



User Guide

Data Preparation R-1.1



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1. About this Guide

1.1. Document History

| Product Version | Date (Release date) | Description |
|-----------------------------|----------------------------------|-------------------------------|
| BizViz Data Preparation 1.0 | August 31 st , 2017 | First Release of the document |
| BizViz Data Preparation 1.1 | December 11 th , 2017 | Updated document |

1.2. Overview

This guide covers:

- Introduction and steps to use the Big Data BizViz ETL plugin
- Configuration details for the Data Preparation components

1.3. Target Audience

This guide is aimed at business users of all skill levels who deal with vast amounts of data and requires data preparation to be attempted before getting informative insights from the collated business datasets.

2. Introduction

2.1. Introducing the Big Data BizViz Data Preparation

The BDB Data Preparation is a self-service data preparation tool that empowers data-driven Business users with powerful capabilities to extract, transform, and merge new data sources. The tool offers a range of components to transform and merge the selected dataset. Users can get analytics-ready data faster to generate valuable insights in less time.

2.2. Prerequisites and Supported Devices

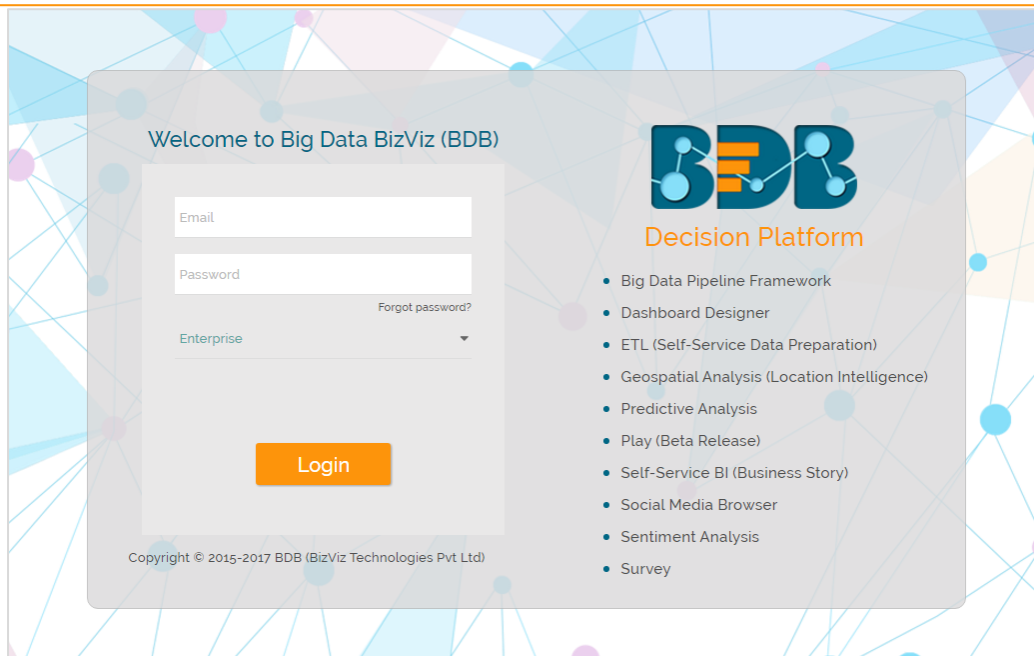
- A browser that supports HTML5
- Operating System: Windows 7
- Basic understanding of the BizViz Server

3. Getting Started with the BDB Data Preparation

3.1. Accessing the BDB Data Preparation


This section explains how to access the BizViz Platform and a variety of plugins that it offers:

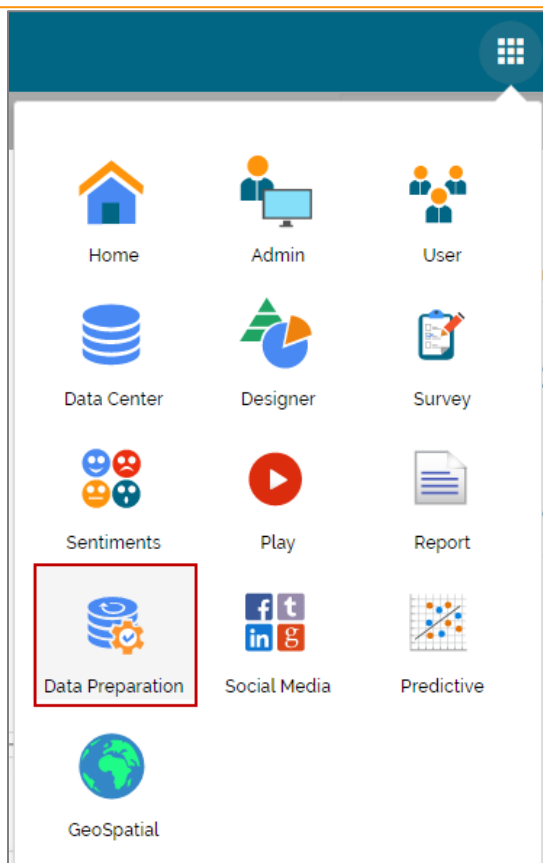
- i) Open BDB Enterprise Platform Link: <http://apps.bdbizviz.com/app/>
- ii) Enter your credentials to Login.
- iii) Click 'Login'



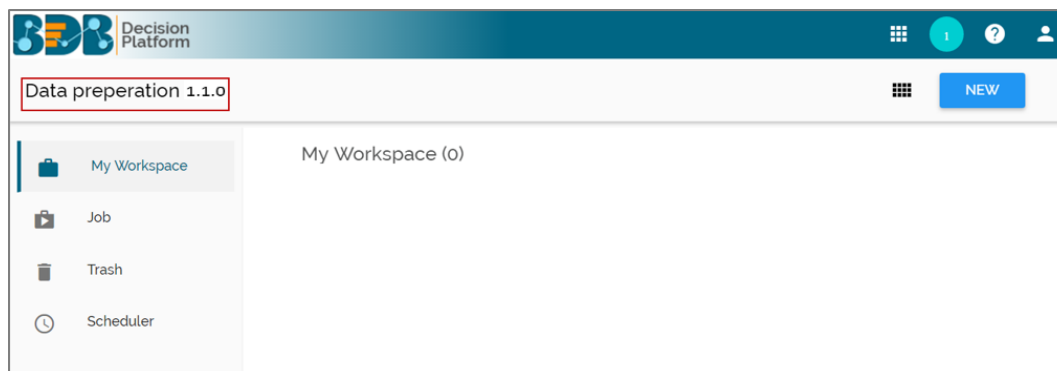
iv) Users will be redirected to the BDB Platform homepage.



- v) Click 'App Menu' option 
- vi) All the available plugins will be listed in the displayed window.
- vii) Click 'Data Preparation'



- viii) Users will be redirected to the Data preparation landing page.
- ix) Users will find four major modules on the Data Preparation landing page:
 - a. My Workspace (Default Component)
 - b. Job
 - c. Trash
 - d. Scheduler

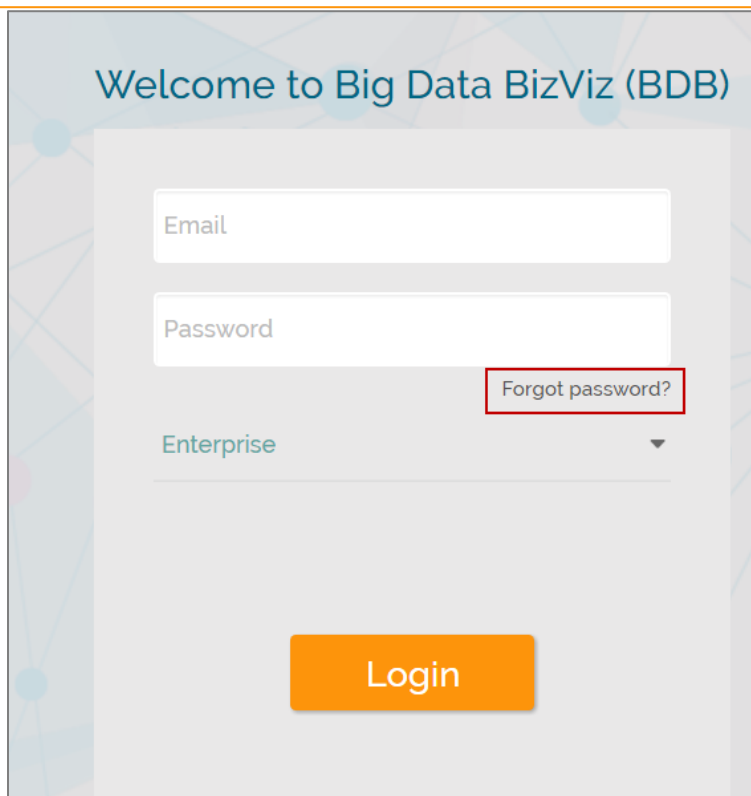


This document will describe all the major components and the related workflows at details.

3.1.1. Forgot Password Option

Users are provided with an option to change the password.

- i) Navigate to the Login page.
- ii) Click 'Forgot Your Password?' option.



Welcome to Big Data BizViz (BDB)

Email

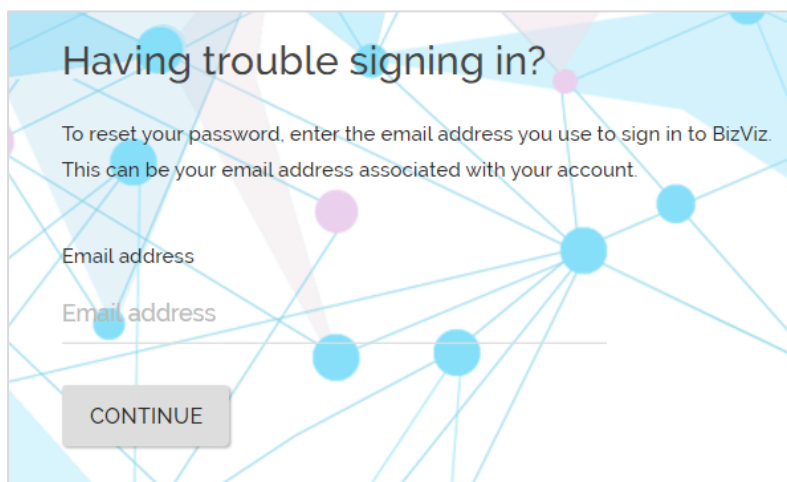
Password

Forgot password?

Enterprise

Login

- iii) Users will be redirected to a new window.
- iv) Provide the email id that is registered with BDB to send the reset password link.
- v) Click 'Continue'



Having trouble signing in?

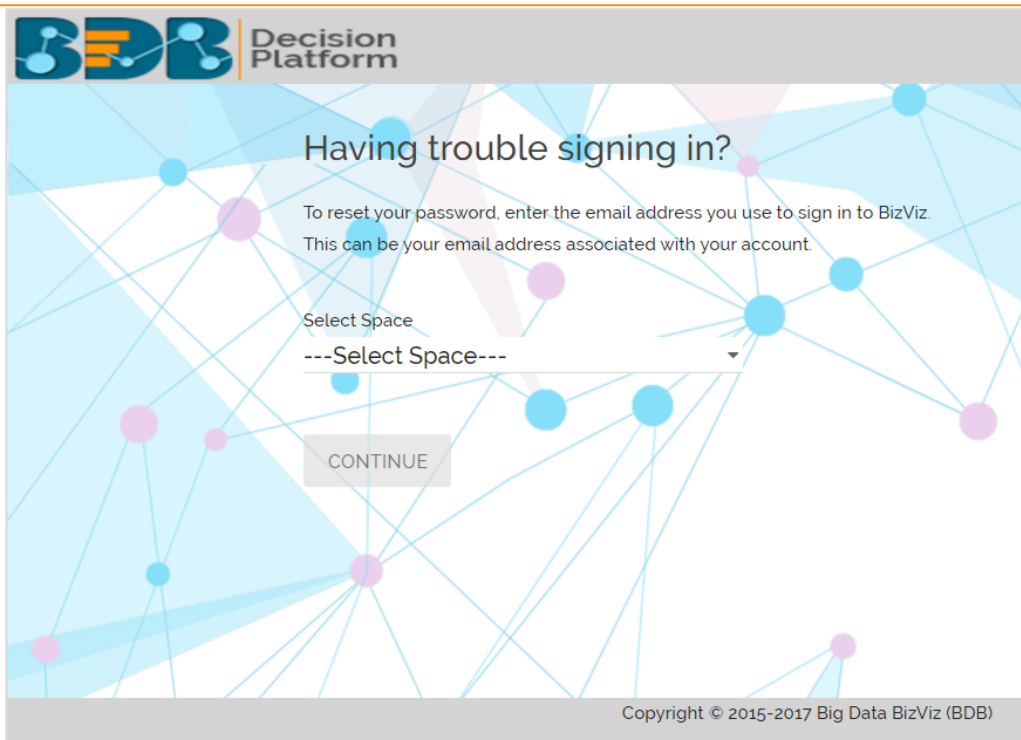
To reset your password, enter the email address you use to sign in to BizViz.
This can be your email address associated with your account.

Email address

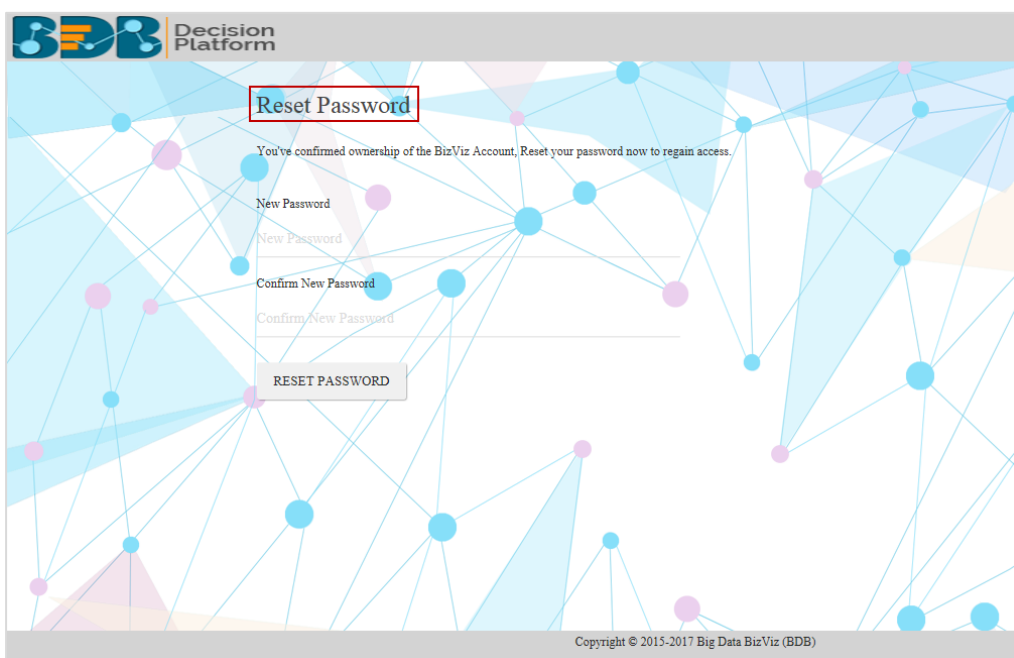
Email address

CONTINUE

- vi) Users will be directed to select a space and continue.



- vii) A reset password link will be sent through email.
- viii) Click on the link.
- ix) Users will be redirected to the 'Reset Password' page to set a new password.
 - a. Set a new password.
 - b. Confirm the newly set password.
 - c. Click 'RESET PASSWORD'



- x) The password will be successfully reset.

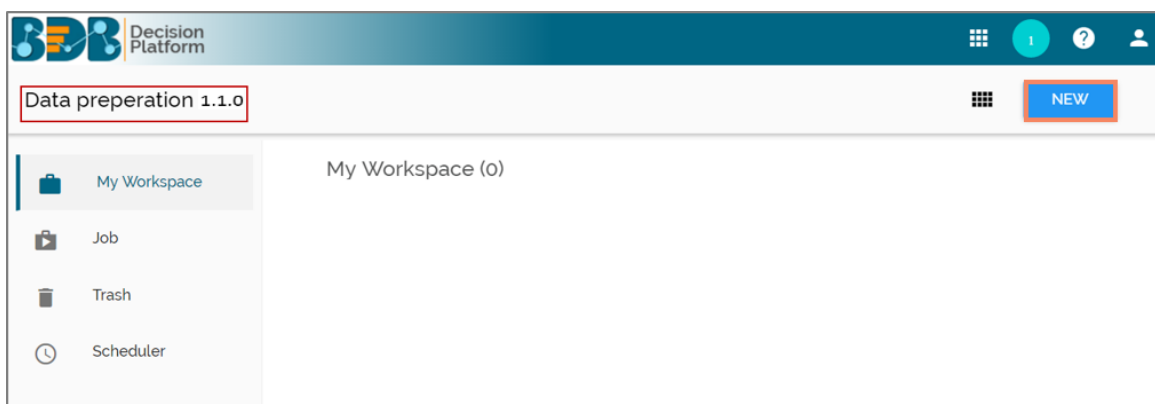
4. Basic Features

The landing page of Data Preparation launches workspace view. **'My Workspace'** will be displayed by default.

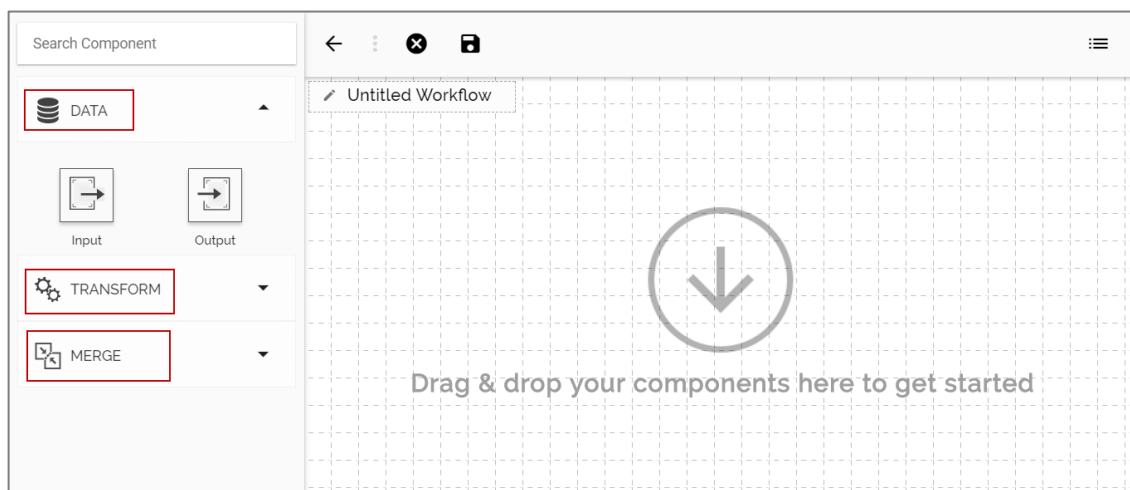
4.1. Workflow Editor

'My Workspace' is a placeholder for the workflows which are created using various data preparation components. Users can create the workflows using the workflow editor.

- i) Navigate to the **'Workspace'** page.
- ii) Click **'New'**



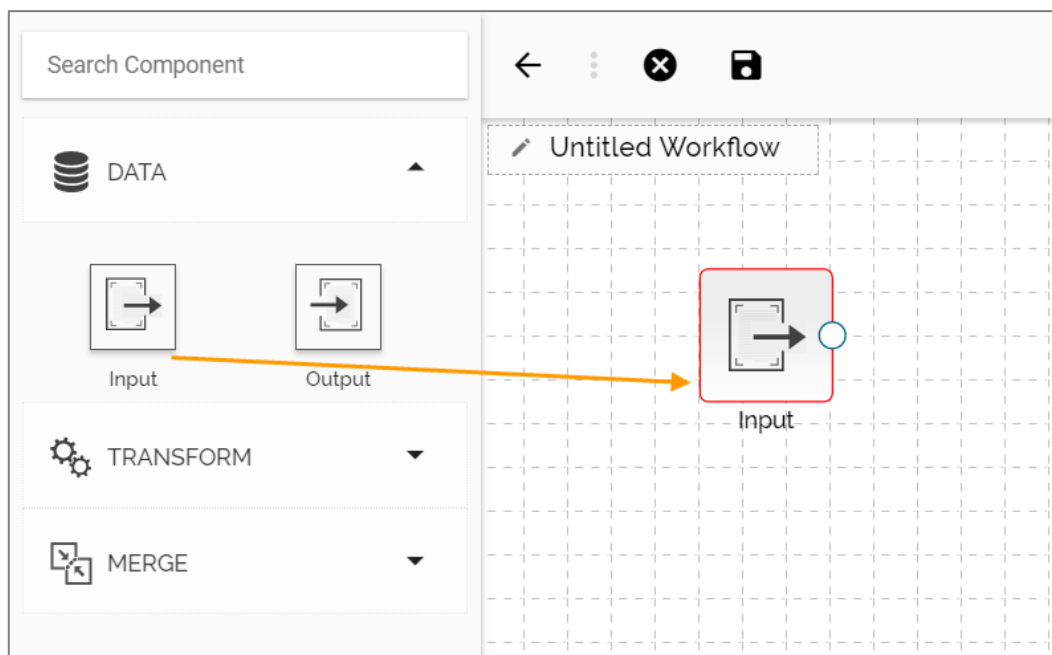
- iii) Users will be redirected to the **'Workflow Editor.'**
- iv) The Workflow editor exposes users to 3 main aspects to autonomously prepare data:
 - a. Data
 - b. Transform
 - c. Merge



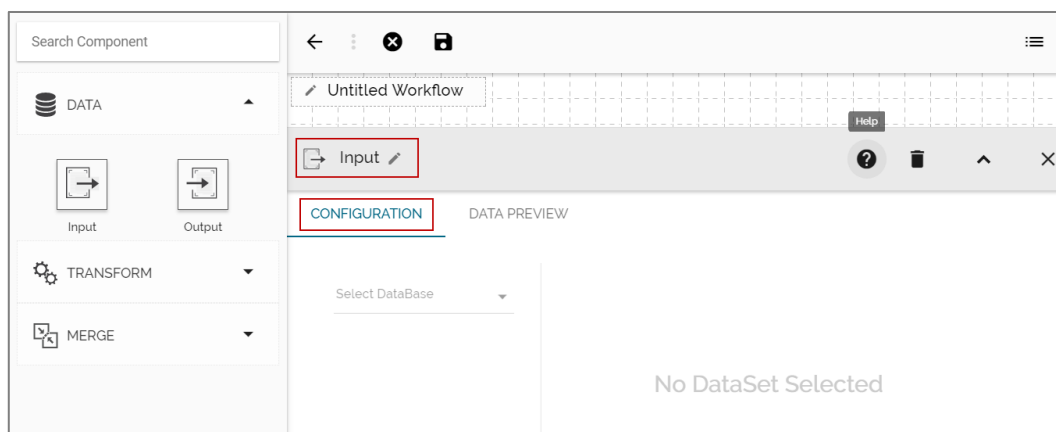
4.2. Extracting Data: Full and Incremental

- i) Navigate to the Workflow Editor.
- ii) The **'Data'** option will be selected by default.

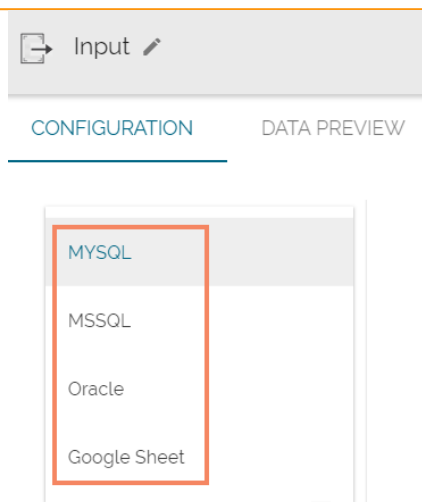
iii) Drag and Drop 'Input' component onto the workflow editor.



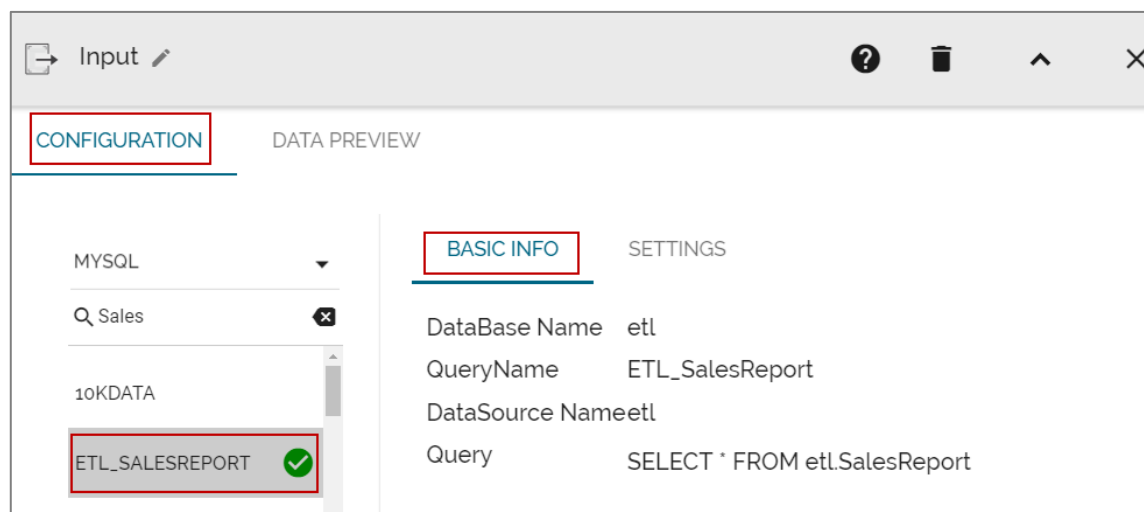
iv) Use right-click on the dragged input component
 v) A new window will be displayed to configure the input data.



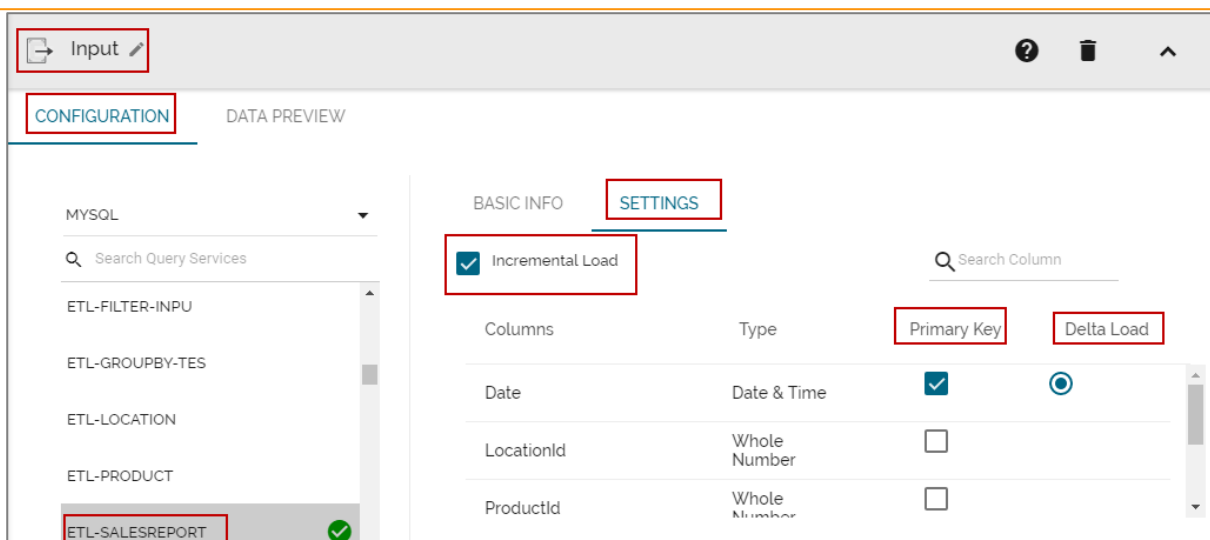
vi) Select a database using the drop-down menu (At present only MYSQL, MSSQL, Oracle, and Google Sheet are supported).



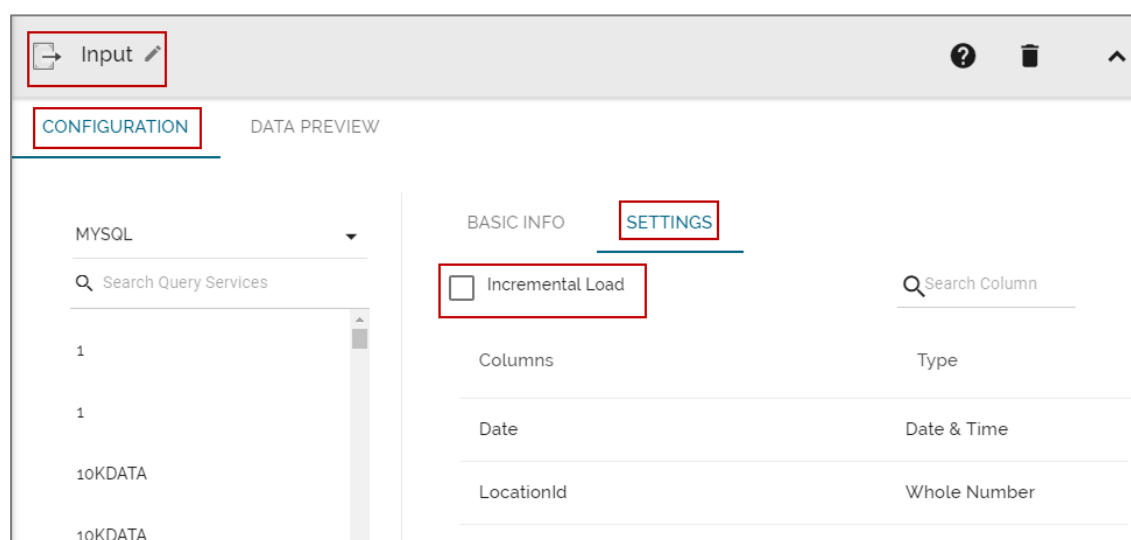
- vii) Selecting a database will redirect users to the list of query services based on the selected database.
- viii) Select a query service from the list.
- ix) The basic information of the database and query service will be displayed (By Default).



- x) Click the 'Settings' tab.
- xi) Users will be redirected to enable 'Increment Load' to access the recently updated data.
- xii) By enabling the 'Increment Load,' Users need to configure the following options:
 - a. 'Primary Key' - Select a primary key of the data source.
 - b. 'Delta Load' - Select a column of type timestamp or date or long which is updated whenever a new row is inserted or updated in the data source. This column will be used to perform the 'Incremented Load'



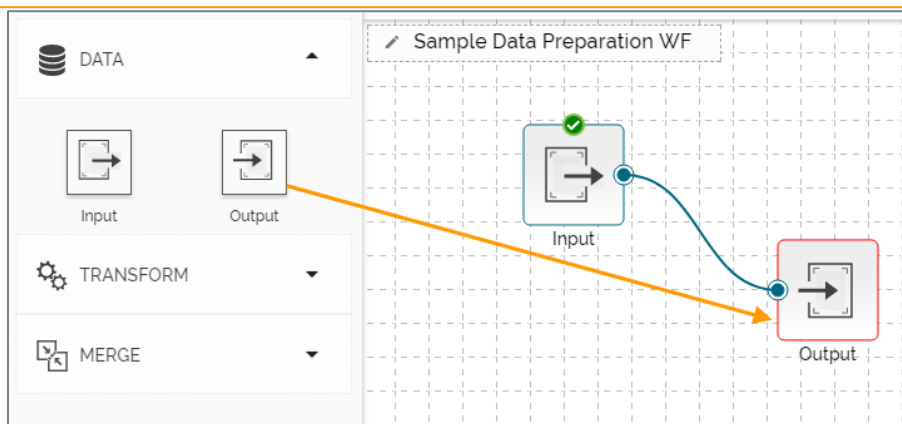
Note: Users can choose not to enable the increment load. In this case, the following details will be displayed, and the full data will be extracted.



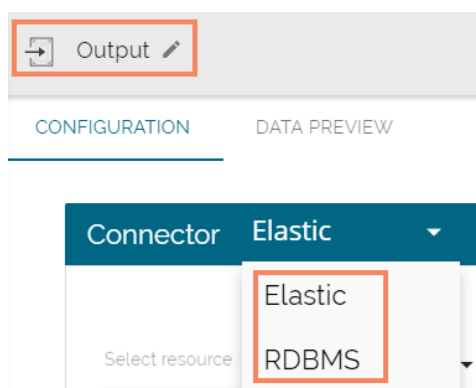
4.3. Loading Data

Users can load the extracted data into an elastic for visualization via the output component.

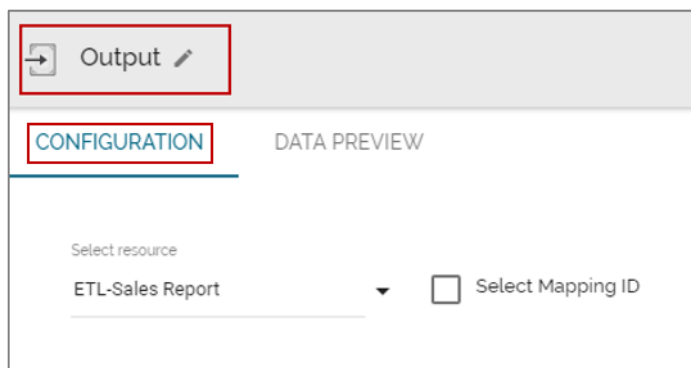
- i) Drag and drop the 'Output' component on the Workflow editor.
- ii) Connect it with the configured 'Input' component.



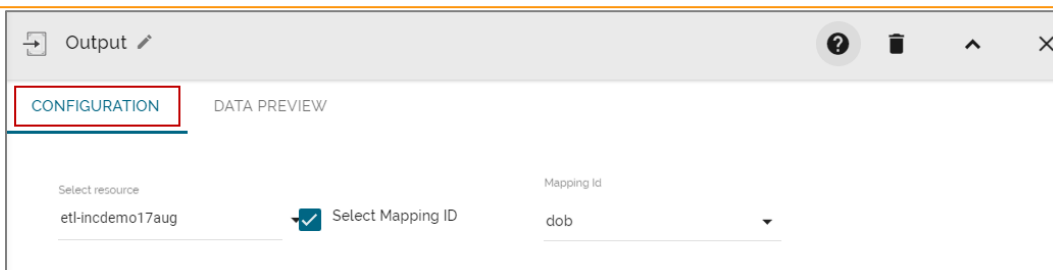
- iii) Click on the 'Output' component to display the 'CONFIGURATION' option.
- iv) Users will get the following options:
 - a. Elastic
 - b. RDBMS
- v) Select an option and configure it



- a. **Configuring Elastic**
 - i. Select a resource using the drop-down menu (for the Elastic writer)
 - ii. Enable 'Select Mapping ID' option-By enabling this choice users will be redirected to select a mapping id from the 'Mapping id' drop-down menu.




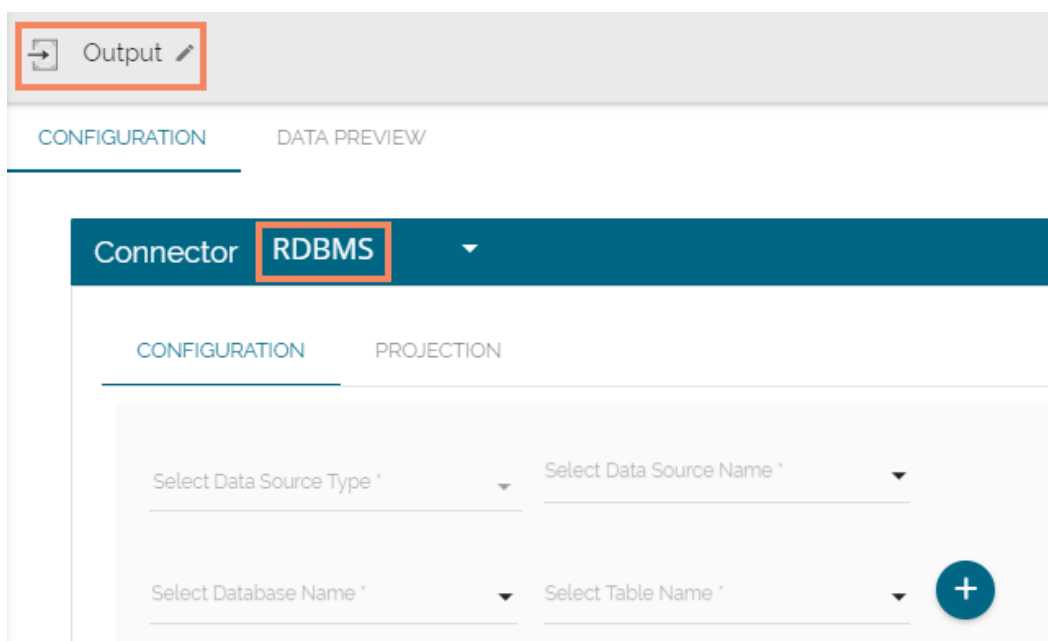
Note: If the 'Select Mapping Id' option is enabled, users will be asked to configure the mapping id using the drop-down menu:



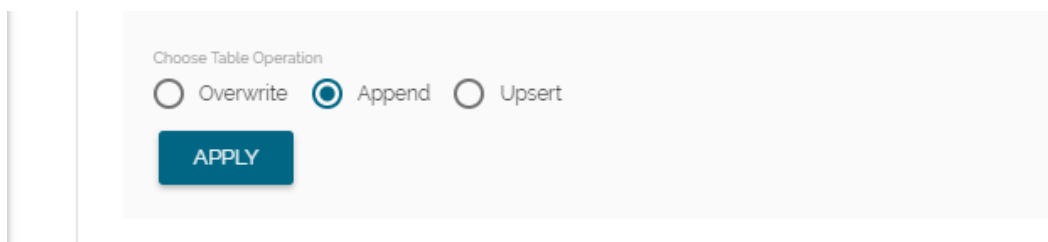
Or

b. Configuring RDBMS

- i. Select a Data Source Type
- ii. Select Data Source Name
- iii. Select Database Name
- iv. Select Table Name
- v. Select 'ADD'  option to Create a New Table



- vi. Choose Table Operation
 - 1. Overwrite
 - 2. Append
 - 3. Upsert
- vii. Click 'APPLY'

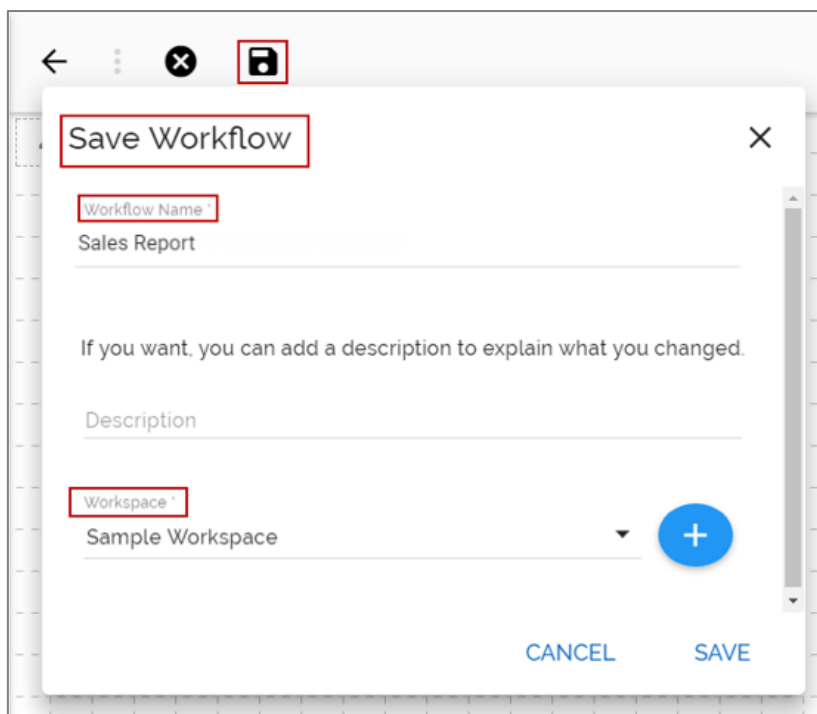


4.4. Saving a Workflow

Users are provided with two options to save a workflow.

- i) Click the 'Save' option 
- ii) A new window pops-up to redirect the user to save the workflow.

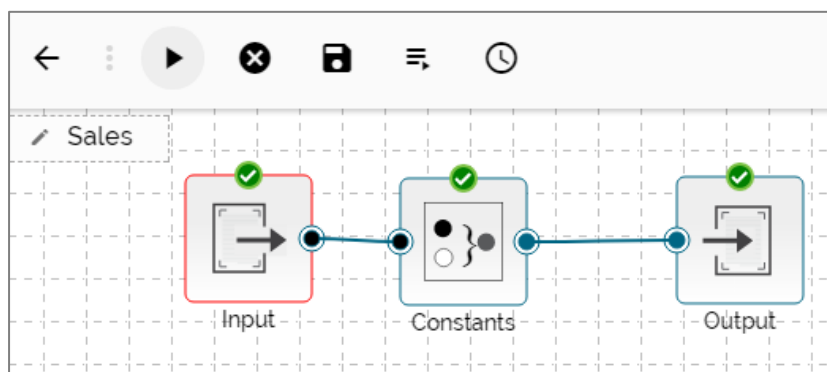
- a. Enter a Workflow name
 - b. Enter Description (Optional)
 - c. Select or Add a Workspace
- iii) Click 'Save'



4.5. Run Preview

Users can run the created workflow without affecting their production system through 'Run Preview' option. Users need to save the workflows to get the 'Run Preview' option.


- i) After saving a workflow, Users will be able to access more options on the workflow editor toolbar.
- ii) Click 'Run Preview' option ▶
- iii) The ongoing execution process will be displayed through a continuous blue line.
- iv) Users will get notified about the beginning and end of the execution process by pop-up messages.
- v) After the execution gets completed a green tick mark will be displayed. The input data with a green mark is ready to preview.



- vi) Open 'Data Preview' by clicking the input component to view the preview of the extracted data.

| Input | | | | |
|---------------|-----|--------------|------------------------------|--------------|
| CONFIGURATION | | DATA PREVIEW | | |
| dob | age | sal | joiningdateandtime | delta_status |
| 1994-05-05 | 23 | 3000.92 | 2017-05-31T15:23:12.000+0530 | insert |
| 1993-09-23 | 24 | 3900.92 | 2017-03-21T15:43:12.000+0530 | insert |
| 1994-09-23 | 23 | 3000.92 | 2016-04-21T17:43:12.000+0530 | insert |
| 1992-07-23 | 27 | 4900.92 | 2014-05-21T16:43:12.000+0530 | insert |
| 1980-09-23 | 40 | 2300.92 | 2017-02-21T23:13:12.000+0530 | insert |

4.6. Save and Execute

By using the ‘Save and Execute’ option  users can save and write a workflow in the metadata to create a datastore out of it.

- i) Click the ‘Save’ option.
- ii) A new window pops-up to redirect the user to save the workflow.
 - a. Enter a Workflow name
 - b. Enter Description (Optional)
 - c. Select or Add a Workspace
- iii) Click ‘Save.’

Save Workflow
✕

Workflow Name *

If you want, you can add a description to explain what you changed.

Description

Workspace *

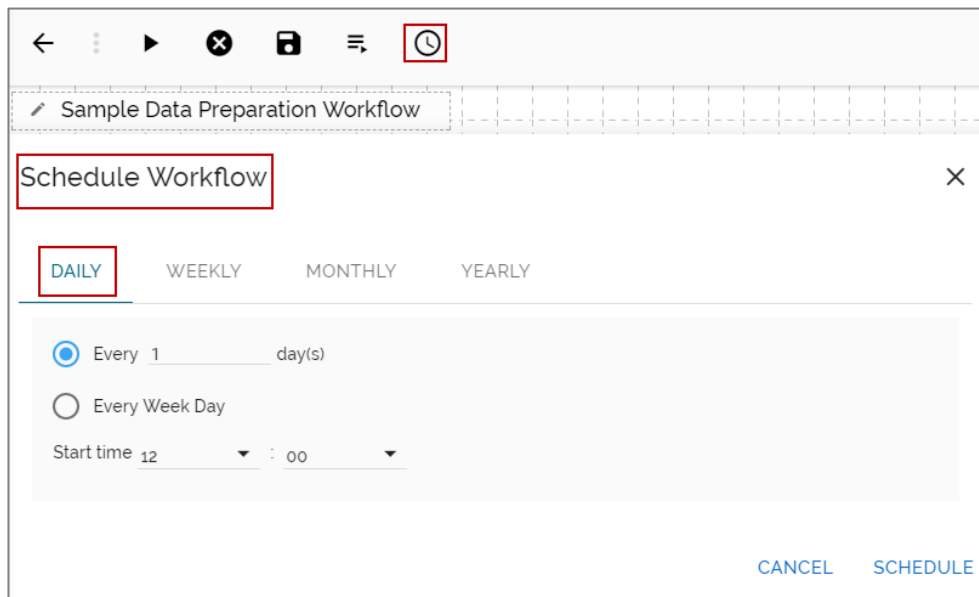
▼
+

CANCEL
SAVE

4.7. Schedule a Workflow

Users can schedule a created workflow for data refresh.

- i) Create a workflow.
- ii) Save and run the workflow.
- iii) Click the 'Scheduler' icon.
- iv) Click a range of time.
- v) Fill in the required details for the selected time range. E.g. The below-given image displays scheduler configuration details for the 'Daily' option.
- vi) Click 'Schedule.'

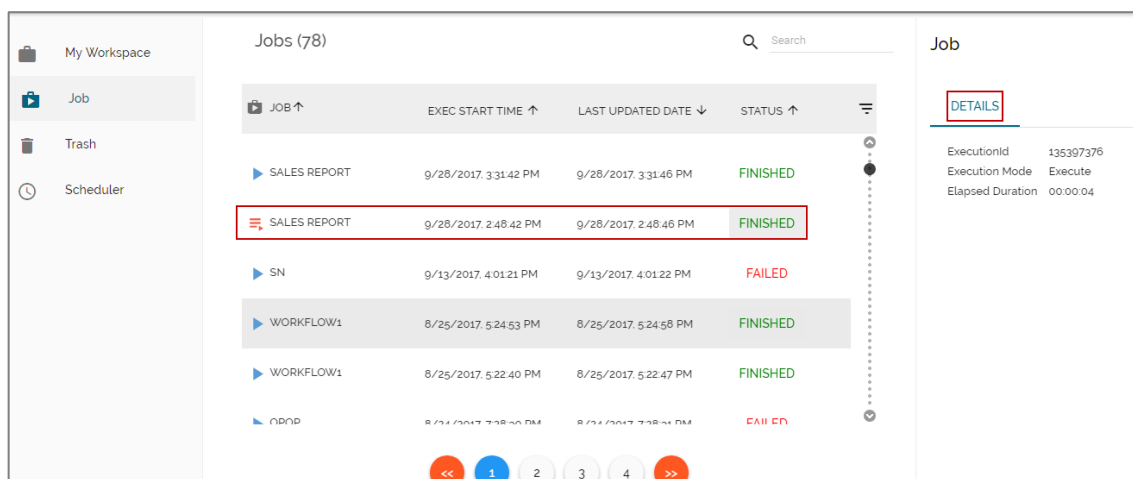


- vii) The selected workflow will be scheduled.

4.8. Job

Users can see the job status for the saved workflows.

- i) Navigate to the Data Preparation landing page.
- ii) Click icon from the workflow editor.
- iii) Click 'Job'
- iv) Users will be displayed the job details in a table.








Note: The execution details will be displayed on the right-hand side of the 'Job' page. Users need to click on the 'STATUS' of a job using the list of the jobs.

4.9. Trash

The 'Trash' folder is provided to store all the deleted workflows and workspaces. Users can restore the deleted workflows and workspaces using this folder.

- i) Click on the 'Trash' option.
- ii) Users will be redirected to see all the deleted files and folders under the trash folder.
- iii) Click 'Restore' to restore the selected workflow/workspace.
- iv) Click 'Delete' to permanently delete the selected workflow/workspace.

Note: Other options provided on the workflow editor are as described below:

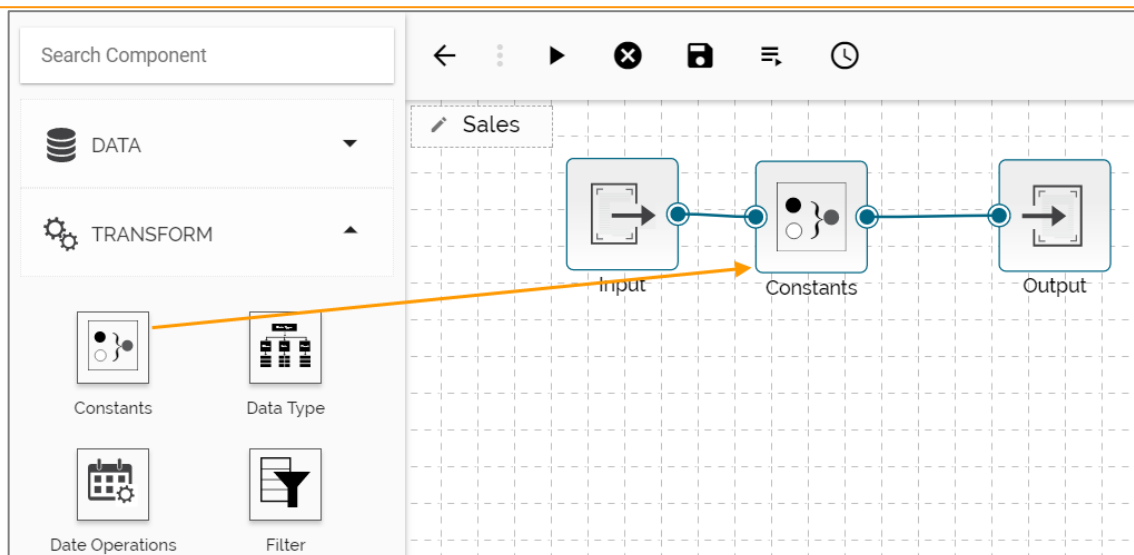
| Icons | Name | Description |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  or  | Hide and Show Components | Hides or shows the components on the left-hand side. |
|  | Clear Workflow | Clears the current workflow from the workflow editor. |
|  | Save | Saves a workflow |
|  | Navigator | Redirects Users to the following hyperlinks: <ol style="list-style-type: none"> 1. Workspace 2. Job 3. Trash 4. Scheduler |

5. Transform

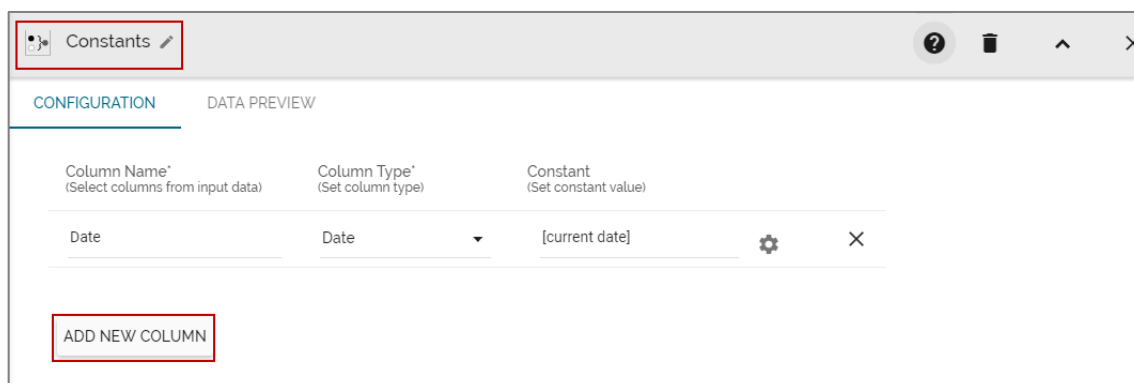
5.1. Constants

Users can give a corresponding valid constant value for each type of column.

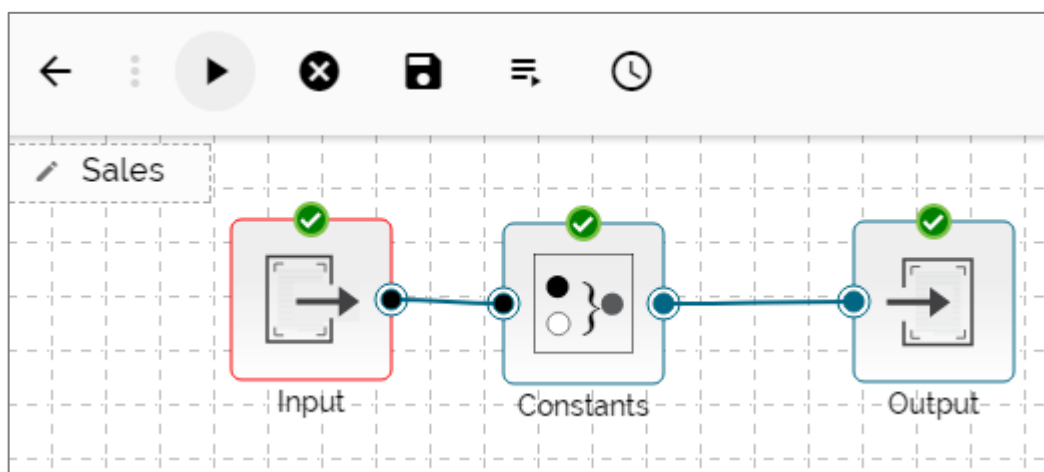
- i) Navigate to the Workflow editor.
- ii) Connect the 'Constants' component to the configured input dataset and output component.



- iii) Configure the required details for the 'Constants' component:
 - a. Column Name: Select columns from input data
 - b. Column Type: Set column type using the drop-down menu
 - c. Constant: Set a constant value
 - d. Remove: Click the 'Remove' icon to remove the added constant information.



- iv) Save the workflow.
- v) Run/Execute the workflow.



- vi) The set constant value will be applied to the selected column in the output dataset.

Output

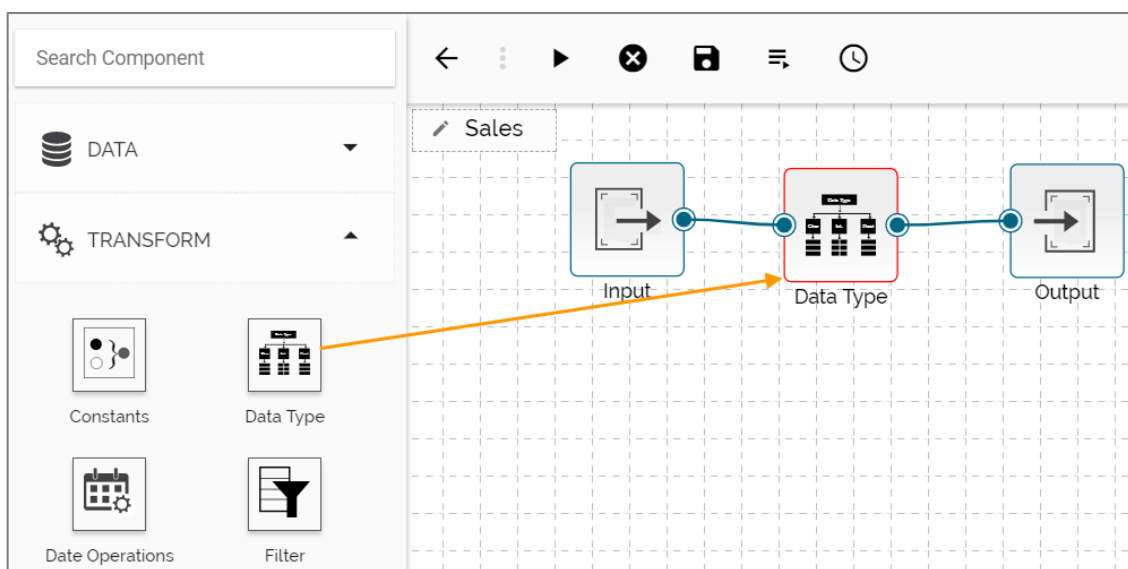
CONFIGURATION **DATA PREVIEW**

| LocationId | ProductId | Quantity | Date |
|------------|-----------|----------|------------|
| 25 | 13 | 7536 | 2017-09-28 |
| 30 | 17 | 6786 | 2017-09-28 |
| 58 | 5 | 9315 | 2017-09-28 |
| 26 | 2 | 2157 | 2017-09-28 |
| 40 | 10 | 6000 | 2017-09-28 |

5.2. Data Type

Users can change the data type of the selected columns by using the 'Date Type.'

- i) Navigate to the Workflow editor.
- ii) Connect the 'Data Type' component to the configured input dataset and output component.



- iii) Select the columns and change the column data type using the drop-down menu.
 - a. Column Name: Select columns from input data
 - b. Data Type: Change column data type
 - c. Date Format: Select source date format
 E.g. In this case, the column data type has been changed from 'Date & Time' to 'Date.'

Data Type

CONFIGURATION DATA PREVIEW

Column Name* (Select columns from input data) Data Type (Change column data type) Date Format (Select source date format)

SalesId [Whole Number] Text X

Date [Date & Time] Date X

ADD COLUMN REMOVE ALL COLUMNS

- iv) Save the workflow.
- v) Run/Execute the workflow.
- vi) Compare the data previews of the input and output datasets.
 - a. Input Data Preview: The 'Date' column is displayed in the original data type.

Input

CONFIGURATION DATA PREVIEW

| SalesId | LocationId | ProductId | Quantity | Date |
|---------|------------|-----------|----------|------------------------------|
| 1535978 | 25 | 13 | 7536 | 2017-09-14T17:47:04.000+0530 |
| 1535979 | 30 | 17 | 6786 | 2017-09-14T17:47:04.000+0530 |
| 1535980 | 58 | 5 | 9315 | 2017-09-14T17:47:04.000+0530 |
| 1535981 | 26 | 2 | 2157 | 2017-09-14T17:47:04.000+0530 |
| 1535982 | 40 | 10 | 6000 | 2017-09-14T17:54:04.000+0530 |
| 1535983 | 40 | 9 | 6000 | 2017-09-14T17:47:04.000+0530 |

- b. Output Data Preview: The data type of the 'Date' column will be changed.

Output

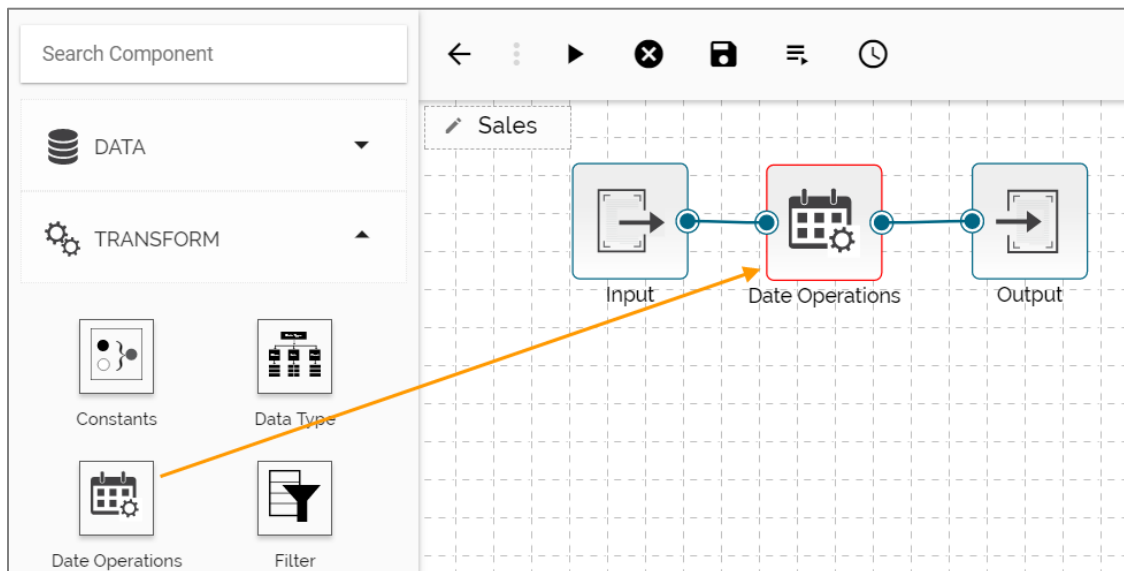
CONFIGURATION DATA PREVIEW

| SalesId | LocationId | ProductId | Quantity | Date |
|---------|------------|-----------|----------|------------|
| 1535978 | 25 | 13 | 7536 | 2017-09-28 |
| 1535979 | 30 | 17 | 6786 | 2017-09-28 |
| 1535980 | 58 | 5 | 9315 | 2017-09-28 |
| 1535981 | 26 | 2 | 2157 | 2017-09-28 |
| 1535982 | 40 | 10 | 6000 | 2017-09-28 |
| 1535983 | 40 | 9 | 6000 | 2017-09-28 |

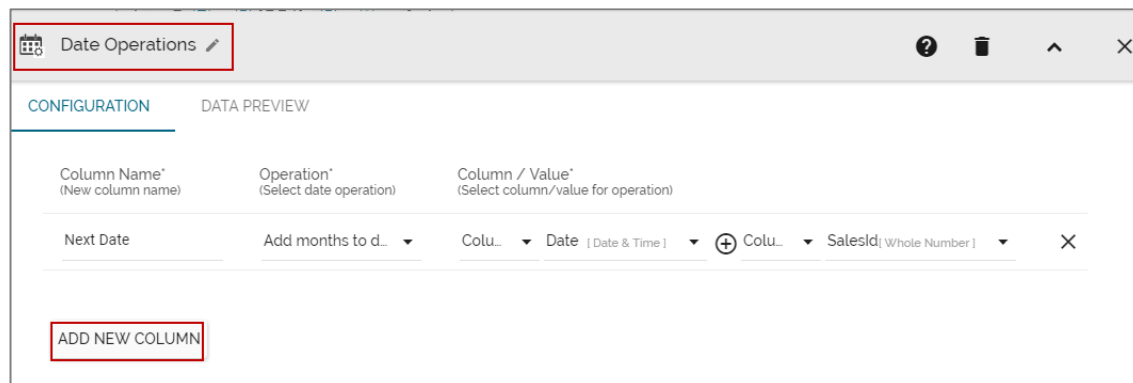
5.3. Date Operations

Users can perform various operations of dates addition/subtraction with integers or other dates. It also allows extraction of parts of dates like day-part, month part, etc.

- i) Navigate to the Workflow editor.
- ii) Connect the 'Date Operations' component to the configured input dataset and output component.



- iii) Configure the 'Date Operations' component as described below:
 - a. Column Name: Enter the New Column Name
 - b. Operations: Select one operation using the drop-down menu.
 - c. Column/Value: Select a column or value for operations.
 - i. By selecting 'column' option, the column drop-down menu will be displayed.
 - ii. By selecting the 'value' option, users will be redirected to enter a value.



- iv) Save the workflow.
- v) Run/Execute the workflow.

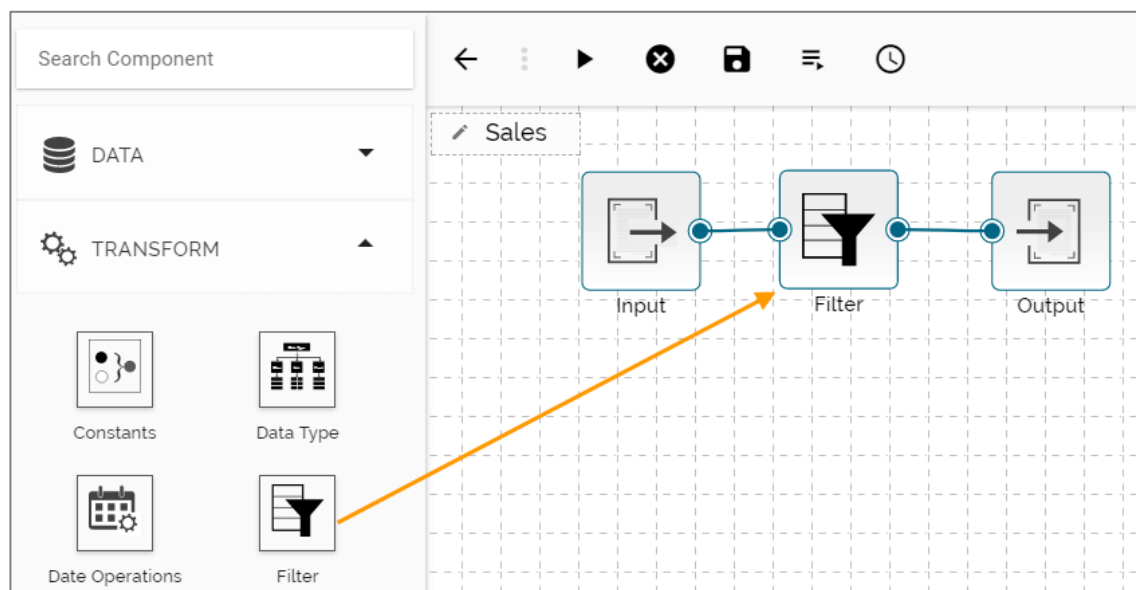
- vi) The new column, 'Next Date' will be added in the output dataset. Users can view it in the output data preview.

| LocationId | ProductId | Quantity | Date | Next Date |
|------------|-----------|----------|------------------------------|------------|
| 25 | 13 | 7536 | 2017-09-14T17:47:04.000+0530 | 2015-11-14 |
| 30 | 17 | 6786 | 2017-09-14T17:47:04.000+0530 | 2015-12-14 |
| 58 | 5 | 9315 | 2017-09-14T17:47:04.000+0530 | 2016-01-14 |
| 26 | 2 | 2157 | 2017-09-14T17:47:04.000+0530 | 2016-02-14 |
| 40 | 10 | 6000 | 2017-09-14T17:54:04.000+0530 | 2016-03-14 |
| 40 | 9 | 6000 | 2017-09-14T17:47:04.000+0530 | 2016-04-14 |

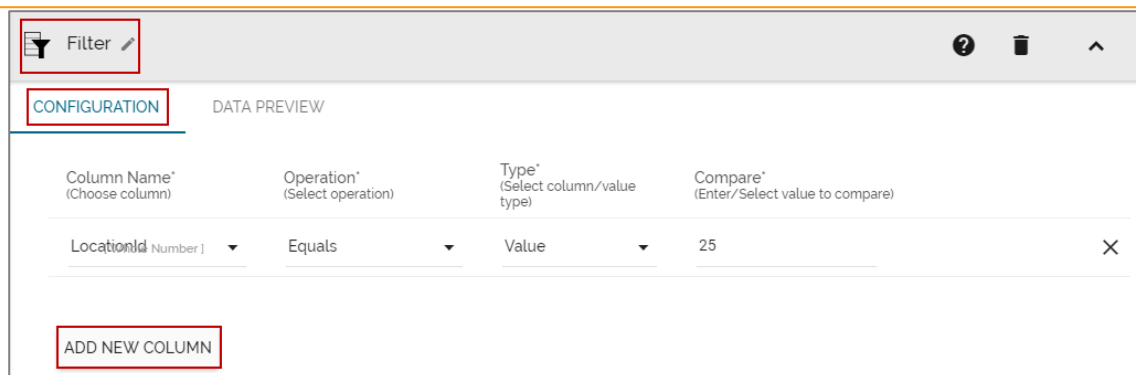
5.4. Filter

Users can filter the input dataset by specifying conditional expressions using the **'Filter'** transform. Multiple filter conditions can be imposed in the same transform. The following table lists the map of data types and permissible filter conditions.

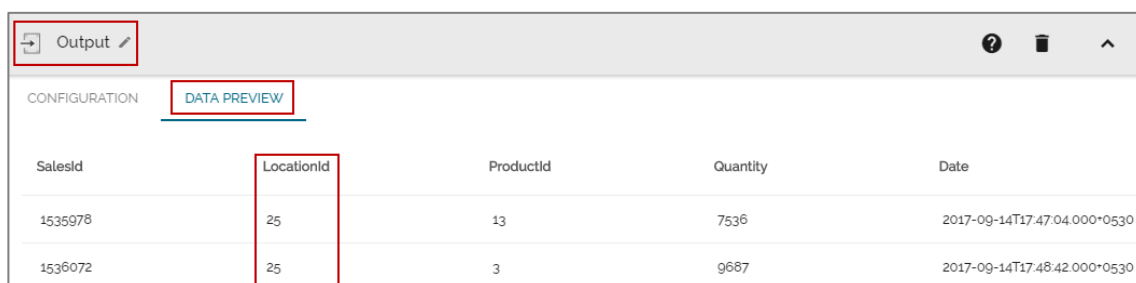
- i) Navigate to the Workflow editor.
- ii) Connect the **'Filter'** component to the configured input dataset and output component.



- iii) Configure the **'Filter'** Component as described below:
 - a. Column Name: Select a column from the drop-down menu
 - b. Operation: Select an operation from the drop-down menu
 - c. Type: Select one option out of **'Column'** or **'Value.'**
 - d. Compare: Enter/Select a value to compare with



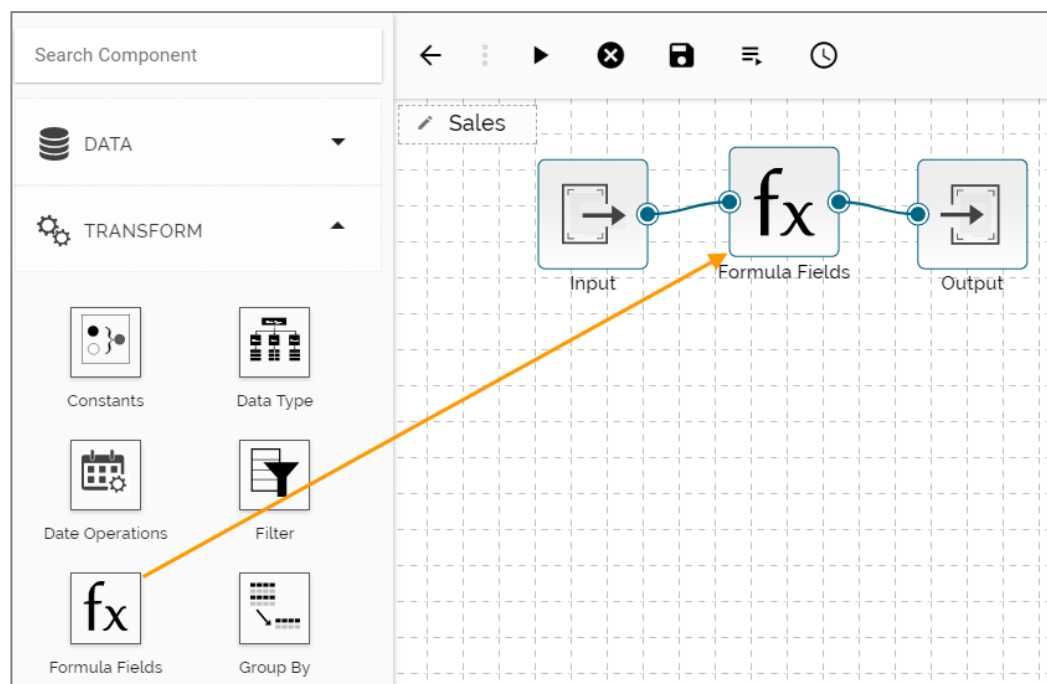
- iv) Save the workflow.
- v) Run the workflow.
- vi) The output data will be filtered as per the applied conditions.



5.5. Formula Fields

Users can perform most common arithmetic operations (add, subtract, multiply and divide) on constants and columns.

- i) Navigate to the Workflow editor.
- ii) Connect the 'Formula Fields' to the configured input dataset and output component.



- iii) Configure the 'Formula' component as described below:
 - a. Column Name: Enter a name for the formula column
 - b. Calculation Type: Select a calculation type using the drop-down menu
 - c. Select Columns for Calculation: Select columns to be used in the calculation. Users can choose either a column or enter a value to complete the calculation process.
E.g. In this case, the value option is chosen.

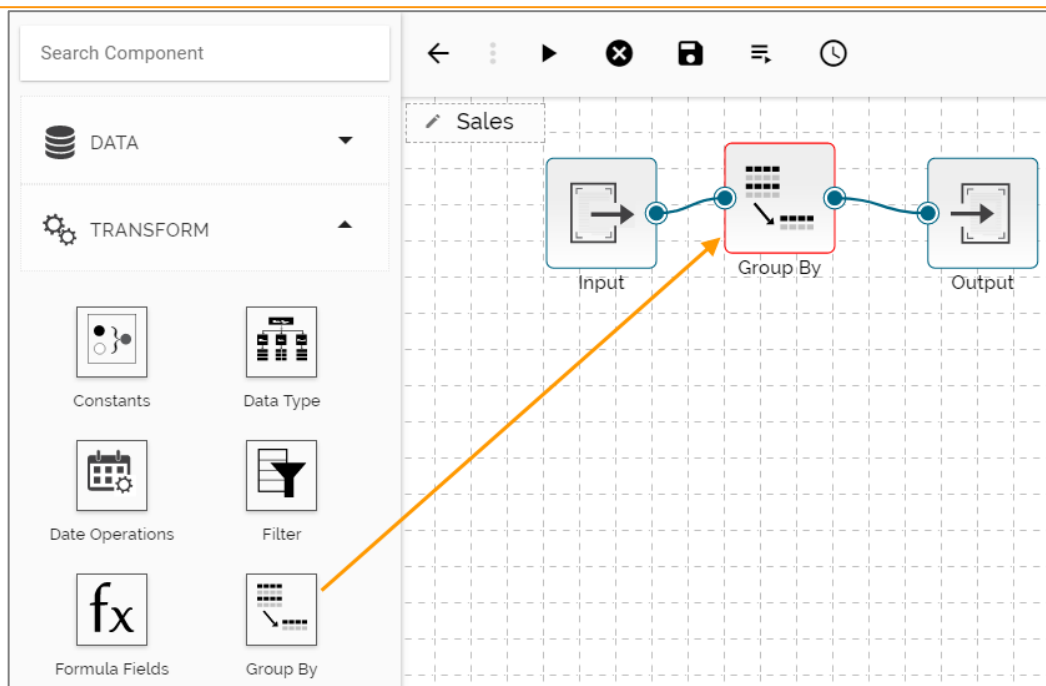
- iv) Save the workflow.
- v) Run the workflow.
- vi) The calculated column will be added in the output dataset.

| SalesId | LocationId | ProductId | Quantity | Date | Formula column |
|---------|------------|-----------|----------|------------------------------|----------------|
| 1535978 | 25 | 13 | 7536 | 2017-09-14T17:47:04.000+0530 | 1536003 |
| 1535979 | 30 | 17 | 6786 | 2017-09-14T17:47:04.000+0530 | 1536009 |
| 1535980 | 58 | 5 | 9315 | 2017-09-14T17:47:04.000+0530 | 1536038 |
| 1535981 | 26 | 2 | 2157 | 2017-09-14T17:47:04.000+0530 | 1536007 |
| 1535982 | 40 | 10 | 6000 | 2017-09-14T17:54:04.000+0530 | 1536022 |
| 1535983 | 40 | 9 | 6000 | 2017-09-14T17:47:04.000+0530 | 1536023 |
| 1535984 | 52 | 5 | 7346 | 2017-09-14T17:47:04.000+0530 | 1536036 |

5.6. Group By


The 'Group By' feature allows multiple aggregations on the same or different columns. Users can obtain multiple aggregations in the same transform. The aggregated values are added to a new column.

- i) Navigate to the Workflow editor.
- ii) Connect the 'Group By' component to the configured input dataset and output component.



- iii) Configure the 'Group By' component as described below:
- Column Name: Choose a column from the drop-down menu.
 - New Column: Enter a title for the aggregate column.
 - Column Aggregate: Select a column from the drop-down menu to apply aggregation.
 - Aggregate Type: Select an aggregation operation from the drop-down menu.

- Save the workflow.
- Run the workflow.
- The aggregated column will be displayed in the output data preview.

| Output  | |
|------------------------------------------------------------------------------------------|--------------|
| CONFIGURATION | DATA PREVIEW |
| LocationId | Max |
| 46 | 21 |
| 18 | 8 |
| 38 | 13 |
| 58 | 5 |
| 77 | 21 |

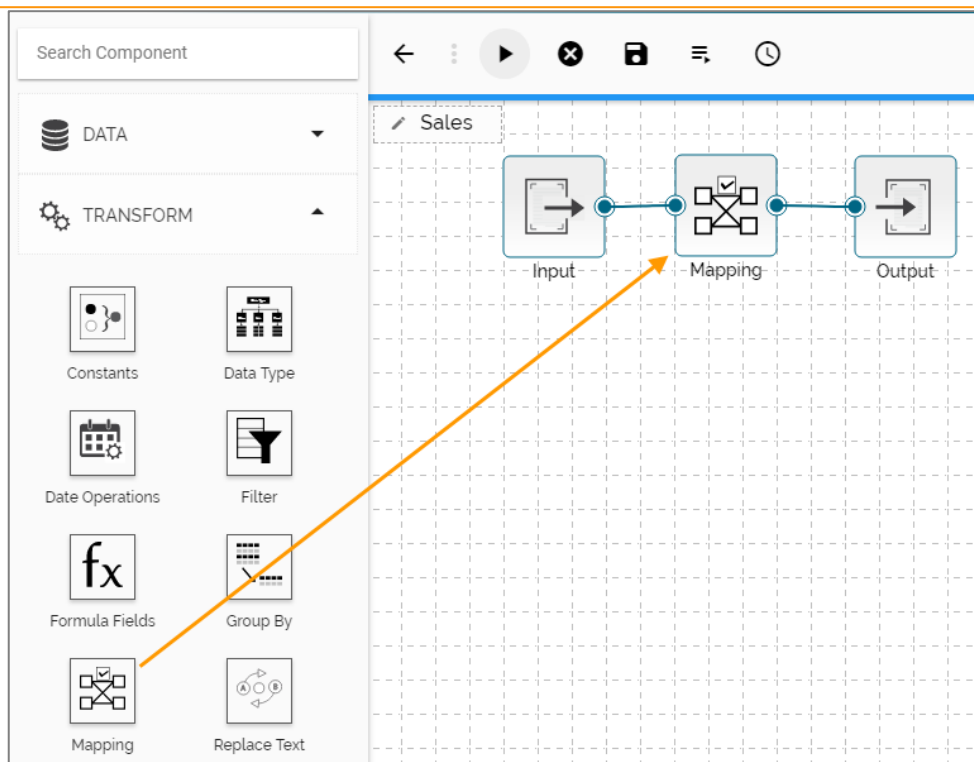
Note: The supported data types and aggregate operations are displayed in the following table:

| Data Type | Aggregate |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Text | Count Count Including NULLs Count Distinct Values First Non-Null Value Last Non-Null Value First Value Last Value Combine Strings Separated by Comma |
| Date Date Time | Minimum Maximum Count Count Including Nulls Count Distinct Values First Non-Null Value Last Non-Null Value First Value Last Value |
| Whole Number Decimal Decimal (Fixed) | Sum Average Minimum Maximum Standard Deviation Count Count Including NULLs |

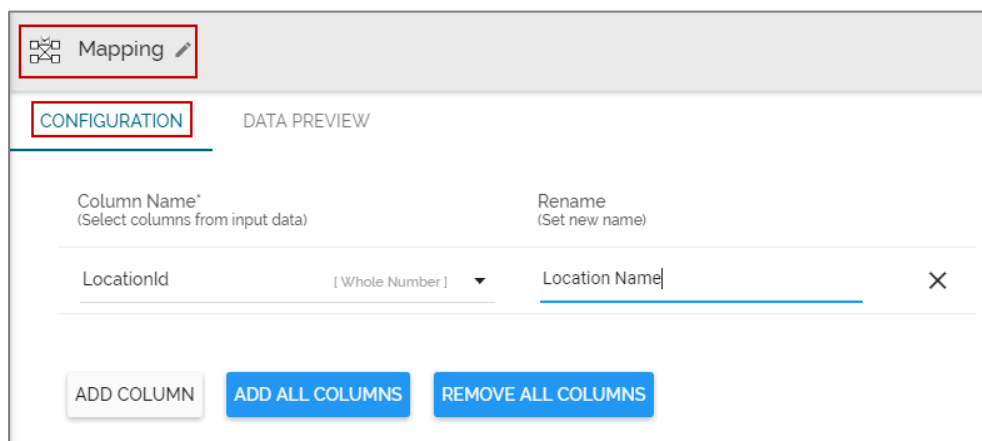
5.7. Mapping

Users should be able to select, remove or rename columns in the input dataset to fit the structure of the sink.

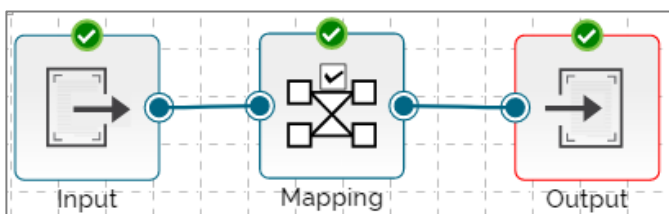
- i) Navigate to the Workflow editor
- ii) Connect the **'Mapping'** component to the configured input dataset and output component



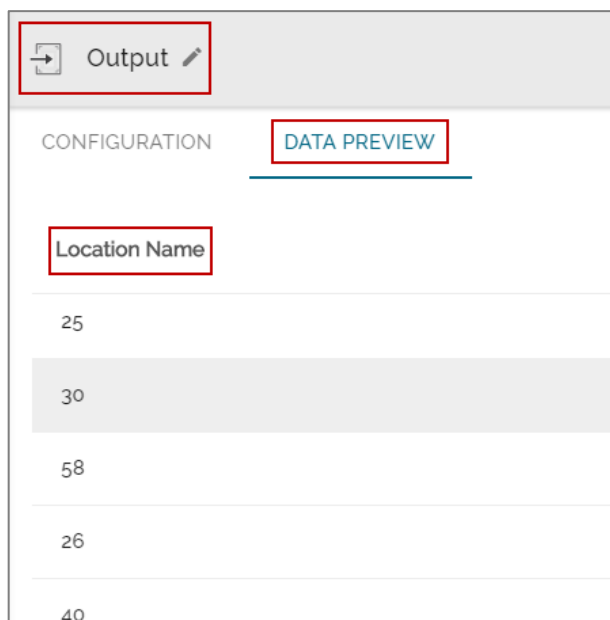
- iii) Configure the 'Mapping' component:
 - a. Column Name: Select a Column from the input data using the drop-down menu
 - b. Rename: Rename the selected column of the input data
 - c. ADD COLUMN: Click this option to add one more column from the input dataset
 - d. ADD ALL COLUMNS: Click this option to map all the columns from the input dataset
 - e. REMOVE ALL COLUMNS: Click this option to remove all the added columns for mapping



- iv) Save the workflow
- v) Run the workflow
- vi) The aggregated column will be displayed in the output data preview



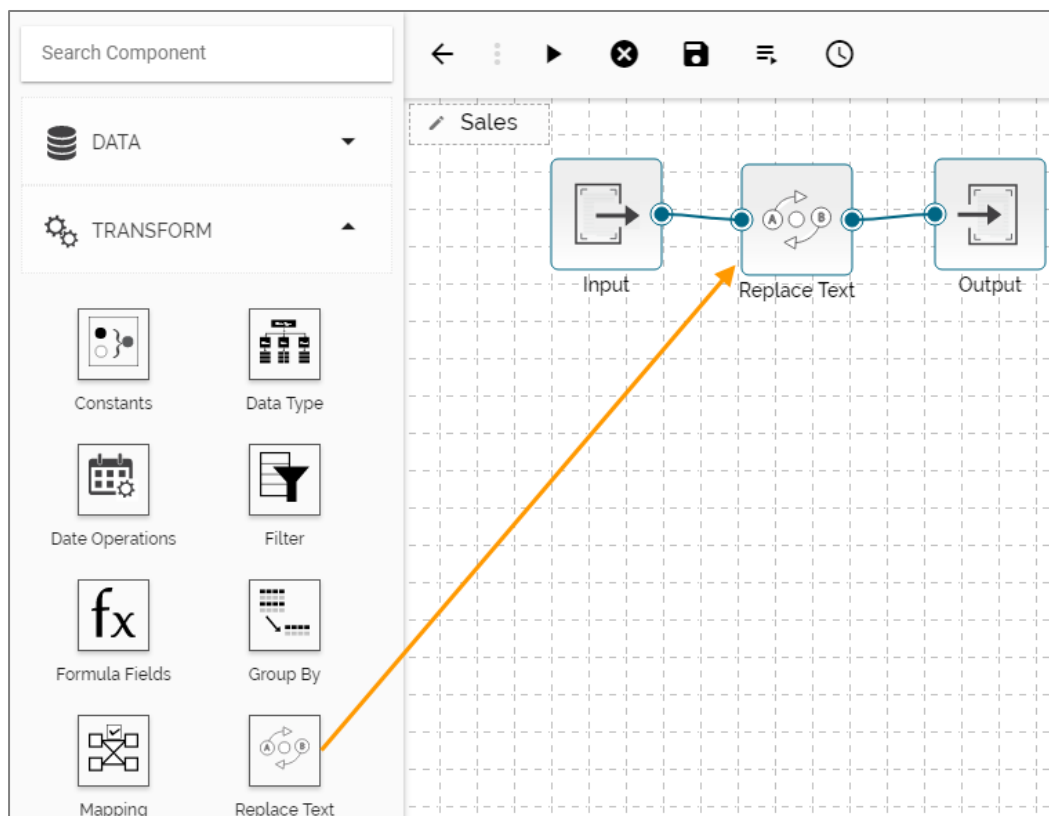
vii) The aggregated column will be displayed in the output data preview



5.8. Replace Text

Users can search by whole word, sensitive to case, search for special values like NULL or empty strings, and use regular expressions, and then replace with any given constant values or even empty strings. Only text columns can be transformed using this component. Users can replace text for the multiple text columns.

- i) Navigate to the Workflow editor.
- ii) Connect the 'Replace Text' component with the configured Input dataset and Output component.



iii) Run the workflow to preview the input data.

| LocationId | LocationCode | City | State | Country |
|------------|--------------|-------------|----------|---------|
| 1 | AL | Montgomery | Alabama | USA |
| 2 | AK | Juneau | Alaska | USA |
| 3 | AZ | Phoenix | Arizona | USA |
| 4 | AR | Little Rock | Arkansas | USA |

- iv) Configure the 'Replace Text' component as described below:
- Column Name: Select a column from the input data set.
 - Search for: Enter a term from the selected column to search for.
 - Replace with: Enter a term to replace the searched term in the input data.

- v) Run the workflow.
vi) Save the workflow.
vii) Open the Output data preview to see the replacement of the selected text in the column.

| LocationId | LocationCode | City | State | Country |
|------------|--------------|-------------|------------|---------|
| 1 | -L | Montgomery | Alabama | USA |
| 2 | -K | Juneau | Alaska | USA |
| 3 | -Z | Phoenix | Arizona | USA |
| 4 | -R | Little Rock | Arkansas | USA |
| 5 | C- | Sacramento | California | USA |

Note:

- a. Users can click on the 'ADD NEW COLUMN' option to configure the multiple columns for any transform component.
- b. Users can also see data preview of the various transform components.

6. Merge

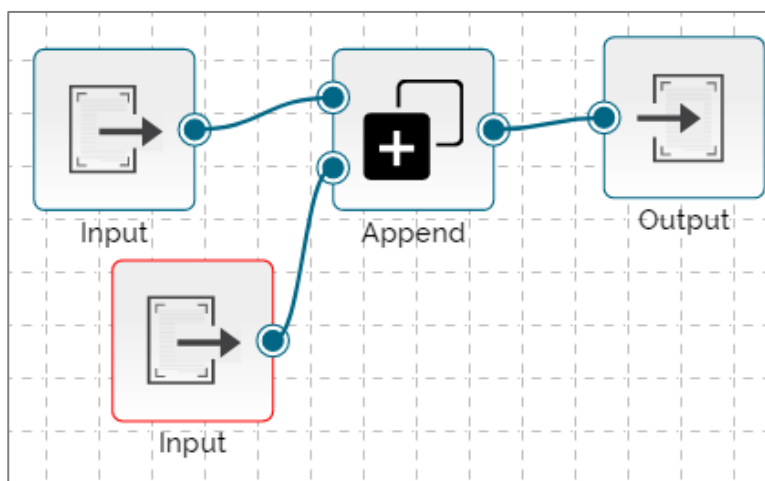
Users can use the 'Merge' components to combine input data sets and get the required output.

6.1. Append

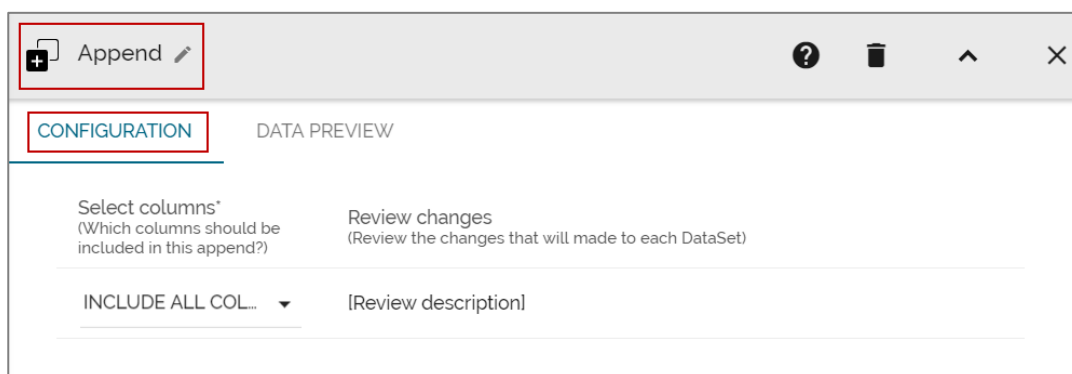
The 'Append' feature combines one dataset on top of another. If the datasets are of different structures, still the union is possible, and the output will be a unified more massive structure with NULL values populated wherever data is missing. Users can choose whether to include only shared columns or all columns to append.

6.1.1. Append All Columns

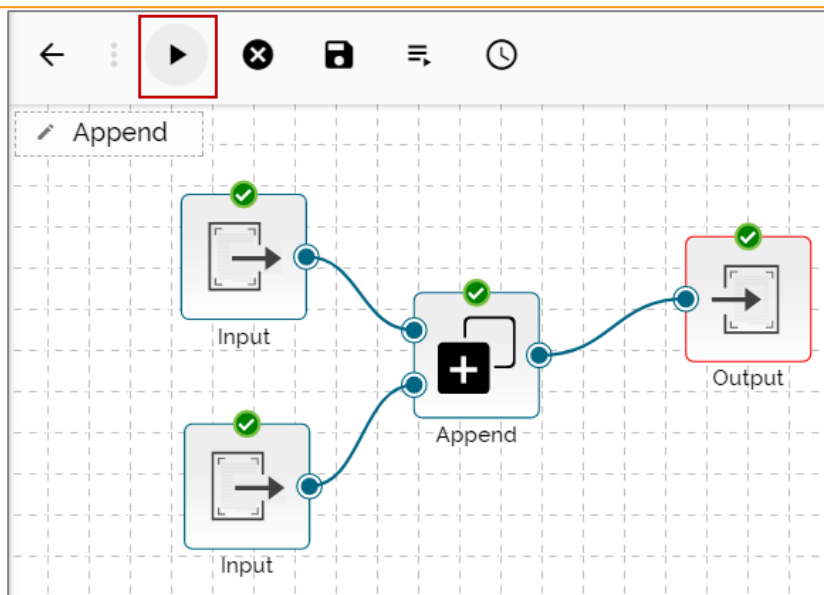
- i) Navigate to the Workflow editor.
- ii) Configure two input datasets.
- iii) Connect the 'Append' component with the configured Input datasets and an Output component.



- iv) Select 'Include All Columns' option using the 'Select Columns' drop-down menu.



- v) Save the workflow.
- vi) Run the workflow.



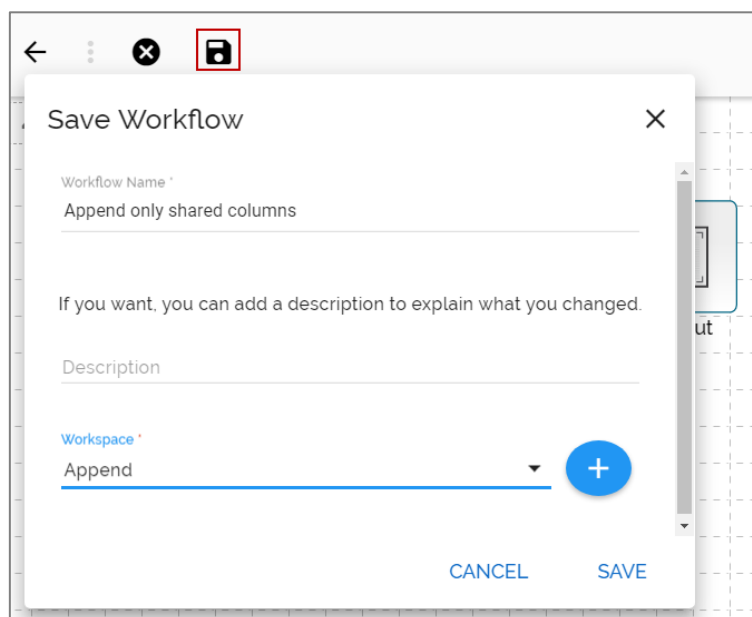
vii) The entire data of both the input data sets will be appended in the output data preview.

| CONFIGURATION | | DATA PREVIEW | | |
|---------------|----------|------------------------------|------------|---------|
| empno1 | bonous1 | doj1 | dob1 | sal1 |
| 1 | 23.43453 | 2016-11-11T23:59:59.000+0530 | 1992-08-23 | 3490.65 |
| 2 | 25.45457 | 2017-12-12T22:59:59.000+0530 | 1993-09-22 | 3596.66 |
| 3 | 22.42457 | 2014-11-13T23:59:59.000+0530 | 1992-03-25 | 3495.67 |
| 1 | 23.43453 | 2016-11-11T23:59:59.000+0530 | 1992-08-23 | 3490.65 |
| 2 | 25.45457 | 2017-12-12T22:59:59.000+0530 | 1993-09-22 | 3596.66 |
| 3 | 22.42457 | 2014-11-13T23:59:59.000+0530 | 1992-03-25 | 3495.67 |

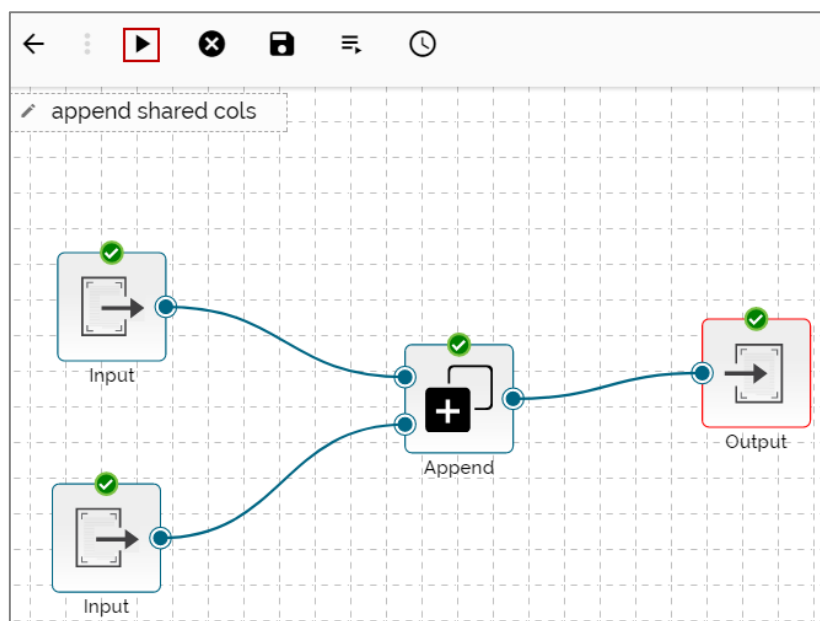
Append Only Shared Columns

- i) Connect the 'Append' component to the configures input datasets and an output component.
- ii) Choose 'ONLY INCLUDE SHARED COLUMNS' as an option to append the datasets.
- iii) The entire data of both the input data sets will be appended in the output data preview.

iv) Save the Workflow.



v) Run the Workflow.



vi) The shared column(s) will be appended in the output data set.
 E.g. The following images illustrate that the shared column 'Location' has been displayed under the data preview of Append and Output components.

a. Input Dataset-1

Input

CONFIGURATION **DATA PREVIEW**

| LocationId | LocationCode | City | State |
|------------|--------------|-------------|------------|
| 1 | AL | Montgomery | Alabama |
| 2 | AK | Juneau | Alaska |
| 3 | AZ | Phoenix | Arizona |
| 4 | AR | Little Rock | Arkansas |
| 5 | CA | Sacramento | California |

b. Input Dataset-2

Input

CONFIGURATION **DATA PREVIEW**

| SalesId | LocationId | ProductId | Quantity |
|---------|------------|-----------|----------|
| 1535978 | 25 | 13 | 7536 |
| 1535979 | 30 | 17 | 6786 |
| 1535980 | 58 | 5 | 9315 |
| 1535981 | 26 | 2 | 2157 |
| 1535982 | 40 | 10 | 6000 |

c. Append Data Preview

Append

CONFIGURATION **DATA PREVIEW**

| LocationId |
|------------|
| 1 |
| 2 |
| 3 |
| 4 |
| 5 |
| 6 |

d. Output Data Preview

Output

CONFIGURATION DATA PREVIEW

LocationId

| |
|----|
| 40 |
| 52 |
| 41 |
| 7 |
| 48 |

6.2. Join

Users can join two datasets and use the merged output to write the workflow in the selected metadata.

- i) Drag two input datasets and configure them to see the dataset preview.

Input Data Set 1

Input 1

CONFIGURATION DATA PREVIEW

| empno | name | dob | age | sal | joiningdateandtime |
|-------|---------|------------|-----|---------|------------------------------|
| 1 | David | 1994-05-05 | 23 | 3000.92 | 2017-05-31T15:23:12.000+0530 |
| 2 | Louie | 1993-09-23 | 24 | 3900.92 | 2017-03-21T15:43:12.000+0530 |
| 3 | Jake | 1994-09-23 | 23 | 3000.92 | 2016-04-21T17:43:12.000+0530 |
| 4 | Harvey | 1992-07-23 | 27 | 4900.92 | 2014-05-21T16:43:12.000+0530 |
| 5 | Matthew | 1980-09-23 | 40 | 2300.92 | 2017-02-21T23:13:12.000+0530 |

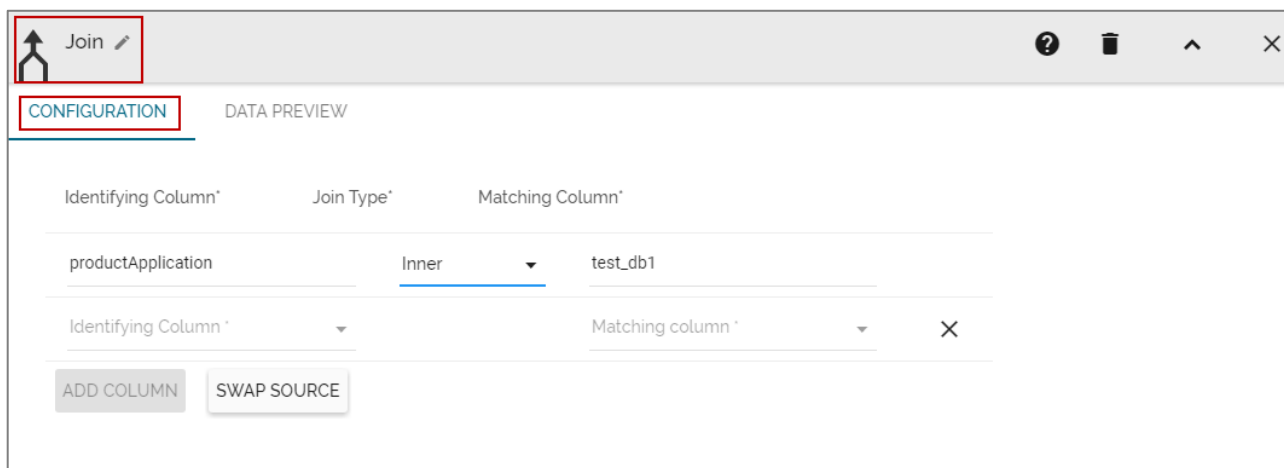
Input Data Set 2

Input 2

CONFIGURATION DATA PREVIEW

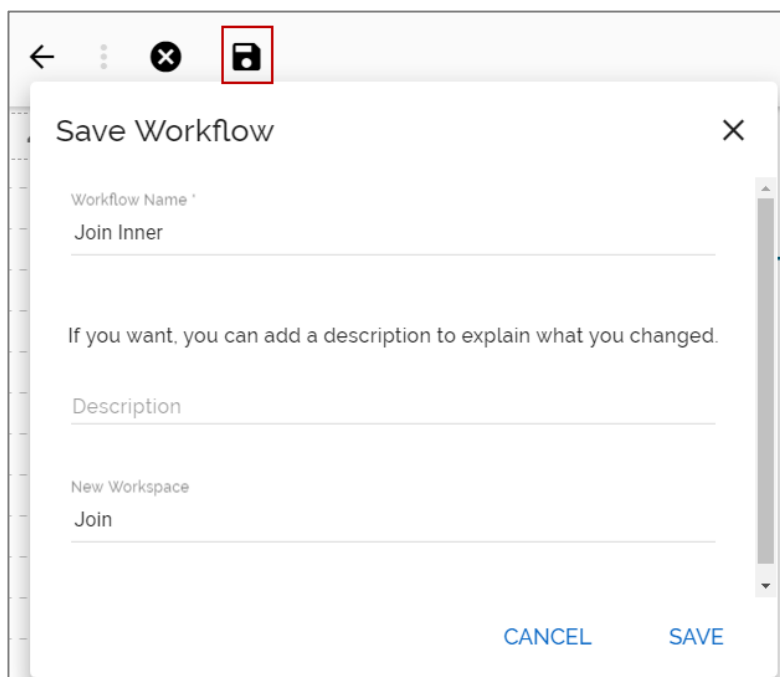
| SalesId | LocationId | ProductId | Quantity | Date |
|---------|------------|-----------|----------|------------------------------|
| 1535978 | 25 | 13 | 7536 | 2017-09-14T17:47:04.000+0530 |
| 1535979 | 30 | 17 | 6786 | 2017-09-14T17:47:04.000+0530 |
| 1535980 | 58 | 5 | 9345 | 2017-09-14T17:47:04.000+0530 |
| 1535981 | 26 | 2 | 2157 | 2017-09-14T17:47:04.000+0530 |
| 1535982 | 40 | 10 | 6000 | 2017-09-14T17:54:04.000+0530 |
| 1535983 | 40 | 9 | 6000 | 2017-09-14T17:47:04.000+0530 |

- ii) Connect the 'Join' component with the above-given input datasets and one output component to complete the workflow.
- iii) Configure the 'Join' component as described below:
 - a. Identifying Column: Identify a column from the input dataset 1
 - b. Join Type: Choose a join type to merge the selected datasets out of the given choices
 - i. Inner
 - ii. Left Outer
 - iii. Right Outer
 - iv. Full Outer
 - c. Matching Column: Select a column from the input dataset 2

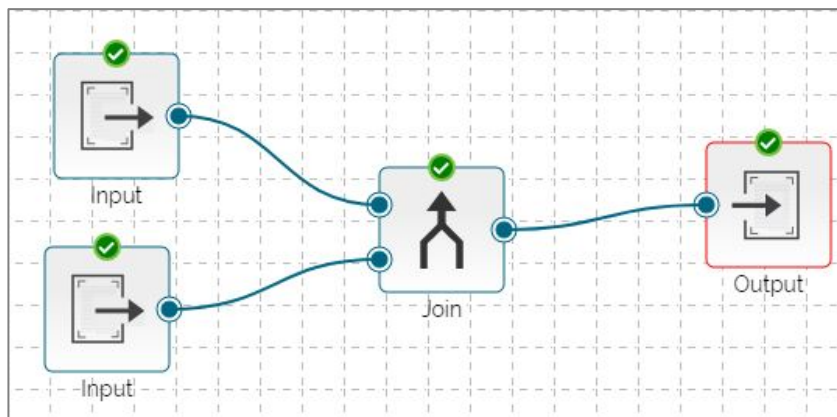


Note:

- a. By default, the 'Inner' join type will be selected. Users can apply multiple inner joins by using the 'ADD COLUMN' tab.
 - b. Click 'SWAP SOURCE' to interchange the input datasets and the selected columns from the data sets.
- iv) Save the workflow.



v) Run the workflow.



vi) Click the 'Data Preview' tab from the Join component to view data preview of the merged data.

Join

CONFIGURATION **DATA PREVIEW**

| SalesId | LocationId | CategoryId | Date | Amount |
|---------|------------|------------|------------------------------|--------|
| 148 | 1 | 1 | 2016-05-27T00:00:00.000+0530 | 2331 |
| 463 | 1 | 1 | 2017-04-07T00:00:00.000+0530 | 3226 |
| 471 | 1 | 2 | 2016-01-04T00:00:00.000+0530 | 1409 |
| 496 | 1 | 2 | 2016-01-29T00:00:00.000+0530 | 1239 |
| 833 | 1 | 2 | 2016-12-31T00:00:00.000+0530 | 4728 |
| 65 | 1 | 1 | 2016-03-02T00:00:00.000+0530 | 3481 |

vii) Users can preview data under the 'Data Preview' tab of the selected output component.

Output

CONFIGURATION **DATA PREVIEW**

| SalesId | LocationId | CategoryId | Date | Amount |
|---------|------------|------------|------------------------------|--------|
| 243 | 1 | 1 | 2016-08-30T00:00:00.000+0530 | 1280 |
| 392 | 1 | 1 | 2017-01-26T00:00:00.000+0530 | 5115 |
| 540 | 1 | 2 | 2016-03-13T00:00:00.000+0530 | 2027 |
| 623 | 1 | 2 | 2016-06-04T00:00:00.000+0530 | 5491 |
| 737 | 1 | 2 | 2016-09-26T00:00:00.000+0530 | 5144 |

6.2.1. Join Types:

The 'Join' feature offers four types of join to merge datasets.

The sample data sets used to describe the supported join types are:

1. Input Dataset 1

| Input 1 | | |
|------------------------------|---------|-----|
| CONFIGURATION | | |
| DATA PREVIEW | | |
| empno | name | age |
| 1 | David | 23 |
| 2 | Louie | 24 |
| 3 | Jake | 23 |
| 4 | Harvey | 27 |
| 5 | Matthew | 40 |

2. Input Dataset 2

| Input 2 | | |
|------------------------------|------------|-----------|
| CONFIGURATION | | |
| DATA PREVIEW | | |
| SalesId | LocationId | ProductId |
| 1535978 | 25 | 13 |
| 1535979 | 30 | 17 |
| 1535980 | 58 | 5 |
| 1535981 | 26 | 2 |
| 1535982 | 40 | 10 |
| 1535983 | 40 | 9 |

a) Inner Join

- i. Connect the join component to the configured input datasets and output component to create a workflow.
- ii. Specify a join type from the 'Configuration' tab of the join component.

| Inner Join | | |
|-------------------------------------------|--------------------------------------------|-----------------------------|
| CONFIGURATION | | |
| DATA PREVIEW | | |
| Identifying Column* | Join Type* | Matching Column* |
| Mapping | Inner | Mapping |
| empno [Whole Number] | | LocationId [Whole Number] |
| <input type="button" value="ADD COLUMN"/> | <input type="button" value="SWAP SOURCE"/> | |

- iii. Save and run the workflow.

- iv. Click the 'Data Preview' tab using the join component to view the merged datasets.

| empno | name | age | SalesId | LocationId | ProductId |
|-------|---------|-----|---------|------------|-----------|
| 3 | Jake | 23 | 1536027 | 3 | 18 |
| 3 | Jake | 23 | 1536059 | 3 | 1 |
| 5 | Matthew | 40 | 1536041 | 5 | 15 |

b) Left Outer Join

- i. Connect the join component to the configured input datasets and output component to create a workflow.
- ii. Specify a join type from the 'Configuration' tab of the join component.

| Identifying Column* | Join Type* | Matching Column* |
|------------------------|------------|-----------------------------|
| Mapping | Left Outer | Mapping |
| empno [Whole Number] | | LocationId [Whole Number] |

ADD COLUMN SWAP SOURCE

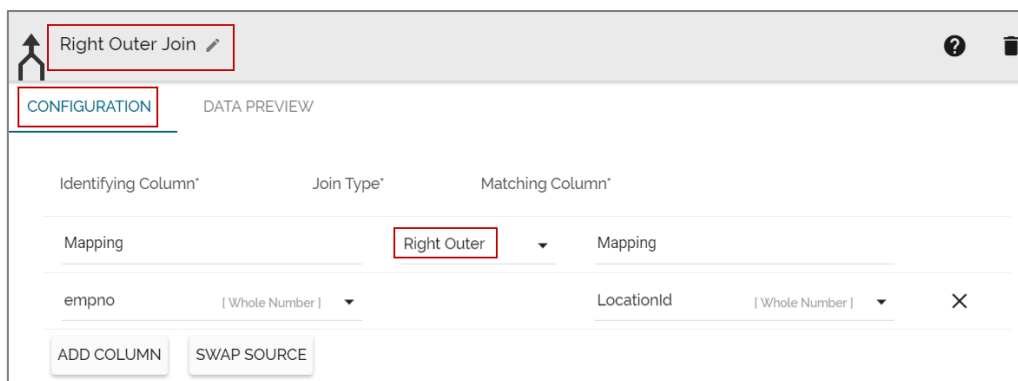
- iii. Save and run the workflow.
- iv. Click the 'Data Preview' tab using the join component to view the merged datasets.

| empno | name | age | SalesId | LocationId | ProductId |
|-------|---------|-----|---------|------------|-----------|
| 3 | Jake | 23 | 1536027 | 3 | 18 |
| 3 | Jake | 23 | 1536059 | 3 | 1 |
| 1 | David | 23 | | | |
| 2 | Louie | 24 | | | |
| 4 | Harvey | 27 | | | |
| 5 | Matthew | 40 | 1536041 | 5 | 15 |

Note: The output data preview will be aligned with the selected left input dataset.

c) Right Outer Join

- i. Connect the join component to the configured input datasets and output component to create a workflow.
- ii. Specify a join type from the 'Configuration' tab of the join component.

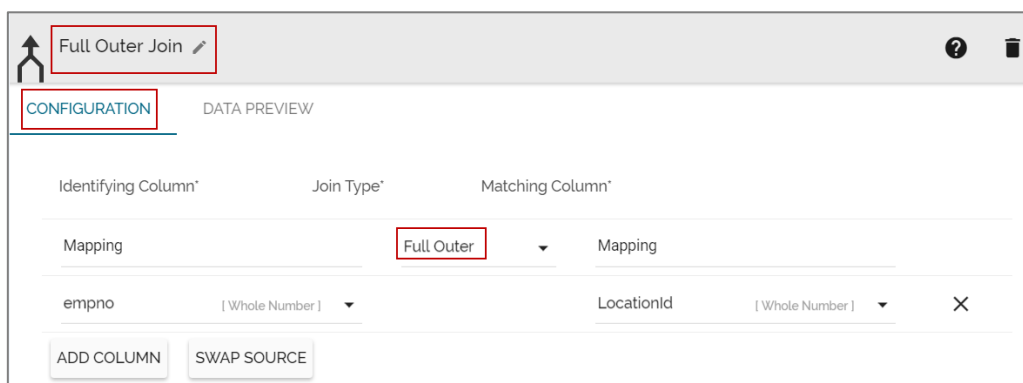


- iii. Save and run the workflow.
- iv. Click the 'Data Preview' tab using the join component to view the merged datasets.

| empno | name | age | SalesId | LocationId | ProductId |
|-------|------|-----|---------|------------|-----------|
| | | | 1535979 | 30 | 17 |
| | | | 1535982 | 40 | 10 |
| | | | 1535983 | 40 | 9 |
| | | | 1535986 | 7 | 15 |
| | | | 1535981 | 26 | 2 |
| | | | 1535985 | 41 | 17 |

d) Full Outer

- i. Connect the join component to the configured input datasets and output component to create a workflow.
- ii. Specify a join type from the 'Configuration' tab of the join component.



- iii. Save and run the workflow.
- iv. Click the 'Data Preview' tab using the join component to view the merged datasets.

Full Outer Join

CONFIGURATION DATA PREVIEW

| empno | name | age | SalesId | LocationId | ProductId |
|-------|------|-----|---------|------------|-----------|
| | | | 1536043 | 6 | 1 |
| | | | 1536077 | 6 | 3 |
| | | | 1535998 | 39 | 9 |
| | | | 1536036 | 39 | 8 |
| 3 | Jake | 23 | 1536027 | 3 | 18 |
| 3 | Jake | 23 | 1536059 | 3 | 1 |

7. Scheduler

The 'Scheduler' section displays the schedule monitoring details. Users can see a list containing all the scheduled workflows.

- i) Click the 'Navigator' icon ☰
- ii) Select 'Scheduler' from the drop-down menu.
- iii) Users will be redirected to the 'Schedule Monitoring' page.
- iv) The scheduled workflow will be added to the list of all the schedules.
- v) Click on a scheduled workflow will display the following schedule details:
 - a. Scheduler Name
 - b. Last Updated Date
 - c. Recurrence date and time
 - d. Status

Decision Platform

Data preparation 1.0.0

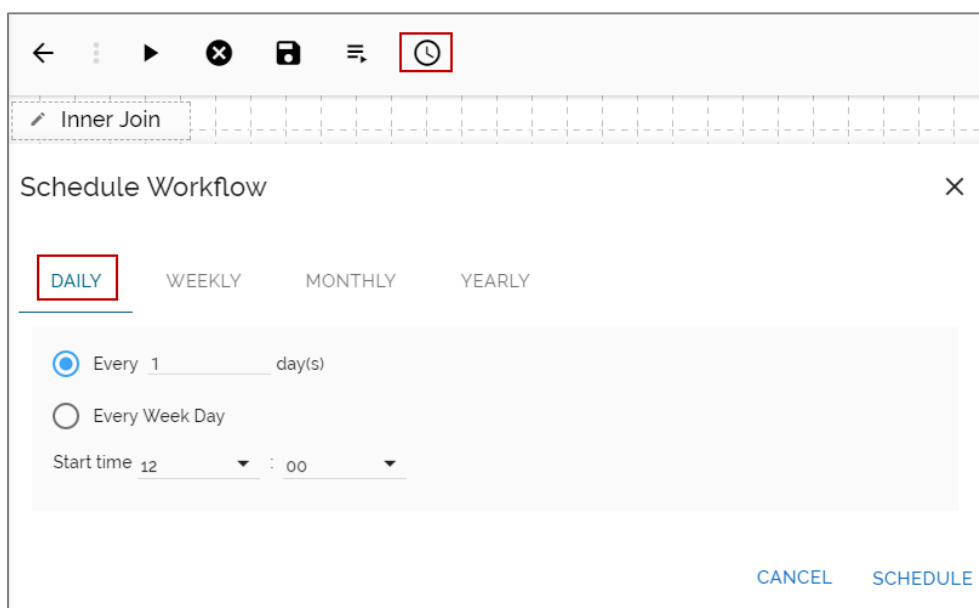
Schedule Monitoring

| Scheduler Name | Last Updated Date | Recurrence | Status |
|--------------------------|-------------------------|------------------------|------------------------------------------|
| nadeem hierarchy test | 10/11/2017, 10:25:00 AM | 10/12/2017, 4:55:00 AM | Successfully started the scheduled query |
| Sample Data Preparati... | 10/11/2017, 4:55:00 AM | 10/12/2017, 4:55:00 AM | Successfully started the scheduled query |
| Data Type Test | 10/11/2017, 4:55:00 AM | 10/12/2017, 4:55:00 AM | Successfully started the scheduled query |
| manjhari-bistory | 10/10/2017, 10:25:00 AM | 10/11/2017, 4:55:00 AM | Successfully started the scheduled query |
| elsticheckk_manjhari | 10/10/2017, 4:55:00 AM | 10/11/2017, 4:55:00 AM | Successfully started the scheduled query |
| mj-simple | 10/10/2017, 4:55:00 AM | 10/11/2017, 4:55:00 AM | Successfully started the scheduled query |
| elastic 15.9 | 10/9/2017, 10:25:00 AM | 10/10/2017, 4:55:00 AM | Successfully started the scheduled query |

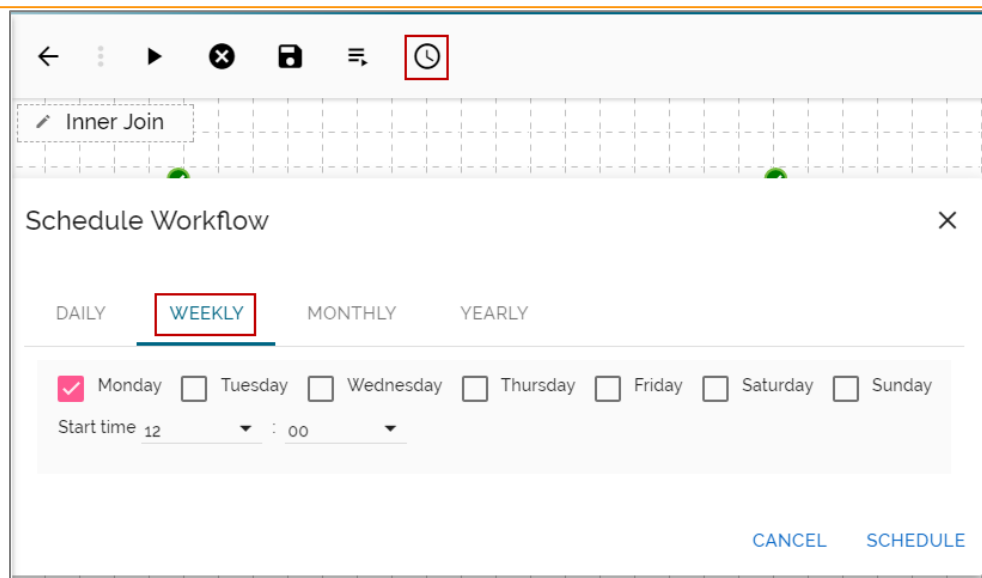
7.1. Schedule Configuration Options

These options are provided to configure a range of time for a scheduled workflow. The user can select only one option at a time from the given menu.

1. **Daily:** User can schedule the job on a daily basis by using this option.
 - a. Click the **'Scheduler'** icon on the workflow editor
 - b. Choose **'Daily'** option from the **'Schedule Workflow'** window (It is a default option).
 - i. Select an option out of the given choices
 1. Every __ day(s)
 2. Every Week Day
 3. Set the start time using the drop-down
 - c. Click **'SCHEDULE'**

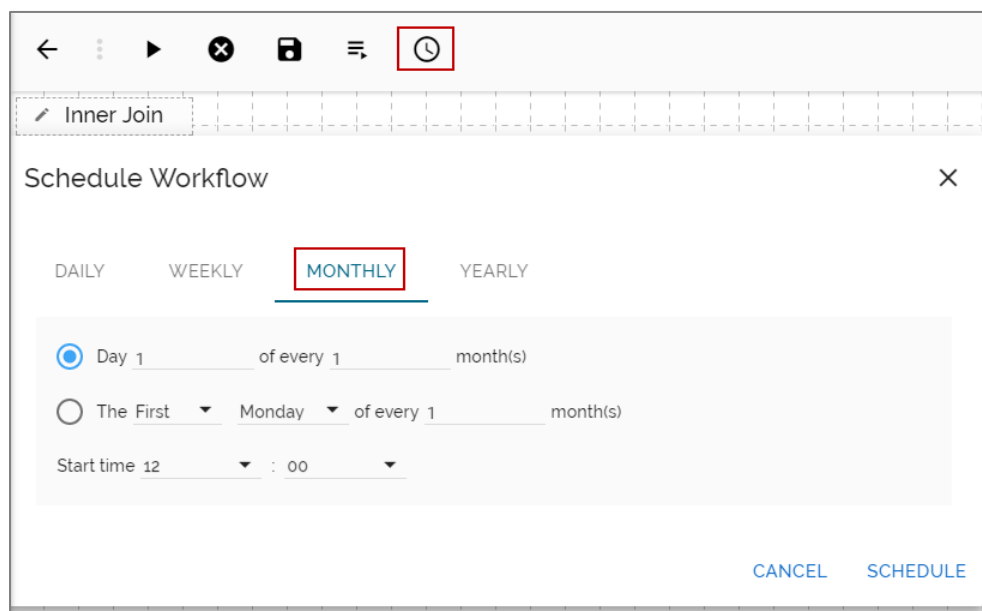


2. **Weekly:** User can schedule the job on a weekly basis by using this option.
 - a. Click the **'Scheduler'** icon on the workflow editor
 - b. Choose the **'Daily'** option from the **'Schedule Workflow'** window.
 - i. Select an option out of the given choices
 1. Choose the days of the week by check marking in the box
 2. Set the start time using the drop-down
 - c. Click **'SCHEDULE'**



3. Monthly: User can schedule the job on the Monthly basis by using this option.

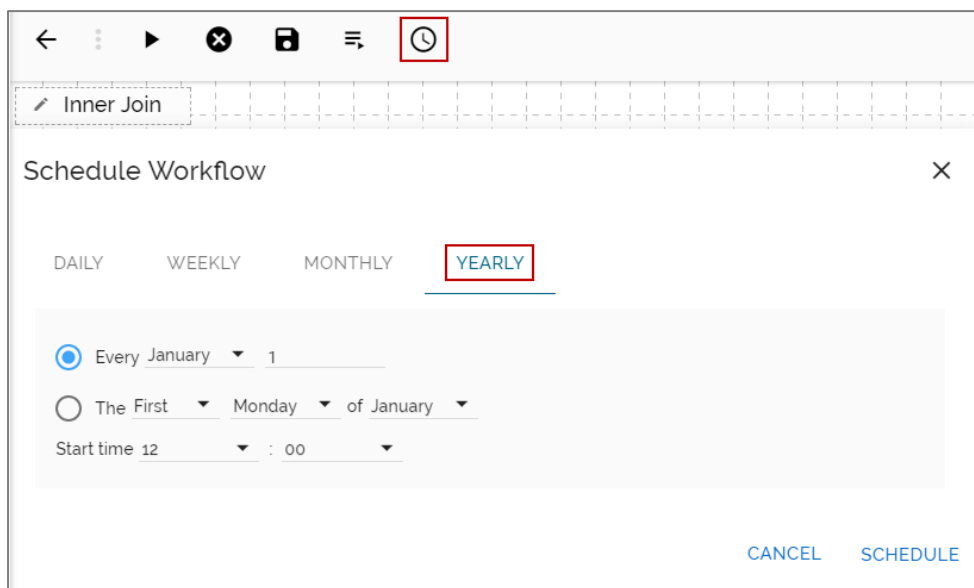
- a. Click the ‘Scheduler’ icon on the workflow editor
- b. Choose the ‘Daily’ option from the ‘Schedule Workflow’ window.
 - i. Select an option out of the given choices to choose a day for each month.
 - ii. Set the start time using the drop-down
- c. Click ‘SCHEDULE’



4. Yearly: User can schedule the job on a yearly basis by using this option.


- a. Click the ‘Scheduler’ icon on the workflow editor
- b. Choose the ‘Daily’ option from the ‘Schedule Workflow’ window.
 - i. Select an option out of the given choices
 1. Specify either a day or date of a specific month in a year
 2. Set the start time using the drop-down

c. Click 'SCHEDULE'



8. Signing Out

Follow the below given steps to sign out from the BizViz Platform:

- i) Click the 'User' icon  on the Platform home page.
- ii) A menu appears with the logged in user details.
- iii) Click 'Sign Out.'
- iv) Users will be successfully logged out from the **BizViz Platform**.

Note: Clicking on 'Sign Out' will redirect the user back to the **login** page of the BizViz platform.