

**Oracle Financial Services Data  
Foundation Application Pack  
Upgrade Guide**

**Release 8.1.x.x**

**Jul 2021**

**ORACLE**  
Financial Services

## Oracle Financial Services Data Foundation Application Pack Upgrade Guide

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# Document Control

Version Number	Revision Date	Change Log
1.0	08-June-2020	The first version of the OFSDF Application Pack Upgrade Guide is created and published.
2.0	30-September-2020	Added content for the Data Model Upgrade Preparation utility.
3.0	09-July-2021	Enhanced the ModelUpgrade utility with the facility to split the prescripts and postscripts. Enhanced ModelUpgrade utility to support the OFSDF 8.1.1.0.0 and 8.1.1.1.0 upgrade processes.

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# 1 Preface

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

## Topics:

- [How this Guide is Organized](#)
- [Purpose of This Document](#)
- [Audience](#)
- [Access to the Oracle Support](#)
- [Related Documents](#)
- [Conventions](#)
- [Abbreviations](#)

## 1.1 How this Guide is Organized

The Installation Guide is organized into the following sections:

- [OFSDF Application Pack Upgrade Process](#): This section provides information about different stages of the OFSDF OOB Data Model upload process, the assumptions during the upgrade process, and the data model upload process flow diagram.
- [Data and Metadata Approach during the Upgrade](#): This section provides information about the data and metadata approach to be taken before and after the OFSDF OOB Data Model upload.

## 1.2 Purpose of this Document

The document provides the approach for the upload of the OFSDF OOB Data Model during the upgrade of OFSDF from the 8.0.6.1.0 or higher release versions to the 8.1.0.0.0 or 8.1.1.0.0 or 8.1.1.1.0 release versions. Here, OFSDF manages OFSAA common data model and associated metadata. Before using the ModelUpgrade utility in the other OFSAA Applications, modifications need to be done in the packaged scripts according to the application-specific metadata.

## 1.3 Audience

This document is intended for Administrators, Business User, Strategists, and Data Analyst, who are responsible for installing and maintaining the following application pack components:

- OFSDF Data Model
- OFSAA Application Components
- OFSAA Architecture
- UNIX Commands

- Database Concepts

## 1.4 Access to the 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

We strive 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 list of related documents is provided as follows:

- [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*
- [OHC Documentation Library](#) for the OFSDF Application Pack Release 8.1.x.x.x product documents:
  - Oracle Financial Services Data Foundation Application Pack Installation and Configuration Guide Release 8.1.x.x
  - Oracle Financial Services Data Foundation Application Pack User Guide Release 8.1.x
  - Oracle Financial Services Data Foundation Application Pack Release Notes 8.1.x.x
  - [Oracle Financial Services Analytical Applications \(OFSAA\) Data Model Extension Guidelines Document Release 8.1.x](#)
  - [Oracle Financial Services Analytical Applications \(OFSAA\) Data Model Naming Standards Guide Release 8.1.x](#)
  - [Oracle Financial Services Analytical Applications \(OFSAA\) Data Model Document Generation Release 8.1.x](#)
  - [Oracle 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](#)
- [OFS Analytical Applications Infrastructure Cloning Reference Guide Release 8.0.x](#)
- [OHC Documentation Library](#) for the OFSAA Release 8.1.x generic documents:
  - [Oracle Financial Services Analytical Applications Infrastructure Security Guide](#)
  - [Oracle Financial Services Analytical Applications Infrastructure Cloning Reference Guide](#)

- [Oracle Financial Services Analytical Applications \(OFSAA\) Technology Matrix Release 8.1.x](#)
- [OHC Documentation Library](#) for the OFS AAI Application Pack Release 8.1.x.x.x product documents:
  - Oracle Financial Services Advanced Analytical Applications Infrastructure Installation Guide Release 8.1.x.x
  - Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide Release 8.1.x
  - [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.x
  - [Oracle Financial Services Analytical Applications \(OFSAA\) Metadata Browser User Guide Release 8.1.0.0.0](#)

## 1.6 Conventions

The following text conventions are used in this document.

**Table 1: Document Conventions**

Convention	Meaning
<b>boldface</b>	Boldface type indicates graphical user interface elements associated with an action or terms defined in text or the glossary.
<i>Italic</i>	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.
<a href="#">Hyperlink</a>	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
DB XML	Database XML
DML	Data Manipulation Language
MOS	My Oracle Support

Conventions	Description
OFS	Oracle Financial Services
OFSAAI	Oracle Financial Services Analytical Application Infrastructure
OFSDF	Oracle Financial Services Data Foundation
OHC	Oracle Help Center
XML	Extensible Markup Language



## 2 OFSDF Application Pack Upgrade Process

This section provides information about the upgrade approach adapted from the OFSDF Application Pack 8.0.x release versions to the OFSDF Application Pack v8.1.0.0.0 and the OFSDF OOB Data Model upload process. Here, OFSDF manages OFSAA common data model and associated metadata.

### NOTE

This upgrade process is also applicable to the OFSDF Application Pack Releases 8.1.1.0.0 and 8.1.1.1.0.

A utility is introduced in the OFSDF Application Pack Release v8.1.0.0.0 to enable the upgrade installation using the Incremental Model upload. This section also provides information about different stages in the OFSDF Application Pack Upgrade Process.

#### Topics:

- [Utility to Enable the Upgrade using Incremental Model Upload](#)
- [Download the OFSDF OOB Data Model](#)
- [Generic Assumptions to Upgrade to v8.1.0.0.0 or v8.1.1.0.0 or v8.1.1.1.0](#)
- [Assumptions for the Customizations using Incremental Model Upload](#)
- [Upgrade Process Flow](#)

### 2.1 Utility to Enable the Upgrade using Incremental Model Upload

A utility, called the *ModelUpgrade* is introduced in the OFSDF Application Pack Release v8.1.0.0.0 to enable the upgrade installation using Incremental model upload. Using this utility, you can execute the packaged Prescripts before the upgrade and the Postscripts after the upgrade to handle the data and metadata.

The following are the results of using the ModelUpgrade utility:

- During the prescripts execution (before performing the custom model upload):
  - The dropped data is backed up and cleared
  - Then the dropped metadata is backed up and cleared
- During the postscripts execution (after the custom model upload and application upgrade):
  - The data is restored
  - Then the SCD and DQ metadata are restored

For the prescripts execution process, see the [Execute the ModelUpgrade.sh File for the Prescripts](#) section.

For the postscripts execution process, see the [Execute the ModelUpgrade.sh File for the Postscripts](#) section.

For information about the approach taken for the table and column drops, see the [Data and Metadata Approach during the Upgrade](#) section.

## 2.2 Download the OFSDF OOB Data Model

To download the OFSDF out-of-the-box Data Model, follow these steps:

1. Log in to [My Oracle Support \(MOS\)](#) with a valid Oracle account.
2. In the **Patches & Updates** tab, search for the following release specific OFSDF OOB Data Model patch:
  - **30812072** for OFSDF 8.1.0.0.0: This patch contains the ModelUpgrade utility.
  - **32294660** for OFSDF 8.1.1.0.0.
  - **32681554** for OFSDF 8.1.1.1.0.
3. Download the patch. See the ReadMe available with the patch for further instructions on installing and extracting the patch.

### NOTE

Download the [DROPPED DATAELEMENTS CUSTOMIZATION 81](#) document from [My Oracle Support](#).

Other OFSAA Applications can create a similar file for their respective products.

## 2.3 Generic Assumptions to Upgrade to v8.1.0.0.0 or 8.1.1.0.0 or 8.1.1.1.0

These are the generic assumptions and observations regarding the v8.1.0.0.0 (or v8.1.1.0.0 or v8.1.1.1.0) upgrade process:

- The minimum OFSAA Application Pack version must be 8.0.6.1.0 to upgrade to 8.1.0.0.0 or 8.1.1.0.0 or 8.1.1.1.0.
- The v8.0.x and v8.1.0.0.0 (or v8.1.1.0.0 or v8.1.1.1.0) OFSAA Application Packs cannot coexist in the same environment. For example, if there are multiple OFSAA applications such as OFSDF v8.0.x and OFS CAP v8.0.x are present on the machine, then you must upgrade both the OFSDF and OFS CAP to the 8.1 version.
- Before the upgrade process, a backup of the production database at the site must be created and stored safely.
- Before the upgrade process, an environment with [Oracle Financial Services Analytical Applications \(OFSAA\) Technology Matrix Release 8.1.0.0.0](#) (or 8.1.1.0.0 or 8.1.1.1.0) must be available. If required, create a clone of the existing v8.0.x applications. See the [Oracle Financial Services Analytical Applications Infrastructure Cloning Reference Guide Release 8.0.x](#), for details.
- After the 8.1.0.0.0 (or 8.1.1.0.0 or 8.1.1.1.0) application installation is complete, the Data Analysts at the site must review the upgraded environment before proceeding with the batch execution.

## 2.4 Assumptions for the Customizations using Incremental Model Upload

**NOTE**

The list of dropped tables and columns, which are not a part of the OFSDF OOB Data Model is mentioned in the [DROPPED DATAELEMENTS CUSTOMIZATION 81](#) document. However, the customers can retain those dropped tables and columns from the v8.0.x environment, and continue to use them as customizations in the v8.1.0.0.0 (or 8.1.1.0.0 or 8.1.1.1.0 as applicable) environment.

The customization is not supported for the dropped attributes, which are a part of the PK and (or) FK and (or) Not Null definitions.

These are the assumptions and observations regarding the customizations using the Incremental Model Upload (Custom Model Upload) in addition to the [Generic Assumptions to Upgrade to v8.1.0.0.0 or 8.1.1.0.0 or 8.1.1.1.0](#) section:

- Review and recompile the metadata defined in the [DROPPED DATAELEMENTS CUSTOMIZATION 81](#) document and retain as the custom metadata as a part of the upgrade at the site to ensure it meets your requirements based on the OFSDF OOB Data Model changes.
- Review the existing custom metadata at the site that can be impacted by the v8.1.0.0.0 (or v8.1.1.0.0 or v8.1.1.1.0 as applicable) tables or attributes after the prescript execution process. See the [Oracle Financial Services Analytical Applications \(OFSA\) Metadata Browser User Guide Release 8.1.0.0.0](#).

The upgrade process is explained in the following section [Upgrade Process Flow](#).

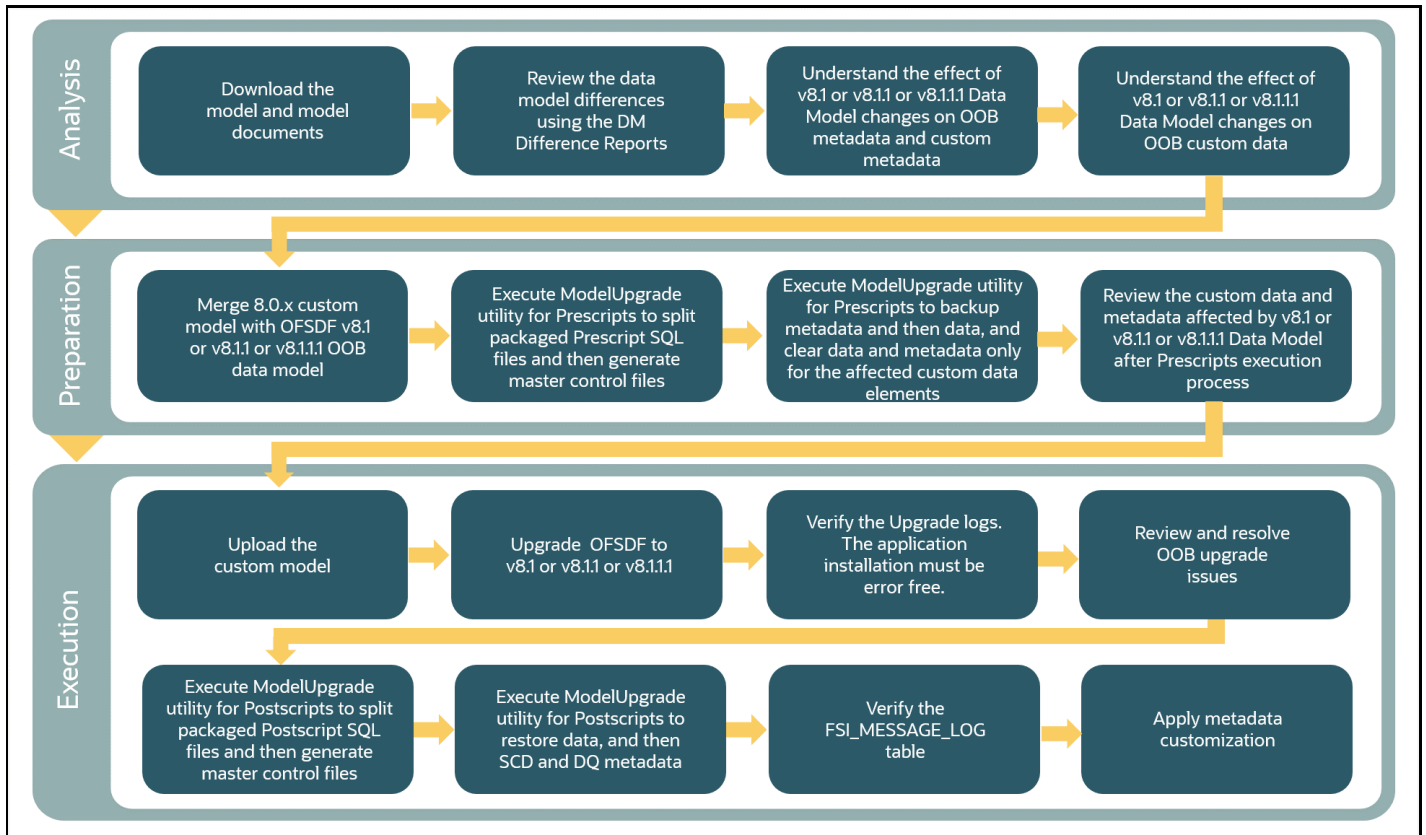
## 2.5 Upgrade Process Flow

This is a process flow diagram showing a series of actions that must be performed during the OFSDF Application Pack upgrade to the v8.1.0.0.0 release from the v8.0.x releases.

**NOTE**

This upgrade process is also applicable to the OFSDF Application Pack Releases 8.1.1.0.0 and 8.1.1.1.0.

**Figure 1: OFSDF Upgrade Process Flow Diagram**



The upgrade process consists of the following three main stages:

- [Analysis](#)
- [Preparation](#)
- [Execution](#)

## 2.5.1 Analysis

In the analysis stage, follow these steps:

1. Download the OFSDF 8.1.0.0.0 or 8.1.1.0.0 or 8.1.1.1.0 OOB Data Model (as required), respective version of the data model documents (XML and other scripts), and the [DROPPED DATAELEMENTS CUSTOMIZATION 81](#) document.

### NOTE

To download the OFSDF 8.1.0.0.0 or 8.1.1.0.0 or 8.1.1.1.0 OOB Data Model, XML, and other scripts packaged in the data model patch, see the [Download the OFSDF OOB Data Model](#) section.

To download the data model documents, see the [OFSDF Data Model Difference Report Documents](#) for the Release 8.1.0.0.0, 8.1.1.0.0, or 8.1.1.1.0 as required.

2. See the OFSDF 8.1.0.0.0 or 8.1.1.0.0 or 8.1.1.1.0 Release related [Data Model Difference Report](#) documents, to review the differences between the 8.1.0.0.0 or 8.1.1.0.0 or 8.1.1.1.0, and earlier versions (8.0.6.1.0 or higher) of the data models.

3. Understand the effect of OFSDF 8.1.0.0.0 or 8.1.1.0.0 or 8.1.1.1.0 Data Model changes on the OOB metadata and custom metadata.
4. Understand the effect of OFSDF 8.1.0.0.0 or 8.1.1.0.0 or 8.1.1.1.0 Data Model changes on the custom data.
5. From your data model at the site, you can decide to retain the custom existing tables and attributes that are discontinued in the OFSDF 8.1.0.0.0 OOB Data Model, as a part of the customization.

For the list of dropped data elements, see the [DROPPED DATAELEMENTS CUSTOMIZATION 81](#) document.

## 2.5.2 Preparation

This section explains the `ModelUpgrade.sh` file execution before the model upload.

### Topics:

- [Prepare for Upgrade](#)
- [Configure the ModelUpgrade.conf File](#)
- [Execute the ModelUpgrade.sh File for the Prescripts](#)
- [Verify the Prescript Execution Log Files](#)

### 2.5.2.1 Prepare for Upgrade

For the upgrade preparation, follow these steps:

1. Ensure that you completed comparing the current custom 8.0.x Data Model in use at the site with the OFSDF 8.1.0.0.0 or 8.1.1.0.0 or 8.1.1.1.0 OOB Data Model (as required) using the Data Model Difference Reports, and understood the OFSDF 8.1.0.0.0 or 8.1.1.0.0 or 8.1.1.1.0 OOB Data Model changes. Understand the effect of OFSDF 8.1.0.0.0 or 8.1.1.0.0 or 8.1.1.1.0 OOB Data Model changes on the OOB metadata and custom metadata. The OFSDF 8.1.0.0.0 or 8.1.1.0.0 or 8.1.1.1.0 OOB Data Model changes result in a delta. Use this delta as a reference.
2. Based on the delta reference, merge the current custom 8.0.x Data Model at the site with the OFSDF 8.1.0.0.0 or 8.1.1.0.0 or 8.1.1.1.0 OOB Data Model (as required). As a result, a custom model is generated. Before proceeding with the custom model upload, [Execute the ModelUpgrade.sh File for the Prescripts](#).

#### NOTE

For the detail procedure about the data model merge process, see the *Data Model Merge Guidelines* section in the [Oracle Financial Services Analytical Applications \(OFSA\) Data Model Extension Guidelines Document Release 8.1.x](#).

#### ATTENTION

You must continue with the next steps only if the custom data model is generated successfully and there are no issues reported. Contact [My Oracle Support \(MOS\)](#) for any issues.

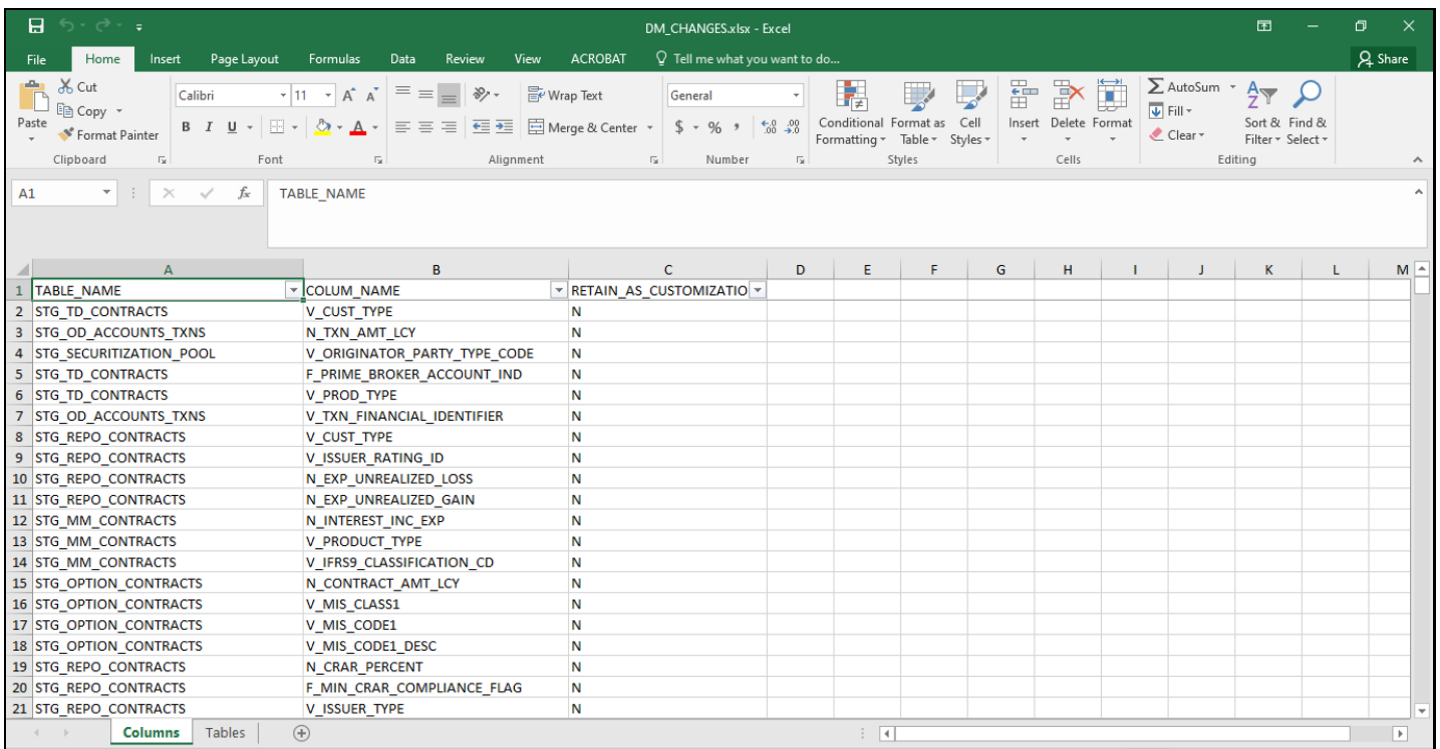
3. Log in to the system as a non-root user.

4. You must download and extract the OFSDF 8.1.0.0.0 or 8.1.1.0.0 or 8.1.1.1.0 OOB Data Model (as required) patch on the OFSAA installed host. See the [Download the OOB Data Model](#) section.
5. Execute the command line utility `MDBPublishExecution.sh` to publish metadata in the Metadata Browser. See the *Command Line Utility to Publish Metadata in Metadata Browser* section in the [Oracle Financial Services Analytical Applications \(OFSAA\) Metadata Browser User Guide Release 8.1.0.0.0](#).
6. Execute the `.profile` file.
7. Navigate to the `<OFSAA_HOME>/DMPatch/ModelUpgrade/` directory.
8. Assign the 755 permission to the `ModelUpgrade` directory using the following command:
 

```
chmod -R 755 ModelUpgrade
```
9. Execute the Data Model Upgrade Preparation utility to identify the metadata impact on the current 8.0.x environment. To execute the utility, follow these steps:
  - a. Copy the change-list into the `DM_CHANGES.xlsx` file.
  - b. Execute the following command:
 

```
./run.sh <OFSAA_HOME>/DMPatch/ModelUpgrade/DM_CHANGES.xlsx
```

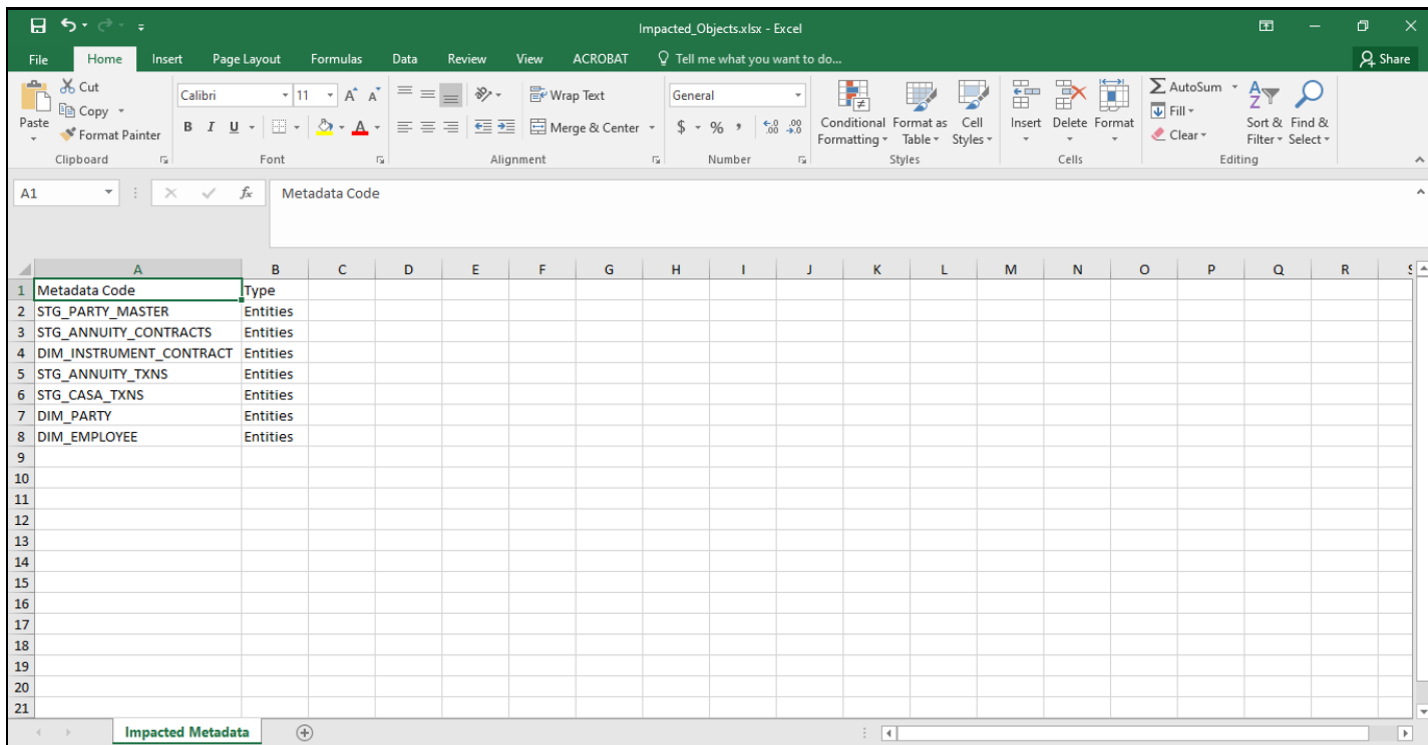
**Figure 2: Sample of the DM\_CHANGES.xlsx file content**



TABLE_NAME	COLUM_NAME	RETAIN_AS_CUSTOMIZATIO
STG_TD_CONTRACTS	V_CUST_TYPE	N
STG_OD_ACCOUNTS_TXNS	N_TXN_AMT_LCY	N
STG_SECURITIZATION_POOL	V_ORIGINATOR_PARTY_TYPE_CODE	N
STG_TD_CONTRACTS	F_PRIME_BROKER_ACCOUNT_IND	N
STG_TD_CONTRACTS	V_PROD_TYPE	N
STG_OD_ACCOUNTS_TXNS	V_TXN_FINANCIAL_IDENTIFIER	N
STG_REPO_CONTRACTS	V_CUST_TYPE	N
STG_REPO_CONTRACTS	V_ISSUER_RATING_ID	N
STG_REPO_CONTRACTS	N_EXP_UNREALIZED_LOSS	N
STG_REPO_CONTRACTS	N_EXP_UNREALIZED_GAIN	N
STG_MM_CONTRACTS	N_INTEREST_INC_EXP	N
STG_MM_CONTRACTS	V_PRODUCT_TYPE	N
STG_MM_CONTRACTS	V_IFRS9_CLASSIFICATION_CD	N
STG_OPTION_CONTRACTS	N_CONTRACT_AMT_LCY	N
STG_OPTION_CONTRACTS	V_MIS_CLASS1	N
STG_OPTION_CONTRACTS	V_MIS_CODE1	N
STG_OPTION_CONTRACTS	V_MIS_CODE1_DESC	N
STG_REPO_CONTRACTS	N_CRAR_PERCENT	N
STG_REPO_CONTRACTS	F_MIN_CRAR_COMPLIANCE_FLAG	N
STG_REPO_CONTRACTS	V_ISSUER_TYPE	N

- c. An `Impacted_Objects.xlsx` file is generated containing the impacted metadata list. In the generated file, the Metadata Code column is a reference to identify the impacted metadata.

**Figure 3: Sample of the generated Impacted\_Objects.xlsx file metadata list**



**NOTE**  
 Ensure to make the metadata changes before the custom 8.0.x Data Model upload to handle disruptive changes.

### 2.5.2.2 Configure the ModelUpgrade.conf File

To configure the ModelUpgrade.conf file, follow these steps:

1. Navigate to the <OFSA\_HOME>/DMPatch/ModelUpgrade/ directory.
2. Open the ModelUpgrade.conf file in a text editor. Enter required values. The parameters are listed and described in the following table:

Figure 4: ModelUpgrade.conf file sample

```
# Specify whether you want to perform Parallelism in ModelUpgrade script
# 0 = If you want to skip parallelism in Model Upgrade scripts
# 1 = If you want to perform parallelism Model Upgrade scripts
IS_PARALLEL=1

# Specify the value for Degree of parallelism in ModelUpgrade script
# Mandatory only if opted i.e you have specified IS_PARALLEL=1
DEGREE_OF_PARALLEL=19

#Specify whether backup/restore of Matadata
# 0 = If you want to skip Medatata backup and restore
# 1 = If you want to perform Medatata backup and restore
METADATA=1

#Specify whether backup/restore of Data
# 0 = If you want to skip Data backup and restore
# 1 = If you want to perform Data backup and restore
DATA=1
```

Table 3: Parameters for the ModelUpgrade.conf file

Property Name	Description of Property	Permissible values	Comments
IS_PARALLEL	Perform parallelism in the ModelUpgrade script	0 = Skip parallelism 1 = Perform parallelism	# Optional Default value is 1
DEGREE_OF_PARALLEL	Degree of parallelism in the ModelUpgrade script	Example: 19	# Mandatory when IS_PARALLEL = 1  Default value is 4
METADATA	Backup and restore the metadata or not	0 = Skip metadata backup and restore 1 = Perform metadata backup and restore	# Optional Default value is 1
DATA	Backup and restore the data or not	0 = Skip data backup and restore 1 = Perform data backup and restore	# Optional Default value is 1

3. Save the file.

### 2.5.2.3 Execute the ModelUpgrade.sh File for the Prescripts

To execute the `ModelUpgrade.sh` file for the prescripts, follow these steps:

#### NOTE

The ModelUpgrade utility is packaged in the OFSAA OOB Data Model patch of OFSAA applications (applications that consist of a data model). The application-specific Prescripts and Postscripts are packaged in that data model patch. At the site that houses multiple OFSAA applications, the `ModelUpgrade.sh` file can be executed only once.



If the data model patches of different OFSAA applications are unzipped in *different* folders, then the `ModelUpgrade.sh` file must be executed for each application pack. Oracle recommends unzipping the ModelUpgrade utility (data model patch) of all the OFSAA applications in the *same* folder.

The [DROPPED DATAELEMENTS CUSTOMIZATION 81](#) table consists of all the tables and columns discontinued from the OFSDF v8.1.0.0.0 OOB Data Model. Run the SQL query to view the table. Review the list and analyze the effects.

1. Log in to the system as a non-root user.
2. Navigate to the `<OFSAA_HOME>/DMPatch/ModelUpgrade/` directory.
3. Gather the schema stats for the atomic and config schemas.
4. Execute the `ModelUpgrade.sh` file with the `-SP` argument using the following command to split the packaged prescript SQL files:

```
./ModelUpgrade.sh -SP
```

#### NOTE

The following prescript SQL files are packaged in the `<OFSAA_HOME>/DMPatch/ModelUpgrade/<App_Pack>/` directory:

- `PreScript_conf_810.sql`
- `Preparation_Script_810.sql`
- `PreScript_backup_T2T_810.sql`
- `PreScript_SCD_Metadata_Backup_810.sql`
- `PreScript_DQ_Metadata_Backup_810.sql`
- `PreScript_Dim_Tables_Const.sql`
- `PreScript_Drop_Stg_tables_810.sql`
- `PreScript_Drop_Dim_tables_810.sql`
- `PreScript_Drop_Fct_tables_810.sql`
- `PreScript_Drop_Oth_tables_810.sql`

#### NOTE

In this step, the `-SP` argument splits the prescript SQL files using the coded spool command and stores in the `ftpshare/<INFODOM_NAME>/<App_Pack>/PRE` folder.

In a scenario where the ModelUpgrade Utility is already executed as a part of the OFSDF Application Pack upgrade installation and you need to execute the ModelUpgrade Utility for other OFSAA Applications, then you can skip this step and proceed with executing the prescripts with the `P` argument for that OFSAA Application.

#### NOTE

The OFSAA Applications must package the application-specific prescript SQL files in the `<OFSAA_HOME>/DMPatch/ModelUpgrade/<App_Pack>/` directory.

5. The following message is displayed in the console:

*Triggering the utility for PreScript splitting. Do you wish to proceed? (Y/N):*

Enter **Y** to proceed with splitting the packaged prescript SQL files.

**Figure 5: Execute the Prescripts with the –SP argument**

```
.profile executed
/scratch/oidfuser>cd /scratch/oidfuser/DMPatch/ModelUpgrade
/scratch/oidfuser/DMPatch/ModelUpgrade>./ModelUpgrade.sh -SP
.profile executed
fetch complete

contents -----
INFODOM is: FSDFINFO
Creating folder in ftpshare for FSDF
=====
You have chosen SPLITPRESCRIPT mode
=====
Triggering the utility for PreScript splitting. Do you wish to proceed? (Y/N):
Y
split config pre-scripts
split atomic pre-scripts
█
```

After the split, the prescript files are generated and segregated in the ftpshare/<INFODOM\_NAME>/<App\_Pack>/PRE folder.

The PRE folder consists of the sub-folders, and they are listed in the following table. All the application-specific Data Model entities are available in these sub-folders.

**Table 4: Sub-folders generated in the PRE folder of the OFSDF Application Pack**

Sub-folder Name	Description
CONST	Stores the constraint entities related prescript files. The file names are in the format Pre_<Entity_Name>_constraints.sql.
DIM	Stores the Dimension table prescript files. The file names are in the format Pre_<Dimension_Table_Name>.sql.
DQ	Stores the following DQ prescript files: <ul style="list-style-type: none"> <li>Pre_DQ_CHECK_MASTER_810.sql</li> <li>Pre_DQ_GROUP_MAPPING_810.sql</li> <li>Pre_T_DQ_CHECK_MASTER_810.sql</li> <li>Pre_T_DQ_CHECK_MASTER_FNL_810.sql</li> <li>Pre_T_DQ_GROUP_MAPPING_810.sql</li> </ul>
FCT	Stores the Fact table prescript files. The file names are in the format Pre_<Target_Table_Name>.sql.
OTH	Stores the prescript files related to other entities such as FSI, Currency Conversion, and so on. The file names are in the format Pre_<Entity_Name>.sql.

Sub-folder Name	Description
SCD	Stores the backup of the SYS_TBL_MASTER and STG_JOIN_MASTER tables, and the list of possible impacted SCD metadata in the following temporary files: <ul style="list-style-type: none"> <li>Pre_SYS_S_TBL_MASTER_810.sql</li> <li>Pre_SYS_STG_JOIN_MASTER_810.sql</li> <li>Pre_T_SYS_S_TBL_MASTER_810.sql</li> <li>Pre_T_SYS_STG_JOIN_MASTER_810.sql</li> <li>Pre_T_SYS_STG_JOIN_MASTER_FNL_810.sql</li> </ul>
STG	Stores the Stage table prescript files. The file names are in the format Pre_<Stage_Table_Name>.sql.
T2T	Stores the T2T metadata backup file. The file names are in the format Pre_<T2T_Metadata_backup>.sql. <b>NOTE:</b> Only a backup of the T2T metadata is saved during the prescript execution. After the postscript execution, the restoration of the T2Ts as a part of the customization is <i>not</i> supported.

6. The following message is displayed in the console:

*Triggering the utility for generating master control files for pre script. Do you wish to proceed? (Y/N):*

Enter **Y** to proceed with generating the master control files `atomic_pre.sql` and `config_pre.sql` for the prescripts split in the previous step.

**Figure 6: Generate the master control files for prescripts**

```
split of PreScript files, Status : SUCCESS
=====
Triggering the utility for generating master control files for pre script. Do you wish to proceed? (Y/N):
Y
Metadata backup is select as 1 hence proceeding for Master file generation..
Data backup is selected as 1 hence proceeding with Master File generation..
```

The master control files `atomic_pre.sql` and `config_pre.sql` are generated in the `ftpshare/<INFODOM_NAME>/<App_Pack>` folder.

#### NOTE

You can modify the `atomic_pre.sql` and `config_pre.sql` file content before executing the `ModelUpgrade.sh` file with the `P` argument.

7. Execute the `ModelUpgrade.sh` file with the `P` argument using the following command to back up the tables, columns, and metadata that are a part of the customization:

```
./ModelUpgrade.sh P
```

**Figure 7: Execute the Prescripts with the P argument**

```

master control file generation for PreScript files, Status : SUCCESS
/scratch/oidfuser/DMPatch/ModelUpgrade>./ModelUpgrade.sh P
.profile executed
fetch complete

contents -----
INFODOM is: FSDFINFO
Creating folder in ftpshare for FSDF

```

8. The following message is displayed in the console:

*Triggering the utility for executing master control files for pre script. Do you wish to proceed? (Y/N):*

Enter **Y** to proceed with executing the master control files `atomic_pre.sql` and `config_pre.sql`.

**Figure 8: Execute the master control files for prescript**

```

=====
You have chosen PREPARE mode
=====
The master control files and individual sql files are expected to reviewed...
=====
Triggering the utility for executing master control files for pre script. Do you wish to proceed? (Y/N):

```

### ATTENTION

The following table consists of the prescript SQL files packaged in the OFSDF Data Model patch kit. These file names maybe same in each OFSAA Application Data Model patch.

The tables and columns present in the `Preparation_Script_810.sql` file are OFSDF v8.1 Application Pack specific information.

The following prescript SQL files are packaged in the `<OFSAA_HOME>/DMPatch/ModelUpgrade/<App_Pack>/` directory.

**Table 5: Prescript SQL File Executed in the master control file `config_pre.sql` of the OFSDF Application Pack**

Executed Prescript File Sequenced in the Master Control File	Purpose of the Sequenced Prescript File
<code>PreScript_backup_T2T_810.sql</code>	This script spools out the split SQL file in the directory <code>ftpshare/&lt;INFODOM_NAME&gt;/&lt;App_Pack&gt;/PRE/T2T/</code> . This script takes the backup of T2T metadata from the config schema and disables the current T2Ts.

### NOTE

`configPreScripts.sql` is the config schema related procedure script file. The `configPreScripts.sql` file calls the `PreScript_backup_T2T_810.sql` file.

Do not change the file name and content of `configPreScripts.sql`.

**Table 6: Prescript SQL Files Executed in the master control file `atomic_pre.sql` of the OFSDF Application Pack**

Executed Prescript File Sequenced in the Main File	Purpose of the Sequenced Prescript File
atomicPreScripts.sql	<p>This is an atomic schema related script file. This script executes the anonymous blocks present in the following files in this sequence to generate the SQL files in the respective folders:</p> <ol style="list-style-type: none"> <li>1. PreScript_conf_810.sql</li> <li>2. Preparation_Script_810.sql</li> <li>3. PreScript_SCD_Metadata_Backup_810.sql</li> <li>4. Prescript_DQ_Metadata_Backup_810.sql</li> <li>5. PreScript_Dim_Tables_Const.sql</li> <li>6. PreScript_Drop_Stg_tables_810.sql</li> <li>7. PreScript_Drop_Dim_tables_810.sql</li> <li>8. PreScript_Drop_Fct_tables_810.sql</li> <li>9. PreScript_Drop_Oth_tables_810.sql</li> </ol>
PreScript_conf_810.sql	<p>This script creates the UTIL_STATUS table. The UTIL_STATUS table contains the execution status of the ModelUpgrade.sh file.</p> <p>The APP_ID column represents the application pack for which the data model upload will be done. The IS_EXEC_FLAG column indicates whether the ModelUpgrade.sh is executed or not. Executing the ModelUpgrade.sh file with the P argument sets the IS_EXEC_FLAG flag to Y.</p> <p>The default value of the IS_EXEC_FLAG column is N.</p> <p>NOTE: select * from UTIL_STATUS query needs to be in Atomic Schema.</p>
Preparation_Script_810.sql	<p>This script creates the <a href="#">DROPPED DATAELEMENTS CUSTOMIZATION 81</a> table. This table consists of all the tables and columns discontinued since the OFSDF v8.1.0.0.0 OOB Data Model. You can query this table to see the detailed information.</p>
PreScript_Dim_Tables_Const.sql	<p>This script creates SQL scripts that take backup and disable all the Dimension table constraints or FSI table constraints during the execution of the ModelUpgrade.sh file with P argument.</p>
PreScript_Drop_Dim_tables_810.sql	<p>This script creates SQL scripts that take backup of all the Dimension tables and truncate the existing data during the execution of the ModelUpgrade.sh file with P argument.</p>
PreScript_Drop_Fct_tables_810.sql	<p>This script creates SQL scripts that take backup of all the Fact tables and truncate the existing data during the execution of the ModelUpgrade.sh file with P argument.</p>
PreScript_Drop_Oth_tables_810.sql	<p>This script creates SQL scripts that take backup of all the other tables and truncate the existing data during the execution of the ModelUpgrade.sh file with P argument.</p>
PreScript_Drop_Stg_tables_810.sql	<p>This script creates SQL scripts that take backup of all the Stage tables and truncate the existing data during the execution of the ModelUpgrade.sh file with P argument.</p>

Executed Prescript File Sequenced in the Main File	Purpose of the Sequenced Prescript File
PreScript_SCD_Metadata_Backup_810.sql	The script creates backup script for respective SCD metadata tables. The script consists of delete scripts to delete the records from metadata tables for the impacted tables and columns.
Prescript_DQ_Metadata_Backup_810.sql	The script creates backup script for respective DQ metadata tables. The script consists of delete scripts to delete the records from metadata tables for the impacted tables and columns.

**NOTE**

Do not change the `atomicPreScripts.sql` file name and content.

**ATTENTION**

To rerun the `ModelUpgrade.sh` file for the prescripts, take a backup of the prescript SQL files, delete only the failed prescript entries from the `OFFLINE_SCRIPTS_DETAILS` table that failed during the execution, set the `IS_EXEC_FLAG` flag from Y to N in the `UTIL_STATUS` table, and then execute the `ModelUpgrade.sh` file with the `P` argument again to re-execute the failed scripts.

- To verify the log information, see the [Verify the Prescript Execution Log Files](#) section.

For information about the *metadata* approach, see the [Metadata Approach during the Upgrade](#) section. For information about the *data* approach, see the [Data Approach during the Upgrade](#) section.

## 2.5.2.4 Verify the Prescript Execution Log Files

See the following logs for more information:

- The log file `<App_Pack>ModelUpgradeStatus.log` in the `<OFSAA_HOME>/DMPatch/ModelUpgrade/logs/<App_Pack>/` directory.  
For example, for OFSDF v8.1.0.0.0, the directory is `30812072_GENERIC/ModelUpgrade/logs/OFS_FSDF/`.
- After splitting the pre SQL files, the errors occurred are logged in the `FSI_MESSAGE_LOG` table in the format 'Script Pre\_<Entity\_Name>.sql Failed due to error'.
- The `FSI_MESSAGE_LOG` table.

**NOTE**

In the log file `<App_Pack>ModelUpgradeStatus.log`, `<App>` is the folder name in the respective OFSAA application. The folder naming convention is based on the `APP_ID` parameter mentioned in the Infodom patches.

**NOTE**

For information about the error codes that occur during the Prescripts execution, see the [Error Code Dictionary](#) section.

## 2.5.3 Execution

This section explains the `ModelUpgrade.sh` file execution during the upgrade process.

### Topics:

- [Execute the ModelUpgrade.sh File for the Postscripts](#)
- [Verify the Postscript Execution Log Files](#)
- [Restoration Process if any T2T Customizations are already present at the site before Upgrade](#)
- [Apply the Metadata Customization as per your Requirement](#)

In the execution stage, perform the following steps:

1. Upload the custom model on the existing OFSAA environment and ensure that the data model upload is free of errors.

#### ATTENTION

You must continue with the next steps only if the custom data model upload is successful and there are no issues reported. Contact [My Oracle Support \(MOS\)](#) for any issues.

#### NOTE

For more information, see the *Model Upload Using erwin*, *Model Upload Using DB Catalog*, and *Model Upload Using OFSAA Data Model Descriptor (Database.XML) File* sections in the [Oracle Financial Services Advanced Analytical Applications Infrastructure User Guide Release 8.1.x](#).

2. Upgrade the existing version of your OFSAA application to v8.1.0.0.0 or v8.1.1.0.0 or v8.1.1.1.0 (as required). Your OFSAA application v8.1.0.0.0 (or v8.1.1.0.0 or v8.1.1.1.0) installer is packaged in your application-specific installer kit. See your application-specific and version-specific *Installation Guide v8.1.x* for the installation and configuration information.

#### NOTE

For example, upgrade the current version of the OFSDF Application Pack to v8.1.0.0.0 or v8.1.1.0.0 or v8.1.1.1.0. The OFSDF Application Pack v8.1.0.0.0 installer is packaged in the OFSDF v8.1.0.0.0 installer kit. For the detail upgrade installation process for the OFSDF Release 8.1.0.0.0, see the *Upgrade* section in the [Oracle Financial Services Data Foundation Application Pack Installation and Configuration Guide Release 8.1.0.0.0](#).

#### NOTE

After upgrading OFSDF from 8.0.6.1.0 to 8.1.0.0.0 (or 8.1.1.0.0 or 8.1.1.1.0), an error occurs in the alter table `AAI_WF_PROCESS_EXE_ATTR_HIST` with the following error message: `ORA-01430: column being added already exists in table`. You can ignore the error.

3. Ensure that the OFSAA application upgrade installation is free of errors.

**ATTENTION**

You must continue with the next steps only if the application upgrade installation is successful and there are no issues reported. Contact [My Oracle Support \(MOS\)](#) for any issues.

### 2.5.3.1 Execute the ModelUpgrade.sh File for the Postscripts

To execute the `ModelUpgrade.sh` file for the postscripts, follow these steps:

1. Log in to the system as a non-root user.
2. Navigate to the `<OFSAA_HOME>/DMPatch/ModelUpgrade/` directory.
3. Gather the schema stats for the atomic and config schemas.
4. Execute the `ModelUpgrade.sh` file with the `-SR` argument using the following command to split the packaged postscript SQL files:

```
./ModelUpgrade.sh -SR
```

**NOTE**

The following postscript SQL files are packaged in the `<OFSAA_HOME>/DMPatch/ModelUpgrade/<App_Pack>/` directory:

- `PostScript_Dim_Tables_Disable_Const.sql`
- `PostScript_SCD_Restore_Metadata_810.sql`
- `PostScript_DQ_Restore_Metadata_810.sql`
- `PostScript_Restore_Specific_Tbl_Cols_810.sql`
- `PostScript_Restore_FCT_Tbl_Cols_810.sql`
- `PostScript_Restore_DIM_Tbl_Cols_810.sql`
- `PostScript_Restore_STG_Tbl_Cols_810.sql`
- `PostScript_Dim_Tables_Const.sql`

**NOTE**

In this step, the `-SR` argument splits the postscript SQL files using the coded spool command and stores in the `ftpshare/<INFODOM_NAME>/<App_Pack>/POST` folder. In a scenario where the ModelUpgrade Utility is already executed as a part of the OFSDF Application Pack upgrade installation and you need to execute the ModelUpgrade Utility for other OFSAA Applications, then you can skip this step and proceed with executing postscripts with the `R` argument for that OFSAA Application.

**NOTE**

The OFSAA Applications must package the application-specific postscript SQL files in the `<OFSAA_HOME>/DMPatch/ModelUpgrade/<App_Pack>/` directory.



- The following message is displayed in the console:

*Triggering the utility for PostScript splitting. Do you wish to proceed? (Y/N):*

Enter **Y** to proceed with splitting the packaged postscript SQL files.

**Figure 9: Execute the Postscripts with the –SR argument**

```

/scratch/oidfuser/DMPatch/ModelUpgrade>./ModelUpgrade.sh -SR
.profile executed
clean logs
fetch complete

contents -----
INFODOM is: FSDFINFO
Creating folder in ftpshare for FSDF
mkdir: cannot create directory '/scratch/oidfuser/ftpshare/FSDFINFO/OFS_FSDF': File exists
=====
You have chosen SPLITPOSTSCRIPT mode
=====
Triggering the utility for PostScript splitting. Do you wish to proceed? (Y/N):
Y
split config post-scripts
split atomic post-scripts
    
```

**NOTE**

After the split, the postscript files are generated and segregated in the ftpshare/<INFODOM\_NAME>/<App\_Pack>/POST folder.

The POST folder consists of the sub-folders, and they are listed in the following table. All the application-specific Data Model entities are available in these sub-folders.

**Table 7: Sub-folders in the POST folder of the OFSDF Application Pack**

Sub-folder Name	Description
DISABLE_CONST	Stores the disabled constraint entities related postscript files. The file names are in the format Post_<Entity_Name>_d_constraints.sql.
CONST	Stores the constraint entities related postscript files. The file names are in the format Post_<Entity_Name>_constraints.sql.
DIM	Stores the Dimension table postscript files. The file names are in the format Post_<Dimension_Table_Name>.sql.
DQ	Stores the DQ postscript files.
FCT	Stores the Fact table postscript files. The file names are in the format Post_<Target_Table_Name>.sql.
OTH	Stores the postscript files related to other entities such as FSI, Currency Conversion, and so on. The file names are in the format Post_<Entity_Name>.sql.
SCD	Stores the postscript files to restore the SYS_TBL_MASTER and STG_JOIN_MASTER tables, and the list of possible impacted SCD metadata in the temporary files.
STG	Stores the Stage table postscript files. The file names are in the format Post_<Stage_Table_Name>.sql.

- The following message is displayed in the console:

*Triggering the utility for generating master control files for Post script. Do you wish to proceed? (Y/N):*

Enter **Y** to proceed with generating the master control files `atomic_post.sql` and `config_post.sql` for postscripts.

**Figure 10: Generate the master control files for postscripts**

```
split of postscript files, Status : SUCESS
=====
Triggering the utility for generating master control files for Post script. Do you wish to proceed? (Y/N):
Y
Metadata backup is select as 1 hence proceeding for Master file generation..

Data backup is selected as 1 hence proceeding with Master File generation..
dos2unix: converting file /scratch/oidfuser/ftpshare/FSDFINFO/OFS_FSDF/atomic_post.sql to Unix format ...
master control file generation for PostScript files, Status : SUCESS
```

### NOTE

The master control files `atomic_post.sql` and `config_post.sql` are generated in the `ftpshare/<INFODOM_NAME>/<App_Pack>` folder.

7. After the successful splitting of the Postscript files, execute the `ModelUpgrade.sh` file with the `R` argument using the following command to restore the data and metadata:

```
./ModelUpgrade.sh R
```

**Figure 11: Execute the Postscripts with the R argument**

```
/scratch/oidfuser/DMPatch/ModelUpgrade>./ModelUpgrade.sh R
.profile executed
fetch complete

contents -----
INFODOM is: FSDFINFO
Creating folder in ftpshare for FSDF
mkdir: cannot create directory '/scratch/oidfuser/ftpshare/FSDFINFO/OFS_FSDF': File exists
=====
You have chosen RESTORE mode
=====
```

As a result, the postscript files are executed.

### NOTE

To exclude the execution of any postscript file, comment out that file name in the `atomic_post.sql` file before execution.

Do not edit the `atomicPostScripts.sql` file.

8. The following message is displayed in the console:

*Triggering the utility for executing master control files for pre script. Do you wish to proceed? (Y/N):*

Enter **Y** to proceed with executing the master control files `atomic_post.sql` and `config_post.sql` for postscripts.

**Figure 12: Execute the master control files for postscripts**

```

=====
You have chosen RESTORE mode
=====
The master control files and individual sql files are expected to reviewed...
=====
Triggering the utility for executing master control files for post script. Do you wish to proceed? (Y/N) :
Y

```

9. As a result, the postscript files are executed.

#### ATTENTION

The following table consists of the postscripts packaged in the OFSDF Data Model patch kit. These file names are different for each Application Data Model patch.

The postscript files are present in the

<OFSAA\_HOME>/DMPatch/ModelUpgrade/<App\_Pack>/ directory. The OFSAA Applications must package their application-specific postscript files in this directory.

#### NOTE

Do not change the `config_post.sql` file name.

**Table 8: Postscript Files executed in the master control Postscript atomic\_post.sql file of the OFSDF Application Pack**

Executed Postscript File Sequenced in the Main File	Purpose of the Sequenced Postscript File
atomicPostScripts.sql	<p>This is an atomic schema related script file. This script executes the anonymous blocks present in the in the following files in a parallel sequence to generate the SQL files in the respective folders:</p> <ol style="list-style-type: none"> <li>10. PostScript_Dim_Tables_Disable_Const.sql</li> <li>11. PostScript_SCD_Restore_Metadata_810.sql</li> <li>12. PostScript_DQ_Restore_Metadata_810.sql</li> <li>13. PostScript_Restore_Specific_Tbl_Cols_810.sql</li> <li>14. PostScript_Restore_FCT_Tbl_Cols_810.sql</li> <li>15. PostScript_Restore_DIM_Tbl_Cols_810.sql</li> <li>16. PostScript_Restore_STG_Tbl_Cols_810.sql</li> <li>17. PostScript_Dim_Tables_Const.sql</li> </ol> <p>After the successful execution of these procedures with R argument, in the UTIL_STATUS table, the IS_EXEC_FLAG column is set to Y.</p>
PostScript_Dim_Tables_Disable_Const.sql	This script disables the Dimension table constraints.

Executed Postscript File Sequenced in the Main File	Purpose of the Sequenced Postscript File
PostScript_SCD_Restore_Metadata_810.sql	This script restores the SCD metadata that was backed up during the prescript execution (retained for customization).
PostScript_DQ_Restore_Metadata_810.sql	This script restores the DQ metadata that was backed up during the prescript execution (retained for customization).
PostScript_Restore_Specific_Tbl_Cols_810.sql	This script restores or appends the data in the tables where Not Null columns are newly added (in the v8.1.0.0.0 or v8.1.1.0.0 or v8.1.1.1.0 OOB Data Model).
PostScript_Restore_FCT_Tbl_Cols_810.sql	This packaged script splits the SQL files that are going to be executed during the execution of the ModelUpgrade.sh file with R argument. Only the columns containing data are restored. The data restoration is implemented using the condition 'and num_distinct > 0' in the column related SQL query in the file. <b>NOTE:</b> To arrive at this condition, it is mandatory to identify the metadata impact on the current 8.0.x environment.
PostScript_Restore_DIM_Tbl_Cols_810.sql	This packaged script splits the SQL files that are going to be executed during the execution of the ModelUpgrade.sh file with R argument. Only the columns containing data are restored. The data restoration is implemented using the condition 'and num_distinct > 0' in the column related SQL query in the file. <b>NOTE:</b> To arrive at this condition, it is mandatory to identify the metadata impact on the current 8.0.x environment.
PostScript_Restore_STG_Tbl_Cols_810.sql	This packaged script splits the SQL files that are going to be executed during the execution of the ModelUpgrade.sh file with R argument. Only the columns containing data are restored. The data restoration is implemented using the condition 'and num_distinct > 0' in the column related SQL query in the file. <b>NOTE:</b> To arrive at this condition, it is mandatory to identify the metadata impact on the current 8.0.x environment.
PostScript_Dim_Tables_Const.sql	This packaged script splits the SQL files that are going to be executed during the execution of the ModelUpgrade.sh file with R argument. This script enables all constraints created on any table, which is a part of the impacted object.

**NOTE**

Do not change the `atomic_post.sql` file name.

**ATTENTION**

To rerun the `ModelUpgrade.sh` file for the postscripts, delete only the failed prescript entries from the `OFFLINE_SCRIPTS_DETAILS` table and then execute the `ModelUpgrade.sh` file with the `R` argument again.

The DQs and SCDs metadata that you had retained as a part of the customization, only those DQs, and SCDs metadata are restored.

The restoration of the T2Ts as a part of the customization is *not* supported.

The enablement of the T2Ts as a part of the customization is *not* supported.

**NOTE**

When the `ModelUpgrade.sh` file is executed for the postscripts, the data elements in the `DROPPED_DATAELEMENTS_CUSTOMIZATION_81` table are compared with the master copy of the tables (`REV_TABLES_B`) and columns (`REV_TAB_COLUMNS`) in the custom model at the site.

If any dropped data elements marked (for customization or retaining) in the `DROPPED_DATAELEMENTS_CUSTOMIZATION_81` table are also present in the master copy of the tables and columns, then the data is restored for those data elements in the output data model.

For example:

The `STG_CUSTOMER_MASTER` table is dropped from the OFSDF v8.1.0.0.0 OOB Data Model packaged by OFSDF. Therefore, the `STG_CUSTOMER_MASTER` table is present in the `DROPPED_DATAELEMENTS_CUSTOMIZATION_81` table packaged by the OFSDF.

Now if you have opted to retain the `STG_CUSTOMER_MASTER` table, then after the postscripts execution, you can see this table in the `REV_TABLES_B` master copy and the data is restored in the table.

10. The Data Analysts at the site must review the upgraded environment before proceeding with the batch execution. For more information, see the [Apply the Metadata Customization as per your Requirement](#) section.
11. To verify the log information, see the [Verify the Postscript Execution Log Files](#) section.

**2.5.3.2 Verify the Postscript Execution Log Files**

See the following logs for more information:

- The log file `<App_Pack>ModelUpgradeStatus.log` in the `<OFSAA_HOME>/DMPatch/ModelUpgrade/logs/<App_Pack>/` directory.  
For example, for OFSDF v8.1.0.0.0, the directory is `30812072_GENERIC/ModelUpgrade/logs/OFS_FSDF/`.
- After splitting the post SQL files, the occurred errors are logged in the `FSI_MESSAGE_LOG` table in the format `'Script Post_<Entity_Name>.sql Failed due to error'`.
- The `FSI_MESSAGE_LOG` table.

**NOTE**

In the log file <App\_Pack>ModelUpgradeStatus.log, <App> is the folder name in the respective OFSAA Application. The folder naming convention is based on the APP\_ID parameter mentioned in the Infodom patches.

For information about the error codes that occur during the Postscript execution, see the [Error Code Dictionary](#) section.

### 2.5.3.3 Restoration Process if any T2T Customizations are already present at the site before Upgrade

If there are any T2T customizations already present at the site even before the upgrade, follow the procedure in the subsequent sections to restore the customized T2Ts (after the ModelUpgrade.sh file execution for the Postscripts).

#### NOTE

After the upgrade installation completes, verify that all the database objects used in these customized T2Ts are present in the merged data model.

#### 2.5.3.3.1 T2T is *not* a part of the v8.1.0.0.0 (or v8.1.1.0.0 or v8.1.1.1.0) OOB Data Model

To restore the customized T2T when it is *not* a part of the v8.1.0.0.0 (or v8.1.1.0.0 or v8.1.1.1.0) OOB Data Model, run the following query to update the record for the <max\_value> of the N\_VERSION column:

```
UPDATE AAI_OBJECT_B SET F_IS_RECORD_LATEST = 'Y' WHERE V_OBJ_SUBTYPE_CODE='T2T'
AND F_IS_RECORD_LATEST = 'N' AND V_OBJ_CODE = '<T2T_NAME>' and
N_VERSION=<max_value>;
COMMIT;
```

#### NOTE

<T2T\_NAME> is the customized T2T.

#### 2.5.3.3.2 T2T is a part of the v8.1.0.0.0 (or v8.1.1.0.0 or v8.1.1.1.0) OOB Data Model

To restore the customized T2T when it is a part of the v8.1 OOB Data Model, follow these steps:

1. Update the record for the <max\_value> of the N\_VERSION column to *disable* the new T2T, which is a part of the v8.1.0.0.0 (or v8.1.1.0.0 or v8.1.1.1.0) OOB Data Model. Run the following query:

```
UPDATE AAI_OBJECT_B SET F_IS_RECORD_LATEST = 'N' WHERE
V_OBJ_SUBTYPE_CODE='T2T' AND F_IS_RECORD_LATEST = 'Y' AND V_OBJ_CODE
='<T2T_NAME>' AND N_VERSION=<max_value>;
COMMIT;
```

#### NOTE

<T2T\_NAME> is the customized T2T.

2. Update the record for the <2nd\_max\_value> of the N\_VERSION column to *enable* the previous T2T. Run the following query:

```
UPDATE AAI_OBJECT_B SET F_IS_RECORD_LATEST = 'Y' WHERE
V_OBJ_SUBTYPE_CODE='T2T' AND F_IS_RECORD_LATEST = 'N' AND V_OBJ_CODE
='<T2T_NAME>' AND N_VERSION=<2nd_max_value>;

COMMIT;
```

**NOTE**

The previous T2T is the T2T that is a part of the previous data model at the site before the upgrade process.

<T2T\_NAME> is the customized T2T.

### 2.5.3.4 Apply the Metadata Customization as per your Requirement

This section provides information about the metadata customization that you can apply as per the requirement.

If you had decided to retain the table for customization during the metadata approach for the table drop:

- For DQs and SCDs, you can add or maintain the Batch or Task as a part of the custom Run Chart.

**NOTE**

When the SCDs and DQs are restored, the SCD batch details and DQ batch details are not restored. You must handle all the batch related actions. This is applicable for the SCDs and DQs for which the metadata is discontinued in the v8.1.0.0.0 OOB Data Model (and as a result, discontinued in the v8.1.1.0.0 or v8.1.1.1.0).

- For T2Ts, after the upgrade installation, the Data Analysts at the site must review the list of restored tables and columns that are a part of the T2Ts; and then add those T2Ts to the Process Modeling Framework (PMF). The restoration of T2Ts must be manually done by the team at the site. See the [Oracle Financial Services Data Foundation Run Chart Release v8.1.x](#).

**NOTE**

For existing T2Ts, the flag column F\_IS\_RECORD\_LATEST is set to N and for the new T2Ts of the 8.1.0.0.0 (or 8.1.1.0.0 or 8.1.1.1.0) Data Model, the flag column F\_IS\_RECORD\_LATEST is set to Y. You must manually enable the flag column F\_IS\_RECORD\_LATEST and then execute the T2Ts.

For the Fact tables, only if the related Stage and the Dimension tables are available, then the data in the Fact tables is restored.

All the tables and columns that are a part of the T2Ts must be restored, and only then, you can proceed to the customization.

In the metadata approach for the column drop:

- For DQs, you can maintain the Batch or Task as a part of the custom Run Chart.
- For SCDs, you can continue to use the OOB Batch or Task.
- For T2Ts, you must review the OOB and 8.0.x metadata to arrive at the post-upgrade customizations.

## 2.5.4 Message Code Dictionary

This section provides information of the Message Codes that occur during the Prescripts and Postscripts execution in the ModelUpgrade utility.

**Table 9: Message Code Dictionary**

MESSAGE_CD	Cause	Resolution
20001	T2T Metadata backup script is successfully created	No action required
20002	SCD Metadata Restore Script for customized tables and columns is successfully created	No action required
20002	SCD Metadata backup script for dropped tables and columns is successfully created	No action required
20003	DQ Metadata Restoration Script for customized tables and columns is successfully created	No action required
20003	DQ Metadata backup script for dropped tables and columns is successfully created	No action required
20004	Constraints disabling script for Dim/other tables is successfully created which got dropped as part of post script execution	No action required
20004	Constraints enabling scripts for Dim Tables is successfully created	No action required
20004	Table backup script for Fct Tables is successfully created which got dropped	No action required
20004	Table backup script for Dim Tables is successfully created which got dropped	No action required
20004	Constraints disabling script for Dim/other tables is successfully created which got dropped	No action required
20004	Table backup Scripts for Other tables are successfully generated	No action required
20004	Backup script for Stg tables is successfully created which got dropped	No action required
20010	Data Restoration Script for Specific case tables/columns is successfully created	No action required
20010	Data Restoration Scripts for Stg tables/columns is successfully created	No action required
20010	Data Restoration Scripts for FCT tables/columns is successfully created	No action required
20010	Data Restoration scripts for customized Dim tables/columns is successfully created	No action required



---

MESSAGE_CD	Cause	Resolution
20012	Script <script_filename> Failed due to error   SQLERRM	Verify the FSI_MESSAGE_LOG table with the message code 20012 for all the failed SQL script errors.

## 3 Data and Metadata Approach during the Upgrade

This section provides information about the approach to be taken for the data and metadata during the upgrade process.

### Topics:

- [Data Approach during the Upgrade](#)
- [Metadata Approach during the Upgrade](#)

### 3.1 Data Approach during the Upgrade

For the upgrade process, the data approach is considered for the table drops and column drops as explained in the following sections.

### Topics:

- [Table Drops](#)
- [Column Drops](#)

#### 3.1.1 Table Drops

The data approach scenarios for the table drops are illustrated in the following table.

**Table 10: Data Approach Scenarios for the Table Drop**

Data Approach Scenarios	ModelUpgrade Utility		
	During Prescripts Execution		During Postscripts Execution
	Data backed up?	Table backed up?	Data restored in the table?
<b>Dropped table is retained</b>	Yes	Yes	Yes
<b>Table had PK changes</b>	Yes		

#### 3.1.2 Column Drops

The data approach scenarios for the column drops are illustrated in the following table.

**Table 11: Data Approach for the Column Drop**

Data Approach Scenarios		ModelUpgrade Utility								
		Is ModelUpgrade Utility supported?	During Prescripts Execution				During Postscripts Execution			
			Is ModelUpgrade Utility supported?	Data is backed up?	Table is backed up?	Table is truncated?	Default value loaded in column?	Data is restored in column?	Data restored in table?	Table is restored?
<b>Stage/Dimension/Fact Table</b>	Existing column is made Not Null	YES				YES				
	PK column is dropped/added	YES				YES				
	Dropped column is retained	YES	YES	YES	YES		YES	YES	YES	
<b>Stage Table</b>	Column dropped but not retained	YES	YES	YES		YES				

## 3.2 Metadata Approach during the Upgrade

For the upgrade process, the metadata approach is considered for the Table Drops and Column Drops as explained in the following sections.

### ATTENTION

The DQs and SCDs metadata that you had retained as a part of the customization, only those DQs, and SCDs metadata are restored.

The restoration of the T2Ts as a part of customization is not supported.

#### Topics:

- [Table Drops](#)
- [Column Drops](#)

### 3.2.1 Table Drops

This section provides information about the metadata approach scenarios for the table drops.

#### Topics:

- [If the table is retained as a part of the merged data model](#)
- [If the table is not retained as a part of the merged data model](#)

The metadata approach scenarios for the table drops are as follows:

#### 3.2.1.1 If the table is retained as a part of the merged data model

- For DQs:
  - During the Prescripts execution in the ModelUpgrade utility:
    - All the DQs (of the table) are backed up in the DQ\_CHECK\_MASTER\_810 table and the dropped elements are removed as a part of the customization.
    - All the DQ Groups are backed up for customization in the DQ\_GROUP\_MAPPING\_810 table.
  - During the Postscripts execution in the ModelUpgrade utility, if the table or column used for the DQ is retained, then its metadata is restored:
    - In the DQ\_CHECK\_MASTER table for DQs.
    - In the DQ\_GROUP\_MAPPING table for the DQ Groups.
  - You can add or maintain the Batch or Task as a part of the custom Run Chart.
- For SCDs:
  - During the Prescripts execution in the ModelUpgrade utility:
    - All the SCDs are backed up for customization in the SYS\_TBL\_MASTER\_810 table.

- All the SCD *mappings* are backed up for customization in the SYS\_STG\_JOIN\_MASTER\_810 table.
- For the View-based SCD, review those database Views, the tables and columns that needs to be retained as a part of the customized Data Model. You need to review the source table View script and ensure that all the components (entities/attributes), which are used in that script, are customized in the merged model. Metadata for these SCDs need to be retained manually in the tables SYS\_TBL\_MASTER and SYS\_STG\_JOIN\_MASTER when metadata is not available in the upgraded version. The metadata may or may not be available.
- If both the Stage and Target tables are retained:
  - Then SCD *metadata* details are restored from the backup table SYS\_TBL\_MASTER\_810 to the SYS\_TBL\_MASTER table during the Postscripts execution in the ModelUpgrade utility.
  - Then SCD *mapping* details are restored from the backup table SYS\_STG\_JOIN\_MASTER\_810 to the SYS\_STG\_JOIN\_MASTER table during the Postscripts execution in the ModelUpgrade utility.
- You can maintain the Batch or Task as a part of your custom Run Chart.

**NOTE**

When the SCD and DQs are restored, the SCD batch details and the DQ batch details are not restored. You must handle all the batch related actions. This is applicable for the SCDs and DQs for which the metadata is discontinued in the v8.1 OOB Data Model.

- For all the T2Ts:
  - The flag column F\_IS\_RECORD\_LATEST is set to N automatically for the old T2Ts in the AAI\_OBJECT\_B table.
  - After the upgrade installation, the Data Analysts at the site must review the list of restored tables and columns that are a part of the T2Ts; and then add those T2Ts to the Process Modeling Framework (PMF). The restoration of T2Ts must be manually done by the team at the site. See the [Oracle Financial Services Data Foundation Run Chart Release v8.1.x](#).

**NOTE**

For existing T2Ts, the flag column F\_IS\_RECORD\_LATEST is set to N and for the new T2Ts of the 8.1 Data Model, the flag column F\_IS\_RECORD\_LATEST is set to Y. You must manually enable the flag column F\_IS\_RECORD\_LATEST and then execute the T2Ts.

For the Fact tables, only if the related Stage and the Dimension tables are available, then the data in the Fact tables is restored.

All the tables and columns that are a part of the T2Ts must be restored, and only then, you can proceed to the customization.

### 3.2.1.2 If the table is *not* retained as a part of the merged data model

- For DQs:
  - DQs are dropped.

- DQ group mappings are dropped.
- The Task and Batch references are deleted during the application upgrade installation process.
- For SCDs:
  - Map references are dropped.
  - The Task and Batch references are deleted during the application upgrade installation process.
- For T2Ts:
  - The flag column F\_IS\_RECORD\_LATEST is set to N in the AAI\_OBJECT\_B table.
  - The Task and Batch references are deleted during the application upgrade installation process.

### 3.2.2 Column Drops

The metadata approach for the column drops is as follows:

- For DQs:
  - Same as that of the DQs metadata approach scenario for the table drops. See the *For DQs* subsection in the [If the table is retained for the customization](#) section.
- For SCDs:
  - No impact on the SYS\_TBL\_MASTER table.
  - For the retained columns, during the Postscripts execution in the ModelUpgrade utility, the SCD *mappings* are restored from the SYS\_STG\_JOIN\_MASTER\_810 table to the SYS\_STG\_JOIN\_MASTER table.
  - You must review the database Views that are required for customization.
  - You can continue to use the OOB Batch or Task.
- For T2Ts:
  - The column F\_IS\_RECORD\_LATEST is set to N in the AAI\_OBJECT\_B table for all the T2Ts.
  - The Data Analysts at the site must review the OOB and 8.0.x metadata to decide the customizations after the upgrade installation because the restoration of the T2Ts as a part of the customization is *not* supported.

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