



# User Guide

Data Preparation R-1.0



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# 1. About this Guide

## 1.1. Document History

Product Version	Date (Release date)	Description
BizViz Data Preparation 1.0	August 31st, 2017	First Release of the document

## 1.2. Overview

This guide covers:

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

## 1.3. Target Audience

This guide is aimed at business users of all skill levels who deal with huge amounts of data to get informative insight into their business.

# 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

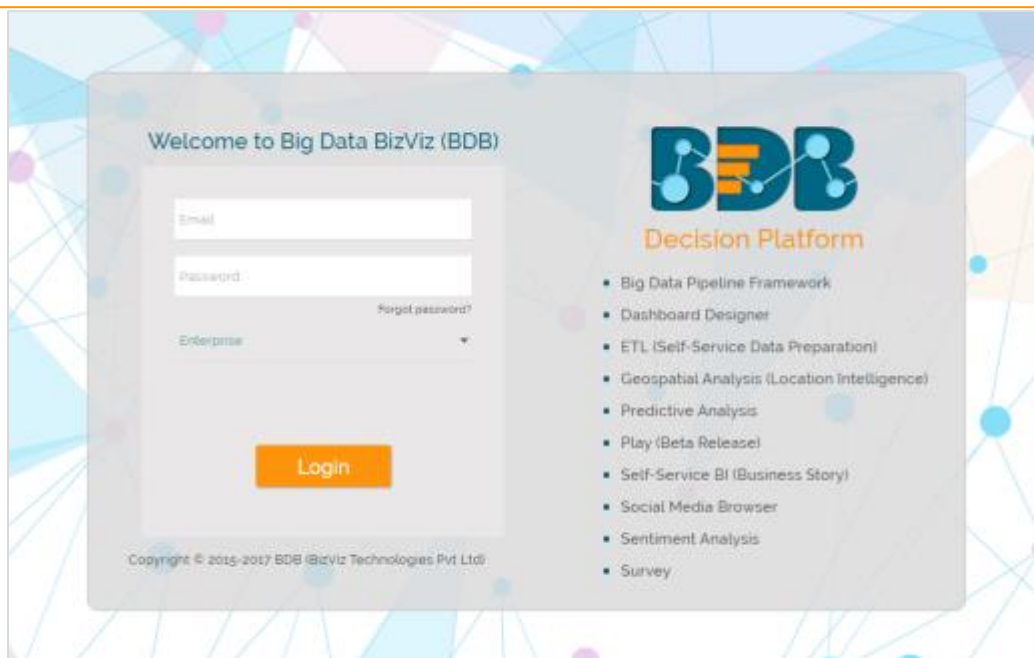
- Browser that supports HTML5
- Operating System: Windows 7
- Basic understanding of the BizViz Server

# 3. Getting Started with the BDB Data Preparation

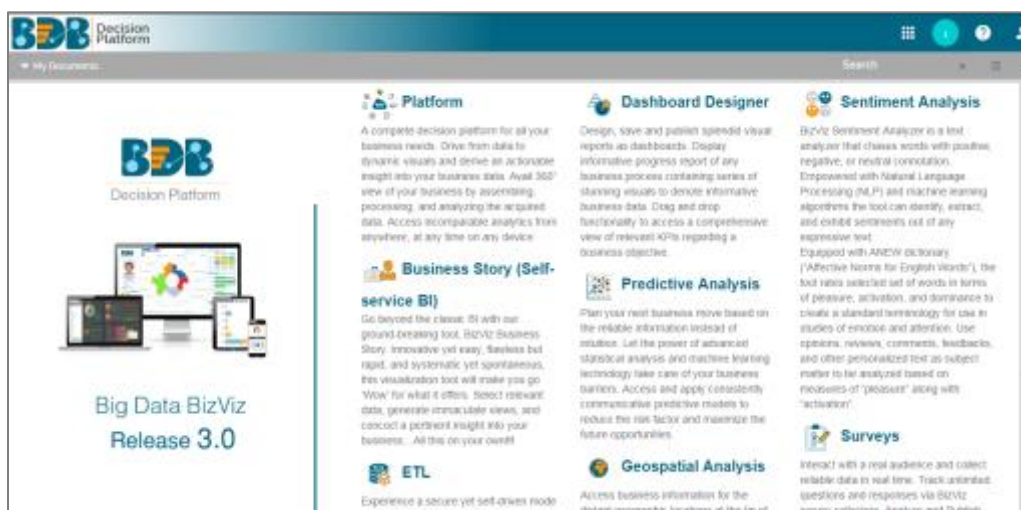
## 3.1. Accessing the BDB Data Preparation

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

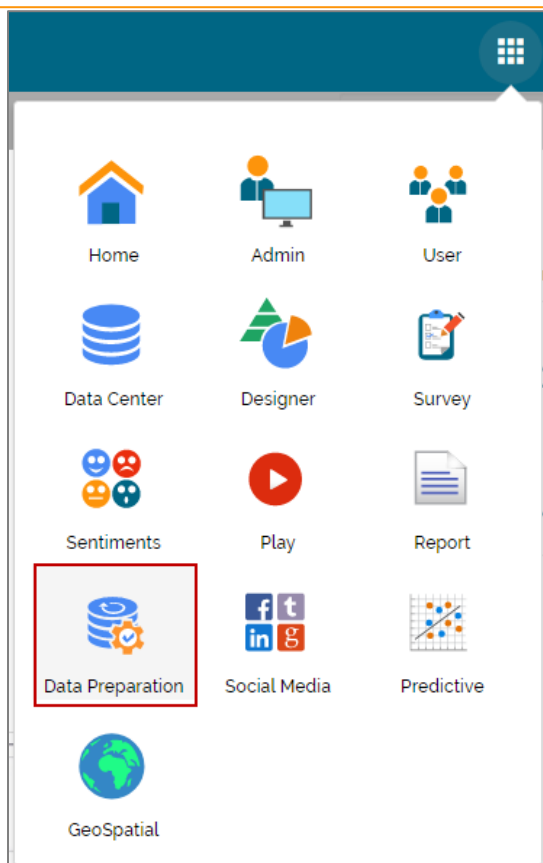
- i) Open BDB Enterprise Platform Link: <http://apps.bdbizviz.com/app/>
- ii) Enter your credentials to Login.
- iii) Click 'Login'



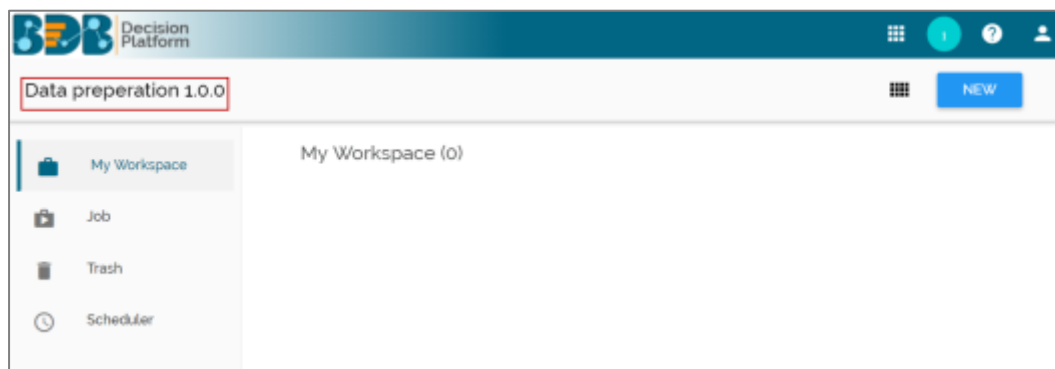
iv) Users will be redirected to the BDB Platform home page.



- 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

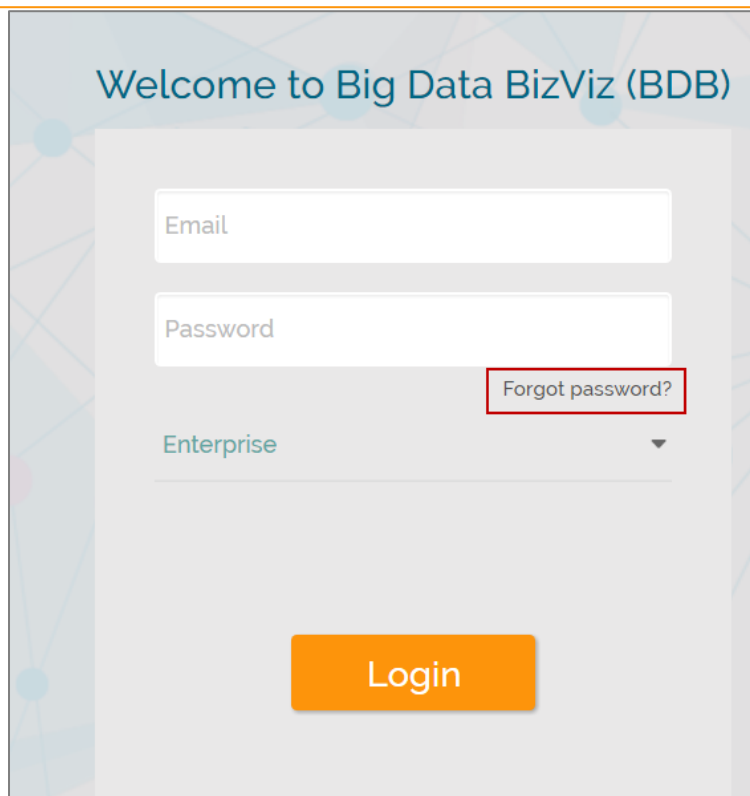


This document will describe all the major components and the related workflows at details.

### 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

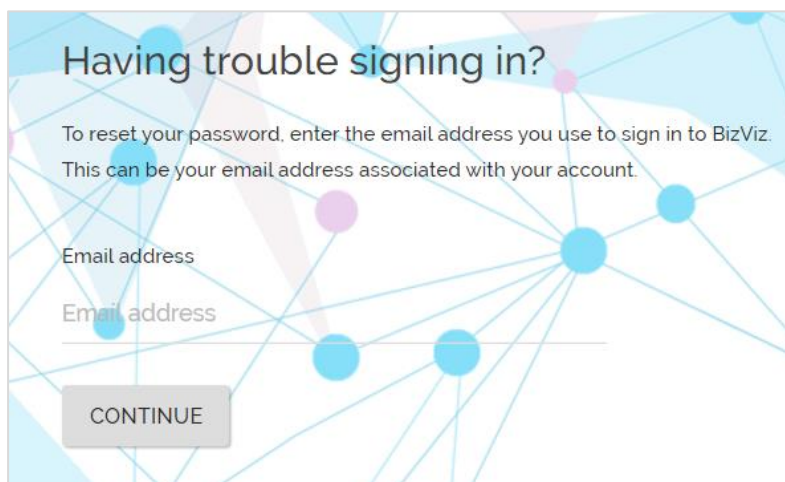
Password

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?

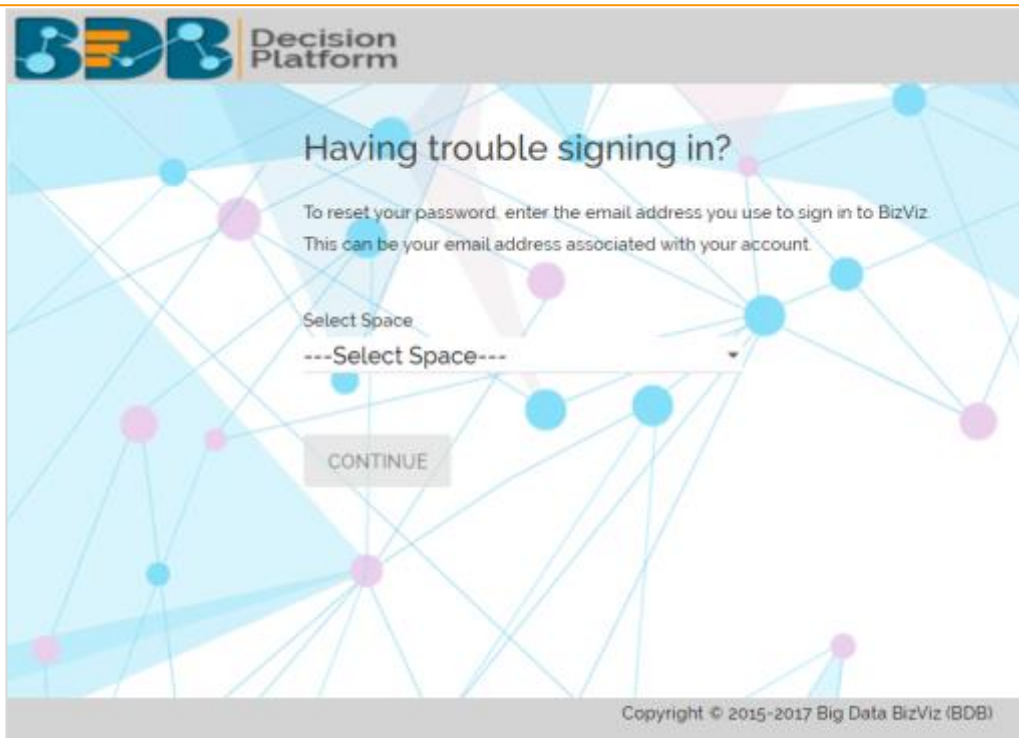
To reset your password, enter the email address you use to sign in to BizViz. This can be your email address associated with your account.

Email address

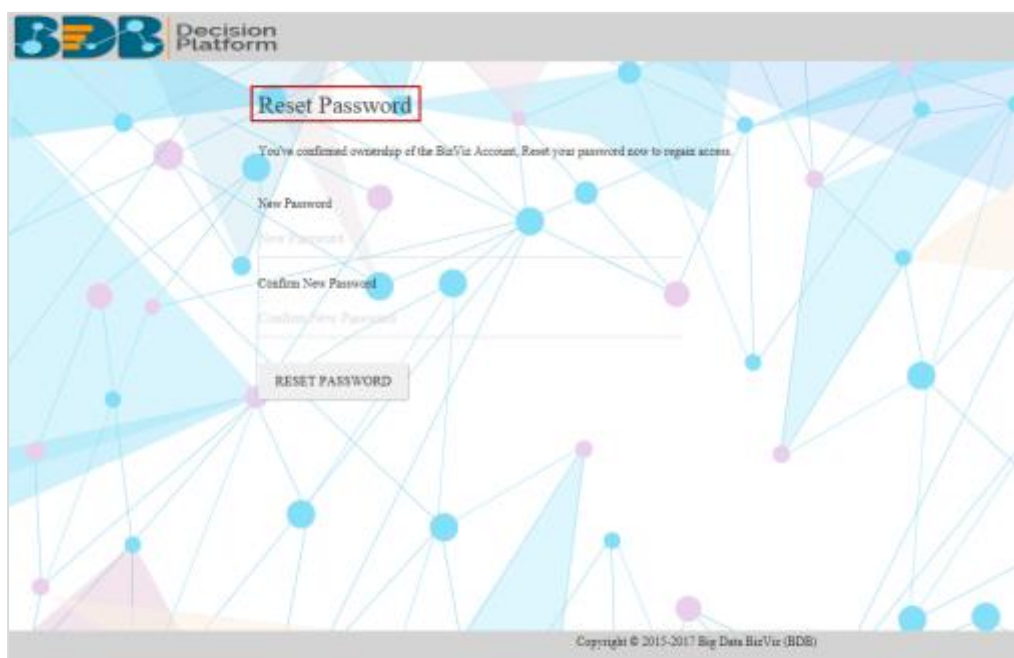
Email address

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.

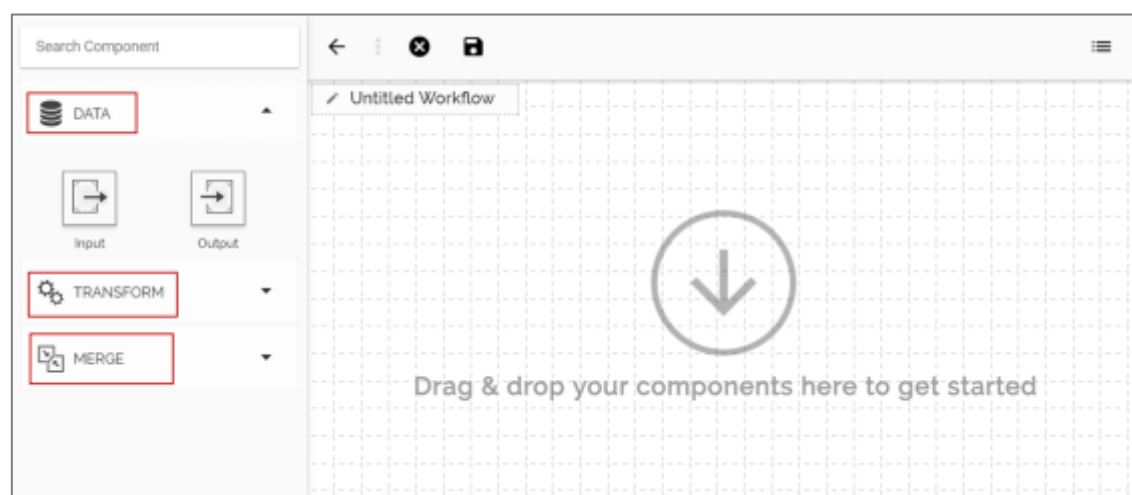
### 4.1. Workflow Editor

'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'

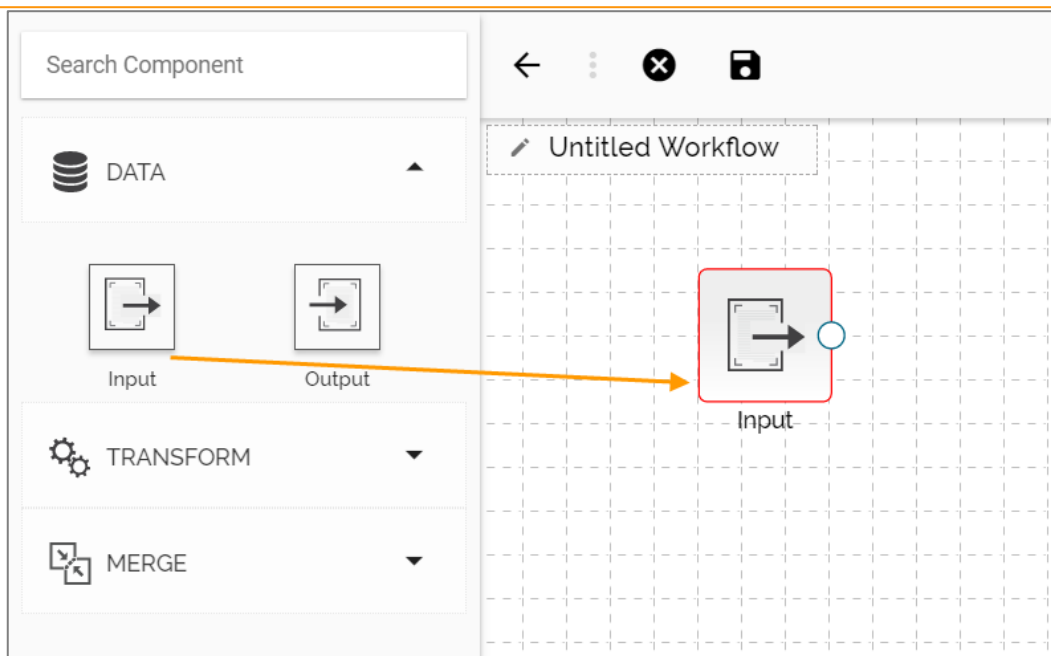


- iii) Users will be redirected to the 'Workflow Editor'
- iv) The Workflow editor exposes users to 3 main aspects to autonomously prepare data:
  - a. Data
  - b. Transform
  - c. Merge

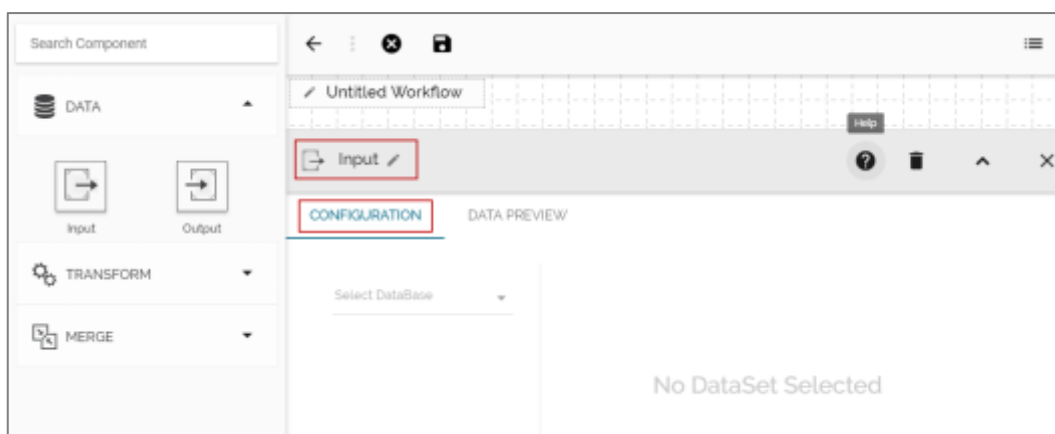


### 4.2. Extracting Data: Full and Incremental

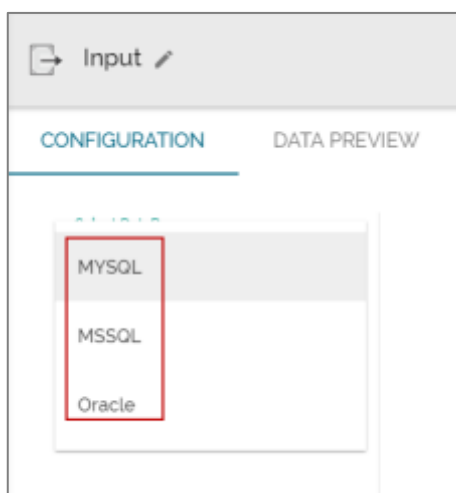
- i) Navigate to the Workflow Editor.
- ii) The 'Data' option will be selected by default.
- iii) Drag and Drop 'Input' component onto the workflow editor.



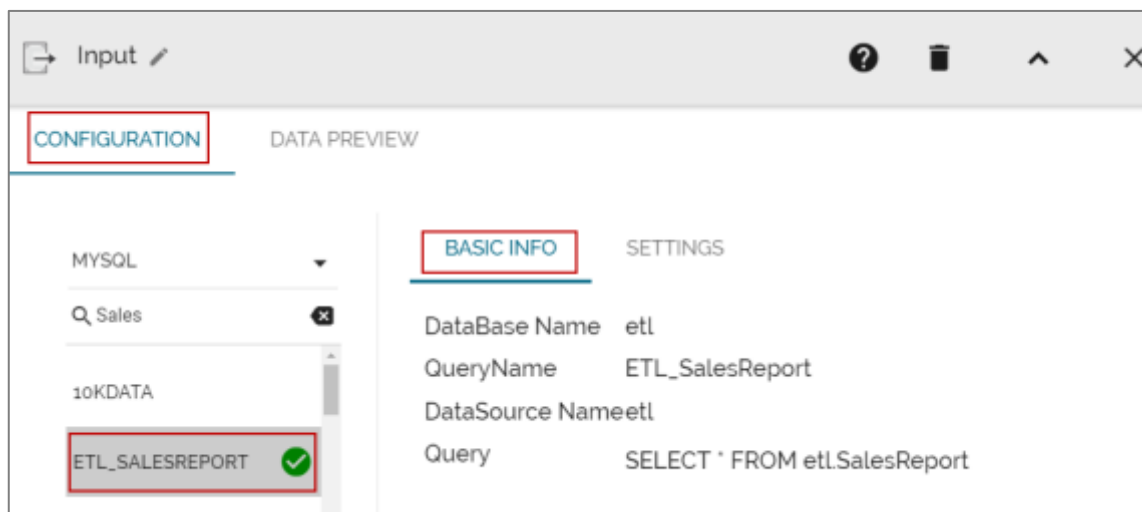
- iv) Use right-click on the dragged input component
- v) A new window will be displayed to configure the input data.



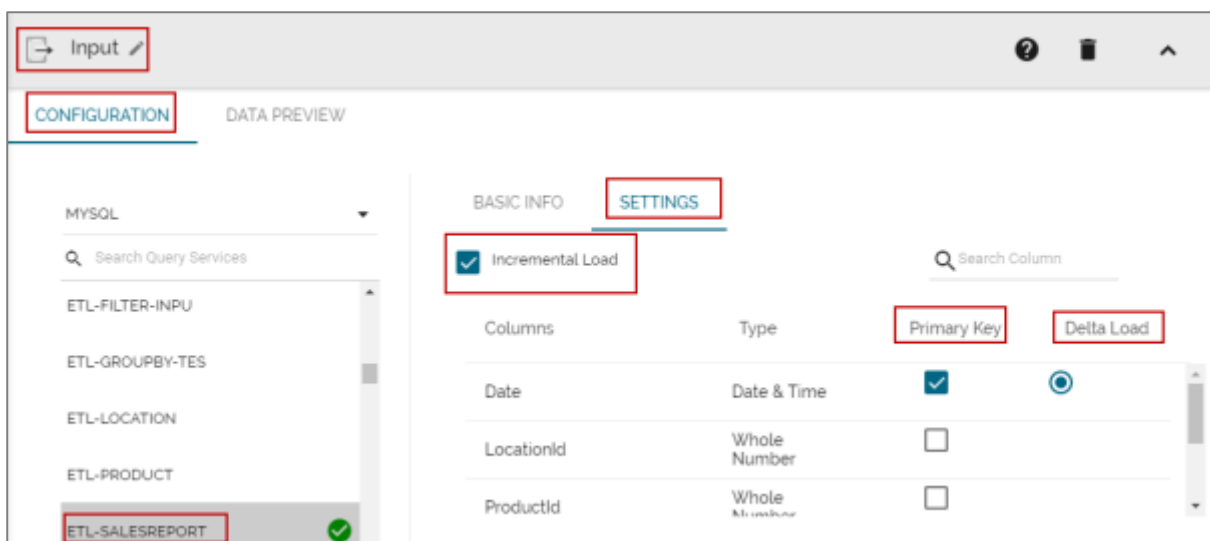
- vi) Select a database using the drop-down menu (At present only MYSQL, MSSQL, and Oracle are supported).



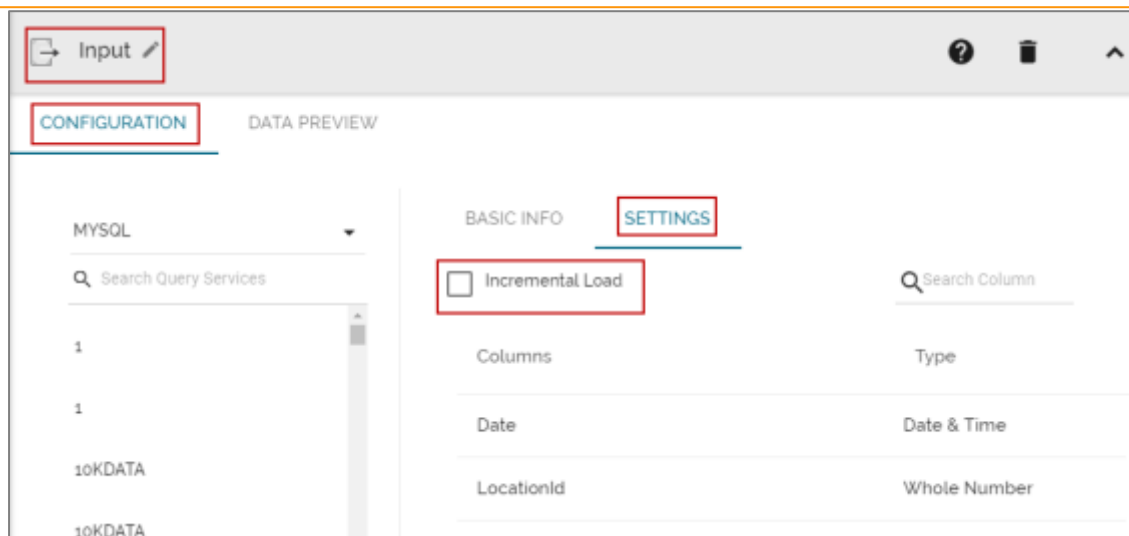
- vii) Selecting a database will redirect users to the list of query services based on the selected database.
- viii) Select a query service from the list.
- ix) The basic information of the database and query service will be displayed (By Default).



- 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'



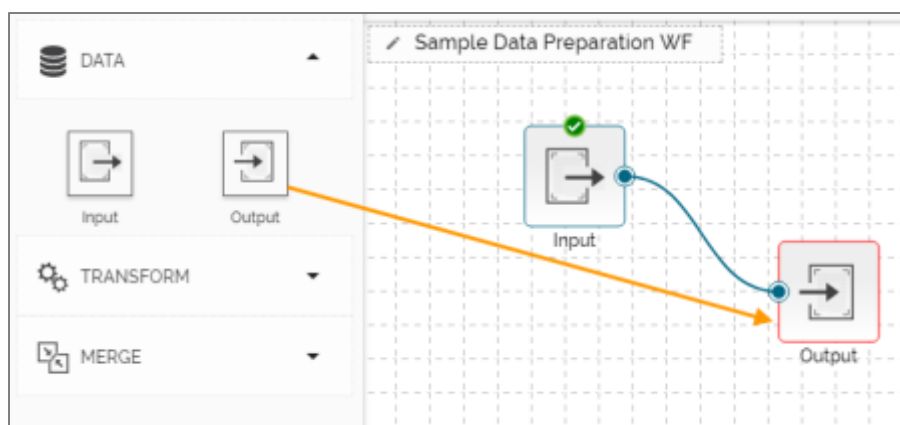
Note: Users can choose not to enable the increment load. In this case, the following details will be displayed and the full data will be extracted.



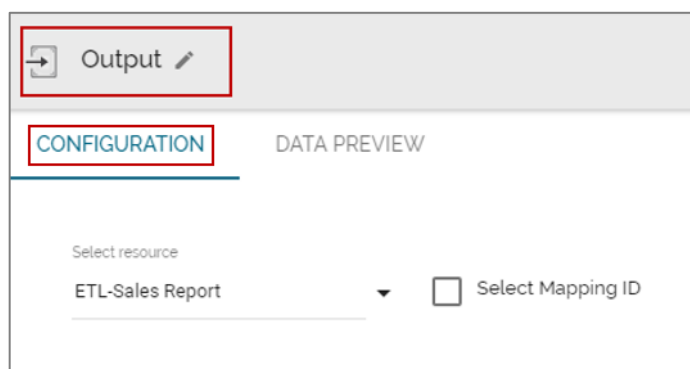
### 4.3. Loading Data

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

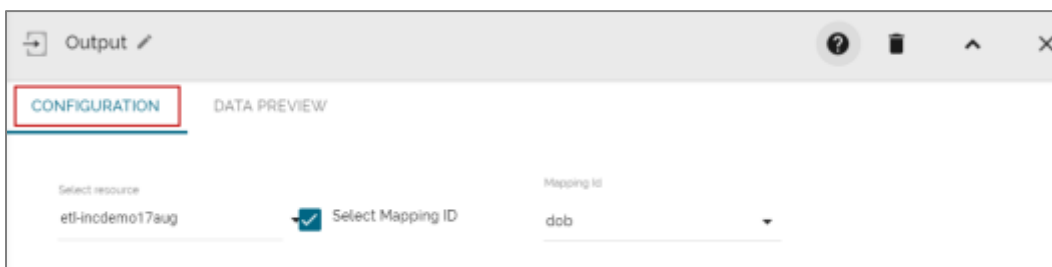
- i) Drag and drop the 'Output' component on the Workflow editor.
- ii) Connect it with the configured 'Input' component.



- iii) Click on the 'Output' component to display the 'CONFIGURATION' option.
  - a. Select a resource using the drop-down menu
  - b. 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.




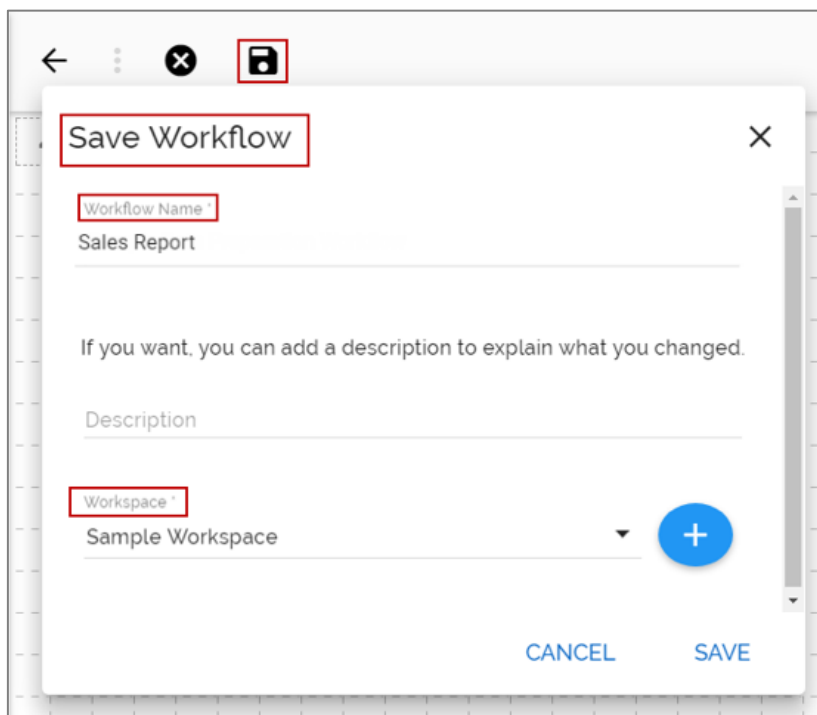
Note: If the 'Select Mapping Id' option is enabled, users will be asked to configure the mapping id using the drop-down menu:



#### 4.4. Saving a Workflow


Users are provided with two options to save a workflow.

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

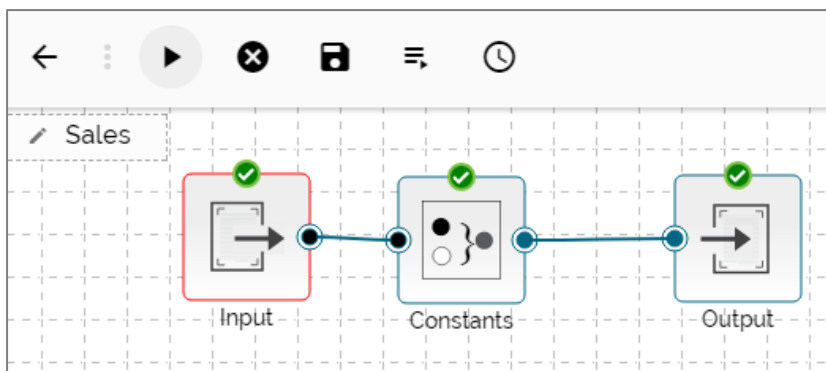


#### 4.5. Run Preview

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 constant blue line.

- iv) Users will get notify 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.



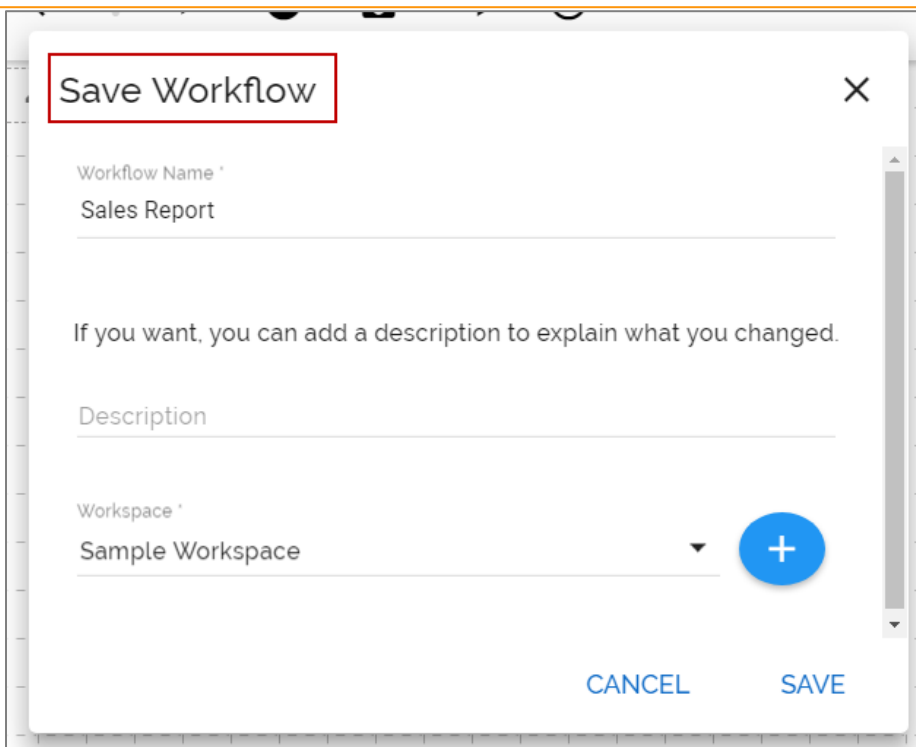
- vi) Open 'Data Preview' by clicking the input component to view the preview of the extracted data.

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.

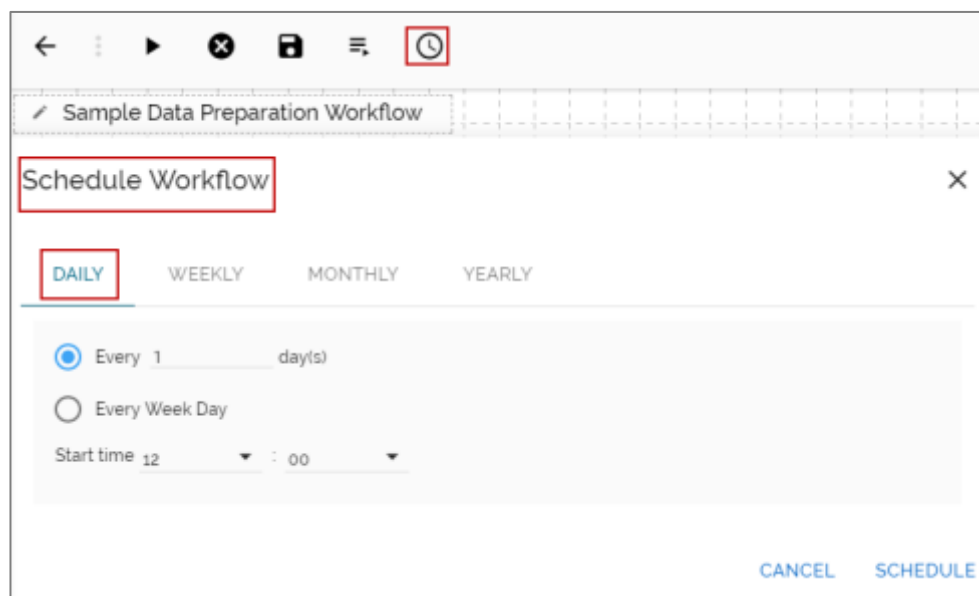
- i) Click 'Save' option.
- ii) A new window pops-up redirecting the user to save the workflow.
  - a. Enter a Workflow name
  - b. Enter Description (Optional)
  - c. Select or Add a Workspace
- iii) Click 'Save'



#### 4.7. 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'.

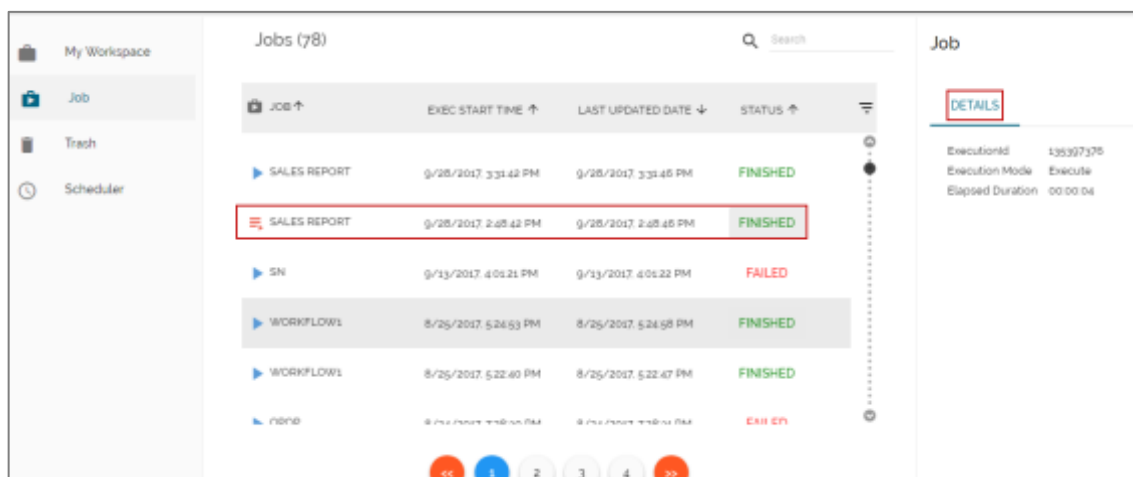


vii) The selected workflow will be scheduled.

## 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"> <li>1. Workspace</li> <li>2. Job</li> <li>3. Trash</li> </ol>



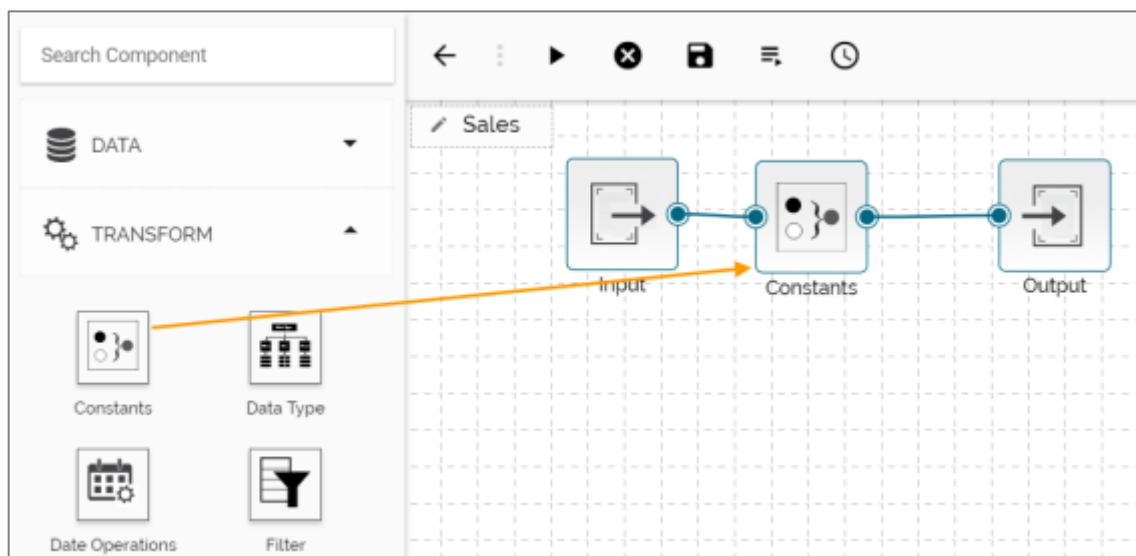
		4. Scheduler
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## 5. Transform

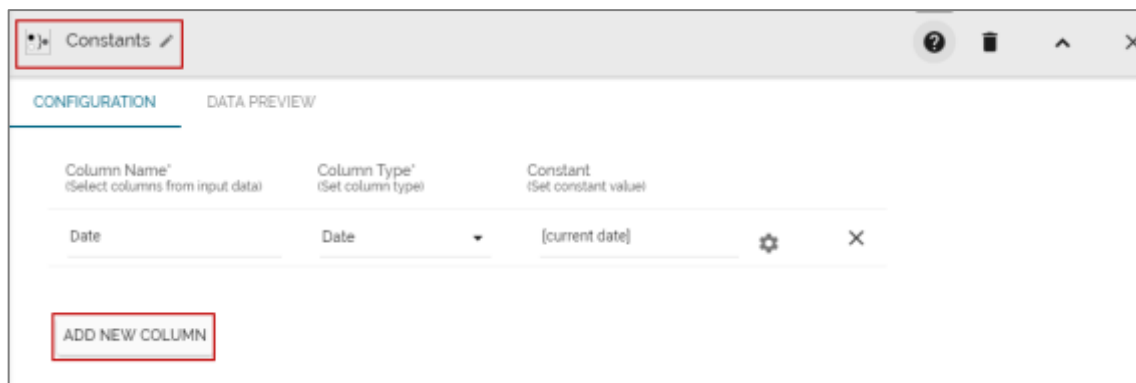
### 5.1. Constants

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

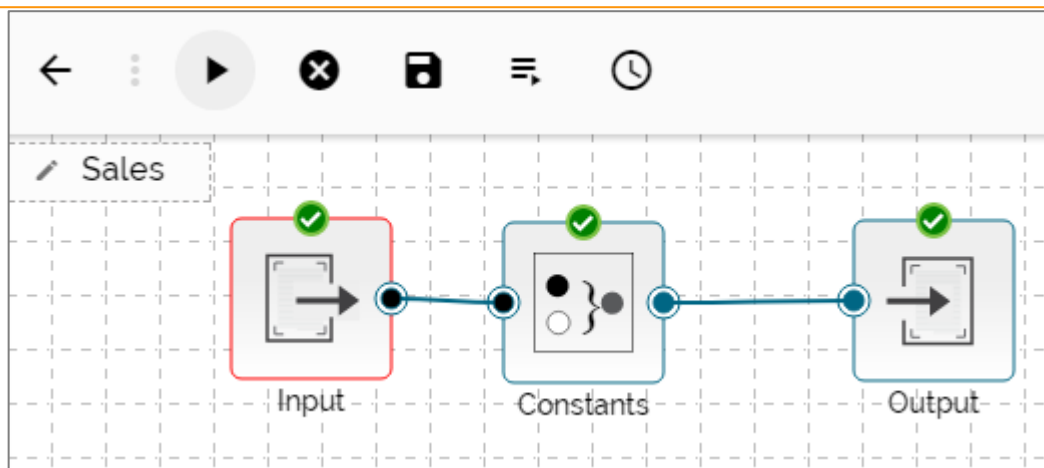
- i) Navigate to the Workflow editor.
- ii) Connect the '**Constants**' component to the configured input dataset and output component.



- 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.



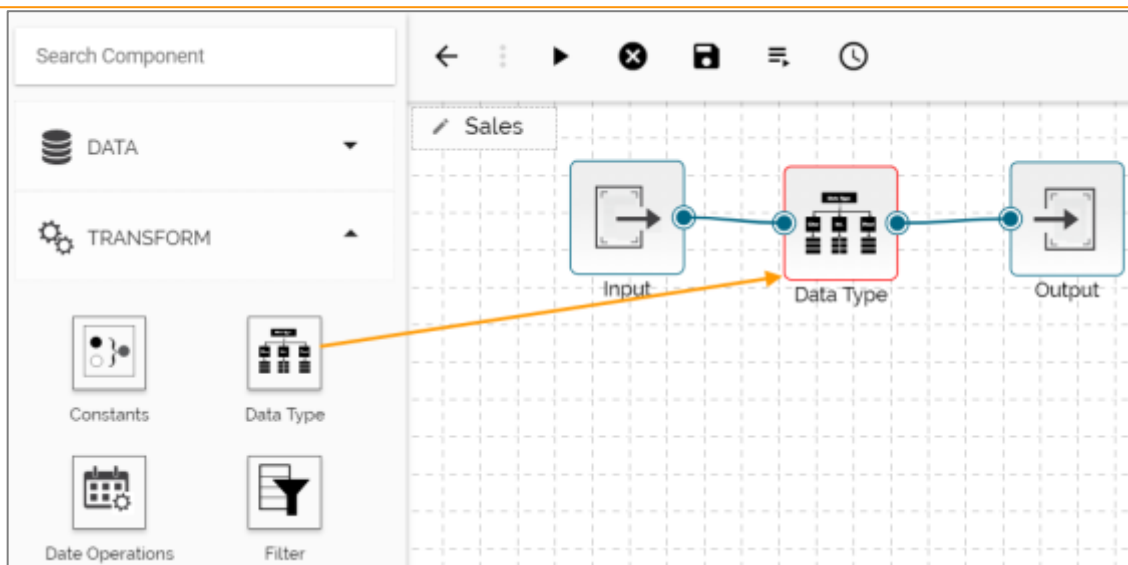
vi) The set constant value will be applied to the selected column in the output dataset.

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

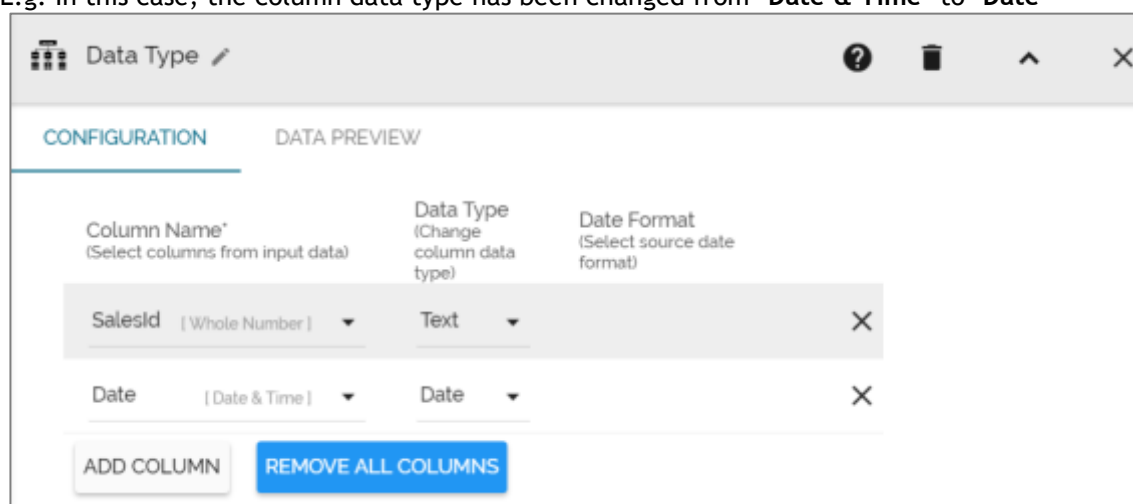
## 5.2. Data Type

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'



- 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

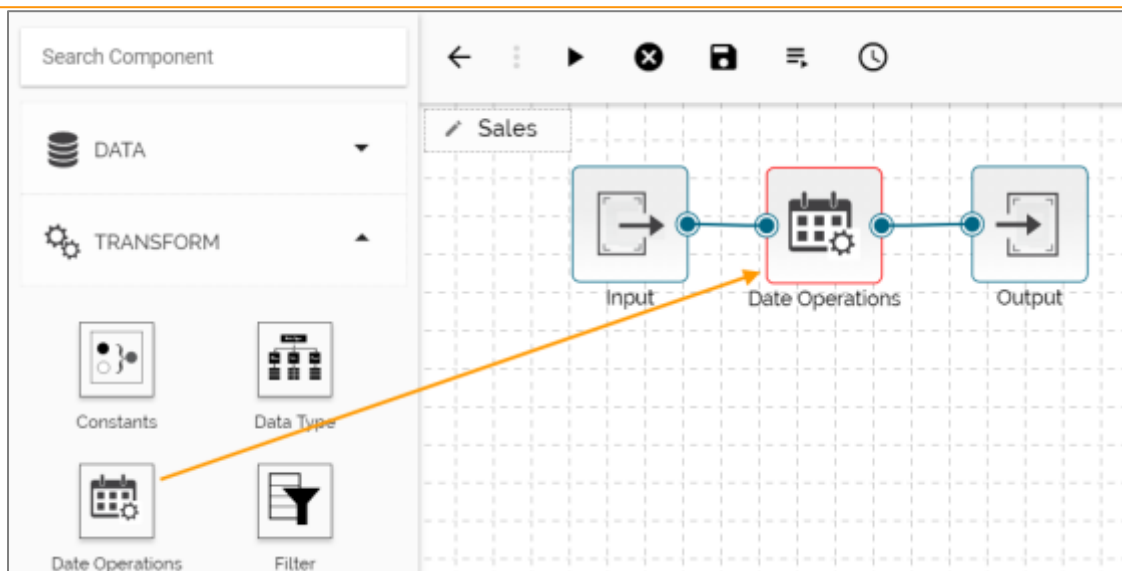
CONFIGURATION DATA PREVIEW

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

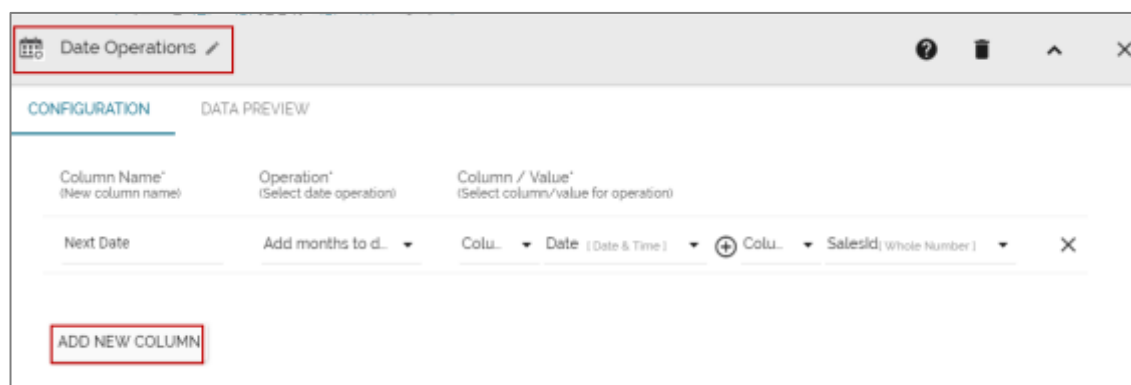
### 5.3. Date Operations

Users can perform various operations of dates addition/subtraction with integers or other dates. It should also allow 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 **'value'** option, users will be redirected to enter a value.



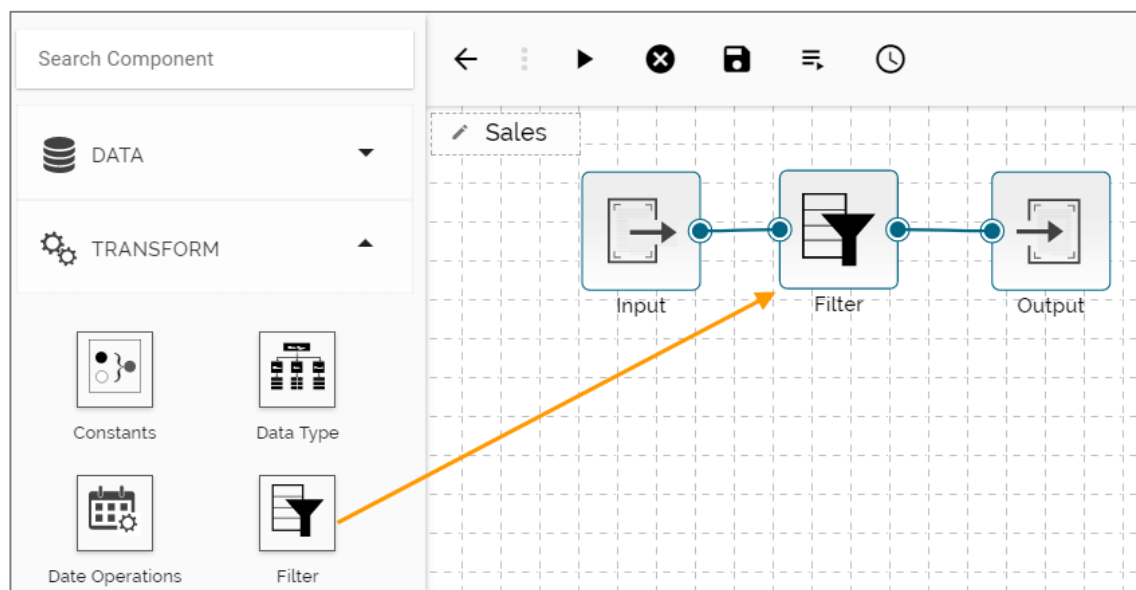
- iv) Save the workflow.
- v) Run/Execute the workflow.
  
- vi) The new column, **'Next Date'** will be added in the output dataset. Users can view it in the output data preview.

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
55	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

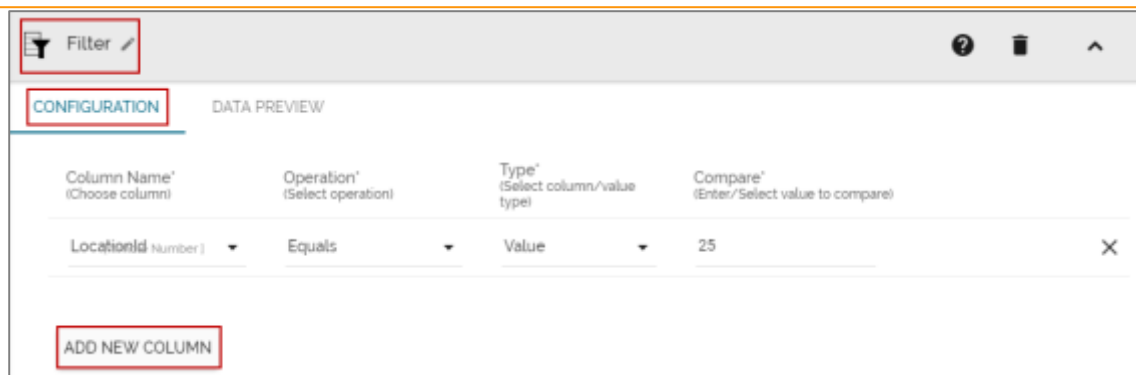
## 5.4. Filter

Users can filter 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.

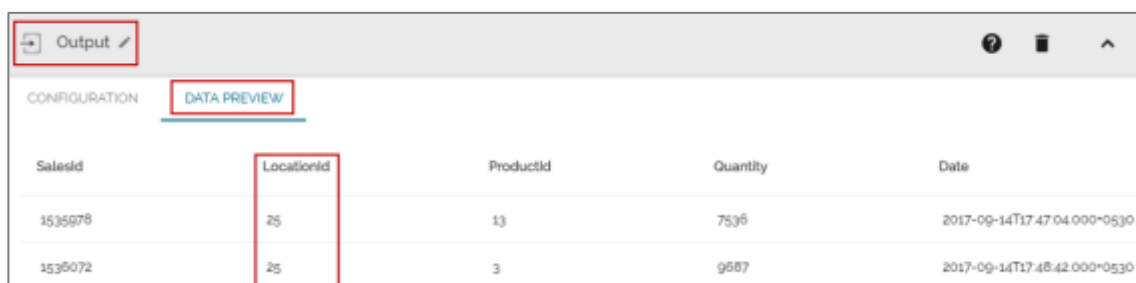
- i) Navigate to the Workflow editor.
- ii) Connect the **'Filter'** component to the configured input dataset and output component.



- 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



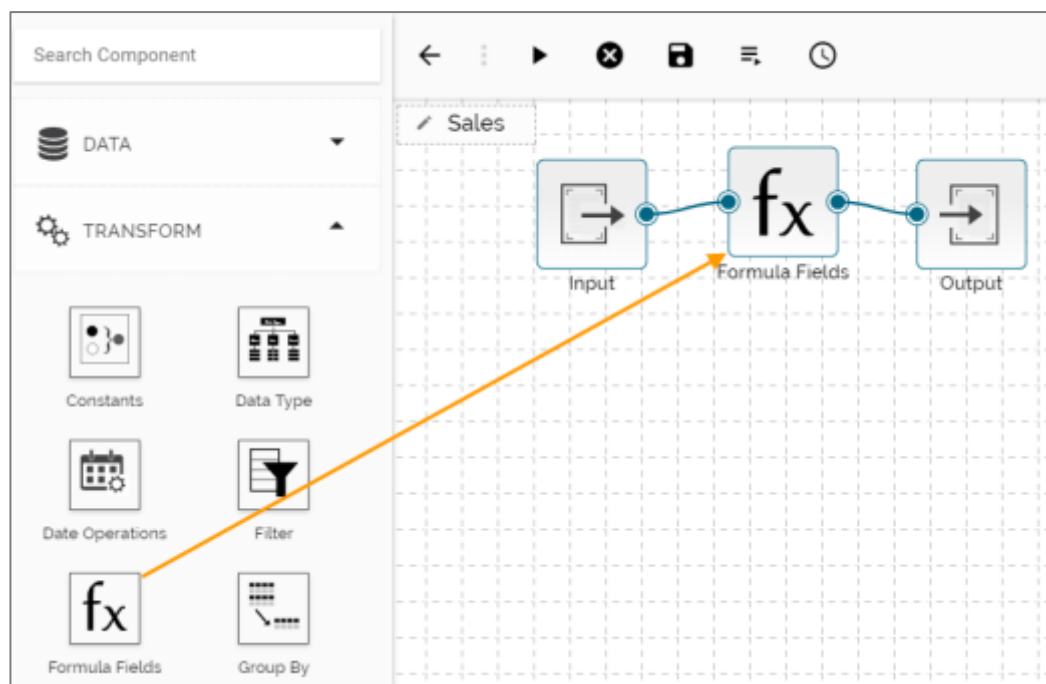
- iv) Save the workflow.
- v) Run the workflow.
- vi) The output data will be filtered as per the applied conditions.



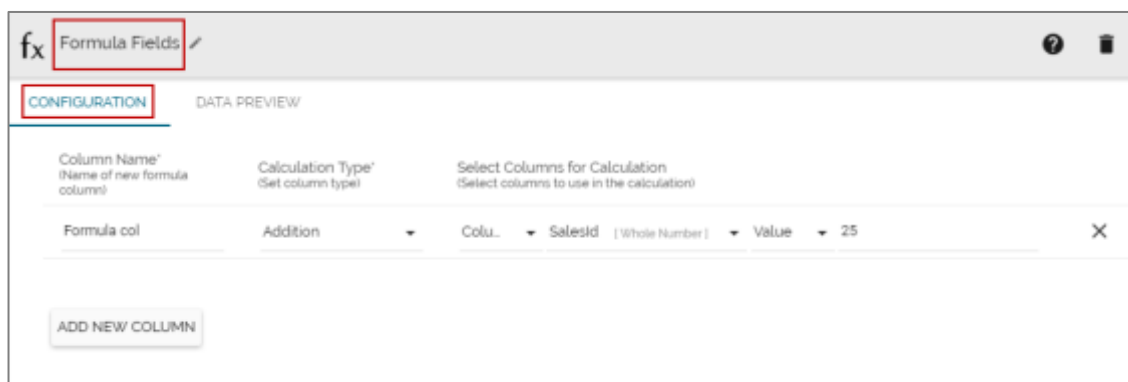
## 5.5. Formula Fields

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 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.

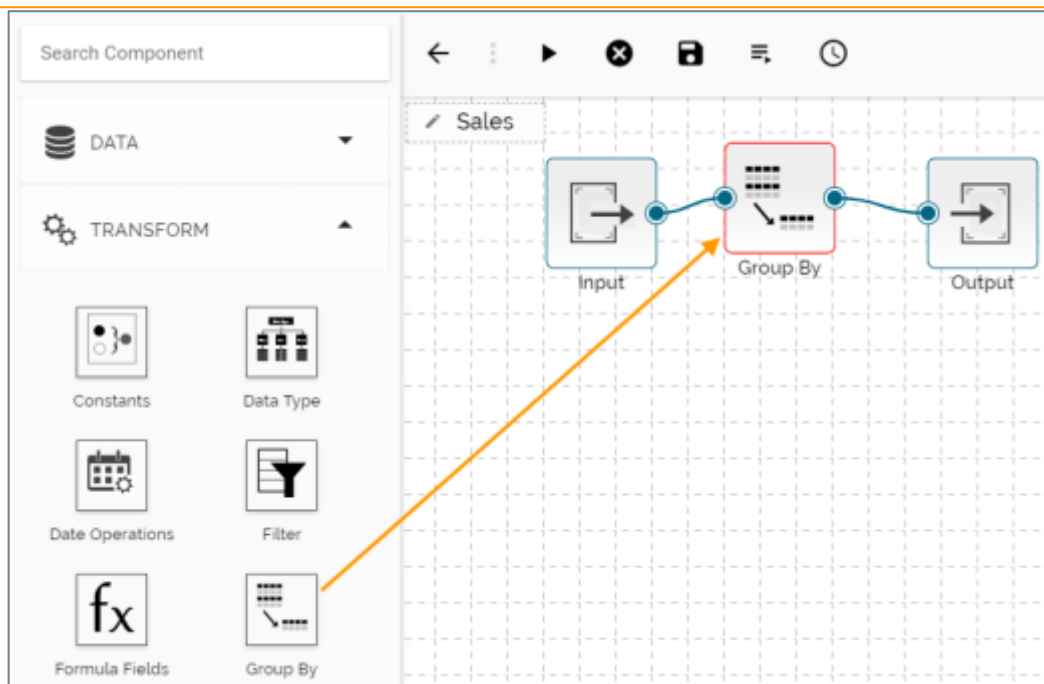
Salesid	Locationid	Productid	Quantity	Date	Formula column
1535978	25	13	7536	2017-09-14T17:47:04.000+0530	1536003
1535979	30	17	6786	2017-09-14T17:47:04.000+0530	1536009
1535980	58	5	9345	2017-09-14T17:47:04.000+0530	1536038
1535981	26	2	2187	2017-09-14T17:47:04.000+0530	1536007
1535982	40	10	6000	2017-09-14T17:54:04.000+0530	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

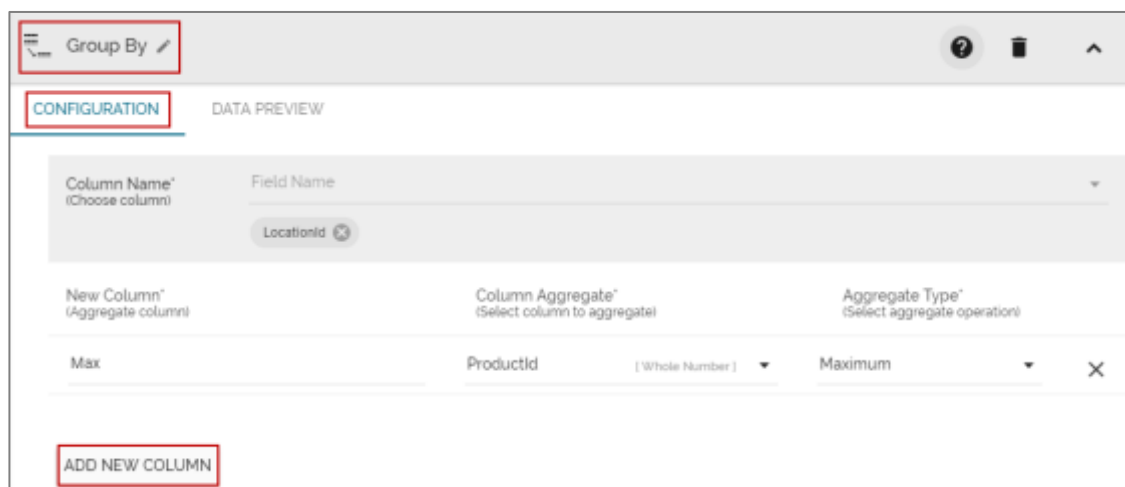
The 'Group By' feature allows multiple aggregations on the same or different columns. Users can obtain multiple aggregations in the same transform. The aggregated values are added in a new column.

- 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:
  - a. Column Name: Choose a column from the drop-down menu.
  - b. New Column: Enter a title for the aggregate column.
  - c. Column Aggregate: Select a column from the drop-down menu to apply aggregation.
  - d. Aggregate Type: Select an aggregation operation from the drop-down menu.



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

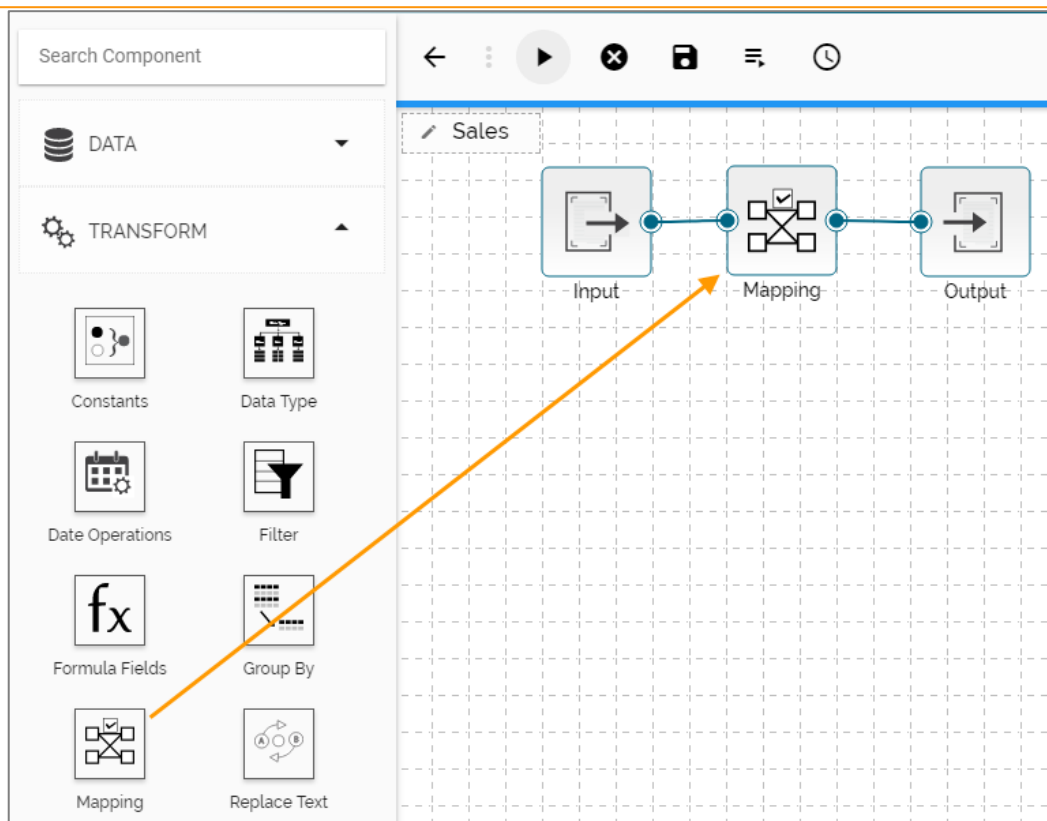
Note: The supported data types and aggregate operations are displayed in the following table:

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

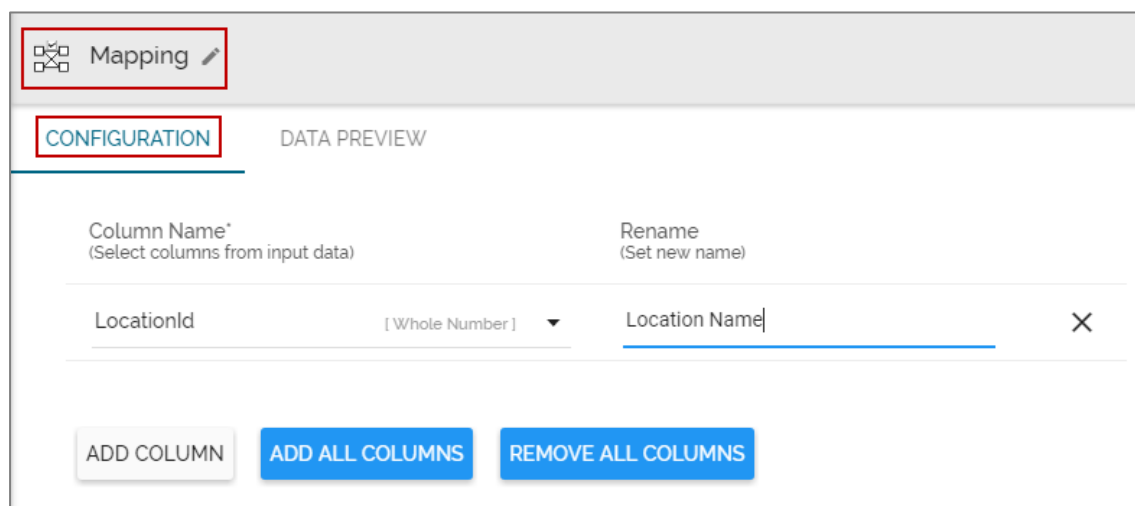
## 5.7. Mapping

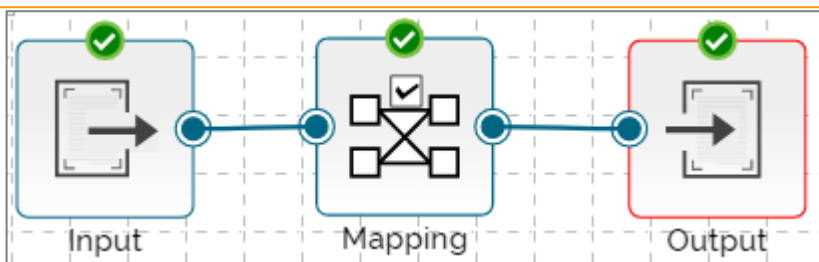
Users should be able to select, remove or rename columns in the input dataset to fit the structure of the sink.

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



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





→ Output ✎

CONFIGURATION
DATA PREVIEW

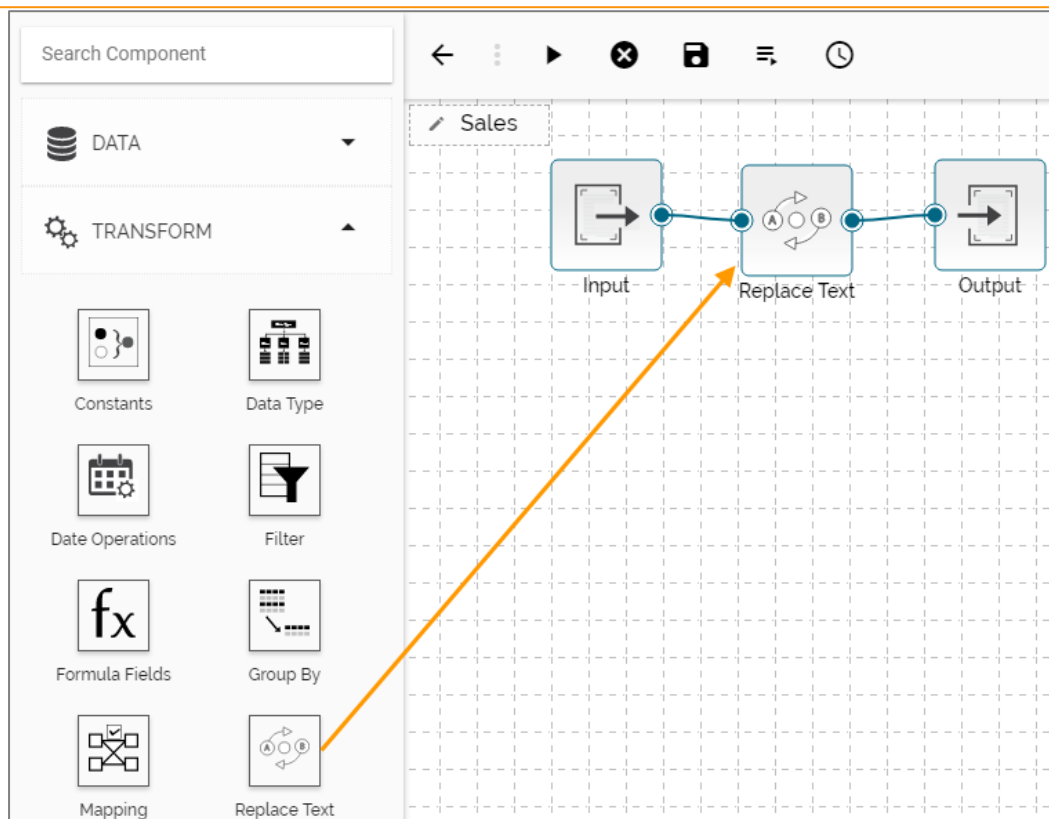
Location Name

25
30
58
26
40

## 5.8. Replace Text

Users can search by whole word, sensitive to case, search for special values like NULL or empty strings, or 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.

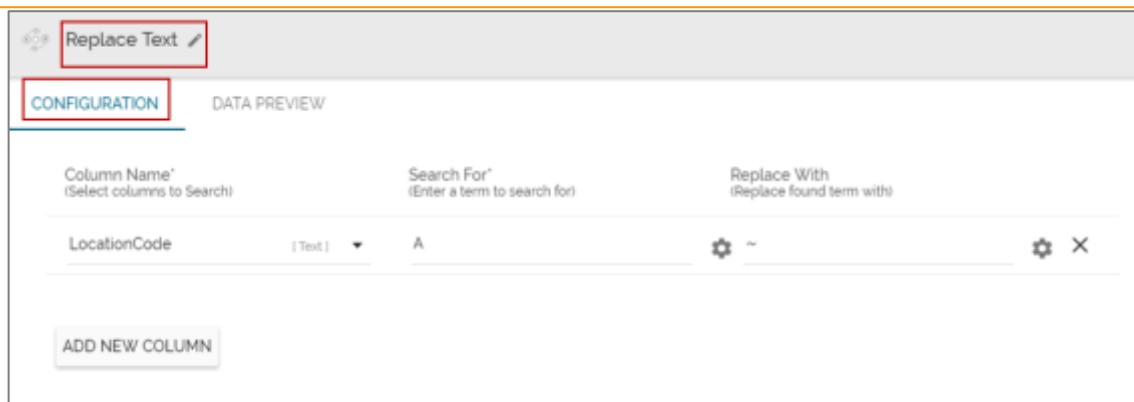
- i) Navigate to the Workflow editor.
- ii) Connect the 'Replace Text' component with the configured Input dataset and Output component.



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

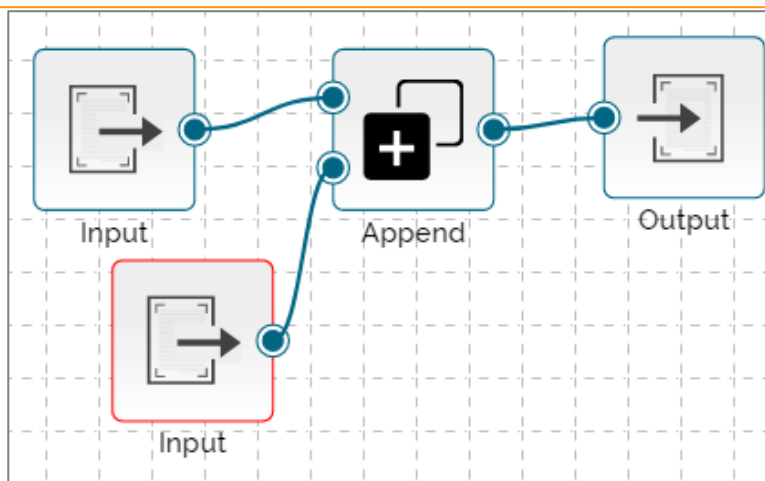
Users can use the 'Merge' components to combine input data sets and get the required output.

### 6.1. Append

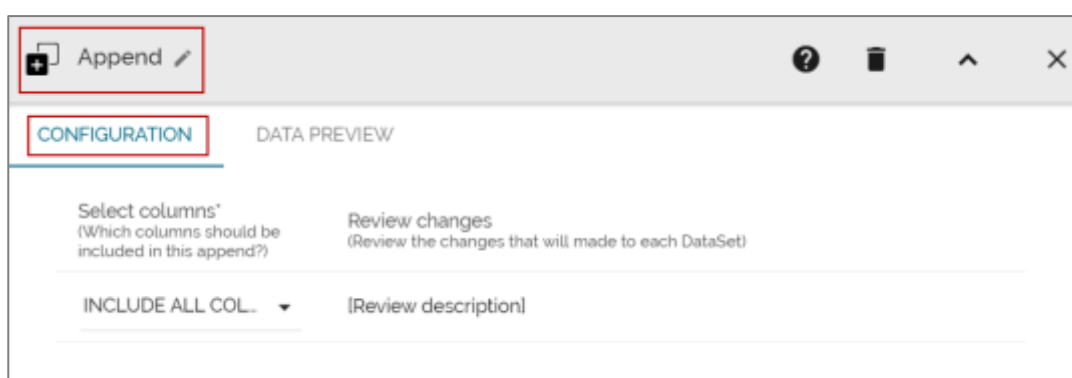
The 'Append' feature combines one dataset on top of another. If the datasets are of different structures still the union is possible, and the output will be a unified larger structure with NULL values populated wherever data is missing. Users can choose whether to include only shared columns or all columns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

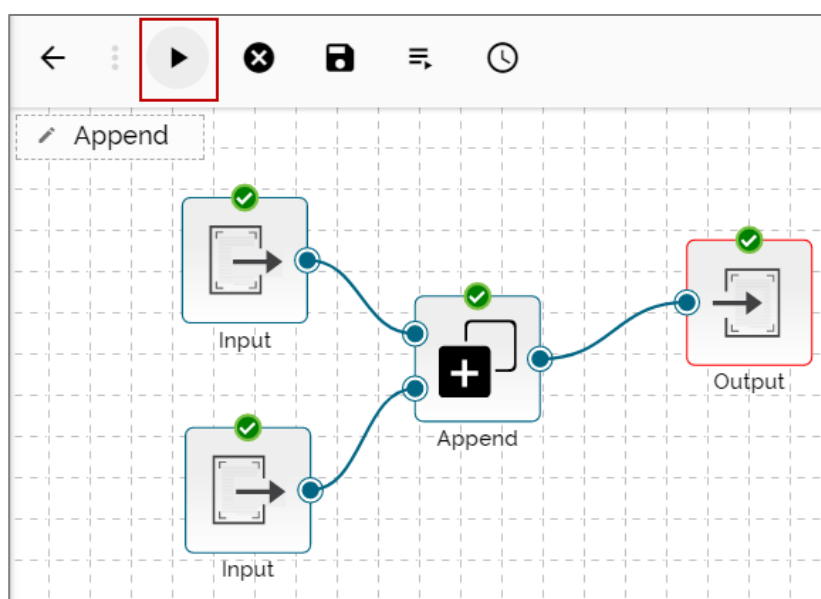


iv) Select 'Include All Columns' option using the 'Select Columns' drop-down menu.



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.

empno1	bonous1	doj1	dob1	sal1
1	23.43453	2016-11-11T23:59:59.000+0530	1992-08-23	3496.66
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	3496.66
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 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.

Select columns\* (Which columns should be included in this append?)

Review changes (Review the changes that will be made to each DataSet)

ONLY INCLUDE SHARED COL... [Review description]

- iv) Save the Workflow.

Workflow Name\*

Append only shared columns

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

Description

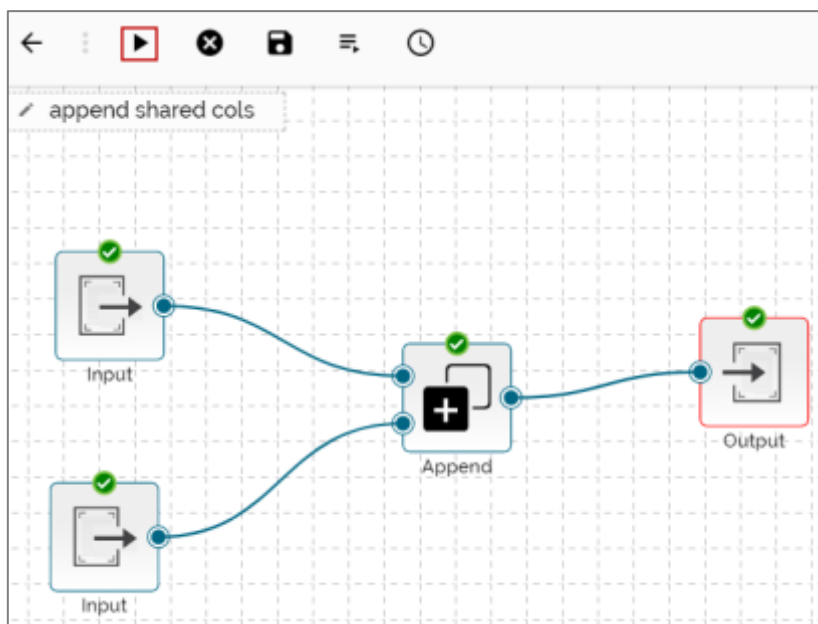
Workspace\*

Append

CANCEL SAVE



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

The screenshot shows the 'Input' component's configuration window. The 'DATA PREVIEW' tab is selected and highlighted with a red box. The table below shows the 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

The 'LocationId' column is highlighted with a red box.

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

The screenshot shows a window titled 'Input 1' with a 'DATA PREVIEW' tab selected. The data is presented in a table with the following columns: empno, name, dob, age, sal, and joiningdateendtime.

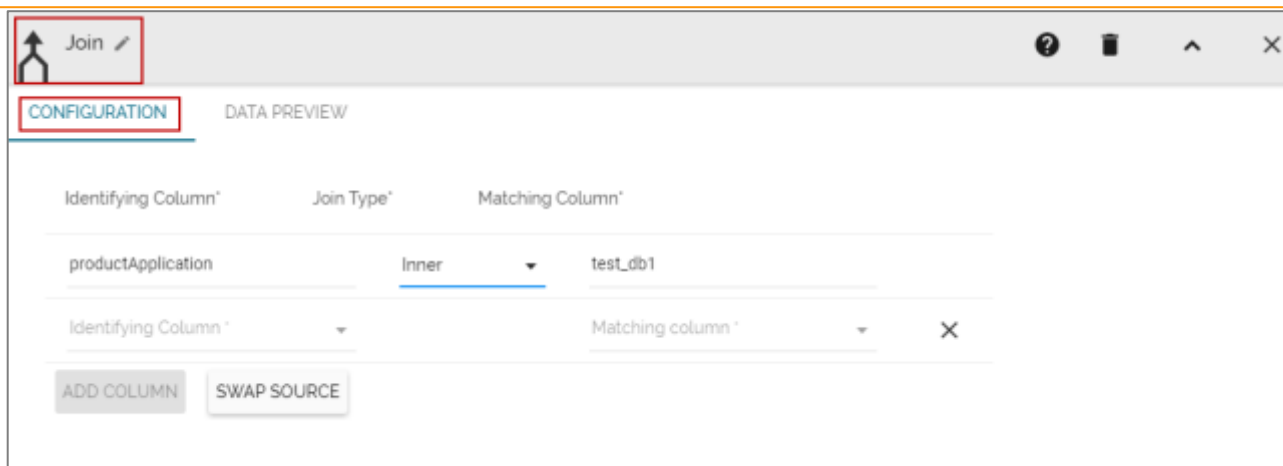
empno	name	dob	age	sal	joiningdateendtime
1	David	1994-05-05	23	3000.02	2017-05-31T15:23:12.000+0530
2	Louie	1993-09-23	24	3900.02	2017-03-21T15:43:12.000+0530
3	Jake	1994-09-23	23	3000.02	2016-04-21T17:43:12.000+0530
4	Harvey	1992-07-23	27	4900.02	2014-05-21T15:43:12.000+0530
5	Matthew	1960-09-23	40	2300.02	2017-02-21T23:13:12.000+0530

### Input Data Set 2

The screenshot shows a window titled 'Input 2' with a 'DATA PREVIEW' tab selected. The data is presented in a table with the following columns: Salesid, Locationid, Productid, Quantity, and Date.

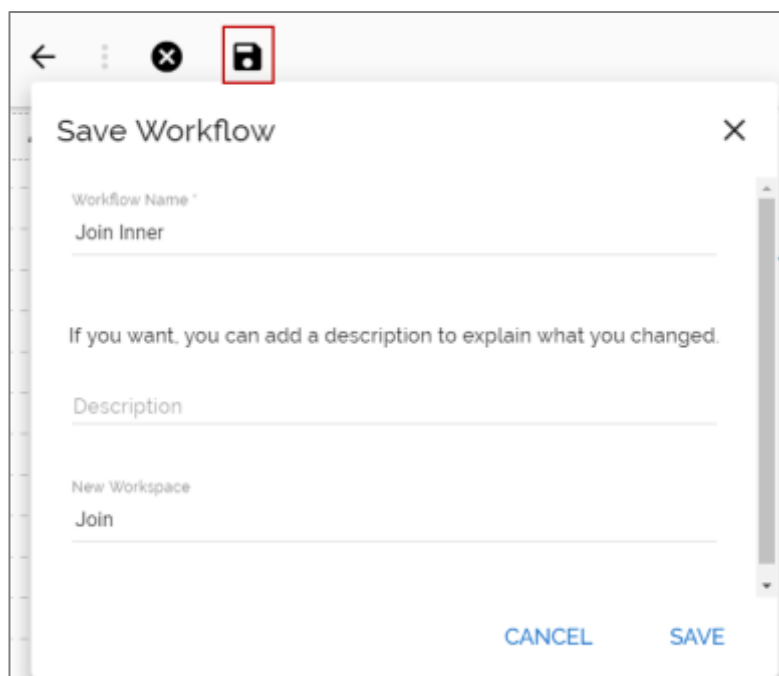
Salesid	Locationid	Productid	Quantity	Date
1535976	25	13	7536	2017-09-14T17:47:04.000+0530
1535979	30	17	6786	2017-09-14T17:47:04.000+0530
1535980	58	5	9385	2017-09-14T17:47:04.000+0530
1535981	25	2	2157	2017-09-14T17:47:04.000+0530
1535982	40	10	6000	2017-09-14T17:54:04.000+0530
1535983	40	9	6000	2017-09-14T17:47:04.000+0530

- 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. Identify 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

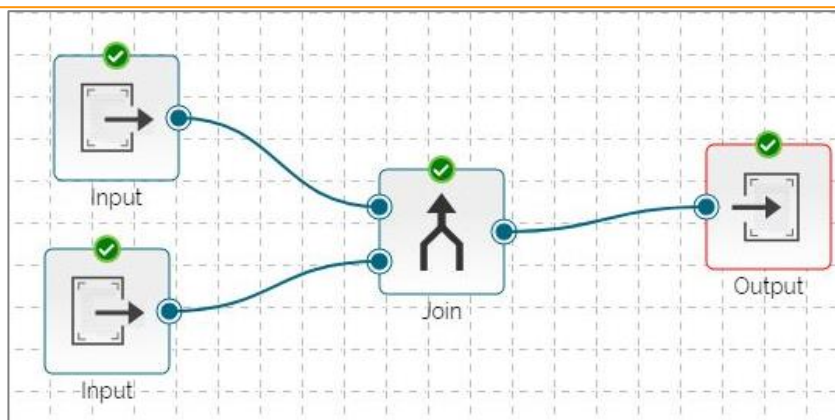


Note:

- 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.

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	2016-03-27T00:00:00.000+0530	3481

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

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

- Connect the join component to the configured input datasets and output component to create a workflow.
- 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]

ADD COLUMN SWAP SOURCE

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

Inner Join

CONFIGURATION DATA PREVIEW

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.

Left Outer Join

CONFIGURATION DATA PREVIEW

Identifying Column\* Join Type\* Matching Column\*

Mapping **Left Outer** Mapping

empno [Whole Number] Locationid [Whole Number] X

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.

Left Outer Join

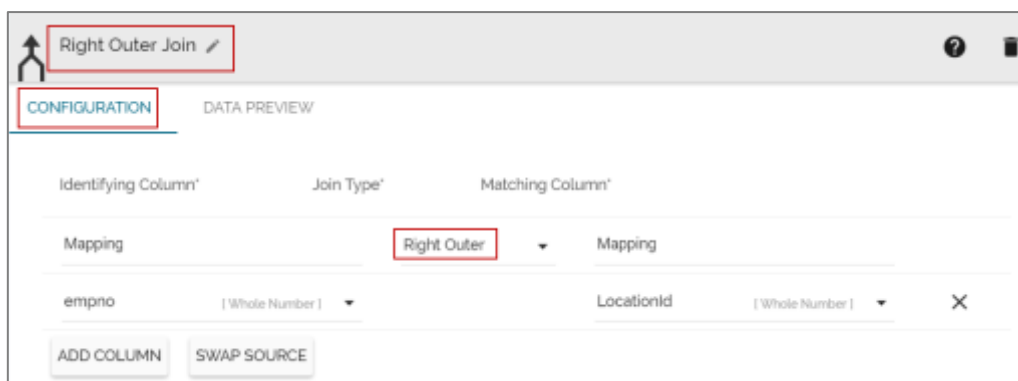
CONFIGURATION DATA PREVIEW

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 to 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.

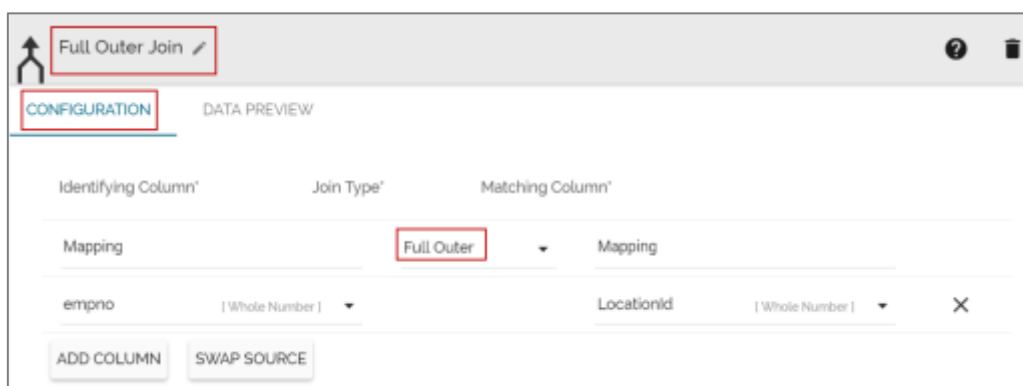


- iii. Save and run the workflow.
- iv. Click the 'Data Preview' tab using the join component to view the merged datasets.

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 in 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

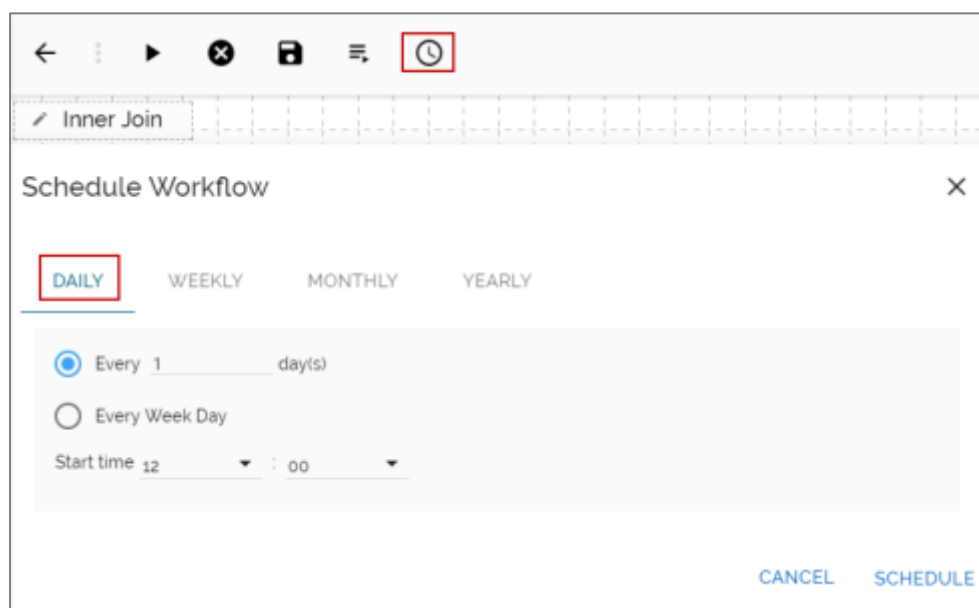
Search Schedule

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 Preparab...	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
manjari-bistory	10/10/2017, 10:25:00 AM	10/11/2017, 4:55:00 AM	Successfully started the scheduled query
elsticheck_manjari	10/10/2017, 4:55:00 AM	10/11/2017, 4:55:00 AM	Successfully started the scheduled query
nj-simple	10/10/2017, 4:55:00 AM	10/11/2017, 4:55:00 AM	Successfully started the scheduled query
elastic 159	10/9/2017, 10:25:00 AM	10/10/2017, 4:55:00 AM	Successfully started the scheduled query

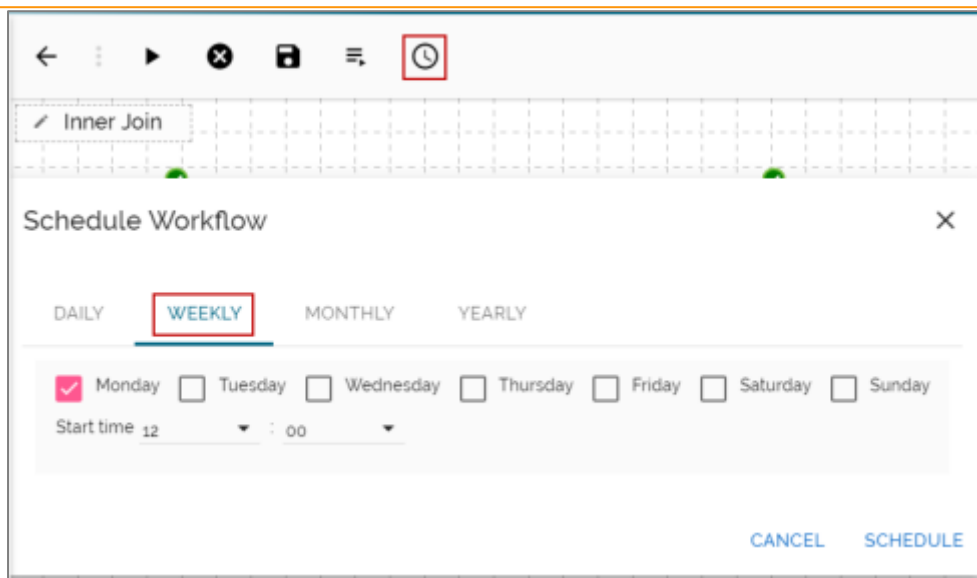
## 7.1. Schedule Configuration Options

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

1. **Daily:** User can schedule the job on daily basis by using this option.
  - a. Click the '**Scheduler**' icon on the workflow editor
  - b. Chose '**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 start time using the drop-down
  - c. Click '**SCHEDULE**'

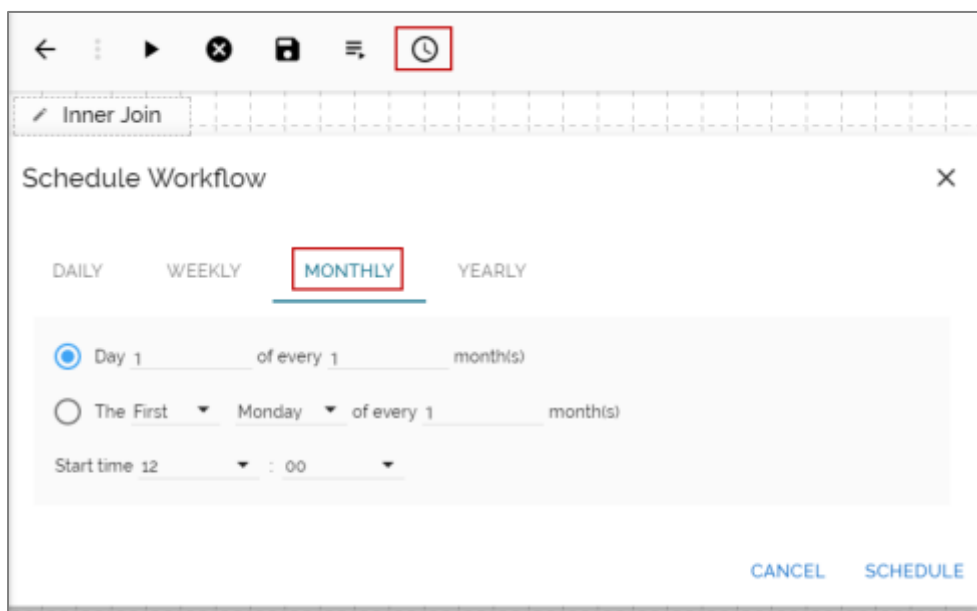


2. **Weekly:** User can schedule the job on weekly basis by using this option.
  - a. Click the '**Scheduler**' icon on the workflow editor
  - b. Chose '**Daily**' option from the '**Schedule Workflow**' window.
    - i. Select an option out of the given choices
      1. Choose the days of the week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



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

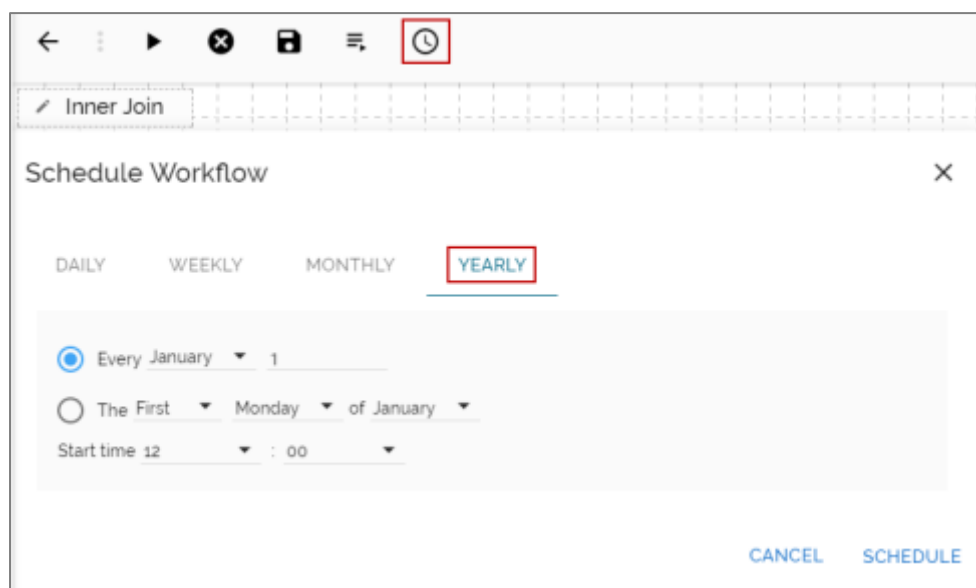
- a. Click the ‘Scheduler’ icon on the workflow editor
- b. Chose ‘Daily’ option from the ‘Schedule Workflow’ window.
  - i. Select an option out of the given choices to choose a day for each month.
  - ii. Set start time using the drop-down
- c. Click ‘SCHEDULE’



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


- a. Click the ‘Scheduler’ icon on the workflow editor
- b. Chose ‘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 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.