

# Oracle Financial Services Scheduler Services User Guide



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# 1

## Scheduler Services

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

You can perform the following operations using Scheduler Services utility:

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

## Accessing Scheduler Services

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

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

## User Roles and Functions

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

### Role Codes

- BATCH\_READ
- BATCH\_WRITE
- BATCH\_ADV

- BATCH\_AUTH
- BATCH\_OPER
- BATCH\_MAINT

#### Function Codes

- BATCH\_ADD
- BATCH\_DEL
- BATCH\_MOD
- BATCH\_VIEW
- BATCH\_SCH
- BATCH\_SUMM
- BATCH\_AUTH
- BATCH\_PURGE
- BATCH\_MON
- BATCH\_EXEC
- BATCH\_COPY

## Define Batch

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

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

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

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

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

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

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

- [Create New Batch](#)
- [Create New Batch Group](#)

- [Edit a Batch](#)
- [Edit a Batch Group](#)
- [Copy a Batch](#)
- [Copy a Batch Group](#)
- [Delete a Batch](#)
- [Delete a Batch Group](#)

## Creating a Batch

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

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

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

The **Create Batch Page** is displayed.

Enter the following **Batch Details** :

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

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

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

 **Note:**

Enclose the Parameter Value for a Run time with \$ symbol. For example, \$paramName\$.

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

3. Enter the following **Header Parameter** details.
  - **Parameter Name** - A valid parameter name for the new header parameter.
  - **Parameter Value** - A valid Parameter Value required for Batch execution.
4. Click **Save**. The new Batch is created and displayed in the **Scheduler Services (Define Batch)** Page.

## Creating a Batch Group

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

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

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

The **Create Batch Page** is displayed.

Enter the following **Batch Details** :

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

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

## Editing a Batch

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

Seeded batches cannot be edited.

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

The Edit Batch Page is displayed.

2. Modify the required **Batch** details.  
For more information, see [Create New Batch](#).
3. Click **Save**.



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

## Editing a Batch Group

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

To modify a Batch Group, perform the following steps:

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

For more information, see [Create New Batch Group](#) section.

4. Click **Save**.

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

## Copying a Batch

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

To copy a Batch, perform the following steps:

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

The Copy Batch Page is displayed.

2. Specify the Batch details as you want to clone and copy the existing batch.

For more information, see [Create New Batch](#) section.

3. Click **Save**.

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

## Copying a Batch Group

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

To copy a Batch Group, perform the following steps:

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

The Copy Batch group Page is displayed.

2. Specify the Batch group details as you want to clone and copy the existing batch group.

For more information, see [Copy a Batch Group](#) section.

3. Click **Save**.

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

## Deleting a Batch

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

Seeded batches cannot be deleted.

To delete a Batch, perform the following steps:

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

### Note:

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

## Deleting a Batch Group

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

Seeded batches cannot be deleted.

To delete a Batch Group, perform the following steps:

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

### Note:

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

## Define Tasks

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

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

1. From the left menu, click **Operations and Processes**.
2. Select **Define Task**, to view the page.
3. Select Batch/Batch Group from the drop-down list and select the particular batch/ batch group.

The list of tasks associated with the specific batch/batch group is displayed. You can view the following details related to each task.

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

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

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

- [Add a task](#)
- [Modify a task](#)
- [Define a task precedence](#)
- [Delete a task](#)

## Adding a Task

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

To add new task, perform the following steps:

1. In the **Scheduler Service (Define Task)** select the Batch for which you want to add new task from the drop-down list.
2. Click **Actions** in page and click **Add**.  
Add Task page is displayed.
3. Enter the details in the Add Task page:
  - **Task Code** - Enter a Unique Alphanumeric Code for the new Task. The Code always begins with alphabets and should not contain any space. The maximum limit is 60 characters and should not contain any special characters except **Underscore ( \_ )**.
  - **Task Name** - Enter a unique name for the new batch. The task name always begins with alphabets and should not contain any space. The maximum limit is 60 characters and should not contain any special characters except **Underscore ( \_ )**.
  - **Task Description** - The description/details for the batch. The description should start with alphabet and should not be more than 250 characters. Words like Select From or Delete From should not be entered in the Description.
  - **Task Type** - Select the task type from the drop-down list.
  - **Batch Service URL** - Select the **Batch Service URL** from the drop-down list.

You can also enter the **Task Service URL** and associated URL is displayed in the **Service URL**. You can also provide the partial URL here and the complete URL in the Task Service URL.

- **Task Service URL** - Enter task service URL if it is different from Batch Service URL.
4. From the Task Parameters Pane, by default, all Batch Level Parameters are added and enabled as task parameters.
    - a. Enter the Parameter name in the **Param Name** field.
    - b. Enter the Parameter value in the **Param Value** field.You can delete a parameter by clicking corresponding to the parameter.
  5. Click **Save**.

## Modifying a Task

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

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

To modify a Task, perform the following steps:

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

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

For more information, see [Add a task](#) Section.
4. Click **Save**.

## Define Task Precedence

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

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

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

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

1. Click **Add or Remove Precedence** corresponding to the task for which you want to add precedence task.

The Task Precedence Mapping Window is displayed.

 **Note:**

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

- a. Select the batch that you want to execute before the current task, from the Available Tasks pane and click **Play**.
  - b. To select all the listed batches, click **Move** (Forward arrow).
  - c. To remove a batch, select the task from the Selected Tasks Pane and click **Remove** (Backward arrow).
  - d. To remove all the selected batches, click **Remove All** (double backward arrow).
2. Click **Save** to update Task Precedence in the batches.
  3. Click **Preview** to view the Precedence information.

## Deleting a Task

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

To delete a Task, perform the following steps:

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

## Schedule Batch

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

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

1. From the left menu, click **Operations and Processes**.
2. Select **Schedule Batch**, to view the page.
3. Select Batch/Batch Group from the drop-down list and select the particular batch/batch group.

The list of tasks associated with the specific batch/batch group is displayed. You can view the following details related to each task.

You can perform the following operation for the batch:

- [Execute a Batch](#)
- Schedule a Batch - [Daily](#), [Weekly](#), [Monthly](#), and [Using Cron expression](#).
- [Re-start a Batch](#)
- [Re-run a Batch](#)

- [Edit Dynamic Parameters](#)
- [Task Definition of a Batch](#)

## Task Definitions of a Batch

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

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

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

## Execute a Batch and Batch Group

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

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

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

The **Execution Schedule** Page is displayed.

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

The Batch is executed, and the associated unique execution ID is displayed.

8. Schedule a Batch/Batch Group.

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

## Schedule Once

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

1. Click **Schedule Batch** from the Header panel.  
The Schedule Batch Page is displayed.
2. In the **Schedule Batch** Page, click **Schedule Once**.
3. Select **Batch or Bath Group** to execute, from the drop-down list.
4. Select the **Batch or Batch Group** Name you want to schedule for once from the drop-down list.
5. Enter a **Schedule Name**.

6. Select the **Start Date** on which you want to run the Batch.
7. Click **Run Time** and select the time at which you want to run the Batch.
8. Click **Schedule**.

## Daily Batch Scheduling

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

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

## Weekly Batch Scheduling

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

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

## Monthly Batch Scheduling

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

1. In the **Schedule Batch** Page, click **Monthly**.
2. Select the **Batch /Batch Group Name**.
3. Select the **Batch or Batch Name** you want to schedule daily from the drop-down list.
4. Enter a **Schedule Name**.

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

## Schedule Cron Expression

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

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

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

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

For more information about the Cron Expression, click Information icon next to the Cron Expression field.

6. Click **Schedule**.

## Re-start a Batch

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

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

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

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



6. Click **Re-start**.

## Re-run a Batch

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

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

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

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

## Edit Dynamic Parameters

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

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

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

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

## Monitor Batch

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

To monitor a batch, perform the following steps:

1. Click **Monitor Batch** from the Header panel.  
The **Monitor Batch Page** is displayed.
2. Select the **Batch/Batch Group** from the drop-down list and then select the **Batch Run ID**.
3. Click **Start Monitor**.

The results are displayed in **Visualization** and **List View** tabs. Details of these tabs are as follows:

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

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

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

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

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

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

- By default, the refresh interval is set to **5 seconds** and duration is set to **5 minutes**.
  - The refresh interval ranges between 5 to 60 seconds.
  - The duration ranges between 5 to 180 seconds.
4. To restart the Batch /Batch Group, select **Restart**.
  5. To rerun the Batch/Batch Group, select **Rerun**.
  6. To interrupt the Batch /Batch Group, select **Stop**.
  7. In the Log Viewer pop-up the log information is displayed. You can click the **Download** icon to download the log or click the **Close** icon to close the log information.

## Scheduler Service Dashboard

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

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

The Scheduler Service Dashboard with the following details is displayed.

- The Executed Runs, Successful Runs, Failed Runs, Ongoing Runs, Interrupted Runs, and Upcoming Runs tabs. You can click the tabs to view the details of the Batches based on their status. For example, click **Ongoing Runs** to view the details of the batches that are currently running.
- The Batches that were executed within the last 7 or 30 days contain details such as Batch Name, Batch Run ID, and Run Time. Click 30 days to view the batches that were executed within the last 30 days. You can click the icon corresponding to a Batch to monitor it.
- The Batch Execution Summary Pane displays the count of total batches executed that were executed within the last 7 days, 30 days, and 120 days. You can also view the separate count of successful batches, failed batches, interrupted batches, on-going batches, and the batches which are yet to start, by hovering your mouse the batches.

# 2

## External Scheduler Interface

External scheduler interface help you to execute tasks using any Command line utility such as cURL commands. You won't require the application interface to execute the tasks.

You can also integrate the Batches with external schedulers, using the external Scheduler interface.

### Related Topics

- [Rest API Status Codes](#)  
Refer to the following table for Rest API Status codes and their description.
- [Execution API](#)  
The Execution (POST) API triggers a batch or a batch group.
- [Execution Status API](#)  
The Execution Status (POST) API provides the current run status of batch/batch group execution.
- [Interrupt API](#)  
The Execution Status (POST) API Interrupts a batch/batch group execution.
- [Restart API](#)  
The Restart (POST) API restarts a batch/batch group execution.
- [Rerun API](#)  
The Rerun (POST) API helps to rerun a batch/batch group execution.

## Rest API Status Codes

Refer to the following table for Rest API Status codes and their description.

**Table 2-1 Status Codes**

Status Code	Description
0	Success
-1	Failure
-2	Interrupted
1	Not Started
2	Ongoing
3	Aborted
4	Excluded
5	Held
-3	Object does not exist
-4	Invalid arguments passed in request/not enough params in Request body
-5	Invalid request headers/request headers missing
-6	No executable job is present.

Table 2-1 (Cont.) Status Codes

Status Code	Description
-7	Job is already interrupted
-8	Job is not ongoing/aborted

## Execution API

The Execution (POST) API triggers a batch or a batch group.

- **HTTP Method** - POST
- **URL** - /SchedulerService/rest-api/v1/external/trigger
- **Header Parameters**
  - **ofs\_tenant\_id** - Tenant ID of the Application
  - **ofs\_service\_id** - Service ID of the Application
  - **ofs\_workspace\_id** - Workspace ID of the Application. It is defaulted to “WS001” and same should be passed each time.
  - **ofs\_remote\_user** - Used ID of the user. This parameter should be mapped to 'BATCH\_EXEC' function.
  - **locale** - locale in languageCode-countryCode format. For example, en-US.
  - **Authorization: Bearer <token>** - Access token required to authenticate the API. If this token is not provided, 401 Unauthorized error is generated. For more information about Bearer token, refer to [Generate the Access Token](#).
- **Sample cURL Command**

```
curl -i -H "ofs_service_id:<Service ID>" -H "ofs_remote_user:<User ID>" -H
  "ofs_tenant_id:<Tenant ID>" -H "ofs_workspace_id:WS001" -H
"locale:en-US" -H
  "Content-Type: application/json" -H "Authorization: Bearer
<BEARER_TOKEN>" -X POST
  <APPLICATION_BASE_PATH>/<URL> -d '<REQUEST_JSON>'
```

## Batch Execution API

Use the Execution API to trigger a batch.

### Attributes

- **batchName** - The unique batch code
- **batchType** - The object type. For Batch, the batch type should be set to `rest`.
- **dynamicParamList** - List of run time parameters which should be overridden over actual values for this trigger. This is an optional parameter.

### Request Body

```
{
  "batchName": "<Batch_code>",
  "batchType": "rest",
  "dynamicParamList": {
    "batchParams": {
      "$FICMISDATE$": "<MISDate (yyyy-mm-dd)>"
    }
  }
}
```

### Sample Response Body

The following Response body is a sample for Success : 200 OK. For more information about status code in the response body, refer to [Rest API Status Codes](#).

```
{
  "severity": "info",
  "summary": "Object triggered successfully with Run Id:
B2001_2022-05-20_1653041947296_1",
  "batchRunId": "B2001_2022-05-20_1653041947296_1",
  "details": "Object triggered successfully.",
  "statusCode": "0",
  "status": "success"
}
```

## Batch Group Execution API

Use the Execution API to trigger a batch group.

### • Attributes

- `batchName` - The unique batch code
- `batchType` - The object type. For Batchgroup, the batch type should be set to `group`.
- `dynamicParamList` - List of run time parameters which should be overridden over actual values for this trigger. This is an optional parameter.

### Request Body

```
{
  "batchName": "<Batch_group_code>",
  "batchType": "group",
  "dynamicParamList": [
    {
      "batchName": "MIS_BATCH001",
      "batchParams": {
        "$FICMISDATE$": "2022-10-23"
      }
    },
    {
      "batchName": "MIS_BATCH002",
```

```

        "batchParams": {
            "$FICMISDATE$": "2022-10-28"
        }
    ]
}

```

### Sample Response Body

The following Response body is a sample for `Success : 200 OK`. For more information about status code in the response body, refer to [Rest API Status Codes](#).

```

{
    "severity": "info",
    "summary": "Object triggered successfully with Run Id:
B2001_2022-05-20_1653041947296_1",
    "batchRunId": "B2001_2022-05-20_1653041947296_1",
    "details": "Object triggered successfully.",
    "statusCode": "0",
    "status": "success"
}

```

## Execution Status API

The Execution Status (POST) API provides the current run status of batch/batch group execution.

- **HTTP Method** - POST
- **URL** - /SchedulerService/rest-api/v1/external/status
- **Header Parameters**
  - **ofs\_tenant\_id** - Tenant ID of the Application
  - **ofs\_service\_id** - Service ID of the Application
  - **ofs\_workspace\_id** - Workspace ID of the Application. It is defaulted to "WS001" and same should be passed each time.
  - **ofs\_remote\_user** - Used ID of the user. This parameter should be mapped to 'BATCH\_EXEC' function.
  - **locale** - locale in languageCode-countryCode format. For example, en-US.
  - **Authorization: Bearer <token>** - Access token required to authenticate the API. If this token is not provided, 401 Unauthorized error is generated. For more information about Bearer token, refer to [Generate the Access Token](#).
- **Sample cURL Command**

```

curl -i -H "ofs_service_id:<Service ID>" -H "ofs_remote_user:<User
ID>" -H
    "ofs_tenant_id:<Tenant ID>" -H "ofs_workspace_id:WS001" -H
"locale:en-US" -H
    "Content-Type: application/json" -H "Authorization: Bearer

```

```
<BEARER_TOKEN>" -X POST  
<APPLICATION_BASE_PATH>/<URL> -d '<REQUEST_JSON>'
```

## Batch Execution Status API

Use the Execution Status API to view the current run status of a batch execution.

### Attributes

- `batchRunId` - Execution Id generated while triggering the object and can be obtained in the response of Execution API.
- `tasks` - List of Task Codes. This is an optional parameter.

### Request Body

```
{  
  "batchRunId": "<Batchrun_ID>",  
}
```

### Sample Response Body

The following Response body is a sample for `Success : 200 OK`. For more information about status code in the response body, refer to [Rest API Status Codes](#).

```
{  
  "severity": "info",  
  "batchRunId": "BatchTEST1_2022-05-31_1653994545003_1",  
  "taskStatusList": [  
    {  
      "taskCode": "t1",  
      "taskStatus": "SUCCESSFUL",  
      "statusCode": "0"  
    },  
    {  
      "taskCode": "t5",  
      "taskStatus": "FAILED",  
      "statusCode": "-1"  
    }  
  ],  
  "batchStatusCode": "-1",  
  "batchList": [],  
  "batchStatus": "FAILED",  
  "status": "success",  
  "statusCode": "0"  
}
```

## Batch Group Execution Status API

Use the Execution Status API to view the current run status of a batch group execution.

### Attributes



- `batchRunId` - Execution Id generated while triggering the object and can be obtained in the response of Execution API.
- `tasks` - List of Task Codes. This is an optional parameter.

### Request Body

```
{
  "batchRunId": "<Batchrun_ID>",
}
```

### Sample Response Body

The following Response body is a sample for `Success : 200 OK`. For more information about status code in the response body, refer to [Rest API Status Codes](#).

```
{
  "severity": "info",
  "batchRunId": "AbTestBG001_2023-01-27_1674798339245_1",
  "batchStatusCode": "0",
  "batchList": [
    {
      "batchRunId": "AbTestBatch002_2023-01-27_1674798339462_1",
      "batchStatusCode": "0",
      "batchStatus": "SUCCESSFUL"
    },
    {
      "batchRunId": "AbTestBatch003_2023-01-27_1674798339556_1",
      "batchStatusCode": "0",
      "batchStatus": "SUCCESSFUL"
    }
  ],
  "batchStatus": "SUCCESSFUL",
  "status": "success",
  "statusCode": "0"
}
```

## Interrupt API

The Execution Status (POST) API Interrupts a batch/batch group execution.

- **HTTP Method** - POST
- **URL** - `/SchedulerService/rest-api/v1/external/interrupt`
- **Header Parameters**
  - **ofs\_tenant\_id** - Tenant ID of the Application
  - **ofs\_service\_id** - Service ID of the Application
  - **ofs\_workspace\_id** - Workspace ID of the Application. It is defaulted to "WS001" and same should be passed each time.
  - **ofs\_remote\_user** - Used ID of the user. This parameter should be mapped to 'BATCH\_EXEC' function.
  - **locale** - locale in `languageCode-countryCode` format. For example, en-US.

- **Authorization: Bearer <token>** - Access token required to authenticate the API. If this token is not provided, 401 Unauthorized error is generated. For more information about Bearer token, refer to [Generate the Access Token](#).
- **Sample cURL Command**

```
curl -i -H "ofs_service_id:<Service ID>" -H "ofs_remote_user:<User ID>" -H
      "ofs_tenant_id:<Tenant ID>" -H "ofs_workspace_id:WS001" -H
"locale:en-US" -H
      "Content-Type: application/json" -H "Authorization: Bearer
<BEARER_TOKEN>" -X POST
      <APPLICATION_BASE_PATH>/<URL> -d '<REQUEST_JSON>'
```

## Batch Interrupt API

Use the Interrupt API to interrupt a batch execution.

### Attributes

- `batchName` - The unique batch code
- `batchRunID` - Execution Id generated while triggering the object and can be obtained in the response of Execution API.

### Request Body

```
{
  "batchName": "<Batch_code>",
  "batchRunId": "<Batchrun_ID>"
}
```

### Sample Response Body

The following Response body is a sample for Success : 200 OK. For more information about status code in the response body, refer to [Rest API Status Codes](#).

```
{
  "severity": "info",
  "batchRunId": "B2001_2022-05-30_1653233511394_1",
  "details": "Execution interrupted successfully.",
  "statusCode": "0",
  "status": "success"
}
```

## Batch Group Interrupt API

Use the Interrupt API to interrupt a batch group execution.

### Attributes

- `batchName` - The unique batch code
- `batchRunID` - Execution Id generated while triggering the object and can be obtained in the response of Execution API.

### Request Body

```
{
  "batchName": "<Batchgroup_code>",
  "batchRunId": "<Batchrun_ID>"
}
```

### Sample Response Body

The following Response body is a sample for Success : 200 OK. For more information about status code in the response body, refer to [Rest API Status Codes](#).

```
{
  "severity": "info",
  "batchRunId": "B2001_2022-05-30_1653233511394_1",
  "details": "Execution interrupted successfully.",
  "statusCode": "0",
  "status": "success"
}
```

## Rerun API

The Rerun (POST) API helps to rerun a batch/batch group execution.

- **HTTP Method** - POST
- **URL** - /SchedulerService/rest-api/v1/external/rerun
- **Header Parameters**
  - **ofs\_tenant\_id** - Tenant ID of the Application
  - **ofs\_service\_id** - Service ID of the Application
  - **ofs\_workspace\_id** - Workspace ID of the Application. It is defaulted to "WS001" and same should be passed each time.
  - **ofs\_remote\_user** - Used ID of the user. This parameter should be mapped to 'BATCH\_EXEC' function.
  - **locale** - locale in languageCode-countryCode format. For example, en-US.
  - **Authorization: Bearer <token>** - Access token required to authenticate the API. If this token is not provided, 401 Unauthorized error is generated. For more information about Bearer token, refer to [Generate the Access Token](#).
- **Sample cURL Command**

```
curl -i -H "ofs_service_id:<Service ID>" -H "ofs_remote_user:<User ID>" -H
  "ofs_tenant_id:<Tenant ID>" -H "ofs_workspace_id:WS001" -H
"locale:en-US" -H
  "Content-Type: application/json" -H "Authorization: Bearer
<BEARER_TOKEN>" -X POST
  <APPLICATION_BASE_PATH>/<URL> -d '<REQUEST_JSON>'
```

## Batch Rerun API

Use the Rerun API to rerun an existing batch execution.

### Attributes

- `batchName` - The unique batch code
- `batchRunID` - Execution Id generated while triggering the object and can be obtained in the response of Execution API.

### Request Body

```
{
  "batchName": "<Batch_code>",
  "batchRunId": "<Batchrun_ID>"
}
```

### Sample Response Body

The following Response body is a sample for Success : 200 OK. For more information about status code in the response body, refer to [Rest API Status Codes](#).

```
Success Scenario: 200 OK
{
  "severity": "info",
  "summary": "Object triggered successfully for rerun with Run Id:
B2001_2022-05-30_1653223084727_1",
  "batchRunId": "B2001_2022-05-30_1653223084727_1",
  "details": "Object triggered successfully.",
  "statusCode": "0",
  "status": "success"
}
```

## Batch Group Rerun API

Use the Rerun API to rerun an existing batch group execution.

### Attributes

- `batchName` - The unique batch code
- `batchRunID` - Execution Id generated while triggering the object and can be obtained in the response of Execution API.

### Request Body

```
{
  "batchName": "<Batchgroup_code>",
  "batchRunId": "<Batchrun_ID>"
}
```

### Sample Response Body

The following Response body is a sample for Success : 200 OK. For more information about status code in the response body, refer to [Rest API Status Codes](#).

```
Success Scenario: 200 OK
{
  "severity": "info",
  "summary": "Object triggered successfully for rerun with Run Id:
B2001_2022-05-30_1653223084727_1",
  "batchRunId": "B2001_2022-05-30_1653223084727_1",
  "details": "Object triggered successfully.",
  "statusCode": "0",
  "status": "success"
}
```

## Restart API

The Restart (POST) API restarts a batch/batch group execution.

- **HTTP Method** - POST
- **URL** - /SchedulerService/rest-api/v1/external/restart
- **Header Parameters**
  - **ofs\_tenant\_id** - Tenant ID of the Application
  - **ofs\_service\_id** - Service ID of the Application
  - **ofs\_workspace\_id** - Workspace ID of the Application. It is defaulted to "WS001" and same should be passed each time.
  - **ofs\_remote\_user** - Used ID of the user. This parameter should be mapped to 'BATCH\_EXEC' function.
  - **locale** - locale in languageCode-countryCode format. For example, en-US.
  - **Authorization: Bearer <token>** - Access token required to authenticate the API. If this token is not provided, 401 Unauthorized error is generated. For more information about Bearer token, refer to [Generate the Access Token](#).
- **Sample cURL Command**

```
curl -i -H "ofs_service_id:<Service ID>" -H "ofs_remote_user:<User ID>" -H "ofs_tenant_id:<Tenant ID>" -H "ofs_workspace_id:WS001" -H "locale:en-US" -H "Content-Type: application/json" -H "Authorization: Bearer <BEARER_TOKEN>" -X POST <APPLICATION_BASE_PATH>/<URL> -d '<REQUEST_JSON>'
```

## Batch Restart API

Use the Restart API to restart a batch execution.

### Attributes

- **batchName** - The unique batch code

- `batchRunID` - Execution Id generated while triggering the object and can be obtained in the response of Execution API.

### Request Body

```
{
  "batchName": "<Batch_code>",
  "batchRunId": "<Batchrun_ID>"
}
```

### Sample Response Body

The following Response body is a sample for `Success : 200 OK`. For more information about status code in the response body, refer to [Rest API Status Codes](#).

```
{
  "severity": "info",
  "summary": "Object triggered successfully for restart with Run Id:
B0001_2022-04-30_1651731208588_1",
  "batchRunId": "B0001_2022-04-30_1651731208588_1",
  "details": "Object triggered successfully.",
  "statusCode": "0",
  "status": "success"
}
```

## Batch Group Restart API

Use the Restart API to restart a batch group execution.

### Attributes

- `batchName` - The unique batch code
- `batchRunID` - Execution Id generated while triggering the object and can be obtained in the response of Execution API.

### Request Body

```
{
  "batchName": "<Batchgroup_code>",
  "batchRunId": "<Batchrun_ID>"
}
```

### Sample Response Body

The following Response body is a sample for `Success : 200 OK`. For more information about status code in the response body, refer to [Rest API Status Codes](#).

```
{
  "severity": "info",
  "summary": "Object triggered successfully for restart with Run Id:
B0001_2022-04-30_1651731208588_1",
  "batchRunId": "B0001_2022-04-30_1651731208588_1",
}
```

```
"details": "Object triggered successfully.",  
"statusCode": "0",  
"status": "success"  
}
```