Oracle Financial Services

Scheduler Services User Guide

Release 26.02.01
G51794-02
February 2026

Oracle Financial Services Scheduler Services User Guide, Release 26.02.01

G51794-02

Contents

1 Scheduler Services

1

Scheduler Services

Scheduler Services automates behind-the-scenes work that is necessary to sustain various enterprise applications and their operations. Using Scheduler Services, applications can control unattended background jobs program execution.

The Scheduler Services screen provides a one-click navigation for each of the operations, at the bottom of the screen, allowing you to move seamlessly between each operation.

Scheduler Services Operations

- **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** - Schedule batch jobs, to automate tasks that are processed on a regular basis but do not need to occur during the day or require human intervention. Jobs that happen on a regular basis are incorporated into batch schedules. You can also edit pre-conditions for batch group execution and pause scheduled executions.
- **Monitor Batch** - Track and 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.
- **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.

Accessing Scheduler Services

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

To access Scheduler Services:

- Log in to the Service Console and from the left navigation pane in the Service console, click **Operations and Processes > Scheduler**.

User Roles and Functions

You require specific user roles and functions, to use Scheduler Services, and to create and manage batches and tasks.

The user roles and user privileges for Scheduler Service are available in the Users and User Privileges Guide.

Scheduler Service Dashboard

View the task executions based on the execution status in the Scheduler Service Dashboard.

To access the **Scheduler Service Dashboard** page, from the left Navigation pane in the Service console, click **Batch Administration** > **Scheduler**.

You can access the following details related to batch/batch group execution from the Dashboard:

- The batches/batch groups are categorized based on their execution status - **Executed Runs**, **Successful Runs**, **Failed Runs**, **Ongoing Runs**, **Interrupted Runs**, and **Upcoming Runs** tabs. Click the respective tab to view the details of the batches/batch groups based on their execution status. For example, click **Ongoing Runs** to view the details of the batches that are currently running.
- The run time, schedule name and the MISDATE associated with each batch/batch group.
- The batch execution summary for all the batches executed in the last 7, 30 and 120 days. The summary is displayed in the form of a color-coded bar graph with legend for the various execution statuses.
- To view the list of all task executions associated with a specific batch/batch group, select the required execution status tab, select Batch/Batch Group and select the required batch/batch group.
- To view the task executions within a specific date range, select the required execution status tab, select Batch/Batch Group and select the required batch/batch group. Specify both the start and end dates.

Click the green navigation icon for a batch or batch group to open the Monitor screen and proceed as needed. The execution details are pre-populated for the selected batch/batch group execution.

Define Batch

You can use batch and batch groups to group a set of background tasks to be executed together.

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 consist of batches that need to be executed together. Batch groups help to process date and time-based background tasks based on a defined period when resources are available for batch processing.

To access the **Scheduler Service Summary (Define Batch)** page, from the left Navigation pane in the application console, click **Batch Administration**> **Scheduler** > **Define Batch**.

To access the list of existing batches and batch groups click **Batch** or **Batch Group** tab respectively. You can also view following details related to each batch/batch group.

- **Batch ID** - The unique alphanumeric code assigned to a specific batch/batch group.
- **Name** - The unique batch/batch group name.
- **Description** - The brief description of the batch/batch group.
- **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 **Name**, **Code**, and **Description**. You can also sort the batch/batch group list based on **Code**, **Name**, **Created Date**, **Last Modified Date**, and **Pinned**.

On the **Define Batch**, click the green navigation icon next to the batch or batch group for which you want to create a task or schedule batch execution, then select the required option. The relevant UI appears pre-populated with batch or batch group details. Proceed as needed.

Perform one of the following operations, to manage batch/batch group, from the **Scheduler Service (Define Batch)** page.

- Create New Batch/Batch Group
- Edit a Batch/Batch Group
- Copy a Batch/Batch Group
- Delete a Batch/Batch Group
- Pin/Unpin a Batch/Batch Group
- Create/edit tasks

Creating a Batch/Batch Group

Create a batch/batch group, to execute a group of background tasks together, on a specific date and time, when the resources are available for batch processing.

To create a batch/batch group from the **Scheduler Service (Define Batch)**:

1. In the **Create Batch** page, enter the following **Batch Details**:
   - **Code** - Enter a unique alphanumeric code for the new batch/batch group.
     The code must start with alphabets, should not contain any spaces, and must not exceed 60 characters. Special characters are not allowed except **underscore (_)**.
   - **Name** - Enter a unique name for the new batch/batch group.
     The name should start with alphabets, should not contain any spaces, and must not exceed 60 characters. Special characters are not allowed except **underscore (_)**.
   - **Description** - The description/details for the batch/batch group.
     The description should start with an alphabet and must not exceed 250 characters.
   - Select **Batch** to create a new batch or **Batch Group** to create a new batch group.
   - For new batch groups,select the **Batches** to be added to the batch group.
   - Select the **Service URL name** from the drop-down list, if it is available.
     To add a new service URL, enter a name to identify the new Service URL Name and enter the proper Service URL. You can give partial URL here and the complete URL in the Task Service URL.
   - Enter the complete **Cleanup URL** and enable the check box, to activate the cleanup URL, before you initiate a batch/batch group restart.
     The complete Cleanup URL : `http://fccm-utility-service:8080//fccm-utility-service/cleanupExecutionWatcher`
   - **Pin Batch/Pin Batch Group**: Use this option to pin the batch or batch group to keep it at the top of the list for quick access.
     For information, see Pinning/Unpinning a Batch/Batch Group.
   - Select one of the following options, to get an email notification, based on the selected batch execution status.
     Based on the selected option, an email is sent to the email ID of the logged in user, mentioned in the IAM console.
     - **Every Time** : An e-mail is triggered irrespective of the batch execution status.
     - **Never** : No e-mail will be triggered.

- **On Error only** : (Default). An e-mail is triggered only when the batch execution has failed.
- **On Interrupt only** : An e-mail is triggered if the batch execution is successfully interrupted.
- The system automatically sends an email to all users assigned to the BATCH_NOTIFY_FUNT function and the BATCH_NOTIFY_ROLE role, except for users who have selected the "Never" notification option. If a batch is mapped to a user (and their email ID), the batch email notifications will be sent only to that configured batch user. If no batch user is configured, the system follows the default email notification process.

> **Note**
>
> You can perform the batch-to-user configuration on the Batch to User Configuration page.

2. For new batches, after entering the Batch Details, provide the following batch parameters.

   From the **Batch Parameters** pane, click **Add** to add a new batch parameter, in the following format.

   - **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, `$paramName$`.

   By default, **$FICMISDATE$** and **$BATCHRUNID$** are added as batch Parameters.

   By default, **$BATCHDATE$**, **$BATCHRUNID$** and **$RUNSKEY$** are added as batch Parameters.

   > **Note**
   >
   > **$RUNSKEY$** parameter is added only if you are creating a new batch or copying from an existing batch. It is not supported for existing batches.

   To delete a batch parameter, click **Delete** next 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/batch group is created and displayed in the **Scheduler Services (Define Batch)** page.

   To view the dependent tasks and their components, click the **Dependency Check** icon. Upon clicking this icon, the **Object Dependency** window appears and displays the following:

- Higher Order Dependencies – Components/batch group that the selected batch depends on. Example: Batch in a batch group will have Batch group as the higher order dependency.
- Lower Order Dependencies – Any task which is created under a batch and the dependency is established will be shown under this tab.

Editing a Batch/Batch Group

Edit the batch/batch group details such as **Description** and also add new **Batch Parameters** to a batch,along with adding new **batches** to the batch group.

Seeded batches cannot be edited.

To modify a batch/batch group:

1. In the **Scheduler Services (Define Batch)** page, click the three-dot menu corresponding to the batch/batch group you want to modify and select **Edit Batch/Edit Batch Group**.
2. Modify the required details, in the **Edit Batch** page.
3. Click **Save** to save the edited batch/batch group.

   The edited batch will be updated in the **Scheduler Services (Define Batch)** page.

You can pin a particular batch/batch group by selecting the **Pin** option from the three-dot menu of each batch/batch group. For information, see Pinning/Unpinning a Batch/Batch Group.
To unpin a batch/batch group, click the three-dot menu corresponding to the pinned batch/batch group and select **Unpin Batch/Unpin Batch Group**.

Copying a Batch/Batch Group

Copy a batch/batch group that you want to clone to create a new batch/batch group.

To copy a batch/batch group:

1. In the **Scheduler Services (Define Batch)** page, click the three-dot menu corresponding to the batch/batch group that you want to copy and select **Copy Batch/Copy Batch Group** .
2. In the **Copy Batch** page, modify the required Batch details to create a new batch/batch group.
3. Click **Save** to add the copied batch to the **Scheduler Services (Define Batch)** page.

Deleting a Batch/Batch Group

Delete a batch/batch group that is no longer required in the system from the Define Batch page.

> **Note**
>
> You cannot delete seeded batches.

To delete a batch/batch group:

1. From the **Scheduler Services (Define Batch)** page, click the three-dot menu corresponding to the batch/batch group you want to delete and select **Delete Batch/Delete Batch Group** .

2. Click **OK** to confirm deletion.

> **Note**
>
> After confirmation, any active schedules associated with the batch will also be deleted.

Pinning/Unpinning a Batch/Batch Group

Use the pinning option to pin a batch/batch group to keep it at the top of the list for quick access, on the **Scheduler Services (Define Batch)** page.

By default, the Batch and Batch Group drop-down lists are sorted such that:

- Pinned objects specific to the logged-in user appear first. Objects pinned by the logged in user appear at the top.
- These are followed by non-pinned objects.
- Within each group (pinned and non-pinned), objects are sorted in ascending alphabetic order.

To pin a batch/batch group:

1. To pin a record: In the **Scheduler Services (Define Batch)** page, click the three-dot menu corresponding to the batch/batch group you want to pin and select **Pin Batch**/**Pin Batch Group**.
2. To unpin a pinned record: In the **Scheduler Services (Define Batch)** page, click the three-dot menu corresponding to the batch/batch group you want to unpin and select **Unpin Batch**/**Unpin Batch Group**.

Define Tasks

The Define Tasks page lists tasks associated with a specific Batch Definition. You can create new tasks, and edit or delete existing tasks.

To access the **Define Task** page:

1. From the left menu, click **Batch Administration** > **Scheduler** and select **Define Task**.
2. Select Batch/Batch Group from the drop-down list and select the particular batch/batch group to access the list of tasks associated with it.

   You can view the following details related to each task:

   - **Task ID** - The unique identifier for the task.
   - **Name** - The name of the task..
   - **Parent Task** - The parent task associated with the task.
   - **Component** - The seeded/custom component associated with the task.
   - **Created Date** - The task creation date.
   - **Last Modified** - The last modification date.

   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 **Code**, **Name**, **Precedence**, **Component**, **Created Date**, and **Last Modified Date**.

Using the **Preview** option, you can view the complete task execution sequence for a specific batch/batch group.
On the **Define Task** page, select the required batch or batch group and proceed as needed.
From the **Actions** menu, you can select **Schedule** to navigate to the **Schedule Batch** screen. The **Schedule Batch** screen appears with pre-populated data related to the selected batch/ batch group.

Perform the following operations to manage a Task, from the **Scheduler Service (Define Task)** page.

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

Adding a Task

Add new tasks to a selected Batch Definition.

To add new task:

1. In the **Scheduler Service (Define Task)**, select the Batch for which you want to add a new task from the drop-down list.
2. Click **Add** to access the **Add Task** page.
3. Enter the following details:
   - **Task Code** - Enter a unique alphanumeric code for the new task.
     The code must begin with letters, should not include spaces, and has a maximum limit of 60 characters. Special characters except **underscore (_)** are not allowed.
   - **Task Name** - Enter a unique name for the new task.
     The name should start with letters, not contain spaces, and have a maximum limit of 60 characters. Special characters except **underscore (_)** are not allowed.
   - **Task Description** - The description/details for the task.
     The description should begin with a letter and not exceed 250 characters. Avoid using phrases like "Select From" or "Delete From" in the description.
   - **Task Type** - Select the task type from the drop-down list.
   - **Component** - Select the custom or the seeded component associated with the task.

     > **Note**
     >
     > Refer to the respective component guide for information related to the component specific parameters.

   - **Batch Service URL** - Select the required Batch Service URL from the drop-down list. Batch Service URL is not required, if you provide the complete Task Service URL.
   - **Task Service URL** - Enter task service URL if it is different from Batch Service url.
4. By default, all Batch Level Parameters are added and enabled as task parameters in the **Task Parameters** pane.

> **Note**
>
> You can edit the parameters only for custom components.

a. Enter the Parameter name in the **Param Name** field.

b. Enter the Parameter value in the **Param Value** field.

c. For FTP Propagation or Advanced FTP Propagation components, select the **Execution Mode** from the drop-down list:

- **Single Query Approach**: Select this option to process small or medium-sized datasets (less than 500,000 records). This mode provides faster execution with minimal overhead and is suitable for manageable data volumes.
- **Sliced Queries Approach**: Select this option for very large datasets (500,000 records or more) that might cause memory or performance issues if processed in a single query. This mode divides the dataset into smaller slices, improving query execution performance and reducing overall processing time.

To delete a parameter, click on **Delete** next to the respective parameter.

5. Click **Save** to add the new task to task summary in the **Define Task** page.

> **Note**
>
> Sync task will remain active if execution time is more than 15 minutes at target service and till acknowledge status is generated from target API after the execution.

Modifying a Task

Modify details such as Task Description and Task Type in existing tasks.

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

To modify a task:

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 you want to modify.
3. Modify the required Task Details, in the **Edit Task** page.
4. Click **Save** to update the changes.

   The modified task is added to the **Define Task** page.

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 lack define precedence and hence will be executed simultaneously during batch execution. However, Task 4 has a precedence value as Task 1, indicating that Task 4 is executed only after the successful completion of Task 1.

You can set Task Precedence between Tasks or define to run a Task after a set of other tasks. While, multiple tasks can be executed simultaneously, cyclical execution is not permitted. Tasks without defined precedence execute immediately upon Batch Execution.

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

To define task precedence:

1. Click **Add or Remove Precedence** corresponding to the task requiring precedence, to access the **Precedence Mapping** list.
   a. Select a batch to execute before the current task, from the **Available Tasks** pane and click **Move Selected**.

      To move all the batches, click **Move All**.

   b. To remove a batch from the task precedence sequence, select the task from the **Selected Tasks** pane and click **Remove**.

      To remove all the selected batches, click **Remove All**.
2. Click **Save** to update Task Precedence in the batches.
3. Click **Preview** to view the precedence information.

Deleting a Task

Remove any tasks that that are no longer required in the system, from a Batch Definition.

To delete a task:

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.

Schedule Batch

Schedule Batch enables users to manage batch/batch group executions.

To access **Schedule Batch** page, from the left menu, click **Operations and Processes** and then select **Schedule Batch**.

All the batch/batch group schedules are listed. You can sort this list based on code, name, Pinned, Task Precedence, Components, and dates, to access a specific schedule.

On the **Schedule Batch** page, select the required batch or batch group and proceed as needed. When you execute/restart/rerun a batch/batch group, a dialog box appears providing you an option to navigate to the **Monitor Batch** screen.

From the **Schedule Batch** page, you can perform the following operations related to the execution and scheduling of batches/batch groups

- Execute batch/batch groups instantaneously
- Edit dynamic parameters
- Automate batch/batch group executions using the various scheduling options

- Re-run a batch/batch group execution
- Re-start a batch/batch group execution

Execute Batch/Batch Group

Use the Execute Batch to run a batch/batch group instantaneously.

To execute a Batch/Batch Group:

1. In the **Schedule Batch** page, select **Batch** or **Batch Group** to execute from the drop-down list.
2. Select the **Batch /Batch Group** for execution.
3. Click **Execute** to access the **Execution Schedule** page.
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 Run ID is displayed in the format `<BATCH_CODE>_<MIS_DATE>_<ITERATION-COUNT>`.
   You can always click preview to view the PMF process sequence used to execute the selected batch/batchgroup.

Adding Pre-Conditions For Batch Group Execution

Pre-conditions help to execute batches associated with a batch group, on specific days, based on the set frequency and selected days.

You can set pre-conditions for a batch group, to execute specific batches on selected days based on the set frequency interval. This enables to wisely use the available resources for execution.

To set pre-conditions for batch group execution:

1. Click **Schedule** from the Header panel.
2. In the **Schedule Batch** page, select **Batch Group** and the **Batch Group Name**.
3. Click **Pre-Conditions** to set the pre-conditions for task execution.
4. Select the **Batch** to set the pre-condition.
5. Set the execution frequency to Weekly, Monthly, or specific interval and set one of the following conditions:
   - **Weekly** - Select the weekdays to execute the batch. You can select multiple days.
   - **Monthly** - Select the days of the month to execute the batch. You can select multiple days.
   - **Interval** - Select the recurrence frequency to execute the batch.
6. Click **Add** to add another pre-condition.
7. After adding all the required pre-conditions, Click **Save**.

   The pre-conditions are saved and the batch group will be executed based on the set pre-conditions.

> **Note**
>
> The batch group is always get executed based on the pre-condition and any schedule associated with the batch group will not be considered for processing.

Edit Dynamic Parameters

Modify the dynamic parameters set for a batch/batch group.

You can modify the batch parameters, batch header parameters, task parameters, and the task header parameters associated with a batch/batch group.

You can save your custom settings for future use by checking the "Remember my saved preference" option. When you execute a batch, your saved preferences will be used for that batch and its tasks. When you migrate a batch, your preferences will also be migrated. When you save your preferences:

- Copying a batch or task will also copy the preferences.
- Deleting a batch or task will also delete the preferences.

To edit the dynamic parameters from the **Schedule Batch** page:

1. Select **Batch/Batch group** and then select the specific batch/batch group.
2. Click **Edit Parameters** to access the **Edit Dynamic Params** page.

   You can also edit the dynamic parameters while configuring the scheduling options.
3. Click the batch/batch group name to access all the parameters.
4. Set the **$BatchDate$** to set the batch execution date: :
   - Set the batch date to SYSDATE (system date). The batch execution date is set to SYSDATE by default.
   - Toggle and select **MISDATE** to select a particular batch execution date.

> **Note**
>
> All dates used in scheduling logic, including the MISDATE field, are consistently stored and processed in UTC (Coordinated Universal Time). This design ensures that scheduled batch executions and system date calculations remain standardized across all regions, eliminating discrepancies caused by local time zones. The MISDATE represents the scheduled date of a batch as stored in UTC. It does not adjust based on the user's local time zone. The SYSDATE function always reflects the current date and time in UTC when used for scheduling logic.
>
> **Example**: If a customer in Singapore (UTC+8) schedules a batch for March 16th at 02:00 AM local time, the system automatically converts and stores it as March 15th, 18:00 UTC. When any user views the MISDATE field for this batch, it will display 2024-03-15 (the UTC date stored).
>
> Similarly, the SYSDATE value is based on the current UTC date and time, ensuring all scheduling logic is aligned with the UTC standard. As a result, while the user schedules the batch for March 16th in their local time zone, the system consistently operates on the equivalent UTC date, maintaining uniformity across all locations.

5. Enter **$BATCHRUNID$** to set the batch run ID in the format: `<BATCH_CODE>_<MIS_DATE>_<ITERATION-COUNT>`.
6. Edit the batch header parameters and the task parameters.
7. Click **Save** to update the batch/batch group parameter values.
8. After updating the changes, execute the batch/batch group or configure the scheduling settings.

Scheduling and Automating Batch/Batch Group Execution

Automate batch/batch group execution.

Using the various scheduling options, you can automate batch/batch group execution to run based on the specified scheduling parameters.

To automate batch/batch execution:

1. Click **Schedule** from the Header panel.
2. In the **Schedule Batch** page, select from the following options:
   - **Once** - Run only once.
   - **Daily** - Run daily.
   - **Weekly** - Run weekly on selected days and time.
   - **Monthly** - Run monthly on selected days and time.
   - **Quarter** -Run every quarter on selected days and time.
   - **Cron Expression** - A Cron Expression is a string comprising 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.
     To execute a batch/batch group using a Cron expression, enter the Cron Expression for your schedule. For more information about the Cron Expression, click **Information** next to the Cron Expression field.
   - **Custom Schedule** - Create a custom schedule to execute a batch based on predefined rules. To create a custom schedule:
     a. Click Add (green plus sign). The **Custom Schedule** dialog appears providing a summary of existing custom schedules.
     b. Click **Add** and provide the following details.
     c. **Batch/Batch Group** - Batch/batch group for execution.
     d. **Name** - The specific batch/batch group to be executed.
     e. **Rule Name** - The rule to run on this batch/batch group.
     f. **Priority**- The priority to be associated with the execution.
     g. **Exception Policy** - The exception (Prepone, Postpone, None).
     h. Click the green + icon to create the custom schedule.

     You can perform the following actions on each custom schedule:
     - Edit Parameter: Edit the dynamic parameters.
     - Exclude Jobs: Exclude the job during execution.
     - Hold Jobs: Hold the job during execution.
     - Preview: Preview the job.

– Delete: Delete the selected batch/batch group during the schedule creation.

> **Note**
>
> You cannot import/export custom schedules.

3. Enter the following generic information and the parameters:
   - **Batch/Batch Group** - Batch/batch group for execution.
   - **Batch/Batch Group Name** - The specific batch/batch group to be executed.
   - **Schedule Name** - The unique schedule name.
4. Provide the following scheduling parameters based on the selected schedule option.

   For Cron Expression based scheduling, enter the required Cron expression.

Table 1-1 Scheduling Options

Details	Once	Daily	Weekly	Monthly	Quarter
Start Date to begin execution.	Yes	Yes	Yes	Yes	Yes
End Date to stop the execution	No	Yes	Yes	Yes	Yes
Run Time to execute the batch/ batch group	Yes	Yes	Yes	Yes	Yes
Days of the week you want to execute the batch/batch group. You can select multiple days.			Yes	Yes	Yes
Months of the Year you want to execute the batch/batch group. You can select multiple months.				Yes	Yes
Day of the Month to execute batch/batch group				Yes	Yes
First Months of the Year to calculate the year beginning and each quarter beginning.					Yes
Select Quarters to execute batch/batch group You can select multiple quarters.					Yes
Days of Quarter - Select the days to execute the batch/batch group. You can select first day, mid day, last day, First N days, or last N days					Yes
No. of Days - If you select first N days or last N days, select the number of days to execute the batch/batch group at the beginning or end of the selected quarter					Yes

> **Note**
>
> All dates used in scheduling logic, including the MISDATE field, are consistently stored and processed in UTC (Coordinated Universal Time). This design ensures that scheduled batch executions and system date calculations remain standardized across all regions, eliminating discrepancies caused by local time zones. The MISDATE represents the scheduled date of a batch as stored in UTC. It does not adjust based on the user's local time zone. The SYSDATE function always reflects the current date and time in UTC when used for scheduling logic.
>
> **Example**: If a customer in Singapore (UTC+8) schedules a batch for March 16th at 02:00 AM local time, the system automatically converts and stores it as March 15th, 18:00 UTC. When any user views the MISDATE field for this batch, it will display 2024-03-15 (the UTC date stored).
>
> Similarly, the SYSDATE value is based on the current UTC date and time, ensuring all scheduling logic is aligned with the UTC standard. As a result, while the user schedules the batch for March 16th in their local time zone, the system consistently operates on the equivalent UTC date, maintaining uniformity across all locations.

5. **Exclude Tasks** to add/remove tasks from the execution list.
6. **Hold Tasks** to pause/release tasks during execution.
7. Click **Edit Dynamic Parameters** to modify the dynamic parameters.
8. Click **Schedule** to add the new schedule for execution.

   You can set pre-conditions to process batch groups. When a batch group has an associated pre-condition, the execution schedule will not be considered for processing.
9. To manage schedules associated with a specific batch:
   a. In the **Select Batch** page, select **Batch** and select the **Batch Name** to view the associated schedules.
   b. Click **View Schedule** to access the list of all the schedules associated with the batch.

      You can perform the following tasks:

      - Click **Edit** to modify the schedule.
      - Click **Pause** and enter the **Start Date** and **End Date** to pause the schedule from execution. Click **Add** to apply the pause.
        To remove the pause, click **Delete** next to the specific pause.

Re-run Batch/Batch Group

Re-running a batch/batch group facilitates you to run the batch/batch group irrespective of the previous execution state.

When you re-run a batch/batch group that has been previously executed, a new Run ID is generated, and the batch/batch group is executed as if it were a new run.

To re-run a batch::

1. Click **Schedule Batch** from the Header panel.
2. In the **Schedule Batch** page, select the **Re-run** tab.
3. Select **Batch/Batch Group**.
4. Select the **Batch or Batch group Name** you want to re-run.

5. Select the **Batch Run ID**.
6. Click **Re-run**.

Re-start Batch/Batch Group

Re-start a batch/batch group that has not executed successfully or has been explicitly interrupted, canceled, or put on hold during the execution process.

Restarting a batch/batch group enables you to continue execution directly from the point of interruption or failure, allowing you to complete executing the remaining tasks.

> **Note**
>
> Before restarting a batch/batch group, ensure to provide the complete cleanup URL and also to enable invoking the cleanup URL before restarting the execution.

To re-start a batch/batch group:

1. Click **Schedule Batch** from the Header panel.
2. From the **Schedule Batch** page, select the **Re-start** tab.
3. Select **Batch/Batch Group**.
4. Select the **Batch or Batch group** you want to schedule daily from the drop-down list.
5. Select the **Batch Run ID**.
6. Click **Re-start**.

Monitor Batch/Batch Group

Using Monitor Batch/Batch Group, you can view the status of executed batches/batch groups, along with the tasks details.

Monitoring enables users to track and identify issues at regular intervals, ensuring smoother batch execution. Both a visual representation and a tabular view of the status of each task in the batch are available.

On the **Monitor Batch** screen, select the required batch or batch group and proceed as needed. From the **Actions** menu, you can select **Restart/Rerun** to navigate to the **Schedule Batch** screen with pre-populated data related to the selected batch/batch group.

To monitor a batch/batch group:

1. Click **Monitor Batch** from the Header panel.
2. Select the **Batch/Batch Group** and the **Batch/Batch Group Name** to monitor the execution.
3. **Set Refresh Frequency Time Interval and duration** in seconds.

   By default, the refresh interval is set to **5 seconds** and duration is set to **5 minutes**. This indicates that the monitor progress will be refreshed every 5 seconds for the next 5 minutes.

   The refresh interval ranges between 5 to 60 seconds and the duration ranges between 5 to 180 seconds.
4. Select the **MISDATE** to view the list of Batch Run IDs executed on a specific date.

5. Select the **Batch Run ID** you want to monitor.
6. Click **Start Monitor** to view the results in **Visualization** and **List View** tabs.

   The **Visualization** tab displays execution status graphically, while the **List View** tab provides the details in a tabular form, including:

   - **Status**: Task execution status - **Not-Started**, **On-going**, **Aborted**, **Successful**, **Failed**, **Interrupted**, **Excluded** and **Undefined**.

     > **Note**
     >
     > When the task execution status is **Aborted**, the batch execution will still be **On-going**. The task status will be set to **Ongoing**, when it is triggered again.

     To download the Orchestrator LogViewer PDF:

     a. Click **View Execution Logs**.
     b. In the page that opens, locate the log you want to download and click the **Log Viewer** icon under **Actions**.
     c. In the Log Viewer page, click the **Details** tab.
     d. Click the **Download** icon to download the Orchestrator LogViewer PDF.

   - **Start Time**: Task execution start time.
   - **End Time**: Task execution end time.

     > **Note**
     >
     > All timestamps displayed in the Log Viewer UI now reflect the timezone configured in the user preferences.

   - **Task Details**: Mouse-over the task to display its status and details.
7. At any point, select **Stop Monitor**, to stop monitoring.

   You can download the task execution summary in PDF or Excel, with or without the task logs, from the **Monitor Task** page.
8. (Optional). To rerun, restart, or interrupt execution, click **Actions** and select the required option.

   You can also reset the search criteria using **Actions**.
9. (Optional). Click **View Execution Parameters** adjacent to a batch/batch group, to access the list of tasks and task parameters such as **Runskey ID**, **Misdate**, associated with that batch/batch group.

Scheduler Configuration

Scheduler Configuration UI allows you to manage the scheduler service configuration parameters.It also allows you to map specific user to batch and batchgroups for email notifications.

To access the Scheduler Configuration UI in the Scheduler Service page, follow these steps:

1. Go to the Home page of the application.

2. Navigate to **Batch Administration** in the left Navigation pane.
3. Under **Batch Administration**, click on **Scheduler Configuration**.

> **Note**
>
> Ensure you have the BATCH_ADMIN function code to access the Scheduler Configuration page.

Batch to User Configuration

Batch to User Configuration menu allows you to map users to specific batch/batch group processes.This assignment ensures that emails are sent only to the specific users associated with each batch.

To access the Batch to User Configuration page, select **Batch to User Configuration** in the Scheduler Configuration UI.

> **Note**
>
> Click the **eye** icon on the **Batch to User Configuration** tile to view the page.

To search for a specific batch/batch group, enter the keywords in the Search field and click **Search**. You can search based on Batch Name, Batch Code, and Batch type.

> **Note**
>
> The system automatically sends an email to all users mapped to the BATCH_NOTIFY_FUNT function and BATCH_NOTIFY_ROLE role. If a batch/batch group is mapped to a user (and their email ID), the batch email notifications will be sent only to that configured batch user. If no batch-to-user configuration is provided or updated, email notifications will be sent to users with the above function and role.

Perform the following steps to add specific user(s) to the batch/batch group:

1. In Batch to User Configuration menu, click **Add** to add new batch/batch groups.
2. Select the batch type from the dropdown menu.
3. Select the required batch/batch group from the dropdown menu.
4. Select the required users from the dropdown menu.
5. Click **Create**, the *Batch User mapping is created successfully* message is displayed.

Action menu

Batch to user mapping configuration page lists all the batch/batch groups which are mapped to specific user(s).

1. Select the desired batch/batch group from the Batch to user mapping configuration page. Click **Action Menu** to view, modify, or delete batch/batch groups.
   a. **View**

Clicking **View** allows users to see detailed information on the batch/batch group user mapping.

b. **Edit**
Edit the batch/batch group to user mapping configuration.You can either update the user details or remove the user.

c. **Delete**
The **Delete** option allows you to remove the user to batch/batch group mapping from the system.

General Configuration

The **General Configuration menu** allows you to configure the parameters related to a scheduler service.

1. Under **Scheduler Configuration** menu, select **General Configuration**.

> **Note**
>
> Click the **eye** icon on the **General Configuration** tile to view the page.

2. In Scheduler Service General Configuration Screen, click **Edit** to modify the configuration settings.
3. Modify the required details, refer to the **General configuration parameters** table below.

Table 1-2 General configuration parameters

Parameter	Description	Default Value
Enable/disable general email notification	Enable/disable general email notifications to automatically alert users when a batch job is successful, failed, or is interrupted.	Enable
Enable/disable in-app notification	Enable/disable in-app notifications to alert users within the application when a batch job is successful, failed, or is interrupted.	Enable
Enable/disable notification for threshold email	Enable/disable email notifications triggered when a batch execution exceeds its expected execution time threshold. For example, if a batch typically completes in 1 hour but now takes longer, an email is sent as its taking longer than expected time to complete.	Enable

Table 1-2 (Cont.) General configuration parameters

Parameter	Description	Default Value
Threshold email time notification percentage criteria	Defines the additional execution time (in percentage) allowed beyond the last successful batch completion time before sending a threshold notification email. For example: If a batch previously completed successfully in 1 hour and the threshold is set to 20%, a threshold notification will be triggered if the batch exceeds 1 hour and 12 minutes (i.e., 60 minutes + 20%). If multiple notifications are allowed (as per the Threshold email Notify Limit), the time for subsequent notifications will be calculated from the last notification time, adding the same threshold percentage again. For instance, the next notification would be triggered after 20% of 72 minutes (i.e., 86.4 minutes), and so on.	20
Threshold email Notify Limit	Defines the maximum number of email notifications that can be sent when a batch exceeds its execution time threshold during a single run. **Note** If general email notification is disabled and only if the threshold email notification is enabled, scheduler sends only the threshold email.	5
Batch to User mapping upper limit	Specifies the maximum number of users that can be mapped to a batch/batch group.You can configure a maximum of five user mappings per batch or batch group.	10

4. Click **Save** to save the modified configurations.
OR

   Click **Cancel** to discard the changes and revert to the previous settings.

Schedule Rule

Use the **Schedule Rule** UI to configure rules that trigger batch execution based on defined conditions.

To schedule a rule:

1. Under **Scheduler Configuration** menu, select **Rule Detail**. The **Schedule Rule** UI appears.
2. Click **Create**. The **Create Rule** dialog appears.
3. Provide rule name and description.
4. Select the execution type:
   - **Every Day**: Executes the batch every day except holidays. Weekends are by default considered holidays.
   - **Specific day/s of the week**: Select the specific day(s) on which the batch should be executed. Also select the recurrence from the **Recur every** drop-down list.

     > **Note**
     >
     > Enable the **Slide Week** option to reorder the weeks if the number of working days in a week is less than or equal to 1 (excluding weekends).

   - **Specific day/s of the month**: Select the specific date(s) on which the batch should be executed.
   - **Last day of the month**: Executes the batch on the last working day of the month.
5. Click **Save**.

To edit a rule:

1. Under Scheduler Configuration menu, select Rule Detail. The Schedule Rule UI appears displaying a list of scheduled rules.
2. Click the Action menu corresponding to the rule you want to edit and select Edit. The Edit Rule dialog appears.
3. Make the required changes and click Update.

To delete a rule:

1. Under **Scheduler Configuration** menu, select **Rule Detail**. The **Schedule Rule** UI appears displaying a list of scheduled rules.
2. Click the Action menu corresponding to the rule you want to delete, select **Delete** and click **Yes** to confirm the deletion.

Appendix A: Understanding Batch Job Scheduling and Daylight Saving Time (DST)

This documentation outlines how Daylight Saving Time (DST) may affect your scheduled batch jobs when using the Europe/London time zone.

Batch Job Scheduling Behavior

When you schedule a batch job in the application interface, you select a Run Time (example: 4:00 AM) in the Europe/London time zone.

- The batch scheduler internally converts this time to UTC behind the scenes at the time of schedule creation.
- Once this UTC time is set, it remains fixed in the schedule.

Observed Impact During DST Transitions

The Europe/London region transitions between standard time and Daylight Saving Time (clocks go forward in March and back in October). Because the job schedule uses a fixed UTC time, the expected local execution time will shift:

- **During standard time (non-DST)**: Your job runs at the expected local time (e.g., 4:00 AM local).
- **After DST ends (clocks go back one hour, usually in October)**: The same fixed UTC schedule will trigger one hour earlier in local time.

Examples:

Case 1: Batch scheduled in non-DST range

Table 1-3 Scheduling in non-DST range

Phase	Europe/ London Time Zone Status	User Expected Schedule Time	Stored UTC Time	Actual Trigger Time (Europe/ London)	Result
Non-DST	UTC+0	8:30 AM	8:30 AM	8:30 AM	Correct
DST starts	UTC+1	8:30 AM	8:30 AM	9:30 AM (8:30 AM UTC + 1 hr)	1 hour delay

Case 2: Batch scheduled in DST range

Table 1-4 Scheduling in DST range

Phase	Europe/ London Time Zone Status	User Expected Schedule Time	Stored UTC Time	Actual Trigger Time (Europe/ London)	Result
DST	UTC+1	8:30 AM	7:30 AM	8:30 AM	Correct
Non-DST starts	UTC+0	8:30 AM	7:30 AM	7:30 AM (7:30 AM UTC + 0 hr)	1 hour early

Customer Impact and Action Required

This behavior may cause scheduled operations, reporting, or data integrations to run at unintended times, particularly for UK users.

The current system does not actively recompute and adjust the UTC time when DST changes. Review and adjust your scheduled jobs around DST changes to ensure they continue to run at your desired local time.