



Boomi

Developer 1

Section 2

Version 7.1

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Section 2 - Administration Training, Properties, and Document Flow

The goal of this session is to turn the process Prospect Tracking into a production state by:

1. Automating the process to query newly-modified accounts
2. Deploying a production release
3. Troubleshooting failed executions and failed documents
4. Developing and releasing process updates for advanced logging
5. Enabling administrator features for advanced alerts

Following Admininstration Training, we will look at Global Properties, and Document Flow.



Exercise 1: Check configuration of Production and Test environments

In Boomi Essentials, you created two different environments: Production and Test. The Atom Cloud is attached to the Production environment, and the Test Atom Cloud is attached to the Test environment. In this exercise, you will confirm the environments and atoms in your training account are configured correctly.

Check Environment setup under Manage > Atom Management

1. Confirm your account has a Production environment with an attached Atom Cloud.

The screenshot shows the 'Manage' tab selected in the top navigation bar. On the left, a sidebar lists environments: 'Production' (selected and highlighted with a yellow box) and 'Test'. Under 'Production', there is an 'Atom Cloud' entry. On the right, the main panel displays 'Environments » Production' for the 'Production' environment. It shows 'Information' fields: Environment ID (b76e2fe1-ade4-41cc-b3e5-c5eee097822b), Classification (Production). In the 'Configuration' section, the 'Attachments' field contains 'Atom Cloud', which is also highlighted with a yellow box.

2. Confirm your account has a Test environment with an attached Test Atom Cloud.

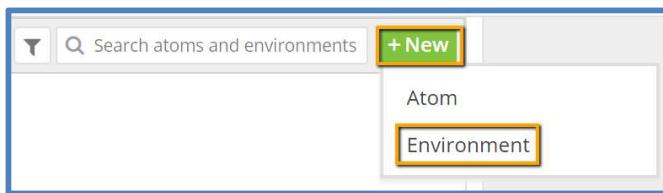
The screenshot shows the 'Manage' tab selected in the top navigation bar. On the left, a sidebar lists environments: 'Production' and 'Test' (selected and highlighted with a yellow box). Under 'Test', there is a 'Test Atom Cloud' entry. On the right, the main panel displays 'Environments » Test' for the 'Test' environment. It shows 'Information' fields: Environment ID (2f75b9a4-a41e-425d-b825-2b8d22babde0), Classification (Test). In the 'Configuration' section, the 'Attachments' field contains 'Test Atom Cloud', which is also highlighted with a yellow box.

If necessary, create the required environment(s) and atom(s), and then attach atom(s)

3. To create a new environment, click on **+ New** and then select **Environment**.



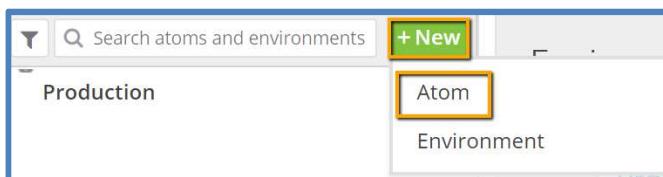
Exercise 1: Check configuration of Production and Test environments



4. Name the environment **Production** with an Environment Classification of Production. Click **Save** to finish creating the environment.

The dialog box has a title "Add Environment" with a question mark icon. It contains two fields: "Name*" with "Production" entered, and "Environment Classification" with "Production" selected from a dropdown. At the bottom are "Save" and "Cancel" buttons.

5. To create a new atom, click on **+ New** and then select **Atom**.



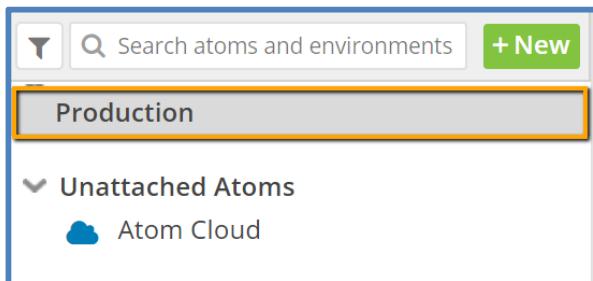
6. For a Production atom, choose Setup Preference **In the Cloud**, Choose the **Atom Cloud**, and for Atom Name enter **Atom Cloud**. Click **OK** to finish creating the atom.

The dialog box has a title "Atom Setup" with a question mark icon. It contains three fields: "Setup Preference" with "In the Cloud" selected (radio button is checked), "Choose a Cloud" with "Atom Cloud" selected from a dropdown, and "Atom Name*" with "Atom Cloud" entered. At the bottom are "OK" and "Cancel" buttons.



Exercise 1: Check configuration of Production and Test environments

7. To attach an atom to an environment, click on the environment name.



8. Under **Configuration**, click in the **Attachments** field and select the atom from the drop-down.

This screenshot shows the 'Production' environment configuration page. It includes sections for 'Information' (Environment ID: e9cd0999-9c3e-4990-8060-923fd5e9d2cb, Classification: Production), 'Configuration' (Roles: Unrestricted, Attachments: Atom Cloud), and 'Administration' (Environment Extensions, Delete Environment). The 'Attachments' dropdown menu is open, showing 'Atom Cloud' as the selected item.

This screenshot shows the 'Configuration' page for the environment. It displays the Roles (Unrestricted) and Attachments (Atom Cloud) settings. The 'Attachments' dropdown menu is now closed, with 'Atom Cloud' still selected.

9. Repeat necessary steps steps 3-8 in order to create a Test environment with an attached Test Atom Cloud.



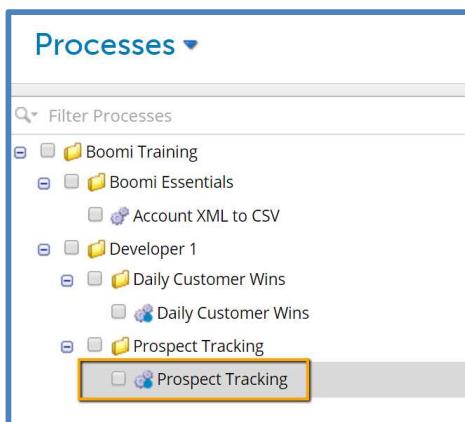
Exercise 2: Deploy the process

The Deploy tab is a process control panel that allows you to manage process versions and to officially embed a process version in an Atom or Atoms to provide automation. To execute a process or to schedule a process to run at a particular interval, you must first deploy it. In this exercise you deploy your process Prospect Tracking so you can later track live activity on the Process Reporting tab.

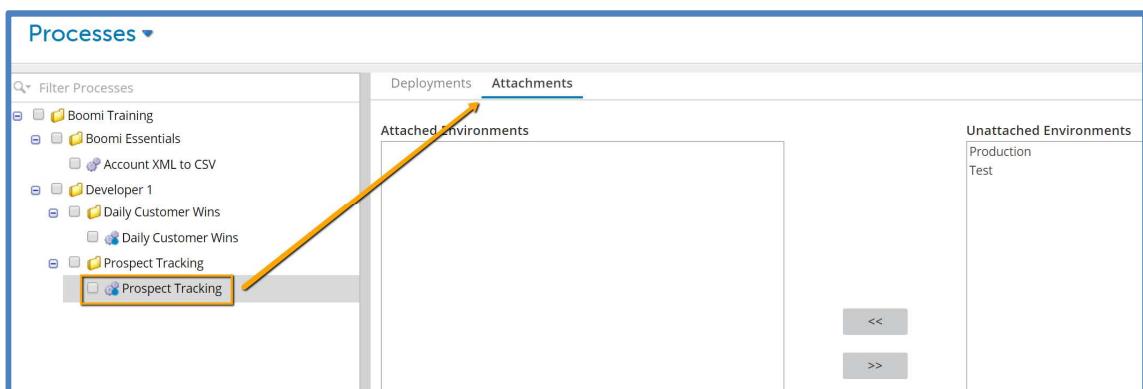
1. Click the **Deploy** tab.



2. In the **Processes** window, highlight the **Prospect Tracking** process.



3. Click the **Attachments** tab. The Attachments tab displays regardless of whether the process is attached to a specific environment. This is where you attach an environment to the process.



4. In the **Unattached Environments** window, highlight **Production**, then click << (**Attach selected**

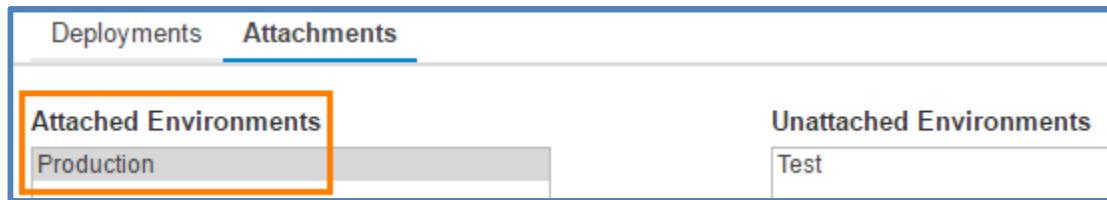


Exercise 2: Deploy the process

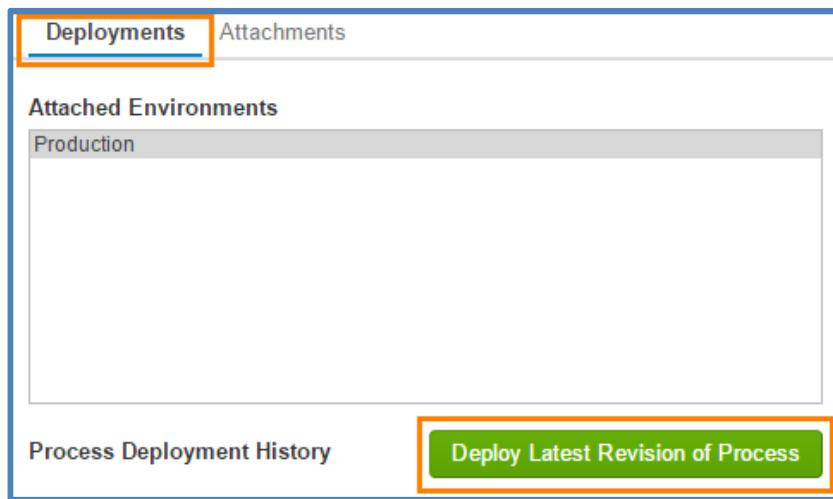
Environments).



This moves the Production environment from the Unattached pane to the Attached pane.



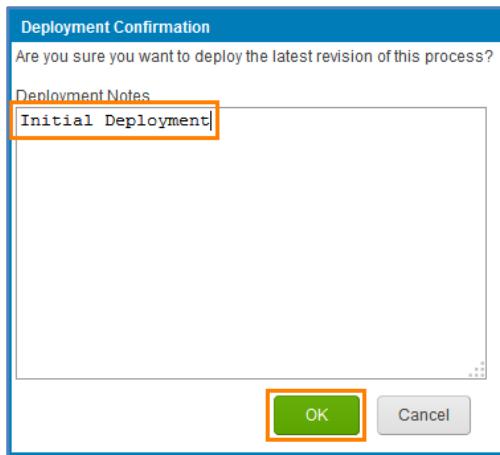
5. Click the **Deployments** tab. Be sure the Production environment is highlighted.
6. In the bottom-right of the **Deployments** window, click **Deploy Latest Revision of Process**.



7. In the Deployment Confirmation pop-up, for the Deployment Notes enter **Initial Deployment**, then click **OK**.



Exercise 2: Deploy the process



The new Version 1 record appears in the Process Deployment History table. Your hyperlinked Deployment Note appears in the Notes column.

Process Deployment History					Deploy Latest Revision of Process
Version	Deployed By	Date Deployed	Deployment ID	Notes	
1	tony_	@dell.com	2015-02-05 06:00:09 PM	96b2d160-b9f2-4842-ba	Initial Deployment

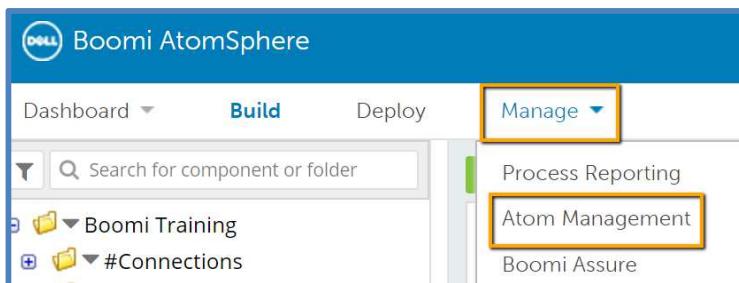
- Using Deployment Notes makes tracking deployment changes easier as you roll out additional versions. Deploying a process does NOT put the process into active production. After you deploy a process, you need to execute it either manually (Manage > Process Reporting) or through a schedule (Manage > Atom Management).*
- Upon Deployment, AtomSphere audits your account to make sure you have a valid number of connection licenses to deploy this process into production. If you do not have the necessary license count available, you will receive an error message.*



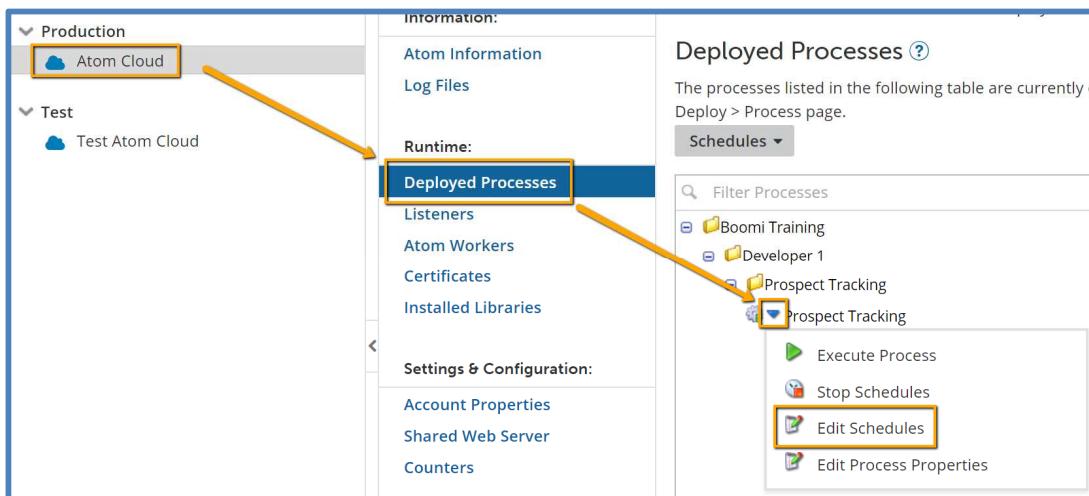
Exercise 3: Configure a process schedule

After you deploy a process, it is ready to be pushed into production which Boomi calls **executed**. You may either deploy this process manually or place it on a schedule. You can automate timed executions as frequent as 1-minute intervals. In this exercise you will configure a 5-minute schedule to create high activity on the Manage > Process Reporting tab.

1. On the Process Lifecycle panel at the top of the AtomSphere window, click **Manage > Atom Management**.



2. In the Environments pane, highlight the Atom Cloud, which has our process attached.
3. Under Runtime, highlight **Deployed Processes**.
4. In the Deployed Processes window, click the **blue arrow** next to Prospect Tracking, then select **Edit Schedules**.

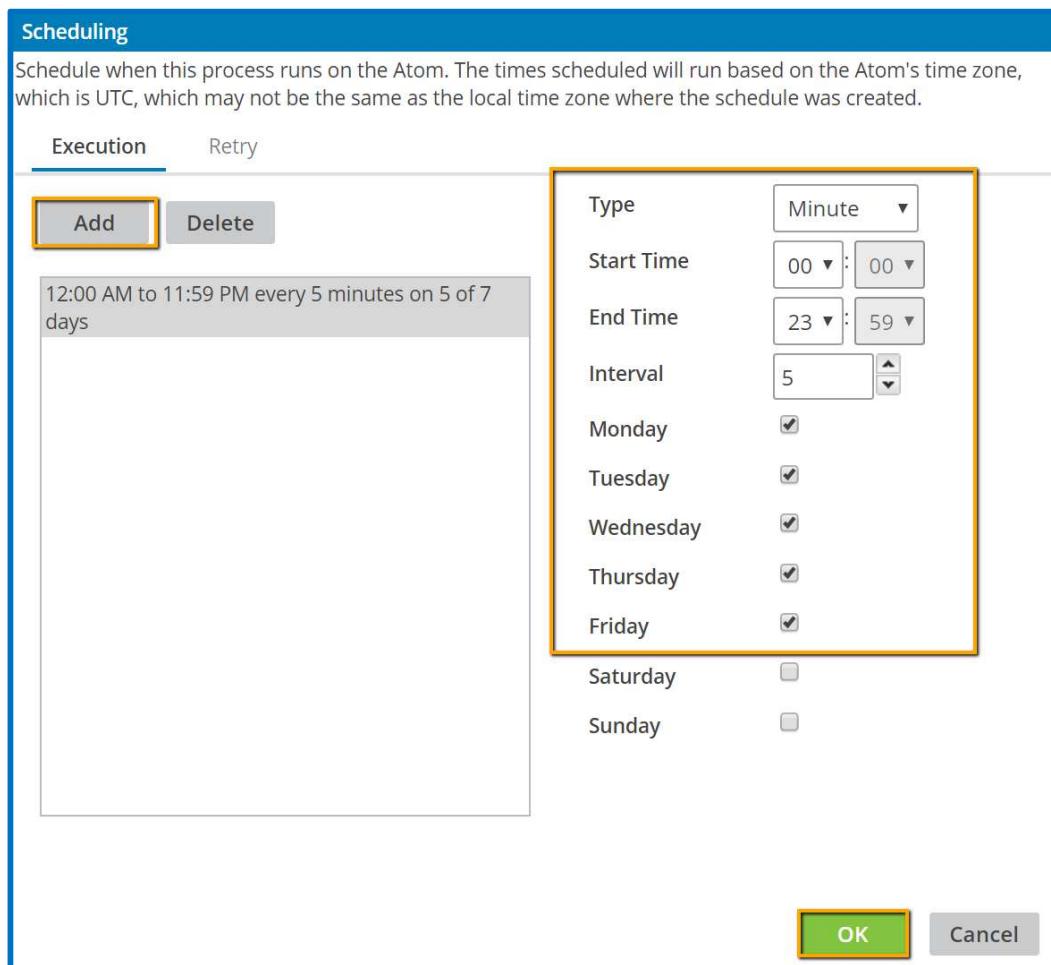


5. Click **Add**, then configure the schedule details to display the following:

Type:	Minute
Start Time:	00:00
End Time:	23:59
Interval:	5

Exercise 3: Configure a process schedule

6. Keep the default checkboxes for Monday through Friday, then click **OK**.



A Schedules saved message appears in the lower-right corner of the Process Canvas.



The time zone schedule depends on where the atom is installed: the Dell Boomi Atom Cloud and Test Atom Cloud use Eastern Time (ET), the EU Atom Cloud uses Universal Time Coordinated (UTC), and locally-installed atoms use the system time where the atom resides.



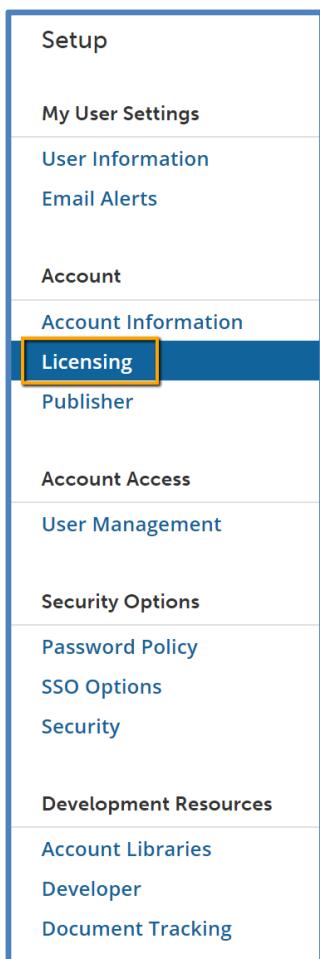
Exercise 4: Review the deployed connection licenses

When deploying a process, AtomSphere does an audit to check the purchased number of connection licenses for your AtomSphere subscription. You can see this audit begin when a pop-up window displays **Recalculating dependencies and auditing deployments**. The results display in your Licensing view. In this exercise you will view the results of the **Prospect Tracking** deployment.

1. In the top-right corner of the platform window, click Account > Setup.



2. Select the **Licensing** tab in the left Setup pane.



Exercise 4: Review the deployed connection licenses

3. In the **Connections By Class** table, note the even count of **Deployed** connections compared to the **Available** column.

Connector Class	Purchased	Deployed	Available
Small Business	0	0	0
Standard	3	2	1
Enterprise	0	0	0
Trading Partner	3	0	3
Small Business (Tact)	0	0	0



You should know the factors affecting your license account. When you use too many licenses, the deployment audit fails and prevents you from deploying your process version. A Boomi best practice is to streamline the number of duplicate connection components. For example, your license count will be higher in a shared account where others are deploying processes. License counts are totaled at the Atom level. Thus, if you use the same connection in multiple processes and deploy those processes to the same Atom, then only one license is tallied. However, if you deploy a single connection to two different Atoms, then two licenses are used.

4. In the **Connections By Class** table, highlight the Standard connector class record.

Connector Class	Purchased	Deployed	Available
Small Business	0	0	0
Standard	3	2	1
Enterprise	0	0	0
Trading Partner	3	0	3
Small Business (Tact)	0	0	0

- ✓ Each license category has a particular integration need. Small Business licenses are for Sage 50 (Peachtree), FreshBooks, and QuickBooks. Standard licenses are used for Salesforce, Database, and Success Factors. Enterprise licenses are used for SAP (Business Suite and Net Weaver) and Oracle E-Business Suite. Trading Partner licenses are used for EDI integrations.

The new records display in the **Connectors Deployed in Class: Standard** view.

5. Highlight the **Boomi Training (MySQL)** database record and notice how the **Deployments** table identifies the deployed Atoms and process(es).

Exercise 5: Track live executions in process reporting

Process Reporting is a search console for accessing information about executed processes. You can review statistics about the execution to see how documents have succeeded, failed, and/or reacted against connectors and process shapes in an elapsed timeframe. In this exercise, review some key information about the latest executions for the process **Prospect Tracking**.

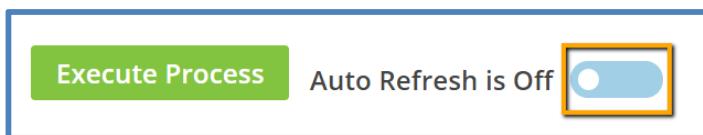
1. Click the **Manage > Process Reporting** tab.



2. In the Executions view, note the process execution instances then monitor the Process Reporting until the execution record with inbound and outbound data displays.
 - ✓ *You may need to click **Refresh** to see new process executions logged.*

Executions								Execute Process	Auto Refresh is Off		
Time	Process	Actions	Atom	In	Out	Elapsed Time	Error Message	All	Errors	Pending	Successes
2017-06-04 04:30:	Prospect Tracking		Atom Cloud	2	0	0:12					
2017-06-04 04:25:	Prospect Tracking		Atom Cloud	2	0	0:09					
2017-06-04 04:20:	Prospect Tracking		Atom Cloud	2	0	0:11					

3. Turn on **Auto Refresh** to automatically refresh the execution records every minute.



4. Select an execution record with inbound and outbound data in the Executions view, then click on the **Actions** button and select **View Deployment Components**.

Exercise 5: Track live executions in process reporting

The screenshot shows a table of live executions. The columns are Time, Process, Actions, Atom, and In. There are four entries:

Time	Process	Actions	Atom	In
2017-06-04 04:30:	Prospect Tracking	[View Process]	Atom Cloud	2
2017-06-04 04:25:	Prospect Tracking	[View Deployment Components]		
2017-06-04 04:20:	Prospect Tracking	[View Process State]		
2017-06-04 04:13:	Prospect Tracking	[View Extended Information]		

A context menu is open over the fourth row, listing options: View Process, View Deployment Components, View Process State, and View Extended Information. The 'View Deployment Components' option is highlighted with a yellow box.

5. Next to the SF Account to DB Insert Map, click the **View/Edit** button.

A new browser tab or window opens displaying the direct component instance.

The screenshot shows a table titled 'Components in this Deployment Version'. The columns are Name, Type, Revision, Modified By, and Modified Date. There are nine rows:

Name	Type	Revision	Modified By	Modified Date
Boomi Training (MySQL)	Connection	2		2017-06-03 07:41:26 PM
CUSTOMER_ID Create	Map Function	1		2017-06-03 08:54:01 PM
Org Insert	Operation	1		2017-06-03 07:40:21 PM
Boomi Training (SF)	Connection	2		2017-06-03 06:23:17 PM
Prospect Tracking	Process	9		2017-06-03 09:46:59 PM
SF Account to DB Insert	Map	6		2017-06-03 09:07:07 PM
SF_Account_QUERY_Respc	XML Profile	2		2017-06-03 08:23:39 PM
Account Query by Type/Date	Operation	2		2017-06-03 08:23:55 PM
Customer Insert	Database Profile	2		2017-06-03 07:47:28 PM

The 'SF Account to DB Insert' row is selected and highlighted with a yellow box. A 'Cancel' button is visible at the bottom right of the window.

6. Close this tab or window to return to a view of the Deployed Components.

The screenshot shows a single browser tab with the title 'BC Boomi Training - Build - Bo...'. The URL in the address bar is <https://platform.boomi.com/#build;accountId=bc0115dellinstructor-3F1451;c>.

The component revision number from the **Components in this Deployment Version** table corresponds to the component revision number in the Revision History. You can review the specific component configuration the Atom is executing and reporting on the Manage tab, which may correspond to the latest version of the process or sub-component.



Exercise 5: Track live executions in process reporting

Components in this Deployment Version					
Name	Type	Revision	Modified By	Modified Date	
Boomi Training (MySQL)	Connection	2		2017-06-03 07:41:26 PM	
CUSTOMER_ID Create	Map Function	1		2017-06-03 08:54:01 PM	
Org Insert	Operation	1		2017-06-03 07:40:21 PM	
Boomi Training (SF)	Connection	2		2017-06-03 06:23:17 PM	
Prospect Tracking	Process	9		2017-06-03 09:46:59 PM	
SF Account to DB Insert	Map	6		2017-06-03 09:07:07 PM	
SF_Account_QUERY_Resp	XML Profile	2		2017-06-03 08:23:39 PM	
Account Query by Type/Date	Operation	2		2017-06-03 08:23:55 PM	
Customer Insert	Database Profile	2		2017-06-03 07:47:28 PM	

7. Click **Cancel** to return to the Process Reporting window.
8. Click on the **View Process Logs** icon of a recent process execution.

Time	Process	Actions	Atom	In	Out	Elapsed Time
2017-06-04 04:40:00 PM	Prospect Tracking		Atom Cloud	2	0	0:11
2017-06-04 04:35:00 PM	Prospect Tracking		Atom Cloud	2	0	0:09
2017-06-04 04:30:00 PM	Prospect Tracking		Atom Cloud	2	0	0:12

9. Note the details in the **Show Log** pane, then click **Cancel** to return to the Process Reporting window.

Show Log					
Time	Level	Shape	Ext Info	Message	Details
2015-02-05 07:34:33 PM	INFO	initializing...		Executing Process Prospect Tracking - My N	
2015-02-05 07:34:33 PM	INFO	Start	Boomi Training (SF) - Sol	Executing Start Shape	
2015-02-05 07:34:33 PM	INFO	Start	Boomi Training (SF) - Sol	Parameter 1 value = Prospect	
2015-02-05 07:34:33 PM	INFO	Start	Boomi Training (SF) - Sol	Parameter 2 value = 2015-02-05T00:34:33.6	
2015-02-05 07:34:35 PM	INFO	Start	Boomi Training (SF) - Sol	3 document(s) found for processing.	
2015-02-05 07:34:35 PM	INFO	Start	Boomi Training (SF) - Sol	Shape executed successfully in 2245ms.	
2015-02-05 07:34:35 PM	INFO	New Account?		Executing Decision with 3 document(s).	
2015-02-05 07:34:36 PM	INFO	New Account?		Shape executed successfully in 439ms.	
2015-02-05 07:34:36 PM	INFO	Notify		Executing Notify Shape with 3 document(s).	
2015-02-05 07:34:36 PM	INFO	Notify		:	
2015-02-05 07:34:36 PM	INFO	Notify		Shape executed successfully in 15ms.	
2015-02-05 07:34:36 PM	INFO	Stop	continuing process	Executing Stop Shape with 3 document(s).	
2015-02-05 07:34:36 PM	INFO	Stop	continuing process	Shape executed successfully in 1ms.	
2015-02-05 07:34:37 PM	INFO	cleanup...		Process execution completed normally.	



Exercise 6: Review live document information

The Detail View pane displays the inbound and outbound data for the selected process execution. **Documents In** refers to the documents captured on the Process Start shape. **Documents Out** refers to any connector shapes on the process flow that retrieve or send documents. In this exercise you will review logs and view documents.

1. Click on the hyperlinked timestamp to view details for a recent process execution.

Time	Process	Actions
● 2017-06-04 04:45:00 PM	Prospect Tracking	
● 2017-06-04 04:40:00 PM	Prospect Tracking	
● 2017-06-04 04:35:00 PM	Prospect Tracking	

A detailed process execution view opens containing process and document-level information.

2. Click on **Successes** to view detailed information about successful documents.

● Prospect Tracking
Time 2017-06-04 04:45:00 PM | Elapsed Time 0:09 | Documents In 2 | Documents Out 0 | Atom Atom Cloud | Execution Type Scheduled Execution

Actions

(Start) Salesforce
Connection salesforce
Operation Account Query by Type/Date
Successes: 2 Errors: 0

3. In the **Successes** section of the Detail View pane, click the **Actions** button on one inbound data record, and then choose **View Document**.

(Start) Salesforce
Connection salesforce
Operation Account Query by Type/Date

Re-run documents ▾ Re-run

ID	Actions	Size (kB)	Error Message
1		9.29	
2			

View Logs
 View Document
 Re-run Document
 Run Document in Test Mode
 View Linked Documents

The Atom temporarily uploads the document to the Document Viewer.



Exercise 6: Review live document information

4. Scroll to the bottom of the Document Viewer pop-up window.

With larger documents, the Document Viewer displays a limited data range. To see all data, download the full document.

- ✓ *To download the full document contents to a file on your workstation click **Download Original Document**.*

5. Click the **Close Document Viewer** button.

The screenshot shows a 'Document Viewer' window with a blue header bar. The main content area displays an XML document with numbered lines from 1 to 27. Lines 1 through 26 show standard prospect data like Id, OwnerId, Name, and various dates. Line 27 contains a date value: <SI >Expiration Date</SI><SI >2017-10-06</SI><SI >Expiration Date</SI>. Below the XML, there is a toggle switch labeled 'Formatted view is on. Formatted view hides some data for easier reading.' followed by a link 'Download Original Document' and a size indicator 'Size 4008 bytes'. At the bottom right is a button labeled 'Close Document Viewer' with an orange border.

```
<Account_c>
  <Id>a6f0q0000004CgqAAE</Id>
  <OwnerId>00540000003O16YAAS</OwnerId>
  <IsDeleted>false</IsDeleted>
  <Name>GenePoint</Name>
  <CurrencyIsoCode>USD</CurrencyIsoCode>
  <CreatedDate>2017-06-16T16:22:16.000Z</CreatedDate>
  <CreatedBy>00540000003O16YAAS</CreatedBy>
  <LastModifiedDate>2017-10-11T18:31:07.000Z</LastModifiedDate>
  <LastModifiedBy>00540000003O16YAAS</LastModifiedBy>
  <SystemModstamp>2017-10-11T18:31:07.000Z</SystemModstamp>
  <LastViewedDate>2017-10-08T18:31:33.000Z</LastViewedDate>
  <LastReferencedDate>2017-10-08T18:31:33.000Z</LastReferencedDate>
  <ConnectionReceivedId></ConnectionReceivedId>
  <ConnectionSentId></ConnectionSentId>
  <Account_Number_c>CC978213</Account_Number_c>
  <Description_del_c>Genomics company engaged in mapping and sequencing of the human ger</Description_del_c>
  <Phone_c>(650) 867-3450</Phone_c>
  <Rating_c>Cold</Rating_c>
  <Type_c>Prospect</Type_c>
  <Website_c>http://www.genepoint.com</Website_c>
  <Annual_Revenue_c>3.0E7</Annual_Revenue_c>
  <Account_Currency_c>U.S.Dollar</Account_Currency_c>
  <Account_Site_c></Account_Site_c>
  <Industry_c>Biotechnology</Industry_c>
  <Billing_Address_c>345 Shoreline Park</Billing_Address_c>
  <SI >Expiration Date</SI><SI >2017-10-06</SI><SI >Expiration Date</SI>
```

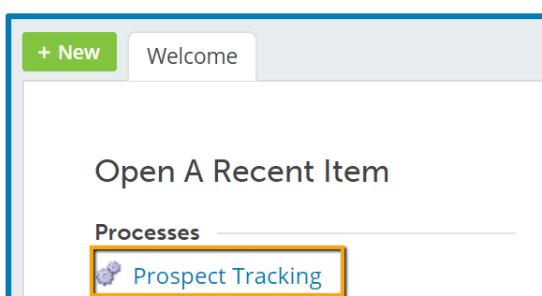
6. To exit the detailed document view and return to process reporting, **click anywhere to the left** of the detailed document view.



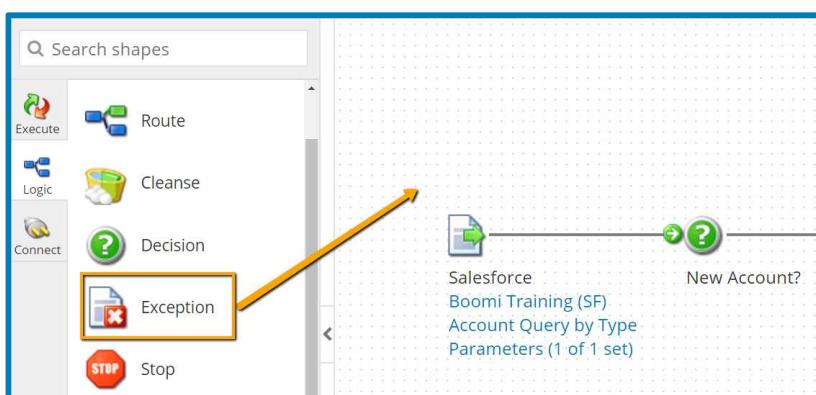
Exercise 7: Configure a forced exception notice

Use the Exception shape to stop the data flow down a path and to define the custom error messages reported in the Manage tab. In the exception shape you define when document data fails to meet certain conditions of a route or decision shape and should not continue processing. In this exercise, add an exception to the process to fail all records not meeting the criteria of the Decision shape's logic (New Account?).

1. Navigate to the Build tab, then open your process **Prospect Tracking**.
 - ✓ A quick way to retrieve this process is to use the **Open A Recent Item** link in the **Welcome** pane.



2. Click and drag an **Exception** shape from the Logic tab of the shapes palette onto the Process Canvas.



3. Configure the following for the Exception properties, then click **OK**.

Title:	Old Account Record
Stop Single Document:	Checked
Message:	----- Account ID: {1} Name: {2} -----

- ✓ Be sure to check **Stop Single Document** which prevents other valid documents from stopping to process through the flow.

Exercise 7: Configure a forced exception notice

The screenshot shows the 'Exception Properties' window with the following settings:

- Display Name:** (empty)
- Title:** Old Account Record
- Option:** Stop a single document (checkbox checked)
- Message:** Account ID: {1}
Name: {2}
- Variables:** {1} Example variable

4. In the Exception shape's properties window, click **Add Parameter (+)**.

5. In the Parameter Values window, configure the first parameter.

Type:	Profile Element
Profile Type:	XML
Profile:	SF_Account__c_QUERY_Response
Element:	Id (Account__c/Id)

6. Set Type as **Profile Element**.

7. Browse and select the correct XML Profile.

8. Browse and select the Id Element under Account__c.

The screenshot shows the 'Parameter Value' window with the following configuration:

Type	Profile Element
Profile Type	XML
Profile	SF_Account__c_QUERY_Response
Element	Id (Account__c/Id)

9. Click **OK** to return to the Exception Properties window.

10. In the Variables window, click the **Add Parameter** button.

11. In the Parameter Value window, configure the second parameter using a similar method as above:

Type:	Profile Element
Profile Type:	XML
Profile:	SF_Account__c_QUERY_Response
Element:	Name (Account__c/Name)



Exercise 7: Configure a forced exception notice

Parameter Value	
Type	Profile Element
Profile Type	XML
Profile	SF_Account__c_QUERY_Response
Element	Name (Account__c/Name)

12. Click **OK** to return to the Exception Properties window.

Both parameters are now loaded in the Parameters section of the Exception Properties window.

Title	Old Account Record	(i)
Option	<input checked="" type="checkbox"/> Stop a single document	(i)
Message	----- Account ID: {1} Name: {2} -----	
Variables		
	{1} XML Profile - SF_Account__c_QUERY_Response - Id (Account__c/Id) {2} XML Profile - SF_Account__c_QUERY_Response - Name (Account__c/Name)	

13. Click **OK** to return to the process.

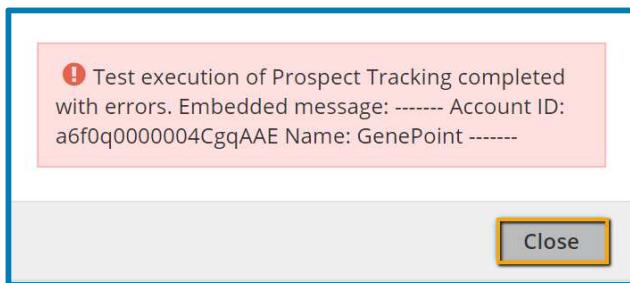
14. Remove the Stop shape from the Decision shape's False path. Connect the False path to the Exception shape, then click **Test** to execute the process in Test Mode using the **Test Atom Cloud**.



The **Test Execution Error** window opens and identifies the failure for the first document.



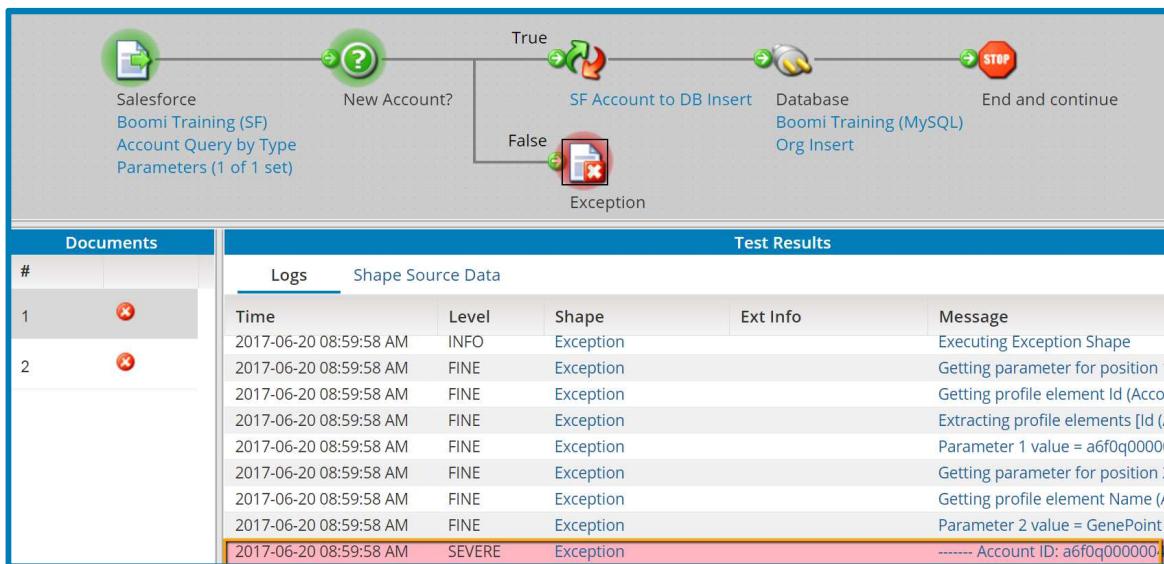
Exercise 7: Configure a forced exception notice



- ✓ At the process level, AtomSphere reports only the first document error returned. You must troubleshoot to find out if other document failures exist at the Document level.

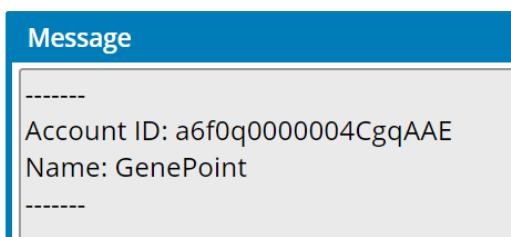
15. Click **Close** to return to the process view.
16. Highlight the **Exception** shape on one of the failed documents

A **SEVERE** level record displays under Test Results.



17. Click the hyperlinked message in the Message column of this record.

A pop-up window opens with the structured Exception message specific to the highlighted document record.



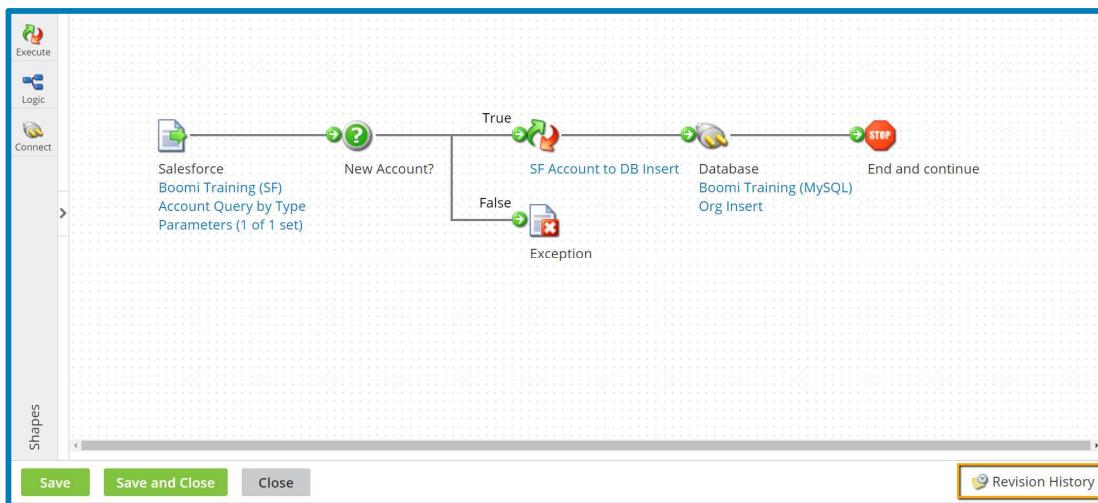
18. Click **Cancel** to return to the process.
19. Click the **Return to Edit Mode** button to exit Test Mode.



Exercise 8: Review the revision history

Revision History displays standard information about a component, including when it was last modified by a specific AtomSphere user. This information is helpful when you need to undo changes at the component level and restore previous configurations. In this exercise, you review a previous process version and note the changes.

1. On the Build tab, open the process **Prospect Tracking**.
2. In the lower-right corner of the Process tab, click **Revision History**.



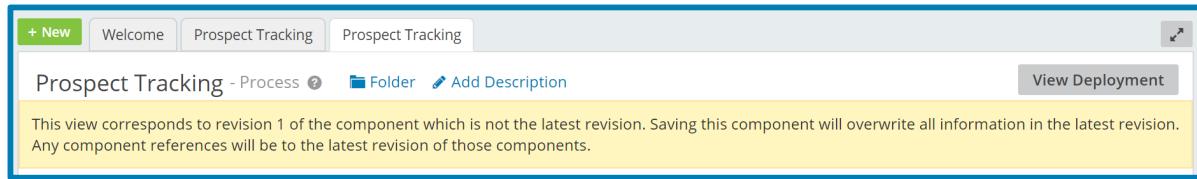
3. Review the current revisions, then click the **Edit** icon next to the earliest revision number.

Revision	Modified By	Modified Date
4		2017-06-03 08:02:07 PM
3		2017-06-03 07:41:27 PM
2		2017-06-03 06:24:43 PM
1		2017-06-03 06:21:59 PM

An information alert appears stating this view does not correspond to the latest version.



Exercise 8: Review the revision history



- ✓ *Do not save this revision.*



The goal of this exercise is to make you aware revisions are never overwritten. Rather, they are stored in Revision History if you need to reference or revert to them later. Saving a process version increments it and moves it to the top of the revision list making it the active version. If you revert to a previously saved version and want to deploy it, you need to redeploy and schedule the process. The reverted version does NOT inherit the deployed state or schedule assigned to the most-recent version.

4. Click **Close** to close the version without saving.

The original **Prospect Tracking** process opens.



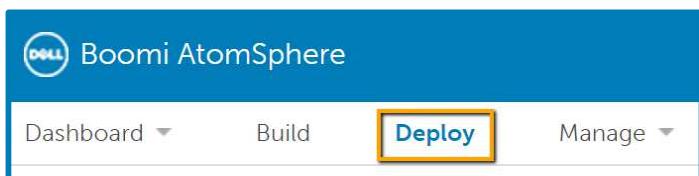
Exercise 9: Redeploy the process and view alerts in process reporting

Exercise 9: Redeploy the process and view alerts in process reporting

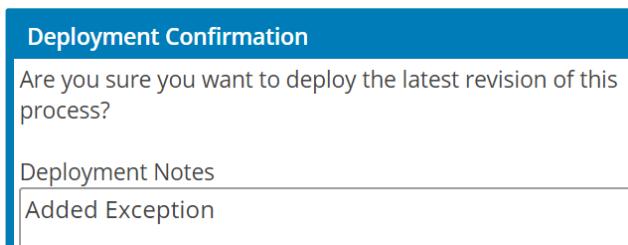
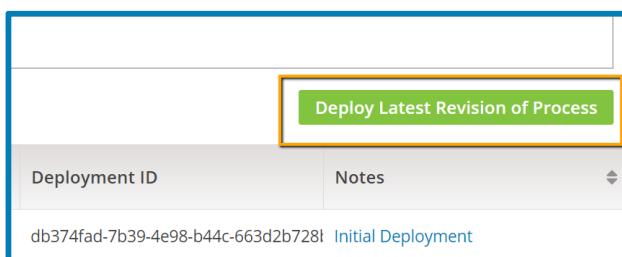
Currently, there are multiple versions of Prospect Tracking, and the most recent version has not been promoted into production. To publish recent changes, it is necessary to redeploy the process. Once the process is redeployed, you will be able to view alerts (from the Exception shape) in process reporting.

Redeploy the process

1. Click the Deploy tab.



2. In the **Processes** window, highlight the **Prospect Tracking** process.
3. Click **Deploy Latest Revision of Process**, add a comment to the **Deployment Notes**, then click **OK**.



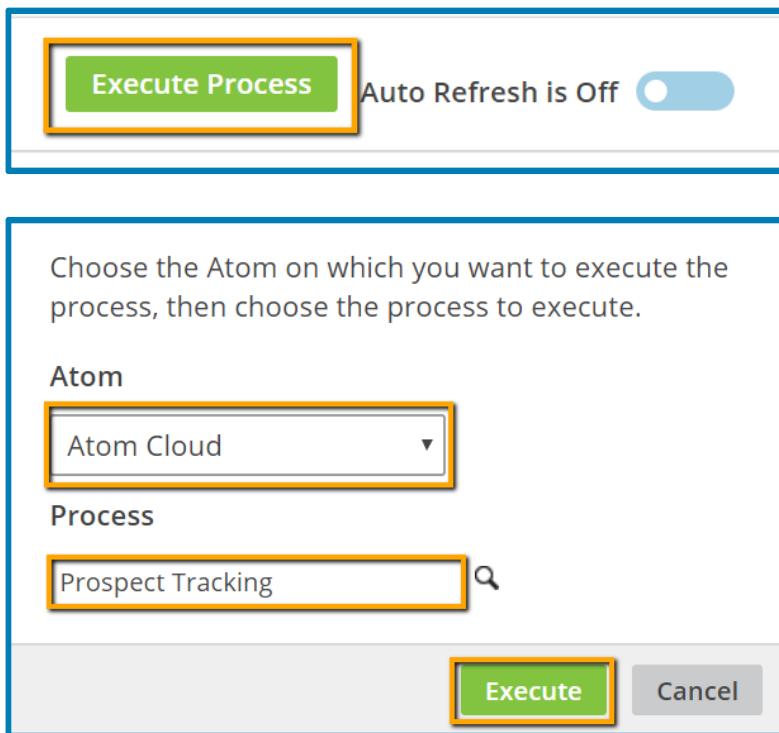
The version logged window displays in the Process Deployment History.

Process Deployment History					Deploy
Version	Actions	Deployed By	Date Deployed	Deployment ID	Notes
2			2017-06-04 05:52:09 PM	30da61b0-74d6-4a9c-b6cb-23536e027fd6	Added Exception
1			2017-06-04 03:44:54 PM	db374fad-7b39-4e98-b44c-663d2b728b02	Initial Deployment

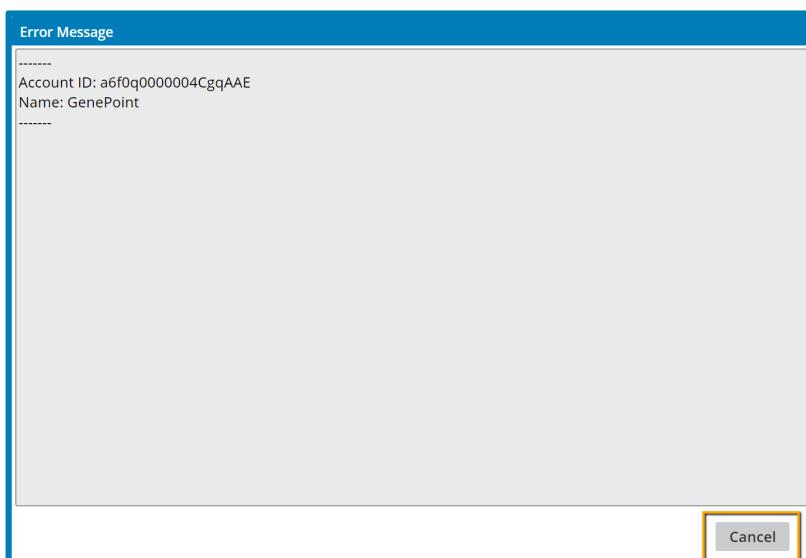
Exercise 9: Redeploy the process and view alerts in process reporting

View alerts in process reporting

4. Click the **Manage > Process Reporting** tab.
5. Manually execute Prospect Tracking by clicking **Execute Process** in the top-right corner of Process Reporting, then choose Atom: Atom Cloud, Process: Prospect Tracking, and click **Execute**.



6. Notice the most recent process executions are now logging Error Messages in process reporting. Information from the first failed document in a process execution is recorded. Click on the hyperlink in the Error Message column to view the configured message.



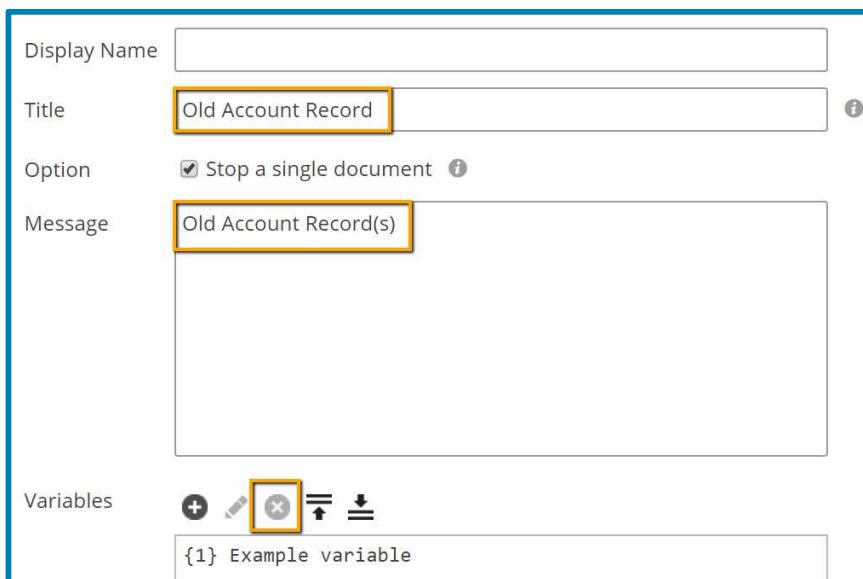
Exercise 10: Configure a notify shape

Use the Notify shape to build custom execution logs and/or send customized notification messages to an email alert subscription or RSS Feed. In this exercise, create a user-defined email event for each failed document and continue to log the Process Execution as failed.

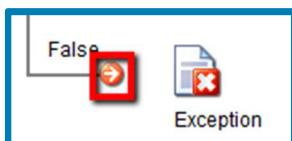
1. From the **Build** tab's **Welcome** tab, in the **Open A Recent Item** section, click on **Prospect Tracking**.
2. Open and configure the Exception shape by replacing the message text with **Old Account Record(s)**.



3. Delete both parameters from the Variables window. Highlight each, click **(x) Delete Parameter?**, then click **OK** to confirm the deletion. Replace the Exception shape's message with the information shown below.



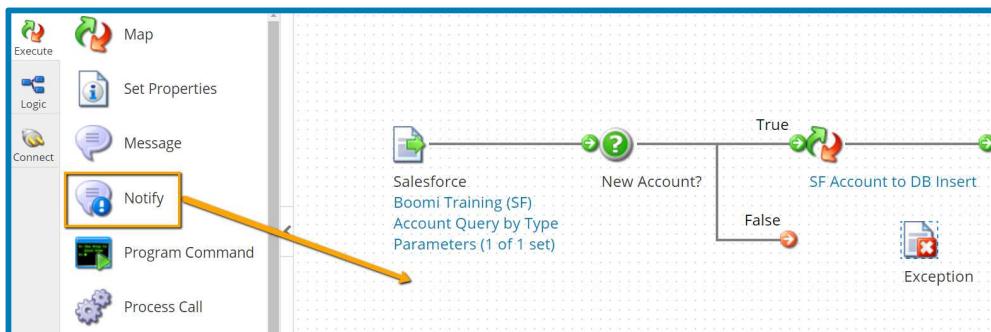
4. Click **OK** to return to the process canvas.
5. Disconnect the Exception shape from the end of the first Decision shape's False path.



6. From the Execute tab of the Shapes palette, drag a Notify shape to the process flow.



Exercise 10: Configure a notify shape



7. Configure the Notify shape's Properties as follows:

Title:	Old Account Record
Message Level:	Error
Message:	ID: {1} Name: {2} <ENTER>
Enable Events:	Checked
Enable User Log:	Unchecked
Write Once Per Execution:	Unchecked

This screenshot shows the configuration dialog for the 'Notify' shape. It has several sections:

- Title:** Old Account Record
- Message Level:** Error (radio button selected)
- Message:** ID: {1} Name: {2}
- Variables:** {1} Example variable
- Options:**
 - Enable Events: checked
 - Enable User Log: unchecked
 - Write Once Per Execution: unchecked



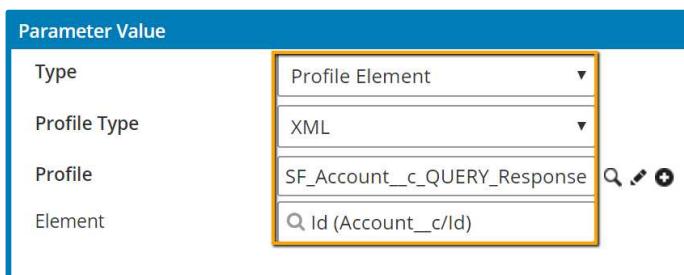
Exercise 10: Configure a notify shape

- ✓ When configuring a Notify shape, the **Message Level** (Information, Warning, or Error) must match the Log Level in an email alert subscription.
- ✓ If **Enable Events** is checked, the notification is sent to the destination for all configured event options.

8. Click **(+)** Add Parameter to add the first parameter.

9. Configure the following for the first parameter in the Parameter Value window:

Type:	Profile Element
Profile Type:	XML
Profile:	SF_Account__c_QUERY_Response
Element:	Id (Account__c/Id)



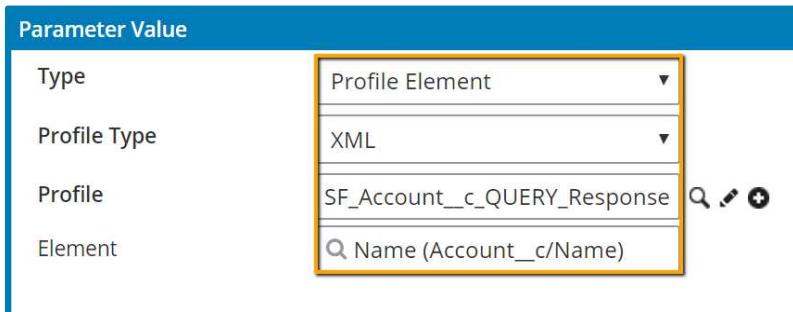
10. Click **OK** to return to the Exception Properties window.

The first parameter is loaded in the Parameters portion of the Notify Properties window.

11. Click **Add Parameter (+)** to add the second parameter.

12. Configure the following for the second parameter in the Parameter Value window.

Type:	Profile Element
Profile Type:	XML
Profile:	SF_Account__c_QUERY_Response
Element:	Name (Account__c/Name)



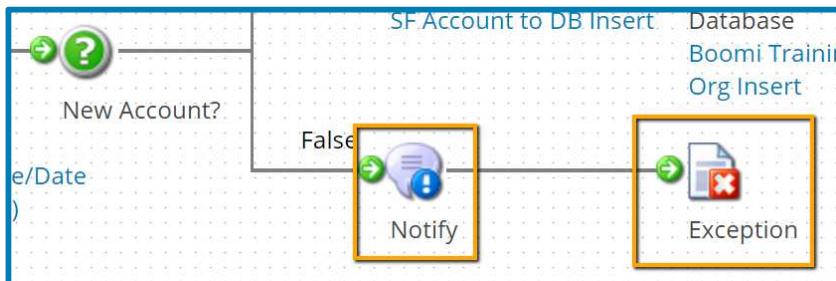
13. Click **OK** to close the Parameter Value dialog then again to return to the process.

Both parameters are now loaded in the Parameters portion of the Notify Properties window.



Exercise 10: Configure a notify shape

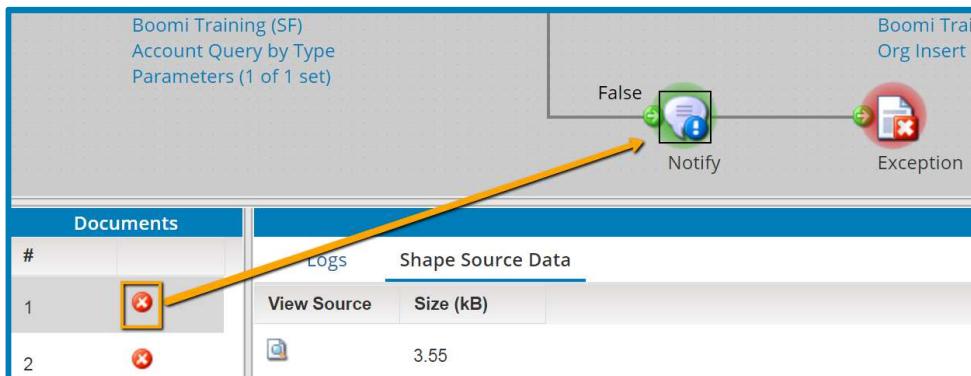
14. Connect the Notify shape between the Decision shape's False path and the Exception shape.



15. Run the process in **Test Mode**.

16. When the Test Execution Error message appears, click **OK** to exit.

Notify executes successfully before the Exception. The Notify shape creates a notification and allows the document(s) to pass through without affecting document structure.



17. Click **Return to Edit Mode** to exit Test Mode.

18. Click the **Deploy** tab, then highlight **Prospect Tracking** to deploy your latest process revision with this new Notify shape.

19. Click **Deploy Latest Revision of Process**, add a comment to the Deployment Notes, then click **OK**.



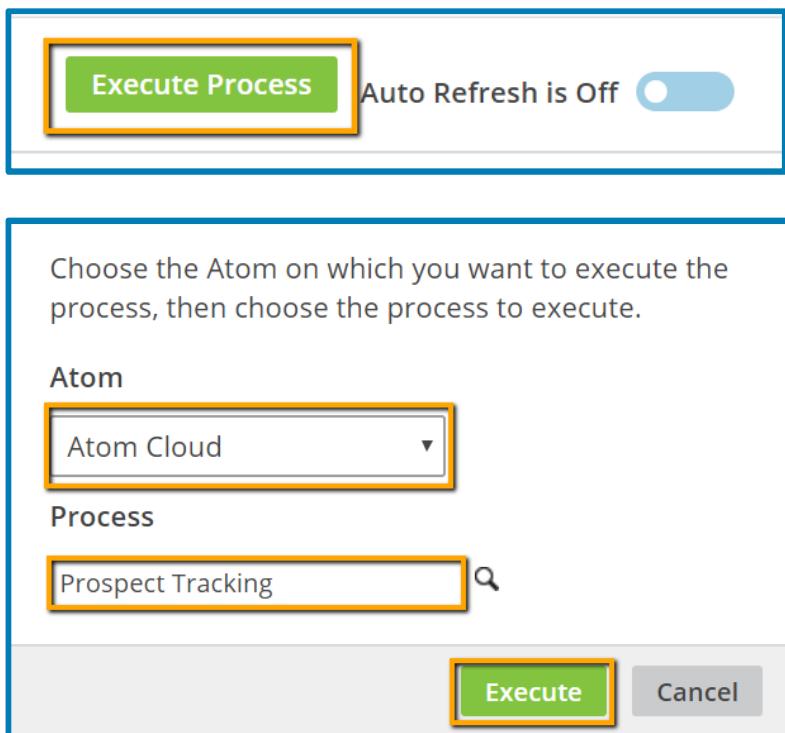
The version logged window displays in the Process Deployment History.

In this design the Exception shape reports a high-level failure and flags the process as an error; the Notify shape notifies the error information at the document-level.



Exercise 10: Configure a notify shape

20. Click the **Manage > Process Reporting** tab.
21. Manually execute Prospect Tracking by clicking **Execute Process** in the top-right corner of Process Reporting, then choose Atom: Atom Cloud, Process: Prospect Tracking, and click **Execute**.



22. Note the most recent process executions are still logging Error Messages in process reporting. The Notify shape creates a user notification, and the Exception shape logs the process execution as failed. Click the **View Process Logs** icon to show the process log with SEVERE errors captured.

Show Log					
Minimum Status to Show: INFO					Save Logs
Time	Level	Shape	Ext Info	Message	Details
2017-06-04 06:57:09 PM	INFO	initializing...		Executing Process Prospect Tracking	
2017-06-04 06:57:09 PM	INFO	Start	Boomi Training (SF): sales!	Executing Start Shape	
2017-06-04 06:57:09 PM	INFO	Start	Boomi Training (SF): sales!	Parameter 1 value = Prospect	
2017-06-04 06:57:09 PM	INFO	Start	Boomi Training (SF): sales!	Parameter 2 value = 2017-06-03T22:57:09.98	
2017-06-04 06:57:11 PM	INFO	Start	Boomi Training (SF): sales!	2 document(s) found for processing.	
2017-06-04 06:57:11 PM	INFO	Start	Boomi Training (SF): sales!	Shape executed successfully in 1712 ms.	
2017-06-04 06:57:11 PM	INFO	New Account?		Executing Decision with 2 document(s).	
2017-06-04 06:57:11 PM	INFO	New Account?		Shape executed successfully in 302 ms.	
2017-06-04 06:57:12 PM	INFO	Notify		Executing Notify Shape with 2 document(s).	
2017-06-04 06:57:12 PM	SEVERE	Notify		Old Account Record: ID: 0015000001AZfOZA.	
2017-06-04 06:57:12 PM	INFO	Notify		Shape executed successfully in 60 ms.	
2017-06-04 06:57:12 PM	INFO	Exception		Executing Exception Shape with 2 document	
2017-06-04 06:57:12 PM	INFO	Exception		Shape executed with errors in 35 ms.	
2017-06-04 06:57:12 PM	WARNING	cleanup...		Prospect Tracking encountered 2 document	
2017-06-04 06:57:12 PM	SEVERE	cleanup...		First document failure: Old Account Record(s)	
2017-06-04 06:57:12 PM	INFO	cleanup...		Errors occurred in process.	

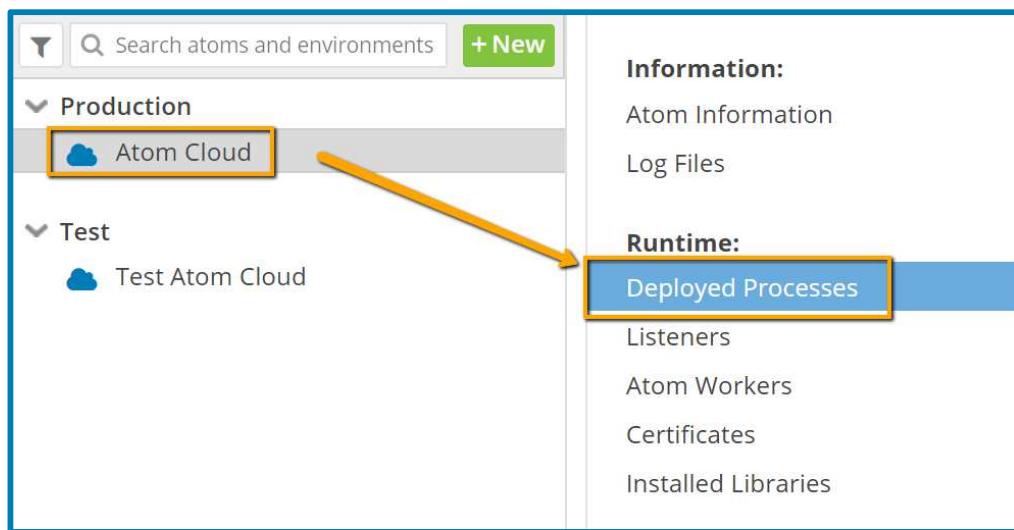


Exercise 11: Stop process schedule and detach environment

A Boomi best practice is to stop process schedule and/or detach the environment from the process when training (or other testing scenarios) is complete. This makes sure the process is not running unnecessarily and that any user alerts stop.

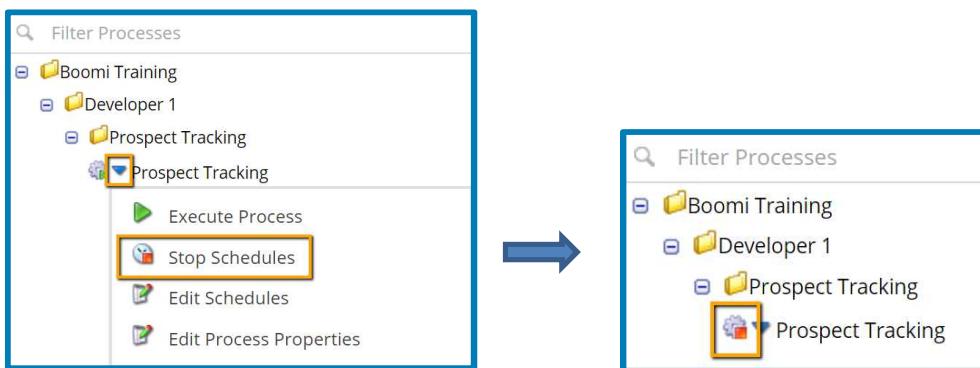
To stop the process schedule

1. Click on the **Manage > Atom Management** link.
2. Select the **Atom** where your process is deployed and then select **Deployed Processes**.



3. Next to **Prospect Tracking**, click the blue dropdown arrow, then select **Stop Schedules**.

The scheduling icon changes from a green arrow to a red square.



To detach an environment

4. Click on the **Deploy** tab, highlight the process then select the **Attachments** tab.

Exercise 11: Stop process schedule and detach environment

The screenshot shows the 'Processes' page in the Boomi Platform. On the left, there's a tree view of processes under 'Boomi Training' and 'Prospect Tracking'. Under 'Prospect Tracking', 'Prospect Tracking' is selected and highlighted with a yellow box. At the top right, there are tabs for 'Deployments' and 'Attachments'. The 'Attachments' tab is selected and highlighted with a yellow box. An orange arrow points from the 'Prospect Tracking' selection in the tree view towards the 'Attachments' tab.

5. Select the Attached environment, then click on the **Detach Selected Environment >>** button.

The screenshot shows the 'Attachments' interface. It has two main sections: 'Attached Environments' on the left containing 'Production' (which is highlighted with an orange box) and 'Unattached Environments' on the right containing 'Test'. Between them are '<<' and '>>' buttons. The '>>' button is highlighted with an orange box.

The environment appears in the Unattached Environments list.

The screenshot shows the 'Unattached Environments' list. It contains two entries: 'Production' and 'Test', both highlighted with an orange box.



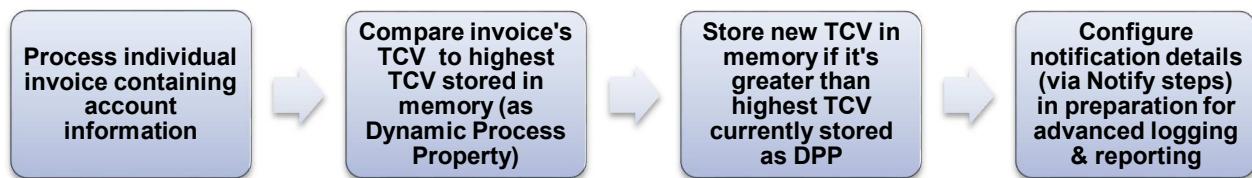
Dynamic Process Properties Activity

Scenario

Each week, a company awards their highest producing sales rep. This award is given to the sales rep who closes the largest deal by week's end. A process was designed to continually check for newly created invoice records within the company's established data store and to track the highest producing deal. The data store contains processed invoices containing basic account information, including the sales rep name and Total Contract Value (TCV) of each closed-won opportunity.

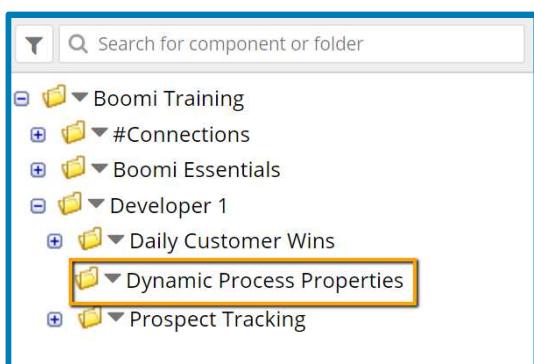
Goal

Take a partially-built process designed for unit testing and change it so it takes full advantage of Dynamic Process Properties (DPP). As each invoice is processed, the TCV is stored as the DPP if it is larger than the previously stored TCV. Storing it as a DPP will allow it to be referenced in later process executions. The following represents the high-level integration strategy and business work flow:



Create a subfolder to house the dynamic process properties process

1. Click on the dropdown arrow next to the **Developer 1** folder.
2. Choose **New Folder** and name it **Dynamic Process Properties**.



Download the process from the Process Library

3. Open the Process Library by clicking on **Browse Process Library** at the bottom of the Component Explorer.

Dynamic Process Properties Activity

4. In the right column search bar enter **Dev1** and press Enter.
5. Click **Install** next to **Dynamic Process Properties Activity**.

The screenshot shows the Boomi Process Library interface. A search bar at the top contains the text "dev1". To the right of the search bar is a "Filter by Publisher" section with two options: "Dell Boomi" and "Education Services", with "Education Services" selected. Below the search bar, a "Search Results" section displays a list of processes. One process, "Dynamic Document Properties Activity", is shown with its details: published on 05 Jun 2017 11:49:14 by Education Services. Below it, another process, "Dynamic Process Properties Activity", is highlighted with a yellow border. This second process was published on 05 Jun 2017 11:49:05 by Education Services. Both processes have "View" and "Install" buttons; the "Install" button for the second process is highlighted with a green border.

6. Click **Choose...** next to Select Installation Location and navigate to the Dynamic Process Properties folder.
7. Click **Install** in the lower-right corner.
8. The process is now installed in your account. Click **View Process**.

Configure the Set Properties, Decision, and Notify shapes

Configure the Set Properties shape to set the incoming XML Document's TCV as a persisted Dynamic Process Property.

9. Click the **Add (+)** icon to add a property.

The screenshot shows the configuration dialog for the "Set Properties Shape". At the top, there is a title "Set Properties Shape" with a help icon. Below the title, a description explains that the shape allows setting values for various document and process properties, which can be used for connector attributes or stored in memory. On the left, there is a small icon of a document with a gear and a plus sign, labeled "Set TCV as DPP" and "Configure". The main configuration area has a "Display Name" field containing "Set TCV as DPP". Below this, there is a "Properties to Set" section with a "Select a property to edit" label and a "Add (+)" button, which is highlighted with a yellow border. There is also a "Configure" link below the icon.

10. Choose 'Dynamic Process Property' from the Property Type dropdown. Set a Dynamic Process Property with a name of 'Highest TCV'. We want to save this value in memory, to reference it in later process executions, check **Persist this property**.



Dynamic Process Properties Activity

Choose Property

Property Type	Dynamic Process Property
Property Name	Highest TCV
Options	<input checked="" type="checkbox"/> Persist this property

11. Click **OK** when completed.

- ✓ *It is important to remember the Property Name exactly, to reference it later.*

12. Now pair the DPP with a parameter referencing the corresponding value and click the **Add** icon to select the correct profile element.

Set Properties Shape ?

The Set Properties shape allows you to set values for various document and process properties. These properties can be used to set outbound connector attributes such as file name or email subject, or store certain values in memory to facilitate the integration. The property values can be comprised of static and/or dynamic values.

Display Name: Set TCV as DPP

Properties to Set Parameters

+ **XML** **X** **Dynamic Process Property - Highest TCV** **+** **XML** **X** **Dynamic Process Property - Highest TCV**

13. Configure the parameter values according to the following:

Type:	Profile Element
Profile Type:	XML
Profile:	Invoice XML
Element:	TCV (Account/TCV)

Parameter Value

Type	Profile Element
Profile Type	XML
Profile	Invoice XML
Element	<input type="button" value="Choose..."/>

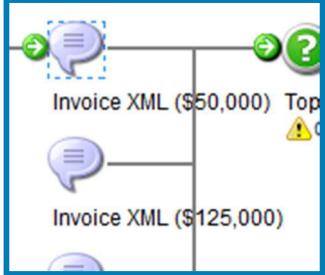
New Output
Please choose an element.

- Account
- Name
- SalesRep
- InvDetails
- TCV



Dynamic Process Properties Activity

- ✓ Examine each message shape mimicking the XML data coming into the process, paying attention to the data elements. These elements are referenced in the 'Invoice XML' Profile provided.



Message Shape

The Message shape generates a free-flow text message from a dynamic or static set of input parameters. Documents that are sent to a Message shape are transformed, and the documents that come out have the format of the message.

Display Name	Invoice XML (\$50,000)
Option	<input type="checkbox"/> Combine documents into a single message (i)
Message	<pre><Account> <Name>Vandelay Industries</Name> <SalesRep>Bruce Smith</SalesRep> <InvDetails>Bla, bla, bla...</InvDetails> <TCV>50000</TCV> </Account></pre>

- ✓ Now that the Dynamic Process Property is configured, configure the Decision shape. We will want to compare the incoming TCV to see if it is greater than the TCV stored as the current DPP value.

14. Open the **Decision shape**. For the First Value, browse and load the (Account/TCV) element from 'Invoice XML' Profile representing the incoming document.
15. Click **OK** when complete.
16. The Compare Type must be set to **Greater Than**, since the logic is determining if the incoming TCV is greater than the TCV stored as a Dynamic Process Property.



Decision Shape

The Decision shape routes documents based on a true/false comparison of two values. Those values can be anything from field values in the current document (profile elements), static values, results of a database, an application query, and more.

Display Name	Top \$ Deal Closer?
First Value	<input type="text"/> XML Profile - Invoice XML - TCV (Account/TCV) (x)
Comparison	<input type="button" value="Greater Than"/>
Second Value	<input type="text"/> Choose...

17. For the second value, select Dynamic Process Property and be sure to enter the Property Name EXACTLY as you entered it when setting it in the Set Properties shape earlier.
 - ✓ Remember when configuring the parameter to store the Dynamic Process Property, enter the Property Name EXACTLY as entered in the Set Properties shape earlier.



Dynamic Process Properties Activity

The screenshot shows the 'Parameter Value' dialog box. It has three fields: 'Type' set to 'Dynamic Process Property', 'Property Name' set to 'Highest TCV', and 'Default Value' set to '0'. The 'Type' field is highlighted with a yellow border.



When the first Document is processed, its TCV value is compared to the Default Value. Before the first run, the Dynamic Process Property value is null. Therefore, a Default Value of '0' must be entered as a Parameter Value.

- Once the default value is entered, click **OK**.



The True Path Set Properties shape is processed only if the Decision logic's result is true. So we configured the decision shape to compare the incoming TCV value with the TCV value stored in the DPP. If the incoming value is greater, the DPP is reset.

- Configure each Notify shape to offer detailed logging to have a better understanding of each processed document. The first Notify shape handles logging for displaying the newly assigned TCV.

- Configure the Notify shape, in the first path, to reflect the following:

The screenshot shows the configuration dialog for a Notify shape. It includes fields for 'Display Name' (empty), 'Title' set to 'Dynamic Process Property Value', 'Message Level' set to 'Information', and a 'Message' area containing '{1}' which is highlighted with a yellow border. In the 'Variables' section, there is a list box with '{1}' and 'XML Profile - Invoice XML - TCV (Account/TCV)' both selected, and a yellow border is around the entire list box.

- Click **OK** to complete the Notify shape.

- Configure the Notify shape, in the second path, to reflect the image below.



Dynamic Process Properties Activity

- ✓ Add the Parameter values corresponding to the {1} and {2} references in the Message window.

Display Name: []

Title: High TCV Status

Message Level: Information Warning Error

Message: Salesperson {1} closed the largest deal with TCV of {2}.

Variables:

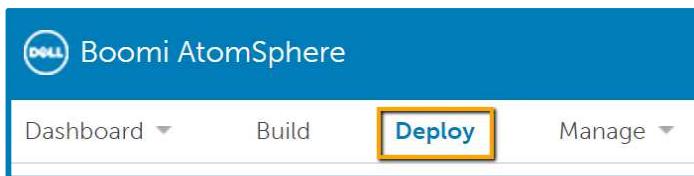
{1}	XML Profile - Invoice XML - SalesRep (Account/SalesRep)
{2}	XML Profile - Invoice XML - TCV (Account/TCV)

22. Click **OK** when finished.
23. The Notify shape down the false path is already configured.
24. Click **Save** to save the process.

Deploy the process

The process is now fully configured, so we are going to deploy it and run a manual execution. The reason for doing this is so we can ‘Edit Process Properties’ which is available only to deployed processes.

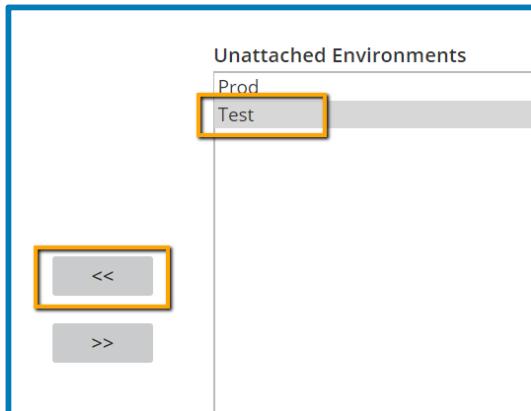
25. Click the **Deploy** tab.



26. In the **Processes** window, highlight the process **Dynamic Process Properties Activity**.
27. Click the **Attachments** tab.
28. In the **Unattached Environments** window, highlight **Test**, then click << (Attach selected Environments).



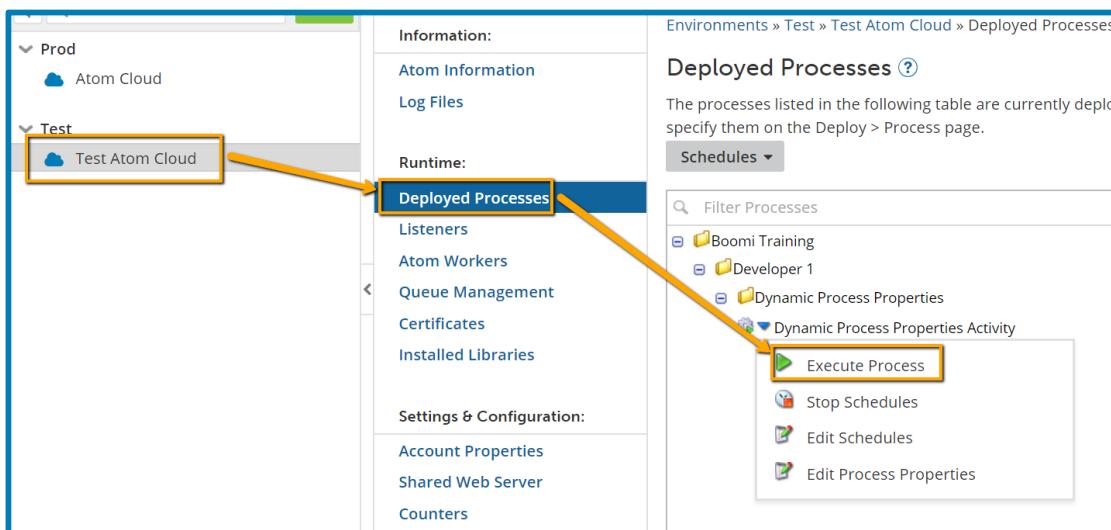
Dynamic Process Properties Activity



This moves the Test environment from the Unattached pane to the Attached pane.



29. Click the **Deployments** tab and make sure the Test environment is highlighted.
30. In the bottom-right of the **Deployments** window, click **Deploy Latest Revision of Process**.
31. Click **Manage > Atom Management** and select the Test Atom Cloud (Test environment). Click **Deployed Processes**. Click the icon to the left of the process name and select **Execute Process** from the drop-down.

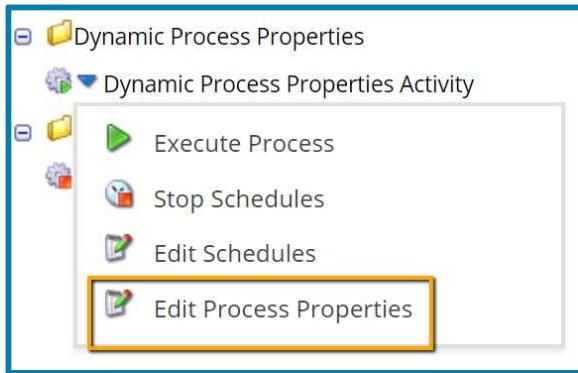


After a few seconds, the process should complete successfully.

32. Click the **Process Icon** and select **Edit Process Properties** from the drop-down.
 - ✓ *The ability to 'Edit Process Properties' is available only to deployed processes. This is why we take this approach instead of running the process in the Build tab.*



Dynamic Process Properties Activity



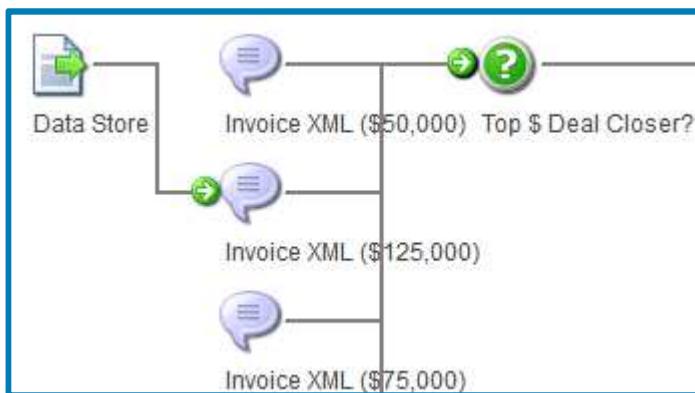
- ✓ From the Edit Process Properties pane, view, edit or delete the Process Property name and/or value. Notice the current DPP value for 'Highest TCV' is 50000.

Property Name	Property Value
com.boomi.execution.lastrun	01/29/2015 15 56 02
com.boomi.execution.lastsuccessfulrun	01/29/2015 15 56 02
Highest TCV	50000

From the Edit Process Properties pane, the stored DPP value is 50000. This Process was set up as a 'plug-and-play' testing environment, utilizing different preloaded documents stored in various message shapes.

After making changes to the process, remember to redeploy the process and run another Manual Execution via Manage > Atom Management.

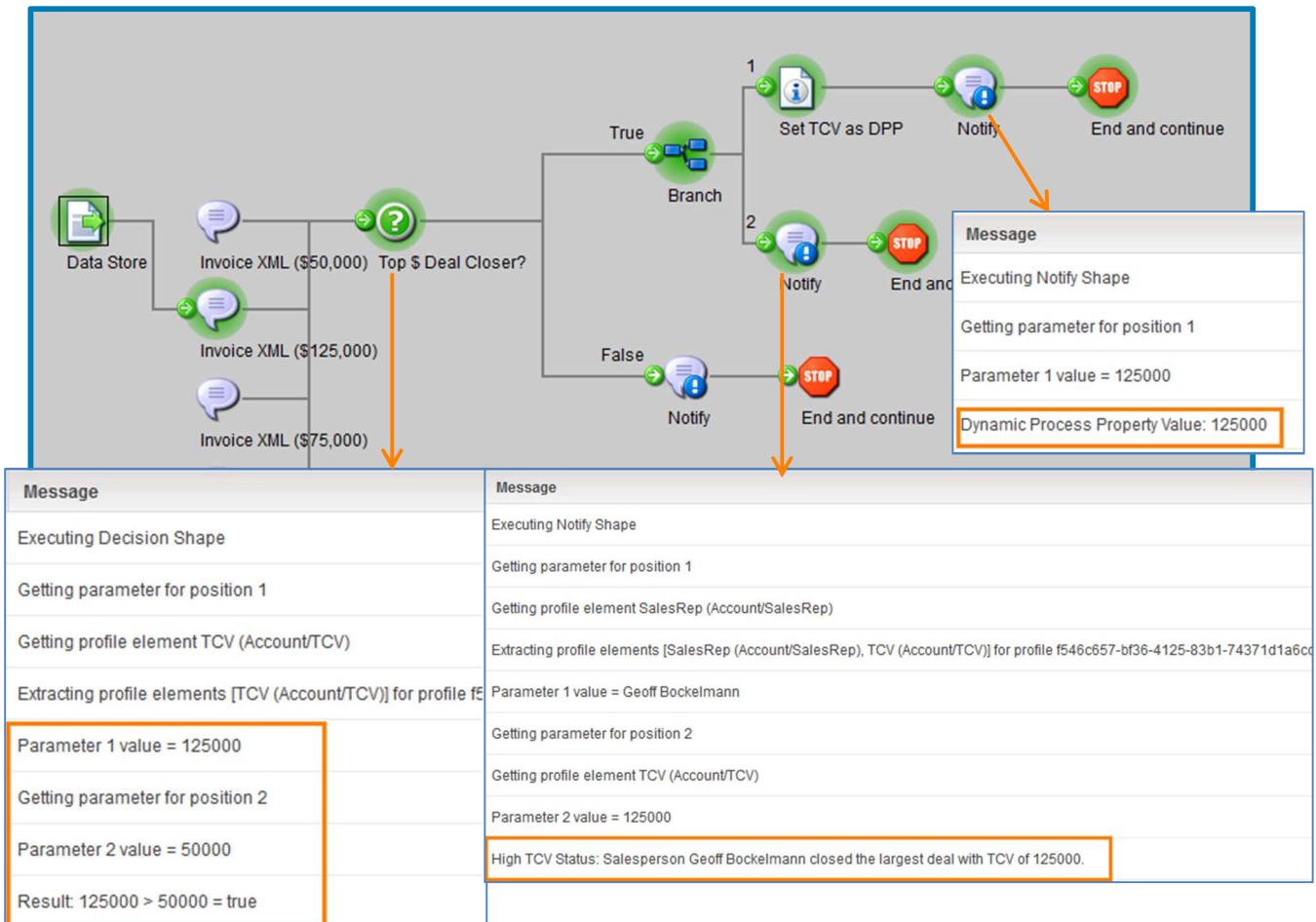
33. Connect the Start shape to a different Message shape, containing a different TCV and execute the process again.



Dynamic Process Properties Activity

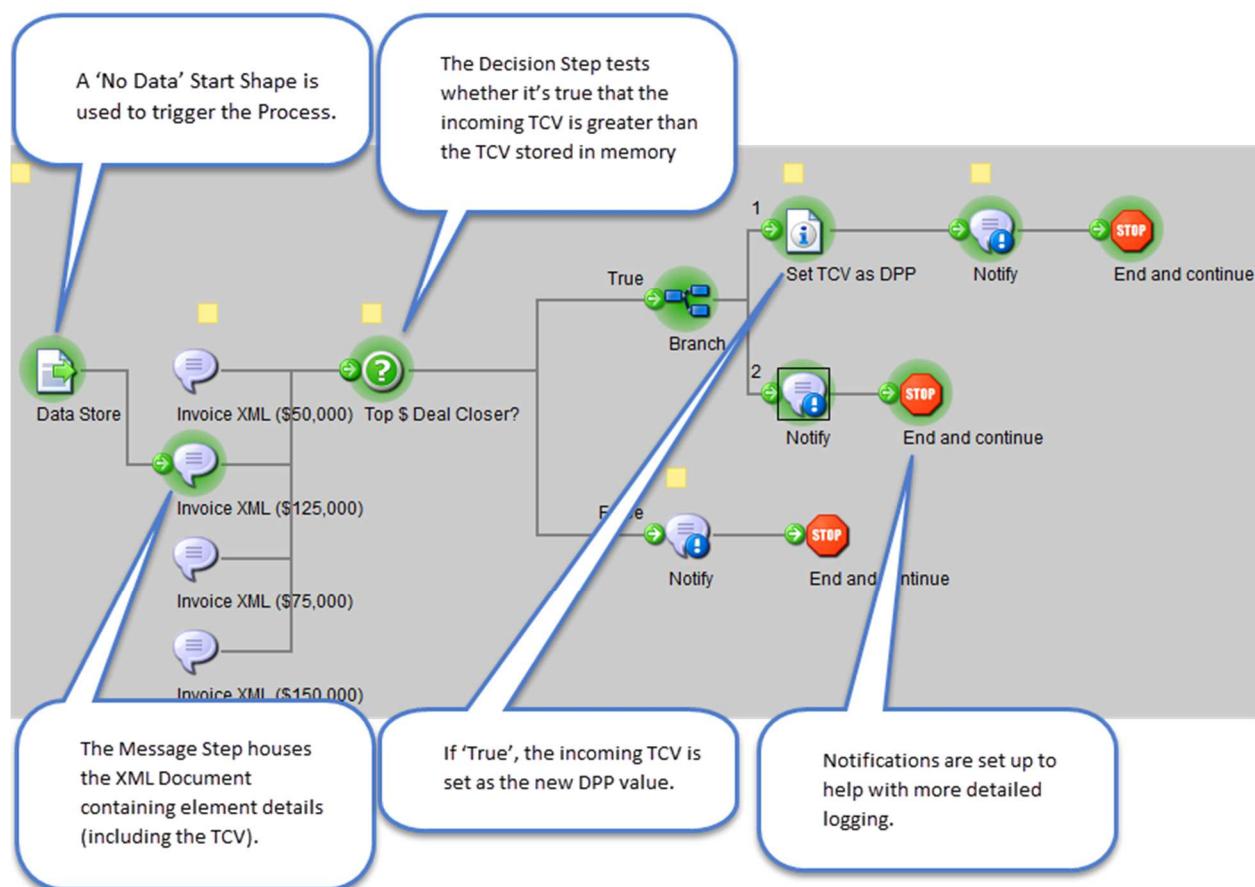
34. After the second manual execution, connect the Start shape to the third Message shape. Notice the TCV is less than the previously stored DPP value and the results in the 'Edit Process Properties' pane.

Although Process Properties cannot be edited or viewed, they still can be executed in the Build tab. Within the Build tab, execute the process a few times with different input values. This is a great opportunity to view the process path based on the Decision Logic, clicking on the various shapes along the process flow to see the document state and view the logging along the way.



Dynamic Process Properties Activity

Remember to continue experimenting with the different TCV values using the Message shapes.
Review the process flow and the document state at each shape:



Dynamic Document Properties Activity

There are two types of global properties: dynamic process properties, which store a single on-the-fly property, and dynamic document properties, which stores additional pieces of information about a document used within a process.

Dynamic Process Properties	Dynamic Document Properties
Value can persist across process executions	Value cannot persist
Value is assigned on the process level – the value remains the same unless changes by a process step	Value is assigned on the document level and can be different per document
Once set, available anywhere in the process including child processes	Once set, only available as long as the document exists – will continue across branches (if set <u>before</u> the Branch shape), but does not continue across Message shapes or outbound Connectors

Scenario

A process continually checks if a given record Account exists in a company's data storage to determine whether to perform a Create or Update call. The process retrieves an Account's internal system ID (from Salesforce) using a Connector Call output parameter as a Dynamic Document Property and then creates an Account or updates an existing Account, based on the routing logic in the Decision shape.

Goal

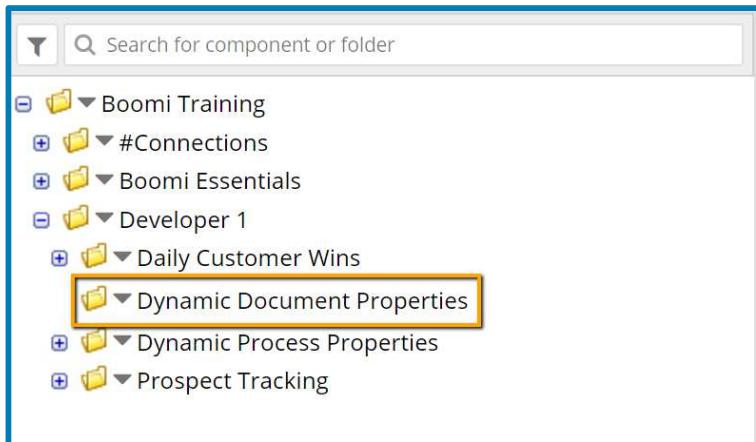
Modify this process using a Set Properties shape to perform a Connector Call that retrieves the internal ID for the given record and stores the result as a Dynamic Document Property. Then use a Decision shape to check whether that property is populated and direct the record to the Create or Update Map. In the Update Map, use a Map Function to retrieve the internal ID value and map it accordingly. (This approach avoids the need to add a second Connector Call in the Update Map to retrieve the internal ID again.)



Dynamic Document Properties Activity

Create a subfolder to house the dynamic document properties process

1. Click on the dropdown arrow next to the **Developer 1** folder.
2. Choose **New Folder** and name it **Dynamic Document Properties**.



Download the process from the Process Library

3. Open the Process Library by clicking on **Browse Process Library** at the bottom of the Component Explorer.
4. In the right column search bar enter **Dev1** and press Enter.
5. Click **Install** next to **Dynamic Document Properties Activity**.
6. Click **Choose...** next to Select Installation Location and navigate to the Dynamic Document Properties folder.
7. Click **Install** in the lower-right corner.
8. The process is now installed in your account. Click **View Process**.

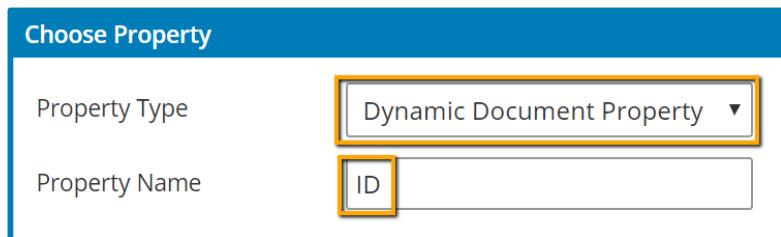
Configure the Set Properties shape



The process begins with a No Data start shape followed by a Message shape with various Account names. The Data Process shape splits the Documents so each record can be validated individually. Add a Dynamic Document Property, using a Connector Call as the parameter value, in the Set Properties shape to assign this property (ID) to each record that exists as an Account in Salesforce.

9. Open the Set Properties shape.
 10. In the Property Type window, select **Dynamic Document Property**, enter the Property Name **ID**, and then click **OK**.
- ✓ Remember **EXACTLY** how this property is named to reference it later.

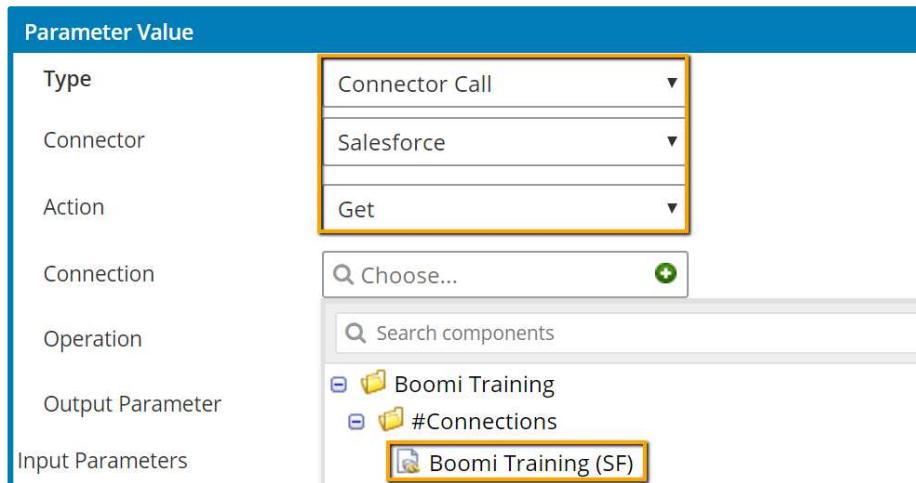
Dynamic Document Properties Activity



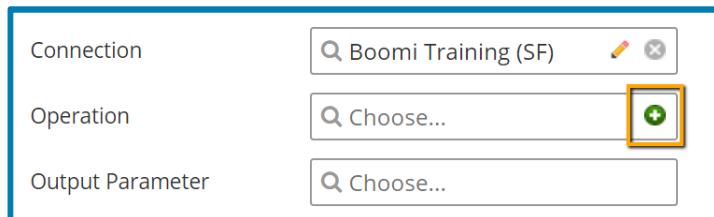
11. In the Set Properties shape window, highlight **Dynamic Document Property - ID**, then click the **(+) Add Parameter** icon.



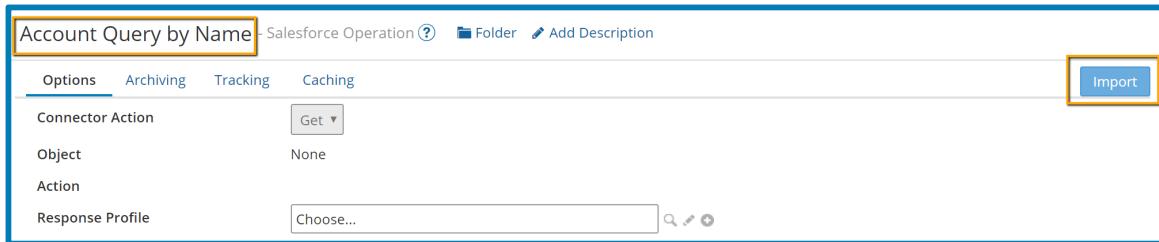
12. In the Parameter Value window, set Type to **Connector Call**, choose **Salesforce** as the Connector with the default **Get** Action. Choose the **Boomi Training (SF)** Connection from the #Connections folder.



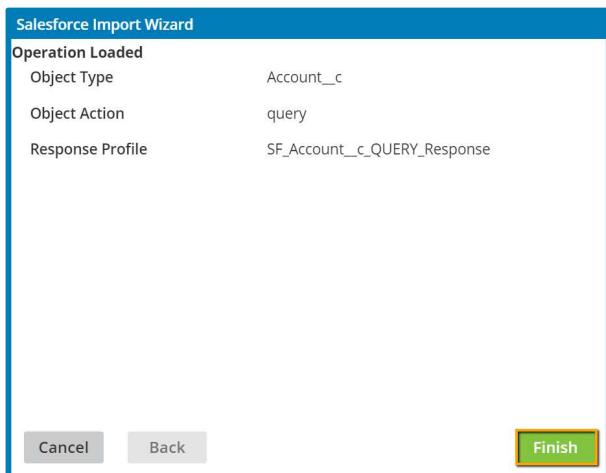
13. Click the **(+) Create** icon to open a new Salesforce Operation tab. Name the Operation component '**Account Query by Name**' and then click the **Import** button to create and load the Response Profile from Salesforce.



Dynamic Document Properties Activity



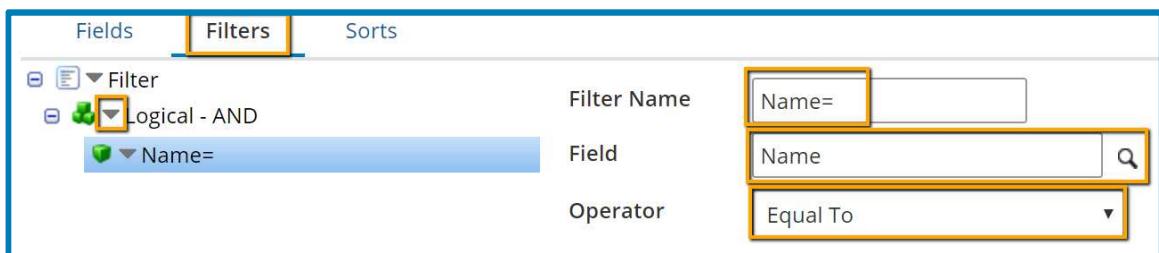
14. Select the **Boomi Training (SF)** Connection and click **Next**. Set the Object Type to **Account__c**, and the Action to **Query**. Click **Next**. Ignore the Account Objects (do not select anything) and click **Next**. Note the Response Profile name and click **Finish**.



15. The only field we want to retrieve is the Account's ID. So under the Fields tab, check and then uncheck the **Account__c** "select all" box. Then check only the **ID** field.

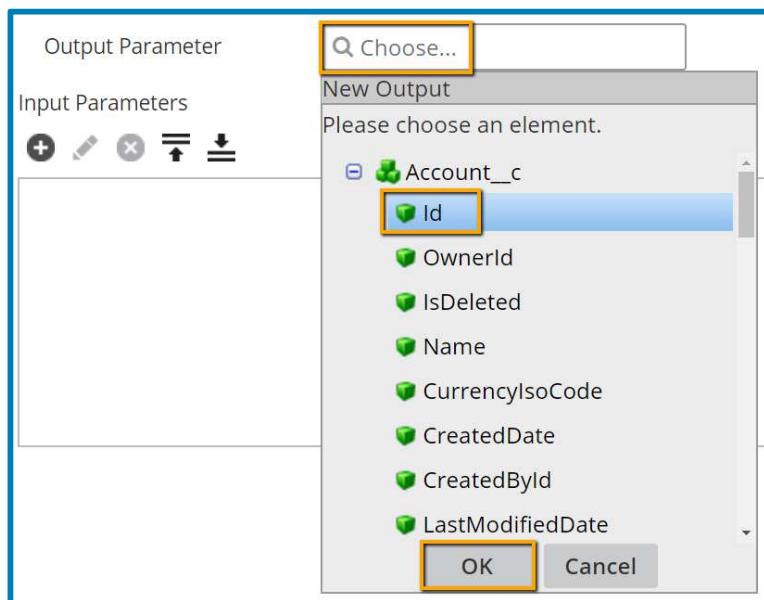


16. In the **Filters** tab, click the drop-down arrow next to **Logical - AND** to add a new Expression. Name the Filter '**Name=**', set the Field to **Name**, and set the Operator to **Equal To**. Click **Save and Close** to return to the Connecor Call's Parameter Value window.

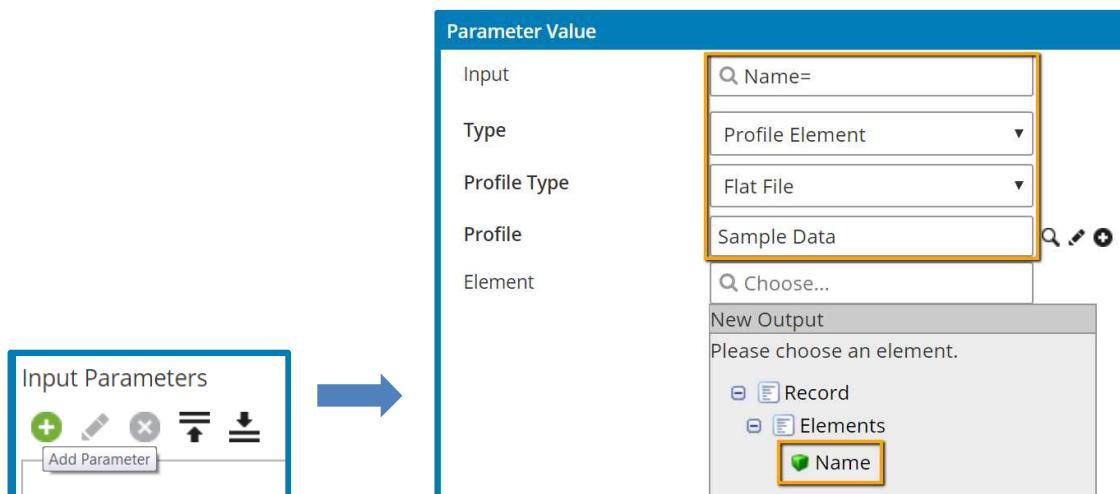


Dynamic Document Properties Activity

17. Choose **ID** for the Output Parameter and then click **OK**.



18. Click **(+)** **Add Parameter** to assign the value for the Input Parameter and configure the Parameter Value window according to the image below, using the Flat File '**Sample Data**' in the Dynamic Document Properties folder. Click **OK** to close the Connector Call window and then click **OK** to exit the Set Properties shape window. Click **Save** to save the process.



Configure the Decision shape

19. For the First Value, choose **Document Property** for Type, then choose **Dynamic Document Property** and enter 'ID'. Click **OK** (twice) to return to the Decision shape's window.

Dynamic Document Properties Activity

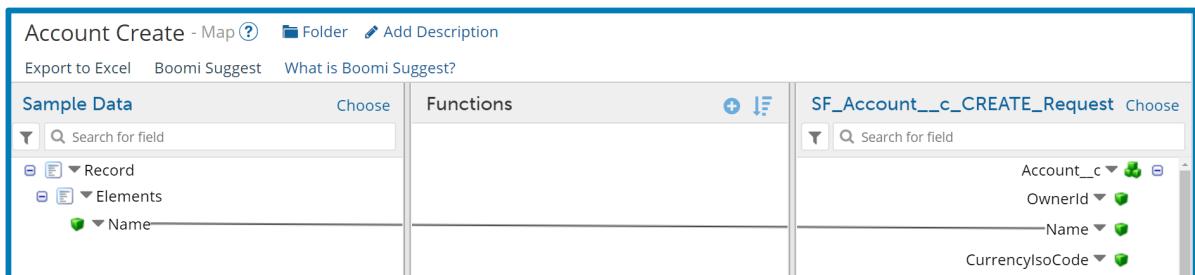
Choose Property

Property Type	Dynamic Document Property ▾
Property Name	ID

20. The Second Value Type is a **Static** value, and it is null (do not enter anything in the Static Value field).

Configure the Account Create and Account Update Maps

21. Open the Map **Account Create**. Map **Name** from the source profile ('Sample Data') to **Name** in the destination profile ('SF_Account__c_CREATE_Request'). **Save and Close** the Map.



✓ *This process is only a test, so we will not actually create new or update accounts in an endpoint data storage system. Notice that both the True and the False paths lead to Stop shapes, not Connector shapes. This activity is intended only to demonstrate how to configure and retrieve Dynamic Document Properties using a Connector Call.*

22. Open the Map **Account Update**. Map **Name** from the source profile ('Sample Data') to **Name** in the destination profile ('SF_Account__c_UPDATE_Request').

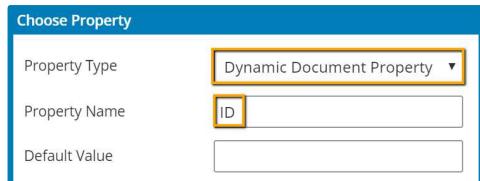
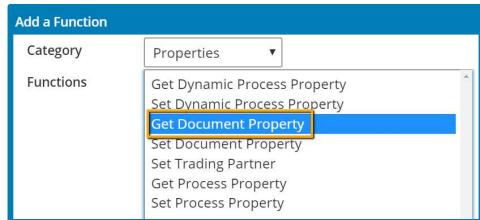


23. Having retrieved an Account's **ID** with the Connector Call, we want to update that value in our endpoint storage system. To do so, add a Function in the middle pane of the Map. Choose **Properties** for the Category, select **Get Document Property** and click **OK**. Click the magnifying

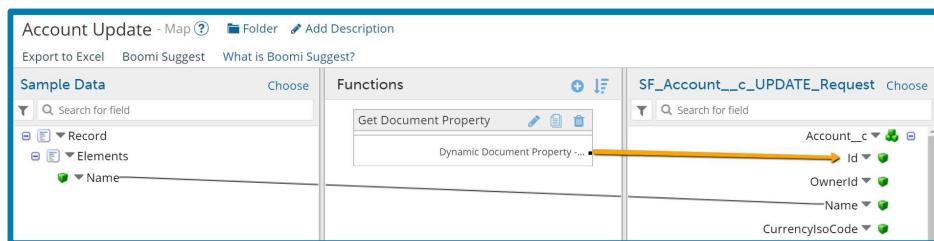


Dynamic Document Properties Activity

glass icon to choose **Dynamic Document Property** for Property Type, and enter ‘ID’ for the Property Name. Click **OK** twice to return to the Map.



24. Map the Function’s output to the **ID** field in the destination profile. Click **Save and Close**.

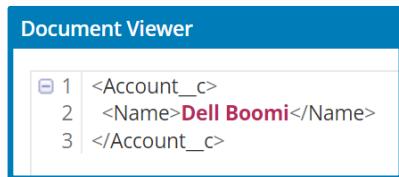


Run the process in Test Mode and observe the results

25. Click **Save** to save the process, then run a Test using the Test Atom Cloud.

26. In Test Results, click on the True path’s Stop shape to see one Document that is a new Account. Click on the False path’s Stop shape to see two Documents whose Account ID fields have been updated.

TRUE:



FALSE:

The screenshot shows two Document Viewers. The top one shows a single account record with ID 'a6f0q0000004Ch0AAE' and name 'Edge Communications'. The bottom one shows two account records with IDs 'a6f0q0000004CgqAAE' and 'a6f0q0000004CgqAAE' and names 'GenePoint' and 'GenePoint' respectively.

Document Viewer (Top)	Document Viewer (Bottom)
<Account_c> <Name>Dell Boomi</Name>	<Account_c> <Id>a6f0q0000004Ch0AAE</Id> <Name>Edge Communications</Name>
	<Account_c> <Id>a6f0q0000004CgqAAE</Id> <Name>GenePoint</Name>

27. Review the process flow and the Document state at each shape.



Document Flow Activity

Scenario

This exercise begins with no data (i.e., no inbound documents). Data is then placed into the process flow via a Message shape. The data consists of a simple CSV flat file with multiple records representing fictional machinery in service at various locations. Depending on each machine's Operational status it is routed down the correct path.

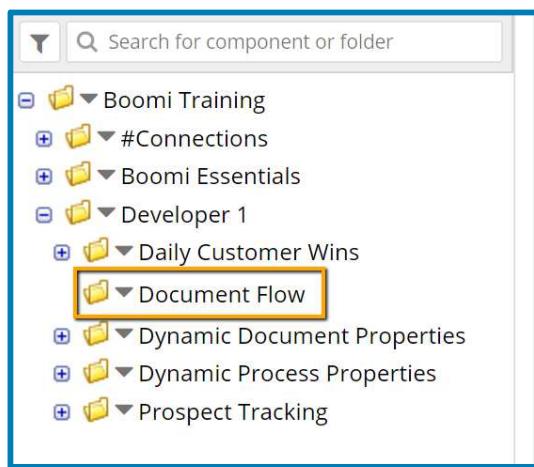
Goal

In this exercise you will change a sample process and compare how different document flow concepts apply under various circumstances. Our goal is to prove how document flow choices impact:

- Execution path
- Document groups
- Map behavior
- Other shape behavior
- Logging and reporting

Create a subfolder to house the document flow activity

1. Click on the dropdown arrow next to the **Developer 1** folder.
2. Choose **New Folder** and name it **Document Flow**.



Download the process from the Process Library

3. Open the Process Library by clicking on **Browse Process Library** at the bottom of the Component Explorer.
4. In the right column search bar enter **Dev1** and press Enter.



Document Flow Activity

5. Click **Install** next to **Document Flow Activity**.
6. Click **Choose...** next to Select Installation Location and navigate to the Document Flow folder.
7. Click **Install** in the lower-right corner.
8. The process is now installed in your account. Click **View Process**.

Review the Process

9. Open the “Operational?” Decision shape.

The screenshot shows a configuration dialog for a Decision shape. It has four input fields:

- Display Name: Operational?
- First Value: Flat File Profile - Activity 1 CSV Start - Operational? (Migration)
- Compare Type: Equal To
- Second Value: Static value of 'TRUE'

The Decision shape validates the question, “Is the machine operational?” If a machine is operational, the flat file profile element “Operational?” will have a value of “TRUE”.

10. Open the “Initialize” Set Properties shape.

The screenshot shows a configuration dialog for a Set Properties Shape. It has two main sections:

- A header section with a help icon and the title “Set Properties Shape”.
- A description section explaining the purpose of the shape: “The Set Properties shape allows you to set values for various document and process properties. These properties can be used to set outbound connector attributes such as file name or email subject, or store certain values in memory to facilitate the integration. The property values can be comprised of static and/or dynamic values.”

Below the description is a configuration area with:

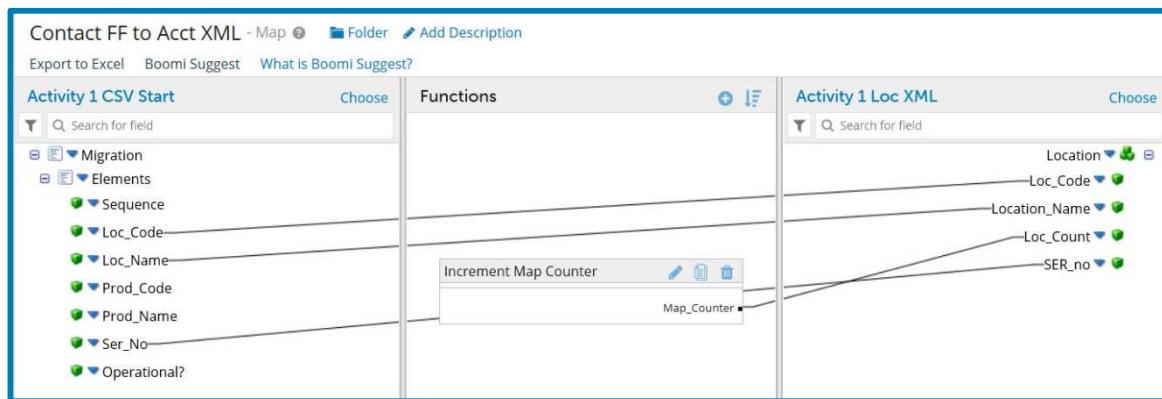
- Display Name: Initialize
- Properties to Set: A list containing “Dynamic Process Property - P_Map_Counter” and “Dynamic Process Property - P_Step_Counter”. There are also “+”, “Edit”, and “Delete” icons for managing the list.
- A “Select a property to edit” placeholder.



There are two Properties being set in this shape. Each is initialized to “0”.

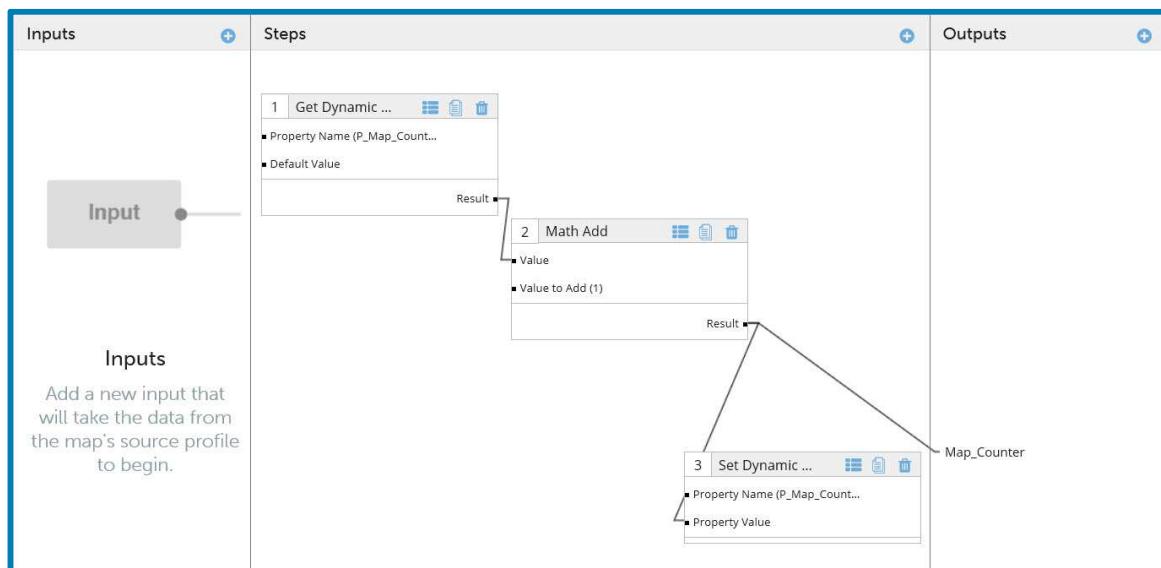
Document Flow Activity

11. Open the “Contact FF to Acct XML” Map shape.



Notice the “Map Counter” function. When data passes through the Map, this function outputs the value “1”. The second document/record outputs a “2”, and so on. The result is incrementally numbered data for all operational machines, with the last number equaling the total.

12. Click on the **Edit** pencil icon on the Map Function.



This function receives no input, so the left-hand pane is blank. In Step 1, the function retrieves a Dynamic Process Property* called “P_Map_Counter.” In Step 2, it adds 1 to the value it just retrieved. The result is then sent to two places: to the Map Function output field “Map_Counter” and to Step 3 where it is saved as the updated value for “P_Map_Counter.”

Document Flow Activity



*Remember a Dynamic Process Property is a variable of Process scope, meaning that it persists for an entire Process execution regardless of how many documents pass through the process.

13. Click **Close** to close the Map Function and to close the Map.
14. Open the “Increment” Set Properties shape. Understand how the Step Counter works.

Click the Dynamic Process Property named “P_Step_Counter.”

Notice two parameters are concatenated with the resulting value stored into “P_Step_Counter.”

This Step counter differs from the Map counter. The Map counter adds values mathematically, while the Step counter concatenates strings. So the Step counter will have an initial value of “0,” then each successive machine will add a “1” (e.g., “01”, then “011”, and so on) similar to tally marks.

15. Click **Cancel** to close the Set Properties dialog.
16. Open the two Notify shapes to see that they are used to write the Counter into the Process Log with a Message Level of Warning.

17. Click **Save** and then click **Test**.

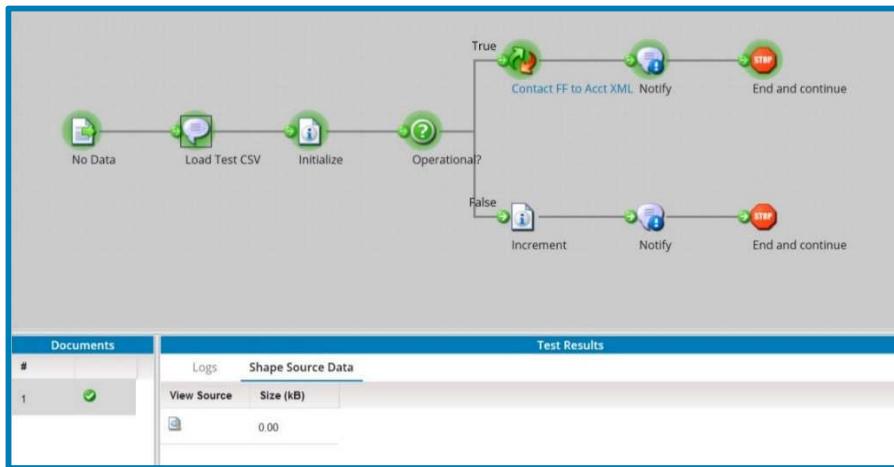


Document Flow Activity

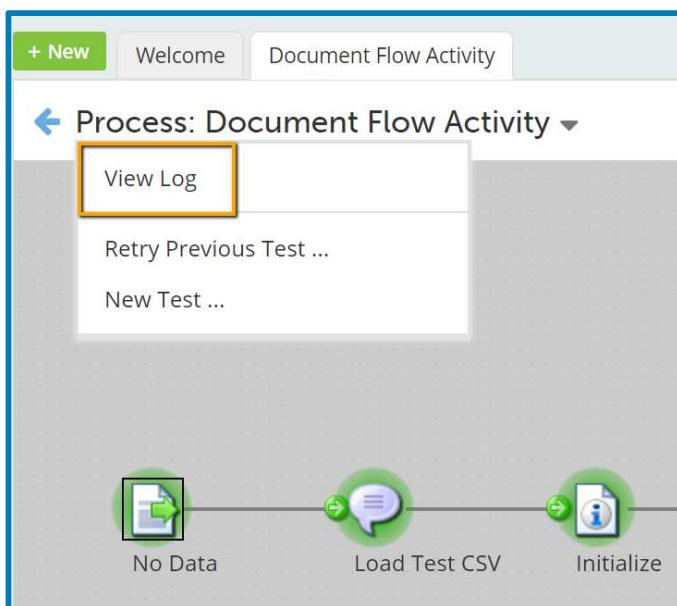
18. Choose the Test Atom Cloud, and then click **Run Test**.

Test Results

19. After the process finishes executing, your results should look like this:



- ✓ Notice the source data size is a single document 0.00 kB in size. This shows that no data (i.e., a blank document) was entered into the **Load Test CSV** shape.
20. Click the **Stop** shape at the end of the True path. In the **Test Results** pane, click on the **Shape Source Data** tab and notice there is only one document that went down the True path.
 21. View the process log by clicking the **Process: Document Flow Activity** hyperlink then click **View Log**.



Document Flow Activity

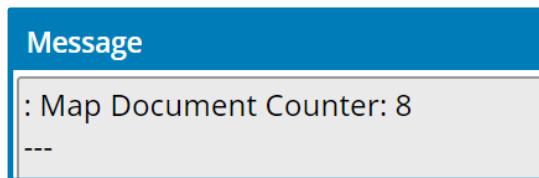
- ✓ Recall that the Notify shape logs a Warning level message that enters the count to the process log. Scroll down until you see the Notify.

Base Process Log				
Refresh		Minimum Status to Show		
Time	Level	Shape	Ext Info	Message
2017-07-13 10:28:54 AM	FINE	initializing...		Loading Process Model Document Flow Act
2017-07-13 10:28:54 AM	INFO	initializing...		Executing Process Document Flow Activity
2017-07-13 10:28:54 AM	INFO	Start	NoData	Executing Start Shape
2017-07-13 10:28:54 AM	INFO	Start	NoData	1 document(s) found for processing.
2017-07-13 10:28:54 AM	INFO	Start	NoData	Shape executed successfully in 89 ms.
2017-07-13 10:28:54 AM	INFO	Start	NoData	Running limited (TEST) execution of process
2017-07-13 10:28:54 AM	INFO	Load Test CSV		Executing Message Shape with 1 document
2017-07-13 10:28:54 AM	INFO	Load Test CSV		Shape executed successfully in 34 ms.
2017-07-13 10:28:54 AM	INFO	Initialize		Executing Set Properties Shape with 1 docu
2017-07-13 10:28:54 AM	INFO	Initialize		Shape executed successfully in 20 ms.
2017-07-13 10:28:54 AM	INFO	Operational?		Executing Decision with 1 document(s).
2017-07-13 10:28:54 AM	INFO	Operational?		Shape executed successfully in 56 ms.
2017-07-13 10:28:54 AM	INFO	Map	Contact FF to Acct XML	Executing Map with 1 document(s).
2017-07-13 10:28:54 AM	INFO	Map	Contact FF to Acct XML	Shape executed successfully in 112 ms.
2017-07-13 10:28:54 AM	INFO	Notify		Executing Notify Shape with 1 document(s).
2017-07-13 10:28:55 AM	WARNING	Notify		: Map Document Counter: 8 ---
2017-07-13 10:28:55 AM	INFO	Notify		Shape executed successfully in 28 ms.
2017-07-13 10:28:55 AM	INFO	Stop	continuing process	Executing Stop Shape with 1 document(s).
2017-07-13 10:28:55 AM	INFO	Stop	continuing process	Shape executed successfully in 1 ms.
2017-07-13 10:28:55 AM	INFO			Process completed successfully

22. From the **Minimum Status to Show** dropdown, choose the **WARNING** error level filter. Then click the message text in the **Message** column.

Base Process Log				
Refresh		Minimum Status to Show		
Time	Level	Shape	Ext Info	Message
2017-07-13 10:28:55 AM	WARNING	Notify		: Map Document Counter: 8 ---

The error pop-up window displays the Notify message, the counter value at '8'.



This reveals that the Notify shape was executed with the batch document, but that the counter had already reached a value of '8' before the Notify shape was executed.

23. Click **Cancel** to close the Message pop-up. Click **Cancel** to close the Process Log.

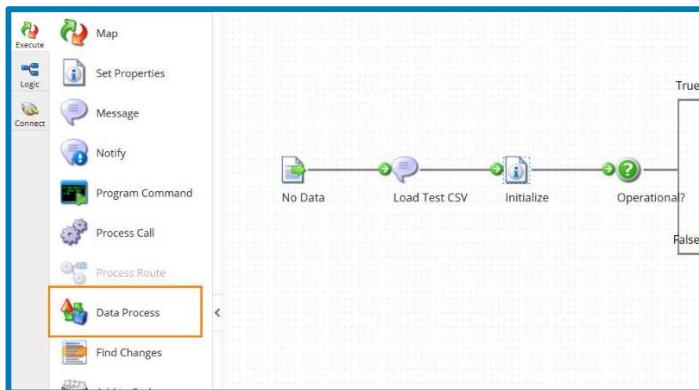
24. Click **Return to Edit Mode** to leave Test Mode.



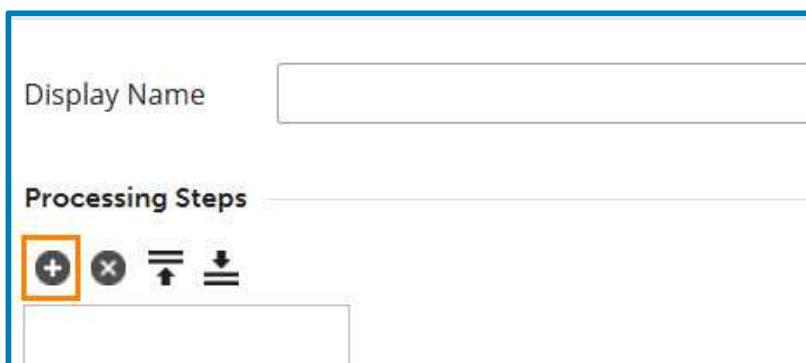
Document Flow Activity

Add a Data Process shape to Split Documents

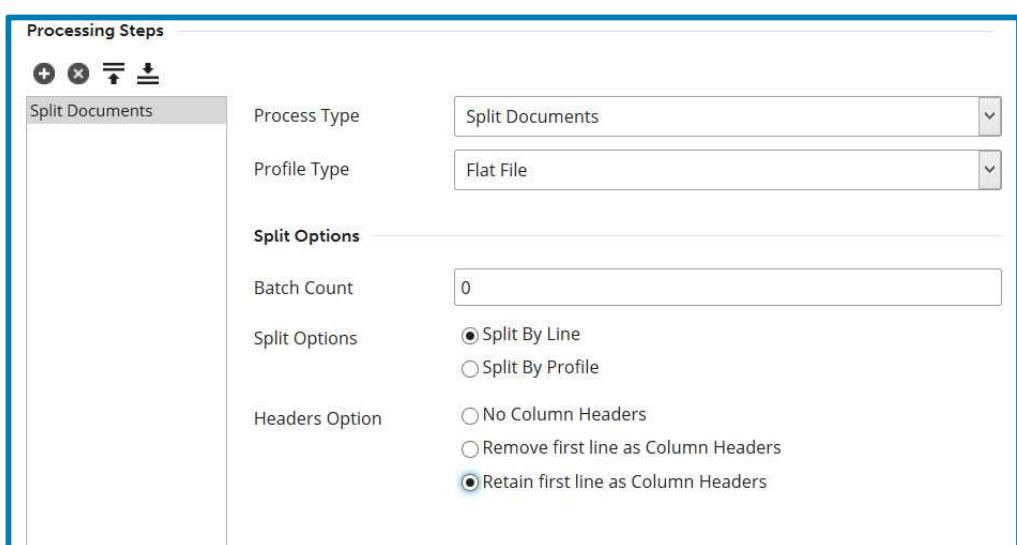
25. Drag and drop a **Data Process** shape onto the Process Canvas.



26. In Data Process Properties dialog click **Add Step (+)**.

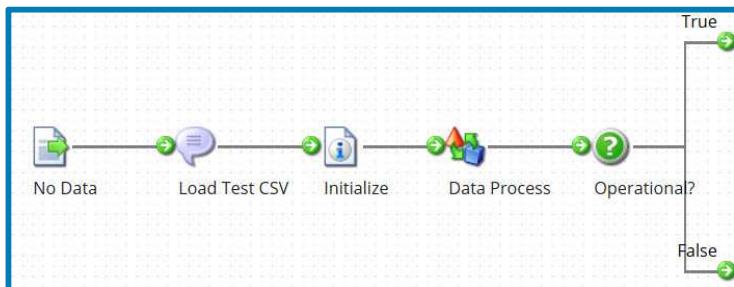


27. Configure the Data Process Properties so it matches the image below. Click **OK** to save your changes.



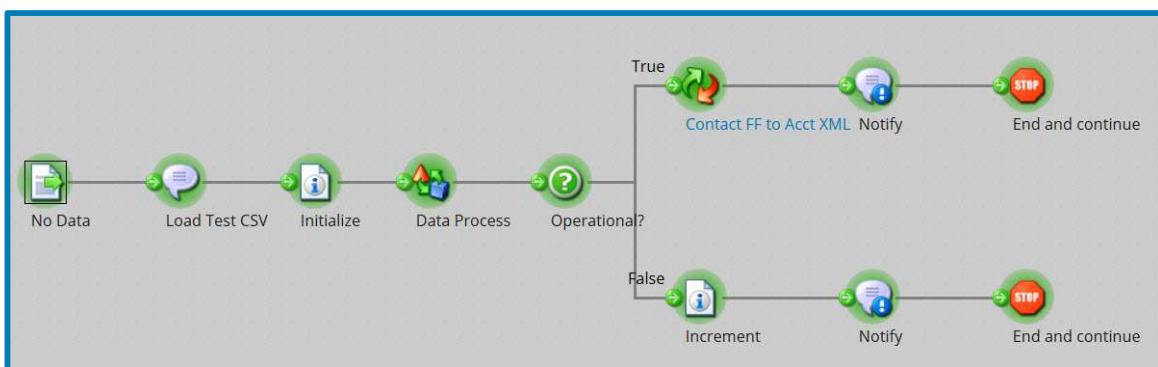
Document Flow Activity

28. Now disconnect and reconnect the various shapes until your process matches the following:



29. Click **Save**. Execute the process in **Test Mode** by clicking **Test**. Run a test using the **Test Atom Cloud**.

30. After the execution finishes, your screen should look like this:



Notice both Decision shape branches are navigated.

✓ *Question: How many documents are True and how many are False?*

31. View the process log by clicking the **Process: Document Flow Activity** hyperlink, then click **View Log**. Review details from this execution.



Document Flow Activity

Base Process Log				
Refresh		Minimum Status to Show DEBUG		
Time	Level	Shape	Ext Info	Message
2015-11-09 12:43	FINE	initializing...		Loading Process Model 2 - Activity 1 State 2 Split Batch
2015-11-09 12:43	INFO	initializing...		Executing Process 2 - Activity 1 State 2 Split Batch
2015-11-09 12:43	INFO	Start	NoData	Executing Start Shape
2015-11-09 12:43	INFO	Start	NoData	1 document(s) found for processing.
2015-11-09 12:43	INFO	Start	NoData	Shape executed successfully in 116ms.
2015-11-09 12:43	INFO	Start	NoData	Running limited (TEST) execution of process.
2015-11-09 12:43	INFO	Load Test CSV		Executing Message Shape with 1 document(s).
2015-11-09 12:43	INFO	Load Test CSV		Shape executed successfully in 38ms.
2015-11-09 12:43	INFO	Initialize		Executing Set Properties Shape with 1 document(s).
2015-11-09 12:43	INFO	Initialize		Shape executed successfully in 21ms.
2015-11-09 12:43	INFO	Data Process		Executing Data Process Shape with 1 document(s).
2015-11-09 12:43	INFO	Data Process	[1] Data Split: FLATFILE	Executing with 1 documents in
2015-11-09 12:43	INFO	Data Process	[1] Data Split: FLATFILE	Split resulted in 8 document(s).
2015-11-09 12:43	INFO	Data Process	[1] Data Split: FLATFILE	Completed with 8 documents out
2015-11-09 12:43	INFO	Data Process		Data Process Execution (DATA_SPLIT) produced 8 documents.
2015-11-09 12:43	INFO	Data Process		Shape executed successfully in 40ms.
2015-11-09 12:43	INFO	Operational?		Executing Decision with 8 document(s).
2015-11-09 12:43	INFO	Operational?		Shape executed successfully in 100ms.
2015-11-09 12:43	INFO	Map	Contact FF to Acct XML	Executing Map with 5 document(s).
2015-11-09 12:43	INFO	Map	Contact FF to Acct XML	Shape executed successfully in 146ms.
2015-11-09 12:43	INFO	Notify		Executing Notify Shape with 5 document(s).
2015-11-09 12:43	WARNII	Notify		: Map Document Counter: 5 -- Map Document Counter: 5 -- Map
2015-11-09 12:43	INFO	Notify		Shape executed successfully in 23ms.

Notice one document entered the Data Process shape, and eight documents exited.

- ✓ *Discussion Question: Where did the various documents travel?*

32. Scroll down to the log entries that pertain to the Map shape and the **Increment** Set Properties shape.

Base Process Log				
Refresh		Minimum Status to Show INFO		
Time	Level	Shape	Ext Info	Message
2015-11-09 12:43	INFO	Operational?		Executing Decision with 8 document(s).
2015-11-09 12:43	INFO	Operational?		Shape executed successfully in 100ms.
2015-11-09 12:43	INFO	Map	Contact FF to Acct XML	Executing Map with 5 document(s).
2015-11-09 12:43	INFO	Map	Contact FF to Acct XML	Shape executed successfully in 146ms.
2015-11-09 12:43	INFO	Notify		Executing Notify Shape with 5 document(s).
2015-11-09 12:43	WARNII	Notify		: Map Document Counter: 5 -- Map Document Counter: 5 -- Map
2015-11-09 12:43	INFO	Notify		Shape executed successfully in 23ms.

Remember the Map handles “Operational” machines. Notice the Map executed with five documents.



Document Flow Activity

Base Process Log				
Refresh		Minimum Status to Show <input type="button" value="INFO"/> <input type="button" value="WARNING"/>		
Time	Level	Shape	Ext Info	Message
2015-11-09 12:43	INFO	Stop	continuing process	Executing Stop Shape with 5 document(s).
2015-11-09 12:43	INFO	Stop	continuing process	Shape executed successfully in 3ms.
2015-11-09 12:43	INFO	Increment		Executing Set Properties Shape with 3 document(s).
2015-11-09 12:43	INFO	Increment		Shape executed successfully in 17ms.
2015-11-09 12:43	INFO	Notify		Executing Notify Shape with 3 document(s).
2015-11-09 12:43	WARNII	Notify		: Step Document Counter: 0111 -- Step Document Counter: 0111
2015-11-09 12:43	INFO	Notify		Shape executed successfully in 18ms.
2015-11-09 12:43	INFO	Stop	continuing process	Executing Stop Shape with 3 document(s).
2015-11-09 12:43	INFO	Stop	continuing process	Shape executed successfully in 2ms.
2015-11-09 12:43	INFO	cleanup...		Process execution completed normally.

Remember **Increment** was the label for our Set Properties shape, which counts the “non-Operational” machines. There were three such machines, and the **Increment** shape executed with three documents.

- ✓ *Question: Why did the Decision shape route the documents differently this time?*

Previously, the Decision shape received a single document (with eight records), and only read the first valid line which contained a “TRUE” value. Therefore, it routed the entire document along the True Path. Now the original document splits into eight documents before reaching the Decision shape, which now receives eight individual documents, inspects the “Operational?” element of each, and routes them accordingly.

- ✓ *Question: In what sequence did the documents execute? How can you tell?*

First, documents for all five “Operational” machines passed through the Map shape, *then* documents for all three “non-Operational” machines passed through the **Increment** (Set Properties) shape. In a Decision shape, all True documents are processed to completion before False documents are processed. However, in the original single document the operational and non-operational machines appear in random order.

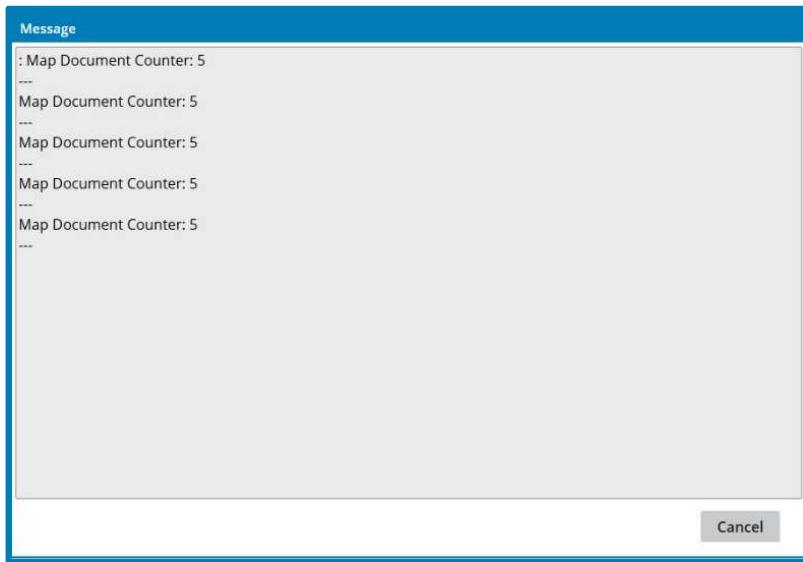
33. From the **Minimum Status to Show** dropdown chose the **WARNING** Error Level filter.

Base Process Log				
Refresh		Minimum Status to Show <input type="button" value="INFO"/> <input type="button" value="WARNING"/>		
Time	Level	Shape	Ext	Message
2015-11-09 11:52:00 AI	WARNING	Notify		: Map Document Counter: 5 --- Map Document Counter: 5 --- Map Document Counter: 5 ---
2015-11-09 11:52:00 AI	WARNING	Notify		: Step Document Counter: 0111 --- Step Document Counter: 0111 --- Step Document Cour



Document Flow Activity

Notice by the time the first Notify shape is executed, all five “Operational” documents have been counted. The Notify message has five concatenated strings, and each string contains a “5” (the total) instead of the interim count (i.e., the sequential value). Double-click the message text to see this more clearly:



Click **Cancel** to dismiss the dialog.

34. Click **Cancel** to dismiss the Process log. Click **Return to Edit Mode**.

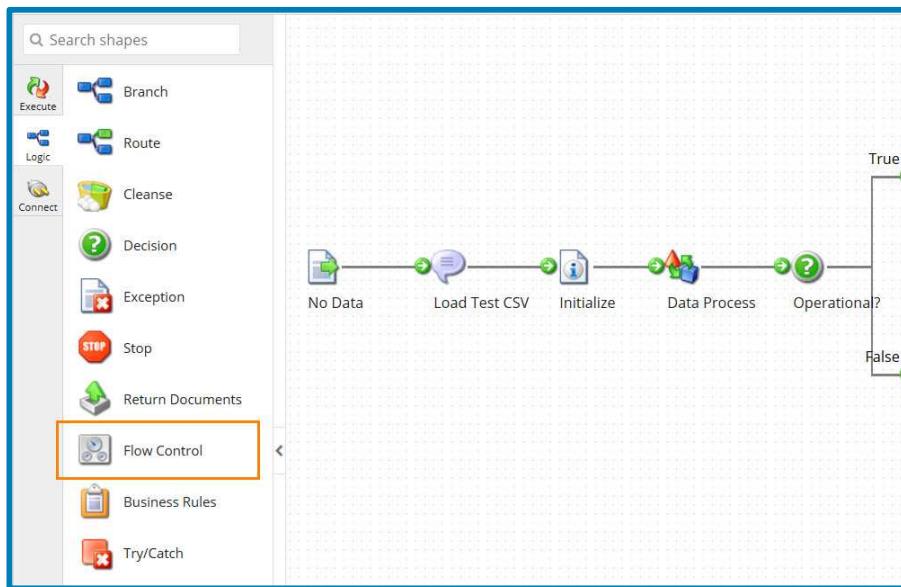
Add Flow Control for One-by-One Document Processing

Next we will use the Flow Control shape to further change the document flow.

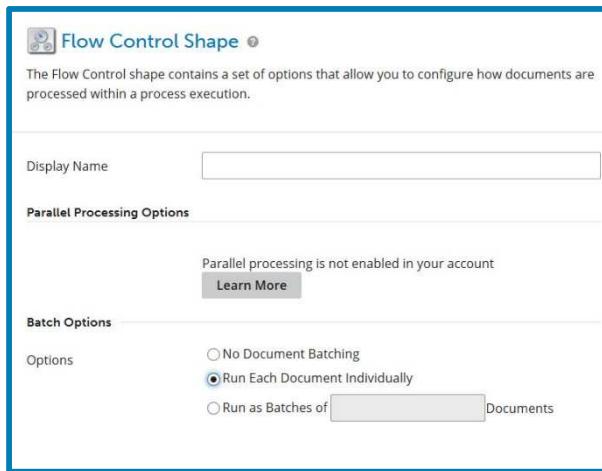


Document Flow Activity

35. From the Logic palette, drag and drop a **Flow Control** shape onto the canvas.



36. The Flow Control Properties dialog appears. Click **Run Each Document Individually**, then click **OK** to save your changes.

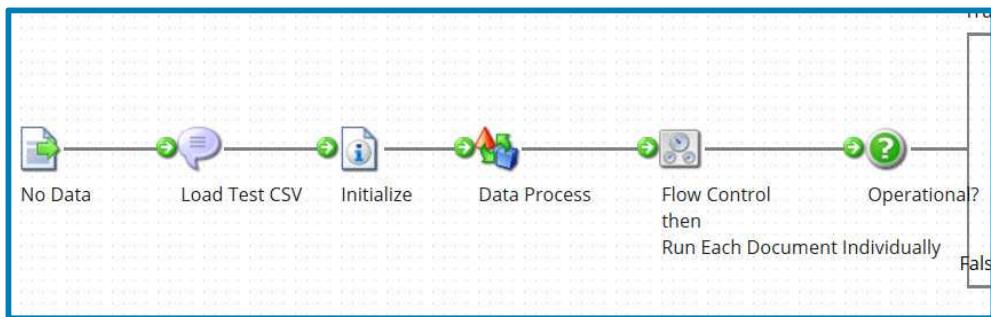


37. Disconnect the Data Process shape from the **Operational?** Decision shape and connect it to the Flow Control shape. Then connect the Flow Control shape to the **Operational?** Decision shape.

Your final process should look like this:



Document Flow Activity



38. Select **Test**. After the execution completes, review the Process Log.

39. Change the Minimum Status to Show to WARNING.

Base Process Log				
Refresh		Minimum Status to Show	WARNING	
Time	Level	Shape	Ext Info	Message
2015-11-09 12:12:46 PM	WARNING	Notify		: Map Document Counter: 1 ---
2015-11-09 12:12:46 PM	WARNING	Notify		: Map Document Counter: 2 ---
2015-11-09 12:12:47 PM	WARNING	Notify		: Map Document Counter: 3 ---
2015-11-09 12:12:47 PM	WARNING	Notify		: Step Document Counter: 01 ---
2015-11-09 12:12:47 PM	WARNING	Notify		: Step Document Counter: 011 ---
2015-11-09 12:12:47 PM	WARNING	Notify		: Map Document Counter: 4 ---
2015-11-09 12:12:47 PM	WARNING	Notify		: Step Document Counter: 0111 ---
2015-11-09 12:12:47 PM	WARNING	Notify		: Map Document Counter: 5 ---

- ✓ *Question: Why were the Notify shapes executed in this sequence?*

This sequence matches the data in the original single document. The Flow Control shape caused the 8 line items, which were split into separate documents, to be processed individually to completion.



Document Flow Activity

- ✓ *Question: Why do the “counters” now show increasing values when before they showed only the final value?*

The Notify shapes are now being executed with individual documents instead of in batches of five and three. At the time each Notify shape is executed, the counters register only the number of documents processed at that point.

40. Click **Return to Edit Mode**.

