Oracle® Revenue Management and Billing

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Batch Scheduler

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ORACLE

Oracle Revenue Management and Billing Batch Scheduler

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Preface

About This Document

This document will help you understand how to schedule jobs using the ORMB platform. It will help you to understand the important topics with respect to scheduler, describes screens related to the features and explains how to perform various tasks in the application.

Intended Audience

This document is intended for the following audience:

- End-Users
- Administrators
- Consulting Team
- Implementation Team

Organization of the Document

The information in this document is organized into the following sections:

Section No.	Section Name	Description
Section 1	ORMB Scheduler	Explains the ORMB Scheduler feature.
Section 2	Scheduler Modules	Lists and describes the set of activities that need to be completed to use scheduler feature in ORMB. It also explains how to define and work with the different modules of scheduler.

Contents

1. ORMB Scheduler

The Scheduler is a set of processes and objects that are defined and executed within the ORMB framework using the objects implemented by the **DBMS_SCHEDULER** package that is embedded in every installation of the Oracle Database. ORMB uses the DBMS scheduler objects to schedule Jobs/Batches in the background.

Some features of ORMB DBMS scheduler include:

- User Interface to help define workflows and/or job dependencies
- User Interface to submit/schedule, monitor and administration of Batch Jobs

The DBMS Scheduler supports the following scheduling methods:

- Time based scheduling - Scheduling job based upon dates and times.
- Dependency scheduling - Scheduling based upon job dependencies using Chains

The ORMB DBMS scheduler uses the following objects:

Program

The lowest object in a scheduler is the Program. A program describes what is to be run by the schedule. The program object includes a definition of the physical object as well as arguments to execute them.

Job

An instance of a program, is a Job. The job is a collection of metadata that defines the program to execute as well as where to execute it (for remote executions), its related schedule (which dictates when it is executed) and any related information. Jobs are subject to scheduling using the time based, event based and/or dependency of other jobs.

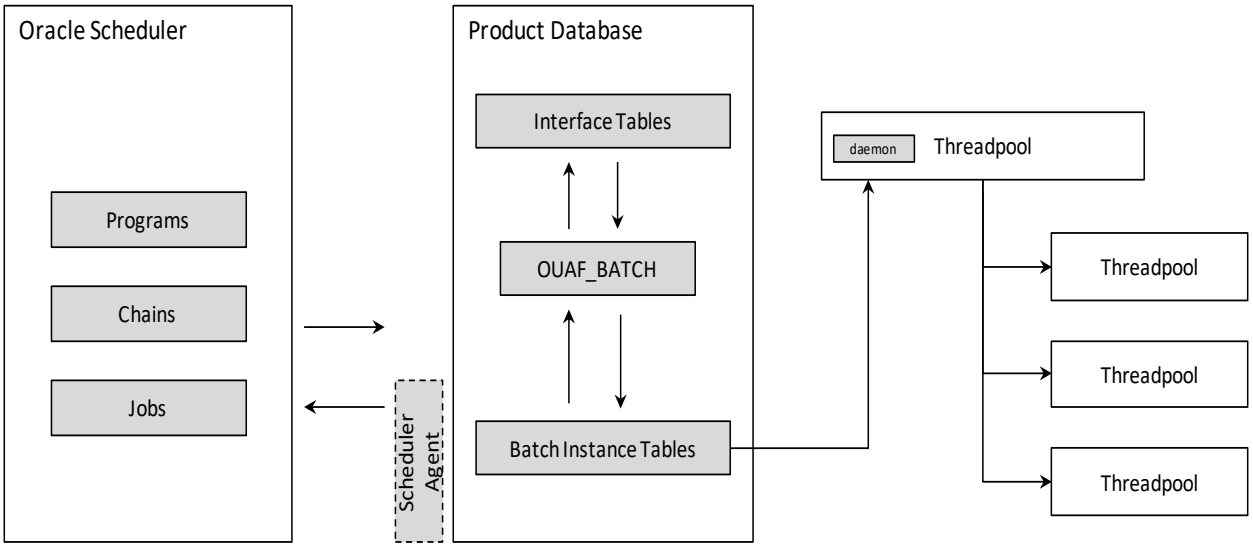
Schedule

The Schedule object defines when and how many times the job is executed. The schedule object uses a rich calendaring syntax to define repeating schedules. Jobs also contain data used for prioritizing as well as resource profiles including support for Windows and Resource Manager.

Chains

Sequences of jobs expressing the dependencies are represented by Chains. Chains define steps which link a job or file watcher and also contains Rules to decide the sequence and outcomes based upon the state of another job in the chain. For example, Job B needs to run only if Job A has completed successfully. Chains can support multiple branches and also chains can include other chains for greater reuse.

1.1 Oracle Scheduler Interface Architecture



The Oracle Scheduler interface has a flexible architecture that exploits the underlying features of the product to execute and monitor background processes. From an architecture perspective the following applies:

- The Oracle Scheduler objects are held as dictionary objects in the Schedule Administrator schema. At a minimum the Oracle Scheduler uses Programs, Jobs and Chains. Other Schedule objects can be defined as necessary.
- The Oracle Scheduler interface is installed on the product schema which includes a number of interface tables, the OUAF_BATCH pl/sql package and permissions to product batch tables.

1.2 Advantages of Using Oracle Scheduler and Interface

- License free implementation
- ORMB embedded user interfaces for setting up Batch Scheduling
- Less Administration
- Supports High Availability
- Maximum Flexibility

2. Scheduler Modules

This section lists and describes the following activities that you need to complete in the specified order to work with scheduler feature in ORMB:

1. Create Program
2. Create Chain
3. Create Schedule
4. Create and Run Job
5. Monitor a job

2.1 Program

A program should be defined for each Batch Job that needs to be scheduled by the DBMS scheduler.

2.1.1 Defining a New Program

To define a new program:

1. From the **Menu** tab, select **Scheduler** and then click **Program**. The **Scheduler Program Search** zone appears.

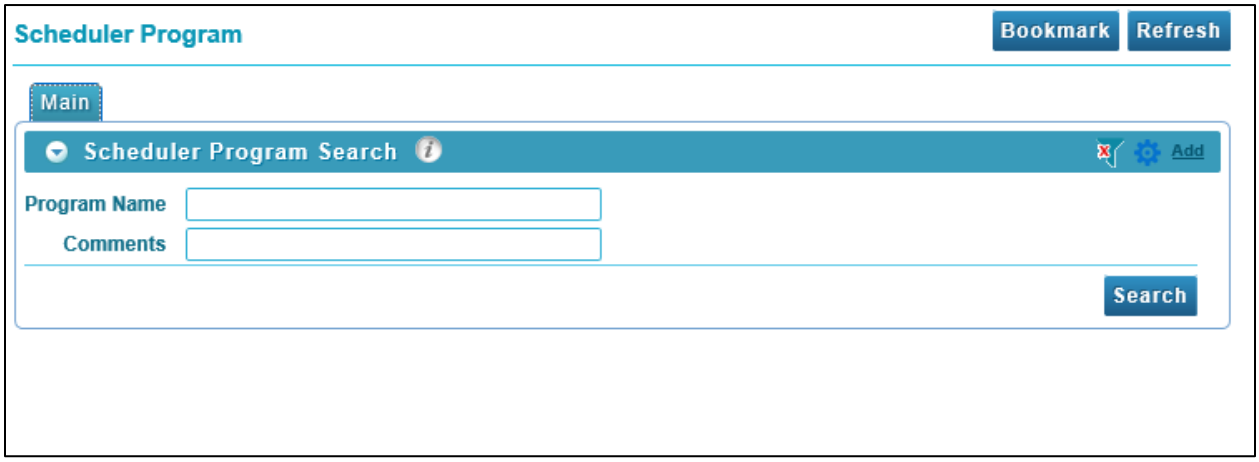


Figure 1: Scheduler Program Search

2. Click the **Add** link present in upper right corner of the **Scheduler Program Search** zone. The **Scheduler Program Maintenance** screen appears.

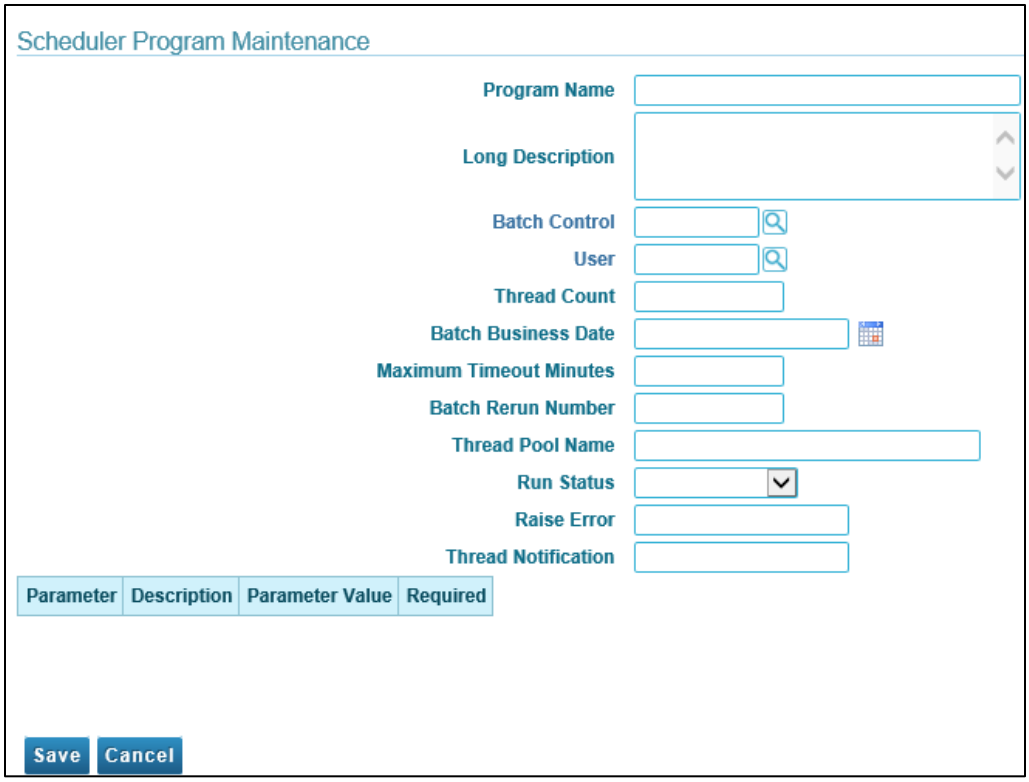


Figure 2: Scheduler Program Maintenance Screen

3. The **Scheduler Program Maintenance** screen has following fields:

Field Name	Description	Mandatory (Yes or No)
Program Name	Used to define the program name.	Yes **Note:** It is mandatory to prefix program name with CM (customer modification) when defining a program on a deployed environment (for example, changes performed during and after installation of the product) and C1 when defining a program on development environment (for example, any changes to Customer Modification data). The valid values are: • C1_BILL • C1BILL • CM_Bill • CMBILL However, following formats are not allowed: • C1 – BILL • C1 BILL • CM – BILL • CM BILL
Long Description	Used to describe the program.	No
Batch Control	Used to define the code that executes the logic associated with the background process. **Tip:** Use the **Search** () icon to search batch name.	Yes
User	Used to define the user name. **Tip:** Use the **Search** () icon to search user name.	Yes
Thread Count	Used to define total number of parallel threads that have been scheduled.	No

Field Name	Description	Mandatory (Yes or No)
Batch Business Date	Used for background processes that use a date in their processing. For example, scheduling a job using the business date to determine which programs or chains should be scheduled. **Note:** If this parameter is left blank, the system date is used.	No
Maximum Timeout Minutes	Used to specify time duration for overriding each background process.	No
Batch Rerun Number	Used for background processes that download information that belongs to given run number. **Note:** It should only be supplied if you need to download an historical run (rather than the latest run).	No
Thread Pool Name	Used to specify the thread pool on which you want to execute the batch.	No
Run Status	Used to indicate the status of the batch run. The valid values are: • Complete • Error • In Progress • Thread Ready	No **Note:** Set **Run Status** value as Error and **Raise Error** value as True to raise an application error and end the job.
Raise Error	Used to define if errors are to be raised. The valid values are: • True • False	No **Note:** Set **Run Status** value as Error and **Raise Error** to True to make the procedure raise an application error and end the job.
Thread Notification	Used to define if email notifications for failed threads are to be sent. The valid values are: • True • False	No

4. Enter program name in **Program Name** field.
5. Enter value in **Batch Control** field. Note that the batch control code should be defined in the application.

Tip: To search for existing batch control name, you can use the **Search** ( ) icon corresponding to the **Batch Control** field.

Note: When the batch control code is populated in **Batch Control** field, the parameter details linked with the respective batch control appear in the **Parameter Details** pane below the basic user defined fields.

6. Enter value in **User** field. To search for existing user name, you can use the **Search** ( ) icon corresponding to the User field.
7. Click **Save**. The Scheduler Program Maintenance screen closes and the new created program is added to the Program list in Filter section.

2.1.2 Searching a Program

To search an existing program:

1. From the **Menu** tab, select **Scheduler** and then click **Program**. The **Scheduler Program Search** zone appears.

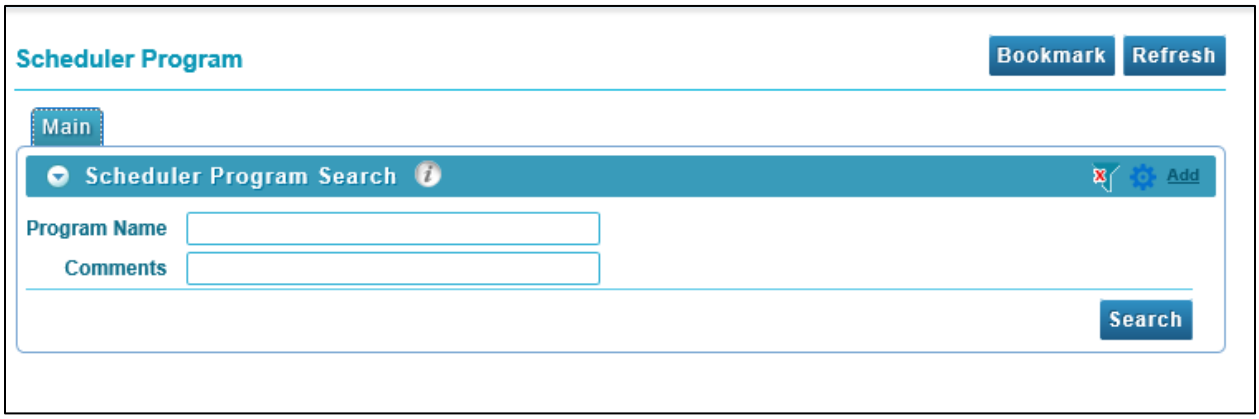


Figure 3: Scheduler Program Search

2. To search a Program, enter text in any one of the following fields:
   - Program Name
   - Comments

Tip: You can also use wildcard character '%' to search for Program Name or Comments.

Click **Search** button present in Search zone to view the list of all existing programs.

3. Click **Search**. The search results are filtered based on the specified search criteria.
4. The Filter section has following columns:

Column Name	Description
Program Name	Displays the program name. **Note:** It has a link. Click on the link to view the program details.
Comments	Displays the description of the program.
Edit	Allows you to edit the program details.
Delete	Allows you to delete the program.

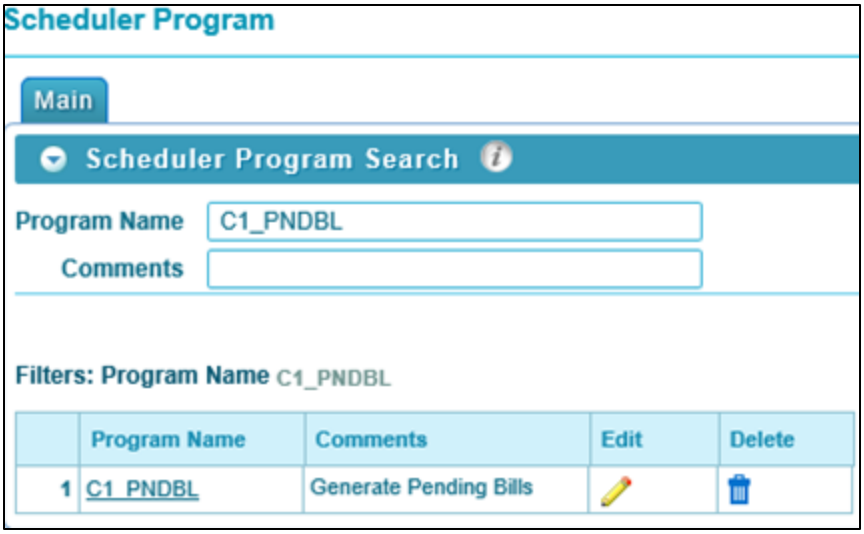


Figure 4: Program - Search Results

2.1.3 Viewing a Program

To view details of an existing program:

1. From the **Menu** tab, select **Scheduler** and then click **Program**. The **Scheduler Program Search** zone appears.
2. Search a Program for which you want to view the details. For more information, refer to the Searching a Program section.
3. Click on the text in **Program Name** column. The **Scheduler Program Read** screen appears with the details of the respective program.

   The **Scheduler Program Read** screen displays the user specified details and the parameters associated with the applied batch. These parameter details are represented in a tabular format.

Column Name	Description
Parameter	Displays the name of the parameter linked with the respective batch.
Description	Displays the description of the parameter.
Parameter Value	Displays the default value, if applicable.
Required	Indicates whether or not this is a required parameter.

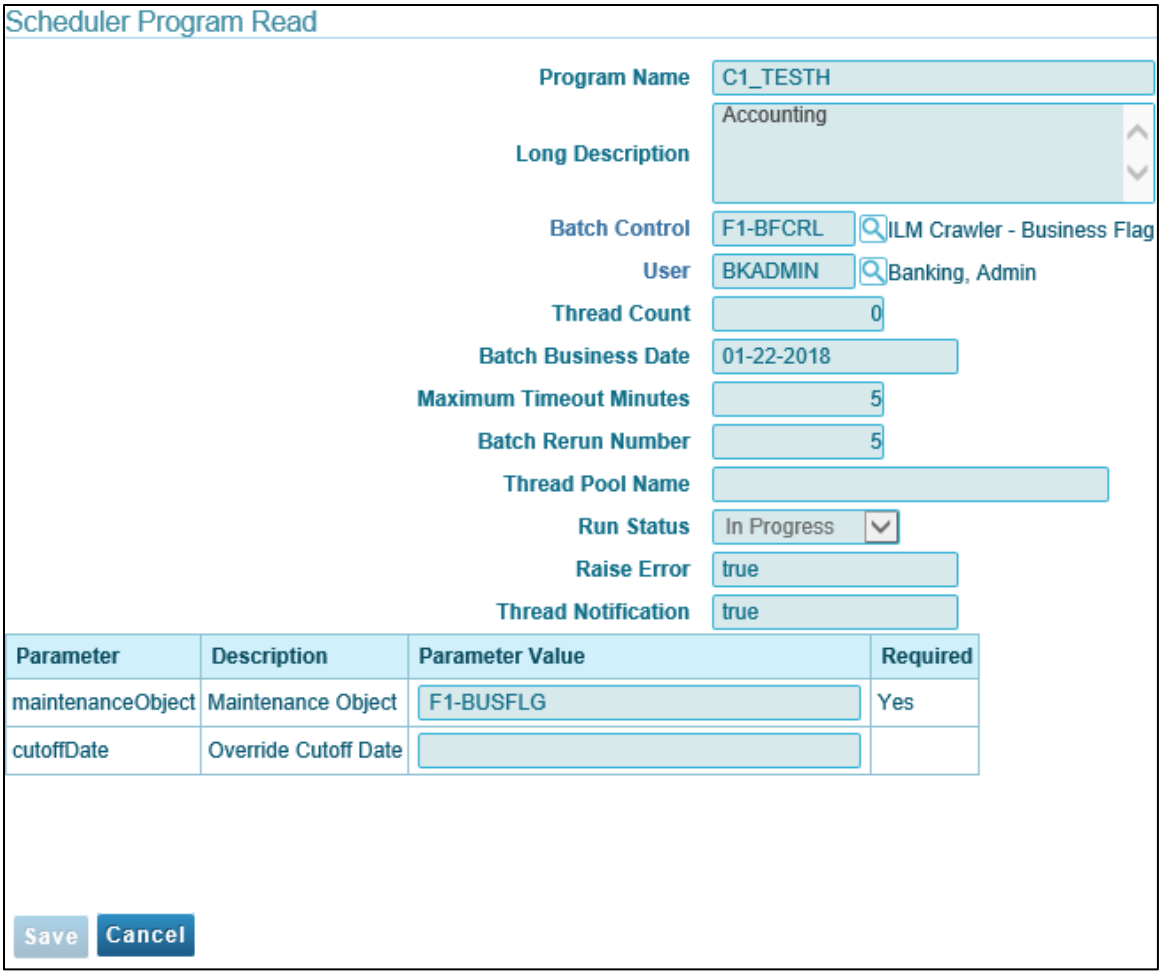


Figure 5: Scheduler Program - Read Mode

2.1.4 Editing a Program

To edit an existing program:

1. From the **Menu** tab, select **Scheduler** and then click **Program**. The **Scheduler Program** Search zone appears.
2. Search a Program which you want to edit. For more information, refer to the Searching a Program section.

3. Click **Edit** ( ) icon corresponding to the respective program name. The **Scheduler Program Maintenance** screen appears.

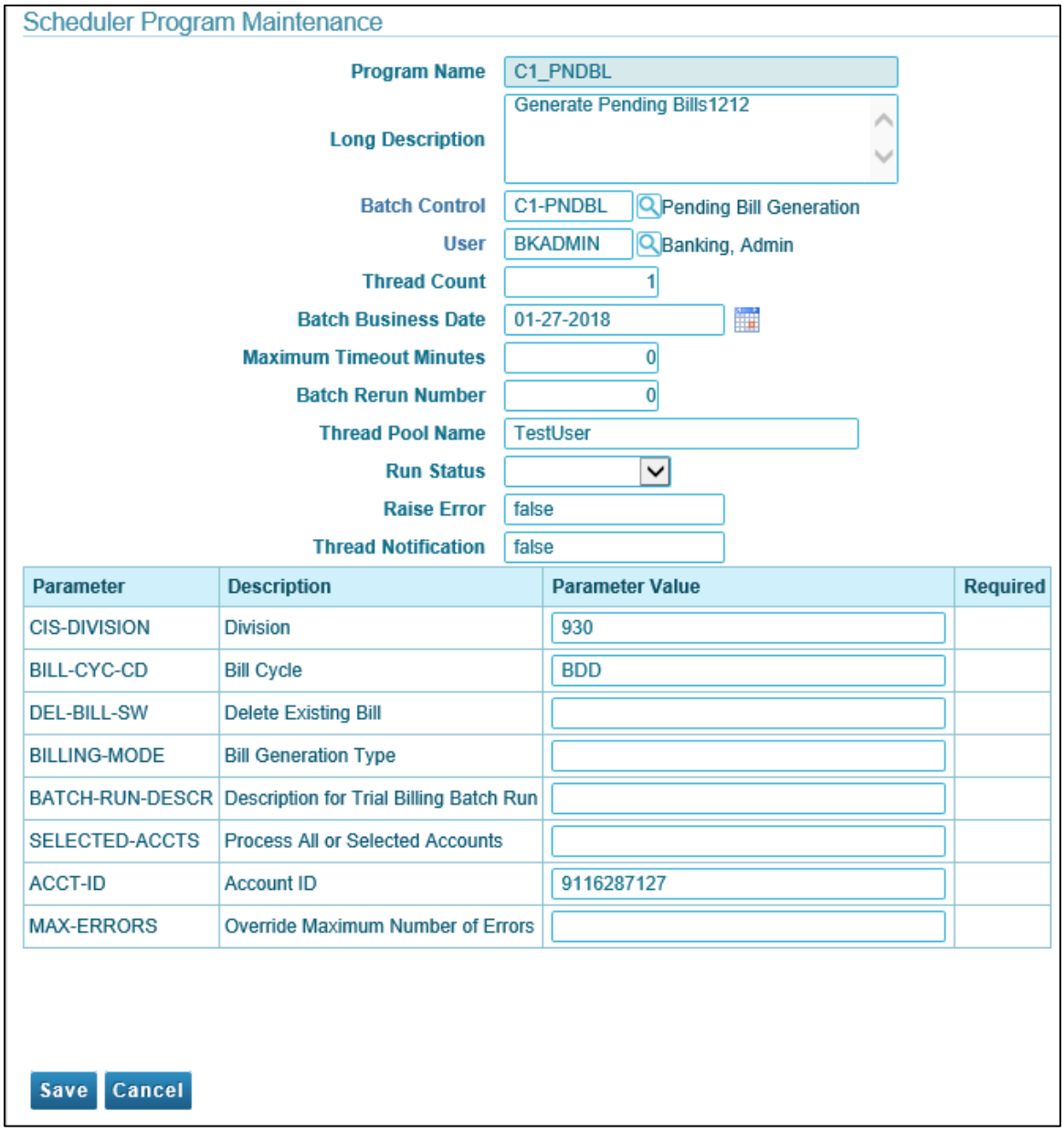


Figure 6: Scheduler Program Maintenance Screen

4. Edit the required fields. Note that you cannot edit the Program Name.
5. Click **Save**. The changes are saved.

2.1.5 Deleting a Program

To delete an existing program:

1. From the **Menu** tab, select **Scheduler** and then click **Program**. The **Scheduler Program Search** zone appears.

2. Search a Program which you want to delete. For more information, refer to the Searching a Program section.
3. Click **Delete** () icon corresponding to the respective Program name.
4. A confirmation message appears indicating “Are you sure you want to delete this object?”
5. Click **OK** to confirm deletion.

Note: Program can be deleted only if it is not being used in any of the jobs.

2.2 Chain

A Chain defines a series of steps with dependency rules between them. A step references a program, with the program performing the actual work for that step. A rule is attached to each step to identify its dependent steps and the condition for when that step should be executed. For example, in a chain consisting of STEP_A and STEP_B, where STEP_B can only start if STEP_A was successful, the rule for STEP_B to start would specify a condition of "STEP_A SUCCEEDED".

2.2.1 Defining a New Chain

To define a new chain:

1. From the **Menu** tab, select **Scheduler** and then click **Chain**. The **Scheduler Chain Search** zone appears.

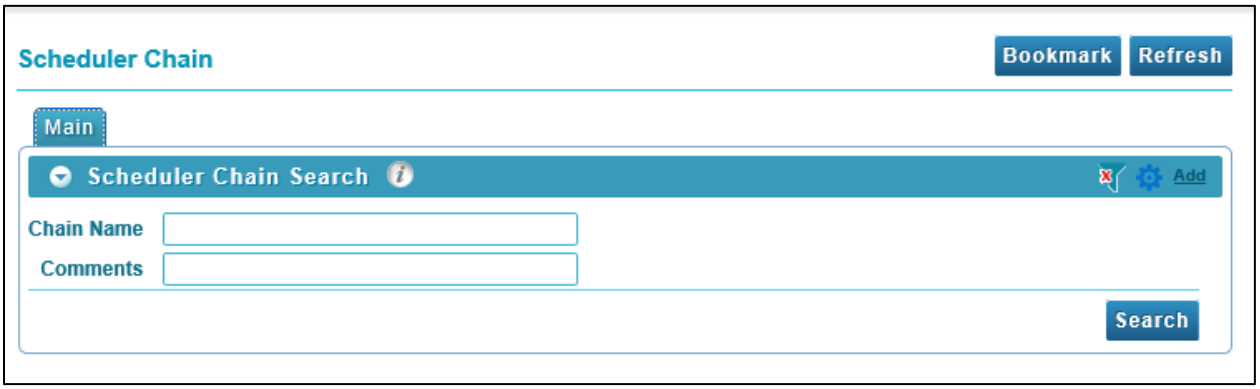


Figure 7: Scheduler Chain Search

2. Click the **Add** link present in upper right corner of the Scheduler Chain Search zone. The **Scheduler Chain Maintenance** screen appears.
3. The **Scheduler Chain Maintenance** screen has following fields:

Field Name	Description	Mandatory (Yes or No)
Chain Name	Used to define the chain name.	Yes **Note:** It is mandatory to prefix chain name with CM (customer modification) when defining a chain on a deployed environment (for example, changes performed during and after installation of the product) and C1 when defining a chain on development environment (for example, any changes to Customer Modification data). The valid values are: • C1_BILL • C1BILL • CM_Bill • CMBILL However, following formats are not allowed: • C1 – BILL • C1 BILL • CM – BILL • CM BILL
Long Description	Used to describe the chain.	No
Step Name	Used to specify name of the step.	Yes
Program Name	Used to specify program name to be linked with the chain.	Yes
Step Condition	Used to specify condition for the step.	Yes

4. In **Chain Name**, enter chain name.
5. In **Long Description**, enter description text.
6. In **Step Name**, enter step name.
7. In **Program Name**, enter Program Name. You can also use **Search** ( ) to search a program name. For more information, refer to the Searching a Program section.
8. Specify **Step Condition**.
9. To add multiple steps, click ( ) icon.

Note: 1st step condition should always be set as 'TRUE'.

Chain definition **must** include an 'End' step. For example, "ACCNO" SUCCEEDED.

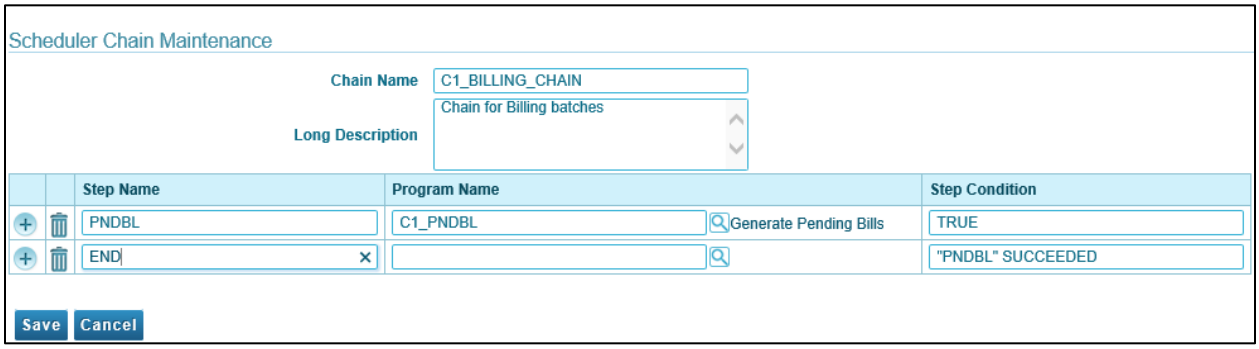


Figure 8: Scheduler Chain Maintenance Screen

10. Click **Save**. The Scheduler Chain Maintenance screen closes and the new created chain is added to the Chain list in Filter section.

Effects on Chains

Depending on the setup of the chain rules, the chain will react differently to a job cancellation:

1. If the chain rule has an end condition for a FAILED execution, then the chain will stop executing.
2. If the chain rule is setup for a SUCCEEDED execution, the default, then the chain will be in a STALLED state and must be manually set to resume.
3. If the chain rule is setup for COMPLETED execution, then the next job in the chain will be executed.

2.2.2 Searching a Chain

To search an existing chain:

1. From the **Menu** tab, select **Scheduler** and then click **Chain**. The **Scheduler Chain Search** zone appears.

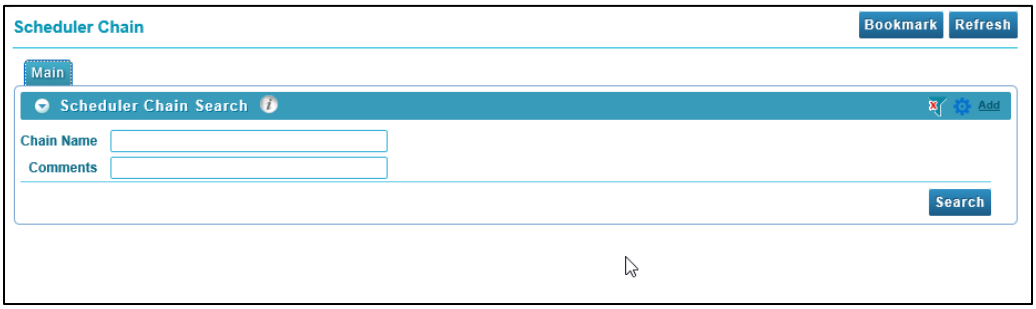


Figure 9: Scheduler Chain Search

2. To search a Chain, enter text in any one of the following fields:
   - Chain Name
   - Comments

Tip: You can also use wildcard character '%' to search for Chain Name or Comments.

Click **Search** button present in Search zone to view the list of all existing chains.

3. Click **Search**. The search results are filtered based on the specified search criteria.
4. The Filter section has following columns:

Column Name	Description
Chain Name	Displays the name of the chain. **Note:** It has a link. Click on the link to view the chain details.
Comments	Displays the description of the chain.
Edit	Allows you to edit the chain details.
Delete	Allows you to delete the chain.

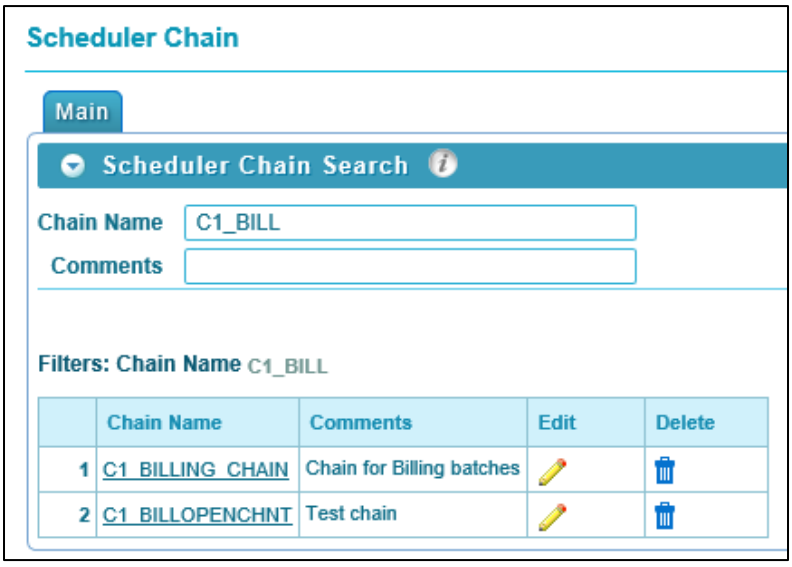


Figure 10: Chain - Search Results

2.2.3 Viewing a Chain

To view details of an existing chain:

1. From the Menu tab, select **Scheduler** and then click **Chain**. The **Scheduler Chain Search** zone appears.
2. Search a Chain for which you want to view the details. For more information, refer to the Searching a Chain section.
3. Click on the text in **Chain Name** column. The **Scheduler Chain Read** screen appears with the details of the respective chain.
4. The Scheduler Chain Read screen has following fields:

Field Name	Description
Chain Name	Displays the name of the chain.
Long Description	Displays the description of the chain.

5. The Scheduler Chain Read screen also shows the steps associated with the respective chain.

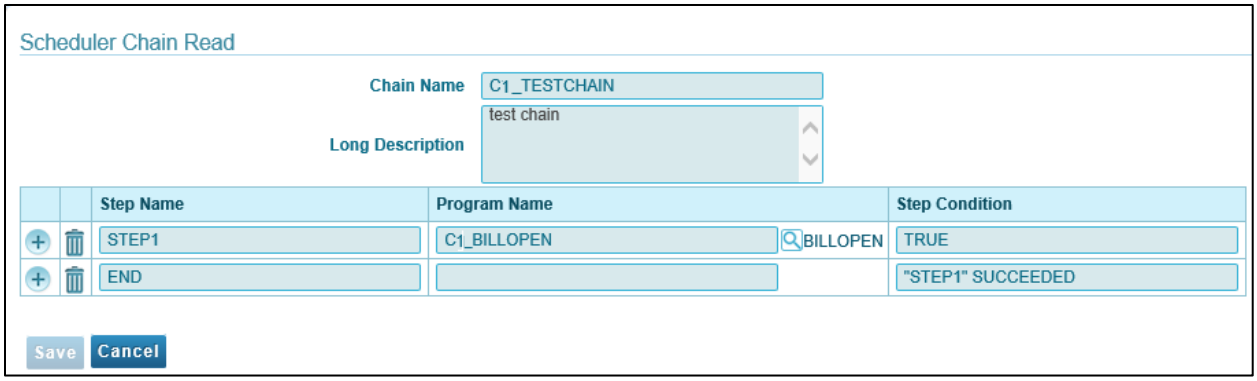


Figure 11: Scheduler Chain Read Mode

2.2.4 Editing a Chain

To edit an existing chain:

1. From the **Menu** tab, select **Scheduler** and then click **Chain**. The **Scheduler Chain Search** zone appears.
2. Search a Chain for which you want to view the details. For more information, refer to the Searching a Chain section.
3. Click **Edit** ( ) icon corresponding to the respective Chain Name. The **Scheduler Chain Maintenance** screen appears.

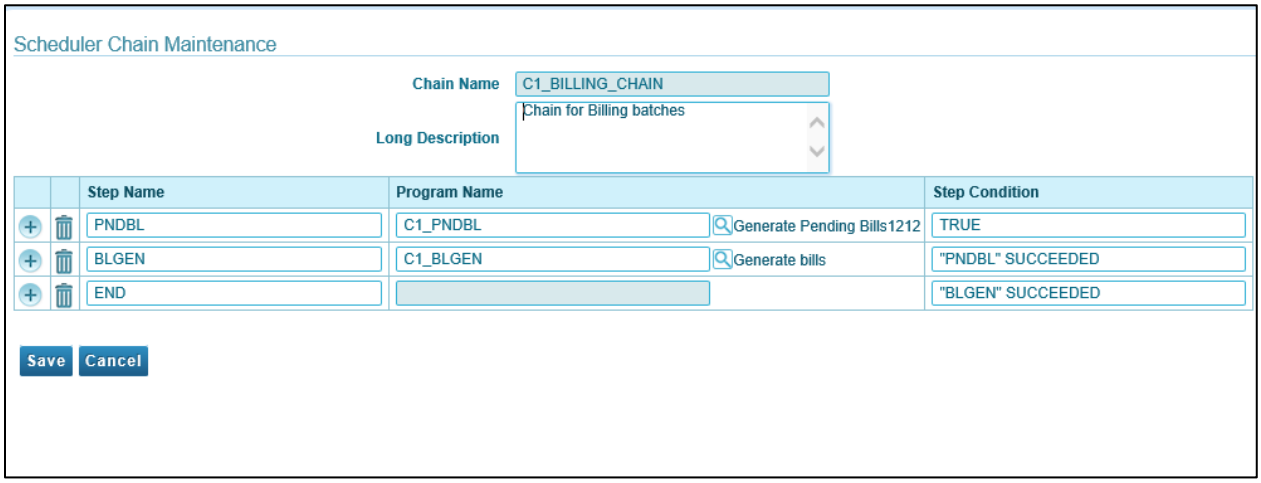


Figure 12: Scheduler Chain Maintenance Screen

4. Edit the required fields. Note that you cannot edit the Chain Name.
5. To add additional steps, click ( ) icon.
6. Click **Delete** ( ) icon corresponding to Step Name to delete the Step Name and corresponding Program Name and Step Condition.
7. Click **Save**. The changes are saved.

2.2.5 Deleting a Chain

To delete an existing chain:

1. From the **Menu** tab, select **Scheduler** and then click **Chain**. The **Scheduler Chain Search** zone appears.
2. Search a Chain which you want to delete. For more information, refer to the Searching a Chain section.
3. Click **Delete** ( ) icon corresponding to the respective Chain name.
4. A confirmation message appears indicating “Are you sure you want to delete this object?”
5. Click **OK** to confirm deletion.

Note: Chain can be deleted only if it is not being used in any of the jobs.

2.3 Schedule

A schedule is a predefined frequency for jobs that need to be run. It defines when and how many times a job is to be executed.

2.3.1 Defining a New Schedule

To define a new schedule:

1. From the **Menu** tab, select **Scheduler** and then click **Schedule**. The **Scheduler Schedule Search** zone appears.

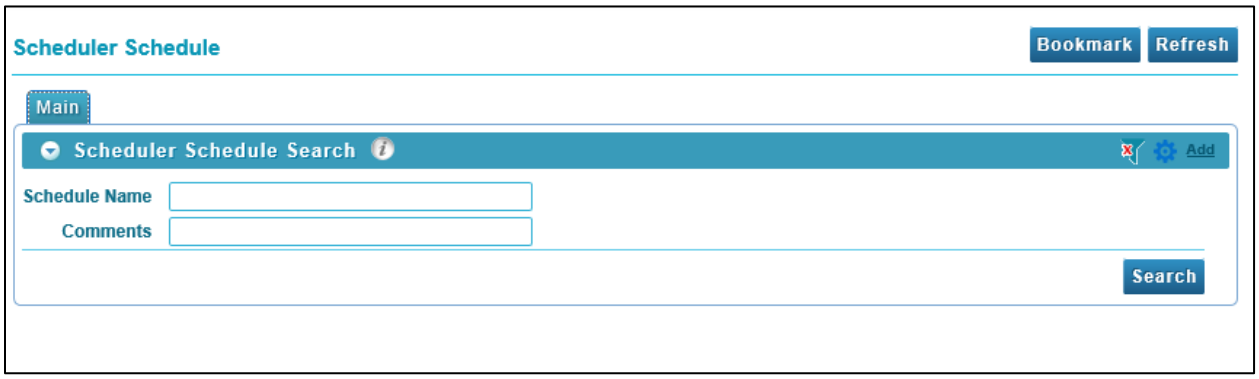


Figure 13: Scheduler Schedule Search

2. Click the **Add** link present in upper right corner of the Scheduler Schedule Search zone. The **Scheduler Schedule Maintenance** screen appears.

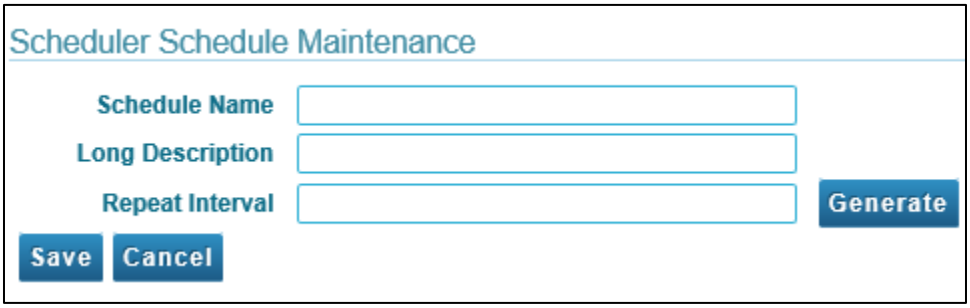


Figure 14: Scheduler Schedule Maintenance Screen

3. The **Scheduler Schedule Maintenance** screen has following fields:

Configuration	Processor	Memory (RAM)
Schedule Name	Used to define the schedule code.	Yes **Note:** It is mandatory to prefix schedule name with CM (customer modification) when defining a schedule on a deployed environment (for example, changes performed during and after installation of the product) and C1 when defining a schedule on development environment (for example, any changes to Customer Modification data). The valid values are: • C1_BILL • C1BILL • CM_Bill • CMBILL However, following formats are not allowed: • C1 – BILL • C1 BILL • CM – BILL • CM BILL
Long Description	Used to describe the schedule.	No
Repeat Interval	Used to define the interval when the system should start a job scheduling.	Yes
Frequency	Used to define the frequency of recurrence.	Yes (Conditional) **Tip:** Click **Generate** to select a frequency type.

4. In **Schedule Name**, enter a schedule name.
5. In **Long Description**, enter description text.
6. Enter the date and time on which the system should automatically run a job.

Tip: You can have the system to generate a time interval.

To set a time interval:

i. Click **Generate**. Select a frequency from the drop-down list.

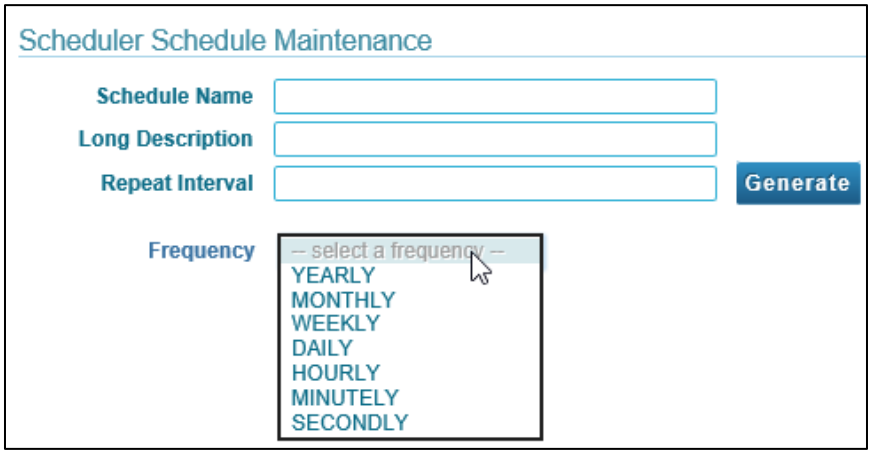


Figure 15: Scheduler Schedule Maintenance – Set Frequency

ii. Frequency field has following drop-down options:

List Options	Description	Parameter Values
Yearly	Used to set yearly schedules.	Interval - define if the schedule should be created every year (a value of 1), every other year (a value of 2), every third year (a value of 3), etc. On Date – select month and date from the list. At Time – used to specify the start time. Use Time Picker ( ) to select a time.
Monthly	Used to set monthly schedules.	Interval - define if the schedule should be created every month (a value of 1), every other month (a value of 2), every third month (a value of 3), etc. Month Day – select day from the list. WeekDay – enter a number. This number relates to the occurrence of the day. Select a day from the list. For example, 3rd Tuesday of every month. At Time – used to specify the start time. Use Time Picker ( ) to select a time.
Weekly	Used to set weekly schedules.	Interval - define if the schedule should be created every week (a value of 1), every other week (a value of 2), every third week (a value of 3), etc. WeekDay – select a week day. At Time – used to specify the start time. Use Time Picker ( ) to select a time.

List Options	Description	Parameter Values
Daily	Used to set daily schedules.	Interval - define if the schedule should be created every day (a value of 1), every other day (a value of 2), every third day (a value of 3), etc. WeekDay – select a week day. At Time – used to specify the start time. Use Time Picker ( ) to select a time.
Hourly	Used to set hourly schedule.	Interval - define if schedule records should be created every hour (a value of 1), every other hour (a value of 2), every third hour (a value of 3), etc. WeekDay – select a week day. At Time – used to specify the start time. **Note:** Specify time in min:sec format.
Minutely	Used to set minutely schedule.	Interval - define if the schedule should be created every minute (a value of 1), every other minute (a value of 2), every third minute (a value of 3), etc. WeekDay – select a week day.
Secondly	Used to set secondly schedule.	Interval - define if the schedule should be created every second (a value of 1), every other second (a value of 2), every third second (a value of 3), etc. Weekday – select a week day.

iii. Select appropriate pattern from the options.

iv. Click **OK**. The Repeat Interval field is populated with the selected intervals.

7. Click **Save**. The Scheduler Schedule Maintenance screen closes and the new created schedule is added to the Schedule list in Filter section.

2.3.2 Searching a Schedule

To search an existing schedule:

1. From the **Menu** tab, select **Scheduler** and then click **Schedule**. The **Scheduler Schedule Search** zone appears.

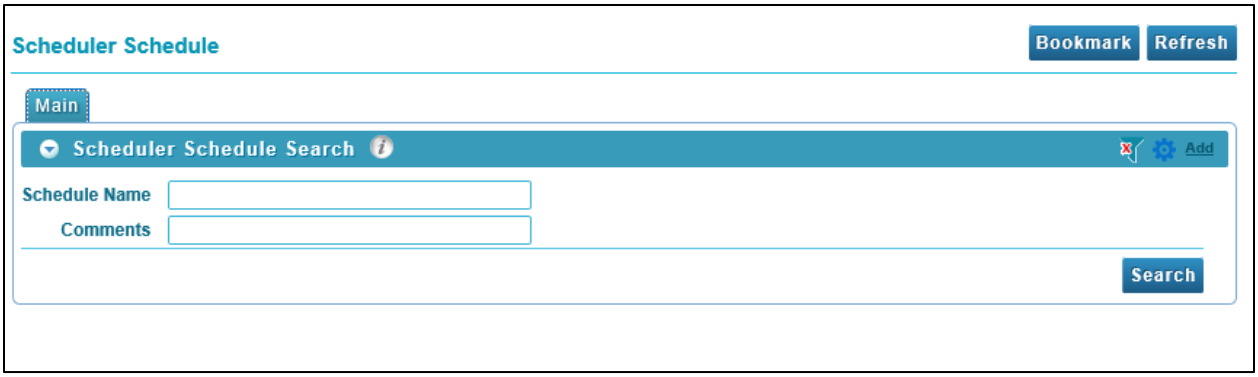


Figure 16: Scheduler Schedule Search

2. To search a Schedule, enter text in any one of the following fields:
   - Schedule Name
   - Comments

Tip: You can also use wildcard character '%' to search for Schedule Name or Comments. Click **Search** button present in Search zone to view the list of all existing schedules.

3. Click **Search**. The search results are filtered based on the specified search criteria.
4. The Filter section has following columns:

Column Name	Description
Schedule Name	Displays the name of the schedule. **Note:** It has a link. Click on the link to view the schedule details.
Comments	Displays the description of the schedule.
Repeat Interval	Displays the set time interval.
Edit	Allows you to edit the schedule details.
Delete	Allows you to delete the schedule.

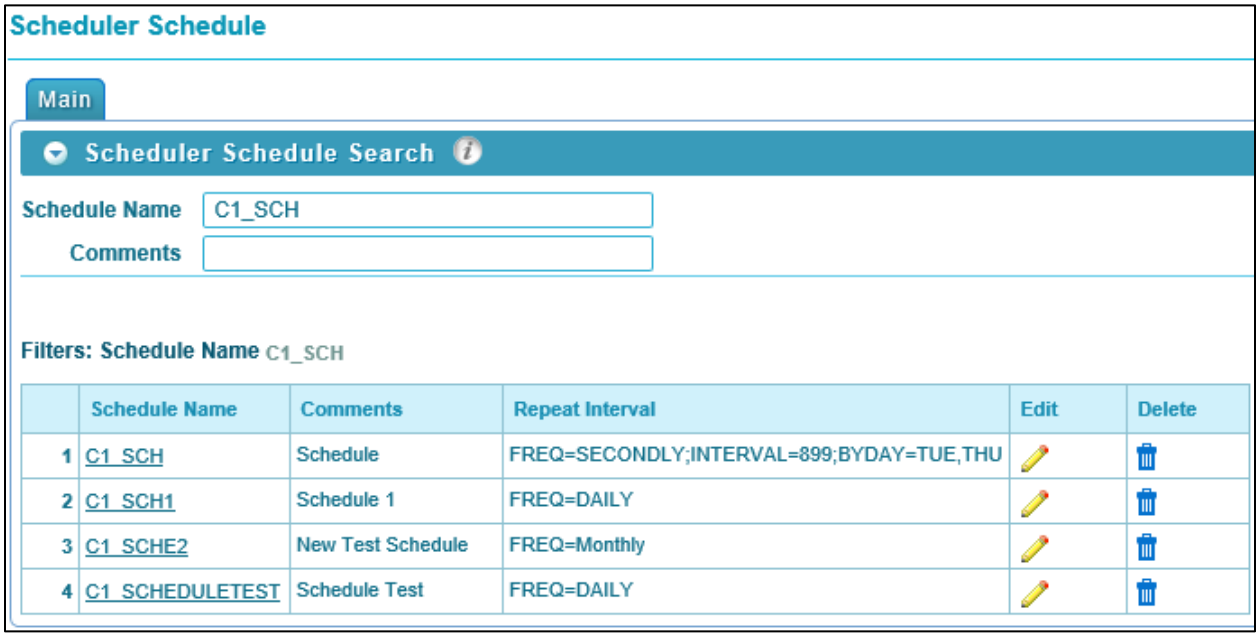


Figure 17: Schedule - Search Results

2.3.3 Viewing a Schedule

To view details of an existing schedule:

1. From the **Menu** tab, select **Scheduler** and then click **Schedule**. The **Scheduler Schedule Search** zone appears.

2. Search a schedule for which you want to view the details. For more information, refer to the Searching a Schedule section.
3. Click on the text in **Schedule Name** column. The **Scheduler Schedule** - **Read only** screen appears with the details of the respective program.
4. The Scheduler Schedule - Read only screen has following fields:

Field Name	Description
Schedule Name	Displays the name of the schedule.
Long Description	Displays the description of the schedule.
Repeat Interval	Indicates the interval defined.

Figure 18: Scheduler Schedule - Read Only Mode

2.3.4 Editing a Schedule

To edit an existing schedule:

1. From the **Menu** tab, select **Scheduler** and then click **Schedule**. The Scheduler Schedule Search zone appears.
2. Search a Schedule which you want to edit. For more information, refer to the Searching a Schedule section.
3. Click **Edit** ( ) icon corresponding to the respective Schedule name. The **Scheduler Schedule Maintenance** screen appears.

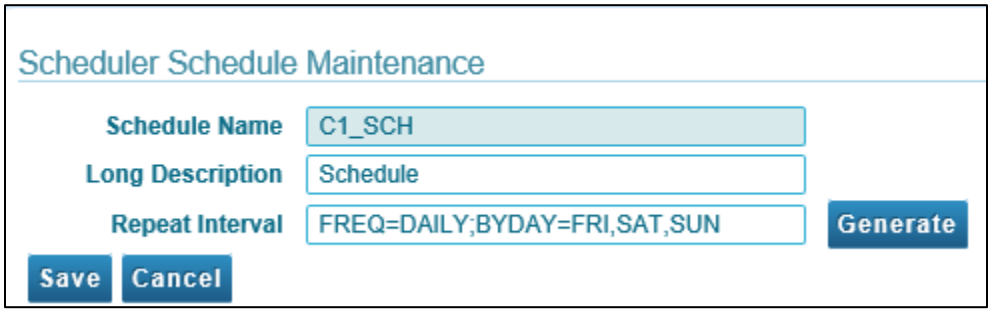


Figure 19: Scheduler Schedule Maintenance Screen

4. Edit the required fields. Note that you cannot edit the Schedule Name.
5. Click **Save**. The changes are saved.

2.3.5 Deleting a Schedule

To delete an existing schedule:

1. From the **Menu** tab, select **Scheduler** and then click **Schedule**. The **Scheduler Schedule Search** zone appears.
2. Search a Schedule which you want to delete. For more information, refer to the Searching a Schedule section.
3. Click **Delete** ( ) icon corresponding to the respective Schedule name.
4. A confirmation message appears indicating “Are you sure you want to delete this object?”
5. Click **OK** to confirm deletion.

Note: Schedule can be deleted only if it is not being used in any of the jobs.

2.4 Job

A job is collection of metadata which defines program to execute, where to execute as well as its related schedule. Running a job relates to trigger a chain which will further trigger set of programs (Batch Jobs) with given sequence and rules.

2.4.1 Defining a New Job

To define a new job:

1. From the **Menu** tab, select **Scheduler** and then click **Job**. The **Scheduler Job Search** zone appears.

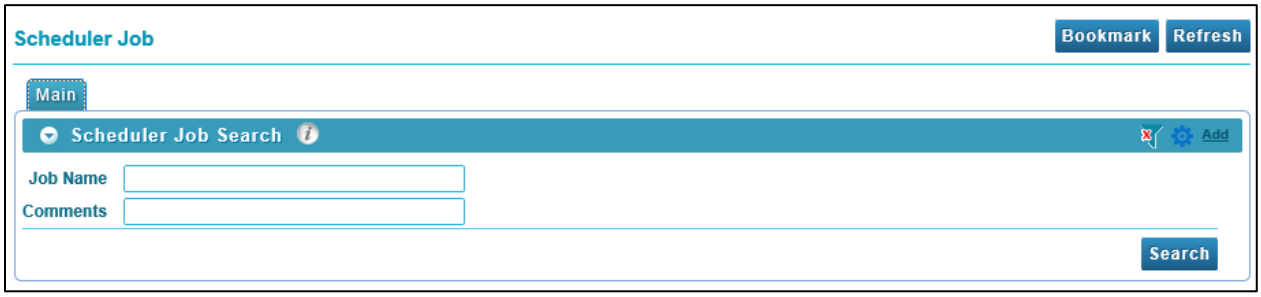


Figure 20: Scheduler Job Search

2. Click the **Add** link present in upper right corner of the Scheduler Job Search zone. The **Scheduler Job Maintenance** screen appears.

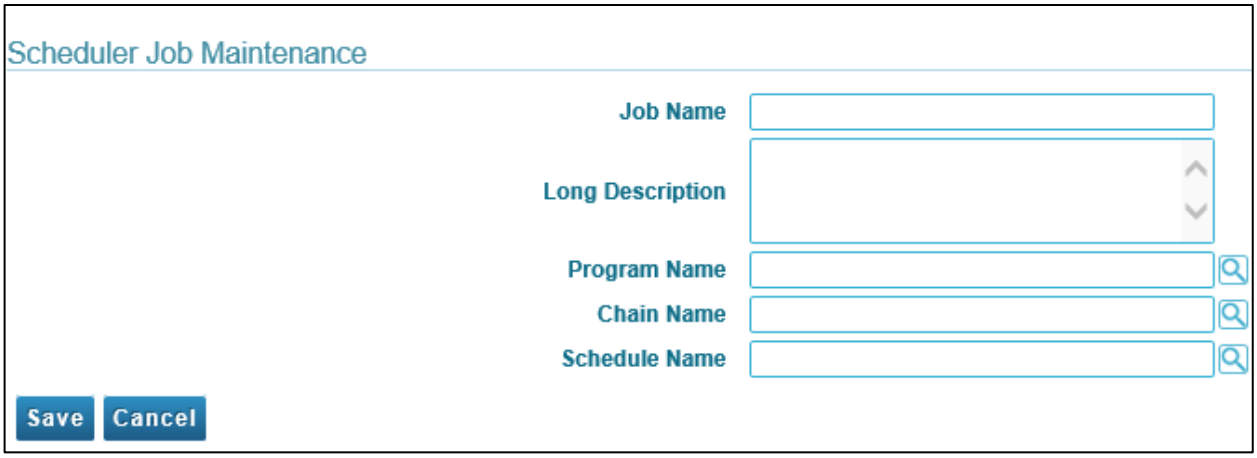


Figure 21: Scheduler Job Maintenance Screen

3. The **Scheduler Job Maintenance** screen has following fields:

Field Name	Description	Mandatory (Yes or No)
Job Name	Used to define job name.	Yes **Note:** It is mandatory to prefix job name with CM (customer modification) when defining a job on a deployed environment (for example, changes performed during and after installation of the product) and C1 when defining a job on development environment (for example, any changes to Customer Modification data). The valid values are: • C1_BILL • C1BILL • CM_Bill • CMBILL However, following formats are not allowed: • C1 – BILL • C1 BILL • CM – BILL • CM BILL
Long Description	Used to describe the job.	No
Program Name	Used to link a program name. **Tip:** Use the **Search** () icon to search program name.	Yes
Chain Name	Used to link a chain name. **Tip:** Use the **Search** () icon to search chain name.	Yes
Schedule Name	Used to link a schedule name. **Tip:** Use the **Search** () icon to search schedule name.	No

Note: Program Name and Chain Name fields are interlinked. If you enter Program Name, Chain Name field is disabled and you cannot add Chain Name. Similarly, if you enter Chain Name, Program Name field is disabled and you cannot add Program Name.

4. In Program Name, enter Program Name. You can also use **Search** ( ) to search an existing program. For more information, refer Searching a Program section.
5. In Chain Name, enter Chain Name. You can also use **Search** ( ) to search an existing chain. For more information, refer Searching a Chain section.
6. In Schedule Name, enter Schedule Name. You can also use **Search** ( ) to search an existing schedule. For more information, refer Searching a Schedule section.
7. Click **Save**. The Scheduler Job Maintenance screen closes and the new created job is added to the Job list in Filter section.

2.4.2 Searching a Job

To search an existing job:

1. From the **Menu** tab, select **Scheduler** and then click **Job**. The **Scheduler Job Search** zone appears.

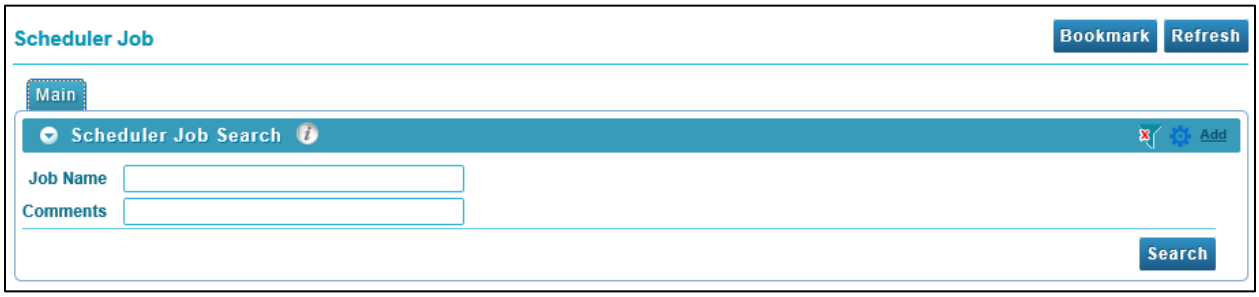


Figure 22: Scheduler Job Search

2. To search a Job, enter text in any one of the following fields:
   - Job Name
   - Comments

Tip: You can also use wildcard character '%' to search for Job Name or Comments.

Click **Search** button present in Search zone to view the list of all existing jobs.

3. Click **Search**. The search results are filtered based on the specified search criteria.
4. The Filter section has following columns:

Column Name	Description
Job Name	Displays the name of the job. **Note:** It has a link. Click on the link to view the job details.
Comments	Displays the description of the job.
Edit	Allows you to edit the job details.
Delete	Allows you to delete the job.

Submit Job	Allows you to submit a job.

2.4.3 Viewing a Job

To view details of an existing job:

1. From the **Menu** tab, select **Scheduler** and then click **Job**. The **Scheduler Job Search** zone appears.
2. Search a job for which you want to view the details. For more information, refer to the Searching a Job section.
3. Click on the text in **Job Name** column. The **Scheduler Job Read** screen appears with the details of the respective job.
4. The Scheduler Job Read screen has following fields:

Field Name	Description
Job Name	Displays the name of the job.
Long Description	Displays the description of the job.
Program Name	Displays the respective program attached with the job.
Chain Name	Displays the respective chain attached with the job.
Schedule Name	Displays the respective schedule attached with the job.

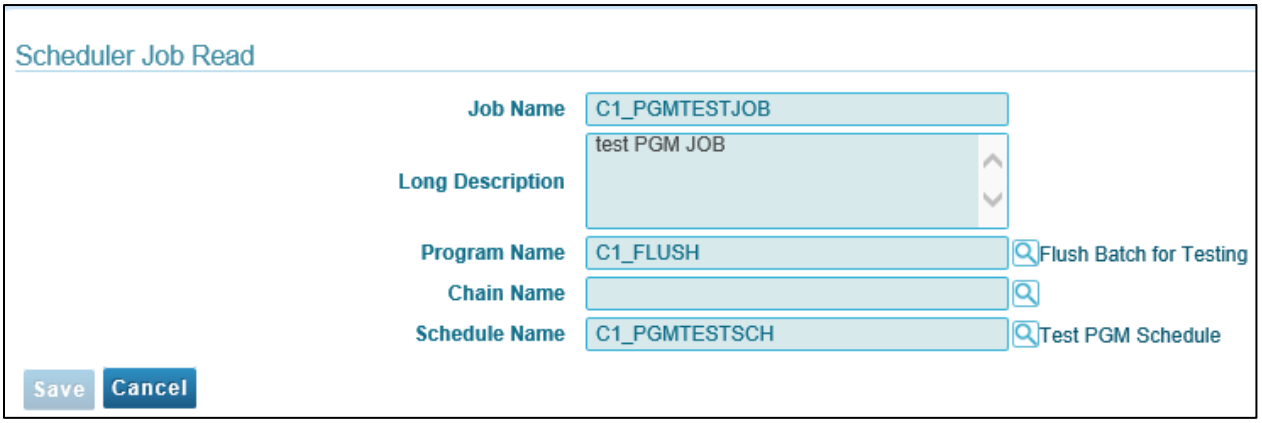


Figure 23: Scheduler Job Read Mode

2.4.4 Editing a Job

To edit an existing job:

1. From the **Menu** tab, select **Scheduler** and then click **Job**. The **Scheduler Job Search** zone appears.
2. Search a job which you want to edit. For more information, refer to the Searching a Job section.

3. Click **Edit** ( ) icon corresponding to the respective Job name. The **Scheduler Job Maintenance screen** appears.

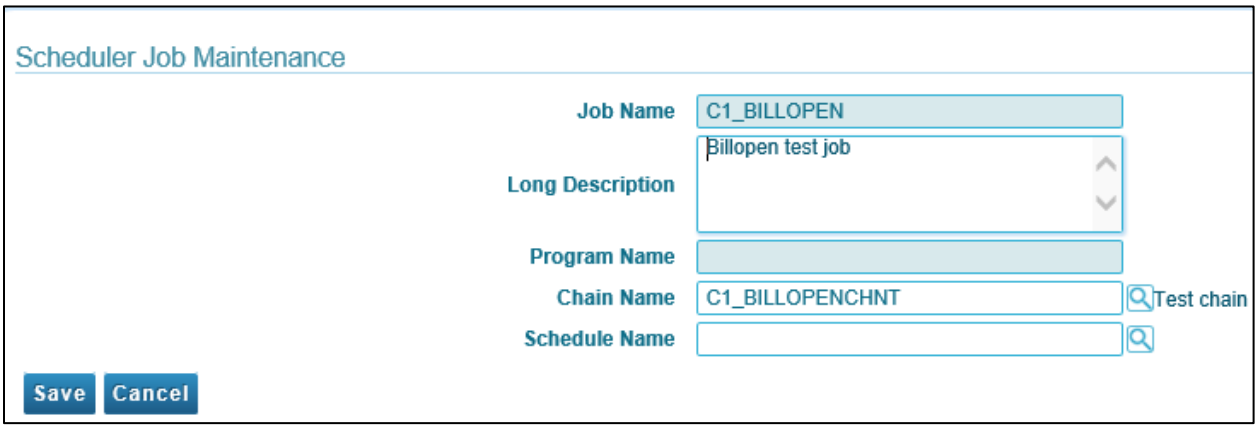


Figure 24: Scheduler Job Maintenance Screen

4. Edit the required fields. Note that you cannot edit the Job Name.
5. Click **Save**. The changes are saved.

2.4.5 Deleting a Job

To delete an existing job:

1. From the **Menu** tab, select **Scheduler** and then click **Job**. The **Scheduler Job Search** zone appears.
2. Search a job which you want to delete. For more information, refer to the Searching a Job section.
3. Click **Delete** ( ) icon corresponding to the respective Job name.
4. A confirmation message appears indicating "Are you sure you want to delete this object?"
5. Click **OK** to confirm deletion.

2.4.6 Submitting a Job

Most batch jobs are submitted via a batch scheduler. Batch jobs may be configured as Timed, which means they will automatically be run based on the set timer frequency.

However, if you want to execute another predefined job, you have an option to submit the same using the **Submit Job** icon. When you click on Submit Job icon, it triggers the job and starts the job execution immediately.

To submit an existing job:

1. From the **Menu** tab, select **Scheduler** and then click **Job**. The **Scheduler Job Search** zone appears.
2. Search a job which is to be submitted. For more information, refer to the Searching a Job section.
3. Click **Submit Job** ( ) icon corresponding to the respective job name.
4. A confirmation message appears indicating "Are you sure you want to submit this job?"
5. Click **OK** to confirm submission.

2.5 Job Monitor

This section explains the Job Monitor feature in ORMB. The job monitor allows you to see the status of submitted jobs. This feature allows you to

- View all running jobs
- View the steps and step status of a specific job
- Viewing completed jobs based on time interval

To monitor jobs:

1. From the **Menu** tab, select **Scheduler** and then click **Job Monitor**. The **Scheduler Monitoring Jobs** zone appears. It has following three fields:

Field Name	Description	Comments
DBMS Job Status	Allows you to search by status of the job. The values are: • Completed • In Progress	**Note:** All jobs which are succeeded, failed or stopped are considered as Complete.
Start Date	Allows you to search by starting date of the job.	**Note:** You must specify the date in MM-DD-YYYY format.
End Date	Allows you to search by ending date of the job.	**Note:** You must specify the date in MM-DD-YYYY format.

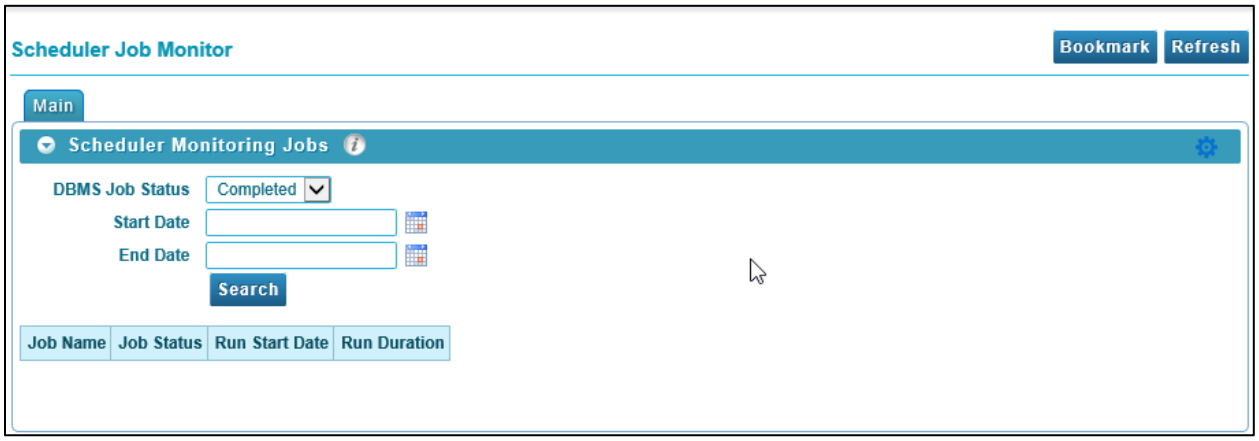


Figure 25: Scheduler Monitoring Jobs

2. Select a DBMS Job Status from the drop-down list. The default value is set as Completed. You can also search by 'In Progress' status.
3. Enter a Start or End date in MM-DD-YYYY format.

Tip: You can also use **Date Picker** ( ) icon to select the date.

4. Click **Search**. The jobs with Completed status appear as results.

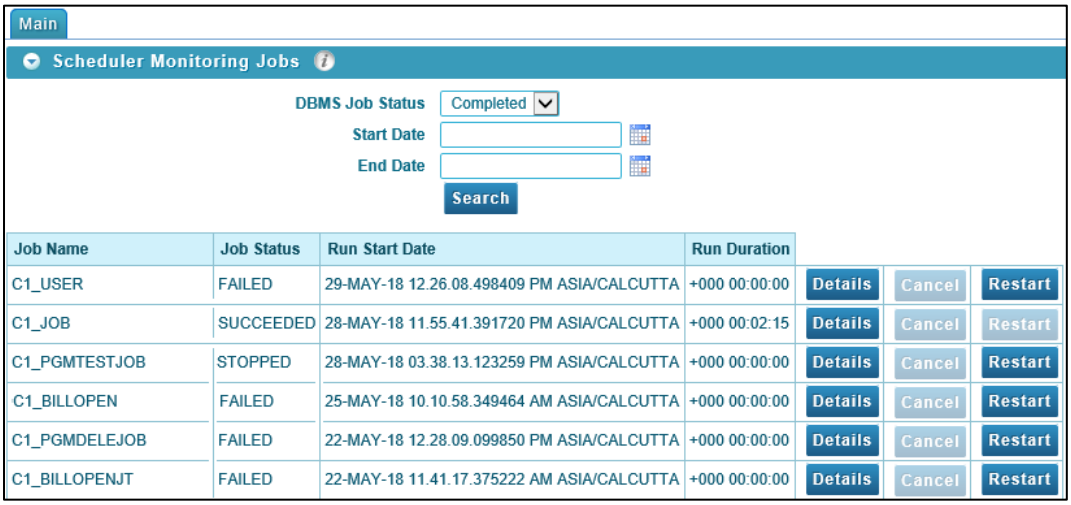


Figure 26: Job Monitor – Complete Status

5. To view the details, click Details.
6. To start the failed job, click Restart. A confirmation message appears indicating "Are you sure you want to restart this job?"
7. Click **OK**.

To monitor 'In Progress' jobs:

1. Select 'In Progress' from the **DBMS Job Status** drop-down list.
2. Click **Search**.
3. All the jobs which have 'In Progress' status appear as results in tabular format.
4. To view the details, click Details.
5. To cancel any ongoing job, click Cancel.

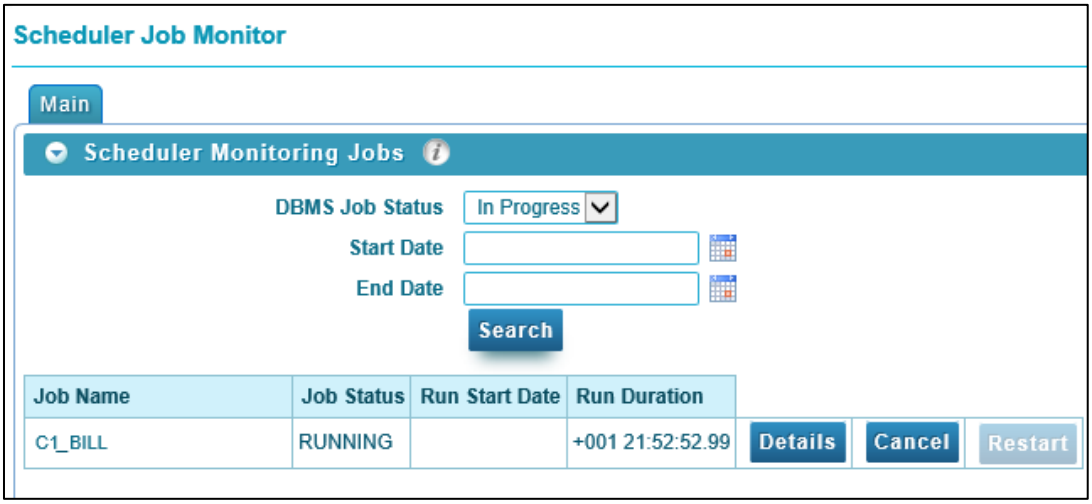


Figure 27: Job Monitor - In Progress Status

