

Batch Scheduler

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intellicus

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For details, visit: <http://www.intellicus.com/acknowledgements.htm>

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Batch Scheduler

Reports can be scheduled on an individual basis. However, if you have many reports to schedule, scheduling on a one-by-one basis can become burdensome. As an alternative, you can use jobs to execute scheduled activities.

Batch jobs are non-interactive programs that run reports in the background. Scheduling of reports is very helpful for better utilization of server and printer resources. Reports that take longer to run can be scheduled to save your time. Report that needs processing of large volume of data and need server and printer resources for long time can be scheduled to be generated over the non-peak business hours when load on servers would be relatively low.

By scheduling a report, it can be sent to multiple deliverables at a time, which is otherwise not possible.

Scheduler component of Intellicus provides you the power to plan report generation in advance:

- Date and time when a report should be generated
- Output format(s) and delivery option(s)
- How the report generation should take place

Note: It is possible to have history of reports generated through schedule.

Schedules can be created by:

- Administrator
- User having Batch Report Scheduler system privileges
- All users (They can create private schedules)

How does it work

Setup a job

A job is a container of scheduled processing activities that operates in a coordinated manner. Instead of scheduling individual reports, a job allows multiple reports to execute using the same schedule.

A job is made up of information like the name of the report that will be executed, details of output type and its delivery options as well as time when the job should be executed.

Setup a task

A task is made up of name of the report to be executed and details of its delivery option.

A task is created and stored in Intellicus repository and selected during setting up a job.

Setup a schedule

A schedule has information related to time and frequency of report execution. A schedule can be designed to be executed only once (immediately or at a pre-set time) as well as re-occurring in a time span.

Schedule is created and stored in Intellicus repository and is selected during setting up a job.

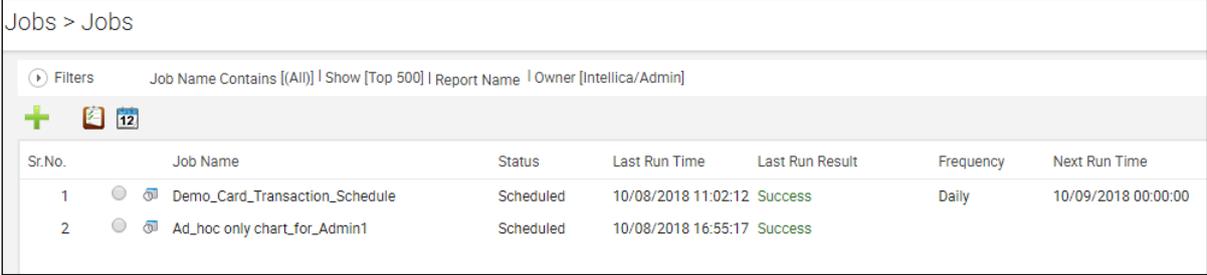
You can select a pre-designed schedule as well as create a new schedule during job setup.

Working with Jobs

Intellicus supports report execution and delivery through pre-set jobs. A job is attached to a task (information about which report should be executed and how it should be delivered) and a schedule (it defines when the job should be executed).

Job is created by clicking **Add Job** on the **Jobs** page. Created jobs are also listed on the **Jobs** page.

Click Navigation > Schedule > Jobs to open **Jobs** page.



The screenshot shows the 'Jobs > Jobs' page. At the top, there is a filter bar with 'Filters' and 'Job Name Contains [(All)] | Show [Top 500] | Report Name | Owner [Intellica/Admin]'. Below the filter bar, there are icons for adding, deleting, and refreshing. The main content is a table with the following columns: Sr.No., Job Name, Status, Last Run Time, Last Run Result, Frequency, and Next Run Time. Two jobs are listed:

Sr.No.	Job Name	Status	Last Run Time	Last Run Result	Frequency	Next Run Time
1	Demo_Card_Transaction_Schedule	Scheduled	10/08/2018 11:02:12	Success	Daily	10/09/2018 00:00:00
2	Ad_hoc only chart_for_Admin1	Scheduled	10/08/2018 16:55:17	Success		

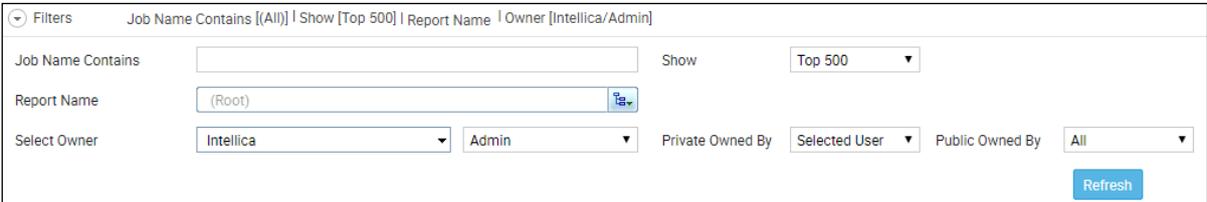
Figure 1: Jobs page

From this page you can open page to create, modify or delete a job and also navigate to the page that lists Schedules and Tasks.

The page is designed to list up to 4000 jobs. By default, it displays first 500 jobs. You can filter the jobs to remove unwanted jobs from the list.

The Filters area

When **Jobs** page opens, **Filter** tab remains collapsed. Click the tab-header to open the filter tab. The tab-header also displays current filter settings.



The screenshot shows the 'Filters' area of the Jobs page. It includes the following fields and controls:

- Job Name Contains:
- Show:
- Report Name:
- Select Owner:
- Private Owned By:
- Public Owned By:
-

Figure 2: Filter area of Jobs page

You can filter jobs by Report Name, Owner. It is possible to specify multiple criteria to filter the list.

In **Job Name Contains**, specify a few characters that the jobs you are searching contain. For example, if you specify "2009", all the jobs whose name contains "2009" will be listed.

In **Report Name**, specify the report to list the jobs that will execute the specified report. Reports are deployed in a folder. Click  to open object selector and select the report.

In **Select Owner**, specify **Organization** and **User** name who owns the job.

By default, a super administrator can list all self-owned jobs and public job created by others.

In **Private Owned By**, select *None* to not view any private jobs, select *Selected User* to view selected user's private jobs, select *Selected Org* to view private jobs of users belonging to the selected organization (in **Select Owner**) and *ALL* to view private jobs owned by all the users.

In **Public Owned By**, select *None* to not view any public jobs, select *Selected User* to view selected user's public jobs, select *Selected Org* to view public jobs of users belonging to the selected organization (in **Select Owner**) and *ALL* to view public jobs owned by all the users.

Note: Jobs are listed in the ascending order of the time of next execution.

Filtering the list

Select / specify filter criteria and click **Refresh** button. List of jobs having entries that meet the filter criteria will appear.

The Result area

Jobs meeting the filter criteria are listed in **Result area**. If the rows are more than what can be displayed on a page, application displays a pagination bar at the bottom of the list. Use buttons on this toolbar to navigate to list jobs that are on other pages.

For each job, the following details can be listed:

- **Job Name:** The name given to a job.
- **Status:** *Running* if the time span of the job is not over. *Completed* if the time span of the job is completed. *Error* if the job started but could not be completed successfully. *Suspended* if the job is marked as suspended.
- **Last Run Time:** The time when the report was run last time.
- **Last Run Result:** The outcome of last run of the job. *Success*, if report was generated successfully. *Error*, if report could not be generated.
- **Schedule Name:** The name of the schedule with which the job is associated.
- **Frequency:** Frequency of occurrence of the schedule.
- **Task Name:** The name of the task that is going to be implemented by this job.
- **Report Name:** The name of the report that this job is going to generate.
- **Owner:** The user Id who created the job.
- **Next Run Time:** The time when the job will be run next.

Add or remove columns in the list

By adding or removing columns you may list only the columns that you need.

Right-click on title-bar to open a context-menu. Context-menu has checkboxes of columns that can be displayed. Check name of the column to display and clear the column that you don't want to display. The columns will be instantly added / removed from the view.

To close the context-menu, click anywhere on the title-bar.

Sorting the list

It is quicker to find the desired item if the reference is sorted. To sort the list by a column, click its column-title. The list will be sorted in ascending order of the column. Look for an arrow icon on the right edge of the column. It indicates current sort order. Click the column once more to sort the list in opposite order. Clicking another column's title will sort the list in ascending order of that column.

Operations on selected Job

Click anywhere on the job row to open and modify the job details. When you click the option button in the job row, toolbar opens.



Figure 3: Toolbar on Jobs list page

On toolbar, click **Add Like**  button to create a job having all or most of the details same as the selected job. When you click this button, **Job Details** page opens having the details filled in like that of the selected job. To add a new job, change **Name** and other information that needs change. This way, you not only reduce chances of entry errors, but also save time in adding the job.

To create a new job from scratch, click  tool button. **Job Details** page will open where you need to fill in the details.

To modify the selected Job, you may also click **Modify**  button from the toolbar. Details of the selected page will be opened on Job Details where you can make changes and save the modified job.

To delete the job, click  **Delete** button from the toolbar.

Note: If you delete a job that is currently being executed, it will continue to execute.

Click  to open **Jobs Execution Status** page and view chart depicting Status Analysis of Jobs.

Add Job page

You reach to **Add Job** page when you click **Add Job**  button or **Add Like**  button from **Jobs** page.

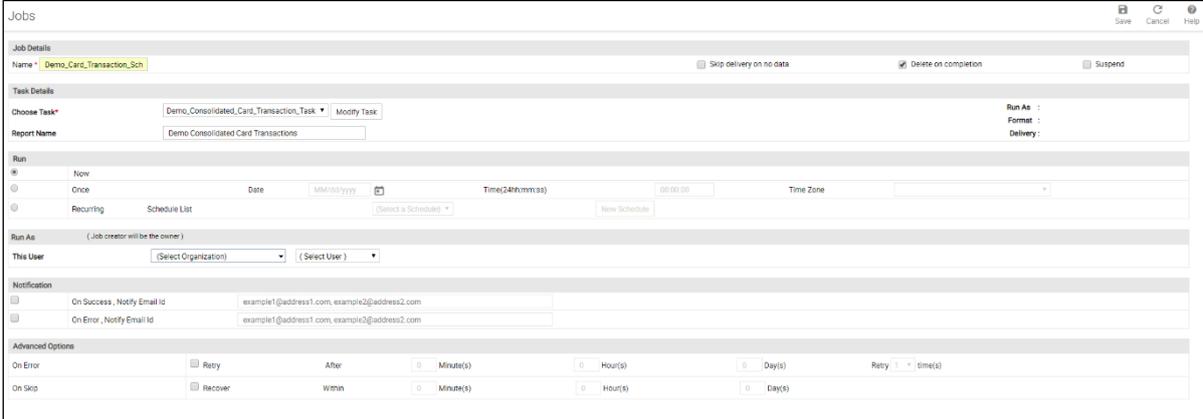


Figure 4: Add Job page

You need to specify the following information to add a new job:

Job details

- **Name:** A name to uniquely identify this Job.
- **Skip delivery on no data:** If selected, report will be delivered to selected delivery options only if the report has any data. Otherwise job will be skipped.
- **Delete on completion:** If selected, job will be deleted after execution for *Run Now* and *Once*. For *Recurring*, it will be deleted if further execution is not scheduled after last execution.
- **Suspend:** If selected, that job will not be implemented that time onwards.

Task Details

- **Choose Task:** Select a task from pre-set tasks. Click the Modify Task button to modify the selected task.
Note: If you have opened this page for adding a job you will notice that **Run As**, **Format** and **Delivery** remain blank. This information will be displayed when this page is opened for modifying a task.
- **Report Name:** A task is associated with a report. The report name associated with the selected task appears here automatically.

Run

- **Now:** To execute the job now.
- **Once:** To execute the job once. (at given date and time). Select a Date. (For explanation of date format, click here). Specify time in terms of 24 hours format. In **Time Zone**, select the time zone as per which time is specified. For example, 09:09:09 in GMT. Report server will execute the job at 09:09:09 GMT. If Time zone is not selected, job will be executed as per report server's time zone.
- **Recurring:** To execute the task as per one of the pre-set schedules. Select the schedule from **Schedule List**. Click **New Schedule** button to create a new schedule.

Run As

To run the job in the name of a specific user, select organization ID and User ID. Please note that **Run As** set in job overrides **Run As** set in task.

Notification

If you want to send a notification to an e-mail recipient:

- **On Success:** To send a notification on success of the job. Select the check box **On Success, Notify Email Id** to and specify the e-mail ID.
- **On Failure:** To send a notification on failure of the job. Select check box **On Error, Notify Email Id** to and specify the e-mail Id.

Advanced Options

On Error

Once report generation starts and due to any reason, it does not get completed, it is an error. In this case, to retry the report generation, select checkbox **Retry** and specify the time when Report Server should retry the task. Values can be given in terms of

- **Minutes:** The number of minutes after which it should be retried.
- **Hours:** The number of hours after which it should be retried.
- **Days:** The number of days after which it should be retried.
- **Retry times:** The number of times it should be retried.

If more than one value is specified, they would be added. For example, after 2 days, 4 hours and 10 minutes.

On Skip

If the report generation could not start as per calendar, it is considered skipped. In this case to recover (try once again) the calendar, select the check box **Recover** and specify the time when it should retry the task. Values can be given in terms of:

- **Minutes:** The number of minutes after which it should be recovered.
- **Hours:** The number of hours after which it should be recovered.
- **Days:** The number of days after which it should be retried.

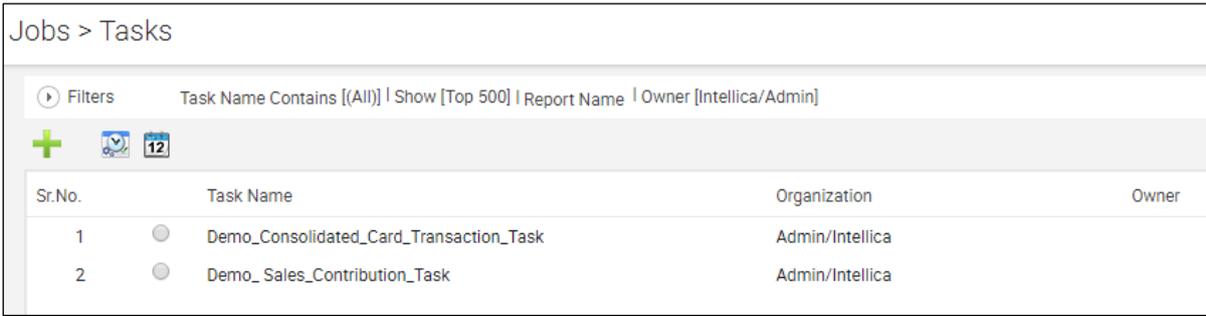
Working with Tasks

A task is made up of name of the report to be executed and details of its delivery options.

A task is created and stored in Intellicus repository and selected during setting up a job.

Task is created to **Add Task** page. Created tasks are listed on **Tasks** page.

To open **Tasks** page, click  button from **Jobs** page.



The screenshot shows the 'Jobs > Tasks' page. At the top, there is a breadcrumb 'Jobs > Tasks'. Below it is a filter bar with a 'Filters' dropdown and the text 'Task Name Contains [(All)] | Show [Top 500] | Report Name | Owner [Intellica/Admin]'. There are three icons: a green plus sign, a calendar icon, and a clock icon. Below the filter bar is a table with the following data:

Sr.No.	Task Name	Organization	Owner
1	Demo_Consolidated_Card_Transaction_Task	Admin/Intellica	
2	Demo_Sales_Contribution_Task	Admin/Intellica	

Figure 5: Tasks list page

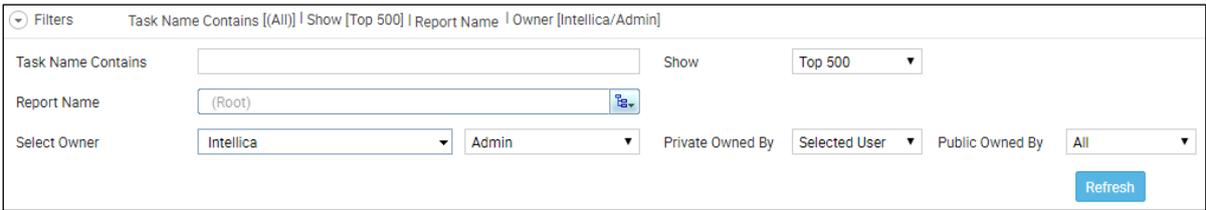
This page displays list of tasks. Also use this page to create, modify or delete a task as well as navigate to the page that lists **Schedules** and **Jobs**.

The page is designed to list up to 4000 tasks. By default, it displays first 500 tasks. In **Show**, you can select a value among 100, 500, 1000 and 4000.

You can filter the tasks to hide unwanted tasks from the list.

The Filters area

When the page opens, Filter tab remains collapsed. Click the tab-header to expand it. The tab-header also displays current filter settings. Tasks can be filtered by **Report Name** and **Owner**. You can specify one or both the criteria to filter the list.



The screenshot shows the filter area of the Tasks page. It includes a 'Filters' dropdown and the text 'Task Name Contains [(All)] | Show [Top 500] | Report Name | Owner [Intellica/Admin]'. Below this are several input fields and dropdown menus:

- Task Name Contains**: A text input field.
- Show**: A dropdown menu set to 'Top 500'.
- Report Name**: A dropdown menu set to '(Root)' with a small icon to the right.
- Select Owner**: A dropdown menu set to 'Intellica'.
- Admin**: A dropdown menu set to 'Admin'.
- Private Owned By**: A dropdown menu set to 'Selected User'.
- Public Owned By**: A dropdown menu set to 'All'.
- Refresh**: A blue button.

Figure 6: Filter area of Tasks page

In **Task Name Contains**, specify a few characters that the tasks you are searching contain. For example, if you specify "2009", all the tasks whose name contains "2009" will be listed.

In **Report Name**, specify the report to list the tasks that will execute the specified report. Reports are deployed in a folder. Click  to open object selector to select the report.

In **Select Owner**, specify **Organization** and **User** name who owns the task.

By default, a super administrator can list all self-owned tasks and public tasks created by others.

In **Private Owned By**, select *None* to not view any private tasks, select *Selected User* to view selected user's private tasks, select *Selected Org* to view private tasks of users belonging to the selected organization (in *Select Owner*) and *ALL* to view private tasks owned by all the users.

In **Public Owned By**, select *None* to not view any public tasks, select *Selected User* to view selected user's public tasks, select *Selected Org* to view public tasks of users belonging to the selected organization (in *Select Owner*) and *ALL* to view public tasks owned by all the users.

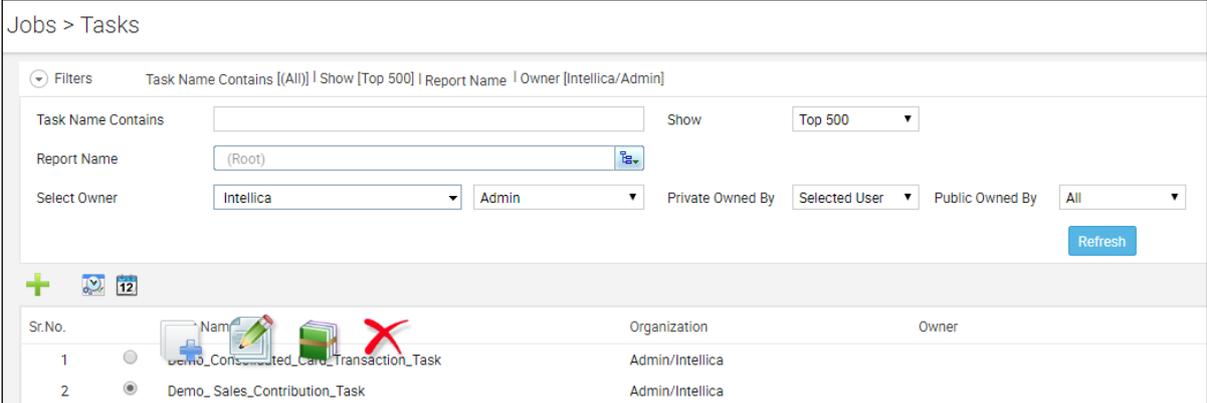
Filtering the list

Select / specify filter criteria and click **Refresh** button. Tasks that meet specified filter criteria will be listed.

The Result area

Tasks meeting the filter criteria are listed in Result area. If rows are more than what can be displayed on a page, application displays a pagination bar at the bottom of the list. Use buttons on this toolbar to navigate to list tasks that are on other pages.

For each task, **Task Name** and its **Owner** are listed.



The screenshot shows the 'Jobs > Tasks' interface. At the top, there are filter options: 'Task Name Contains [(All)] | Show [Top 500] | Report Name | Owner [Intellica/Admin]'. Below this, there are input fields for 'Task Name Contains', 'Report Name' (set to '(Root)'), and 'Select Owner' (set to 'Intellica'). There are also dropdown menus for 'Admin', 'Private Owned By' (set to 'Selected User'), and 'Public Owned By' (set to 'All'). A 'Refresh' button is located at the bottom right of the filter section. Below the filter section is a toolbar with icons for adding, deleting, and refreshing. The main area contains a table with the following data:

Sr.No.	Name	Organization	Owner
1	Demo_Consumed_Card_Transaction_Task	Admin/Intellica	
2	Demo_Sales_Contribution_Task	Admin/Intellica	

Figure 7: Results area of task page

Operations on selected task

Click anywhere on the task row to open and modify the task details. When you click the option button in the task row, toolbar opens.

On toolbar, click **Add Like**  button to create a task having all or most of the details same as the selected task. When you click this button, **Task Details** page opens having the details filled in like that of the selected task. To add a new task, change Name and other information. This way, you not only reduce chances of entry errors, but also save time in adding the task.

To create a new task from scratch, click  tool button. **Task Details** page will open where you need to fill in the details.

To modify the selected task, click **Modify**  button from the toolbar. Details of the selected task will be opened on **Task Details** where you can make changes and save the modified task.

To delete the task, click **Delete**  button from the toolbar.

Note: You cannot delete a task that is associated with a job.

Click  to open **Associated Job List** page to view jobs with which this task is attached.

Add Task page

You reach to Add Task page when you click **Add Task**  button or **Add Like**  button from **Jobs** page.

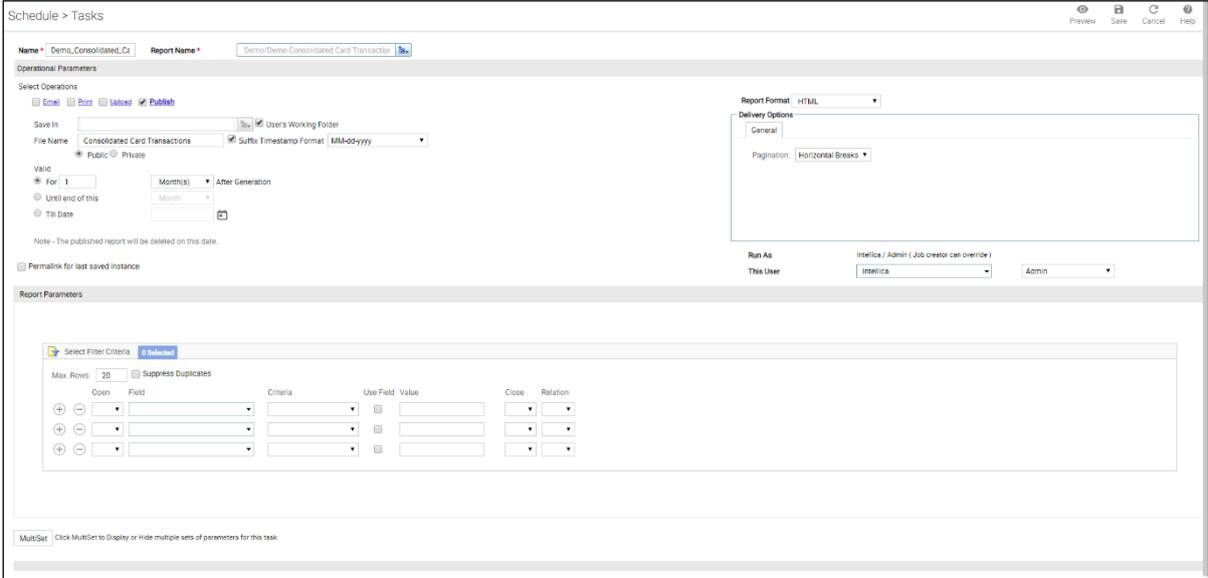


Figure 8: Setting up a task

In **Name**, specify a unique name for this entry. This name will be used to refer to this task.

Select a report for the task. Click  to open object selector to select report from. Information in **Operational Parameters** and **Report Parameters** will appear filled.

Specify the format of your report under **Report Format** along with its **Delivery Options**.

(Optional Step) To run the task in a specific user's name, select organization and the user from dropdown boxes under **Run As**.

Note: **Run As** is available to Administrators and Super Administrators only. It is not available to end-users having Scheduler privileges.

1. Specify required information for **Operational Parameters** and **Report Parameters**. The details for these are explained after these steps.
2. If the report is going to have multiple set of parameters (operational parameters as well as report parameters), specify **MultiSet** parameters. Detail of MultiSet is provided later in the chapter.
3. Click the **Save** button after specifying all the required information.

Task detail is saved and its entry appears on the **Tasks** page.

Click the **Cancel** button to abandon this task details. Click the **Preview** button to preview the report in selected format.

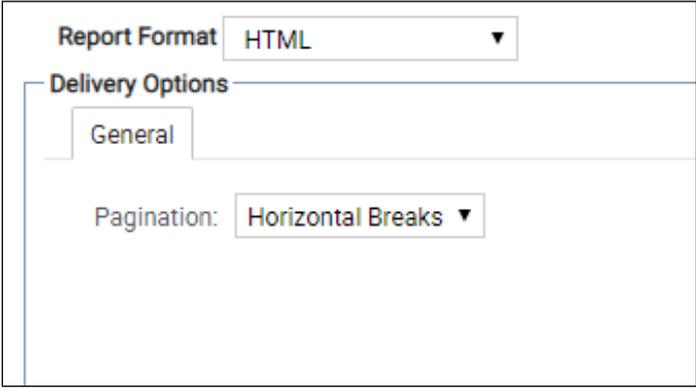
Note: The preview will fail if the report being scheduled has hidden parameter and / or shadow parameters (display parameters) used in the report. However, the schedule task will run as per expectations.

Operational Parameters

These parameters deal with format and delivery of the report.

Selecting Report Format

When you select a report format, Delivery Options area just below Report Format dropdown box will list the properties related to selected report format. You can set these properties as per need.

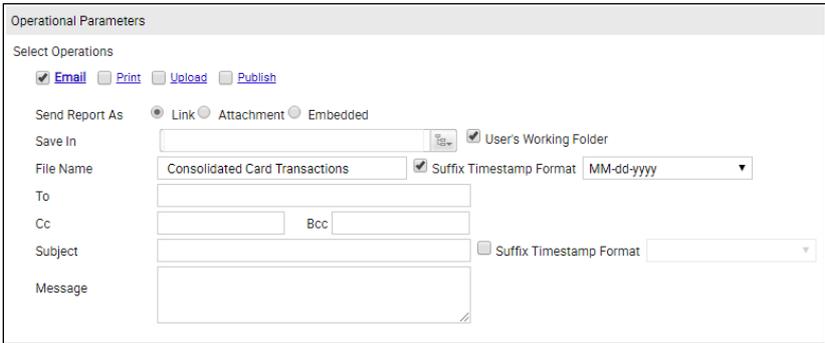


The screenshot shows a configuration panel for a report. At the top, there is a 'Report Format' dropdown menu with 'HTML' selected. Below this is a 'Delivery Options' section, which is a container for various settings. Inside this section, there is a 'General' tab selected. Under the 'General' tab, there is a 'Pagination' dropdown menu with 'Horizontal Breaks' selected.

Figure 9: Selecting report format

Email

To send a report through an email, check the **Email** checkbox.



The screenshot shows the 'Operational Parameters' dialog box. Under 'Select Operations', the 'Email' checkbox is checked, while 'Print', 'Upload', and 'Publish' are unchecked. The 'Send Report As' section has radio buttons for 'Link' (selected), 'Attachment', and 'Embedded'. The 'Save In' section has a folder selection button and a checked 'User's Working Folder' checkbox. The 'File Name' section has a text box containing 'Consolidated Card Transactions' and a checked 'Suffix Timestamp Format' checkbox with a dropdown menu showing 'MM-dd-yyyy'. There are text boxes for 'To', 'Cc', and 'Bcc', and a 'Subject' text box with an unchecked 'Suffix Timestamp Format' checkbox and a dropdown menu. A large text area for 'Message' is at the bottom.

Figure 10: Email details

In **Report Format**, select the required report format.

Depending on the selected output type, you can select **Delivery Options** for the report. For example, to zip the file before attaching it with the mail, ignoring page breaks, options specific to CSV or MS Excel output, etc.

A report can be mailed as an attachment or a link. Under **Send Report As**, select *Attachment* to send report attached with the mail. If the report is very heavy, or attachments are filtered by recipient's mail server, you may select *Link*. In this method, report is generated and saved on report server at specified location. When recipient clicks the link in the mail, report opens. To save the report in user's working folder, check **User's Working Folder**.

While sending report as a link, you also need to specify file name and location where report will be saved. Reports are saved inside a folder. In **Save In**, click  to open object selector and navigate to the desired folder.

To include date and time of report generation, check **Suffix Timestamp Format** checkbox and select a date format.

Specify e-mail IDs for **To**, **Cc** and **Bcc**. Use comma or semi colon to separate e-mail IDs.

Default message text set by your application administrator is displayed in **Message** box, which you can change if desired. You can include user parameters as well as system parameters in the message text. For example, if the report you are mailing has a parameter "ReportDate", then you can insert it as `<%ReportDate%>` in your message text, which will be replaced by report execution date at run time.

Getting parameter value

When a report is having multi-set parameters and their values come from an SQL, you can have parameter value as part of free form entry boxes:

- File Name
- To, Cc and Bcc

- Subject
- Message

To include a parameter in a field, enclose the parameter name in <% and %> and specify in respective entry box.

For example, Sales<%CountryCode%>Jan2006. Here, CountryCode is a parameter name that will be replaced by its actual value when the report is executed.

Print

Use this option when reports will be printed on paper. To get print related operational parameters, click the **Print** link as shown in the figure below.

Figure 11: Setting up Print as delivery option

To set up the Print operation,

1. Check the **Print** checkbox.
2. In **Report Format**, select the required report format. This will make sure you get exactly you have been viewing on screen in specific format.
3. In **Copies**, specify the number of copies to be printed.
4. In **Page Range**, select *All* to print all pages in the report, or specify the pages to be printed.
5. Select the **Printer Name** to be used to print the report. This dropdown box has all the printers installed on Report Server machine.

Note: If a print setting is associated with the report, the details will be displayed when you select the report.

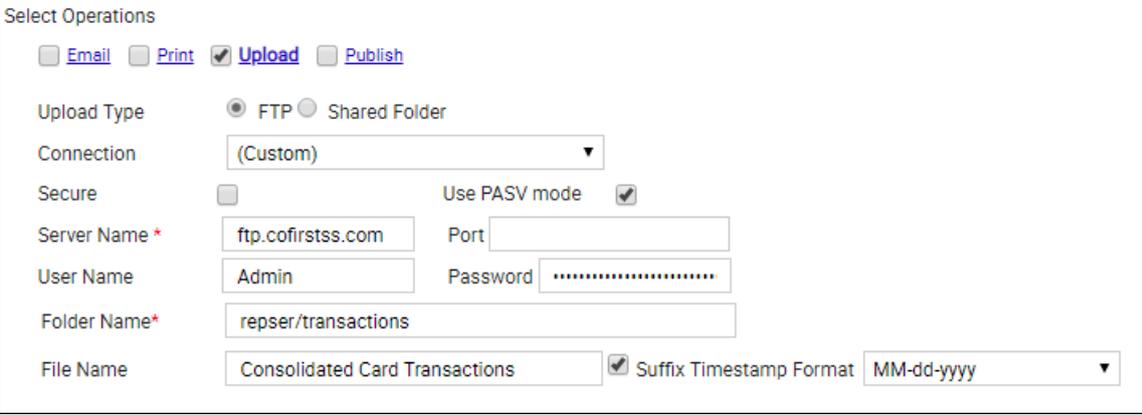
Raw Text output format is not available for Print.

Note: For selected report if print setting **is forceful**, you would not be able to edit the print parameters.

Now you can proceed with other steps of setting up the task.

Upload

A report can be uploaded to an FTP server as well as stored at a shared location. To get upload related operational parameters, click the **Upload** link.



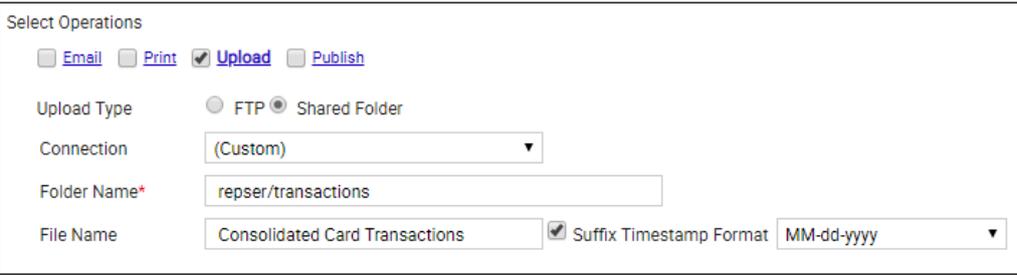
The screenshot shows a web form titled "Select Operations". At the top, there are four checkboxes: "Email", "Print", "Upload" (which is checked), and "Publish". Below this, the "Upload Type" section has two radio buttons: "FTP" (selected) and "Shared Folder". The "Connection" is set to "(Custom)". The "Secure" checkbox is unchecked, but the "Use PASV mode" checkbox is checked. The "Server Name" field contains "ftp.cofirstss.com", and the "Port" field is empty. The "User Name" field contains "Admin", and the "Password" field is masked with dots. The "Folder Name" field contains "repser/transactions". The "File Name" field contains "Consolidated Card Transactions", and the "Suffix Timestamp Format" checkbox is checked with a dropdown menu set to "MM-dd-yyyy".

Figure 12: Setting FTP as report delivery

Uploading the report on FTP Server requires the below information:

1. Check the **Upload** checkbox.
2. In **Report Format**, select the required report format. Select **Delivery Options**.
3. In Upload Type, select **FTP**.
4. To upload report on a secure FTP server, check **Secured** checkbox. Intellicus uses Secure Shell Protocol (SSH) protocol (TCP port 22) to provide secure file transfer. When you do this, **Use PASV mode** checkbox will be unchecked and disabled.
5. To upload in passive mode, check **Use PASV mode** checkbox.
6. In **Server Name** specify the server name.
7. In **Port**, specify the port that should be used for upload.
8. In **User Name**, specify the user name by which application to login into server.
9. In **Password**, specify the password to be used at the time of login.
10. In **Folder name**, specify the folder where the report should be placed. Specify "/" if you want to place the report at root.
11. In **File Name**, specify name by which the report will be stored on server.

A report can be saved on a shared folder on the network.



The screenshot shows the same "Select Operations" form as Figure 12, but with different settings. The "Upload Type" section now has "Shared Folder" selected. The "Folder Name" field contains "repser/transactions". The "File Name" field contains "Consolidated Card Transactions", and the "Suffix Timestamp Format" checkbox is checked with a dropdown menu set to "MM-dd-yyyy".

Figure 13: Saving on shared folder

To save on a shared folder, you need to specify the following:

1. Check the **Upload** checkbox.
2. In **Report Format**, select the required report format. Select **Delivery Options**.
3. In **Upload Type**, select *Shared Folder*.
4. In **Folder Name**, specify the network path in UNC format (\\computername\folder) where the report should be placed.
5. In **File Name**, specify the name by which the report will be stored.

Now you can proceed with other steps of setting up the task.

Publish

Check **Publish** checkbox.

You can publish a report in any of the available Report Formats. Publishing a report in desired format will save time (of selecting report format) when it is viewed. Even if you publish the report in a selected format, you can view it in other formats, if needed. Select an output format from **Report Format** dropdown.

Note: A report published in RAW TEXT will not be available for view in any of the other formats.

Depending on the selected output type, you can select **Delivery Options** for the report. For example, to zip the file before publishing, ignoring page breaks, options specific to CSV or MS Excel output, etc.

The screenshot shows a 'Select Operations' dialog box with the following elements:

- Four checkboxes: Email, Print, Upload, and Publish.
- 'Save In' field with a folder selector icon and a checked 'User's Working Folder' checkbox.
- 'File Name' field containing 'Consolidated Card Transactions' and a checked 'Suffix Timestamp Format' checkbox with a dropdown menu set to 'MM-dd-yyyy'.
- Radio buttons for 'Public' (selected) and 'Private'.
- 'Valid' section with three options:
 - For: '1' in a text box, 'Month(s)' in a dropdown, and 'After Generation'.
 - Until end of this: 'Month' in a dropdown.
 - Till Date: an empty text box with a calendar icon.
- A note: 'Note - The published report will be deleted on this date.'
- 'Permalink for last saved instance' checkbox.

Figure 14: Publish as task

In **Save In**, click  to open object selector to navigate and open the folder in which you want to save the report. Object Selector's features like multiple views, filtering and sorting makes it easier and quicker to find the desired folder. To save the report in users working folder, check User's Working Folder.

Though not mandatory, it is always good to specify a unique **File Name** for the published report. To include date and time of report generation, check **Suffix Timestamp Format** checkbox and select a date format.

You can keep the published report output accessible to yourself (select *Private*) or make it available for all (select *Public*).

Validity Options

A published report is available as per its validity period. After the validity period is lapsed, the report is removed from the list.

You have the following validity options for report publishing:

1. For a specific time period after generation

For example, for 2 months, 3 weeks, 6 hours, etc. Select this option button and specify the number followed by selecting unit (hour(s), day(s), week(s), month(s) and year(s)).

2. Up to end of a duration from generation

Select this option to keep the report published up to the end of the duration (hour, day, week, month and year). For example, at the end of this week, at the end of this year, etc.

3. Up to end of a specific time period

Select this option button to keep report published up to a specific date. For example, July 30, 2006.

Note: Report will not be available after the period / time duration is over.

A published report is stored on Report Server. It is recommended that you specify an expiry date. Deletion of the expired reports will free up the server space.

An expired report cannot be retrieved back. You may backup the reports to keep the output. This will make sure you have the data with you at the same time server space is not remain occupied for a report output.

Getting parameter value in file name

You can set parameter value as part of a free form entry field.

To include a parameter in a file name, enclose the parameter name in <% and %> and specify in File Name entry box.

For example, Sales<%CountryCode%>Jan2006. Here, CountryCode is a parameter name that will be replaced by its actual value when the report is executed.

Report Parameters

These are the values that are specified at run time. However, a report may or may not have report parameters.

MultiSet parameters

This is used to provide more than one set of operational parameters and report parameters. This is one of the very powerful features of Intellicus. Using Multiset parameters, you can at run time dynamically select the parameter values to run a report.

To do this, click **MultiSet**. The Multiset parameters area will open to specify required information about operational parameters and report parameters.

Multiset Parameter values can be:

- **Static:** Fix values will be specified for the parameters. These values can be specified on this page.
- **SQL:** SQL query will be used to fetch parameter values from database.

Providing Multiset Parameters

Click the **MultiSet** Button. Multiset Parameters area opens. Select one among Static or SQL.

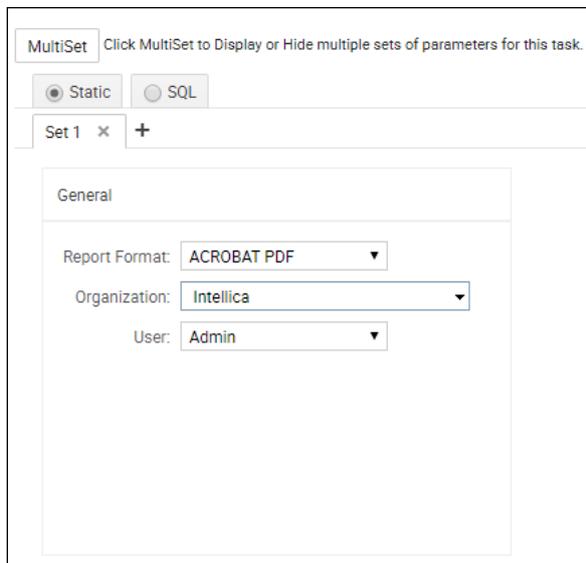


Figure 15: Specifying MultiSet Parameters

To specify Static Parameters, you need to follow the below steps:

1. Select the **Static** option. A check box would appear on the left side of each of the **Operational parameter** and **Report parameter**.
2. Select the parameters (by checking respective checkboxes on **Report Parameters** area) for which you want to provide multiple set of values. Entry boxes (under **MultiSet Parameters**) for selected parameters will become available.
3. Click the **Add** button. A row opens.
4. Specify values in respective entry boxes.
5. After providing all the values, click the **Save** button.

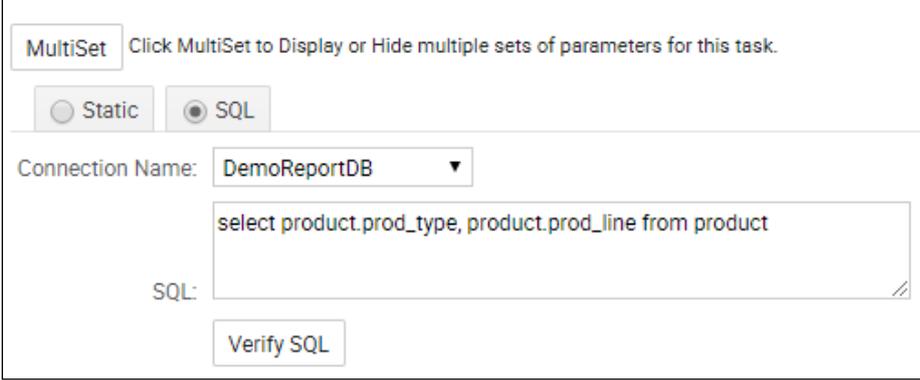
Click the **Add** button to get more number of rows. Click  button to remove the respective row.

Click **Reset** to reset the values like the ones set under operational parameters.

Click **Preview** to have a look at the report based on the parameters set here.

Getting Parameter values through an SQL

Use this when parameter values need to come directly from database using an SQL. This way you can dynamically select parameter values at run time.



The screenshot shows a web interface for configuring a task. At the top, there is a 'MultiSet' button and a tooltip that says 'Click MultiSet to Display or Hide multiple sets of parameters for this task.' Below this, there are two radio buttons: 'Static' (unselected) and 'SQL' (selected). Underneath, there is a 'Connection Name' dropdown menu with 'DemoReportDB' selected. Below the dropdown is a text area containing the SQL query: 'select product.prod_type, product.prod_line from product'. To the left of the text area is the label 'SQL:'. At the bottom of the form is a 'Verify SQL' button.

Figure 16: Specifying multiset parameter values through SQL

To specify parameter values through SQL, you need to follow the below steps:

1. Select the option SQL. Select the connection name to be used to get the parameters.
2. Specify the SQL.
3. Click Verify SQL to check if the SQL you specified is valid.

Working with task information without Intellicus web interface

Task information that you specify and submit is stored on the server as an XML file. This file can be downloaded, opened using an editor to modify the task information without using Intellicus Web Interface. After modification, you can upload it to the server.

Downloading task information

1. On **Task List** page, select the task that you want to download.
2. Click the **Modify** button. **Task** page opens.
3. Click the **Download XML** button. Click **Save** on the dialog box; specify the location where you want to save the file.

The file is downloaded. For modification, the file can be opened using any text-editor.

Uploading task information

The file having task information can be uploaded after modification. (You need not upload if it is not changed).

1. Click **Browse** button and select the file that you want to upload.
2. Once the file is selected, click **Upload XML** button.

The file is uploaded to the server.

Working with Schedules

A schedule has information related to time and frequency of report execution. A schedule can be designed to be executed only once (immediately or at a pre-set time) as well as re-occurring in a time span.

A schedule can be associated with one or multiple jobs.

Schedule is created on **Add Schedule** page. Created schedules are listed on **Schedules** page.

To open **Schedules** page, click  button from **Jobs** page.



Sr.No.	Schedule Name	Organization	Owner	Frequency
1	BI-monthly sales	Intellica/Admin	Monthly	Monthly
2	Card Transactions	Intellica/Admin	Daily	Daily

Figure 17: Schedules list

Use this page to get a list of schedules. Also use this page to create, modify or delete a schedule.

This page lists the **Schedule Name**, **Organization/Owner** and **Frequency**.

The Filters area

When the page opens, Filter tab remains collapsed. Click the tab-header to expand. The tab-header also displays current filter settings.

In **Schedule Name Contains**, specify a few characters that the schedule you are searching contains. For example, if you specify "2009", all the schedules whose name contains "2009" will be listed.

The page is designed to list up to 4000 schedules. By default, it displays first 500 schedules. In **Show**, you can select a value among 100, 500, 1000 and 4000.

You can filter the schedules to hide unwanted schedules from the list.

In **Select Owner**, specify **Organization** and **User** name who owns the schedule.

By default, a super administrator can list all self-owned schedules and public schedules created by others.

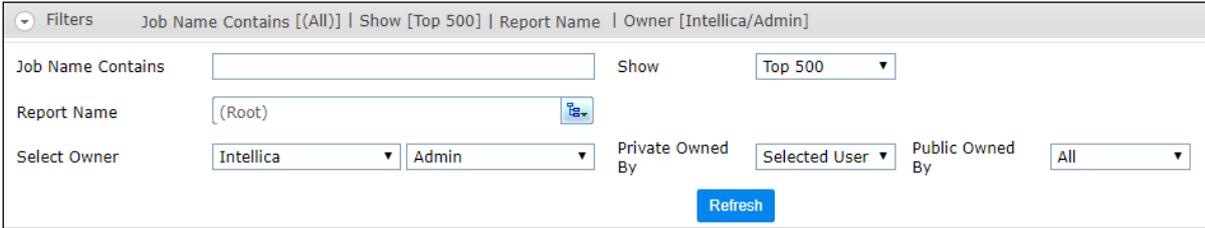


Figure 18: Filter tab of Schedules page

In **Private Owned By**, select *None* to not view any private schedules, select *Selected User* to view selected user's private schedules, select *Selected Org* to view private schedules of users belonging to the selected organization (in Select Owner) and *ALL* to view private schedules owned by all the users.

In **Public Owned By**, select *None* to not view any public schedules, select *Selected User* to view selected user's public schedules, select *Selected Org* to view public schedules of users belonging to the selected organization (in Select Owner) and *ALL* to view public schedules owned by all the users.

Filtering the list

Select / specify filter criteria and click Refresh button. Tasks that meet specified filter criteria will be listed.

The Result area

Schedules that meet the filter criteria are listed in Result area. If the rows are more than what can be displayed on a page, application displays a pagination bar at the bottom of the list. Use buttons on this toolbar to navigate to list tasks that are on other pages.

The list has **Schedule Name**, **Organization/Owner** and **Frequency** columns.

Operations on selected Schedule

Click anywhere on the schedule row to open and modify the schedule details. When you click the option button in the schedule row, following toolbar opens.



Figure 19: Toolbar on Schedule List page

On toolbar, click **Add Like**  button to create a schedule having all or most of the details same as the selected schedule. When you click this button, **Schedule Details** page opens having the details filled in like that of the selected schedule. To add a schedule, change Name and other information. This way, you not only reduce chances of entry errors, but also save time in adding the schedule.

To create a new schedule from scratch, click  tool button. **Schedule Details** page will open up where you need to fill in the details.

To modify the selected schedule, click **Modify**  button from the toolbar. Details of the selected schedule will be opened on **Schedule Details** page where you can make changes and save the modified schedule.

To delete the schedule, click **Delete**  button from the toolbar.

Note: You cannot delete a schedule that is associated with a job.

Click  to open **Associated Job List** page to view jobs with which this task is attached.

Add a schedule

You reach to **Add schedule** page when you click **Add Schedule**  button or **Add Like**  button from **Schedules** page.

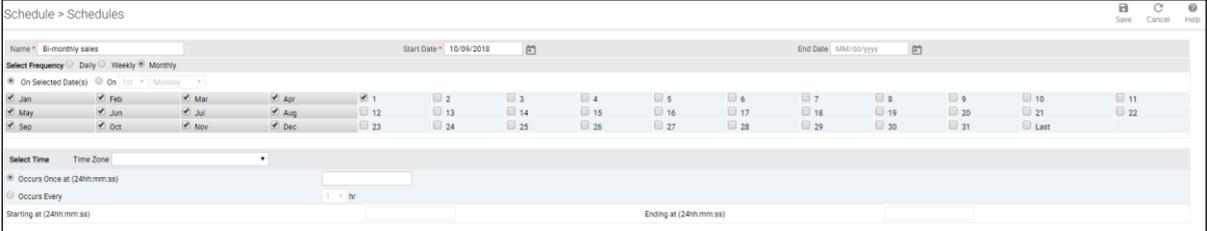


Figure 20: Creating a new schedule. Name entry box can't be left blank.

To create a whole new schedule, specify the below information:

1. In **Name**, specify a unique name for this entry. This name will be used to refer to this schedule. This can't be left blank.
2. In **Start Date** select the date from which schedule should be implemented. By default, today's date will appear there.
3. In **End Date**, select the date from which the schedule would not be available. If this is kept blank, this schedule will never expire and will continue to be available for implementation.
4. In **Select Frequency**, select the frequency. Details are given after these steps. This sets day(s) on which this schedule will be implemented.
5. Specify information under **Select Time**. Details are given after these steps. This will have the time when the schedule should be implemented.
6. Click the **Save** button to save the schedule details.

To abandon the process, truncate the changes and return to **Schedules** page, click the **Cancel** button.

Details

Frequency Details (daily, weekly, monthly)

The frequency is set in following ways:

- Daily (by days)
- Weekly (by weeks)
- Monthly (by months and dates / days within month)

To set frequency as Daily (by days)

1. While setting up schedule, under **Select Frequency**, select **Daily**. The page changes accordingly.
2. Under **Every**, specify the number of days after which the schedule should repeat itself.



The screenshot shows a form with the following elements:

- A dropdown menu labeled "Select Frequency" with "Daily" selected, and "Weekly" and "Monthly" as options.
- A text input field labeled "Every" containing the number "5".
- A label "Day(s)" next to the input field.

Figure 21: Setting up schedule to be repeated based on days

For example, if you want schedule to be repeated once in three days, (1st, 4th, 7th and so on), select 3 as number of days. To repeat the schedule every alternate day, select 2 as number of days. Once a week, select 7 as number of days.

To set frequency as Weekly

1. While setting up schedule, under **Select Frequency**, select **Weekly**. The page changes accordingly.
2. Under **Every**, select after how many weeks, the schedule should be repeated.
3. Select the check boxes of day when you want the schedule to repeat.



The screenshot shows a form with the following elements:

- A dropdown menu labeled "Select Frequency" with "Weekly" selected, and "Daily" and "Monthly" as options.
- A dropdown menu labeled "Every" with "1" selected and "Week(s)" as the unit.
- A grid of days with checkboxes: Sunday (checked), Monday (unchecked), Tuesday (checked), Wednesday (unchecked), Thursday (checked), Friday (checked), Saturday (unchecked).

Figure 22: Setting up schedule to be repeated by week-days

For example, if you want schedule to be repeated every 3 weeks, and implemented on Tuesday and Friday, select 3 in **Every** and select check boxes of **Monday** and **Wednesday**.

To set frequency as Monthly (by dates)

In this case, a schedule is set to repeat on selected months and on specific dates.



The screenshot shows a form with the following elements:

- A dropdown menu labeled "Select Frequency" with "Monthly" selected, and "Daily" and "Weekly" as options.
- A dropdown menu labeled "On Selected Date(s)" with "Monday" selected.
- A grid of months and dates: Jan (checked), Feb (unchecked), Mar (unchecked), Apr (checked), May (unchecked), Jun (unchecked), Jul (unchecked), Aug (unchecked), Sep (unchecked), Oct (unchecked), Nov (unchecked), Dec (checked). Dates 1, 3, 4, 6, and 25 are checked under their respective months.

Figure 23: Setting up schedule to be repeated on monthly basis (dates)

1. While setting up schedule, under **Select Frequency**, select **Monthly**. The page changes accordingly.
2. Select the months in which the schedule will be implemented.
3. Select the option **On Selected Date(s)**.
4. Select the dates on which you want the schedule to repeat.

For example, if you want schedule to be repeated in April, July, Oct and December on dates 1, 3, 4, 6, 25, select months Apr, Jul, Oct and Dec. Select dates 1, 3, 4, 6 and 25.

To set frequency as Monthly (by days)

Here a schedule is set to repeat on selected months and on a specific day



Select Frequency			Daily			Weekly			Monthly					
On Selected Date(s)			On 3rd			Friday								
<input checked="" type="checkbox"/> Jan	<input type="checkbox"/> Feb	<input checked="" type="checkbox"/> Mar	<input type="checkbox"/> Apr	<input checked="" type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5	<input type="checkbox"/> 6	<input type="checkbox"/> 7	<input type="checkbox"/> 8	<input type="checkbox"/> 9	<input type="checkbox"/> 10	<input type="checkbox"/> 11
<input checked="" type="checkbox"/> May	<input type="checkbox"/> Jun	<input checked="" type="checkbox"/> Jul	<input type="checkbox"/> Aug	<input type="checkbox"/> 12	<input type="checkbox"/> 13	<input type="checkbox"/> 14	<input type="checkbox"/> 15	<input type="checkbox"/> 16	<input type="checkbox"/> 17	<input type="checkbox"/> 18	<input type="checkbox"/> 19	<input type="checkbox"/> 20	<input type="checkbox"/> 21	<input type="checkbox"/> 22
<input checked="" type="checkbox"/> Sep	<input type="checkbox"/> Oct	<input checked="" type="checkbox"/> Nov	<input type="checkbox"/> Dec	<input type="checkbox"/> 23	<input type="checkbox"/> 24	<input type="checkbox"/> 25	<input type="checkbox"/> 26	<input type="checkbox"/> 27	<input type="checkbox"/> 28	<input type="checkbox"/> 29	<input type="checkbox"/> 30	<input type="checkbox"/> 31	<input type="checkbox"/> Last	<input type="checkbox"/> 22

Figure 24: Setting up schedule to be repeated on monthly basis (dates)

1. While setting up schedule, under **Select Frequency**, select **Monthly**. The page changes accordingly.
2. Select the option **On**.
3. Select the required option among 1st, 2nd, 3rd, 4th and 5th, followed by selection of day.
4. Select one or more month.

For example, if you want schedule to be repeated every 3rd Friday of January, February and October, select the months Jan, Feb and Oct. Select 3rd and Friday as day.

Time for implementing the schedule

This is the time when on given day, the schedule should be implemented. It can be made to:

Occur only once at a specific time on given day

Occur more than once (at given interval) on given day

Select the **Time Zone** as per which the schedule execution time will be entered on this page. For example, if you select GMT, schedule will be executed at specified time as per GMT. If Time zone is not selected, schedule will be executed as per report server's time zone.

Occur once at

Select this if you want the schedule to occur only once at a specified time.

For example, once only at 20:00:00 hours.



Select Time	Time Zone	*(GMT-5:00)America/New York[EST]
<input checked="" type="radio"/> Occurs Once at (24h:mm:ss)	20:00:00	
<input type="radio"/> Occurs Every	1 hr	
Starting at (24h:mm:ss)		Ending at (24h:mm:ss)

Figure 25: Specifying time for implementing the schedule

Click the option button on the left of **Occurs Once at** and specify the time in hh:mm:ss format in the entry box.

Occurs Every

Select this if you want the schedule to repeat at an interval of set number of hours.

Click the option button on the left of **Occurs Every** and select a number indicating the number of hours after which the schedule should repeat. Set time for **Starting at** and **Ending at** is the time between which this schedule will occur.

For example, Starting at 04:00:00 hour, every 2 hours up to 6:45:00 hours.

Jobs Execution Status

Execution status of all the reports executed as scheduled job, quick job as well as reports that were run in background can be viewed on **Jobs Execution Status** page. This page also lists reports that are currently executing and reports upcoming for execution. You can go to **Navigate > Schedule > Jobs Execution Status** to open this page.

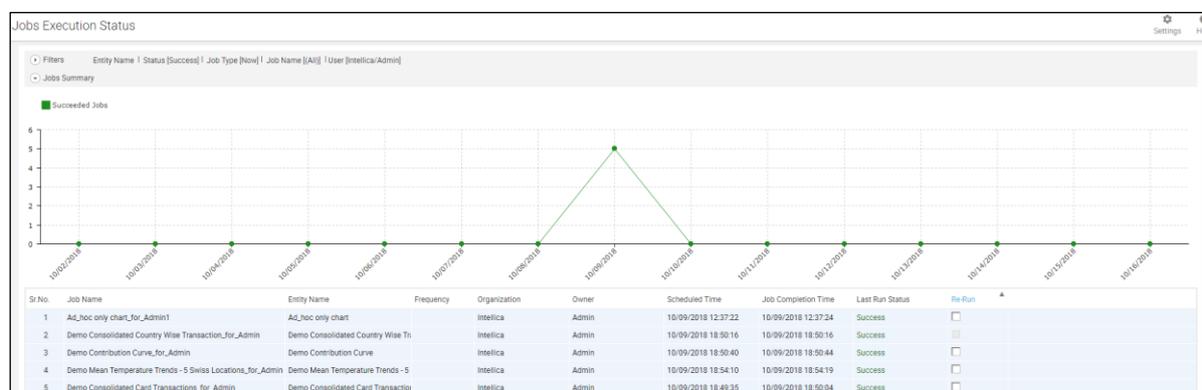


Figure 26: Job Execution Status

Data is displayed as chart and table (below the chart).

By default, data of jobs having execution date 7 days in past and 7 days in future is displayed. For example, if today is December 8 2009, data of jobs having execution date of December 1 2009 to December 15 2009 will be displayed.

Chart

Chart depicts jobs execution status in line chart (by date) for Completed jobs, Succeeded Jobs, Failed Jobs and Upcoming Jobs. By default, it displays Completed Jobs and upcoming jobs. If date range applied in filter is 3 days or less, chart will display hourly data. When you apply filter, the chart will change accordingly.

To view the point value, click corresponding line and hover on the point. A callout will be displayed showing the point value. To disable the value popup, click corresponding line again. When you click the data point, job detail pertaining to the clicked point will appear in a popup window.

The chart tab is collapsible. Click chart title to hide the chart tab. Click the title again to open chart tab.

List of Jobs

For each job, the following details are listed:

- Job Name
- Report Name
- Frequency
- Owner

- Scheduled Time
- Execution Time
- Last Run Status
- Re-Run

Frequency value of one-time jobs will be displayed as blank.

The Filters area

When the page opens, Filters tab remains collapsed. Click the tab-header to expand it. The tab-header also displays current filter settings.

Figure 27: Providing filters

By default, it displays first 500 jobs (no filter for report name, Owner Intellica/Admin). List of jobs can be filtered by:

- **Select Report(s):** Select a report. Select a folder to select all the reports in it. Click  to open object selector to make selection.
- **Date From and To:** Dates between which the jobs were executed / to be executed.
- **Select Owner:** Organization and User of the person who is owner of the job.
- **Job Name:** Name of job.
- **Job Run Time:** Select *All* to view all jobs, select *Completed* to list job that are completed (successful as well as failure), *Scheduled* to list the jobs that are currently executing and select *Pending* to list jobs that are yet to be executed.
- **Job Type:** Select the job type. *All*, to include all type of jobs; *Now*, *Once*, *Recurring* to include respective types; *Background* to include jobs run in background, *Post Approval* to include the jobs that executed reports supposed to undergo approval process.
- In **Private Owned By**, select *None* to not view any private jobs, select *Selected User* to view selected user's private jobs, select *Selected Org* to view private jobs of users belonging to the selected organization (in **Select Owner**) and *ALL* to view private jobs owned by all the users.
- **Show (selecting the number):** Select *Top 100* to view first 100 jobs from the filtered list, select *Top 500*, *Top 1000* and *Top 4000* to view first 500, 1000 and 4000 jobs respectively.
- **Status:** Select *Success*, *Failure* or *All* to include only successful jobs, failed jobs or all jobs respectively.
- **Frequency:** Available when selected Job Type is Recurring, select among *Daily*, *weekly*, *monthly* or *All*.
- In **Public Owned By**, select *None* to not view any public jobs, select *Selected User* to view selected user's public jobs, select *Selected Org* to view public jobs of users belonging to the selected organization (in **Select Owner**) and *ALL* to view public jobs owned by all the users.

Note: Jobs are listed in the ascending order of the time of execution.

Filtering the list

Provide filter criteria and click the **Refresh** button. List of jobs having jobs that meet the filter criteria will be listed and plotted on the chart.