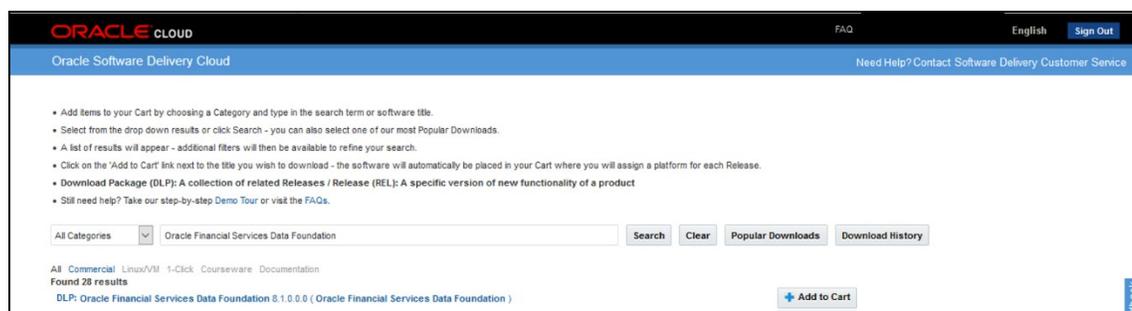
3. Copy the installer archive into the download directory (in Binary mode) in the setup identified for the OFSDF Application Pack installation.

8.3.1.2   Download the Data Model

To download the OFSDF OOB v8.1.0.0.0 Data Model, follow these steps:

> **NOTE**   This is an optional section, which is applicable if you are performing the customized model upload. The ModelUpgrade utility is packaged in this OFSDF OOB Data Model patch.

1. Log in to the My Oracle Support (MOS) with a valid Oracle account.

2. In the **Patches & Updates** tab, search for the OFSDF data model installer patch **30812072** and download the patch. See the Readme available with the patch for further instructions on downloading the patch and extracting the erwin files.

For detailed information to perform the OFSDF v8.1.0.0.0 OOB data model upload outside of the installer, see the Oracle Financial Services Data Foundation Application Pack Upgrade Guide Release 8.1.x.x.

8.3.1.3 Download and Install the Mandatory Patches

The following table includes information about the mandatory patches that must be installed during the OFSDF Application Pack upgrade installation.

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

Table 36: Mandatory Patches

One-Off Patch	Description
31509494	Download and install this mandatory OFSAAI one-off patch. This is a mandatory Pre-installation requirement for the OFSDF Application Pack upgrade installation from the 8.0.x versions to the 8.1.0.0.0 version on the Solaris operating system. For information about installing the patch, see the ReadMe document attached with the patch.
31544548	Download this OFSDF one-off patch for the upgrade installation of the OFSDF application Pack 8.1.0.0.0 release. This patch is applicable only to the RDBMS mode of installation.
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 2827801.1. Ensure that whenever any New or Upgrade or an Incremental Installation Release is applied, the OFSAAI Mandatory Patch **33663417** for Log4J must be reapplied.

8.3.2 Prepare the Environment for Upgrade

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

1. Backup the following environment file from the `OFS_BFND_PACK/conf/` directory the directory:
   - `OFS_BFND_PACK.xml`

2. Backup the following environment files from the `OFS_BFND_PACK/schema_creator/conf/` directory:

- `DBMASTER_SC.xml`

- `OFS_BFND_SCHEMA_IN.xml`

- `OFS_BFND_SCHEMA_BIGDATA_IN.xml`

3. Backup the following environment file from the `OFS_BFND_PACK/OFS_AAI/conf/` directory:

- `OFSAAI_InstallConfig.xml`

4. Ensure that the following property files are present in the `OFS_BFND_PACK/appsLibConfig/conf/` directory and make a backup:

- `Silent_upgrade_to_81.template`

5. See OFSAA Technology Matrix for the hardware and software required to upgrade to the OFSDF Application Pack Release 8.1.0.0.0.

6. Enable unlimited cryptographic policy for Java. For more information, see the *Enabling Unlimited Cryptographic Policy* section in the Oracle Financial Services Advanced Analytical Applications Infrastructure Administration and Configuration Guide Release 8.1.x.

7. Clone your environment. For more information, see the Oracle Financial Services Analytical Applications Infrastructure Cloning Reference Guide Release 8.1.x.

8. If your environment consists of the OFS PFT Applications Pack, then before performing the OFSDF data model upload, execute the following prescript in the atomic schema:

```
DECLARE

    V_REC_COUNT NUMBER;

    BEGIN

            SELECT COUNT(1) INTO V_REC_COUNT

            FROM USER_CONSTRAINTS

            WHERE TABLE_NAME='FSI_CURRENCIES'

            AND CONSTRAINT_NAME='FK_FSI_CURRENCIES_2';


            IF V_REC_COUNT = 1 THEN

                    EXECUTE IMMEDIATE 'ALTER TABLE FSI_CURRENCIES DROP
    CONSTRAINT FK_FSI_CURRENCIES_2';

    END IF;


END;
/
```

NOTE	After performing the OFSDF Release 8.1.0.0.0 data model upload, execute the postscript mentioned in the following sections:
	• Configuration for the OFS PFT Applications Pack after the OFSDF Data Model Upload for the scenario Upgrade from OFSDF v8.0.6.1.0 or a Higher Version to OFSDF v8.1.0.0.0.
	• Configuration for the OFS PFT Applications Pack after the OFSDF Data Model Upload for the scenario Install OFSDF Application Pack v8.1.0.0.0 on an Existing OFSAA Instance.
	This NOTE is applicable only if your environment consists of the Oracle Financial Services Profitability (OFS PFT) Applications Pack.

NOTE	When upgrading the OFSAA Application Pack to the Release v8.1.0.0.0, the installation initially may fail as a result of any underlying issue. This issue results in the error "Warning: Object already exists" because re-installation also fails during the execution of the `Prescript_Backup_Drop_Tables_81.sql` File. Before attempting the re-installation, follow this Pre-installation procedure.
	If any Table Name with the term _8_BKP exists in the Schema, then follow these steps:
	1. Rename the Table Name containing the Suffix _8_BKP to _8 (For example, rename FCT_COMMON_ACCOUNT_SUMMARY_8_BKP to FCT_COMMON_ACCOUNT_SUMMARY_8).
	2. Execute the Postscripts manually.

8.4 Upgrade from OFS Data Foundation Application Pack Release v8.0.x on AIX or Solaris x86 Operating System

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

8.5 Upgrade from OFSDF v8.0.6.0.0 or Earlier Versions to OFSDF v8.0.6.1.0 or a Higher Version

If you are upgrading OFSDF Application Pack from a release prior to v8.0.6.1.0:

1. Upgrade OFSDF to v8.0.6.1.0 or later versions. For more information, see the corresponding version-specific Oracle Financial Services Data Foundation Application Pack Installation and Configuration Guide.

2. Upgrade from OFSDF v8.0.6.1.0 or later versions to OFSDF v8.1.0.0.0. For more information, see Upgrade from OFSDF v8.0.6.1.0 or a Higher Version to OFSDF v8.1.0.0.0.

NOTE	The minimum supported version of OFSDF is v8.0.6.1.0

8.6 Upgrade from OFSDF v8.0.6.1.0 or a Higher Version to OFSDF v8.1.0.0.0

You are upgrading OFSDF Application Pack from the Release v8.0.6.1.0 or a higher version to the Release v8.1.0.0.0.

For example, you are using OFSDF v8.0.7.0.0 and now want to upgrade to the OFSDF v8.1.0.0.0.

NOTE	If upgrading OFSDF Application Pack from a version before OFSDF v8.0.6.1.0, then first upgrade to OFSDF v8.0.6.1.0 or a higher version. To upgrade to OFSDF v8.0.6.1.0 or a higher version, see the corresponding version-specific Oracle Financial Services Data Foundation Application Pack Installation and Configuration Guide.

Topics:

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

8.6.1 Clone Your Existing Environment

Clone your existing environment to the v8.1.0.0.0 of OFSAA Technology Matrix. For more information, see the Oracle Financial Services Analytical Applications Infrastructure Cloning Reference Guide Release 8.0.x.

NOTE	If the OFSDF Application Pack v8.0.7.0.0 and higher versions are already installed on the v8.1.0.0.0 OFSAA Technology Matrix, then you can switch the Oracle Client from 12c to 18c, and update the `.profile` file accordingly.
	In this scenario, you can skip the environment Cloning. Switching is done only for v8.1.0.0.0. The Application Pack will work only after the upgrade to v8.1.0.0.0 is complete.

8.6.2   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 OFSDF 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 OFSDF Application Pack Release v8.1.0.0.0 installer archive file in the download directory with the following command:

    ```
    unzip OFS_BFND_8.1.0.0.0_<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. For Solaris OS, extract the one-off patch **31509494**. See the ReadMe packaged with the patch for further instructions on how to install the patch.

    > **NOTE**   This is a mandatory Pre-installation requirement for the OFSDF Application Pack upgrade installation from the 8.0.x versions to the 8.1.0.0.0 version on the Solaris operating system.

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

    ```
    chmod -R 750 OFS_BFND_PACK
    ```

7. Extract the OFSDF mandatory one-off patch **31544548**. See the Oracle Financial Services Data Foundation Application Pack Release Notes 8.1.0.0.1 for further instructions about how to extract the patch. This patch is applicable only to the RDBMS mode of installation.

8.6.3   Update the OFS_BFND_PACK.xml File

Update the `OFS_BFND_PACK.xml` file. Enable only the existing installed Application Packs.

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

1. Navigate to the `<INSTALLER_DIRECTORY>/OFS_BFND_PACK/conf` directory.

2. Rename the `OFS_BFND_PACK.xml` file to `OFS_BFND_PACK.xml.template`

3. Open the `OFS_BFND_PACK.xml` file in a text editor.

4. Update the `OFS_BFND_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 40: Sample OFS_BFND_PACK.xml File with the Update for Upgrade

```xml
<APP_PACK_CONFIG>
    <APP_PACK_ID>OFS_BFND_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>8.1.0.0.0</VERSION>
    <APP>
        <APP_ID PREREQ="" DEF_SEL_FLG="YES" ENABLE="YES">OFS_AAI</APP_ID>
        <APP_NAME>Financial Services Analytical Applications Infrastructure</APP_NAME>
        <APP_DESCRIPTION>Base Infrastructure for Analytical Applications</APP_DESCRIPTION>
        <VERSION>8.1.0.0.0</VERSION>
    </APP>
    <APP>
        <APP_ID PREREQ="OFS_AAI" ENABLE="NO">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>8.1.0.0.0</VERSION>
    </APP>
    <APP>
        <APP_ID PREREQ="OFS_AAIB" ENABLE="NO">OFS_FSDF</APP_ID>
        <APP_NAME>Financial Services Data Foundation</APP_NAME>
        <APP_DESCRIPTION>Data Foundation for Banking and Financial Services domain on Big Data
        </APP_DESCRIPTION>
        <VERSION>8.1.0.0.0</VERSION>
    </APP>
</APP_PACK_CONFIG>
```

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

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**: The Application or Product once enabled cannot be disabled. However, the Application or Product not enabled during installation can be enabled later through the Administration UI.

5. Save the file.

8.6.4 Update the Silent.props File

Topics:

- [Silent Upgrade to OFSDF v8.1.0.0.0 for RDBMS](#)

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

8.6.4.1 Silent Upgrade to OFSDF v8.1.0.0.0 for RDBMS

This section is applicable only for the RDBMS mode of OFSDF v8.1.0.0.0 upgrade installation.

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

To configure the `Silent.props` file to upgrade to the OFSDF Application Pack Release 8.1.0.0.0, follow these steps:

1. Navigate to the installer kit `OFS_BFND_PACK/appsLibConfig/conf/` directory.

2. Rename the `Silent_upgrade_to_81.template` file to `Silent.props`.

3. Update the `Silent.props` file and mention the following parameters:

Table 38: Parameters for the Silent.props File (Silent_upgrade_to_81.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: BFNDSEG	#Mandatory Segment Code must be the same as the code that is used during the first OFSDF 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_NAME>/logs	#Mandatory Information Domain Maintenance log path must be the same as the log path that is used during the first OFSDF installation (Base Pack).
DBFTP_LOG_PATH	Information Domain Maintenance log path (to be created) for the new Information Domain for DB Layer	Example: /ftpshare/<INFODOM_NAME>/logs	#Mandatory Information Domain Maintenance log path must be the same as the log path that is used during the first OFSDF installation (Base Pack).
UPLOAD_MODEL	Whether you want 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 when UPLOAD_MODEL=1
DATAMODEL	The file name for the customized data model	Not Applicable	# Mandatory Only when uploading the customized data model. # Option selected for MODEL_TYPE=1
DM_DIRECTORY	The path for the customized data model	Not Applicable	#Mandatory Only when 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_REQUIRED	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	#Optional

Property Name	Description of Property	Permissible values	Comments
		triggered to handle the processing of fsapps.	

4. Save the file.

8.6.5 Trigger the Installation

You are upgrading OFSDF Application Pack from Release 8.0.6.1.0 or later to Release 8.1.0.0.0.

For example, you are using release 8.0.7.0.0 and now want to upgrade to Release 8.1.0.0.0.

> **NOTE** If upgrading from a version before OFSDF v8.0.6.1.0, then first upgrade to v8.0.6.1.0 or a higher version. To upgrade to OFSDF v8.0.6.1.0, see the corresponding version-specific Oracle Financial Services Data Foundation Application Pack Installation and Configuration Guide.

To install the OFSDF Application Pack, follow these steps:

1. Ensure that you have completed the following steps:

   a. Download the installer.

   b. Perform the prerequisites for installation.

   c. Prepare for Upgrade.

   d. Extract the software.

   e. Update the OFS_BFND_PACK.xml file.

   f. Update the Silent.props file.

> **NOTE** Ensure you have downloaded and applied the mandatory OFSAAI one-off patch **31509494**. This is a mandatory Pre-installation requirement for the OFSDF Application Pack upgrade installation from the 8.0.x versions to the 8.1.0.0.0 version on the Solaris operating system.

2. Enter the following command in the console to execute the OFSDF 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 41: OFSAA Processing Tier FTP/SFTP Password Prompt

> | **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 42: Accept the OFSAA License Agreement

6. The installer installs the OFSAAAI application.

Figure 43: OFS AAAI Silent Mode Installation

7. After OFSAAAI is installed, the OFSDF Application Pack installation begins.

Figure 44: OFSDF Application Pack Installation

NOTE	• The data model upload may take several hours to complete. You can check the installation logs in the `/OFS_BFND_PACK/OFS_FSDF/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 `TransformErwin.sh`, 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 8.1.0.0.0.

Figure 45: OFSDF Application Pack Installation Complete


```
BUILD SUCCESSFUL
Total time: 39 seconds
Shutdown of OFSAAI services started...
nohup: appending output to 'nohup.out'
Shutdown of OFSAAI services done.
OFSAA App Layer Services start-up check started...
Starting startofsaai.sh service...
OFSAA Service - OK
Starting icc service...
ICC service - OK
Shutting down icc service...
Shutting down OFSAA service...
OFSAAI App Layer Services check Status: SUCCESSFUL.
OFSAAI DB Layer Services check started...
Calling agentshutdown.sh to check and kill, if any of the server is running...
MESSAGE Server service is not running.
AM service is not running.
ROUTER service is not running.
Starting ROUTER Service
ROUTER service started in background mode.
Starting AM Service
AM service started in background mode.
Starting MESSAGE SERVER Service
MESSAGE SERVER service started in background mode.
Stop MESSAGE Server service with Proces ID : 21493
Stop AM service with Proces ID : 21468
Stop ROUTER service with Proces ID : 21453
OFSAAI DB Layer File Services check Status: SUCCESSFUL.
*************************************************
Installation completed...
*************************************************
/scratch/██████/kit/OFS_BFND_PACK/bin>
--------------------------------------------------------------------------------
```

8. 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 Verify the Log File Information.

> **NOTE**　If any applications are installed on top of OFS AAAI Application Pack 8.1.0.0.0 version, execute the script `update_dq_batches_optional_params.sql`, which is available in the folder `$FIC_HOME/Post_AAI_Migration`, after the installation of the applications.

11. Install the OFSDF mandatory one-off patch **31544548**. See the ReadMe packaged with the patch for further instructions on how to install the patch. This patch is applicable only to the RDBMS mode of installation.

12. For more information on securing your OFSAA Infrastructure, refer to the Oracle Financial Services Analytical Applications Infrastructure Security Guide Release 8.1.x.

13. After successful installation, perform the Post-installation procedures. For detailed information, see the Post-installation section.

14. Perform the necessary Additional Configuration.

> **NOTE**　The DMT screens are no more managed with a generic function since AAI v8.1.0.0.0. Starting from AAI v8.0.6.0.0, each action performed in the DMT screens require specific user roles and functions for various operations. Therefore, OFSDF has up taken the user roles and functions available for the AAI v8.1.0.0.0 DMT screens. From v8.1.0.0.0, OFSDF and AAI support only new functions and the new user roles mapped to the user groups.

8.6.6　Verify the Log File Information

See the following logs files for more information:

- `Pack_Install.log` file in the `OFS_BFND_PACK/logs/` directory.

- The `OFS_FSDF_installation.log` file and the `OFS_FSDF_installation.err` file in the `OFS_BFND_PACK/OFS_FSDF/logs` directory.

- Infrastructure installation log files in the `OFS_BFND_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).

8.6.7   Post-installation Steps

Follow the steps mentioned in the [Post-installation](#) section.

Topics:

- [Execute the ModelUpgrade.sh file for the Postscripts](#)
- [Configuration for the OFS PFT Applications Pack after the OFSDF Data Model Upload](#)

8.6.7.1   Execute the ModelUpgrade.sh File for the Postscripts

This section is applicable if you have performed the OFSDF v8.1.0.0.0 OOB data model upload outside of the installer.

After the successful upgrade of the OFSDF Application Pack to the v8.1.0.0.0 release, execute the OFSDF `ModelUpgrade.sh` file for Postscripts to restore the data and the metadata.

For detailed information, see the *Execute the ModelUpgrade.sh file for the Postscripts* and *OFSDF Application Pack Upgrade Process* sections in the [Oracle Financial Services Data Foundation Application Pack Upgrade Guide Release 8.1.x.x](#).

8.6.7.2   Configuration for the OFS PFT Applications Pack after the OFSDF Data Model Upload

If your environment consists of the Oracle Financial Services Profitability (OFS PFT) Applications Pack, then after performing the OFSDF data model upload, execute the following postscript in the atomic schema:

```
DECLARE
  V_REC_COUNT NUMBER;
  BEGIN
        SELECT COUNT(1) INTO V_REC_COUNT
        FROM USER_CONSTRAINTS
        WHERE TABLE_NAME='FSI_CURRENCIES'
        AND CONSTRAINT_NAME='FK_FSI_CURRENCIES_2';


  IF V_REC_COUNT = 0 THEN
        EXECUTE IMMEDIATE 'ALTER TABLE FSI_CURRENCIES ADD CONSTRAINT
        FK_FSI_CURRENCIES_2 FOREIGN KEY (REFERENCE_IRC) REFERENCES FSI_IRCS
        (INTEREST_RATE_CD)';
  END IF;
END;
/
```

NOTE	Before you execute the postscript, ensure you have executed the prescript mentioned in the section <u>Prepare the Environment for Upgrade</u>.
	This NOTE is applicable only if your environment consists of the Oracle Financial Services Profitability (OFS PFT) Applications Pack.

8.6.8   Additional Configuration

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

8.7   Install OFSDF Application Pack v8.1.0.0.0 on an Existing OFSAA Instance

This is an upgrade installation scenario, where you have already installed an application pack from the Release v8.1.0.0.0 and now you want to install another application pack from the Release v8.1.0.0.0. For example, the OFS ALM Application Pack is already installed and now you want to install the OFSDF Application Pack.

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

Topics:

- <u>Extract the Software</u>
- <u>Update the OFS_BFND_PACK.xml File</u>
- <u>Update the Silent.props File</u>
- <u>Execute the Schema Creator Utility Only for the New OFSDF Application Pack</u>
- <u>Trigger the Installation</u>
- <u>Verify the Log File Information</u>
- <u>Post-installation Steps</u>
- <u>Additional Configuration</u>

8.7.1   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 OFSDF 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 OFSDF Application Pack Release v8.1.0.0.0 installer archive file in the download directory with the following command:

```
unzip OFS_BFND_8.1.0.0.0_<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. For Solaris OS, extract the one-off patch **31509494**. See the ReadMe packaged with the patch for further instructions on how to install the patch.

> **NOTE**   This is a mandatory Pre-installation requirement for the OFSDF Application Pack upgrade installation from the 8.0.x versions to the 8.1.0.0.0 version on the Solaris operating system.

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

```
chmod -R 750 OFS_BFND_PACK
```

7. Extract the OFSDF mandatory one-off patch **31544548**. See the Oracle Financial Services Data Foundation Application Pack Release Notes 8.1.0.0.1 for further instructions about how to extract the patch. This patch is applicable only to the RDBMS mode of installation.

8.7.2 Update the OFS_BFND_PACK.xml File

Update the `OFS_BFND_PACK.xml` file to enable only the existing installed Application Packs.

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

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

2. Rename the file `OFS_BFND_PACK.xml` to `OFS_BFND_PACK.xml.template`

3. Open the `OFS_BFND_PACK.xml` file in a text editor.

4. Update the `OFS_BFND_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 46: Sample OFS_BFND_PACK.xml File

```
<APP_PACK_CONFIG>
    <APP_PACK_ID>OFS_BFND_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>8.1.0.0.0</VERSION>
    <APP>
        <APP_ID PREREQ="" DEF_SEL_FLG="YES" ENABLE="YES">OFS_AAI</APP_ID>
        <APP_NAME>Financial Services Analytical Applications Infrastructure</APP_NAME>
        <APP_DESCRIPTION>Base Infrastructure for Analytical Applications</APP_DESCRIPTION>
        <VERSION>8.1.0.0.0</VERSION>
    </APP>
    <APP>
        <APP_ID PREREQ="OFS_AAI" ENABLE="NO">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>8.1.0.0.0</VERSION>
    </APP>
    <APP>
        <APP_ID PREREQ="OFS_AAIB" ENABLE="NO">OFS_FSDF</APP_ID>
        <APP_NAME>Financial Services Data Foundation</APP_NAME>
        <APP_DESCRIPTION>Data Foundation for Banking and Financial Services domain on Big Data
        </APP_DESCRIPTION>
        <VERSION>8.1.0.0.0</VERSION>
    </APP>
</APP_PACK_CONFIG>
```

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

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**: The Application or Product once enabled cannot be disabled. However, the Application or Product not enabled during installation can be enabled later through the Administration UI.

5. Save the file.

8.7.3 Update the Silent.props File

Topics:

- Silent Upgrade to OFSDF v8.1.0.0.0 for RDBMS

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

8.7.3.1 Silent Upgrade to OFSDF v8.1.0.0.0 for RDBMS

This section is applicable only for the RDBMS mode of OFSDF v8.1.0.0.0 upgrade installation.

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

To configure the `Silent.props` file to upgrade to the OFSDF Application Pack Release 8.1.0.0.0, follow these steps:

1. Navigate to the installer kit `OFS_BFND_PACK/appsLibConfig/conf/` directory.

2. Rename the `Silent_upgrade_to_81.template` file to `Silent.props`.

3. Update the `Silent.props` file and mention the following parameters:

Table 40: Parameters for the Silent.props File (Silent_upgrade_to_81.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: BFNDSEG	# Mandatory Segment Code must be the same as the code that is used during the first OFSDF 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_NAME>/logs`	# Mandatory Information Domain Maintenance log path must be the same as the log path that is used during the first OFSDF 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`	# Mandatory Information Domain Maintenance log path must be the same as the log path that is used during the first OFSDF installation (Base Pack)
UPLOAD_MODEL	Whether you want 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.

8.7.4 Execute the Schema Creator Utility Only for the New OFSDF 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 `OFS_BFND_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 file `OFS_BFND_PACK/schema_creator/conf/OFS_BFND_SCHEMA_IN.xml` in a text editor. See the Configure the OFS_BFND_SCHEMA_IN.xml File section for values to modify in the XML file.

2. Execute the utility with -s option.

   For Example: `./osc.sh –s`

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

8.7.5   Trigger the Installation

You are upgrading OFSDF Application Pack from Release 8.0.6.1.0 or later to Release 8.1.0.0.0.

For example, you are using release 8.0.7.0.0 and now want to upgrade to Release 8.1.0.0.0.

> **NOTE** If upgrading from a version before OFSDF v8.0.6.1.0, then first upgrade to v8.0.6.1.0 or later versions. To upgrade to OFSDF v8.0.6.1.0, see the installation guides Oracle Financial Services Data Foundation Application Pack Installation and Configuration Guide.

To install the OFSDF Application Pack, follow these steps:

1. Ensure that you have completed the following steps:

   a. Download the installer.

   b. Perform the prerequisites for installation.

   c. Prepare for Upgrade.

   d. Extract the software.

   e. Update the `OFS_BFND_PACK.xml` file.

   f. Update the `Silent.props` file.

   g. Execute the Schema Creator Utility.

   > **NOTE** Ensure you have downloaded and applied the mandatory OFSAAI one-off patch **31509494**. This is a mandatory Pre-installation requirement for the OFSAA Application upgrade installation from the 8.0.x versions to the 8.1.0.0.0 version on the Solaris operating system.

2. Enter the following command in the console to execute the OFSDF 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 47: OFSAA Processing Tier FTP/SFTP Password Prompt**

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 48: Accept the OFSAA License Agreement

6. The installer installs the OFSAAAI application.

Figure 49: OFS AAAI Silent Mode Installation

7. After OFSAAAI is installed, the OFSDF Application Pack installation begins.

Figure 50: OFSDF Application Pack Installation

NOTE	• The data model upload may take several hours to complete. You can check the installation logs in the `/OFS_BFND_PACK/OFS_FSDF/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 `TransformErwin.sh`, 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 8.1.0.0.0.

Figure 51: OFSDF Application Pack Installation Complete


```
BUILD SUCCESSFUL
Total time: 39 seconds
Shutdown of OFSAAI services started...
nohup: appending output to 'nohup.out'
Shutdown of OFSAAI services done.
OFSAA App Layer Services start-up check started...
Starting startofsaai.sh service...
OFSAA Service - OK
Starting icc service...
ICC service - OK
Shutting down icc service...
Shutting down OFSAA service...
OFSAAI App Layer Services check Status: SUCCESSFUL.
OFSAAI DB Layer Services check started...
Calling agentshutdown.sh to check and kill, if any of the server is running...
MESSAGE Server service is not running.
AM service is not running.
ROUTER service is not running.
Starting ROUTER Service
ROUTER service started in background mode.
Starting AM Service
AM service started in background mode.
Starting MESSAGE SERVER Service
MESSAGE SERVER service started in background mode.
Stop MESSAGE Server service with Proces ID : 21493
Stop AM service with Proces ID : 21468
Stop ROUTER service with Proces ID : 21453
OFSAAI DB Layer File Services check Status: SUCCESSFUL.
*************************************************
Installation completed...
*************************************************
/scratch/██████/kit/OFS_BFND_PACK/bin>█
-------------------------------------------------------------------------------
```

8. 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 Verify the Log File Information.

NOTE	If any applications are installed on top of OFS AAAI Application Pack 8.1.0.0.0 version, execute the script `update_dq_batches_optional_params.sql`, which is available in the folder `$FIC_HOME/Post_AAI_Migration`, after the installation of the applications.

11. Install the OFSDF mandatory one-off patch **31544548**. See the ReadMe packaged with the patch for further instructions on how to install the patch. This patch is applicable only to the RDBMS mode of installation.

12. For more information on securing your OFSAA Infrastructure, refer to the Oracle Financial Services Analytical Applications Infrastructure Security Guide Release 8.1.x.

13. After successful installation, perform the Post-installation procedures. For detailed information, see the Post-installation section.

14. Perform the necessary Additional Configuration.

NOTE	The DMT screens are no more managed with a generic function since AAI v8.1.0.0.0. Starting from AAI v8.0.6.0.0, each action performed in the DMT screens require specific user roles and functions for various operations. Therefore, OFSDF has up taken the user roles and functions available for the AAI v8.1.0.0.0 DMT screens. From v8.1.0.0.0, OFSDF and AAI support only new functions and the new user roles mapped to the user groups.

8.7.6   Verify the Log File Information

See the following logs files for more information:

- The `Pack_Install.log` file in the `OFS_BFND_PACK/logs/` directory.

- The `OFS_FSDF_installation.log` file and the `OFS_FSDF_installation.err` file in the `OFS_BFND_PACK/OFS_FSDF/logs` directory.

- The Infrastructure installation log files in the `OFS_BFND_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).

8.7.7 Post-installation Steps

Follow the steps mentioned in the Post-installation section.

Topics:

- Execute the ModelUpgrade.sh file for the Postscripts
- Configuration for the OFS PFT Applications Pack after the OFSDF Data Model Upload

8.7.7.1 Execute the ModelUpgrade.sh file for the Postscripts

This section is applicable if you have performed the OFSDF v8.1.0.0.0 OOB data model upload outside of the installer.

After the successful upgrade of the OFSDF Application Pack to the v8.1.0.0.0 release, execute the OFSDF `ModelUpgrade.sh` file for Postscripts to restore the data and the metadata.

For detailed information, see the *Execute the ModelUpgrade.sh file for the Postscripts* and *OFSDF Application Pack Upgrade Process* sections in the Oracle Financial Services Data Foundation Application Pack Upgrade Guide Release 8.1.x.x.

8.7.7.2 Configuration for the OFS PFT Applications Pack after the OFSDF Data Model Upload

If your environment consists of the Oracle Financial Services Profitability (OFS PFT) Applications Pack, then after performing the OFSDF data model upload, execute the following postscript in the atomic schema:

```
DECLARE
V_REC_COUNT NUMBER;
BEGIN
SELECT COUNT(1) INTO V_REC_COUNT
FROM USER_CONSTRAINTS
WHERE TABLE_NAME='FSI_CURRENCIES'
AND CONSTRAINT_NAME='FK_FSI_CURRENCIES_2';

IF V_REC_COUNT = 0 THEN
EXECUTE IMMEDIATE 'ALTER TABLE FSI_CURRENCIES ADD CONSTRAINT
FK_FSI_CURRENCIES_2 FOREIGN KEY (REFERENCE_IRC) REFERENCES FSI_IRCS
(INTEREST_RATE_CD)';
END IF;
END;
/
```

NOTE	Before you execute the postscript, ensure you have executed the prescript mentioned in the section <u>Prepare the Environment for Upgrade</u>.
	This NOTE is applicable only if your environment consists of the Oracle Financial Services Profitability (OFS PFT) Applications Pack.

8.7.8   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 OFSDF Application Pack installation. See the *Additional Configuration* section in the Oracle Financial Services Advanced Analytical Applications Infrastructure Installation Guide Release 8.1.0.0.0 to complete the procedures listed in the following table.

| NOTE | OFSDF uses the Process Modeling Framework (PMF) to execute two ready-to-use Runs (FSDF Sourced Run and FSDF Execution Run) for data loading. For more information about the Process Modeling Framework configuration, see the Oracle Financial Services Advanced Analytical Applications Infrastructure Administration and Configuration Guide Release 8.1.x and the Oracle Financial Services Analytical Applications Infrastructure Process Modelling Framework Orchestration Guide Release 8.1.0.0.0. |

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	Execute the OFSAAI setup information fetching tool.
9	Execute the Encryption Changer.
10	Configure the Infrastructure LDAP.
11	Configure and deploy the OFSAAI web services.
12	Enable the parallel execution of DML statements.
13	Configure the message details in the Forms Designer.
14	Clear the application cache.
15	Configure the password changes.
16	Configure the Java Virtual Machine.
17	Configure the internal service (Document Upload/Download).
18	Migrate the Excel upload functionality.
19	Remove the OFSAA Infrastructure.

10 Frequently Asked Questions (FAQs) and Error Dictionary

For FAQs and installation error-related information, see the section Frequently Asked Questions (FAQs) and Error Dictionary in the Oracle Financial Services Advanced Analytical Applications Infrastructure Installation Guide Release 8.1.0.0.0.

OFSAA Support

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

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- Is the information clearly presented?

- Do you need more information? If so, where?

- Are the examples correct? Do you need more examples?

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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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