Tracking Fields in Boomi

Tracking Fields and How to set those in Boomi Process

In this blog, let us see what are Tracking Fields and How to set those in Boomi Process.

What are Tracking Fields?

It can be used to track the documents' process execution history based on the specific tracking field defined in Document Tracking. Tracking Fields allows us to use certain business identifiers to track the complete flow. Dell Boomi allows the same tracking fields to be used across different Boomi processes. We can view the process of tracking in the Process Reporting tab.

In this Use case, we will send JSON data into the MYSQL Database and will track what comes into the database.

Let us begin with the steps.

Step 1: Firstly, we will create a table named "Accounts" in the **MYSQL** database and import that profile into the process that we create. To create a table, we need to follow below steps:

- login to the MYSQL Database server with the required credentials.
- Go to Databases > System databases > Right-click on Tables > New > Table
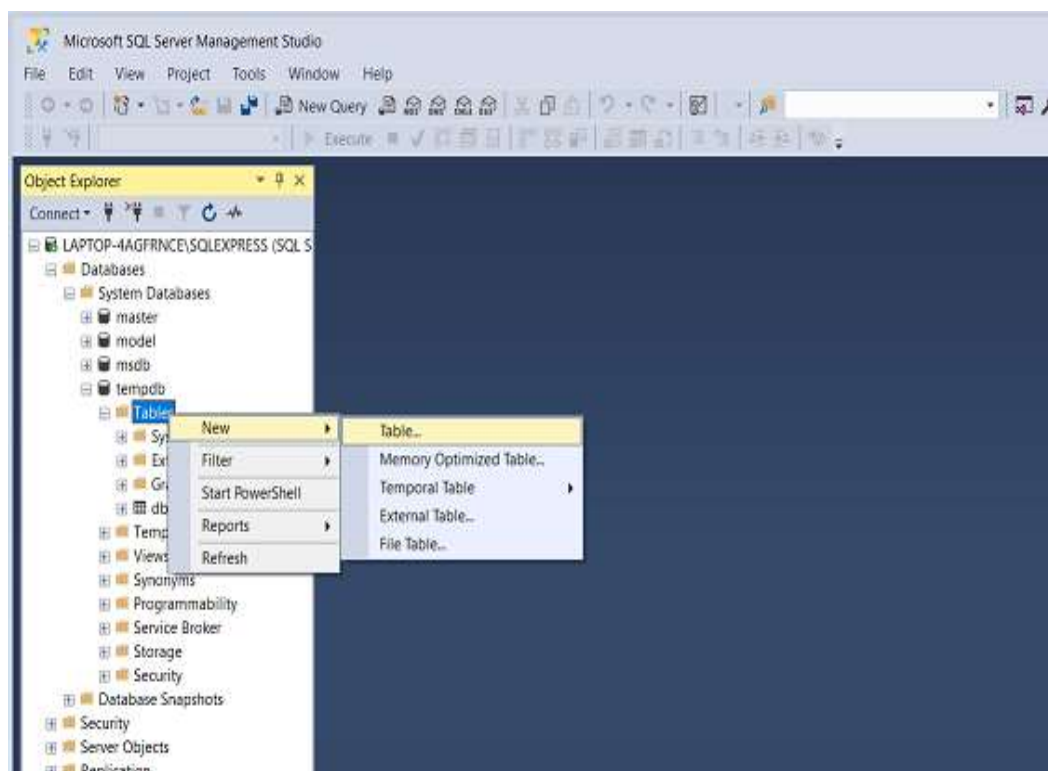
- Set Column names and data Type, Allow Nulls as per the screenshot.

Column Name	Data Type	Allow Nulls
[Account Id]	varchar(MAX)	☐
[Account Name]	varchar(MAX)	☐
▶ Branch	varchar(MAX)	☐
		☐

- Save the table with the name "Accounts" and we see that the table has been created with the above details.
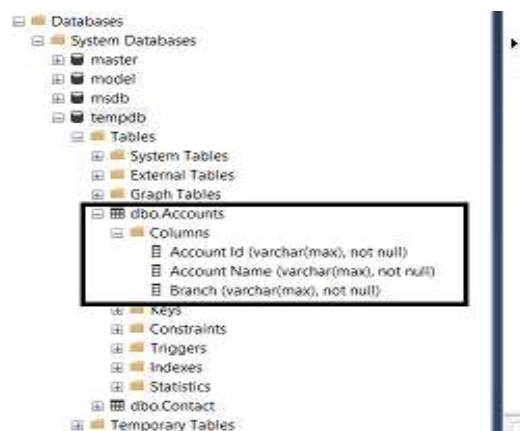
Step 2: Log on to the Boomi platform (https://platform.boomi.com/) with the required credentials i.e., Email Address and Password.
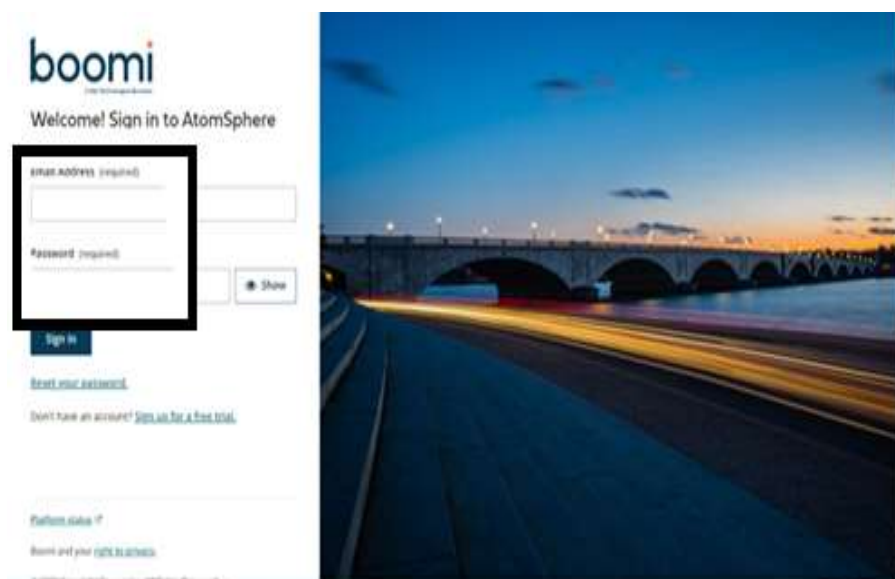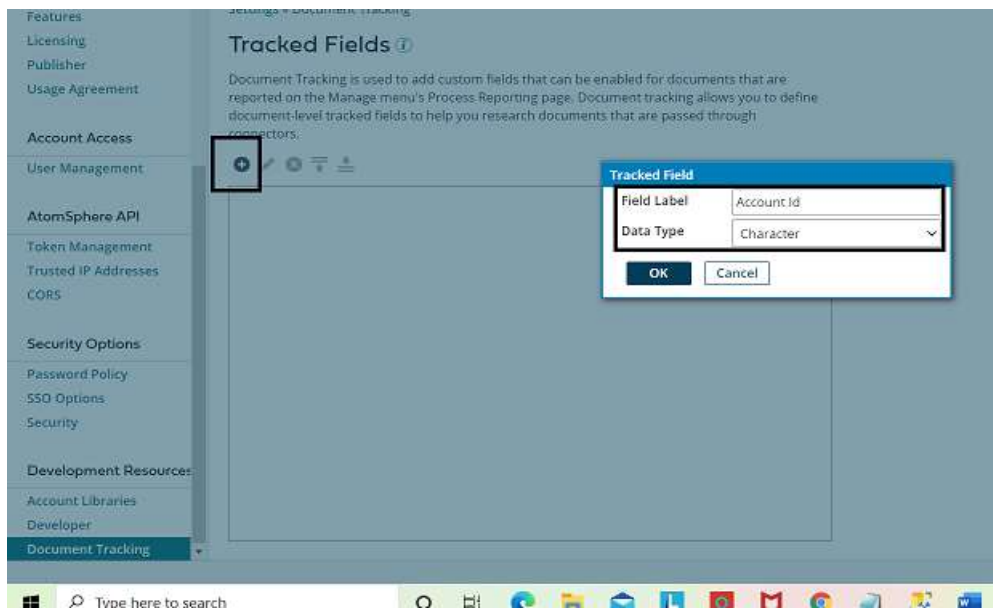
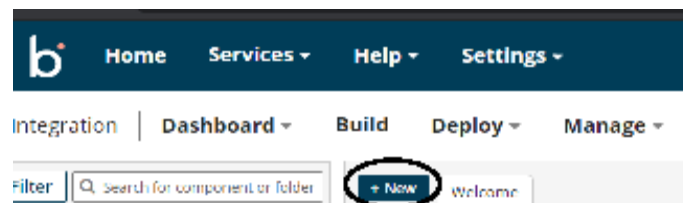**Step 3**: Once logged into the Boomi platform, we will be able to view the Home page.
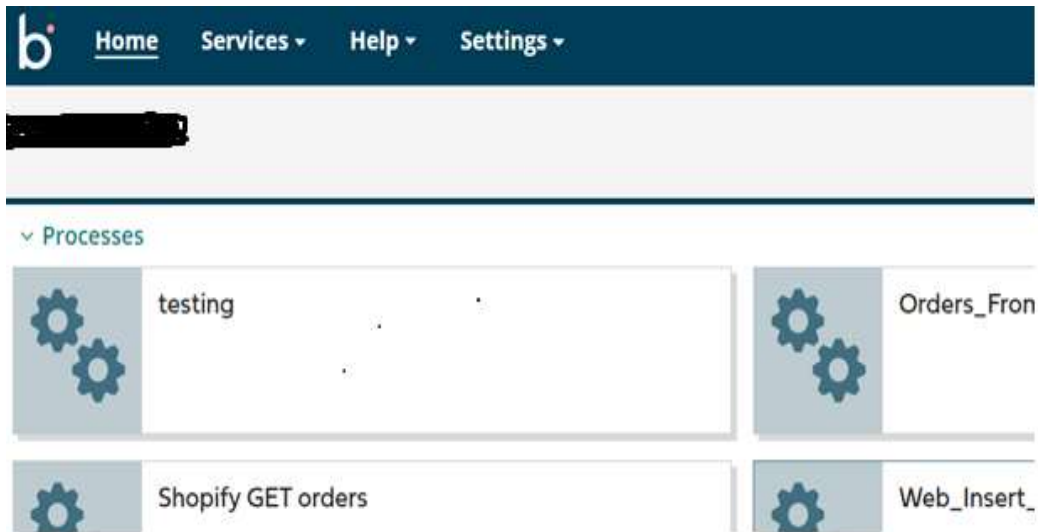
Step 4: Now, we will set the tracking field in the document property. Go to settings > Select Account Information > Document Tracking.
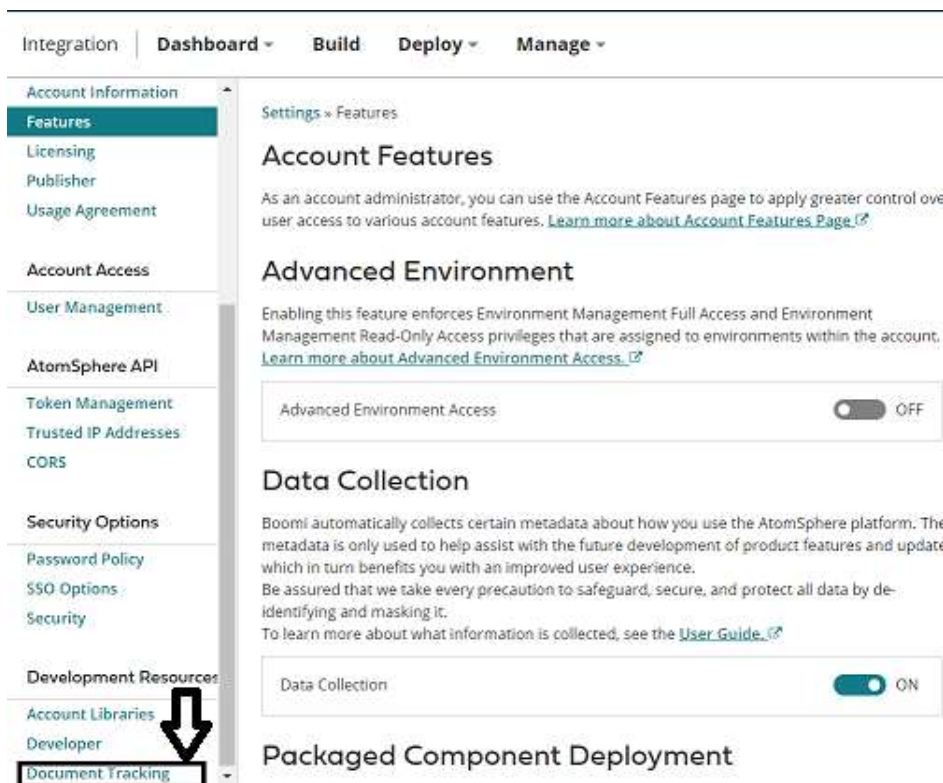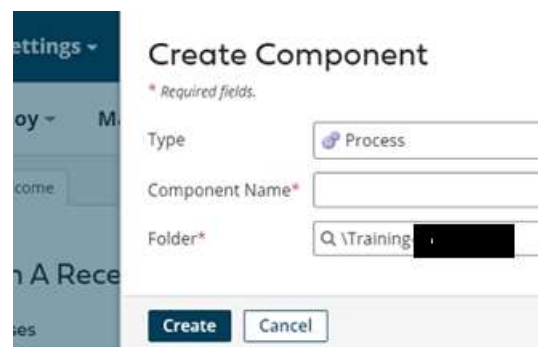
Click on + to add the tracking field. Add Field Label as Account ID and Data type as Character. Click ok.

**Step 5:** Now, click on the Build page > New.

Step 6: Once, clicked on New, we will be able to see three fields i.e., Type, Component Name, and Folder.
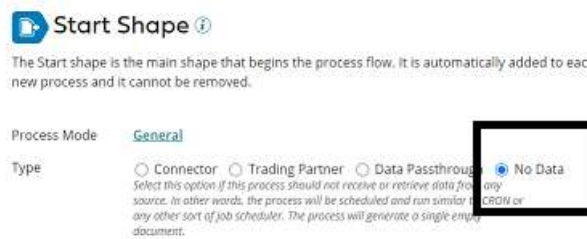
- Select Type as process as we are building a process. Component Name and Folder can be given based on your choice (i.e., which name to be given and where do we want to create the process). Click on Create.

Step 7: We see that the process gets created with a start shape which is configured with AS2 Shared Server by default.
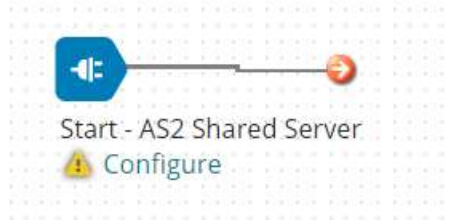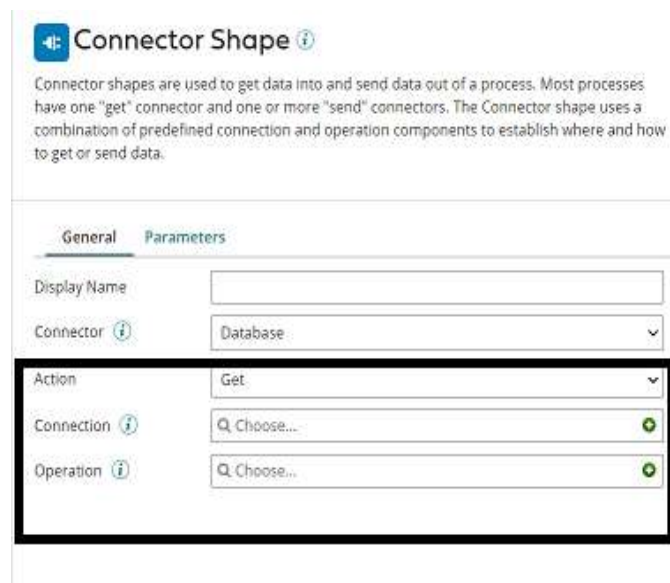

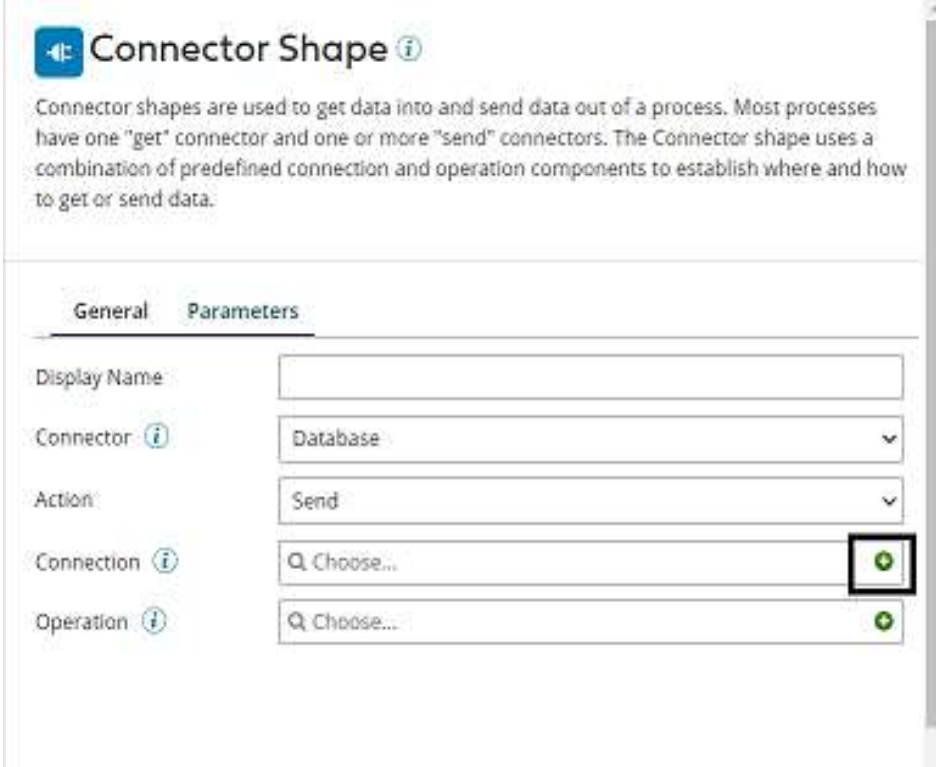**Step 8:** Select the start shape and choose No Data. Click ok.

Step 9: Drag and drop the Database connector onto the process canvas.

- We have to configure 3 fields in the connector i.e., Action, Connector, and Operation.

- We see 2 actions i.e., Get and Send.

  Get – To get the data from the Database.

  Send – To send the data to the Database.

- Here, we choose the action as **Send** as we are sending data.

- Click + on connection as shown and name it

Driver Type: Select the database to connect to from the drop-down list. Here, it would be **SQL Server(jTDS).**

Username and Password: Give the Database username and password.

Host: It will be the Name or IP address of the database server.
Port: The port that is used to connect to the database server. The default port for SQL Server is 1433.
Database Name: Give the Database name.
NOTE: Drivers are not included in MYSQL. We need to manually add the jars for MYSQL Connectivity.

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SQL_Database_Connection - Database ⓘ 📁 Folder ✏ Add Description

Connection   Advanced Options   Connection Pool

Database Connection

The authentication details and location of the hosted Database.

Database URL ⓘ	jdbc:jtds:sqlserver://localhost:1433/tempdb
Driver Type ⓘ	SQL Server (JTDS)
Class Name ⓘ	net.sourceforge.jtds.jdbc.Driver
User Name ⓘ	sa
Password ⓘ	<Encrypted>
Host ⓘ	localhost
Port ⓘ	1433
Database Name ⓘ	tempdb
Additional Options ⓘ	

- Save and close.

- Click + on the operation and name it.

🔌 **Connector Shape** ⓘ

Connector shapes are used to get data into and send data out of a process. Most processes have one "get" connector and one or more "send" connectors. The Connector shape uses a combination of predefined connection and operation components to establish where and how to get or send data.

General   Parameters

Display Name	
Connector ⓘ	Database
Action	Send
Connection ⓘ	🔍 SQL_Database_Connection ✏ ⊗
Operation ⓘ	🔍 Choose... ⊕

- Click + on the profile to add it.

Account Database Profile Database Operation ⓘ 📁 Folder

Options   Archiving   Tracking   Caching

## Database Options

The operation represents a specific action to be performed on the database co example, in the operation you define whether to get or send information, how database inserts, etc.
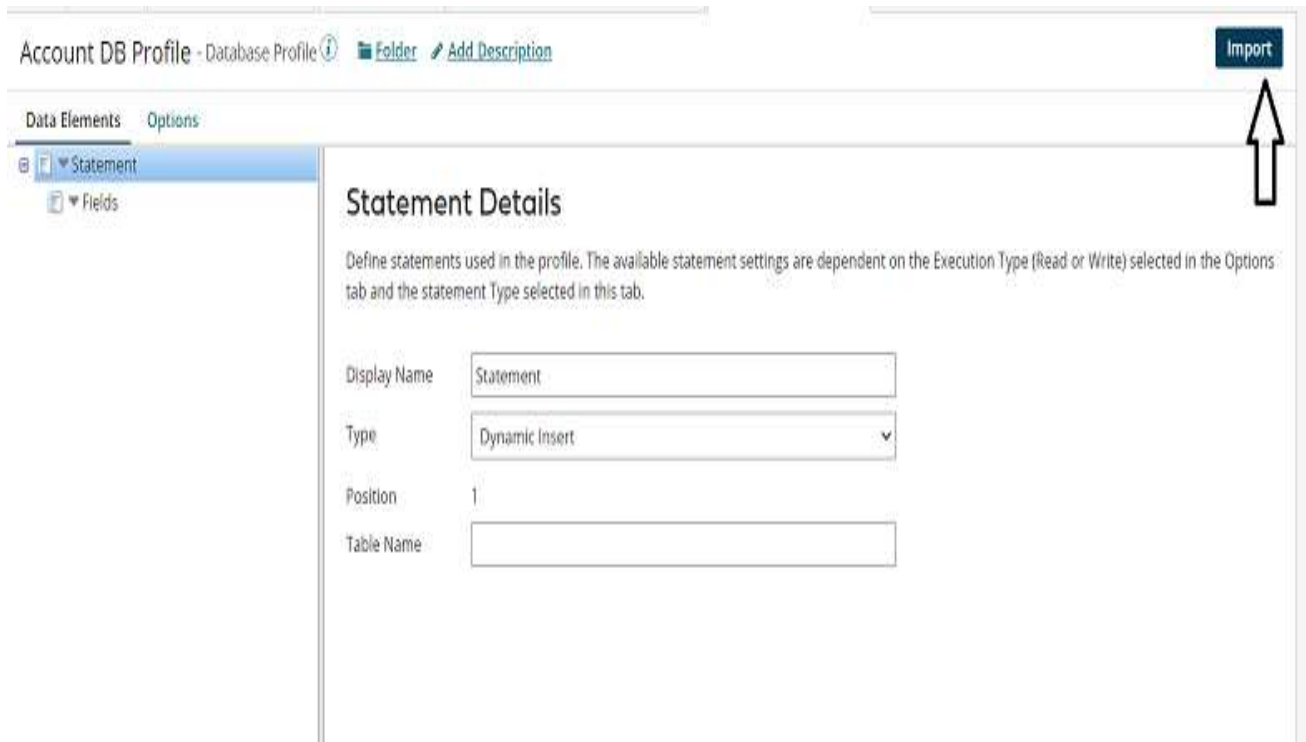
Connector Action	Send
Profile ⓘ	🔍 Choose... ⊕

Commit Options

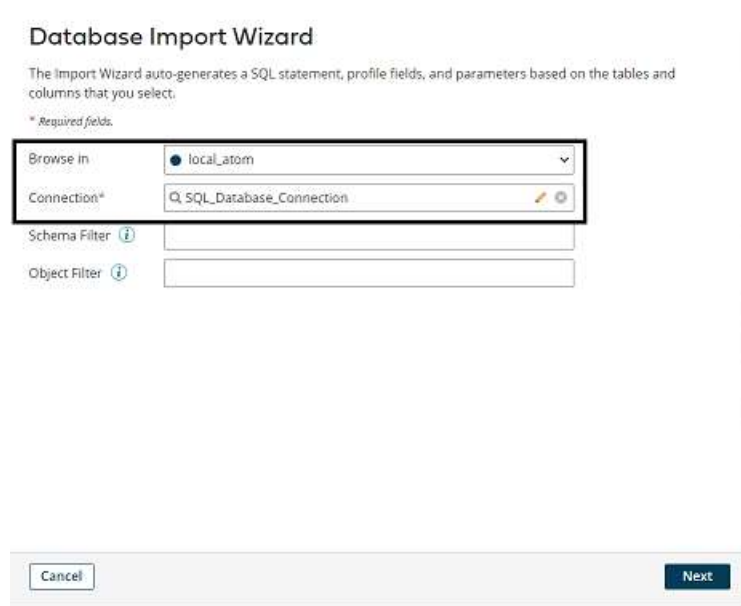|	
Commit Option ⓘ	Commit By Profile
Batch Count ⓘ	0
JDBC Batching	☑ Enable JDBC Batching ⓘ

- Name the profile. Click on the statement and select Type as Dynamic insert from the dropdown as shown in the screenshot.
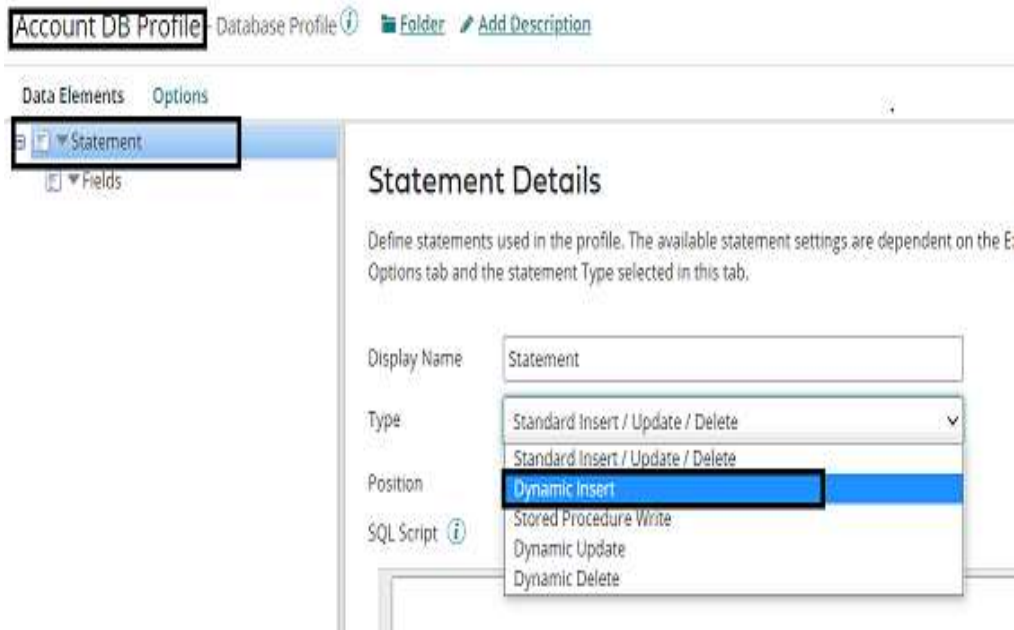
- Choose import.

- Choose the atom and connection. Click on next.

Database Import Wizard

The Import Wizard auto-generates a SQL statement, profile fields, and parameters based on the tables and columns that you select.

* *Required fields.*

Browse in	local_atom
Connection*	SQL_Database_Connection
Schema Filter ⓘ	
Object Filter ⓘ	

Cancel   Next

- Choose the table as "Accounts" which we have created above. Click Next.

Choose a Table

Accounts
Contact
trace_xe_action_map
trace_xe_event_map

- Choose all the fields from the table. Click Next.

Choose Columns

For the table selected on the previous screen, select one or more fields.
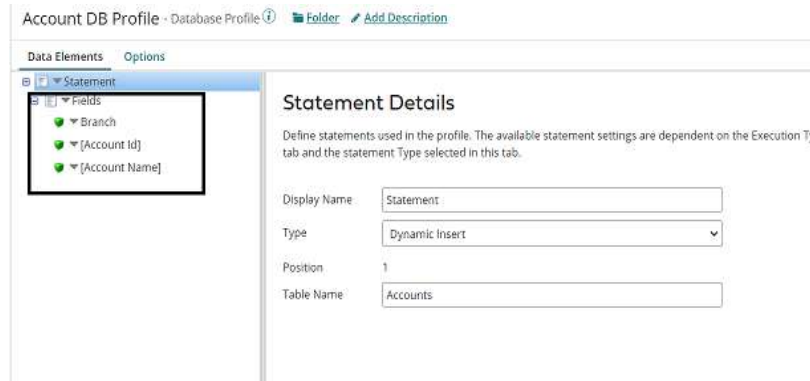
Fields for Accounts

- ☑
- ☑ Branch
- ☑ [Account Id]
- ☑ [Account Name]

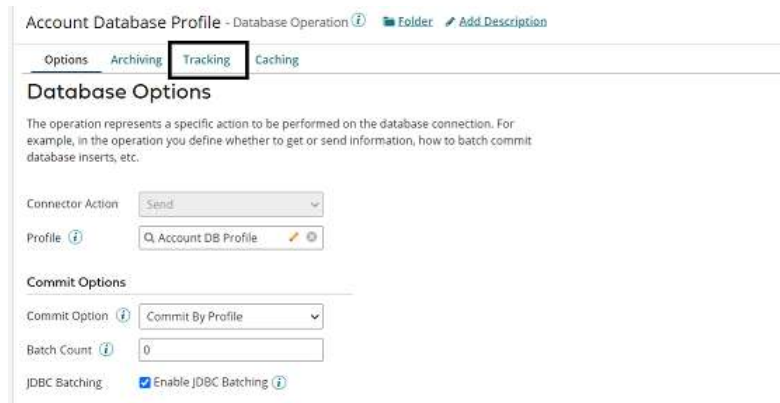- We see a success message saying the profile has been successfully imported. Click Finish.

Success

You successsfully imported the fields into your profile.
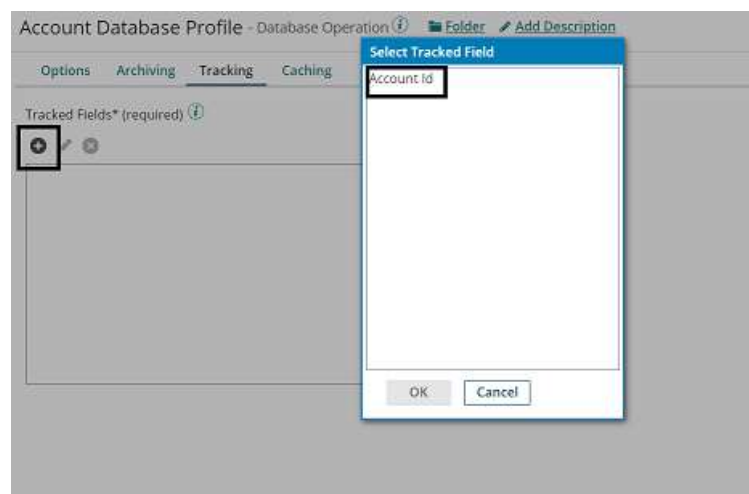
- We see that all the fields from the table have been imported. Click save and close.
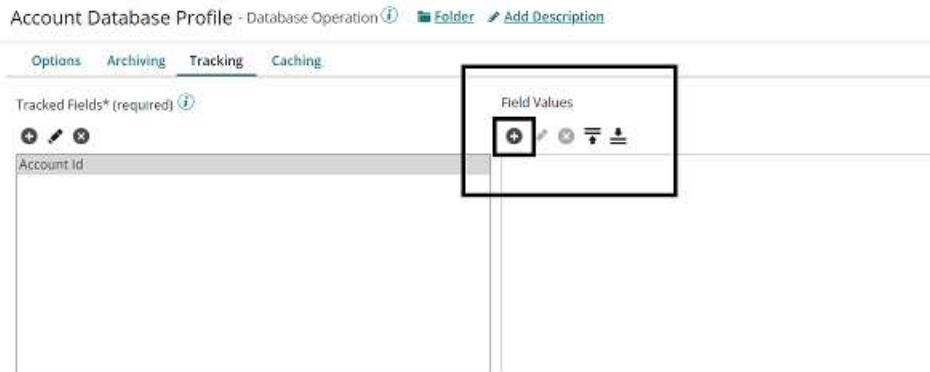

- We see an option of Tracking in Database options. Click on it.

- Click on + and we see Account ID as the tracking field which we have set in Document Tracking in Step 4.

- Select Account ID. Click + on Field Values and assign the account ID of the Database profile coming from the **Accounts** table.


NOTE: Here, we have to choose the profile based on where we want to track a particular field. Here, we are tracking the ID that goes into the Database. Hence, the profile will be a Database Profile.

- Here, the Type would be the Profile element, the Profile Type will be Database as we are assigning the Account ID of Database profile to the tracking field, Profile will be Account DB Profile which we have imported and Element will be Account ID. Click ok, save, and close.
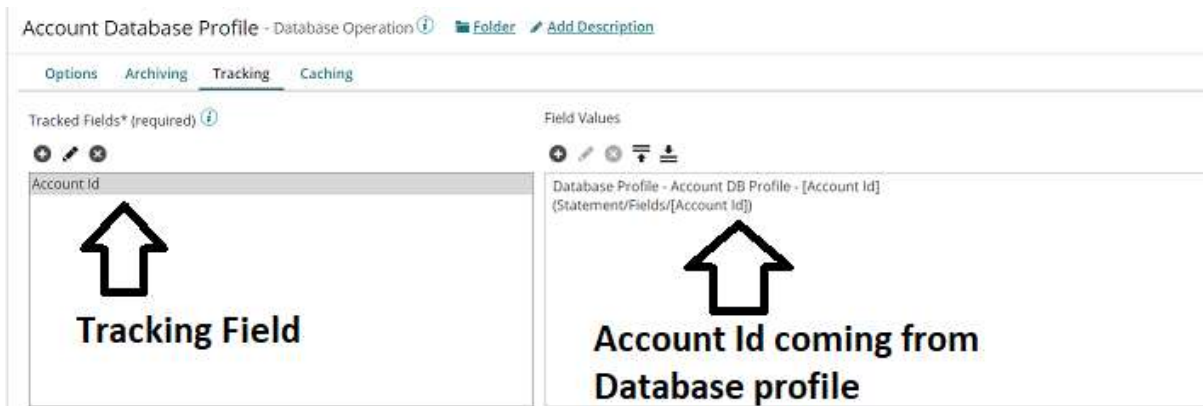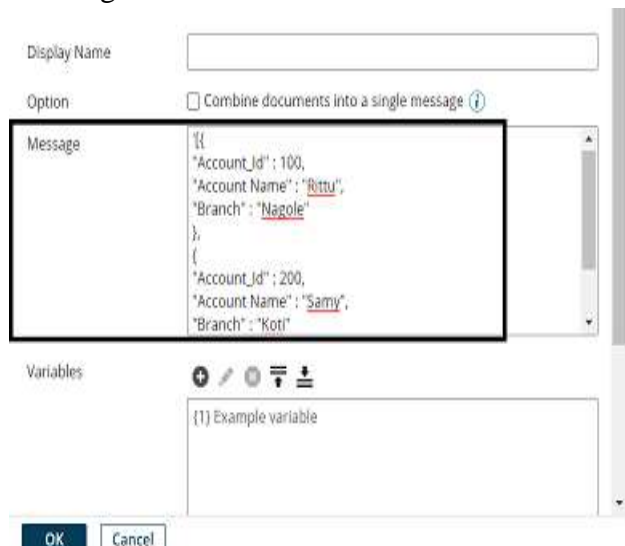
Step 10: Drag and drop a message shape onto the process canvas to add the static message.

Here, it would be JSON data and looks like

[

{

"Account_Id": 100,

"Account Name" : "Rittu",

"Branch": "Nagole",

},

{

"Account_Id": 200,

"Account Name": "Samy",

"Branch": "Koti"

}
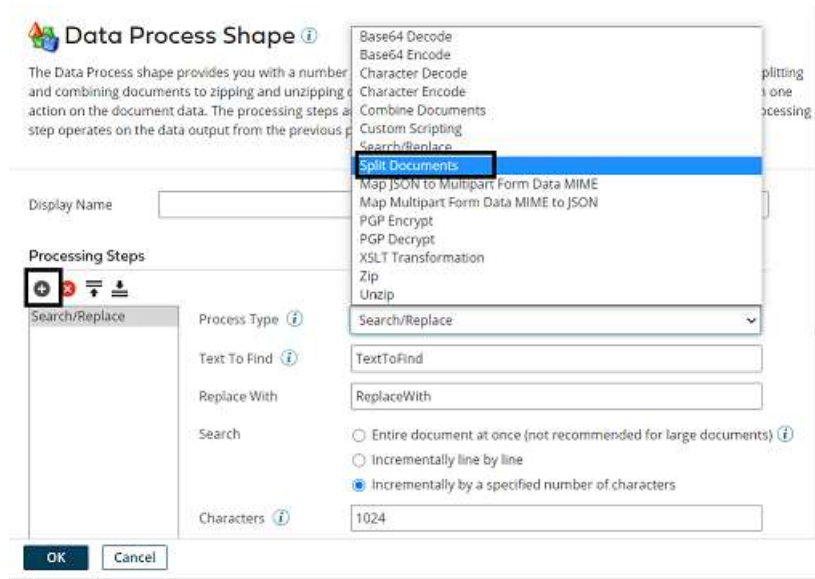
]

NOTE: Whenever we add JSON Data in message shape, we should enclose the data in single quotes (').

- Add data in the message section as below.
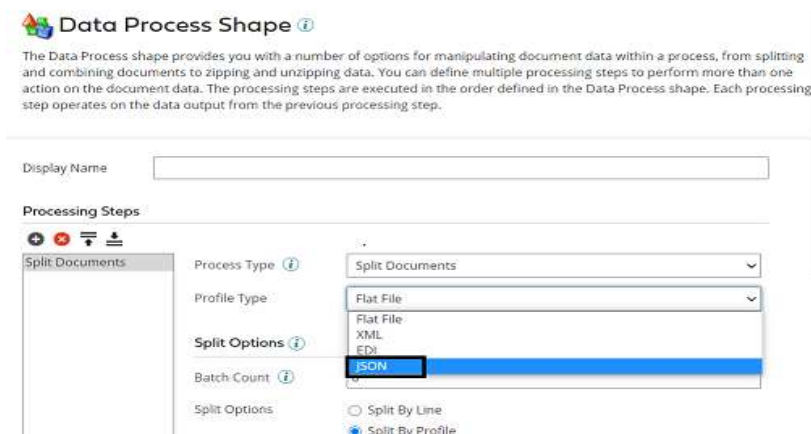

- Click ok.
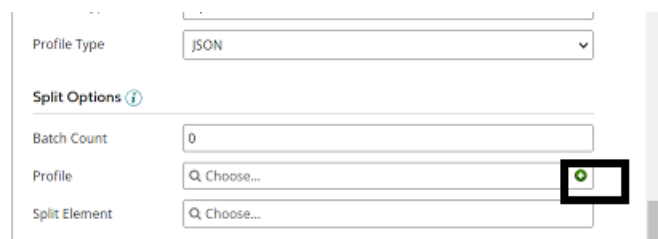
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Step 11: Drag and drop the data process shape onto the process canvas to split the JSON Data. Click on + and choose Process Type as Split Documents.
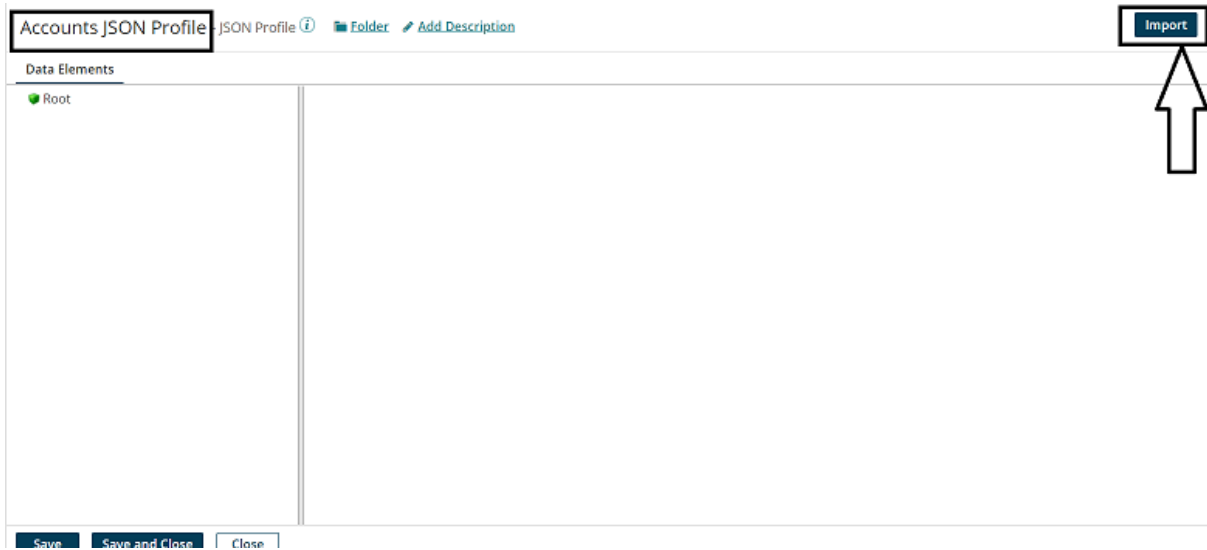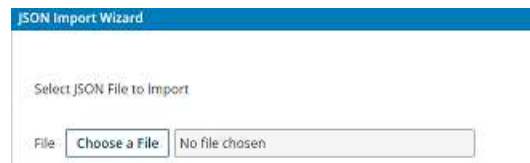

- Select Profile Type as JSON as shown.
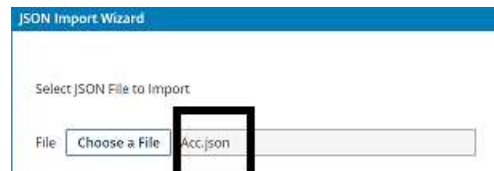

- Click on + to create a new JSON Profile.

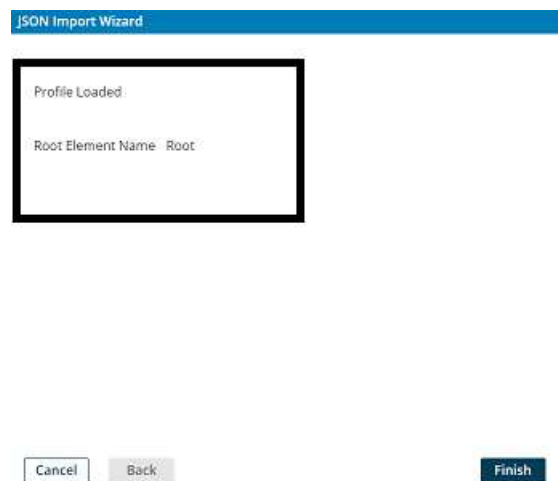- Name the profile and click on import as shown.

- Choose the location of the JSON File from the directory where you saved it.

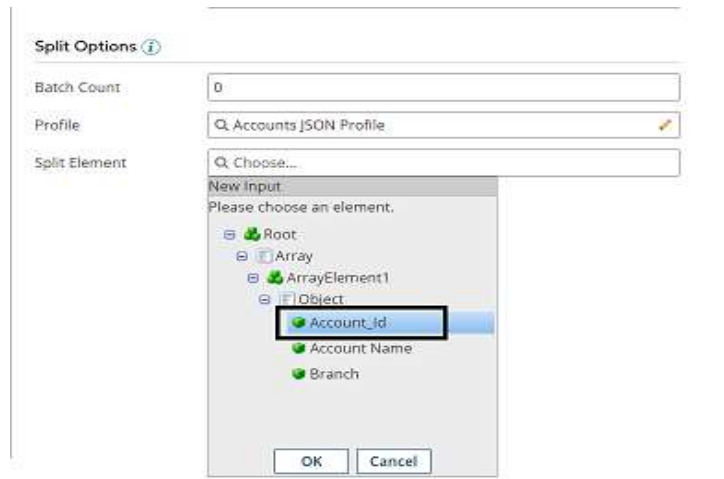- We see that the Acc.json file has been selected. Click Next.

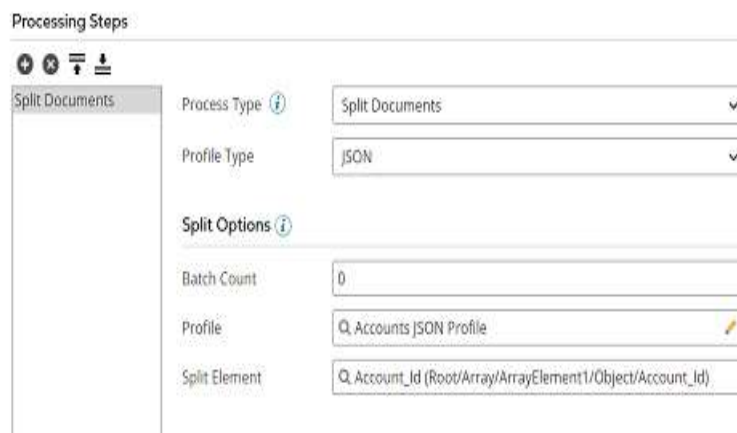- We see that the profile has been loaded. Click Finish.

- We can now see the imported profile with respective fields. Click save and close.

- We have to select the split element (i.e., based on which element the document has to be divided). Here, it will be Account ID. Select it and click ok.
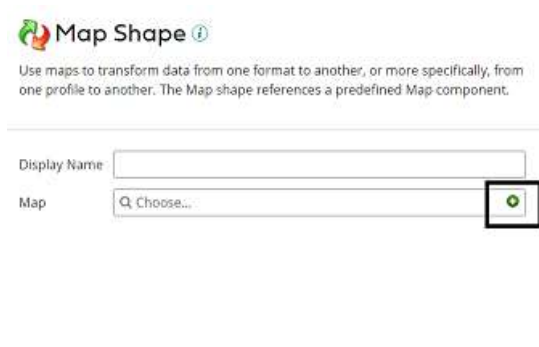

- After configuring all the fields, it looks like below

Step 12: Drag and drop the Map shape onto the process canvas. Click + and Name the map.

- Add source side and Destination side profiles to the map. Here, the source side would be the JSON profile and the Destination side would be the the Database profile. First, we will add a Source profile. Click choose and select the folder where we saved the profile.
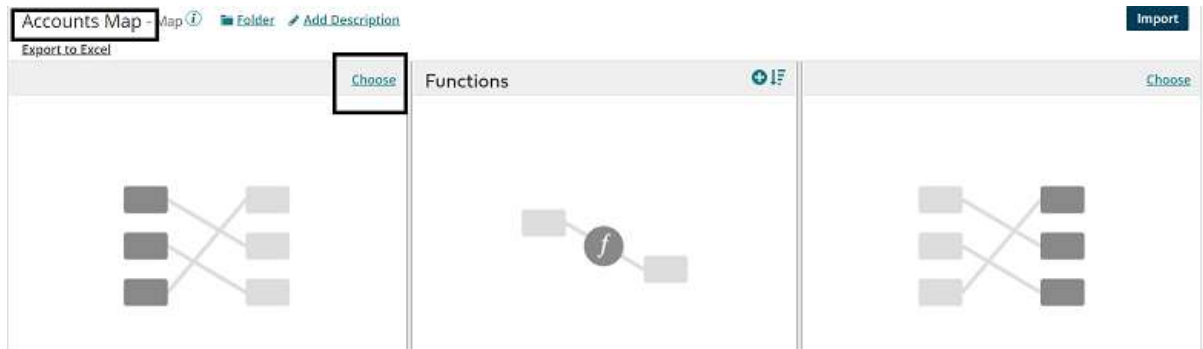
- Here, the Profile Type will be JSON, and select the JSON profile which we have configured in Data Process shape. Click ok.

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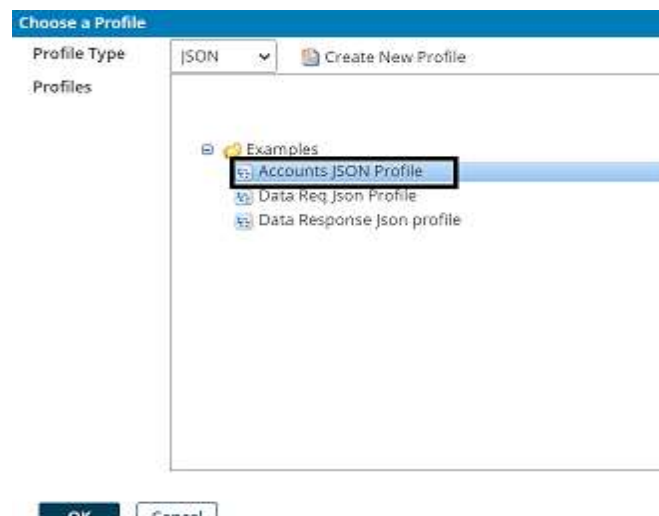
- Now, add the destination profile. Click choose on the right-hand side.

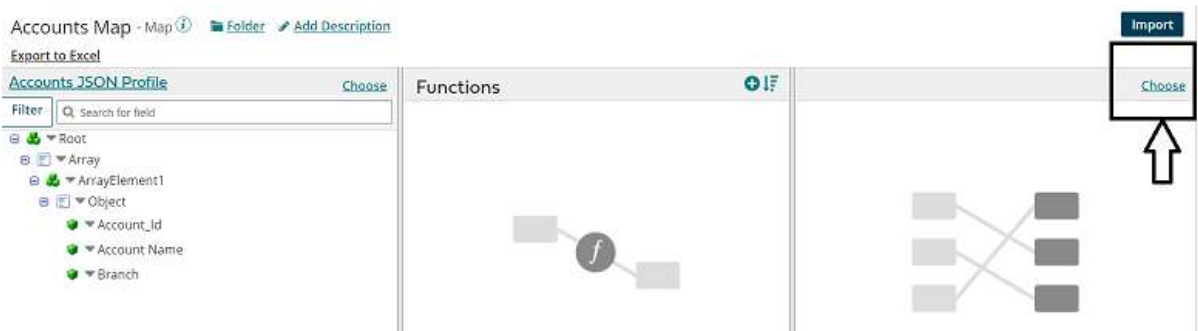- Profile Type will be Database and select the Database profile which we have imported in the previous steps. Click ok.
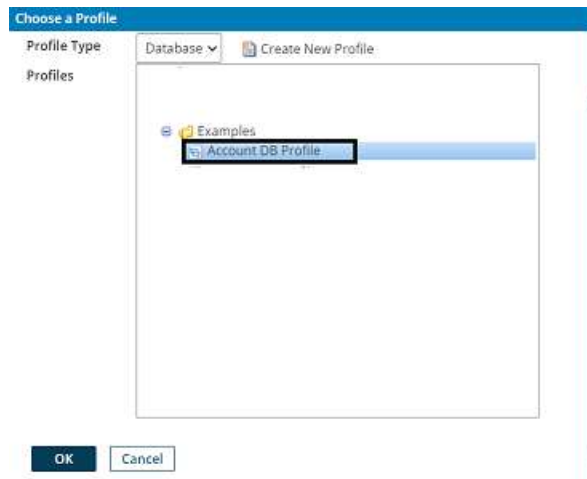
- We see that source and destination profiles have been imported. Provide one to one mapping from source to destination. Save and close.
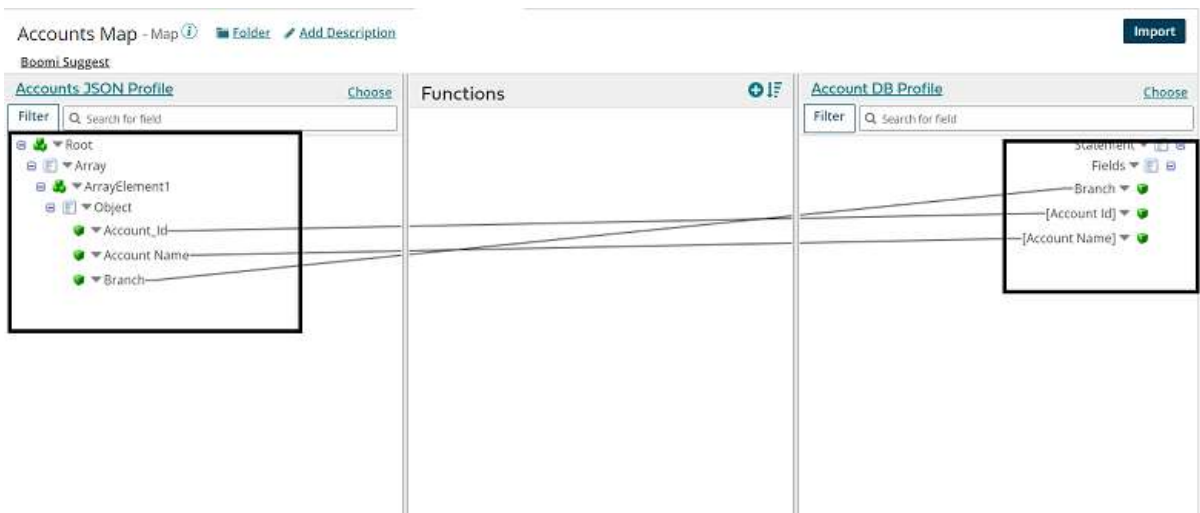
Step 13: Drag and drop the stop shape onto the process canvas to indicate the end of the flow.

Step 14: Arrange all shapes in the order and deploy the process. Click on Create Packaged Component as shown below.

- The process gets selected automatically. Click Add Details.

- Next, select the version and write notes if you have any. Click on create packaged component.

Create Packaged Components: Add Details

Optionally apply details to the newest version of your packaged components. When you have multiple packaged components selected at one time, the details you sp each selected component results in its own individual version.

Component Name	Latest Version ⓘ	⬍	Latest Notes
Tracking Fields Demo	2.0		—

Version for all [ ] ⬅

If you do not supply a name, a version number is automatically generated for each individual packaged component, and increments based on the latest version number.

Package Notes for All [ ] ⬅

4000 characters remaining.

Sharing ⓘ   ☐ Allow Processes and APIs to be publicly shared to subaccounts.
This setting is ignored for components that cannot be shared.

Create Packaged Component (1)

- Now, we see that the package has been created successfully and click on deploy.

Packaged Components Successfully Created

Your packaged components were successfully created.
To deploy your packaged components, click on the deploy button below.

[Deploy] [Close]

- We will then have to select the environment. Choose production and click select version and review.

Deploy: Select Environment

Select the environment in which to deploy your packaged component(s), and optionally add notes about the deployment.

Deployment Environment   [Q Choose...]
                        API Production
Deployment Notes   Test
                   production

4000 characters remaining.

Deploy: Select Environment

Select the environment in which to deploy your packaged component(s), and optionally add notes about the deployment.

Deployment Environment: Choose...
API Production
Deployment Notes: production — **choose production**

4000 characters remaining

Next: Select Versions

Next: Review

- We will be asked to cross-check the environment that we have configured in the deployment tab.

Deploy: Review

You're almost done! Before deploying this version of your packaged component, confirm that the destination environment you have selected is correct.

Environment: production
Deployment Notes:

Name	Type	Selected Version	Deployed Version	Duplicate
Tracking Fields Demo	Process	3.0	N/A	—

- Once, we click on deploy we will be able to see that deployment is done successfully.

Deployment Successful

Your packaged components were successfully deployed.
Click on the View Deployments button to see all deployments for this account.

View Deployments   **Close**

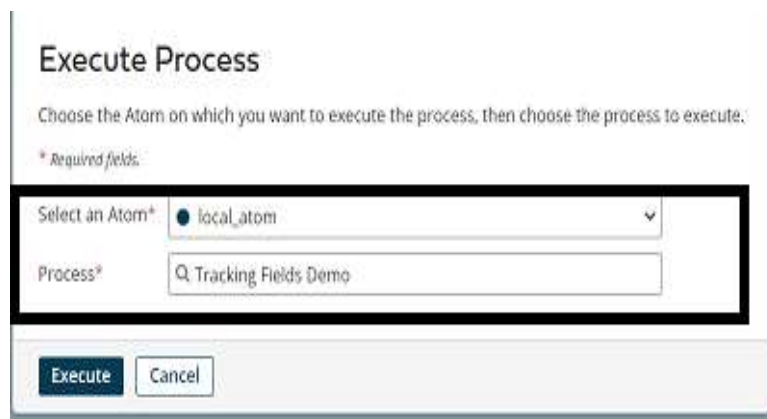**Step 15:** Click on Manage followed by Process Reporting.

Step 16: Click on execute the process. Select the atom and process as shown below. Click on Execute.

Step 17: We see that the process has been executed and records have been inserted.

MYSQL Table:

```
/****** Script for SelectTopNRows command from SSMS ******/
SELECT TOP (1000) [Account Id]
      ,[Account Name]
      ,[Branch]
  FROM [tempdb].[dbo].[Accounts]
```

100 %

Results | Messages

	Account Id	Account Name	Branch
1	100	Rittu	Nagole
2	200	Samy	Koti

records got inserted

Step 18: Now, to track the Account Id click on Executions followed by Documents.

| Integration | Dashboard ▾ | Build | Deploy ▾ | Manage ▾ |

Executions ▾
Documents

Trading Partner

Time	Process	Actions	Atom	In	Out	Elapsed Time
02 Nov 2020 13:56:13	Tracking Fields Demo	⚙	local_atom	1	2	0:00

- Select Add Filter and choose the option as Tracked Fields.

Step 19: Check in User Defined – Account ID option as we have defined the tracking field. Give value as 100.
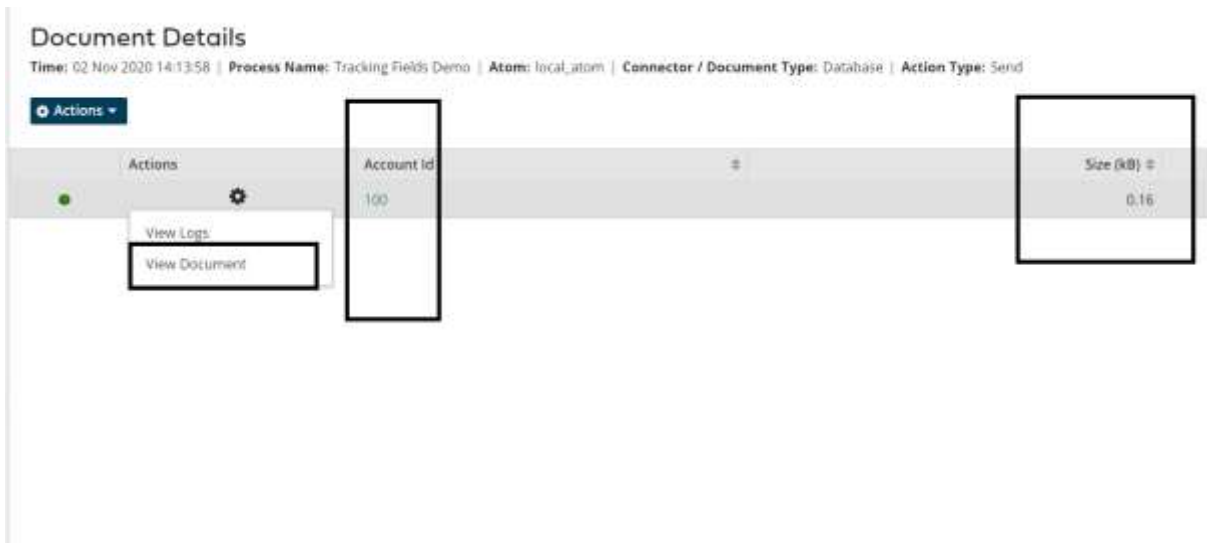
- We have got the document with Account Id as 100 which went into the database. Click on time. We will see the document Details.

- We can view the logs and document by clicking on the circle symbol beside 100.

- Once, we click on view Document, we can see what document came into Database.

- Similarly, we can search for 200 Account Id by following the above steps. Replace 200 with 100 in the search.

Document Viewer

```
DBSTART|faade5d0-c2bf-4e1d-9489-
72c82c91858c|2|@|BEGIN|2|@|OUT_START|3|@|Koti|^|200|^|Samy|#||#|OUT_END|3|@|EN
D|2|@|DBEND|faade5d0-c2bf-4e1d-9489-72c82c91858c|2|@|
```

TGH

Making Integrations Simpler

boomi Partner

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