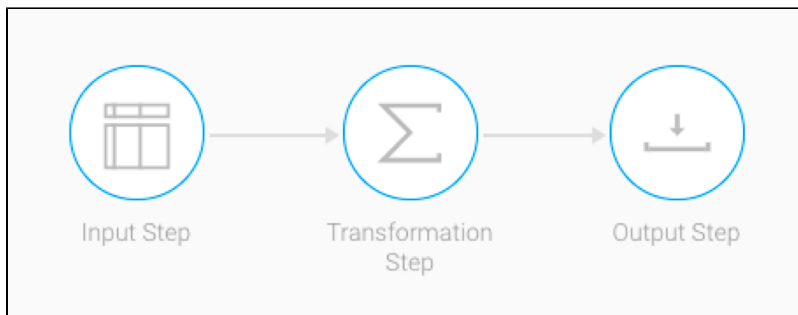


# Creating a Basic Transformation Flow

## Overview

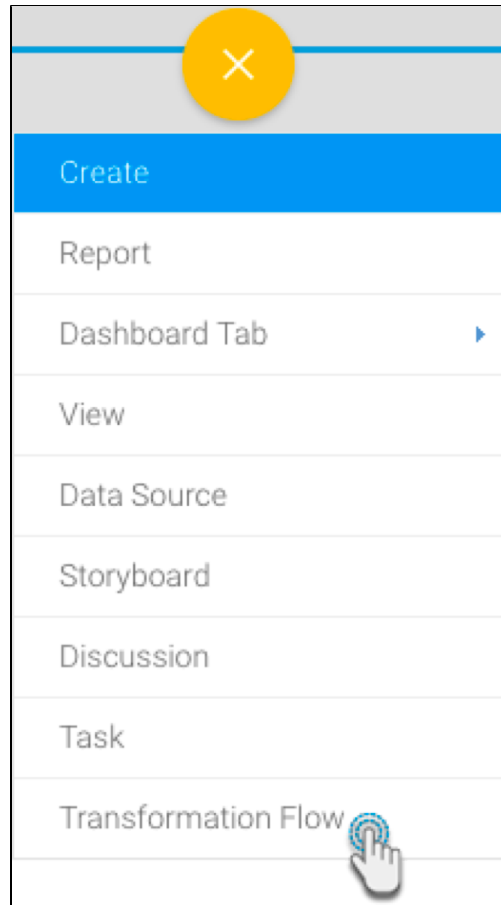
In this example, we will cover how to create a simple transformation flow, through the transformation flow builder. (Click [here](#) to learn about this builder and its components). This involves setting up an input step, adding a transformation step, and connecting the two together. Then add an output step and join the transformation step to it. Each step requires configuration when added to the flow.



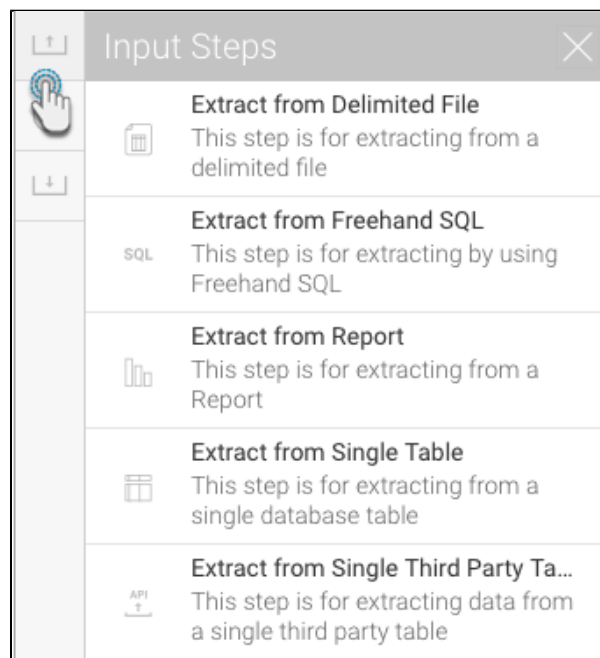
1. Click on the Create button in the top-right corner.
2. Then select the Transformation Flow option.



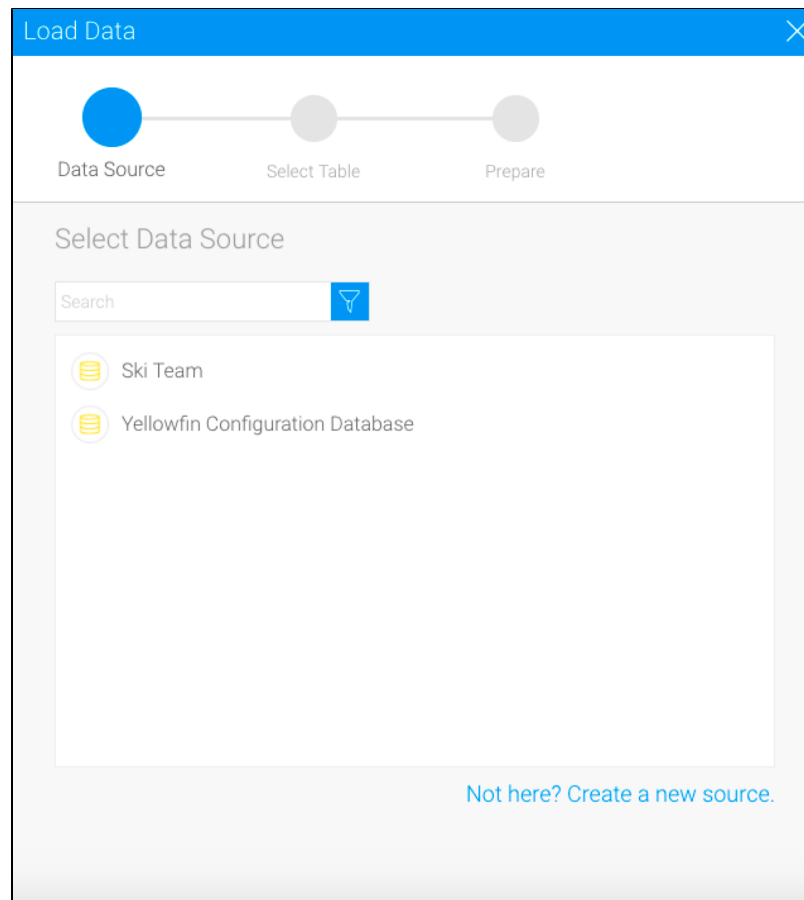
If you do not see this option, you may not have security access to transformation flows. Learn how to get access [here](#).



3. You will be taken to the transformation flow builder.
4. Hover your cursor over the Input Steps button on the left side to make the panel appear.



5. Drag an input step from this panel onto the canvas. (For this procedure, we will use the single database table as an example. Click [here](#) to learn about the different input steps.)
6. On doing so, a popup will appear, requiring information on the selected data source. (The steps within this popup will differ for each type of input step.)



7. Select the data source, and then a single table (since our selected input was a single table).

8. Then click on the Submit button.

The 'Load Data' dialog box has a blue header with a close button. Below the header is a progress bar with three steps: 'Ski Team' (completed), 'Select Table' (active), and 'Prepare'. The main area is titled 'Select Table:' and contains the instruction 'Choose the table you want to analyze from your selected data source'. A search bar is at the top right of the table list, and a dropdown menu shows the following tables: ADDRESS, ATHLETEFACT, BONEBREAKS (highlighted), CAMP, CAMPAIGN, COUNTRYGEOMETRY, and DATELOOKUP. A blue 'Submit' button is at the bottom right, with a hand icon pointing to it.

9. Next, click on the newly created input step in the canvas. Its details will appear in the configure flow panel.

The canvas on the left shows a single step icon labeled 'Ski Team - PUBLIC.BONEBREAKS' with a hand icon pointing to it. Below the canvas is a 'Data Preview Panel' with the text 'No Columns to display.' The right panel is titled 'Ski Team - PUBLIC.BONEBREAKS' and has tabs for 'Configure', 'Errors', and 'Details'. The 'Configure' tab is active, showing 'Select Fields to be extracted' with 'Select All' and 'Deselect All' links. Three fields are checked: CAMPID, ATHLETEID, and BONEGROUP. Below this is the 'Apply Filters to Extract Data' section with an 'Add Filters' link. A yellow 'Apply' button is at the bottom right.

10. **Note:** Clicking on a blank space in the canvas will show details of the entire flow, but clicking on a specific step shows only that step's configurations.

11. If required, you can rename the input step. Click on the Details tab in the Configuration panel, and provide a new name, or even an updated description.

Athlete Data

Configure

Errors

Details

Name:

Athlete Data

Description:

This step is for extracting from a single database table

12. Click on the Configure tab and select only the fields that you want data to be extracted from.
13. Click on the Add Filter button to apply filters to control the data being extracted, when the Filter popup appears.

Filters

Add Filter

-- Select Filter Field --

Submit

14. Once you're done with the configuration, click on the Apply button.

!

You must click on the Apply button to save the configuration details. If you do not click on this button, and click somewhere else first, you will lose the configuration details.

Athlete Data

ConfigureErrorsDetails

Select Fields to be extracted

Select AllDeselect All

☒ CAMPID

☒ ATHLETEID


☒ BONEGROUP

Apply Filters to Extract Data

Add Filters

Apply

15. **Note:** Clicking on the Apply button for the first time will bring up the following pop up. Click *Done* to close this popup. (It will not show up again for the current user's session. Alternatively, if you click on *Got It!*, the pop up will never be brought up again.)

 In preview mode, up to 200 row(s) are shown.  
For a complete run, initiate it from the browse page.

DoneGot It!

16. On doing so, the data preview panel will display the data extracted from the configured data source. A maximum row setting of 200 applies.

	CAMPID NUMERIC	ATHLETEID NUMERIC	BONEGRO... TEXT
1	12242	9154	Scapula
2	12301	9159	Carpus
3	12242	9199	Clavicle
4	12423	9266	Radius

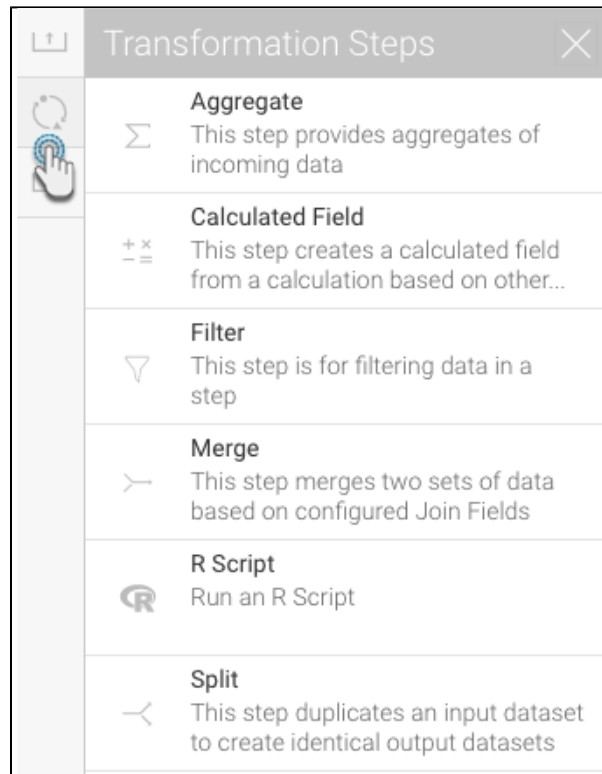
17. You can apply transformations to fields directly from the data preview panel. Click [here](#) to learn more.

18. A new Fields tab will also appear in the step configuration panel. Use this to manage the data fields that are extracted from the step.

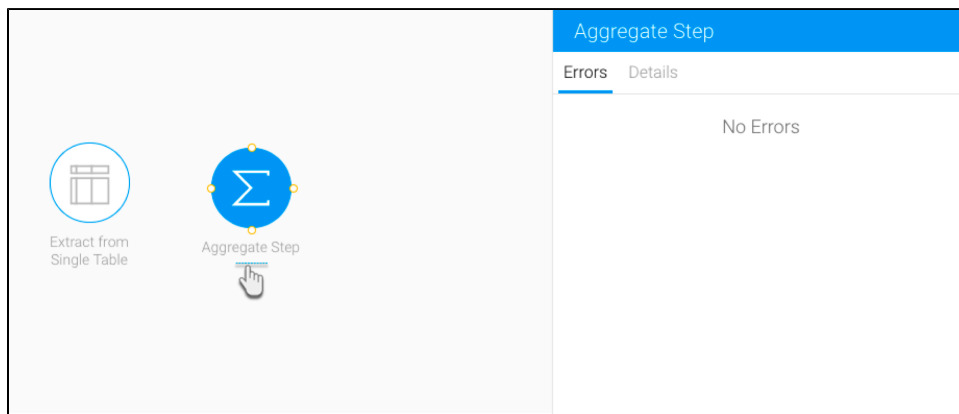
Extract from Single Table		
Configure	Fields	Errors
Details		
Inc.	Field	Type
<input checked="" type="checkbox"/>	CAMPID	Numeric
<input checked="" type="checkbox"/>	ATHLETEID	Numeric
<input checked="" type="checkbox"/>	BONEGROUP	Text

[go back](#)

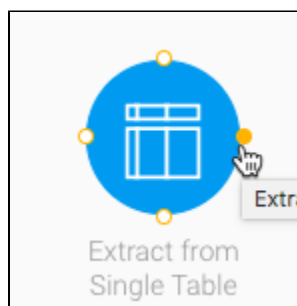
1. Next, expand the transformation step panel by hovering on its icon in the step builder, and then dragging a transformation step onto the canvas.



2. A transformation step will appear on the canvas.

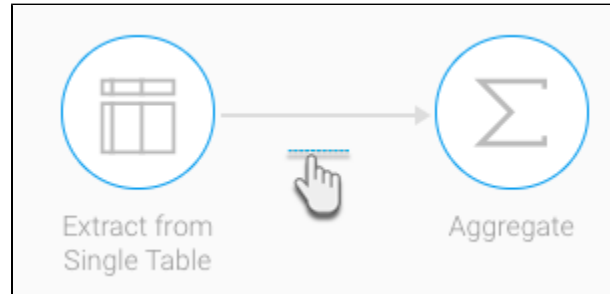


3. Next, create a connection between the input step and the transformation step. This is done by hovering over an input step to make connecting points appear.





4. Drag a point and connect it to the transformation step to form a relationship between them. (Click [here](#) to learn about rules involving connections, and how to break existing connections.)



5. Now you can configure the transformation step, by clicking on its icon and using the step configuration panel. (Each transformation step type will be configured differently.)
6. Save changes using the Apply button.

This screenshot shows the configuration interface for the 'Aggregate' step. On the left, a workflow diagram shows the 'Ski Team - PUBLIC.BONEBREAKS' source connected to the 'Aggregate' step. The 'Aggregate' step icon is highlighted with a hand cursor. On the right, the 'Aggregate' configuration panel is open, featuring tabs for 'Configure', 'Fields', 'Errors', and 'Details'. The 'Configure' tab is active, displaying three fields: 'CAMPID', 'ATHLETEID', and 'BONEGROUP'. Each field has a dropdown menu currently set to 'None'. A yellow 'Apply' button is located at the bottom right of the panel, with a hand cursor hovering over it.

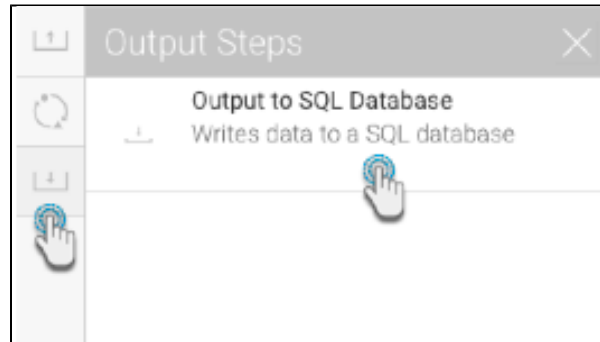
7. **Note:** When a field transformation is made to the data, a Transforms tab will appear in the step configuration panel.

This screenshot displays the configuration panel for the 'Extract from Delimited File' step. The panel has a blue header with the step name. Below the header are tabs for 'Configure', 'Fields', 'Transforms', 'Errors', and 'Details'. The 'Transforms' tab is selected and highlighted with a hand cursor. Under the 'Transforms' tab, there are three configuration options: 'Duplicate Field: Employment', 'Convert the type of a field: Income', and 'Number Precision: ID'. Each option has a text input field for specifying the transformation details.

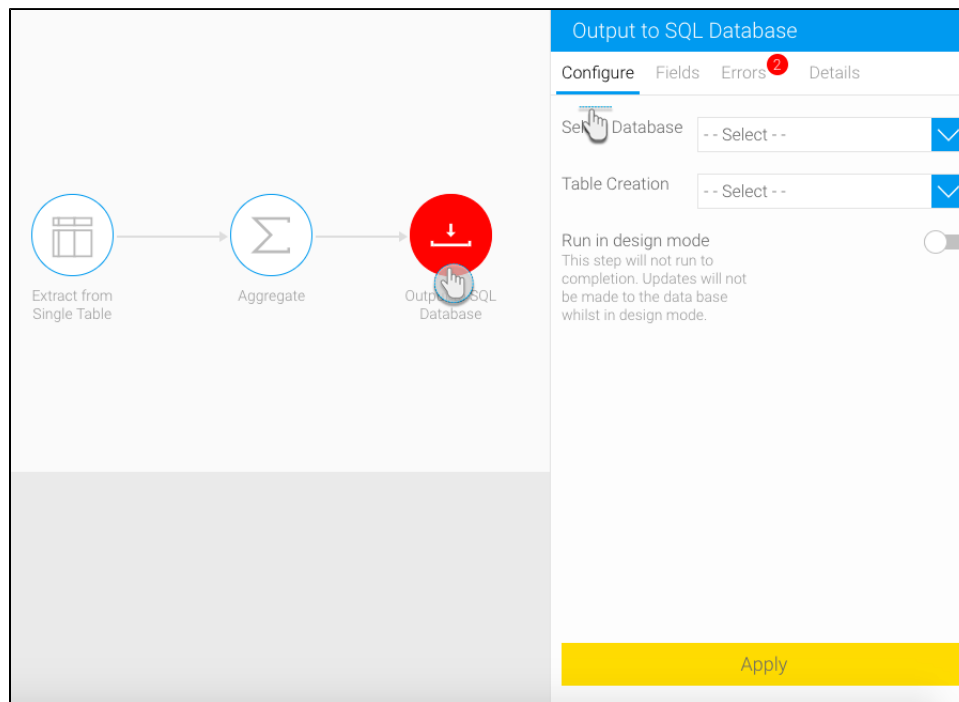


**Warning:** Extra caution should be taken when configuring the output step so that any existing source data does not get accidentally overwritten. The output to database step has a variety of options such as dropping tables, truncating (deleting) data, adding new rows, and updating existing data. It is recommended that a test database is used when developing transformation flows. Further, the output step is disabled by default when in edit mode (see Run in Design mode option).

1. Extend the output step panel by hovering on its icon, and drag an output step onto the canvas.



2. Next, connect the transformation step to the output step as mentioned above (in part 2, steps 3 and 4).
  3. And then configure the output step through the panel on the right-side. Click [here](#) to learn more about configuring this step.
- Note:** By default, the output step will be highlighted as red to signify that it contains errors. This is because it has not been configured yet.



4. You can also view the flow's status in the run logs tab in the flow panel.
5. Click on the run button in the top header menu to execute the flow. Each step will process the number of rows that has been configured for the design panel (with the max. limit being 200), or until it runs out of data, or if it processes an error. By default, any output to database step will not run. This behaviour can be overridden by enabling the Run in Design mode option in the output step configuration panel. This should only be done subject to the warnings listed earlier on this page.



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Once a flow has been created, you can save and publish it. Although you can manually execute draft flow, scheduled flows will have to be published in order to be executed.

Only valid flows may be published. A flow is valid when:

- It has at least one output step.
- All steps are configured.
- All steps have the correct number of inputs and outputs connected.

1. Click on the Publish button to do so.



2. Provide details in the popup that appears, such as giving your transformation flow a proper name and choosing the correct access rights.

A screenshot of a 'Save Transformation Flow' dialog box. The dialog has a blue header with the title 'Save Transformation Flow' and a close button (X). Below the header is a 'Details' section. Inside 'Details', there is a text input field containing 'Draft Transformation'. Below that is a larger text area with the placeholder text 'Give this Transformation Flow a description.'. Underneath the text area are two dropdown menus, both showing '-- Select --'. Below the dropdowns is a 'Transformation Access' section. It contains the text 'All users with Folder access will be able to view this Transformation Flow.' and two radio buttons: 'Public' (which is selected) and 'Private'. At the bottom of the dialog is a blue 'Save' button with a dropdown arrow on its right side.

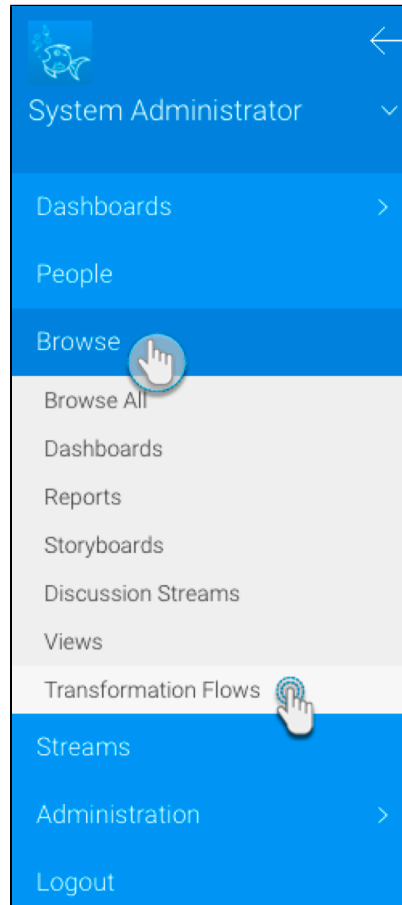
[go back](#)

Once a flow is created, you can either execute it [manually](#) or [schedule](#) its execution.

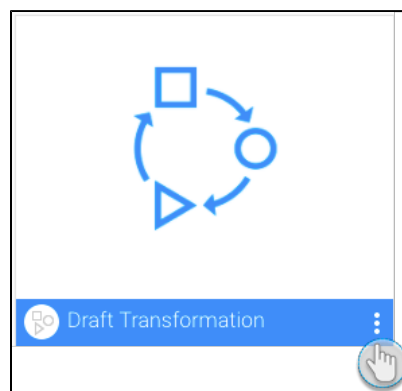
## Manual Execution

This process shows how to execute the transformation flow manually:

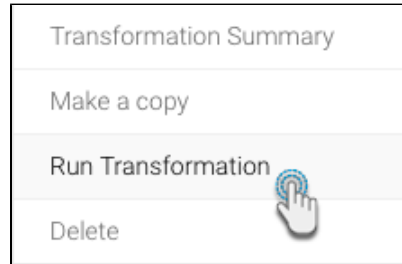
1. Navigate to left side menu > Browse > Transformation Flows.



2. Locate the flow that you want to run, and click on its menu icon. (The menu icon will appear when you hover the cursor on the bottom-right corner of the thumbnail. This menu can also be invoked by right-clicking the flow.)



3. Then click on the Run Transformation option.

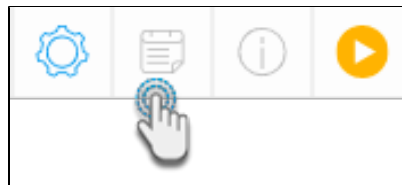


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## Scheduled Execution

Here's how to schedule a data transformation flow to be executed through the scheduler:

1. Click on the schedule button in the transformation builder's header menu.

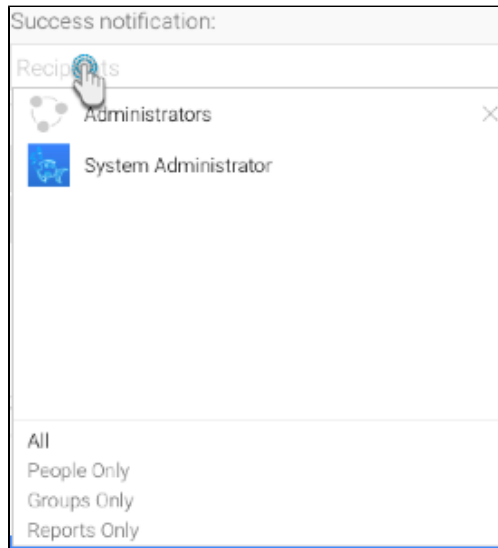


2. When the scheduling popup appears, click on the button to enable it.

A screenshot of the 'Schedule' popup form. It has a title bar with 'Schedule' and a close button. The form contains several sections: 'Enable Scheduling' with a toggle switch; 'Success notification:' with a text input field; 'Recipients' with a text input field; 'Frequency:' with dropdown menus for 'Weekly', 'Saturday', 'Australia', 'Sydney (+11:0...)', '12 am', and ':00'; 'Limit Schedule Period' with a toggle switch; 'Failure Notification' with a toggle switch and a dropdown menu showing 'Administrators'; and a 'Submit' button at the bottom. A summary line at the bottom says 'This will run every week, on Saturday.' and a 'Less ↑' link is on the right.

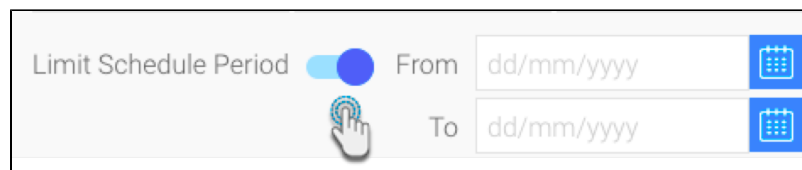
3. Provide scheduling details to run the batch at specified intervals:

- a. Click on the Recipients textbox to select users to notify when the batch has executed successfully. You can add individual users and even groups.



A dialog box titled "Success notification:" with a "Recipients" section. A hand icon is clicking on the "Recipients" header. Below the header, there is a list of recipients: "Administrators" (with a group icon) and "System Administrator" (with a user icon). At the bottom, there are four radio button options: "All", "People Only", "Groups Only", and "Reports Only".

- b. Choose frequency with which to run the transformation flow.  
c. Enable option to limit schedule period. This allows you to establish a time period within which the batch will be executed. Once the end period passes, the transformation will stop being executed.



A section titled "Limit Schedule Period" with a toggle switch that is turned on. Below the toggle, there are two date input fields: "From" and "To", both containing the placeholder text "dd/mm/yyyy". A hand icon is clicking on the "To" field. To the right of each date field is a calendar icon.

- d. Enable the Failure Notification button and add user groups to notify if the transformation failed to be executed.



A section titled "Failure Notification" with a toggle switch that is turned on. To the right of the toggle is a recipient selection box containing the text "Administrators" and a close button (X).

- e. Finally, click on the Submit button.

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