Oracle® Financial Services Data Foundation Cloud Service for Banking

Data Controls

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Data Quality Overview

1.1 Data Quality Checks

Data Catalog Contents include Data Quality Check Rules. These Rules are defined at the Business Term and Entity Level, and seeded as a part of the Data Catalog Content.

1.1.1 Types of Data Quality Checks

The following are the types of Data Quality checks and their definitions:

Table 1-1 Data Quality Checks

Data Quality Check	Definition
Blank Value check	Identifies if the base column is empty considering the blank space.
Column Reference / Specific Value check	Compares the base column data with another column of the base table or compare with any attribute of compatible data type from a referenced dimension of a base entity.
Data Length Check	Checks for the length of the base column data by using a minimum and maximum value, and identifies if it falls outside the specified range.
List of Value Check	It can be used to verify values where a dimension/master table is not present. This check identifies if the base column data does not match with a value or specified code in a list of values.
NULL value Check	Identifies if NULL is specified in the base column.
Referential Integrity Check	Identifies all the base column data that has not been referenced by the selected column of the referenced table. Here, the user specifies the reference table and columns.
Range Check	Identifies if the base column data falls outside a specified range of a Minimum and Maximum value. Value Needs to be between 0 and 100.
Uniqueness Check for Numeric Identifiers in Dimension	• Check to identify duplicates in Numeric Identifier Attribute for a Dimension Entity. • Check to identify changes in Numeric Identifier Attribute for a Dimension Entity for the same Business Key member.

Table 1-1 (Cont.) Data Quality Checks

Data Quality Check	Definition
Special Character Check	Identify business term contains only the allowed set of special characters. Currently, AFCS has preconfigured rules for the following Business Terms: • Legal Entity Code • Legal Entity Description • Legal Entity Name • Data Source Code • Data Source Description For more details on allowed set of special characters, see *Allowed Special characters List* in the *AFCS User Guide*.

The controls are specific to reports.

> **Note:**
>
> The check category for custom DQ check referencing to dimensions will be shown as **Custom Check** in the Data Quality Result reports.

2
Data Quality Configuration

The **Data Quality Framework** is a scalable, rule-based engine designed to standardize, match, and eliminate duplicate information across global datasets using a single-pass integration process. This framework, embedded within the **Infrastructure system**, allows users to define and execute rules for querying, validating, and correcting transformed data within an **Information Domain**.

2.1 Create a Rule

You can define a **Data Quality (DQ) Rule** by specifying the necessary details in the DQ Definition.

Supported Capabilities:

- Create three types of custom DQ rules: **Mandatory, Range, and Comparison**.
- Edit custom DQ rules in **Draft, Returned, and Published** statuses.
- Delete custom DQ rules in **Draft or Returned** statuses.

> **Note:**
>
> - A rule can only be created for an action that is in **New** or **Returned** status.
> - The **Action ID** is automatically populated.
> - The **Range** option is only supported for attributes of **numeric** and **date** types.
> - The **Comparison** option only allows attributes of the **same type** to be compared.
>   - When comparing **alphanumeric** or **character-type** attributes, only the **equal sign (=) operator** is supported.
> - The **Mandatory** rule is defined as follows:
>   - For **alphanumeric or character-type** attributes: It checks for both **Null** and **Blank values**.
>   - For **all other attribute types**: It performs a **Null Value Check** only.

Ensure that the issue is categorized under **Data Accuracy**, with the Source set to **Catalog** and the Action Type set to **Data Accuracy**.

Steps to Create a Data Quality Rule:

Access the Control Extensions Menu

1. From the **Inbox** page, select the action for which you want to create a DQ rule.
2. Click **Control Extensions** from the left-hand side (LHS) menu.
   Initiate Rule Creation
3. Click **Create Rule** to open the rule creation window.

4. Enter Rule Details:
   - Provide a **Description** of the rule.
   - Add **Comments** if needed.

   Select Entity and Attribute
5. Choose the relevant **Entity Name** from the drop-down list. This will populate associated attributes in the **Attribute Name** list.
6. Select the desired **Attribute Name**.
7. Select one of the available Rule Types: **Mandatory, Range, or Comparison**.
8. Depending on the selected Rule Type, additional fields will appear. Enter the required details accordingly.
   Define a Data Quality Rule Filter
9. Click **Add** to configure a Data Quality Rule Filter. The filter configuration window will open.
10. Click the **Add Filter** icon, enter a name for the filter, and click **+ Condition** to specify the filter conditions.
11. The selected conditions will be displayed in the **Expression** field. Click **Save** to confirm.
    Custom DQ Filter Behavior:
    - Mapping a filter to a **custom DQ rule is optional**; a rule can be saved and published **with or without** a filter.
    - Filters can be **reused** across multiple custom DQ rules.
    - A filter **cannot be edited or deleted** if it is mapped to an existing custom DQ rule.
    - A filter can only be **changed or unmapped** from a custom DQ rule **if the rule is in Draft, Returned, or Published state**.

    Filter Condition Rules:
    - Filter conditions **can only be defined** on attributes of the entity where the filter is applied.
    - For **text-based columns**, only the following operators are supported:
      - **Equals (=), Not Equals (!=), IN, and NOT IN** (when compared against values).
    - The **Value field** in filter conditions for **text-based columns** can only contain these special characters:
      - **Hyphen (-), Comma (,), Underscore (_), and Full Stop (.)**.
    - The **Filter Name** must be **unique within an entity** and can only include these special characters:
      - **Hyphen (-), Comma (,), Underscore (_), and Full Stop (.)**.
    - The **maximum supported length** for a filter expression **without a dimension entity reference** is **3,800 characters**.
12. Click **Save** to finalize the rule.
13. The system will generate a **Rule Code**, and the rule will appear in the **Control Extensions** page.

2.2 Editing a Data Quality Rule

You can edit an existing **Data Quality Rule** definition to update its details.

> **Note:**
>
> **Editing Guidelines**
>
> - A rule can only be edited if the associated action is in **New** or **Returned** status.
> - **Custom DQ Rules** can be edited if they are in **Draft, Returned, or Published** status.
> - The **Rule Type** cannot be edited.
> - The **Base Entity and Attribute** cannot be edited for **Custom DQ Rules in Published status**.

:**Steps to Edit a Data Quality Rule**:

1. From the **Inbox** page, select an action in **New** or **Returned** status for which you want to edit the DQ rule.
2. Click **Control Extensions** from the **left-hand side (LHS) menu**.
3. Click the **rule** you want to modify.
4. Update the necessary details.
5. Click **Save** to apply the changes.

Once saved, the rule is successfully updated.

2.3 Deleting a Data Quality Rule

You can delete an existing **Data Quality Rule** if it meets the deletion criteria.

> **Note:**
>
> **Deletion Guidelines**:
>
> - A rule can only be deleted if the associated **action is in New or Returned status**.
> - Only **Custom DQ Rules in Draft or Returned status** can be deleted.

Steps to Delete a Data Quality Rule:

1. From the **Inbox** page, select an action in **New** or **Returned** status for which you want to delete a DQ rule.
2. Click **Control Extensions** from the **left-hand side (LHS) menu**.
3. Click the **Edit Rule** option.
4. Choose the **rule** you want to delete.
5. Click the **Delete** icon.

Once deleted, the rule is permanently removed from the system.

2.4 Create a Data Quality Group

Data Quality Groups facilitate the **logical grouping of Data Quality (DQ) definitions** and allow scheduling their execution.

Capabilities in the 23.2.1 Release:

- Ability to create **Custom DQ Groups** based on either:
  - A specific **Entity**
  - An **Existing DQ Group**
- Ability to map the following types of rules to a group:
  - **Seeded DQ Rules**
  - **Published Custom DQ Rules**
  - **Unpublished Custom DQ Rules** (only from the same action)

> **Note:**
>
> - A **Custom DQ Group** can only be created using **rules from the same entity**.
> - **Editing a Custom DQ Group** only updates the rule mapping—**no rules are created or deleted**.
> - **Custom DQ Groups** can be:
>   - Edited in **Draft, Returned, or Published** status.
>   - Deleted in **Draft or Returned** status.

Steps to Create a Data Quality Group:

1. From the **Inbox** page, select an action in **New** or **Returned** status for which you want to create a DQ Group.
2. Click **Control Extensions** from the **left-hand side (LHS) menu**.
3. Click **Create Group** to open the group creation window.
4. **Enter Group Details**:
   - **Name**: Enter the group name using **alphanumeric characters** and **underscores (_) only**.
   - **Description**: Provide details about the group.

   > **Note:**
   >
   > The description field does not support new lines.
5. Select the relevant **Entity** for the group.
6. **(Optional) Create from an Existing Group**
   - If you want to create a new group based on an **existing DQ Group**, enable the **Create Data Quality Group from an Existing DQ Group** option.

- Select the required group from the **Copied from Data Quality Group** drop-down list.

7. Click **+** to link DQ rules for the selected entity.
8. Select the required rules and click **Link**.
9. Click **Save** to finalize the group creation. The **Group Code** is automatically generated, and the group appears in the **Control Extensions** page.

2.5 Editing a Data Quality Group

You can edit an existing **Data Quality Group** to update its details.

Editing Guidelines:

- A **Data Quality Group** can only be edited if the associated action is in **New** or **Returned** status.
- **Custom DQ Groups** can be edited in **Draft, Returned, or Published** status.
- The **Group Name** can only be edited if the group is in **Draft** or **Returned** status.
- The **Group Description** and **Mapped DQ Rules** can be edited in **Draft, Returned, or Published** status.

Steps to Edit a Data Quality Group:

1. From the **Inbox** page, select an action in **New** or **Returned** status for which you want to edit a DQ Group.
2. Click **Control Extensions** from the **left-hand side (LHS) menu**.
3. Select the Group to Edit and click the **Data Quality Group** you want to modify.
4. Update the **description** and **mapped DQ rules** as needed.
5. If the group is in **Draft or Returned** status, you can also update the **group name**.
6. Click **Save** to apply the modifications.
7. The updated group details will be displayed in the **Control Extensions** page.

The Data Quality Group is successfully updated.

2.6 Deleting a Data Quality Group

You can delete an existing **Data Quality Group** if it meets the required conditions.

Deletion Guidelines:

- A **Data Quality Group** can only be deleted if the associated action is in **New** or **Returned** status.
- Only **Custom DQ Groups** in **Draft** or **Returned** status can be deleted.

Steps to Delete a Data Quality Group:

1. From the **Inbox** page, select an action in **New** or **Returned** status for which you want to delete a DQ Group.
2. Click **Control Extensions** from the **left-hand side (LHS) menu**.
3. Open the Edit Group Page and click the **Edit Group** option to view the list of existing groups.
4. Select the **DQ Group** you want to delete.

5. Click the **Delete** icon.

The Data Quality Group is successfully deleted.

2.7 Limitations

The following behaviors apply to **Data Quality Rules and Groups**:

- **Single-Entity Restriction**:
  - A **DQ Group** must be defined for only **one entity**.
  - **Multiple entities** rules cannot be combined within the same DQ Group.

Deletion Restrictions:

- You **cannot delete** Custom DQ Rules or Groups if they are in **Published, Approved, or Submitted** status.
- You can only delete Custom DQ Rules or Groups if they are in **Draft or Returned** status.

3
Data Quality Executions

3.1 Use and Execute the Source Data Quality Check Process

The **Run Pipeline (Process)** is used to perform **Data Quality Checks** on source records for various data elements. Follow the steps below to access, execute, and verify the **Source Data Quality Check Process** in **Process Orchestration**.

Steps to Use and Execute the Source Data Quality Check Process

1. On the home page, navigate to **Process Orchestration**.

   The **Process Modeller** page will be displayed.

2. Search for **Source Data Quality Check Process** on the **Process Modeller** page.

   The **Process Flow Page** will be displaying the process flow created on a drawing canvas. This canvas uses Transition, Activity, and Widgets components (from the floating toolbar).

   > **Note:**
   >
   > This workflow consists of:
   >
   > - **RUN DQ RULE Widgets** which represent Data Quality Groups) are arranged in parallel.).
   > - A Data Service Widget called the **Data Quality Reporting Engine** is added at the end of the process for reporting purposes.

3. **View Widget Details (Optional)**
   - To see details of a widget, **double-click** on it.
   - You can view details related to **Activity, Transition, and Notification**.
   - On the **drawing canvas**, you can check the **Definition, Data Fields, and Application Rule** details.
4. You can start execution from the **Process Flow Page** or the **Process Modeller Page**.
5. On the **Process Modeller Page**, locate the **Source Data Quality Check Process**.
6. Click the **Menu** button, then select **Execute Run**.

   The **Execution Page** will be displayed.
7. On the **Execution Page**, choose **With Parameters** from the **Execution Type List**.
8. Select the required **As of Date** to process Data Quality Checks.
9. Click **Apply** to start the **Run Pipeline execution**.

> **Note:**
>
> The Run Pipeline is triggered using the selected Extraction Date. For additional details, refer to the Process Orchestration framework documentation.

10. **Steps to Verify the Run Execution**
    a. Open the **Process Monitor Page** by clicking **Process Monitor** on the **Process Modeller Page**.
    b. The **Process Monitor Page** lists all **Run Instances** for the **Source Data Quality Check Process**.
    c. Use **Process ID** or **Process Name** to search for the executed process.
    d. Select the required **Process Instance** to view the **Run Execution Status**.

    The **Process Flow Page** will display the **Run Execution Status** at each node of the workflow.
11. On the **Process Monitor Page**, click the required **Process Instance** to review execution logs.

    The **Process Flow Page** will display the **Run Execution Status** for each node.
12. To check the execution details of a specific **Node**, **double-click** on it.
13. Click **Execution Logs** to open the **Log Viewer Page**

    The **Log Viewer Page** displays all logs related to the **Process Instance**.
14. Click **Show More** to expand log entries.
15. Click outside the **Log Viewer** to close it.

    The Source Data Quality Check Process has been successfully executed and verified.

4

Data Quality Dashboards

The Data Quality Visualization offers insights into data quality issues detected during data ingestion. Users can:

- View error records associated with specific entities to identify data inconsistencies or loading issues.
- Analyze data movement errors using error datasets that track records with read or load errors.
- Utilize a grid view to pinpoint the type and source of errors within staging entities.
- Access tools for error remediation, aiding in the correction and reprocessing of problematic records.

This visualization facilitates error identification, supports remediation efforts, and ensures the integrity of data before it moves to subsequent stages in the DFCS workflow.

4.1 Data Quality Reports

This Data Quality Report offers an in-depth overview of data quality issues across multiple entities. It provides key insights into the checks performed, their distribution, and outcomes, along with customizable filters and visualizations. The report helps organizations monitor, analyze, and address data quality challenges systematically.

Data Quality rules can be created, modified, or approved within the Data Quality Summary framework which is a scalable rule-based engine providing robust tools for maintaining high-quality, and reliable data.

The Data Quality Rules are predefined validation checks that ensure the accuracy and integrity of data within the system. These rules support validations such as Range, Data Length, Column Reference/Specific Value, List of Values/Codes, Null Value, Blank Value, Referential Integrity, Duplicity, and Custom Check/Business logic.

Users can group, execute, and manage these rules, enabling efficient monitoring and correction of data quality issues.

To access these reports, navigate using the following path:

1. Navigate to **Home > Catalog > Shared Folders > Data Quality Visualization > Data Quality**.

The Data Quality visualization features several default filters, such as Number of Checks, Type, Class, and Severity, enabling users to customize their view based on specific preferences or needs.

To enhance usability and customization, the Data Quality visualizations include several default filters as listed below:

Table 4-1 Default Filters

Filter	Description
Period	Allows users to filter data by time levels, including years, months, weeks, or days.
As of Date	Facilitates analysis based on specific dates.
Group	Enables segmentation based on data groupings

Table 4-2 Type Filters

Type Filter	Description
Custom Check	Validates data against user-defined business rules or custom logic tailored to specific organizational requirements.
Duplicity Check	Identifies and flags duplicate records within the dataset to ensure data uniqueness and accuracy.
List of Values or Code	Ensures that data values in specific fields match predefined valid entries or codes from a reference list.
Null Values Check	Detects and flags fields with missing (null) values to address gaps in data completeness.
Other	Captures data quality validations that do not fall into standard predefined categories, often accommodating miscellaneous checks.
Referential Integrity Check	Ensures that relationships between linked tables are consistent, verifying that foreign keys correctly reference primary keys.

Table 4-3 Class Filters

Class Filter	Description
Conformity	Ensure that data adheres to defined formats, patterns, or standards, such as date formats or character limits.
Consistency	Validate that data values remain logically and structurally aligned across different datasets or fields to maintain data integrity.
Generic	Cover flexible, custom-defined validations tailored to specific business rules or requirements.
Others	Include specialized or advanced validations, such as cross-referencing external datasets or verifying complex relationships between data elements.

4.2 Data Quality Registry

The Data Quality (DQ) Registry provides a detailed overview of the data quality checks available across different entities. It serves as a central repository to analyze and monitor the distribution and classification of these checks. Key highlights of this report include:

- **Distribution of Checks**: Offers a breakdown by type, severity, and class, providing insights into how checks are applied and their criticality across entities.

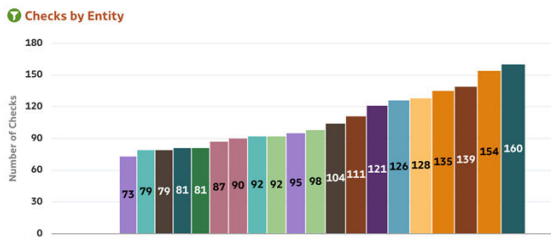
- **Checks by Severity and Entity Types**: Classifies checks based on their severity levels and applicable entity types, helping users pinpoint areas that need the most attention.
- **Number of Checks by Entity**: Showcases the prominence of data quality checks across different source tables. Larger font sizes indicate higher number of DQ Checks configured for that particular entity, providing a visually intuitive way to comprehend the distribution of DQ Checks.
- **Activity - Results Data Browsing**
  - **Objective**: To highlight the number of data quality checks configured for different entities.
  - **Persona**: Business Analyst

Table 4-4 Number of Checks by Entity

Step Description	Observations
Follow the navigation path: **Home → Catalog → Shared Folders → Data Quality Visualization à Data Quality à Data Quality Registry**	Larger font sizes indicate higher number of Data Quality checks. 

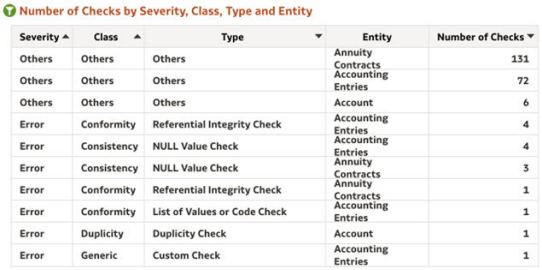
- **Number of Data Quality Checks by Source Table (Bar Chart)**: This bar chart displays the source tables on the x-axis, arranged in ascending order based on the number of configured Data Quality (DQ) checks, which are shown on the y-axis.
- **Activity - Results Data Browsing**
  - **Objective**: to provide a clear overview of the distribution of Data Quality (DQ) checks across source tables.
  - **Persona**: Business Analyst

Table 4-5 Checks by Entity

Step Description	Observations
Follow the navigation path: **Home → Catalog → Shared Folders → Data Quality Visualization à Data Quality à Data Quality Registry Tab**	The chart displayed is based on the default filter criteria. This can be customized by choosing a different filter. 

- **Number of Checks by Severity, Class, Type and Entity (Table)**: Number of DQ checks are organized by Severity, Class and Type names for each entity, presented in a table format.
- **Activity - Results Data Browsing**
- **Objective**: To list all the DQ checks in a tabular format.
- **Persona**: Business Analyst

Table 4-6 Number of Checks by Severity, Class, Type, and Entity

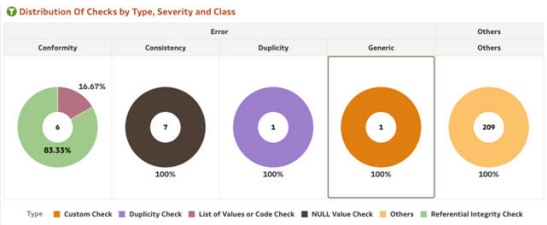
Step Description	Observations
Follow the navigation path: **Home → Catalog → Shared Folders → Data Quality Visualization à Data Quality à Data Quality Registry**	

Number of Checks by Severity, Class, Type and Entity

Severity	Class	Type	Entity	Number of Checks
Others	Others	Others	Annuity Contracts	131
Others	Others	Others	Accounting Entries	72
Others	Others	Others	Account	6
Error	Conformity	Referential Integrity Check	Accounting Entries	4
Error	Consistency	NULL Value Check	Accounting Entries	4
Error	Consistency	NULL Value Check	Annuity Contracts	3
Error	Conformity	Referential Integrity Check	Annuity Contracts	1
Error	Conformity	List of Values or Code Check	Accounting Entries	1
Error	Duplicity	Duplicity Check	Account	1
Error	Generic	Custom Check	Accounting Entries	1

- **Distribution Of Checks by Type, Severity and Class (Donut Chart):** Number of DQ checks organized by Severity, Class and Type names for each source table column, in a donut chart layout. Severity and Class names are visually represented within separate trellis columns, and Type segregated by color providing a clear depiction of their distribution and relationship.
- **Activity - Results Data Browsing**
  - **Objective**: to provide a comprehensive view of the distribution of Data Quality (DQ) checks by severity, class, and type across source table columns.
  - **Persona**: Business Analyst

Table 4-7 Distribution of Checks by Type, Severity, and Class

Step Description	Observations
Follow the navigation path: **Home → Catalog → Shared Folders → Data Quality Visualization à Data Quality à Data Quality Registry**	

4.3 Data Quality Summary

The Data Quality Summary tab provides a concise and comprehensive snapshot of the overall data quality status within the system. It is designed to present key metrics and insights,

enabling users to monitor and assess the effectiveness of data quality processes. Key features of this tab include:

- **Data Quality Ratio (Bar Chart)**: The Data Quality Ratio measures the proportion of unique failed records to the total unique scanned records within a specific entity. This metric is visualized as a bar chart, categorized by execution periods, with the most recent value prominently displayed. It provides stakeholders with insights into the effectiveness of data quality checks over time.
- **Activity - Results Data Browsing**:
  - **Objective**: to provide a clear and measurable indicator of data quality within a specific entity by highlighting the proportion of failed records as a percentage of the total scanned records.
  - **Persona**: Business Analyst

Table 4-8 Activity - Results Data Browsing

Step Description	Observations
Follow the navigation path: **Home → Catalog → Shared Folders → Data Quality Visualization à Data Quality à Data Quality Summary**	The Quality Ratio is displayed like below based on the default filter set. **Figure 4-1 Activity - Results Data Browsing** 

- **Scanned records (Line Chart)**: This metric represents the count of unique records scanned within a specific entity. A line chart is utilized to visualize this data, categorized by the execution period, with the most recent value prominently displayed for quick reference.
- **Activity - Results Data Browsing**
  - **Objective**: to track and visualize the volume of records scanned within a specific entity over time
  - **Persona**: Business Analyst

Step Description	Observations
Follow the navigation path: **Home → Catalog → Shared Folders → Data Quality Visualization à Data Quality à Data Quality Summary**	Number of processed records are shown like below based on the default filter criteria. **Figure 4-2 Activity - Results Data Browsing** 

- **Error records (Line Chart)**: This metric represents the count of unique failed records within a specific entity. A line chart is utilized to display this data, categorized across execution periods
  - **Activity - Results Data Browsing**
  - **Objective**: to track and visualize the volume of error records within a specific entity over time
  - **Persona**: Business Analyst

Step Description	Observations
Follow the navigation path: **Home → Catalog → Shared Folders → Data Quality Visualization à Data Quality à Data Quality Summary**	Number of Errors identified are shown based on the default filter criteria. **Figure 4-3 Error records (Line Chart)** 

- **Checks Executed Vs Failed (Bar Chart)**: This indicates the percentage of Data Quality (DQ) checks that failed relative to the total number of checks executed. The data is visualized using a bar chart, categorized by execution periods, with the most recent value prominently displayed.
- **Activity - Results Data Browsing**
  - **Objective**: to provide a clear and actionable view of the effectiveness of executed Data Quality checks over time.

– **Persona**: Business Analyst

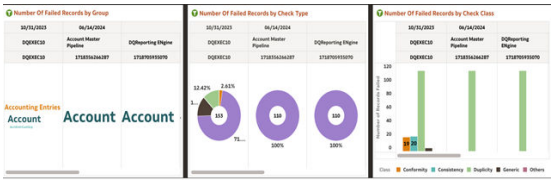
Step Description	Observations
Follow the navigation path: **Home → Catalog → Shared Folders → Data Quality Visualization à Data Quality à Data Quality Summary**	Based on the filter criteria set, the chart is shown as below **Figure 4-4 Checks Executed Vs Failed (Bar Chart)** 

- **Attributes Executed Vs Failed (Bar Chart)**: represents the proportion of number of unique attributes that have failed during data quality (DQ) checks, compared to the total number of attributes that underwent DQ checks. Bar chart enabled for this Tile categorized across execution period with last Value on display.
- **Activity - Results Data Browsing**
  - **Objective**: To track and analyze the proportion of attributes failing Data Quality checks relative to the total attributes tested, enabling stakeholders to identify and address data quality issues effectively.
  - **Persona**: Business Analyst

Step Description	Observations
Follow the navigation path: **Home → Catalog → Shared Folders → Data Quality Visualization à Data Quality à Data Quality Summary**	Based on the filter criteria set, the chart is shown as below: **Figure 4-5 Attributes Executed Vs Failed (Bar Chart)** 

- **Failed Records Analysis**: Offers a detailed view of the failed records, categorized by various dimensions such as check type, check class, and other groupings, helping users identify recurring issues and problem areas.

- **Number of Failed Records by Group**: This view gives the number of failed records grouped by DQ Group for Date, run description and Run Execution Identifier as Trellis Columns
  - **Objective**: To provide a comprehensive analysis of failed records across dimensions like check type, check class, and groupings, enabling users to pinpoint recurring issues and address root causes effectively.
  - **Persona**: Business Analyst

Step Description	Observations
Follow the navigation path: **Home → Catalog → Shared Folders → Data Quality Visualization à Data Quality à Data Quality Summary**	Different charts for each dimension are shown as below: **Figure 4-6 Failed Records Analysis** 

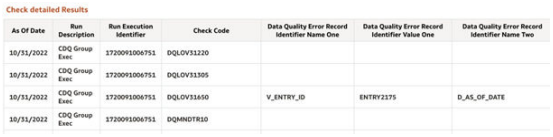
4.4 Data Quality Executions

4.5 Data Quality Results

The Data Quality Results tab offers a detailed record of the data that has undergone quality checks, providing users with essential information to trace, audit, and understand the data quality process. Key features of this report include:

- **Run Descriptions**: Provides detailed information about the data extraction process, describing how and when the data was pulled for quality checks.
- **Check Code**: Displays the unique identifier for each quality check performed, allowing users to track specific checks executed on the data.
- **Processed Data**: A comprehensive log of all records that were processed through the quality checks, helping users trace the flow of data and monitor the quality assurance efforts.
- **Activity - Results Data Browsing**
  - **Objective**: to provide insights at the most detailed level of data, enabling the identification of incorrect records that have failed data quality checks.
  - **Persona**: Business Analyst

Step Description	Observations
Follow the navigation path: **Home > Catalog > Shared Folders > Data Quality Visualization > Data Quality > Data Quality Results**	Based on the filter criteria set, the chart is shown as below



Check detailed Results

As Of Date	Run Description	Run Execution Identifier	Check Code	Data Quality Error Record Identifier Name One	Data Quality Error Record Identifier Value One	Data Quality Error Record Identifier Name Two
10/31/2022	CDQ Group Exec	1720091006751	DQLOV31220			
10/31/2022	CDQ Group Exec	1720091006751	DQLOV31305			
10/31/2022	CDQ Group Exec	1720091006751	DQLOV31650	V_ENTRY_ID	ENTRY2175	D_AS_OF_DATE
10/31/2022	CDQ Group Exec	1720091006751	DQMNDTR10			

5

Balance Reconciliation

Balance Reconciliation reconciles the balances from the operational systems of a bank with the balances maintained in General Ledger (GL) of the bank. With DFCS, banks can also reconcile between General Ledgers maintained in the bank. The balances in the GL of a bank are the ones that are audited and duly certified by internal and external auditors. Hence, considered to be the final version of the truth in a bank. Therefore, all data extracted from any other operating system of a bank must be reconciled with the balances maintained in the GL to ensure they are complete, accurate, and comprehensive. It acts as an authentic and reliable base for any further decision-making.

The bank's operational data are sourced into standard product processor entities/tables. DFCS' GL Reconciliation has pre-configured GL/PP table GL code and corresponding balances, for which the reconciliation definition process must be executed. See *Balance Reconciliation* for more information.

An option is available to reconcile GL data with other operational data used by the bank, which does not flow into the standard Product Processors configured in the application.

The Balance Reconciliation feature of DFCS supports reconciliation by the following dimensions, of which As-of Date, Accounting Standard, Account Currency, Legal Entity, and GL Account are mandatory.

Table 5-1 Mandatory Dimensions

Dimension
Accounting Standard
Account Currency
Legal Entity

> **Note:**
>
> As-Of Date and GL Accounts are not mandatory dimensions.

Table 5-2 Optional Dimensions

Dimension
Business Unit
Organization Unit
Branch
Product
Project
Ledger Identifier
Counterparty
Account

> **Note:**
>
> COA and ML segments are not supported by DFCS.

> **Note:**
>
> This set of dimensions corresponds to properties that are common across all product-processor and ledger balance data. Users can now include custom COA segment dimensions based on GL recon requirement.

Product Processors supported are:

- Stage Bill Contracts
- Stage Borrowings
- Stage Cards
- Stage Casa
- Stage Annuity Contracts
- Stage Futures Contracts
- Stage Foreign Exchange Contracts
- Stage Investments
- Stage Letter Of Credit Contracts
- Stage Leases Contracts
- Stage Loan Contracts
- Stage Over Draft Accounts
- Stage Option Contracts
- Stage Repo Contracts
- Stage Term Deposit Contracts

5.1 Measures List

Balance reconciliation uses the following product-processor amount figures as the measured values (measures) for comparison with ledger balance information.

> **Note:**
>
> This set of dimensions corresponds to properties that are common across all product-processor and ledger balance data. It cannot be extended by users.

> **Note:**
>
> Balance reconciliation requires that currency in which entered currency amount figures in Stage GL Data is designated matches the currency in which product processor and ML balance data is, as well.

For more information on the Product Processor balance data, Entity names and their Measures list, see AFCS Download Specifications document.

5.1.1 Enable Custom Measures

Beginning with AFCS 23D, the use of new measures for GL-PP Reconciliation is supported. You can map a custom Amount (numeric) measure to the GL code when a custom extension is completed. Custom measures can now be selected for GL-PP and ML-PP Reconciliation but not for GL-ML Reconciliation.

To enable a new measure:

1. Create an issue by selecting **Catalog Extension** as the **Category** and **Catalog** as the **Source**. See Create or Log an Issue to know how to create an issue.
2. Create an action for the issue you just created by selecting **Catalog Extension** as the Action Type. SeeCreate an Action to know how to create an action.
3. Navigate to the action you just created and navigate to **Extension** tab and select **Create Business Term**option.
4. In the **Definition** screen, enter the **Business Term Logical Name**, select **Classification** and **Logical Data Type** based on your requirements and click **Add**.
5. In the **Relationships** screen, click **Add** and enter **GR2** under **Group Code** field and select the **Relationship Type** as **Measure GL** and select the required code in the **Related Business Term** drop-down.
6. Navigate to **Definition** screen and click **Save**.
7. In the **Extension** tab, click Submit and Approve.
8. Navigate to **Administration** and click **Publish Change Request**> **Approved** tab and select the action you just created and click **Publish**. To view the status of the approval, navigate to **Published** tab.
9. Create a new Action and navigate to **Extension** tab and select **Extend Fact**option. SeeCreate an Action to know how to create an action.
10. In the **Extend Fact Entity** screen, select **Grain** as **Customer Account**, select the **Entities** and **Business Terms** which you want to extend and click **Save**. The custom created Business term is displayed here.
11. In the **Extension** tab, click Submit and Approve.
12. Navigate to **Administration** and click **Publish Change Request**> Approved tab and select the action you just created and click **Publish**. To view the status of the approval, navigate to **Published** tab.
13. Navigate to the **Entity** screen and map the new measure to the respective Product Processor.
    The custom measure is mapped to the Product Processor.

5.2 Before you Begin

Select the **Domain** and **Deploy** the selected domain.

5.3 Access Balance Reconciliation UI

To access Balance Reconciliation, perform these steps:

1. From the **Oracle Financial Services Data Foundation Cloud** page, click and select your Subledger application.
2. Click **Balance Reconciliation**.
   The **Type** details for the selected Subledger application are displayed.
3. You can click the following tabs to view more details:
   - **Entity**
   - **Reconciliation Rule**
   - **Reconciliation Summary**
   - **Adjustments**

5.4 Configure Type of Reconciliation

GL to PP and GL to ML reconciliation are supported. For GL to PP reconciliation, Source GL is mapped to target PP tables, and in the case of GL to ML reconciliation, Source GL is mapped to target ML table. Mandatory dimensions are preselected but you can define additional dimensions. Mandatory dimensions, optional dimensions, and MEMBERS OF THE DIMENSION participate in the GL Reconciliation process.

On the **Type** configuration page, the predefined Reconciliation Definition types that can be used during a Reconciliation Definition are displayed:

- General Ledger to Product Processor
- General Ledger to Management Ledger

> **Note:**
>
> "GL Code for Reconciliation" as an optional dimension is not expected to be used in any of the Reconciliation types.

5.4.1 Type Configuration

While configuring the Type, you define the type of reconciliation. You can click the **Type** tab and perform the following tasks for the selected reconciliation type:

- **View**: Click the **View** icon to view the Settings and Dimensions of the selected reconciliation type as read-only.

- **Edit**: Click the **Edit** icon to modify the Settings and Dimensions details of the selected reconciliation type. You can modify the existing reconciliation definition except its name.

Topics:

- General Ledger to Product Processor
- General Ledger to Management Ledger
- Management Ledger to Product Processor

5.4.1.1 General Ledger to Product Processor

General Ledger to Product Processor Reconciliation identifies the difference between GL system and Product Processor data. It nullifies the difference by posting the adjustment entries up to the amount of difference.

- If the reconciliation difference is greater than the threshold value, the difference is reported.
- A threshold is a specified Product Processor level and these values are specified as a percentage or an absolute amount. The percentage value represents the difference in percent to the General Ledger side amount.
- If the threshold is specified as an amount, it must be read in connection with a currency of the threshold amount. The reconciliation difference is reported in the base currency. If the currency specified here is different from that of the reconciliation dimension, the difference amount must be converted in the threshold currency using the exchange rate of execution date or the latest available rate of the five preceding days.
- While reconciling General Ledger and Product Processor, differences can arise in two ways:
  When the General Ledger Amount is greater than the Product Processor Amount

  OR

  When the General Ledger amount is less than the Product Processor amount.
- Therefore, there are two threshold values to address differences arising out of this condition. For more information, see Target Parameters.
  Topics:
  - Settings
  - Dimensions

5.5 Configure Entity

Use the **Entity** tab to set and maintain metadata related to Reconciliation Rules. This is a one-time activity and defines the boundaries of GL Reconciliation. Entity configuration includes the Reconciliation of Entities in the GL Reconciliation Process.

> **Note:**
>
> The Entities screen consists of predefined data. You can view, or edit the Reconciliation Entities using this predefined data.
> The Entity list is pre-seeded. However, you can change the **Dataset** to **Measures** mapping.

5.5.1 Entity Configuration

On the **Entity** screen, you will see a list of settings with the following information:

- **Entity Name:** The name of the Reconciliation Entity.
- **Grain:** The granularity of data within the entity. For example: Ledger, Account, or Management Ledger.
- **Dataset:** Add the Dataset from the drop-down list for the selected Entity.

You can view, or edit a selected entity.

- **View:**

  Click the View icon, to view details of the entity in the Read-Only mode.
- **Edit:**

  Click the Edit icon to modify the **DataSet** to **Measures** mapping for this entity.

> **Note:**
>
> For more information, see the list of Measures.

5.6 Reconciliation Rules

Topics:

- Define Reconciliation Rules
- Executing the Rule
- Reconciliation Summary

5.6.1 Define Reconciliation Rules

Reconciliation Management is the designated level at which the account balances are reconciled in the system. Information that specifies the granular level at which account balances are reconciled across one or many entities is stored.

GL to PP Reconciliation is performed at the following levels:

- **GL Level Reconciliation:** The difference between the GL System and the Product Processor systems at each reconciliation dimension node level within a GL Code is identified.
- **Map Level Reconciliation:** The difference between the GL Data and the Product Processor Data at each reconciliation Dimension Node Level across all the Product Processors are identified.

GL to PP Reconciliation can be defined using Manual Reconciliation Definition.

For a detailed explanation of GL Level Recon and Map Level Recon, see the 'Key Terms and Concepts' section.

Topics:

- Reconciliation Page
- Search Reconciliation Rule
- Add a Reconciliation Definition

5.6.1.1 Search Reconciliation Rule

Use the **Search** bar to search for any reconciliation rule.

Prerequisites

Predefined Reconciliation Rule

Procedure

To search a reconciliation rule, follow these steps:

1. Navigate to the **Reconciliation Rules** screen.
2. Enter the search criteria in the **Search** bar and click **GL Level Recon** or **Map Level Recon**.
3. The search results are displayed in the **List** view.

5.6.1.2 Add a Reconciliation Definition

To add the reconciliation definition, follow these steps:

On the Reconciliation Rules **Summary** screen, click the **Add** icon. The **Add Rule** tab appears where you can provide the following information:

- Settings
- GL Parameters (Source Ledger Parameters)
- Target Parameters
- Dimensions
- Allocation

5.6.2 Reconciliation Rule

On the DFCS home page, select a GL application and click its Balance Reconciliation link. Then click Reconciliation Rules on the LHS menu to access the Reconciliation Rules screen.

Use the Thumb and List view icons to control how you want to view the Reconciliation Rules. Use the Search bar to search for a Reconciliation Rule.

To add or edit a Reconciliation Rule, you must provide information grouped under the following:

- Settings
- GL Parameters
- Target Parameters
- Dimension
- Allocation

> **Note:**
>
> Allocation settings are not applicable when the Reconciliation Type is **General Ledger to Management Ledger**.

You can View (in Read-Only mode), Edit, Copy, or Delete Reconciliation Rules. Use the **Add** button to add a new Reconciliation Rule.

- **Add**: Click **Add** to begin the process of adding a new Reconciliation Rule.

Figure 5-1 Add

- **View**: To view a reconciliation definition (in read-only mode), click **View** corresponding to that definition.

Figure 5-2 View

- **Edit**: To modify a reconciliation definition, click the **Edit** icon corresponding to that definition. The Rule Name, Reconciliation type, Consolidation Type fields are enabled/ disabled while you edit a reconciliation definition.

Figure 5-3 Edit

- **Copy**: To copy a reconciliation definition, click **Copy** corresponding to that definition. Provide a Name and Description. Navigate through the remaining tabs to modify the settings per your requirement and Save your details to create a new reconciliation definition.

Figure 5-4 Copy

- **Delete**: To delete a reconciliation definition, click **Delete** corresponding to that definition.

Figure 5-5 Delete

5.6.3 Execution of Rule

After defining the parameters on both the GL and the Product Processor sides, the defined reconciliation rules must be executed, and the differences between the GL data and PP data computed. The Processing Modelling task is used to execute the reconciliation rules. Processing Modelling Framework (PMF) enables a business user, without assistance from a technical analyst, to easily define and execute a run. PMF enables you to define a run by selecting a combination of different GL reconciliation parameters.

5.6.3.1 Prerequisites

- The SCD executable should be present under <installation home>ficdb/bin. The file name is scd.
- The user executing the SCD component should have execute rights on the file mentioned as prerequisite in point 2.
- The setup tables accessed by SCD component are SYS_TBL_MASTER and SYS_STG_JOIN_MASTER.

SYS_TBL_MASTER stores the information like which is the source stage table and the target dimension tables. The source sometimes can be the database views which could be simple or a complex view.

SYS_STG_JOIN_MASTER stores the information like which source column is mapped to which column of a target dimension table. It makes use of data base sequence to populate into surrogate key columns of dimension tables.

5.6.3.2 Process Modeller

The Process Modeller page displays existing pipelines along with their details such as: processID, process name, process description, version, instance, application, and last modified date, and last modified by. For example, Type: Run.

To execute the process run, perform the following steps:

1. On the Oracle Financial Services Data Foundation Cloud for Banking home page, click the **Process Orchestration** from the LHS menu.
2. Click + to create a new pipeline.
3. Click the process name link to launch and edit the pipeline.
4. Launch the process in a new window.
5. Delete a pipeline.

6. Click the **Menu** button and do the following for each pipeline:
7. View a process flow
8. Copy a process flow
9. Monitor the pipeline in the **Process Flow Monitor** window
10. Execute a pipeline
11. Apply a filter condition to a Run pipeline
12. Use the **Search** grid to search for a pipeline by providing a keyword containing the process ID, process name, or description.
13. Click the **Reset** icon to reset the search fields.
14. You can narrow down your search results by additionally selecting the **Pipeline Filter** options to filter pipelines based on pipeline type. Example: To view only **Run Pipelines**, click inside the **Pipeline Filter** list, and select **Run Pipeline**. Remove the other pipeline types if already selected and click **Search**.
15. You can also sort the pipelines on this page based on the **Process ID**, **Process Name**, or **Application**.
16. Click the **Sort By** drop-down and select the sort criterion.
17. Click to go to the **Process Monitor** window.

5.6.3.3 Process Monitor

Use the Process Monitor to monitor the current stage of a process. After integrating with a service, a workflow is invoked. After it is invoked, the workflow goes through all the defined stages. Using the Process Monitor, you can view all the stages of the workflow such as current stages, stages to follow, if any, and finished.

Your user group must be mapped to the function role WFMACC (Workflow Monitor Access) to access the Process Monitor window. For the list of the PMF Roles, see the Process Modeling Framework Roles section.

1. On the **Process Modeller** page, click the **Process Monitor** icon on the header to view the Process Monitor page. All workflows that are invoked from the service are displayed along with details such as **Entity Name**, **Entity ID**, **Process Name**, **Process Description**, **MIS Date**, **Execution Start Time**, **Last Execution Time**, **Last Updated By**, and **Status**.

To monitor only a selected pipeline, on the Process Modeller summary page, click the menu button corresponding to that pipeline and select **Process Flow Monitor**. The execution details are displayed.

Click the menu button corresponding to the selected pipeline to view options to:

- **Resume**: To resume a Run pipeline.
- **Re-run**: To execute a Run pipeline again irrespective of the previous execution status.
- **Abort**: To abort an ongoing Run pipeline

> **Note:**
>
> In case of Disaster recovery (DR) after switch over to the secondary site, the processes that are in running status should be aborted and resume to proceed further.

To return to the Process Modeller page, click the Process Modeller icon on the header of the Process Monitor page.

Use the **Search** field to search for a specific pipeline by providing a keyword from either the Process ID, Process Name, or Process Description of the process you are looking for and click **Search**.

5.7 Configure Adjustments

The Data Adjustment module provides the ability to define templates that can be used for Adjustments. The entities on templates that can be defined refer to the Stage instrument tables of OFS Data Foundation. The templates are used by Balance Reconciliation to define default values for various attributes for the Instrument tables. While posting adjustments, the Data Adjustment module applies the defaults for the adjustments created by Balance Reconciliation.

You must define an Adjustment Template for each Product Processor (PP) involved in the reconciliation process if there are translation differences and adjustments have to be posted.

5.7.1 Adjustments Summary

The Adjustments Summary window displays all Adjustment templates defined for various entities. The Adjustment entries associated with the first dimension are displayed. Use the **Search** field to to search for an Adjustment entry or filter the entries - alphabetically or based on last modified date. You can also add or delete Adjustments.

5.7.2 Search Adjustment Rule

Prerequisites

Predefined Adjustment Rule

Procedure

To search for an Adjustment Rule, follow these steps:

1. Navigate to the **Adjustment Summary** page.
2. Enter the search criteria in the **Search** field. Among other properties, each Adjustment Entry consists of a **Run Execution ID**, a **GL Date**, and a **Definition**. You may search on any of these properties.

5.7.3 Update Adjustment Template

To update an existing Adjustment template, follow these steps:

1. Navigate to the **Adjustment Summary** page.
2. Click the Adjustment template link that you want to modify.
3. To reset the expression or default value of an attribute, select the attribute and click **Remove** in the **Expression** field. Now enter the new expression or value and click **Save Expression**.
4. To simply modify an attribute's expression, click the attribute and modify the expression or value in the **Expression** field and click **Save Expression**.
5. Click **Update**.

5.7.3.1 PMF Dashboard for Balance Reconciliation

You can monitor the process status of a pipeline using the PMF Dashboard. The Balance Reconciliation provides information on the following pipelines:

- General Ledger to Management Ledger
- General Ledger to Product Processor
- Management Ledger to Product Processor

> **Note:**
>
> In a scenario, where an execution is done with an Auto approval as 'No', the **Adjustment** tile has no events to display where as the **Reconciliation** tile displays the activities of the execution.

For more information on the activities, tasks within a pipeline and exporting the results, see Filtering the PMF Dashboard and Exporting the PMF Process Activities.

5.8 Resave Hierarchies

Following are the seeded hierarchies and its corresponding mapping tables:

Table 5-3 Following are the seeded hierarchies and its corresponding mapping tables

Seeded Hierarchy	Mapping Tables
HGL001	Product Dimension
HGL002	Business Unit Dimension
HGL003	Branch Dimension
HGL004	Counterparty Dimension
HGL005	Currency Dimension
HGL006	Organization Unit Dimension
HGL008	Legal Entity Hierarchy Dimension
HGL009	General Ledger Hierarchy Dimension
HGL012	Accounting Standard Dimension
HGL014	Ledger Dimension
HGL015	Project Dimension

Re-save the following Hierarchies and then proceed with the Run Pipeline execution:

Table 5-4 Re-save the following Hierarchies and then proceed with the Run Pipeline execution

Hierarchy	Run Pipeline
Branch Dimension	Branch for Reconciliation
Business Unit Dimension	Business Unit for Reconciliation
Legal Entity Hierarchy Dimension	Legal Entity for Reconciliation
Organization Unit Dimension	Organization Unit for Reconciliation

Table 5-4 (Cont.) Re-save the following Hierarchies and then proceed with the Run Pipeline execution

Hierarchy	Run Pipeline
Product Dimension	Product for Reconciliation
Project Dimension	Project for Reconciliation
General Ledger Hierarchy Dimension	GL Code for Reconciliation
Ledger Dimension	Ledger for Reconciliation
Currency Dimension	Currency for Reconciliation
Accounting Standard Dimension	Accounting Standard for Reconciliation
Legal Entity Dimension	Intercompany for Reconciliation
Counterparty Dimension	Counterparty for Reconciliation
Account Dimension	Account for Reconciliation

To re-save the GL Hierarchies in Process Orchestration, follow these steps:

1. On the home page, select **Process Orchestration** from the LHS menu. The **Process Modeller** page is displayed.
2. Create a pipeline GL Hierarchy Resave and select one or multiple of the above listed Hierarchy names in the Process Orchestration before re-saving them. To create a pipeline, follow these steps:
   a. On the **Process Modeller** page, search for the created pipeline. The Process Flow Page is displayed. This Process Flow is designed on the Drawing Canvas using the Transition, Activity, and Widgets Components available in the floating toolbar. A HIERARCHYRESAVE Widget is added to the START for the purpose of resaving the Hierarchy.
   b. After the HIERARCHYRESAVE Widget is added in the Drawing Canvas, double-click the HIERACHYRESAVE Node, the HIERARCHYRESAVE window is displayed. Enter information in the Activity Desc field. Under Dynamic Parameters for HIERARCHYRESAVE fields, select the Entities, and then the corresponding Hierarchy names, and select Load Type as Resave. Click Tick mark icon to save the details.
   c. To execute the Run, you can select the Run Parameter Values using the Execution Button on the Process Flow Page or on the Process Modeller Page.
   d. Go to the Process Modeller Page to execute the Run. Click the Menu Button corresponding to the pipeline that needs to be executed. Click Execute Run. The Execution Page is displayed.
   e. On the Execution Page, select the Execution Type as Without Parameters. Enter a unique value for the Object ID.
   f. To save the details and execute the Run, click the Apply Button. The resaving process begins.

   > **Note:**
   > See the Process Orchestration Section for more details about the Processes.

3. To verify the Run Execution (GL Hierarchy Resave), do the following:
   a. To open the Process Monitor Page, on the Process Modeller Page, click the Process Monitor Button or select Process Flow Monitor on the Process Modeller Menu.

b. The Process Monitor Page is displayed listing all the Run Instances corresponding to the GL Hierarchy Resave Processes. On the Process Monitor Page, search by the Process ID, or by the Process Name GL Hierarchy Resave, and select the Process Instance for the required Run Pipeline (GL Hierarchy Resave) that was executed. The Process Flow Page is displayed with the Run Execution Status on each Node of the GL Hierarchy Resave Process.

4. To verify the Run Execution Logs, do the following:

   a. On the Process Monitor Page, click the required Process Instance for which you need to verify the Execution Logs. The Process Flow Page is displayed with the Run Execution Status on each Node.

   b. To see the Execution Status details of a Node, double-click on that Node. The Execution Status details Page is displayed. Click Execution Logs. The Log Viewer page is displayed, which lists all the Logs related to the Process Instance. To see the details of a log entry, click the Show More Button. Click outside the Log Viewer Page to close it.

5.9 Workflow of Balance Reconciliation

The Balance Reconciliation structure is designed in such a way that, it facilitates verification of the differences which arise by comparing the GL Source Systems with the Bank's Operational Systems. At a global level, you must input GL and Product Processor setting details which form a base at a reconciliation level. The input provided in the Type and Configuration Windows is reflected at a global level.

The General Ledger to Product Processor is the predefined reconciliation definition type that can be used during a Reconciliation Definition. The reconciliations are defined, which forms a part of execution and data verification. This can be defined as Manual Reconciliation Definition, as shown in below Figure.

This reconciliation type is defined in the Reconciliation Rule UI. Product Processor is an entity in the AFCS System used to store data that are received from the Operational System of the Bank.

This workflow explains about the execution of a Balance Reconciliation rule for General Ledger to Product Processor.

Figure 5-6 Balance Reconciliation Workflow

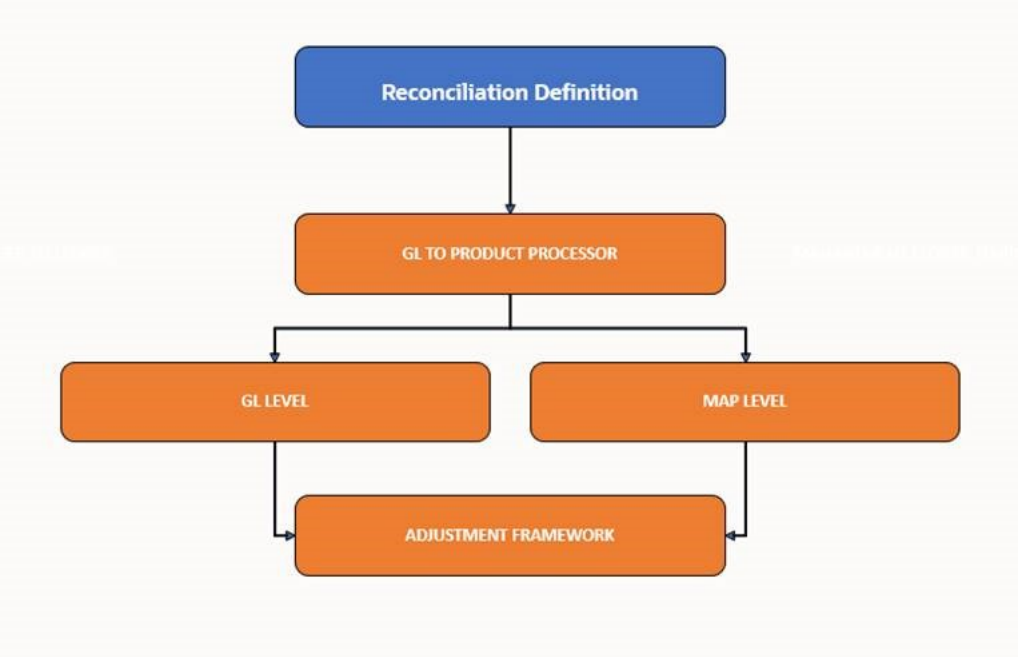
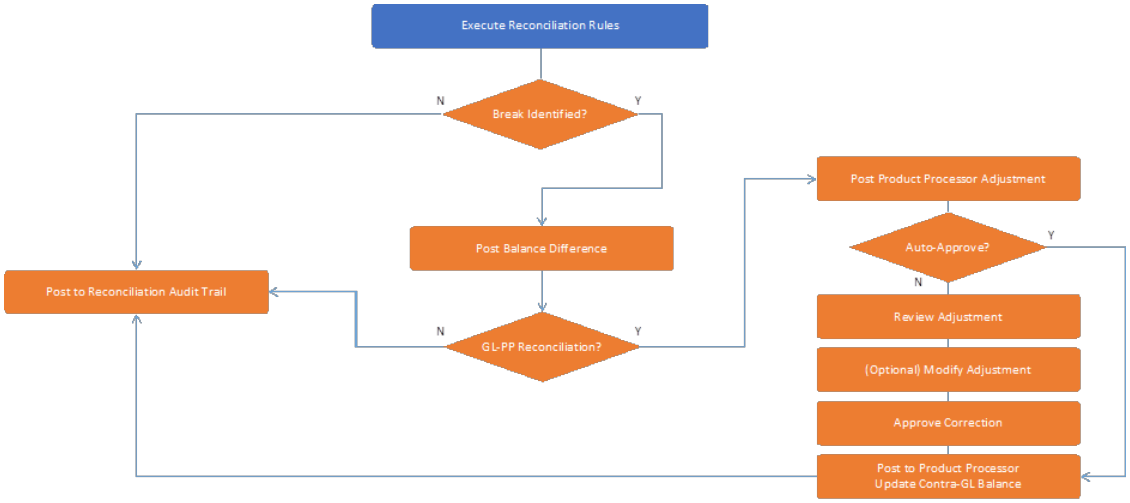


Figure 5-7 Balance Reconciliation Rule for General Ledger to Product Processor Workflow



1. First define and consider the Balance Reconciliation Rule.
2. Define the Operational System data, which needs to be used for reconciliation.
3. Configure threshold and Adjustment Entry floor before passing the Adjustments. This is applicable for Manual Reconciliation. For more information on Adjustments, see the Adjustment section. A different allocation ratio can be fixed for passing the adjustment entry into the different Product Processors (PP) that participate in the mapping.
4. Execute the Reconciliation rule using the Process Modelling Framework.
   When reconciliation differences arise, then the adjustment entries are passed (manually).

- If there are Reconciliation differences reported after execution, the differences are populated in FACT reconciliation difference table and then these entries are posted as Adjustments. There are two types of reconciliation processes:
  - In Manual Reconciliation process, you can review the adjustments in Reconciliation Summary UI and post the reconciliation entries to product process tables. In manual reconciliation definition, your input is sought on the GL side and PP side to determine the course of reconciliation. This is applicable for both GL Level and Map Level Reconciliation. In GL level reconciliation, unique GL codes are identified from the GL code mapping. At the map level, GL codes do not form a part of the reconciliation definition. A manual reconciliation definition can be used for a Solo or Consolidated Legal Entity. The reconciliation definition for a consolidated GL, having an intra-group GL structure, is computed from GL data and not from PP data. Therefore, any account present in the PP but unavailable in GL is not captured in the reconciliation definition.
  - In Automatic Reconciliation Process, reconciliation entries are posted to the process tables.
- If there are no Reconciliation differences reported after execution, then no audit entry is made in terms of reconciliation to process table. Further no action is required.

5.10 Balance Reconciliation Dashboards

You can generate reports to review key details related to Balance Reconciliation and Balance Computation. The Balance Reconciliation feature provides a reporting and information framework that enables you to generate reports and access computation details efficiently. It serves as a unified regulatory and management reporting solution, offering out-of-the-box reporting on Balance Reconciliation results.

Key Features:

- **Tabular and Pivot Table Reports** – View and analyze data in structured formats.
- **Drill-Through Capability** – Navigate across reports for deeper insights.
- **Multiple Export Options** – Export reports in formats such as Microsoft Excel, PowerPoint, and PDF.

Reconciliation Framework Analytics Dashboard

1. **Home**
2. **Threshold Breach**
3. **Map Filter Report**

Home Dashboard Options:

Each dashboard includes selection options at the top of the page, allowing you to filter and customize reports.

- **As of Date** – Select a specific date using the calendar icon.
- **Execution ID** – Choose a completed Run Execution ID from the drop-down list.
- **Legal Entity** – Select the relevant legal entity.
- Click **Apply** to display the filtered data or **Reset** to refresh it.

Threshold Breach Dashboard Options:

- **As of Date** – Select a specific date using the calendar icon.

- **Execution ID** – Choose a completed Run Execution ID from the drop-down list.

Map Filter Report Dashboard Options:

- **Execution ID** – Select a completed Run Execution ID.
- **GL Map ID** – Choose a General Ledger Map ID from the drop-down list.
- **Map Version Number** – Select the appropriate version number. The map version numbers are populated here.

Report Features & Actions

A few reports include filters at each reporting level, which are detailed in the **Report Descriptions** section. Selecting the appropriate filters ensures that data is displayed accurately.

For each report within a dashboard, you can also perform the following tasks:

- **Refresh** – Update the displayed report values.
- **Print** – Print the selected report.
- **Export** – Download the report in multiple formats, including PDF, Microsoft Excel, and PowerPoint.
- **Return** – Navigate back to the previous window.
- **Create Bookmark Link** – Save or share a specific report view.
- **Sorting** – Use sort icons to arrange data in ascending or descending order.
- **Drill-Through** – Access detailed, granular-level data where applicable.

> **Note:**
>
> The **Adjustment Report** displays the entry of Root Node for Map level executions. You can ignore this entry.

5.10.1 Dashboard Home Page

This section provides details about the **Home Dashboard** in the **Reconciliation Framework** application. It explains the available options, filters, and functionalities that help users generate and analyze reconciliation reports efficiently.

Table 5-5 Reconciliation Execution Summary information

Report Name	Reconciliation Execution Summary
Report Level Filters	Not Applicable

Table 5-5 (Cont.) Reconciliation Execution Summary information

Report Name	Reconciliation Execution Summary
Report Description	This report displays the following parameters of the selected **Run Execution ID**: • **GL Map ID**: The map identification number of the reconciliation defined in the **Reconciliation Management** window. • **Map-Version Number**: The version number of the defined reconciliation. It indicates the number of times the reconciliation is edited at the reconciliation definition stage. • **Legal Entity**: The Legal Entity is defined for this map and the version number is displayed here. • **Consolidation Type**: The consolidation types of **Solo**, **Consolidation**, or **Aggregate** is displayed here. • **Reconciliation Type**: The reconciliation types: Ledger to Ledger Reconciliation, General Ledger to Product Processor (Manual Reconciliation), or General Ledger to Product Processor (Auto Reconciliation) are displayed here. • **Reconciliation Level**: Displays the level at which the reconciliation is performed: **GL Level** or **Map Level**. • **Adjustment Allocation**: Adjustment Allocation is displayed here as **Yes** or **No** as defined in the **Reconciliation Management** window. • **Balance Type**: The Reconciliation period as defined in the **Reconciliation Management** window is displayed here. • **Reconciliation Dimensions**: The Mandatory Dimensions and Optional Reconciliation Dimensions (if any) are displayed here.
Drill-through On	Not Applicable

Table 5-6 Reconciliation Difference Report information

Report Name	Reconciliation Difference Report
Report Level Filters	• **Map Name**: The name of the reconciliation as defined in the **Reconciliation Management** window. • **Map Version**: The version number of the defined reconciliation. It indicates the number of times the reconciliation is edited at the reconciliation definition stage.

Table 5-6 (Cont.) Reconciliation Difference Report information

Report Name	Reconciliation Difference Report
Report Description	This report displays the identified Reconciliation Differences for a particular Map. The following parameters are displayed: • **GL Name**: The name of the specific GL entity code of the selected Map name. • **Currency**: The currency in which the actual reconciliation difference. • **Source Balance**: The account balance at the source GL entity level. – **Target Balance**: The account balance at the target GL entity level (for Ledger to Ledger reconciliation) or Product Processor. – **Positive Reconciliation Difference**: Any positive reconciliation difference based on the source entity balance. – **Negative Reconciliation Difference**: Any negative reconciliation difference based on the target entity balance. **Note:** If the percentage is selected in the **Reconciliation Difference Value Display** field, the positive reconciliation difference and negative reconciliation difference are compared, and the relevant percentage value is populated. For example: If the Actual Positive Reconciliation Difference is 5000 and the Actual Negative Reconciliation Difference is 0, then the percentage is displayed as 100 for positive reconciliation difference. • **Absolute Reconciliation Difference**: This is calculated as the total difference by ignoring the signs between the negative and positive reconciliation differences. For example: if Positive Reconciliation Difference is 19,500 and the Negative Reconciliation Difference is 23,000, then the absolute difference is 42,500. • **Net Reconciliation Difference**: The net difference between negative and positive reconciliation differences. For example: if Positive Reconciliation Difference is 19,500 and the Negative Reconciliation Difference is 23,000, then the net difference is 3,500. • **Percentage Difference**: The percentage difference between Source Balance and Target

Table 5-6 (Cont.) Reconciliation Difference Report information

Report Name	Reconciliation Difference Report
	Balance attributes. The value is derived by using the formula ((Source Balance - Target Balance) * 100)/Source Balance.

> **Note:**
>
> On the Dashboard Home page, the reconciliation sections such as **Reconciliation Difference Report**, and **Reconciliation Adjustment Report**, the GL related columns **GL Code**, and **GL Account Name** will be blank/MSG for Map level reconciliation.

Table 5-7 Reconciliation Adjustment Report information

Report Name	Reconciliation Adjustment Report
Report Level Filters	• **Map Name**: The name of the reconciliation as defined in the **Reconciliation Management** window. • **Map Version**: The version number of the defined reconciliation. It indicates the number of times the reconciliation is edited at the reconciliation definition stage.
Report Description	This report is displayed if Adjustment Allocation is selected as **Yes** while defining reconciliation. This report displays the adjustment amount pass. The following parameters are displayed: • **GL Account Name**: The name of the specific GL entity code of the selected Map Name. • **Currency**: The currency in which the Adjustment Entry is processed. • **Reconciliation Difference**: The net reconciliation difference. • **Legal Entity**: The Legal Entity as defined for this map and version number. • **Approved Adjustment Amount**: The adjustment amount authorized by the approver. • **Pending Adjustment Amount**: The adjustment amount pending to be submitted from the Adjustment Entry window. • **Submitted Adjustment Amount**: The adjustment amount submitted from the Adjustment Entry window, however waiting to be approved by the authorizer. • **Rejected Adjustment Amount**: The adjustment amount rejected by the authorizer from the Adjustment Entry Approval window.

5.10.2 Threshold Breach

Table 5-8 Threshold Breach Summary

Report Name	Threshold Breach Summary
Report Level Filters	Not Applicable
Report Description	This report displays the threshold parameters of the selected **Run Execution ID**. The following parameters are reported: **Global Threshold**: Indicates the point of reconciliation difference greater than which execution process may either stop or continue at the time of execution. Global Threshold is compared with cumulative percentage difference across all reconciliation definitions getting executed in a Run. • **Execution on Threshold Breach**: Depending on your selection in the **Run Execution Parameters** window, **Continue** or **Stop** is displayed here. • **Auto Approval**: The value selected in the **Run Execution Parameter** window: **Yes** or **No**. • **Global Threshold**: Indicates if the Global Threshold Level is breached or not breached. The following parameters are reported: • **Map Name**: The name of the reconciliation as defined in the **Reconciliation Management** window. • **Map-Version Number**: The version number of the defined reconciliation. It indicates the number of times the reconciliation is edited at the reconciliation definition stage. • **Number of Observations**: The number of times the same map and version is executed. • **Number of Breaches**: The number of breaches reported based on the threshold value specified in the **Reconciliation Management** window.
Drill-through On	Map Name

Table 5-8 (Cont.) Threshold Breach Summary

Report Name	Threshold Breach Summary
Drill-through Description	Report Name: **Threshold Breach Detailed Report** **Navigation Path**: Click **Map Name** in the **Threshold Breach Summary** to view the detailed report. **Map Level Filters**: **Map Name**, **Map Version** This report provides a detailed view of the threshold value breaches; the following parameters are reported: • **GL Name**: The name of the specific GL entity code of the selected Map Name. • **Legal Entity**: The Legal Entity defined for this particular map and version number. • **Currency**: The currency in which the actual reconciliation difference is displayed. • **Accounting Standard Code**: The Accounting Standard code defined in the reconciliation. • **Other optional dimensions**: Values against respective optional dimensions (if any) are reported here. • **Source Balance**: The account balance at the source GL entity. • **Target Balance**: The account balance at the target GL entity (for Ledger to Ledger reconciliation) or Product Processor. • **Reconciliation Difference**: The net reconciliation difference amount. • **Threshold Breach Type**: Indicated as a negative or positive breach based on the positive or negative reconciliation differences. • **Threshold Value**: The value per the breach type. • **Threshold Currency**: The Threshold currency is displayed if the **Threshold value** is in **Absolute** format. • **Threshold Breached by**: The value or percentage by which the threshold value is breached based on the reconciliation difference.

Table 5-9 Global Threshold Breach Summary information

Report Name	Global Threshold Breach Summary
Report Level Filters	Not Applicable

Table 5-9 (Cont.) Global Threshold Breach Summary information

Report Name	Global Threshold Breach Summary
Report Description	This report displays the global threshold parameters of the selected Run Execution ID. The following parameters are reported: • **Global Threshold Percentage**: Indicates the point at which the execution process may stop or continue at the time of execution if the reconciliation difference surpasses the defined Global Threshold level. Global Threshold is compared with the cumulative percentage difference across all reconciliation definitions getting executed in a Run. • **Difference Percentage**: The absolute percentage difference. • **Breach Percentage**: The percentage by which the Global Threshold is breached based on the reconciliation difference.
Drill-through On	Not Applicable

Table 5-10 Threshold Definition information

Report Name	Threshold Definition
Report Level Filters	**GL Map Name**: Select the name of the specific GL entity map name. **Map Version**: The version number of the selected map name. It indicates the number of times the reconciliation is edited at the reconciliation definition stage.
Report Description	This report displays the following parameters: • **Target Entity**: The name of the Product Processor is displayed here in case of a GL to PP reconciliation, or the name of the Target GL entity. • **Target Balance Column**: The specific column in the Product Processor (for GL-PP reconciliation) or target GL entity (for GL-GL reconciliation) is displayed here. • **The threshold In**: The type of threshold: **Absolute** or **Percentage**. • **Threshold Currency**: The currency in which the threshold value is defined. It is not displayed when **Percentage** is selected. • **Positive Correction Threshold**: The positive correction threshold value defined in the **Reconciliation Management** window. • **Negative Correction Threshold**: The negative correction threshold value defined in the **Reconciliation Management** window.
Drill-through On	Not Applicable

5.10.3 Map Filter Report

This dashboard displays the map level definition of Source configuration of Reconciliation definition in Balance Reconciliation.

Table 5-11 Map Filter Report Information

Report Name	Reconciliation Source Filters
Report Level Filters	Not Applicable
Report Description	This report displays the following parameters of the selected **Run Execution ID**: • **GL Map ID**: The map identification number of the reconciliation defined in the **Reconciliation Management** window. • **Map-Version Number**: The version number of the defined reconciliation. It indicates the number of times the reconciliation is edited at the reconciliation definition stage. • **Dimension Table Name**: The name of the Dimension table of the reconciliation defined in the **Reconciliation Management** window. • **Filter Values Selected**: The list of filter values of the reconciliation.
Drill-through On	Not Applicable

Table 5-12 Map Filter Report -Reconciliation Target Filters

Report Name	Reconciliation Target Filters
Report Level Filters	Not Applicable
Report Description	This report displays the following parameters of the selected **Run Execution ID**: • **GL Map ID**: The map identification number of the reconciliation defined in the **Reconciliation Management** window. • **Map-Version Number**: The version number of the defined reconciliation. It indicates the number of times the reconciliation was edited at the reconciliation definition stage. • **Target Table Name**: The name of the target table or Product Processor. • **Dimension Table Name**: The name of the Dimension table of the reconciliation defined in the **Reconciliation Management** window. • **Filter Values Selected**: The list of filter values of the reconciliation.
Drill-through On	Not Applicable

Table 5-13 Map Filter Report -Reconciliation Dimensions

Report Name	Reconciliation Dimensions
Report Description	This report displays the following parameters of the selected **Run Execution ID**: • **GL Map ID**: The map identification number of the reconciliation defined in the **Reconciliation Management** window. • **Map-Version Number**: The version number of the defined reconciliation. It indicates the number of times the reconciliation is edited at the reconciliation definition stage. • **Dimension Table Name**: The name of the Dimension table of the reconciliation defined in the **Reconciliation Management** window.
Drill-through On	Not Applicable

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