Oracle Financial Services

Data File Specification User Guide

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Oracle Financial Services Data File Specification User Guide, Release 24B

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Contents

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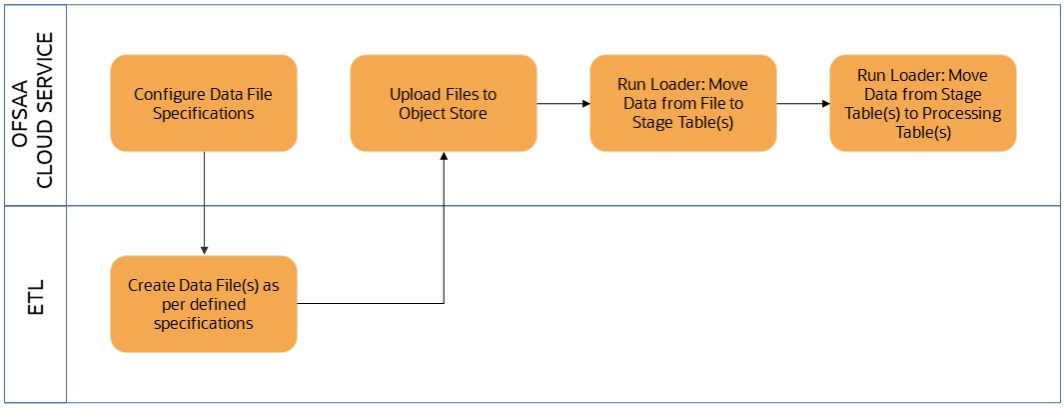
Loading External Data

The (OFSAA or Oracle) Cloud Services use following categories of data:

- Account or Instrument
- Management Ledger
- Transaction Summary
- Dimensions and Hierarchies
- Market data like Interest Rate, Currency Exchange Rate

The following illustration depicts the process of loading data from your systems into the Cloud Services:

Figure 1-1 Loading External Data



Oracle Cloud Services uses Oracle's Object Store Service to transfer data between your machine/laptop and its databases. Object Storage Service allows storing the files as objects in a highly secure, scalable, and durable way. Files can be uploaded through a Web Console; however, it is possible to do so only with files up to 1 GB.

Uploaded Data Files are temporarily stored in the Object Storage for Data Loaders to read and move them to the corresponding Database Tables for further use by the individual services.

Before the files can be created and uploaded, format, column order and other properties must be defined using Data File Specifications User Interface. This chapter discusses the supported formats and contents of the data file that is being imported into the Object Storage.

For information on uploading files, see the File Upload and Download section. For information on running the Data Loaders, see the Data Loaders section.

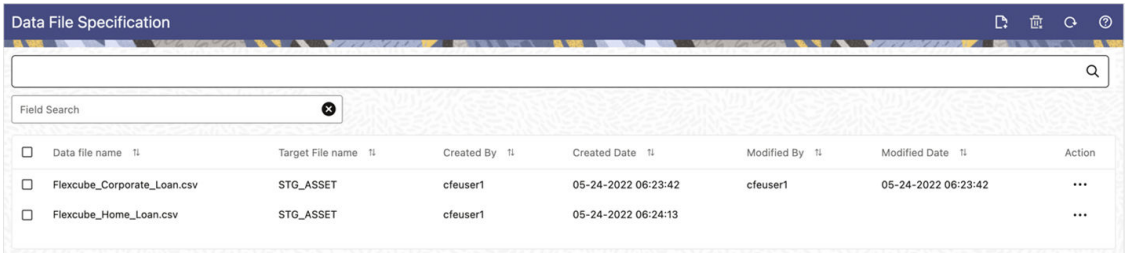
1.1 Data File Specification

The three supported formats for the Data Files are TXT, DAT, and CSV. These files contain the name of the table for which the specifications are being created.

Ensure that there are no duplicate records in a single Data File. If there are duplicate records, then the Data File Upload results in a failure.

To open the Data File Specification Window, navigate to the **Data Management Tools**, select **Data File Administration**, and then select **Data File Specification** to display the Data File Specification Summary Page.

Figure 1-2 Data File Specification Summary Screen



The Summary Page of Data File Specification displays the Search Criteria Pane, Specific Search Pane, and the already created Data Files and their details.

1.1.1 Searching for a Data File Specification

There are two Search Panes provided to search the Data Files on the Summary Page.

To search the Data File:

1. Click the **Search** icon on the Search pane to collapse (display) the Criteria Window.
2. Data File Name and/or Target File Name and click **Search** to display the Data File Names that match the criteria.
3. Click **Cancel/Reset** to remove the filter criteria on the Search Window and refresh the window.
4. Click **Search** after entering the search criteria.
   The search results are displayed in a table containing all the Data Files that meet the search criteria with the following details:
   - **Data File Name**: The name of the Data File.
   - **Target File Name**: The Target File Name.
   - **Created By**: Displays the Name of the user who created the Data File.
   - **Created Date**: Displays the Date and Time at which the Data File was created.
   - **Modified By**: Displays the Name of the user who last modified the Data File.
   - **Modified Date**: Displays the Date and Time at which a Data File was last modified.
5. Click on the **Action** icon against the Data File Name to do further actions as follows:
   - **View**: Click View to view the contents of a Data File in read-only format.
   - **Edit**: Click the Edit icon to modify a previously saved Data File. Note that you cannot change the File Name.
   - **Save As**: Click Save As to create a copy of the selected Data File.
   - **Delete**: Click Delete to delete the selected Data File.

6. Click on the **Action** icon against the Data File to do further actions **View**, **Edit**, **Save As**, and **Delete** on the selected Data File.

The other method to search a Data File is using the **Field Search** pane. You can enter any one of the details of a Data File and press the **Enter** key to display the details of the Data File.

1.1.2 Creating a Data File Specification

The Data File usually contains the Name of the Physical Table on which the specifications are being created and the columns included in the file.

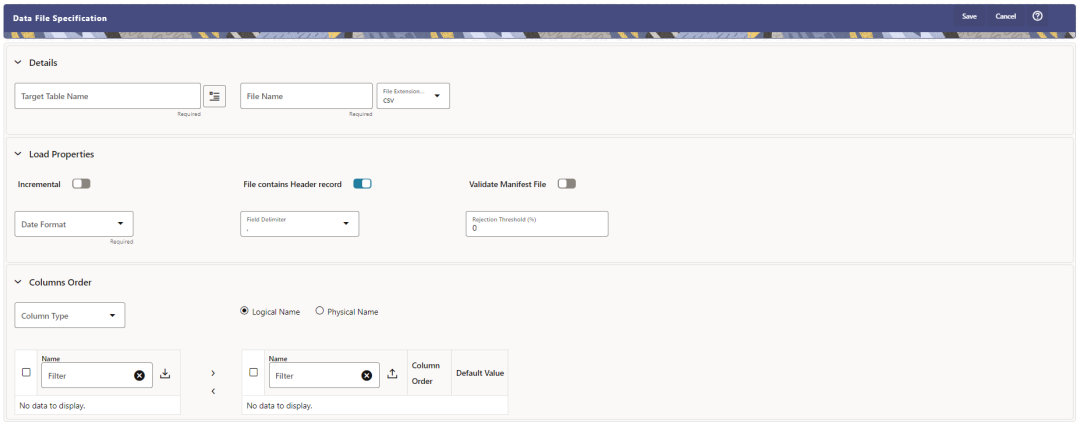
For the complete list of available columns, see the Data Requirements as follows:

- Profitability and Balance Sheet Management Cloud Service: Doc ID: 28694909.1
- IFRS 9 Cloud Service: Doc ID: 2959143.1

To create a new Data File Specification:

1. Navigate to the Data File Specification summary page and click the **Add** icon to open the Data File Specification window.

Figure 1-3 Data File Specification



2. Under the Details section of the screen, enter the following details:
   a. Click on **Target Table Name** to open a list **Category – Table Names**. The tables are categorized into different groups and are as follows:
      - Transaction Summary
      - Ledger
      - Others
      - Schedule o Instruments

      Each of the above **Categories** lists the **Tables** available for data loading. The list of categories is dependent on the Metadata from the Seeded Tables that come with the various Cloud Services and may differ from that shown above based on the services you have subscribed.
   b. Select a **Table** from the list for which you want to create the Data File Specification.
   c. Enter a unique **Name** for Data File Specification with an extension of the file format. The formats supported are TXT, CSV, and DAT types.
3. Under the **Load Properties** Section of the screen, enter the following details:

a. Select the **Incremental** toggle switch if the data in the file is incremental. If the data is a complete load, then do not select this switch.
This flag identifies if the Data File is incremental or fresh accounts. In the case of incremental accounts, if account 1 is loaded as part of the Data File 1 and needs a correction. In that case, the account is corrected and will be uploaded as part of Data File 2. In this case, Data File 2 is the incremental file.

b. Select **File contains Header record** toggle switch if the file contains a Header Record.

c. Select **Validate Manifest File** toggle switch if you want to validate the data in the Data File. This validation checks the Checksum of the file, the number of records that are being loaded from the file and other additional details such as Date Format and so on. To use this toggle switch, a prerequisite is to generate a manifest file for the Data File that is being created and it must be uploaded using the File Upload process. For more details, see the File Upload and Download section.
This is an optional step. However, if you want to generate a manifest file in JSON format, then enter the following details and save it as a .manifest file. A sample JSON file format is as follows:

```
{"file_name":"test.dat","as_of_date":"2022-03-24","checksum":"2587cdb6a2b8
7835c6adfce627671486","record_count":"10","rejection_threshold":"0"}
```

> **Note:**
>
> Ensure that the name of the manifest file is same as the Data File with .manifest extension. For example, if the Data File Name is asset.csv, then the manifest file must be named asset.manifest.

Table 1-1 MANIFEST File Details

Property Name	Notes
file_name	Full name of the file, without the leading path. Not validated; Only for information purposes.
as_of_date	Date for which file contains the data; Not validated; Only for information purposes.
checksum	Mandatory. The checksum of the file will be validated before loading commences.
record_count	Mandatory. The number of records in the file (ignoring header-record); will be validated after SQL*Loader completes.
rejection_threshold	Limit for % of records rejected, for calling the loading as “failed”. This can also be set from the UI.

d. Select the **Date Format** from the drop-down list to indicate the Date Format used in the Data File.

e. Select the **Delimiter** used in the Data File.

f. Select the **Rejection Threshold**. You should enter a number that is greater than or equal to zero.
The Rejection Threshold is used to check the allowed percentage of rows that can be rejected in a Data File. As an example, if you define a 10% Rejection Threshold for a Data File that has 1000 rows, then the Data File Upload fails if more than 100 rows are

rejected. If the number of rows rejected is less than 100, then Data File Upload succeeds.

4. Under the **Columns Order** section of the screen, enter the following details. If you enter zero, then none of the records from the Data File should fail.

   a. Select the relevant option for Column Type from the following options:

      - **Key Columns**: The Key Columns are the primary keys of the record. A table displays the Key Columns available for the selected Target Table Name. By default, the primary keys will be selected.
      - **Other Columns**: If you select the Other Columns, all remaining columns (key dimensions, simple dimensions, dates, measures, and so on) for the selected Target Table are displayed. Select the applicable columns from the list and click the Move button to display them in the table on the right-hand side.

   b. There are two option to add other columns to the definition as follows:

      i. Within the selected Column Type, Column Names can be re-ordered by dragging and dropping. The columns are always ordered by their type, that is, Key Columns will appear before the Dimension Columns and Dimension Columns will always appear before the Other Columns.

      ii. You can download the template available in the left pane, arrange the columns as required in the downloaded file and upload to the right pane.

   After saving a definition, if you add a new Dimension Column then it will appear in the order before the remaining Other Columns.

   For example, assume that the initial definition is saved with the below columns:

Figure 1-4 Column Preview

After this, if a new Dimension Column (say Product Id) is selected, it will push the Other Columns down in order.

Figure 1-5 Columns Preview

The same order must be followed while preparing the Data File.

The default value for each Column can also be given in the table. If the Column Value is null in the Data File, then the default value is used.

c. Select Logical Name or Physical Name to display the logical or physical names for the columns in the table.

5. Click **Save**. The newly created file will be listed on the Data File Specification summary screen.
6. On the summary screen, click on the **Action** icon against the File Name to perform further actions **View**, **Edit**, **Save as**, and **Delete**.

After you create the Data File, you must upload the file into the Object Store using the File Upload and Download option. If you have created a MANIFEST file for the Data File, you must upload the MANIFEST file too. For more information and procedure to upload or download the file, see the File Upload and Download section.

1.1.3 Creating the Data File

After the Data File Specification is defined, follow the below mentioned guidelines to prepare the Data Files:

- Columns to be included in the Data File must be as per the Data File Specification.
- Name of the Data File must be same as the Data File Specification with a prefix of “input_yyyymmdd” where yyyymmdd is the Date (As of Date) for which the Data File is prepared. For example:
  - Data File Specification Name is “Asset.dat”
  - The As of Date is 06-July-2022
  - Data File Name must be “input_20220706_asset.dat”
- Unique Data Validations:
  - Instrument Data Files: Account Numbers must be unique across the data files for a single As of Date.
  - Management Ledger Data Files: The combination of KPDs and Simple Dimensions must be unique across the data files for a single As of Date.
  - Transaction Summary Data Files: The combination of Account Numbers and KPDs must be unique across the data files for a single As of Date.

- Permitted Delimiters are comma (,) and pipeline (|).
- Data Validations:
  - Number fields: only numbers and dot (.) are allowed.
  - Description fields: comma (,) pipeline (|), single quotes (‘’), and double quotes (“ “) are not supported.
  - Any nullable fields which are mapped in the Data File Specification definitions should not skipped in the Data File.
  - The column order in the Data File should be in sync with the order defined in the Data File Specification definition.
  - Field Enclosures: Only double quotes (“”) are considered as Field Enclosures.

See the following sample files for your reference:

- input_20151009_asset.dat
- input_20150330_ASSETTXN.dat
- input_20220110_STGML.dat

For more information about the data required by the Profitability and Balance Sheet Management Cloud Services, see the Data Requirements available at the Doc ID: 2869409.1.

2

Data Loaders

Oracle Financial Services Cloud Service's Data Loaders are used to move the data from one stage to another stage and in turn update the underlying Database Tables.

Oracle Financial Services Cloud Services support the following types of Data Loaders:

- **Dimension Data Loaders**: The Dimension Data Loaders are used to populate the Dimension Members, Attributes, and Hierarchies from the Staging Dimension Tables to the Dimension Tables registered with the Cloud Services.
- **Instrument Data Loaders**: The Instrument Data Loaders are used to move the data from the files to the staging instrument tables.
- **Management Ledger Data Loaders**: The Management Ledger Data Loaders are used to move the data from the files to the staging Ledger tables and then to the processing Ledger tables.
- **Transaction Summary Data Loaders**: The Transaction Summary Data Loaders are used to move the data from the files to the staging Ledger tables and then to the processing Transaction Summary tables.
- **Exchange Rate Data Loader**: The Exchange Rate Data Loader allows the user to load the Exchange Rate Data required by the Cloud Services to enrich the data.

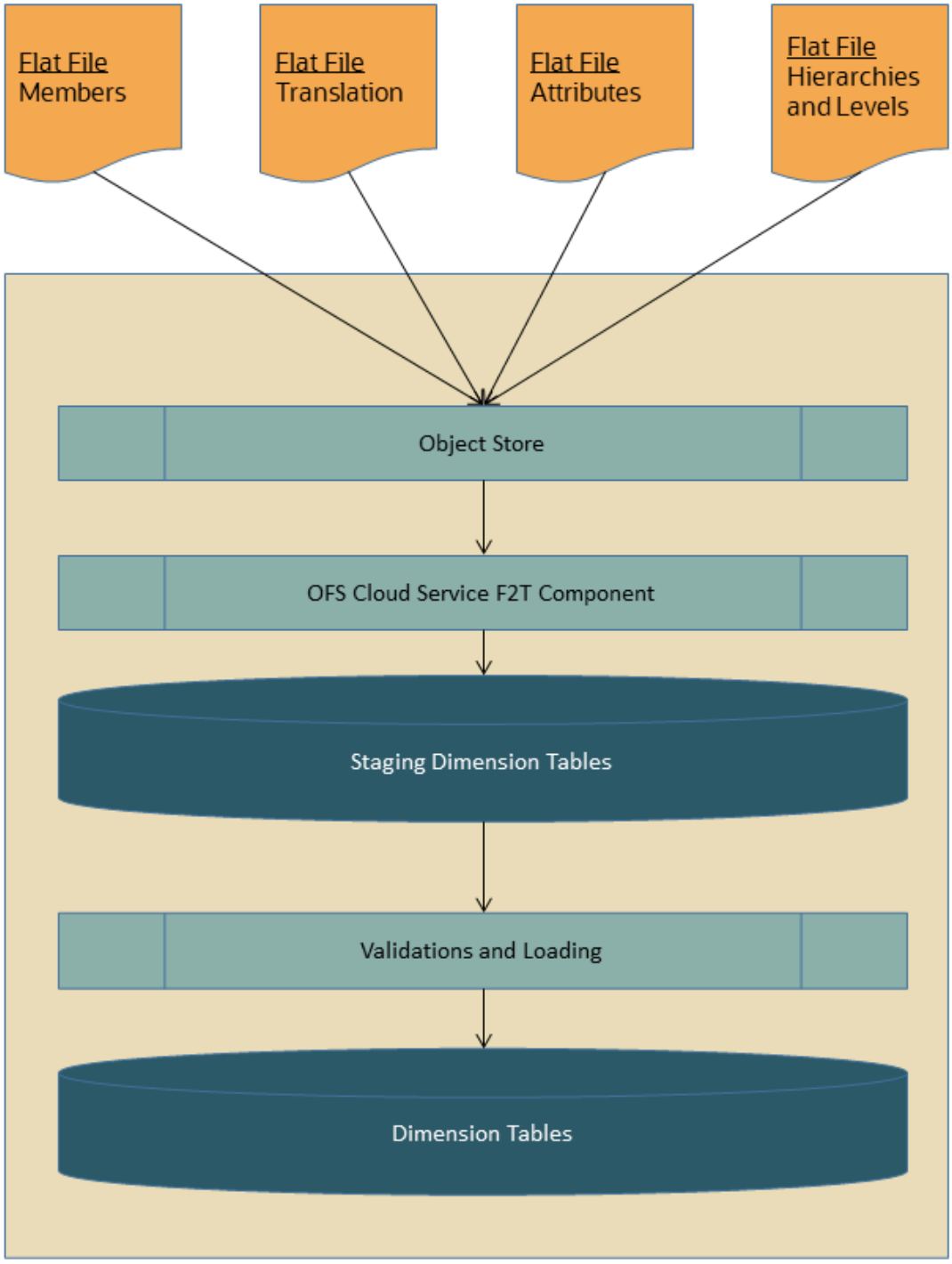
2.1 Dimension Data Loader

The Dimension Loader procedure populates Dimension Members, Attributes, and Hierarchies from Staging Dimension Tables into the Dimension Tables registered with the Cloud Services. You can view the Members and Hierarchies loaded by the Dimension Loader though the Cloud Service screens.

The Data File Specification is not applicable to Dimension Data Loaders. The file format and the file names are static in nature.

The following illustration depicts the process of Dimension Loading.

Figure 2-1 Dimension Loading Process



The Dimension Loader is used to:

- Load the Dimension Members and their Attributes from the Staging area into the Dimension Tables that are registered with OFS Cloud Service framework.
- Create Hierarchies for Key Dimensions in the Cloud Service.

- Load Hierarchical relationships between Key Dimension Members within the Hierarchies from the Staging area into the Cloud Service.

The following are the features of Dimension Loader:

- Loading Simple Dimensions from Staging Tables.
- Multiple Hierarchies can be loaded from Staging Tables.
- Validations of Members and Hierarchies are similar to that of being performed within the Cloud Service Screens.

Before you start the Dimension Loader, you must upload the Data Files that have the Dimension details.

As part of the File Definition, it is required Dimension Identifier for both Key and Simple Dimensions.

To get the correct DIMENSION ID to be used for the data file definition, you should use the SQL Query Browser and following query under OFSAAMETA schema the REV_DIMENSIONS_B table:

```
SELECT
dimension_id,
member_b_table_name,
member_tl_table_name,
dimension_active_flag,
simple_dimension_flag,
user_defined_flag,
write_flag,
dimension_editable_flag,
key_dimension_flag
FROM
ofsaameta.rev_dimensions_b
WHERE
dimension_active_flag = 'Y';
```

Then for the dimension table desired, available in REV_DIMENSIONS_B.MEMBER_B_TABLE_NAME or REV_DIMENSIONS_B.MEMBER_TL_TABLE_NAME table columns, the End User should pick up the correct value displayed in REV_DIMENSIONS_B.DIMENSION_ID to be used for correct input file definition.

The following sections list the sample files that you can use to build the Dimension Data. The name of the Data Files must be same as mentioned below and the File Extension must be .DAT. Click on each Data File Name to open a Sample Data File.

2.1.1 For Key Dimensions

The following is a list of sample files that you can use to build the Dimension Data.

The name of the Data Files must be same as mentioned below and the file extension must be .DAT. The value of column HIERARCHY_CODE must not contain space in files STG_DIMENSIONS_HIER_INTF, STG_HIERARCHIES_INTF and STG_HIERARCHY_LEVELS_INTF. Click on each Data File Name to open a Sample Data File.

Stage Dimension Loaders (Task 1):

- input_stg_dimensions_attr_intf.dat

- input_stg_dimensions_b_intf.dat
- input_stg_dimensions_tl_intf.dat
- input_stg_dimensions_hier_intf.dat

Stage Hierarchy Loaders (Task 2):

- input_stg_hierarchies_intf.dat
- input_stg_hierarchy_levels_intf.dat

> **Note:**
>
> Any column description that contains a ",", then it should be enclosed within "" (double quotes). For example, Account, Type should be "Account, Type".

To load the Dimensions:

1. Define a new Batch and save it.
2. Add the following Tasks to the above Batch:

Table 2-1 Dimension Loading Process Tasks

Task Code	Task Name	Component	Parameters	Parent Task
1	Stage Dimension Loader	Stage Dimension Loader	All parameters are automatically generated.	
2	Stage Hierarchy Loader	Stage Hierarchy Loader	All parameters are automatically generated.	1

Table 2-1 (Cont.) Dimension Loading Process Tasks

Task Code	Task Name	Component	Parameters	Parent Task
3	Stage DRM Loader	Stage DRM Loader	• **Dimension Name**: Select the relevant one or more dimensions. • **Sync Stage and Dimension**: – **Yes**: The record(s) that is/are already present will be overwritten by the incoming dimension loader. – **No**: The new records will be merged to the existing records. • **Force Member Delete**: This is used only when the above flag is Yes. – **Yes**: This allows you to delete a members even if is referred in hierarchies. – **No**: No records will be deleted.	2

> **Note:**
>
> The above Tasks must be executed in the same order.
> The Stage DRM Loader allows you to select a Dimension.

3. Execute the Batch.

Dimension Loader with ZIP File Support

You can zip all the DAT files into a single file and upload it to the Object Store.

To process the zip file:

- Create a Batch.
- Create a Task with the Component Name as **Dimension and Hierarchy Loader**.
- Execute the Batch.

For detailed instructions on Creating a Batch, Defining a Task, Execute the Task, and Schedule a Batch, see Scheduler Services.

2.1.2 For Simple Dimensions

The following is a list of sample files that you can use to build the Dimension Data.

The name of the Data Files must be same as mentioned below and the File Extension must be .DAT. Click on each Data File Name to open a Sample Data File.

Stage Dimension Loaders (Task 1):

- input_stg_dimensions_b_intf.dat
- input_stg_dimensions_tl_intf.dat

> **Note:**
>
> Any column description that contains a ",", then it should be enclosed within "" (double quotes). For example, Account, Type should be "Account, Type".

To load the Dimensions, perform the following steps:

1. Define a new Batch and save it.
2. Add the following Tasks to the above Batch:

Table 2-2 Dimension Loading Process Tasks

Task Code	Task Name	Component	Parameters	Parent Task
1	Stage Dimension Loader	Stage Dimension Loader	All parameters are automatically generated.	

Table 2-2 (Cont.) Dimension Loading Process Tasks

Task Code	Task Name	Component	Parameters	Parent Task
2	Stage DRM Loader	Stage DRM Loader	• **Dimension Name**: Select the relevant one or more dimensions. • **Sync Stage and Dimension**: – **Yes**: The record(s) that is/are already present will be overwritten by the incoming dimension loader. – **No**: The new records will be merged to the existing records. • **Force Member Delete**: This is used only when the above flag is Yes. – **Yes**: This allows you to delete a members even if is referred in hierarchies. – **No**: No records will be deleted.	1

> **Note:**
>
> The above Tasks must be executed in the same order.
> The Stage DRM Loader allows you to select a Dimension.

3. Execute the Batch.

Dimension Loader with ZIP File Support

You can zip all the DAT files into a single file and upload it to the Object Store.

To process the zip file:

- Create a Batch.
- Create a Task with the Component Name as **Dimension and Hierarchy Loader**.
- Execute the Batch.

For detailed instructions on Creating a Batch, Defining a Task, Execute the Task, and Schedule a Batch, see Scheduler Services.

2.1.3 Clear and Back up Dimension Data

This process helps you to clear or delete the existing Dimension Data from the relevant Dimension tables using the Scheduler Services.

Before clearing the data from the Dimension tables, the service creates a back up of the table.

To clear the Dimension Data:

1. Navigate to **Operations and Processes**, select **Scheduler**, and then select **Define Batch**.
2. Create the Batch and save it.
3. Navigate to **Operations and Processes**, select **Scheduler**, and then select **Define Task**.
4. Select the created Batch and create a Task with **Clear Dimension Members** as Component.
5. Select the Dimension Name that you want to delete. You can select one or more Dimension Names.
6. From the LHS menu, navigate to **Operations and Processes**, select **Scheduler**, and then select **Execute Batch**.
   The service first creates a backup of the existing Dimension table and then deletes the Dimension Member entries for the selected Dimensions.

While deleting the data from the tables, there are no validations. The back up files are suffixed with As Of Date and Current Time Stamp.

The following table gives the sample actual and backed up table names:

Table 2-3 Sample Table Names

Dimension Type	Actual Table Name	Backup Table Name
Simple Dimension	FSI_ACCRUAL_BASIS_CD	FSI_ACCRUAL_BASIS_CD_<AS_OF_DATE>_<CURRENTTIMESTAMP>
	FSI_ACCRUAL_BASIS_MLS	FSI_ACCRUAL_BASIS_MLS_<AS_OF_DATE>_<CURRENTTIMESTAMP>
Key Dimension	DIM_COMMON_COA_ATTR	DIM_COMMON_COA_ATTR_<AS_OF_DATE>_<CURRENTTIMESTAMP>
	DIM_COMMON_COA_B	DIM_COMMON_COA_B_<AS_OF_DATE>_<CURRENTTIMESTAMP>

Table 2-3 (Cont.) Sample Table Names

Dimension Type	Actual Table Name	Backup Table Name
	DIM_COMMON_COA_HIER	DIM_COMMON_COA_HIER_<AS_OF_DATE>_<CURRENTTIMESTAMP>
	DIM_COMMON_COA_TL	DIM_COMMON_COA_TL_<AS_OF_DATE>_<CURRENTTIMESTAMP>

2.2 Instrument and Ledger Data Loaders

After the Data Files are uploaded to the Object Store, the Data Loaders are used to move the data from the files to the standing tables and then to processing tables.

File to Stage

To load the Data to Staging Tables:

1. Define a new Batch and save it.
2. Add the following Tasks to the above Batch:

Table 2-4 Data Loader – File to Stage Data

Task Code	Task Name	Component	Parameters
1 *	Custom Task Name *	Stage Data Loader	**Table Name**: select the stage table name from the available list. **Data File Specification**: select the data file specification definition form the available list. **File Name**: free text where file name uploaded to the object store to be provided. **Note:** You can also zip the file and then upload. Ensure the file name in the zip file is inline with the Data File Specification .

* Task Code and Task Name in the above table are for illustration purpose only. You can name them as per your requirements.

Execute the Batch for the As-of-Date used in the Data File.

For detailed instructions on Creating a Batch, Defining a Task, Execute the Task, and Schedule a Batch, see #unique_20.

Profitability and Balance Sheet Management Cloud Service - Stage to Processing

To load the Data from Staging Tables to Processing:

1. Define a new Batch and save it.
2. Add the following Tasks to the above Batch:

Table 2-5 Data Loader – Stage to Processing Data

Task Code	Task Name	Component	Parameters
1 *	Custom Task Name *	Select the relevant Component depending on the Data that you want to process. The options are: • Instrument Data Loader • Ledger Data Loader • Transaction Summary Loader	Stage Table: select the stage table name from the available list. Data File Specification: select the Data File Specification name from the available list.

Climate Change Analytics Cloud Service - Stage to Processing

CCACS is delivered with out-of-the-box seeded batches to load the data from Staging tables to Processing tables. For the list of seeded batches, see the <MOS page>. The user can define custom batches using the following components.

1. Add the following Tasks to the Batch:

Table 2-6 Data Loader – Stage to Processing Data

Task Code	Task Name	Component	Parameters
1 *	Custom Task Name *	Select the relevant Component depending on the Data that you want to process. The options are: • CCA Processing Loader	For CCA Processing Loader: select the stage table name and data file name.

2.3 Generic Data Loader

The Data Loader service allows the user to load the required data by the Cloud Service to enrich the data. In this service, first you upload the data, and then run a batch to propagate the data into the processing layer.

To load the data:

1. From the LHS menu, select **Data Management Tools**, select **Data File Administration**, and then select **File upload and download** to display the File Upload/Download screen. The File Upload/Download screen displays the list of files that are uploaded to the Object Store and displays the following details for each file:
   - **File ID**: The unique file id. This is auto generated during upload.
   - **Prefix**: The prefix added to the file name.
   - **File Name**: The name of the uploaded file.
   - **Stripe Name**: The unique identifier for storing the files.
   - **Uploaded Date**: The file upload date.
   - **Download File**: Click the Download icon to download a copy of the file.
   - **Delete**: Click Delete to delete the uploaded file.
2. Click **Drag and Drop** to browse and select a file for upload from the local directory. You can also browse to the local directory from the File Explorer and select file and drop it here.

   The File Upload/Download service supports upload of TXT, DAT, and CSV format files.

   Name of the data file must follow the format as given below:
   - A prefix as **input_yyyymmdd** where the date format is related to the As of Date (i.e., 02-May-2023 becomes 20230502).
   - As per the data that you want to upload, upload the relevant data file from the table:

   Table 2-7 Data File

Data	Data File Name	Object Store File Name
Exchange Rates	stg_exchange_rates.dat	input_20230622_stg_exchange_rates.dat
Behavior Patters	stg_behavior_pattern.dat	input_20230502_stg_behavior_pattern.dat

   > **Note:**
   >
   > The file name is case-sensitive.

   For more information about File Upload and Download, see #unique_25.

   The following are the sample files for reference:
   - stg_exchange_rates.dat
   - input_20230701_bploaderdata.csv
3. After selecting the file to upload, click **Upload**. The UI displays a confirmation message *Upload successful*.
4. From the LHS menu, navigate to **Operations and Processes**, select **Scheduler**, and then select **Schedule Batch**.
5. Create a new Batch with a new Task with Generic Data Loader as Component.

Table 2-8 Loader Type

Seeded Batch Component	Loader Type Parameter
Generic Data Loader	Exchange Rates
Generic Data Loader	Behavior Patterns

6. From the LHS menu, navigate to **Operations and Processes**, select **Scheduler**, and then select **Execute Batch**.
7. From the LHS menu, navigate to **Operations and Processes**, select **Scheduler**, and then select **Monitor Batch**.
8. Select the **Batch** and then select the **MISDATE** and the **Batch name**. There may be multiple executions of the Data Loader batch. Select the latest execution and click **Start Monitor**.
   The UI displays the status of the batch.

For more details about Scheduler processes, see the Scheduler Services.

2.4 Interest Rates Loader

The Interest Rates Data Loader allows the users to load the Interest Rate Curves that are consumed by the Oracle Financial Services Cloud Services.

Loading the Interest Rate Data consists of three tasks as follows:

- Stage Loader
- Stage Validator
- Processing Loader

The above three tasks can be executed individually or together under same batch. If created together, then the precedence mapping must be created as follows:

- Stage Validator must be executed after the Stage Loader is executed.
- Processing Loader must be executed after the Stage Loader is executed. Stage Validator is not mandatory.
- If Stage Validator is included, then the Processing Loader must be executed after the Stage Validator is executed.

To upload the Interest Rate Data file:

1. From the LHS menu, select **Data Management Tools**, select **Data File Administration**, and then select **File upload and download** to display the File Upload/Download screen.
2. Click **Drag and Drop** to browse and select a file for upload from a local directory. You can also browse to the local directory from the File Explorer, select the file, and drop it.
   The File Upload/Download service supports uploading CSV format files.

   Name of the Data File must follow the format as given below:

   - A prefix as **INPUT_YYYYMMDD** where the date format is related to the As of Date (i.e., 02-October-2023 becomes 20231002).
   - A suffix as _**FILENAME.CSV**.
   - An example of Data File Name could be:
     INPUT_20231002_IRC_<DATAFILENAME>.csv.
     The order of the columns in the input file must be as follows:
     – INTEREST_RATE_NAME

- EFFECTIVE_DATE (Date format: MM-DD-YYYY)
- INTEREST_RATE_TERM
- INTEREST_RATE_TERM_MULT
- INTEREST_RATE
- RATE_DATA_SOURCE_CODE

For more information about File Upload and Download, see File Upload and Download Utility section.

3. After selecting the file to upload, click **Upload**.
The UI displays a confirmation message: Upload successful and insert the data into the Stage tables.

   At this stage, the **Stage Validation** begins and performs the following checks:

   - **Records in the Stage table**: Stage Validation fails when no records are found in the uploaded file and no execution happens after this point.
   - **IRC definitions exist**: If there are single IRC definitions in the file, the validator passes and displays a warning message along with the Interest Rate Code for which definitions are missing.
   - Invalid Terms check (Term details not found): If there are extra terms available in incoming file: A warning message is displayed in the View Logs: Term details not found in the definition: Interest Rate Name: Standard25, Interest RateCd:25, Interest Rate Term: 270 D, 3 M.

   Warnings are displayed in the View Log.

   If there are multiple rows in the data file and one of the rows does not have the required information or wrong information, the validator leaves that record and proceeds with the remaining records. However, the log displays summary error messages with total number of records, records skipped, records rejected, records read, and records discarded. It does not display which particular records are failed or rejected.

   > **Note:**
   >
   > The As of Date is used to load the file and the Effective Date in the file can be different. The data is loaded based on the Effective Date and if any value exists for corresponding Effective Date, then the loader will update. This also helps to push the IRC History data from on-prem to SaaS, and in the SaaS environments one tenant to other tenant.

4. From the LHS menu, navigate to **Operations and Processes**, select **Scheduler**, and then select **Create Batch**. For more details, see Define Batch.
5. From the LHS menu, navigate to **Operations and Processes**, select **Scheduler**, and then select **Ceate Task**. For more details, see Define Tasks.
   a. Task Type: REST
   b. Component:
      - Stage Loader: IRCLoader Stage Loader
      - Stage Validator: IRCLoader Stage Validator
      - Processing Loader: IRCLoader Processing Loader
   c. File Name: INPUT_20231002_IRC_<DATAFILENAME>.csv

6. Select the seeded batch and click **Edit Parameters**. In the Dynamic Parameters pop-up window, change the date to the relevant As-of-Date, and then save the batch.
7. From the LHS menu, navigate to **Operations and Processes**, select **Scheduler**, and then select **Execute Batch**.
8. From the LHS menu, navigate to **Operations and Processes**, select **Scheduler**, and then select **Monitor Batch**. For more information, see Monitor Batch.
9. Select the **Batch** and then select the **MISDATE** and the **Batch name**. There may be multiple executions of the Exchange Rate Data Loader batch. Select the latest execution and click **Start Monitor**.
   The UI displays the Status of the batch.

2.5 Generating Holidays for Holiday Calendar using Scheduler

The **Generate Holidays** option on the **Holiday Calendar Definition** page allows you to generate Holiday for a definition at a time. Using the Scheduler Service, you can generate the Holidays for multiple Calendar definitions in bulk.

To execute the batch, navigate to **Operations and Processes** , select **Scheduler**, and then select **Schedule Batch**.

You can also define new batch to execute any Holiday Calendar Generation by the following these steps:

1. Navigate to **Operations and Processes**, select **Scheduler**, and then select **Define Batch**.
2. Create a new Batch with a new Task with Holiday Generator as Component.

   For the selected From to To date parameters, you can generate Holidays for single or multiple calendar definitions.
3. From the LHS menu, navigate to **Operations and Processes**, select **Scheduler**, and then select **Execute Batch**.
4. From the LHS menu, navigate to **Operations and Processes**, select **Scheduler**, and then select **Monitor Batch**.
5. Select the **Batch** and then select the **MISDATE** and the **Batch name**. There may be multiple executions of the Data Loader batch. Select the latest execution and click **Start Monitor**.

   The UI displays the status of the batch.

   For more details about Scheduler processes, see the Scheduler Services.

3
Data File History

The Data File History screen in the OFS Cloud Service allows you to see the data files that are uploaded to the staging tables and their status.

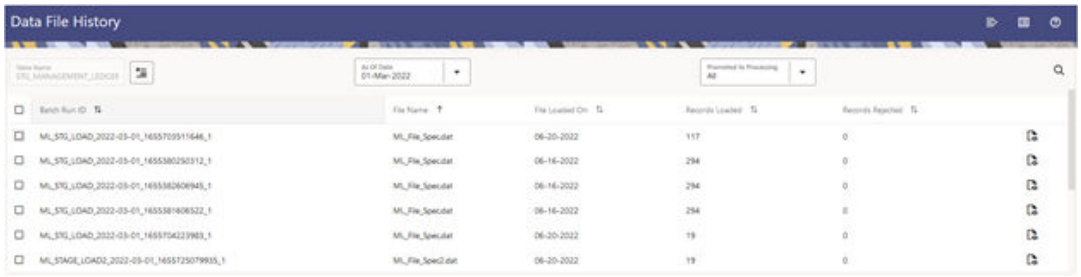
The Data File History summary screen allows you to do the following:

- Search for data files for which the stage data loader batch is already executed.
- Move the data from stage to processing tables.
- Delete the data from the stage or processing tables.
- Scan for invalid members.
- Create invalid members.

To open the Data File History window:

1. Navigate to the **Data Management Tools**, select **Data File Administration**, and then select **Data File History** to display the Data File History summary screen.

Figure 3-1 Data File History summary screen



The summary screen displays the following information of the data files:

- **Batch Run ID**: The ID used to run the batch.
- **File Name**: The data file name.
- **File Loaded On**: The date on which the data file is loaded.
- **Records Loaded**: The number of records loaded using the data file.
- **Records Rejected**: The number of records that are rejected from the data file.
- **View Details** (Icon): Select a Batch Run ID and click the details of the data file.

The following illustration is a sample of the data file's details.

Figure 3-2 File Details

- **Promote selected files to Processing** (button): To promote the selected file or files for processing. This triggers the Batch Scheduler and queues the selected file or files for processing.
- **Advanced Actions** (button): There are four options in the Advances Actions. The following table explains the four options and the related information that is required to complete the actions:

Table 3-1 Advanced Actions

	As Of Date	Table Name	Data File Specification	File Name(s)	Comments / Notes
Delete Data from Staging	Required	Required	Required	Optional	Required
Delete Data from Processing	Required	Required	Required	Required	Required
Scan for Invalid Members	Required	Required	Required	Optional	Not applicable
Create Invalid Members	Required	Required	Required	Optional	Not applicable

  - Click **Delete/Scan/Create** button as applicable.
    - **Delete Data from Staging**: The staging data uploaded from a data file will be deleted.
    - **Delete Data from Processing**: The processing data uploaded from a file will be deleted.
    - **Scan for Invalid Members**: To scan the staging data and identifying the dimension member codes present in the staging table, but not present in the corresponding dimension tables.
    - **Create Invalid Members**: To populate the dimension tables with members identified in the above scan.
- **Help** (Button): Click the Help icon to view the Data File History help.

Scan for Invalid Members and Create Invalid Members is also possible using the Scheduler Services.

Table 3-2 Scan and create Invalid Members

Task Code	Task Name	Component	Parameters
1 *	Scan_Staging_for_Invalid_Members	Scan_Staging_for_Invalid_Members	• Table Name • Data File Specification: select the Data File Specification name from the available list. • Data File Name • Fail When Invalid Members
	Create_Invalid_Members	Create_Invalid_Members	• Table Name • Data File Specification: select the Data File Specification name from the available list. • Data File Name

* Task Code in the above table is for illustration purpose only. You can name them as per your requirements.

Promoting a Data File for Processing

By promoting a Data File for processing, you insert the Data from the staging tables to the processing tables.

To promote a Data File for processing:

1. Click on the **Table Name** icon to display the **Category – Table Names** window. This window displays the Stage Table Names where data is already loaded. The tables are categorized into different groups and are as follows:
   - Transaction Summary
   - Ledger
   - Others
   - Schedule
   - Instruments

   Each of the above categories lists the tables available to which the data is loaded. The list of categories is dependent on the Metadata from the seeded tables that come with the various OFS Cloud Services and may differ from that shown above based on the services you have subscribed.
2. Select the **Table** for which you want to see the File History from the list.
3. Select the relevant **As Of Date** from the drop-down list. This drop-down list displays different As-of-Dates. These dates are based on processed or not processed data loading. For example, if you have already processed some data on a previous date, this drop-down displays that date and displays the current date.
4. Click on **Promoted to Processing** and select the following options:
   - **All**: To display all the Data Files that are specified on the selected As-of-Date.

- **Yes**: To display only the Data Files that are already specified and processed on the selected As-of-Date.
- **No**: To display only the Data Files that are specified but are in the queue to be processed on the selected As-of-Date.

5. Click the **Search** icon to display the Data Files information as per the option you selected in the previous step.
6. Select one of more **Batch Run IDs** that you want to promote for processing and click the **Promote selected files to Processing** button. This triggers the Batch Scheduler and schedules the Batch for processing. You can monitor the status using the Monitor Batch screen.

Reloading a Data File

OFS Cloud Services allow you to reload a Data File. For the detailed instructions on Reloading the Data File, see the Scheduler Service section.

> **Note:**
>
> While defining the Task, ensure that you select Delete Data Loader from the Component drop-down list.

3.1 Promoting a Data File for Processing

By promoting a Data File for processing, you insert the Data from the Data Staging Tables to the Processing Tables.

To promote a Data File for processing, perform the following steps:

1. Click on the **Table Name** icon to display the **Category – Table Names** window. This window displays the Stage Table Names where data is already loaded. The tables are categorized into different groups and are as follows:
   - Transaction Summary
   - Ledger
   - Others
   - Schedule
   - Instruments

   Each of the above Categories lists the Tables available to which the data is loaded. The list of categories is dependent on the Metadata from the Seeded Tables that come with the various OFS Cloud Services and may differ from that shown above based on the services you have subscribed.
2. Select the **Table** for which you want to see the File History from the list.
3. Select the relevant **As Of Date** from the drop-down list. This drop-down list displays different As-of-Dates. These dates are based on processed or not processed data loading. For example, if you have already processed some data on a previous date, this drop-down displays that date and displays the current date.
4. Click on **Promoted to Processing** and select the following options:
   - **All**: To display all the Data Files that are specified on the selected As-of-Date.

- **Yes**: To display only the Data Files that are already specified and processed on the selected As-of-Date.
- **No**: To display only the Data Files that are specified but are in the queue to be processed on the selected As-of-Date.

5. Click the **Search** icon to display the Data Files information as per the option you selected in the previous step.
6. Select one of more **Batch Run IDs** that you want to promote for processing and click the **Promote selected files to Processing** button. This triggers the Batch Scheduler and schedules the Batch for processing. You can monitor the status using the Monitor Batch screen.

3.2 Reloading a Data File

OFS Cloud Services allows you to reload a Data File.

For the detailed instructions on Reloading the Data File, see the Scheduler Service section.

> **Note:**
>
> While defining the Task, ensure that you select Delete Data Loader from the Component drop-down list.