Oracle® Financial Services Climate Change Analytics Cloud Service

User Guide

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2
Get Help

Topics:

- Get Help in the Applications
- Learn About Accessibility
- Get Support
- Get Training
- Join Our Community
- Share Your Feedback
- Before You Begin

2.1 Get Help in the Applications

Use Help icons to access help in the application.

Note that not all pages have Help icons. You can also access the Oracle Help Center to find guides and videos.

Additional Resources

- Community: Use Oracle Cloud Customer Connect to get information from experts at Oracle, the Partner Community, and other users.
- Training: Take courses on Oracle Cloud from Oracle University.

2.2 Learn About Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program. Videos included in this guide are provided as a media alternative for text-based topics also available in this guide.

2.3 Get Support

You can get support at My Oracle Support.

For accessible support, visit Oracle Accessibility Learning and Support.

2.4 Get Training

Increase your knowledge of Oracle Cloud by taking courses at Oracle University.

2.5 Join Our Community

Use Cloud Customer Connect to get information from industry experts at Oracle and in the Partner Community. You can join forums to connect with other customers, post questions, and watch events.

2.6 Share Your Feedback

We welcome your feedback about Oracle Applications User Assistance. If you need clarification, find an error, or just want to tell us what you found helpful, we did like to hear from you.

You can email your feedback to My Oracle Support.

Thanks for helping us improve our User Assistance!

2.7 Before You Begin

Refer to following Documents:

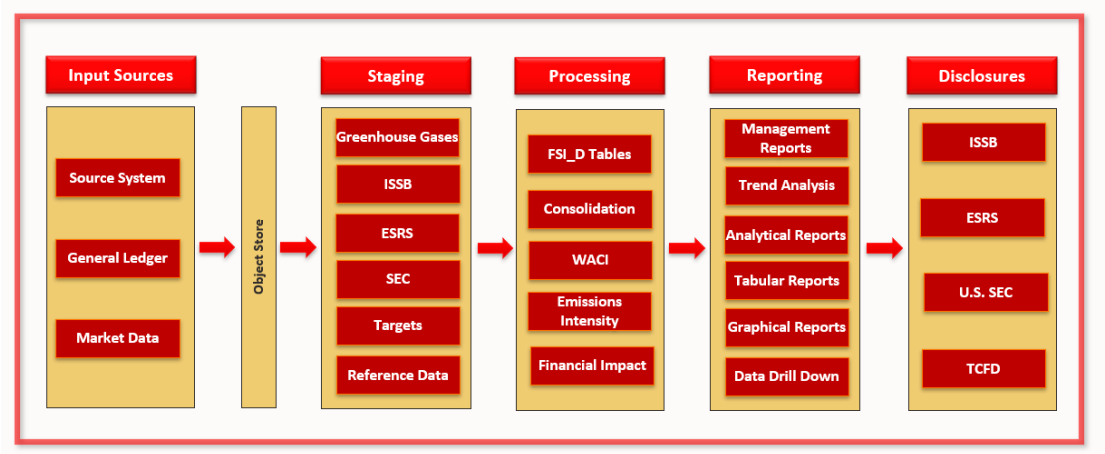
- See What's New

3

Oracle Financial Services Climate Change Analytics Cloud Service (OFS CCA CS)

This chapter provides the functional and business overview of the Oracle Financial Services Climate Change Analytics Cloud Service workflow.

Figure 3-1 The OFS Climate Change Analytics Cloud Service Workflow



Oracle Financial Services Climate Change Analytics Cloud Service (OFS CCA CS) is a one-stop-shop-solution to help banks and financial institutions in their endeavor of complying with their climate change-related reporting and analytical requirements across the following standards and/or frameworks:

- The sustainability Disclosure Standard is issued by the International Sustainability Standards Board (ISSB) by the IFRS Foundation.
- European Sustainability Reporting Standard (ESRS) issued by the European Financial Reporting Advisory Group (EFRAG).
- Climate-related Disclosures issued by the U.S. Securities and Exchange Commission (SEC), USA.
- Task Force on Climate-related Financial Disclosures (TCFD) issued by The Financial Stability Board (FSB).

> **Note:**
>
> This standard uses draft/interim provisions, and requirements of ISSB, ESRS, and U.S. SEC standards/rules. Over time, application calculations and reports may change in line with updates made in these respective standards/rules.

The application supports compliance with these standards and/or frameworks by having specific and out-of-the-box analytics for the following reporting requirements:

- Greenhouse Gas (GHG) Emissions
- Climate Change Risk Management
- The Upstream and Downstream impact of Climate Change Risk
- Climate Change Targets, and Performance Evaluation
- Management Overview

3.1 GHG Emissions and Classification

Greenhouse Gases refer to a collection of seven greenhouse gases listed in the Kyoto Protocol, i.e., carbon dioxide (CO2); methane (CH4); nitrous oxide (N2O); hydrofluorocarbons (HFCs); nitrogen trifluoride (NF3); perfluorocarbons (PFCs); and sulfur hexafluoride (SF6). These GHGs are released into the atmosphere as a result of emissions from various activities undertaken as part of several business operations and/or an entity's value chain.

Classification

GHG Emissions are broadly classified into two sources and three reporting categories which are consistently used across these standards and/or frameworks:

Table 3-1 Classification of GHG Emissions

Source	Reporting Category
Direct Emissions	Scope 1
Indirect Emissions	Scope 2
Indirect Emissions	Scope 3

These emission reporting categories can be distinguished based on the following definitions:

- Scope 1 – Emissions from sources that are owned or controlled by an entity
- Scope 2 – Emissions from sources that are purchased and controlled by an entity
- Scope 3 – Emission from all other sources

These reporting categories are further sub-divided into various activities as listed below:

Table 3-2 Reporting Categories

Reporting Category	Emission Source Activity
Scope 1	Fuels
Scope 1	Refrigerants
Scope 1	Owned Transportation
Scope 2	Electricity
Scope 2	Heat and Steam
Scope 2	District Cooling
Scope 3	Purchased goods and services
Scope 3	Capital goods

Table 3-2 (Cont.) Reporting Categories

Scope 3	Fuel and energy-related activities
Scope 3	Upstream transportation and distribution
Scope 3	Waste generated in operations
Scope 3	Business travel
Scope 3	Employee commuting
Scope 3	Upstream leased assets
Scope 3	Downstream transportation and distribution
Scope 3	Processing of sold products
Scope 3	Use of sold products
Scope 3	End-of-life treatment of sold products
Scope 3	Downstream leased assets
Scope 3	Franchises
Scope 3	Investments

3.2 Frameworks Supported by Oracle Financial Services Climate Change Analytics Cloud Service

This section provides information on the various frameworks that are supported by Oracle Financial Services Climate Change Analytics Cloud Service:

> **Note:**
>
> The purpose of this section is to only highlight the various requirements of the mentioned frameworks and/or standards. Over time, the application calculations and reports may change in line with updates made in these respective standards/ rules.

- **European Sustainability Reporting Standards (ESRS)**
- **International Sustainability Standards Board (ISSB)**
- **U.S. Securities Exchange and Commission (SEC Rules)**
- **Task Force on Climate-Related Financial Disclosures (TCFD Requirements)**

3.2.1 ESRS

The following is the set of disclosure requirements from ESRS relating to climate change that a reporting entity needs to report:

- **Disclosure Requirement E1-1** – Transition plan for climate change mitigation
- **Disclosure Requirement E1-2** – Policies related to climate change mitigation and adaptation
- **Disclosure Requirement E1-3** – Actions and resources about climate change policies
- **Disclosure Requirement E1-4** – Targets related to climate change mitigation and adaptation

- **Disclosure Requirement E1-5** – Energy consumption and mix
- **Disclosure Requirement E1-6** – Gross Scopes 1, 2, 3 and Total GHG emissions
- **Disclosure Requirement E1-7** – GHG removals and GHG mitigation projects financed through carbon credits
- **Disclosure Requirement E1-8** – Internal carbon pricing
- **Disclosure Requirement E1-9** – Potential financial effects from material physical and transition risks and potential climate-related opportunities

3.2.2 ISSB

The following are the set of disclosure requirements from ISSB relating to climate change that a reporting entity needs to report.

- **Governance**
- **Strategy**
- **Risk Management**
- **Metrics**

3.2.2.1 Governance

An entity shall disclose information about the identity of the governance body or bodies that are responsible for the oversight of climate-related risks and opportunities; a reflection of its policies on board mandates, and other policies; updates on climate-related risks and opportunities; consideration given to climate-related risks and opportunities when overseeing entity's strategy.

3.2.2.2 Strategy

An entity shall disclose information about the significant climate-related risks and opportunities that it reasonably expects could affect its business model and strategy; the effects of such risks and opportunities on its business model, value chain, strategy, transition plans, and financial position; and the climate resilience of its strategy.

3.2.2.3 Risk Management

An entity shall disclose processes used to identify climate-related risks and opportunities; monitor, manage, and prioritize climate-related risks and opportunities; and the extent of integration of such risks and opportunities into the overall Risk Management Process.

3.2.2.4 Metrics

An entity shall disclose financial disclosures on metrics and targets related to the relevant cross-industry metric categories; industry-based metrics; other metrics used by the board or management to measure progress towards the targets; and targets set by the entity relating to climate-related risks and opportunities.

3.2.3 U.S. SEC Rules

The following are the set of disclosure requirements from the SEC relating to climate change that a reporting entity needs to comply report.

- The oversight and governance of climate-related risks by the registrant's board and management;
- How many climate-related risks identified by the registrant have had or are likely to have a material impact on its business and consolidated financial statements, which may manifest over the short-, medium-, or long-term;
- How many identified climate-related risks have affected or are likely to affect the registrant's strategy, business model, and outlook;
- The registrant's processes for identifying, assessing, and managing climate-related risks and whether any such processes are integrated into the registrant's overall risk management system or processes;
- If the registrant has adopted a transition plan as part of its climate-related risk management strategy, a description of the plan, including the relevant metrics and targets used to identify and manage any physical and transition risks;
- If the registrant uses scenario analysis to assess the resilience of its business strategy to climate-related risks, a description of the scenarios used, as well as the parameters, assumptions, analytical choices, and projected principal financial impacts;
- If a registrant uses an internal carbon price, information about the price and how it is set;
- The impact of climate-related events (severe weather events and other natural conditions) and transition activities on the line items of a registrant's consolidated financial statements, as well as the financial estimates and assumptions used in the financial statements;
- The registrant's direct GHG emissions (Scope 1) and indirect GHG emissions from purchased electricity and other forms of energy (Scope 2), separately disclosed, expressed both by disaggregated constituent greenhouse gases and in the aggregate, and absolute terms, not including offsets, and in terms of intensity (per unit of economic value or production);
- Indirect emissions from upstream and downstream activities in a registrant's value chain (Scope 3), if material, or if the registrant has set a GHG emissions target or goal that includes Scope 3 emissions, in absolute terms, not including offsets, and in terms of intensity; and
- If the registrant has publicly set climate-related targets or goals, information about:
  - The scope of activities and emissions included in the target, the defined time horizon by which the target is intended to be achieved, and any interim targets;
  - How the registrant intends to meet its climate-related targets or goals;
  - Relevant data to indicate whether the registrant is making progress toward meeting the target or goal and how much progress has been achieved, with updates each fiscal year; and
  - If carbon offsets or renewable energy certificates ("RECs") have been used as part of the registrant's plan to achieve climate-related targets or goals, certain information about the carbon offsets or RECs, including the amount of carbon reduction represented by the offsets or the amount of generated renewable energy represented by the RECs.

3.2.4 TCFD Requirements

The following are the set of disclosure suggestions from TCFD relating to climate change that a reporting entity needs to report:

- Governance
- Strategy
- Risk Management
- Metrics and Targets

3.2.4.1 Governance

Discloses the organization's governance around climate-related risks and opportunities including a description of the board's oversight of climate-related risks and opportunities; and management's role in assessing and managing climate-related risks and opportunities.

3.2.4.2 Strategy

Discloses the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material. The required information would include a description of the identified climate-related risks and opportunities in the company; the impact of such risks and opportunities on the company's businesses, strategy, and financial planning; and describe the resilience of the company's strategy.

3.2.4.3 Risk Management

Discloses how the company identifies, assesses, and manages climate-related risks by including a description of the company's processes for identifying and assessing such risks; processes for managing them; and their integration into the company's overall Risk Management.

3.2.4.4 Metrics and Targets

Discloses the Metrics and Targets used to assess and manage relevant climate-related risks and opportunities where such information is material. Disclosures include metrics used by the organization to assess climate-related risks and opportunities; Greenhouse Gas (GHG) Emissions; Climate Targets; and a performance evaluation against targets.

3.3 Working with Oracle Financial Services Climate Change Analytics Cloud Service

The following sections provide an overview of the OFS CCA CS User Groups, Guidelines for working with the application, launching the application, and common features.

3.3.1 User Groups

The following table provides information on User Groups and the related activities:

Table 3-3 User Groups and Activities

User Groups	Activities
CCA Administrator User Group	• Set User and Application Preferences • Set Setup Parameters • Currency and Rate Management • Dimension Management
CCA Analyst User Group	• Data Management: Metadata and Data Loaders • Schedule Batch Processes
CCA Auditor User Group	• View privileges for all application-specific modules: • Review/Analyze Results • Review Process Logs • View Reports

In addition to this, custom user groups can be created and managed as per requirement. For more information, see the User Roles and Privileges section.

3.3.2 Guidelines for working with Oracle Financial Services Climate Change Analytics Cloud Service

This topic describes an approach to designing and building applications based on your Security Role and the tasks it enables you to perform.

Table 3-4 List of Roles referred to in Oracle Financial Services Climate Change Analytics Cloud Service

Module Details				OFS CCA CS Roles		
Module	**Access Code**	**Functionality**	**Module Role Code**	**CCA Admin**	**CCA Analyst**	**CCA Auditor**
File Upload	File Upload, File Download, File Delete, List of Files (summary)	User mapped to this role can perform File upload, download, delete and view the list of files uploaded	File advance	Y	N	N
File Upload	File List	This role will have access to view the list of File uploaded into the Object Store	File read	Y	Y	Y

Table 3-4 (Cont.) List of Roles referred to in Oracle Financial Services Climate Change Analytics Cloud Service

Module Details				OFS CCA CS Roles		
Batch Scheduler	Batch Advanced	This role can perform Batch create, edit, delete, purge, schedule, execute, copy, view	Batch adv	Y	N	N
Batch Scheduler	Batch Operator	This role can perform Batch execute, schedule, view, list of batches	Batch oper	N	Y	N
Batch Scheduler	Batch Read	This role can view batch, list of batches	Batch read	N	N	Y
Dimension Member	Member Advanced	This role can add, edit, view, delete, authorize, view list of members	Member adv	Y	N	N
Dimension Member	Member write	This role can add, edit, view, view list of members	Member write	N	Y	N
Dimension Member	Member read	This role can view member and list of members (summary)	Member read	N	N	Y
Hierarchy	Hierarchy Advanced role	This role can add, edit, view, delete, authorize, view list of hierarchies	Hierarchy Adv	Y	N	N
Hierarchy	Hierarchy Write role	This role can add, edit, view, view list of hierarchies	Hierarchy write	N	Y	N
Hierarchy	Hierarchy Read role	This role can view hierarchy definition and view the list of hierarchies	Hierarchy read	N	N	Y

Table 3-4 (Cont.) List of Roles referred to in Oracle Financial Services Climate Change Analytics Cloud Service

Module Details				OFS CCA CS Roles		
Attribute	Attribute Advanced role	This role can add, edit, view, delete, authorize, view list of attribute definitions	Attribute advanced	Y	N	N
Attribute	Attribute write role	This role can add, edit, view, view list of attribute definitions	Attribute write	N	Y	N
Attribute	Attribute read role	This role can view, view list of attribute definitions	Attribute read	N	N	Y
Currency	Currency Admin role	This role can add, edit, View, delete currency definition	Currency admin	Y	Y	N
Currency	Currency auditor role	This role can view currency definition	Currency auditor	N	N	Y
Currency rates	Currency rates Admin role	This role can add, edit, view, delete the Currency rates	Currency rates admin	Y	Y	N
Currency Rates	Currency Rates Auditor	This role can view the Currency rates	Currency rates auditor	N	N	Y
Data File Specification	Data File Specification Advanced	This role can add, edit, view, delete, copy, data upload	Data file specification adv	Y	Y	N
Data File Specification	Data File Specification Read	This role can view the Data file specification definition	Data file specification read	N	N	Y

3.3.3 Accessing Oracle Financial Services Climate Change Analytics Cloud Service

See the Getting Started Guide for information on how to subscribe and set up the service.

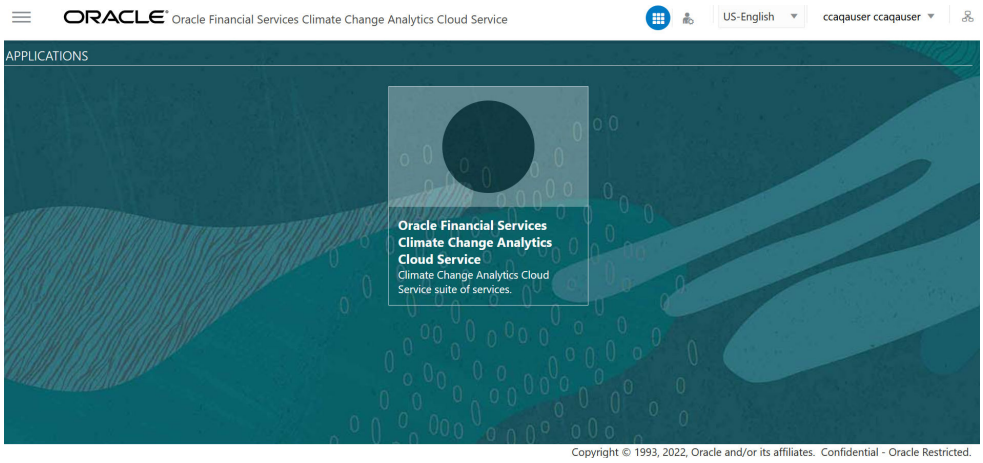
3.3.4 Launching Oracle Financial Services Climate Change Analytics Cloud Service

1. In the Web browser, click the link provided by Oracle.
2. Enter your user name and password.

   If requested, select an application. The password is case-sensitive.
3. Click **Sign In**.

   The **Oracle Financial Services Climate Change Analytics Cloud Service** Home page is displayed.

Figure 3-2 Oracle Financial Services Climate Change Analytics Cloud Service Home Page



3.3.4.1 Oracle Financial Services Climate Change Analytics Cloud Service Home Page

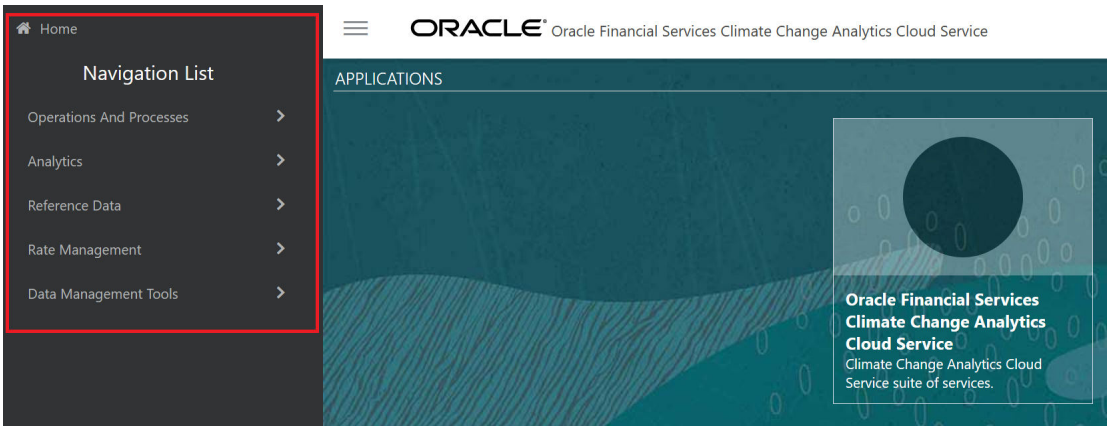
When you log in, you see the Oracle Financial Services Climate Change Analytics Cloud Service Home page.

Click the **Navigator Screen** icon

Figure 3-3 Navigator Screen Icon

to display the Navigator screen. This screen serves as a sitemap of the application features and displays links to all of the pages you can access. Use the Navigator screen to navigate among the rules and processes required to define, review, and analyze the application, and to report results.

Figure 3-4 The LHS Navigation



The OFS CCA Cloud Service Navigation Paths are displayed in the List of Navigation Paths. Access all these pages through the CCA Admin, or CCA Analyst, or CCA Auditor.

3.3.4.2 Common Icons

Use the icons to view and analyze data and related information for each feature.

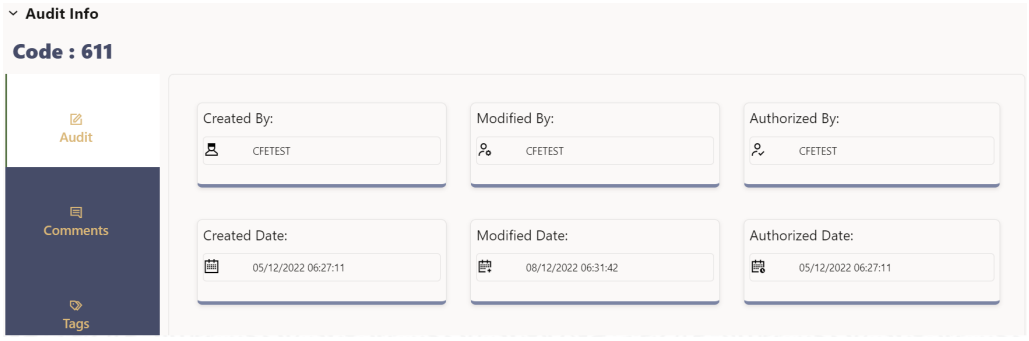
Figure 3-5 Common Icons

Icon Name	Icon	Uses
Action	•••	Click to perform view various action options.
View/Edit		Click in the Action column and select View/Edit to view or edit the contents of a rule in Read/Write format. Depending on User Privileges, the rule will open in either View or Edit mode.
Copy or Save As		Click in the Action column and select Save As to create a copy of an existing rule.
Delete		Click in the Action column and select Delete to delete an existing rule.
Execute		To execute a process.
Execution Details		To view the execution details of the process.
Add New	+	Click Add icon to add new items on Rule screen.

3.3.4.3 Common Feature Controls

The OFS CCA Cloud Service includes many common feature controls.

Figure 3-6 Audit Info



Audit

The Audit Trail container is a standard footer container for every OFS CCS CS rule type. It displays Created By, Creation Date, Last Modified By, Modification Date, Authorized By, and Authorized Date on the Audit tab.

User Comments

The User Comments tab may be used to add comments to any rule, subject to a maximum of 4000 characters.

Tags

The Tags tab allows you to add a tag to the selected Rule ID.

3.3.5 Quick Tour

The following table provides a bird's eye view of the tasks and the order to execute these tasks using the application. Click the links to read the details of each task. You can use the links on this page to help you immediately begin using Oracle Financial Services Climate Change Analytics Cloud Service.

Table 3-5 Quick Tour

Order	Task	Who Does This?	Action
1	CPQ Order Placement	Tenant Admin	Subscribe to the application. You will receive a Welcome e-mail with the URL and temporary password. See Getting Started with Oracle Cloud.

Table 3-5 (Cont.) Quick Tour

Order	Task	Who Does This?	Action
2	Provision Users	Sys Admin	Configure the Security Management System (SMS) to create users, assign roles, and implement user authorization and authentication. For more information, see Getting Started with Oracle Cloud. Review Standard User Groups and Roles Create Groups and Roles Create/Import Users Assign applications and groups to users Send notification to users.

Table 3-5 (Cont.) Quick Tour

Order	Task	Who Does This?	Action
3	Load Global Preferences	CCA Admin or CCA Analyst	Perform the following tasks: • Load Setup Master Data file to the Object store • Execute Setup Master data loader • Load Canvas threshold Data file to the Object store (Refer to the Download Specifications on MOS for data file preparation) • Execute Canvas threshold data loader • Load Unit of Measurement conversion Data file to the Object store (Refer to the Download Specifications on MOS for data file preparation) • Execute Unit of Measurement conversion data loader Additionally, you must refer to the Reference Guide for Batch Information on MOS.
4	Configure Market data	CCA Admin or CCA Analyst	Configure the following data: • Activate Currency • Add Currency Exchange Rate For more information see Currency and Currency Exchange Rate.

Table 3-5 (Cont.) Quick Tour

Order	Task	Who Does This?	Action
5	Load Dimensions	CCA Admin or CCA Analyst	Load Dimension Data files to the Object store Execute the Dimension Data Loader Update the Dimension Data (Member, Attribute, or Hierarchy) from the Dimension Management feature. Refer to the Download Specifications for the data file preparation and the Reference Guide for Batch Information and preseeded dimensions on MOS.
6	Load GL Data	CCA Admin or CCA Analyst	Load the GL (Financial Statement Item) Data file to Object store Execute the GL Data Loader Refer to the Download Specifications for the data file preparation and to the Reference Guide for Batch information on MOS.
7	Load Source Data	CCA Admin or CCA Analyst	Load the Source Data files to Object store. For more information, refer to the Download Specifications on MOS & preseeded Data File Specifications for the data file preparation Execute the Source Data Loaders. For more information, refer to the Reference Guide for Batch information on MOS.

Table 3-5 (Cont.) Quick Tour

Order	Task	Who Does This?	Action
8	Run Processing batches	CCA Analyst	Execute the Year-To Date (YTD) Loaders with the Consolidation or Standalone Parameter. For more information, refer to the Reference Guide for Batch information on MOS.
9	Generate Reports	CCA Analyst	Review the Reporting canvases. For more information, see the Reports document.

4
Scheduler Services

The Scheduler Service is a service that automates behind-the-scenes work that is necessary to sustain various enterprise applications and their operations. This automation helps the applications to control unattended background jobs program execution.

You can perform the following operations using Scheduler Services utility:

- **Define Batch** - A Batch contains a group of background tasks that are executed together, on a specific date and time during which the resources are available for batch processing.
- **Define Task** - A batch job is a piece of a program meant to meet specific and business-critical functions. The program is a REST API used in a batch.
- **Schedule Batch** - Batch jobs are scheduled to automate the tasks to be processed on a regular basis but don't necessarily need to occur during the day or have an employee interacted with the system are batch schedule. Jobs that happen on a regular basis are incorporated into batch schedules. You can also execute a Batch instantaneously and schedule batches.
- **Monitor Batch** - Track your batch executions using a Web browser. You can access the real-time feedback on the status of the current encoding job and lists the jobs pending in the batch. You can also **Cancel** or **Restart** the service when required.
- Use **Scheduler Service Dashboard** - The Scheduler Service Dashboard gives the complete status of the Executed Runs, Successful Runs, Failed Runs, Ongoing Runs, Interrupted Runs, and the Upcoming Runs.

4.1 User Roles and Functions

The following roles and functions are required to use Scheduler Services, and create and manage Batches and tasks, and also use Scheduler Service Dashboard.

Role Codes

- BATCH_READ
- BATCH_WRITE
- BATCH_ADV
- BATCH_AUTH
- BATCH_OPER
- BATCH_MAINT

Function Codes

- BATCH_ADD
- BATCH_DEL
- BATCH_MOD
- BATCH_VIEW

- BATCH_SCH
- BATCH_SUMM
- BATCH_AUTH
- BATCH_PURGE
- BATCH_MON
- BATCH_EXEC
- BATCH_COPY

4.2 Accessing Scheduler Services

Using the Scheduler Service feature, you can create and execute batches and schedules to run various tasks and also monitor them.

To access the Scheduler Service feature, from the left Navigation pane in the Service console, click **Operations and Processes > Scheduler**.

4.3 Define Batch

A Batch contains a group of background tasks that are executed together, on a specific date and time during which the resources are available for batch processing.

Batch Groups are a set of batches that are required to be execute together. Batch groups help to process Date and time-based background tasks based on a defined period during which the resources were available for Batch Processing.

To access the **Define Batch** page, from the left Navigation pane in the application console, click **Operations and Processes** > **Scheduler** > **Define Batch**.

The **Scheduler Service Summary Page (Define Batch)** with the list of Batches and Batch Groups is displayed. You can view the following details related to each Batch/ Batch Group.

- **Batch ID** - The unique Alphanumeric Code assigned to a specific Batch.
- **Name** - The unique Batch Name.
- **Description** - The brief description of the Batch.
- **Last Modified** - The last modified By User, Date and Time details.

To search for a specific Batch/Batch Group, enter the keywords in the **Search** Field and click **Search**. You can search based on the Batch/Batch group name, code and description. You can also sort the Batch/Batch group list based on Code, Name, Created Date and Last Modified Date.

You can perform the following operations to manage Batch/Batch Groups, from the **Scheduler Service Summary (Define Batch)** page.

- Create New Batch
- Create New Batch Group
- Edit a Batch
- Edit a Batch Group
- Copy a Batch

- Copy a Batch Group
- Delete a Batch
- Delete a Batch Group

4.3.1 Creating a Batch

A Batch contains a group of background tasks that are executed together, on a specific date and time, when the resources are available for batch processing.

Refer to the following steps, to create a batch from the **Scheduler Service Summary (Define Batch)** page.

1. To create a new Batch, click the **Action** and click **Create**.

   The **Create Batch Page** is displayed.

   Enter the following **Batch Details** :

   - **Code** - Enter a Unique Alphanumeric Code for the new Batch.
     The Code name always begins with alphabets and should not contain any space. The maximum limit is 60 characters and should not contain any special characters except **Underscore (_)**.
   - **Batch Name** - Enter a unique name for the new batch.
     The Code name always begins with alphabets and should not contain any space. The maximum limit is 60 characters and should not contain any special characters except **Underscore (_)**.
   - **Batch Description** - The description/details for the batch.
     The description should start with alphabet and should not be more than 250 characters.
   - **Service URL Name/ Service URL** - Select the **Service URL Name** from the drop-down list.
     You can also enter the **Service URL Name** and associated URL is displayed in the **Service URL**. You can also provide the partial URL here and the complete URL in the Task Service URL.

2. After entering the Batch Details, provide the following Batch Parameters.

   From the Batch Parameters pane, click **Add** to add a new Batch Parameter.
   By default, **$FICMISDATE$** and **$BATCHRUNID$** are added as Batch Parameters.

   - **Parameter Name** - A valid parameter name for the new Batch parameter.
   - **Parameter Value** - A valid Parameter Value required for Batch execution.

   > **Note:**
   >
   > Enclose the Parameter Value for a Run time with $ symbol. For example, $paramName$.

   To delete a Batch parameter, click **Delete** next to to that Parameter details.

3. Enter the following **Header Parameter** details.

   - **Parameter Name** - A valid parameter name for the new header parameter.
   - **Parameter Value** - A valid Parameter Value required for Batch execution.

4. Click **Save**. The new Batch is created and displayed in the **Scheduler Services (Define Batch)** Page.

4.3.2 Creating a Batch Group

You can create a new Batch Group in the Define Batch Page and schedule and monitor the Batch Group that you created.

To create a new Batch Group, perform the following steps:

1. To create a new Batch, click the **Action** and click **Create**.

   The **Create Batch Page** is displayed.

   Enter the following **Batch Details** :

   - **Code** - Enter a Unique Alphanumeric Code for the new Batch group.
     The Code name always begins with alphabets and should not contain any space. The maximum limit is 60 characters and should not contain any special characters except **Underscore (_)**.
   - **Batch Name** - Enter a unique name for the new batch group.
     The Code name always begins with alphabets and should not contain any space. The maximum limit is 60 characters and should not contain any special characters except **Underscore (_)**.
   - **Batch Description** - The description/details for the batch group.
     The description should start with alphabet and should not be more than 250 characters.
2. Select **Batch Group** option.
3. Select the Batches to be grouped together for processing, from the drop-down list.
4. Click **Save**.

   The new Batch Group is created and added to the **Scheduler Services (Define Batch)** page.

4.3.3 Editing a Batch

The **Edit Batch** option allows you to edit the Batch details such as Batch Description, Service URL Name and Service URL and also add a new Batch Parameter.

Seeded batches cannot be edited.

1. In the **Scheduler Services (Define Batch)** Page, click **Edit** corresponding to the Batch you want to modify.

   The Edit Batch Page is displayed.
2. Modify the required **Batch** details.

   For more information, see Create New Batch.
3. Click **Save**.

   The edited batch is saved and displayed in the **Scheduler Services (Define Batch)** Page.

4.3.4 Editing a Batch Group

The Edit Batch Group option allows you to edit the Batch Group details such as Batch Group Name, Added Batches, and Batch Group Description.

To modify a Batch Group, perform the following steps:

1. In the **Scheduler Services (Define Batch)** Page, click **Batch Group** option to list the Batch Groups.
2. Click **Edit** corresponding to the Batch Group you want to modify.
3. Modify the required Batch Group details.

   For more information, see Create New Batch Group section.
4. Click **Save**.

   The edited Batch Group is saved and updated in the**Scheduler Services (Define Batch)**.

4.3.5 Copying a Batch

The Copy Batch option allows you to copy a Batch that you want to clone or create instances in the system from the Define Batch Window.

To copy a Batch, perform the following steps:

1. In the **Scheduler Services (Define Batch)** Page, click **Copy** corresponding to the Batch that you want to copy.

   The Copy Batch Page is displayed.
2. Specify the Batch details as you want to clone and copy the existing batch.

   For more information, see Create New Batch section.
3. Click **Save**.

   The copied batch is saved and displayed in the **Scheduler Services (Define Batch)** Page.

4.3.6 Copying a Batch Group

The Copy Batch group option allows you to copy a Batch group that you want to clone or create instances in the system from the Define Batch Page.

To copy a Batch Group, perform the following steps:

1. In the **Scheduler Services (Define Batch)** Page, click **Copy** corresponding to the Batch group that you want to copy.

   The Copy Batch group Page is displayed.
2. Specify the Batch group details as you want to clone and copy the existing batch group.

   For more information, see Copy a Batch Group section.
3. Click **Save**.

   The copied batch group is saved and displayed in the **Scheduler Services (Define Batch)** Page.

4.3.7 Deleting a Batch

The Delete Batch option allows you to delete a Batch that are no longer required in the system from the Define Batch Page.

Seeded batches cannot be deleted.

To delete a Batch, perform the following steps:

1. From the **Scheduler Services (Define Batch)** Page, click **Delete** corresponding to the Batch you want to delete.
2. Click **OK** to confirm deletion.

> **Note:**
>
> If the batch has any active schedules all the associated schedules of the batch are also deleted, after confirmation.

4.3.8 Deleting a Batch Group

The Delete Batch group option allows you to delete a Batch group that are no longer required in the system from the Define Batch page.

Seeded batches cannot be deleted.

To delete a Batch Group, perform the following steps:

1. From the **Scheduler Services (Define Batch)** Page, click **Delete** corresponding to the Batch group you want to delete.
2. Click **OK** to confirm deletion.

> **Note:**
>
> If the batch group has any active schedules all the associated schedules of the batch are also deleted, after confirmation.

4.4 Define Tasks

The Define Tasks Page provides the list of tasks associated with a specific Batch Definition. You can create new tasks, and edit or delete existing tasks .

To access the **Define Task** page, from the left Navigation pane in the Service console,

1. From the left menu, click **Operations and Processes**.
2. Select **Define Task**, to view the page.
3. Select Batch/Batch Group from the drop-down list and select the particular batch/batch group.
   The list of tasks associated with the specific batch/batch group is displayed. You can view the following details related to each task.
   - Task ID

- Name
- Parent Task
- Component
- Created Date
- Last Modified

To search for a specific task, enter the keywords in the **Search** Field and click **Search**. You can search based on the Task Name, code and description. You can also sort the Task list based on Name Precedence, Component, Created Date and Last Modified Date.

You can perform the following operations to manage a Task, from the **Scheduler Service Summary (Define Task)** page.

- Add a task
- Modify a task
- Define a task precedence
- Delete a task

4.4.1 Adding a Task

Adding a new task option allows you to add new tasks to a selected Batch Definition.

To add new task, perform the following steps:

1. In the **Scheduler Service (Define Task)** select the Batch for which you want to add new task from the drop-down list.
2. Click **Actions** in page and click **Add**.

   Add Task page is displayed.
3. Enter the details in the Add Task page:
   - **Task Code** - Enter a Unique Alphanumeric Code for the new Task.
     The Code always begins with alphabets and should not contain any space. The maximum limit is 60 characters and should not contain any special characters except **Underscore (_)**.
   - **Task Name** - Enter a unique name for the new batch.
     The task name always begins with alphabets and should not contain any space. The maximum limit is 60 characters and should not contain any special characters except **Underscore (_)**.
   - **Task Description** - The description/details for the batch.
     The description should start with alphabet and should not be more than 250 characters. Words like Select From or Delete From should not be entered in the Description.
   - **Task Type** - Select the task type from the drop-down list.
   - **Batch Service URL** - Select the **Batch Service URL** from the drop-down list.
     You can also enter the **Task Service URL** and associated URL is displayed in the **Service URL**. You can also provide the partial URL here and the complete URL in the Task Service URL.
   - **Task Service URL** - Enter task service URL if it is different from Batch Service URL.

4. From the Task Parameters Pane, by default, all Batch Level Parameters are added and enabled as task parameters.
   a. Enter the Parameter name in the **Param Name** field.
   b. Enter the Parameter value in the **Param Value** field.

   You can delete a parameter by clicking corresponding to the parameter.
5. Click **Save**.

4.4.2 Modifying a Task

Modifying Task option allows you to modify the details of existing tasks of a Batch Definition such as Task Description, Task Type, Batch Service URL and Task Service URL.

You can also add a new task parameter and enable or disable already existing task parameters.

To modify a Task, perform the following steps:

1. From the **Define Task** Page, select the Batch to modify the task details, from the drop-down list.
2. Click **Edit** corresponding to the Task to be modified.

   The **Edit Task** Page is displayed.
3. Modify the required Task Details.

   For more information, see Add a task Section.
4. Click **Save**.

4.4.3 Define Task Precedence

Task Precedence indicates the execution-flow of a Batch. Task Precedence Value helps to determine the order in which the specific Tasks of a Batch are executed.

For example, consider a Batch consisting of four tasks. The first three tasks does not have a precedence defined and hence will be executed simultaneously, during the Batch Execution. However, Task 4 has a precedence value as Task 1 which indicates that, Task 4 is executed only after Task 1 has been successfully executed.

You can set Task precedence between Tasks or define to run a Task after a set of other tasks. However, multiple tasks can be executed simultaneously, and cyclical execution of tasks is not permitted. If the precedence for a Task is not set, the Task is executed immediately on Batch Execution.

To define the task precedence in the Define Task Page, perform the following steps:

1. Click **Add or Remove Precedence** corresponding to the task for which you want to add precedence task.
   The Task Precedence Mapping Window is displayed.

> **Note:**
>
> The **Task Precedence** option is disabled if a batch has only one task associated.

a. Select the batch that you want to execute before the current task, from the Available Tasks pane and click **Play**.

b. To select all the listed batches, click **Move** (Forward arrow).

c. To remove a batch, select the task from the Selected Tasks Pane and click **Remove** (Backward arrow).

d. To remove all the selected batches, click **Remove All** (double backward arrow).

2. Click **Save** to update Task Precedence in the batches.
3. Click **Preview** to view the Precedence information.

4.4.4 Deleting a Task

You can remove a task from a Batch Definition which are no longer required in the system by deleting it from the Define Task page.

To delete a Task, perform the following steps:

1. From the Define Task Page, select the Batch from the drop-down list.
2. Click **Delete** corresponding to the Task you want to delete.
3. Click **OK** in the confirmation dialog to confirm deletion.

4.5 Schedule Batch

The Schedule Batch Page facilitates you to run, schedule, re-start, and re-run the batches in the Scheduler Service. After you upload the data in the required format into the Object Storage, you must load the data into the system using the Scheduler Service. You can schedule them to run in a required pattern and view the Run Time Status of the scheduled services using the Monitor Batch Feature.

To access the **Schedule Batch** page, from the left Navigation pane in the Service console,

1. From the left menu, click **Operations and Processes**.
2. Select **Schedule Batch**, to view the page.
3. Select Batch/Batch Group from the drop-down list and select the particular batch/batch group.
   The list of tasks associated with the specific batch/batch group is displayed. You can view the following details related to each task.

You can perform the following operation for the batch:

- Execute a Batch
- Schedule a Batch - Daily, Weekly, Monthly, and Using Cron expression.
- Re-start a Batch
- Re-run a Batch
- Edit Dynamic Parameters
- Task Definition of a Batch

4.5.1 Task Definitions of a Batch

You can modify the Task Definition state in the Batch Execution Page to exclude or hold the defined task in a Batch from execution. The excluded tasks are therefore assumed to have completed execution and get excluded during the Batch Run.

While executing or scheduling a Batch from the Schedule Batch Page, you can:

- Exclude a task or include the excluded task.
- Hold a task or release the held task.

4.5.2 Execute a Batch and Batch Group

The Execute Batch option allows you to run a batch instantaneously.

To execute a Batch/Batch Group, perform the following steps:

1. In the **Schedule Batch** page, select Batch or Bath Group to execute, from the drop-down list.
2. Select the Batch /Batch Group Name from the drop-down list. For example, AMLDataLoad.
3. Click **Execute**.

   The **Execution Schedule** Page is displayed.
4. Click **Exclude Tasks**, to add/remove tasks from the execution list..
5. Click **Hold Tasks**, to pause/release tasks during execution..
6. Click **Edit Dynamic Parameters**, to modify the dynamic parameters..
7. Click **Execute**.

   The Batch is executed, and the associated unique execution ID is displayed.
8. Schedule a Batch/Batch Group.

   You can schedule a Batch/Batch Group to run just for Daily, Weekly, and Monthly. for scheduling the batches. You can also have a user defined schedule to schedule and run a batch, Using Cron expression.

4.5.3 Schedule Once

To schedule a Batch /Batch Group to run once, perform the following steps:

1. Click **Schedule Batch** from the Header panel.

   The Schedule Batch Page is displayed.
2. In the **Schedule Batch** Page, click **Schedule Once**.
3. Select **Batch or Bath Group** to execute, from the drop-down list.
4. Select the **Batch or Batch Group** Name you want to schedule for once from the drop-down list.
5. Enter a **Schedule Name**.
6. Select the **Start Date** on which you want to run the Batch.
7. Click **Run Time** and select the time at which you want to run the Batch.

8. Click **Schedule**.

4.5.4 Daily Batch Scheduling

To schedule a Batch to run daily, perform the following steps:

1. Click **Schedule Batch** from the Header panel. The Schedule Batch Page is displayed.
2. In the Schedule Batch Page, click **Daily** .
3. Select the **Batch /Batch Group Name**.
4. Select the **Batch or Batch Name** you want to schedule daily from the dro-down list.
5. Enter a **Schedule Name**.
6. Select the **Start Date** from which you want to run the Batch.
7. Select the **End Date** till which you want to run the Batch.
8. Select the **Time** at which you want to run the Batch daily.
9. Click **Schedule**.

4.5.5 Weekly Batch Scheduling

To schedule a Batch to run weekly, perform the following steps:

1. Click **Schedule Batch** from the Header panel.

   The Schedule Batch Page is displayed.
2. In the Schedule Batch Page, click **Weekly**.
3. Select the Batch /Batch Group Name.
4. Select the **Batch or Batch Name** you want to schedule daily from the drop-down menu.
5. Enter a **Schedule Name**.
6. Select the **Start Date** from which you want to run the Batch.
7. Select the **End Date** till which you want to run the Batch.
8. Select the **Time** at which you want to run the Batch every week.
9. Select the days on a week you want to run the Batch from the **Select Days** of the Week multi-select drop down menu.
10. Click **Schedule**.

4.5.6 Monthly Batch Scheduling

To schedule a Batch to run weekly, perform the following steps:

1. In the **Schedule Batch** Page, click **Monthly**.
2. Select the **Batch /Batch Group Name**.
3. Select the **Batch or Batch Name** you want to schedule daily from the drop-down list.
4. Enter a **Schedule Name**.
5. Select the **Start Date** from which you want to run the Batch.
6. Select the **End Date** till which you want to run the Batch.

7. Select the **Time** at which you want to run the Batch every Month.
8. Select the months in a year you want to run the Batch from the **Select Months of the Year** multi-select drop-down list.
9. Select the day of the month that you want to run the Batch from the Select Day of the Month drop down menu.
10. Click **Schedule**.

4.5.7 Schedule Cron Expression

To run a Batch in a user-defined schedule, you can have custom schedule with the help of Cron Expression.

A Cron Expression is a string comprised of six or seven fields separated by white space. Fields can contain any of the allowed values, along with various combinations of the allowed special characters for that field. For more information, click the icon next to the Cron Expression field.

To schedule a Batch based on Cron Expression, perform the following steps:

1. In the Schedule Batch Page, click **Cron Expression**.
2. Select the **Batch /Batch Group**.
3. Select the Batch or Batch Group Name you want to schedule from the Select drop down menu.
4. Enter a **Schedule Name**.
5. Enter the **Cron Expression** for your schedule.

   For more information about the Cron Expression, click Information icon next to the Cron Expression field.
6. Click **Schedule**.

4.5.8 Re-start a Batch

You can re-start a Batch which has not been executed successfully or which has been explicitly interrupted, or cancelled, or put on hold during the execution process.

By re-starting a Batch, you can continue Batch execution directly from the point of interruption or failure and complete executing the remaining tasks.

To re-start a batch, perform the following steps:

1. Click **Schedule Batch** from the Header panel.

   The Schedule Page is displayed.
2. From the **Schedule** Page, select Re-start tab.
3. Select **Batch /Batch Group**.
4. Select the **Batch or Batch Name** you want to schedule daily from the drop-down list.
5. Select the **Batch Run ID**.
6. Click **Re-start**.

4.5.9 Re-run a Batch

You can re-run a Batch which has previously been executed. Re-run Batch facilitates you to run the Batch irrespective of the previous execution state.

A new Batch Run ID is generated during the Re-run process and the Batch is executed as similar to the new Batch Run.

To re-run a batch, perform the following steps:

1. Click **Schedule Batch** from the Header panel.

   The **Schedule Batch** Page is displayed.
2. In the **Schedule Batch** Page, select **Re-run** tab.
3. Select **Batch /Batch Group**.
4. Select the **Batch or Batch group Name** you want to re-run from the Select Name drop down menu.
5. Select the **Batch Run ID**.
6. Click **Re-run**.

4.5.10 Edit Dynamic Parameters

Dynamic Parameters facilitate you to modify the dynamic parameters for the batch.

You can change the Param Value from the Edit Dynamic Params Page and save the changes to the Batch. The Edit Dynamic Parameters option is available in all the tab in the Schedule Batch Page.

To edit the dynamic parameters for a batch, perform the following steps:

1. In the **Schedule Batch Page**, click **Edit Dynamic Parameters**.
   The **Edit Dynamic Params** Page is displayed.
2. In the **Edit Dynamic Params** Page, modify the values as required.
3. Click **Save**. The modified parameters are applied to the Batch.

4.6 Monitor Batch

The Monitor Batch enables you to view the status of executed Batch along with the tasks details. You can track the issues if any, on regular intervals and ensure smoother Batch Execution. A visual representation as well as tabular view of the status of each Tasks in the Batch is available.

To monitor a batch, perform the following steps:

1. Click **Monitor Batch** from the Header panel.
   The **Monitor Batch Page** is displayed.
2. Select the **Batch/Batch Group** from the drop-down list and then select the **Batch Run ID**.
3. Click **Start Monitor**.
   The results are displayed in **Visualization** and **List View** tabs. Details of these tabs are as follows:

The **Visualization** tab displays the details in the form of a chart represented with the following details:

- **Batch Status**: Displays the batch status, the different batch status are NOT-STARTED, ON-GOING, SUCCESSFUL, FAILED, INTERRUPTED, EXCLUDED, HELD, and UNDEFINED.
- **Batch Start Time**: Displays the Batch Start Time details.
- **Batch End Time**: Displays the Batch End Time details.
- **Task Details**: Mouse-over the task to display its status and details.

The **List View** tab displays the details in a tabular form with the following details:

- **Batch Status**: Displays the batch status, the different Batch Status are NOT-STARTED, ON-GOING, SUCCESSFUL, FAILED, INTERRUPTED, EXCLUDED, HELD, and UNDEFINED.
- **Batch Start Time**: Displays the Batch Start Time details.
- **Batch End Time**: Displays the Batch End Time details.
- **Task Details**: Mouse-over the task to display its status and details.
- **More Information**: The message returned by the Rest Service.

Select **Stop Monitor**, to stop monitoring. You can also specify the Start and Stop Monitor options along with refresh interval in the Refresh every second and minute fields.

You can also setup auto refresh to automatically update the status based on the set **Refresh Interval** and **Duration**. At any point, click **Stop Monitor** to stop the auto refresh.

- By default, the refresh interval is set to **5 seconds** and duration is set to **5 minutes**.
- The refresh interval ranges between 5 to 60 seconds.
- The duration ranges between 5 to 180 seconds.

4. To restart the Batch /Batch Group, select **Restart**.
5. To rerun the Batch/Batch Group, select **Rerun**.
6. To interrupt the Batch /Batch Group, select **Stop**.
7. In the Log Viewer pop-up the log information is displayed. You can click the **Download** icon to download the log or click the **Close** icon to close the log information.

4.7 Scheduler Service Dashboard

You can view and monitor the complete status of the Executed Runs, Successful Runs, Failed Runs, Ongoing Runs, Interrupted Runs, and the Upcoming Runs, from the Scheduler Service Dashboard.

To access the **Scheduler Service Dashboard** page, from the left Navigation pane in the Service console, click **Operations and Processes** > **Scheduler** > **Dashboard**.

The Scheduler Service Dashboard with the following details is displayed.

- The Executed Runs, Successful Runs, Failed Runs, Ongoing Runs, Interrupted Runs, and Upcoming Runs tabs. You can click the tabs to view the details of the

Batches based on their status. For example, click **Ongoing Runs** to view the details of the batches that are currently running.

- The Batches that were executed within the last 7 or 30 days contain details such as Batch Name, Batch Run ID, and Run Time. Click 30 days to view the batches that were executed within the last 30 days. You can click the icon corresponding to a Batch to monitor it.
- The Batch Execution Summary Pane displays the count of total batches executed that were executed within the last 7 days, 30 days, and 120 days. You can also view the separate count of successful batches, failed batches, interrupted batches, on-going batches, and the batches which are yet to start, by hovering your mouse the batches.

5
Viewing Logs

This section describes the OFS CCA CS log details.

5.1 Kubectl Commands

To get the subnamespace:

```
kubectl get subnamespaces
```

To get the pods:

```
kubectl -n <subnamespace> get pods
```

For example:

```
kubectl -n fsgbu-ofscca--fsafnd-ccaqa313233-prd get pods
```

```
kubectl -n fsgbu-ofscca--ofscca-ccaqa313233-prd get pods
```

To get the node level details and logs:

```
kubectl logs <servicename> -n <subnamespace>
```

For example:

```
kubectl logs dataload-ofscca-czpv5 -n fsgbu-ofscca--ofscca-ccaqa282233-prd
```

To delete a pod:

```
kubectl delete pod <ppodname> -n fsgbu-ofscca--ofscca-<tenanted>
```

For example:

```
kubectl delete pod cca-loader-cfdf7b4f4-8vk4x -n fsgbu-ofscca--ofscca-
ccaqa313233-prd
```

Scaling the pods:

```
Kubectl get deployments
```

```
kubectl scale deployment jobless-ordering-service --replicas=3(Scale up)
```

```
kubectl scale deployment jobless-ordering-service --replicas=0 (Scale Down)
```

5.2 Kubectl Commands

```
kubectl logs dataload-ofscca-czpv5 -n
    fsgbu-ofscca--ofscca-ccaqa282233-prd
```

5.3 Instrument Data Loader (File to Stage)

You can see the messages from User Interface. To view messages, follow these steps:

- Navigate to **Operations and Processes**, select **Scheduler**, and then select **Monitor Batch**.
- Select **Batch** and **Run Id**.
- Click **Start Monitor**.

5.4 Instrument Data Loader (Stage to Processing)

You can see the messages from User Interface. To view messages, follow these steps:

- Navigate to **Operations and Processes**, select **Scheduler**, and then select **Monitor Batch**.
- Select **Batch** and **Run Id**.
- Click **Start Monitor**.

Additional information is available in table AAICL_MESSAGE_LOG of data schema.

5.5 Dimension Loader (File to Stage to Dimension)

You can see the messages from User Interface. To view messages, follow these steps:

- Navigate to **Operations and Processes**, select **Scheduler**, and then select **Monitor Batch**.
- Select Batch and Run Id.
- Click **Start Monitor**.

6
File Upload and Download Utility

This section provides information on the different topics in this feature:

6.1 Roles and Functions

The following table lists the role codes and function codes required to configure the File Upload/Download Utility.

Role Code	Function Code
FILE_READ	FILE_SUMMARY
FILE_UPLOAD	FILE_UPLOAD
FILE_DOWNLOAD	FILE_DOWNLOAD
FILE_ADV	FILE_UPLOAD
	FILE_DOWNLOAD
	FILE_DELETE
	FILE_SUMMARY

6.2 File Upload and Download Utility

The File Upload and Download Utility enables you to upload or download files to the Object Store. Complete the following steps to Upload or Download a file.

6.2.1 Upload or Download File from Object Store Using Console

1. From the left menu, click **Common Object Maintenance**.
2. Click **Data Management** in the left navigation pane.

   The **File Upload and Download** Page is displayed. The Files that are uploaded to the Object Store are listed here. The following details are provided for each File.

Field	Description
File ID	The unique file ID associated with the file. This is auto-generated during the upload.
Prefix	The prefix is added to the file name.
File Name	The name of the file that is uploaded. This is automatically updated after you select the file.
Stripe Name	The Unique Identifier for storing a collection of files. Collection examples: Project, organization, tenant.
Uploaded Date	The file upload date.
Download File	Click **Download** to download a copy of the uploaded file.

Field	Description
Delete	Click **Delete** to delete the file.

Related Topics

- Uploading/Downloading a File Using Utility
  Complete the following steps to Upload or Download a file using the Utility.
-

6.2.2 Uploading/Downloading a File Using Utility

Complete the following steps to Upload or Download a file using the Utility.

1. 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 the file and drop it here.

   The file name is automatically updated in the **Selected File** field.
2. Enter the **Prefix** to be added to the file name.

   The Prefix is added to the file name. In case, you have two files with the same file name, you can save them with different prefixes.
   Example: **/abc/test.txt** and **/def/test.txt**. Both these files have the same file name but different Prefixes.
3. Click **Upload** to upload the selected file.

   A confirmation message is displayed after successful upload and the file is listed in the Uploaded Files list.

6.2.3 Uploading/Downloading a File Using PAR URL

Complete the following steps to upload or download a file using the PAR URL.

1. 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 name is automatically updated in the **Selected File** field.
2. Enter the **Prefix** to be added to the file name.
3. Click **Get PAR URL**.

   This will generate the PAR URL and File ID which are required in order to upload the file.

   You can also generate PAR URL using Rest API.
4. Copy PAR URL and note the related File ID.
5. You can upload file content referred with the specific PAR URL into the object store using one of the following options: Console, CLI, or SDK.

For example, you may use the following curl command directly in local Gitbash.

```
curl -X PUT --data-binary '@<local-filename>' <unique-PAR-URL>
```

You can also use the following command.

```
curl -T '<Filepath>' -X PUT <PAR_URL>
```

You can scan the file referred with the specific File ID (obtained in Step 3) using one of the following options: Console, CLI, or SDK. For example, use the following CURL command to scan the File. Use the File ID.

```
curl -k --location --request PUT 'https://<Host:Port>/<Tenant-ID>/utils-
service/v1/file/scan/<FileID>' \
--header 'ofs_tenant_id: <Tenant-ID>' \
--header 'ofs_service_id: <Service-ID>' \
--header 'ofs_workspace_id: <WorkspaceId>' \
--header 'Authorization: Bearer <Generated_Token>'
```

A confirmation message is displayed after successful upload and the file is listed in the Uploaded Files list.

6.3 File Upload Process Outline

This section provides the step-by-step process that is implemented within the File Upload utility.

6.3.1 Background Information

Client for URLs

For information regarding how to use Client for URLs (cURL), access the following link:

Sending API requests using cURL

View list of Uploaded Files

For information regarding how to view a list of uploaded files in your Cloud Service, access the following link:

Viewing List of Uploaded Files

6.3.2 Step 1: Generate Access Token

Generate the Access Token for your Cloud Service by:

1. Submitting a RESTful API Post Request to your Oracle IDCS environment as defined in the Identity Cloud Service User Guide. For information, see OAuth Runtime Tokens REST Endpoints.

Note that a sample code snippet has been provided below using cURL to generate the access token for Basic Authorization and assign it to a variable for use within a script:

```
access_token=`curl -s --insecure -H "Authorization: Basic $ENCODED" -H
"Content-Type: application/x-www-form-urlencoded;charset=UTF-8" --
request POST $IDCS_URL -d
"grant_type=password&username=$USERNAME&password=$PASSWORD&scope=urn:op
c:idm:__myscopes__ urn:opc:resource:expiry=9153600" | python3 -c
"import sys, json; print(json.load(sys.stdin)['access_token'])"`
```

6.3.3 Step 2: Generate PAR URL

Generate the PAR URL your Cloud Service by:

1. Submitting a RESTful API Post Request to your Cloud Service as defined in the Calling the API to Generate the URL section.

Note a sample code snippet has been provided below using cURL to generate the PAR URL and and assign it to a variable for use within a script:

PAR URL Generation Code Snippet

```
curl --location --insecure --request POST "$FILEUPLOADURL" --header
"Authorization: Bearer $access_token" --header 'Content-Type:
application/json' --data-raw "{
    \"fileName\": \"$1\",
    \"fileSize\": \"$2\",
    \"mimeType\": \"$3\"
}" >> "$HOME"/FILEUPLOAD_UTIL/"$1"_PARURLresponse.out 2>&1
```

PAR URL Variable Assignment Code Snippet

```
grep -oE '(https)[^ ]*' "$HOME"/
FILEUPLOAD_UTIL/"$1"_PARURLresponse.out > "$HOME"/
FILEUPLOAD_UTIL/"$1"_PARURLresponse1.csv
    while IFS="," read -r H1 H2
    do
        URLtrim="$H1"
        FinalPAR=${URLtrim::-1}
          echo -e "\n PAR_URL is $FinalPAR"
    done < "$HOME"/FILEUPLOAD_UTIL/"$1"_PARURLresponse1.csv
```

PAR URL Variable Assignment Code Snippet – used in File Scanning Step

```
grep -oE '(fileId)[^ ]*' "$HOME"/
FILEUPLOAD_UTIL/"$1"_PARURLresponse.out > "$HOME"/
FILEUPLOAD_UTIL/"$1"_PARURLresponse2.csv
    while IFS="," read -r F1 F2
    do
        FILEIDtrim="$F1"
        FINALFILEID=`echo "$FILEIDtrim"| sed -r 's/^.{8}//'`
```

```
        echo -e "\n FILE ID is $FINALFILEID"
    done < "$HOME"/FILEUPLOAD_UTIL/"$1"_PARURLresponse2.csv
```

6.3.4 Step 3: Upload file to Object Store

Upload file to the Object Store of your Cloud Service by:

1. Submitting a RESTful API Post Request to your Cloud Service as defined in the Uploading/Downloading a File Using PAR URL topic.

Note a sample code snippet has been provided below using cURL to upload the file:

```
curl -T "$HOME"/FILEUPLOAD_UTIL/"$1" -X PUT "$FinalPAR"
```

6.3.5 Step 4: Scan the file to ensure Upload was Successful

Scan the file that was uploaded to the Object Store of your Cloud Service by:

1. Submitting a RESTful API Put Request to your Cloud Service as defined by the code snippet below:

File Scanning Code Snippet – using File ID from Step 2 – Generate PAR URL

```
if [ $last_error -eq 0 ]; then
        echo -e "\n *****Scanning the File *****"
        curl -k --location --request PUT "$SCANURL/$FINALFILEID" --header
'ofs_tenant_id: $TENANT' --header 'ofs_service_id: OFS_FTP' --header
'ofs_workspace_id: WS001' --header "Authorization: Bearer $access_token"
        last_error=$?
        if [ $last_error -eq 0 ]; then
            echo -e "\n ***File Upload is Successful please check File
Upload / Download UI***"
        else
            echo "Scan failed"
            exit -2;
        fi
    else
        echo "Upload failed"
        exit -3;
    fi
```

6.4 Automating the File Upload Process Using File Upload Utility

This section provides the procedure including the script to automate the process of uploading input data files using the File Upload utility.

You can download this script from this MoS Doc ID 2953162.1.

6.4.1 Software Prerequisites

Python 3.10 (Note this is used to access data elements from the API JSON responses)

6.4.2 File Upload Using File Upload Utility

To upload files using the File Upload utility, follow these steps:

1. Extract the **FILEUPLOAD_UTIL.zip** file under the **$HOME** directory.
2. Place the Data Loader input file in the **$HOME/FILEUPLOAD_UTIL** directory.

Figure 6-1 Data Loader Input File Path

3. Edit the **Env_setup.sh** file to update the ENV variables. For more information to get the IDCS URL, see
IDCS_URL=<idcs-url>/oauth2/v1/token

   Example: https://
idcs-0cb0c2b3ba624afca67467fd5eb9db49.identity.xxyy.xxyyy.com/oauth2/v1/
token

   ENCODED=<OAuth Client ID>:<OAuth Client Secret> (Encode them using **base64encode**)

   See Get the OAuth Client ID and Client Secret for getting the URL. for the Client ID and Client Secret details.

   Example:

   ZnRwcWExMDEyMzEtcHJkX0FQUElEOjBkMmU5MDBiLTlhYjItNGFmOS05OWM0LTEwNTYyMDVkYWYwNQ==

   USERNAME=<App login user>

   > **Note:**
   >
   > <App login user> should have FILE_UPLOAD role mapped.

   PASSWORD=<App login password>

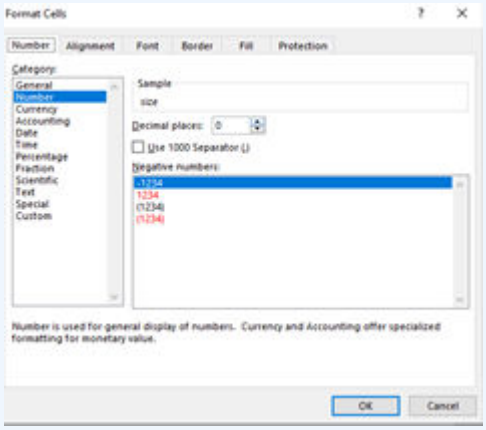
   TENANT=<abcdef-prd>

   CCAHOST=<CCAhostdetail>

   Example : dc.ccacloud.us-xxxxx -1.ocs.oc-test.com

Figure 6-2 OFS CCA CS Host Details

4. The **input1.csv** file is the input file that stores the file name, size, and type. To run the multiple files for upload, you must have multiple entries of the details of the file that need to be included.

> **Note:**
>
> While running this in windows,the size field must be numeric as displayed in the following image:
>
> **Figure 6-3 Example**
>
> 
>

5. Run **./wrapper.sh**.

Figure 6-4 Running ./wrapper.sh

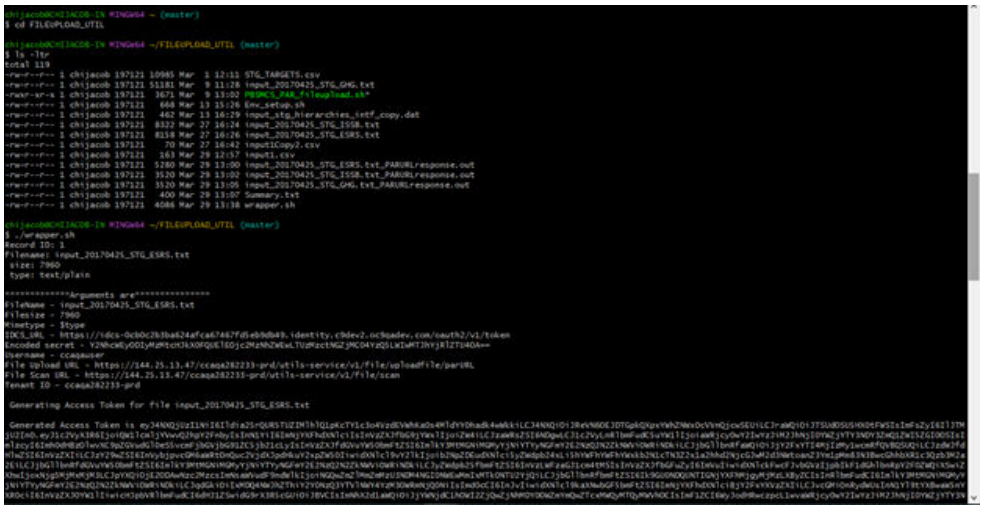


Figure 6-5 PAR URL Generation is Successful

6. The script generates the parresponse for each input file and **summary.txt**.

Figure 6-6 The Generated summary.txt File

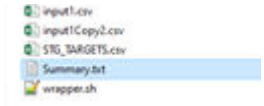
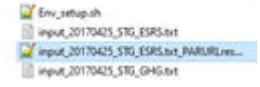
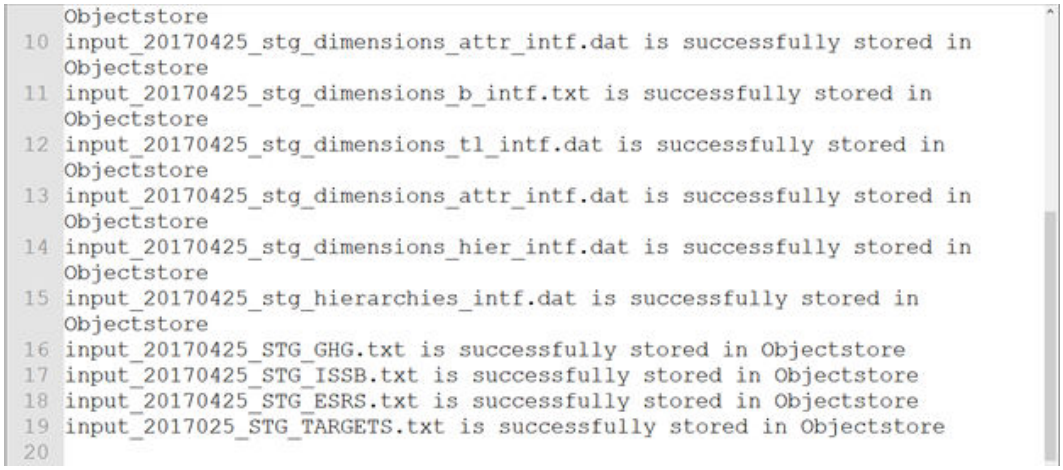


Figure 6-7 The Generated Response File



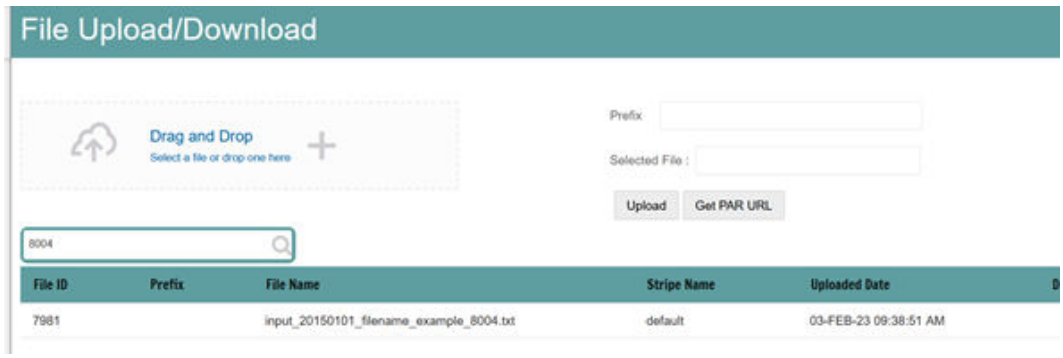
The following image displays the contents of the generated summary file:

Figure 6-8 The Generated Summary File



7. After the execution is completed, check the File Upload/Download UI to confirm that the uploaded file is appearing.

Figure 6-9 File Upload/Download UI



6.4.3 Uploading/Downloading a File Using PAR URL

Complete the following steps to upload or download a file using the PAR URL.

1. 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 name is automatically updated in the **Selected File** field.
2. Enter the **Prefix** to be added to the file name.
3. Click **Get PAR URL**.

   This will generate the PAR URL and File ID which are required in order to upload the file.

   You can also generate PAR URL using Rest API.
4. Copy PAR URL and note the related File ID.

5. You can upload file content referred with the specific PAR URL into the object store using one of the following options: Console, CLI, or SDK.

   For example, you may use the following curl command directly in local Gitbash.

   ```
   curl -X PUT --data-binary '@<local-filename>' <unique-PAR-URL>
   ```

   You can also use the following command.

   ```
   curl -T '<Filepath>' -X PUT <PAR_URL>
   ```

   You can scan the file referred with the specific File ID (obtained in Step 3) using one of the following options: Console, CLI, or SDK. For example, use the following CURL command to scan the File. Use the File ID.

   ```
   curl -k --location --request PUT 'https://<Host:Port>/<Tenant-ID>/
   utils-service/v1/file/scan/<FileID>' \
   --header 'ofs_tenant_id: <Tenant-ID>' \
   --header 'ofs_service_id: <Service-ID>' \
   --header 'ofs_workspace_id: <WorkspaceId>' \
   --header 'Authorization: Bearer <Generated_Token>'
   ```

   A confirmation message is displayed after successful upload and the file is listed in the Uploaded Files list.

6.5 Generating PAR URL for File Operations

The PAR URL for File Operations API creates a PAR File that you can use to perform file operations in the Object Store for end-to-end integrations.

6.5.1 Generating PAR URL for File Upload

You can use this REST API to generate the PAR URL for File Upload. See the following sections for information on how to perform the POST operation.

Related Topics

•

6.5.1.1 End Point Details

- **Method** – POST
- **URL** - `https://<HOST_NAME:PORT>/<TENANT>/utils-service/v1/file/uploadfile/parURL?prefix=<prefix>`
- **Content-Type** - Application/Json

6.5.1.2 Calling the API to Generate the URL

To call the API, follow these steps:

1. Open a relevant tool, such as via cURL command.

2. Prepare a cURL command with the authentication token and other details. For more information refer to the following code.

Syntax

```
curl -k --location --request POST 'https://<hostname>/<TENANT-ID>/utils-
service/v1/file/uploadfile/parURL?prefix=' \
--data-raw '{"fileName": "<remote filename>", "fileSize": <file size>,
"mimeType": "<file type>"}' \
--header 'ofs_remote_user: <USERID>' \
--header 'locale: en-US' \
--header 'ofs_tenant_id: <TENANT-ID>' \
--header 'ofs_workspace_id: WS001' \
--header 'content-type: application/json' \
--header 'Authorization: Bearer <TOKEN>'
```

Example (truncated)

```
curl -k --location --request POST 'https://<hostname>/<TENANT-ID>/utils-
service/v1/file/uploadfile/parURL?prefix=' \
--data-raw '{"fileName": "idcs_log1.txt", "fileSize": 100, "mimeType":
"text/plain"}' \
--header 'ofs_remote_user: cneadmin' \
--header 'locale: en-US' \
--header 'ofs_tenant_id: aaitestdev1001-prd' \
--header 'ofs_workspace_id: WS001' \
--header 'content-type: application/json' \
--header 'Authorization: Bearer
eyJ4NXQjUzI1NiI6Ildia25rQUR5TUZIMlhlQ1pKcTY1c3o4VzdEVWhKa0s4MldYY0hadk4wWk
kiLCJ4
...
...
sQXj0iohsSIEmQXVwwjhhqnc4eJNnmCjx8Tb7TXjx1MIQLeOIcfrIj5gkzoMKX94_7USxHv-6L
hBzw'
```

6.5.1.2.1 Request JSON Parameters

This section provides the list of parameters in the JSON Request.

Table 6-1 Request JSON Parameters

Name	Type	Required	Description
fileName	STRING	Yes	The name of the file to be uploaded. The following are the conditions for to enter in this field: • Must start with an Alphanumeric Character • Allowed characters are alphabets, numbers, and special characters - hyphen(-), dot(.), and underscore(_) • Length of characters must not be greater than 255 characters
fileSize	INTEGER	Yes	The size of the file (in Bytes) to be uploaded. The size of the file should be greater than 1 Byte and less than 7 GB.
mimeType	STRING	Yes	The mime type to be uploaded. The following mime types are allowed: • Text/CSV • Text/plain • DAT

Request JSON Sample

```
 [{
"fileName": "File.csv",
"fileSize": 7654,
"mimeType": "text/csv"
}]
```

6.5.1.2.2 Response JSON Parameters

This section provides the list of parameters in the JSON Response.

Table 6-2 POST JSON Response

Name	Type	Description
fileName	STRING	The name of the file to be uploaded.
uploadURL	STRING	The generated pre-authenticated URL to upload a file.
fileId	INTEGER	The unique File Identifier.

Response JSON Sample

```
{
   "payload": {
       "uploadURL": "https://objectstorage.us-phoenix-1.oraclecloud.com/p/
bdSI-hzigiAoUU0lyEKnuk0YGs05L172gt_woZAgqNFYmUFQeexV3BDfTO97mhBI/n/
oraclegbudevcorp/b/fsgbu_pbsm_cndevcorp_ftpqa101231-prd_default/o/default/
2023-01-31/jfr/f9ce031f-4a42-471d-b4da-d0577f3eca15",
       "createUser": "user1",
       "stripeName": "default",
       "fileId": 5025,
       "createDate": "2023-01-31T09:14:16",
       "token": "",
       "status": "success"
   }
}
```

6.5.1.3 Viewing List of Uploaded Files

Run the following cURL command to generate and view all the files that are uploaded using PAR URL.

Syntax

```
curl -k --location --request GET 'https://<hostname>/<TENANT-ID>/utils-
service/v1/listfiles stripeName=default' \
--header 'locale: en-US' \
--header 'ofs_remote_user: <user id>' \
--header 'ofs_tenant_id: < TENANT-ID >' \
--header 'ofs_workspace_id: WS001' \
--header "Authorization: Bearer <TOKEN>'
```

Example

```
curl -k --location --request GET 'https://dc.pbsmcloud.us-phoenix-1.ocs.oc-
test.com/aaitestdev1001-prd/utils-service/v1/listfiles?stripeName=default' \
--header 'locale: en-US' \
--header 'ofs_remote_user: cneadmin' \
--header 'ofs_tenant_id: aaitestdev1001-prd' \
--header 'ofs_workspace_id: WS001' \
--header "Authorization: Bearer ${TOKEN}"
```

Response

```
      {"payload":
[{"v_file_name":"Idcs_log3.txt","n_file_id":9916,"d_upload_date":"31-
JAN-23
      06:33:43 AM","v_stripe_name":"default"},
{"v_file_name":"Idcs_log4.txt","n_file_id":9917,"d_upload_date":"31-
JAN-23
      06:40:25 AM","v_stripe_name":"default"}],"count":2}
```

6.5.2 Generating PAR URL For File Download

You can use this REST API to generate the PAR URL for File Download. See the following sections for information on how to perform the post operation.

6.5.2.1 Calling the API to Generate PAR URL for File Download Using File Name

To call the API, follow these steps:

1. Open a relevant tool, such as via cURL command.
2. Prepare a cURL command with the authentication token and other details. For more information refer to the following code.

   Syntax

   ```
   curl -k --location --request GET < 'https://<hostname>/<TENANT-ID>/
   utils-service/v1/file/download?fileName=<file
   name>&stripeName=default&prefix=' \
    --header 'ofs_remote_user: <userid>' \
    --header 'locale: en-US' \
    --header 'ofs_tenant_id: <TENANT-ID>' \
    --header 'ofs_workspace_id: WS001' \
    --header "Authorization: Bearer <TOKEN>"
   ```

   Example

   ```
   curl -k --location --request GET 'https://<hostname>/<TENANT-ID>/
   utils-service/v1/file/download?
   fileName=test3GB.xml&stripeName=default&prefix=' \
    --header 'ofs_remote_user: cneadmin' \
    --header 'locale: en-US' \
    --header 'ofs_tenant_id: aaitestdev1001-prd' \
    --header 'ofs_workspace_id: WS001' \
    --header "Authorization: Bearer ${TOKEN}"
   ```

   Response

   ```
    {"payload":{"downloadURL":"https://objectstorage.us-
   phoenix-1.oraclecloud.com/p/8R68eVcQAxQjNjK__S04MZjS-
   v4BqEbWSILvu0w40kJNrzfKeCB8vWBwugW5XvsK/n/oraclegbudevcorp/b/
   ```

```
fsgbu_pbsm_cndevcorp_aaitestdev1001-prd_default/o/default/2023-01-20/rnz/
6c023e75-09e2-4265-815e-32cedcd2415e?
httpResponseContentDisposition=ATTACHMENT%3B%20filename%3Dtest3GB.xml"}}
```

6.5.2.2 Calling the API to Generate PAR URL for File Download Using File ID

To call the API, follow these steps:

1. Open a relevant tool, such as via cURL command.
2. Prepare a cURL command with the authentication token and other details. For more information, refer to the following code.

Syntax

```
curl -k --location --request GET ' 'https://<hostname>/<TENANT-ID> /utils-
service/v1/file/downloadfile/<file id>' \
--header 'ofs_remote_user: <userid>' \
--header 'locale: en-US' \
--header 'ofs_tenant_id: < TENANT-ID> ' \
--header 'ofs_workspace_id: WS001' \
--header "Authorization: Bearer <TOKEN>"
```

Example

```
curl -k --location --request GET 'https://<hostname>/<TENANT-ID>/utils-
service/v1/file/downloadfile/9916' \
--header 'ofs_remote_user: cneadmin' \
--header 'locale: en-US' \
--header 'ofs_tenant_id: aaitestdev1001-prd' \
--header 'ofs_workspace_id: WS001' \
--header "Authorization: Bearer ${TOKEN}"
```

Response

```
{"payload":{"downloadURL":"https://objectstorage.us-
phoenix-1.oraclecloud.com/p/
gTxxzhqLEea4Or2TRkBqTqHxt_JogVFa9G_0wtN8NYy_op0Zk4lvKGDxxeXGhLq7/n/
oraclegbudevcorp/b/fsgbu_pbsm_cndevcorp_aaitestdev1001-prd_default/o/
default/2023-01-31/fae/2d63d2fe-2090-4fb7-a4c8-9940d22987db?
httpResponseContentDisposition=ATTACHMENT%3B%20filename%3DIdcs_log3.txt"}}
```

7

Data File Specification

This section provides information on the different topics in this feature:

7.1 Loading External Data into OFS CCA CS

The OFS CCA CS Application uses the following categories of data:

- Account or Instrument
- Dimensions and Hierarchies
- Market data like Currency Exchange Rate

OFS CCA CS 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 OFS CCA CS 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.

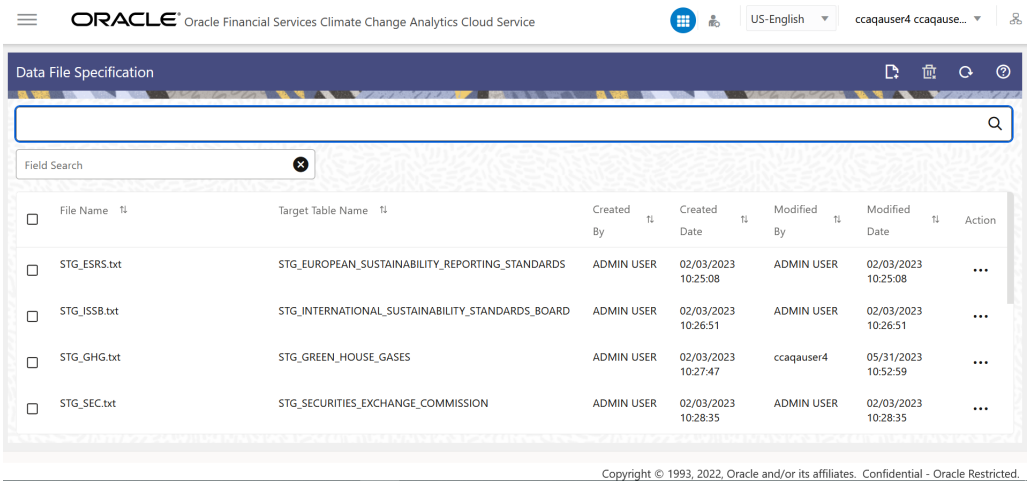
7.2 Data File Specification

OFS CCA CS supports three formats of Data Files, namely TXT, DAT, and CSV. These files contain the name of the table for which the specifications are being created.

> **Note:**
>
> 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 7-1 The Data File Specification Summary Page



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

> **Note:**
>
> For more information, refer to the preseeded data file specifications in Reference Guide on MOS

7.2.1 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, perform the following steps:

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.

7.3 Creating a Data File Specification

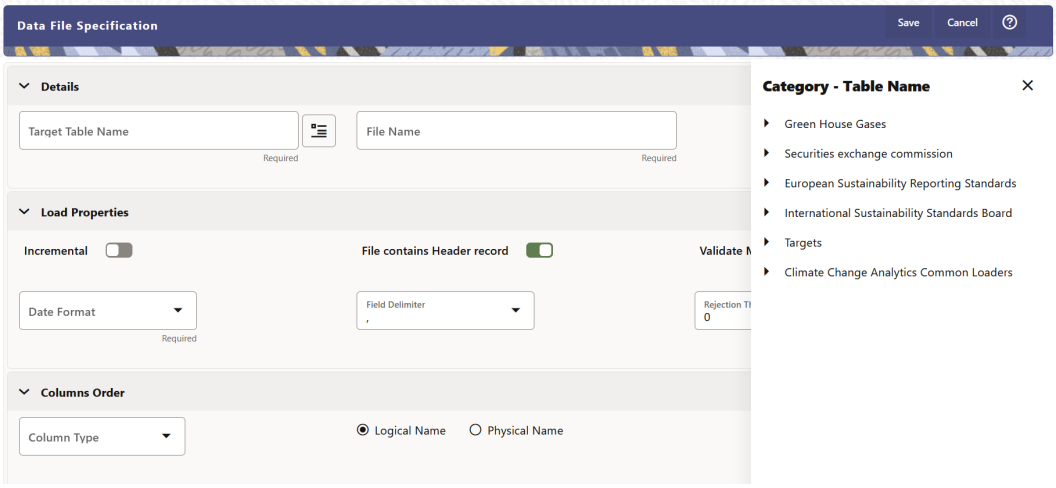
The Data File usually contains the Name of the Physical Table on which the specifications are being created and the columns included in the file.

For the complete list of available columns, see the Download Specifications available at Doc ID: 2930308.1

To create a new Data File Specification, perform the following steps:

1. Navigate to the Data File Specification Summary Page and click the **Add** icon to open the Data File Specification window.

Figure 7-2 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:
      - Green House Gases
      - Securities Exchange Commission

- European Sustainability Reporting Standards
- International Sustainability Standards Board
- Targets
- Climate Change Analytics Common Loaders

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 OFS CCA Cloud Services and may differ from that shown above based on the services you have subscribed to.

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 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":"2587cdb6a2b87835c6adfce627671486","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 7-1 MANIFEST File Details

Property Name	Notes
file_name	Full name of the file, without the leading path. Not validated; Only for information purposes.

Table 7-1 (Cont.) MANIFEST File Details

Property Name	Notes
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.

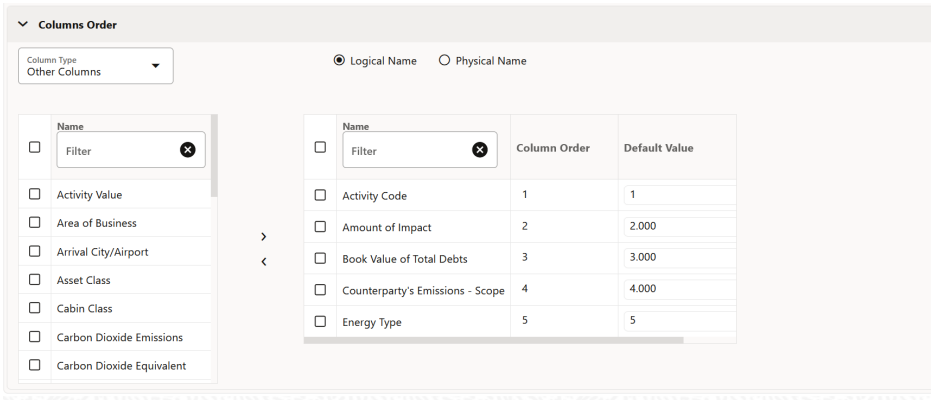
4. Under the **Columns Order** section of the screen, enter the following details. If you enter zero, then none of the records from the Data File should fail.

   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.
      - **Dimension Columns**: If you select the Dimension Columns, all the Key Processing Dimensions for the selected Target Table are displayed in the drop-down list. This list displays the Placeholder Key Dimensions that are defined as part of the Data Model Extension Process. For more details, see the Data Model Extension User Guide. Select the applicable Dimension Columns and click the **Move** button to display them in the table on the right-hand side.
      - **Other Columns**: If you select the Other Columns, all remaining columns (simple dimension, 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.

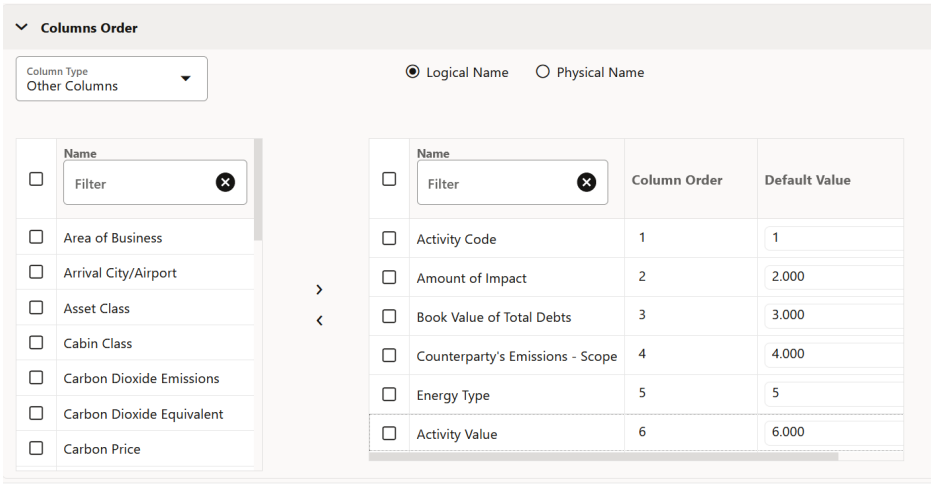
   Within the selected Column Type, Column Names can be re-ordered by dragging and dropping. The columns are always ordered by their type, that is, Key Columns will appear before the Dimension Columns and Dimension Columns will always appear before the Other Columns. After saving a definition, if you add 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 7-3 Column Preview



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

Figure 7-4 Column 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.

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

5. Click **Save** to save the file. 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 File Upload and Download Utility.

7.4 Creating the Data File

After the Data File Specification is defined, follow the 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”
- 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 must 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 OFS CCA CS Services, see the Download Specifications available at the following documents:

- Doc ID: 2930308.1

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7.5 Data Loaders

Oracle Financial Services Climate Change Analytics (OFS CCA CS) 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.

OFS CCA CS supports 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 OFS CCA CS.
- **Instrument Data Loaders**: The Instrument Data Loaders are used to move the data from the files to the staging instrument tables.

7.5.1 Dimension Data Loader

The Dimension Loader is used to load the dimension data from the File to Stage tables. The Dimension Loader procedure populates Dimension Members, Attributes, and Hierarchies from Staging Dimension Tables into the Dimension Tables registered with OFS CCA CS. You can view the Members and Hierarchies loaded by the Dimension Loader through the OFS CCA CS Screens.

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

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 CCA CS framework.
- Create Hierarchies in OFS CCA CS.
- Load Hierarchical relationships between Members within the Hierarchies from the Staging area into OFS CCA CS.

The following are the features of Dimension Loader:

- Multiple Hierarchies can be loaded from Staging Tables.
- Validations of Members and Hierarchies are similar to that of being performed within the OFS CCA CS Screens.

Before you start the Dimension Loader, you must upload the Data Files that have the Dimension details. 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 following Sample Data Files are available on MOS.

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

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:

> **Note:**
>
> For more information, refer to the preseeded Dimension Loader Batches in the Reference Guide on MOS.

Table 7-2 Dimension Loading Process Tasks

Task Code	Task Name	Component	Parent Task
1	Stage Dimension Loader	Stage Dimension Loader	
2	Stage Hierarchy Loader	Stage Hierarchy Loader	1
3	Stage DRM Loader	Stage DRM Loader	2

> **Note:**
>
> The above Tasks must be executed in the same order.
> The Stage DRM Loader allows you to select a Dimension. You can select both Simple and Key Dimensions.

3. Execute the Batch.

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

7.5.2 Instrument Data Loader

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

7.5.2.1 File to Stage

To load the Instrument Data to Staging Tables, perform the following steps:

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

Table 7-3 Instrument Data Loader – File to Stage Data

Task Code	Task Name	Component	Parameters
1 *	Stage Greenhouse Gas *	Stage Data Loader	Table Name: select the stage table name from the available list. File Name: select the Data File Specification name from the available list.
2*	Stage ISSB*	Stage Data Loader	Table Name: select the stage table name from the available list. File Name: select the Data File Specification name from the available list.

Table 7-3 (Cont.) Instrument Data Loader – File to Stage Data

Task Code	Task Name	Component	Parameters
3*	Stage ESRS*	Stage Data Loader	Table Name: select the stage table name from the available list. File Name: select the Data File Specification name from the available list.
4*	Stage Securities Exchange Commission*	Stage Data Loader	Table Name: select the stage table name from the available list. File Name: select the Data File Specification name from the available list.
5*	Stage Targets*	Stage Data Loader	Table Name: select the stage table name from the available list. File Name: select the Data File Specification name from the available list.

> **Note:**
>
> For more information, refer to the preseeded Batches and Data Loaders in the Reference Guide on MOS.

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

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

7.5.2.2 Stage to Processing

To load the Instrument Data from Staging Tables to Processing, perform the following steps:

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

Table 7-4 Instrument Data Loader – Stage to Processing Data

Task Code	Task Name	Component	Parameters
1 *	Stage Greenhouse Gas *	Stage Data Loader	Table Name: select the stage table name from the available list. File Name: select the Data File Specification name from the available list.
2*	Stage ISSB*	Stage Data Loader	Table Name: select the stage table name from the available list. File Name: select the Data File Specification name from the available list.
3*	Stage ESRS*	Stage Data Loader	Table Name: select the stage table name from the available list. File Name: select the Data File Specification name from the available list.
4*	Stage Securities Exchange Commission*	Stage Data Loader	Table Name: select the stage table name from the available list. File Name: select the Data File Specification name from the available list.
5*	Stage Targets*	Stage Data Loader	Table Name: select the stage table name from the available list. File Name: select the Data File Specification name from the available list.

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

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

7.6 Data File History

The Data File History Screen in the OFS CCA CS allows you to see the Data Files that are uploaded to the Staging Tables and their status.

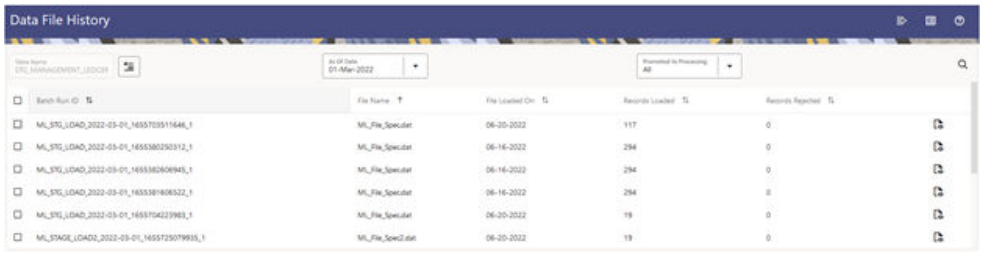
The Data File History UI allows you to do the following:

- Search for Data Files for which the Stage Data Loader Batch is already executed.
- Move the Data from State to Processing Tables.
- Delete the Data from the Stage.

To open the Data File History Window, perform the following steps:

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 7-5 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 7-6 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): If you select a File and click this button, a Delete Data icon is displayed. You can select the Delete Data icon to delete the File.

- **Help** (Button): Click the Help icon to view the Data File History help.

7.6.1 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, 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:
   - Green House Gases
   - Securities Exchange Commission
   - European Sustainability Reporting Standards
   - International Sustainability Standards Board
   - Targets
   - Climate Change Analytics Common Loaders

   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 CCA CS 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.

7.6.2 Reloading a Data File

OFS CCA CS allows you to reload a Data File.

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

8
Currency

Financial institutions transact business in more than one currency. Transacting business in multiple currencies demands functional capabilities for multi-currency accounting and currency rate management.

Currency module supports the definitions and maintenance of currencies. Currency definitions are fundamental to the definition of both interest rate yield curves and currency exchange rates. A key attribute of every yield curve is the currency with which it is associated, and currency exchange rates can only be established between defined currencies. A comprehensive list of ISO-defined currencies is provided; you can also define and add your user-defined currencies.

Topics

- Currency Summary Page
- Search for Currency
- Add a Currency
- View and Edit Currency
- Delete Currency

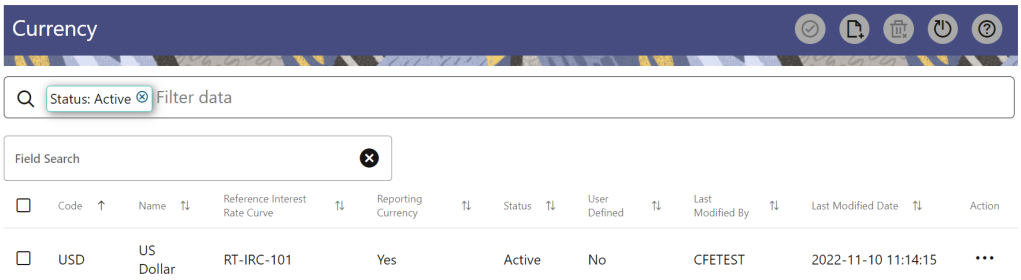
8.1 Currency Summary Page

This page is the gateway to all Currencies and related functionality. You can navigate to other pages relating to Currency from this point. The Currency Summary Page displays the following columns.

Table 8-1 Table: Currency – Fields and Descriptions

Column	Description
Code	Displays the 3-letter ISO code of Currency
Name	Displays the name of currency
Reference Interest Rate Curve	Displays the Reference Interest Rate Curve of Currency
Reporting Currency	Indicates whether currency is marked for use as Reporting Currency
Status	Displays the Active or Inactive status of Currency.
User Defined	Identifies any user-defined currency, that is, a currency not seeded by Cloud Service
Last Modified By	Displays the Name of the user who last modified the Currency
Last Modified Date	Displays the Date and Time when Currency was modified last
Action	Displays the list of actions that can be performed on the Currency. For more information, see Currency – Icons and Descriptions .

Figure 8-1 Currency Summary Page



The **Action** column on the **Currency Summary** page and icons on top right of the page offers several actions that allow you to perform different functions. The following actions are available for the Currency.

Table 8-2 Table: Currency– Icons and Descriptions

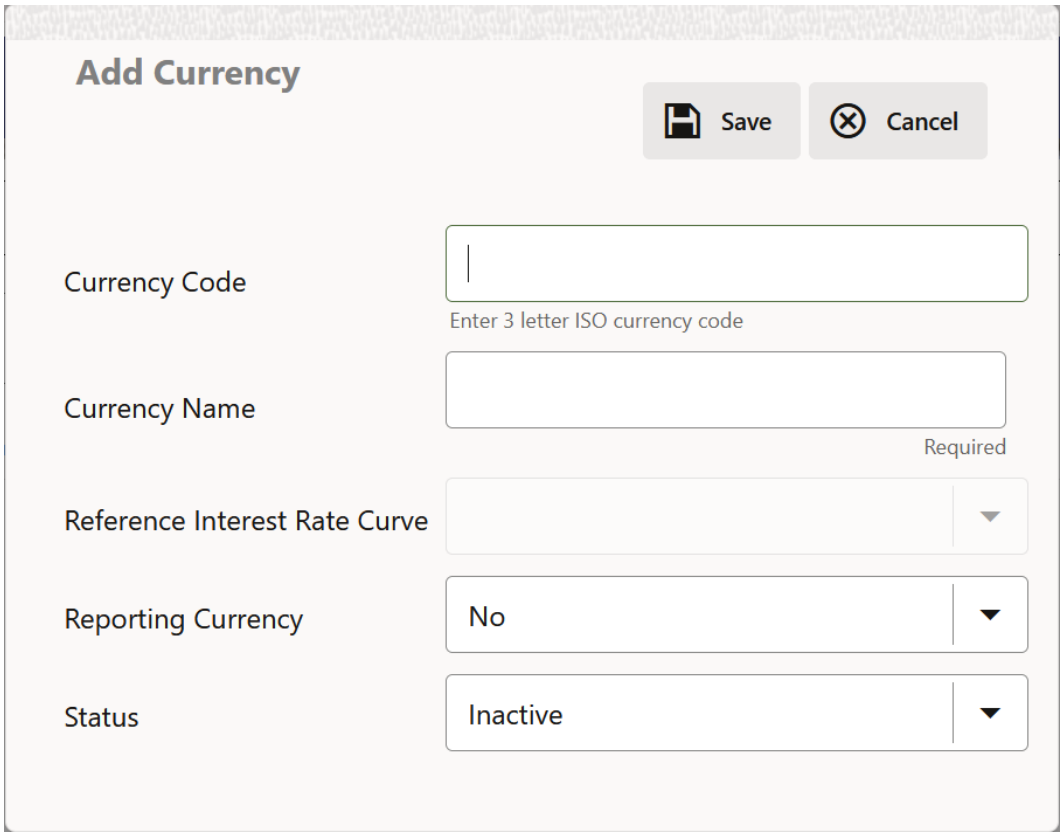
Fields	Description
Activate	Select one or more currency and click Activate icon to change status to active.
Add	Click Add icon to create a new Currency.
Multiple Delete	Select one or more currencies in the table and then click the Delete icon at the top right of the summary page to delete more than one Currencies at the same time.
View/Edit	Click on the **Action** icon against the Currency Name and select View/Edit to view or edit the contents of a Currency in read/write format. Depending on user privileges the currency will open in either View or Edit mode.
Delete	Click on the **Action** icon against the Currency Name and select Delete to delete an existing Currency.

8.2 Add Currency

To add a Currency, follow these steps:

1. Navigate to **Reference Data** and select **Currency**.
2. Click **Add** icon on Currency summary page. The **Add Currency** page is displayed.

Figure 8-2 Add Currency Page



3. Enter the following details:

Table 8-3 Adding a Currency – Fields and Descriptions

Fields	Description
Currency Code	For seeded currencies, these are ISO Currency Codes. For user-defined currencies, these can be any pure character string (no numbers) up to a length of 3 characters.
Currency Name	For seeded currencies, these are ISO Currency Codes. For user-defined currencies, these can be any string up to a length of 40 characters.
Reference Interest Rate Curve	Reference Interest Rate Curve is the Interest Rate Curve with which currency is associated for exchange rate forecasting purposes. Define multiple yield curves each of which has the same Reference Currency, but a currency can only have one Reference Interest Rate Curve.

Table 8-3 (Cont.) Adding a Currency – Fields and Descriptions

Fields	Description
Reporting Currency	A reporting currency is an active currency to which balances in other currencies can be consolidated to facilitate reporting. Balances in reporting currencies can be, in turn, consolidated to the functional currency. For example, an American multinational bank might consolidate its holdings in Asian currencies to the Japanese yen (Reporting Currency) and its balances in European currencies to the Euro (Reporting Currency) after which it might consolidate these reporting currencies to the U.S. dollar (Functional Currency).
Status	The status of any currency can be either Active or Inactive. You must Activate a currency before doing the followings: a. Define that currency as a Reference Currency for an Interest Rate curve. b. Enter Exchange Rate data for a currency. c. Define Forecast Rates for that currency. d. Define any other business rule like Prepayment, Transfer Pricing for that currency.

Note:

- For the Oracle Financial Services Climate Change Analytics Cloud Service application, select '*Yes'* for the Reporting Currency. This supports the Exchange Rate Conversion in the Currency Rate feature.
- The Reference Interest Rate Curve is not applicable for processing and analytical purposes in Oracle Financial Services Climate Change Analytics Cloud Service.

4. Click **Save**.

8.3 Search a Currency

Search for a Currency to perform any of the following tasks:

- Activate
- View
- Edit
- Delete

Prerequisites

Predefined Currencies

Procedure

To search the Currency, follow these steps:

1. Navigate to **Reference Data** and select **Currency** .
2. Enter the **Code, Name, Status, Reporting Currency**, or **User Defined** status of the Currency.
3. Click **Search**.

Only Currencies that match the search criteria are displayed.

8.4 View and Edit Currency

You can view existing Currency, and you can edit existing Currencies, provided you have read/write privileges.

To view and edit a Currency, follow these steps:

1. Navigate to **Currency Summary** Page.
2. Search for a Currency. For further information, see the Searching a Currency section.
3. Click on the **Action** icon against the Currency Name and select **View/Edit** to open the Currency you want to update.
4. Update the Currency details.
5. Click **Save**.

8.5 Delete a Currency

You can delete Currencies that are no longer required.

> **Note:**
>
> A Currency cannot be retrieved after deletion. Restrictions on deleting Currencies are:
>
> - You cannot delete Currencies if you have only Read privileges. Only users with read/write privileges and Currency owners can delete Currencies.
> - You cannot delete a Currency that has a dependency.

To delete a Currency, follow these steps:

1. Navigate to Currency Summary Page.
2. Search for a Currency and select it. For further information, see the Searching a Currency section.
3. Click on the **Action** icon against the Currency Name and select Delete.

9
Currency Rates

Currency Rates Module uses the currencies defined and activated in the Currency Module to support the creation and maintenance of Historical Exchange Rates. In the Currency Rate Window, you can manage historical Exchange Rates between currencies.

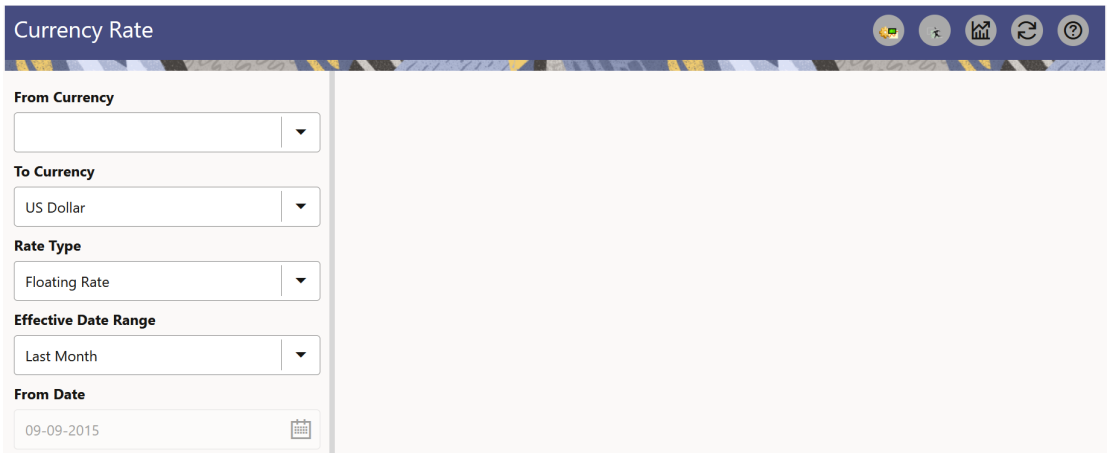
To Currency defaults to the Initial Currency selection from the Assumption Management defaults in the Active Preferences Window. You can select another To Currency from the drop-down list that displays all Active Currencies.

9.1 Adding Exchange Rate Data

Based on the Rate Types, you can add the following Exchange Rate Data:

- **Floating Rates**
  Floating Exchange Rates, such as those between the US Dollar (USD), the Pound Sterling (GBP), the Japanese Yen (JPY), and the Euro (EUR), are market-driven and can change from day-to-day, hour-to-hour, or minute-to-minute.
- **Fixed Rates**
  Some countries, especially smaller countries or countries that have experienced significant inflation in the recent past, can wish to “peg” their currency to a larger, more stable currency such as the US Dollar, Japanese Yen, or Euro.

Figure 9-1 Currency Rates



Adding Floating Rate Data

To add the Exchange Rate Data, follow these steps:

1. Select a **From Currency**.
2. Select a **To Currency**.

3. Select **Rate Type** as **Floating Rate** (default selection is Floating Rate).
4. The RHS pane is displayed as Floating Currency Rates.
5. Select **Effective Date Range** to enter the values in From Date and To Date fields.
6. Select the **Rate Provider**.
7. Currency Rate Pane initially displays a single blank row followed by the most recent month's Exchange Rate data (if any such Exchange Rate Data already exists). To enter a single new Exchange Rate Data Point, enter data into the blank row.

Table 9-1 Floating Currency Rates

Fields	Description
Effective Date	Directly enter a date or select the Calendar icon to choose an effective date for your new Exchange Rate data point. Rate Management Stores the Historical Exchange Rate Data. You cannot enter Exchange Rate data for dates greater than the current date.
Exchange Rate	This must be entered as 1 unit of From Currency are converted to n unit of To Currency.
Status	Status is a read-only display that is updated after the Currency Rates Validation has been run.
Data Origin	The Data Origin is displayed read-only and indicates whether the rates were input through the UI or the Data Loader.

8. Click **Save**.
9. Click **Add** to add additional blank rows to enter the additional Effective Dates and Exchange Rates. After adding the multiple new Exchange Rates, click **Save**.

Adding Fixed Rate Data

To add the Exchange Rate Data, follow these steps:

1. Select a **From Currency**.
2. Select a **To Currency**.
3. Select **Rate Type** as **Fixed Rate**.
4. After selecting a **To Currency** value, the RHS pane is displayed as Fixed Currency Rates.
5. Select **Effective Date Range** to enter the values in From Date and To Date fields.
6. Select the **Rate Provider**.
7. Currency Rate Pane initially displays a single blank row followed by the most recent month's Exchange Rate Data (if any such Exchange Rate Data already exists). To enter a single new Exchange Rate Data Point, enter data into the blank row.

Table 9-2 Fixed Currency Rates

Fields	Description
Effective From Date	Directly enter a date or select the Calendar icon to choose a starting effective date for your new Exchange Rate Data Point.
Effective To Date	Directly enter a date or select the Calendar icon to choose a ending effective date for your new Exchange Rate Data Point.
Currency Exchange Rate	This must be entered as 1 unit of From Currency are converted to n unit of To Currency.
Status	Status is a read-only display that is updated after the Currency Rates Validation has been run.
Data Origin	The Data Origin is displayed read-only and indicates whether the rates were input through the UI or the Data Loader.

8. Click **Save**.
9. Click **Add** to add additional blank rows to enter the additional Effective Start and End Dates and Exchange Rates. After adding the multiple new Exchange Rates, click **Save**.

9.2 Viewing Exchange Rate Data

By default, both the Floating Currency Rates Pane and the Fixed Currency Rates Pane display the most recent month of historical Exchange Rate Data. You can control the amount of data displayed by selecting a different value from the **Effective Date Range** drop-down list in the **Currency Selection** Window.

From Date and **To Date** can also be modified to view relevant Currency Rates.

9.3 Editing Exchange Rate Data

Select the check box on the left-hand side of any row to enable the **Edit** icon. After clicking Edit, the row becomes active to edit the **Effective Date** and (or) the **Exchange Rate**. Click **Save** to save the changes.

9.4 Deleting Exchange Rate Data

Select one or more check boxes on the left-hand side of any row to enable the **Delete** icon. After clicking Delete, a confirmation message is displayed. Click **Ok**.

9.5 Currency Exchange Rate Validation

Exchange Rate Validation has the following features:

- Movement of historical Exchange Rates to the Currency Direct Access Table.
- Calculation of inverse Exchange Rates for Reporting Currencies.
- Calculation of triangulated Exchange Rates where possible.

Features of Exchange Rate Validation

The goal of Exchange Rate Validation is to ensure that Exchange Rates from all active currencies to all reporting currencies are available for processing. Some of these rates can come from the validated direct input, others are calculated based on relationships with other rates. To support triangulation, all fixed Exchange Rates are available for all currencies that make up an exchange that needs to be triangulated. Also, a direct Exchange Rate between each Child Currency and each reporting currency is calculated and supplied to support quick access to Exchange Rates. If a Child currency is a Reporting Currency, then Exchange Rates are calculated for all currencies having an exchange relationship with the Parent Currency.

Validating Exchange Rate Relationships

You must run the Exchange Rate Validation Process after adding or modifying Exchange Rate Data. Run the process immediately or schedule one or more to be run in the future.

Each Exchange Rate has one of the following statuses:

Table 9-3 Details of Exchange Rates

Fields	Description
Not Yet Validated	The Exchange Rate has been input or loaded but not yet validated.
Valid	The Exchange Rate has been validated.
Invalid	The Exchange Rate has violated one or more acceptance rules.

Only Exchange Rates in valid status are available for processing and they are not subject to future validation unless you edit them. The Rate Validation Status is displayed in the Currency Rates Window of the Rate Management.

Exchange Rate Validation Criteria

In the Rate Validation Process, all Exchange Rate relationships in the database are examined for compliance with the following criteria. Error messages and warnings are displayed if one or more criteria are not met.

- If a currency is defined as a Child in a fixed exchange relationship then it must not be in any floating (standard) Exchange Rate Relationship at the same time. Consequently, all floating Exchange Rates to or from the Child Currency must be defined through the Parent Currency. If this criterion is not met then the following message is displayed: Invalid fixed relationship—Child Currency exists in a standard Exchange Rate within the same time period.
- A Child Currency within a fixed relationship must not be a Child Currency in any other Fixed Relationship during the same time period. If this criterion is not met then the following message is displayed: Invalid fixed relationship—Child Currency already exists in a fixed relationship for the same time period.
- A Circular Relationship must not exist. In other words, a Child Currency cannot link back to its Parent in any other FixedRate Relationship within the same time period. If it does, then the following message is displayed: Invalid fixed relationship creates a circular relationship with other fixed Exchange Rates.
- Regarding new Floating (standard) Exchange Rates, from and To currencies must not exist as Child Currencies within any Fixed Exchange Rate Relationships. If this criterion is not met then the following message is displayed: From/To/Both

currency(ies) in the new Exchange Rate already exist in a fixed relationship for the same time period.

- If any Exchange Rate is equal to 0, then a warning message is displayed. Generally speaking, 0 is a valid value. You can use it, for example, to designate an Exchange Rate with a currency of a country that no longer exists.

If two Exchange Rate Relationships fail to meet these criteria then both of them will be labeled Invalid. (Exception, if one of the relationships is already in Valid status, then the other one will be labeled Invalid.) For example, if a currency is defined as a Child in a Fixed Rate Relationship and is also defined as being in a Floating Relationship at the same time, then both Fixed and Floating Rates for that currency will be labeled Invalid.

If there are both direct and Inverse Floating Exchange Rates defined for any two currencies (in other words, one currency is both a To and a From Currency in relation to the other), then both relationships will be marked valid.

Running an Exchange Rate Validation

You can run a validation immediately or schedule one or more for later. The Validation Status is displayed in the **Currency Rates** Window.

You can execute the Exchange Rate validation using the **Currency Rates Validation** option.

To execute the Exchange Rate Validation, follow these steps:

1. Click **Currency Rates** Validation.
2. To execute Exchange Rate validation from the **Currency Rates** Window, the following two options are available:
   - **Specify Dates:** After selecting this option, a Select Dates Pane is displayed to enter or verify the Start Date and End parameters. These dates will be passed to the batch for execution.
   - **Start Date:** This defaults to the date of last rate validation.
   - **End Date:** This defaults to the current date.
   - **Validate For All Dates:** Select this option to validate all the rates irrespective of dates.

> **Note:**
>
> This option will replace all of the validated Exchange Rate History and can be a time-consuming process depending on the amount of history available to be processed.

9.6 Download

The Download functionality is used to download the Historical Exchange Rates.

9.7 Importing Currency Rates

To import the Currency Rate, follow these steps:

1. Navigate to the **Currency Rate** page.

2. Select **Upload Data**.
3. Select the type of Rate as **Floating** or **Fixed**.
4. Click the **Drag and Drop** option to select the file.

> **Note:**
>
> The excel file, you are uploading should be in a specific format. You can download the template using the Download Template option. The Templates for Fixed and Floating Rate Types.
> Currency rates UI bulk upload supports only **YYYY-MM-DD** date format

5. Click **Upload**.

10
Dimension Management

Dimension Management facilitates you to categorize data into a single object as a Member; define levels and aggregate data to form the Hierarchies, and distinguish each member by defining the required Attributes.

The roles mapped to Dimension Management are as follows:

- Dimension Advanced
- Dimension Authorization
- Dimension Read Only
- Dimension Write

10.1 Components of Dimension Management

You can create and manage the following Object Definitions using from Dimension Management:

- Members
- Attributes
- Hierachy

10.2 Object Security

Object security helps to secure data and also to decide what each user can access. You can apply ObObject security to various object definitions like Hierarchy definitions, Filters, Expressions and Migration definitions.

You can assign specific user roles and functions to user groups, to implement Object Security. To assign user roles and functions, Seeded User Groups and Seeded User Roles are mapped to the User Groups. If you are using the Seeded User Groups, the security to access objects depends on the associated User Groups.

Map your User Group to the folder in case of public or shared folder, for creating/editing/copying/removing an object in Dimension Management Module. You should also be the the owner of the folder in case of Private Folder. Additionally, the WRITE role should be mapped to your User Group.

To access the link and the Summary page, map your User Group to ACCESS Role. You can view all objects created in Public Folders - Shared Folders to which you are mapped and Private Folders for which you are the owner.

10.3 Members

Dimension Members refer to the individual items that constitute a dimension when data is categorized into a single object such as Product, Organization, Time, and so on. Members are available within Dimension Management Section.

10.3.1 Member Summary Page

The list of created member definitions are displayed in the Member Summary.

To access the Member Summary Page, complete the following procedure.

1. From the left menu, click **Common Object Maintenance.**
2. Select Dimension Management and select **Member**.
   The **Member Summary Page** containing the following details is displayed.
   - **Alphanumeric Code** - The Alphanumeric Code assigned to a Member.
   - **Numeric Code** - The Numeric Code assigned to a Member.
   - **Name** - The unique Member Name.
   - **Is Leaf** - The leaf node status of the member definition.
     - **Yes** - The member is set as a leaf node in any hierarchy and child cannot be added to this node.
     - **No** - The member is a not a leaf and can have Child Nodes.
   - **Action** - Click to View, Edit, Copy or Delete a Member Definition.

10.3.2 Creating Member Definitions

You can add new Member Definitions from the Member Summary page.

To create a Member Definition in the Members Page, complete the following steps.

1. To create a Member definition, click the **Add** in the Member Summary Page. The Add Member Definition Page is displayed.
2. Enter the following **Member Details** as described in the following table:
   - **Dimension** - Select the Dimension to be associated with the new Member.
   - **Alphanumeric Code** - The Alphanumeric Code to be assigned to the new Member Definition.
     You can enter up to 100 characters. We recommend using only Underscore (“_”) as a special character.
   - **Numeric Cod**e - The Numeric Code to be assigned to the new Member Definition. You can enter the value between 0 and 999,999,999 manually or click **Generate**, to auto-generate a unique code.
     If you enter the value manually, it is assigned after validation.
   - **Name** - The unique Member Definition Name.
     You can enter up to 100 characters. All characters are allowed except " & ' and " ' ".
   - **Description** - A brief description about the Member Definition.
     You can enter up to 100 characters. All characters are allowed except " & ' and " ' ".
   - **Is Leaf** - Check this option if the member is a leaf of another member. By default, it is set to **Yes**.
     - **Yes** - The member can be used as a Leaf Node in any hierarchy and Child cannot be added to this node.

– **No** -The Member is not set as a Leaf and can have Child Nodes.

> **Note:**
>
> If a Member is set as a Non-Leaf and is associated with Child Nodes, it cannot be set as a Leaf again.

- **Enabled** - This field is set to **Yes** by default and can be edited only after the Member is created. To edit a Member, refer Editing Member Definition Details.

> **Note:**
>
> You can change the option to **No** only when the particular member is not used in any hierarchy. The disabled members will not be displayed in Hierarchy Rules, or utilities which are based on Hierarchies, such as Hierarchy Filters and Hierarchical Assumption Browsers used in applications.

- **Copy Attribute Assignment** - Attach an existing attribute to this new Member Definition.

3. Click **Copy Attribute Assignment** ().

   The **Attributes Page** associated with the selected Dimension is displayed. This field can be left blank so that the Member Attributes Panel can be filled in without considering the values already assigned.

   Click **Search** to search for a specific Member based on Alphanumeric Code, Numeric Code, Name, Description, Enabled status, Is Leaf status, Attribute Name, or Attribute Value. You can also enter any of these parameters as Keywords in the Search field and click **Search**.

4. Locate the Attribute to be copied and click Move and select **Copy**, located under **Actions**.
5. Click **Save**.

10.3.3 Managing Member Definitions

You can View, Edit, Copy, and Delete the existing Member Definitions from the Member Summary Page.

In the Members Summary Page, highlight a specific Member Definition and click the **Action**. The following Options are displayed:

- **View** - View the **Member Details** for a specific Member Definition.
- **Edit** - Edit the **Member Details** for a specific Member Definition.
- **Copy** - Copy the Member Definition Details and create another Member Definition by changing Alphanumeric Code, Numeric Code and Name.
- **Delete** - Delete the Member Definition Details.

10.3.3.1 Viewing Member Definition Details

You can view the details of an individual Member Definition, from Member Summary page.

To view a Member Definition, the Read Only Role should be mapped to your User Group.

You can view the details of an individual Member Definition, using the following procedure:

1. Highlight the Member Definition and click the **Action**.
2. Click the **View** button.

   The Member Definition Page is displayed with the details Dimension, Alphanumeric Code, Numeric Code, Name, Is Leaf and Enabled status.

10.3.3.2 Editing Member Definition Details

To edit the existing Member Definition details, the Write Role should be mapped to your User Group.

You can edit individual Member Definition Details, using the following procedure:

1. Highlight the Member Definition and click the **Action**.
2. Click the **Edit** button.

   The Member Definition Page is displayed with the details Dimension, Alphanumeric Code, Numeric Code, Name, Is Leaf and Enabled status.

   Edit the required information and click **Save**.

10.3.3.3 Copying Member Definition Details

To copy the Member Definition Details, the Write Role should be mapped to your User Group.

You can copy individual Member Definition Details, to recreate another new Member Definition, using the following procedure:

1. Highlight the Member Definition and click the **Action**.
2. Click the **Copy** button.

   The **Member Definition Page** is displayed with the details Dimension, Alphanumeric Code, Numeric Code, Name, Is Leaf and Enabled status.

   Edit the unique information such as Name, Alphanumeric Code, Numeric Code and click **Save**.

10.3.3.4 Deleting Member Definition Details

To delete a Member Definition, the Write Role should be mapped to your User Group.

You can delete individual Member Definition Details, using the following procedure:

1. Highlight the Member Definition and click the **Action**.
2. Click the **Delete** button.

The Member Definition is deleted after confirmation.

10.4 Attributes

Attributes refers to the distinguished properties or qualifiers that describes a Dimension Member. Attributes are applicable to key dimensions only.

10.4.1 Attribute Summary Page

The list of created attribute definitions are displayed in the Attribute Summary.

To access the Attribute Summary Page, complete the following procedure:

1. From the left menu, click **Common Object Maintenance.**
2. Select Dimension Management and select **Attribute**.

The **Attribute Summary Page** containing the following details is displayed.

The Attribute Summary Page provides the list of Member Definitions with the following details:

Field	Description
Code	The Numeric Code assigned to the Attribute Definition.
Name	The unique Attribute Definition Name.
Data Type	The Data Type associated with the Attribute. The Data Type is set to Date, Dimension, Number or String.
Required	• **Yes** – Attribute Value is mandatory for the Dimension Member. • **No** - The Attribute value is optional for the Dimension Member.
Seeded	• **Yes** - This Attribute is seeded by the service. • **No** - The Attribute is created by the user.
Action	Click to View, Edit, Copy or Delete an Attribute Definition.

10.4.1.1 Navigating Attribute Summary Page

To access records in a Summary Page, you can search, sort and navigate to multiple pages.

10.4.2 Creating Attribute Definition

To create a new Attribute for a dimension, complete the following steps:

1. Click the **Add** in the Attribute Summary Page.

   The **Add Attribute Definition** Page is displayed.
2. Enter the Attribute Details as described in the following table:

Field	Description
Attribute Details	

Field	Description
Dimension	Select the Dimension for which the new Attribute is getting created.
Numeric Code	The Numeric Code to be assigned to the new Attribute Definition. You can enter the value manually or click **Generate**, to auto-generate a unique code. If you enter the value manually, the system will verify if the value is unique and assigns it. You can enter any number between 0 and 999,999,999.
Name	The unique Attribute Definition Name. You can enter up to 100 characters. All characters are allowed except " & ' and " ' ".
Alphanumeric Field Value	The name of physical column name that will be used to store attribute value in the Report Dimension Table. You can enter up to 100 characters. We recommend using only Underscore (“_”) as a special character.
Description	A brief description about the Attribute Definition. You can enter up to 100 characters. All characters are allowed except " & ' + @ and ~.
Attribute Properties	
Data Type	Select the Data Type as Date, Dimension, Number, or String from the drop-down list. If Number is selected as the Data Type: Enter a Scale value >= 0. If it is left as 0, values for this attribute will be limited to Integers. If you wish to enable decimal entries for this attribute, the maximum Scale Value must be > 0 and <= the scale defined for NUMBER in the dimension's underlying attribute table. The maximum value of the NUMBER is set to 22.
Dimension	Select the Dimension to be associated with the new Attribute Definition. This field is enabled only if the Data Type is set to Dimension.

Field	Description
Default Value	The Default Value is set based on the selected Data Type. The Default Value is mandatory if this attribute is set as a Required Attribute. • If Dimension is set as the Data Type, select the Default Value from the drop-down list of members mapped to the selected Dimension. • If NUMBER is selected as the Data Type, enter a Numeric Value in the Default Value field, and it must be consistent with the Scale you have defined. • If DATE is selected as the Data Type: Click button to select a valid date as the Default Value from the calendar. • If STRING is selected as the Data Type: Enter the Alphanumeric Value in the Default Value field. The Maximum characters allowed in Default Value field for String Data Type is 1000.
Required Attribute	• **Yes** - This Attribute is mandatory for the associated Dimension Members. • **No** - This is an optional Attribute for the associated Dimension Members. This field is disabled in Add and Edit Modes if any members already exist for the Dimension on which this attribute is defined.
Seeded Value	• **Yes** – This is selected only when the attribute is seeded out of box by the Cloud Service. • **No** – Always select this when you are creating a new attribute.

3. Click **Save**.

10.4.3 Managing Attribute Definitions

You can view, edit, copy and delete the existing Attribute Definitions from the Summary Page.

In the Attribute Summary Page, highlight a specific Attribute Definition and click the **Action**. The following Options are displayed.

Field	Description
View	View the **details** for a selected Attribute.
Edit	Edit theselected Attribute.
Copy	Copy the Attribute Definition Details and create another Attribute Definition by changing the unique values like Alphanumeric Field Value, Numeric Code and Name.
Delete	Delete the selected Attribute.

10.4.3.1 Viewing Attribute Definition

You can view individual Attribute Definition Details at any given point. The Read Only Role should be mapped to your User Group.

To view the existing Attribute Definition details in the Attribute page:

1. Highlight the Attribute Definition and click **Action**.
2. Click **View** .

   The **Attribute Definition** Page is displayed with the details Code, Name, Data Type, Required and Seeded status.

10.4.3.2 Copying Attribute Definition

The Copy Attribute Definition facilitates you to quickly create a new Attribute Definition based on the existing attributes or by updating the values of the required attributes.

To copy an existing Attribute Definition, the Write Role should be mapped to your User Group.

Refer to the following steps, to copy an attribute definition.

1. Highlight the Attribute Definition and click **Action**.
2. Click **Copy**.

   The Attribute Definition Page is displayed with the details: Code, Name, Data Type, Required and Seeded status.

   Edit the unique information such as Name, Alphanumeric Field Value, Numeric Code and click **Save**.

10.4.3.3 Deleting Attribute Definition

You can remove the Attribute Definitions which are not required in the system by deleting from the Attributes summary.

To delete an attribute definition, he Write role should be mapped to your User Group.

1. Highlight the Attribute Definition and click the **Menu** button.
2. Click the **Delete** button.

   The Attribute Definition is deleted after confirmation.

> **Note:**
>
> You cannot delete a definition if any dependency like Attribute, Hierarchy or Filter is attached to it. Detach the dependency before deleting the definition.

10.5 Hierarchy

Hierarchies refer to Dimension Members that are arranged in levels, with each level representing the aggregated total of the data from the level below. One dimension type

can have multiple hierarchies associated with it. Hierarchies are available within the Dimension Management Section.

A Default Hierarchy definition is required to support BI Users to perform multi dimensional analysis, in the BI reporting. The hierarchy name of a default hierarchy definitions are suffixed with the term **System Hierarchy**. You can only view the details of the default hierarchy, from the Hierarchy summary page. All orphan members under their corresponding default hierarchy, are automatically updated, when they are added/deleted to/from the system.

10.5.1 Hierarchy Summary Page

The list of created Hierarchy definitions are displayed in the Hierarchy Summary.

To access the Hierarchy Summary Page, complete the following procedure.

1. From the left menu, click **Common Object Maintenance.**
2. Select Dimension Management and select **Hierarchy**.

The Hierarchy Summary Page provides the list of Member Definitions with the following details:

Field	Description
Name	The unique Hierarchy Name.
	Note: The name of a default hierarchy is always suffixed with the term **System Hierarchy**.
Description	The brief description about the Hierarchy.
Folder	The folder in which the Hierarchy is stored.
Dimension	The Dimension associated with the Hierarchy.
Tag	Tags are labels that help to simplify the data search and locate the required details.
Action	Click to View, Edit, Copy or Delete a Hierarchy Definition.

10.5.1.1 Navigating Hierarchy Summary Page

To access records in a Summary Page, you can search, sort and navigate to multiple pages.

10.5.2 Creating Hierarchy Definitions

To create a Hierarchy Definition in the Hierarchy Summary Page, complete the following steps.

1. To create a Hierarchy definition, click **Add** in the Hierarchy Summary Page.
   The **Add Hierarchy Definition** Page is displayed.

   Enter the **Hierarchy Details** as described in the following table:

Table 10-1 Field Description

Field	Description
Basic Details	
Name	The unique Hierarchy Definition Name. **Note:** You can enter up to 100 characters. All characters are allowed except " & ' and " ' ".
Description	A brief description about the Hierarchy Definition. **Note:** You can enter up to 100 characters. All characters are allowed except " & ' + @ and ~.
Hierarchy Sub Type	By default, the sub type is set to **Member based** and cannot be changed.
Folder	Select the Folder in which the Hierarchy is to be stored.
Based On	
Dimension	Select the Dimension to be associated with the new Hierarchy Definition.
Start Date	The date from which this Hierarchy will be activated. By default the Start Date is set to the current System Date.
Data Grid	
Hierarchy View	The Members associated with the selected Dimension are displayed. You can sort this list in Ascending/ Descending order, expand or collapse the list to view in details and search for a specific Member. You can focus on a Member to view the Member Properties. You can add a Child or add a Sibling to an existing Member in the Data Grid.
Search Results	The search results based on the specific keyword entered to search a Member is populated.

To Add a Child to the Hierarchy:

a. Right-click in the **Hierarchy View** tab.

b. Select **Add Child** option and the **Add Member Page** are displayed.

c. Select the required Member and click **Move**, to move the Member to the Selected Members panel. To select multiple members, press CTRL and select the members. The selected members are added to the **Selected Members** pane.

- Click **Move All** to move all Members listed in the Show Members pane, to the Selected Members pane. Click **Fetch from DB** to select all nodes/ members in the server.
- Select a member and Click **Remove** to deselect a Member. To remove multiple members, press CTRL and select the members.
- To remove all the members from the **Selected Members** pane, click **Remove all**.
- You can click **Search** button for the required member using Alphanumeric Code, Numeric Code, Name, Description, Attribute Name, or Attribute Value. Enter the search criteria and Click **Search**, in the Search Panel.
- You can also click **Search** button to toggle the display of Numeric Code left, right, or name and click button to display Alphanumeric Code left, right, or name.

d. Click **OK**. The selected Member is displayed as Child under **Data Grid** panel in the **Hierarchy View** tab.

2. **To add a Sibling to the Child in the Hierarchy Definition:**

a. Right-click on the Child and select the option **Add Sibling**.
The **Add Sibling** Page is displayed.

b. Select the required Members and **Move**, to move the Member to the Selected Members panel.
The Member is displayed in the **Selected Members** panel.

c. Click **OK**. The selected Member is added as **Sibling** below the **Parent** under Data Grid Panel in the **Hierarchy View** Tab.

3. **To add a Leaf under a Parent/Child or Sibling**:

a. Right-click the Parent or Child and select **Add Leaf**.
The Add Member Page is displayed.

b. Select the required Members and click **Move**, to move the Member to the Selected Members panel.
The Member is displayed in the **Selected Members** panel.

c. Click **OK**. The selected Member is displayed as Leaf below the Parent or Sibling under **Show Hierarchy** Panel in the Hierarchy View Tab.

4. **To define Level Properties:**

a. Right-click the Parent or Child and select **Level Properties**. The details are displayed in the Member Properties Panel.

b. Enter the valid **Name** and **Description** in the respective fields.

c. Click **OK** and the Levels defined are displayed in the drop-down in **Initial Level Display** field in **Data Grid** in **Hierarchy View** Tab.

5. **To cut and paste Child or Sibling:**

a. Right-click on any node and select **Cut**.

b. Right-click on any node and **Paste as Child** or **Paste as Sibling**.

6. **To Delete/Undelete**

a. Right-click on the node to be deleted and select **Delete Node**.
The node deleted is struck out.

b. Right-click and select **UnDelete** to cancel deletion of the node.

7. To view the Member Properties and Member Attributes of a node in the **Hierarchy View** Panel:

   a. Click on a Member.
   The properties such as Alphanumeric Code, Numeric Code, Name, Description, Enabled, Is Leaf, Created By, Creation Date, Last Modified By, Last Modification Date, Attribute, and Value of the selected Member are displayed in the Member Properties and Member Attributes Grids.

   In the Hierarchies page you can also:

   - Click **Collapse** or Expand, to collapse or expand a branch .
   - Click **Focus** or **Unfocus**, to focus or unfocus a selected node except the Root Node.
   - Click **Sort** to sort the list in ascending or descending order.

8. Click **Save**.
   The new Hierarchy Definition is created successfully.

10.5.2.1 Audit Info

The Audit Info Section provides details such as Created By and Modified By Users, Creation and Modification Date, and Authorized By user Details. You can add Additional information as comments and Tags. Tags are labels that help to simplify the data search and locate the required details.

10.5.3 Managing Hierarchy Definitions

You can View, Edit, Copy, and Delete the existing Hierarchy Definitions from the Hierarchy Summary Page.

In the Hierarchy Summary Page, highlight a specific Hierarchy Definition and click **Action**. The following options are displayed.

Field	Description
View	View the **Hierarchy Details** for a specific Member Definition.
Edit	Edit the**Hierarchy Details** for a specific Member Definition.
Copy	Copy the Hierarchy Definition details and create another Hierarchy Definition by changing the unique values like Name, Description and so on.
Delete	Edit the Hierarchy Definition Details.

10.5.3.1 Viewing Hierarchy Definition Details

You can view the details of an individual Hierarchy Definition, using the following procedure:

1. Highlight the Hierarchy Definition and click **Action (three dots)** .
2. Click **View** .

The Hierarchy Definition Page is displayed with the details Name, Description, Folder, Dimension, Start Date and Hierarchy View details.

10.5.3.2 Editing Hierarchy Definition Details

You can edit individual Hierarchy Definition Details at any given point.

To edit the existing Hierarchy Definition Details:

1. Highlight the Hierarchy Definition and click the **Action (three dots)**.
2. Click **Edit** .

   The Hierarchy Definition Page is displayed with the details Name, Description, Folder, Dimension, Start Date and Hierarchy View details.

   Edit the required information and click **Save**.

10.5.3.3 Copying Hierarchy Definition Details

You can copy individual Hierarchy Definition Details, to recreate another new Member Definition. To copy the Member Definition Details:

1. Highlight the Hierarchy Definition and click **Action**.
2. Click **Copy**.

   The Hierarchy Definition Page is displayed with the details Name, Description, Folder, Dimension, Start Date and Hierarchy View details.

   Edit the unique information such as Name, Description, Folder, Dimension, Start Date and Hierarchy View details and click **Save**.

10.5.3.4 Deleting Hierarchy Definition Details

To delete a Hierarchy Definition:

1. Highlight the Hierarchy Definition and click **Action**.
2. Click **Delete** .

   The Hierarchy Definition is deleted after confirmation.

> **Note:**
>
> You cannot delete a definition if any dependency like Attribute, Hierarchy or Filter is attached to it. Detach the dependency before deleting the definition.

10.6 Viewing Data in a Summary Page

A Summary Page will contain a list of definitions associated with a specific Dimension Data, Filters, Batch or Schedules.

You can search, filter and customize the view to access the required data faster.

11 Reports

This chapter contains information on the various sections of reports that are available in the Oracle Financial Services Climate Change Analytics Cloud Service:

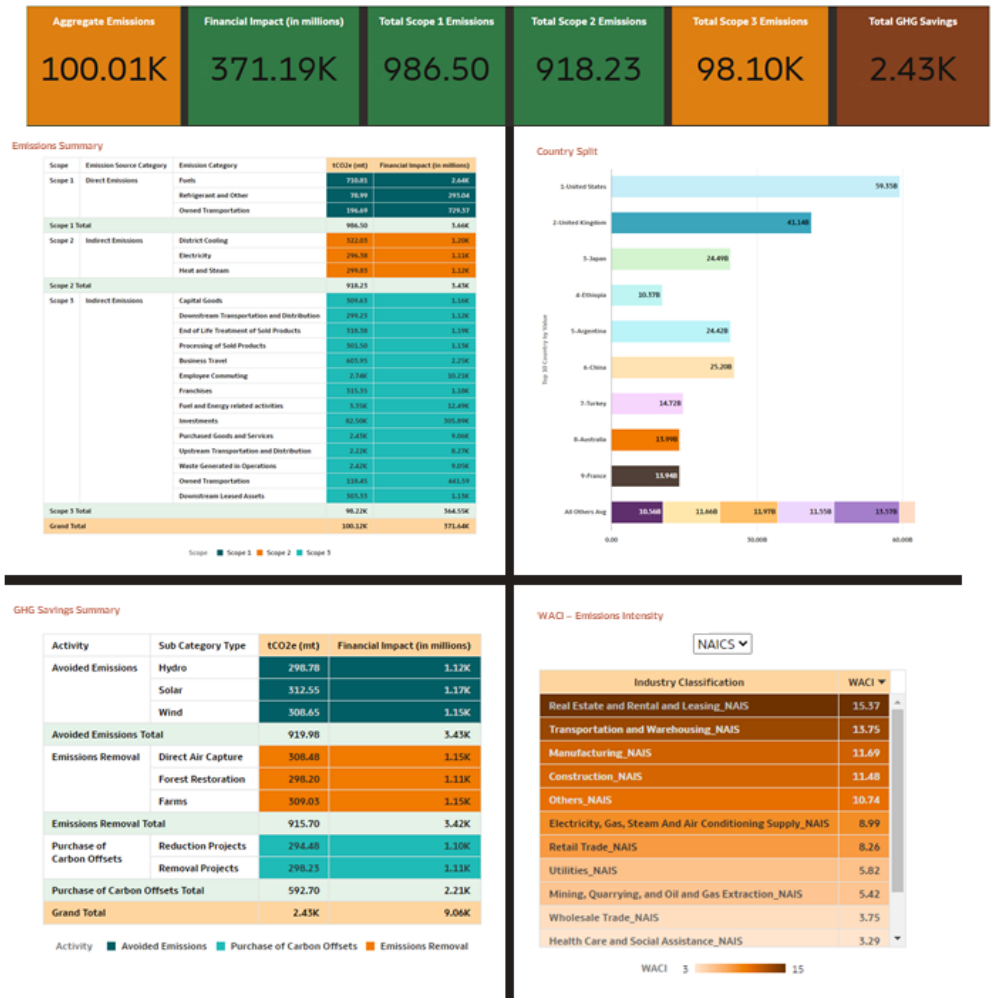
- Executive Summary
- Annual Reports
- Trend Reports
- U.S. Securities Exchange and Commission (SEC) Reports
- European Sustainability Reporting Standards (ESRS) Reports
- International Sustainability Standards Board (ISSB) Reports

11.1 Executive Summary

This section contains reports to aid executives, and senior management in visualizing the state of affairs in their organization across various emission categories, countries of operation, and industries.

The Executive Summary contains the following visualizations:

Figure 11-1 Executive Summary Visualizations



Users will be able to filter reports using various prompts. Examples of such prompts include:

- **Fiscal Year** - You can use this filter to select a specific Fiscal Year derived from As of-Date.
- **Month** - You can use this filter to select a specific Month derived from As-of-Date.
- **Region** – Use this filter to select a Region.
- **Legal Entity** - Use this filter to select a Legal Entity.
- **Consolidation Type** – Use this filter to select either Standalone/Consolidated status.
- **LOB** – Use this filter to select a Line of Business.
- **Business Unit** – Use this filter to select a business unit.
- **Currency** – Use this filter to select a currency.

Several reports within this section allow users with a data drill-down capability, leveraging underlying data across below data elements.

- **Legal Entity** – Displays the breakup of various legal entities holding relevant value.
- **Line of Business** - Displays the breakup of various lines of businesses holding relevant value.
- **Business Unit** - Displays the breakup of various business units holding relevant value.
- **Country of Incorporation** - Displays the breakup of various countries wherein relevant legal entities are incorporated.
- **Counterparty** – Displays the breakup of various counterparties holding relevant value.
- **Country of Counterparty** - Displays the breakup of various countries where relevant counterparties are incorporated.

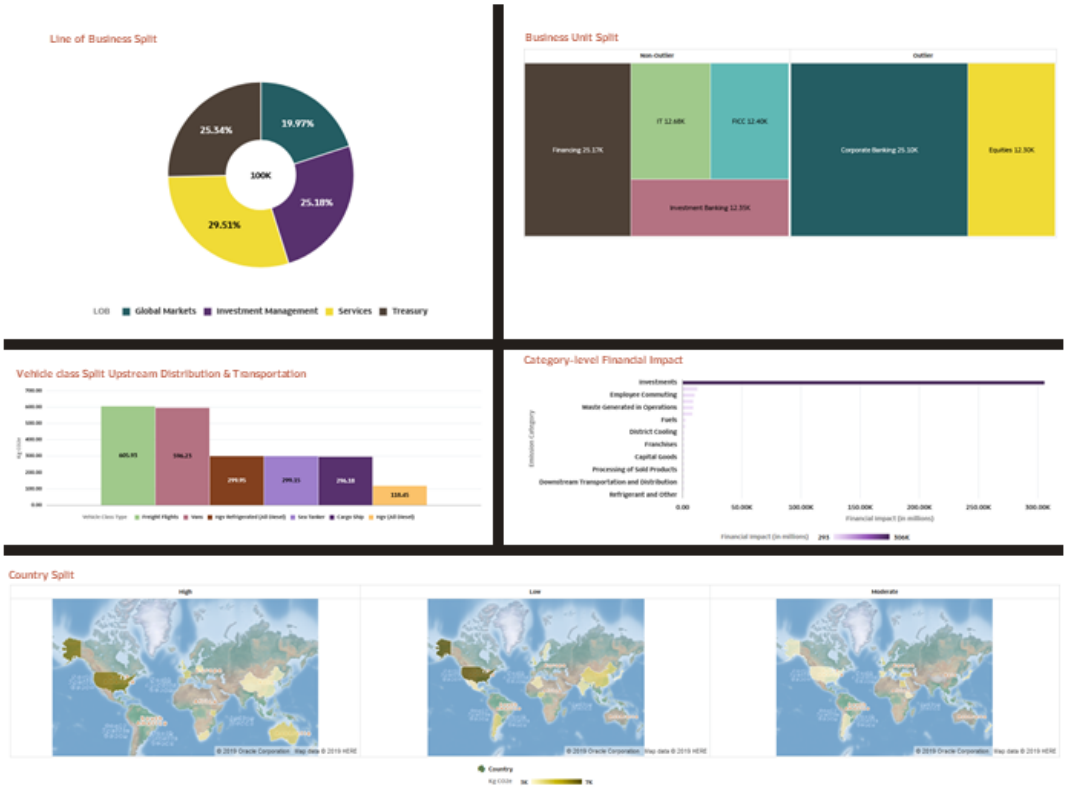
For more details on prompts and drill-down capabilities, users can refer to the Reports document on MOS.

11.2 Annual Reports

This section contains reports to aid users with a summary of annual emissions and financial impact numbers with a specific focus on individual categories of GHG emissions.

The Annual Reports - Annual Emissions Summary contains the following visualizations:

Figure 11-2 Annual Reports Annual Emissions Summary Visualizations



Users will be able to filter reports using various prompts. Examples of such prompts include:

- **Fiscal Year** - You can use this filter to select a specific Fiscal Year derived from As of-Date.
- **Month** - You can use this filter to select a specific Month derived from As-of-Date.
- **Region** – Use this filter to select a Region.
- **Legal Entity** - Use this filter to select a Legal Entity.
- **Consolidation Type** – Use this filter to select either Standalone/Consolidated status.
- **LOB** – Use this filter to select a Line of Business.
- **Business Unit** – Use this filter to select a business unit.
- **Currency** – Use this filter to select a currency.

Several reports within this section allow users with a data drill-down capability, leveraging underlying data across below data elements.

- **Legal Entity** – Displays the breakup of various legal entities holding relevant value.
- **Line of Business** - Displays the breakup of various lines of businesses holding relevant value.
- **Business Unit** - Displays the breakup of various business units holding relevant value.
- **Country of Incorporation** - Displays the breakup of various countries wherein relevant legal entities are incorporated.
- **Counterparty** – Displays the breakup of various counterparties holding relevant value.
- **Country of Counterparty** - Displays the breakup of various countries where relevant counterparties are incorporated.

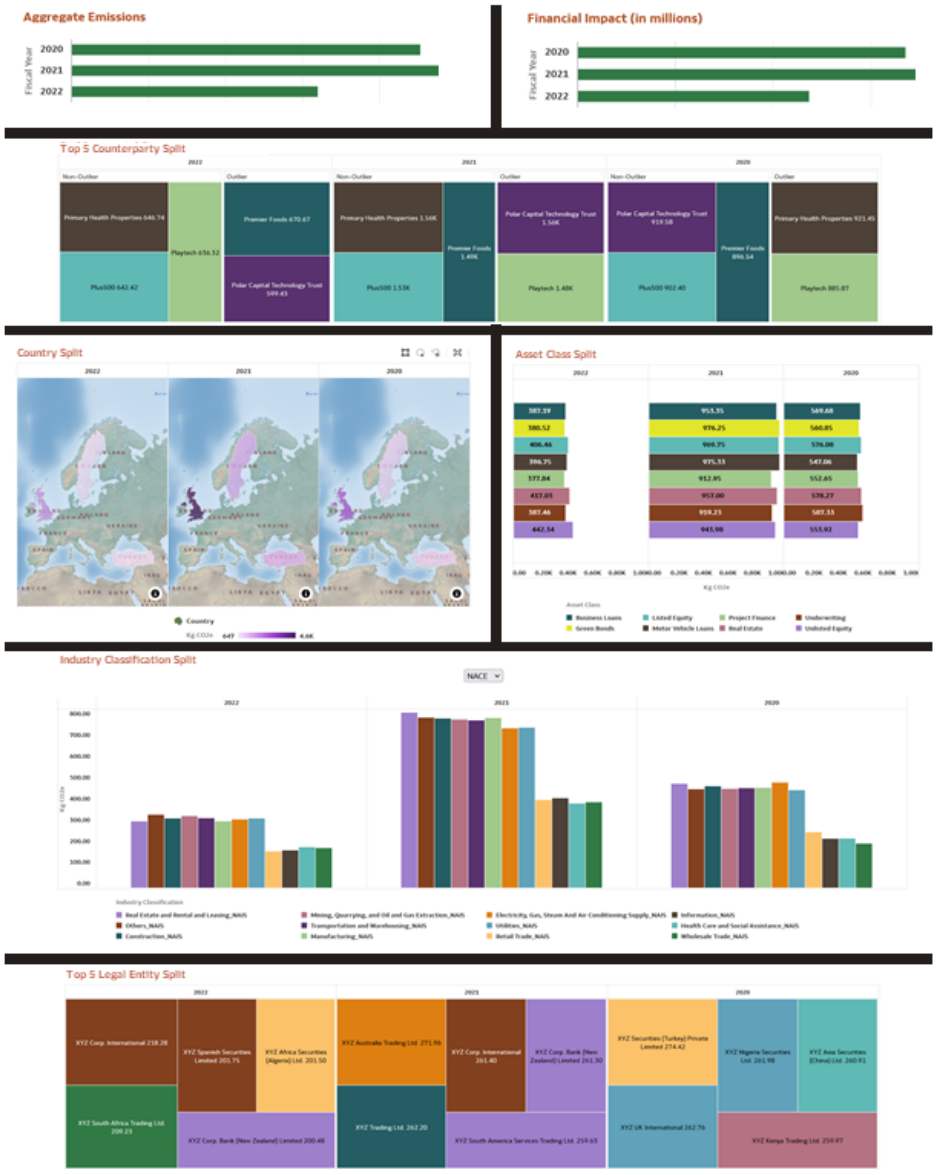
For more details on prompts and drill-down capabilities, users can refer to the Reports document on MOS.

11.3 Trend Analysis Reports

This section contains reports to aid users with trend analysis across multiple years. The topic includes subjects like Financed Emissions, Climate Targets etc.

The Trend Analysis Reports contains the following visualizations:

Figure 11-3 Trend Reports Visualizations



Users will be able to filter reports using various prompts. Examples of such prompts include:

- **Fiscal Year** - You can use this filter to select a specific Fiscal Year derived from As of-Date.
- **Region** - Use this filter to select a Region.
- **Legal Entity** - Use this filter to select a Legal Entity.
- **Consolidation Type** – Use this filter to select either Standalone/Consolidated status.
- **LOB** - Use this filter to select a Line of Business.
- **Business Unit** – Use this filter to select a business unit
- **Counterparty** - Use this filter to select a Counterparty.

- **Sector** - Use this filter to select a sector.
- **Currency** - Use this filter to select a currency.

Several reports within this section allows users with a data drill-down capability, leveraging underlying data across below data elements.

- **Legal Entity** – Displays the breakup of various legal entities holding relevant value.
- **Line of Business** - Displays the breakup of various lines of businesses holding relevant value.
- **Business Unit** - Displays the breakup of various business units holding relevant value.
- **Country of Incorporation** - Displays the breakup of various countries wherein relevant legal entities are incorporated.
- **Counterparty** – Displays the breakup of various counterparties holding relevant value.
- **Country of Counterparty** - Displays the breakup of various countries where relevant counterparties are incorporated.

For more details on prompts and drill-down capabilities, users can refer to the Reports document on MOS.

11.4 U.S. SEC Reports

This section contains reports to aid users visualize reports curated to the specific needs of U.S. SEC climate change reporting rules.

The U.S. SEC Reports contain the following visualizations:

Figure 11-4 U.S. SEC Reports Visualizations

Users will be able to filter reports using various prompts. Examples of such prompts include:

- **Fiscal Year** - You can use this filter to select a specific Fiscal Year derived from As of-Date.
- **Month** - You can use this filter to select a specific Month derived from As-of-Date.
- **Region** – Use this filter to select a Region.
- **Legal Entity** - Use this filter to select a Legal Entity.
- **Consolidation Type** – Use this filter to select either Standalone/Consolidated status.
- **LOB** – Use this filter to select a Line of Business.
- **Business Unit** – Use this filter to select a business unit.
- **Currency** – Use this filter to select a currency.

Several reports within this section allow users with a data drill-down capability, leveraging underlying data across below data elements.

- **Legal Entity** – Displays the breakup of various legal entities holding relevant value.
- **Line of Business** - Displays the breakup of various lines of businesses holding relevant value.
- **Business Unit** - Displays the breakup of various business units holding relevant value.

- **Country of Incorporation** - Displays the breakup of various countries wherein relevant legal entities are incorporated.
- **Counterparty** – Displays the breakup of various counterparties holding relevant value.
- **Country of Counterparty** - Displays the breakup of various countries where relevant counterparties are incorporated.

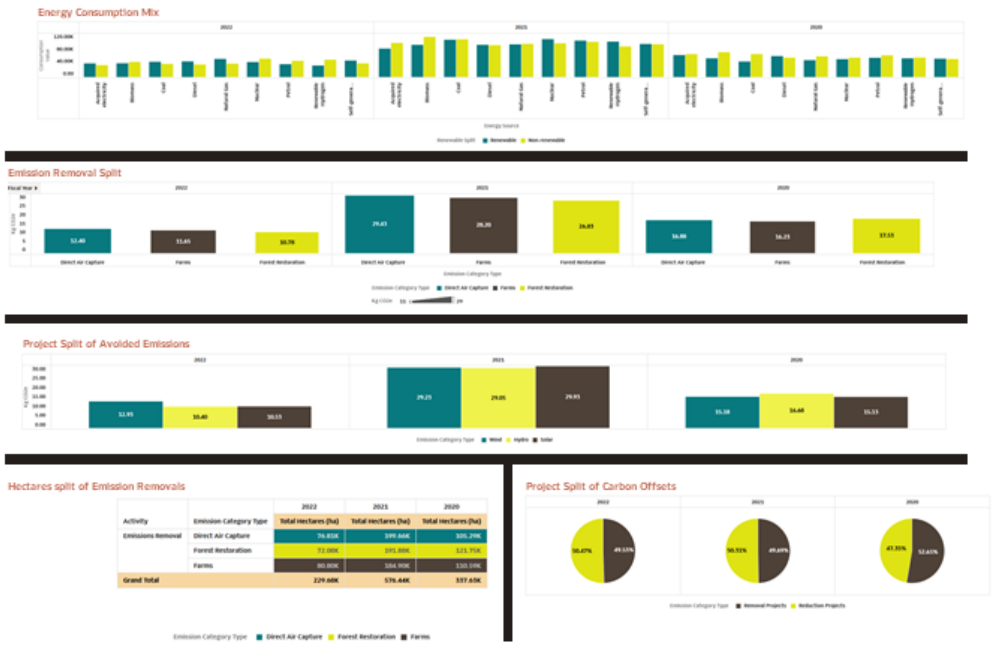
For more details on prompts and drill-down capabilities, users can refer to the Reports document on MOS.

11.5 ESRS Reports

This section contains reports to aid users visualize reports curated to the specific needs of ESRS climate change reporting rules.

The ESRS Reports contain the following visualizations:

Figure 11-5 ESRS Reports Visualizations



Users will be able to filter reports using various prompts. Examples of such prompts include:

- **Fiscal Year** - You can use this filter to select a specific Fiscal Year derived from As of-Date.
- **Month** - You can use this filter to select a specific Month derived from As-of-Date.
- **Region** – Use this filter to select a Region.
- **Legal Entity** - Use this filter to select a Legal Entity.
- **Consolidation Type** – Use this filter to select either Standalone/Consolidated status.

- **LOB** – Use this filter to select a Line of Business.
- **Business Unit** – Use this filter to select a business unit.
- **Currency** – Use this filter to select a currency.

Several reports within this section allow users with a data drill-down capability, leveraging underlying data across below data elements.

- **Legal Entity** – Displays the breakup of various legal entities holding relevant value.
- **Line of Business** - Displays the breakup of various lines of businesses holding relevant value.
- **Business Unit** - Displays the breakup of various business units holding relevant value.
- **Country of Incorporation** - Displays the breakup of various countries wherein relevant legal entities are incorporated.
- **Counterparty** – Displays the breakup of various counterparties holding relevant value.
- **Country of Counterparty** - Displays the breakup of various countries where relevant counterparties are incorporated.

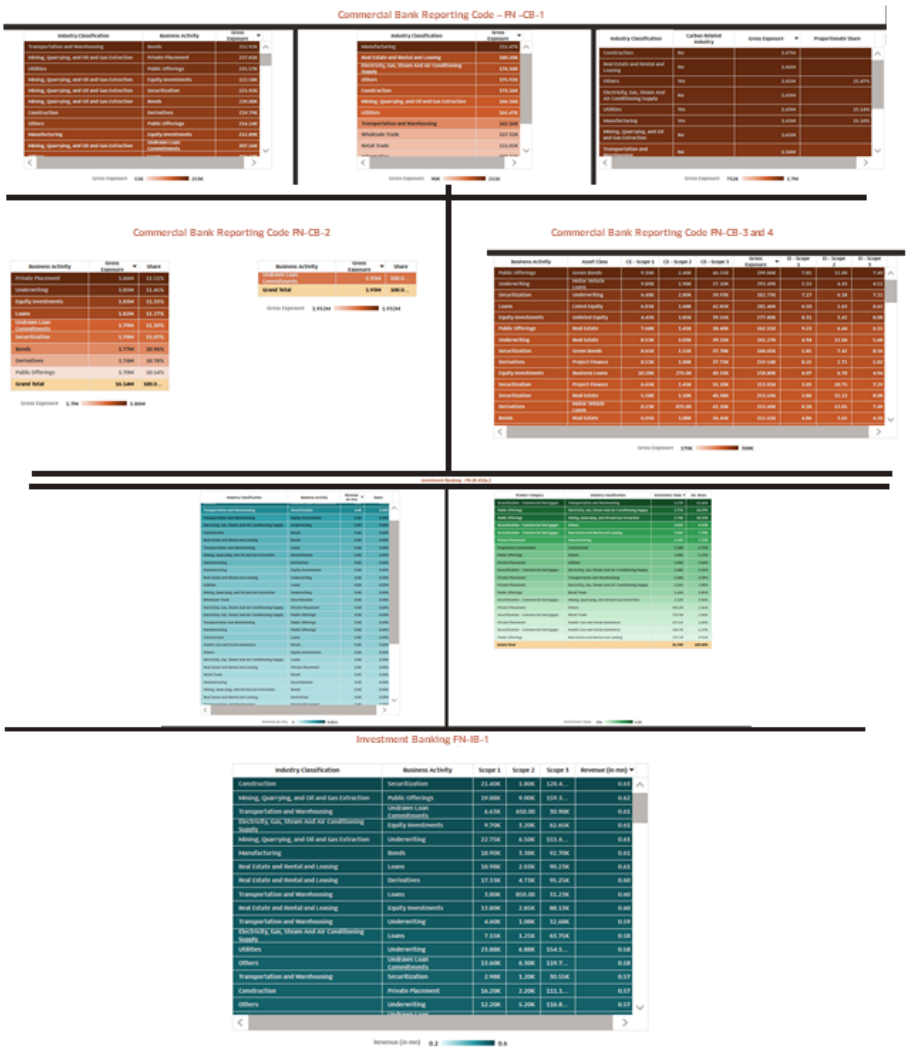
For more details on prompts and drill-down capabilities, users can refer to the Reports document on MOS.

11.6 ISSB Reports

This section contains reports to aid users visualize reports curated to the specific needs of ISSB climate change reporting rules.

The ISSB Reports contains the following visualizations:

Figure 11-6 ISSB Reports Visualizations



Users will be able to filter reports using various prompts. Examples of such prompts include:

- **Fiscal Year** - You can use this filter to select a specific Fiscal Year derived from As of-Date.
- **Month** - You can use this filter to select a specific Month derived from As-of-Date.
- **Region** - Use this filter to select a Region.
- **Legal Entity** - Use this filter to select a Legal Entity.
- **LOB** - Use this filter to select a Line of Business.
- **Business Unit** – Use this filter to select a business unit.
- **Asset Class** - Use this filter to select an Asset Class.
- **Counterparty** - Use this filter to select a Counterparty.
- **Sector** - Use this filter to select a sector.

- **Currency** - Use this filter to select a currency.

Several reports within this section allow users with a data drill-down capability, leveraging underlying data across below data elements.

- **Legal Entity** – Showcasing breakup of various legal entities holding relevant value.
- **Line of Business** - Showcasing breakup of various lines of businesses holding relevant value.
- **Business Unit** - Showcasing the breakup of various business units holding relevant value.
- **Country of Incorporation** - Showcasing the breakup of various countries wherein relevant legal entities are incorporated.
- **Counterparty** – Showcasing breakup of various counterparties holding relevant value.
- **Country of Counterparty** - Showcasing breakup of various countries where relevant counterparties are incorporated.

For more details on prompts and drill-down capabilities, users can refer to the Reports document on MOS.