

IICS: Cloud Data Integration Services

Lab Guide

Version: IICS-R33-Cloud-DIS-202002



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February 2020

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This guide uses the following formatting conventions:

If you see...	It means...	Example
>	Indicates a sub menu to navigate to.	Click Repository > Connect. In this example, you should click the Repository menu or button and choose Connect.
boldfaced text	Indicates text you need to type or enter.	Click the Rename button and name the new source definition S_EMPLOYEE .
UPPERCASE	Database tables and column names are shown in all UPPERCASE.	T_ITEM_SUMMARY
<i>italicized text</i>	Indicates a variable you must replace with specific information.	Connect to the Repository using the assigned <i>login_id</i> .
Note:	The following paragraph provides additional facts.	Note: You can select multiple objects to import by using the Ctrl key.
Tip:	The following paragraph provides suggested uses or a Velocity best practice.	Tip: The m_ prefix for a mapping name is...

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- Documentation and Knowledge Base
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Module 0: Getting Started

Lab 0-1: Rename the Computer Name

Overview:

In the Ravello environment, all the computers set-up for performing labs of CDI course have the same computer names. You will require the Secure Agent to run the tasks in the IICS org. When you install the Secure Agent on your computer, the Secure Agent takes the name of the computer on which it installs.

To easily identify your Secure Agent in the IICS org, you must rename your computer as per the naming conventions. In this lab, you will rename your computer.

Objective:

- Rename the computer

Duration:

10 minutes

Tasks:

Access Ravello URL:

Open a web browser (recommended: Firefox/Google Chrome).

Enter the Ravello URL provided by your Instructor.

On the home page, click **Console**.

Note: The Console opens in a new tab.

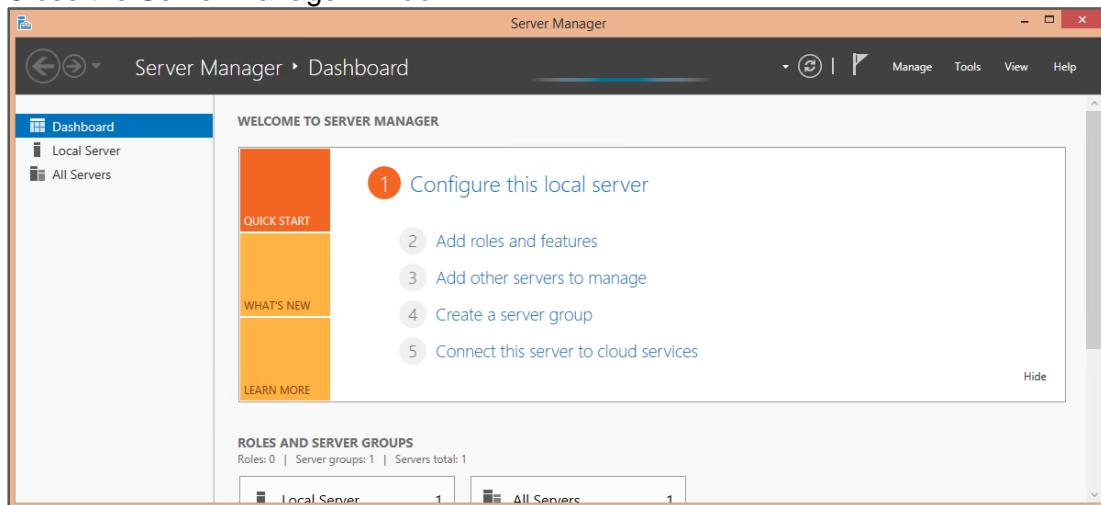
On the top right corner of the screen, click **Ctrl Alt Del**.



Log in using the password **Infa@1234** and hit **Enter**.

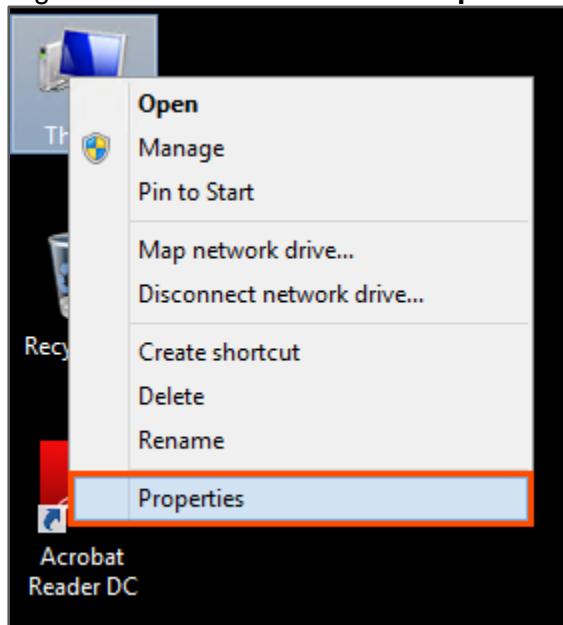


Close the Server Manager window.

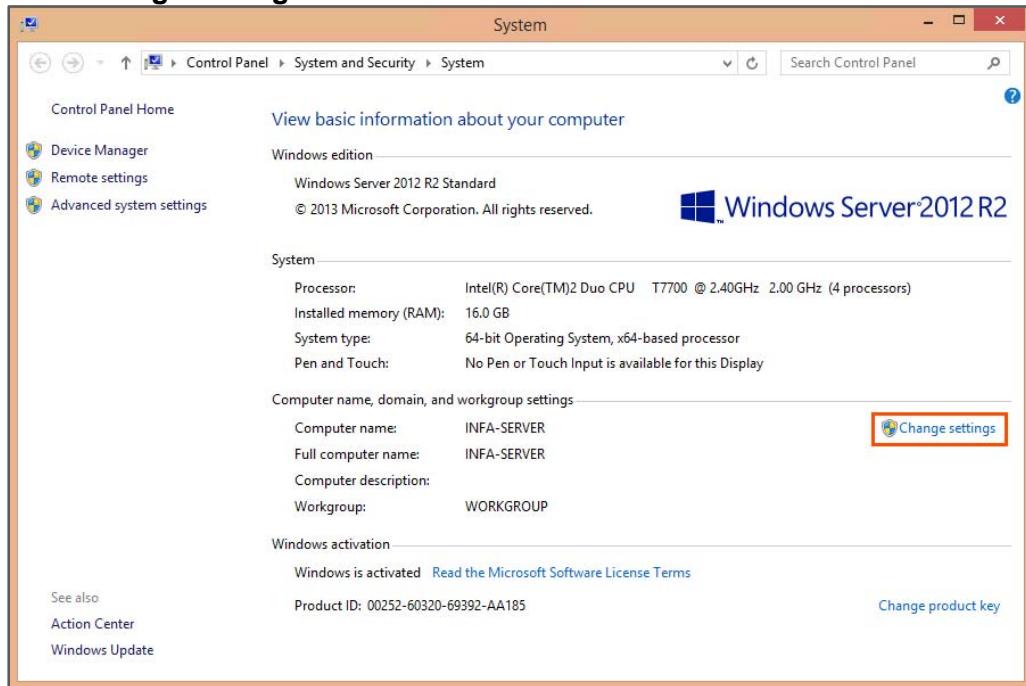


Note: Do not update or restart the system if it prompts you for an update or restart.

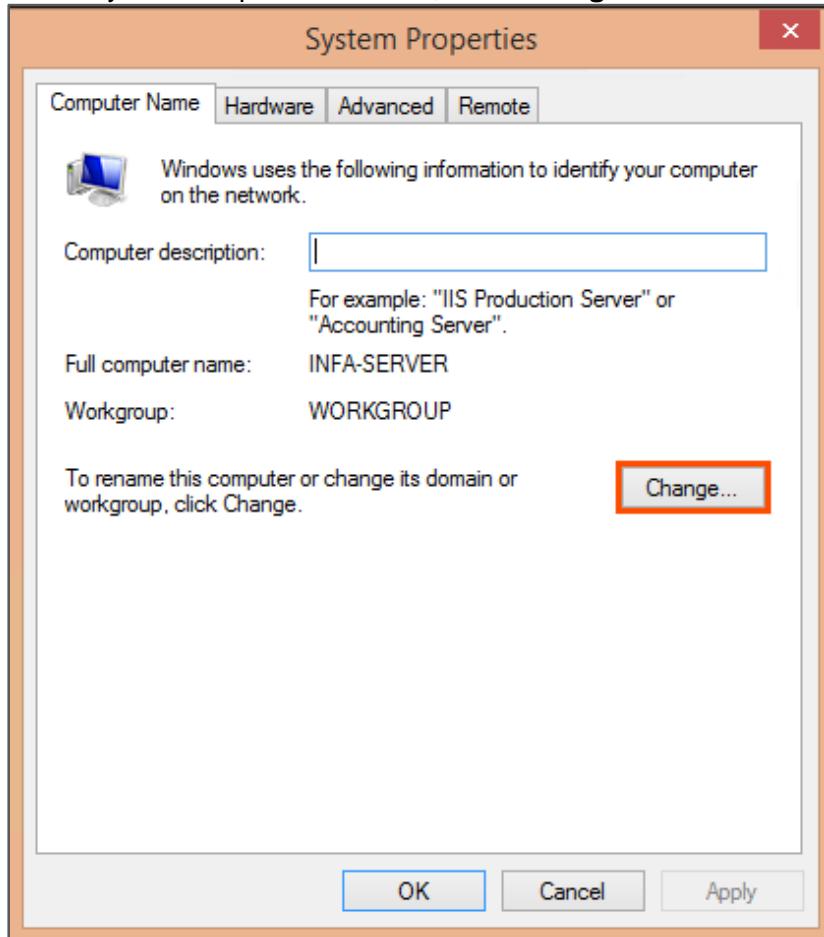
Right-click **This PC** and select **Properties**.



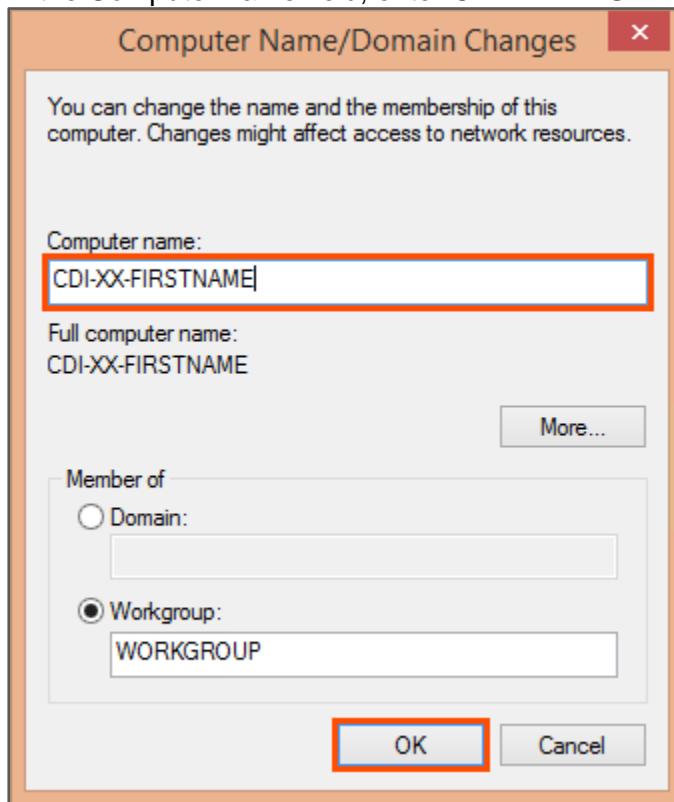
Click **Change settings**.



In the System Properties window, click **Change**.

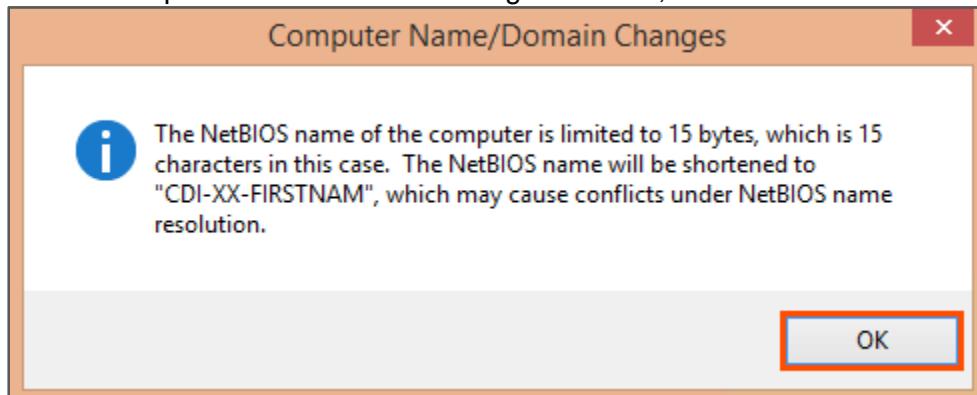


In the Computer name field, enter **CDI-XX-FIRSTNAME**, and click **OK**.

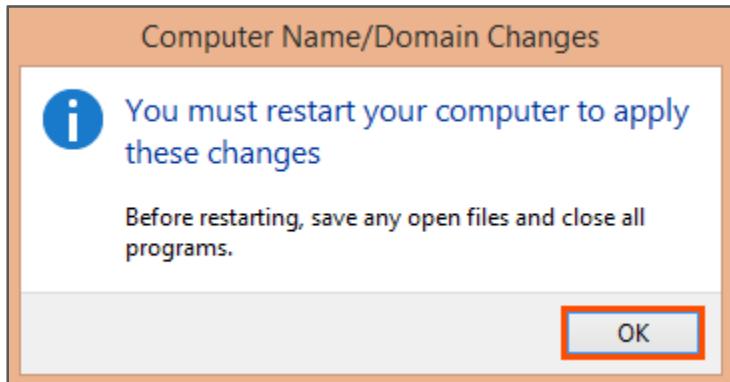


Note: In the Computer name, XX refers to your initials, and FIRSTNAME refers to your First Name. For example, if your Name is Bob William, then you must rename the computer name as CDI-BW-BOB.

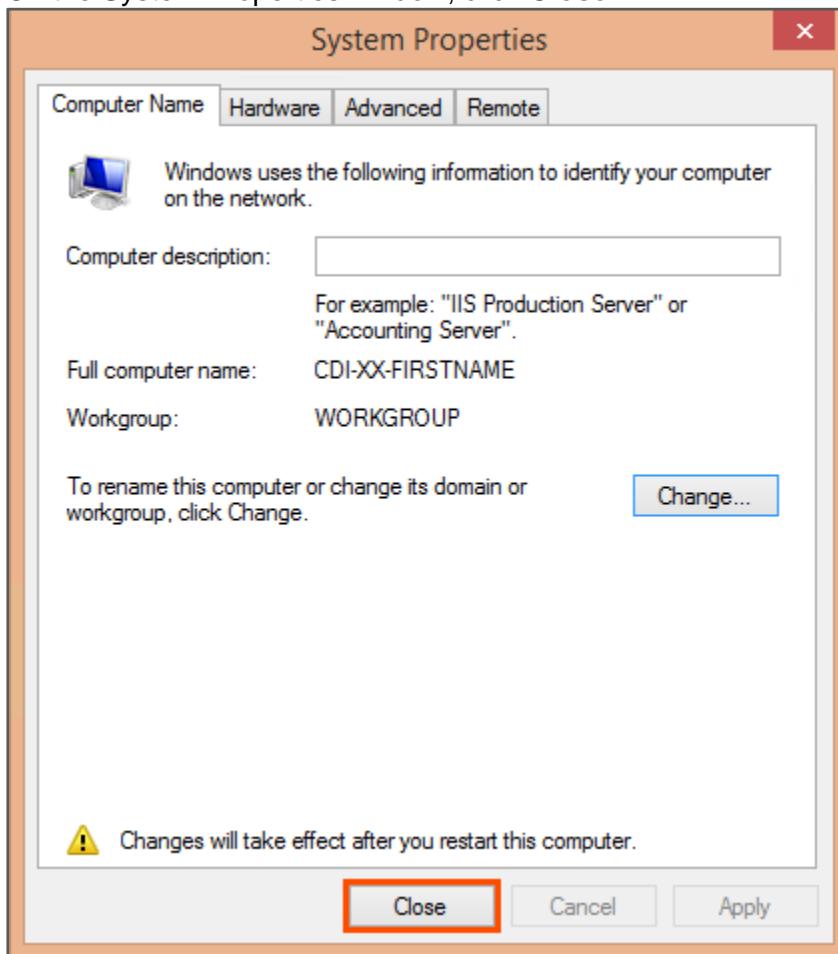
On the Computer Name/Domain Changes window, click **OK**.



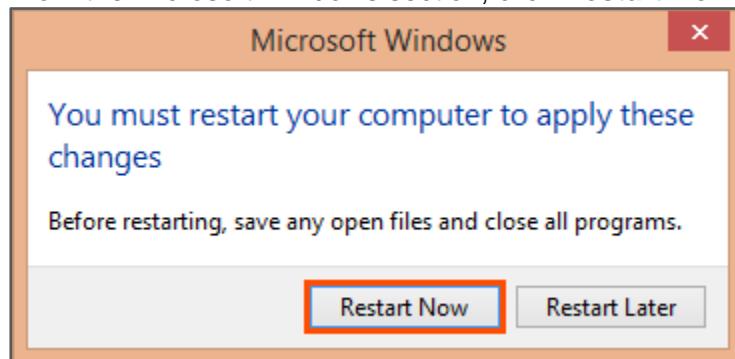
Click **OK**.



On the System Properties window, click **Close**.



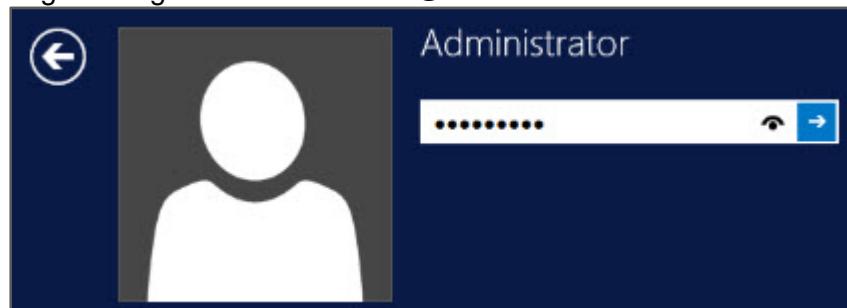
From the Microsoft Windows section, click **Restart Now**.



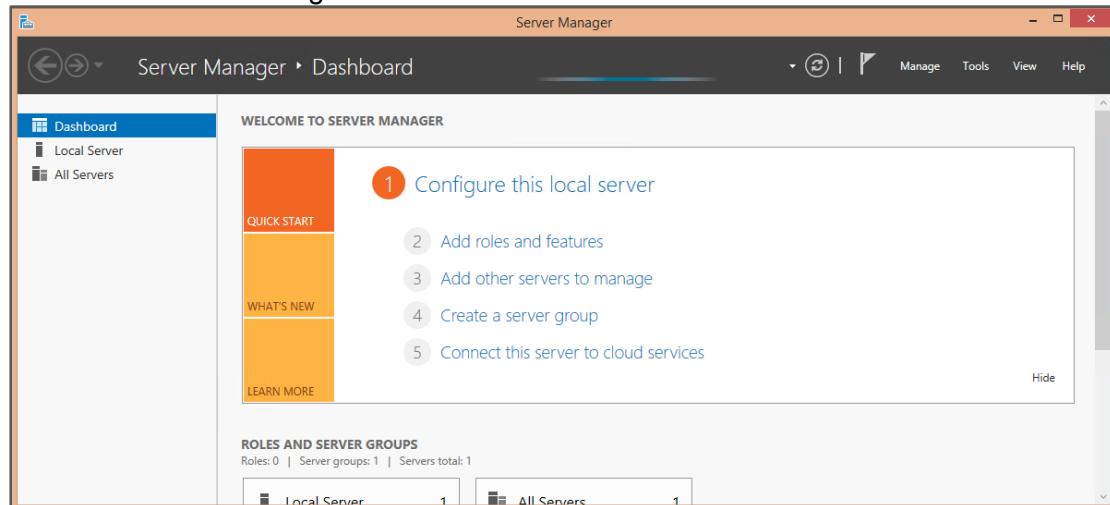
After the computer restarts, on the top right corner of the screen, click **Ctrl Alt Del**.



Log in using the Password **Infa@1234** and hit **Enter**.

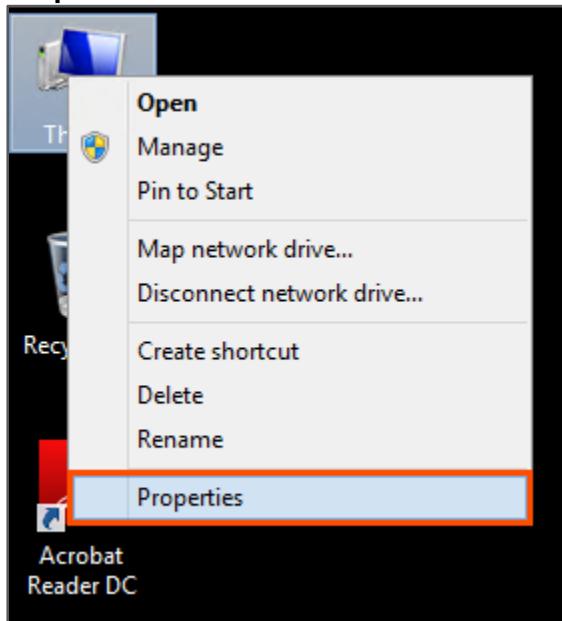


Close the Server Manager window.

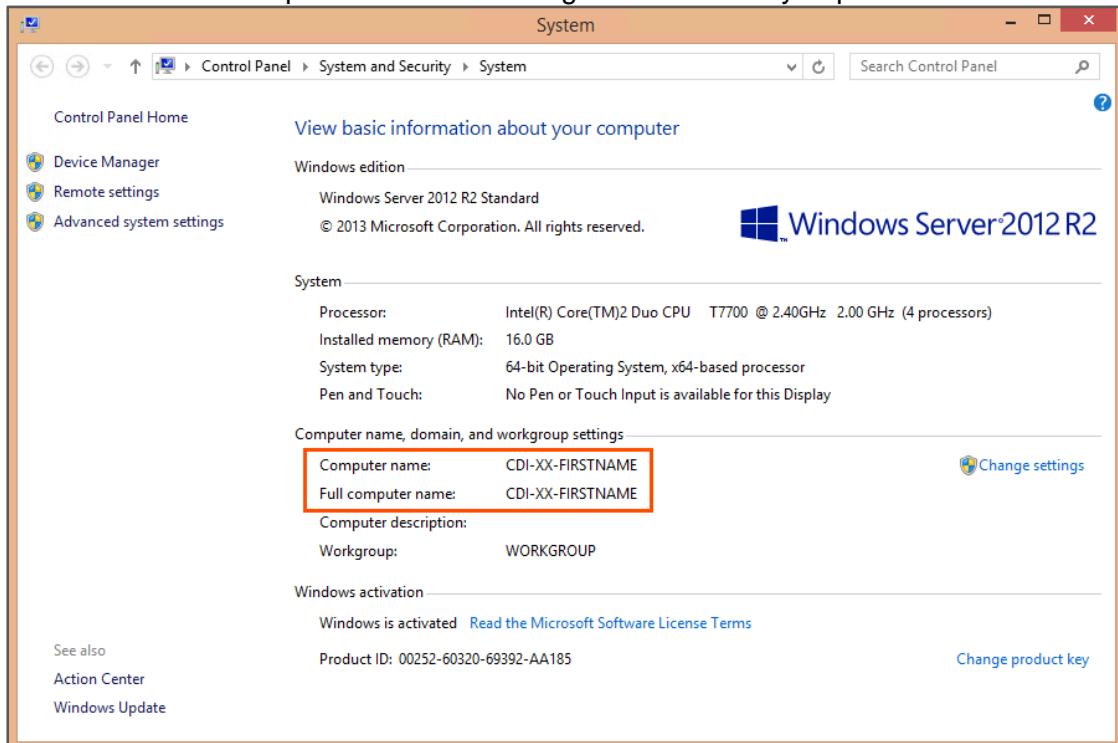


Note: If prompted for update or restart, do not update or restart.

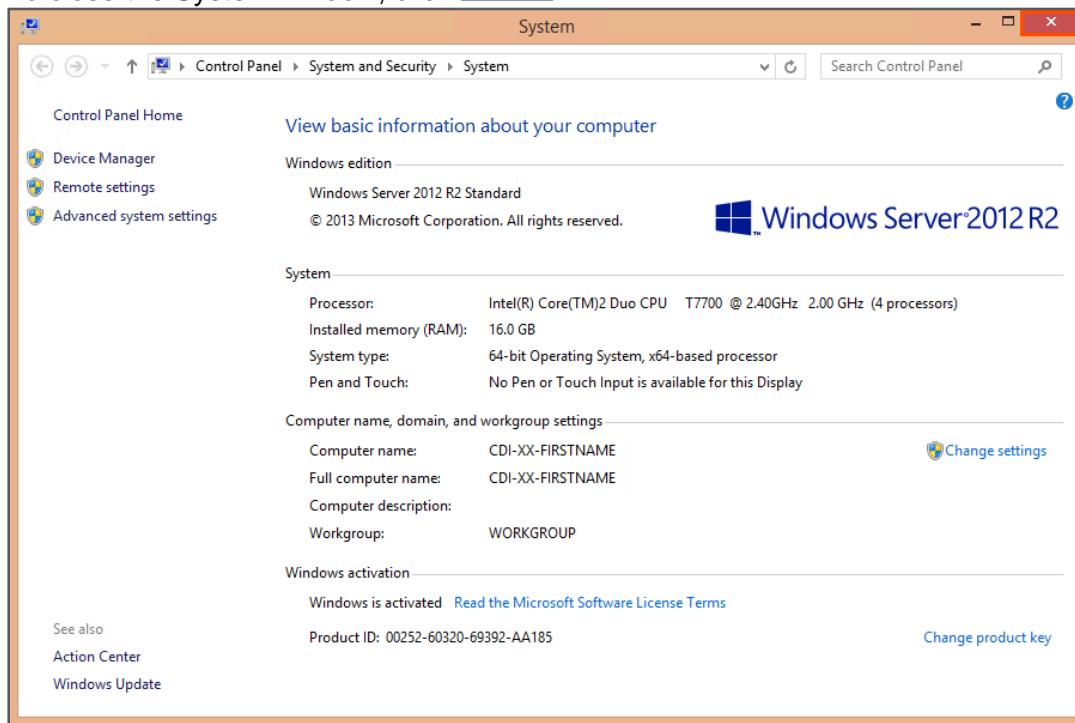
To confirm that the computer name has changed, right-click **This PC**, and select **Properties**.



Observe that the computer name has changed to the name you provided.



To close the System window, click .



This concludes the lab.

Module 0: Getting Started

Lab 0-2: Installing IICS Secure Agent

Overview:

The Secure Agent is a lightweight, self-upgrading program that runs inside your network. The Secure Agent is responsible for moving data from source to target.

IICS Secure Agent runs all tasks and enables a secure communication between your organization and Informatica Cloud.

There are certain system requirements that must be met to install the Secure Agent. This document lists the system requirements and the steps to install the Secure Agent.

Objective:

- List the system requirements for installing IICS Secure Agent
- Install the Secure Agent

Duration:

15 minutes

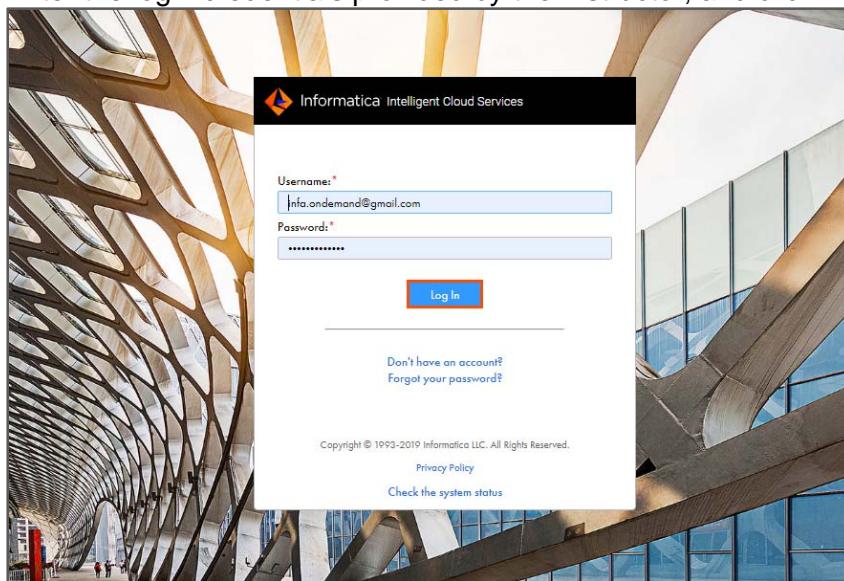
Download the IICS Secure Agent:

Open a web browser and enter the following URL to open the IICS Login page:

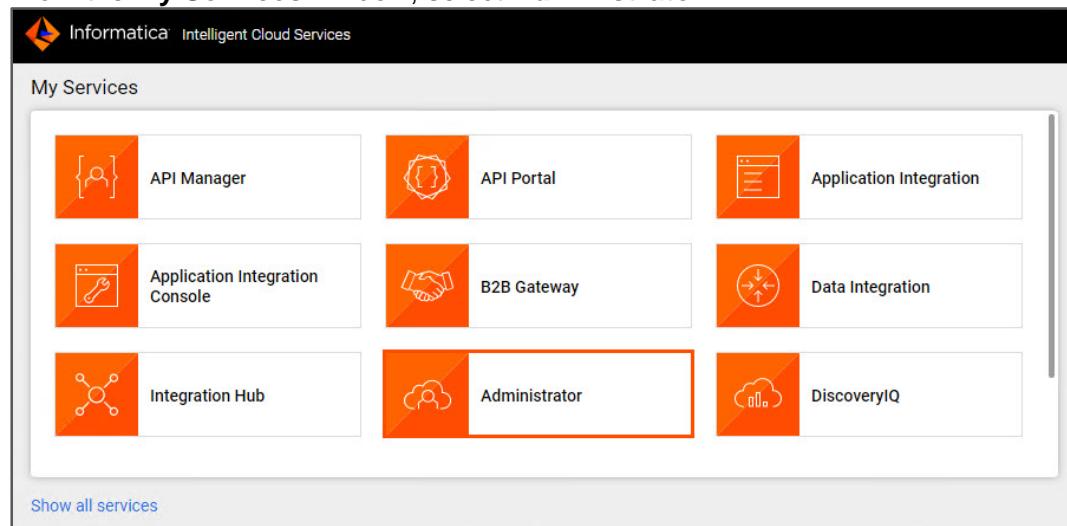
<https://dm-us.informaticacloud.com/identity-service/home>

Note: Bookmark this page for future use.

Enter the login credentials provided by the Instructor, and click **Log In**.



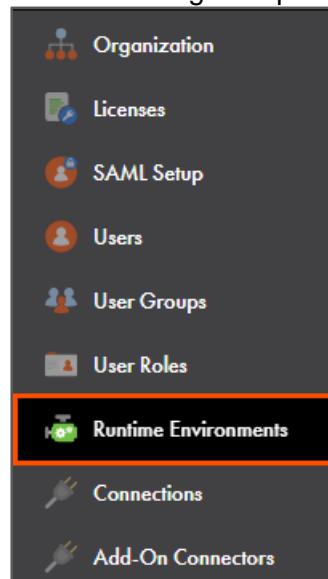
From the **My Services** window, select **Administrator**.



The screenshot shows the 'My Services' interface. It displays nine service options arranged in three rows of three. The services are: API Manager, API Portal, Application Integration; Application Integration Console, B2B Gateway, Data Integration; Integration Hub, Administrator, and DiscoveryIQ. The 'Administrator' service is highlighted with an orange border around its icon and name.

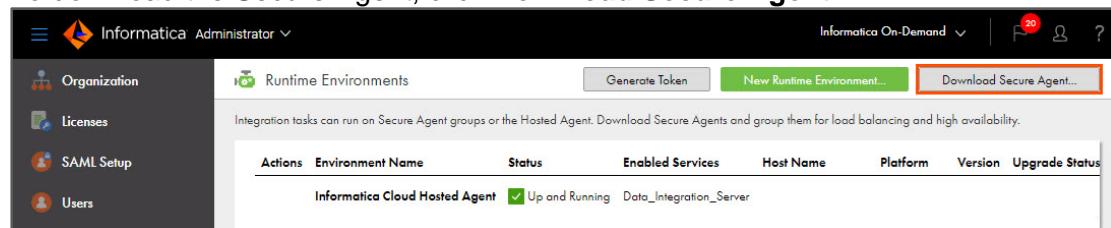
Note: The Organization page appears.

From the navigation pane, select **Runtime Environments**.



The screenshot shows the navigation pane on the left side of the application. It lists several management categories: Organization, Licenses, SAML Setup, Users, User Groups, User Roles, Runtime Environments, Connections, and Add-On Connectors. The 'Runtime Environments' option is highlighted with an orange border.

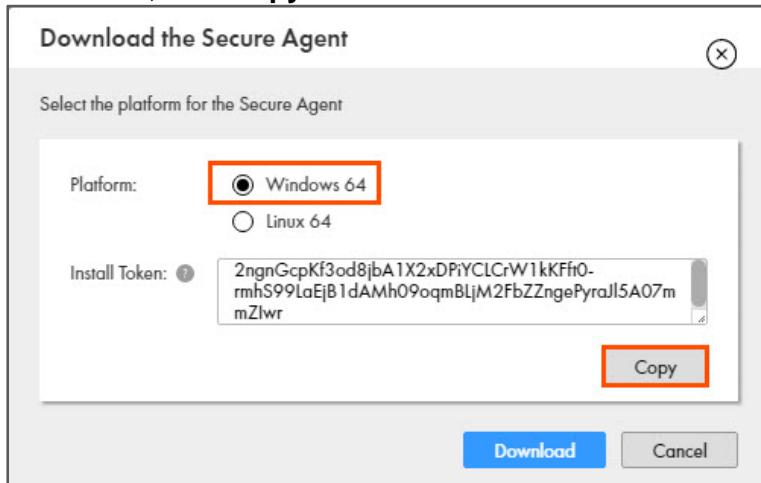
To download the Secure Agent, click **Download Secure Agent**.



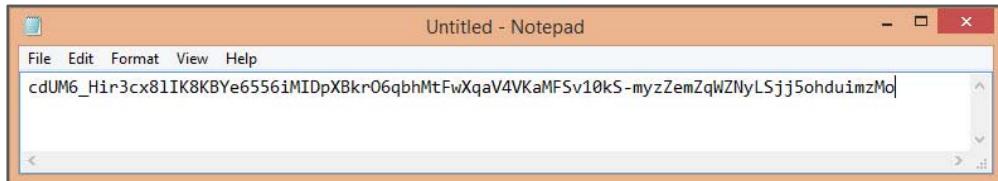
The screenshot shows the 'Runtime Environments' page. At the top, there are buttons for 'Generate Token', 'New Runtime Environment...', and 'Download Secure Agent...'. The 'Download Secure Agent...' button is highlighted with an orange border. Below the buttons, there is a message: 'Integration tasks can run on Secure Agent groups or the Hosted Agent. Download Secure Agents and group them for load balancing and high availability.' A table follows, showing a single entry for an 'Informatica Cloud Hosted Agent' which is 'Up and Running' on the 'Data_Integration_Server'.

Actions	Environment Name	Status	Enabled Services	Host Name	Platform	Version	Upgrade Status
	Informatica Cloud Hosted Agent	<input checked="" type="checkbox"/> Up and Running		Data_Integration_Server			

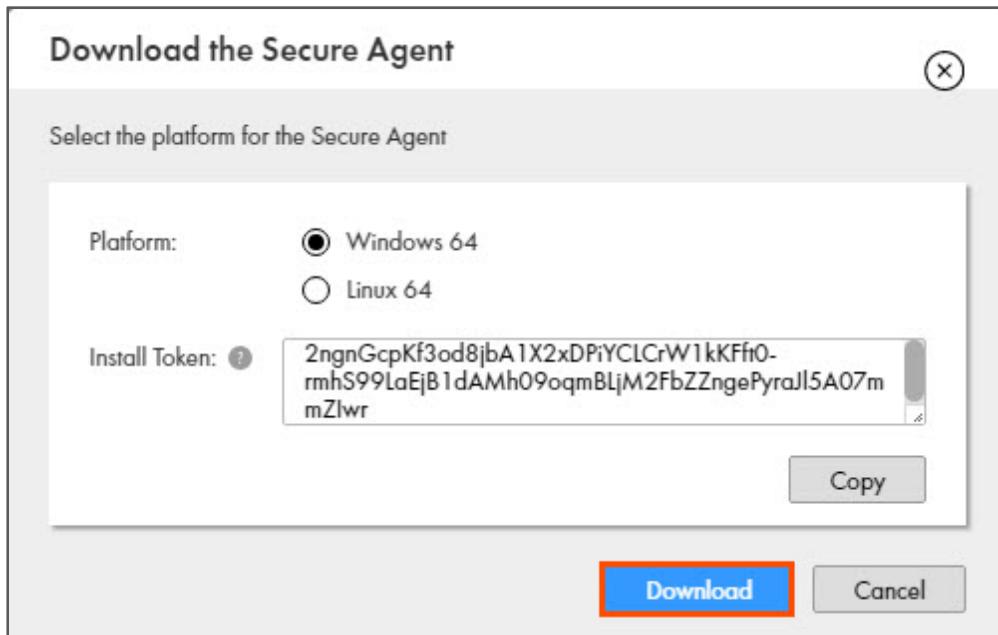
From the Download, the Secure Agent window, select **Windows 64**, and from the Install Token field, click **Copy**.



Paste the Install Token in a text file.



Click **Download**.

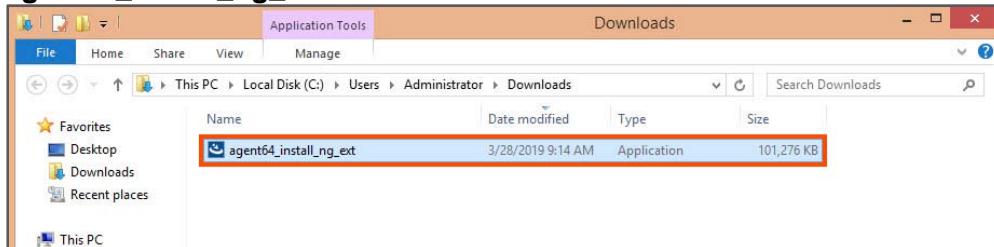


Note: Informatica Cloud Secure Agent for the selected platform will download on your machine. In this lab, you will install the Secure Agent on Windows platform.

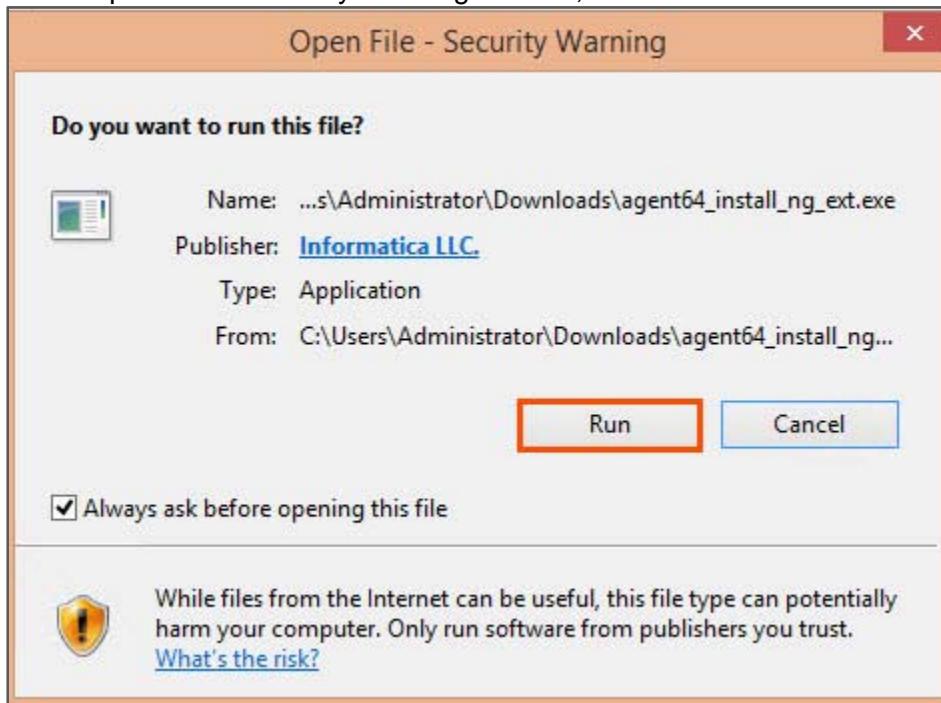
Install the Secure Agent:

Go to the download directory on your Ravello and locate the agent installation file.

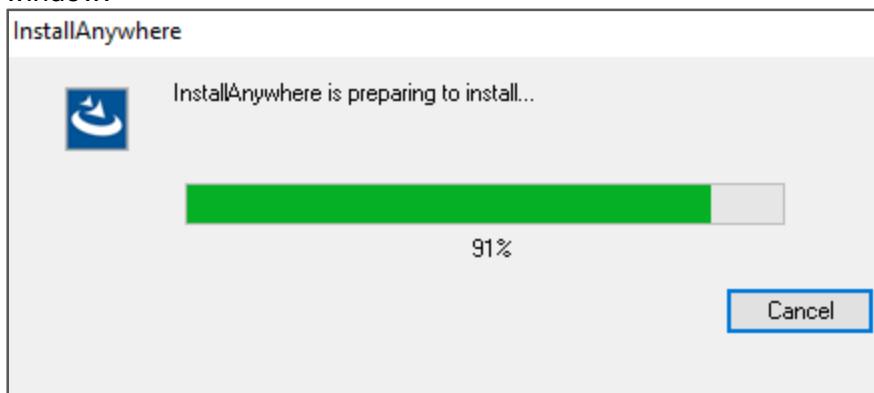
To install the Secure Agent, double-click the executable file
agent64_install_ng_ext.exe.



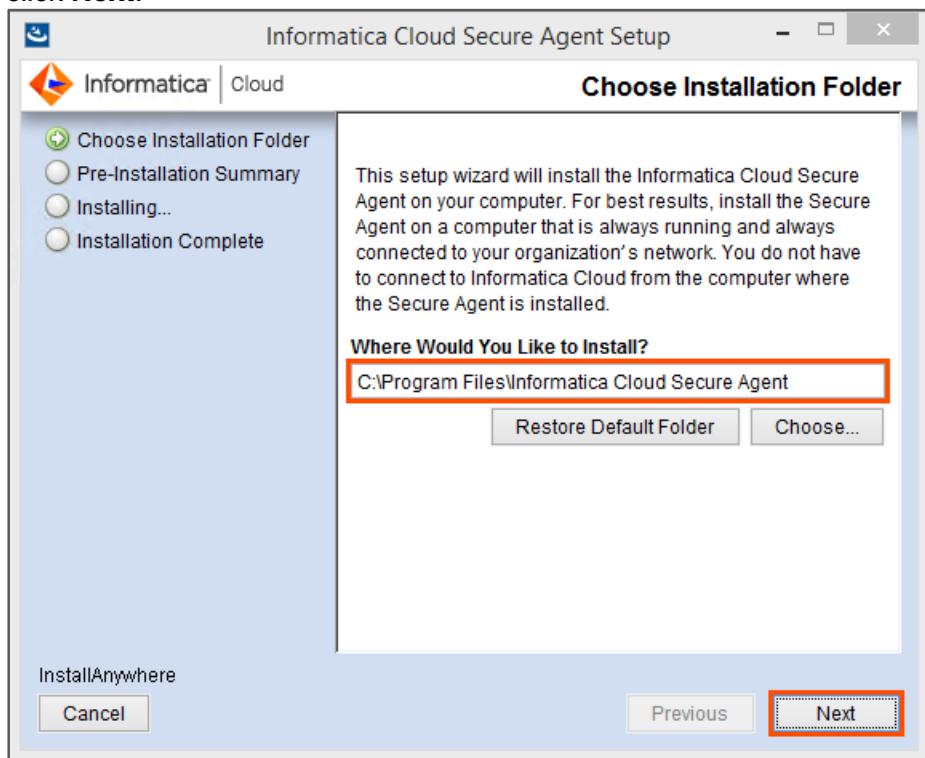
In the Open File – Security Warning window, click **Run**.



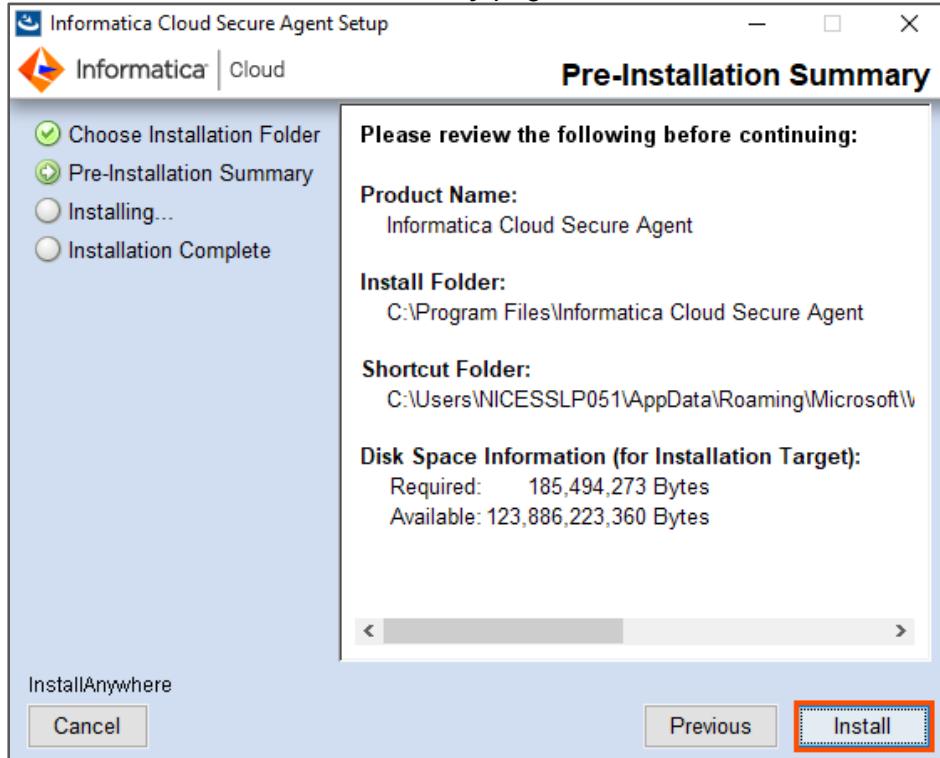
Note: When the Secure Agent initiates the installation, it displays the **InstallAnywhere** window.



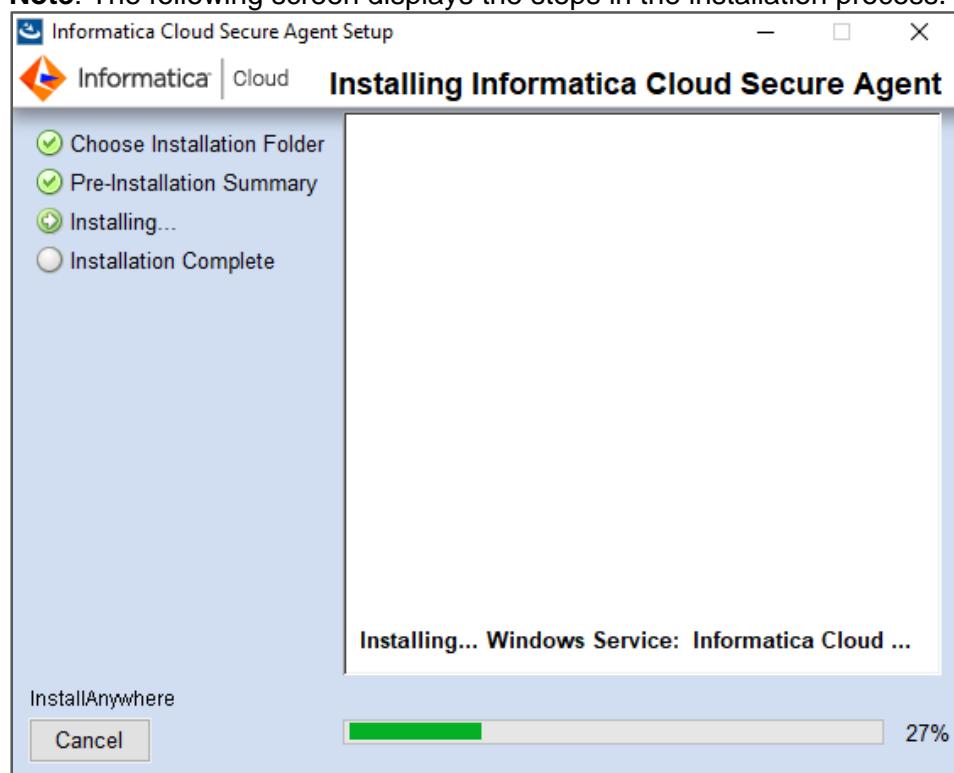
From the **Choose Installation Folder** window, retain the default installation location and click **Next**.



From the **Pre-Installation Summary** page, click **Install**.



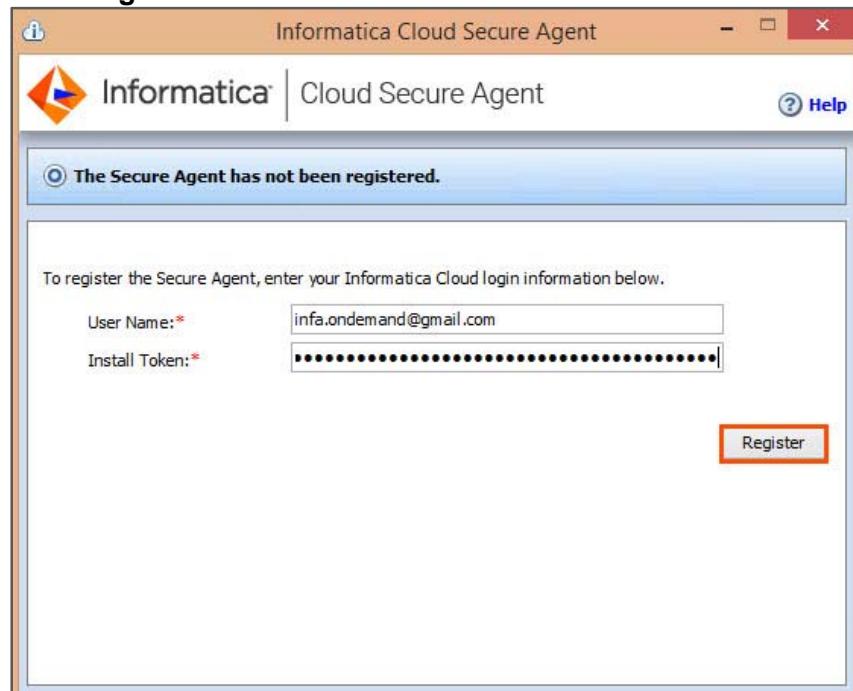
Note: The following screen displays the steps in the installation process.



After the installation process is complete, the Secure Agent registration page appears with the message **The Secure Agent has not been registered.**

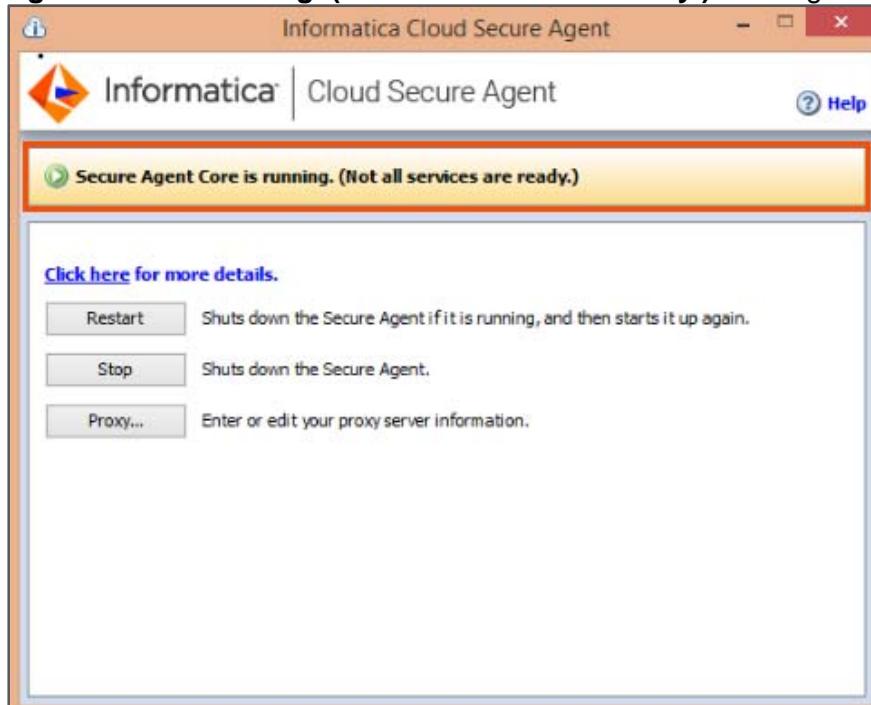
To register your Secure Agent, enter the IICS username provided by instructor and paste the Install Token copied in Step 6 in the Install Token field.

Click **Register**.

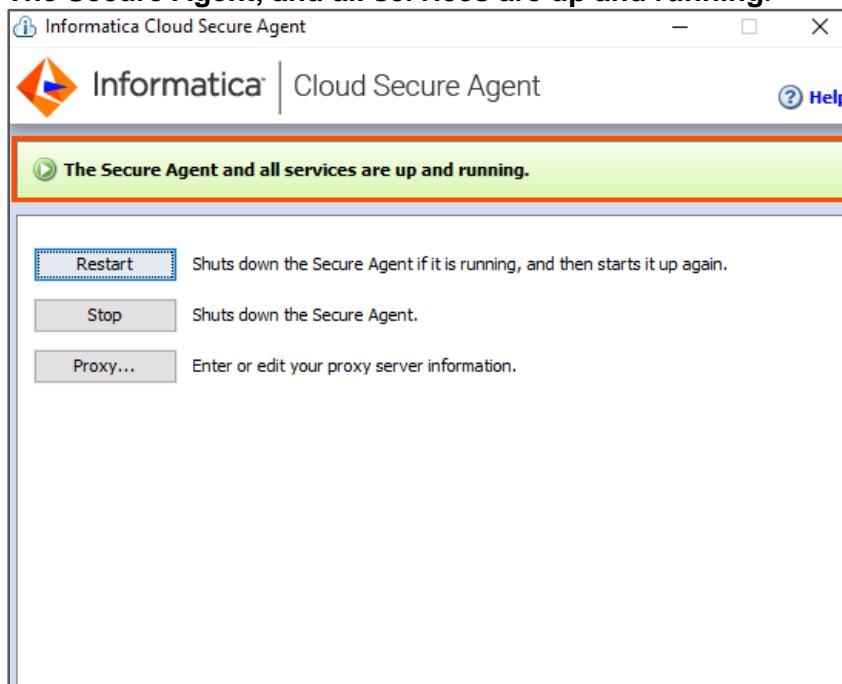


Note: After successful registration, the Secure Agent will download the necessary files for the connectors.

When the configuration of the Secure Agent services is in progress, it displays **Secure Agent Core is running. (Not all services are ready.)** message.



After the Secure Agent configures all the services, the agent status message changes to **The Secure Agent, and all services are up and running.**

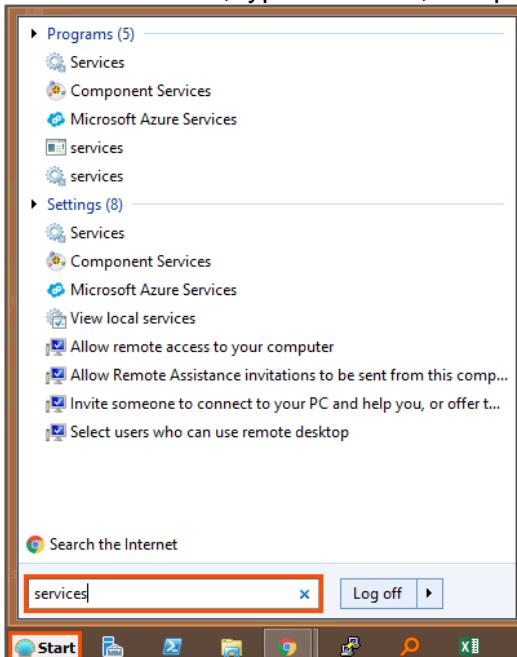


Note: After the Secure Agent changes to up and running, you must provide Administrator rights to your Secure Agent.

Setting Administrative rights for Secure Agent:

Select the windows **Start** menu.

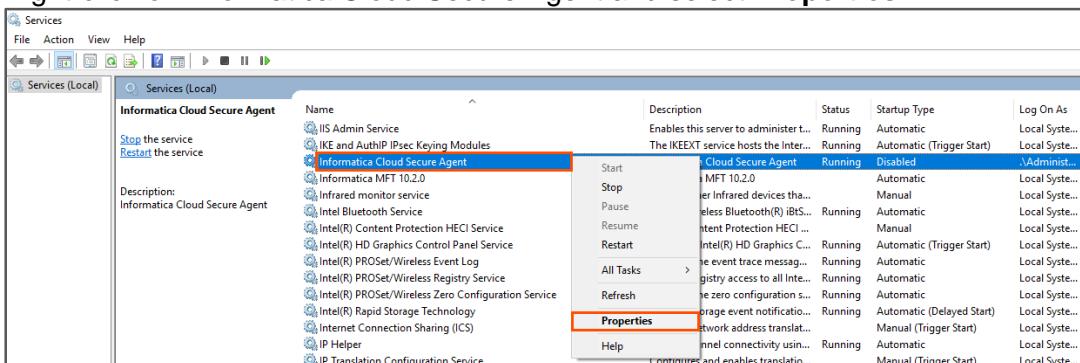
In the search bar, type **services**, and press **enter** on your keyboard.



Note: The services window appears.

From the services page, select **Informatica Cloud Secure Agent**.

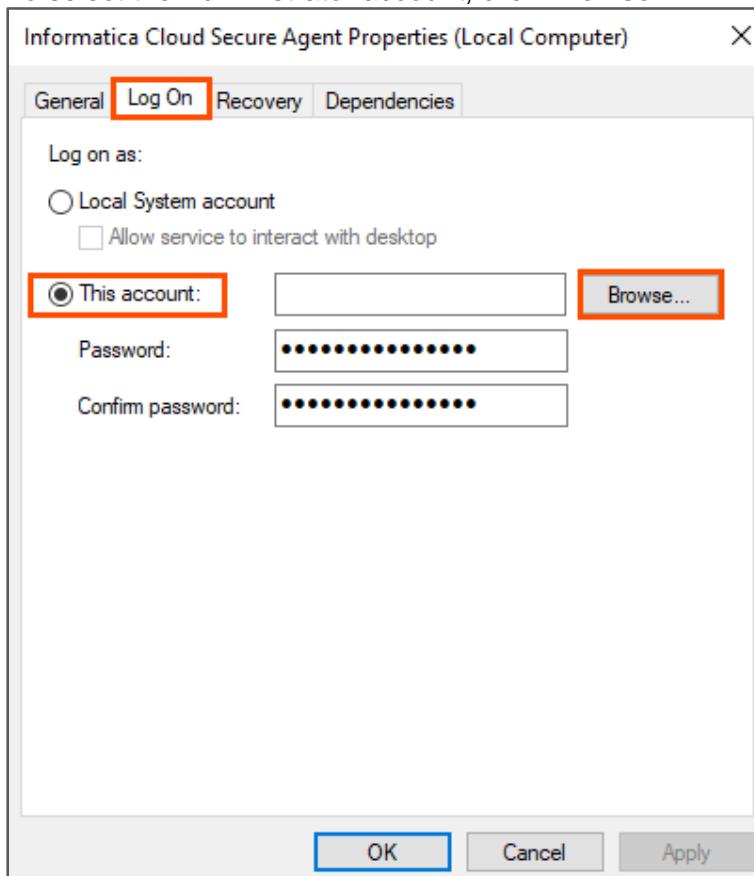
Right-click on Informatica Cloud Secure Agent and select **Properties**.



Note: A new properties window appears.

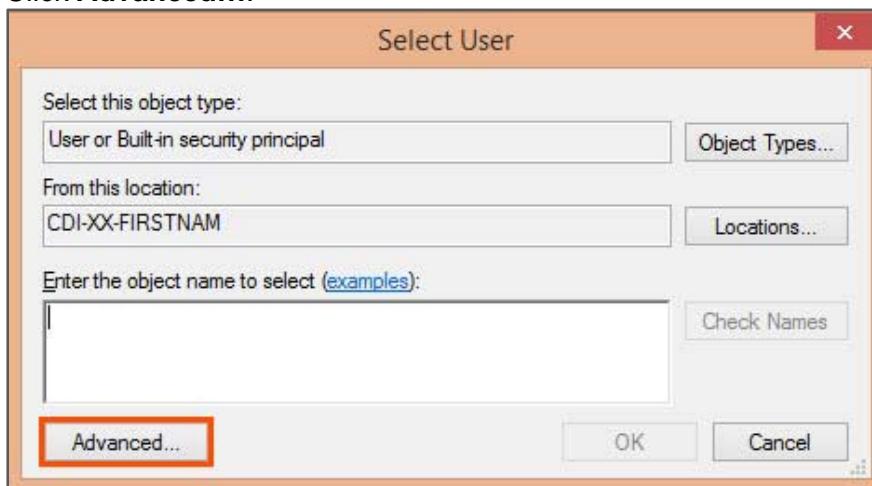
Go to **Log On** tab and select **This account**.

To select the Administrator account, click **Browse**.



Note: The Select User window appears.

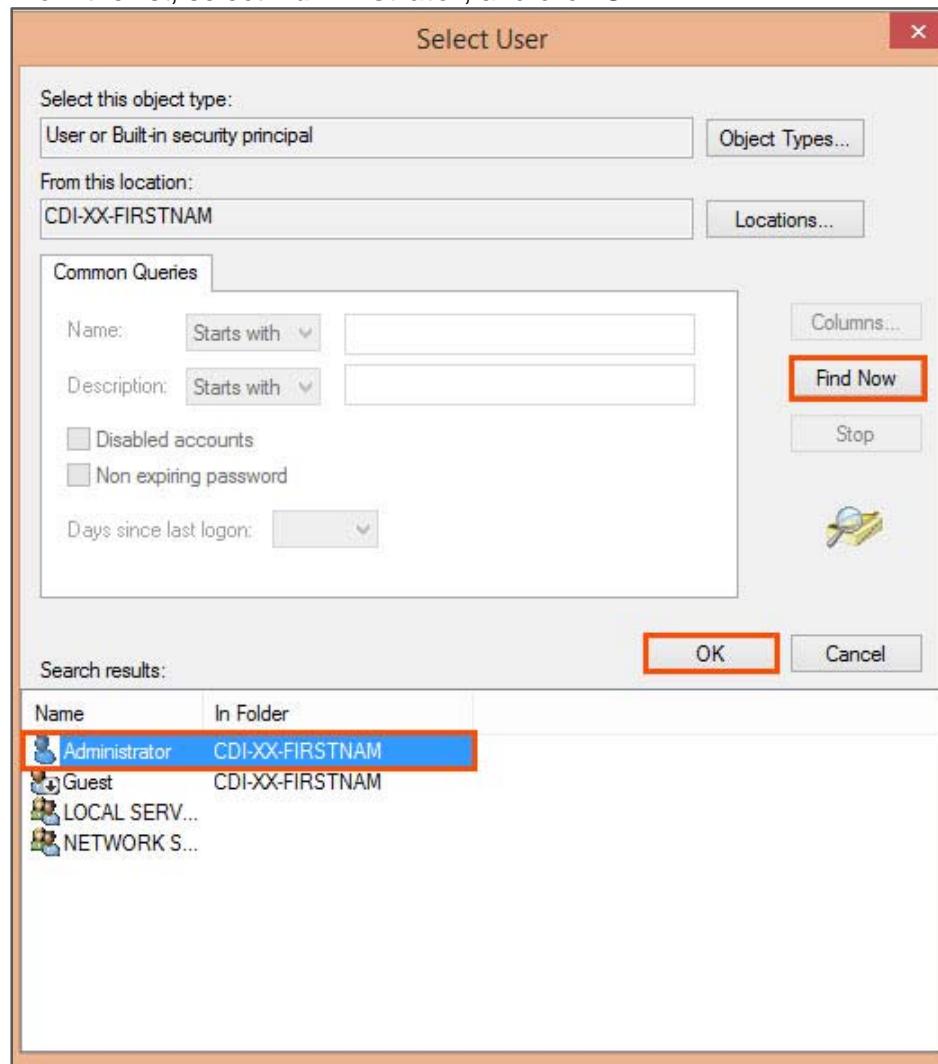
Click **Advanced....**



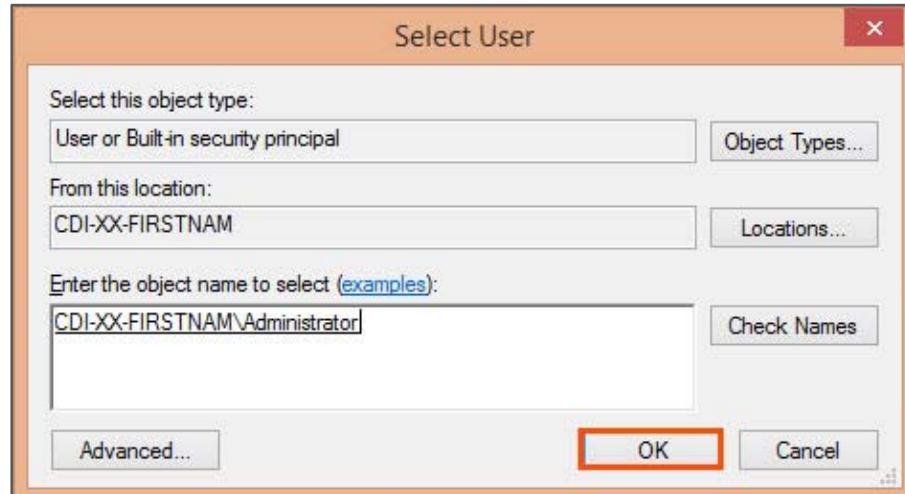
From the Select User window, select **Find Now**.

Note: A list of available user account appears.

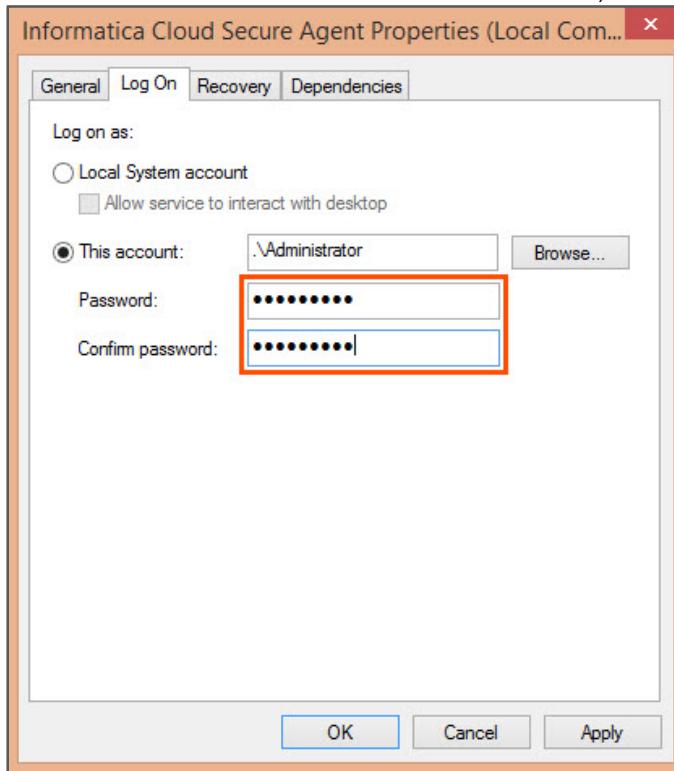
From the list, select **Administrator**, and click **OK**.



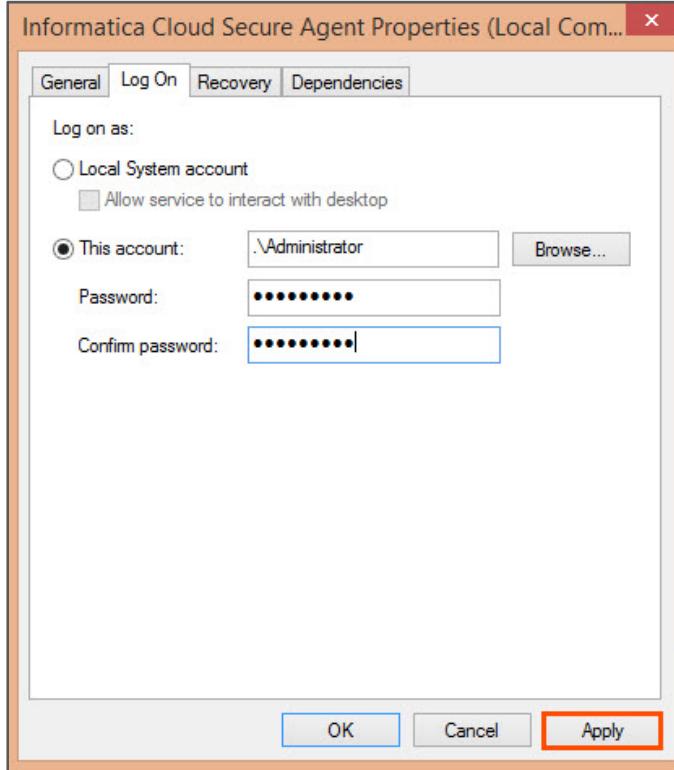
Click **OK**.



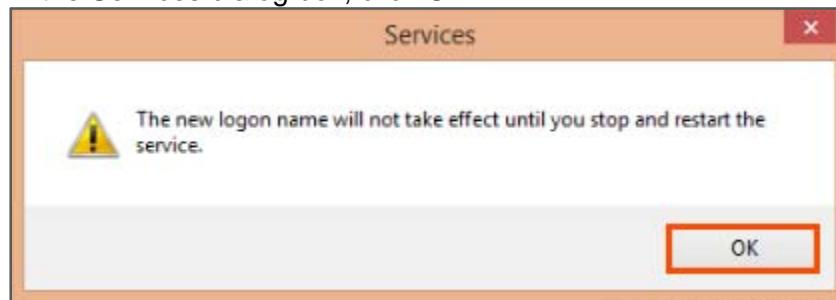
In the Password and Confirm Password fields, enter **Infa@1234**.



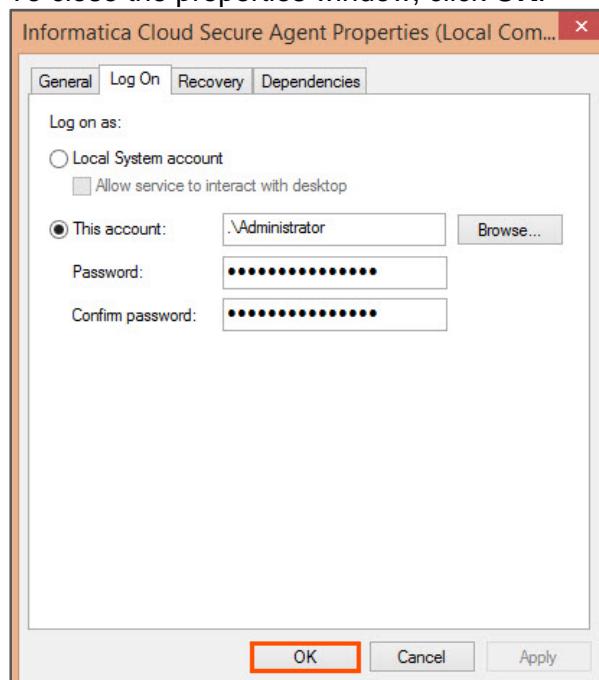
To apply the changes, click **Apply**.



In the Services dialog box, click **OK**.

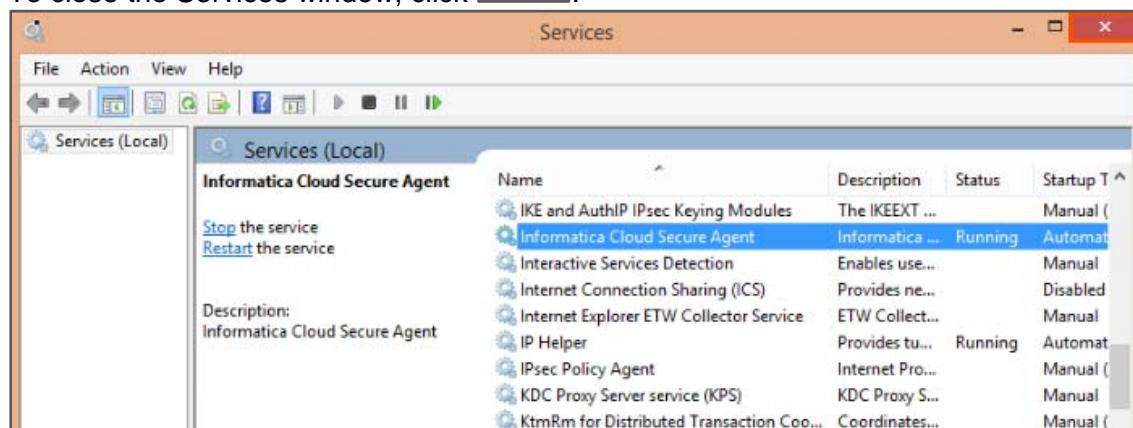


To close the properties window, click **OK**.

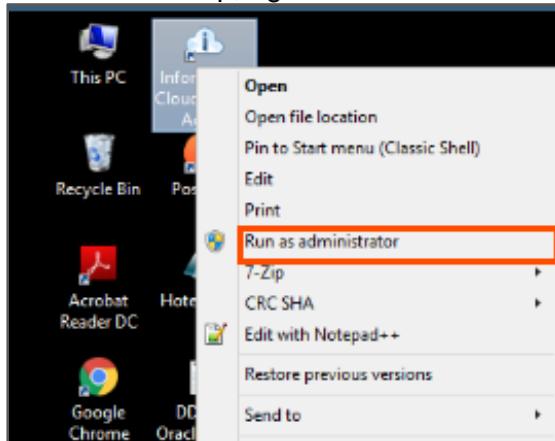


Note: After this, you must restart the Secure Agent.

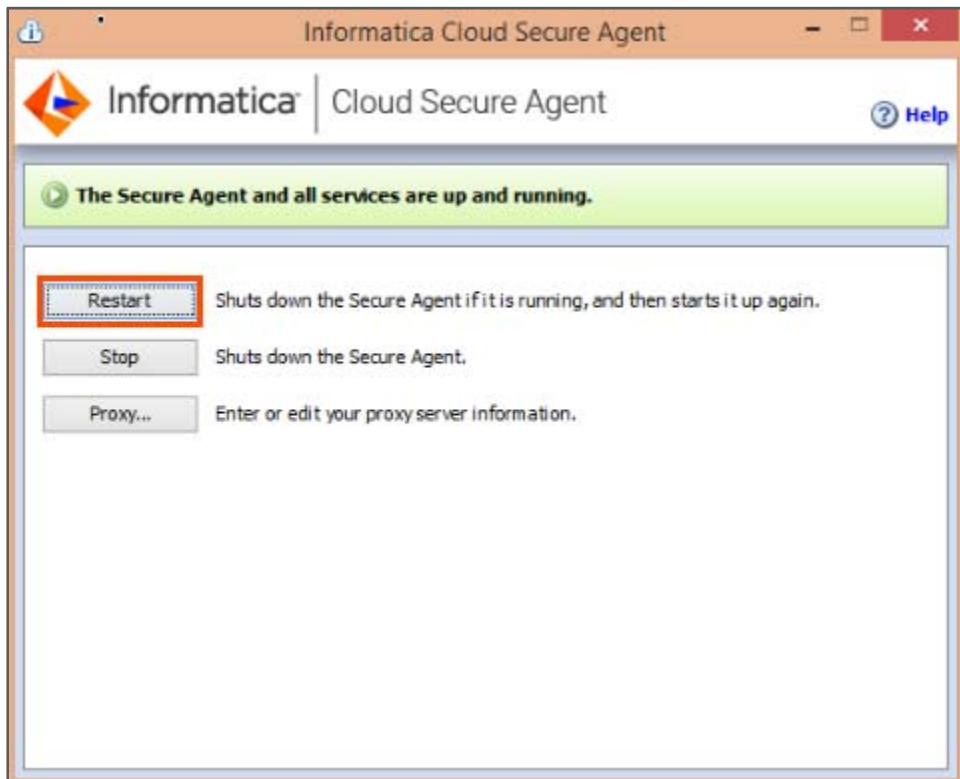
To close the Services window, click .



From the desktop, right click on the Secure Agent, and select **Run as administrator**.



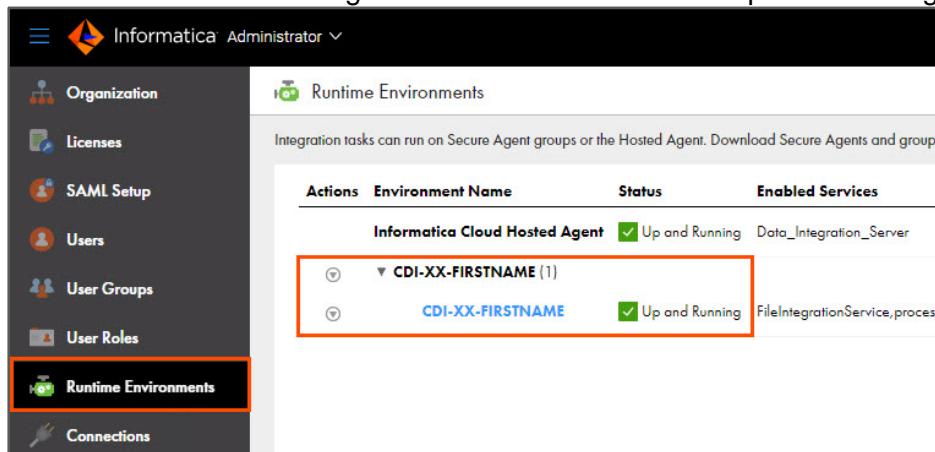
Click **Restart**.



Note: You must wait for the Secure Agent to get back to the running state.

View the Secure Agent in IICS:

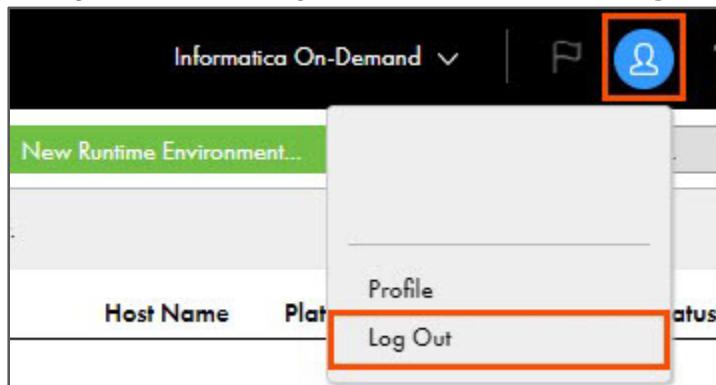
From the Administrator service navigation pane, select **Runtime Environments** and observe that the Secure Agent CDI-XX-FIRSTNAME is Up and Running.



Actions	Environment Name	Status	Enabled Services
	Informatica Cloud Hosted Agent	<input checked="" type="checkbox"/> Up and Running	Data_Integration_Server
▼	CDI-XX-FIRSTNAME (1)	<input checked="" type="checkbox"/> Up and Running	FileIntegrationService,process
▼	CDI-XX-FIRSTNAME	<input checked="" type="checkbox"/> Up and Running	

Note: By default, the Secure Agent takes the name of the computer it is installed on. If the Secure Agent does not appear in **Runtime Environments** page, you can refresh the webpage to view the updated status of the page.

To log out from the Org, click **User**, and select **Log Out**.



This concludes the lab.

Module 1: Informatica Cloud Overview

Lab 1-1: Navigating the IICS Interface

Overview:

Informatica Intelligent Cloud Services (IICS) is a platform that helps in Enterprise Data Management through a suite of Intelligent Cloud services.

To effectively manage the data, IICS platform provides Data Integration, Administrator, and Monitor services.

The Data Integration service synchronizes data between a heterogeneous source and target.

The Administrator service provides organization management capabilities such as managing security, licenses, users, user groups, user roles, connections, schedules, add-on bundles, and swagger files.

Monitor service enables a user to analyze the state of various deployment activities that you perform within the organization.

Objective:

- Log in to the Informatica Cloud Org
- Access the Informatica Cloud online help
- Search the online help

Scenario:

After hearing about IICS, Ruby wants to use Informatica Cloud Data Integration Service to improve the performance of her store. So, to introduce Ruby with various features of IICS, Joseph tells Ruby how to access the IICS interface and navigate between the services. He also explains the procedure to access the online help option to Ruby.

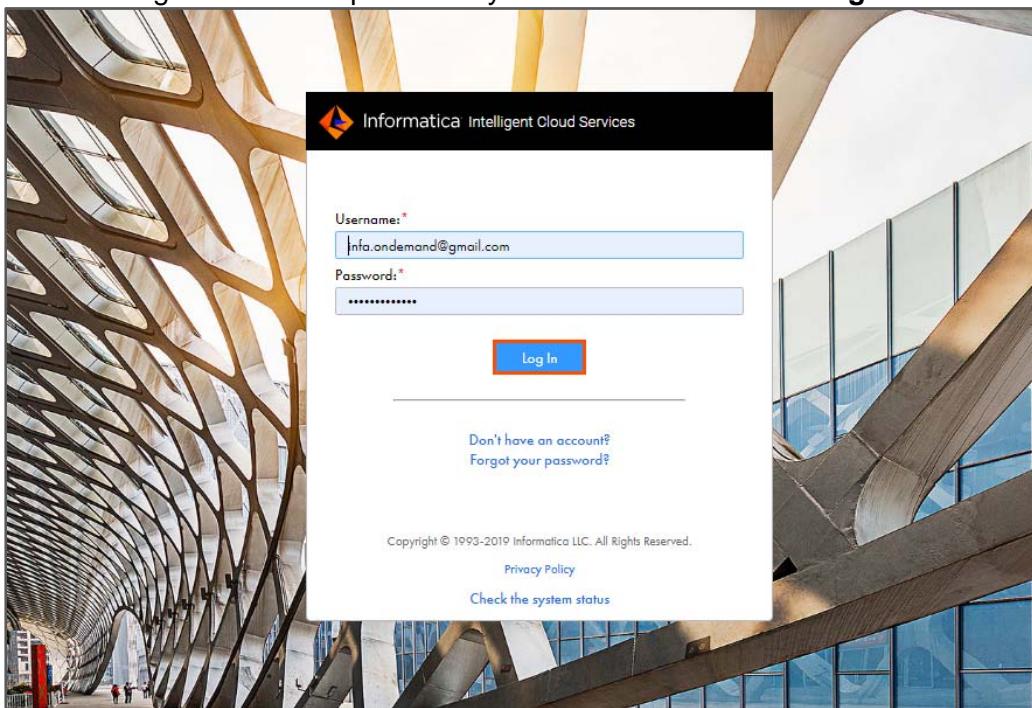
In this lab, Ruby will access IICS interface and access the online help option. Ruby will also explore various IICS services.

Duration:

10 minutes

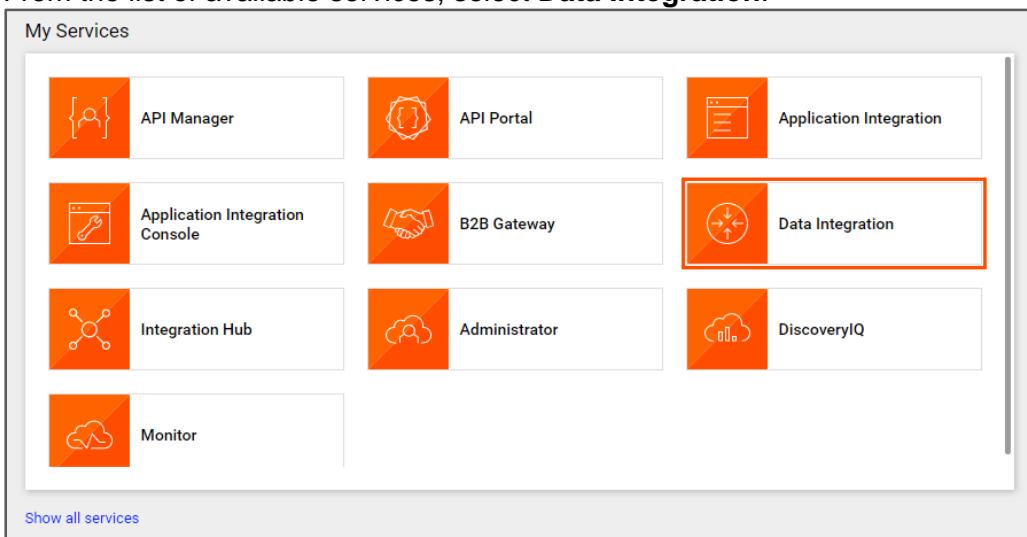
Tasks:**Access IICS Interface:**

1. Open the IICS Login page from the bookmarks bar.
Note: You may have bookmarked the link after executing the Getting Started lab.
2. Enter the login credentials provided by the Instructor and click **Log In**.



Note: The **My Services** window appears.

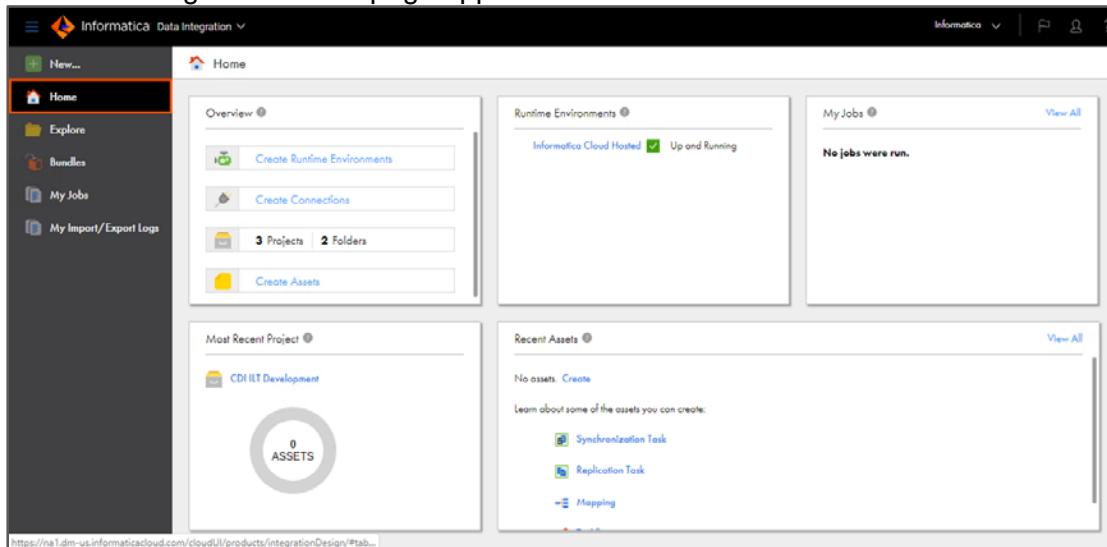
3. From the list of available services, select **Data Integration**.



My Services		
 API Manager	 API Portal	 Application Integration
 Application Integration Console	 B2B Gateway	 Data Integration
 Integration Hub	 Administrator	 DiscoveryIQ
 Monitor		

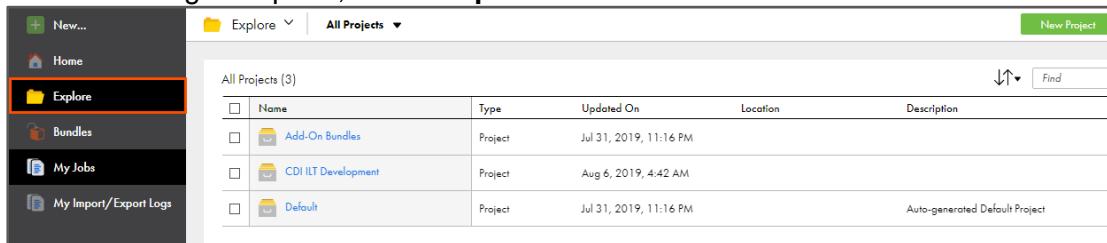
Show all services

4. The Data Integration **Home** page appears.



The screenshot shows the Informatica Data Integration Home page. The navigation pane on the left has 'Home' selected. The main area contains several cards: 'Overview' (Create Runtime Environments, Create Connections, 3 Projects, 2 Folders, Create Assets), 'Runtime Environments' (Informatica Cloud Hosted Up and Running), 'My Jobs' (No jobs were run), 'Most Recent Project' (CDI ILT Development, 0 ASSETS), and 'Recent Assets' (No assets, Create, Synchronization Task, Replication Task, Mapping).

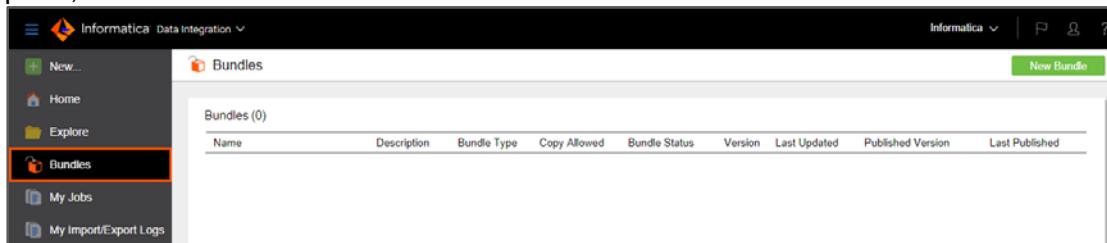
5. From the navigation pane, select **Explore**.



	Name	Type	Updated On	Location	Description
<input type="checkbox"/>	Add-On Bundles	Project	Jul 31, 2019, 11:16 PM		
<input type="checkbox"/>	CDI ILT Development	Project	Aug 6, 2019, 4:42 AM		
<input type="checkbox"/>	Default	Project	Jul 31, 2019, 11:16 PM		Auto-generated Default Project

Note: The Explore page shows all the projects and assets built using IICS.

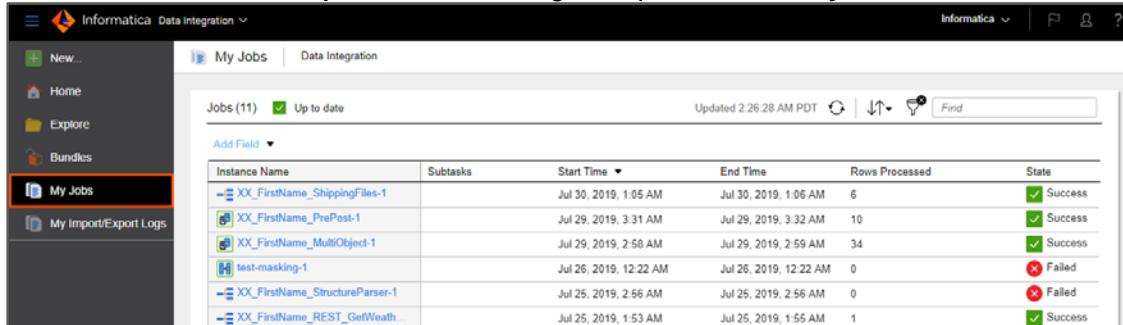
6. To check the list of all the bundles available in your organization, from the navigation pane, select **Bundles**.



Name	Description	Bundle Type	Copy Allowed	Bundle Status	Version	Last Updated	Published Version	Last Published

Note: A bundle is a set of prebuilt integration template that allows you to execute custom integration tasks.

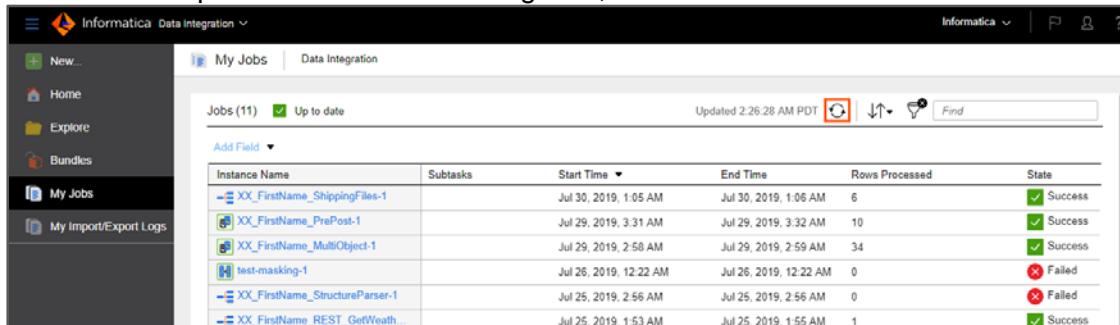
7. To check the status of a job, from the navigation pane, select **My Jobs**.



Instance Name	Subtasks	Start Time	End Time	Rows Processed	State
XX_FirstName_ShippingFiles-1		Jul 30, 2019, 1:05 AM	Jul 30, 2019, 1:06 AM	6	Success
XX_FirstName_PrePost-1		Jul 29, 2019, 3:31 AM	Jul 29, 2019, 3:32 AM	10	Success
XX_FirstName_MultiObject-1		Jul 29, 2019, 2:58 AM	Jul 29, 2019, 2:59 AM	34	Success
test-masking-1		Jul 26, 2019, 12:22 AM	Jul 26, 2019, 12:22 AM	0	Failed
XX_FirstName_StructureParser-1		Jul 25, 2019, 2:56 AM	Jul 25, 2019, 2:56 AM	0	Failed
XX_FirstName_REST_GetWeath...		Jul 25, 2019, 1:53 AM	Jul 25, 2019, 1:55 AM	1	Success



8. To check the updated status of a running task, click .



The screenshot shows the Informatica Data Integration interface. The left navigation pane includes options like New..., Home, Explore, Bundles, My Jobs, and My Import/Export Logs. The main content area is titled 'My Jobs' and displays a table of 'Jobs (11)'. The table columns are Instance Name, Subtasks, Start Time, End Time, Rows Processed, and State. The data shows various jobs with their execution details and success/failure status.

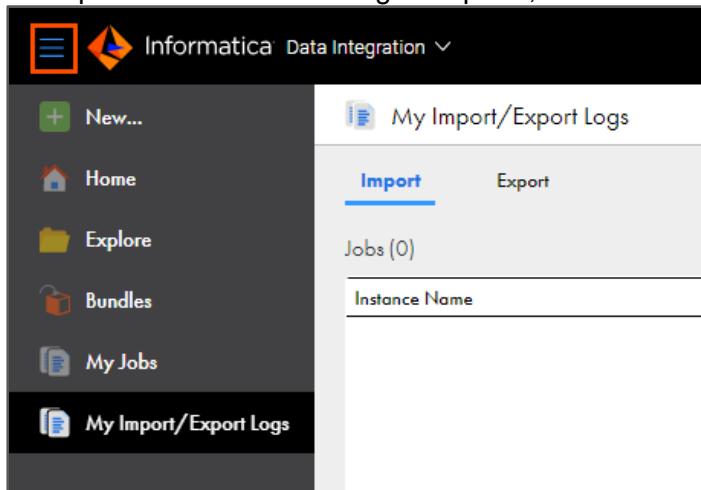
Instance Name	Subtasks	Start Time	End Time	Rows Processed	State
XX_FirstName_ShippingFiles-1		Jul 30, 2019, 1:05 AM	Jul 30, 2019, 1:06 AM	6	Success
XX_FirstName_PrePost-1		Jul 29, 2019, 3:31 AM	Jul 29, 2019, 3:32 AM	10	Success
XX_FirstName_MultiObject-1		Jul 29, 2019, 2:58 AM	Jul 29, 2019, 2:59 AM	34	Success
test-masking-1		Jul 26, 2019, 12:22 AM	Jul 26, 2019, 12:22 AM	0	Failed
XX_FirstName_StructureParser-1		Jul 25, 2019, 2:56 AM	Jul 25, 2019, 2:56 AM	0	Failed
XX_FirstName_REST_GetWeath...		Jul 25, 2019, 1:53 AM	Jul 25, 2019, 1:55 AM	1	Success

9. To list import/export task started by current user, from the navigation pane, select **My Import/Export Logs**.



The screenshot shows the Informatica Data Integration interface. The left navigation pane includes options like New..., Home, Explore, Bundles, My Jobs, and My Import/Export Logs. The main content area is titled 'My Import/Export Logs' and displays a table of 'Jobs (0)'. The table columns are Instance Name, Start Time, User Name, Start Method, and Status. The table is currently empty.

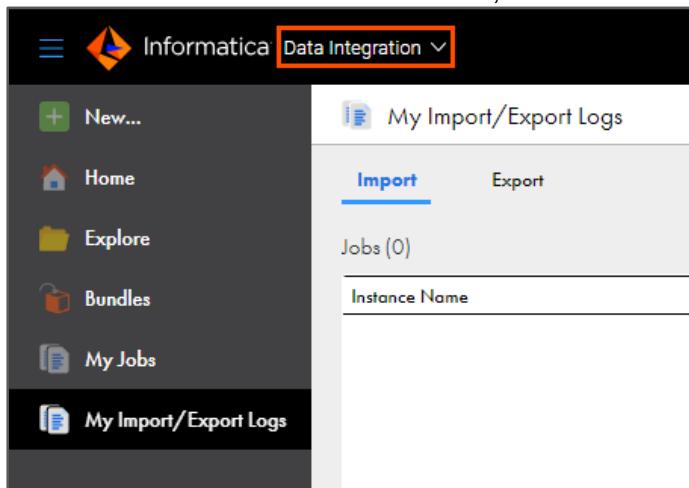
10. To expand and hide the navigation pane, click .



The screenshot shows the Informatica Data Integration interface with the navigation pane expanded. The navigation pane on the left lists the following items: New..., Home, Explore, Bundles, My Jobs, and My Import/Export Logs. The main content area is titled 'My Import/Export Logs' and displays a table of 'Jobs (0)'. The table columns are Instance Name, Start Time, User Name, Start Method, and Status. The table is currently empty.

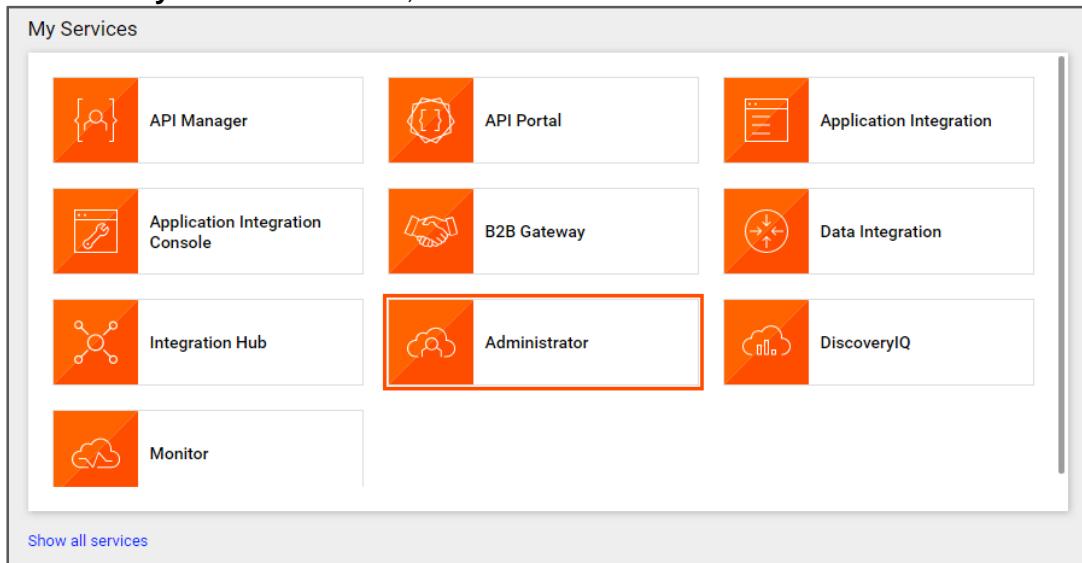
Switching between Services:

11. To switch between the available services, from the toolbar, select the drop-down next to the current service name. In this case, the service name is **Data Integration**.

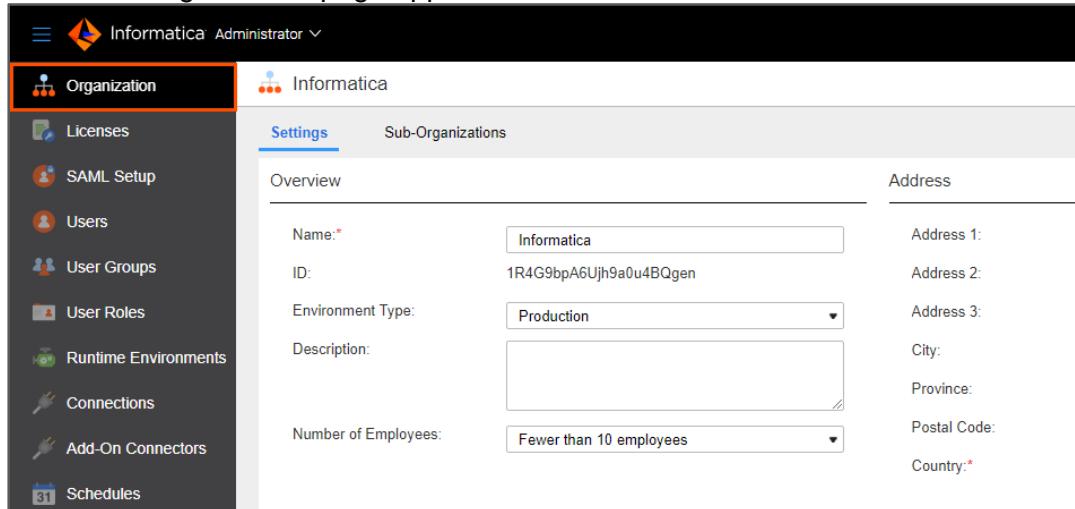


Note: The My Services window appears. You can select any available service at the time of login as well.

12. From the **My Services** window, select **Administrator**.

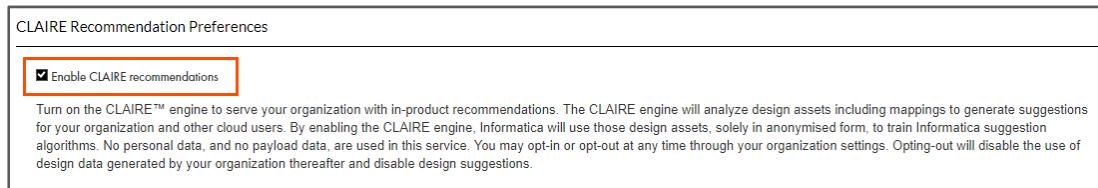


Note: The Organization page appears.



The screenshot shows the Informatica Administrator interface. The left sidebar has a dark theme with various icons and labels: Licenses, SAML Setup, Users, User Groups, User Roles, Runtime Environments, Connections, Add-On Connectors, and Schedules. The 'Organization' icon is highlighted with an orange border. The main panel has a light gray header with the Informatica logo and the word 'Administrator'. Below the header, there are two tabs: 'Settings' (which is selected) and 'Sub-Organizations'. The 'Settings' tab contains several input fields: 'Name:' with 'Informatica' typed in, 'ID:' with '1R4G9bpA6Ujh9a0u4BQgen', 'Environment Type:' with 'Production' selected, 'Description:' (empty), 'Number of Employees:' with 'Fewer than 10 employees' selected, and address fields for 'Address 1' through 'Country:'.

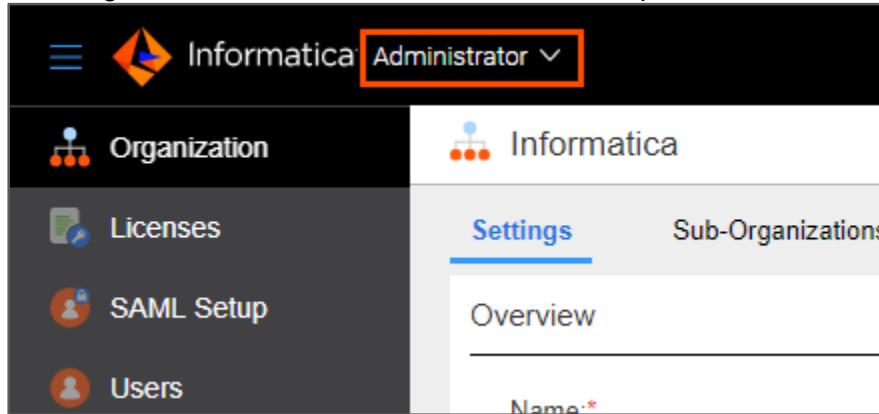
13. Scroll down to the CLAIRE Recommendation Preferences section, where you can enable or disable CLAIRE recommendations.



The screenshot shows the 'CLAIRE Recommendation Preferences' section. It features a single checkbox labeled 'Enable CLAIRE recommendations' which is checked. Below the checkbox is a detailed explanatory text block: 'Turn on the CLAIRE™ engine to serve your organization with in-product recommendations. The CLAIRE engine will analyze design assets including mappings to generate suggestions for your organization and other cloud users. By enabling the CLAIRE engine, Informatica will use those design assets, solely in anonymised form, to train Informatica suggestion algorithms. No personal data, and no payload data, are used in this service. You may opt-in or opt-out at any time through your organization settings. Opting-out will disable the use of design data generated by your organization thereafter and disable design suggestions.'

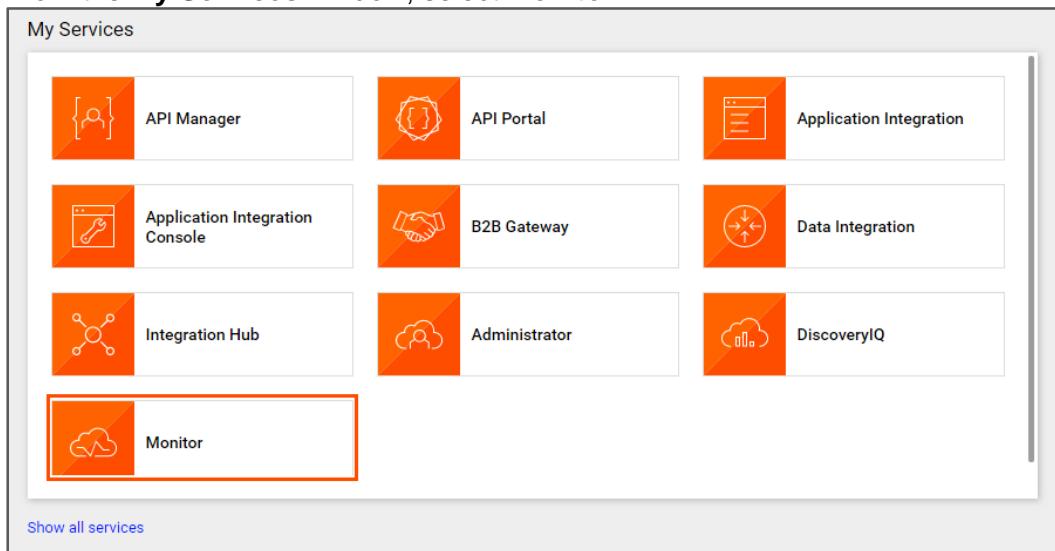
Note: By default, CLAIRE recommendation is enabled. For this course, do not make any changes in the Administrator service unless stated in the labs.

14. To navigate to the Monitor service, select the drop-down next to **Administrator**.



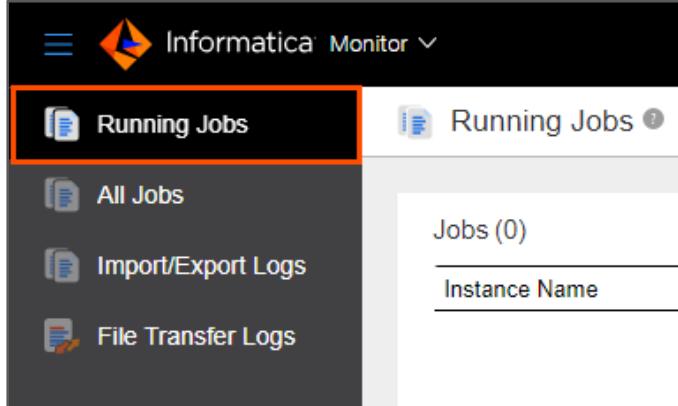
The screenshot shows the Informatica Administrator interface. The left sidebar has a dark theme with icons for Organization, Licenses, SAML Setup, and Users. The 'Organization' icon is highlighted with an orange border. The main panel has a light gray header with the Informatica logo and the word 'Administrator'. Below the header, there are two tabs: 'Settings' (selected) and 'Sub-Organizations'. The 'Settings' tab contains an input field for 'Name:' with the placeholder 'Name...*'.

15. From the **My Services** window, select **Monitor**.



The screenshot shows the 'My Services' interface. It displays a grid of nine service icons. The 'Monitor' service, located at the bottom left, is highlighted with a red border. Other services include API Manager, API Portal, Application Integration, Application Integration Console, B2B Gateway, Data Integration, Integration Hub, Administrator, and DiscoveryIQ.

Note: The Running Jobs page appears.



The screenshot shows the 'Running Jobs' page. On the left, there is a sidebar with options: 'Running Jobs' (selected and highlighted), 'All Jobs', 'Import/Export Logs', and 'File Transfer Logs'. The main content area shows a table with one row: 'Jobs (0)'. Below the table is a field labeled 'Instance Name' with a text input field.

Note: The Running Jobs page shows the live monitoring of the jobs running in your organization.

Accessing Notifications, User details, and Online help:

16. To view the notifications, select .



The screenshot shows the 'Running Jobs' page. The top right corner of the interface includes icons for notifications, user profile, and help. The main content area shows a table with columns: Instance Name, Location, Subtasks, Start Time, End Time, Rows Processed, and State. There is one row listed: 'Jobs (0)'.

Note: The upper right corner of the IICS console displays Organization name, Notifications icon, User icon, and Help icon.

17. To view user-related information, click .



The screenshot shows the Informatica Monitor interface. In the top right corner, there is a user profile icon with a question mark over it. A dropdown menu is open, showing options: 'Info Cloud' (with the email 'info.ondemand@gmail.com'), 'Profile', and 'Log Out'. The 'Profile' option is highlighted.

Note: You can access user profile from this option.

18. To access online help, click .



The screenshot shows the Informatica Monitor interface. In the top right corner, there is a question mark icon with a blue outline. A dropdown menu is open, showing options: 'Online Help' (which is highlighted), 'Contact Support', 'Videos', 'Informatica Network', 'Success Academy', 'Marketplace', and 'Walkthroughs'. The 'Online Help' option is highlighted.

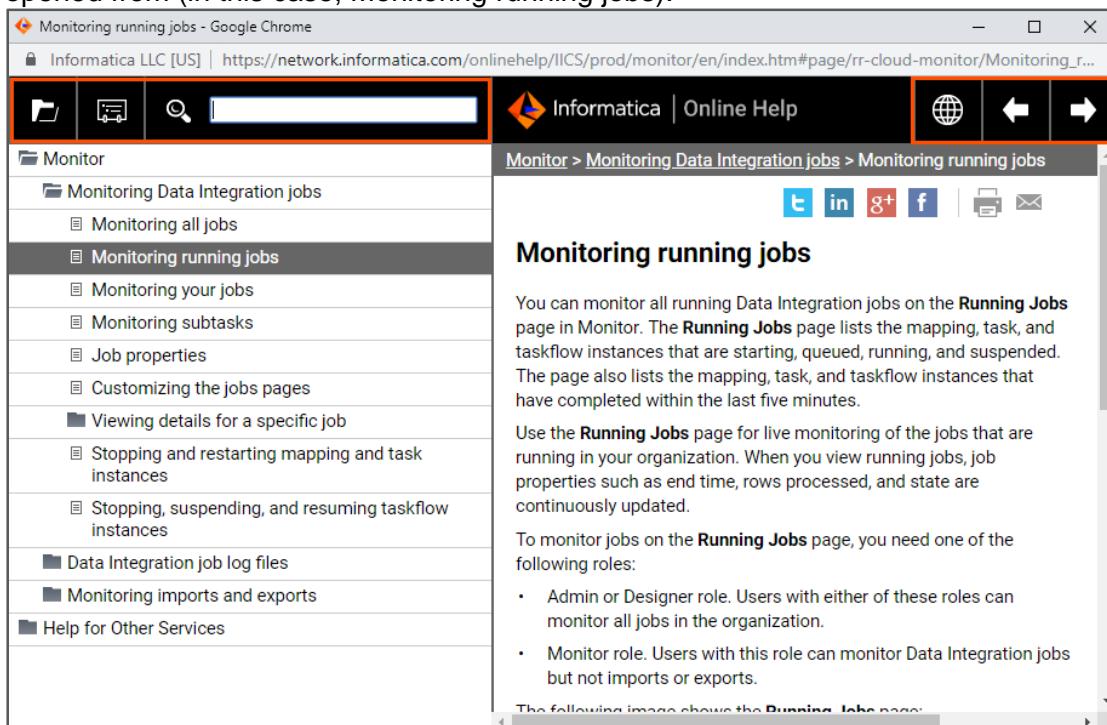
19. From the drop-down, select **Online Help**.



The screenshot shows the Informatica Monitor interface. In the top right corner, there is a question mark icon with a blue outline. A dropdown menu is open, showing options: 'Online Help' (which is highlighted), 'Contact Support', 'Videos', 'Informatica Network', 'Success Academy', 'Marketplace', and 'Walkthroughs'. The 'Online Help' option is highlighted. The main content area displays the 'Online Help' page for 'Monitoring running jobs'.

Note: The Online Help opens in the new browser window or tab.

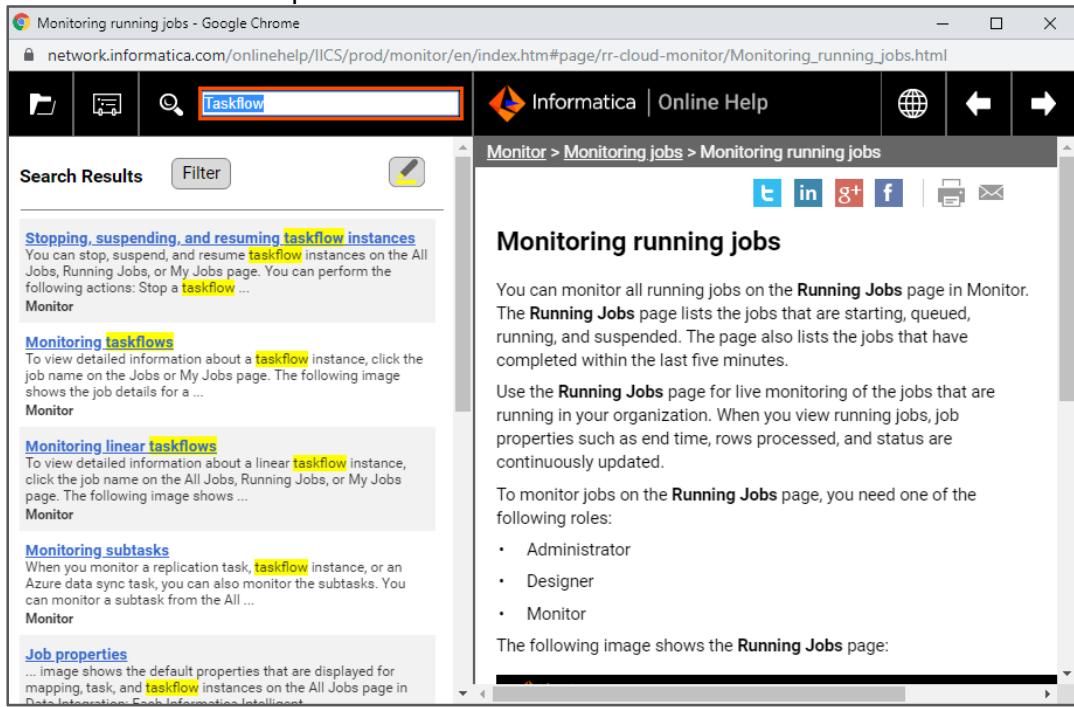
20. By default, Online Help shows the information related to the page it was originally opened from (in this case, Monitoring running jobs).



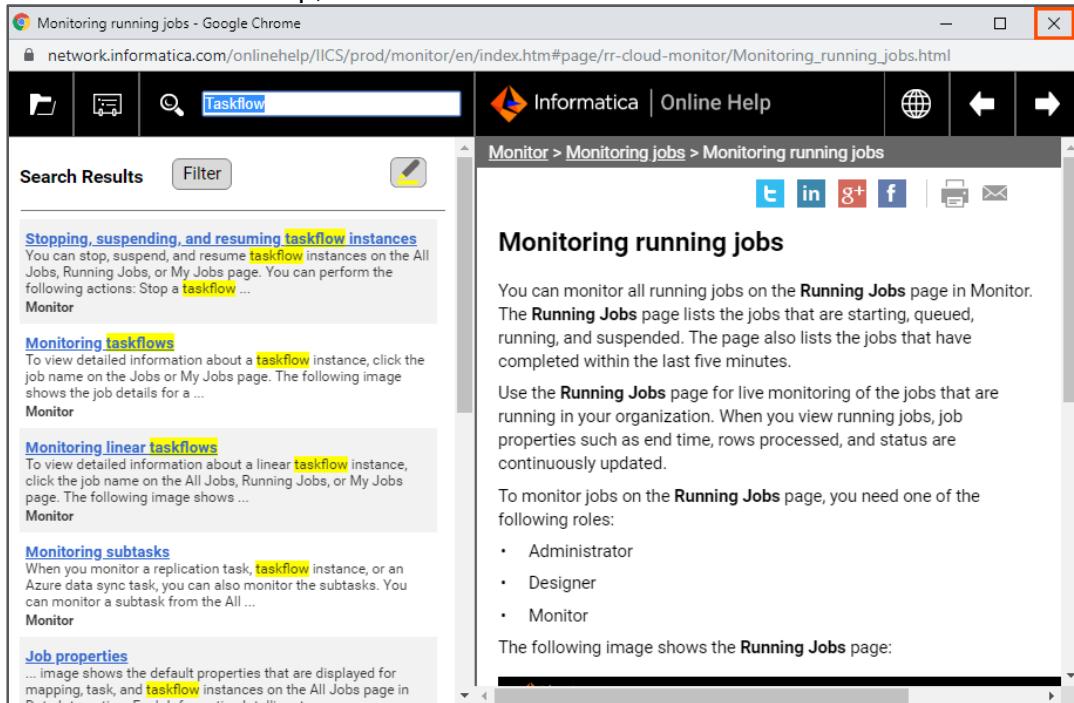
The screenshot shows a browser window titled 'Monitoring running jobs - Google Chrome'. The address bar shows the URL: 'Informatica LLC [US] | https://network.informatica.com/onlinehelp/IICS/prod/monitor/en/index.htm#page/rr-cloud-monitor/Monitoring_r...'. The left sidebar has a tree view with the following items: 'Monitor' (selected), 'Monitoring Data Integration jobs', 'Monitoring all jobs', 'Monitoring running jobs' (highlighted in grey), 'Monitoring your jobs', 'Monitoring subtasks', 'Job properties', 'Customizing the jobs pages', 'Viewing details for a specific job', 'Stopping and restarting mapping and task instances', 'Stopping, suspending, and resuming taskflow instances', 'Data Integration job log files', 'Monitoring imports and exports', and 'Help for Other Services'. The main content area is titled 'Informatica | Online Help' and shows the 'Monitoring running jobs' page. The page content includes: 'Monitoring running jobs', 'You can monitor all running Data Integration jobs on the Running Jobs page in Monitor. The Running Jobs page lists the mapping, task, and taskflow instances that are starting, queued, running, and suspended. The page also lists the mapping, task, and taskflow instances that have completed within the last five minutes.', 'Use the Running Jobs page for live monitoring of the jobs that are running in your organization. When you view running jobs, job properties such as end time, rows processed, and state are continuously updated.', 'To monitor jobs on the Running Jobs page, you need one of the following roles:', and a bulleted list: '- Admin or Designer role. Users with either of these roles can monitor all jobs in the organization.' and '- Monitor role. Users with this role can monitor Data Integration jobs but not imports or exports.' At the bottom of the page, there is a note: 'The following image shows the Running Jobs page.'

Note: You can browse the Online Help as per the Content, Index, Search, and navigate to the Next and Previous help articles.

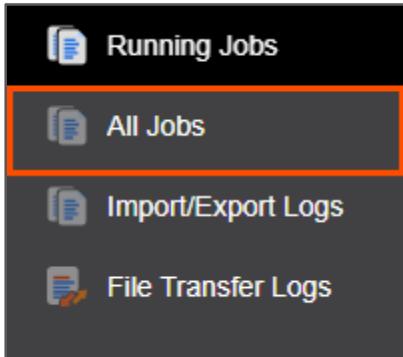
21. Search the Online Help for the term **Taskflow** and observe the results.



22. To close the online help, click



23. You can also view the status of all your tasks from the **All Jobs** tab.



This concludes the lab.

Module 2: Runtime Environments and Connections

Lab 2-1: Creating a Salesforce Connection

Overview:

In IICS, a connection allows you to gain access to data which is available on Cloud and on-premise applications such as platforms, databases, and flat files. After you create a connection in IICS, it is available to all users in the organization.

A Salesforce connection allow you to securely read data from or write data to Salesforce sources or targets.

Objective:

- Create a Salesforce connection

Scenario:

Now that Ruby has installed the secure agent, Joseph informs her that she needs to create a connection on IICS to connect to a data source. One of the outlets of NH Retails manages data on Salesforce. So, Ruby needs to create a Salesforce connection to read data from Salesforce.

In this lab, Ruby will create a Salesforce connection.

Duration:

20 minutes

Note: Before starting this lab, you must have a functional Salesforce Developer account. If you do not have a Salesforce Developer account, create one by using the following URL:

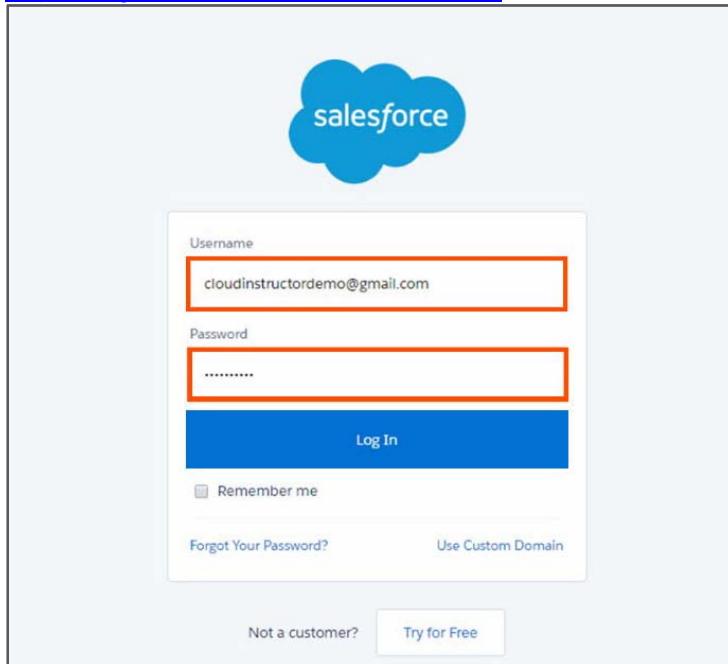
<https://developer.salesforce.com/signup>

IICS accesses Salesforce.com through API. You must reset your Salesforce.com security token (unless you have previously accessed the API from your current machine). You must execute this process only once.

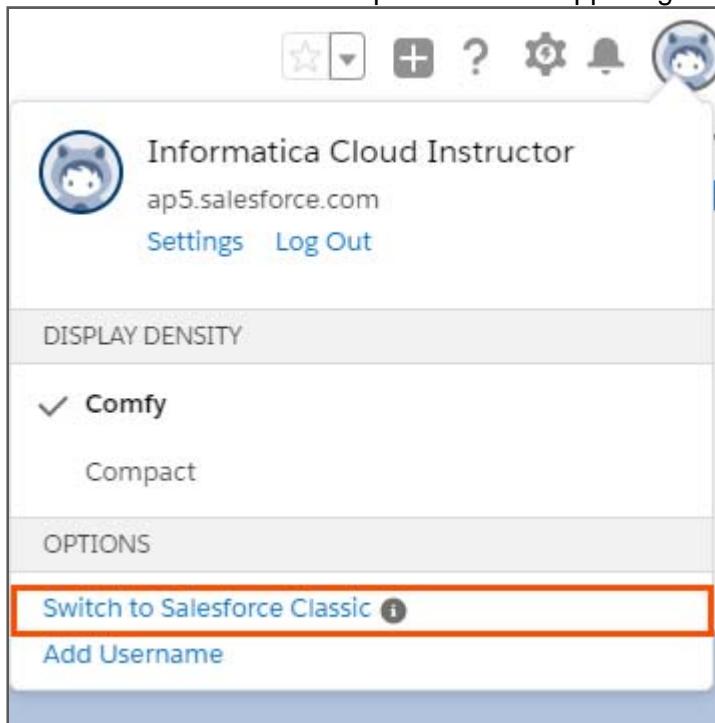
Tasks:**Reset your Security Token in Salesforce.com:**

1. Open a new tab in the web browser (recommended: Firefox/Google Chrome).
2. Log in to Salesforce.com using your Salesforce Developer credentials:

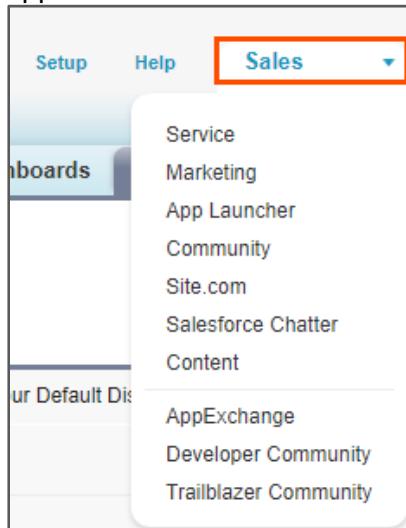
<https://login.salesforce.com/?locale=in>



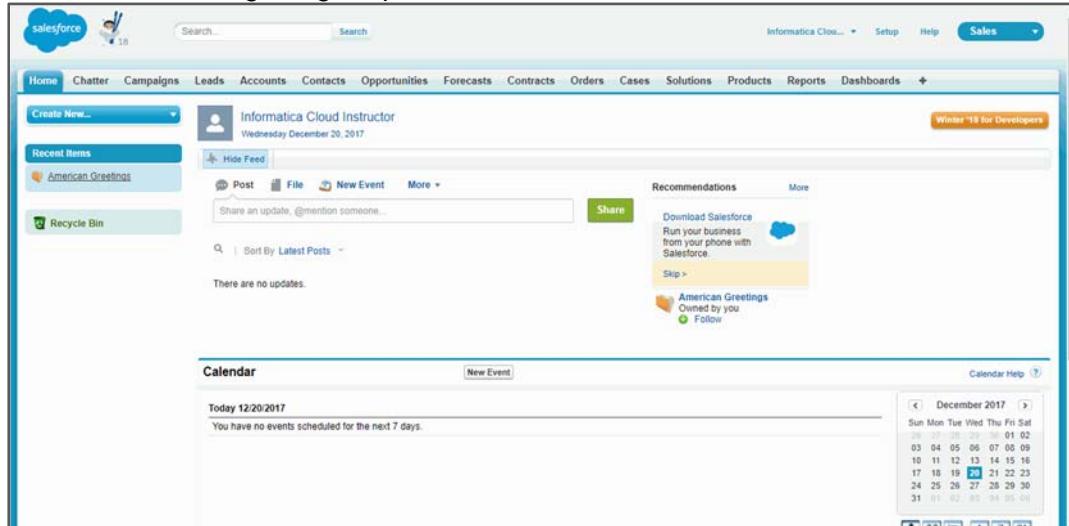
Note: This lab is based on the Classic version of Salesforce. If you are using the Lightning version, switch to the Classic version. The option to switch versions is available under the User drop-down in the upper right corner of the user interface.



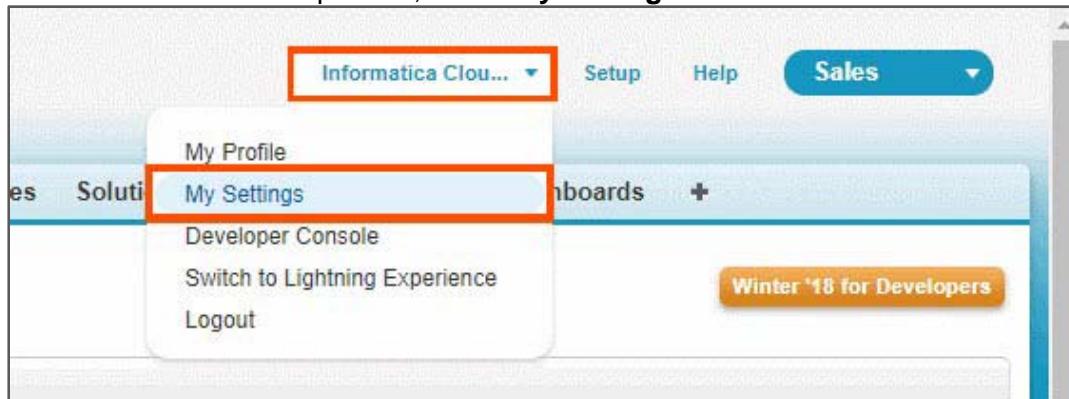
Note: For better visibility of tabs in Salesforce, you must select **Sales** from Salesforce app menu.



Note: The following image represents the Classic version view of Salesforce.

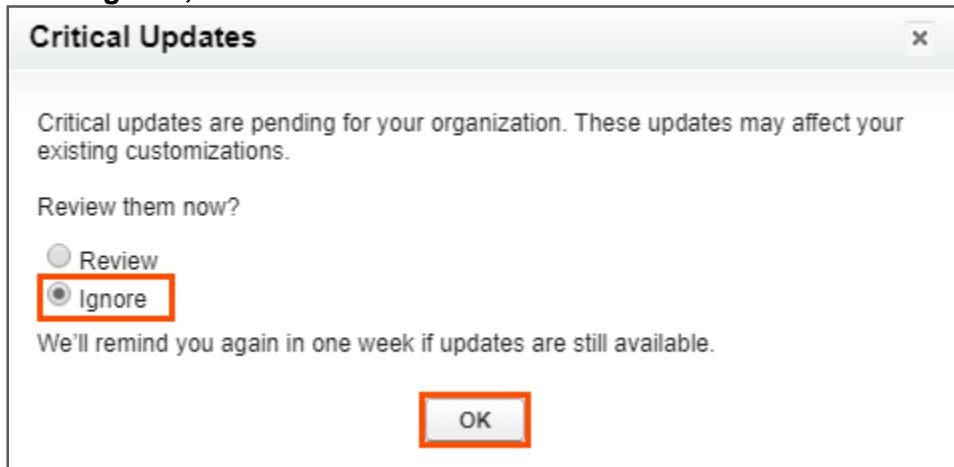


- From the Username drop-down, select **My Settings**.

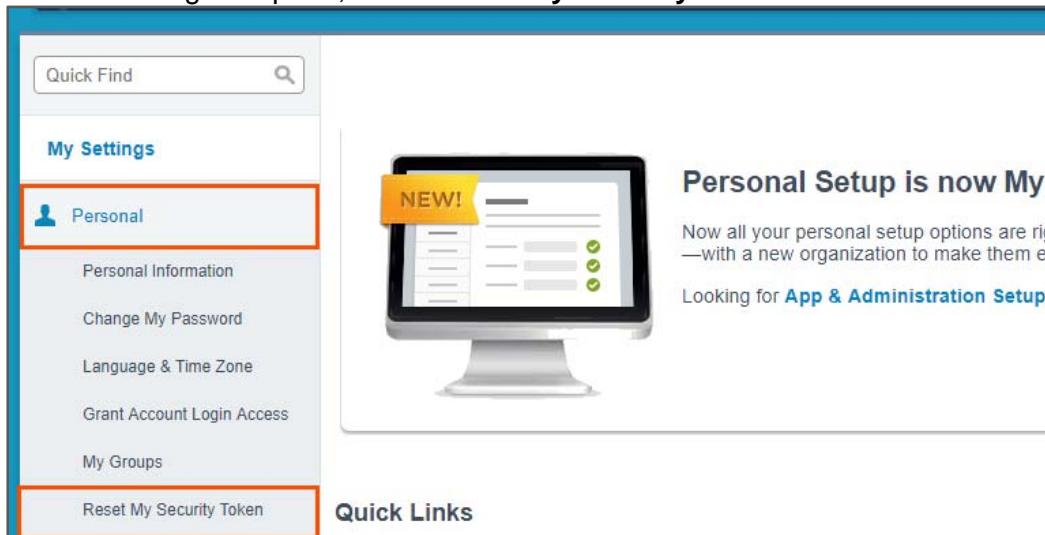


Note: The Critical Updates window appears.

4. Select **Ignore**, and click **OK**.

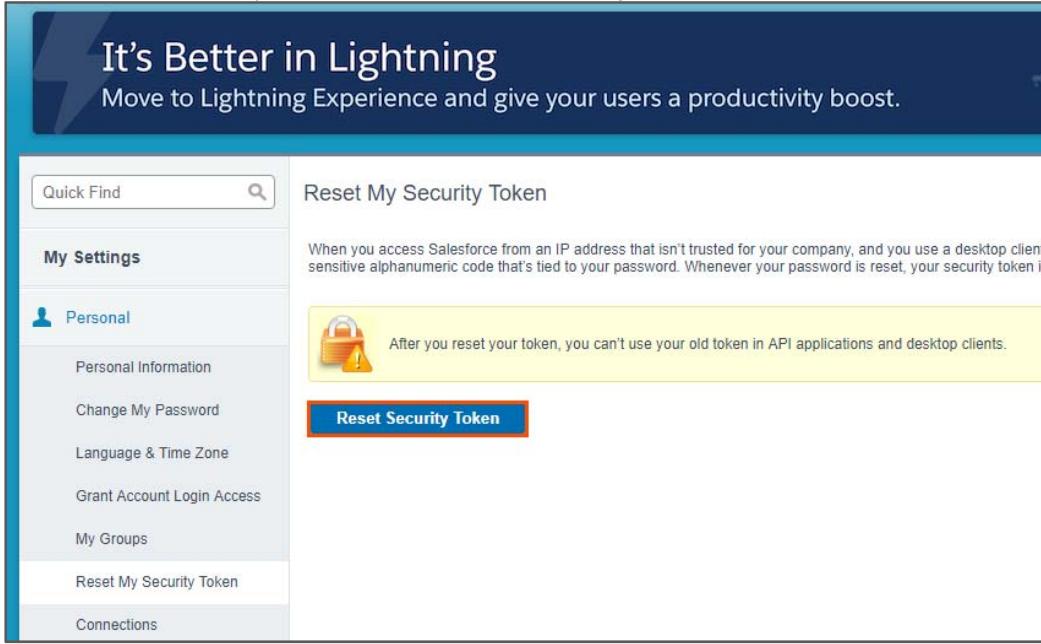


5. From the **My Settings** page, drill down to **Personal**.
6. From the navigation pane, select **Reset My Security Token**.



The screenshot shows the "My Settings" page. On the left, there's a "Quick Find" search bar. The main area has a sidebar titled "My Settings" with several options: "Personal" (highlighted with a red box), "Personal Information", "Change My Password", "Language & Time Zone", "Grant Account Login Access", "My Groups", and "Reset My Security Token" (also highlighted with a red box). To the right of the sidebar, there's a large image of a computer monitor displaying a dashboard with a "NEW!" badge. The text next to the image says: "Personal Setup is now My" and "Now all your personal setup options are right here—with a new organization to make them easier to find." Below the image is a link: "Looking for App & Administration Setup?". At the bottom of the main area, it says "Quick Links".

7. To reset the security token, click **Reset Security Token**.



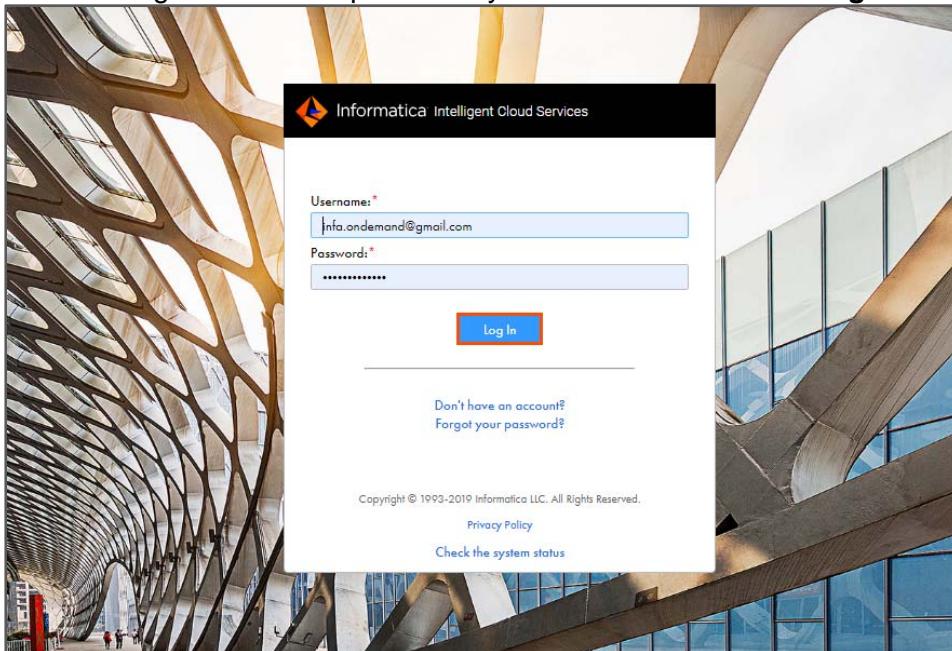
The screenshot shows the Salesforce Lightning Experience interface. At the top, a banner reads "It's Better in Lightning" and "Move to Lightning Experience and give your users a productivity boost.". Below the banner, the main content area has a title "Reset My Security Token". A note states: "When you access Salesforce from an IP address that isn't trusted for your company, and you use a desktop client sensitive alphanumeric code that's tied to your password. Whenever your password is reset, your security token is". A warning icon (a lock with a yellow exclamation mark) is shown next to the note. Below the note is a prominent blue button labeled "Reset Security Token". On the left side, there is a sidebar titled "My Settings" with a "Personal" section containing links: Personal Information, Change My Password, Language & Time Zone, Grant Account Login Access, My Groups, Reset My Security Token, and Connections.

Copy Security Token:

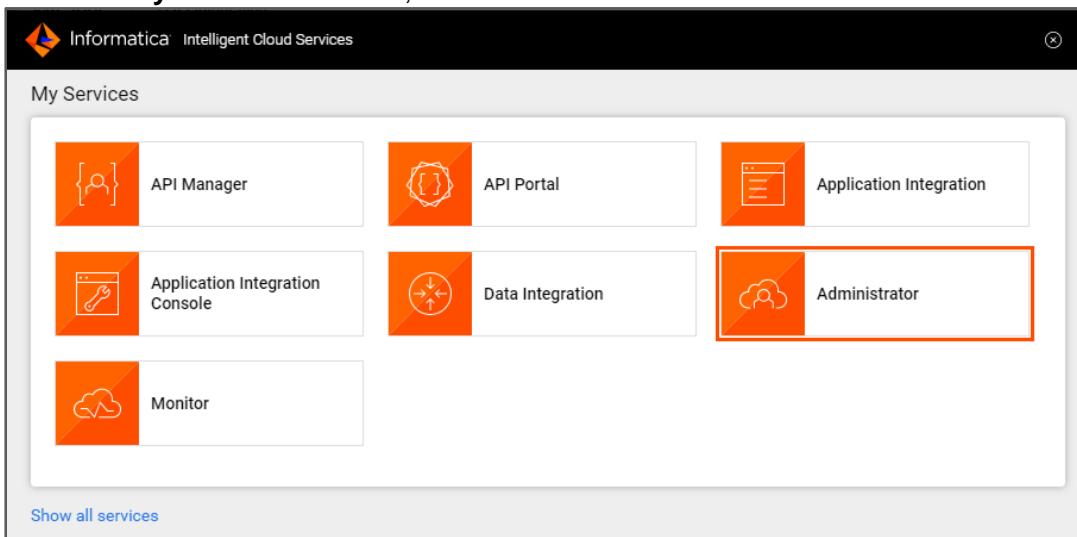
8. After you reset the security token, you will receive an email in your email id registered with Salesforce.
9. Open the email from support@salesforce.com from your mailbox.
10. Copy your security token and paste it in a text file.

Create a Salesforce Connection:

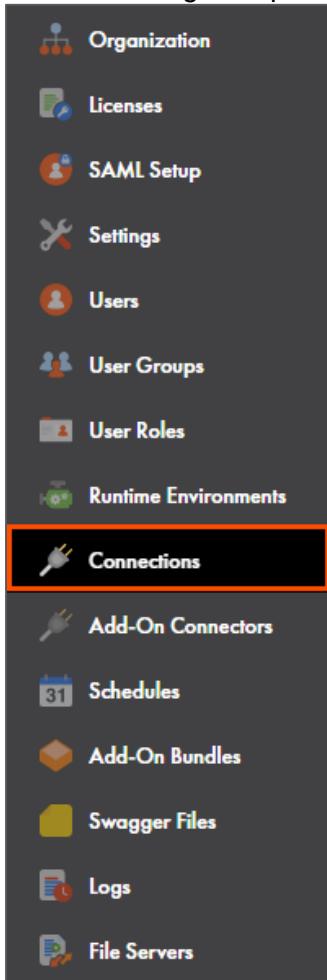
11. Open the IICS Login page from the bookmark bar.
Note: Follow this step if you have navigated away from the login page.
12. Enter the login credentials provided by the Instructor and click **Log In**.



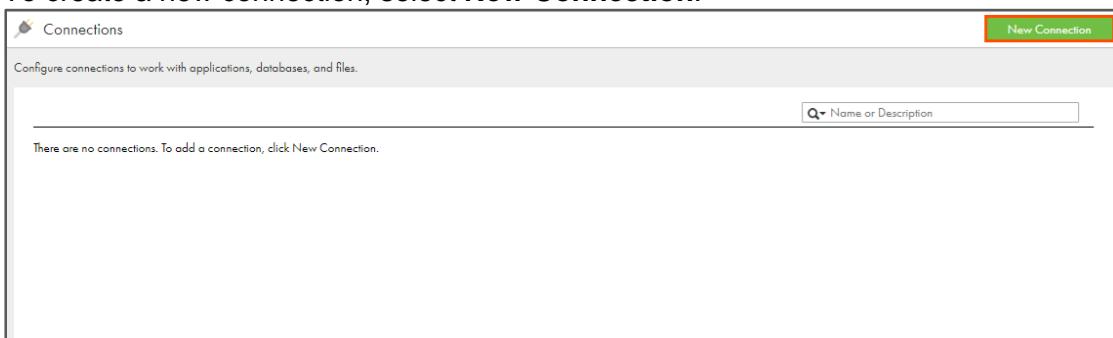
13. From the **My Services** window, select **Administrator**.



14. From the navigation pane, select **Connections**.



15. To create a new connection, select **New Connection**.

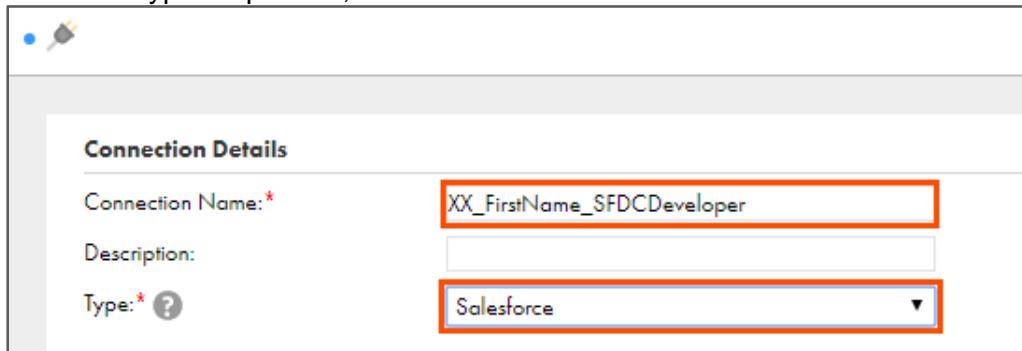


Note: The New Connection page appears.

16. Enter the Connection Name as **XX_FirstName_SFDCDeveloper**.

Note: Here, XX refers to your initials, and FIRSTNAME refers to your First Name. For example, if your Name is Bob William, then you must name the connection as BW-BOB-SFDCDeveloper.

17. From the Type drop-down, select **Salesforce**.

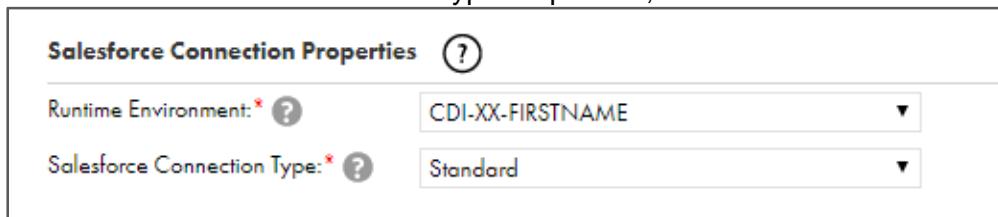


The screenshot shows the 'Connection Details' dialog. The 'Type' field is highlighted with a red border and contains the value 'Salesforce'. Other fields include 'Connection Name' (XX_FirstName_SFDCDeveloper) and 'Description'.

18. From the **Runtime Environment** drop-down, select your secure agent group.

Note: This was created in the lab GettingStarted_Installing_IICS_Secure_Agent_0-2. The Runtime Environment name will be in format CDI-XX-FIRSTNAME, where XX refers to your initials, and FIRSTNAME refers to your First Name.

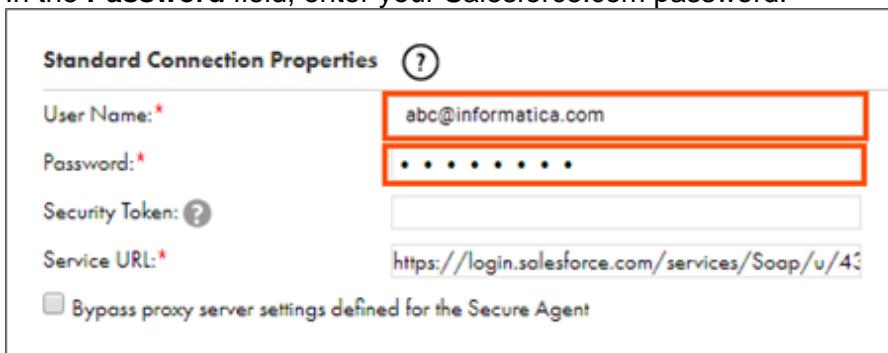
19. From the Salesforce Connection Type drop-down, select **Standard**.



The screenshot shows the 'Salesforce Connection Properties' dialog. The 'Salesforce Connection Type' field is highlighted with a red border and contains the value 'Standard'. Other fields include 'Runtime Environment' (CDI-XX-FIRSTNAME).

20. In the Standard Connection Properties section, in the **User Name** field, enter your Salesforce.com user name.

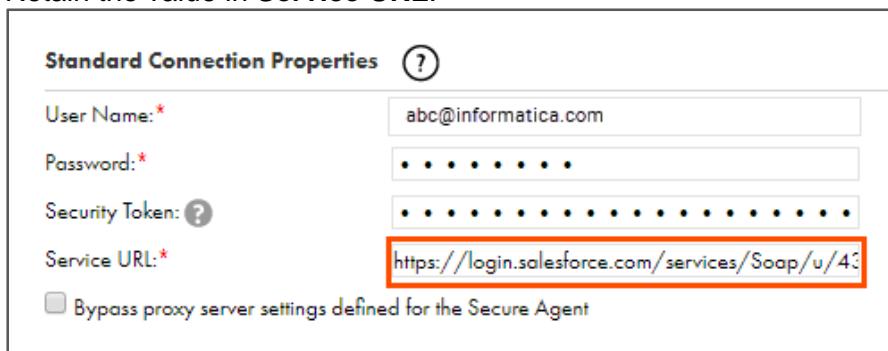
21. In the **Password** field, enter your Salesforce.com password.



The screenshot shows the 'Standard Connection Properties' dialog. The 'User Name' field is highlighted with a red border and contains the value 'abc@informatica.com'. The 'Password' field is also highlighted with a red border and contains several dots representing the password. Other fields include 'Service URL' (https://login.salesforce.com/services/Soap/u/43) and a checkbox for 'Bypass proxy server settings defined for the Secure Agent'.

22. In the **Security Token** field, paste your Salesforce.com security token copied in step 10.

23. Retain the value in **Service URL**.



The screenshot shows the 'Standard Connection Properties' dialog. The 'Service URL' field is highlighted with a red border and contains the value 'https://login.salesforce.com/services/Soap/u/43'. Other fields include 'User Name' (abc@informatica.com), 'Password' (dots), and a checkbox for 'Bypass proxy server settings defined for the Secure Agent'.

Note: By default, the Service URL contains the latest Salesforce API version. It is recommended not to change the Salesforce API version in Service URL, as some of the features are not available for older versions of Salesforce API.

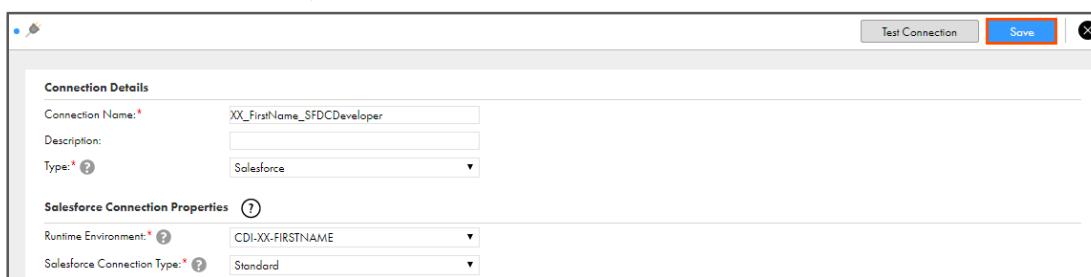
24. To test the connection, click **Test Connection**.

Note: A message '**The test for the connection was successful**' appears.



The screenshot shows a configuration window for a connection. At the top right are buttons for 'Test Connection' (highlighted with a red box), 'Save', and a close button. Below the buttons is a success message: 'The test for this connection was successful.' in a green box. The main area contains 'Connection Details' and 'Salesforce Connection Properties'. Under 'Connection Details', 'Connection Name' is set to 'XX_FirstName_SFDCDeveloper', 'Type' is 'Salesforce', and 'Runtime Environment' is 'CDI-XX-FIRSTNAME'. Under 'Salesforce Connection Properties', 'Salesforce Connection Type' is 'Standard'. The entire window has a light gray background.

25. To save the connection, click **Save**.



This screenshot is identical to the previous one, showing the same configuration window for a connection. The 'Save' button at the top right is highlighted with a red box. The rest of the interface, including the connection details and properties, remains the same.

This concludes the lab.

Module 2: Runtime Environments and Connections

Lab 2-2: Creating a Flat File Connection

Overview:

Flat file connections store the information to create, access, and store flat files.

Objective:

- Create a flat file connection

Scenario:

As mentioned earlier, different outlets of NH Suppliers manage data on different data sources. The outlet in California uses flat files to organize the everyday sales data. So, in this lab, Ruby will create a Flat File connection to access flat files on her local machine.

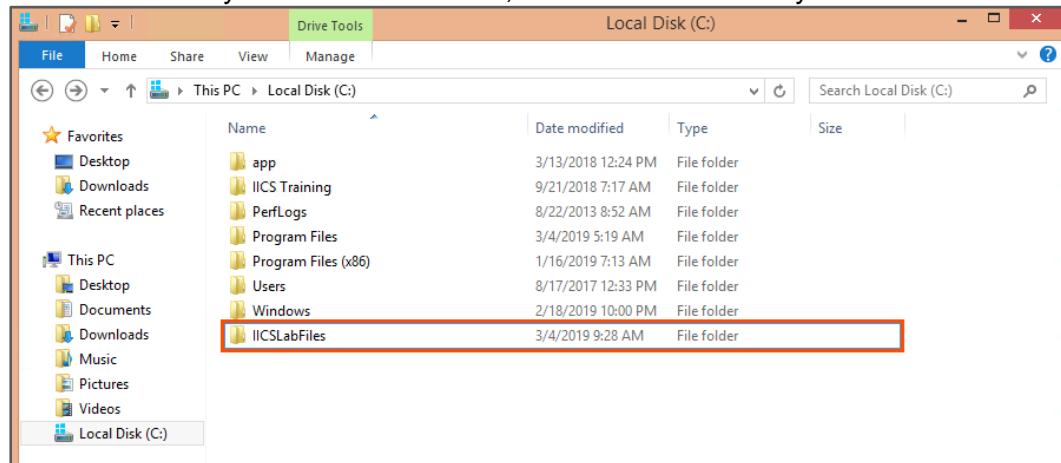
Duration:

5 minutes

Tasks:

Create a Flat File Directory on your local computer:

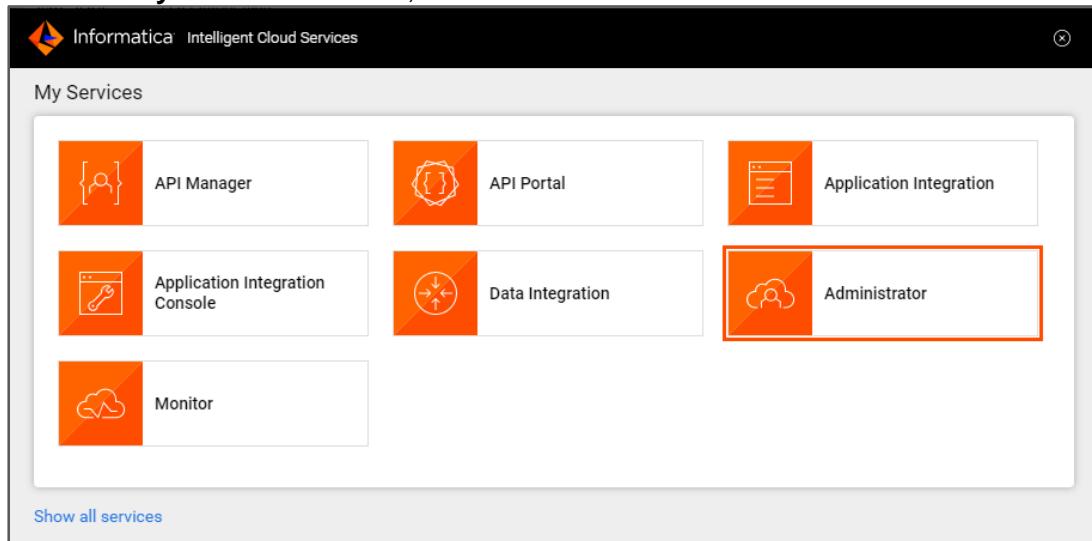
1. In the C drive of your Ravello machine, create a new directory named **IICSLabFiles**.



Create a Flat File Connection in IICS:

2. Open the IICS Login page from the bookmark bar.
3. Enter the login credentials provided by the Instructor and click **Log In**.

4. From the **My Services** window, select **Administrator**.

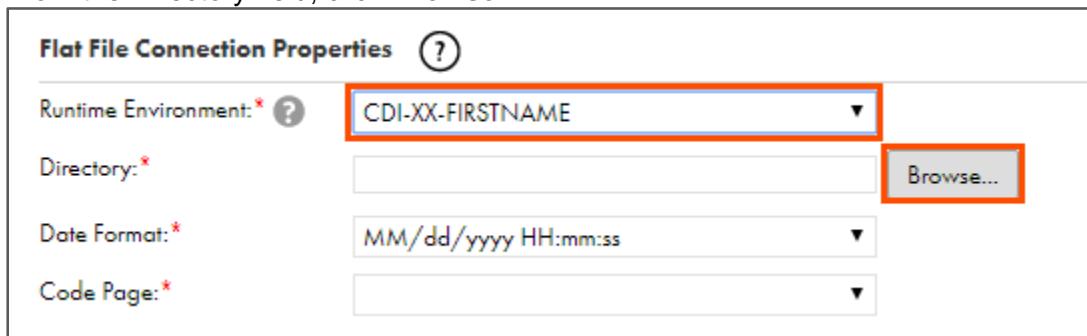


5. From the navigation pane, select **Connections**.
 6. To create a new connection, select **New Connection**.

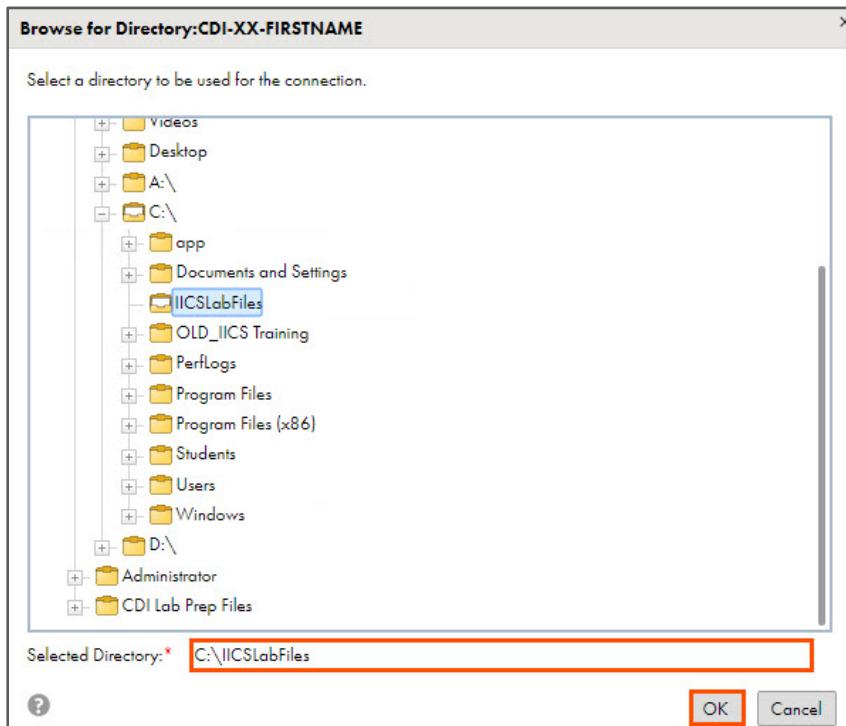


7. Enter the Connection Name as **XX_FirstName_LocalCSVFiles**.
Note: XX refers to your initials, and FirstName refers to your First Name.
 8. From the Type drop-down, select **Flat File**.
9. From the **Runtime Environment** drop-down, select your secure agent group.
Note: The Runtime Environment name will be in format CDI-XX-FIRSTNAME, where XX refers to your initials, and FirstName refers to your First Name.

10. From the Directory field, click **Browse**.

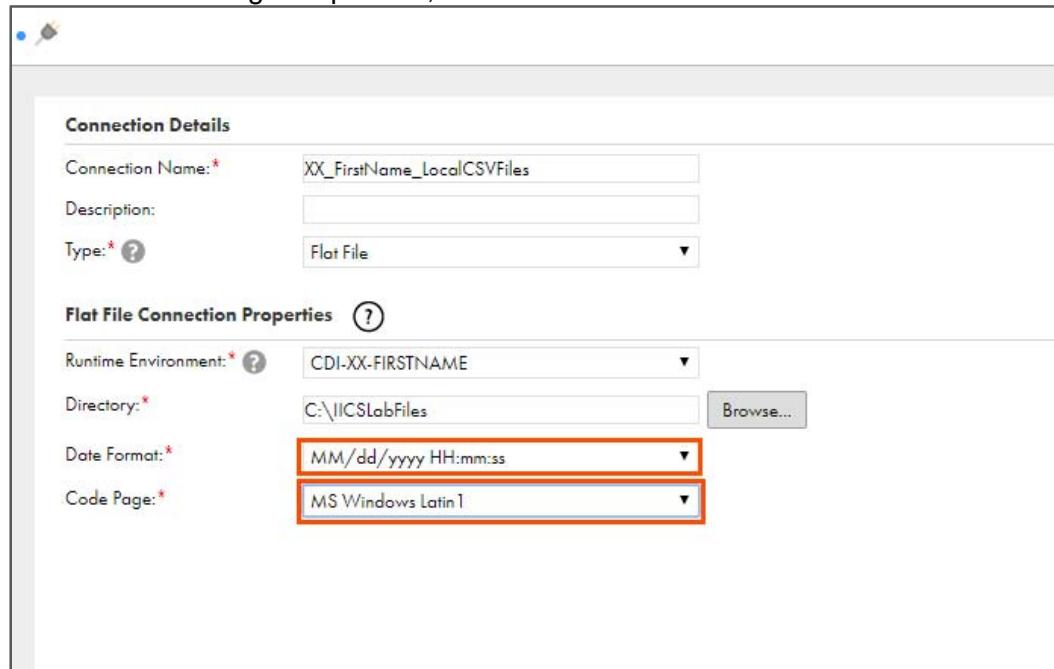


11. Browse to **C:\IICSLabFiles** and click **OK**.



12. Retain the value in the **Date Format** field.

13. From the Code Page drop-down, select **MS Windows Latin1**.



Connection Details

Connection Name: * XX_FirstName_LocalCSVFiles

Description:

Type: * Flat File

Flat File Connection Properties

Runtime Environment: * CDI-XX-FIRSTNAME

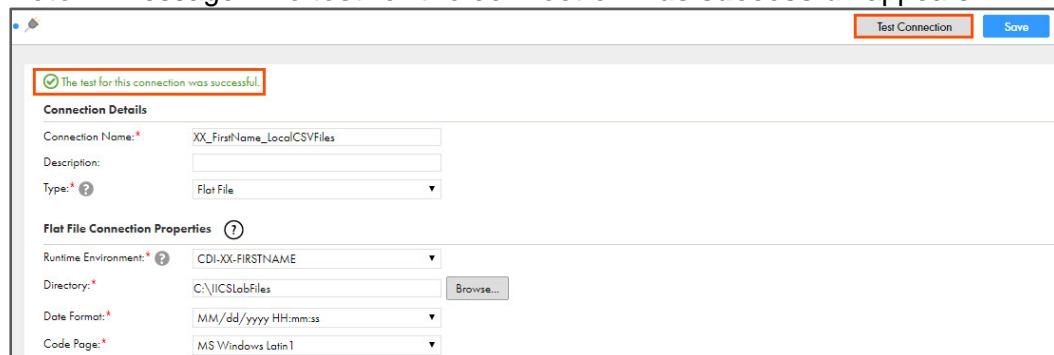
Directory: * C:\IICSLabFiles

Date Format: * MM/dd/yyyy HH:mm:ss

Code Page: * MS Windows Latin1

14. To test the connection, click **Test Connection**.

Note: A message '**The test for the connection was successful**' appears.



Connection Details

Connection Name: * XX_FirstName_LocalCSVFiles

Description:

Type: * Flat File

Flat File Connection Properties

Runtime Environment: * CDI-XX-FIRSTNAME

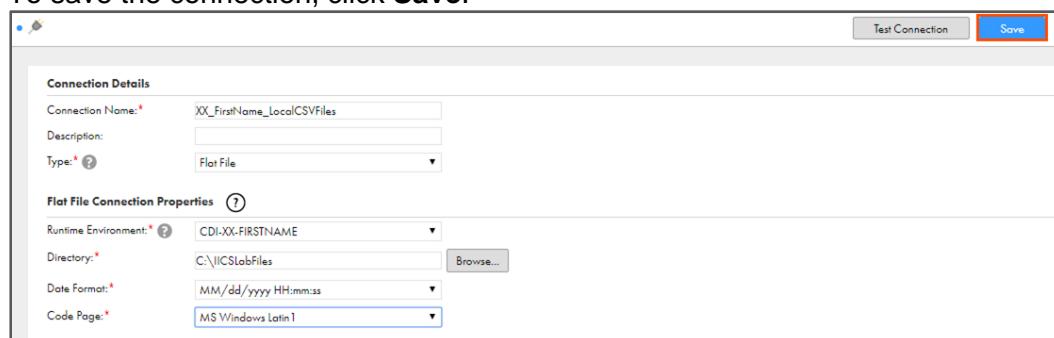
Directory: * C:\IICSLabFiles

Date Format: * MM/dd/yyyy HH:mm:ss

Code Page: * MS Windows Latin1

(Success message: The test for this connection was successful.)

15. To save the connection, click **Save**.



Connection Details

Connection Name: * XX_FirstName_LocalCSVFiles

Description:

Type: * Flat File

Flat File Connection Properties

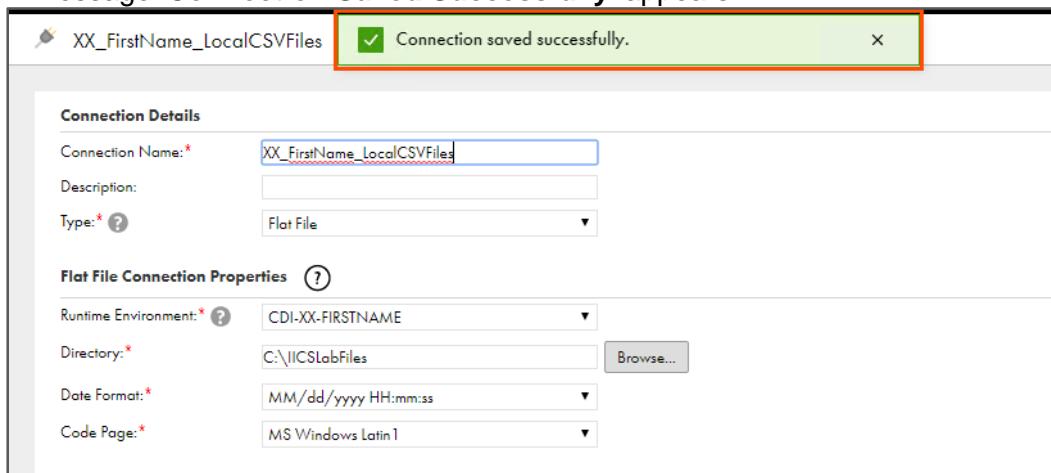
Runtime Environment: * CDI-XX-FIRSTNAME

Directory: * C:\IICSLabFiles

Date Format: * MM/dd/yyyy HH:mm:ss

Code Page: * MS Windows Latin1

16. A message 'Connection Saved Successfully' appears.



This concludes the lab.

Module 2: Runtime Environments and Connections

Lab 2-3: Creating an Oracle connection

Overview:

In IICS, you can connect to Oracle Database Cloud Service through an Oracle connection.

In this lab, you will create an Oracle Connection in IICS.

Objective:

- Create an oracle connection

Scenario:

The Alaska outlet of NH suppliers uses Oracle database to manage the sales data. So, to integrate data from oracle database, Ruby must create an Oracle Connection.

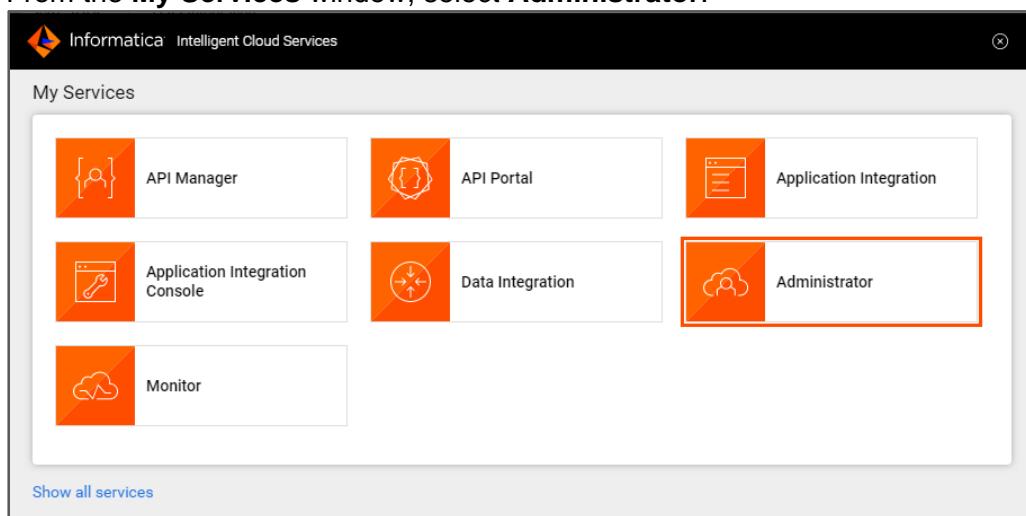
Duration:

5 minutes

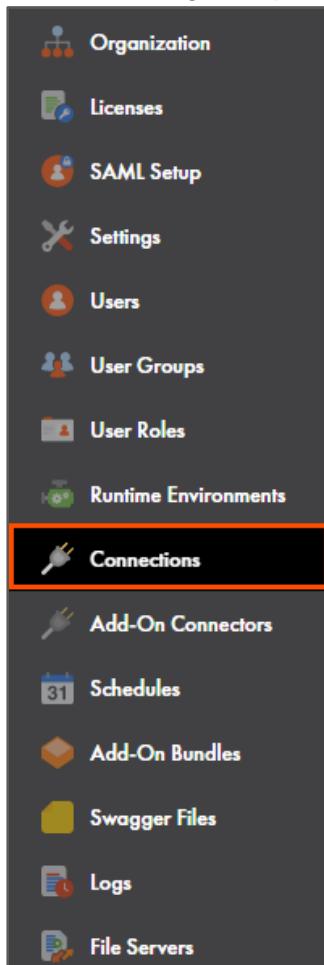
Tasks:

Create Oracle Connection:

1. Open the IICS Login page from the bookmark bar.
Note: Follow this step if you have navigated away from the login page.
2. Enter the login credentials provided by the Instructor and click **Log In**.
3. From the **My Services** window, select **Administrator**.



4. From the navigation pane, select **Connections**.



5. To create a new connection, select **New Connection**.



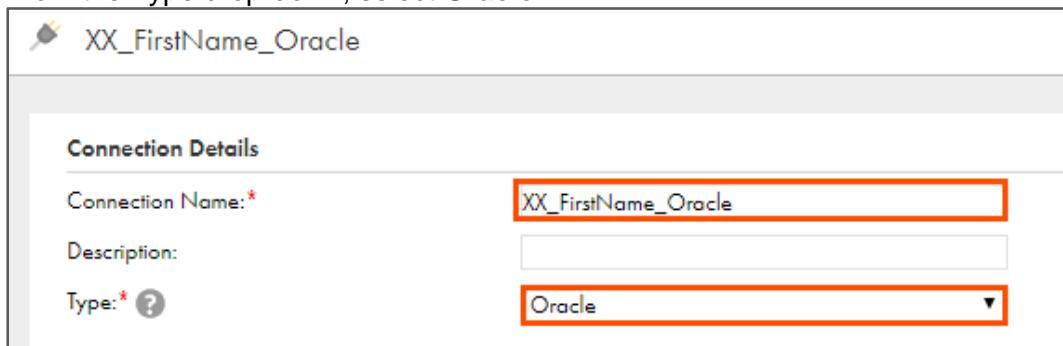
The screenshot shows the 'Connections' page. At the top right, there is a green button labeled 'New Connection'. Below it, a table lists existing connections:

Actions	Name	Type	Runtime Environment	Service URL
	XX_FirstName_LocalCSVFiles	Flat File	CDI-XX-FIRSTNAME	C:\JCSlobFiles
	XX_FirstName_SFDCDeveloper	Salesforce	CDI-XX-FIRSTNAME	https://login.salesforce.com/services/Soap/u/46.0

6. In the Name field, enter **XX_FirstName_Oracle**.

Note: XX refers to your initials, and FirstName refers to your First Name.

7. From the Type drop-down, select **Oracle**.



Connection Details

Connection Name: * XX_FirstName_Oracle

Description:

Type: * Oracle

8. From the **Runtime Environment** drop-down, select your secure agent group.



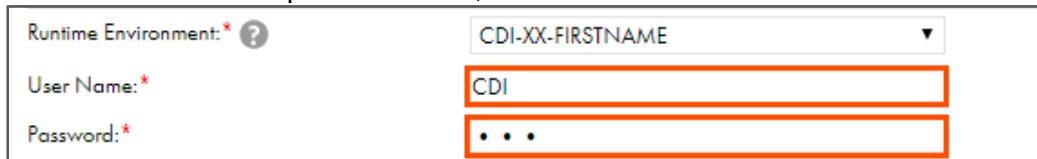
Type: * Oracle

Oracle Connection Properties

Runtime Environment: * CDI-XX-FIRSTNAME

Note: The Runtime Environment name will be in CDI-XX-FIRSTNAME format, where XX refers to your initials, and FIRSTNAME refers to your First Name.

9. In the Username and password field, enter **CDI**.



Runtime Environment: * CDI-XX-FIRSTNAME

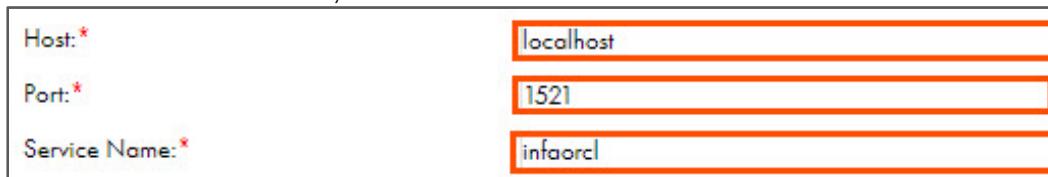
User Name: * CDI

Password: * • • •

Note: The Password is case-sensitive.

10. In the Host field, enter **localhost**, and retain Port as **1521**.

11. In the Service Name field, enter **infaorcl**.

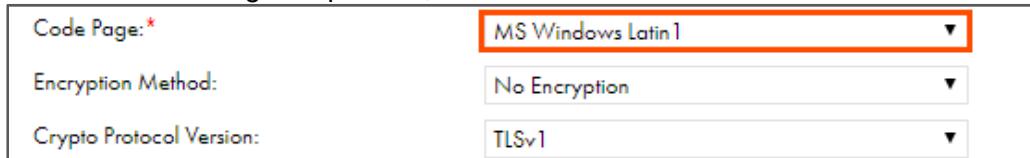


Host: * localhost

Port: * 1521

Service Name: * infaorcl

12. From the Code Page drop-down, select **MS Windows Latin 1**.



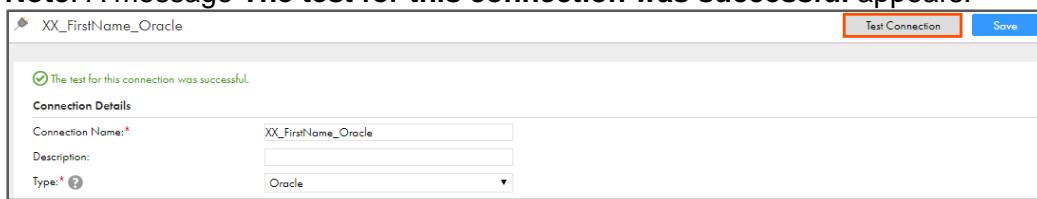
Code Page: * MS Windows Latin1

Encryption Method: No Encryption

Crypto Protocol Version: TLSv1

13. To test the connection, click **Test Connection**.

Note: A message **The test for this connection was successful** appears.



XX_FirstName_Oracle

The test for this connection was successful.

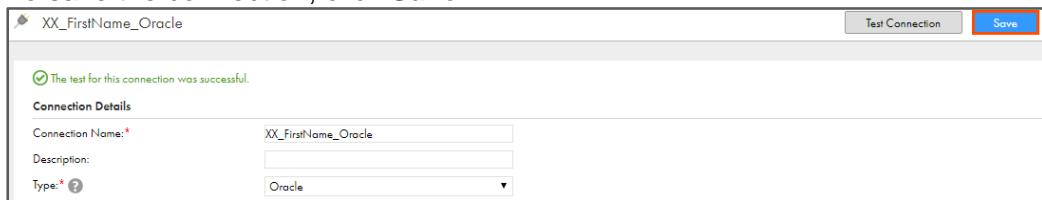
Connection Details

Connection Name: * XX_FirstName_Oracle

Description:

Type: * Oracle

14. To save the connection, click **Save**.



The screenshot shows the 'Connection Details' dialog box for a connection named 'XX_FirstName_Oracle'. At the top, there is a message: 'The test for this connection was successful.' Below this, there are three fields: 'Connection Name:' with the value 'XX_FirstName_Oracle', 'Description:' with an empty field, and 'Type:' with a dropdown menu set to 'Oracle'. In the top right corner, there are two buttons: 'Test Connection' and 'Save'. The 'Save' button is highlighted with a red rectangle.

This concludes the lab.

Module 3: Synchronizaton Task

Lab 3-1: Creating a Synchronization Task

Overview:

The Synchronization task synchronizes data between a source and a target. The Data Synchronization application supports Insert, Update, Upsert, and Delete operations.

Objective:

- Create and configure a synchronization task
- Run the task and validate the results in Salesforce

Scenario:

After Ruby creates the connections in IICS, she asks Joseph about the process to integrate data between various data sources. To this, Joseph says that she must create a Synchronization task in IICS. In this lab, Ruby will create a synchronization task to load outlet data from a CSV file to the Account object in Salesforce.

Duration:

15 minutes

Tasks:

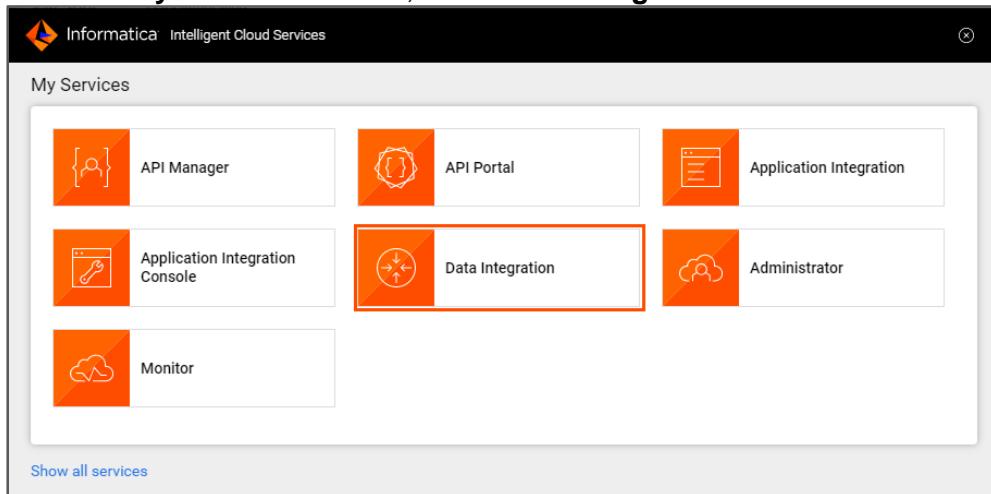
Copy Source Files:

1. Copy the **Outlets.csv** file from the CDI Lab Prep Files folder available on your desktop and paste it in your flat file directory (C:\IICSLabFiles).
2. Open the **Outlets.csv** file and note the number of records in the file. Also, note some of the outlet names in the file.
Note: Close the **Outlets.csv** file before running the task to avoid job failure.

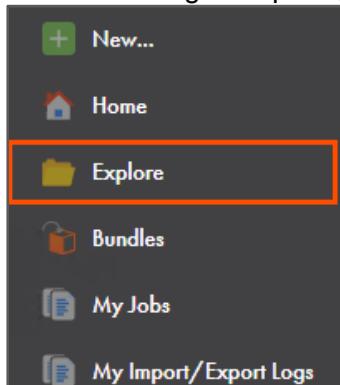
Create a Synchronization task in IICS:

3. Open the IICS Login page from the Bookmarks bar.
Note: Follow this step if you have navigated away from the login page.
4. Enter the login credentials provided by the Instructor and click **Log In**.

5. From the **My Services** window, select **Data Integration**.



6. From the navigation pane, select **Explore**.



7. Select the Project provided by the instructor.

Note: Here, the Project name is **CDI ILT Development**.

All Projects (3)					
	Name	Type	Updated On	Location	Description
<input type="checkbox"/>	Add-On Bundles	Project	Jul 31, 2019, 11:16 PM		
<input type="checkbox"/>	CDI ILT Development	Project	Aug 6, 2019, 4:42 AM		
<input type="checkbox"/>	Default	Project	Jul 31, 2019, 11:16 PM		Auto-generated Default Project

8. Open the **CDI ILT Development** project.

9. To add a folder in this project, select **New Folder**.

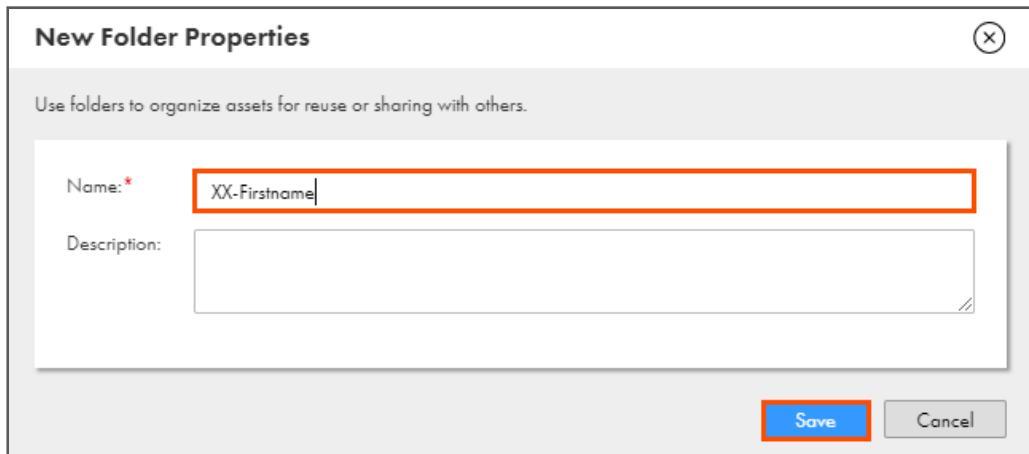
CDI ILT Development (0) All selected						
	Name	Type	Updated On	Description	Tags	Status

Note: A New Folder Properties window appears.

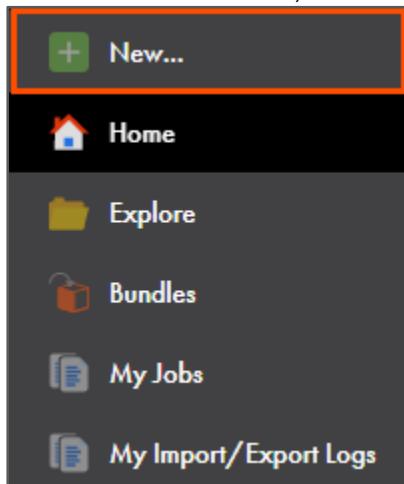
10. In the Name field, enter the name as **XX-Firstname**.

Note: XX refers to your initials, and Firstname refers to your First Name. For example, if your Name is Bob William, then you must name the folder as BW-BOB.

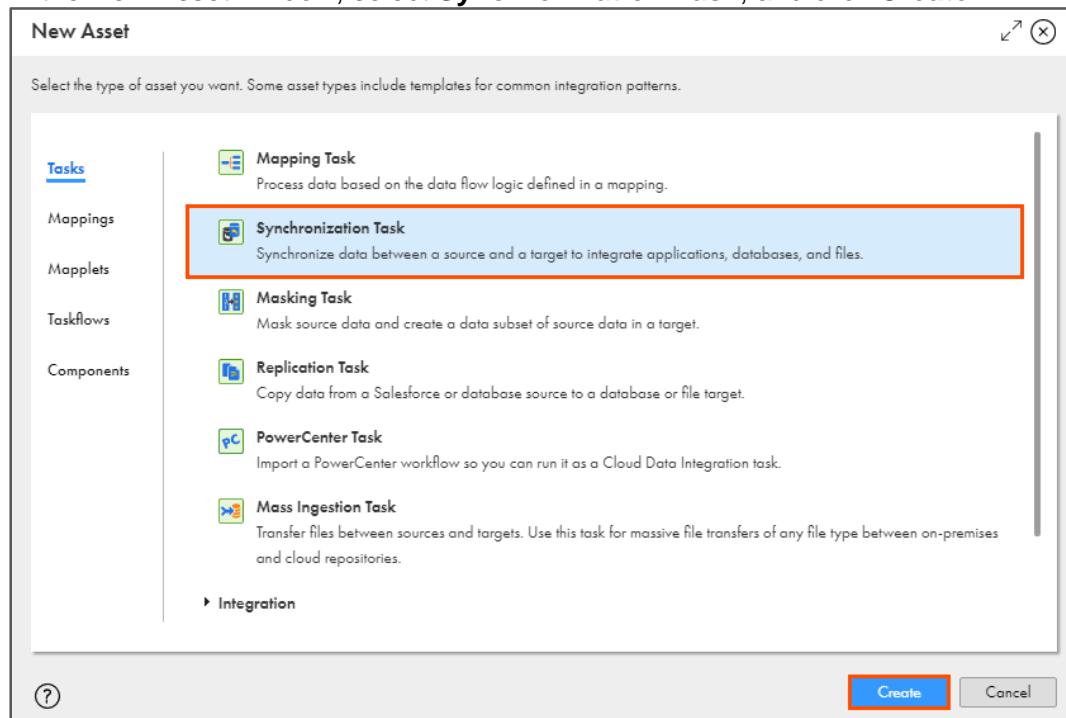
11. Click **Save**.



12. To create a new asset, from the navigation pane, select **New**.



13. In the New Asset window, select **Synchronization Task**, and click **Create**.



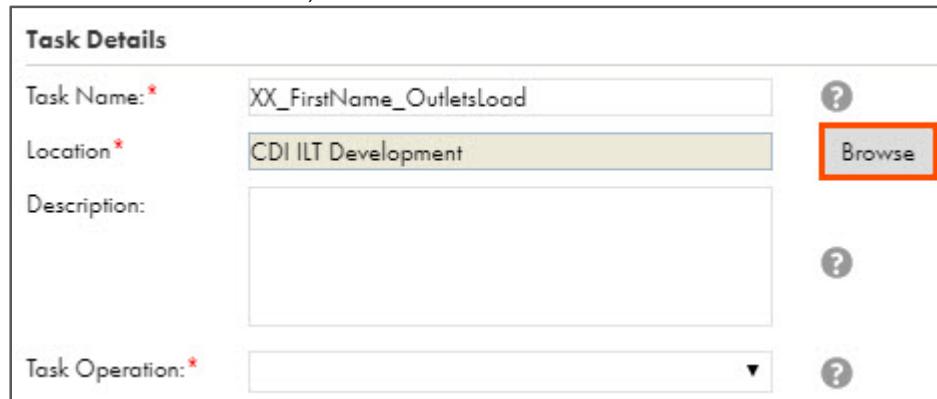
Note: A six-step Synchronization Task wizard appears.

Specify Definition Information:

14. In the Task Name field, enter **XX_FirstName_OutletsLoad**.

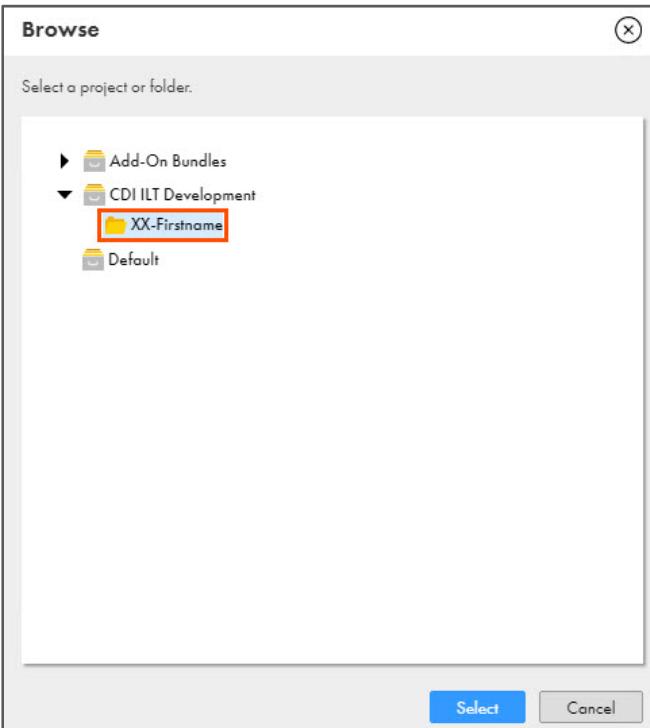
Note: XX refers to your initials, and FirstName refers to your First Name.

15. From the Location field, select **Browse**.



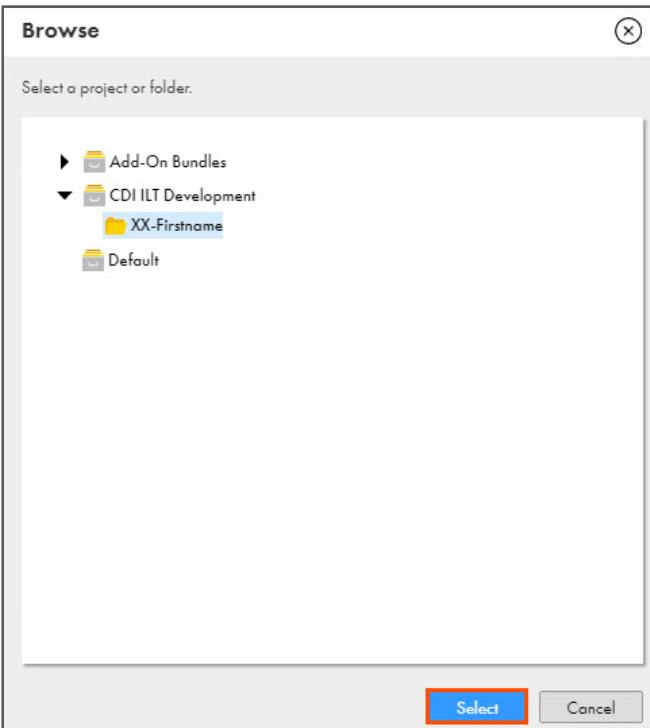
The screenshot shows the 'Task Details' dialog box. It has several input fields: 'Task Name:' with value 'XX_FirstName_OutletsLoad', 'Location:' with value 'CDI ILT Development' (which is highlighted with a red box), 'Description:' (empty), and 'Task Operation:' (a dropdown menu). To the right of each field is a question mark icon. The 'Browse' button next to the Location field is also highlighted with a red box.

16. In the Browse window, expand the CDI ILT Development folder, and select **XX-Firstname**.

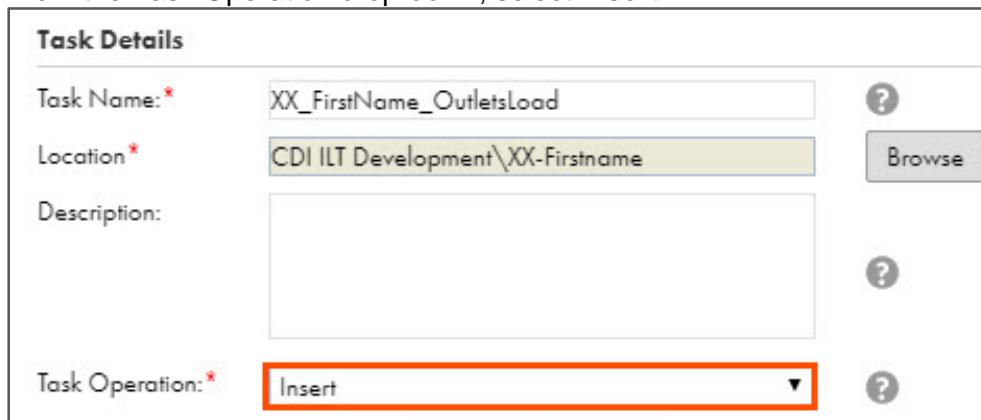


Note: Here, XX refers to your initials, and FirstName refers to your First Name.

17. Click **Select**.

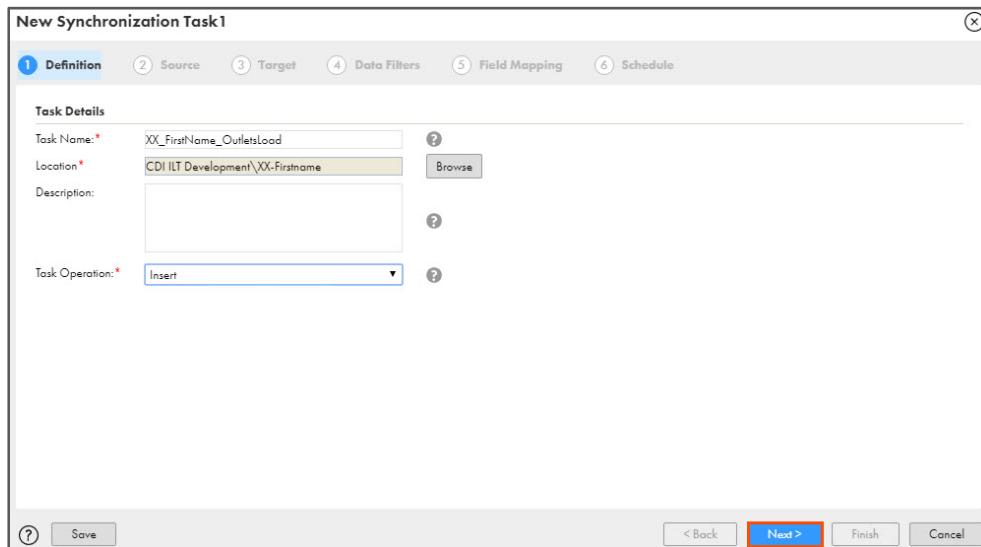


18. From the Task Operation drop-down, select **Insert**.



The screenshot shows the 'Task Details' dialog. The 'Task Name' field contains 'XX_FirstName_OutletsLoad'. The 'Location' field is set to 'CDI ILT Development\XX-Firstname'. The 'Task Operation' dropdown is highlighted with a red box and contains the value 'Insert'.

19. Click **Next**.



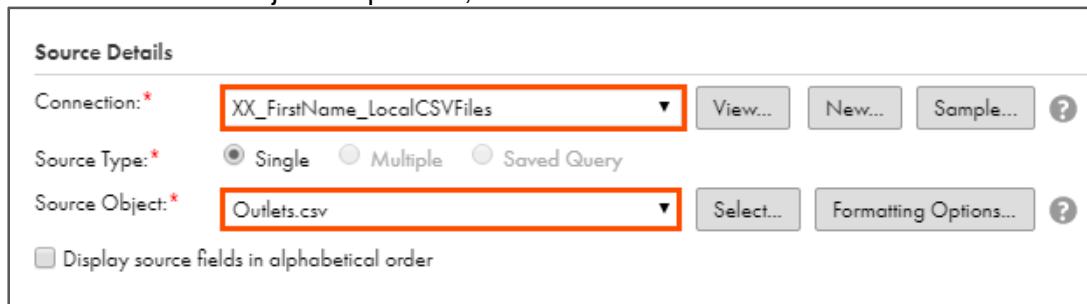
The screenshot shows the 'New Synchronization Task1' dialog. It is on the 'Definition' tab. The 'Task Details' section is identical to the previous screenshot. At the bottom right, the 'Next >' button is highlighted with a red box.

Specify Source Information:

20. From the Connection drop-down, select **XX_FirstName_LocalCSVFiles**.

Note: XX refers to your initials, and FirstName refers to your First Name.

21. From the Source Object drop-down, select **Outlets.csv**.



The screenshot shows the 'Source Details' dialog. The 'Connection' dropdown is set to 'XX_FirstName_LocalCSVFiles'. The 'Source Object' dropdown is set to 'Outlets.csv'. Both dropdowns are highlighted with a red box.

Note: The Data Preview section appears. It shows the first ten rows of the first five columns in the object and also displays the total number of columns in the object.

22. Click **Next**.

New XX_FirstName_OutletsLoad

① Definition ② Source ③ Target ④ Data Filters ⑤ Field Mapping ⑥ Schedule

Source Details

Connection: * XX_FirstName_LocalCSVFiles

Source Type: * Single Multiple Saved Query

Source Object: * Outlets.csv

Display source fields in alphabetical order

Data Preview

Outlets.csv (Total columns: 9)

Outlet_ID	Outlet_Name	Phone_Number	Street	City	...
1	NH Dneeds	754-3010	11 West Park Road	Pasadena	...
2	NH Mart	281-6000	6620 W. Broad St.	Rampart	...
3	NH Groceries	522-8175	7227 W Harry St	Winslow	...
4	NH Lifestyle	864-8000	2145 Hamilton Ave	Salida	...
5	NH Digital	314-3600	6601 Hawkinsville Rd	Milford	...
6	NH Trends	782-9000	95 N Moorland Rd	Miami	...

Specify Target Information:

23. From the Connection drop-down, select **XX_FirstName_SFDCDeveloper**.

Note: XX refers to your initials, and FirstName refers to your First Name.

24. From the Target Object drop-down, select **Account**.

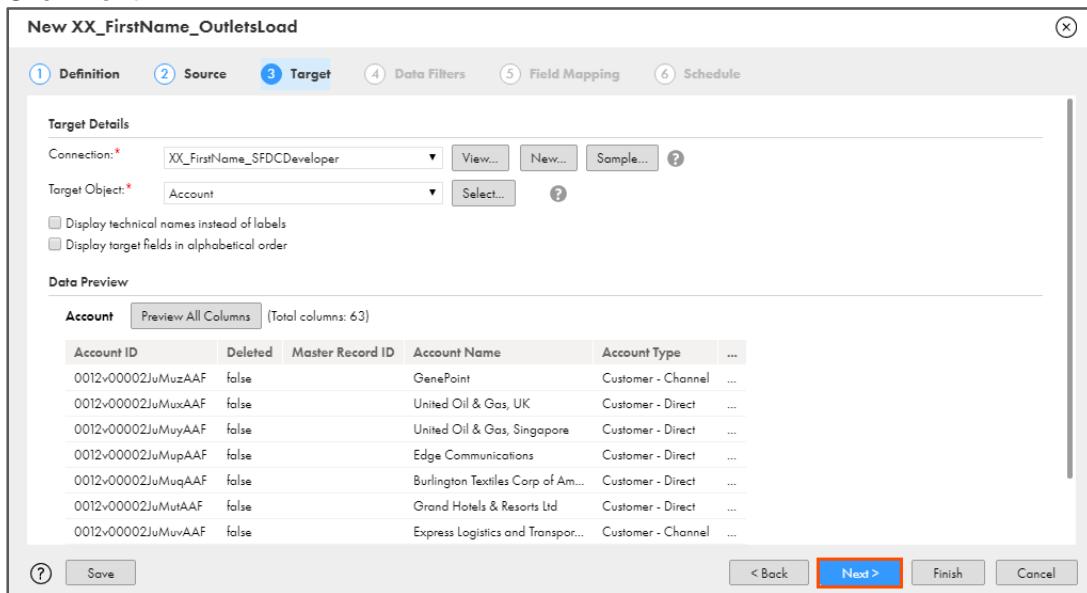
Target Details

Connection: * XX_FirstName_SFDCDeveloper

Target Object: * Account

Display technical names instead of labels
 Display target fields in alphabetical order

25. Click **Next**.



New XX_FirstName_OutletsLoad

Target Details

Connection: * XX_FirstName_SFDCDeveloper View... New... Sample... ?

Target Object: * Account Select... ?

Display technical names instead of labels
 Display target fields in alphabetical order

Data Preview

Account Preview All Columns (Total columns: 63)

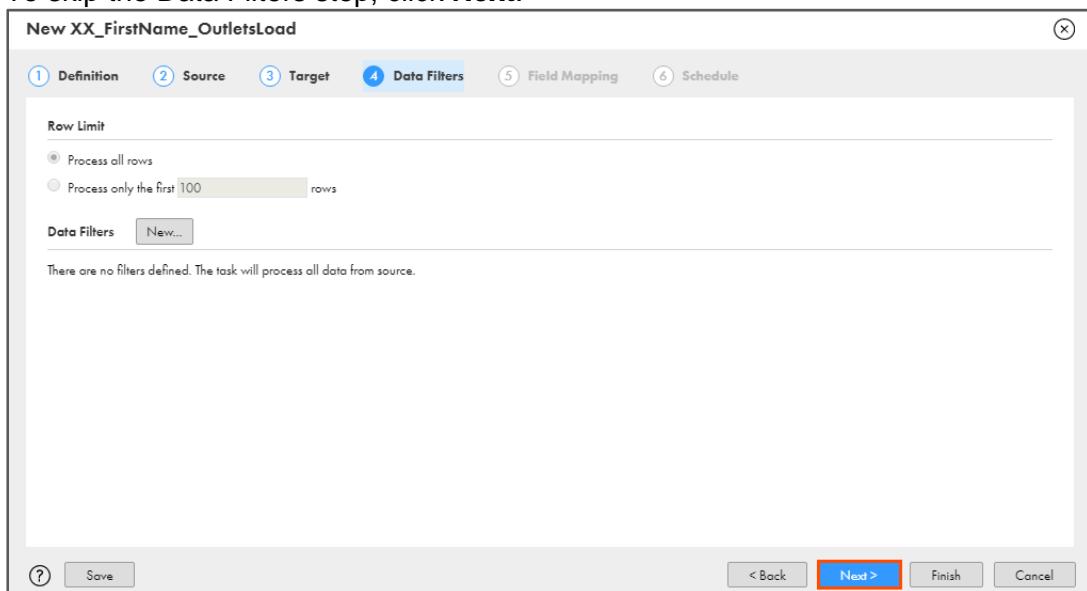
Account ID	Deleted	Master Record ID	Account Name	Account Type	...
0012v00002JuMuzAAF	false		GenePoint	Customer - Channel	...
0012v00002JuMuxAAF	false		United Oil & Gas, UK	Customer - Direct	...
0012v00002JuMuyAAF	false		United Oil & Gas, Singapore	Customer - Direct	...
0012v00002JuMupAAF	false		Edge Communications	Customer - Direct	...
0012v00002JuMuqAAF	false		Burlington Textiles Corp of Am...	Customer - Direct	...
0012v00002JuMutAAF	false		Grand Hotels & Resorts Ltd	Customer - Direct	...
0012v00002JuMuvAAF	false		Express Logistics and Transpor...	Customer - Channel	...

?

Save

< Back **Next >** Finish Cancel

26. To skip the Data Filters step, click **Next**.



New XX_FirstName_OutletsLoad

Data Filters

Row Limit

(Process all rows) (Process only the first 100 rows)

Data Filters New...

There are no filters defined. The task will process all data from source.

?

Save

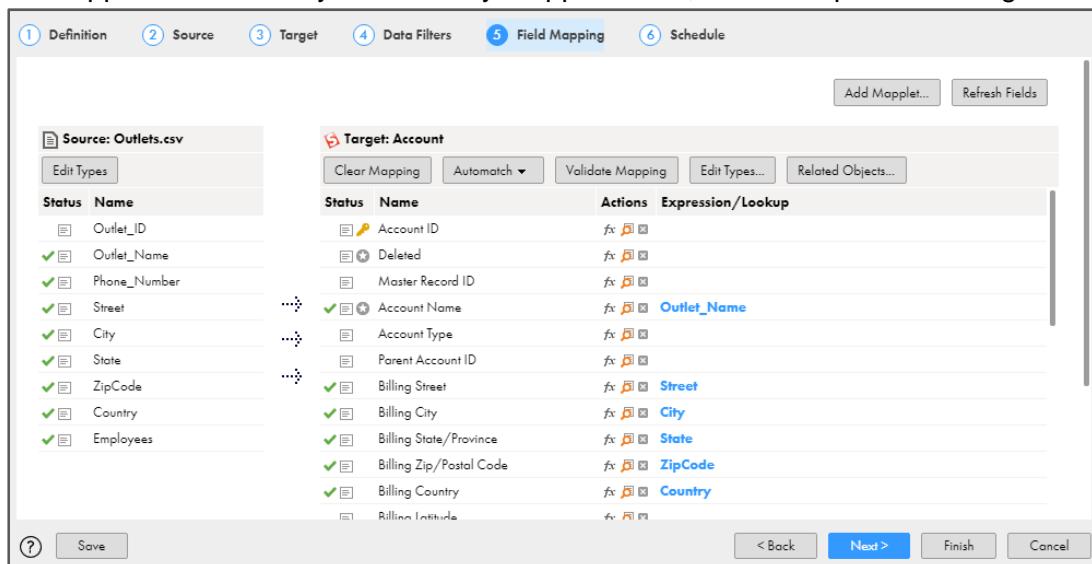
< Back **Next >** Finish Cancel

Define Field Mappings:

27. Map the Source field with Target field, as shown in the table below:

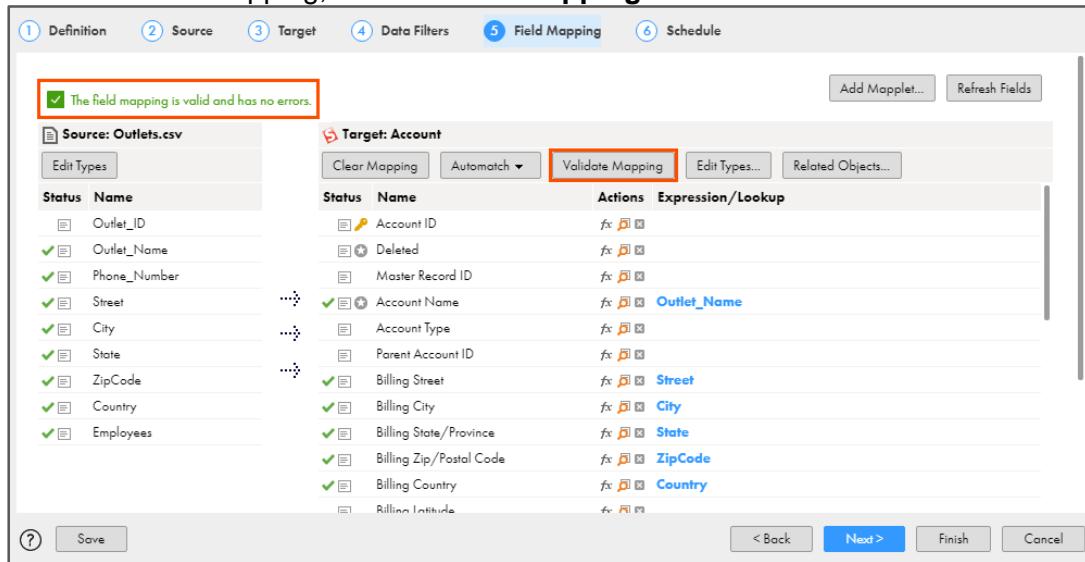
Source Field Name	Target Field Name
Outlet_Name	Account Name
Phone_Number	Account Phone
Street	Billing Street
City	Billing City
State	Billing State/Province
ZipCode	Billing Zip/Postal Code
Country	Billing Country
Employees	Employees

Note: You can drag a Source field and drop it onto a Target field. Some of the fields may be mapped automatically. For already mapped fields, do not map the fields again.



The screenshot shows the 'Field Mapping' step of the Mapplet configuration process. The 'Source' table on the left contains fields: Status, Name, Outlet_ID, Outlet_Name, Phone_Number, Street, City, State, ZipCode, Country, and Employees. The 'Target' table on the right contains fields: Status, Name, Account ID, Deleted, Master Record ID, Account Name, Account Type, Parent Account ID, Billing Street, Billing City, Billing State/Province, Billing Zip/Postal Code, Billing Country, and Billing Latitude. Mappings are listed in the 'Expression/Lookup' column, such as 'Account Name' mapping to 'Outlet_Name'.

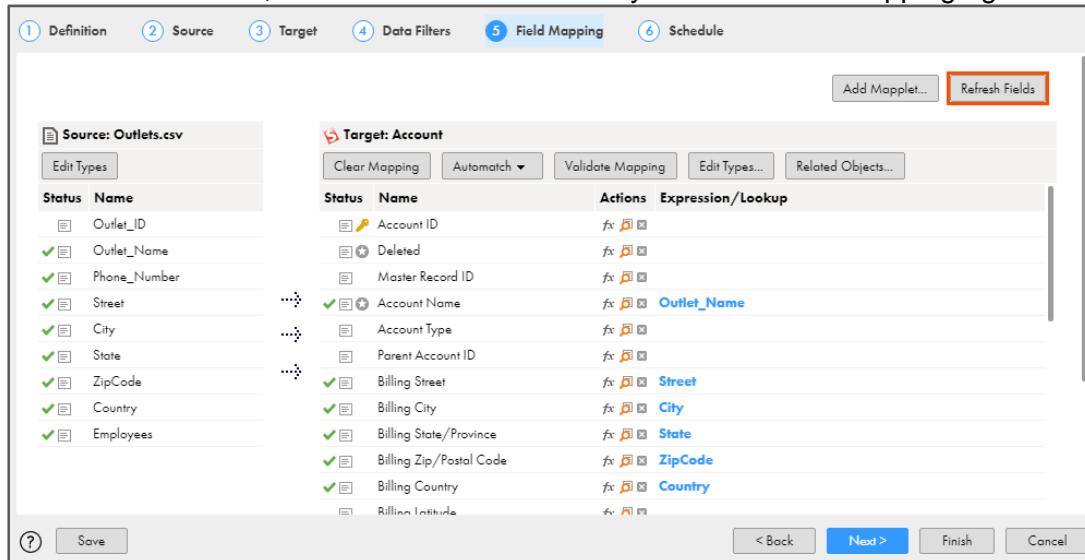
28. To validate the mapping, click **Validate Mapping**.



The screenshot shows the Informatica Mapplet interface at the 'Field Mapping' step (Step 5). On the left, the 'Source: Outlets.csv' pane lists fields: Status, Name, Outlet_ID, Outlet_Name, Phone_Number, Street, City, State, ZipCode, Country, and Employees. On the right, the 'Target: Account' pane lists fields: Status, Name, Account ID, Deleted, Master Record ID, Account Name, Account Type, Parent Account ID, Billing Street, Billing City, Billing State/Province, Billing Zip/Postal Code, Billing Country, and Billing Latitude. Mappings are shown between corresponding fields: Outlet_Name to Account Name, Street to Billing Street, City to Billing City, State to Billing State/Province, ZipCode to Billing Zip/Postal Code, and Country to Billing Country. A message at the top left states: 'The field mapping is valid and has no errors.' The 'Validate Mapping' button is highlighted with a red box.

Note: A message **The field mapping is valid and has no errors** appears.

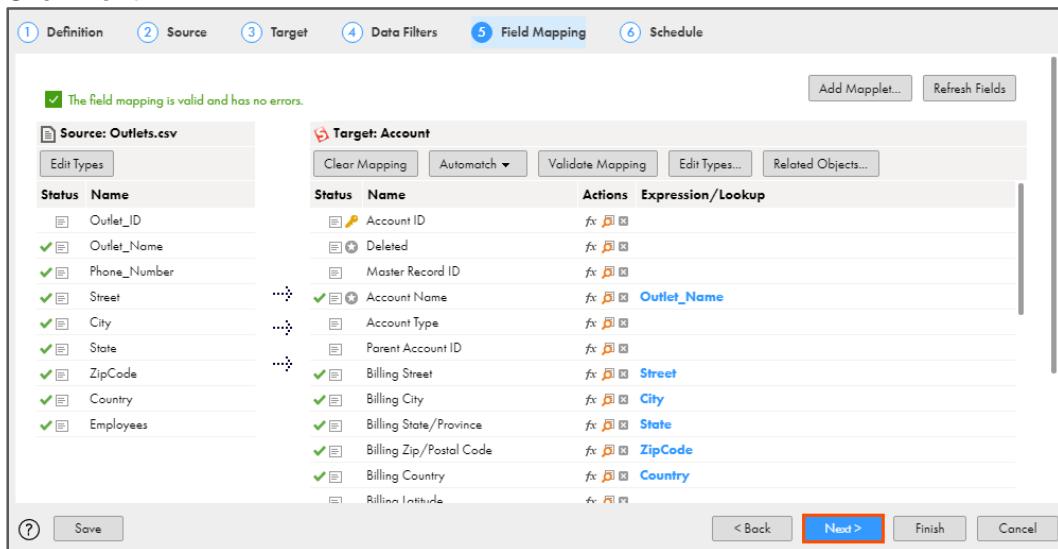
29. If the validation fails, click **Refresh Fields** and try to validate the mapping again.



The screenshot shows the Informatica Mapplet interface at the 'Field Mapping' step (Step 5). It is identical to the previous screenshot, but the 'Refresh Fields' button in the top right corner is highlighted with a red box.

Note: Refresh Fields option updates the data integration cache and shows the latest field attributes.

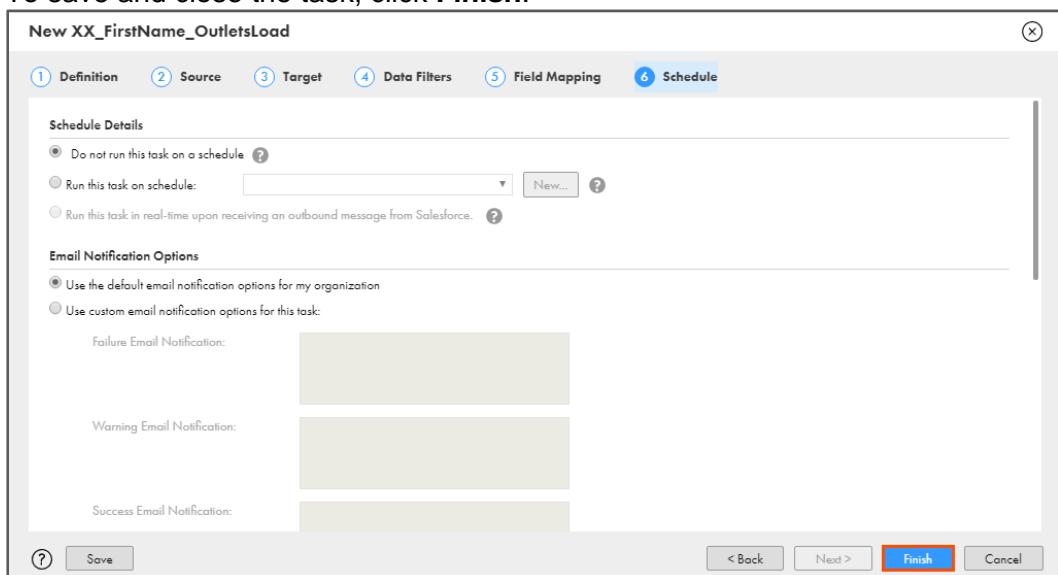
30. Click Next.



Status	Name	Actions	Expression/Lookup
✓	Outlet_ID	fx	Account ID
✓	Outlet_Name	fx	Deleted
✓	Phone_Number	fx	Master Record ID
✓	Street	✓	Account Name
✓	City	...	fx <input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
✓	State	...	Account Type
✓	ZipCode	...	Parent Account ID
✓	Country	...	Billing Street
✓	Employees	...	Billing City
		...	Billing State/Province
		...	Billing Zip/Postal Code
		...	Billing Country
		...	Billing Latitude

Note: In this lab, you will not define a Schedule.

31. To save and close the task, click **Finish.**



Schedule Details

(Do not run this task on a schedule) (Run this task on schedule: Run this task in real-time upon receiving an outbound message from Salesforce.)

Email Notification Options

(Use the default email notification options for my organization) (Use custom email notification options for this task)

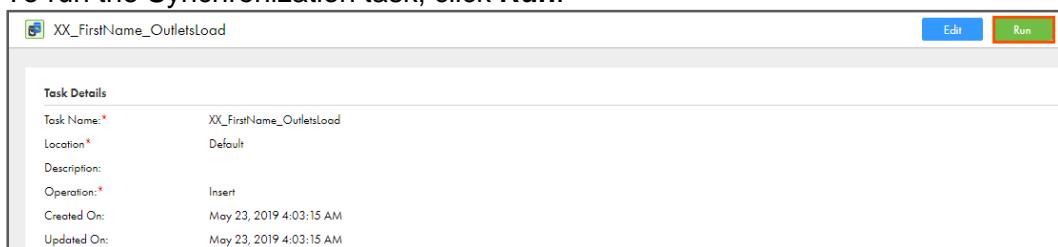
Failure Email Notification: [Redacted]

Warning Email Notification: [Redacted]

Success Email Notification: [Redacted]

Note: When you click Finish, the Synchronization Task Asset appears in the navigation pane and displays the task details on the page.

32. To run the Synchronization task, click **Run.**

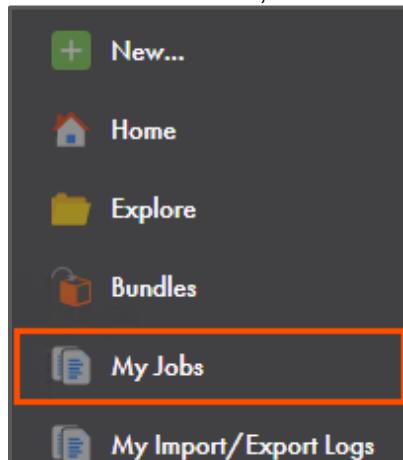


Task Details	
Task Name: [*]	XX_FirstName_OutletsLoad
Location: [*]	Default
Description:	
Operation: [*]	Insert
Created On:	May 23, 2019 4:03:15 AM
Updated On:	May 23, 2019 4:03:15 AM

Note: If you want to re-run a task, delete the records inserted by the task in the first run to avoid getting duplication errors.

Monitor the Synchronization Task:

33. To monitor the task, from the navigation pane, click **My Jobs**.



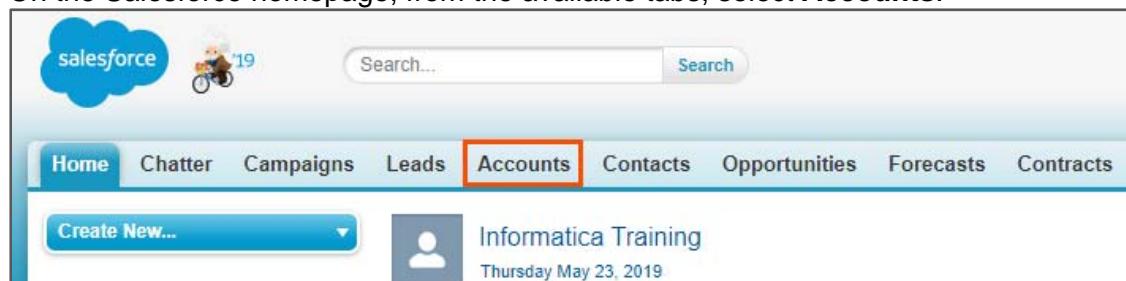
34. When the task completes, the status changes to **Success**.

My Jobs		Data Integration			
Jobs (1 of 11)		Up to date	Updated 3:00:08 AM PDT		
			Asset Name: XX_FirstName_O...	Add Field	
Instance Name	Subtasks	Start Time	End Time	Rows Processed	State
XX_FirstName_OutletsLoad-1		Jul 25, 2019, 12:50 AM	Jul 25, 2019, 12:51 AM	9	<input checked="" type="checkbox"/> Success

Note: You can use  to refresh the page if the status does not change automatically.

Verify the Results:

35. Log in to the Salesforce Developer account using your credentials.
 36. On the Salesforce homepage, from the available tabs, select **Accounts**.

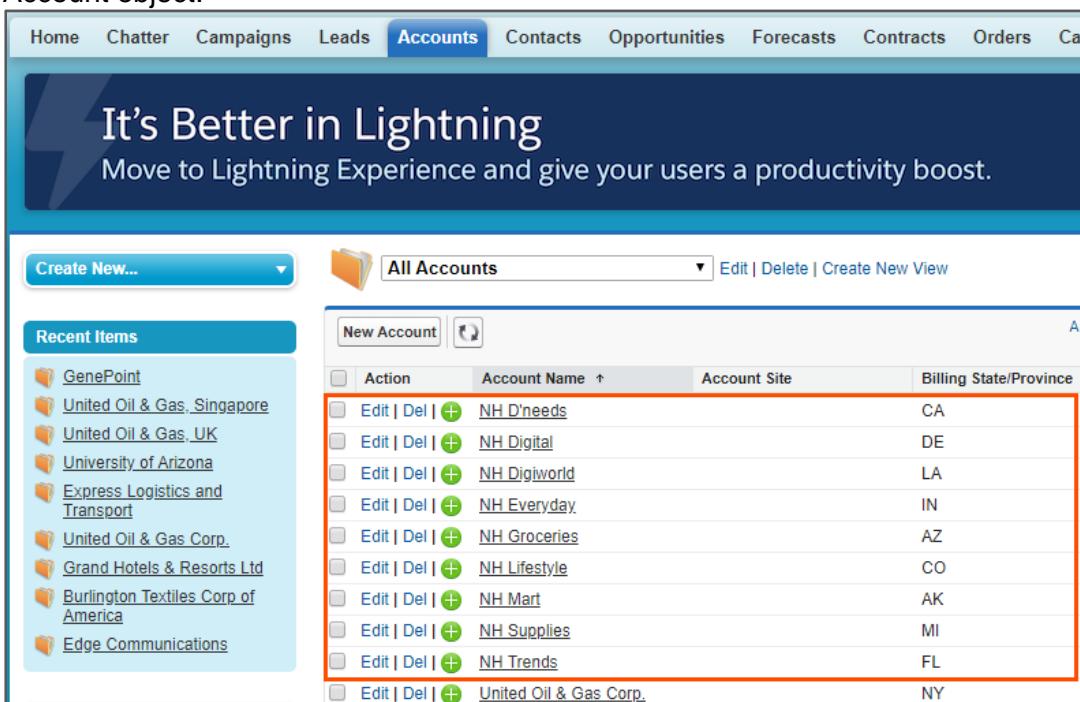


37. From the drop-down, select **All Accounts**.

38. Click **Go!**.



39. Verify that all the Accounts in the source file (Outlets.csv) are now in the Salesforce Account object.



Action	Account Name	Account Site	Billing State/Province
Edit Del +	NH D'needs		CA
Edit Del +	NH Digital		DE
Edit Del +	NH Digiworld		LA
Edit Del +	NH Everyday		IN
Edit Del +	NH Groceries		AZ
Edit Del +	NH Lifestyle		CO
Edit Del +	NH Mart		AK
Edit Del +	NH Supplies		MI
Edit Del +	NH Trends		FL
Edit Del +	United Oil & Gas Corp.		NY

This concludes the lab.

Module 3: Synchronizaton Task

Lab 3-2: Using Filter, Expression, and Lookup in a Synchronization Task

Overview:

Data filters help you to fetch the required data from an object. The synchronization task uses the data filters to process the data as per the data filter assigned to that object.

A lookup returns values based on a lookup condition. You can create a lookup condition based on the information in the source.

Objective:

- Create data filter
- Create field expressions
- Use a lookup to relate outlet name and account name

Scenario:

Now that Ruby has inserted the data in Salesforce Accounts object, she wants to load Employee data on Salesforce as well.

However, the format of employee data is not compatible with Salesforce. So, John informs Ruby that he can use various features of IICS synchronization task to transform the data and load it in Salesforce.

In this lab, John will use the data filters to skip loading sales department's employee data. He will also use the field expression to separate first and last name and to perform a lookup in Salesforce using the account name.

Duration:

20 minutes

Tasks:

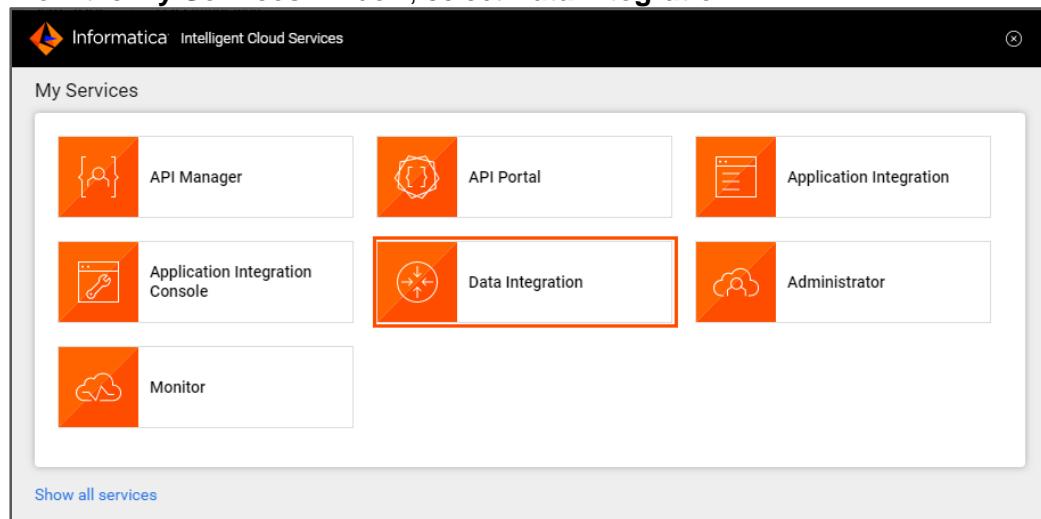
Copy Source Files:

1. Copy the **Employee.csv** file from the CDI Lab Prep Files folder available on your desktop and paste it in your flat file directory (C:\IICSLabFiles).
2. Open the **Employee.csv** file and note the names of contacts with department as Sales.

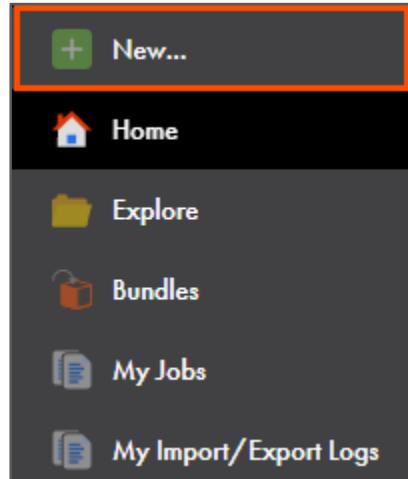
Create a Synchronization task in IICS:

3. Open the IICS Login page from the Bookmarks bar.
Note: Follow this step if you have navigated away from the login page.
4. Enter the login credentials provided by the Instructor and click **Log In**.

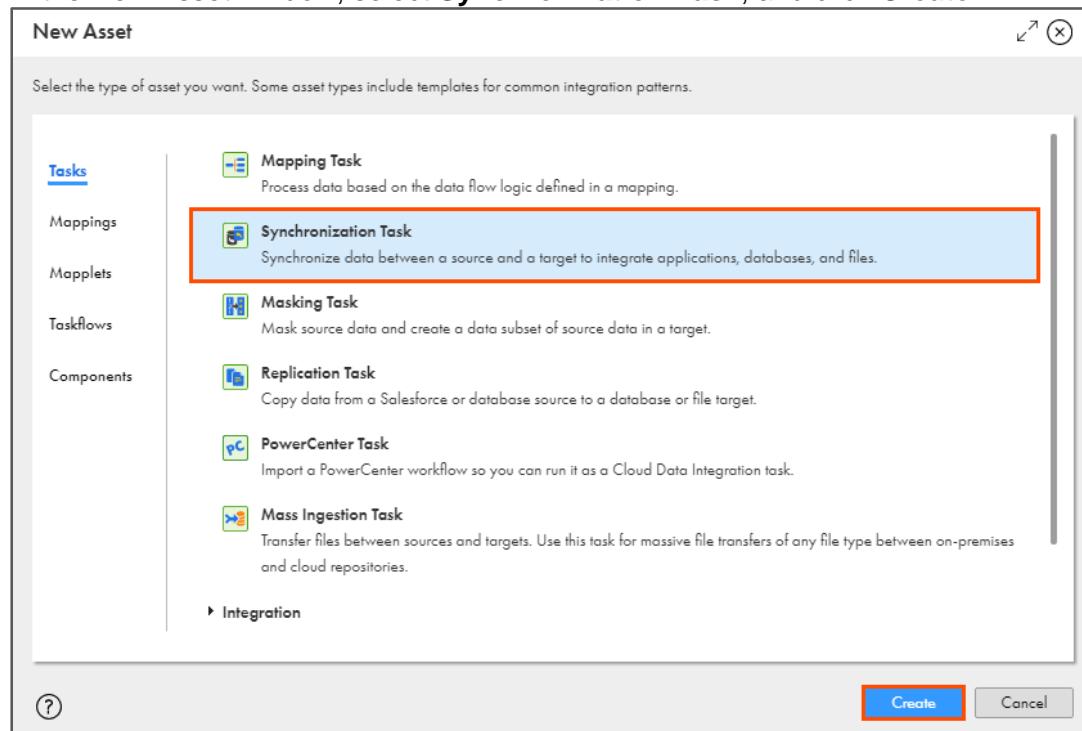
5. From the **My Services** window, select **Data Integration**.



6. To create a new asset, from the navigation pane, select **New**.



7. In the New Asset window, select **Synchronization Task**, and click **Create**.



Note: A six-step Synchronization Task wizard appears.

Specify Definition Information:

8. In the Task Name field, enter **XX_FirstName_Employee**.

Note: XX refers to your initials, and FirstName refers to your First Name.

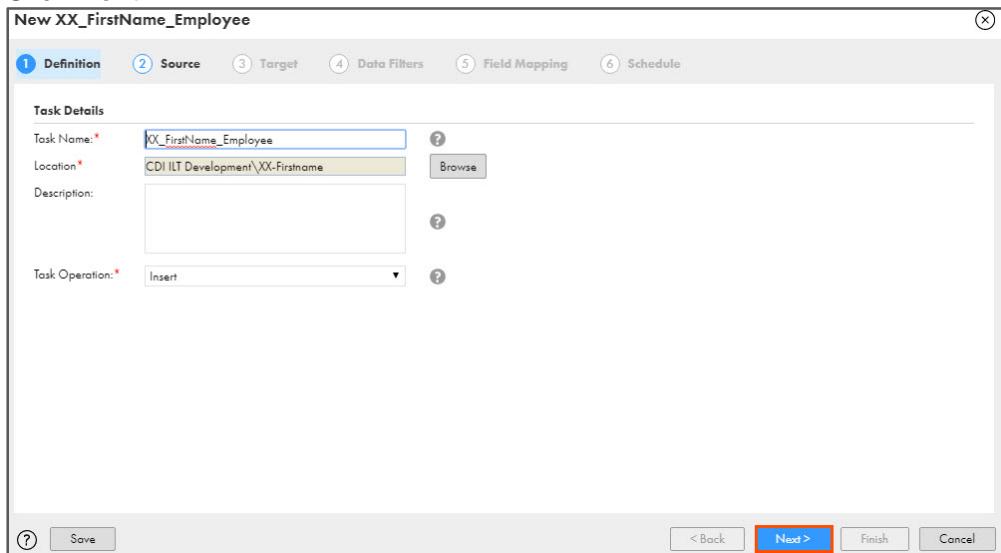
9. From the Task Operation drop-down, select **Insert**.



Task Details	
Task Name *	XX_FirstName_Employee
Location *	CDI ILT Development\XX-Firstname
Description:	
Task Operation: *	Insert

Note: Verify that asset Location is **CDI ILT Development\XX-Firstname**, where XX refers to your initials and Firstname refers to your First Name

10. Click **Next**.



New XX_FirstName_Employee

① Definition ② Source ③ Target ④ Data Filters ⑤ Field Mapping ⑥ Schedule

Task Details

Task Name: * **XX_FirstName_Employee**

Location: * **CDI ILT Development\XX-Firstname**

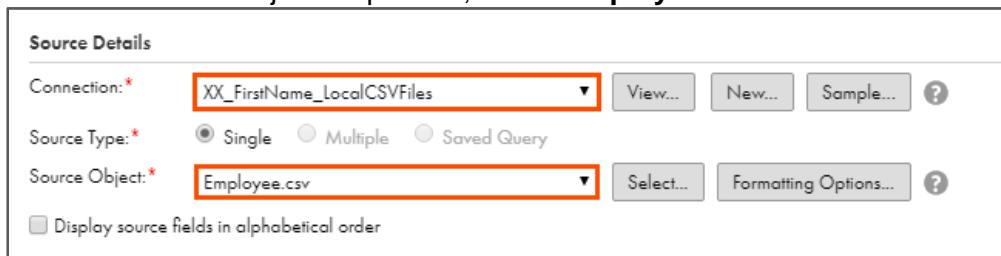
Description:

Task Operation: * **Insert**

⑦ Save < Back **Next>** Finish Cancel

Specify Source Information:

11. From the Connection drop-down, select **XX_FirstName_LocalCSVFiles**.
 12. From the Source Object drop-down, select **Employee.csv**.



Source Details

Connection: * **XX_FirstName_LocalCSVFiles** ?

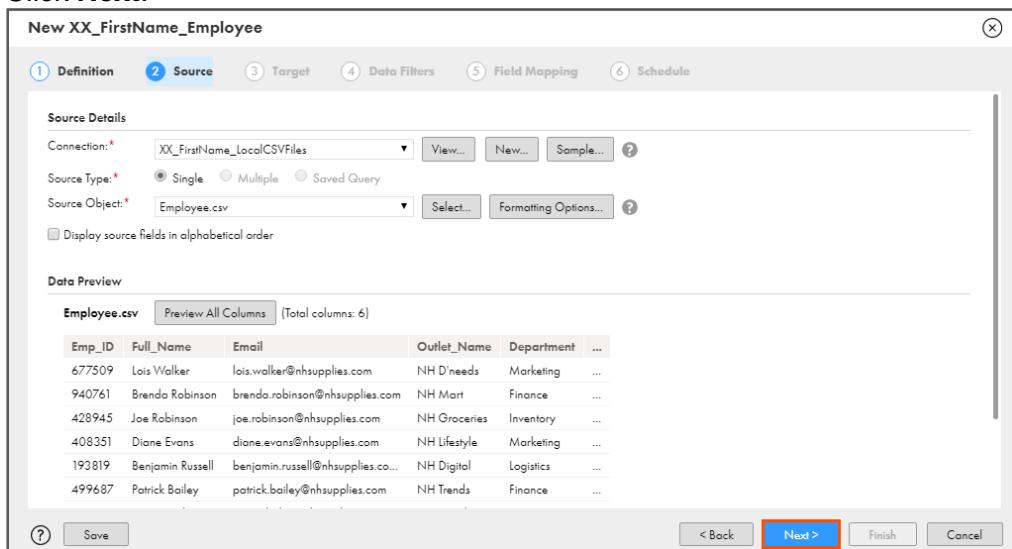
Source Type: * Single Multiple Saved Query

Source Object: * **Employee.csv** ?

Display source fields in alphabetical order

Note: The Data Preview section appears. It shows the first ten rows of the first five columns in the object and displays the total number of columns in the object.

13. Click **Next**.



New XX_FirstName_Employee

① Definition ② Source ③ Target ④ Data Filters ⑤ Field Mapping ⑥ Schedule

Source Details

Connection: * **XX_FirstName_LocalCSVFiles** ?

Source Type: * Single Multiple Saved Query

Source Object: * **Employee.csv** ?

Display source fields in alphabetical order

Data Preview

Employee.csv (Total columns: 6)

Emp_ID	Full_Name	Email	Outlet_Name	Department	...
677509	Lois Walker	lois.walker@nhsupplies.com	NH D'needs	Marketing	...
940761	Brenda Robinson	brenda.robinson@nhsupplies.com	NH Mart	Finance	...
428945	Joe Robinson	joe.robinson@nhsupplies.com	NH Groceries	Inventory	...
408351	Diane Evans	diane.evans@nhsupplies.com	NH Lifestyle	Marketing	...
193819	Benjamin Russell	benjamin.russell@nhsupplies.co...	NH Digital	Logistics	...
499687	Patrick Bailey	patrick.bailey@nhsupplies.com	NH Trends	Finance	...

⑦ Save < Back **Next>** Finish Cancel

Specify Target Information:

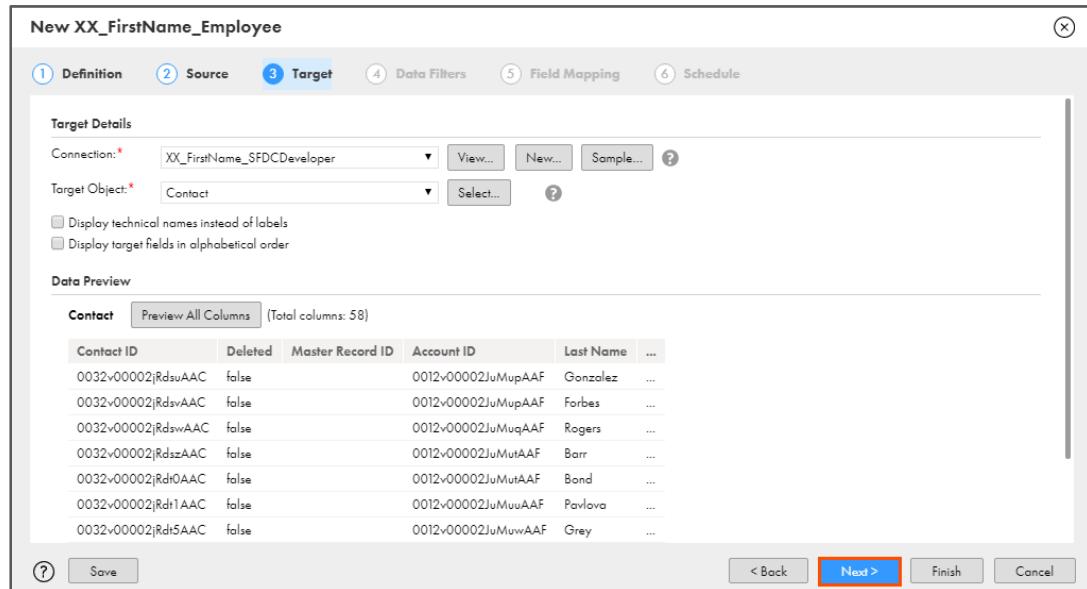
14. From the Connection drop-down, select **XX_FirstName_SFDCDeveloper**.

Note: XX refers to your initials, and FirstName refers to your First Name.

15. From the Target Object drop-down, select **Contact**.



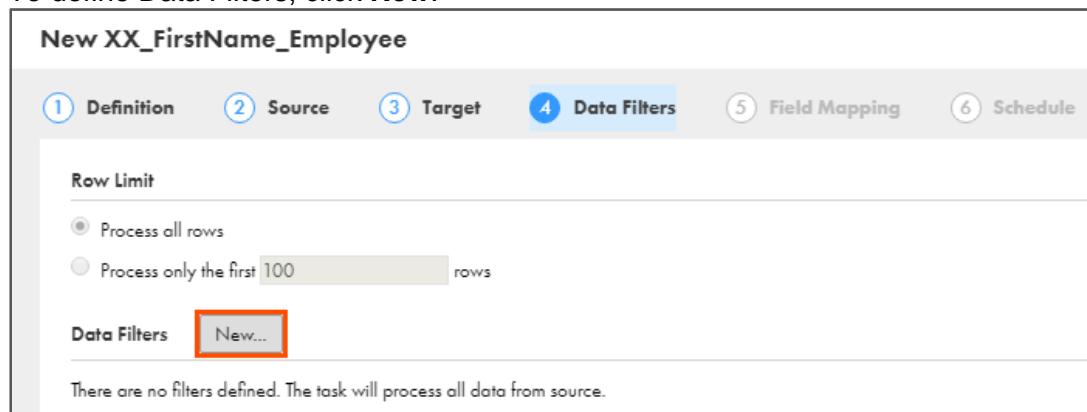
16. Click **Next**.



Contact ID	Deleted	Master Record ID	Account ID	Last Name	...
0032v00002 RdsuAAC	false		0012v00002JuMupAAF	Gonzalez	...
0032v00002 RdsvAAC	false		0012v00002JuMupAAF	Forbes	...
0032v00002 RdsAAC	false		0012v00002JuMuqAAF	Rogers	...
0032v00002 RdszAAC	false		0012v00002JuMutAAF	Barr	...
0032v00002 Rd0AAC	false		0012v00002JuMutAAF	Bond	...
0032v00002 Rdt1AAC	false		0012v00002JuMuwAAF	Pavlova	...
0032v00002 Rdt5AAC	false		0012v00002JuMuwAAF	Grey	...

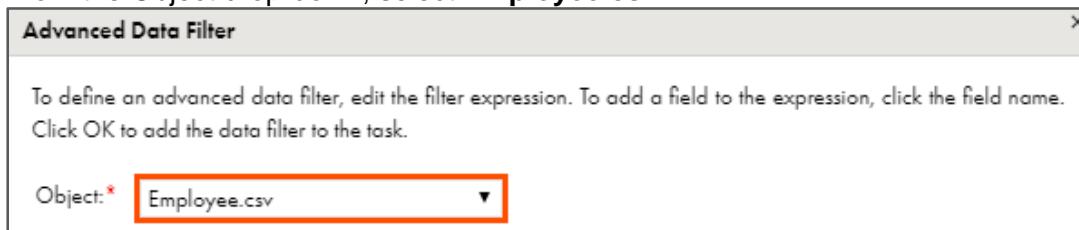
Define Data Filters to skip contacts with Department as Sales:

17. To define Data Filters, click **New**.



Note: The Advanced Data Filter window appears. You cannot apply a simple filter if the source connection is a Flat file connection.

18. From the Object drop-down, select **Employee.csv**.

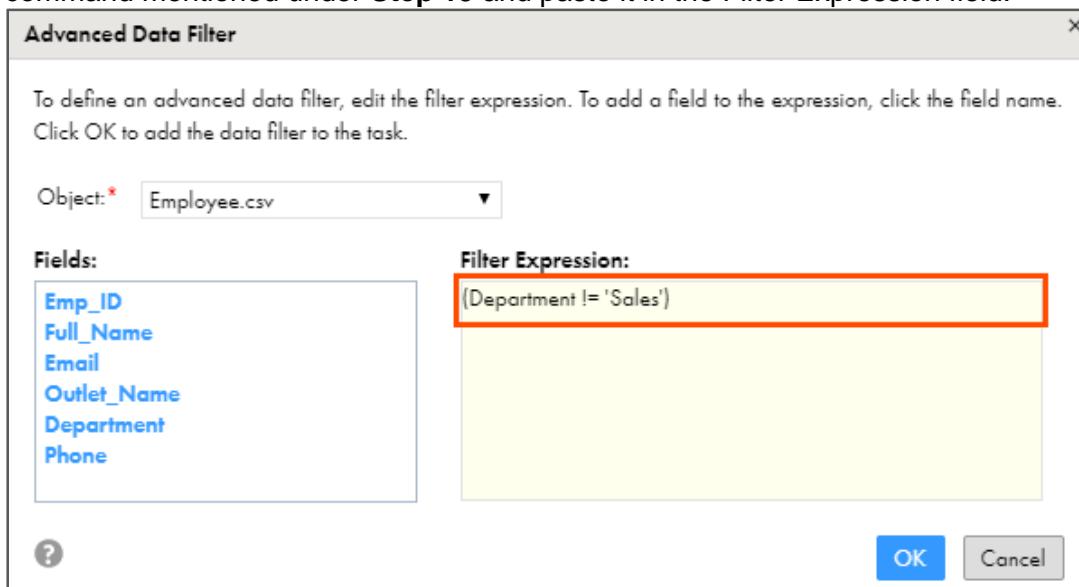


19. In the **Filter Expression** field, enter the following expression:

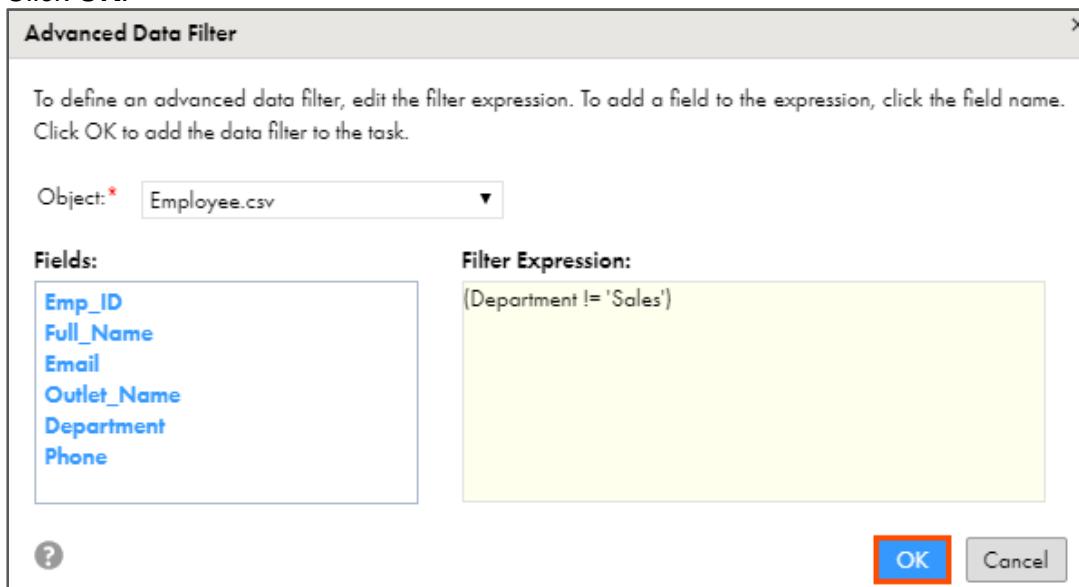
(Department != 'Sales')

OR

Navigate to the **C:\Students\Commands** directory on your local machine and open the file named **06_LabGuide_UsingDataFiltersLookupAndExpressions_3-2**. Copy the command mentioned under **Step 19** and paste it in the Filter Expression field.

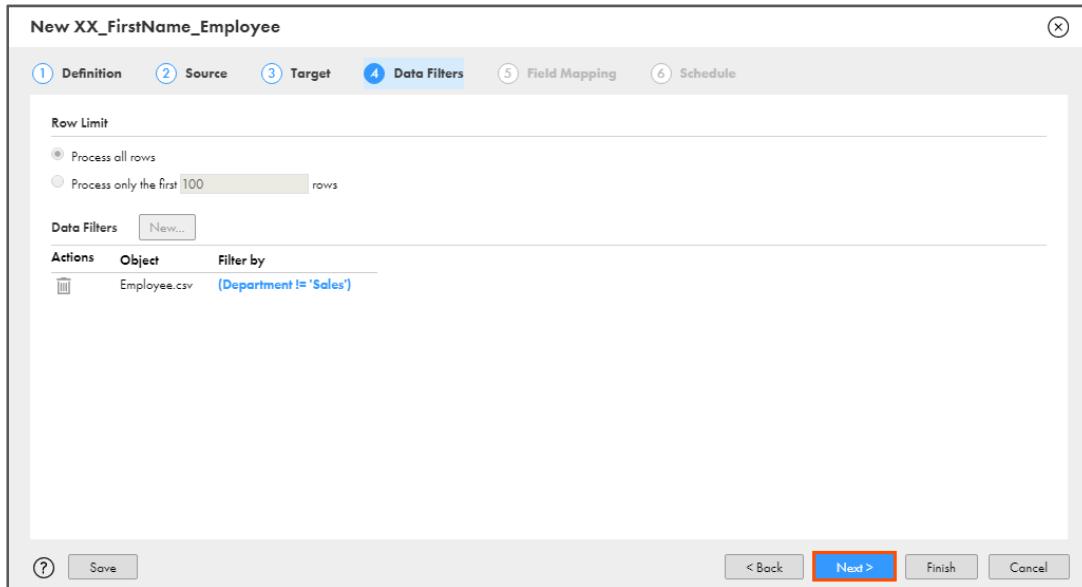


20. Click **OK**.



Note: If you copy and paste the above filter expression, you must verify the expression to avoid getting an apostrophe error.

21. Click **Next**.

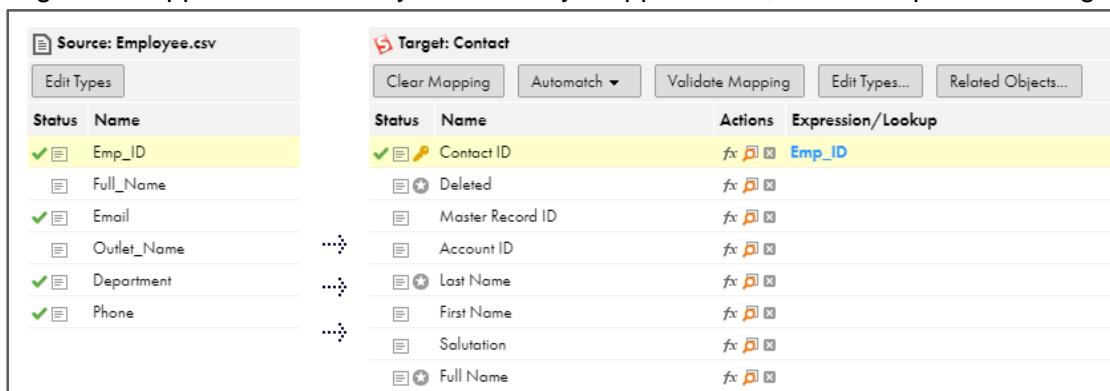


Define Field Mappings:

22. Map the Source field with Target field, as shown in the table below:

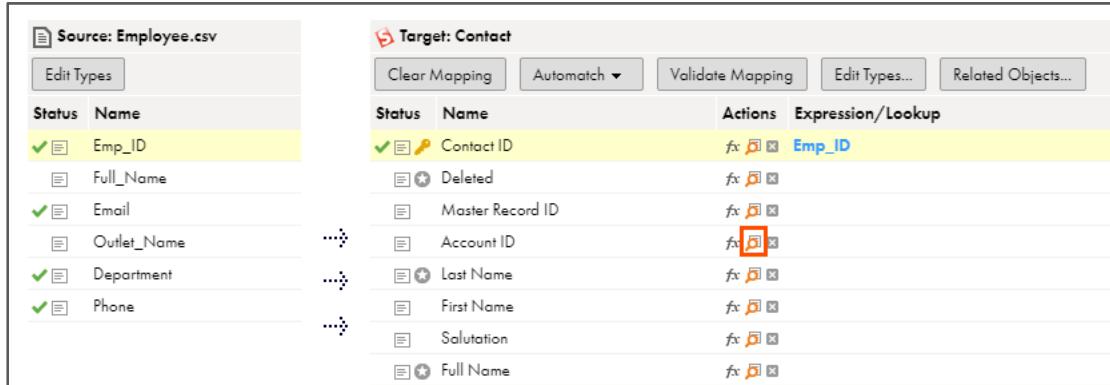
Source Field Name	Target Field Name
Emp_ID	Contact ID
Email	Email
Department	Department
Phone	Business Phone

Note: For this lab, do not map Full_Name and Outlet_Name fields. Some of the fields might be mapped automatically. For already mapped fields, do not map the fields again.



Add a Lookup Condition:

23. To define a lookup condition, from the Target: Contact section, select  for **Account ID**.



Source: Employee.csv		Target: Contact	
Status	Name	Status	Name
<input checked="" type="checkbox"/>	Emp_ID	<input checked="" type="checkbox"/>	Contact ID
	Full_Name		Deleted
<input checked="" type="checkbox"/>	Email		Master Record ID
	Outlet_Name	<input checked="" type="checkbox"/>	Account ID
<input checked="" type="checkbox"/>	Department	<input checked="" type="checkbox"/>	Last Name
<input checked="" type="checkbox"/>	Phone	<input checked="" type="checkbox"/>	First Name
		<input checked="" type="checkbox"/>	Salutation
		<input checked="" type="checkbox"/>	Full Name

Note: The Field Lookup window appears.

24. From the Lookup Connection drop-down, select **XX_FirstName_SFDCDeveloper**.

Note: XX refers to your initials, and FirstName refers to your First Name.

25. From the Lookup Object drop-down, select **Account**.



Lookup

Lookup Connection: * **XX_FirstName_SFDCDeveloper**

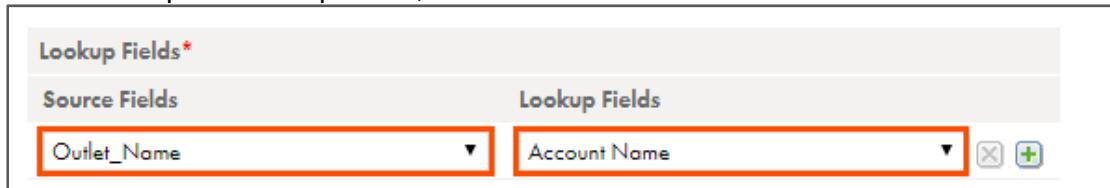
Lookup Object: * **Account**

Display technical names instead of labels

Display fields in alphabetical order

26. In the Source Fields drop-down, select **Outlet_Name**.

27. In the Lookup Fields drop-down, select **Account Name**.

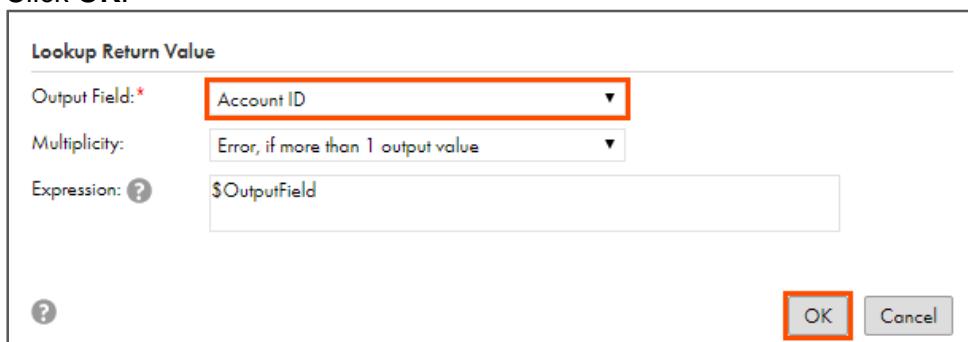


Lookup Fields*

Source Fields	Lookup Fields
Outlet_Name	Account Name

28. In the Lookup Return Value section, from the Output Field drop-down, select **Account ID**.

29. Click **OK**.



Lookup Return Value

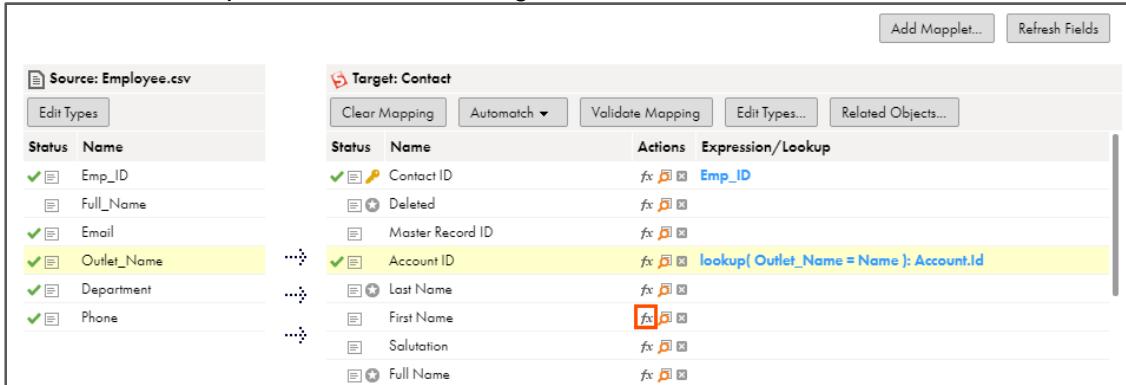
Output Field: * **Account ID**

Multiplicity: Error, if more than 1 output value

Expression: ? **\$OutputField**

Define Field Expression to split Full Name into First Name and Last Name:

30. To define field expression, from the Target: Contact section, select  for First Name.



Source: Employee.csv		Target: Contact	
Status	Name	Status	Name
✓	Emp_ID	✓	Contact ID
	Full_Name		Deleted
✓	Email		Master Record ID
✓	Outlet_Name	✓	Account ID
✓	Department		Last Name
✓	Phone		First Name
			Salutation
			Full Name

Note: The Field Expression window appears.

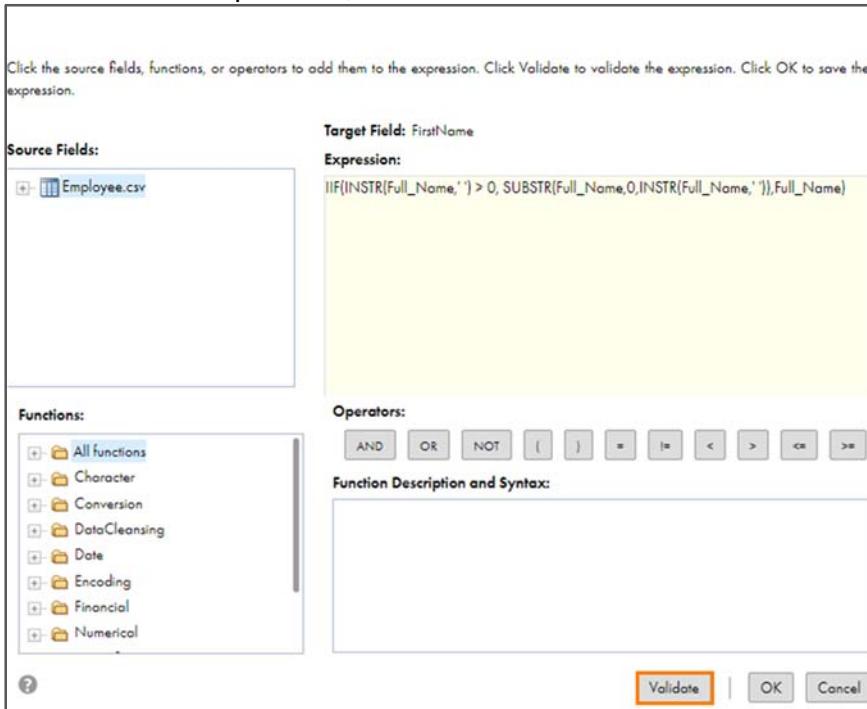
31. In the **Expression** field, enter the following expression:

IIF(INSTR(Full_Name, ' ') > 0, SUBSTR(Full_Name,0,INSTR(Full_Name, ' ')),Full_Name)

OR

Navigate to the **C:\Students\Commands** directory on your local machine and open the file named **06_LabGuide_UsingDataFiltersLookupAndExpressions_3-2**. Copy the command mentioned under **Step 31** and paste it in the Filter Expression field.

32. To validate the expression, click **Validate**.



Click the source fields, functions, or operators to add them to the expression. Click Validate to validate the expression. Click OK to save the expression.

Target Field: FirstName

Expression:
`IIF(INSTR(Full_Name, ' ') > 0, SUBSTR(Full_Name,0,INSTR(Full_Name, ' ')),Full_Name)`

Source Fields:
Employee.csv

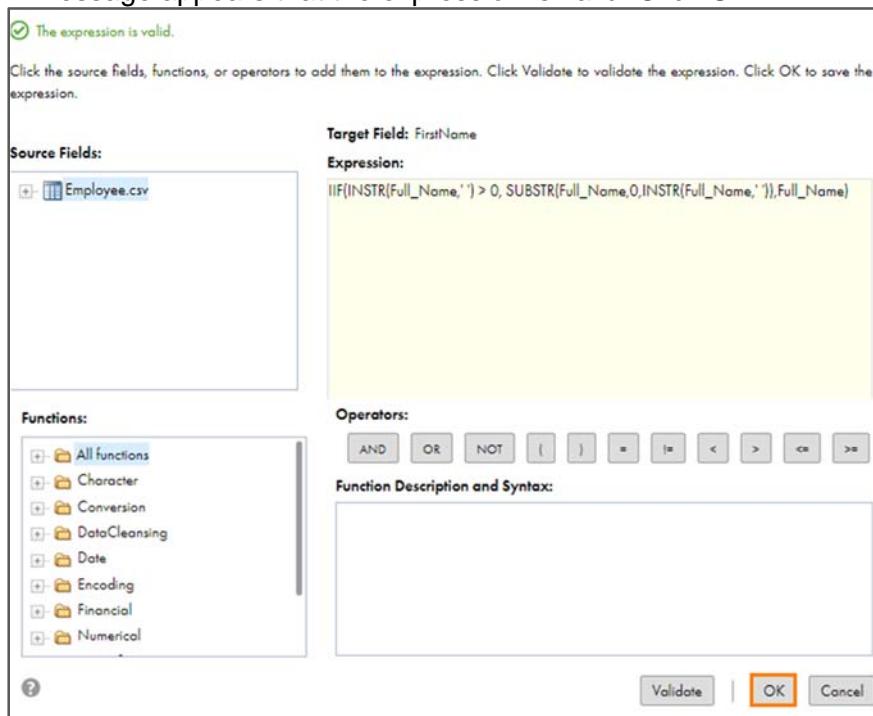
Functions:
All functions, Character, Conversion, DataCleansing, Date, Encoding, Financial, Numerical

Operators:
AND, OR, NOT, (,), =, !=, <, >, <=, >=

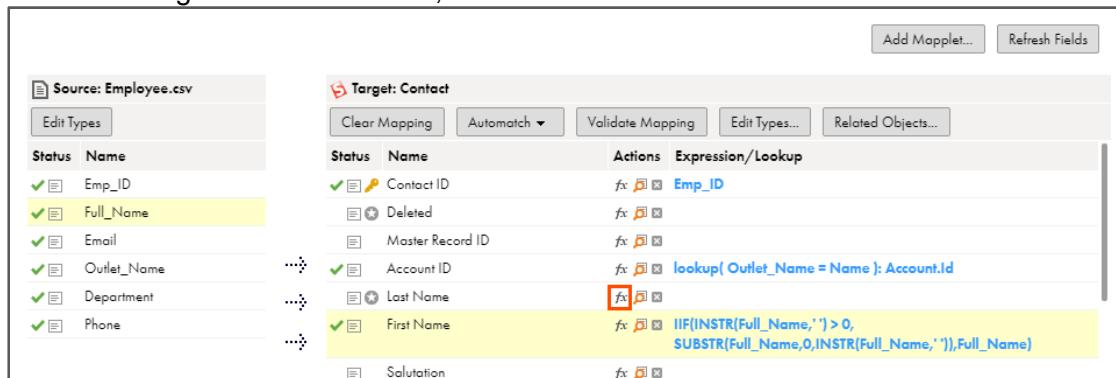
Function Description and Syntax:

Validate | OK | Cancel

33. A message appears that the expression is valid. Click **OK**.



34. From the Target: Contact section, select  for Last Name.



Source: Employee.csv	Target: Contact
Status Name	Status Name Actions Expression/Lookup
✓ Emp_ID	✓ Contact ID fx  Emp_ID
✓ Full_Name	✓ Deleted fx 
✓ Email	✓ Master Record ID fx 
✓ Outlet_Name	✓ Account ID fx  lookup(Outlet_Name = Name) : Account.Id
✓ Department	✓ Last Name fx 
✓ Phone	✓ First Name fx  IIF(INSTR(Full_Name, ' ') > 0, SUBSTR(Full_Name,0,INSTR(Full_Name, ' ')),Full_Name)
	✓ Salutation fx 

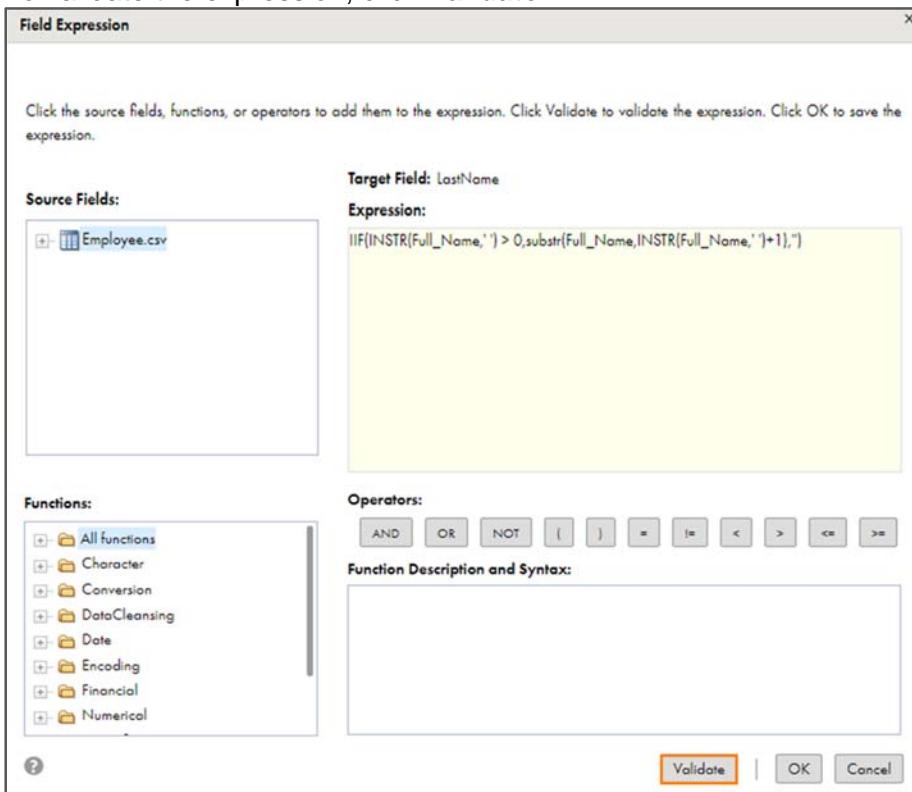
Note: The Field Expression window appears.

35. In the **Expression** field, enter the following expression:

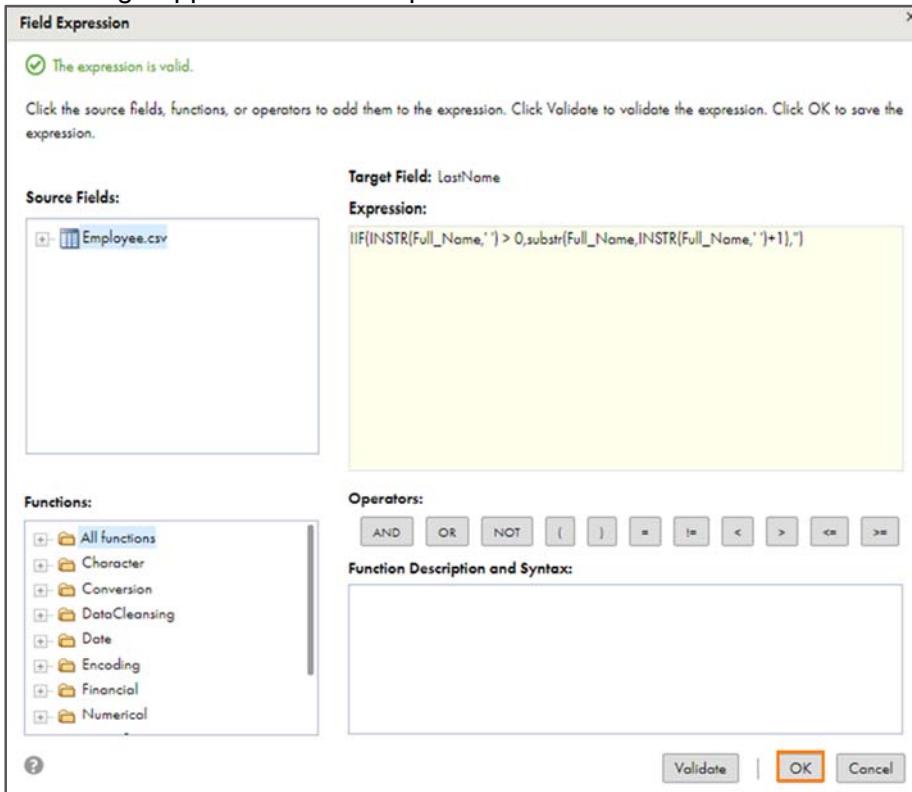
IIF(INSTR(Full_Name, ' ') > 0, substr(Full_Name, INSTR(Full_Name, ' ') + 1), '')
OR

Navigate to the **C:\Students\Commands** directory on your local machine and open the file named **06_LabGuide_UsingDataFiltersLookupAndExpressions_3-2**. Copy the command mentioned under **Step 35** and paste it in the Filter Expression field.

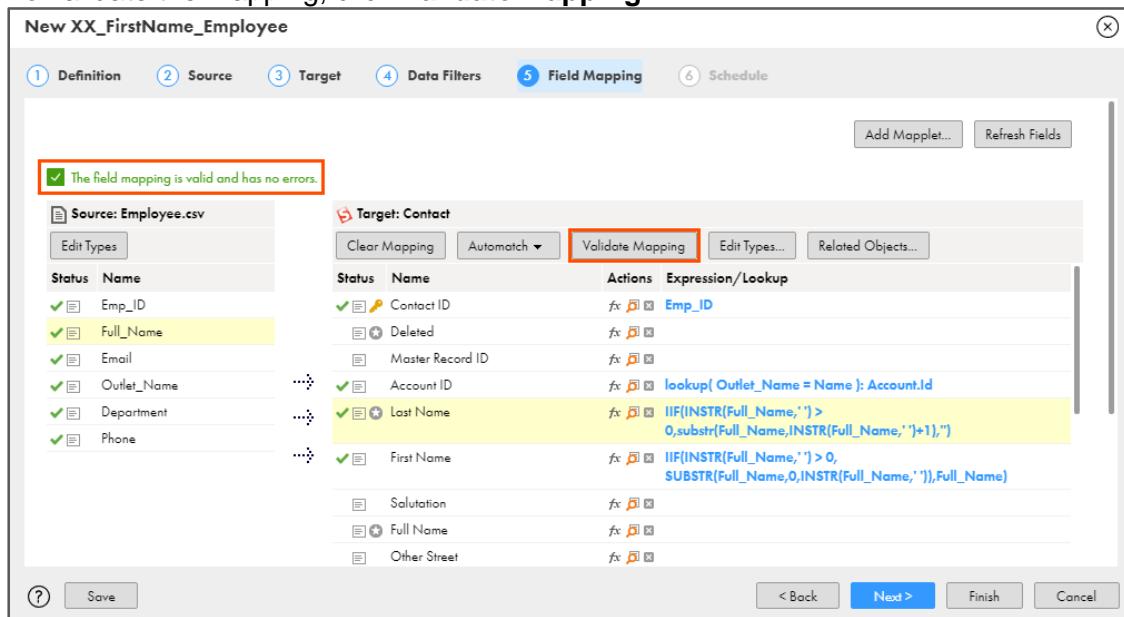
36. To validate the expression, click **Validate**.



37. A message appears that the expression is valid. Click **OK**.



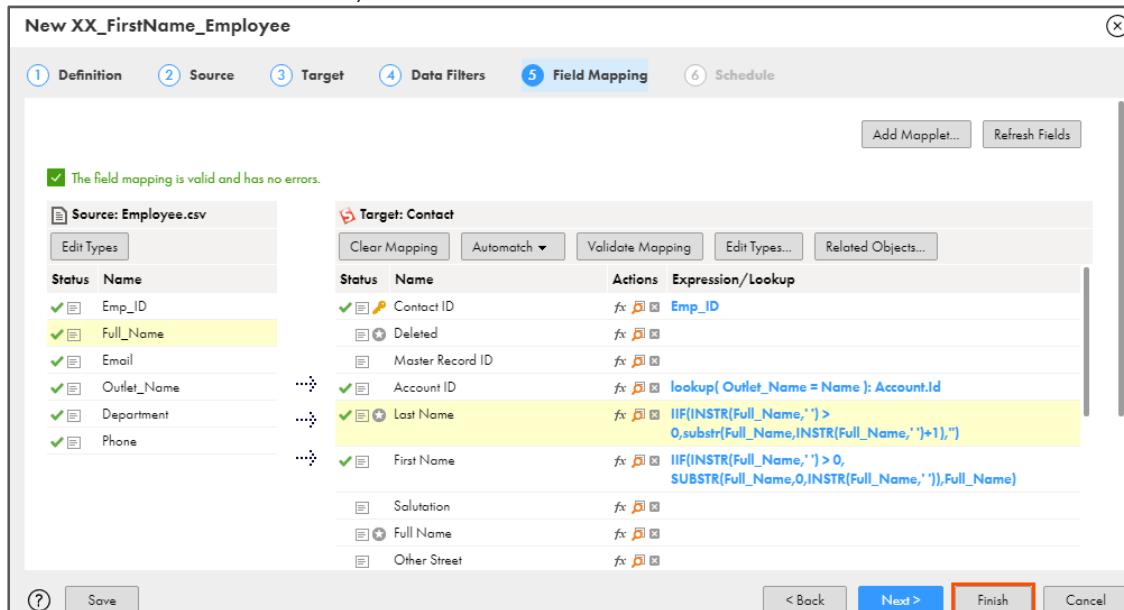
38. To validate the mapping, click **Validate Mapping**.



Status	Name	Actions	Expression/Lookup
✓	Contact ID	fx	Emp_ID
✗	Deleted	fx	
✗	Master Record ID	fx	
✓	Account ID	fx	lookup(Outlet_Name = Name):Account.Id
✓	Last Name	fx	IIF(INSTR(Full_Name,'>0,substr(Full_Name,INSTR(Full_Name,'>)+1),")
✓	First Name	fx	IIF(INSTR(Full_Name,'>0, SUBSTR(Full_Name,0,INSTR(Full_Name,'>)),Full_Name)
✗	Salutation	fx	
✗	Full Name	fx	
✗	Other Street	fx	

Note: A message **The field mapping is valid and has no errors** appears.

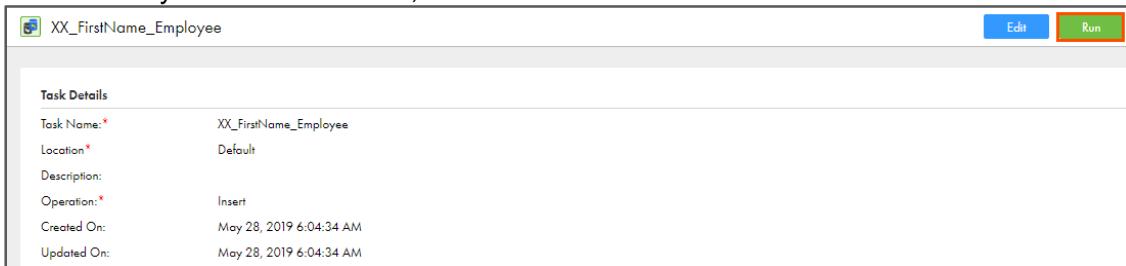
39. To save and close the task, click **Finish**.



Status	Name	Actions	Expression/Lookup
✓	Contact ID	fx	Emp_ID
✗	Deleted	fx	
✗	Master Record ID	fx	
✓	Account ID	fx	lookup(Outlet_Name = Name):Account.Id
✓	Last Name	fx	IIF(INSTR(Full_Name,'>0,substr(Full_Name,INSTR(Full_Name,'>)+1),")
✓	First Name	fx	IIF(INSTR(Full_Name,'>0, SUBSTR(Full_Name,0,INSTR(Full_Name,'>)),Full_Name)
✗	Salutation	fx	
✗	Full Name	fx	
✗	Other Street	fx	

Note: When you click Finish, the Synchronization Task Asset appears in the navigation pane and displays the task details on the page.

40. To run the synchronization task, click **Run**.



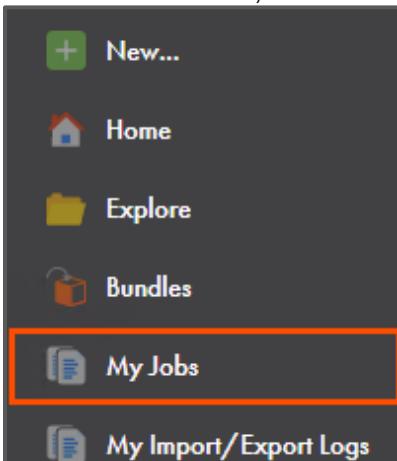
Task Details

Task Name:	XX_FirstName_Employee	Location:	Default
Description:		Operation:	Insert
Created On:	May 28, 2019 6:04:34 AM	Updated On:	May 28, 2019 6:04:34 AM

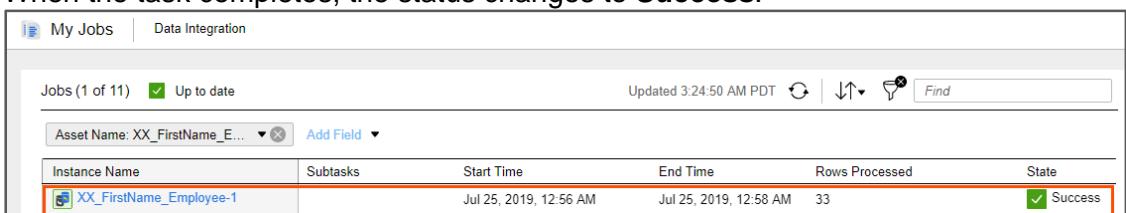
Note: If you want to re-run a task, delete the records inserted by the task in the first run to avoid getting duplication errors.

Monitor the Synchronization Task:

41. To monitor the task, from the navigation pane, click **My Jobs**.



42. When the task completes, the status changes to **Success**.



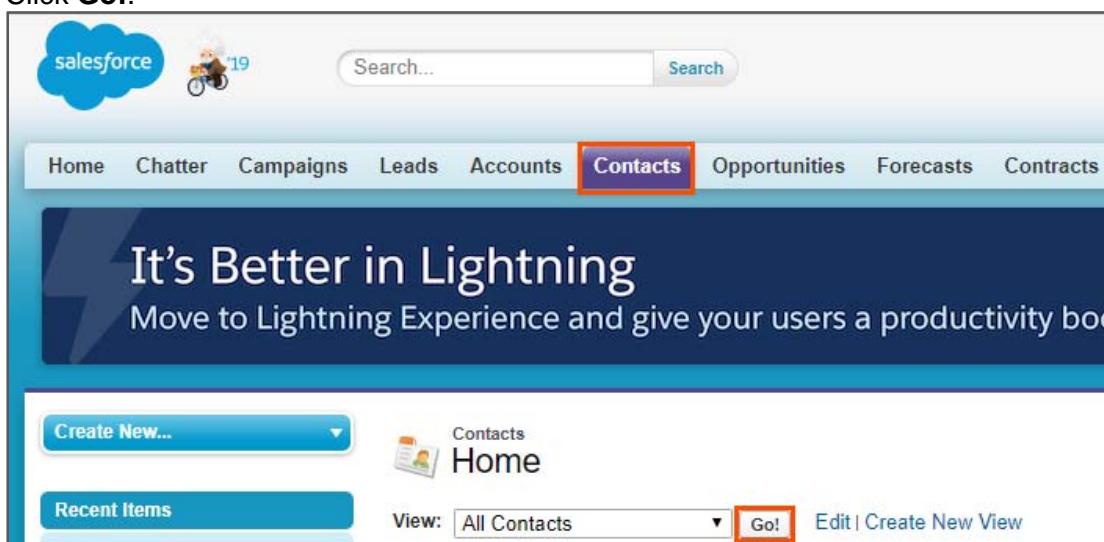
My Jobs		Data Integration			
Jobs (1 of 11)	<input checked="" type="checkbox"/> Up to date	Updated 3:24:50 AM PDT     			
Asset Name: XX_FirstName_E...	 				
Instance Name	Subtasks	Start Time	End Time	Rows Processed	State
 XX_FirstName_Employee-1		Jul 25, 2019, 12:56 AM	Jul 25, 2019, 12:58 AM	33	 Success

Note: Verify that 33 rows are processed by the task. You can use the refresh option  if the status of the task does not change automatically.

Verify the Results:

43. Log in to your Salesforce Developer account using your credentials.
 44. To view the new account records that were inserted, click **Contacts**.
Note: Verify that the View field is set to All Contacts.

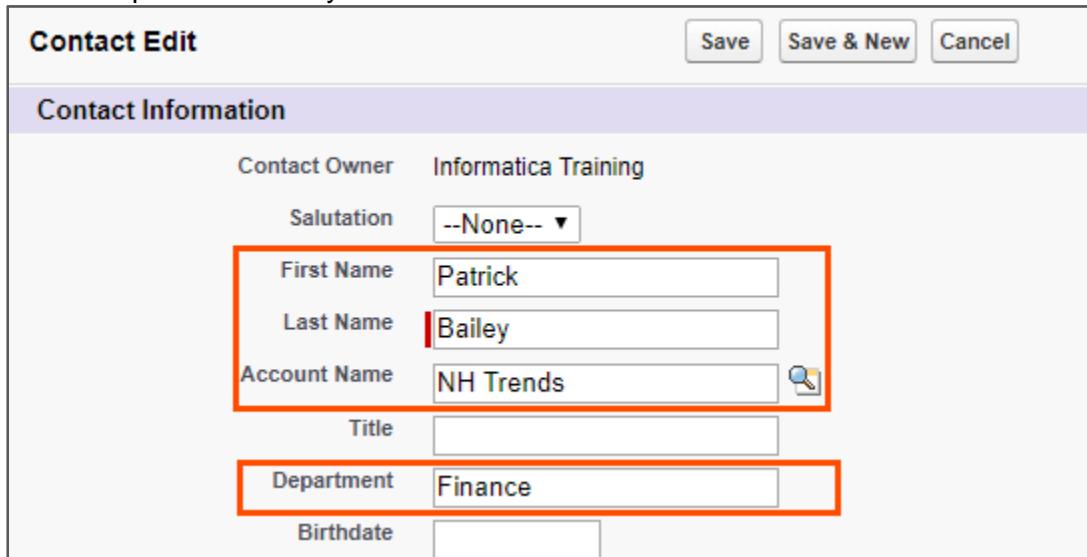
45. Click **Go!**.



46. To verify that the First Name and Last Name are parsed correctly, select a contact and click **Edit**.

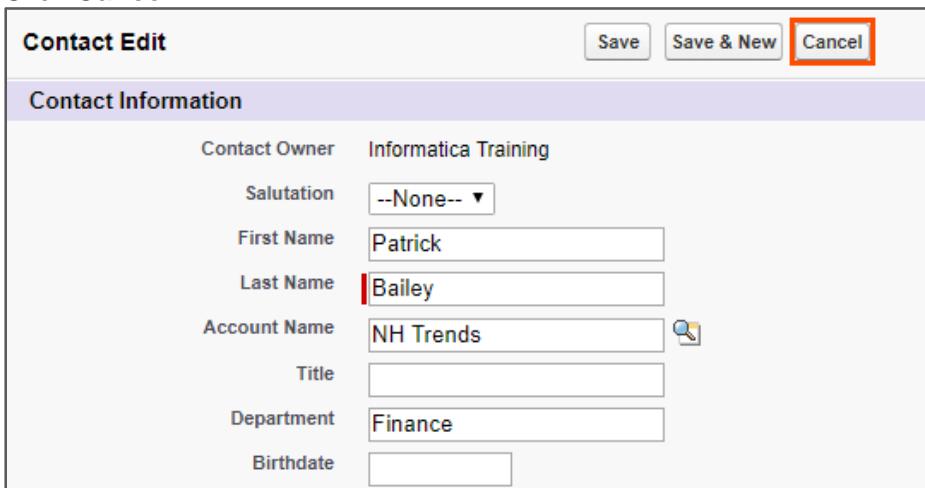
Action	Name	Account Name	Title	Phone	Email	Contact Owner Alias
Edit Del +	Bailey, Patrick	NH Trends		319-812-6957	patrick.bailey@nhsupplies...	ITrai
Edit Del +	Baker, Nancy	NH Supplies		229-336-5117	nancy.baker@nhsupplies...	ITrai
Edit Del +	Barr, Tim	Grand Hotels & Resorts Ltd	SVP, Administration and Fi...	(312) 596-1000	barr.tim@grandhotels.com	ITrai
Edit Del +	Bond, John	Grand Hotels & Resorts Ltd	VP, Facilities	(312) 596-1000	bond.john@grandhotels.c...	ITrai
Edit Del +	Boyle, Lauren	United Oil & Gas Corp.	SVP, Technology	(212) 842-5500	lboyle@uog.com	ITrai
Edit Del +	Brown, Donna	NH Everyday		212-434-7910	donna.brown@nhsupplies...	ITrai

47. Observe the entries in the First Name, Last Name, Account Name, and Department fields are parsed correctly.



Contact Edit		Save	Save & New	Cancel
Contact Information				
Contact Owner	Informatica Training			
Salutation	--None--			
First Name	Patrick			
Last Name	Bailey			
Account Name	NH Trends			
Title				
Department	Finance			
Birthdate				

48. Click **Cancel**.

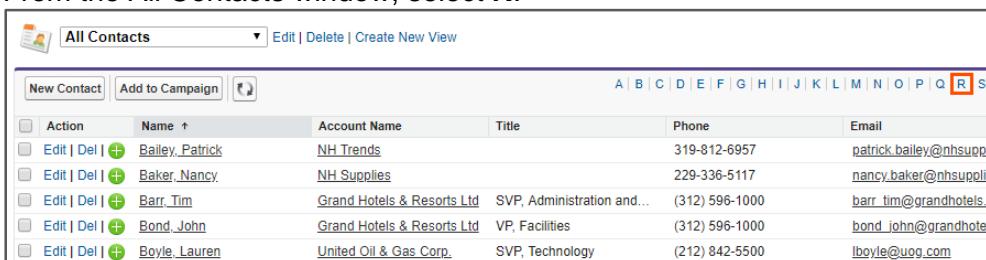


Contact Owner	Informatica Training
Salutation	--None--
First Name	Patrick
Last Name	Bailey
Account Name	NH Trends
Title	
Department	Finance
Birthdate	

49. Search for the contact that you noted in step 2 and verify that the contact is not loaded to salesforce.

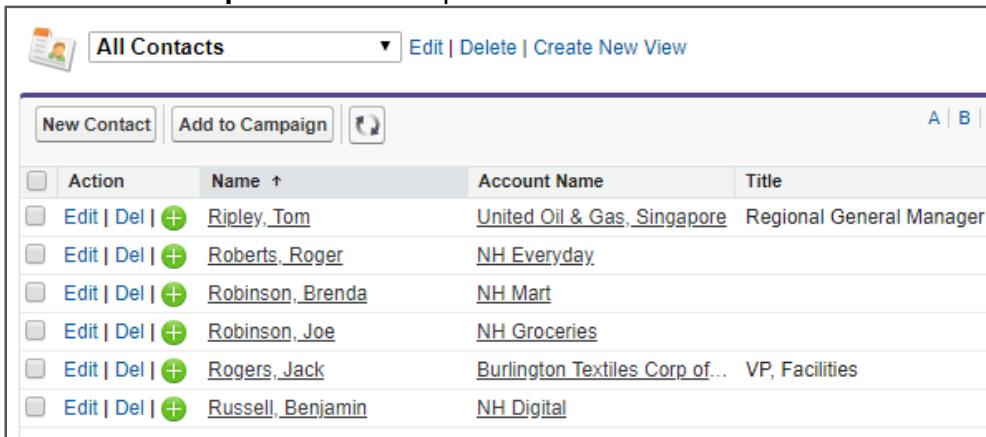
Note: In Salesforce, you can search for contacts alphabetically. In this case, the contact **Ralph Flores** should not be present in Salesforce.

50. From the All Contacts window, select **R**.



All Contacts					
Edit Delete Create New View					
New Contact	Add to Campaign				
A	B	C	D	E	F
G	H	I	J	K	L
M	N	O	P	Q	R
S					
<input type="checkbox"/> Action	Name ↑	Account Name	Title	Phone	Email
Edit Del	Bailey, Patrick	NH Trends		319-812-6957	patrick.bailey@nhsupply.com
Edit Del	Baker, Nancy	NH Supplies		229-336-5117	nancy.baker@nhsupply.com
Edit Del	Barr, Tim	Grand Hotels & Resorts Ltd	SVP, Administration and...	(312) 596-1000	barr.tim@grandhotels.com
Edit Del	Bond, John	Grand Hotels & Resorts Ltd	VP, Facilities	(312) 596-1000	bond.john@grandhotels.com
Edit Del	Boyle, Lauren	United Oil & Gas Corp.	SVP, Technology	(212) 842-5500	lboyle@uog.com

51. Observe that **Ralph Flores** is not present in the list.



All Contacts					
Edit Delete Create New View					
New Contact	Add to Campaign				
A	B	C	D	E	F
G	H	I	J	K	L
M	N	O	P	Q	R
S					
<input type="checkbox"/> Action	Name ↑	Account Name	Title		
Edit Del	Ripley, Tom	United Oil & Gas, Singapore	Regional General Manager		
Edit Del	Roberts, Roger	NH Everyday			
Edit Del	Robinson, Brenda	NH Mart			
Edit Del	Robinson, Joe	NH Groceries			
Edit Del	Rogers, Jack	Burlington Textiles Corp of...	VP, Facilities		
Edit Del	Russell, Benjamin	NH Digital			

This concludes the lab.

Module 3: Synchronization Task

Lab 3-3: Creating a Synchronization Task with Multiple Object Source Types

Overview:

You can use multiple tables in a source to join related objects as per the defined relationship.

Objective:

- Create a Synchronization task to load data from multiple Salesforce objects into a Flat File

Scenario:

Ruby wants to synchronize data from multiple Salesforce object and load the data from these objects to a flat file to gain better business insights. In this lab, John will extract product and pricing information from multiple objects within Salesforce and to load the data to a flat file.

Duration:

15 minutes

Tasks:

Copy Source Files:

1. Copy the **Items.csv** file from the CDI Lab Prep Files folder available on your desktop and paste it in your flat file directory (C:\IICSLabFiles).

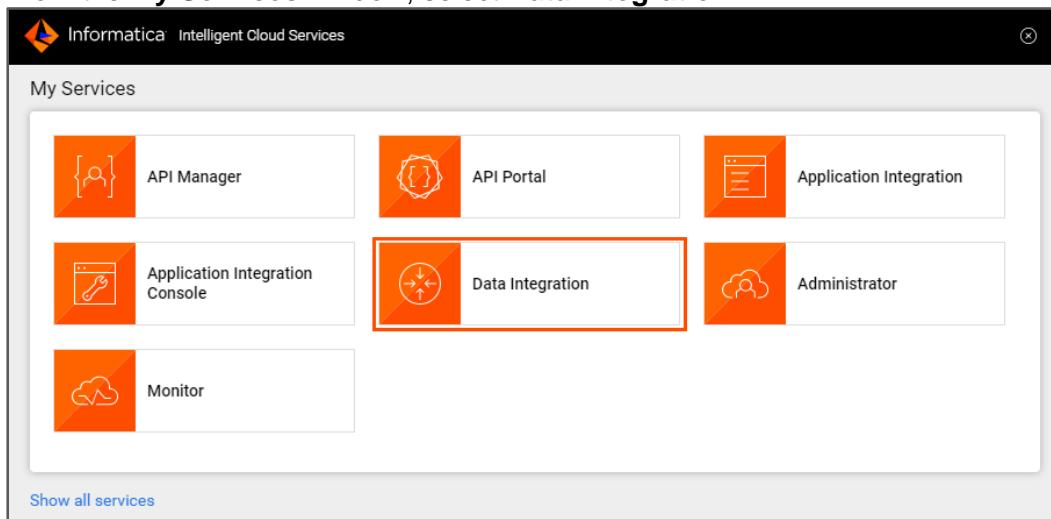
Create a Data Synchronization task:

1. Open the IICS Login page from the bookmarks bar.

Note: Follow this step if you have navigated away from the login page.

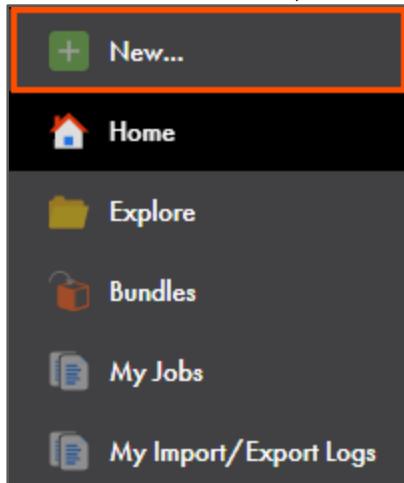
2. Enter the login credentials provided by the Instructor and click **Log In**.

3. From the **My Services** window, select **Data Integration**.

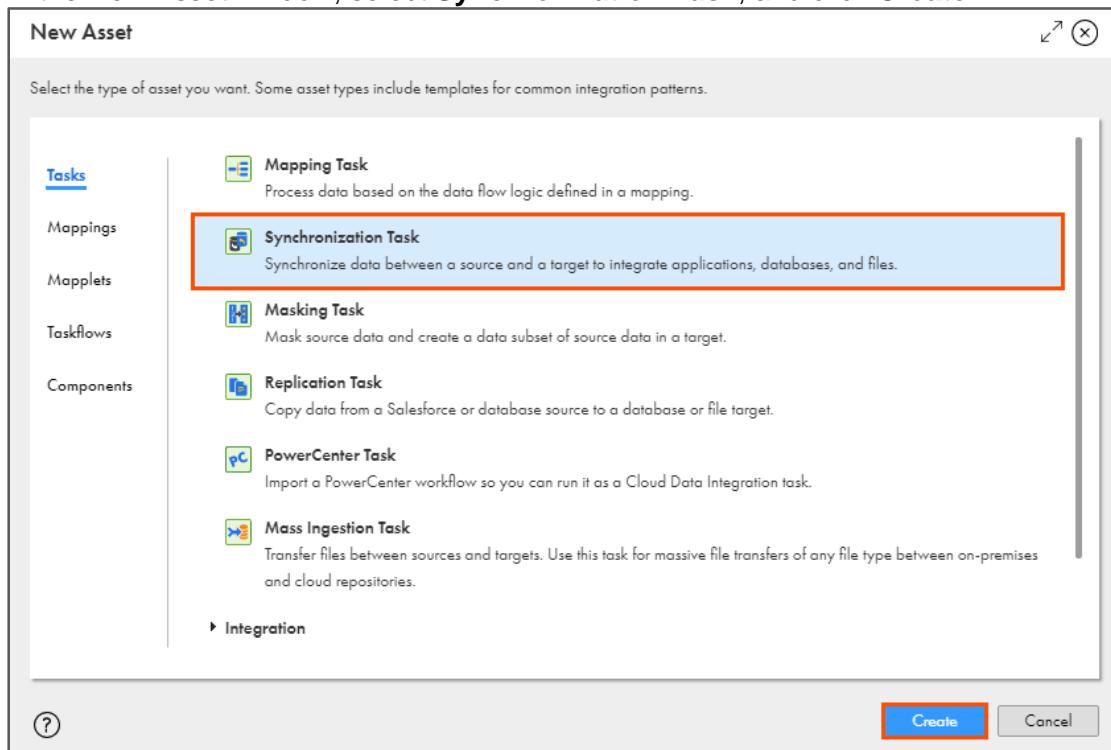


Note: You can also switch between services by selecting the drop-down next to current service name.

4. To create a new asset, from the navigation pane, select **New**.



5. In the New Asset window, select **Synchronization Task**, and click **Create**.



6. In the Task Name field, enter **XX_FirstName_MultiObject**.

Note: Here, XX refers to your initials, and FirstName refers to your First Name.

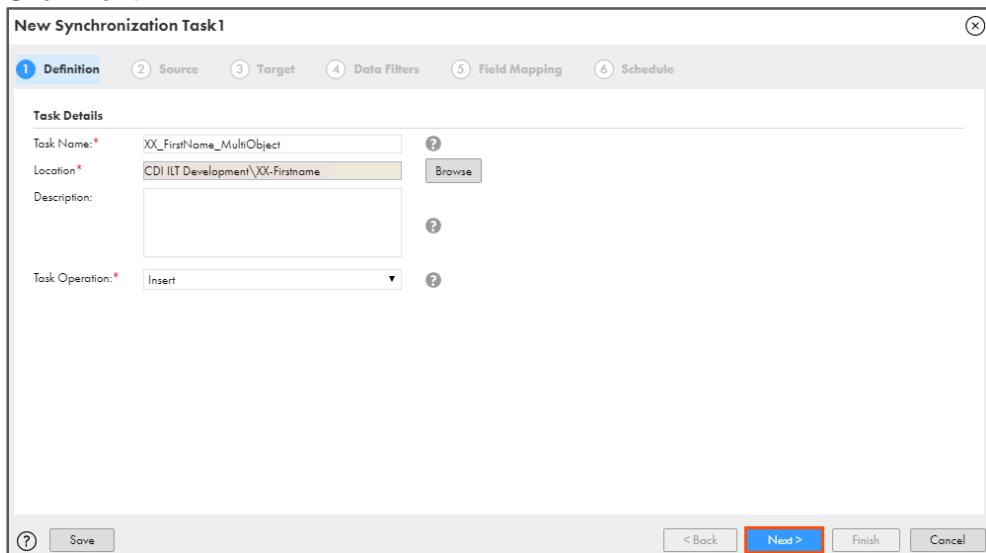
7. From the Task Operation drop-down, select **Insert**.



The screenshot shows the 'Task Details' dialog box. It has fields for 'Task Name' (containing 'XX_FirstName_MultiObject'), 'Location' (containing 'CDI ILT Development\XX-Firstname'), 'Description' (empty), and 'Task Operation' (set to 'Insert'). The 'Task Operation' dropdown is highlighted with a red box.

Note: Verify that asset Location is **CDI ILT Development\XX-Firstname**, where XX refers to your initials, and Firstname refers to your First Name.

8. Click **Next**.



New Synchronization Task1

Task Details

Task Name: * XX_FirstName_MultiObject

Location: * CDI ILT Development\XX-Firstname

Description:

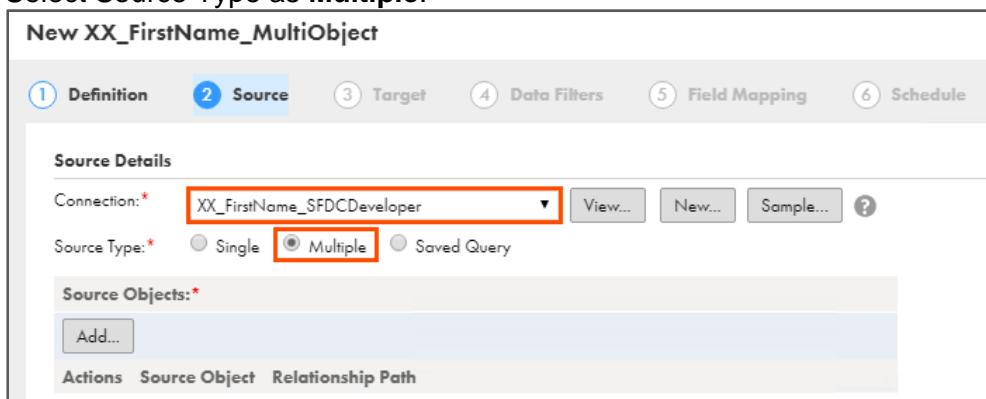
Task Operation: * Insert

Buttons: Save, < Back, **Next>**, Finish, Cancel

9. From the Connection drop-down, select **XX_FirstName_SFDCDeveloper**.

Note: XX refers to your initials, and FirstName refers to your First Name.

10. Select Source Type as **Multiple**.



New XX_FirstName_MultiObject

Source Details

Connection: * XX_FirstName_SFDCDeveloper

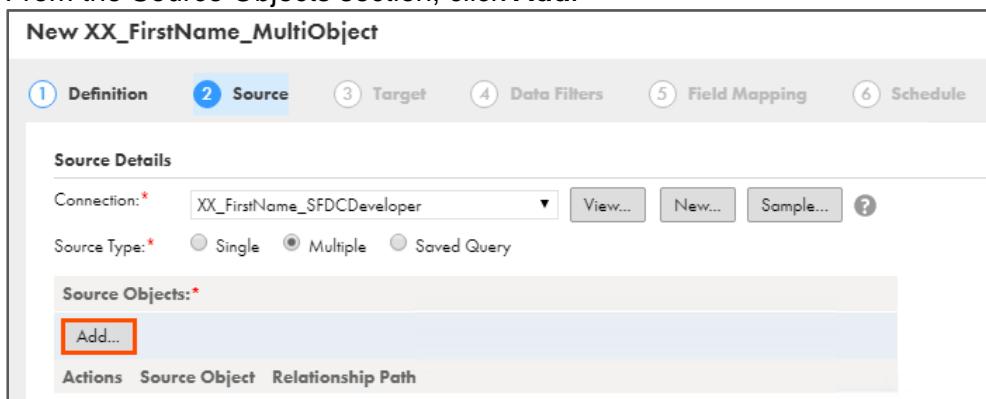
Source Type: * Single Multiple Saved Query

Source Objects: *

Add...

Actions Source Object Relationship Path

11. From the Source Objects section, click **Add**.



New XX_FirstName_MultiObject

Source Details

Connection: * XX_FirstName_SFDCDeveloper

Source Type: * Single Multiple Saved Query

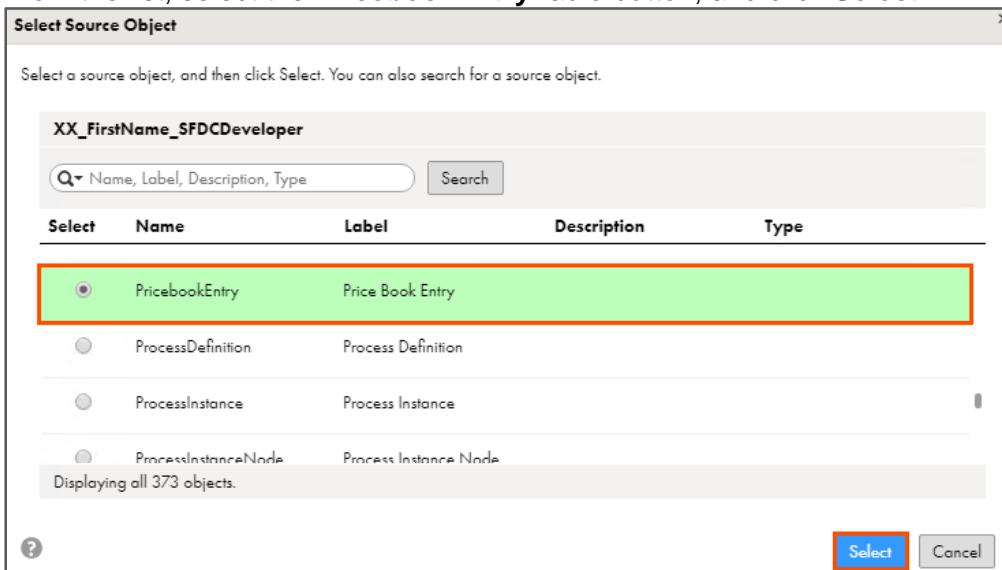
Source Objects: *

Add...

Actions Source Object Relationship Path

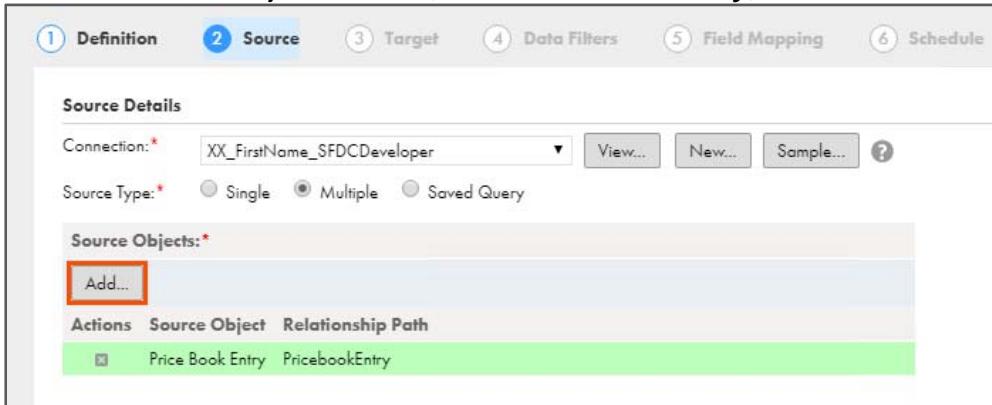
Note: The Select Source Object window appears.

12. From the list, select the **PricebookEntry** radio button, and click **Select**.



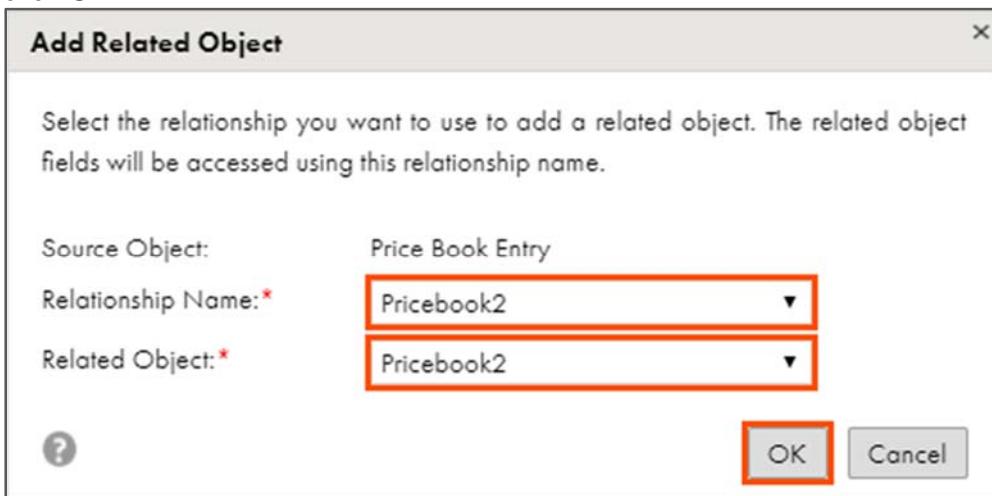
Note: You can also use the search option to locate the PricebookEntry object.

13. From the Source Objects section, select **PricebookEntry**, and click **Add**.

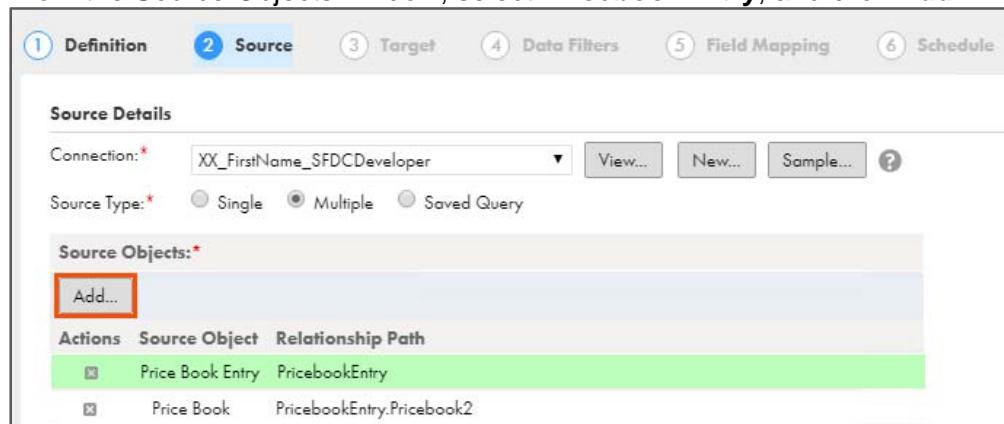


Note: The Add Related Object window appears.

14. From the Relationship Name and Related Object drop-down, select **Pricebook2** and click **OK**.



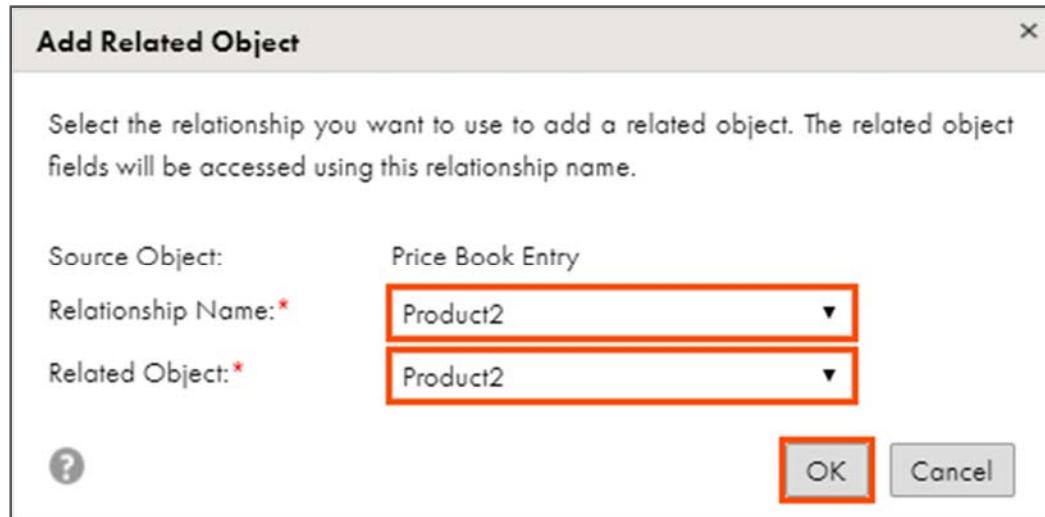
15. From the Source Objects window, select **PricebookEntry**, and click **Add**.



The screenshot shows the 'Source Details' section of the Source Objects window. The 'Connection' dropdown is set to 'XX_FirstName_SFDCDeveloper'. The 'Source Type' dropdown has 'Multiple' selected. The 'Source Objects' list contains two entries: 'Price Book Entry' and 'Price Book'. The 'Price Book Entry' entry is highlighted with a green background.

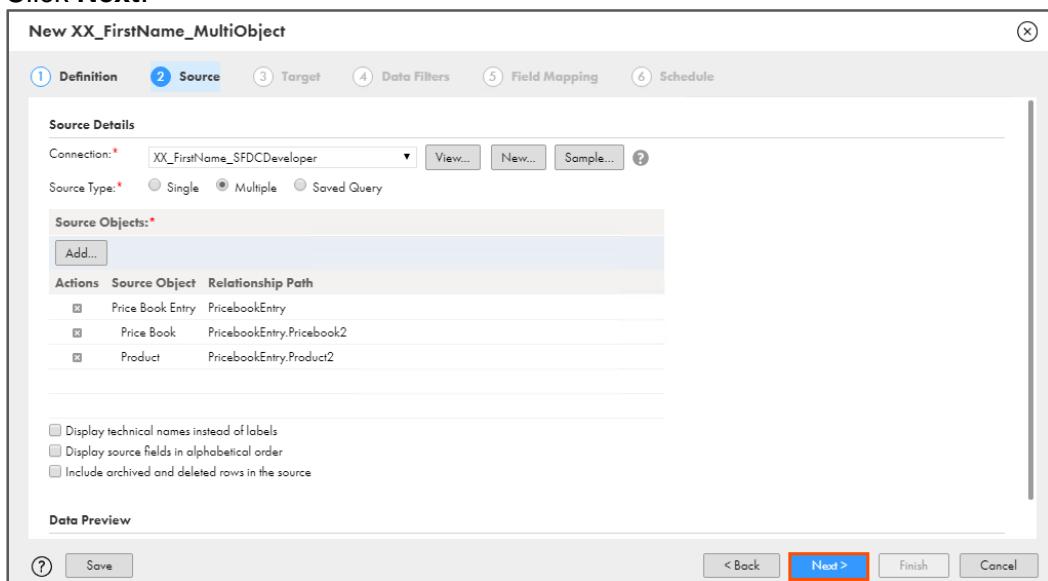
Note: The Add Related Object window appears.

16. From the Relationship Name and Related Object drop-down, select **Product2**.
17. Click **OK**.



The screenshot shows the 'Add Related Object' dialog box. The 'Source Object' is set to 'Price Book Entry'. The 'Relationship Name:' dropdown and the 'Related Object:' dropdown are both set to 'Product2'. The 'OK' button is highlighted with a red box.

18. Click **Next**.



New XX_FirstName_MultiObject

① Definition ② Source ③ Target ④ Data Filters ⑤ Field Mapping ⑥ Schedule

Source Details

Connection: * XX_FirstName_SFDCDeveloper View... New... Sample... ?

Source Type: * Single Multiple Saved Query

Source Objects: *

Add... Actions Source Object Relationship Path

<input checked="" type="checkbox"/>	Price Book Entry	PricebookEntry
<input checked="" type="checkbox"/>	Price Book	PricebookEntry;Pricebook2
<input checked="" type="checkbox"/>	Product	PricebookEntry;Product2

Display technical names instead of labels
 Display source fields in alphabetical order
 Include archived and deleted rows in the source

Data Preview

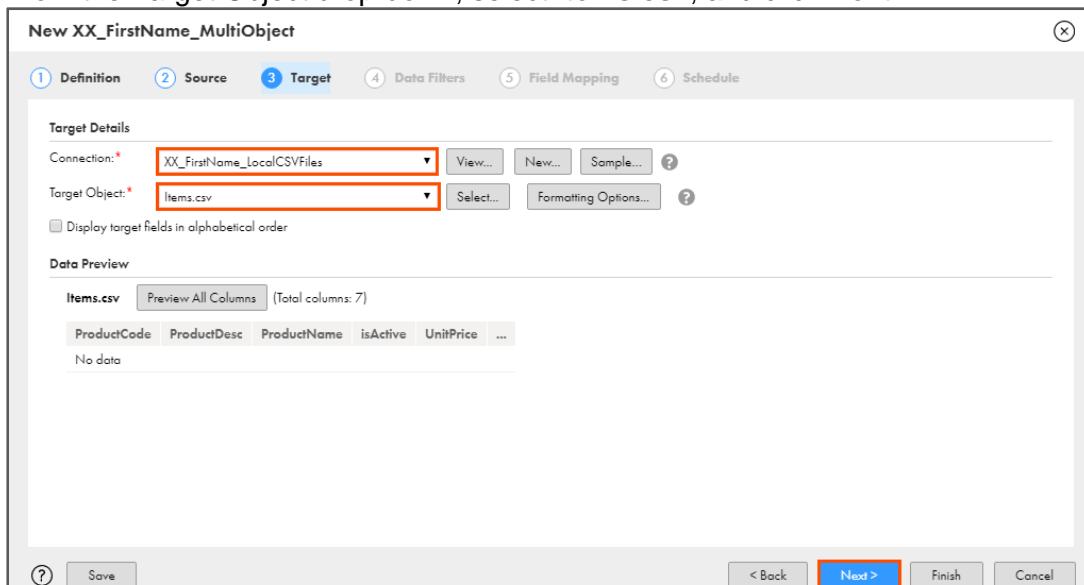
?

Save < Back **Next >** Finish Cancel

19. From the Connection drop-down, select **XX_FirstName_LocalCSVFiles**.

Note: XX refers to your initials, and FirstName refers to your First Name.

20. From the Target Object drop-down, select **Items.csv**, and click **Next**.



New XX_FirstName_MultiObject

① Definition ② Source ③ Target ④ Data Filters ⑤ Field Mapping ⑥ Schedule

Target Details

Connection: * **XX_FirstName_LocalCSVFiles** View... New... Sample... ?

Target Object: * **Items.csv** Select... Formatting Options... ?

Display target fields in alphabetical order

Data Preview

Items.csv Preview All Columns (Total columns: 7)

ProductCode	ProductDesc	ProductName	isActive	UnitPrice	...
-------------	-------------	-------------	----------	-----------	-----

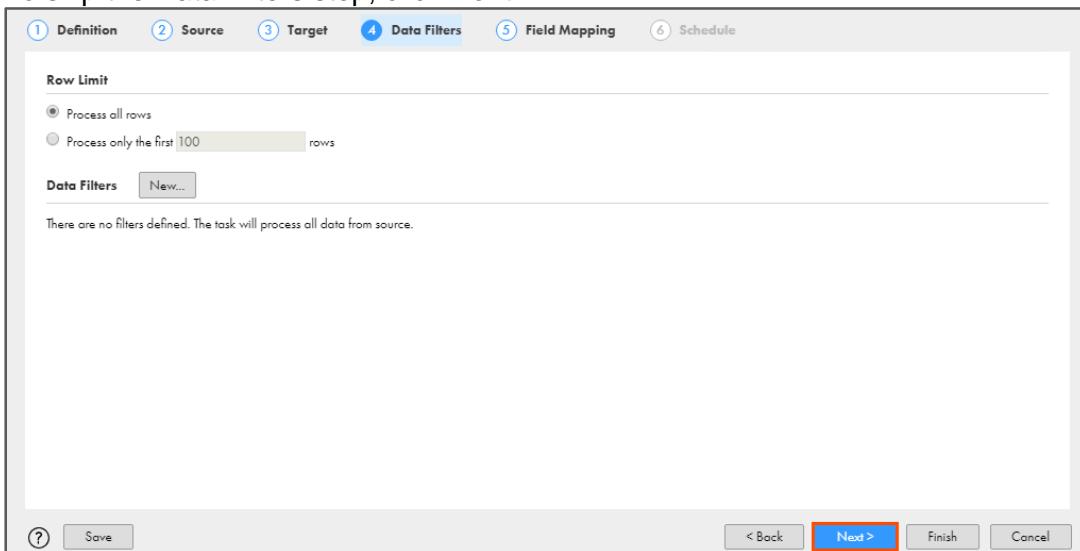
No data

?

Save < Back **Next >** Finish Cancel

Note: By default, if you select Flat File connection in the target, you will get the option to create a new flat file during design time. However, when the source is multi-object, this option is not available.

21. To skip the Data Filters step, click **Next**.



The screenshot shows the 'Data Filters' configuration screen. The 'Data Filters' tab is active. Under 'Row Limit', the 'Process all rows' radio button is selected. A note below states: 'There are no filters defined. The task will process all data from source.' At the bottom of the screen, there are buttons for '?', 'Save', '< Back', 'Next >', 'Finish', and 'Cancel'. The 'Next >' button is highlighted with a red box.

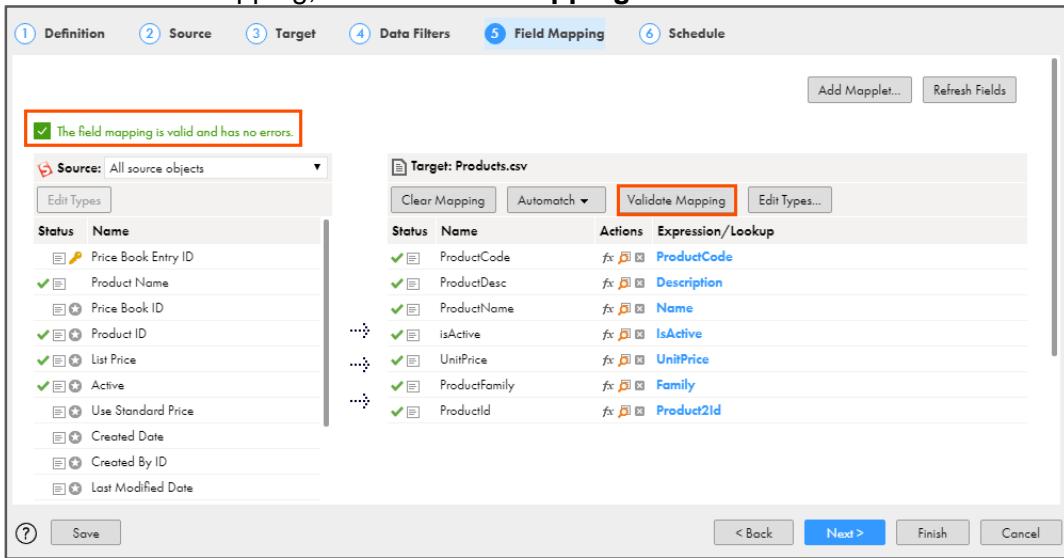
22. Map the fields, as shown in the following table:

Note: You can drag a Source field and drop it onto a Target field. Some of the fields might be mapped automatically. For already mapped fields, do not map the fields again.

Source Object	Source Field Name	Target Field Name
Price Book Entry	Product Name	ProductName
Price Book Entry	Product ID	ProductId
Price Book Entry	List Price	UnitPrice
Price Book Entry	Active	isActive
Price Book Entry	Product Code	ProductCode
Pricebook	Description	ProductDesc
Product	Product Family	ProductFamily

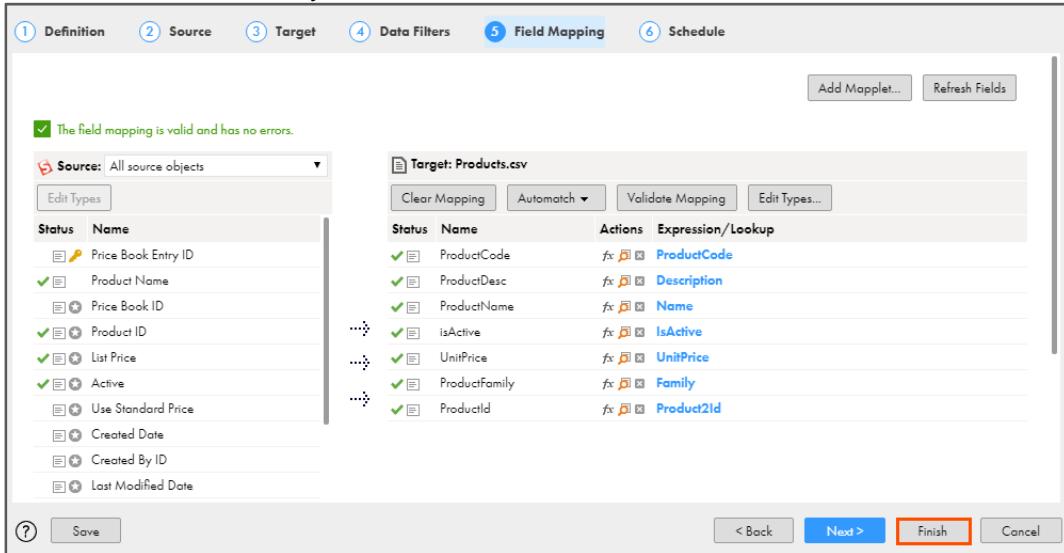
Note: The field name displayed in the field mapping are the technical field names of the respective source fields. Thus, after mapping, Product ID is displayed as Product2Id, Active is displayed as IsActive, Product Name is displayed as Name, and Product Family is displayed as Family.

23. To validate the mapping, click **Validate Mapping**.



The screenshot shows the Informatica Synchronization Task wizard at the 'Field Mapping' step (Step 5). The 'Source' dropdown is set to 'All source objects'. The 'Target' section shows a table for 'Products.csv' with columns: Status, Name, Actions, and Expression/Lookup. The 'Validate Mapping' button is highlighted with a red box. Other buttons include 'Clear Mapping', 'Automatch', 'Edit Types...', 'Save', and navigation buttons ('Back', 'Next >', 'Finish', 'Cancel'). A message box at the top left says: 'The field mapping is valid and has no errors.'

24. To save and close the Synchronization Task wizard, click **Finish**.



This screenshot is identical to the previous one, showing the 'Field Mapping' step of the wizard. The 'Validate Mapping' button is still highlighted. In this version, the 'Finish' button is highlighted with a red box, indicating the final step of the process.

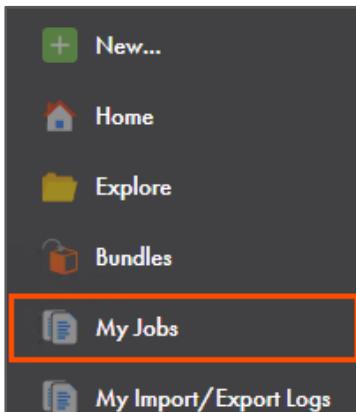
25. To run the synchronization task, click **Run**.



The screenshot shows the 'Task Details' window for a task named 'XX_FirstName_MultiObject'. The 'Run' button is highlighted with a red box. Other buttons in the header include 'Edit' and a close button. The task details include: Task Name: XX_FirstName_MultiObject, Location: Default, Description: , and Operation: Insert.

Monitor the Synchronization Task:

26. To monitor the task, from the navigation pane, click **My Jobs**.



27. When the task completes, the status changes to **Success**.

My Jobs		Data Integration
Jobs (1 of 26)	<input checked="" type="checkbox"/> Up to date	Updated 10:14:29 PM PDT 
Asset Name: XX_FirstName_MultiO...  	Add Field 	   Find
Instance Name	Subtasks	Start Time
XX_FirstName_MultiObject-1		Aug 1, 2019, ...
		Aug 1, 2019, ...
		34
		 Success

Note: You can refresh the page if the status does not change automatically.

Examine Results:

28. Open the **Items.csv** file and review the added rows. The output will look like the below excel file:

A	B	C		D	E	F	G
1	ProductCode	ProductDesc	ProductName	isActive	UnitPrice	ProductFamily	ProductId
2	GC1040		GenWatt Diesel 200kW	1	25000		01t2v000009ICVvAAO
3	GC1020		GenWatt Diesel 10kW	1	5000		01t2v000009ICVwAAO
4	IN7080		Installation: Industrial - High	1	85000		01t2v000009ICVxAAO
5	SL9040		SLA: Silver	1	20000		01t2v000009ICVyAAO
6	GC3040		GenWatt Propane 500kW	1	50000		01t2v000009ICVzAAO
7	SL9080		SLA: Platinum	1	40000		01t2v000009ICW0AAO
8	GC3020		GenWatt Propane 100kW	1	15000		01t2v000009ICW1AAO
9	GC3060		GenWatt Propane 1500kW	1	120000		01t2v000009ICW2AAO
10	GC1060		GenWatt Diesel 1000kW	1	100000		01t2v000009ICW3AAO

Note: The output changes according to the data in your Salesforce Products object.

This concludes the lab.

Module 3: Synchronization Task

Lab 3-4: Using Pre and Post SQL Commands in a Synchronization Task

Overview:

Pre and Post commands enables IICS to perform additional tasks on the data before and after you load it to the target.

In this lab, you will create a synchronization task and configure Pre and Post commands.

Objective:

- Use pre and post SQL commands in a Synchronization task

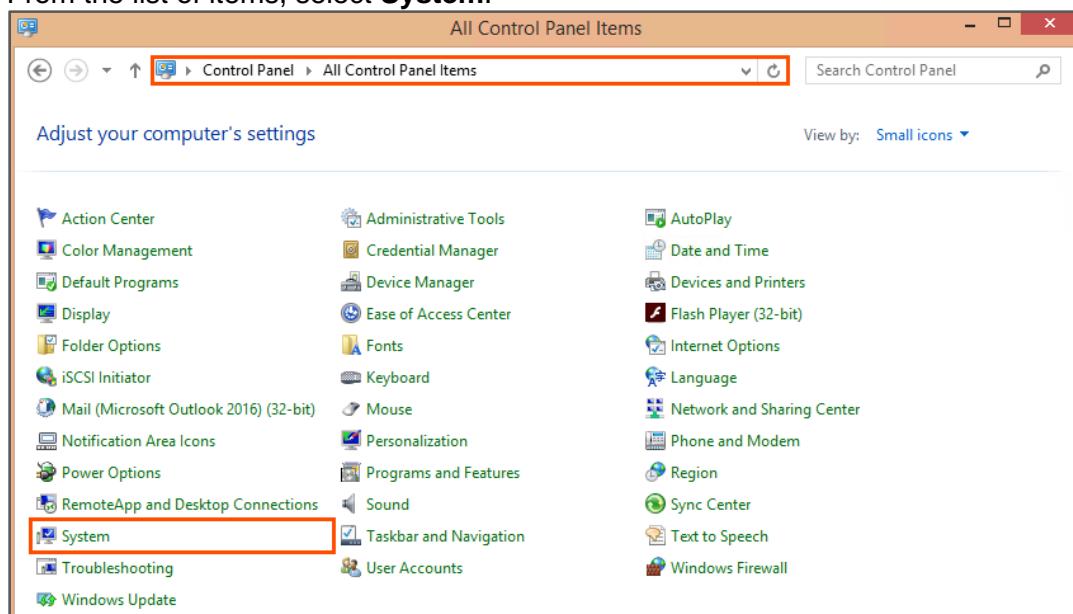
Duration:

20 minutes

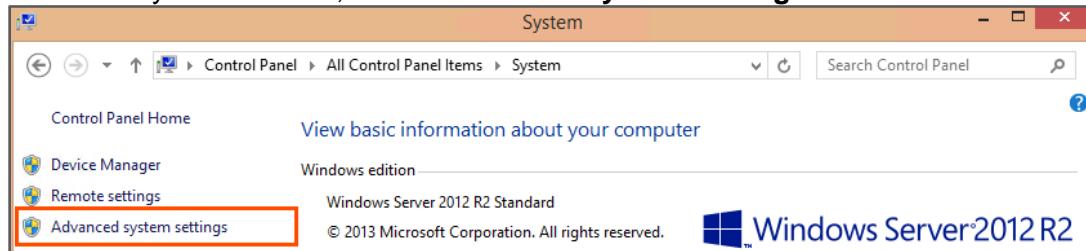
Tasks:

Copy location of sql.exe:

1. Select the windows **Start** menu.
2. In the search bar, enter **Control Panel** and press **enter**.
3. From the list of items, select **System**.

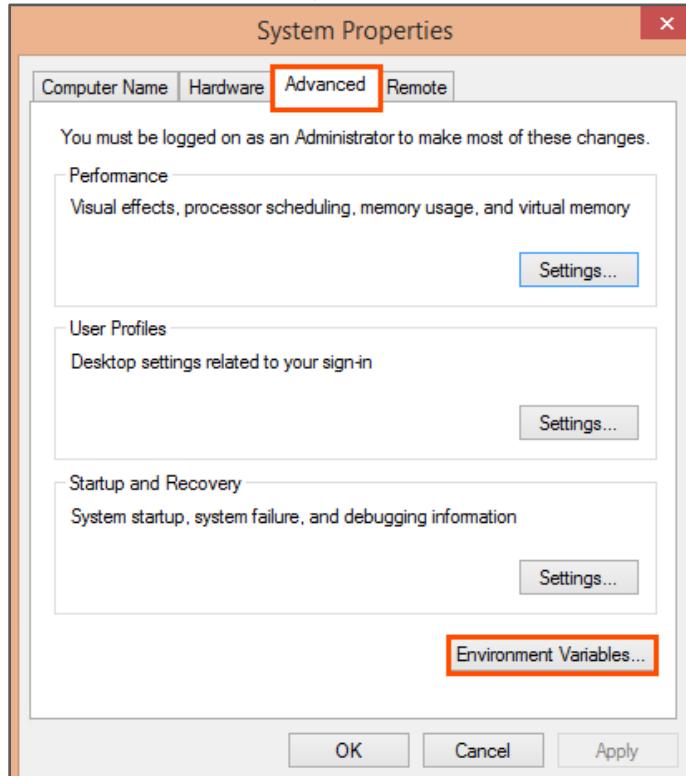


4. From the System window, select **Advanced system settings**.



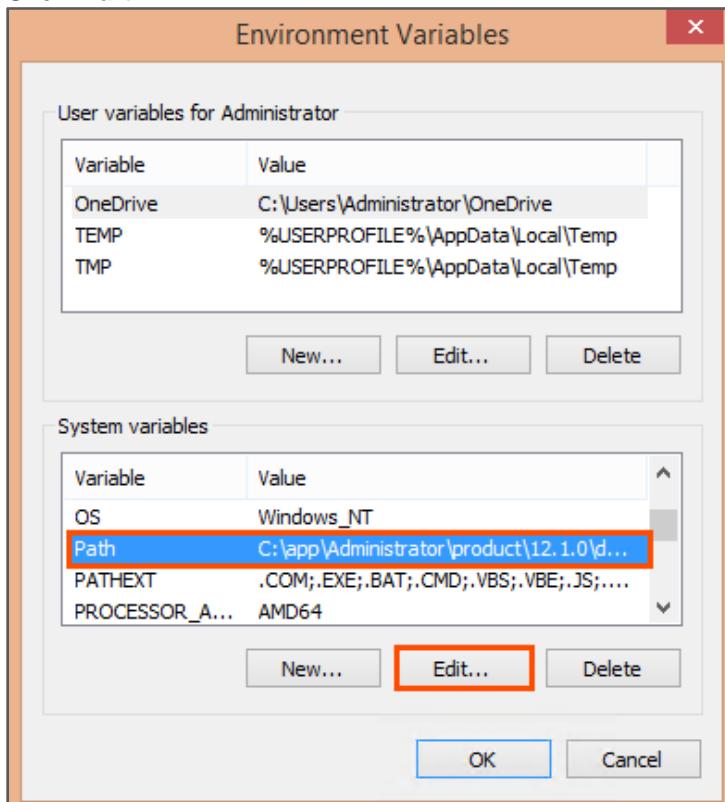
Note: The System Properties window appears.

5. From the Advanced tab, select **Environment Variables**.



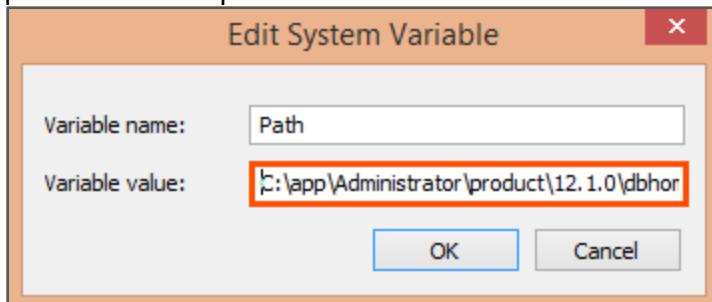
6. From the System variables section, select the **Path** variable.

7. Click **Edit**.



Note: The Edit System Variable window appears.

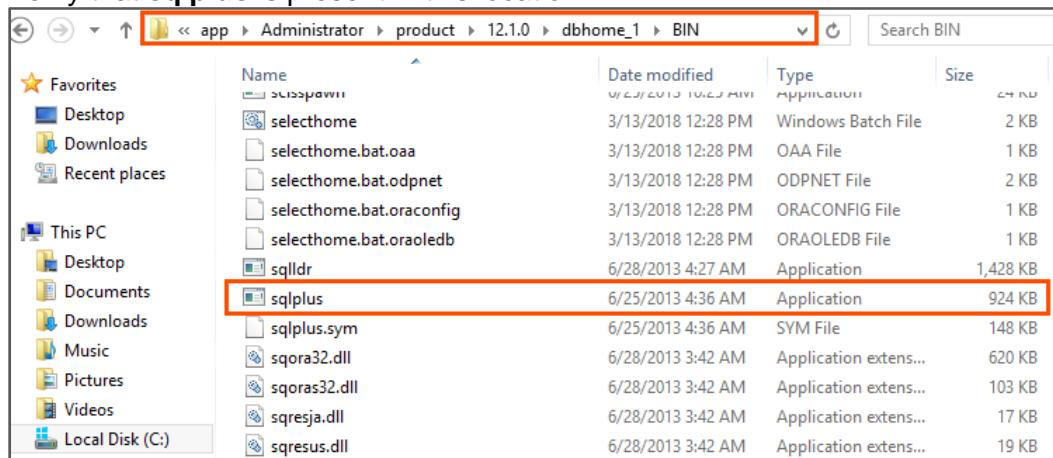
8. From the Edit System Variable window, copy the path from the Variable value field and paste it in a notepad.



Note: You must copy the path till \bin. In this case, the location is **C:\app\Administrator\product\12.1.0\dbhome_1\bin**.

9. On your system, navigate to the copied location.

10. Verify that **sqlplus** is present in this location.



Copy Source Files:

11. Copy the **del.sql** and **create.sql** files from the CDI Lab Prep Files folder available on your desktop and paste it in your flat file directory (C:\IICSLabFiles).

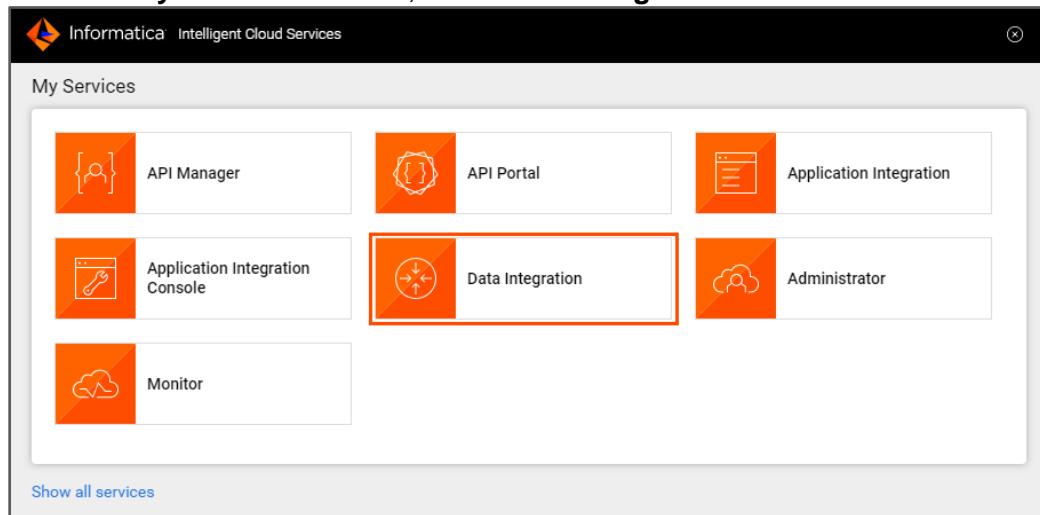
Create Synchronization Task:

12. Open the IICS Login page from the Bookmarks bar.

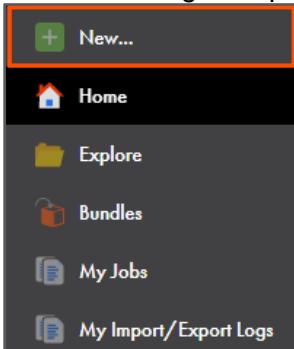
Note: Follow this step if you have navigated away from the login page.

13. Enter the login credentials provided by the Instructor and click **Log In**.

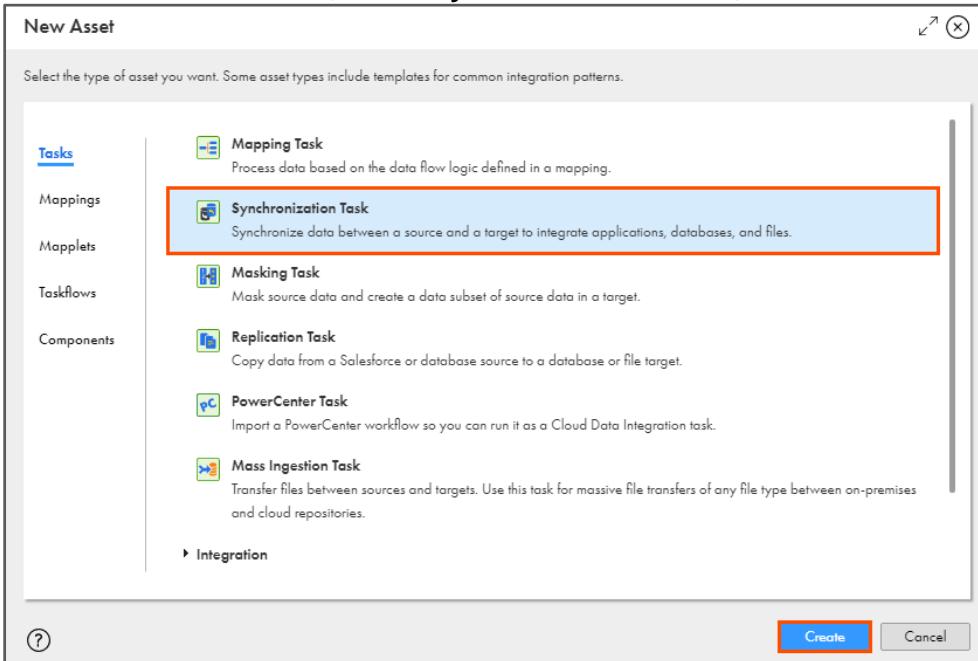
14. From the **My Services** window, select **Data Integration**.



15. From the navigation pane, select **New**.



16. In the New Asset window, select **Synchronization Task**, and click **Create**.

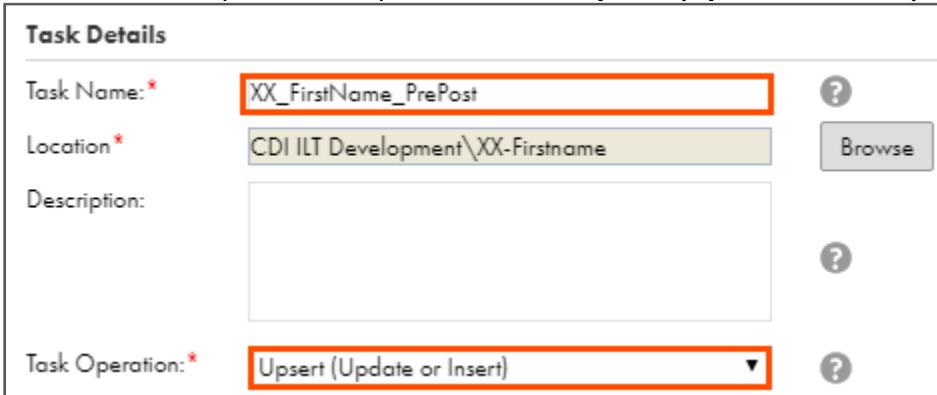


Note: A six-step Synchronization Task wizard appears.

17. In the Task Name field, enter **XX_FirstName_PrePost**.

Note: XX refers to your initials, and FirstName refers to your First Name.

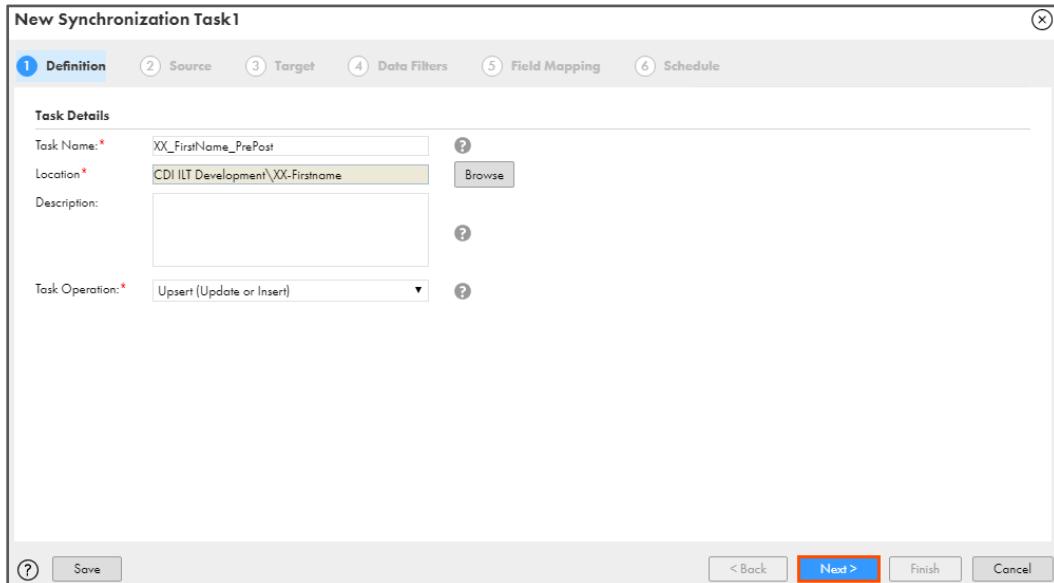
18. From the Task Operation drop-down, select **Upsert (Update or Insert)**.



Task Details	
Task Name: *	XX_FirstName_PrePost
Location *	CDI ILT Development\XX-Firstname
Description:	
Task Operation: *	Upsert (Update or Insert)

Note: Verify that asset Location is **CDI ILT Development\XX-Firstname**, where XX refers to your initials, and Firstname refers to your First Name.

19. Click **Next**.



New Synchronization Task1

① Definition ② Source ③ Target ④ Data Filters ⑤ Field Mapping ⑥ Schedule

Task Details

Task Name: * XX_FirstName_PrePost

Location: * CDI ILT Development\XX-Firstname

Description:

Task Operation: * Upsert (Update or Insert)

Buttons: ? Save < Back **Next >** Finish Cancel

20. From the Connection drop-down, select **XX_FirstName_Oracle**.

Note: XX refers to your initials, and FirstName refers to your First Name.

21. Retain Source Type as **Single**.



Source Details

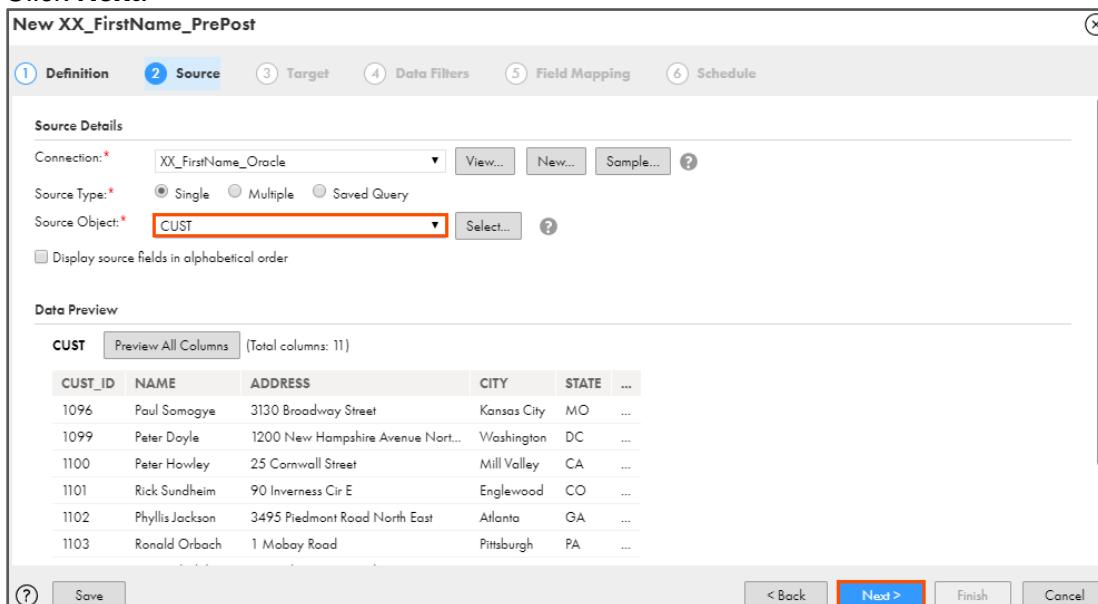
Connection: * XX_FirstName_Oracle

Source Type: * Single Multiple Saved Query

Buttons: View... New... Sample... ?

22. From the Source Object drop-down, select **CUST**.

23. Click **Next**.



New XX_FirstName_PrePost

① Definition ② Source ③ Target ④ Data Filters ⑤ Field Mapping ⑥ Schedule

Source Details

Connection: * XX_FirstName_Oracle

Source Type: * Single Multiple Saved Query

Source Object: * **CUST**

Display source fields in alphabetical order

Data Preview

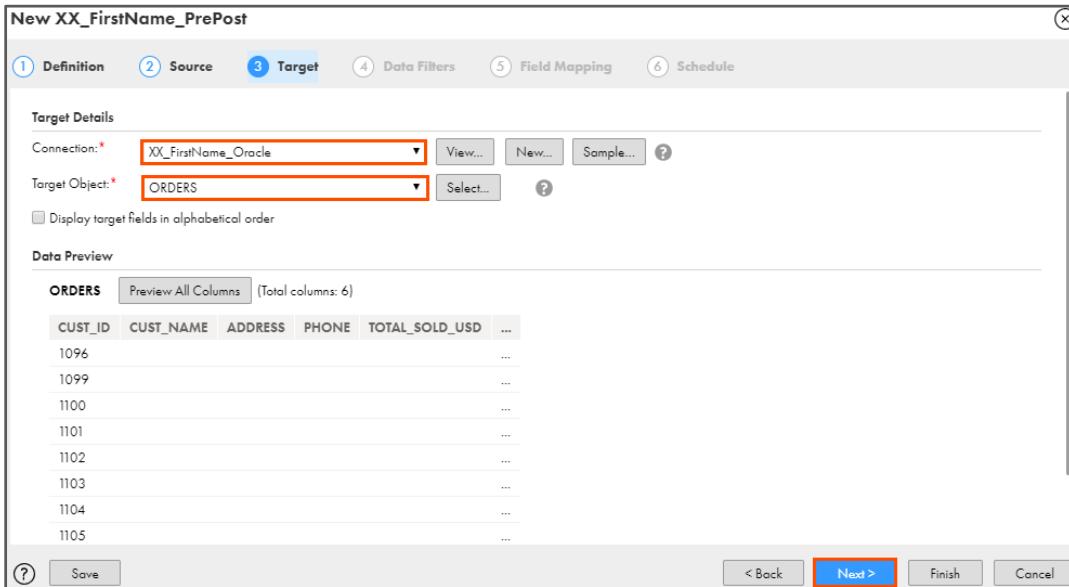
CUST						Preview All Columns	(Total columns: 11)
CUST_ID	NAME	ADDRESS	CITY	STATE	...		
1096	Paul Somogyi	3130 Broadway Street	Kansas City	MO	...		
1099	Peter Doyle	1200 New Hampshire Avenue Nort...	Washington	DC	...		
1100	Peter Howley	25 Cornwall Street	Mill Valley	CA	...		
1101	Rick Sundheim	90 Inverness Cir E	Englewood	CO	...		
1102	Phyllis Jackson	3495 Piedmont Road North East	Atlanta	GA	...		
1103	Ronald Orbach	1 Mobay Road	Pittsburgh	PA	...		

Buttons: ? Save < Back **Next >** Finish Cancel

24. From the Connection drop-down, select **XX_FirstName_Oracle**.

25. From the Target Object drop-down, select **ORDERS**.

26. Click **Next**.



New XX_FirstName_PrePost

① Definition ② Source ③ Target ④ Data Filters ⑤ Field Mapping ⑥ Schedule

Target Details

Connection: * XX_FirstName_Oracle View... New... Sample... ?

Target Object: * ORDERS Select... ?

Display target fields in alphabetical order

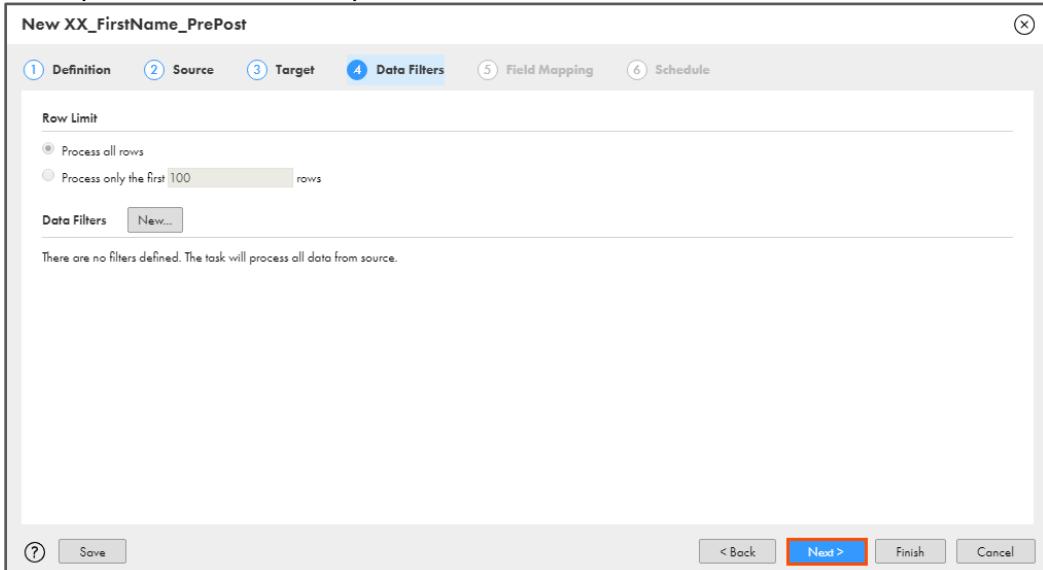
Data Preview

ORDERS Preview All Columns (Total columns: 6)

CUST_ID	CUST_NAME	ADDRESS	PHONE	TOTAL_SOLD_USD	...
1096					...
1099					...
1100					...
1101					...
1102					...
1103					...
1104					...
1105					...

Save < Back Next > Finish Cancel

27. To skip the Data Filters step, click **Next**.



New XX_FirstName_PrePost

① Definition ② Source ③ Target ④ Data Filters ⑤ Field Mapping ⑥ Schedule

Row Limit

Process all rows

Process only the first 100 rows

Data Filters New...

There are no filters defined. The task will process all data from source.

Save < Back Next > Finish Cancel

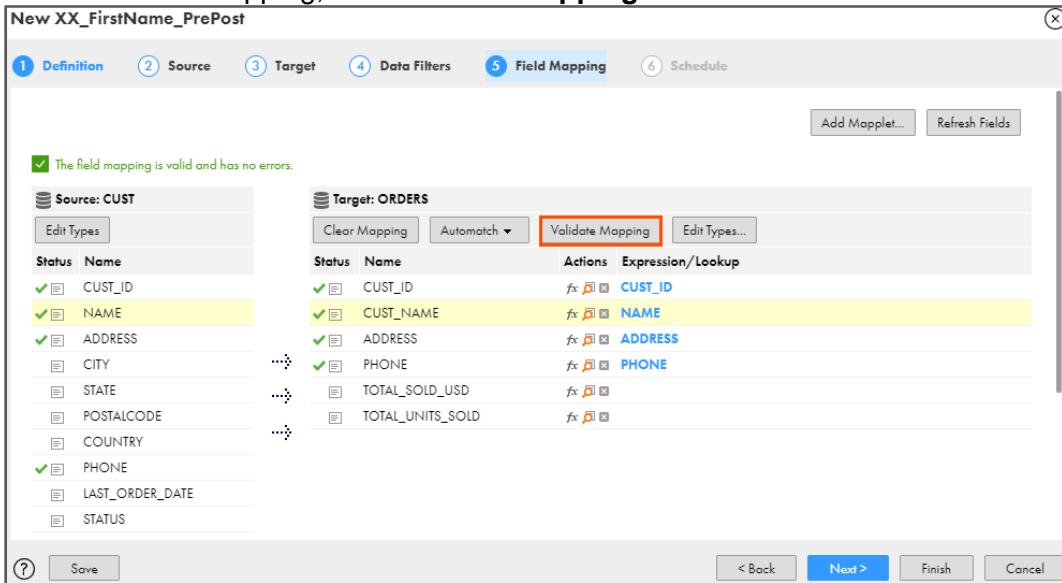
28. Map the fields, as shown in the table below:

You can drag a Source field and drop it onto a Target field.

Source Field Name	Target Field Name
CUST_ID	CUST_ID
NAME	CUST_NAME
ADDRESS	ADDRESS
PHONE	PHONE

Note: Some of the fields may be mapped automatically. For already mapped fields, do not map the fields again.

29. To validate the mapping, click **Validate Mapping**.

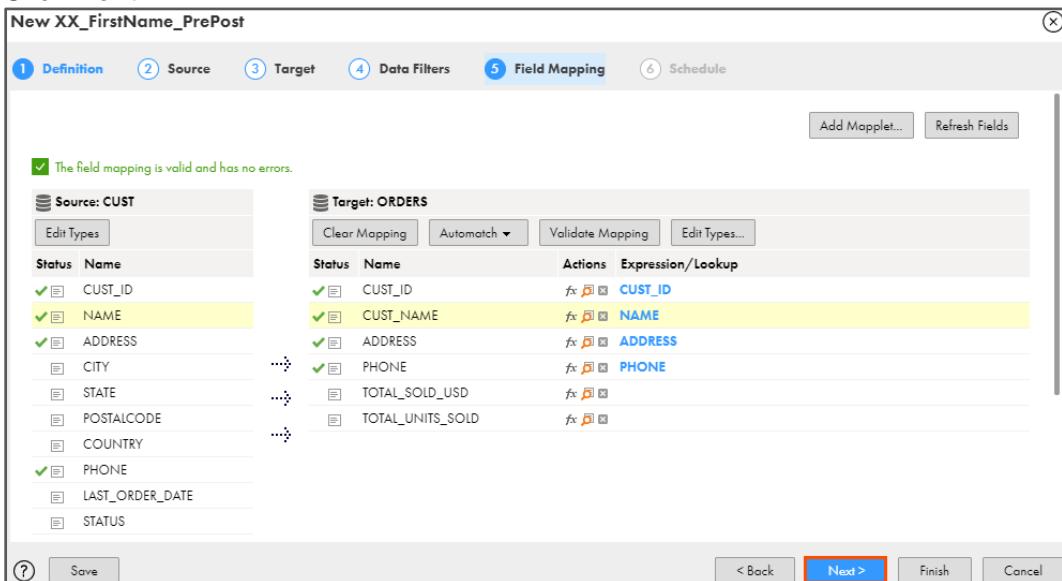


The field mapping is valid and has no errors.

Source: CUST	Target: ORDERS
Status Name	Status Name
CUST_ID	CUST_ID
NAME	CUST_NAME
ADDRESS	ADDRESS
CITY	PHONE
STATE	TOTAL_SOLD_USD
POSTALCODE	TOTAL_UNITS SOLD
COUNTRY	
PHONE	
LAST_ORDER_DATE	
STATUS	

Note: A message **The field mapping is valid and has no errors** appears.

30. Click **Next**.



The field mapping is valid and has no errors.

Source: CUST	Target: ORDERS
Status Name	Status Name
CUST_ID	CUST_ID
NAME	CUST_NAME
ADDRESS	ADDRESS
CITY	PHONE
STATE	TOTAL_SOLD_USD
POSTALCODE	TOTAL_UNITS SOLD
COUNTRY	
PHONE	
LAST_ORDER_DATE	
STATUS	

31. Scroll down to **Advanced Options**.

32. In the Preprocessing Commands field, enter the following command:

**C:\app\Administrator\product\12.1.0\dbhome_1\bin\sqlplus.exe CDI/CDI@infaorcl
@C:\IICSLabFiles\create.sql**

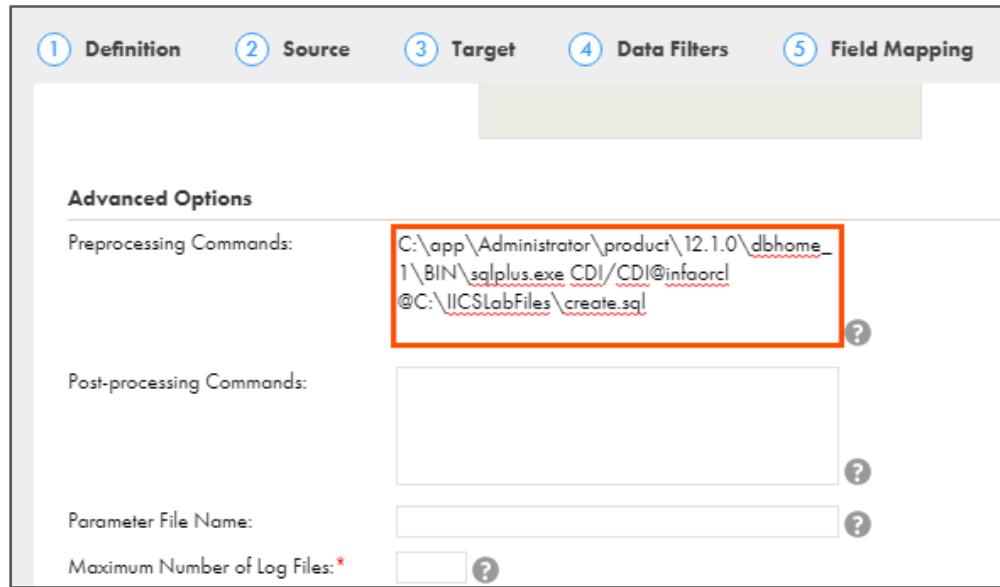
OR

Navigate to the **C:\Students\Commands** directory on your local machine and open the file named

08_LabGuide_CDI_UsingPreAndPostSQLCommandsInSynchronizationTask_3-4.

Copy the command mentioned under **Step 32** and paste it in the Preprocessing

Commands field.



① Definition ② Source ③ Target ④ Data Filters ⑤ Field Mapping

Advanced Options

Preprocessing Commands: `C:\app\Administrator\product\12.1.0\dbhome_1\BIN\sqlplus.exe CDI/CDI@infaorcl
@C:\IICSLabFiles\create.sql`

Post-processing Commands:

Parameter File Name:

Maximum Number of Log Files: *

33. In the Post-processing Commands field, enter the following command:

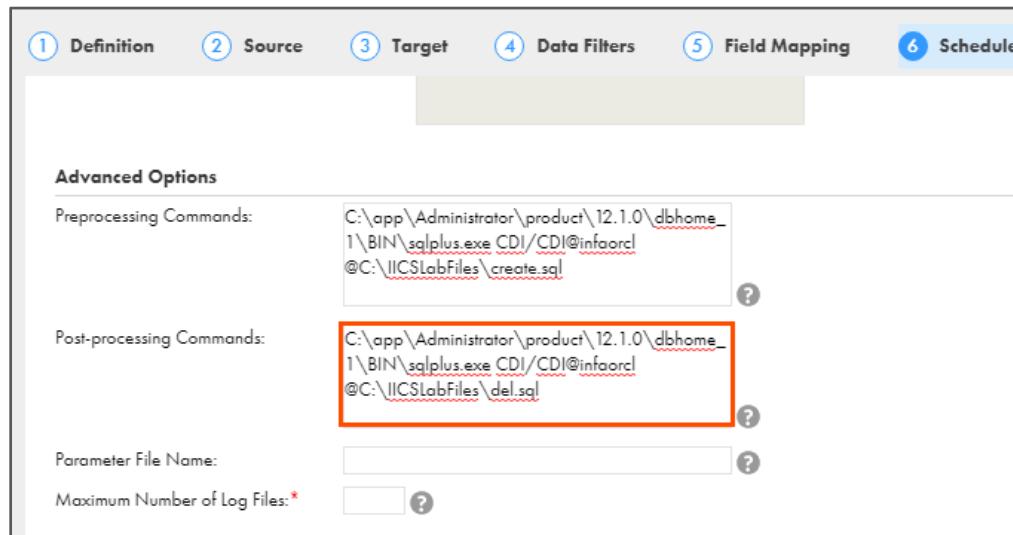
`C:\app\Administrator\product\12.1.0\dbhome_1\bin\sqlplus.exe CDI/CDI@infaorcl
@C:\IICSLabFiles\del.sql`

OR

Navigate to the **C:\Students\Commands** directory on your local machine and open the file named

08_LabGuide_CDI_UsingPreAndPostSQLCommandsInSynchronizationTask_3-4.

Copy the command mentioned under **Step 33** and paste it in the Post-processing Commands field.



① Definition ② Source ③ Target ④ Data Filters ⑤ Field Mapping ⑥ Schedule

Advanced Options

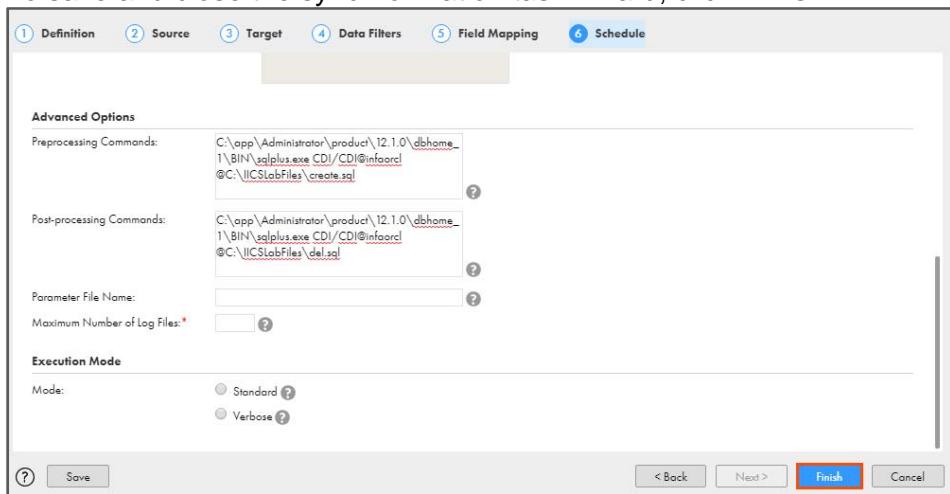
Preprocessing Commands: `C:\app\Administrator\product\12.1.0\dbhome_1\BIN\sqlplus.exe CDI/CDI@infaorcl
@C:\IICSLabFiles\create.sql`

Post-processing Commands: `C:\app\Administrator\product\12.1.0\dbhome_1\BIN\sqlplus.exe CDI/CDI@infaorcl
@C:\IICSLabFiles\del.sql`

Parameter File Name:

Maximum Number of Log Files: *

34. To save and close the synchronization task wizard, click **Finish**.

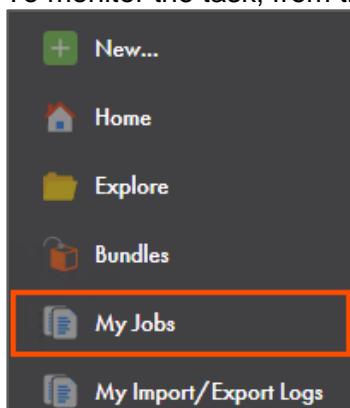


35. To run the Synchronization task, click **Run**.



Monitor the Synchronization Task:

36. To monitor the task, from the navigation pane, click **My Jobs**.



37. When the task completes, the status changes to **Success**.

Jobs (1 of 27)		Up to date	Updated 11:18:01 PM PDT			
			Subtasks	Start Time	End Time	Rows Processed
Asset Name:	XX_FirstName_PrePost					
				Aug 1, 2019, ...	Aug 1, 2019, ...	10
						✓ Success

Note: If the status of the task does not change to success automatically, click  to refresh the task status.

This concludes the lab.

Module 4: Cloud Mapping Designer – Basic Transformations

Lab 4-1: Creating a Mapping Using Basic Transformations

Overview:

The Mapping designer feature of IICS allows you to create a mapping and use it in a Mapping Task.

Objective:

- Use Joiner, Filter, and Expression transformations in a mapping

Scenario:

NH Suppliers recently started offering express delivery to their customers with order value of more than 1000 dollars. However, Ruby, the owner of NH suppliers, wants to automate the delivery selection process. John, who is the Lead Developer in NH Suppliers, suggests using the IICS Mapping designer to fulfil this requirement.

In this lab, John will combine the Products and Order details to calculate the total order amount. This calculated amount will be utilized to process the orders as normal shipping or expedited shipping.

Duration:

45 minutes

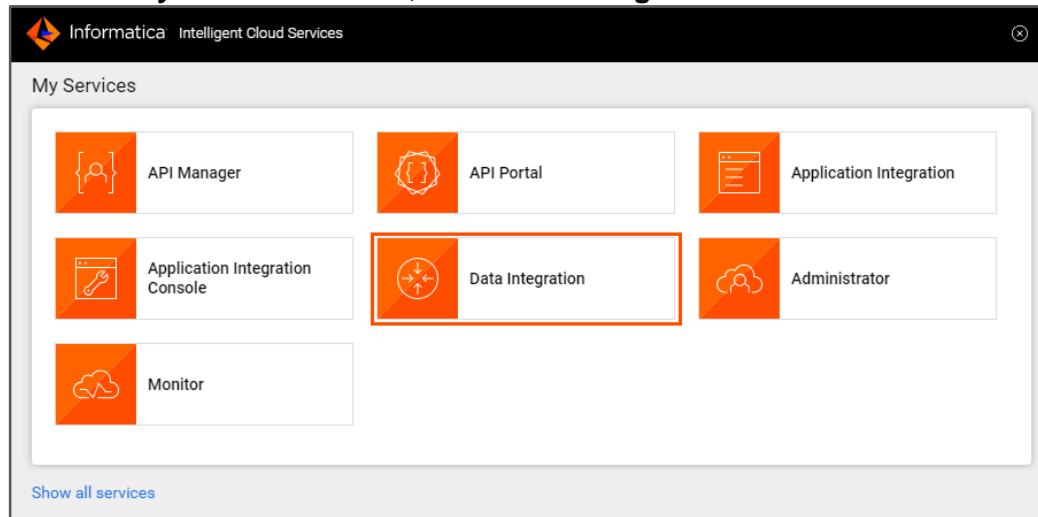
Tasks:**Copy Source Files:**

1. Copy the following files from the CDI Lab Prep Files folder available on your desktop and paste it in your flat file directory (C:\IICSLabFiles):

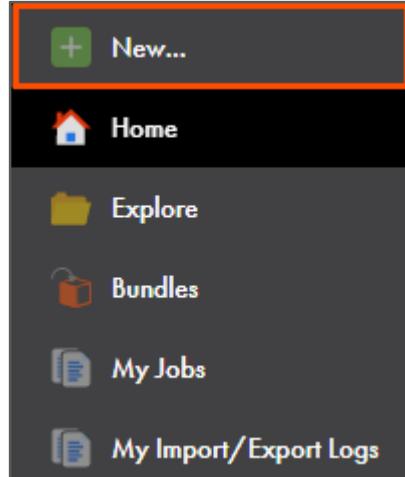
Files
ExpeditedShipping.csv
NormalShipping.csv
Orders.csv
Products.csv

Create Mapping:

2. Open the IICS Login page from the Bookmarks bar.
- Note:** Follow this step if you have navigated away from the login page.
3. Enter the login credentials provided by the Instructor and click **Log In**.
4. From the **My Services** window, select **Data Integration**.

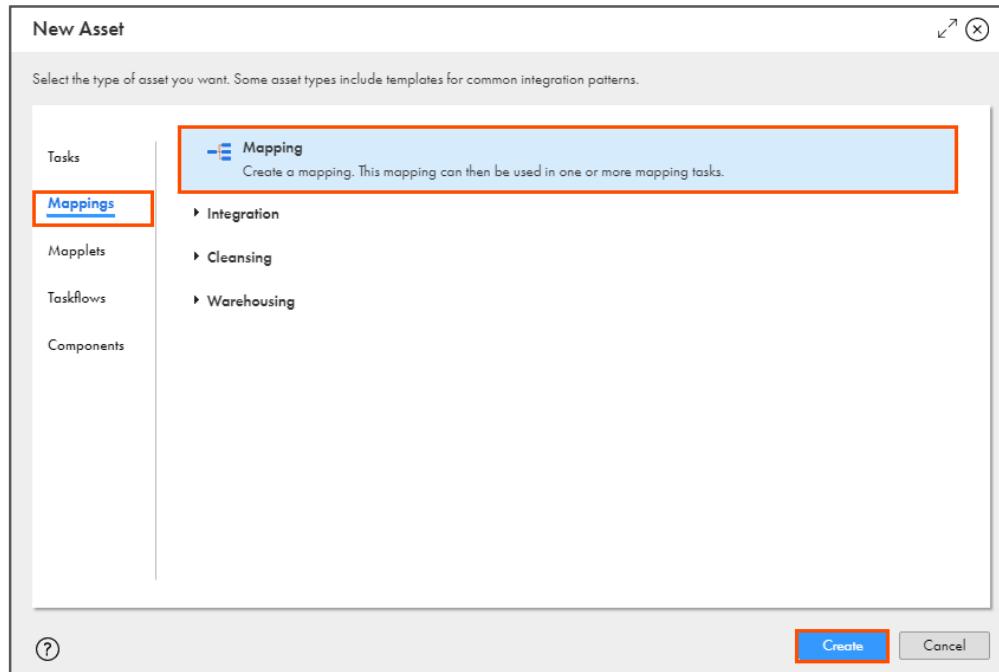


5. From the navigation pane, select **New**.

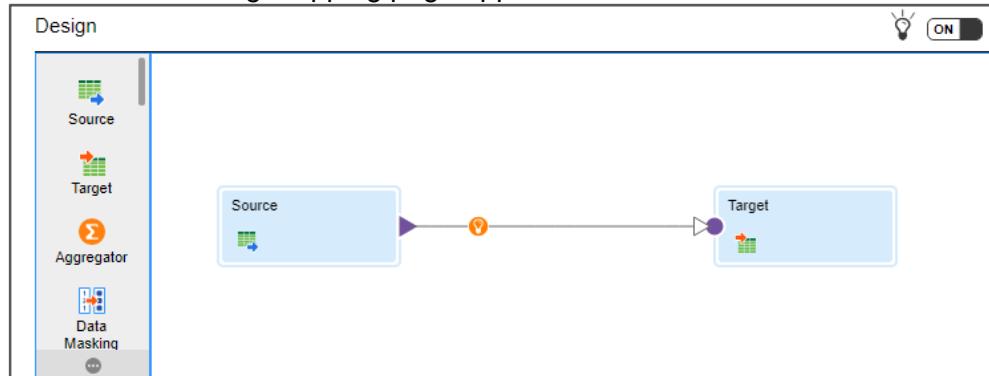


6. From the New Asset window, click the **Mappings** tab, and select **Mapping**.

7. Click **Create**.

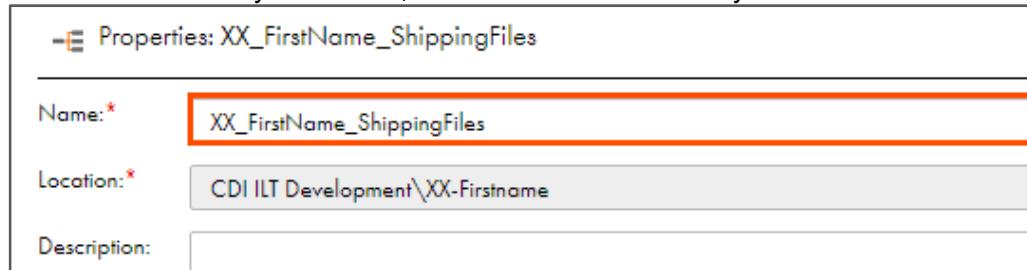


Note: The following Mapping page appears.



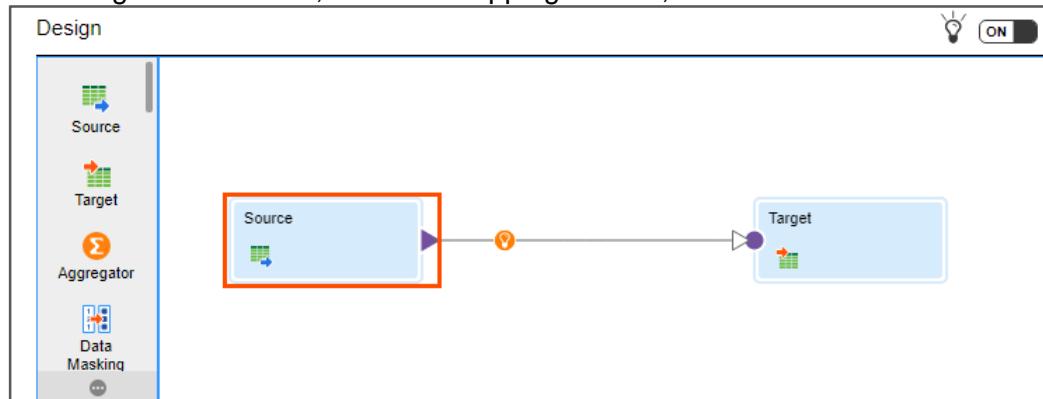
8. In the Name field, enter **XX_FirstName_ShippingFiles**.

Note: XX refers to your initials, and FirstName refers to your First Name.

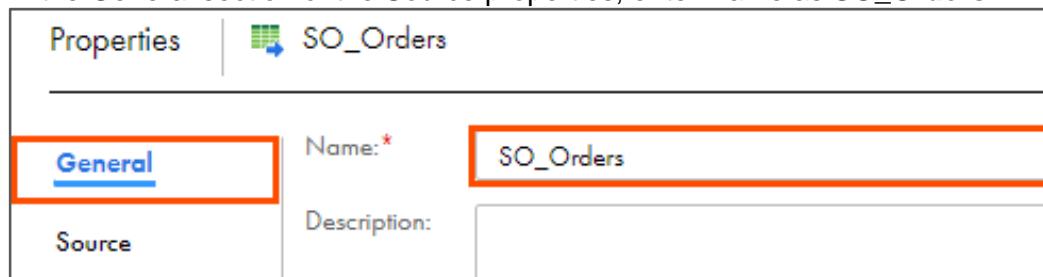


Properties: XX_FirstName_ShippingFiles	
Name:*	XX_FirstName_ShippingFiles
Location:*	CDI ILT Development\XX-Firstname
Description:	

9. To configure the source, from the mapping canvas, click the **Source** transformation.



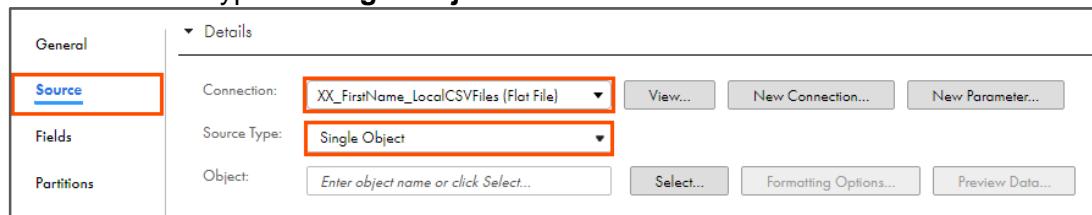
10. In the General section of the Source properties, enter Name as **SO_Orders**.



11. From the properties pane, click **Source**.

12. From Connection drop-down, select **XX_FirstName_LocalCSVFiles**.

13. Retain Source Type as **Single Object**.



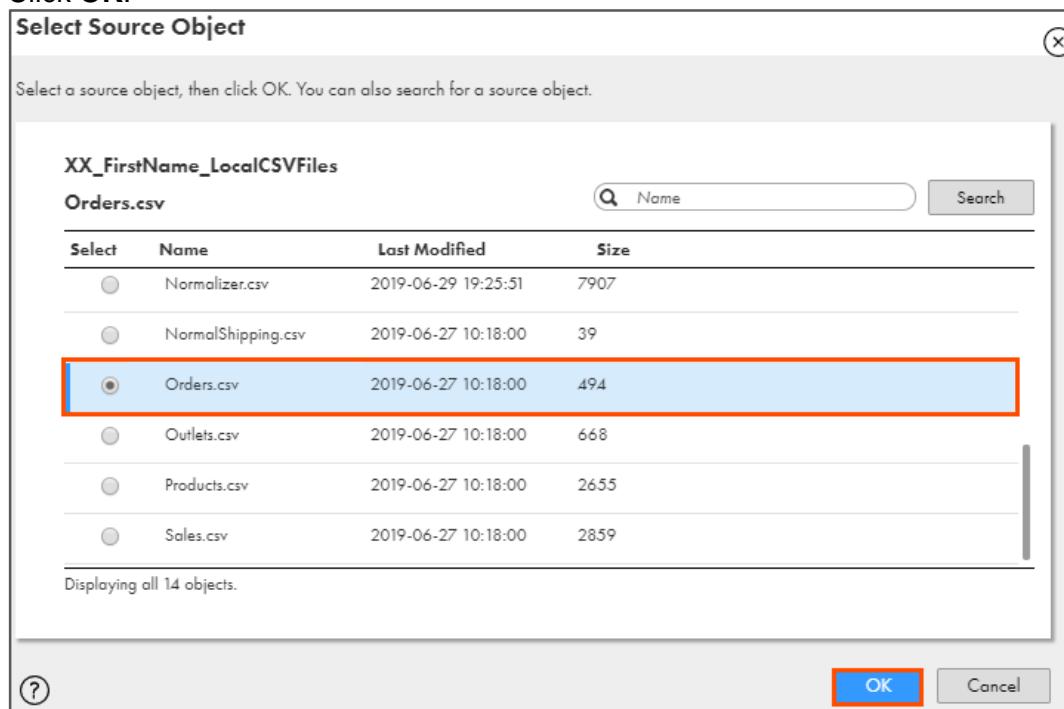
14. To select the source object from the Object field, click **Select**.



Note: The Select Source Object window appears.

15. From the list, select **Orders.csv**.

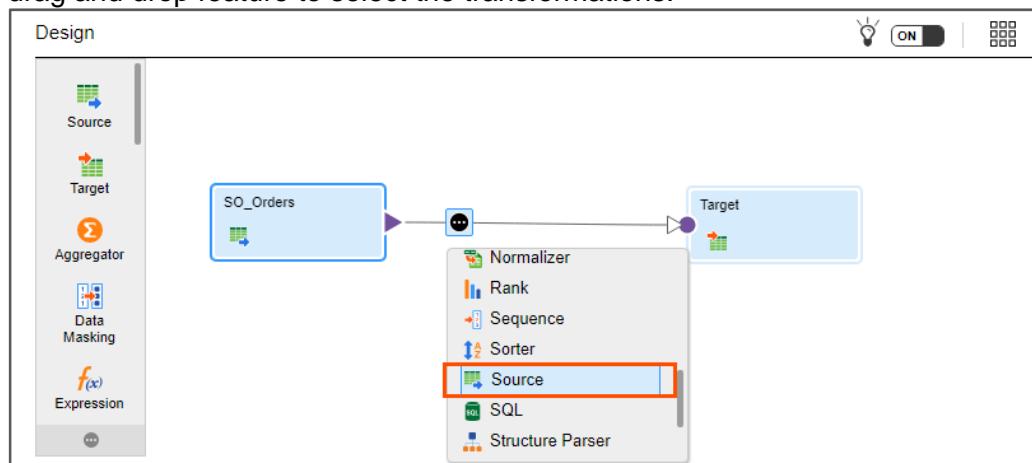
16. Click **OK**.



Add Source Transformation:

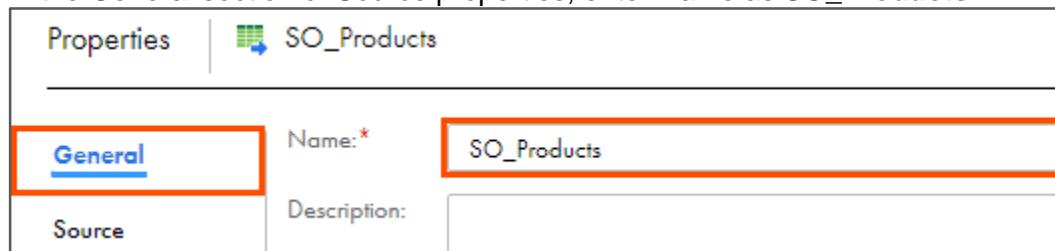
17. From the list of available transformations, drag and drop a **Source** transformation on to the mapping canvas.

Note: You can also use the Add Transformation icon  to add transformations directly on the mapping canvas. The Add Transformation icon appears when you hover over the link between the transformations. For this lab, you will use the drag and drop feature to select the transformations.



18. Select **Source** from the mapping canvas.

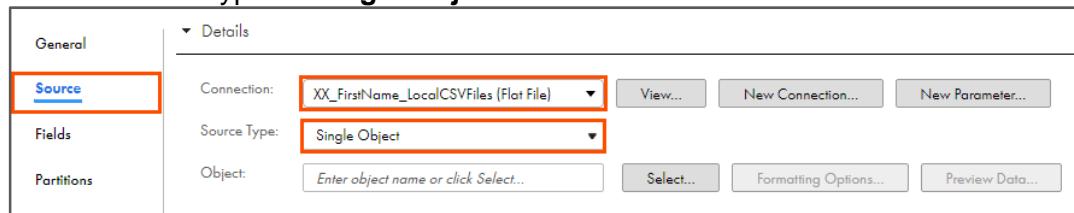
19. In the General section of Source properties, enter Name as **SO_Products**.



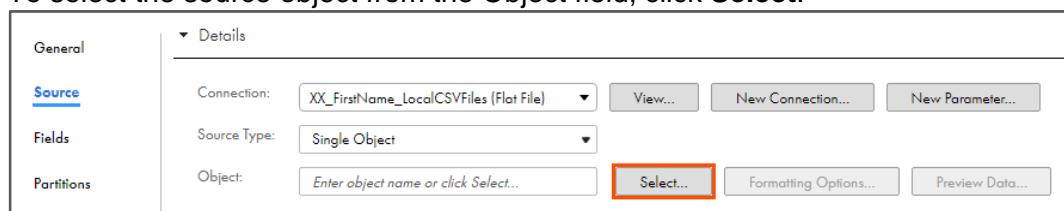
20. From the properties pane, click **Source**.

21. From Connection drop-down, select **XX_FirstName_LocalCSVFiles**.

22. Retain Source Type as **Single Object**.



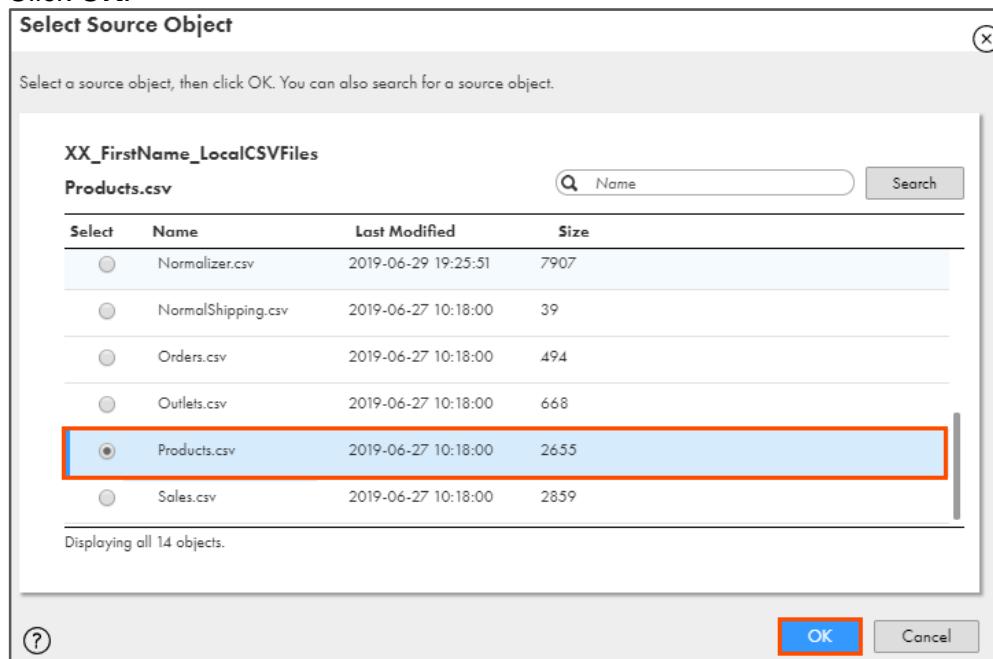
23. To select the source object from the Object field, click **Select**.



Note: The Select Source Object window appears.

24. From the list, select **Products.csv**.

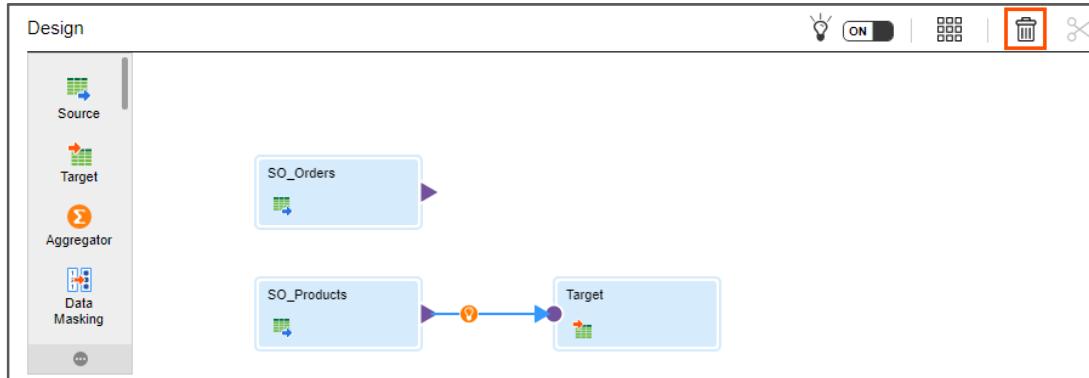
25. Click **OK**.



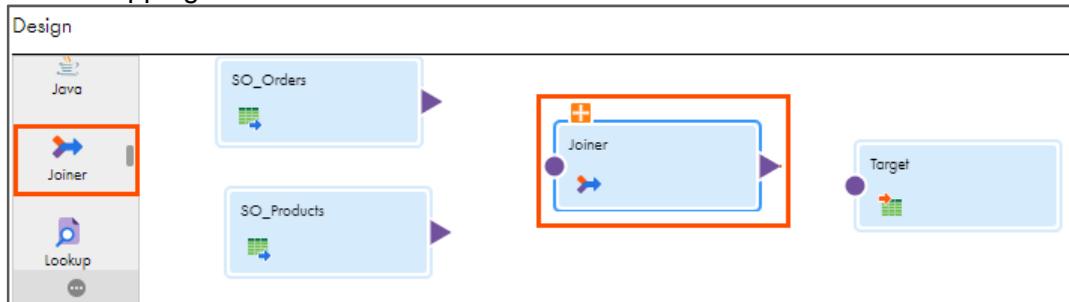
Add Joiner Transformation:

26. Click the link joining the **SO_Products** and Target.

27. To remove the link, click .

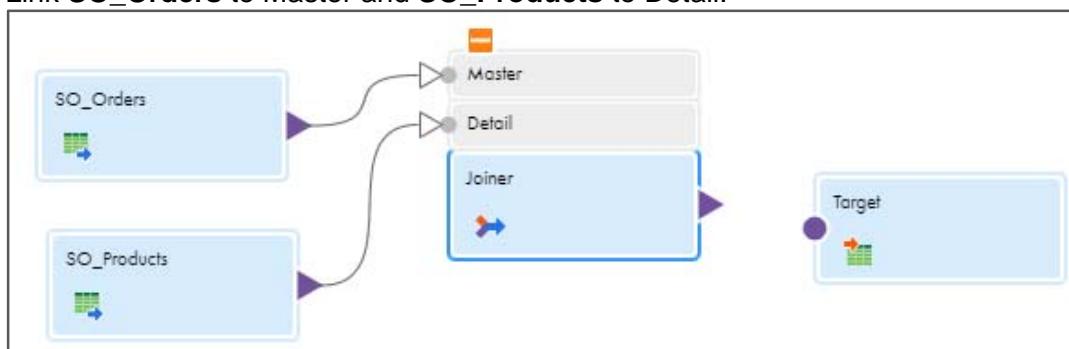


28. From the list of available transformations, drag and drop a **Joiner** transformation on to the mapping canvas.



29. To expand the join options, click .

30. Link **SO_Orders** to Master and **SO_Products** to Detail.



31. To configure the Joiner transformation, from the mapping canvas, click the **Joiner** transformation.

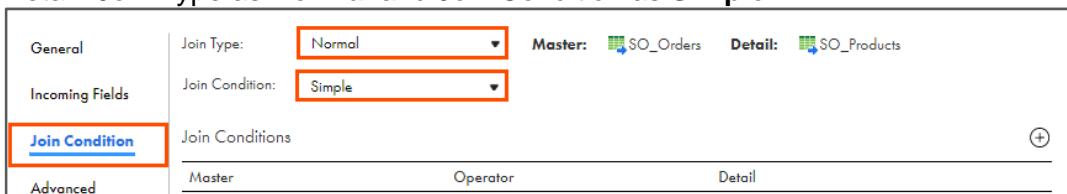
32. In the General section of the Joiner properties, retain the Name as **Joiner**.



Properties		Joiner
General	Name: *	Joiner
Incoming Fields	Description:	

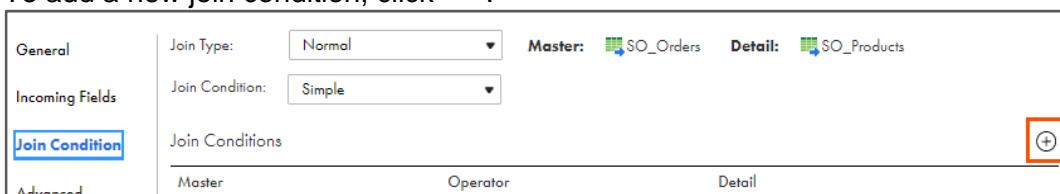
33. From the properties pane, click **Join Condition**.

34. Retain Join Type as **Normal** and Join Condition as **Simple**.



General		Join Type: Normal	Master: SO_Orders	Detail: SO_Products
Incoming Fields	Join Condition: Simple	Join Conditions		
Join Condition		Master	Operator	Detail
Advanced				

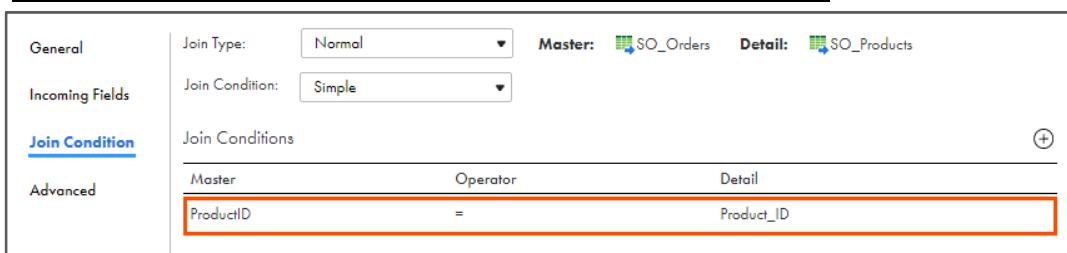
35. To add a new join condition, click .



General		Join Type: Normal	Master: SO_Orders	Detail: SO_Products
Incoming Fields	Join Condition: Simple	Join Conditions		
Join Condition		Master	Operator	Detail
Advanced				

36. Enter the join condition, as shown in the table below:

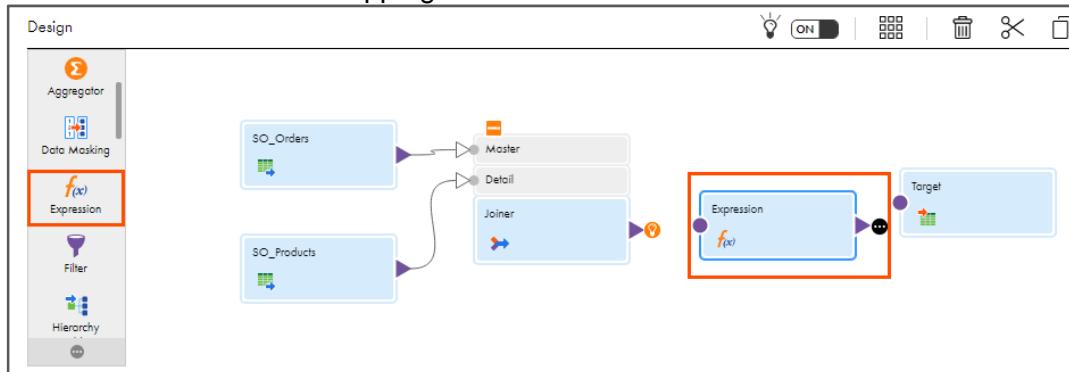
Master	Operator	Detail
ProductID	=	Product_ID



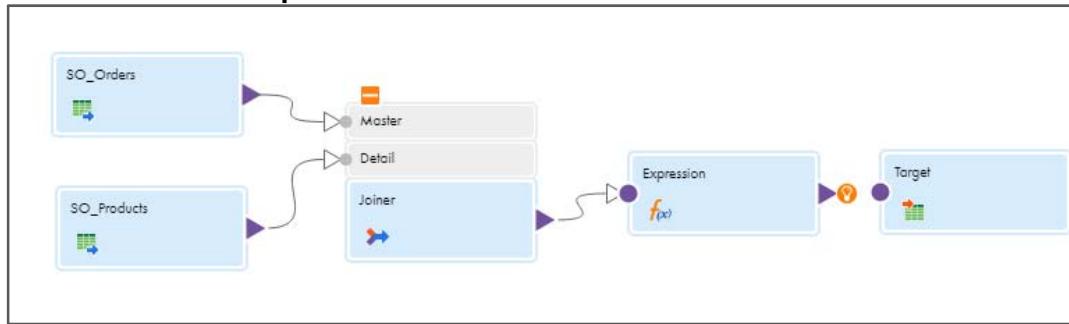
General		Join Type: Normal	Master: SO_Orders	Detail: SO_Products
Incoming Fields	Join Condition: Simple	Join Conditions		
Join Condition		Master	Operator	Detail
Advanced		ProductID	=	Product_ID

Add Expression Transformation:

37. From the list of available transformations, drag and drop an **Expression** transformation on to the mapping canvas.

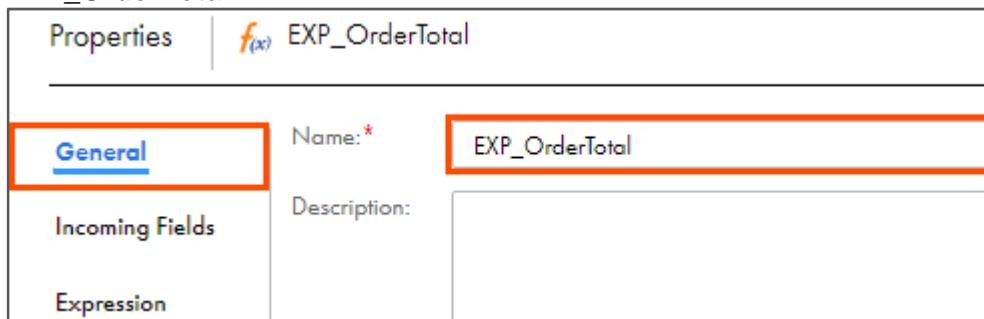


38. Link **Joiner** to the **Expression** transformation.



Note: To arrange all the transformations on the canvas, click .

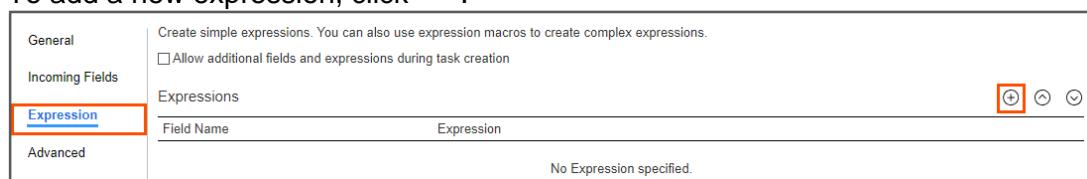
39. In the General section of the Expression properties, enter the Name as **EXP_OrderTotal**.



Note: You must create two variable expressions to convert the incoming fields (UnitPrice and Quantity) to integers before you can use them in the output field that calculates the Order Total.

40. From the properties pane, click **Expression**.

41. To add a new expression, click .



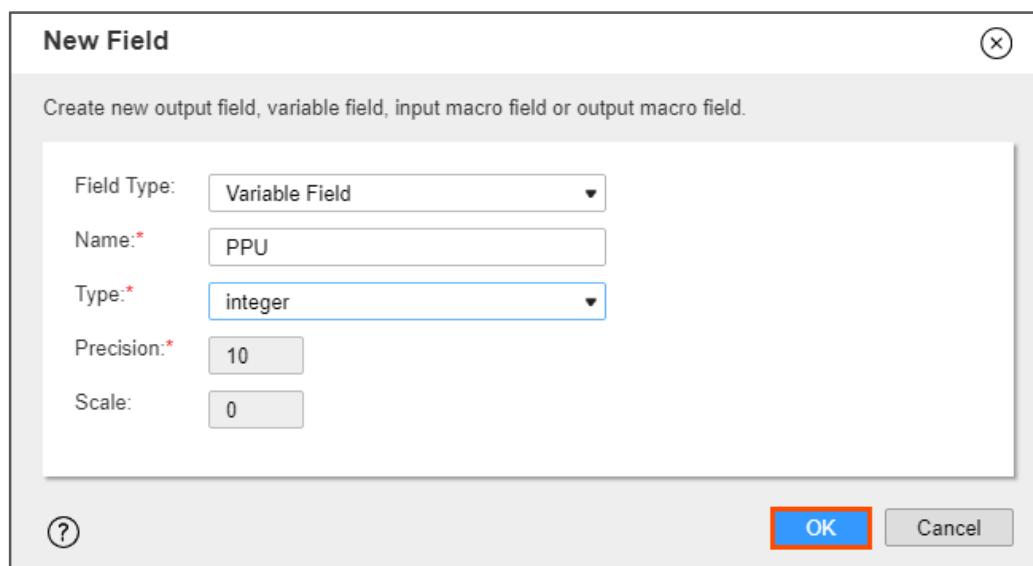
The screenshot shows the 'New Field' dialog box. The 'Expression' tab is selected. On the right, there's a section for creating simple expressions with a note about using expression macros. Below it is a table for defining fields. The first row has 'Field Name' as 'PPU' and 'Expression' as 'No Expression specified.' To the right of the table are three icons: a plus sign, a minus sign, and a circular arrow.

Note: The New Field window appears.

42. Enter the details as shown in table below:

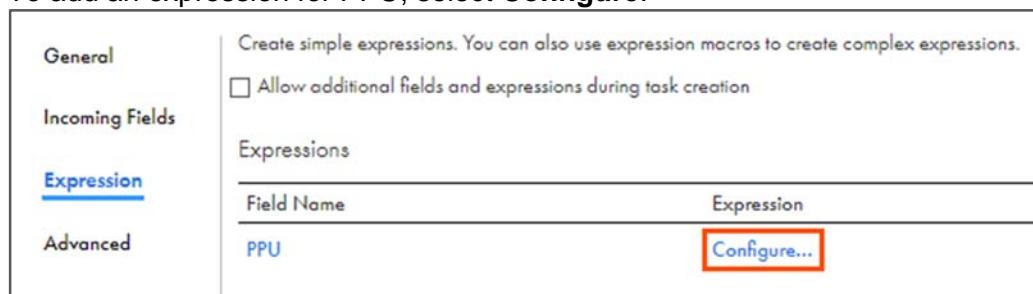
Field Type	Name	Type	Precision	Scale
Variable Field	PPU	integer	10	0

43. Click **OK**.



The screenshot shows the 'New Field' dialog box again. It contains fields for 'Field Type' (Variable Field), 'Name' (PPU), 'Type' (integer), 'Precision' (10), and 'Scale' (0). At the bottom are 'OK' and 'Cancel' buttons, with 'OK' being highlighted by a red box.

44. To add an expression for PPU, select **Configure**.



The screenshot shows the 'Expressions' section of the configuration window. It lists a single entry for 'PPU' with an 'Expression' field containing 'Configure...'. This 'Configure...' button is highlighted with a red box.

45. In expression window, enter following expression:

TO_INTEGER(UnitPrice)

OR

Navigate to the **C:\Students\Commands** directory on your local machine and open the file named **9_LabGuide_CreatingMappingUsingBasicTransformations_4**. Copy the command mentioned under **Step 45** and paste it in the Expression field.

46. Click **OK**.

Field Expression: PPU(integer, 10, 0)

Configure expression by adding fields and functions.

Expression: Not Parameterized

Fields	Parameters	Functions	Expression	Validate
PPU (Variable)			TO_INTEGER(UnitPrice)	
Id				
IsDeleted				
MasterRecordId				
Name				
Type				
ParentId				
..				

Operators

AND OR NOT { } = != < > <= >=

(?) OK Cancel

47. Add another expression.

48. Enter the details, as shown in the table below:

Field Type	Name	Type	Precision	Scale
Variable Field	QTY	integer	10	0

49. Click **OK**.

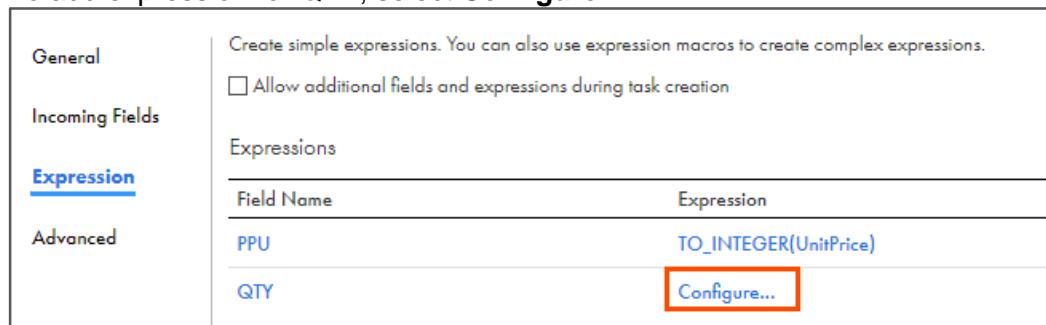
New Field

Create new output field, variable field, input macro field or output macro field.

Field Type:	Variable Field
Name:*	QTY
Type:*	integer
Precision:*	10
Scale:	0

(?) OK Cancel

50. To add expression for QTY, select **Configure**.



Field Name	Expression
PPU	TO_INTEGER(UnitPrice)
QTY	Configure...

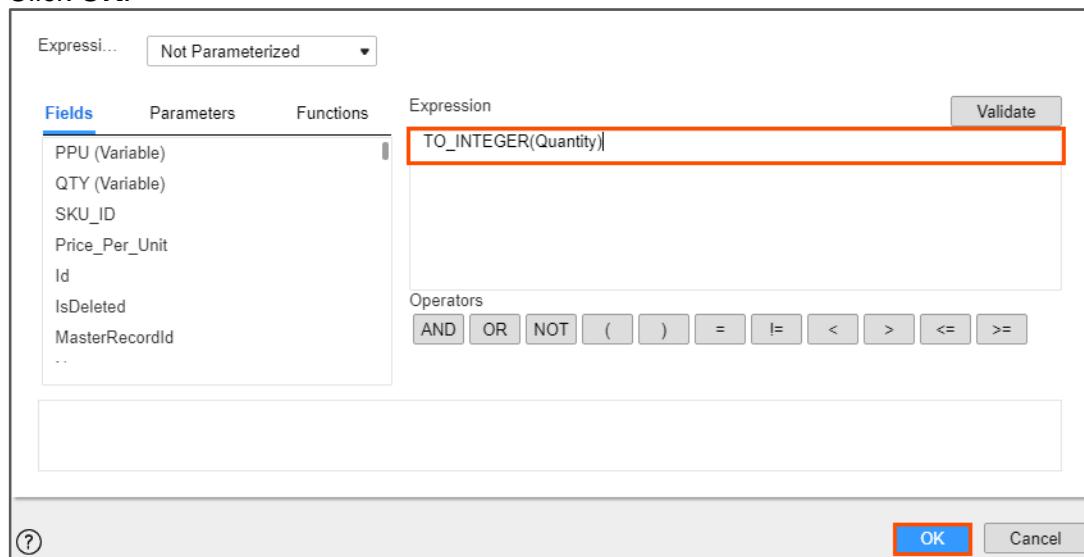
51. In expression window, enter following expression:

TO_INTEGER(Quantity)

OR

Navigate to the **C:\Students\Commands** directory on your local machine and open the file named **9_LabGuide_CreatingMappingUsingBasicTransformations_4**. Copy the command mentioned under **Step 51** and paste it in the Expression field.

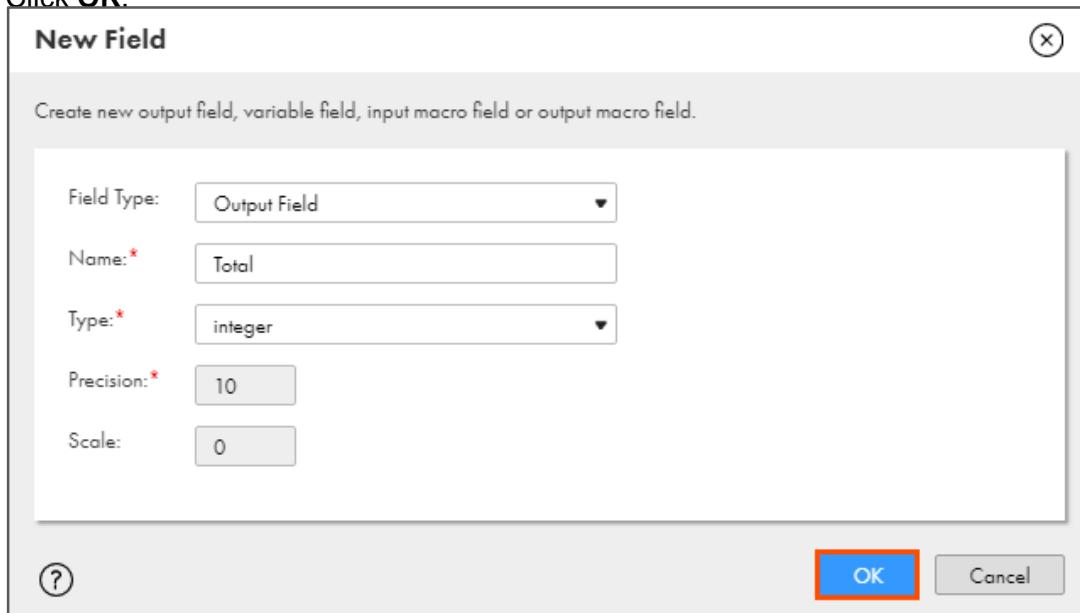
52. Click **OK**.



53. Add one more expression with the following values:

Field Type	Name	Type	Precision	Scale
Output Field	Total	integer	10	0

54. Click **OK**.



55. To add expression for Total, select **Configure**.

General		Expressions	
Incoming Fields		Field Name	Expression
<u>Expression</u>		PPU	TO_INTEGER(UnitPrice)
Advanced		QTY	TO_INTEGER(Quantity)
		Total	Configure...

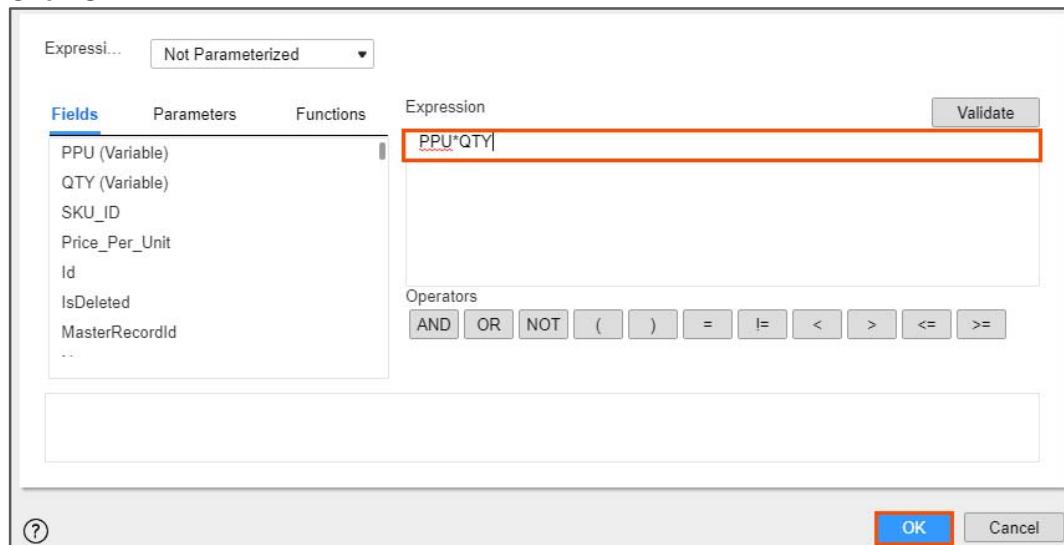
56. In expression window, enter following expression:

PPU*QTY

OR

Navigate to the **C:\Students\Commands** directory on your local machine and open the file named **9_LabGuide_CreatingMappingUsingBasicTransformations_4**. Copy the command mentioned under **Step 57** and paste it in the Expression field.

57. Click **OK**.

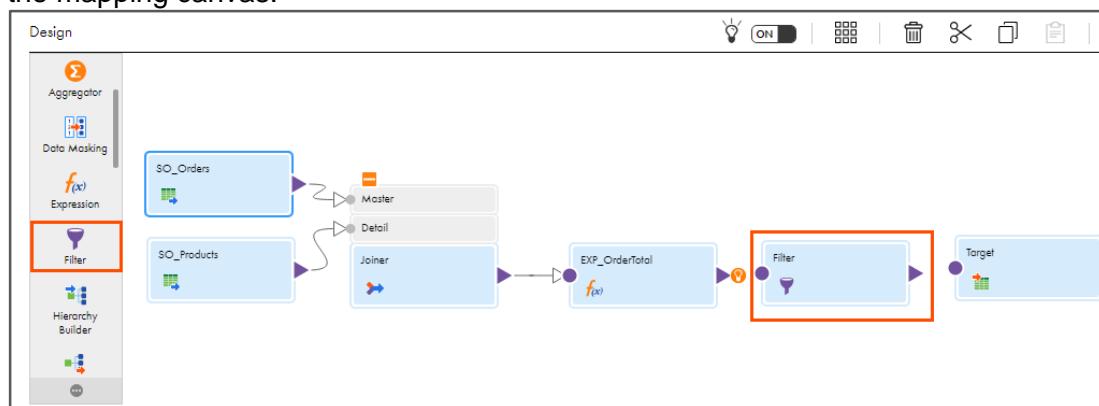


58. After configuring all the expressions, the expressions are displayed as follows:

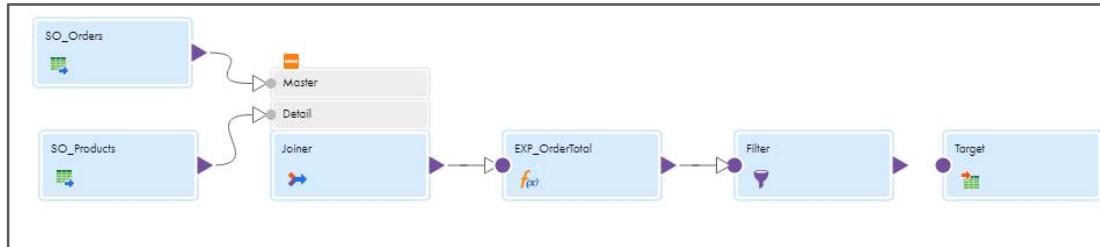
General		Create simple expressions. You can also use expression macros to create complex expressions.
<input type="checkbox"/> Incoming Fields		<input type="checkbox"/> Allow additional fields and expressions during task creation
Expression		Expressions
Advanced		
Field Name		Expression
PPU		TO_INTEGER(UnitPrice)
QTY		TO_INTEGER(Quantity)
Total		PPU*QTY

Add Filter Transformation:

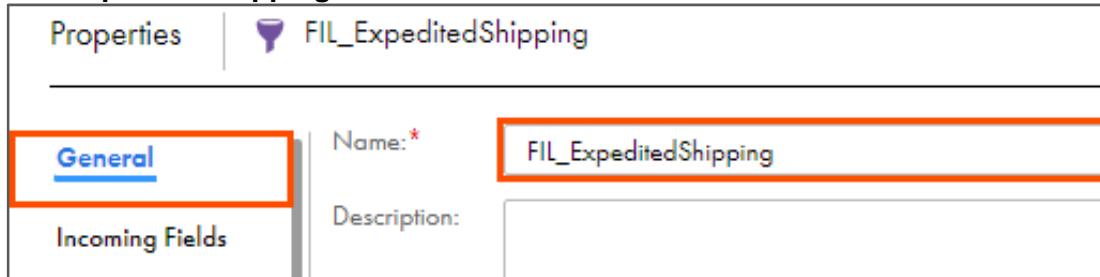
59. From the list of available transformations, drag and drop a **Filter** transformation on to the mapping canvas.



60. Link **EXP_OrderTotal** to the **Filter** transformation.



61. In the General section of the Filter properties, enter the Name as **FIL_ExpeditedShipping**.

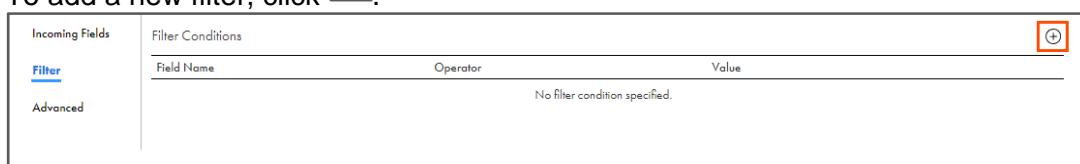


62. From the properties pane, click **Filter**.

63. Retain the Filter Condition as **Simple**.



64. To add a new filter, click .



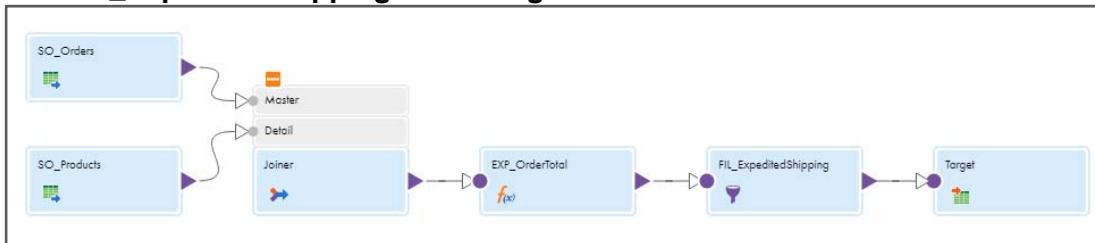
65. Enter filter condition as shown in the table below:

Field Name	Operator	Value
Total	>= (Greater than or equals)	1000



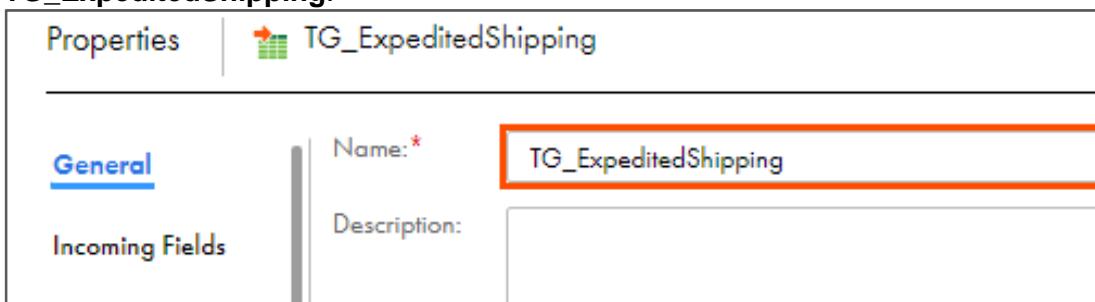
Configure Target Transformation:

66. Link **FIL_ExpeditedShipping** to the **Target** transformation.



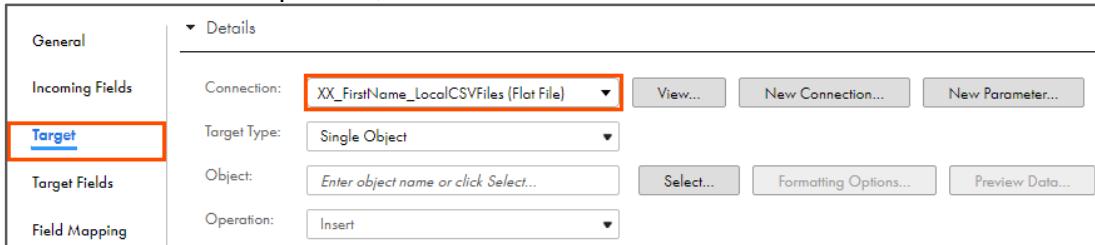
67. Select the **Target** transformation from the mapping canvas.

68. In the General section of the Target properties, enter the Name as **TG_ExpeditedShipping**.



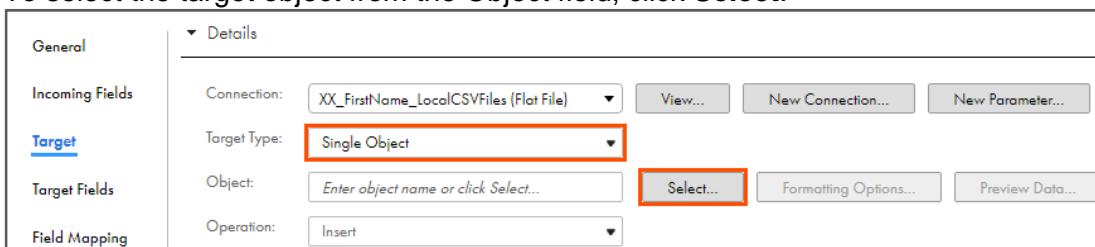
69. From the properties pane, click **Target**.

70. From Connection drop-down, select **XX_FirstName_LocalCSVFiles**.



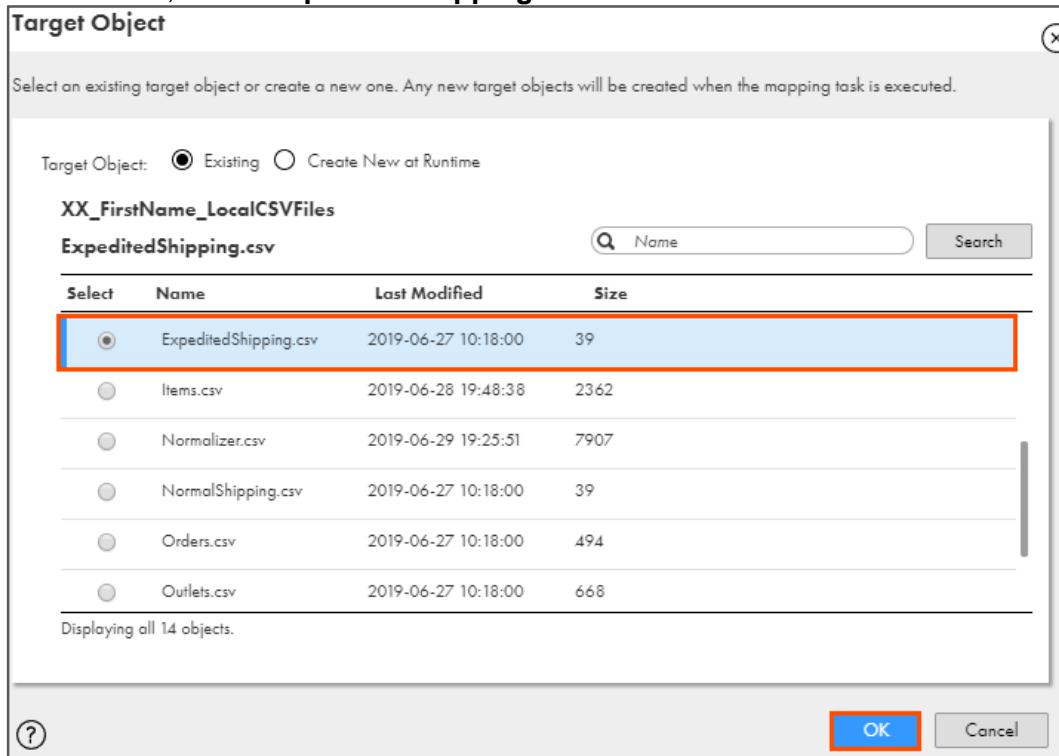
71. Retain Target Type as **Single Object**.

72. To select the target object from the Object field, click **Select**.



Note: The Target Object window appears.

73. From the list, select **ExpeditedShipping.csv** and click **OK**.



74. From the properties pane, click **Field Mapping**.

75. Match the fields as shown in following table:

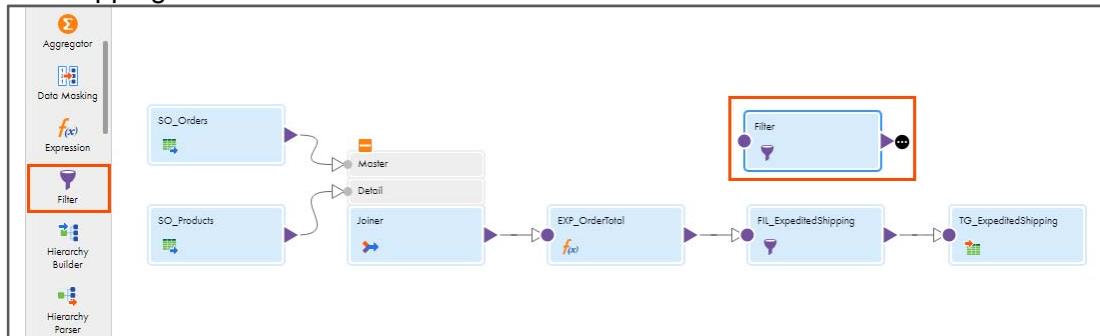
Note: Some of the fields might be mapped automatically. For the already mapped fields, do not map the fields again.

Incoming Field	Target Field
OrderId	OrderID
ProductDescription	ProductDescription
Total	OrderTotal

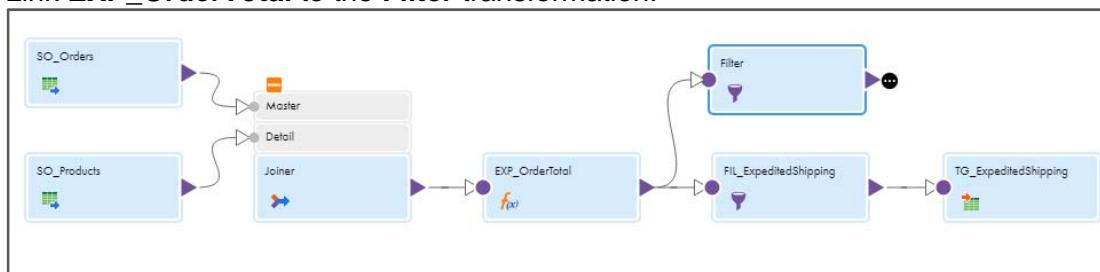
General	Incoming Fields: (3 of 76 mapped)	Target Fields: (3 of 3 mapped)
	Find	Find
Incoming Fields	Incoming Fields: (3 of 76 mapped) Find Field Name ▾ Total	
Target		
Target Fields	Target Fields: (3 of 3 mapped) Find Field Name ▾ OrderID ProductDescription OrderTotal	
Field Mapping		

Add Filter Transformation:

76. From the list of available transformations, drag and drop a **Filter** transformation on to the mapping canvas.

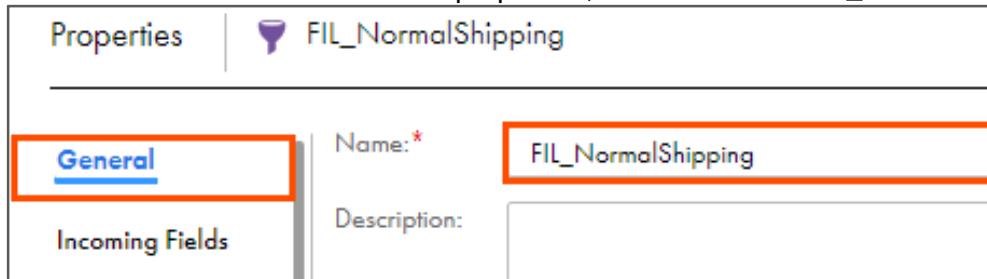


77. Link **EXP_OrderTotal** to the **Filter** transformation.



78. Select the **Filter** transformation from the mapping canvas.

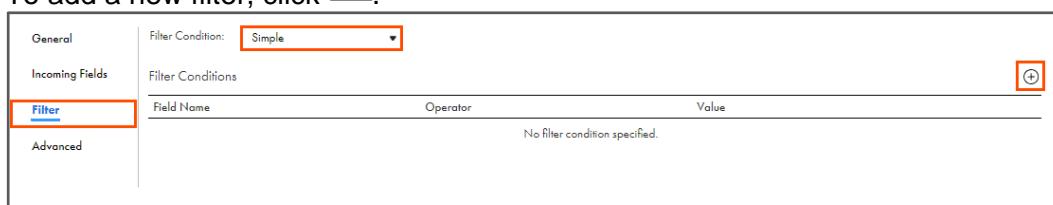
79. In the General section of the Filter properties, enter Name as **FIL_NormalShipping**.



80. From the properties pane, click **Filter**.

81. Retain Filter Condition as **Simple**.

82. To add a new filter, click



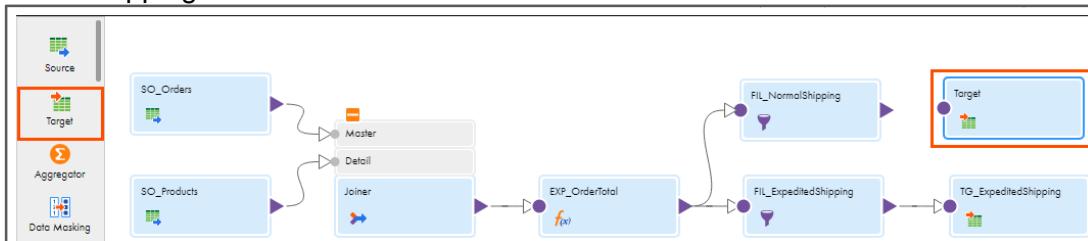
83. Enter filter condition as shown in the table below:

Field Name	Operator	Value
Total	< (Less than)	1000

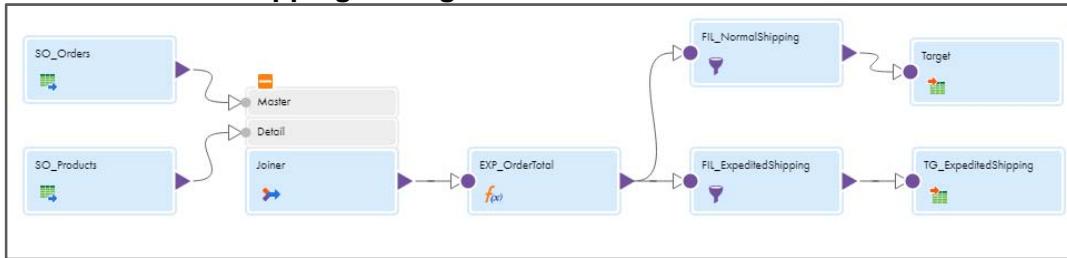
General	Filter Condition: Simple
Incoming Fields	Filter Conditions
Filter	Field Name Operator Value
Advanced	Total < 1000

Configure Target Transformation:

84. From the list of available transformations, drag and drop a **Target** transformation on to the mapping canvas.



85. Link **FIL_NormalShipping** to **Target** transformation.

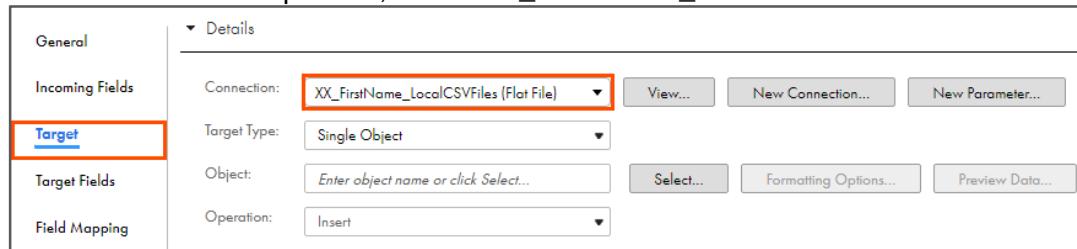


86. In the General section of the Target properties, enter Name as **TG_NormalShipping**.

Properties	 TG_NormalShipping
General	Name: * TG_NormalShipping
Incoming Fields	Description:

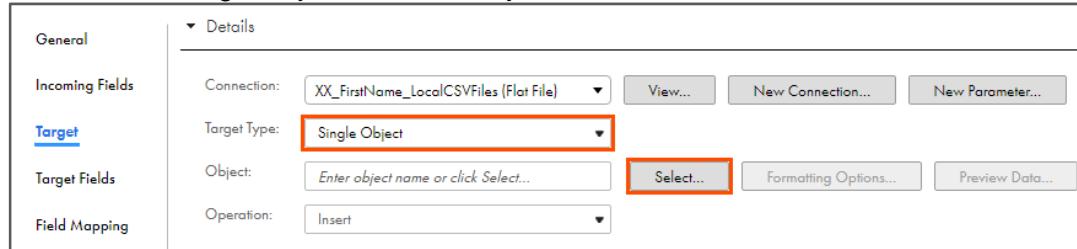
87. From the properties pane, click **Target**.

88. From Connection drop-down, select **XX_FirstName_LocalCSVFiles**.



89. Retain Target Type as **Single Object**.

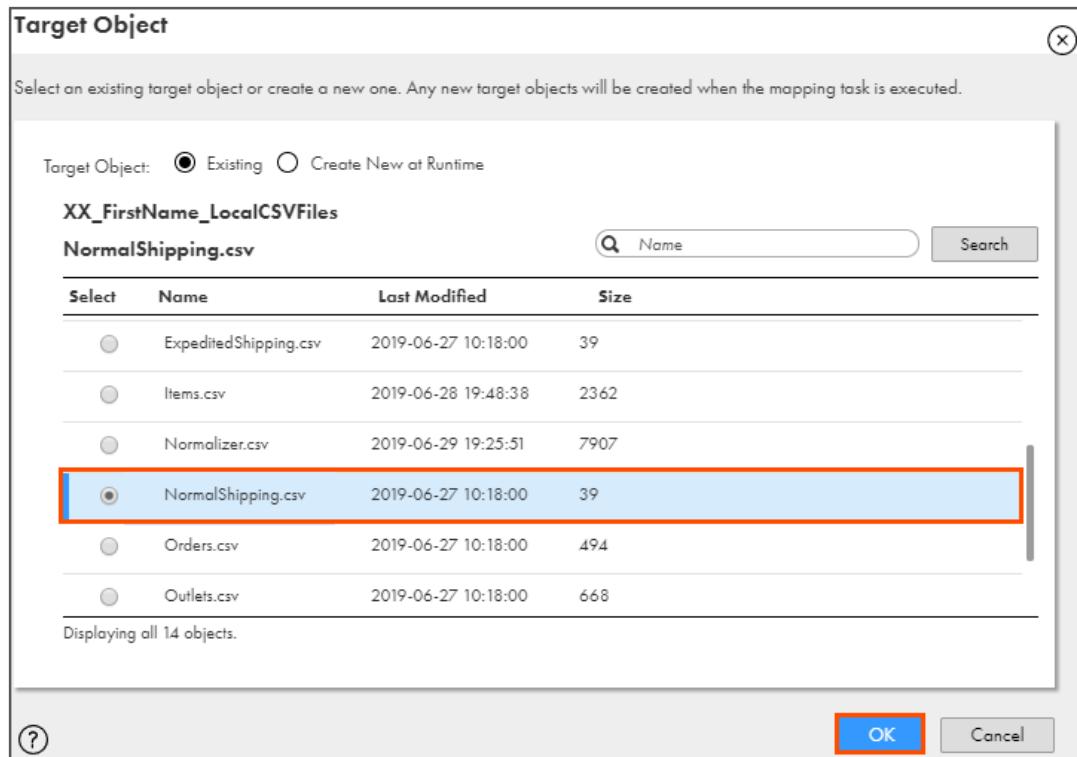
90. To select the target object from the Object field, click **Select**.



Note: The Target Object window appears.

91. From the list, select **NormalShipping.csv**.

92. Click **OK**.

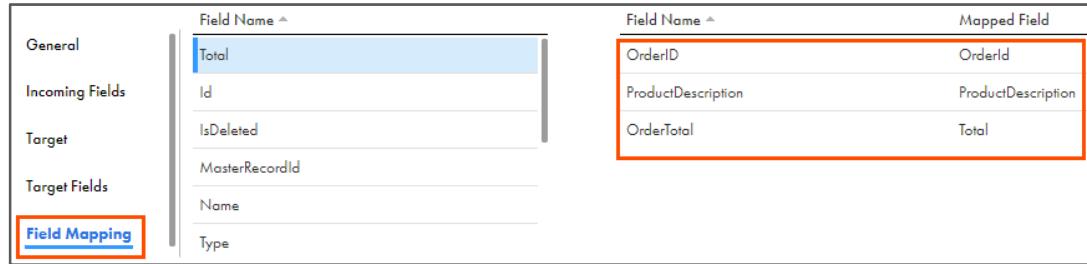


93. From the properties pane, click **Field Mapping** and click to maximize the view.

94. Match the fields, as shown in the table below:

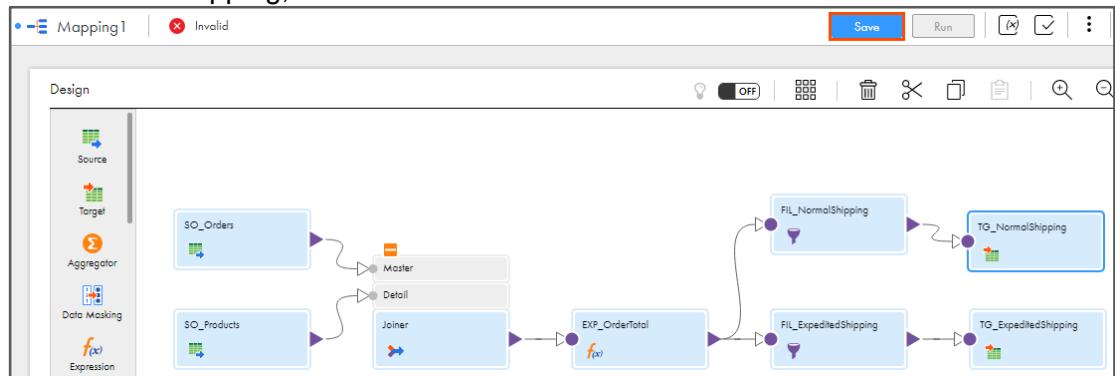
Note: Some of the fields might be mapped automatically. For already mapped fields, do not map the fields again.

Incoming Field	Target Field
OrderId	OrderID
ProductDescription	ProductDescription
Total	OrderTotal

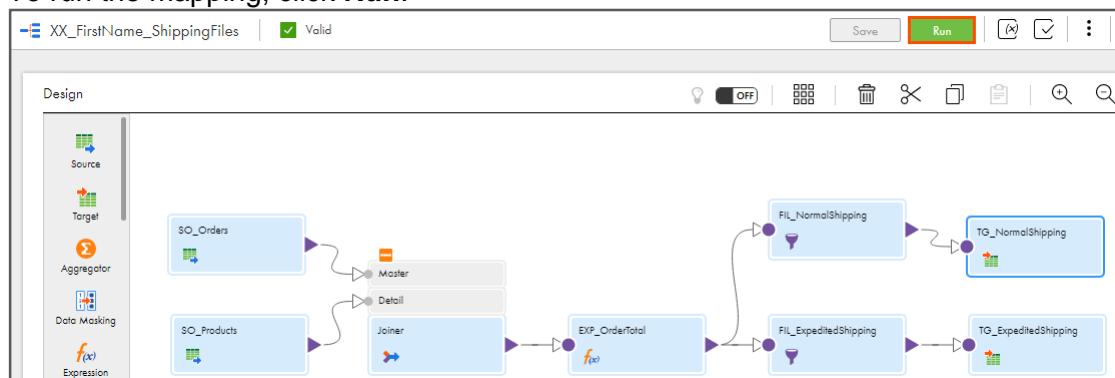


95. To restore the view, click .

96. To save the mapping, click **Save**.



97. To run the mapping, click **Run**.

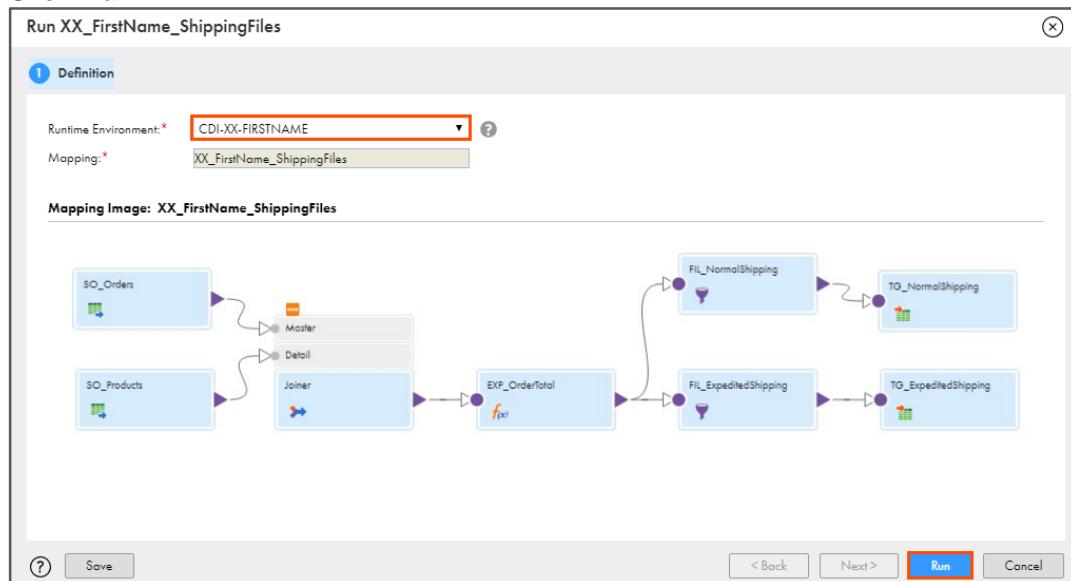


Note: The Run mapping window appears.

98. From the Runtime Environment drop-down, select your secure agent group.

Note: The Runtime Environment will be in the format CDI-XX-FIRSTNAME.

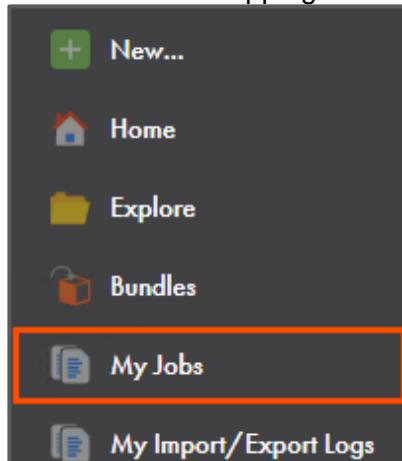
99. Click **Run**.



Note: At this point, the IICS generates a temporary Mapping Task for the mapping and runs it.

Monitor Status:

100. To monitor the mapping status, from the navigation pane, click **My Jobs**.



101. When the task completes, the status changes to **Success**.

Jobs (1 of 11)		Up to date	Updated 1:07:03 AM PDT		
Asset Name: XX_FirstName_S...		Add Field	Find		
Instance Name	Subtasks	Start Time	End Time	Rows Processed	State
-E XX_FirstName_ShippingFiles-1		Jul 30, 2019, 1:05 AM	Jul 30, 2019, 1:06 AM	6	Success

Note: You can refresh the job status if it does not change automatically.

102. On your local machine, go to **C:\IICSLabFiles**.

103. Verify that the correct entries are written to the following files.

ExpeditedShipping.csv:

	A	B	C	D	E	F
1	OrderID	ProductDescription	OrderTotal			
2	1	Apple MacBook Pro	12390			
3	5	JBL Link 500	3980			
4						
5						

NormalShipping.csv:

	A	B	C	D	E
1	OrderID	ProductDescription	OrderTotal		
2	4	Wilson Evolution Game Basketball	300		
3	6	Redemption	180		
4	3	Xbox 360 Slim	75		
5	2	Samsonite Winfield Luggage	178		
6					

This concludes the lab.

Module 5: Advanced Transformations and Mapping Tasks

Lab 5-1: Using Normalizer Aggregator and Rank Transformations in a Mapping

Overview:

A Normalizer transformation represents the data in a smarter and organized manner. The Aggregator transformation performs aggregate calculations on groups of data. These calculations can be average, sum, count, and so on. A Rank transformation selects the top or bottom range of data. You can use it to find out the largest or smallest numeric values in a group.

Objective:

- Configure a mapping in Informatica Cloud
- Use Normalizer, Rank, and Aggregator transformations in the mapping

Scenario:

Ruby wants to know the top performers in the store for last four quarters. So, she asks John to use IICS mapping designer to provide her the list of the top performers.

In this lab, John will use the Informatica Cloud Mapping Designer to calculate the sales percentage for each employee for NH suppliers in the last four quarters. He will use the Rank transformation to list the top twenty performers based on the overall sales percentage.

Duration:

30 minutes

Tasks:

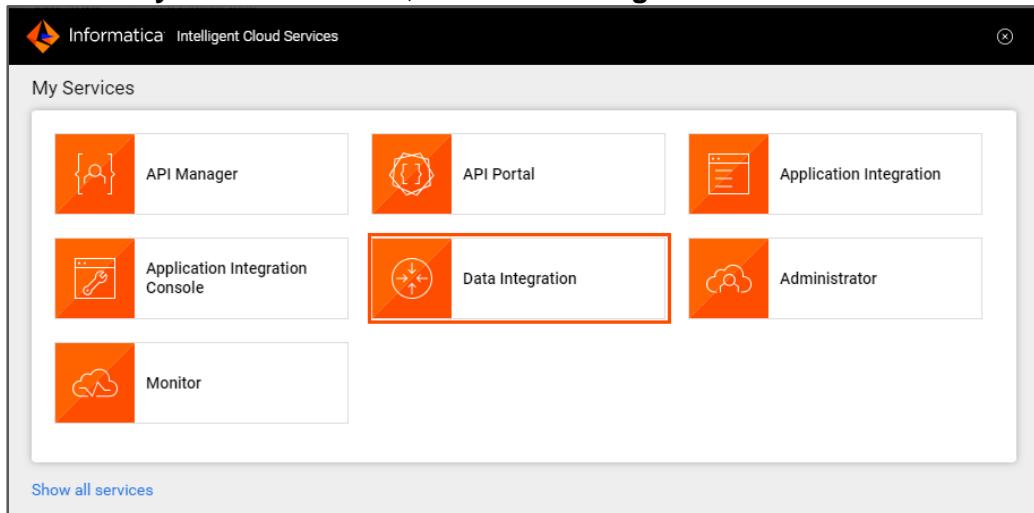
Copy Source Files:

1. Copy the following files from the CDI Lab Prep Files folder available on your desktop and paste it in your flat file directory (C:\IICSLabFiles):

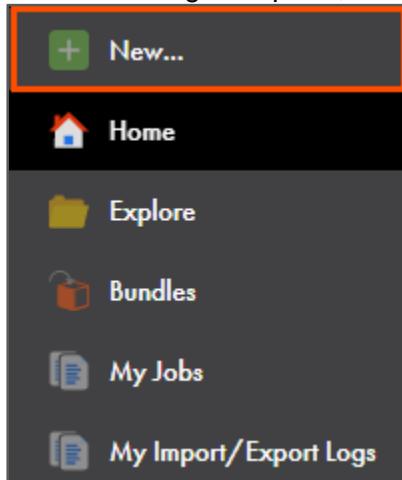
Files
Sales.csv
Normalizer.csv
Aggregated.csv

Create Mapping:

2. Open the IICS Login page from the Bookmarks bar.
Note: Follow this step if you have navigated away from the login page.
3. Enter the login credentials provided by the Instructor and click **Log In**.
4. From the **My Services** window, select **Data Integration**.

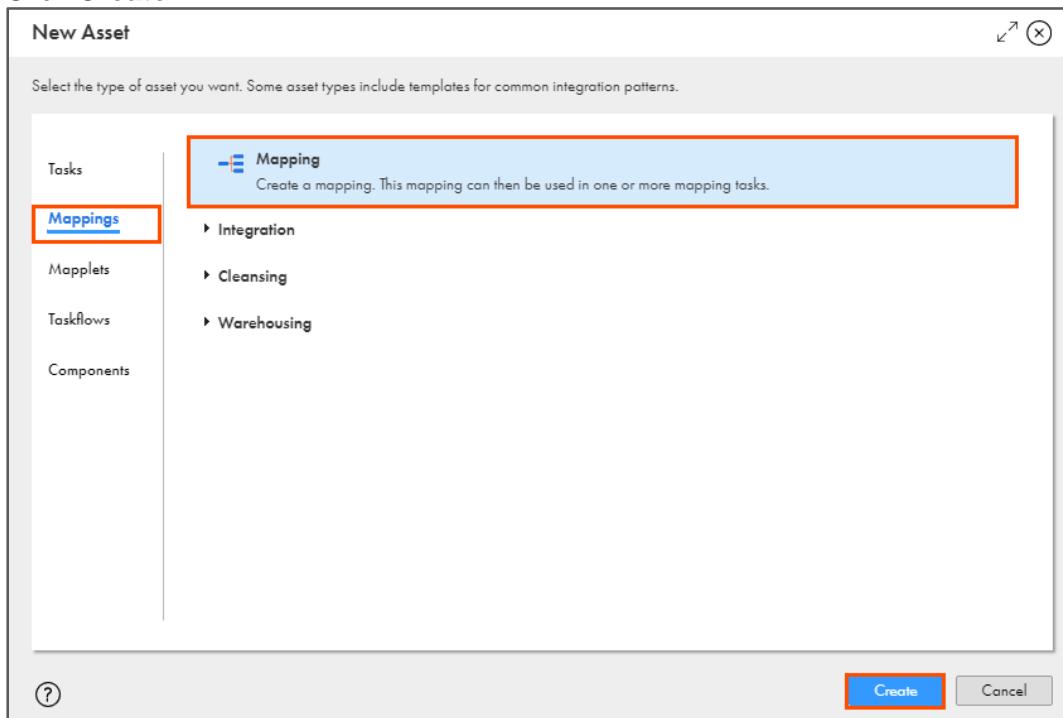


5. From the navigation pane, select **New**.



6. From the New Asset window, click the **Mappings** tab, and select **Mapping**.

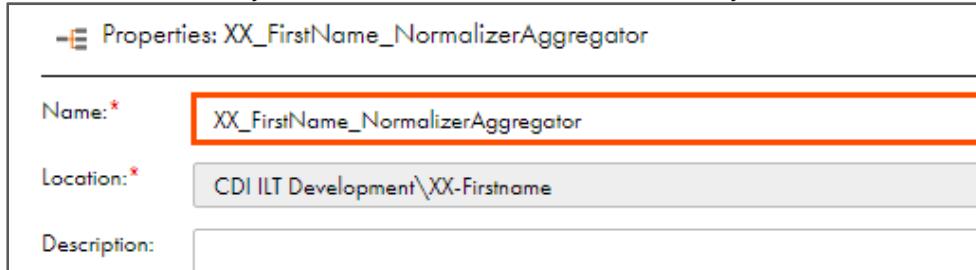
7. Click **Create**.



Note: The Mapping page appears.

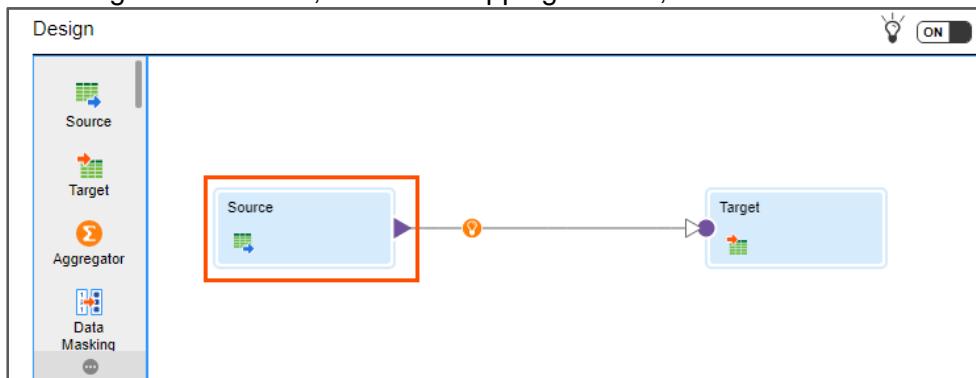
8. In the Name field, enter **XX_FirstName_NormalizerAggregator**.

Note: XX refers to your initials, and FirstName refers to your First Name.



Properties: XX_FirstName_NormalizerAggregator	
Name:*	XX_FirstName_NormalizerAggregator
Location:*	CDI ILT Development\XX-Firstname
Description:	

9. To configure the source, from the mapping canvas, click the **Source** transformation.

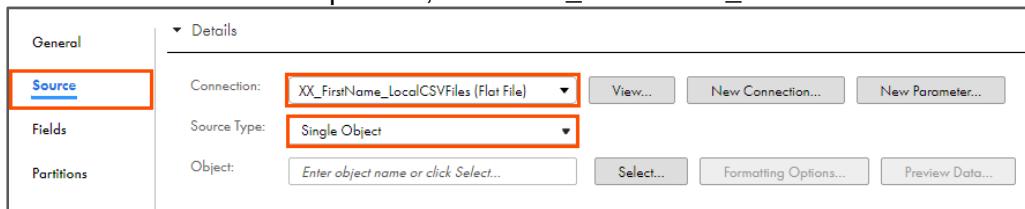


10. In the **General** section of the Source properties, enter the Name as **SO_Sales**.



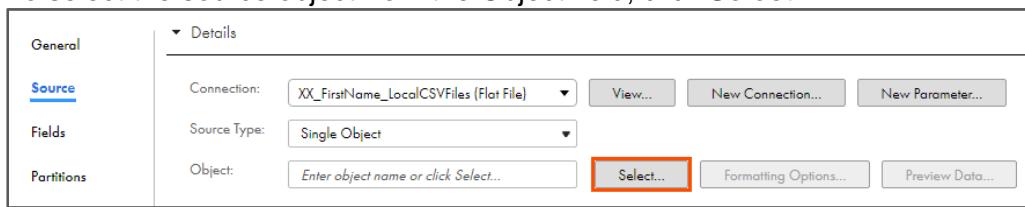
11. From the properties pane, click **Source**.

12. From the Connection drop-down, select **XX_FirstName_LocalCSVFiles**.



13. Retain Source Type as **Single Object**.

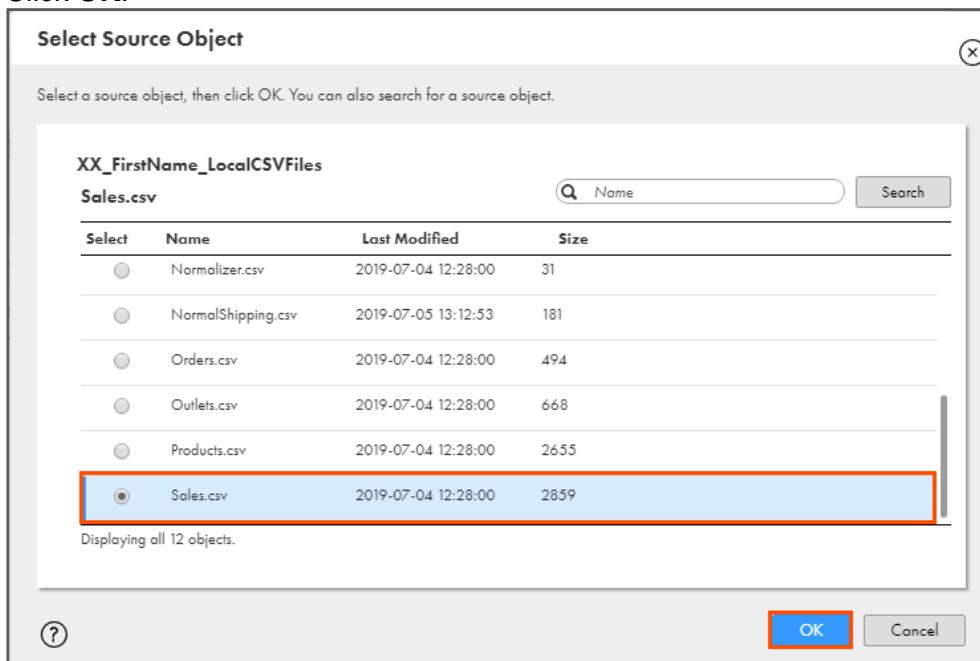
14. To select the source object from the Object field, click **Select**.



Note: The Select Source Object window appears.

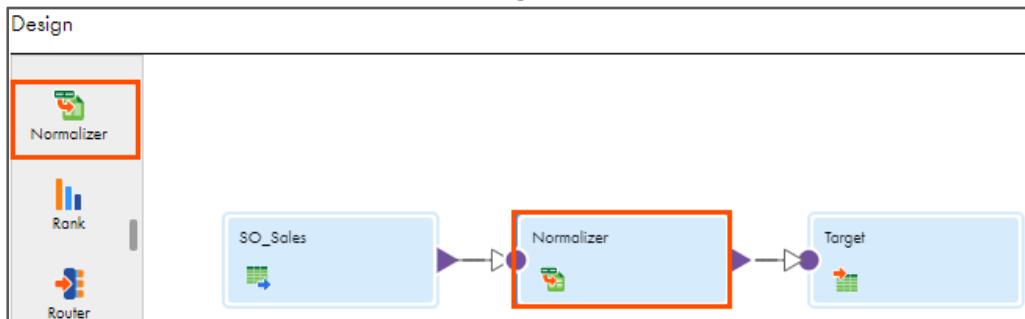
15. From the list, select **Sales.csv**.

16. Click **OK**.



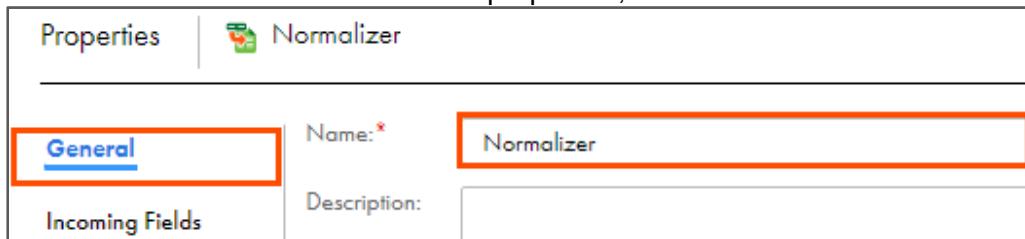
Add Normalizer Transformation:

17. From the list of available transformations, drag and drop the **Normalizer** transformation on the link between **SO_Sales** and **Target**.



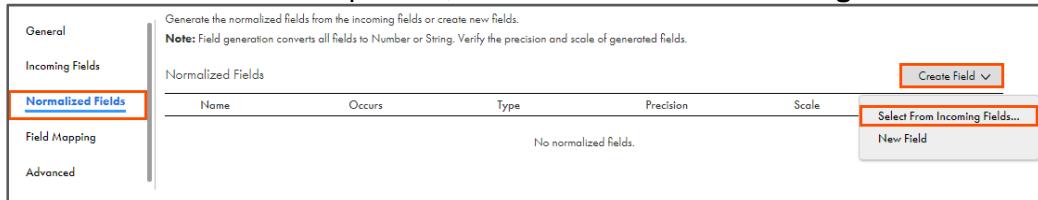
18. Select the **Normalizer** transformation from the mapping canvas.

19. In the **General** section of Normalizer properties, retain the Name as **Normalizer**.



20. From the properties pane, click **Normalized Fields**.

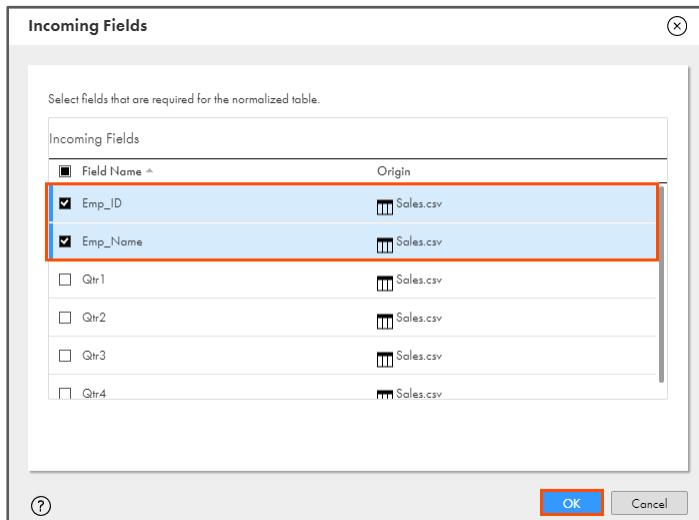
21. From the **Create Field** drop-down, select **Select From Incoming Fields**.



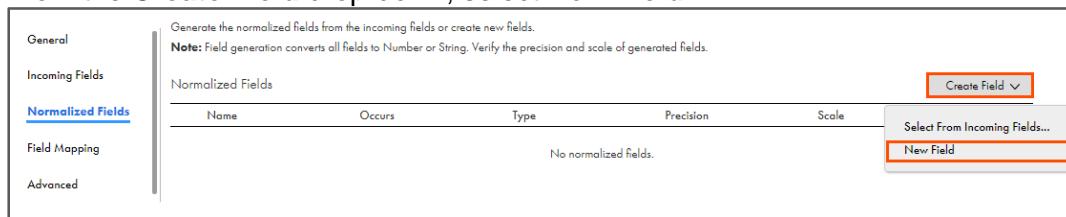
Note: The Incoming Fields window appears.

22. Select **Emp_ID** and **Emp_Name**.

23. Click **OK**.



24. From the **Create Field** drop-down, select **New Field**.



General
Incoming Fields
Normalized Fields
Field Mapping
Advanced

Generate the normalized fields from the incoming fields or create new fields.
Note: Field generation converts all fields to Number or String. Verify the precision and scale of generated fields.

Normalized Fields

Name	Occurs	Type	Precision	Scale
No normalized fields.				

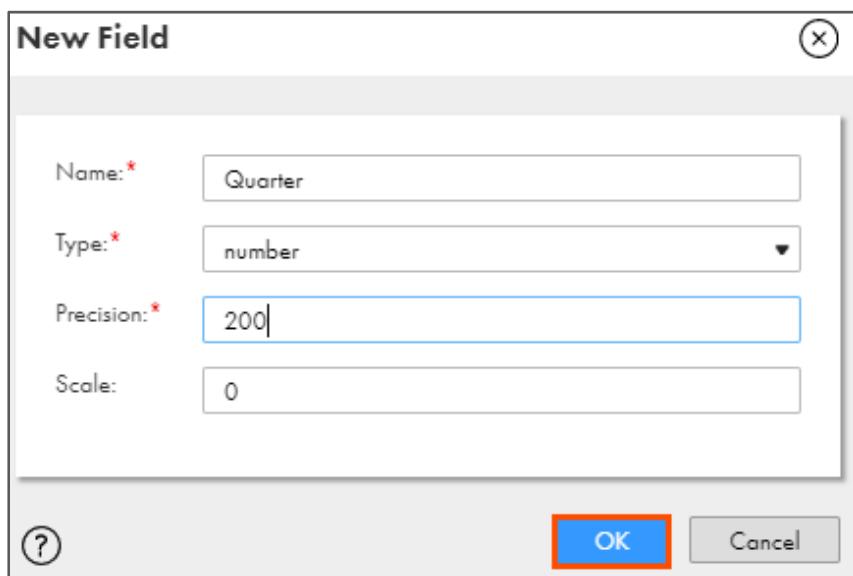
Create Field ▾
 Select From Incoming Fields...
New Field

Note: The New Field window appears.

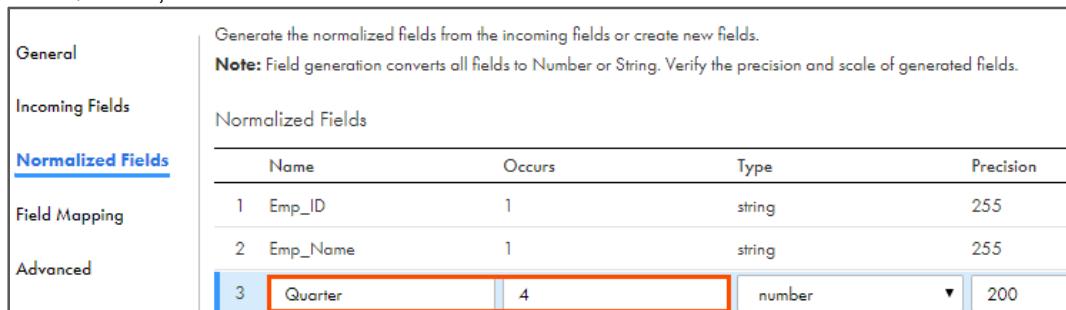
25. Enter the details as shown in table below:

Name	Type	Precision	Scale
Quarter	number	200	0

26. Click **OK**.



27. For Quarter, set Occurs as 4.



General
Incoming Fields
Normalized Fields
Field Mapping
Advanced

Generate the normalized fields from the incoming fields or create new fields.
Note: Field generation converts all fields to Number or String. Verify the precision and scale of generated fields.

Normalized Fields

Name	Occurs	Type	Precision
1 Emp_ID	1	string	255
2 Emp_Name	1	string	255
3 Quarter	4	number	200

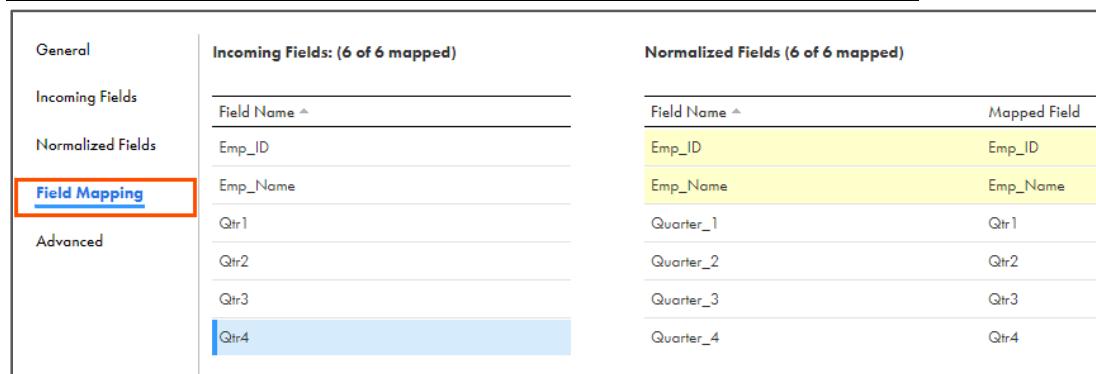
Note: Occurs define the number of instances the field occurs in incoming data.

28. From the properties pane, click **Field Mapping**.

29. Map the fields, as shown in the following table:

Note: For already mapped fields, do not map the fields again.

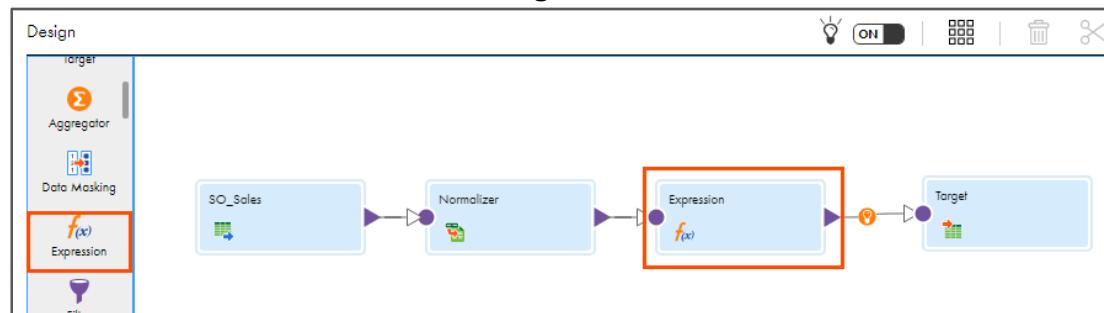
Incoming Fields	Normalized Fields
Emp_ID	Emp_ID
Emp_Name	Emp_Name
Qtr1	Quarter_1
Qtr2	Quarter_2
Qtr3	Quarter_3
Qtr4	Quarter_4



Field Name	Mapped Field
Emp_ID	Emp_ID
Emp_Name	Emp_Name
Quarter_1	Qtr1
Quarter_2	Qtr2
Quarter_3	Qtr3
Quarter_4	Qtr4

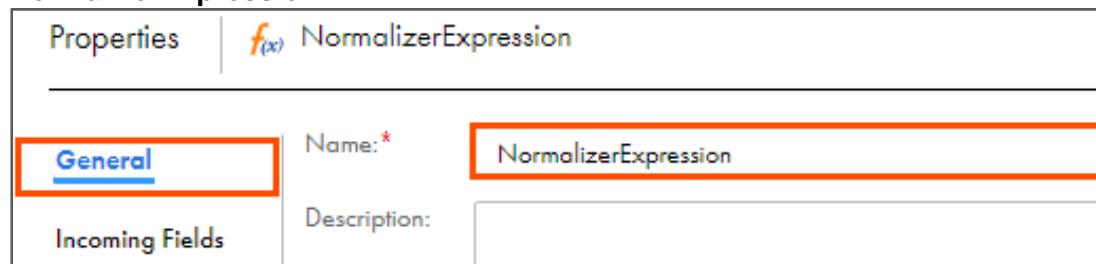
Add Expression Transformation:

30. From the list of available transformations, drag and drop the **Expression** transformation on the link between **Normalizer** and **Target**.



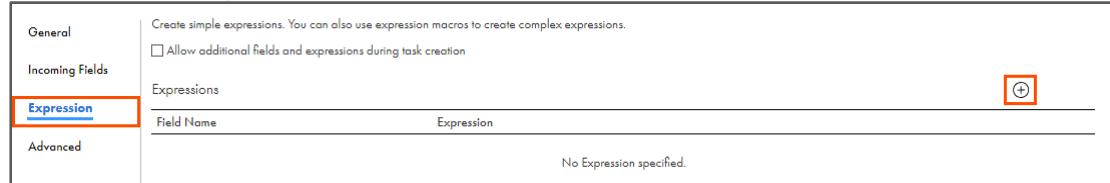
31. Select the **Expression** transformation from the mapping canvas.

32. In the **General** section of Normalizer properties, enter the Name as **NormalizerExpression**.



33. From the properties pane, click **Expression**.

34. To add a new expression, click .



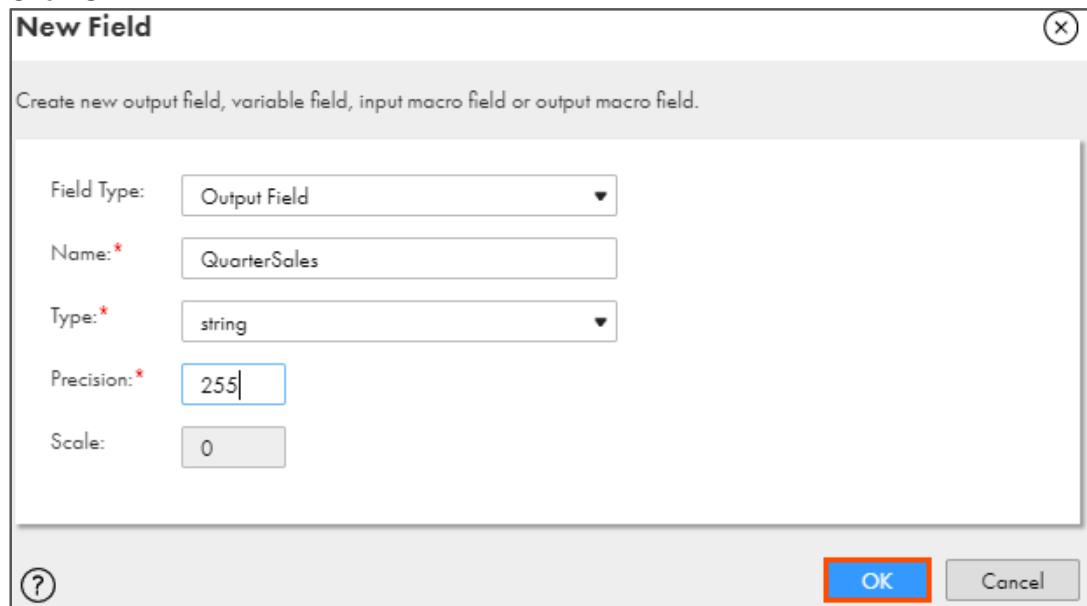
The screenshot shows the 'New Field' dialog box. On the left, there are tabs: General, Incoming Fields, Expression (which is selected and highlighted with a red box), and Advanced. The main area has sections for 'Create simple expressions' and 'Allow additional fields and expressions during task creation'. Below that is a table for 'Expressions' with columns 'Field Name' and 'Expression'. A red box highlights the '+' icon at the top right of this table.

Note: The New Field window appears.

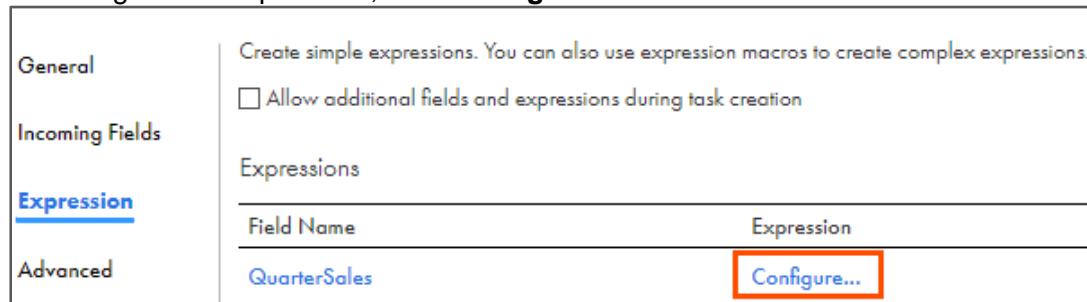
35. Enter the details as shown in table below:

Field Type	Name	Type	Precision	Scale
Output Field	QuarterSales	string	255	0

36. Click **OK**.



37. To configure the expression, click **Configure**.



The screenshot shows the 'Field Expression' dialog box. It has tabs: General, Incoming Fields, Expression (selected and highlighted with a red box), and Advanced. The main area has sections for 'Create simple expressions' and 'Allow additional fields and expressions during task creation'. Below that is a table for 'Expressions' with columns 'Field Name' and 'Expression'. A row for 'QuarterSales' has a 'Configure...' button in the 'Expression' column, which is highlighted with a red box.

Note: The Field Expression window appears.

38. In the Expression field, copy and paste the following expression:

DECODE(TRUE, GCID_Quarter=1, 'Qtr1', GCID_Quarter=2, 'Qtr2', GCID_Quarter=3, 'Qtr3', GCID_Quarter=4, 'Qtr4')

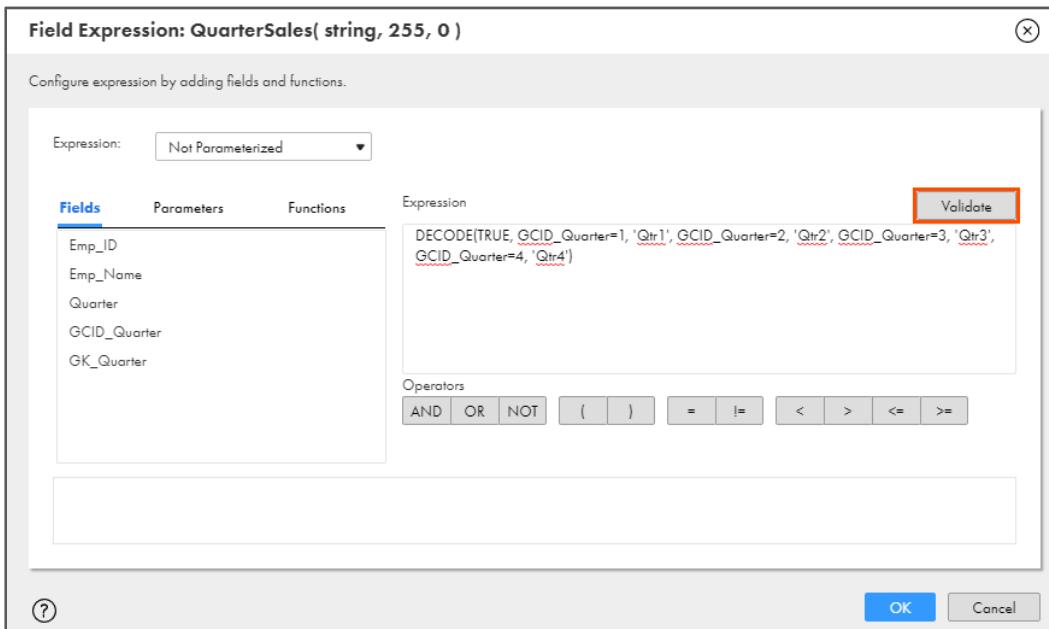
OR

Navigate to the **C:\Students\Commands** directory on your local machine and open the

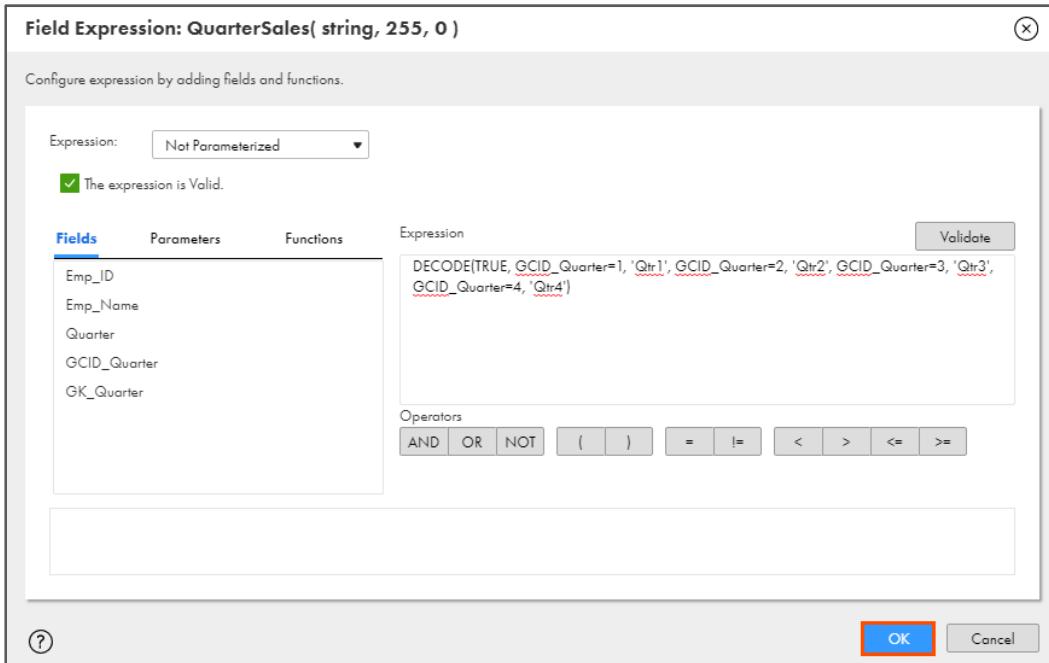
file named **10_LabGuide_UsingNormalizerAggregatorRankTransformations_5-1**.

Copy the command mentioned under **Step 38** and paste it in the Expression field.

39. Click Validate.

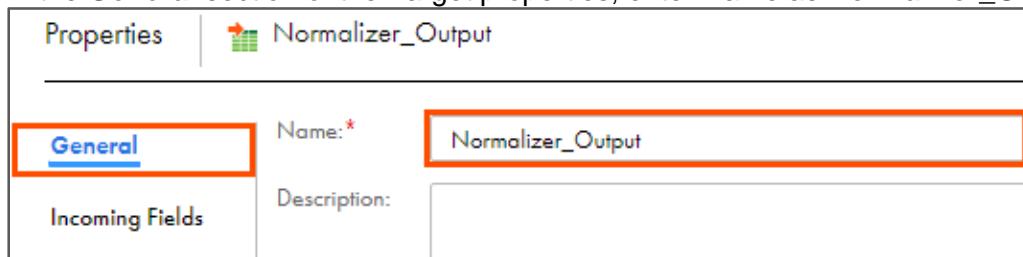


40. Click OK.



41. To configure the target, from the mapping canvas, click the **Target transformation.**

42. In the **General** section of the Target properties, enter Name as **Normalizer_Output**.

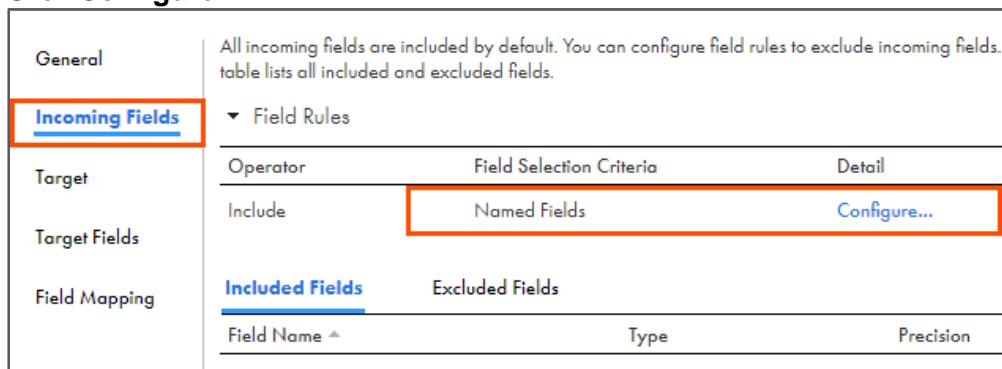


Properties		Normalizer_Output
General	Name:*	Normalizer_Output
Incoming Fields	Description:	

43. From the properties pane, click **Incoming Fields**.

44. In the Field Rules section, from the Field Selection Criteria drop-down, select **Named Fields**.

45. Click **Configure**.

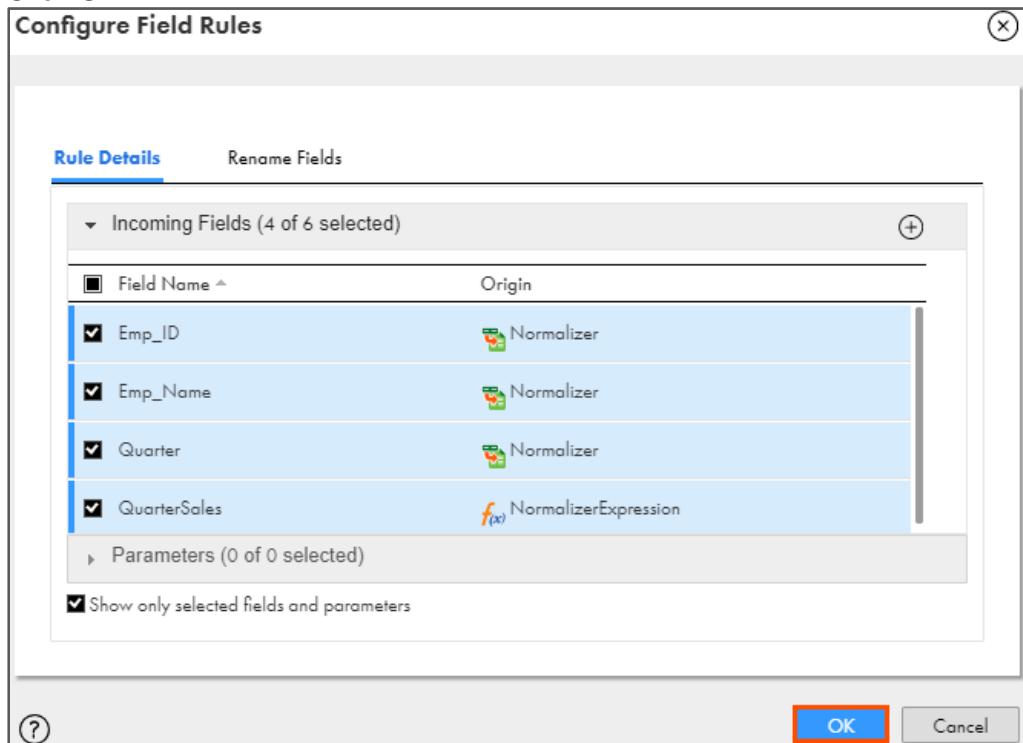


General		
All incoming fields are included by default. You can configure field rules to exclude incoming fields. table lists all included and excluded fields.		
Incoming Fields		
Target	Field Rules	
Target Fields	Operator	Field Selection Criteria
Field Mapping	Include	Named Fields Configure...
	Included Fields	
	Excluded Fields	
	Field Name	Type
		Precision

Note: The Configure Field Rule window appears.

46. Select **Emp_ID**, **Emp_Name**, **Quarter**, and **QuarterSales**.

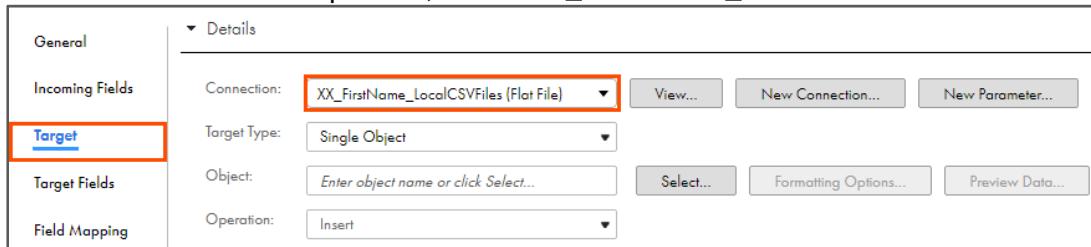
47. Click **OK**.



Rule Details		Rename Fields
Incoming Fields (4 of 6 selected)		
<input type="checkbox"/> Field Name	Origin	(+)
<input checked="" type="checkbox"/> Emp_ID	Normalizer	
<input checked="" type="checkbox"/> Emp_Name	Normalizer	
<input checked="" type="checkbox"/> Quarter	Normalizer	
<input checked="" type="checkbox"/> QuarterSales	NormalizerExpression	
Parameters (0 of 0 selected)		
<input checked="" type="checkbox"/> Show only selected fields and parameters		

48. From the properties pane, click **Target**.

49. From the Connection drop-down, select **XX_FirstName_LocalCSVFiles**.



50. Retain Target Type as **Single Object**.

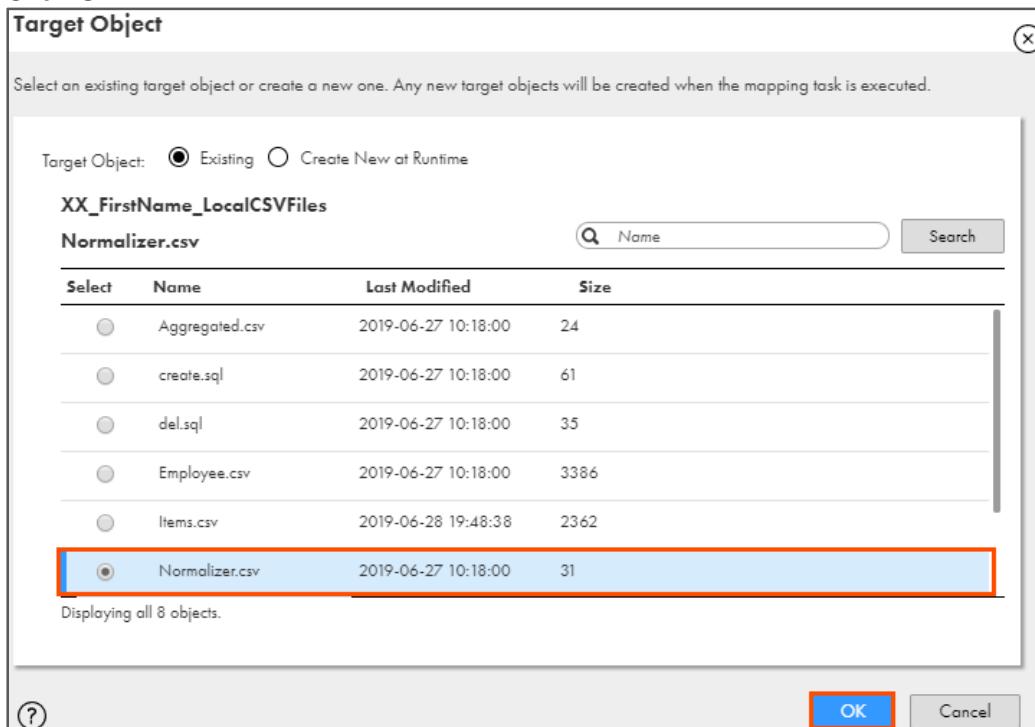
51. To select the target object from the Object field, click **Select**.



Note: The Target Object window appears.

52. From the list, select **Normalizer.csv**.

53. Click **OK**.



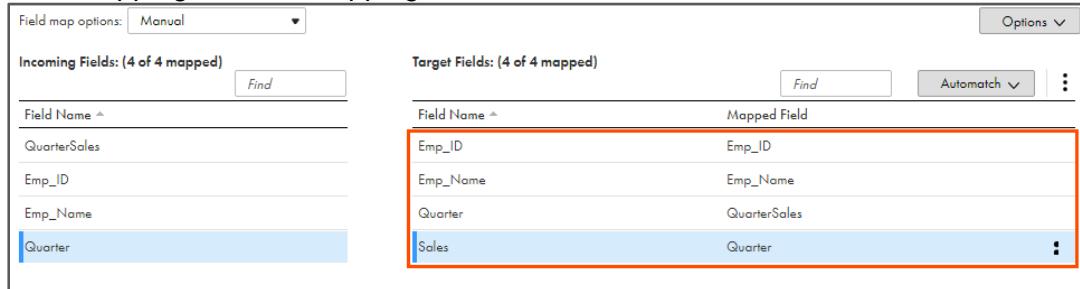
54. From the properties pane, click **Field Mapping**.

55. Match the fields, as shown in the table below:

Note: Some of the fields may be mapped automatically. For already mapped fields, do not map the fields again.

Incoming Field	Target Field
QuarterSales	Quarter
Emp_ID	Emp_ID
Emp_Name	Emp_Name
Quarter	Sales

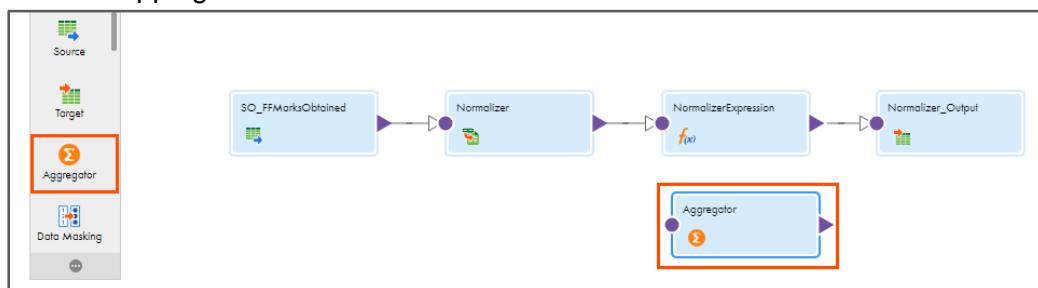
56. After mapping the field mapping looks as shown below:



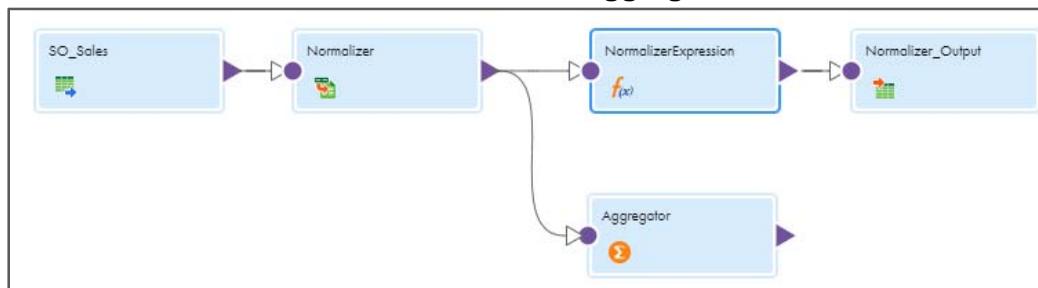
The screenshot shows the 'Field map options' interface with 'Manual' selected. Under 'Incoming Fields: (4 of 4 mapped)', fields 'QuarterSales', 'Emp_ID', 'Emp_Name', and 'Quarter' are listed. Under 'Target Fields: (4 of 4 mapped)', fields 'Emp_ID', 'Emp_Name', 'QuarterSales', and 'Quarter' are listed, each paired with its corresponding incoming field. A red box highlights the target field mapping section.

Add Aggregator Transformation:

57. From the list of available transformations, drag and drop the **Aggregator** transformation on the mapping canvas.



58. Link the **Normalizer** transformation with the **Aggregator** transformation.



59. Select the **Aggregator** transformation from the mapping canvas.

60. In the **General** section of Aggregator properties, retain the Name as **Aggregator**.



The screenshot shows the Properties pane for an Aggregator. The General tab is selected. The Name field is highlighted with a red border and contains the value "Aggregator". The Description field is empty.

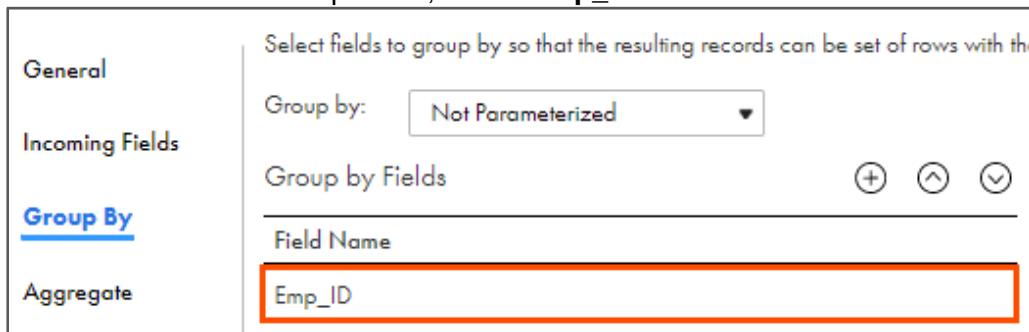
61. From the properties pane, click **Group By**.

62. To add a group by condition, click .



The screenshot shows the Properties pane with the Group By tab selected. The Group by dropdown is set to "Not Parameterized". The Add button () is highlighted with a red border.

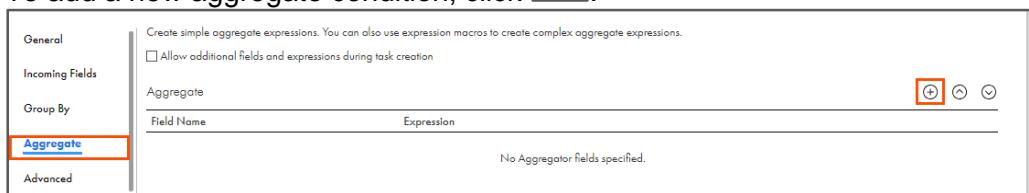
63. From the Field Name drop-down, select **Emp_ID**.



The screenshot shows the Properties pane with the Group By tab selected. The Field Name dropdown is set to "Emp_ID".

64. From the properties pane, click **Aggregate**.

65. To add a new aggregate condition, click .



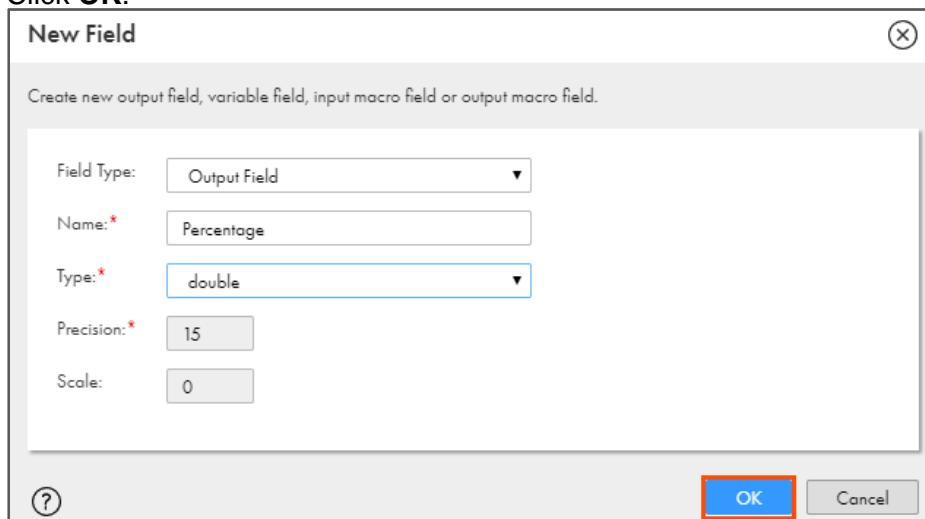
The screenshot shows the Properties pane with the Aggregate tab selected. The Add button () is highlighted with a red border.

Note: The New Field window appears.

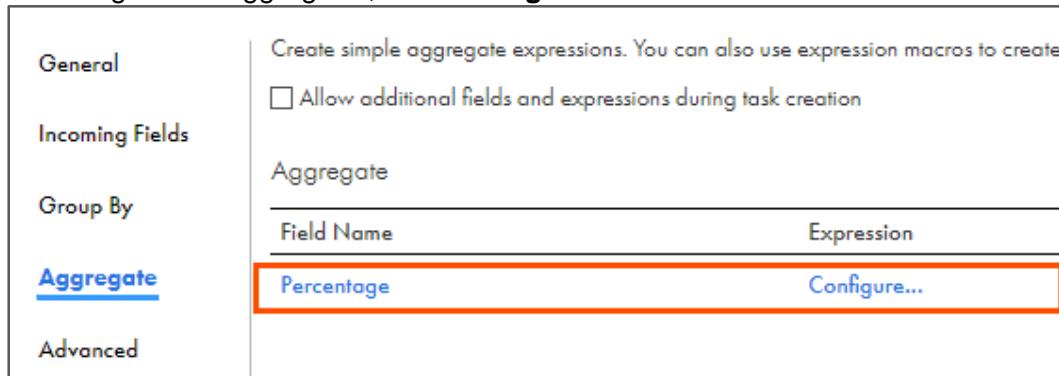
66. Enter the details as shown in table below:

Field Type	Name	Type	Precision	Scale
Output Field	Percentage	double	15	0

67. Click **OK**.



68. To configure the aggregator, click **Configure**.



Field Name	Expression
Percentage	Configure...

Note: The Field Expression window appears.

69. In the Expression field, enter the following expression:

(SUM(Quarter) /400)*100

OR

Navigate to the **C:\Students\Commands** directory on your local machine and open the file named **10_LabGuide_UsingNormalizerAggregatorRankTransformations_5-1**. Copy the command mentioned under **Step 69** and paste it in the Expression field.

70. Click Validate.

Field Expression: Percentage(double, 15, 0)

Configure expression by adding fields and functions.

Expression: Not Parameterized

Fields	Parameters	Functions	Expression	Validate
Emp_ID			<code> (SUM(Quarter) / 400)*100</code>	Validate
Emp_Name				
Quarter				
GCID_Quarter				
GK_Quarter				

Operators

AND OR NOT () = != < > <= >=

(?) OK Cancel

71. Click OK.

Field Expression: Percentage(double, 15, 0)

Configure expression by adding fields and functions.

Expression: Not Parameterized

The expression is Valid.

Fields	Parameters	Functions	Expression	Validate
Emp_ID			<code>(SUM(Quarter) / 400)*100</code>	Validate
Emp_Name				
Quarter				
GCID_Quarter				
GK_Quarter				

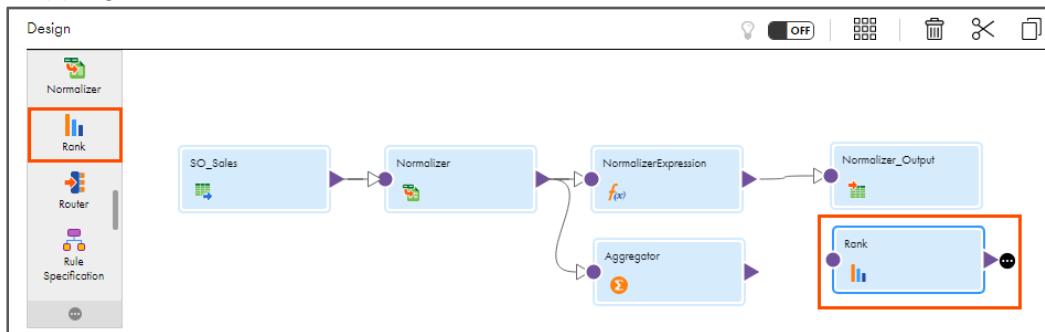
Operators

AND OR NOT () = != < > <= >=

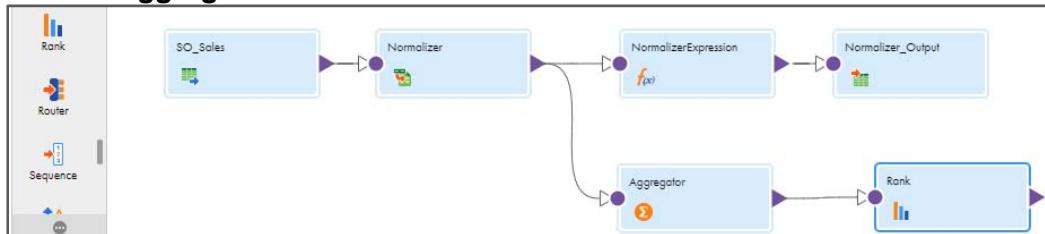
(?) OK Cancel

Add Rank Transformation:

72. From the list of available transformations, drag and drop **Rank** transformation on the mapping canvas.



73. Link the **Aggregator** with **Rank** transformation.



74. Select the **Rank** transformation from the mapping canvas.

75. In the **General** section of Rank properties, retain the Name as **Rank**.

Properties		Rank
General		Name: * Rank
Incoming Fields		Description:

76. From the properties pane, click **Rank**.

77. From the Rank By drop-down, select **Percentage**.

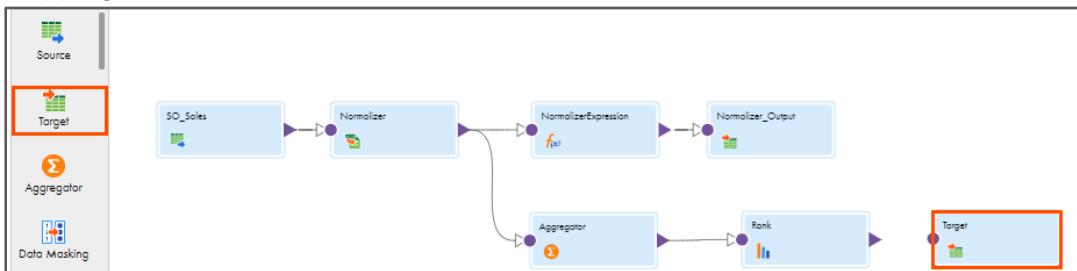
78. Retain Rank Order as **Top**.

79. In the Number of Rows section, in the Number of Rows field, enter **20**.

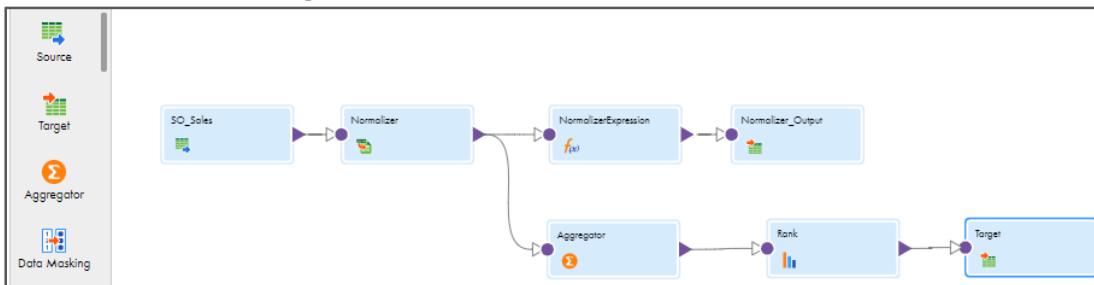
Properties		Rank
General		Rank By: * Percentage (double)
Incoming Fields		Rank Order: * Top
Rank		Number of Rows
Group By		Parameterize Number of Rows: * Not Parameterized
Advanced		Number of Rows: * 20

Add Target Transformation:

80. From the list of available transformations, drag and drop **Target** transformation on the mapping canvas.

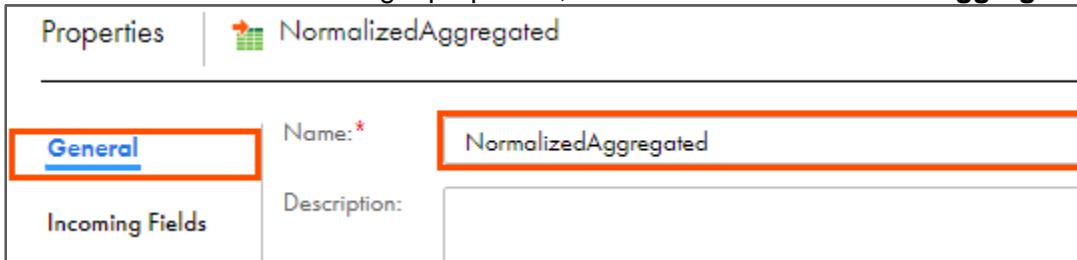


81. Link the **Rank** with **Target** transformation.



82. Select the **Target** transformation from the mapping canvas.

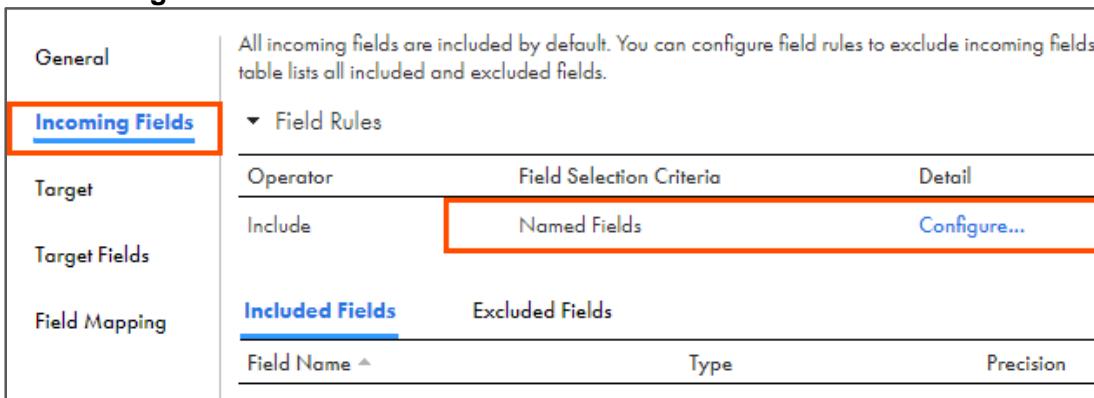
83. In the **General** section of Target properties, enter Name as **NormalizedAggregated**.



84. From the properties pane, click **Incoming Fields**.

85. In the Field Rules section, from the Field Selection Criteria drop-down, select **Named Fields**.

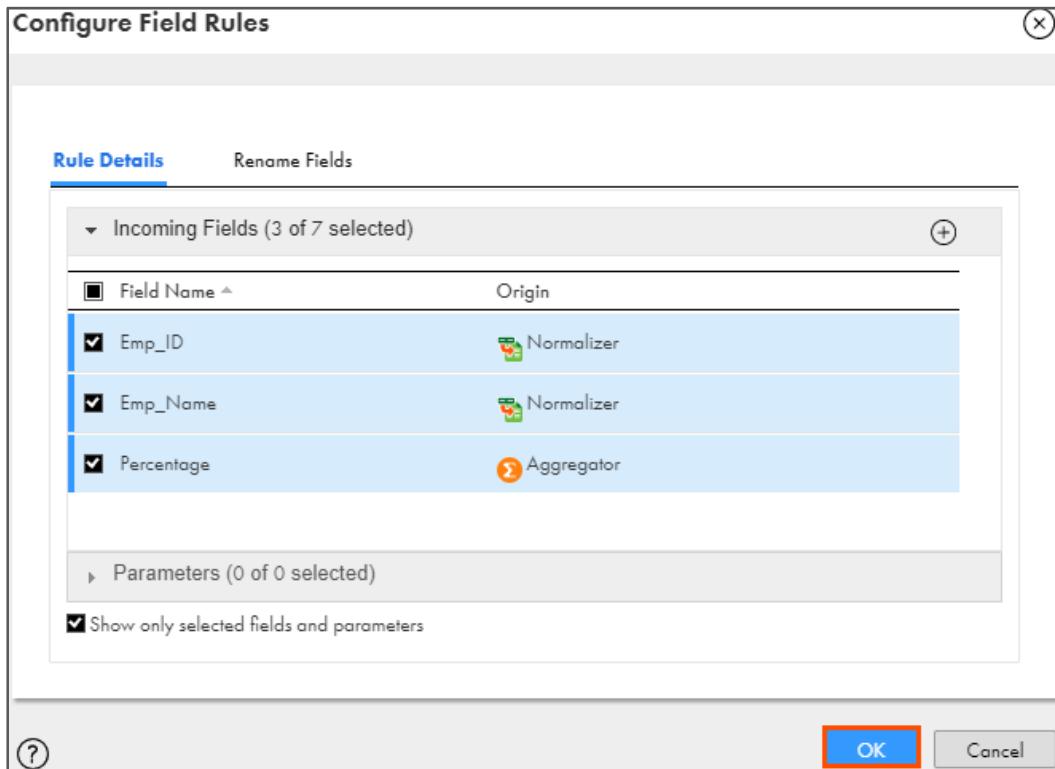
86. Click **Configure**.



Note: The Configure Field Rules window appears.

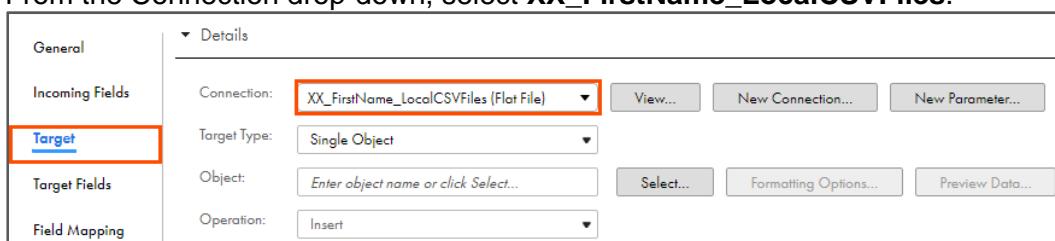
87. Select **Emp_ID**, **Emp_Name**, and **Percentage**.

88. Click **OK**.



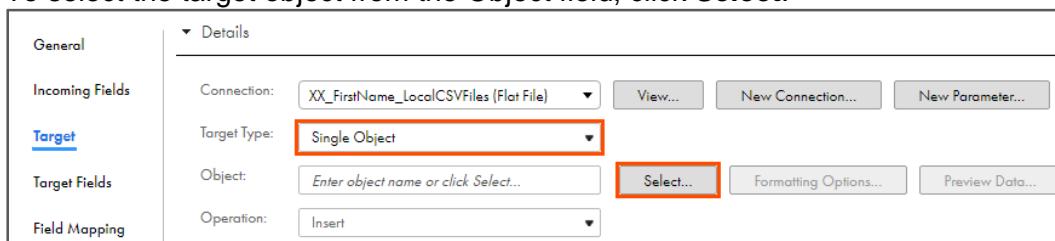
89. From the properties pane, click **Target**.

90. From the Connection drop-down, select **XX_FirstName_LocalCSVFiles**.



91. Retain Target Type as **Single Object**.

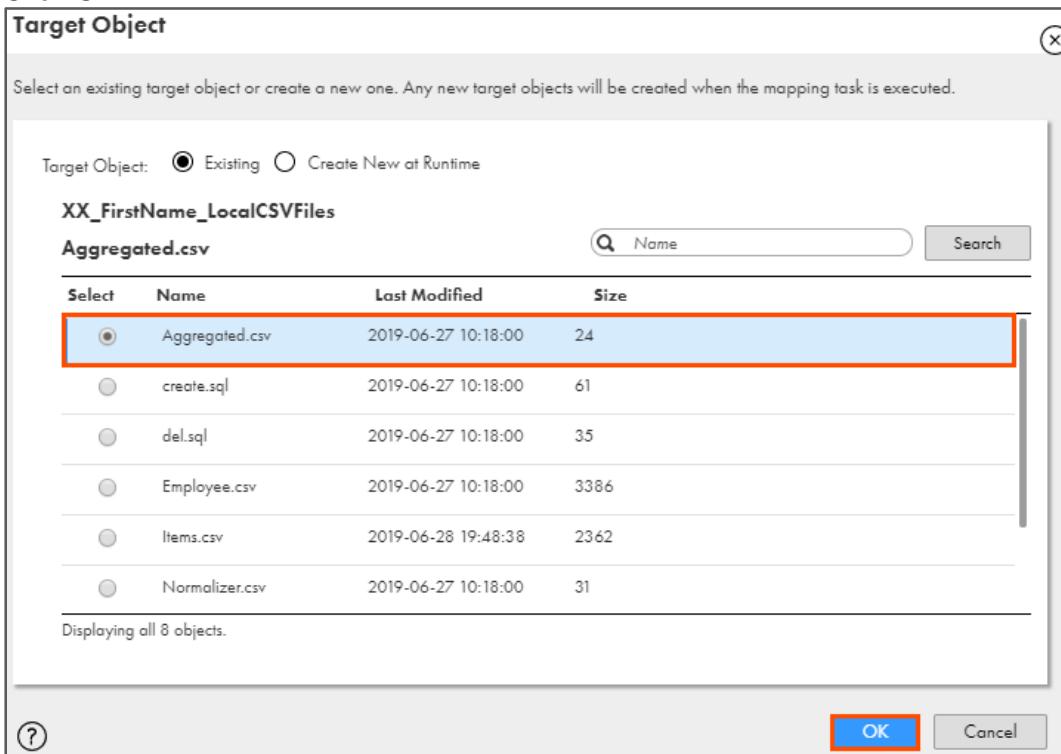
92. To select the target object from the Object field, click **Select**.



Note: The Target Object window appears.

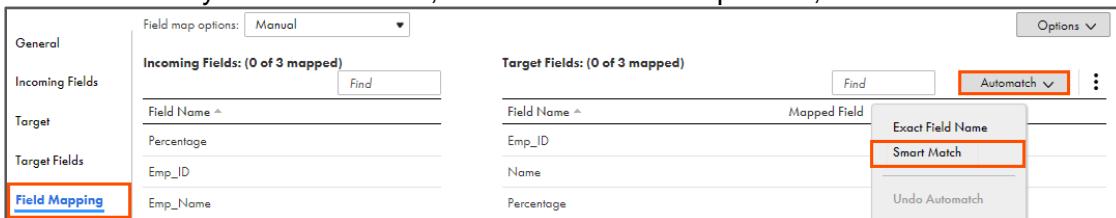
93. From the list, select **Aggregated.csv**.

94. Click **OK**.

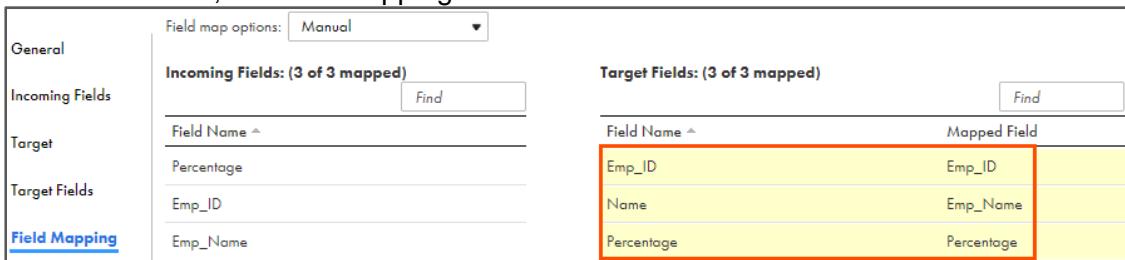


95. From the properties pane, click **Field Mapping**.

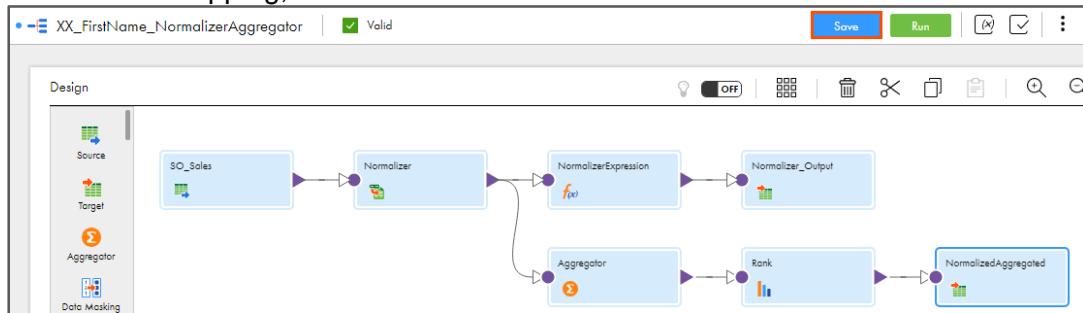
96. To automatically match the fields, from Automatch drop-down, select **Smart Match**.



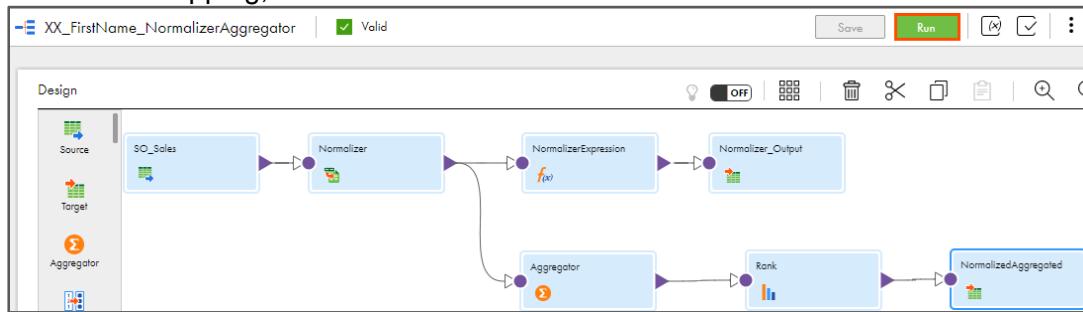
97. After Automatch, the field mapping looks as shown below:



98. To save the mapping, click **Save**.



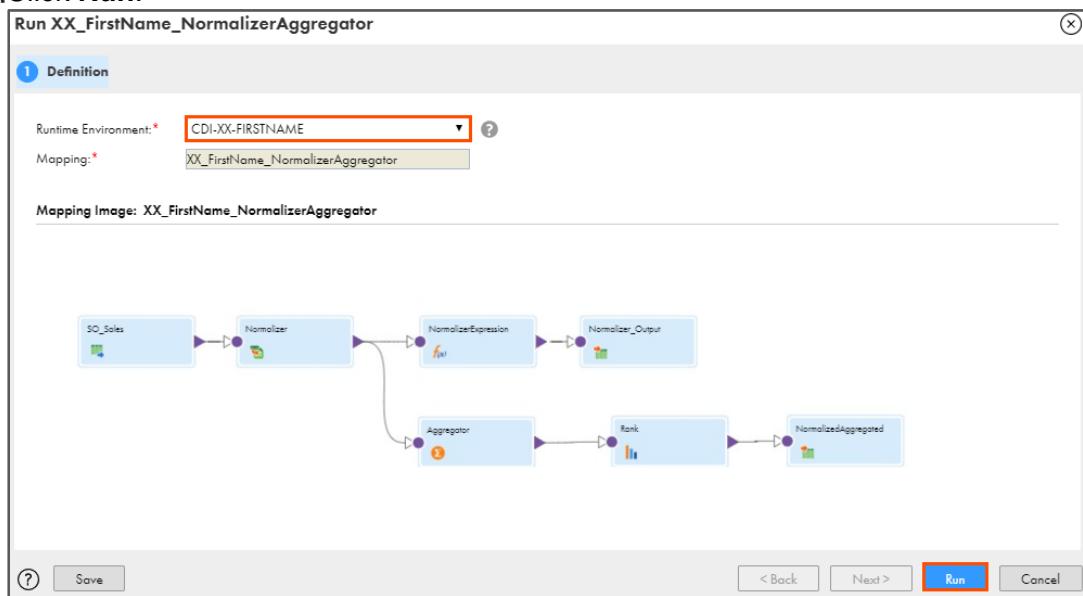
99. To run the mapping, click **Run**.



Note: The Run mapping window appears.

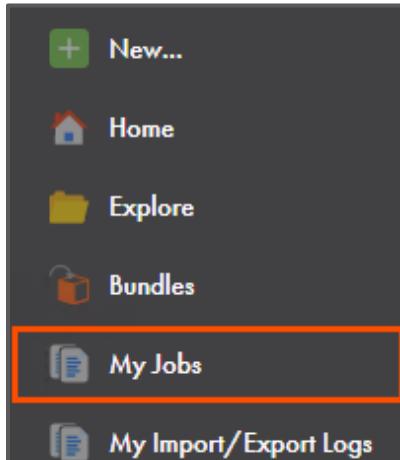
100. From the Runtime Environment drop-down, select your secure agent group.

101. Click **Run**.



Monitor Status:

102.To monitor the mapping status, from the navigation pane, click **My Jobs**.



103.When the task completes, the status changes to Success.

My Jobs		Data Integration			
Jobs (1 of 27)	<input checked="" type="checkbox"/> Up to date	Updated 12:20:29 AM PDT     Find			
Asset Name: XX_FirstName_Normalizer...  	Add Field 				
Instance Name	Subtasks	Start Time	End Time	Rows Processed	State
XX_FirstName_NormalizerAggregator-1		Aug 1, 2019, ...	Aug 1, 20...	180	 Success

104.On your local machine, go to **C:\IICSLabFiles**.

105.Verify the contents of **Normalizer.csv** and **Aggregated.csv** files.

Aggregated.csv:

A	B	C	D	E	F	G
1	Emp_ID	Name	Percentage			
2	408351	Diane Evans	647.75			
3	329752	Lillian Brown	397.75			
4	560455	Carolyn Hayes	372.5			
5	218791	Aaron Price	339.75			
6	677509	Lois Walker	331			
7	683826	Roger Roberts	310			
8	278556	Richard Mitchell	304.75			
9	153989	Jack Alexander	293.5			
10	333476	Mary Wilson	285			
11	766610	Joyce Jenkins	282.5			
12	214352	Theresa Lee	266			
13	979607	Carol Edwards	261			
14	386158	Melissa King	223.75			
15	969580	Matthew Turner	210.75			
16	621833	Gregory Edwards	210.5			
17	499687	Patrick Bailey	208.25			
18	477253	Anne Russell	203			
19	456747	Roy Griffin	194.25			
20	940761	Brenda Robinson	191			
21	441771	Cheryl Scott	174.25			
22						

Normalizer.csv:

A	B	C	D	E
Emp_ID	Emp_Name	Quarter	Sales	
677509	Lois Walker	Qtr1	32	
677509	Lois Walker	Qtr2	534	
677509	Lois Walker	Qtr3	746	
677509	Lois Walker	Qtr4	12	
940761	Brenda Robinson	Qtr1	13	
940761	Brenda Robinson	Qtr2	645	
940761	Brenda Robinson	Qtr3	76	
940761	Brenda Robinson	Qtr4	30	
428945	Joe Robinson	Qtr1	37	
428945	Joe Robinson	Qtr2	36	
428945	Joe Robinson	Qtr3	2	
428945	Joe Robinson	Qtr4	1	
408351	Diane Evans	Qtr1	529	
408351	Diane Evans	Qtr2	962	
408351	Diane Evans	Qtr3	114	
408351	Diane Evans	Qtr4	986	
193819	Benjamin Russell	Qtr1	13	
193819	Benjamin Russell	Qtr2	23	
193819	Benjamin Russell	Qtr3	82	

This concludes the lab.

Module 5: Advanced Transformations and Mapping Tasks

Lab 5-2: Creating a mapping using Unconnected Lookup Transformation

Overview:

An unconnected Lookup transformation is not connected to other transformations in a mapping. It returns one column to the calling transformation.

Objective:

- Use Unconnected Lookup transformations in the mapping

Scenario:

John explains to Ruby about various transformations used in IICS. To familiarize Ruby with the Lookup transformation, he creates a mapping in IICS using unconnected lookup. In this lab, John will use the Informatica Cloud Mapping Designer's Unconnected Lookup transformation.

Duration:

35 minutes

Tasks:

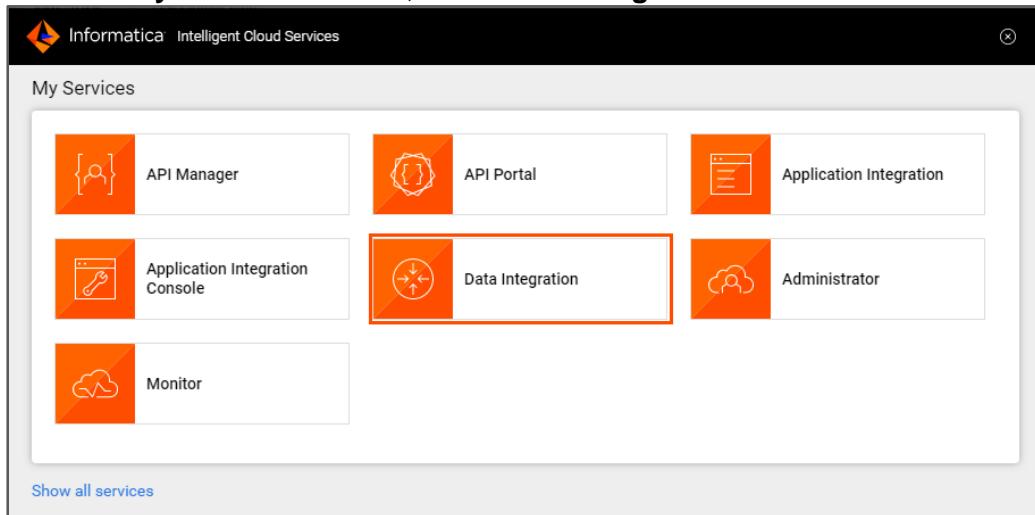
Copy Source Files:

1. Copy the following files from the CDI Lab Prep Files folder available on your desktop and paste it in your flat file directory (C:\IICSLabFiles):

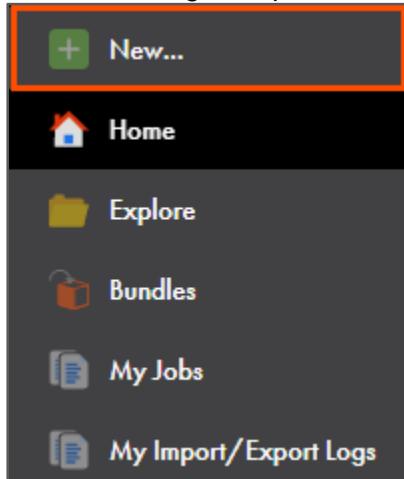
Files
ETF-Ticker.txt
InvestmentOption.txt
StockTicker.txt
TotalAmount.txt

Create Mapping:

2. Open the IICS Login page from the Bookmarks bar.
Note: Follow this step if you have navigated away from the login page.
3. Enter the login credentials provided by the Instructor and click **Log In**.
4. From the **My Services** window, select **Data Integration**.

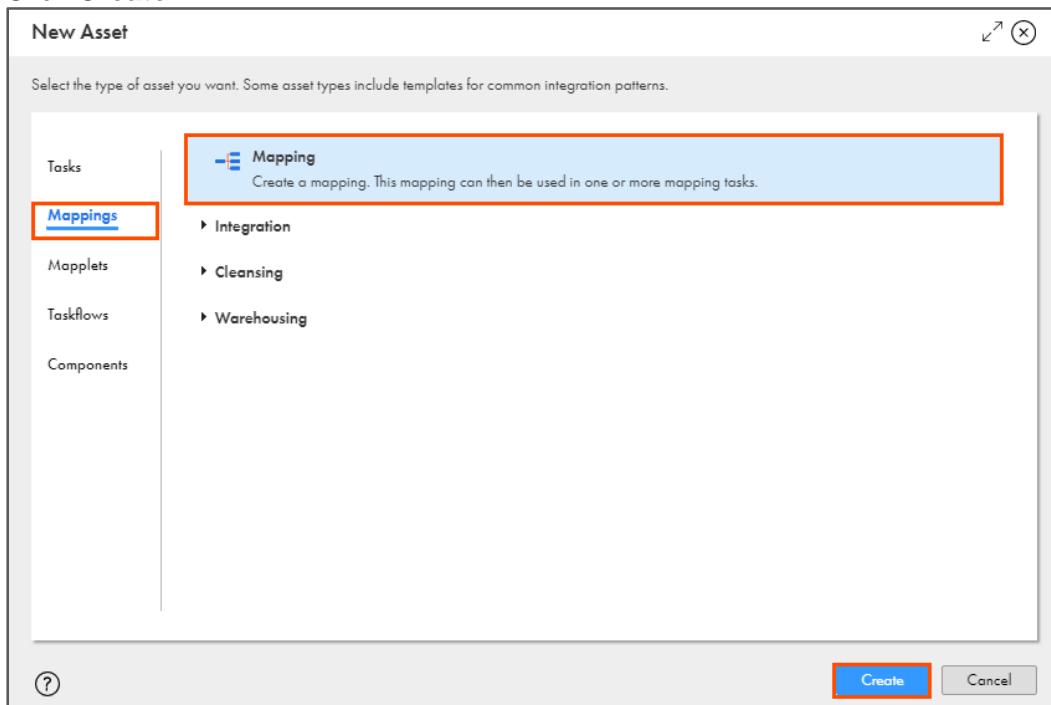


5. From the navigation pane, select **New**.



6. From the New Asset window, click the **Mappings** tab, and select **Mapping**.

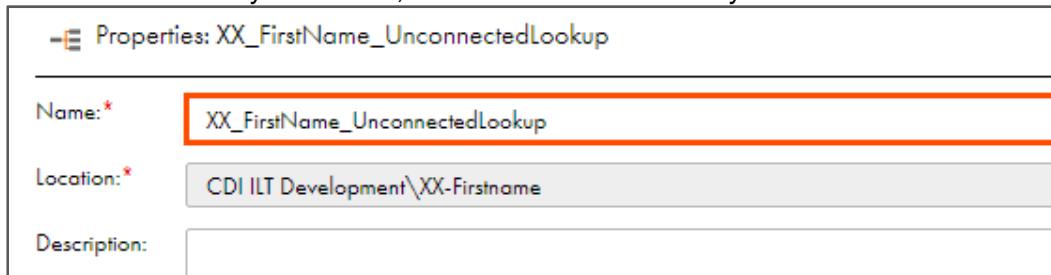
7. Click **Create**.



Note: The following Mapping page appears.

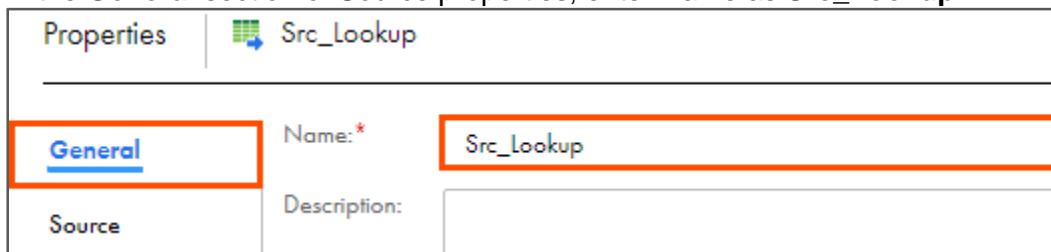
8. In the Name field, enter **XX_FirstName_UnconnectedLookup**.

Note: XX refers to your initials, and FirstName refers to your First Name.



9. To configure the source, from the mapping canvas, click the **Source** transformation.

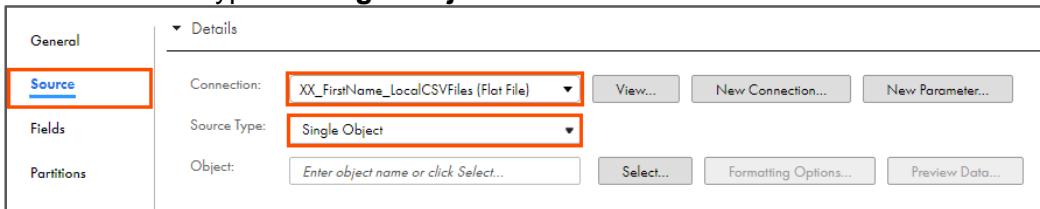
10. In the **General** section of Source properties, enter Name as **Src_Lookup**.



11. From the properties pane, click **Source**.

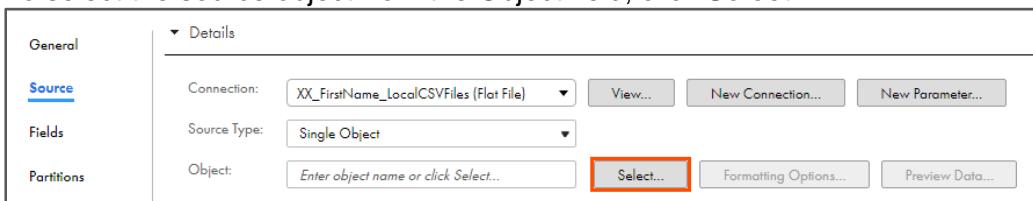
12. From the Connection drop-down, select **XX_FirstName_LocalCSVFiles**.

13. Retain Source Type as **Single Object**.



The screenshot shows the 'Source' tab selected in the properties pane. The 'Source Type' dropdown is set to 'Single Object'. Other tabs like 'Fields' and 'Partitions' are visible but not selected.

14. To select the source object from the Object field, click **Select**.

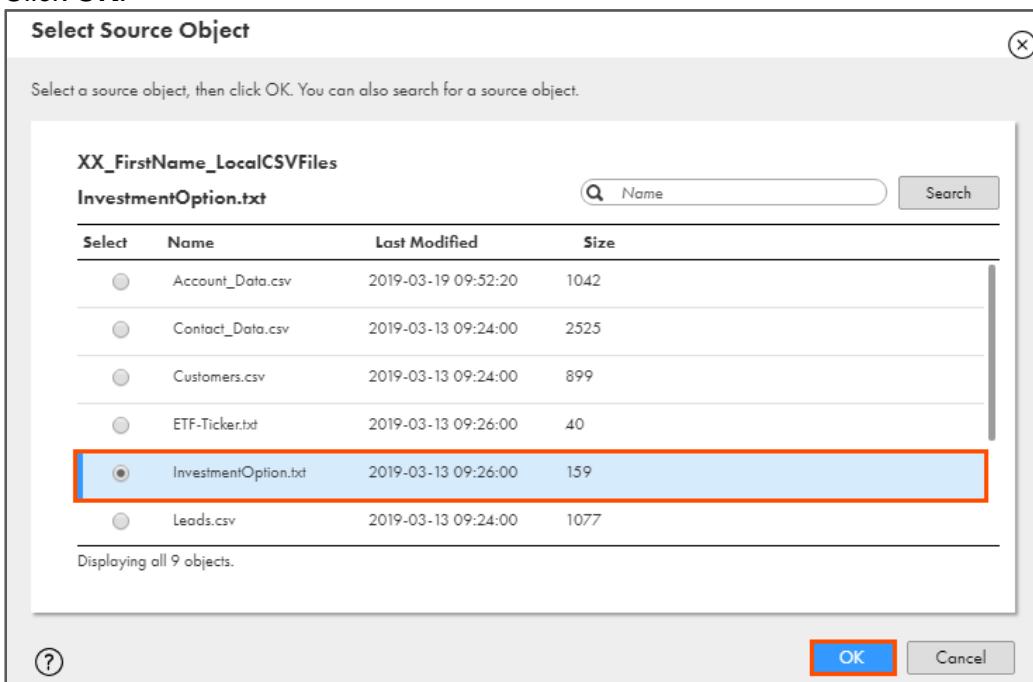


The screenshot shows the 'Object' field containing 'Enter object name or click Select...' with the 'Select...' button highlighted by a red box.

Note: The Select Source Object window appears.

15. From the list, select **InvestmentOption.txt**.

16. Click **OK**.

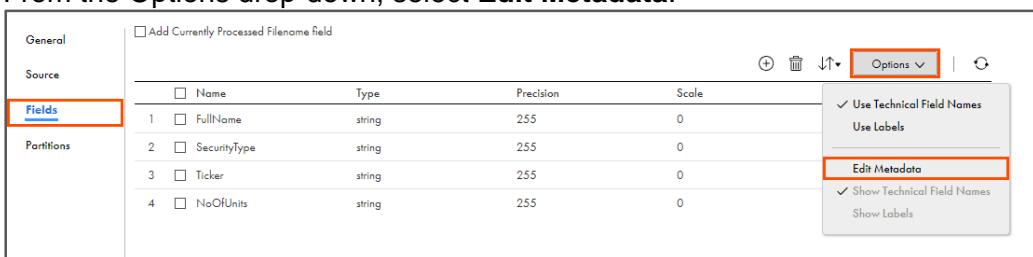


The dialog box title is 'Select Source Object'. It contains a search bar and a table with columns: Select, Name, Last Modified, and Size. The table lists several files, with 'InvestmentOption.txt' being the last item and highlighted by a red box. At the bottom right are 'OK' and 'Cancel' buttons.

Select	Name	Last Modified	Size
...	Account_Data.csv	2019-03-19 09:52:20	1042
...	Contact_Data.csv	2019-03-13 09:24:00	2525
...	Customers.csv	2019-03-13 09:24:00	899
...	ETF-Ticker.txt	2019-03-13 09:26:00	40
...	InvestmentOption.txt	2019-03-13 09:26:00	159
...	Leads.csv	2019-03-13 09:24:00	1077

17. From the properties pane, click **Fields**.

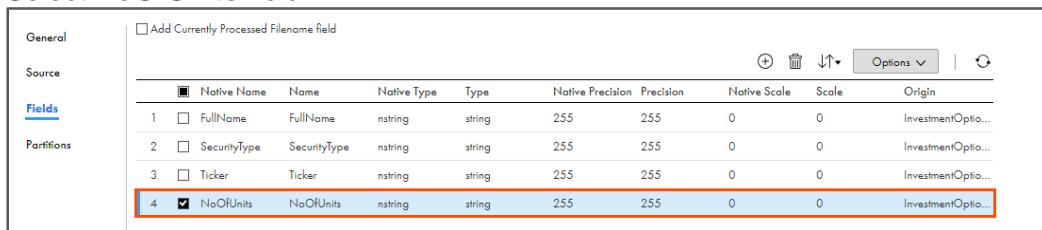
18. From the Options drop-down, select **Edit Metadata**.



The screenshot shows the 'Fields' tab selected in the properties pane. A context menu is open over the table, with 'Edit Metadata' highlighted by a red box. Other options like 'Use Technical Field Names' and 'Show Labels' are also visible.

Note: You can use Edit Metadata option to edit the data type of fields.

19. Select **NoOfUnits** field.

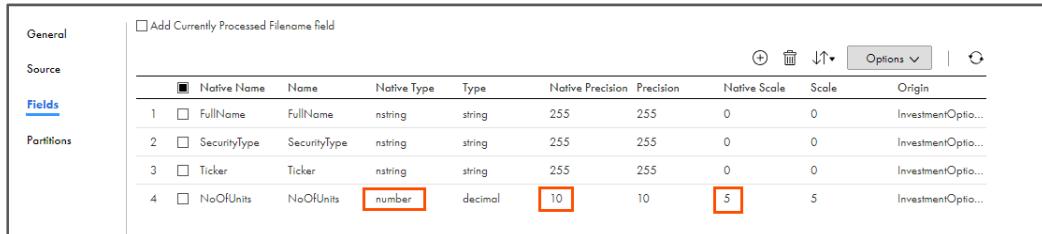


The screenshot shows the 'Fields' section of the Informatica interface. A table lists four fields: FullName, SecurityType, Ticker, and NoOfUnits. The 'NoOfUnits' row is highlighted with a red box. The 'Native Type' column for NoOfUnits is set to 'number'.

	Native Name	Name	Native Type	Type	Native Precision	Precision	Native Scale	Scale	Origin
1	FullName	FullName	nstring	string	255	255	0	0	InvestmentOptio...
2	SecurityType	SecurityType	nstring	string	255	255	0	0	InvestmentOptio...
3	Ticker	Ticker	nstring	string	255	255	0	0	InvestmentOptio...
4	<input checked="" type="checkbox"/> NoOfUnits	NoOfUnits	nstring	string	255	255	0	0	InvestmentOptio...

20. From the Native Type drop-down, select **number**.

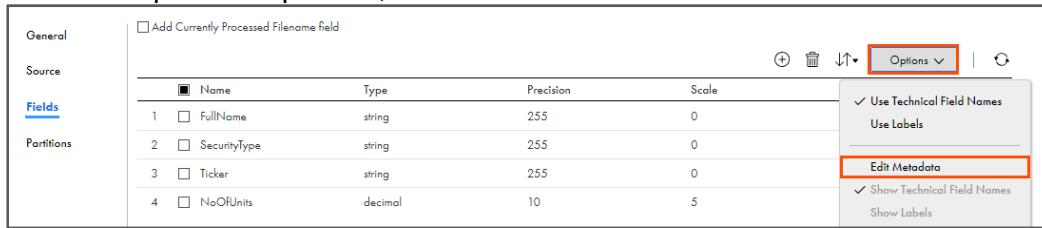
21. Set Native Precision to **10** and Native Scale to **5**.



The screenshot shows the 'Fields' section after updating the 'NoOfUnits' field. The 'Native Type' is now 'decimal'. The 'Native Precision' is set to '10' and the 'Native Scale' is set to '5'.

	Native Name	Name	Native Type	Type	Native Precision	Precision	Native Scale	Scale	Origin
1	FullName	FullName	nstring	string	255	255	0	0	InvestmentOptio...
2	SecurityType	SecurityType	nstring	string	255	255	0	0	InvestmentOptio...
3	Ticker	Ticker	nstring	string	255	255	0	0	InvestmentOptio...
4	<input type="checkbox"/> NoOfUnits	NoOfUnits	number	decimal	10	10	5	5	InvestmentOptio...

22. From the Options drop-down, uncheck **Edit Metadata**.



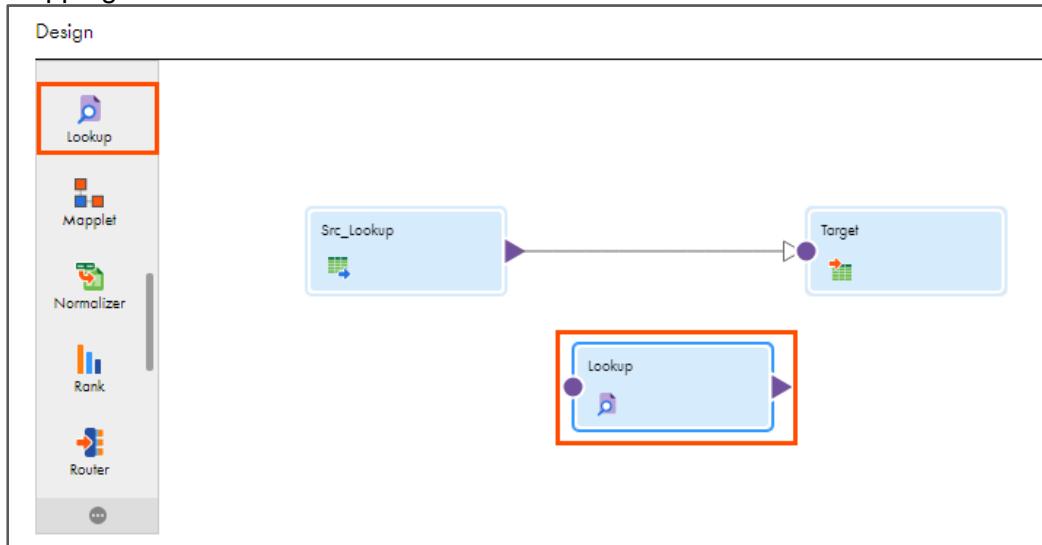
The screenshot shows the 'Fields' section with the 'Options' dropdown open. The 'Edit Metadata' checkbox is unchecked, while other options like 'Use Technical Field Names' and 'Show Labels' are checked.

	Name	Type	Precision	Scale
1	FullName	string	255	0
2	SecurityType	string	255	0
3	Ticker	string	255	0
4	<input type="checkbox"/> NoOfUnits	decimal	10	5

Use Technical Field Names
 Use Labels
 Edit Metadata
 Show Technical Field Names
 Show Labels

Add Lookup Transformation:

23. From the list of available transformations, drag and drop **Lookup** transformation on the mapping canvas.

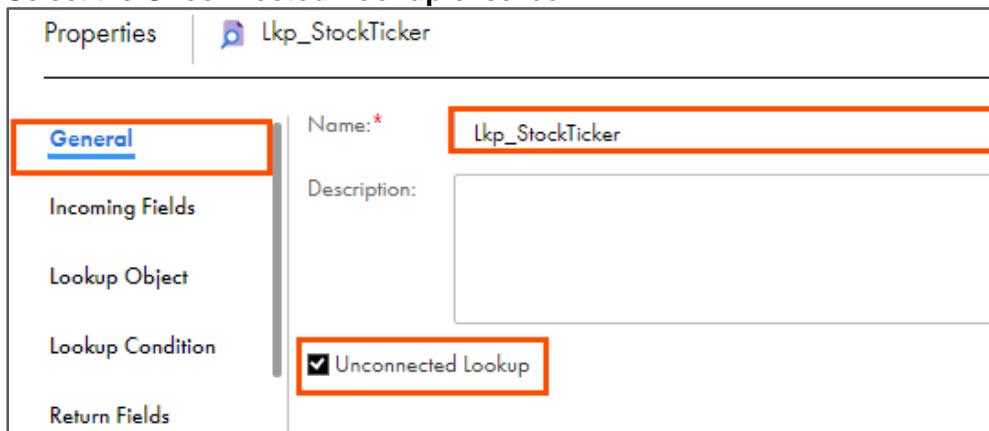


The screenshot shows the 'Design' canvas. On the left, a palette lists several transformations: 'Lookup' (selected and highlighted with a red box), 'Mapplet', 'Normalizer', 'Rank', and 'Router'. On the right, a mapping diagram shows a 'Src_Lookup' source connected to a 'Target' target via a 'Lookup' transformation (also highlighted with a red box).

24. Select the **Lookup** transformation on the mapping canvas.

25. In the **General** section of Lookup properties, enter Name as **Lkp_StockTicker**.

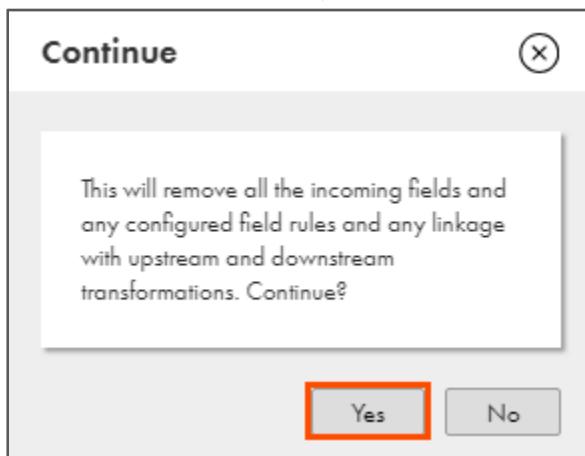
26. Select the **Unconnected Lookup** checkbox.



The screenshot shows the Informatica Properties pane for a transformation named "Lkp_StockTicker". The "General" tab is selected. The "Name" field contains "Lkp_StockTicker". The "Unconnected Lookup" checkbox is checked and highlighted with a red box.

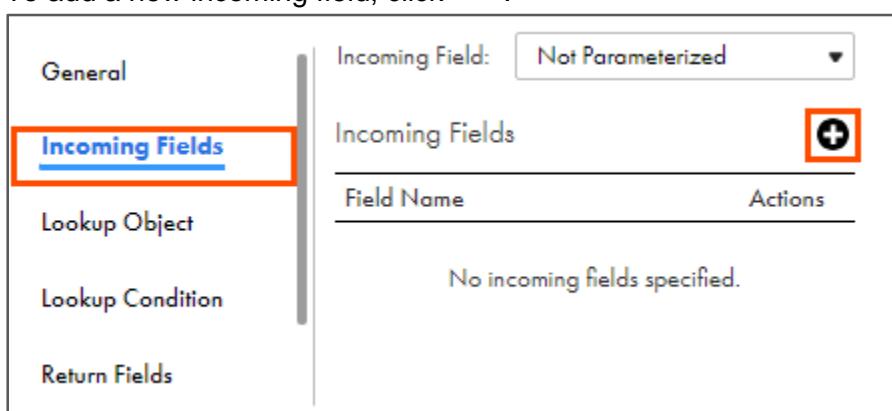
Note: A Continue pop-up window appears.

27. In the **Continue** window, select **Yes**.



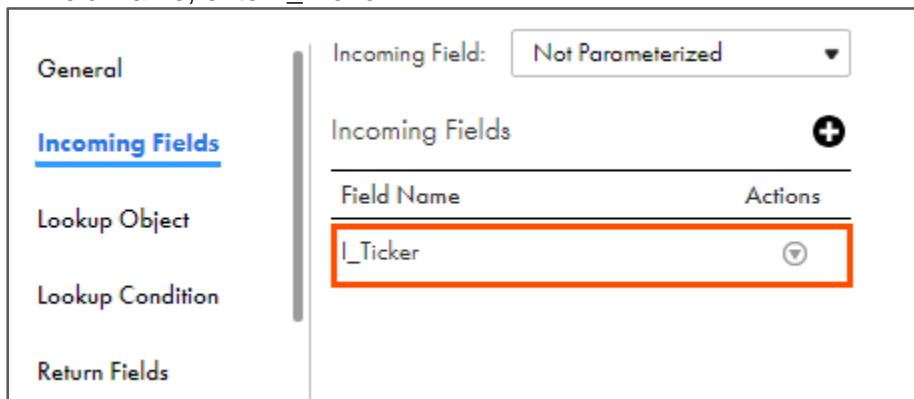
28. From the properties pane, click **Incoming Fields**.

29. To add a new incoming field, click .



The screenshot shows the Informatica Properties pane for a transformation. The "Incoming Fields" tab is selected. The "Incoming Field" dropdown is set to "Not Parameterized". Below it, there is a table with one row. The first column is "Field Name" and the second column is "Actions". The table displays the message "No incoming fields specified.". A plus sign icon in the "Actions" column is highlighted with a red box.

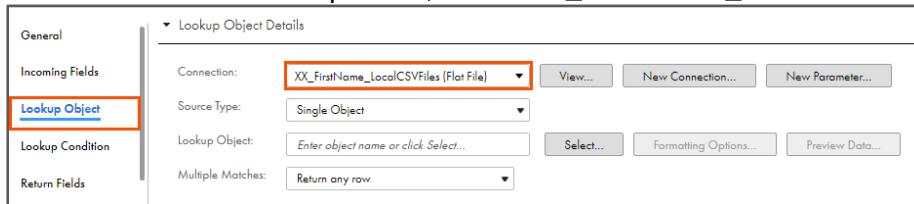
30. In Field Name, enter **I_Ticker**.



Field Name	Actions
I_Ticker	(dropdown)

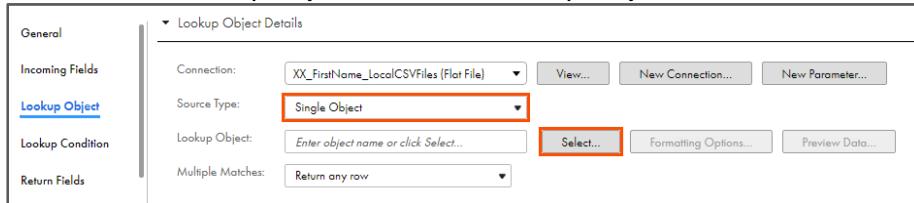
31. From the properties pane, click **Lookup Object**.

32. From the Connection drop-down, select **XX_FirstName_LocalCSVFiles**.



33. Retain Source Type as **Single Object**.

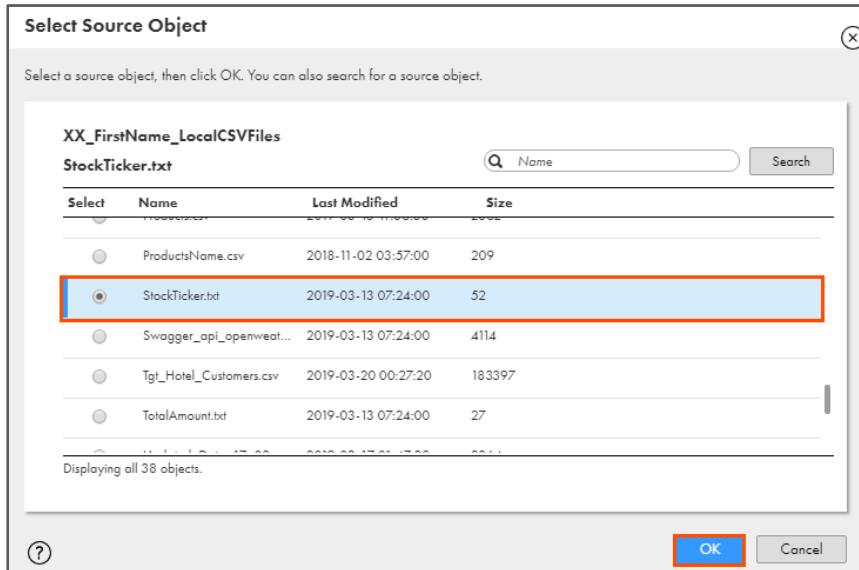
34. To select the lookup object, from the Lookup Object field, click **Select**.



Note: The Select Source Object window appears.

35. From the list, select **StockTicker.txt**.

36. Click **OK**.



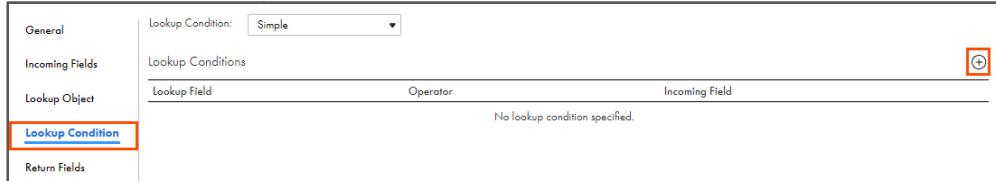
Select	Name	Last Modified	Size
<input type="radio"/>	ProductsName.csv	2018-11-02 03:57:00	209
<input checked="" type="radio"/>	StockTicker.txt	2019-03-13 07:24:00	52
<input type="radio"/>	Swagger_api_openweat...	2019-03-13 07:24:00	4114
<input type="radio"/>	Tgt_Hotel_Customers.csv	2019-03-20 00:27:20	183397
<input type="radio"/>	TotalAmount.txt	2019-03-13 07:24:00	27

Displaying all 38 objects.

OK Cancel

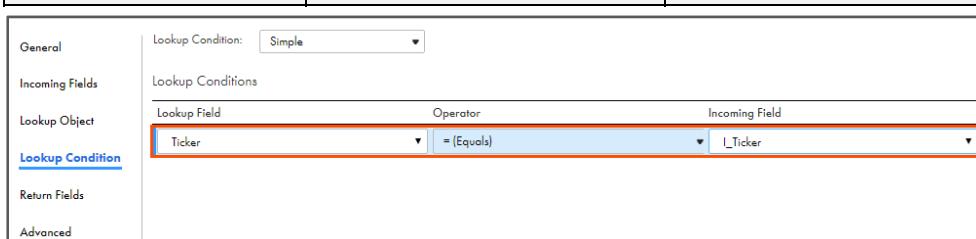
37. From the properties pane, click **Lookup Condition**.

38. To add a new lookup condition, click .



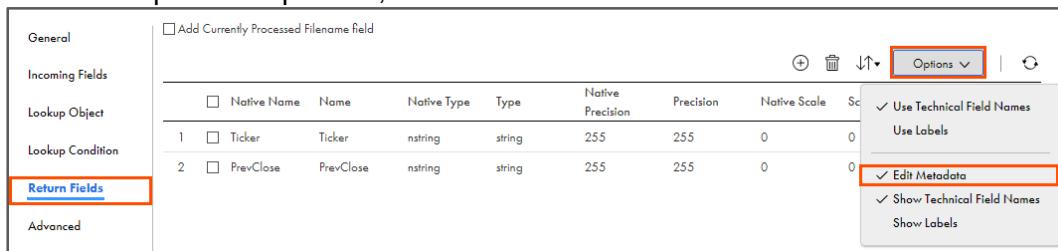
39. Enter the lookup condition, as shown in the table below:

Lookup Field	Operator	Incoming Field
Ticker	=	I_Ticker

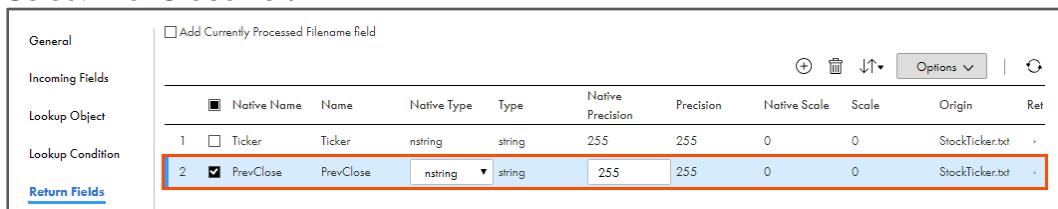


40. From the properties pane, click **Return Fields**.

41. From the Options drop-down, select **Edit Metadata**.

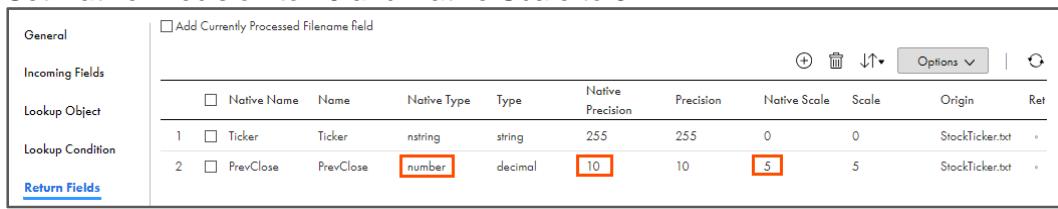


42. Select **PrevClose** field.

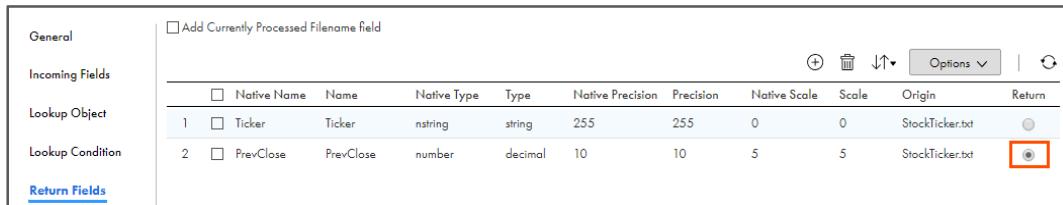


43. From the Native Type drop-down, select **number**.

44. Set Native Precision to **10** and Native Scale to **5**.



45. Select Return.

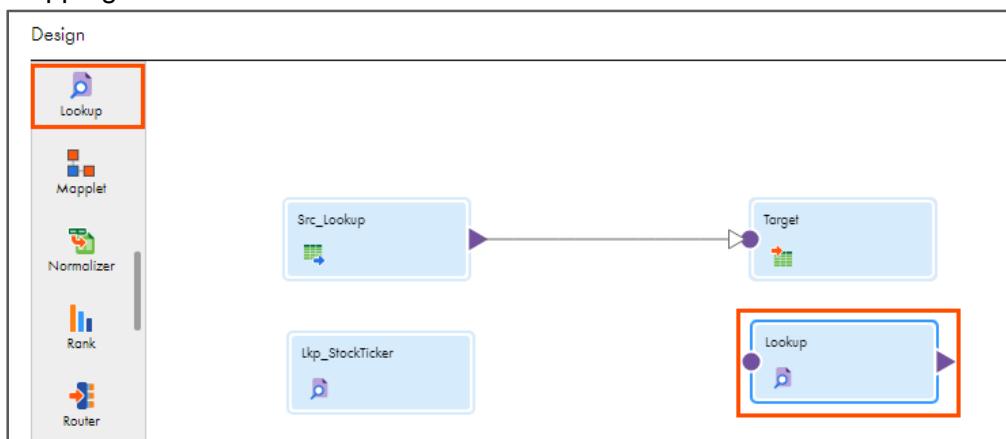


Native Name	Name	Native Type	Type	Native Precision	Precision	Native Scale	Scale	Origin	Return
Ticker	Ticker	nstring	string	255	255	0	0	StockTicker.txt	<input type="radio"/>
PrevClose	PrevClose	number	decimal	10	10	5	5	StockTicker.txt	<input checked="" type="radio"/>

Note: The lookup will check if the **PrevClose** value of the **Ticker**, which is equal to **I_Ticker**.

Add second Lookup Transformation:

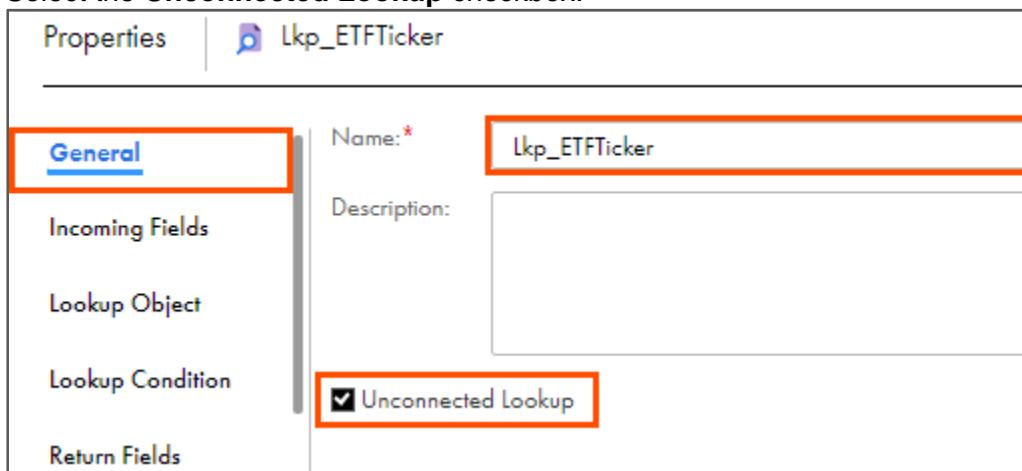
- 46.** From the list of available transformations, drag and drop **Lookup** transformation on the mapping canvas.



- 47.** Select the **Lookup** transformation on the mapping canvas.

- 48.** In the **General** section of the Lookup properties, enter the Name as **Lkp_ETFTicker**.

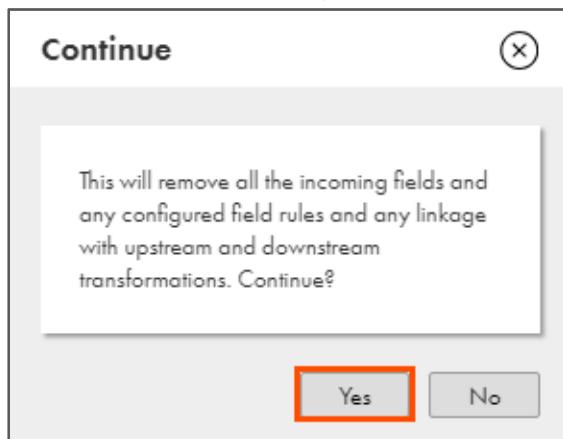
- 49.** Select the **Unconnected Lookup** checkbox.



General	Name: * Lkp_ETFTicker
Incoming Fields	
Lookup Object	
Lookup Condition	<input checked="" type="checkbox"/> Unconnected Lookup
Return Fields	

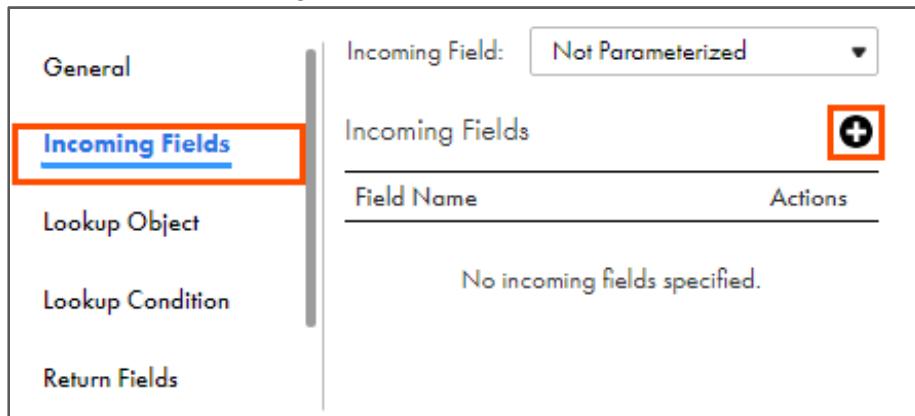
Note: A Continue pop-up window appears.

50. In the **Continue** window, select **Yes**.



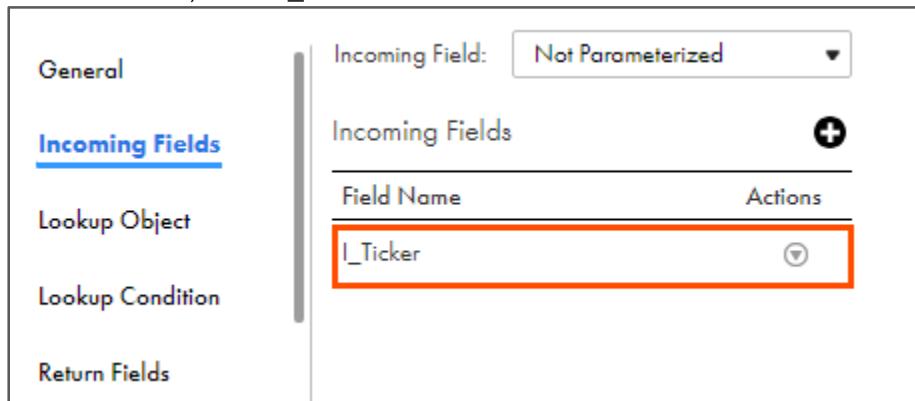
51. From the properties pane, click **Incoming Fields**.

52. To add a new incoming field, click .



General	Incoming Field: Not Parameterized
Incoming Fields	Add
Lookup Object	
Lookup Condition	No incoming fields specified.
Return Fields	

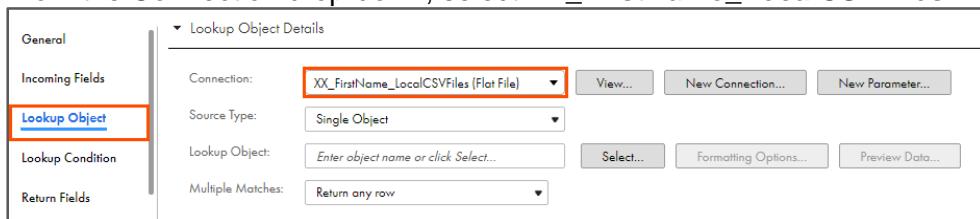
53. In Field Name, enter **I_Ticker**.



General	Incoming Field: Not Parameterized
Incoming Fields	Add
Lookup Object	
Lookup Condition	
Return Fields	

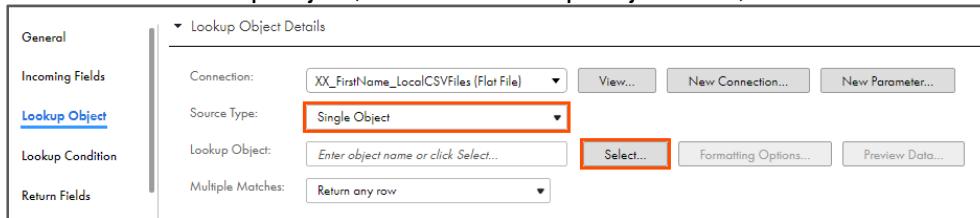
54. From the properties pane, click **Lookup Object**.

55. From the Connection drop-down, select **XX_FirstName_LocalCSVFiles**.



56. Retain Source Type as **Single Object**.

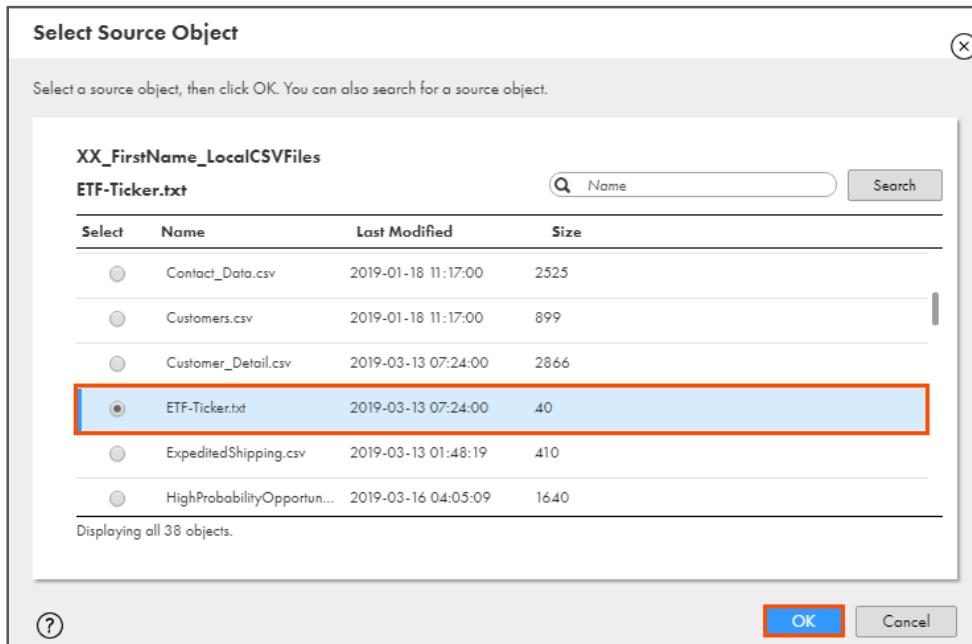
57. To select the lookup object, from the Lookup Object field, click **Select**.



Note: The Select Source Object window appears.

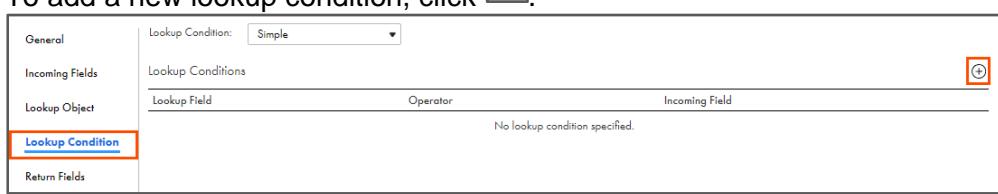
58. From the list, select **ETF-Ticker.txt**.

59. Click **OK**.



60. From the properties pane, click **Lookup Condition**.

61. To add a new lookup condition, click .



62. Enter the lookup condition, as shown in the table below:

Lookup Field	Operator	Incoming Field
Ticker	=	I_Ticker

Below the table is a screenshot of the Informatica transformation editor showing the 'Lookup Condition' pane. The 'Lookup Condition' dropdown is set to 'Simple'. Under 'Lookup Conditions', there is one entry: 'Ticker' (Native Name) = (Equals) I_Ticker (Incoming Field). The 'Return Fields' tab is selected.

63. From the properties pane, click **Return Fields**.

64. From the Options drop-down, select **Edit Metadata**.

General	Add Currently Processed Filename field									Options
Incoming Fields	Native Name	Name	Native Type	Type	Native Precision	Precision	Native Scale	Scale	Origin	Ref
Lookup Object										
Lookup Condition										
Return Fields										
Advanced										

A context menu is open over the second row of the table, with 'Edit Metadata' highlighted.

65. Select **PrevClose** field.

General	Add Currently Processed Filename field									Options
Incoming Fields	Native Name	Name	Native Type	Type	Native Precision	Precision	Native Scale	Scale	Origin	Ref
Lookup Object										
Lookup Condition										
Return Fields										
Advanced										

The 'Return Fields' pane shows two rows. The second row has 'PrevClose' selected in the 'Native Name' column. A context menu is open over the second row, with 'Edit Metadata' highlighted.

66. From the Native Type drop-down, select **number**.

67. Set Native Precision to **10** and Native Scale to **5**.

General	Add Currently Processed Filename field									Options
Incoming Fields	Native Name	Name	Native Type	Type	Native Precision	Precision	Native Scale	Scale	Origin	Ref
Lookup Object										
Lookup Condition										
Return Fields										
Advanced										

The 'Return Fields' pane shows two rows. The second row has 'PrevClose' selected in the 'Native Name' column, and its 'Native Type' dropdown is set to 'number'. The 'Native Precision' input field is set to '10' and the 'Native Scale' input field is set to '5'.

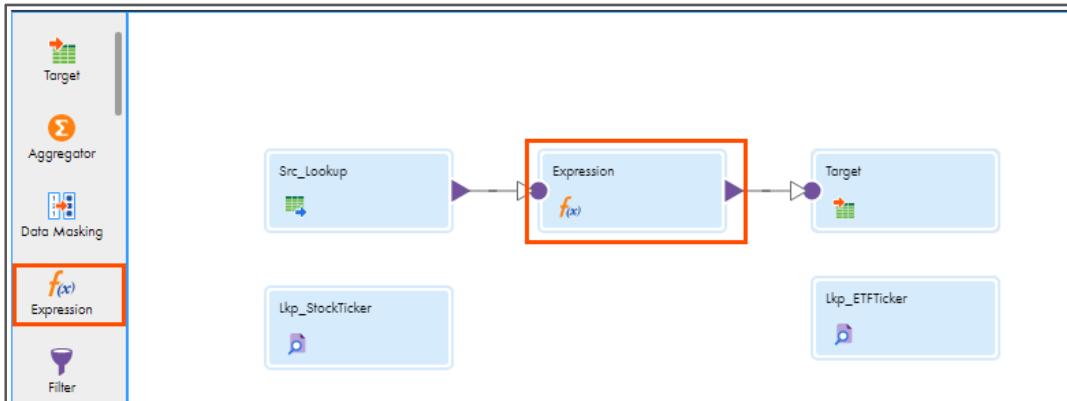
68. Select **Return**.

General	Add Currently Processed Filename field									Options
Incoming Fields	Native Name	Name	Native Type	Type	Native Precision	Precision	Native Scale	Scale	Origin	Return
Lookup Object										
Lookup Condition										
Return Fields										
Advanced										

The 'Return Fields' pane shows two rows. The second row has 'PrevClose' selected in the 'Native Name' column, and its 'Native Type' dropdown is set to 'number'. The 'Native Precision' input field is set to '10' and the 'Native Scale' input field is set to '5'. The 'Return' checkbox is checked.

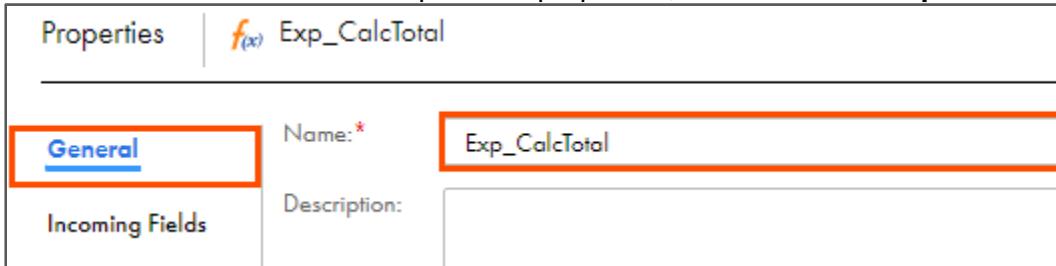
Add Expression Transformation:

69. From the list of available transformations, drag and drop the **Expression** transformation on the link between **Src_Lookup** and **Target**.



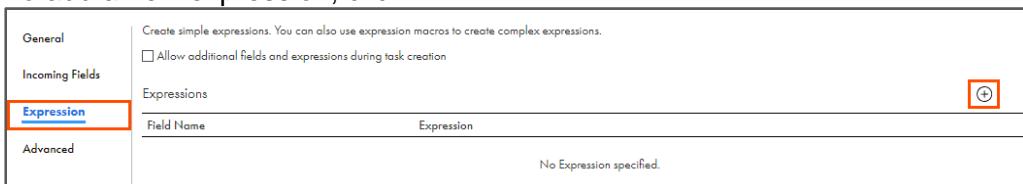
70. Select **Expression** transformation from the mapping canvas.

71. In the **General** section of the Expression properties, enter Name as **Exp_CalcTotal**.



72. From the properties pane, click **Expression**.

73. To add a new expression, click .

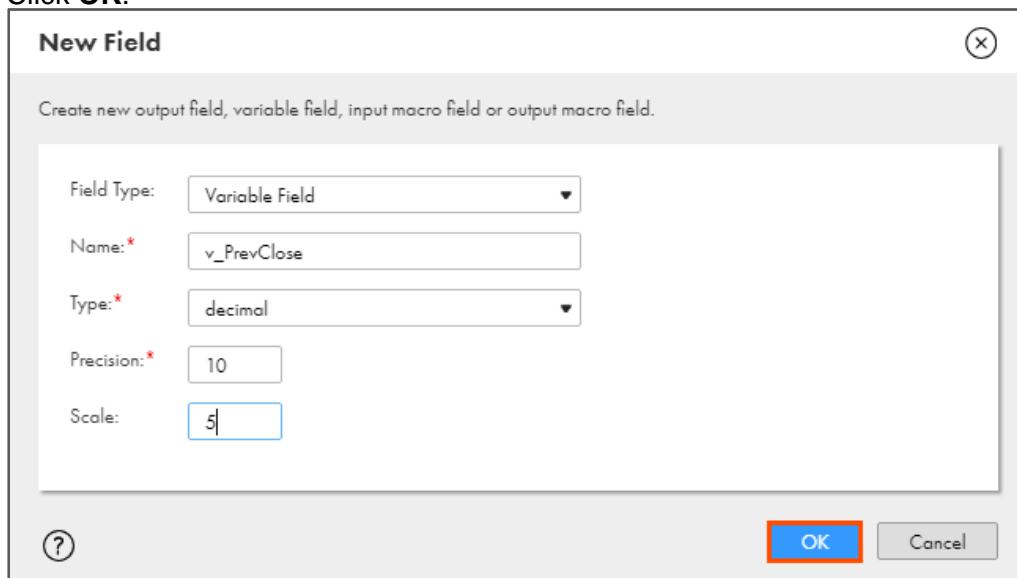


Note: The New Field window appears.

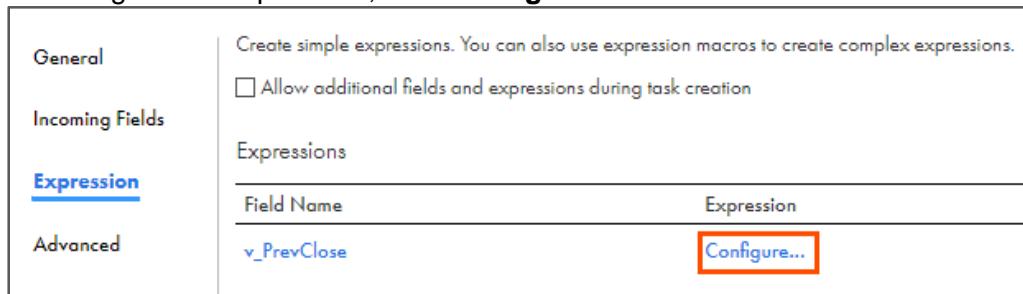
74. Enter the details as shown in table below:

Field Type	Name	Type	Precision	Scale
Variable Field	v_PrevClose	decimal	10	5

75. Click **OK**.



76. To configure the expression, click **Configure**.



Field Name	Expression
v_PrevClose	Configure...

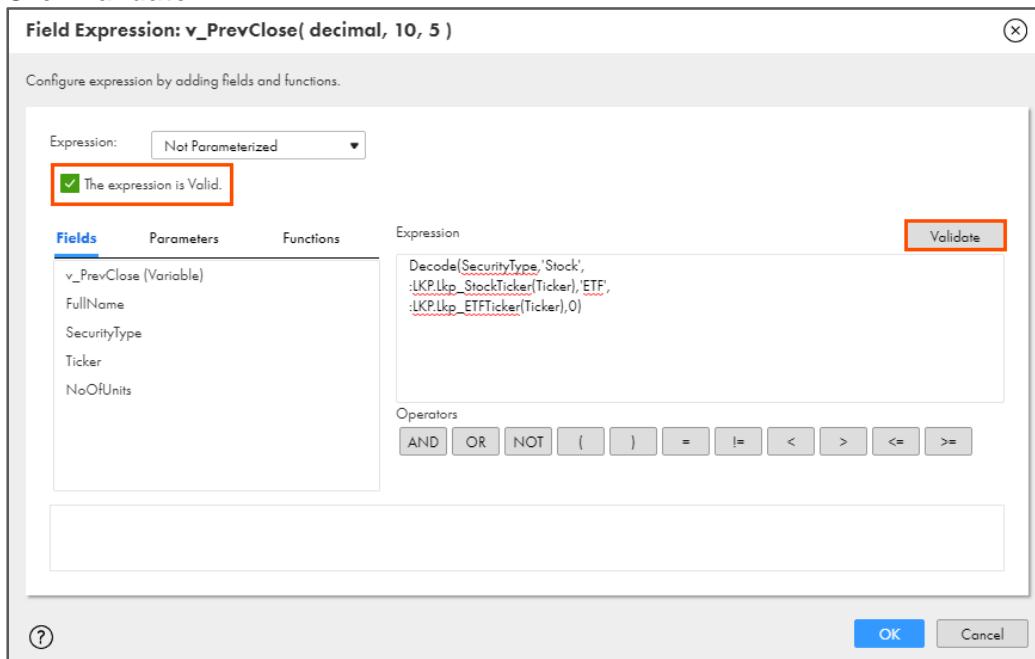
Note: The Field Expression window appears.

77. In the Expression field, copy and paste the following expression:

```
Decode(SecurityType,'Stock',
:LKP.Lkp_StockTicker(Ticker),'ETF',
:LKP.Lkp_ETFTicker(Ticker),0)
OR
```

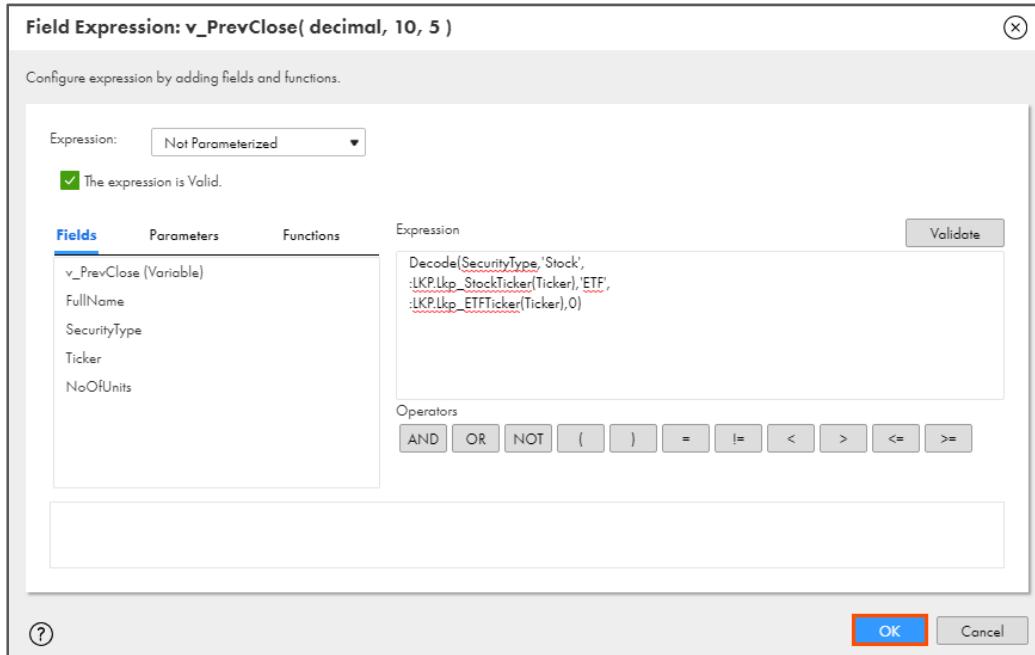
Navigate to the **C:\Students\Commands** directory on your local machine and open the file named **11_LabGuide_UsingUnconnectedLookupTransformations_5-2**. Copy the command mentioned under **Step 77** and paste it in the Expression field.

78. Click Validate.



Note: The expression is Valid message appears.

79. Click OK.



80. Add another expression.



The screenshot shows the 'Expression' tab selected in a configuration window. A new expression row has been added:

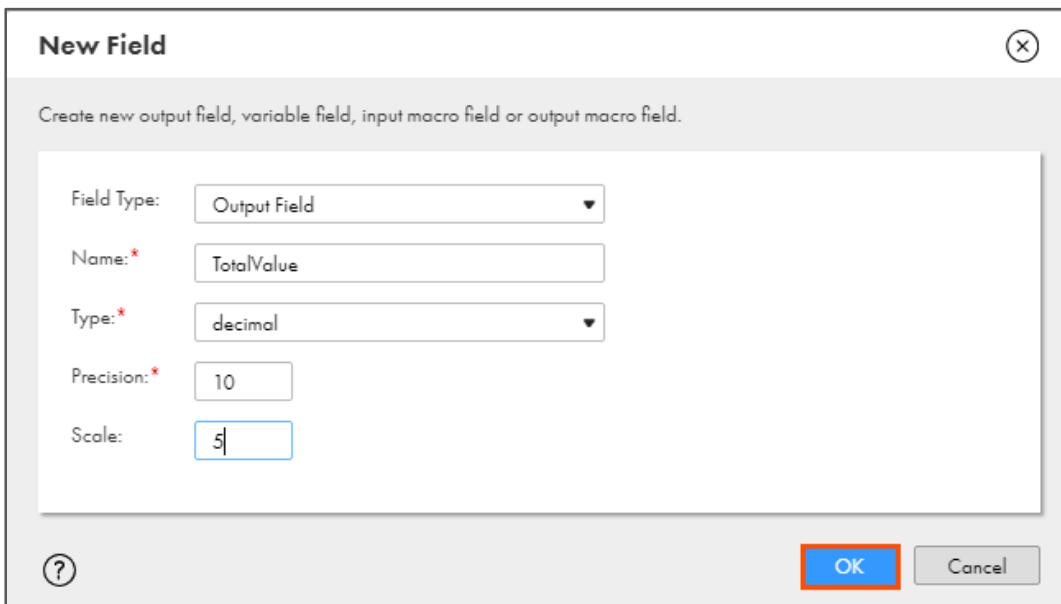
Field Name	Expression
v_PrevClose	Decode(SecurityType,'Stock', :LKP.Lkp_StockTicker(Ticker), 'ETF', :LKP.Lkp_ETFTicker(Ticker), 0)

Note: The New Field window appears.

81. Enter the details as shown in table below:

Field Type	Name	Type	Precision	Scale
Output Field	TotalValue	decimal	10	5

82. Click **OK**.

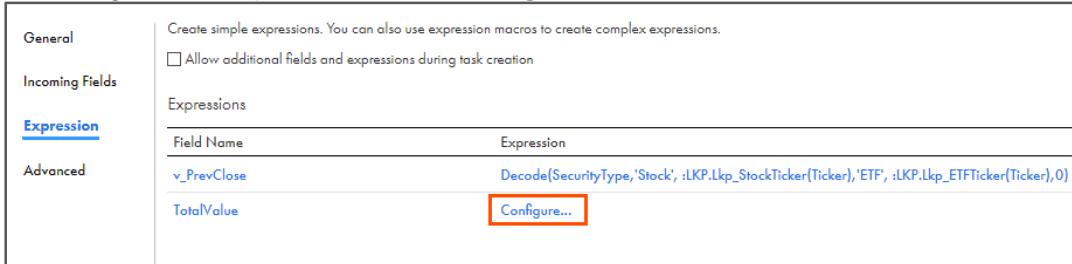


The 'New Field' dialog box is open, showing the following configuration:

Field Type:	Output Field
Name:	TotalValue
Type:	decimal
Precision:	10
Scale:	5

Buttons at the bottom: **OK** (highlighted with a red box) and **Cancel**.

83. To configure the expression, click **Configure**.



The screenshot shows the 'Expression' tab selected in a configuration window. The 'TotalValue' row has its 'Configure...' button highlighted with a red box:

Field Name	Expression
v_PrevClose	Decode(SecurityType,'Stock', :LKP.Lkp_StockTicker(Ticker), 'ETF', :LKP.Lkp_ETFTicker(Ticker), 0)
TotalValue	Configure...

Note: The Field Expression window appears.

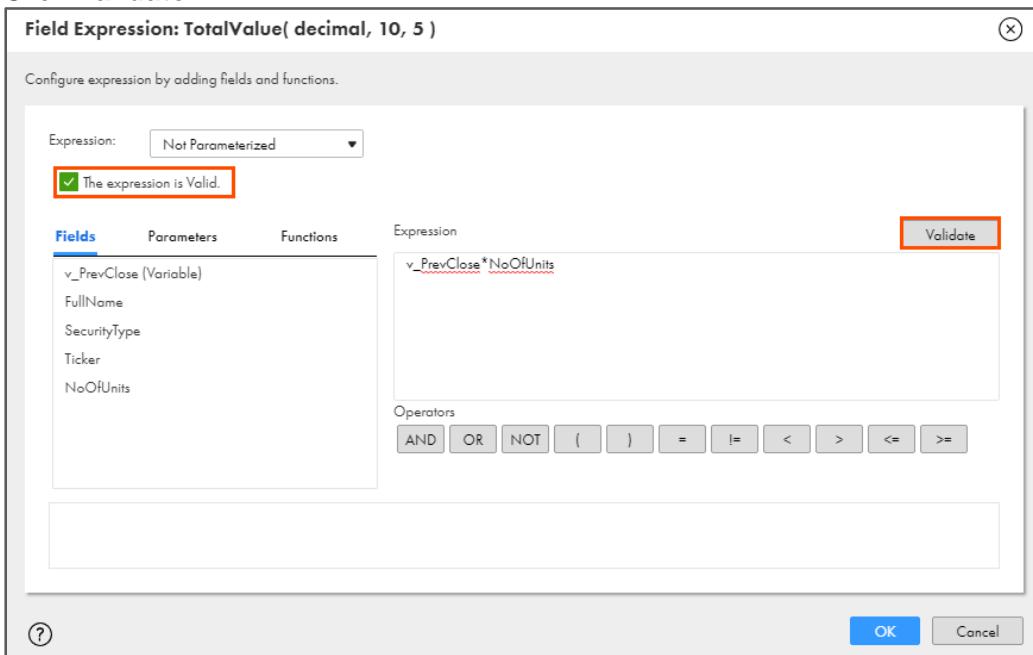
84. In the Expression field, enter the following expression:

v_PrevClose*NoOfUnits

OR

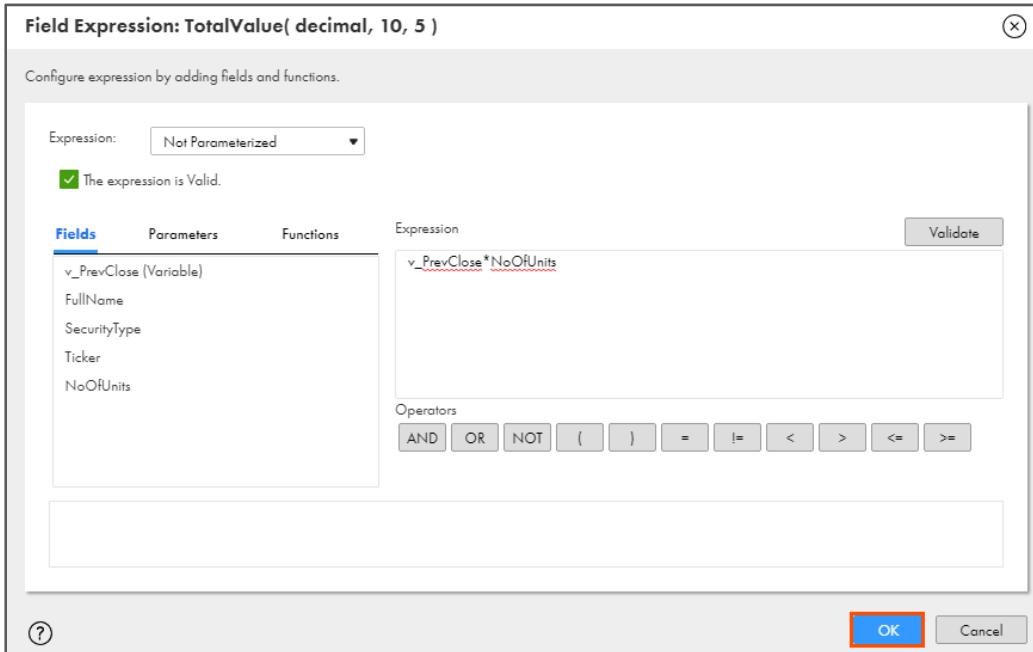
Navigate to the **C:\Students\Commands** directory on your local machine and open the file named **11_LabGuide_UsingUnconnectedLookupTransformations_5-2**. Copy the command mentioned under **Step 84** and paste it in the Expression field.

85. Click Validate.



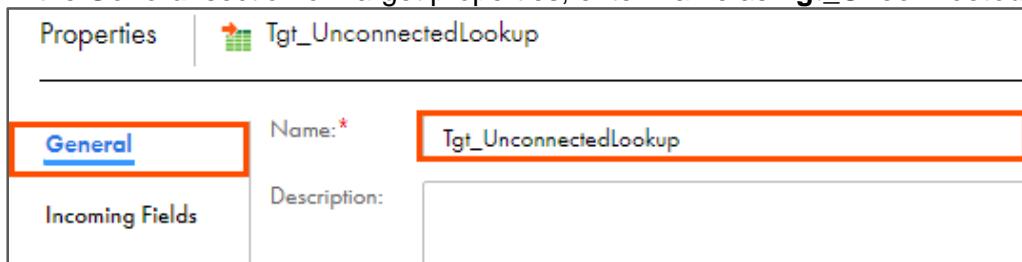
Note: The expression is Valid message appears.

86. Click OK.



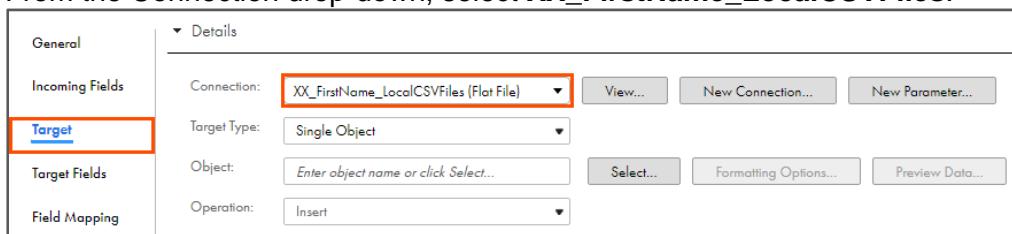
87. To configure the target, from the mapping canvas, click the **Target transformation.**

88. In the **General** section of Target properties, enter Name as **Tgt_UnconnectedLookup**.



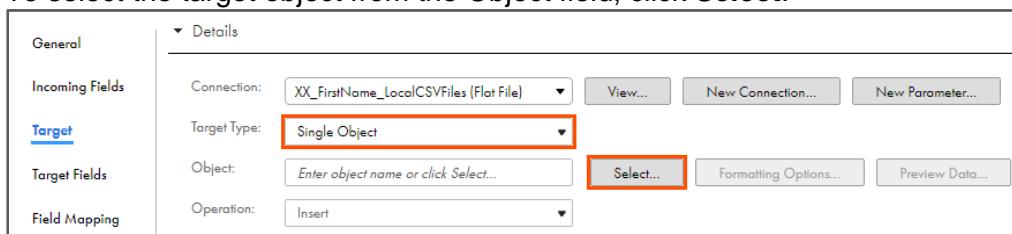
89. From the properties pane, click **Target**.

90. From the Connection drop-down, select **XX_FirstName_LocalCSVFiles**.



91. Retain Target Type as **Single Object**.

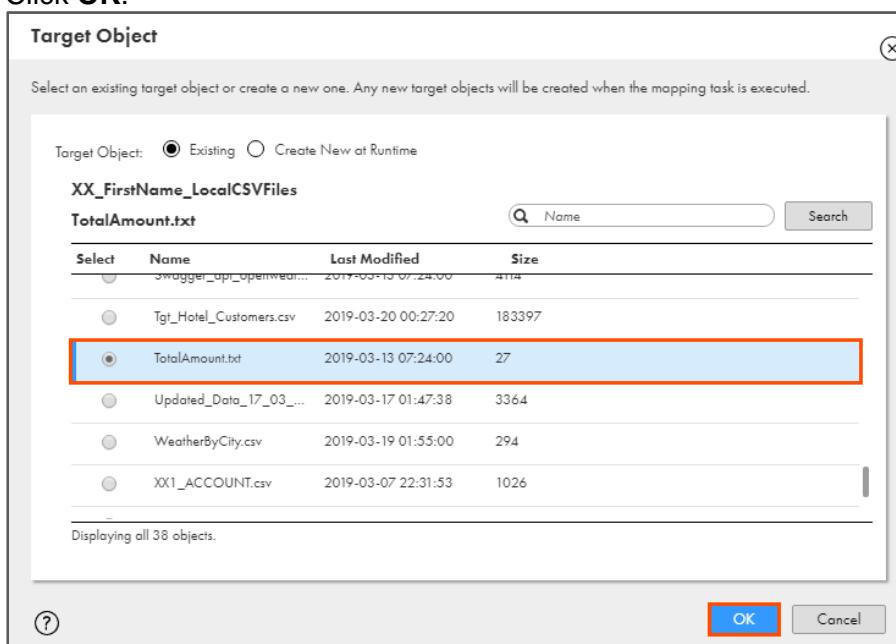
92. To select the target object from the Object field, click **Select**.



Note: The Target Object window appears.

93. From the list, select **TotalAmount.txt**.

94. Click **OK**.



95. From the properties pane, click **Field Mapping**.

96. Match the fields, as shown in the table below:

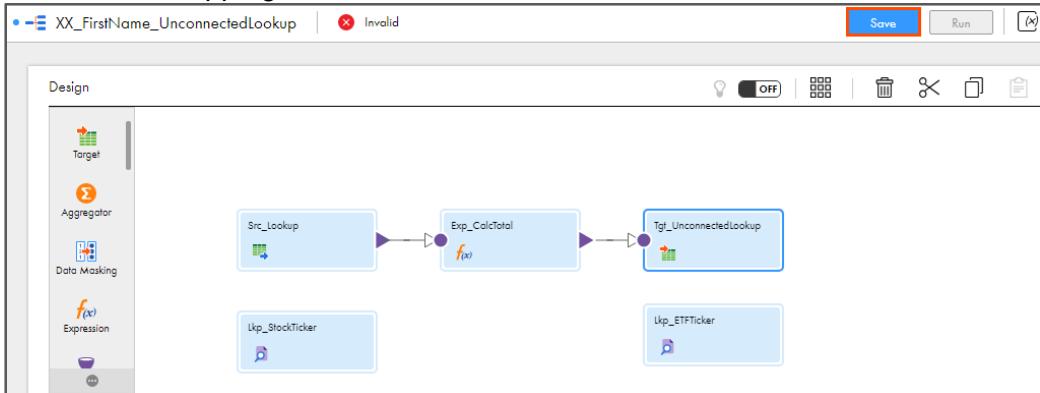
Incoming Field	Target Field
TotalValue	AccountValue
FullName	FullName

General
Field map options: Manual

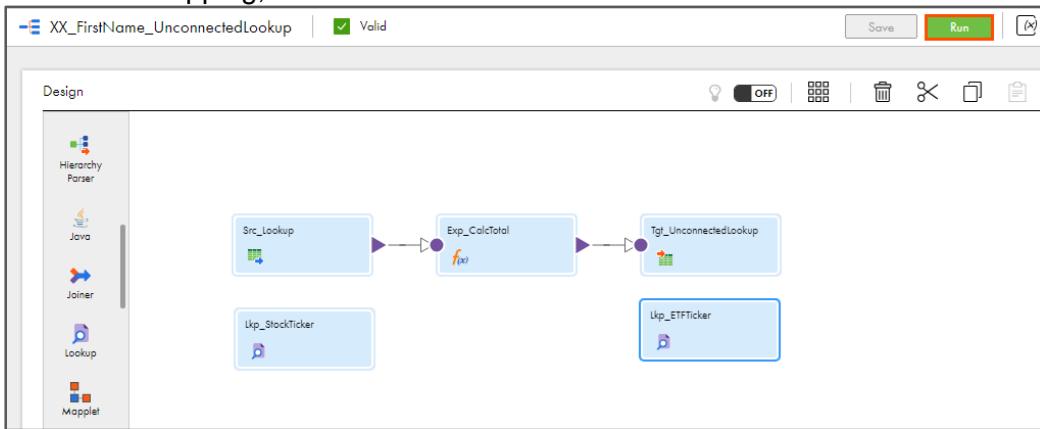
Incoming Fields
Find
Target Fields
Find

Field Name	Mapped Field
TotalValue	FullName
FullName	FullName
SecurityType	AccountValue
Ticker	TotalValue
NoOfUnits	

97. To save the mapping, click **Save**.



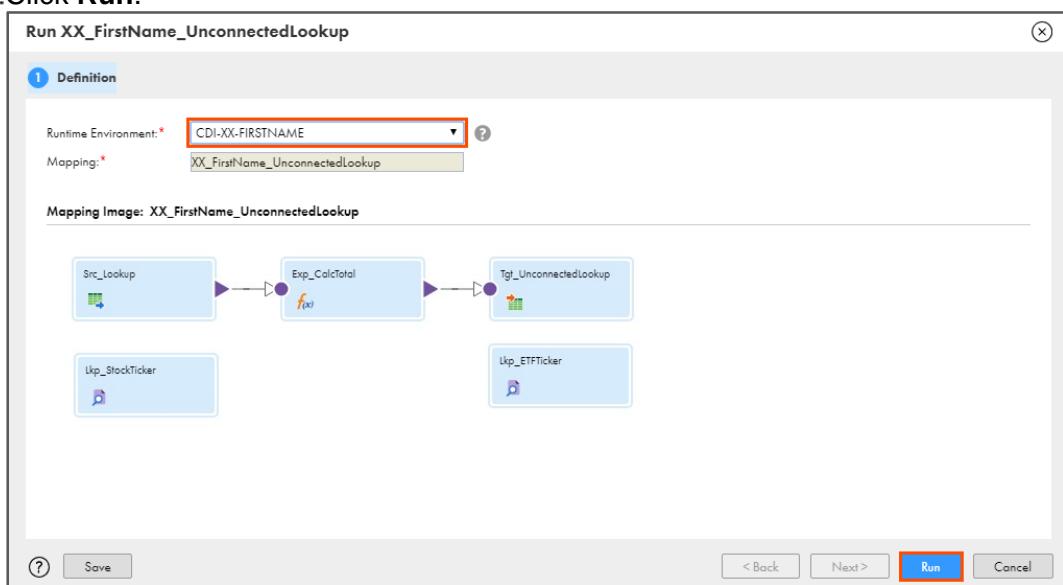
98. To run the mapping, click **Run**.



Note: The Run mapping window appears.

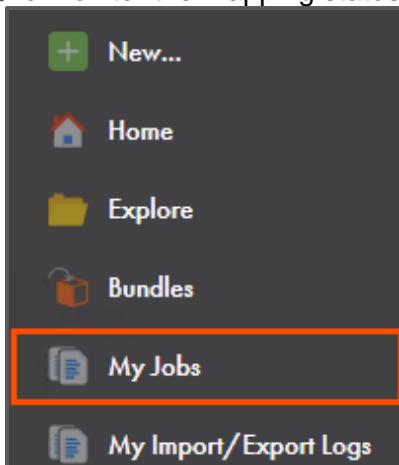
99. From the Runtime Environment drop-down, select your secure agent group.

100.Click Run.



Monitor Status:

101.To monitor the mapping status, from the navigation pane, click **My Jobs**.



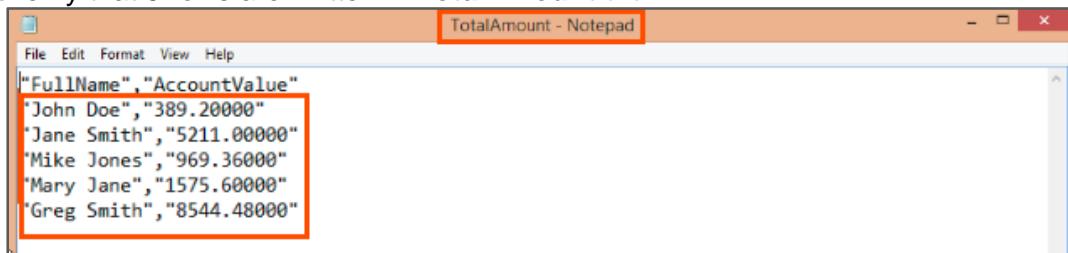
102.When the task completes, the status changes to **Success**.

Jobs (1 of 27) <input checked="" type="checkbox"/> Up to date		Updated 2:29:54 AM PDT    Find				
Asset Name: XX_FirstName_Unconn...  Add Field 						
Instance Name	Subtasks	Start Time	End Time	Rows Processed	State	
XX_FirstName_UnconnectedLookup-1		Aug 1, 2019, ...	Aug 1, 2019, ...	5	 Success	

Note: Observe that 5 success rows are processed.

103.On your machine, go to **C:\IICSLabFiles**.

104. Verify that 5 rows are written in **TotalAmount.txt**.



The screenshot shows a Windows Notepad window with the title bar "TotalAmount - Notepad". The menu bar includes File, Edit, Format, View, and Help. The main content area contains the following five rows of data, each enclosed in double quotes:

```
["FullName", "AccountValue"]
"John Doe", "389.20000"
"Jane Smith", "5211.00000"
"Mike Jones", "969.36000"
"Mary Jane", "1575.60000"
"Greg Smith", "8544.48000"
```

This concludes the lab.

Module 5: Advanced Transformations and Mapping Tasks

Lab 5-3: Creating a Mapping Task

Overview:

A Mapping task processes the data as per the flow that you define in a mapping.

Objective:

- Create a Mapping Task

Scenario:

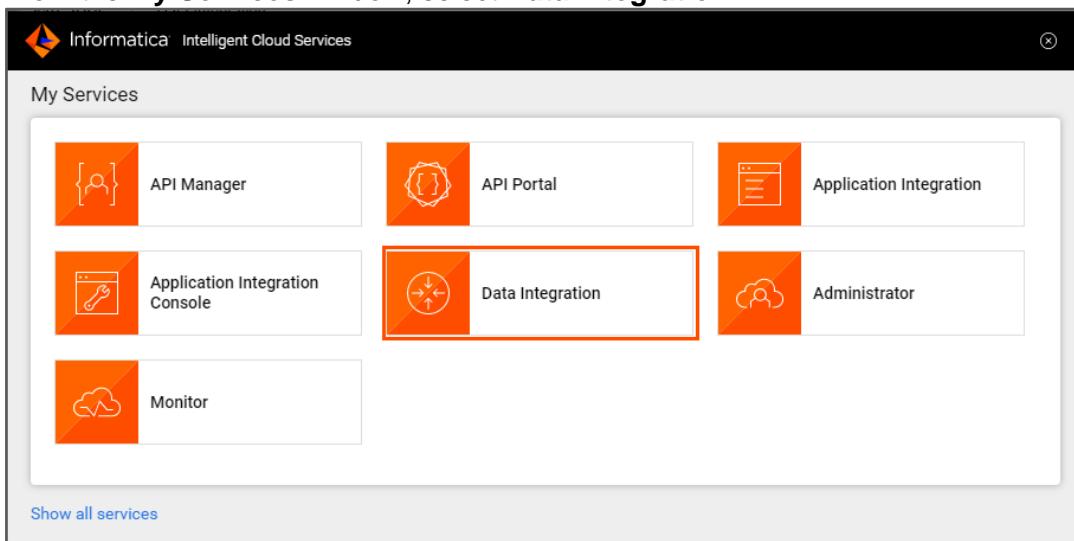
The mapping that John created to list top performers will be used by higher management and HR team of NH Suppliers. So, John creates a mapping task in IICS to run the previously created NormalizerAggregator mapping.

Duration:

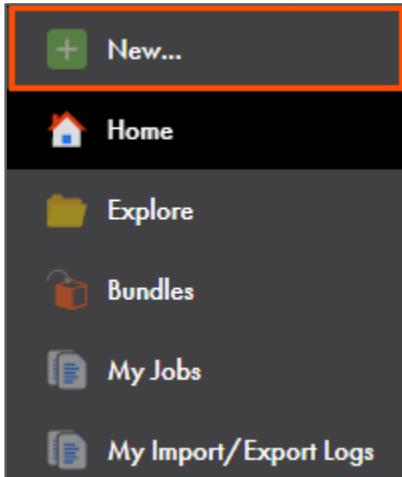
5 minutes

Tasks:**Create a Mapping Task:**

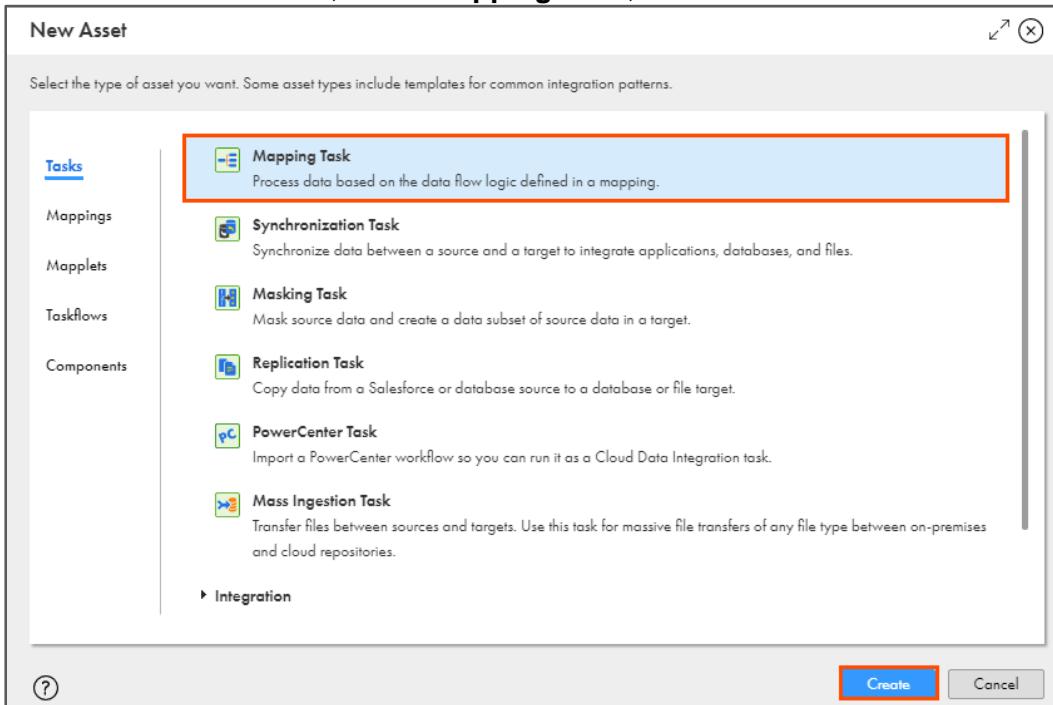
1. Open the IICS Login page from the Bookmarks bar.
Note: Follow this step if you have navigated away from the login page.
2. Enter the login credentials provided by the Instructor and click **Log In**.
3. From the **My Services** window, select **Data Integration**.



4. To create a new asset, from the navigation pane, select **New**.

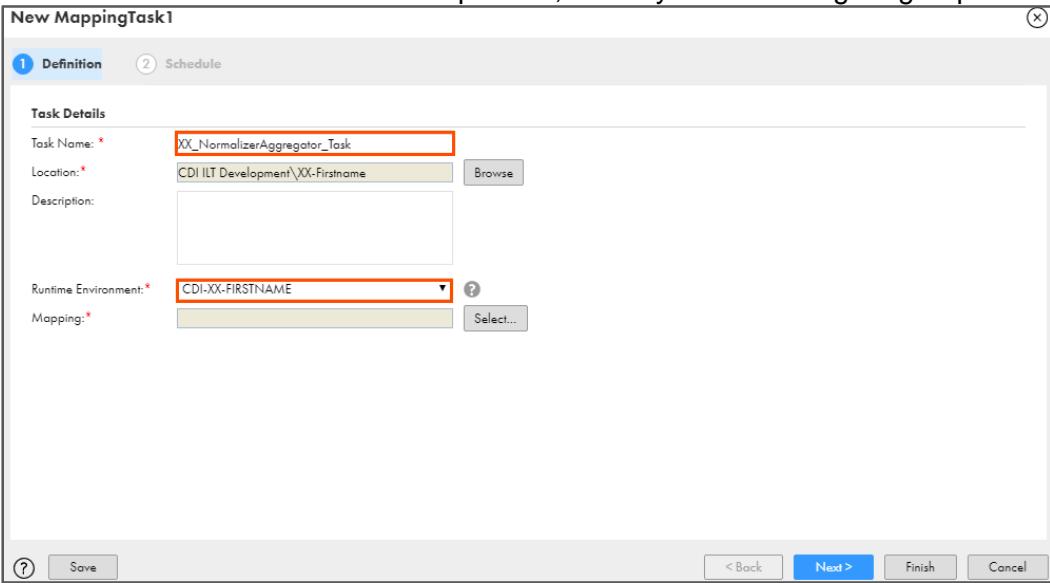


5. In the New Asset window, select **Mapping Task**, and click **Create**.



6. In the Task Name field, enter **XX_NormalizerAggregator_Task**.
Note: Here, XX refers to your initials.

7. From the Runtime Environment drop-down, select your secure agent group.



New MappingTask1

① Definition ② Schedule

Task Details

Task Name: * XX_NormalizerAggregator_Task

Location: * CDI ILT Development\XX-Firstname

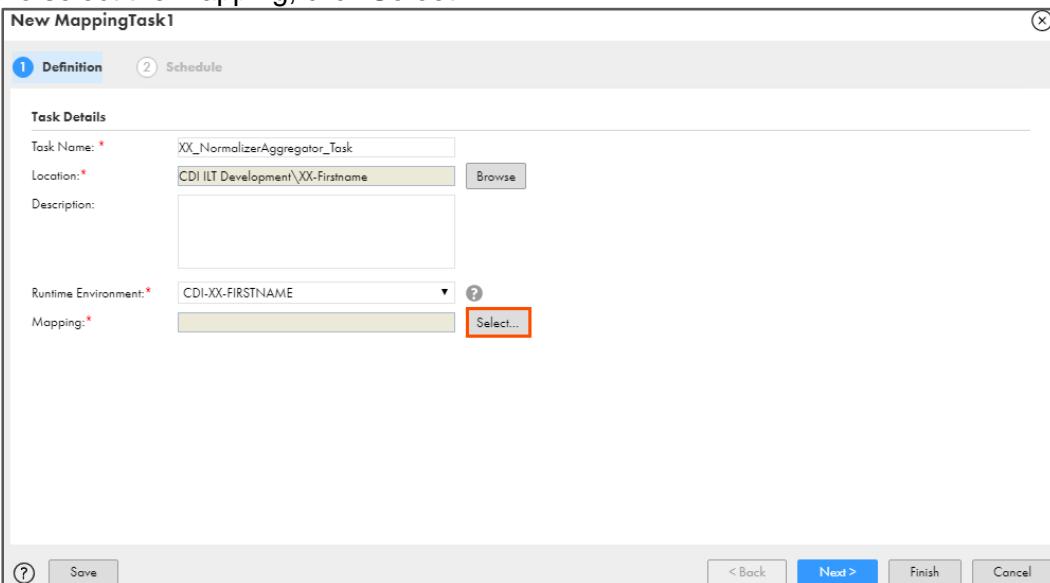
Description:

Runtime Environment: * CDI-XX-FIRSTNAME

Mapping: *

⑦ Save < Back Next > Finish Cancel

8. To select the mapping, click **Select**.



New MappingTask1

① Definition ② Schedule

Task Details

Task Name: * XX_NormalizerAggregator_Task

Location: * CDI ILT Development\XX-Firstname

Description:

Runtime Environment: * CDI-XX-FIRSTNAME

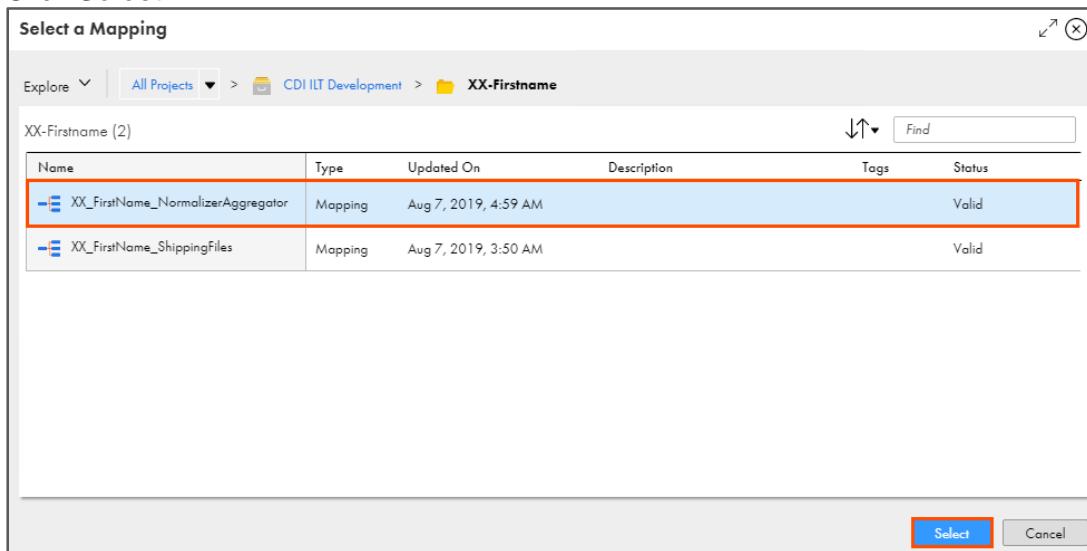
Mapping: *

⑦ Save < Back Next > Finish Cancel

Note: The Select a Mapping window appears.

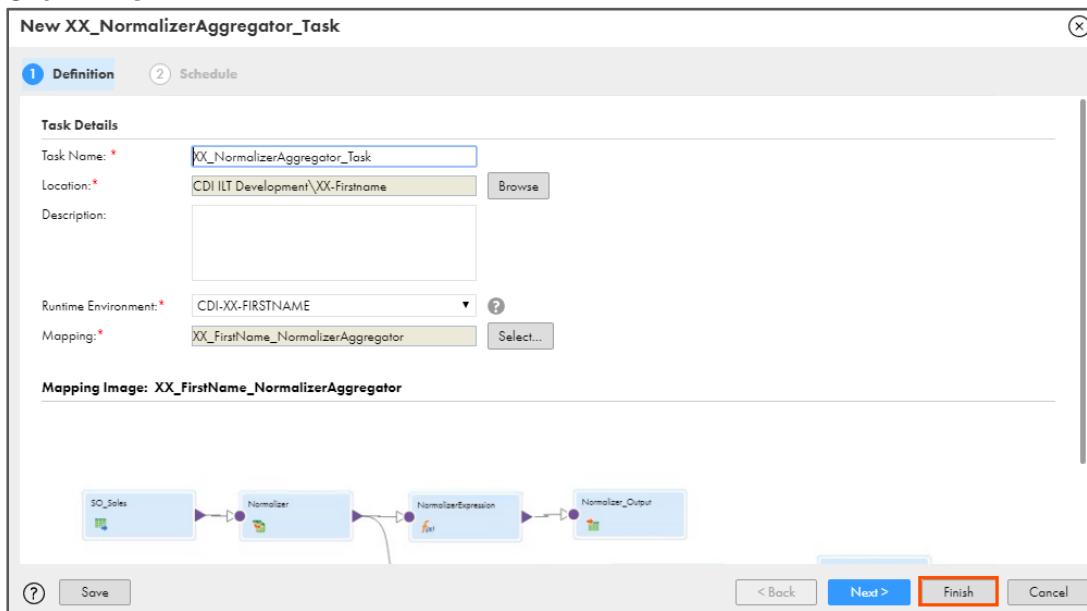
9. From the list, select **XX_FirstName_NormalizerAggregator**.

10. Click **Select**.



Name	Type	Updated On	Description	Tags	Status
- XX_FirstName_NormalizerAggregator	Mapping	Aug 7, 2019, 4:59 AM			Valid
- XX_FirstName_ShippingFiles	Mapping	Aug 7, 2019, 3:50 AM			Valid

11. Click **Finish**.



This concludes the lab.

Module 5: Advanced Transformations and Mapping Tasks

Lab 5-4: Using Maplet Transformation in a Mapping

Overview:

In IICS, Maplet transformation inserts a maplet created in Data Integration, imported from PowerCenter, or generated from an SAP asset into a mapping. A maplet can encapsulate two or more transformations.

In this lab, you will create a Maplet and use the created Maplet in a mapping.

Objective:

- Create a Maplet
- Using Maplet Transformation in a mapping

Duration:

20 minutes

Tasks:

Copy Source File:

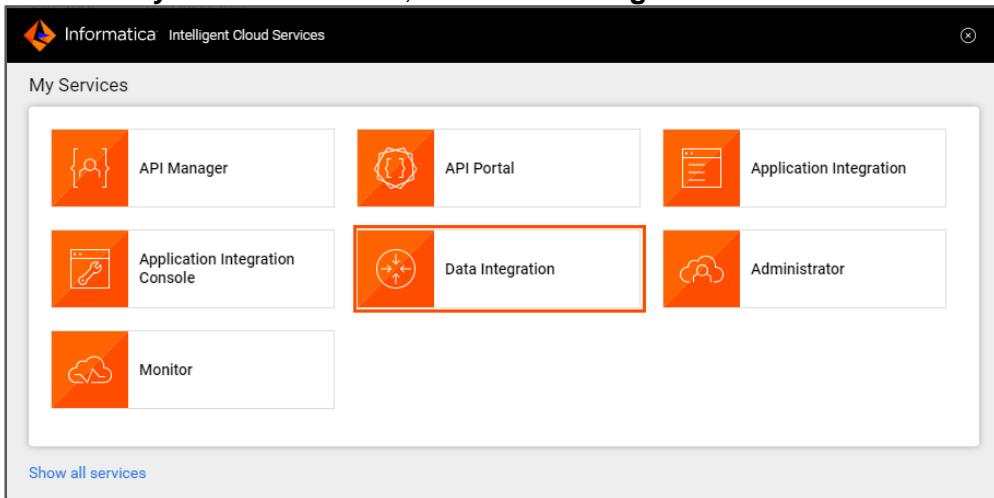
1. Copy the following files from the CDI Lab Prep Files folder available on your desktop and paste it in your flat file directory (C:\IICSLabFiles):

Files
Product_List.csv
OrderCost.csv

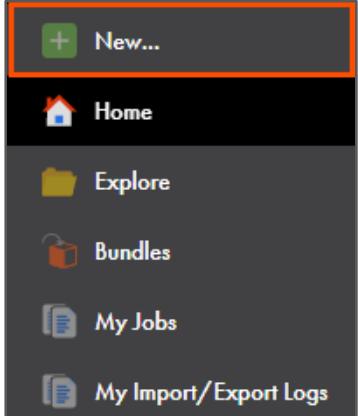
Create Maplet:

2. Open the IICS Login page from the Bookmarks bar.
Note: Follow this step if you have navigated away from the login page.
3. Enter the login credentials provided by the Instructor and click **Log In**.

4. From the **My Services** window, select **Data Integration**.

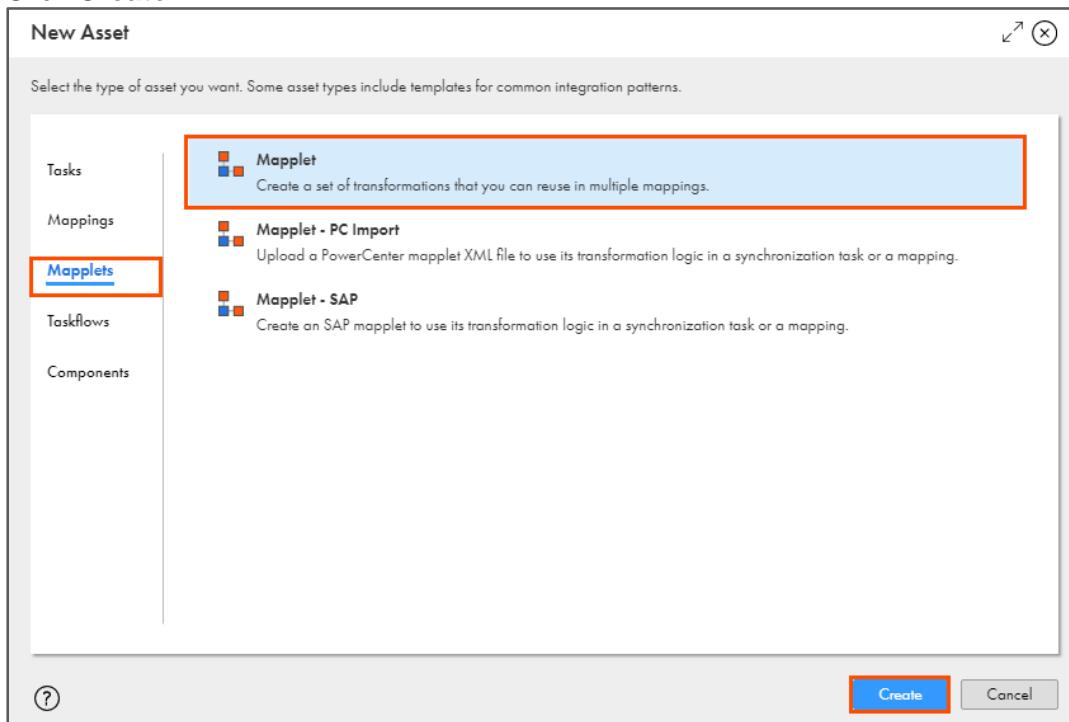


5. From the navigation pane, select **New**.



6. From the New Asset window, click the **Maplets** tab, and select **Maplet**.

7. Click **Create**.

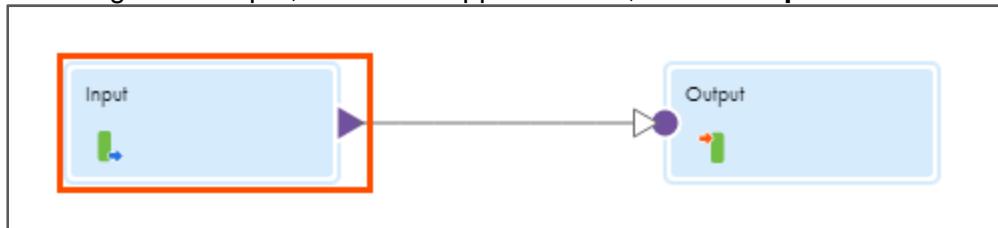


8. In the Name field, enter **XX_FirstName_Maplet**.

Note: XX refers to your initials, and FirstName refers to your First Name.

XX_FirstName_Maplet	
Name:*	XX_FirstName_Maplet
Location:*	CDI ILT Development\XX_Firstname

9. To configure the Input, from the mapplet canvas, click the **Input** transformation.

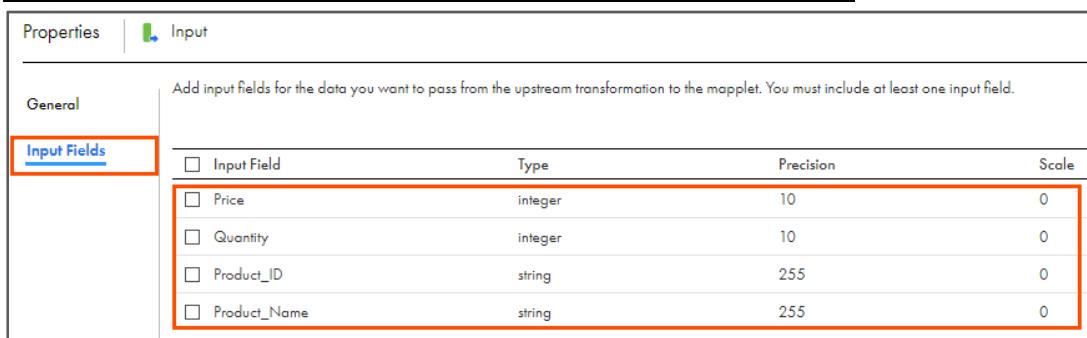


10. In the General section of the Input properties, retain the Name as **Input**.

Properties	
 Input	
General	Name:*
Input Fields	Input
Description:	

11. From the properties pane, click **Input Fields**.
12. To add input fields, click .
13. Define the input fields, as shown in the table below:

Name	Type	Precision	Scale
Price	integer	10	0
Quantity	integer	10	0
Product_ID	string	255	0
Product_Name	string	255	0

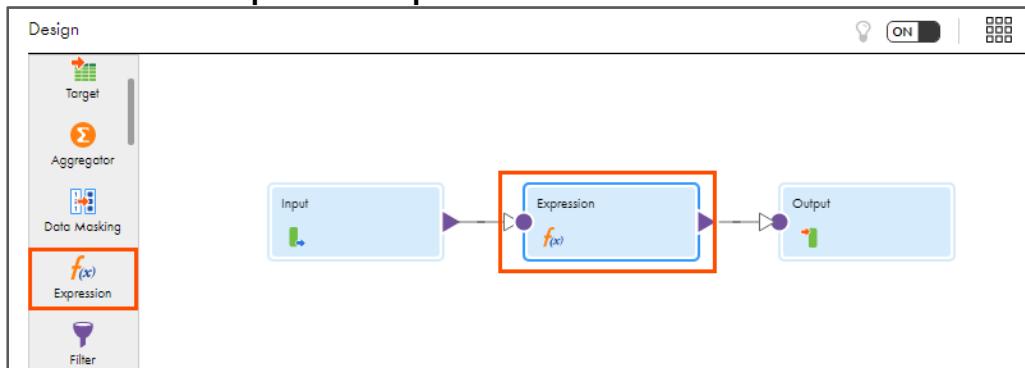


Properties |  Input

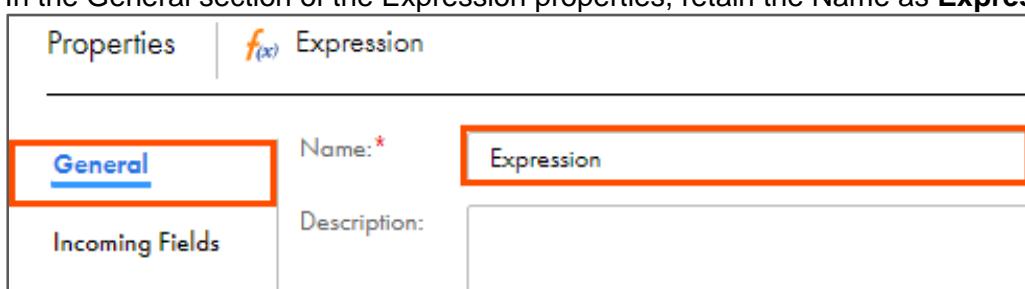
Add input fields for the data you want to pass from the upstream transformation to the mapplet. You must include at least one input field.

Input Field	Type	Precision	Scale
Price	integer	10	0
Quantity	integer	10	0
Product_ID	string	255	0
Product_Name	string	255	0

14. From the list of available transformations, drag, and drop **Expression** transformation on the link between **Input** and **Output**.



15. Select the **Expression** transformation from the mapplet canvas.
16. In the General section of the Expression properties, retain the Name as **Expression**.

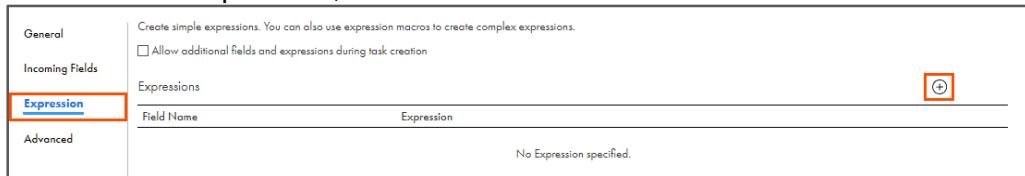


Properties |  Expression

General	Name: * Expression
Incoming Fields	Description:

17. From the properties pane, click **Expression**.

18. To add a new expression, click .



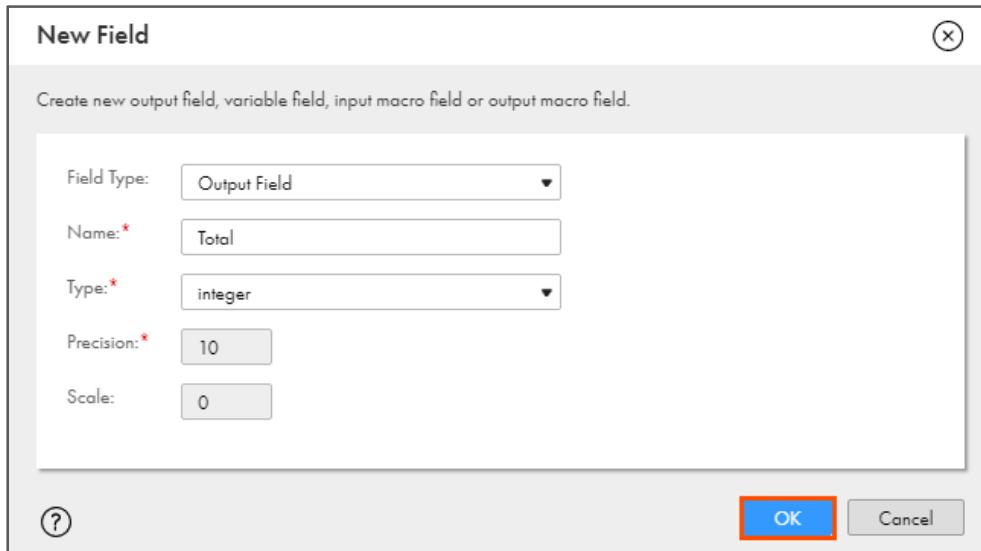
The screenshot shows the 'New Field' dialog box. The 'Expression' tab is selected. In the 'Expressions' section, there is a table with one row. The 'Field Name' column contains 'Total' and the 'Expression' column contains an empty text field. A red box highlights the plus sign icon in the top right corner of the table.

Note: The New Field window appears.

19. Enter the details as shown in table below:

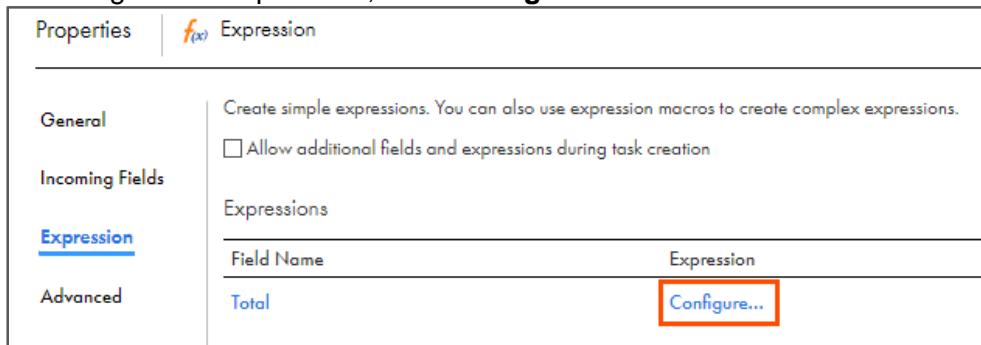
Field Type	Name	Type	Precision	Scale
Output Field	Total	integer	10	0

20. Click **OK**.



The screenshot shows the 'New Field' dialog box. It has fields for 'Name' (Total), 'Type' (integer), 'Precision' (10), and 'Scale' (0). The 'OK' button is highlighted with a red box.

21. To configure the expression, click **Configure**.



The screenshot shows the 'Properties' dialog box. The 'Expression' tab is selected. In the 'Expressions' section, there is a table with one row. The 'Field Name' column contains 'Total' and the 'Expression' column contains a button labeled 'Configure...'. This button is highlighted with a red box.

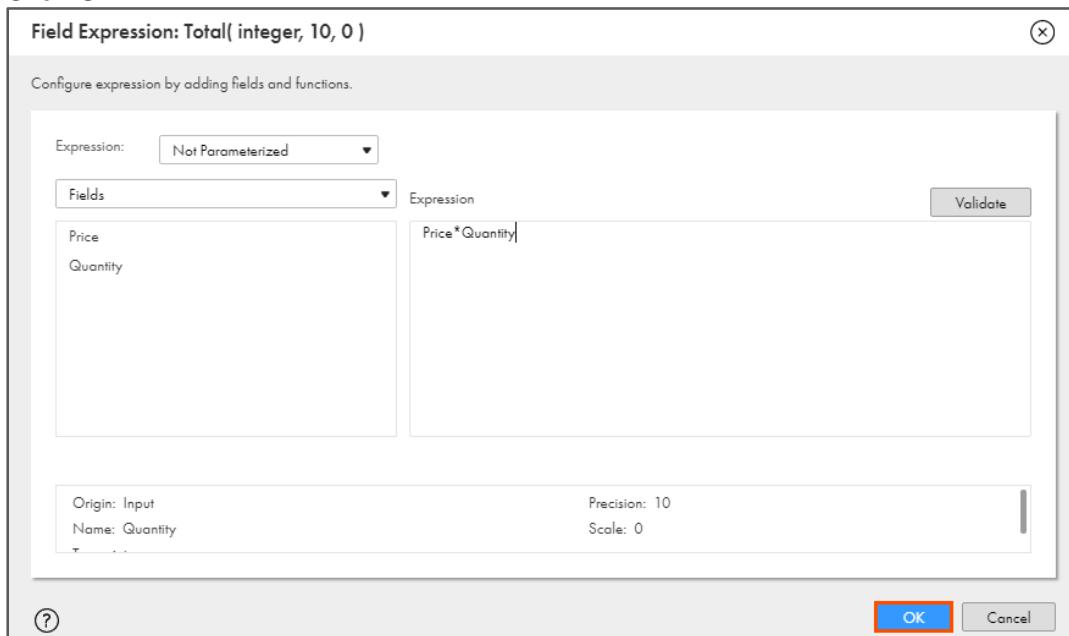
22. In the Expression field, copy and paste the following expression:

Price*Quantity

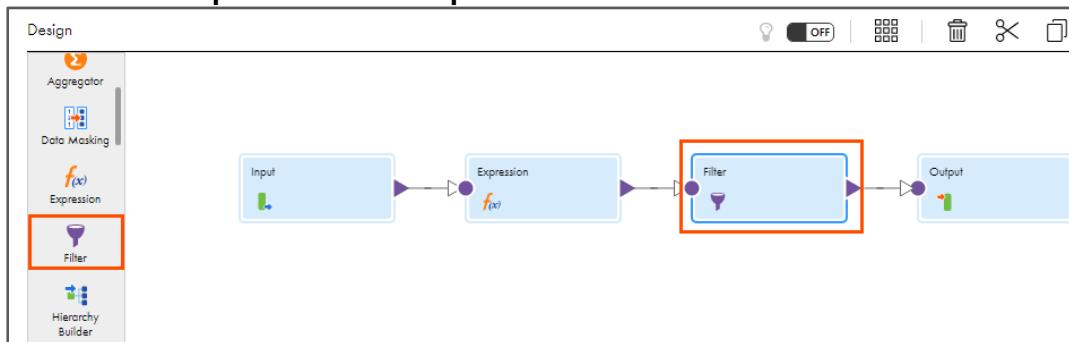
OR

Navigate to the **C:\Students\Commands** directory on your local machine and open the file named **13_LabGuide_UsingMapletTransformations_5-4**. Copy the command mentioned under **Step 21** and paste it in the Expression field.

23. Click **OK**.



24. From the list of available transformations, drag, and drop **Filter** transformation on the link between **Expression** and **Output**.



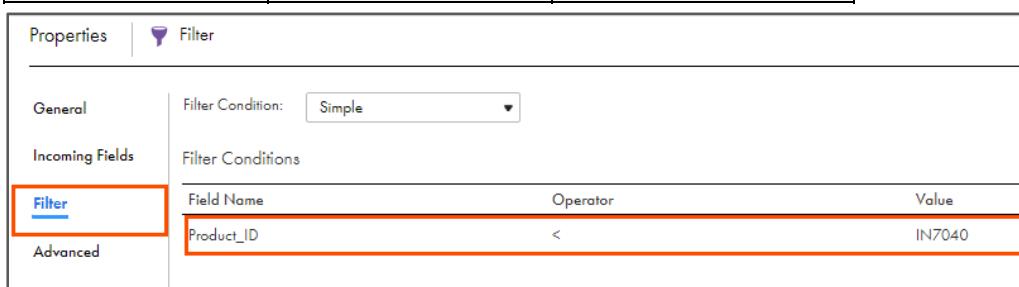
25. Select the **Filter** transformation from the mapplet canvas.

26. From the properties pane, select **Filter**.

27. To add filter condition, click .

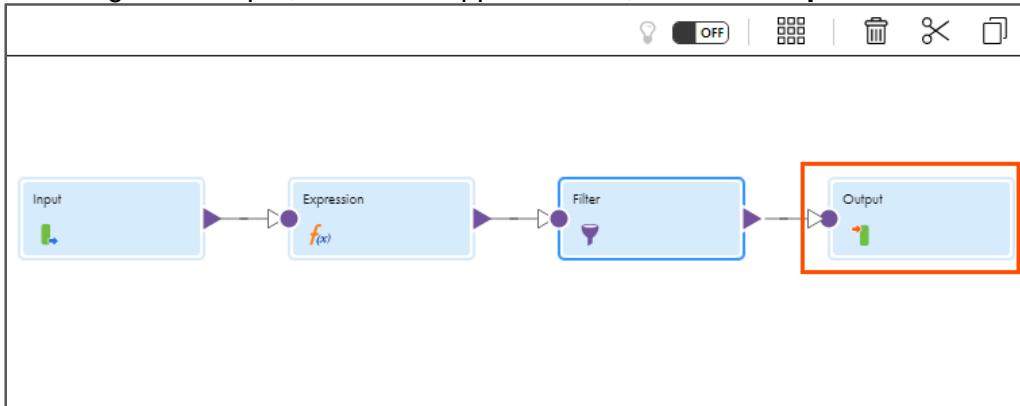
28. Define the filter, as shown in the table below:

Field Name	Operator	Value
Product_ID	< (Less Than)	IN7040



Properties		
 Filter		
General	Filter Condition: Simple	
Incoming Fields	Filter Conditions	
Filter	Field Name	Operator
Advanced	Product_ID	<
		IN7040

29. To configure the Input, from the mapplet canvas, click the **Output** transformation.

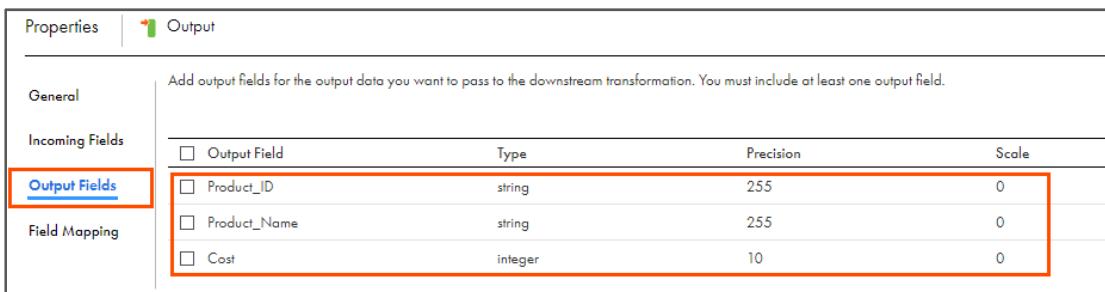


30. From the properties pane, select **Output Fields**.

31. To add output fields, click .

32. Define the output fields, as shown in the table below:

Name	Type	Precision	Scale
Product_ID	string	255	0
Product_Name	string	255	0
Cost	Integer	10	0



Properties  Output

Add output fields for the output data you want to pass to the downstream transformation. You must include at least one output field.

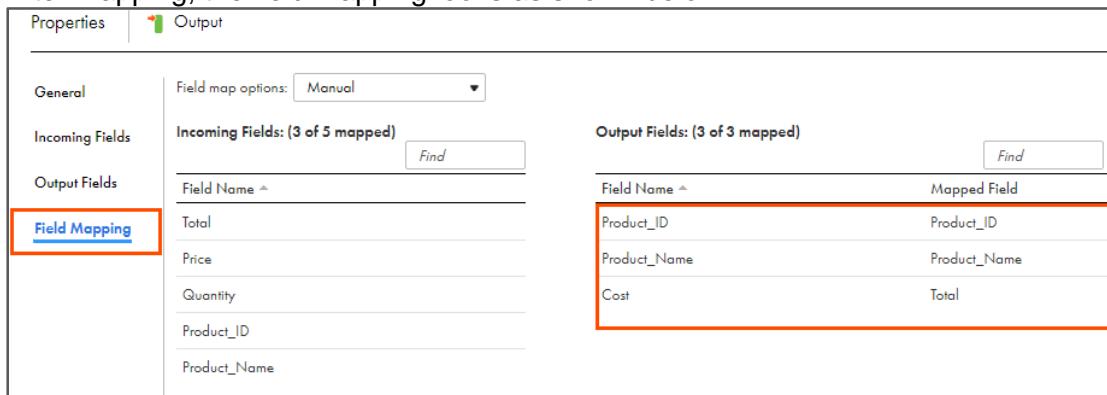
Output Field	Type	Precision	Scale
Product_ID	string	255	0
Product_Name	string	255	0
Cost	integer	10	0

33. From the properties pane, select **Field Mapping**.

34. Match the fields, as shown in the table below:

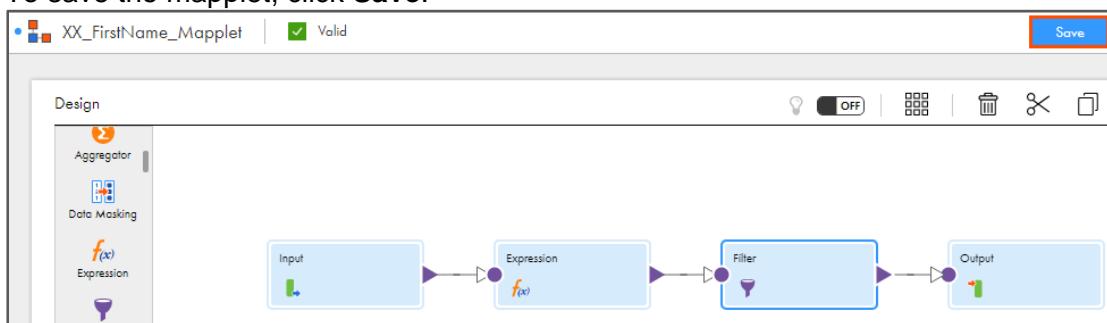
Incoming Field	Target Field
Product_ID	Product_ID
Product_Name	Product_Name
Total	Cost

35. After mapping, the field mapping looks as shown below:



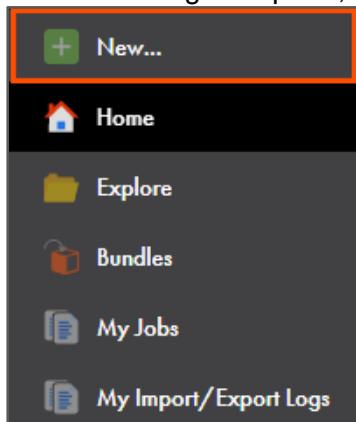
Field Name	Mapped Field
Product_ID	Product_ID
Product_Name	Product_Name
Cost	Total

36. To save the mapplet, click **Save**.



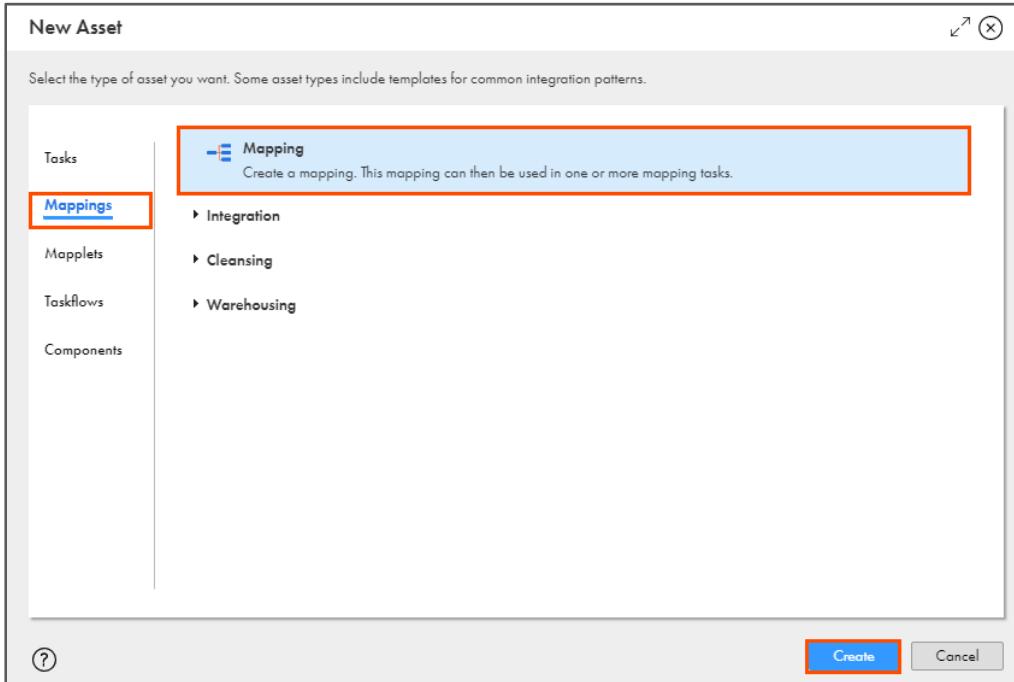
Create Mapping:

37. From the navigation pane, select **New**.



38. From the New Asset window, click the **Mappings** tab, and select **Mapping**.

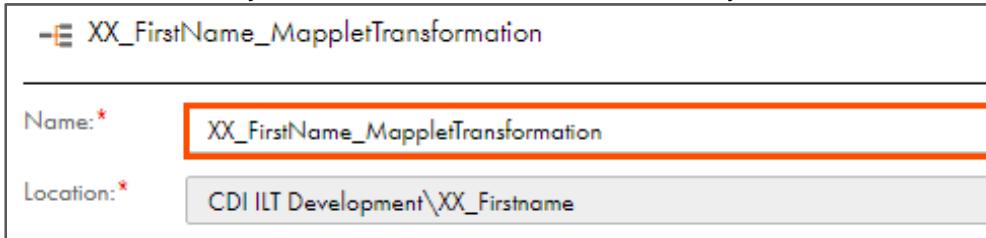
39. Click **Create**.



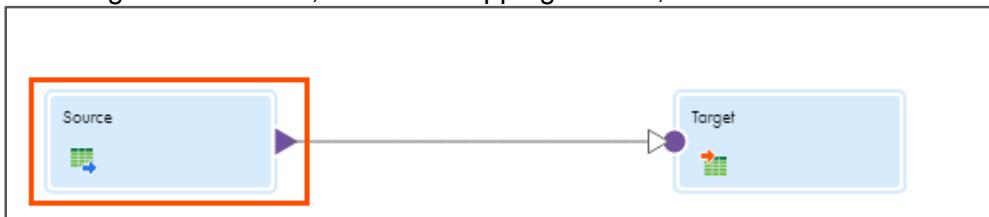
Note: The Mapping page appears.

40. In the Name field, enter **XX_FirstName_MappletTransformation**.

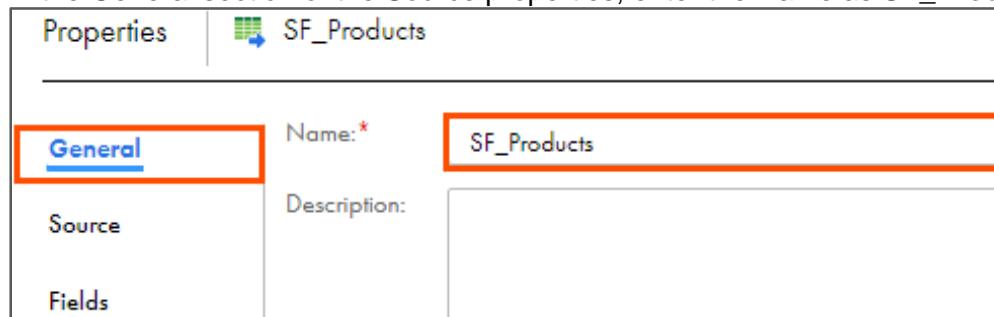
Note: XX refers to your initials, and FirstName refers to your First Name.



41. To configure the source, from the mapping canvas, click the **Source** transformation.



42. In the General section of the Source properties, enter the Name as **SF_Products**.



Properties	
General	Name: * SF_Products
Source	Description:
Fields	

43. From the properties pane, click **Source**.

44. From the Connection drop-down, select **XX_FirstName_SFDCDeveloper**.

45. Retain Source Type as **Single Object**.



General		Details			
Source	Connection:	XX_FirstName_SFDCDeveloper (Salesfor...)	View...	New Connection...	New Parameter...
Fields	Source Type:	Single Object			
Partitions	Object:	Enter object name or click Select...	Select...	Preview Data...	

46. To select the source object from the Object field, click **Select**.



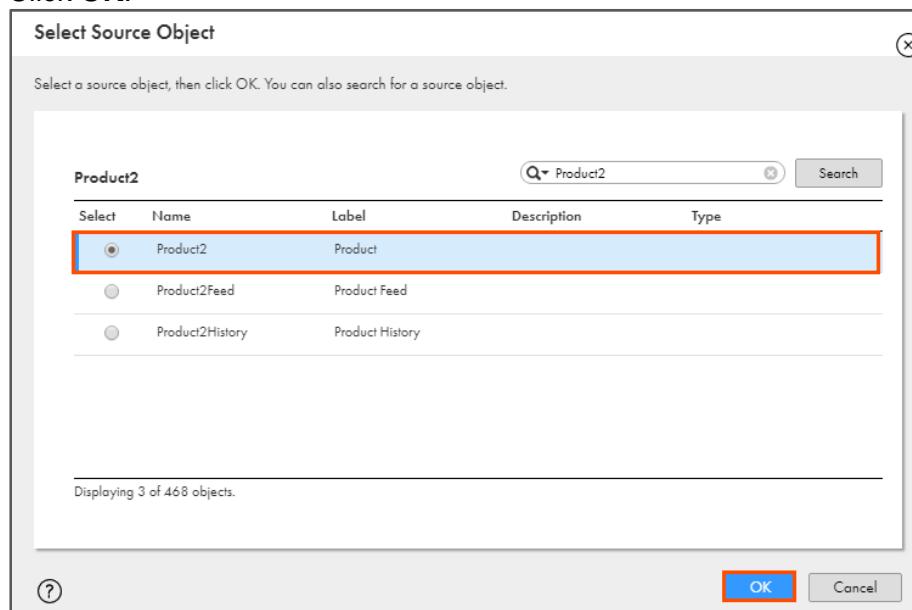
General		Details			
Source	Connection:	XX_FirstName_SFDCDeveloper (Salesfor...)	View...	New Connection...	New Parameter...
Fields	Source Type:	Single Object			
Partitions	Object:	Enter object name or click Select...	Select...	Preview Data...	

Note: The Select Source Object window appears.

47. From the list, select **Product2**.

Note: You can use the search option to locate the object.

48. Click **OK**.

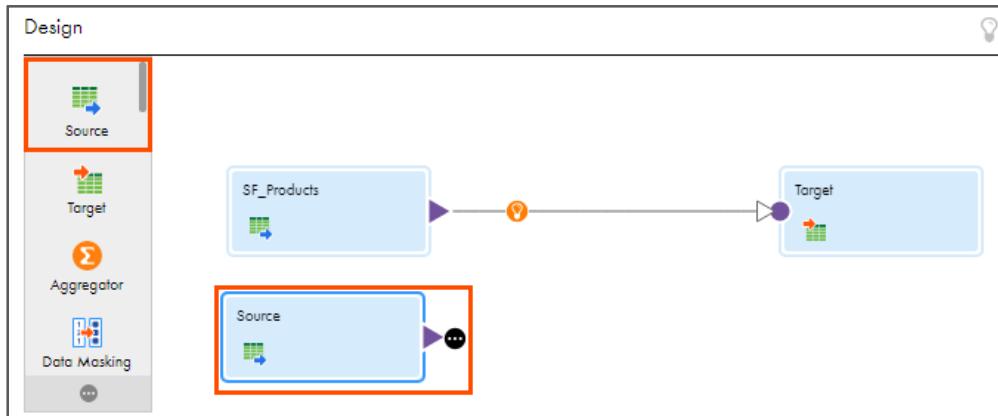


Product2				
Select	Name	Label	Description	Type
<input checked="" type="radio"/>	Product2	Product		
<input type="radio"/>	Product2Feed	Product Feed		
<input type="radio"/>	Product2History	Product History		

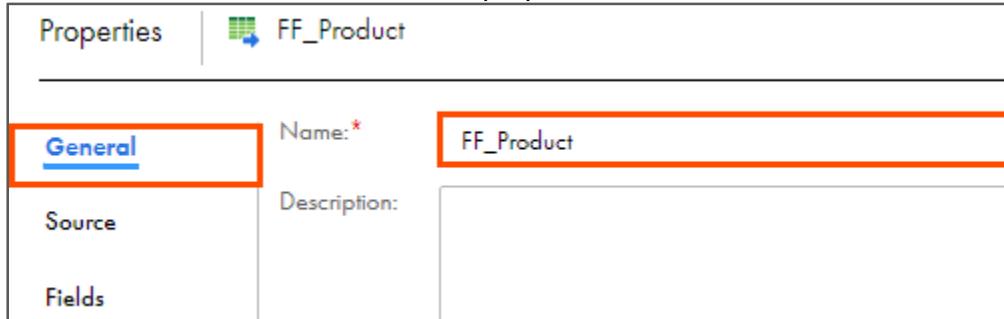
Displaying 3 of 468 objects.

(?) **OK** Cancel

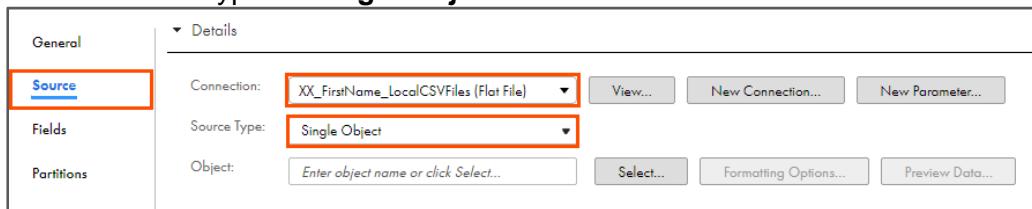
49. From the list of available transformations, drag and drop another **Source** transformation on the mapping canvas.



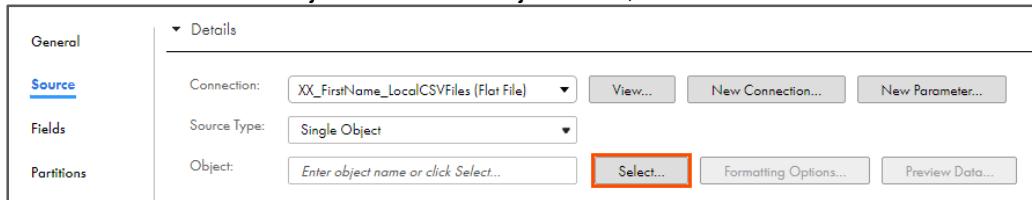
50. Select the newly added transformation from the mapping canvas.
 51. In the General section of the Source properties, enter the Name as **FF_Product**.



52. From the properties pane, click **Source**.
 53. From the Connection drop-down, select **XX_FirstName_LocalCSVFiles**.
 54. Retain Source Type as **Single Object**.



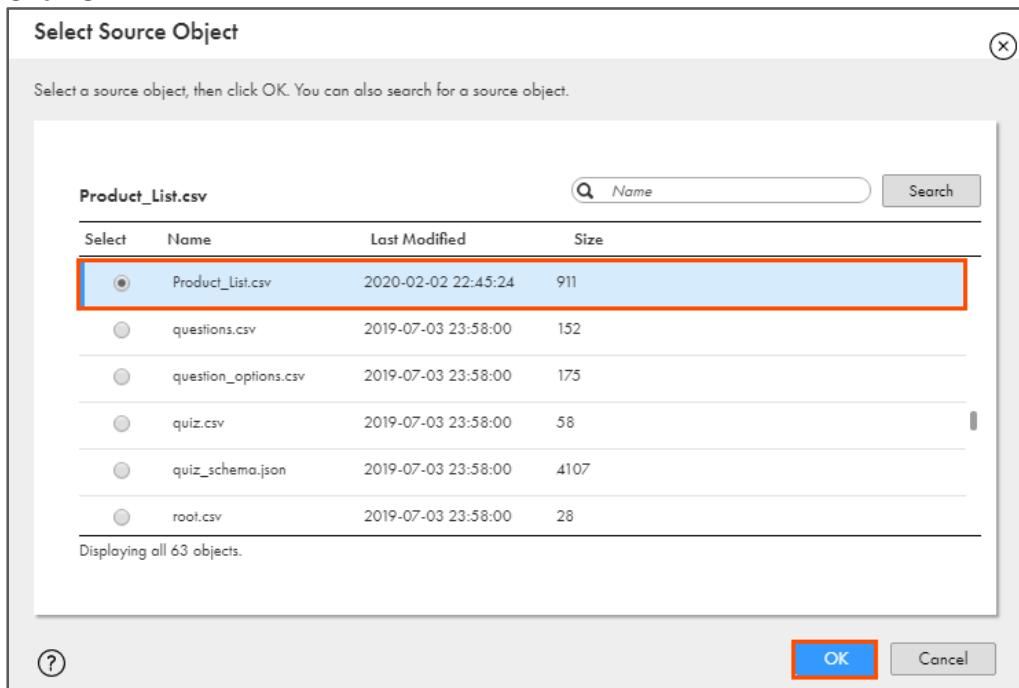
55. To select the source object from the Object field, click **Select**.



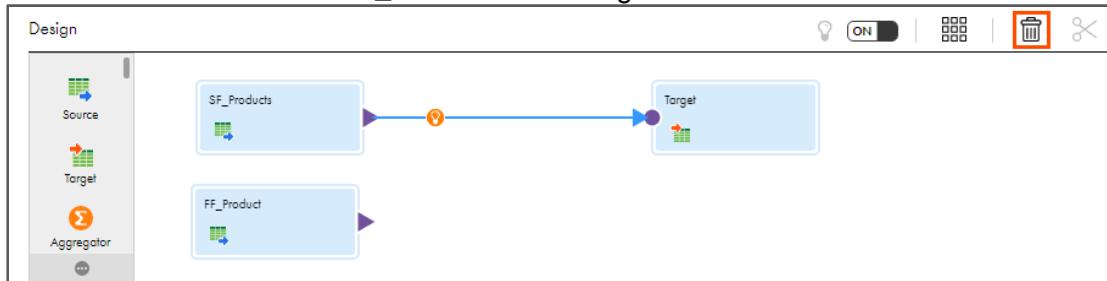
Note: The Select Source Object window appears.

56. From the list, select **Product_List.csv**.

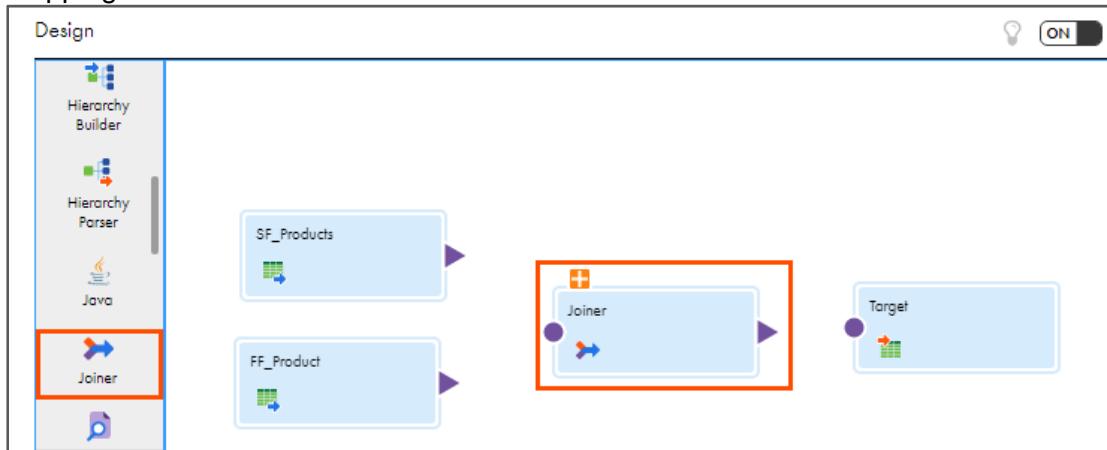
57. Click OK.



58. Click on the link between SF_Products and Target and click .

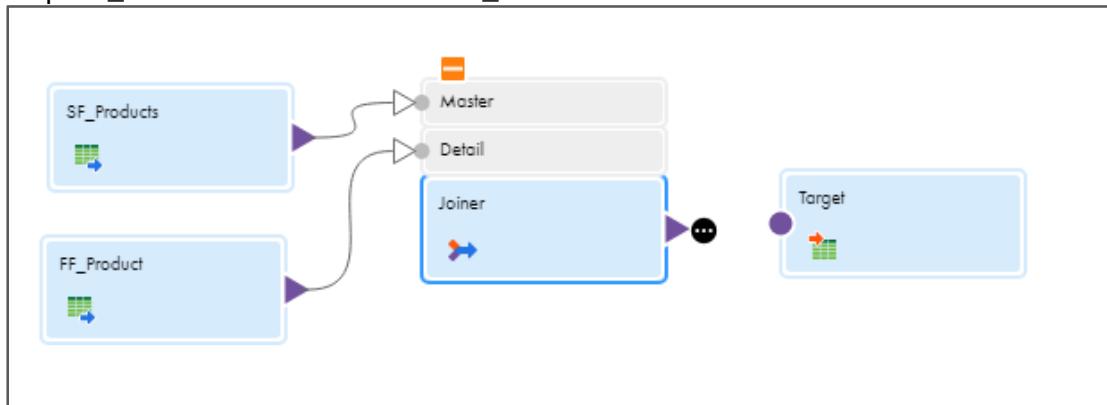


59. From the list of available transformations, drag and drop **Joiner** transformation on the mapping canvas.



60. Select the Joiner transformation and click  on the Joiner transformation.

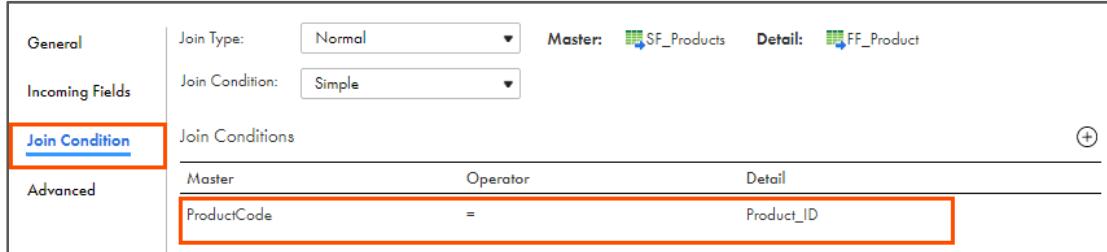
61. Map SF_Products as **Master** and FF_Product as **Detail**.



62. From the properties pane, click **Join Condition**.

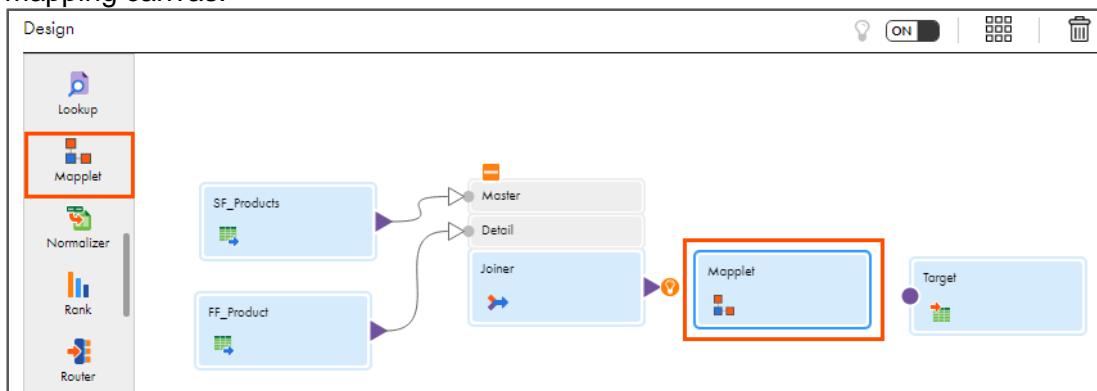
63. Add the condition as shown in table below:

Master	Operator	Detail
ProductCode	= (Equals)	Product_ID



Master	Operator	Detail
ProductCode	=	Product_ID

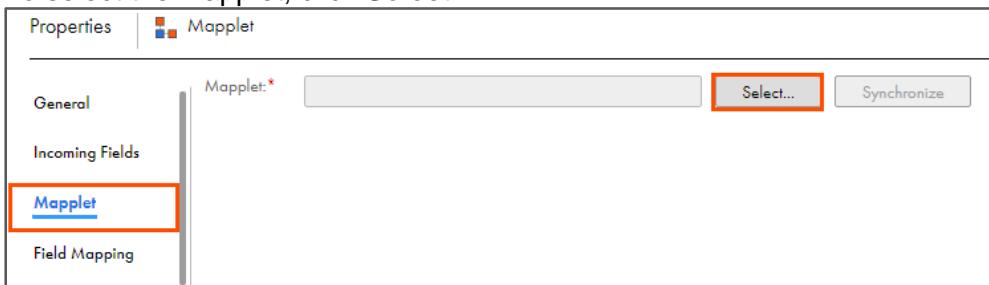
64. From the list of available transformations, drag and drop **Mapplet** transformation on the mapping canvas.



65. Select the Mapplet transformation from the mapping canvas.

66. From the properties pane, select **Mapplet**.

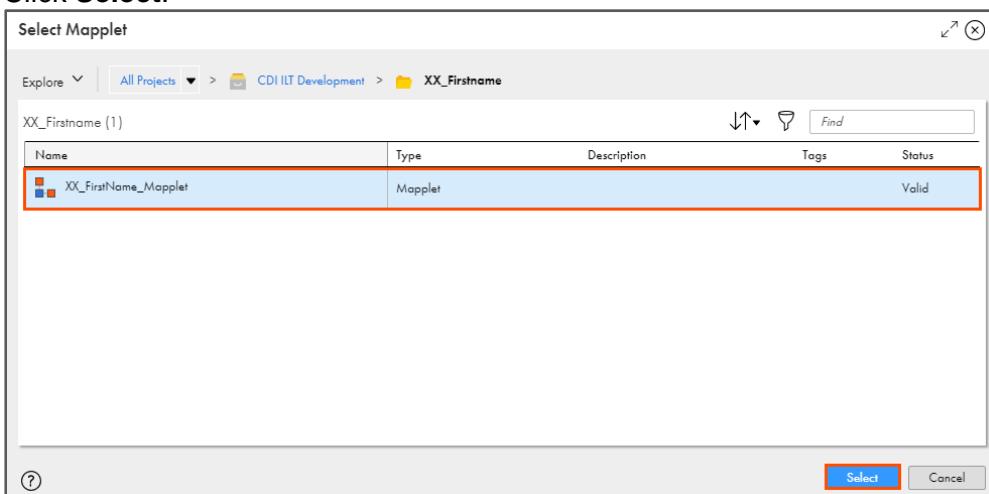
67. To select the mapplet, click **Select**.



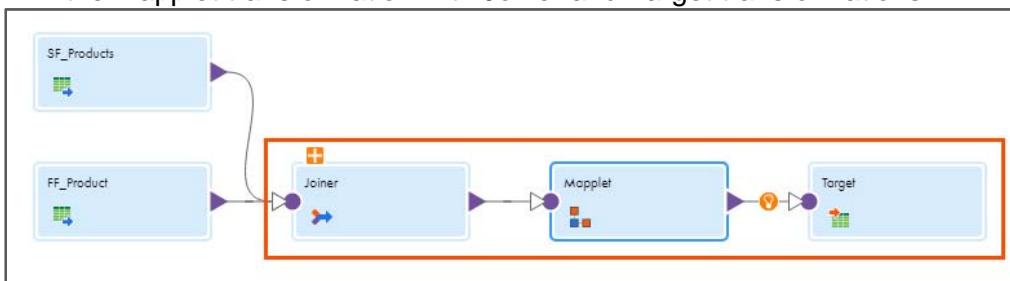
Note: The Select Maplet window appears.

68. Navigate to CDI ILT Development\XX_Firstname and select **XX_FirstName_Mapplet**.

69. Click **Select**.



70. Link the Maplet transformation with Joiner and Target transformations.



71. Select the Maplet transformation from the mapping canvas.

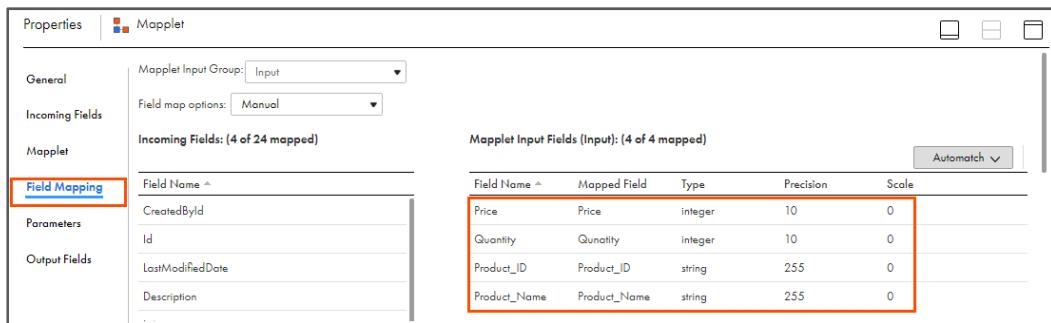
72. From the properties pane, click **Field Mapping**.

73. Match the fields, as shown in the table below:

Note: For already mapped fields, do not match the field again.

Incoming Field	Target Field
Price	Price
Quantity	Quantity
Product_ID	Product_ID
Product_Name	Product_Name

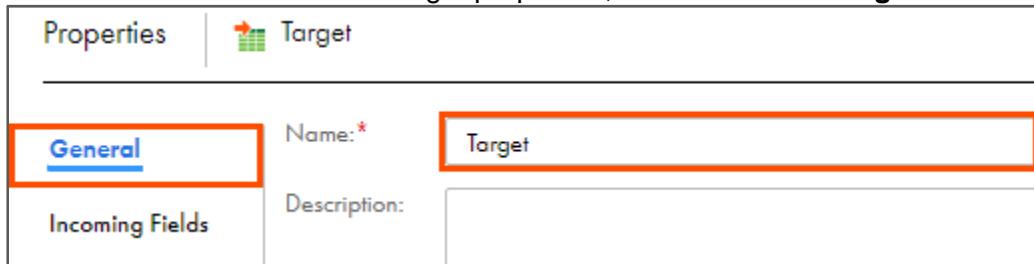
74. After field mapping, the mapping looks as shown below:



Field Name	Mapped Field	Type	Precision	Scale
Price	Price	integer	10	0
Quantity	Quantity	integer	10	0
Product_ID	Product_ID	string	255	0
Product_Name	Product_Name	string	255	0

75. To configure the target, from the mapping canvas, click the **Target** transformation.

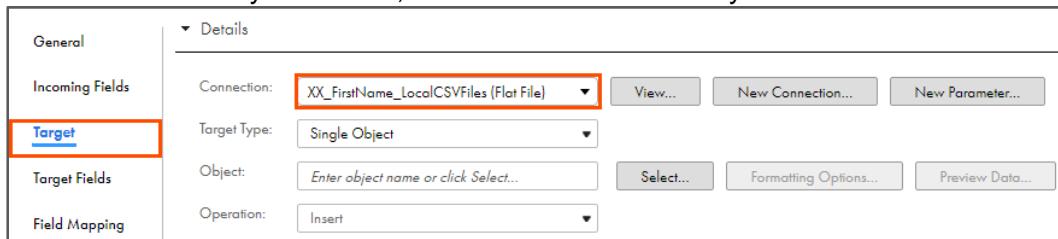
76. In the General section of the Target properties, retain Name as **Target**.



77. From the properties pane, click **Target**.

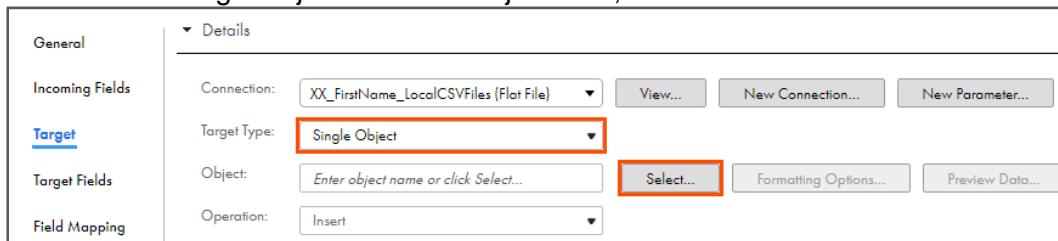
78. From the Connection drop-down, select **XX_FirstName_LocalCSVFiles**.

Note: XX refers to your initials, and FirstName refers to your First Name.



79. Retain Target Type as **Single Object**.

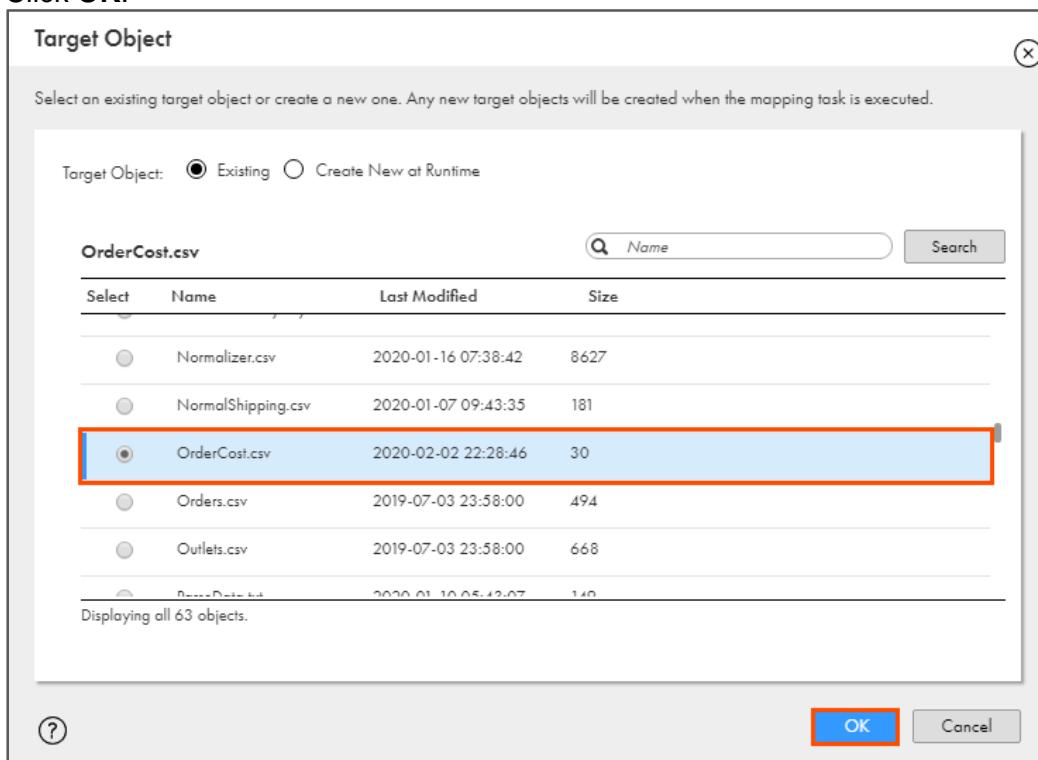
80. To select the target object from the Object field, click **Select**.



Note: The Target Object window appears.

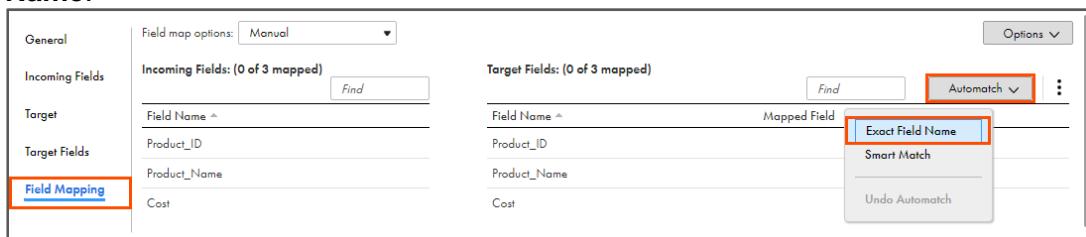
81. On the Target Object window, select **OrderCost.csv**.

82. Click OK.

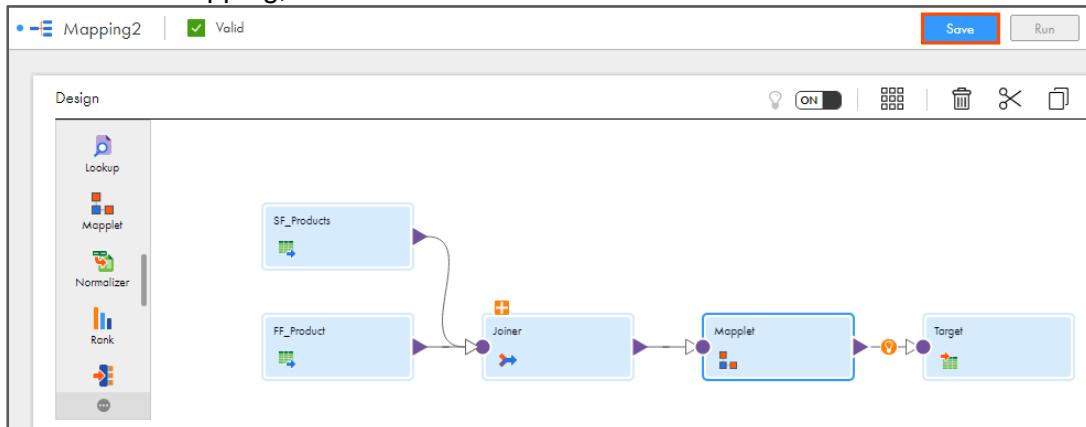


83. From the properties pane, click **Field Mapping**.

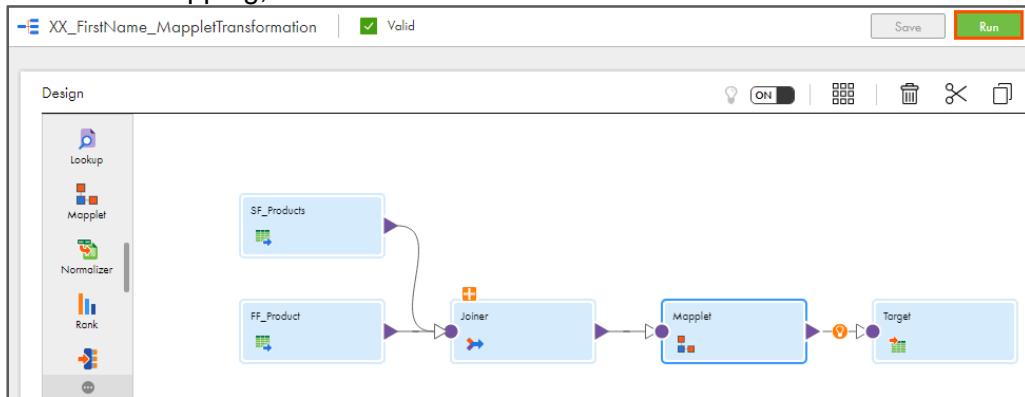
84. To match the fields automatically, from the Automatch drop-down, select **Exact Field Name**.



85. To save the mapping, click **Save**.

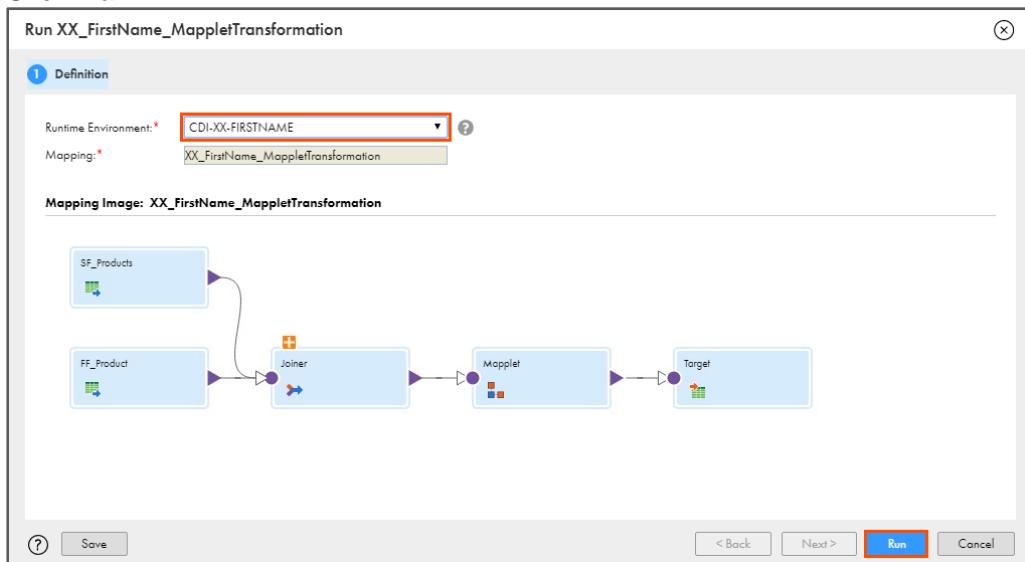


86. To run the mapping, click **Run**.



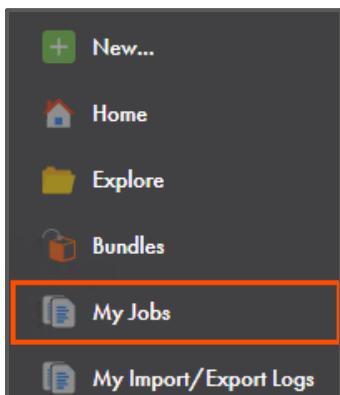
Note: The Run mapping window appears.

87. From the Runtime Environment drop-down, select your secure agent group.
 88. Click **Run**.



Monitor Status:

89. To monitor the mapping status, from the navigation pane, click **My Jobs**.



90. When the task completes, the status changes to Success.

Jobs (1 of 238)		Up to date	Updated 12:46:01 AM PST				
Asset Name: XX_FirstName_Mapple...		Add Field	Subtasks	Start Time	End Time	Rows Processed	
Instance Name						Status	
XX_FirstName_MappleTransformation-1				Feb 3, 2020, 12:46:01 AM	Feb 3, 2020, 12:46:01 AM	10	Success

Verify Output:

91. On your local machine, go to **C:\NICSLabFiles**.
 92. Verify that correct cost is written in **OrderCost.csv**.

A	B	C	D
Product_ID	Product_Name	Cost	
GC1040	RALPH LAUREN Polo Classic Full-Zip Fleece Hooded Sweatshirt	67	
GC1020	Essential Oil Diffuser Bracelet	75	
GC3040	Tommy Hilfiger Men's Classic V-Neck Shirt	410	
GC3020	Pro Impact Cricket Set	2950	
GC3060	Microsoft Surface Pro	11085	
GC1060	Pureology Hydrate Moisturizing Shampoo	108	
GC5040	Gourmia GAF645 Digital Stainless Steel Air Fryer	9900	
IN7020	Skechers Women's Glide Ultra-Playa Boat Shoe	850	
GC5020	Wilson Energy XL Tennis Racket	880	
GC5060	Google Chromecast 3rd Generation	408	

This concludes the lab.

Module 6: Mapping Parameters

Lab 6-1: Performing Complete Parameterization

Overview:

Parameters are placeholders that represent values in a mapping. In IICS, you can make a mapping reusable with the help of parameters.

Objective:

- Create a completely parameterized mapping

Scenario:

Ruby wants to filter the opportunities based the probability. However, creating a mapping every time an opportunity is added is time consuming. When she explains this concern to John, he recommends creating a completely parameterized mapping.

In this lab, John will create a completely parameterized mapping.

Duration:

30 minutes

Tasks:

Copy Source Files:

1. Copy the following files from the CDI Lab Prep Files folder available on your desktop and paste it in your flat file directory (**C:\IICSLabFiles**):

Files
LowProbabilityOpportunities.csv
HighProbabilityOpportunities.csv

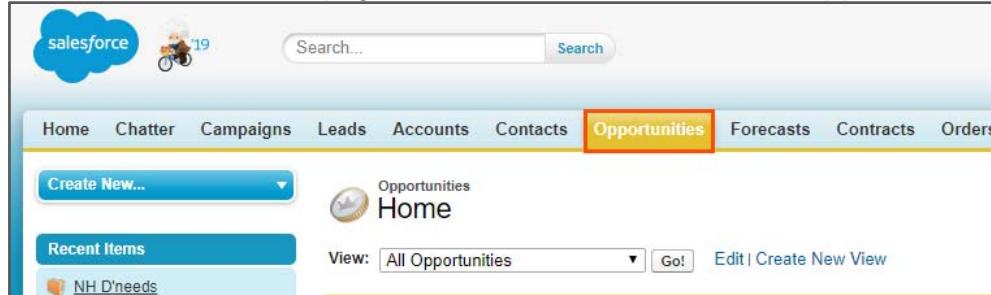
Create Opportunities in Salesforce:

2. Log in to your Salesforce Developer account using your credentials.

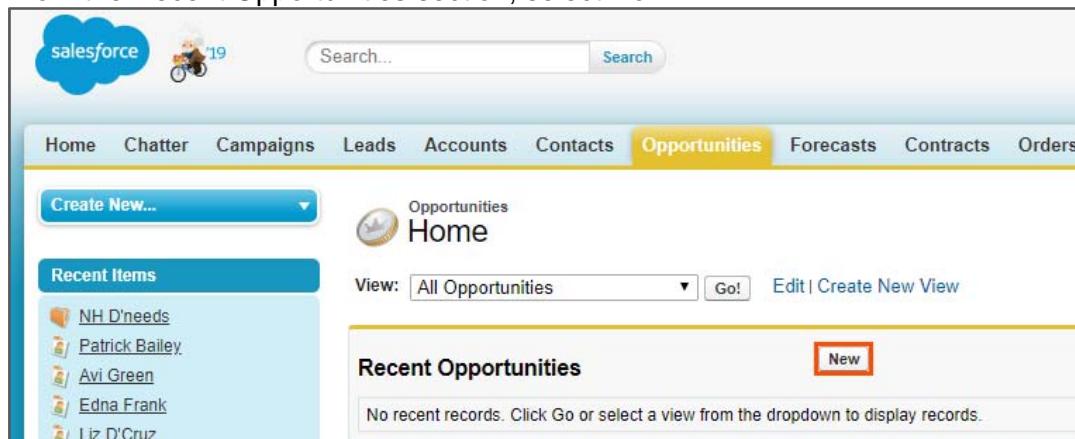
Note: You can use the below mentioned link to login:

<https://login.salesforce.com/>

3. On the Salesforce homepage, from the available tabs, select **Opportunities**.



4. From the Recent Opportunities section, select **New**.

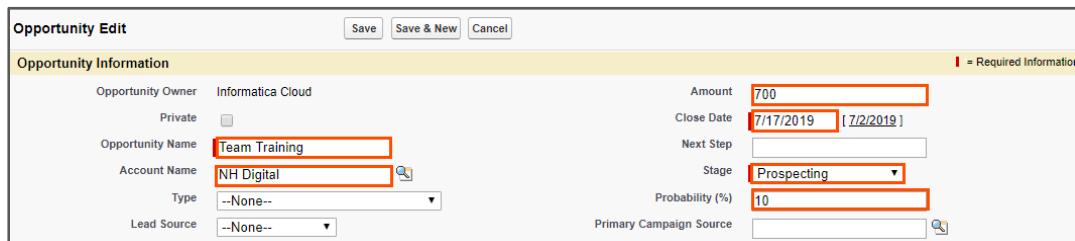


The screenshot shows the Salesforce Opportunities Home page. At the top, there's a navigation bar with links for Home, Chatter, Campaigns, Leads, Accounts, Contacts, Opportunities (which is highlighted in yellow), Forecasts, Contracts, and Orders. Below the navigation bar is a search bar with a placeholder 'Search...' and a 'Search' button. On the left, there's a sidebar titled 'Recent Items' listing several contacts: NH D'needs, Patrick Bailey, Avi Green, Edna Frank, and Liz D'Cruz. The main area is titled 'Opportunities Home' and shows a section titled 'Recent Opportunities' with a 'New' button. A message below says 'No recent records. Click Go or select a view from the dropdown to display records.'

Note: The New Opportunity window appears.

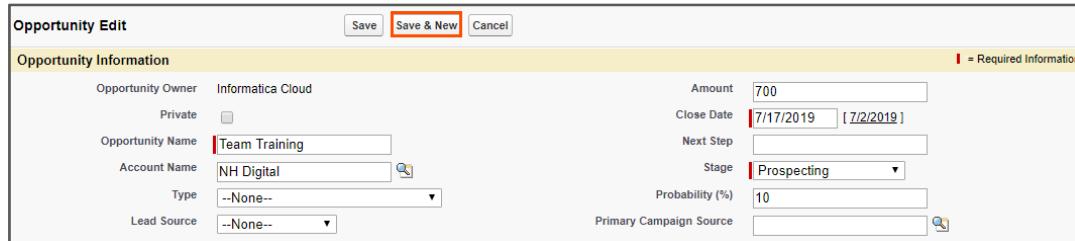
5. Enter the details, as shown in the table below:

Field Name	Values
Opportunity Name	Team Training
Account Name	NH Digital
Amount	700
Close Date	Choose a date greater than the current date
Stage	Prospecting
Probability	10



The screenshot shows the 'Opportunity Edit' form. At the top, there are three buttons: 'Save', 'Save & New', and 'Cancel'. Below that is a section titled 'Opportunity Information'. The form contains the following fields with their values: Opportunity Owner (Informatica Cloud), Private (unchecked), Opportunity Name (Team Training), Account Name (NH Digital), Type (None), Lead Source (None), Amount (700), Close Date (7/17/2019), Next Step (empty), Stage (Prospecting), Probability (%)(10), and Primary Campaign Source (empty). A note at the bottom right indicates that the 'Stage' field is required information.

6. Click **Save & New**.



This screenshot is identical to the one above it, showing the 'Opportunity Edit' form with the 'Opportunity Information' section. All fields have been populated with the same values as the first screenshot, and the 'Save & New' button is highlighted with a red box.

7. Similarly, create several opportunities in Salesforce.

Note: To create opportunities in Salesforce, you can refer the

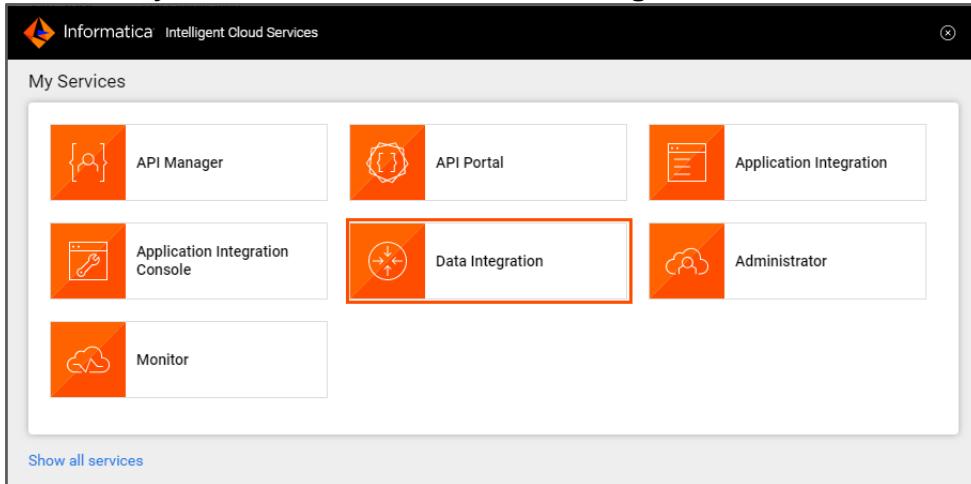
Salesforce_Opportunities.csv file provided in CDI Lab Prep Files folder available on your desktop.

Create Mapping:

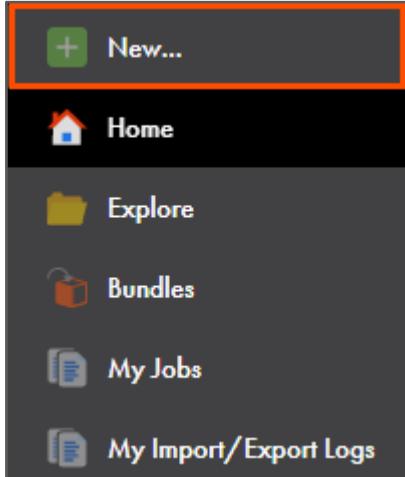
8. Open the IICS Login page from the Bookmarks bar.

Note: Follow this step if you have navigated away from the login page.

9. Enter the login credentials provided by the Instructor and click **Log In**.
10. From the **My Services** window, select **Data Integration**.

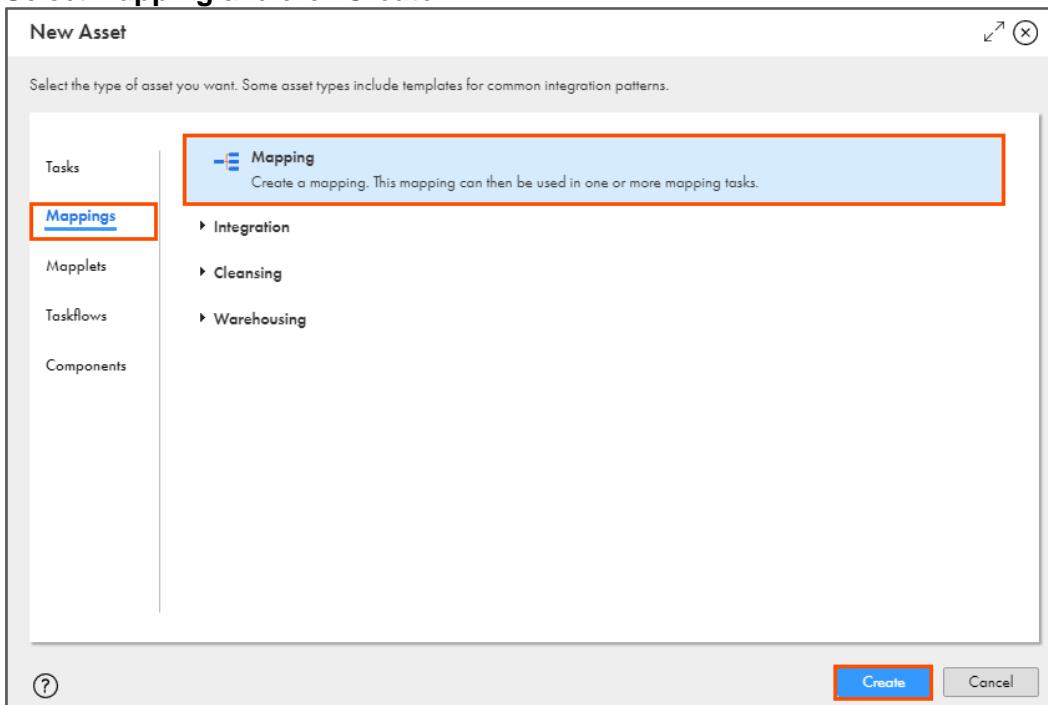


11. To create a new asset, from the navigation pane, select **New**.



12. From the New Asset window, click the **Mappings** tab.

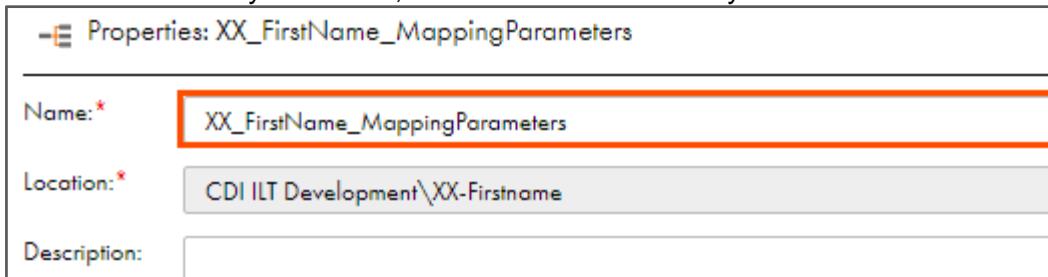
13. Select **Mapping** and click **Create**.



Note: The Mapping page appears.

14. In the Name field, enter **XX_FirstName_MappingParameters**.

Note: XX refers to your initials, and FirstName refers to your First Name.



Properties: XX_FirstName_MappingParameters	
Name:*	XX_FirstName_MappingParameters
Location:	CDI ILT Development\XX-Firstname
Description:	

15. To configure the source, from the mapping canvas, click the **Source** transformation.

16. In the General section of the Source properties, enter Name as **SO_Salesforce**.



Properties		SO_Salesforce
General	Name:*	SO_Salesforce
Source	Description:	

17. From the properties pane, click **Source**.

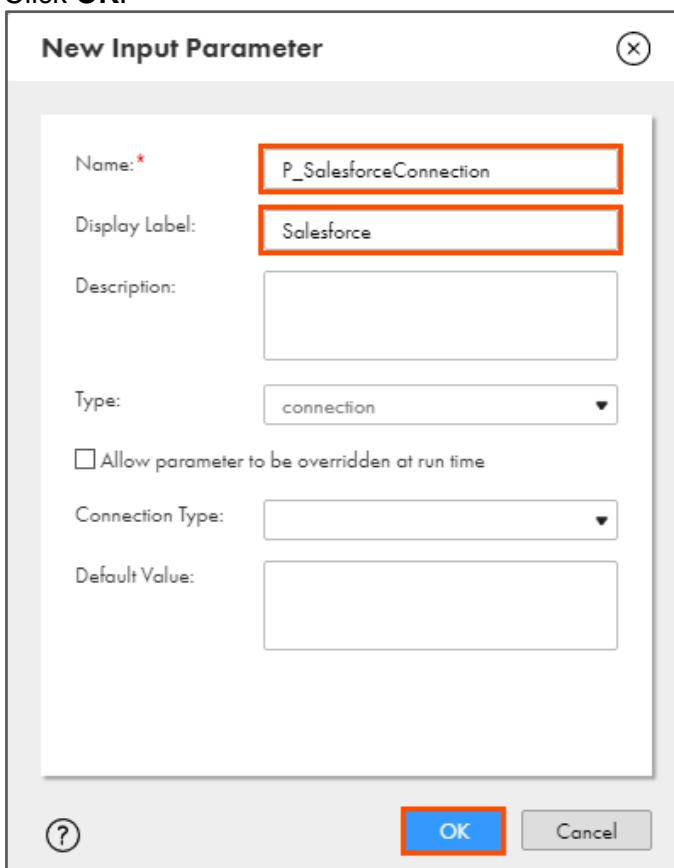
18. To create a new connection parameter, click **New Parameter**.



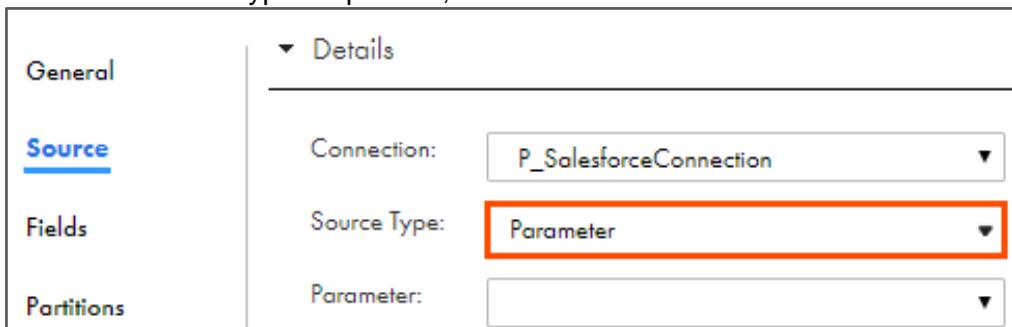
Note: The New Input Parameter window appears.

19. Enter Name as **P_SalesforceConnection**, and Display Label as **Salesforce**.

20. Click **OK**.



21. From the Source Type drop-down, select **Parameter**.



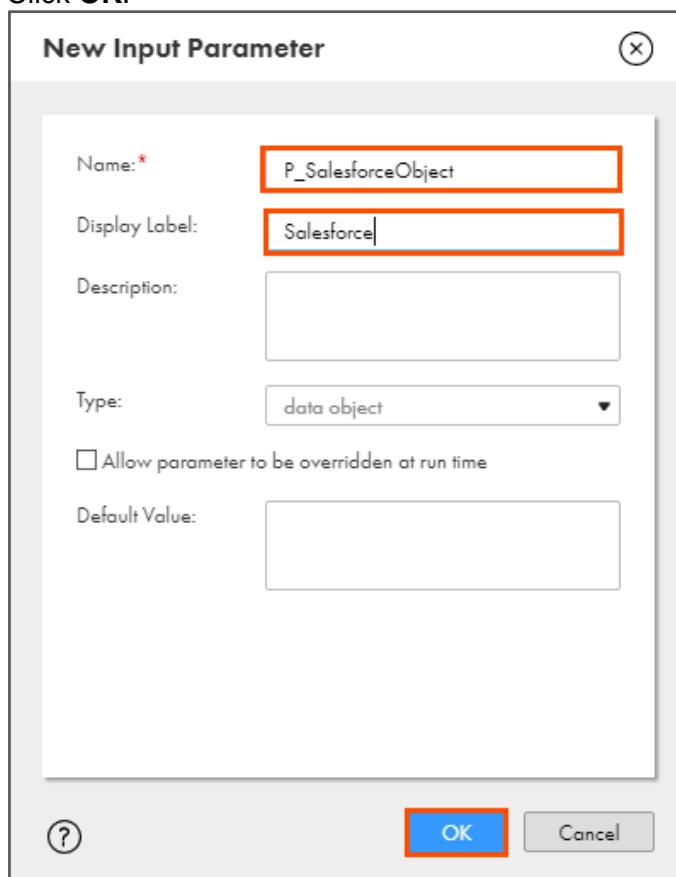
22. To create a new parameter, from the Parameter field, click **New Parameter**.



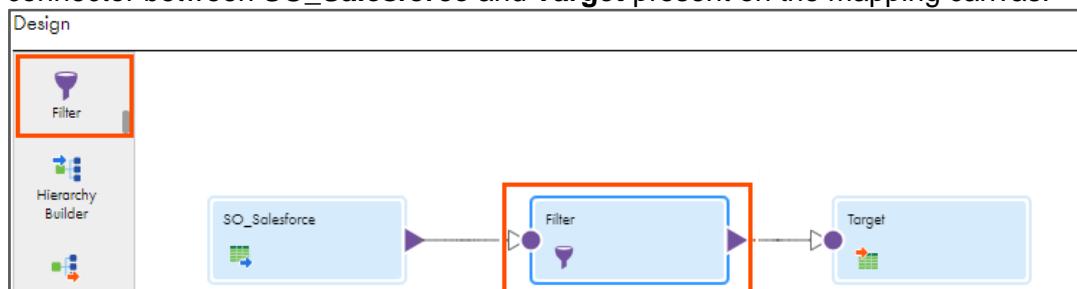
Note: The New Input Parameter window appears.

23. Enter Name as **P_SalesforceObject**, and the Display Label as **Salesforce**.

24. Click **OK**.



25. From the list of available transformations, drag and drop **Filter** transformation on to the connector between **SO_Salesforce** and **Target** present on the mapping canvas.



26. In the General section of the Filter properties, enter the Name as **FIL_RouteHighProbOpptys**.

Properties	
 FIL_RouteHighProbOpptys	
General	Name: * FIL_RouteHighProbOpptys
Incoming Fields	Description:

27. From the properties pane, click **Filter**.

28. From the Filter Condition drop-down, select **Completely Parameterized**.

General	Filter Condition: Completely Parameterized
Incoming Fields	Parameter: <input type="button" value="▼"/>
Filter	<input type="button" value="New Parameter..."/>
Advanced	

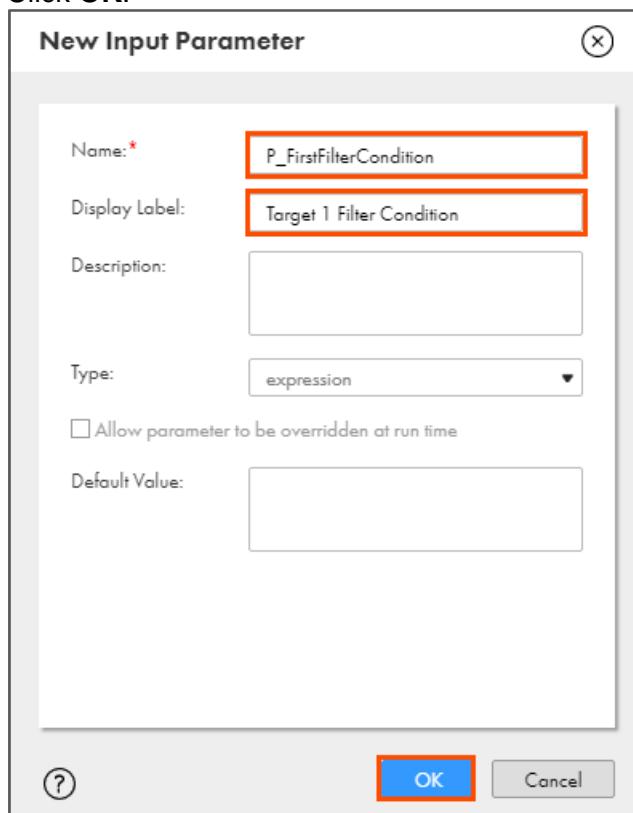
29. To create a new filter parameter, click **New Parameter**.

General	Filter Condition: Completely Parameterized
Incoming Fields	Parameter: <input type="button" value="▼"/>
Filter	<input type="button" value="New Parameter..."/>
Advanced	

Note: The New Input Parameter window appears.

30. Enter Name as **P_FirstFilterCondition**, and Display Label as **Target 1 Filter Condition**.

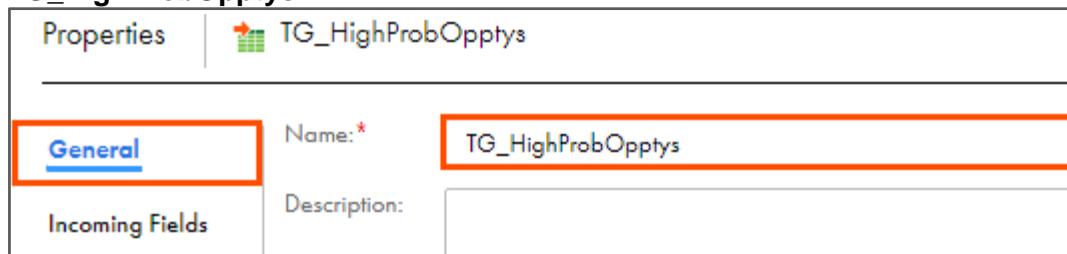
31. Click **OK**.



32. To configure the target, from the mapping canvas, click the **Target** transformation.

33. In the General section of the Target properties, enter the Name as

TG_HighProbOpptys.



34. From the properties pane, click **Target**.

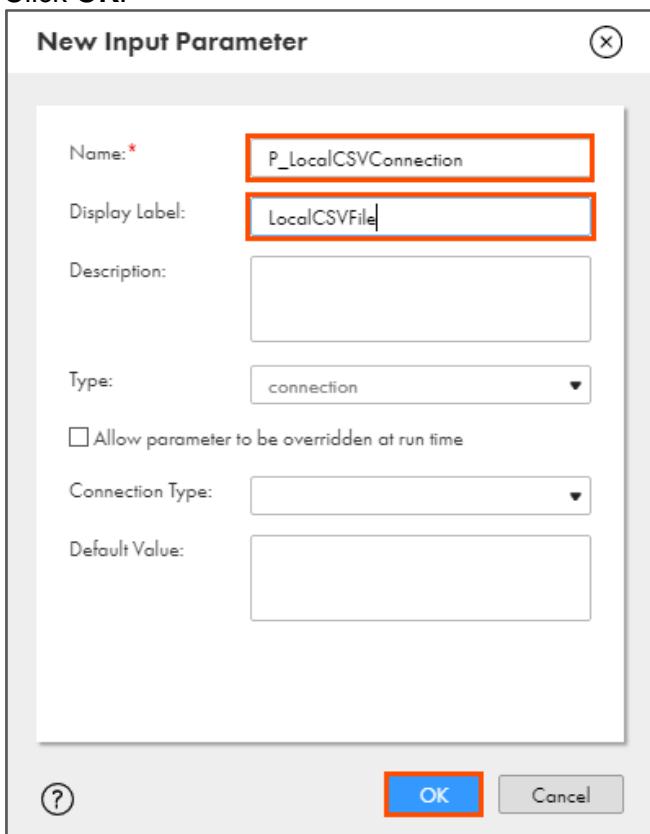
35. To create a new connection parameter, click **New Parameter**.



Note: The New Input Parameter window appears.

36. Enter Name as **P_LocalCSVConnection**, and Display Label as **LocalCSVFile**.

37. Click **OK**.



New Input Parameter

Name: P_LocalCSVConnection

Display Label: LocalCSVFile

Description:

Type:

Allow parameter to be overridden at run time

Connection Type:

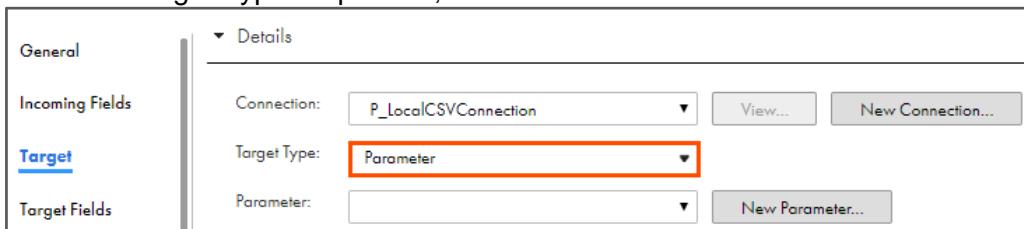
Default Value:

?

OK

Cancel

38. From the Target Type drop-down, select **Parameter**.



General ▾ **Details**

Incoming Fields

Connection: View... New Connection...

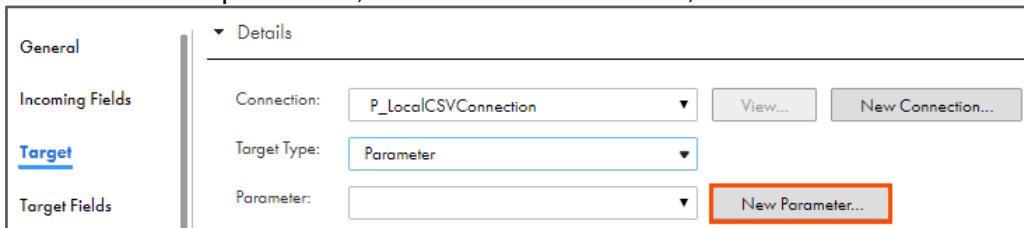
Target

Target Type: Parameter

Target Fields

Parameter: New Parameter...

39. To create a new parameter, from the Parameter field, click **New Parameter**.



General ▾ **Details**

Incoming Fields

Connection: View... New Connection...

Target

Target Type: Parameter

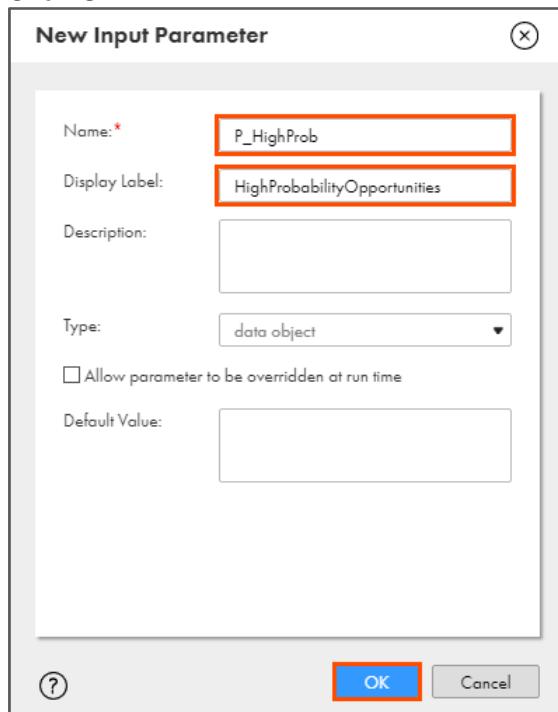
Target Fields

Parameter: New Parameter...

Note: The New Input Parameter window appears.

40. Enter Name as **P_HighProb**, and the Display Label as **HighProbabilityOpportunities**.

41. Click **OK**.

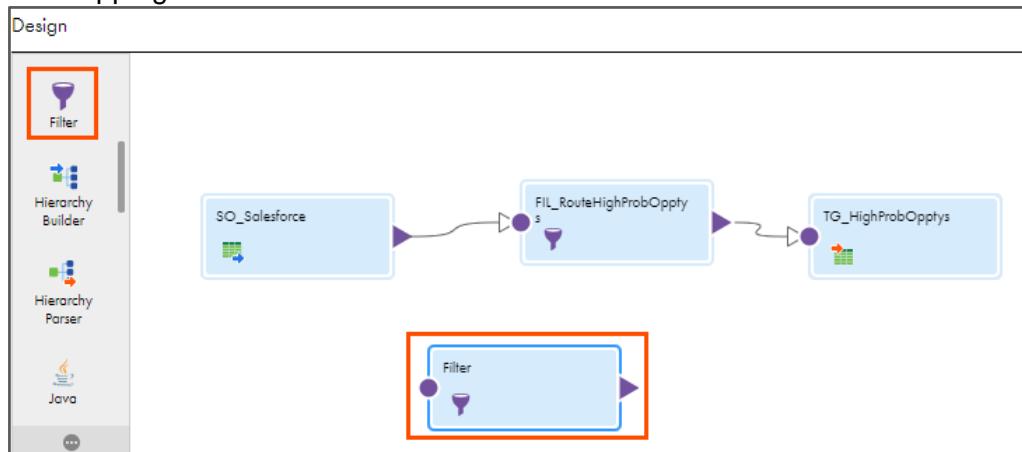


42. From the properties pane, click **Field Mapping**.

43. From the Field map options drop-down, select **Automatic**.



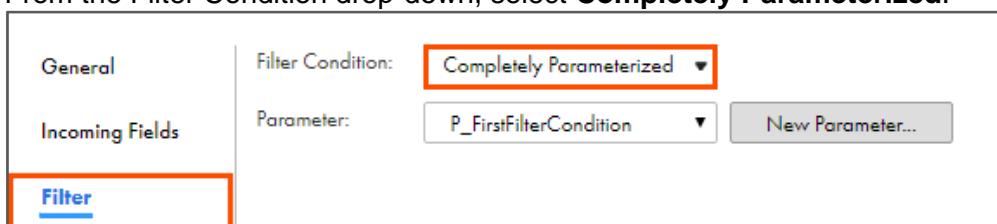
44. From the list of available transformations, drag and drop a **Filter** transformation on to the mapping canvas.



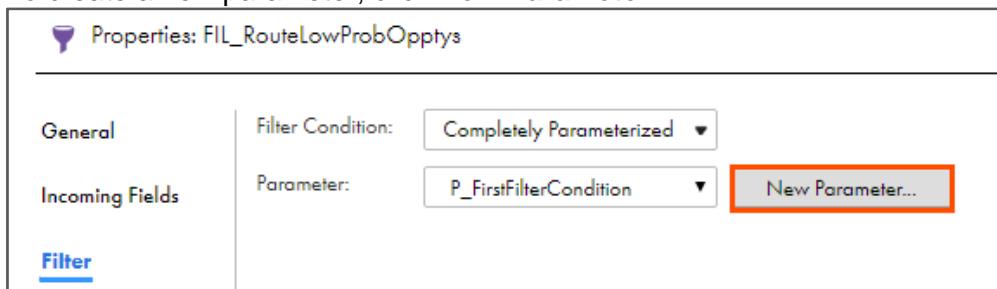
45. Link **SO_Salesforce** to the **Filter** transformation.
46. Select the **Filter** transformation from the mapping canvas.
47. In the General section of the Filter properties, enter the Name as **FIL_RouteLowProbOpptys**.



48. From the properties pane, click **Filter**.
49. From the Filter Condition drop-down, select **Completely Parameterized**.



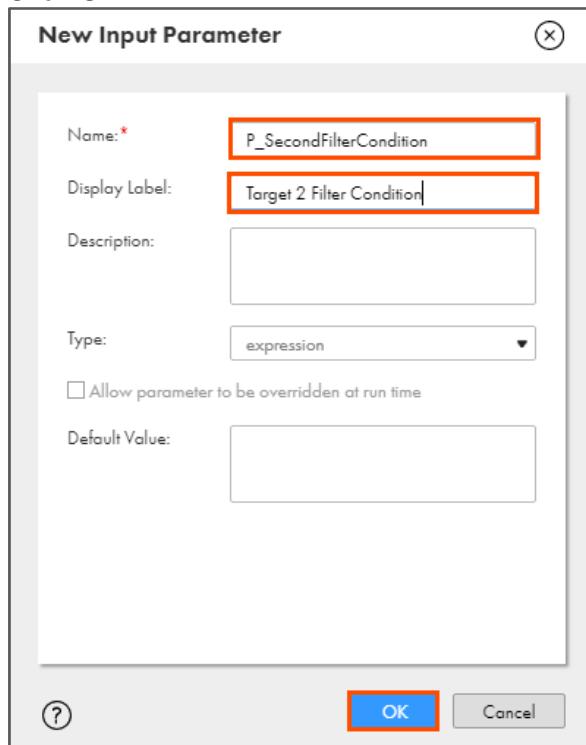
50. To create a new parameter, click **New Parameter**.



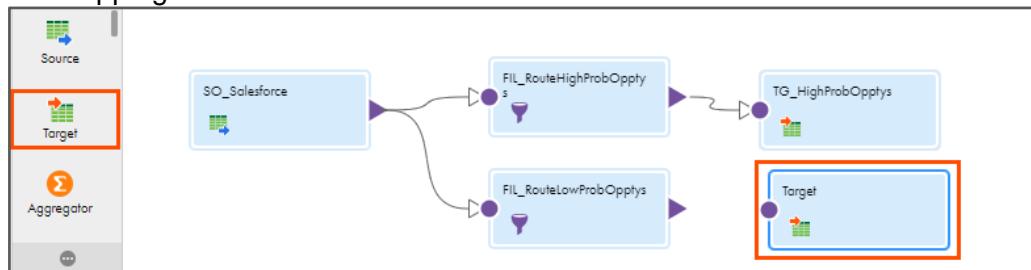
Note: The New Input Parameter window appears.

51. Enter Name as **P_SecondFilterCondition**, and Display Label as **Target 2 Filter Condition**.

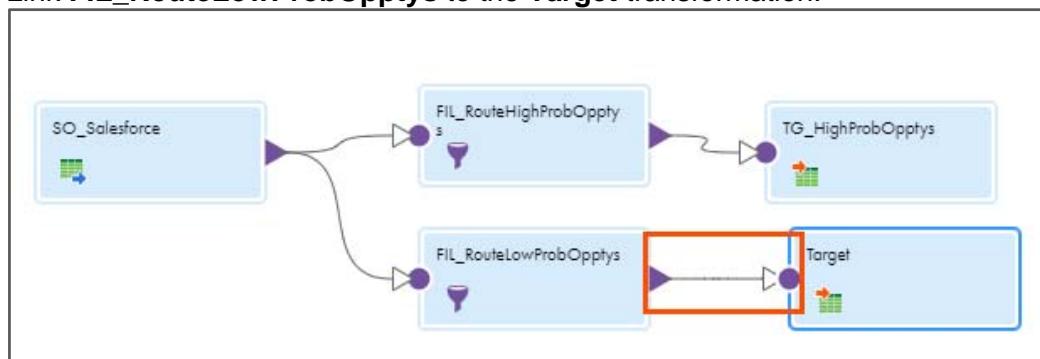
52. Click **OK**.



53. From the list of available transformations, drag and drop a **Target** transformation on to the mapping canvas.



54. Link **FIL_RouteLowProbOppys** to the **Target** transformation.



55. Select the **Target** transformation from the mapping canvas.

56. In the General section of Target properties, enter Name as **TG_LowProbOpptys**.

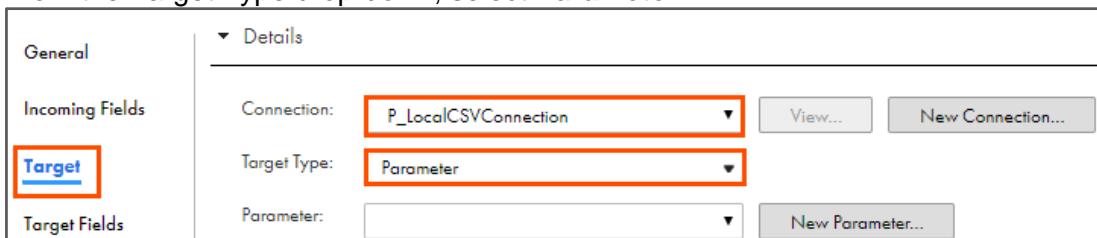


Properties	TG_LowProbOpptys
General	Name: * TG_LowProbOpptys
Incoming Fields	Description:

57. From the properties pane, click **Target**.

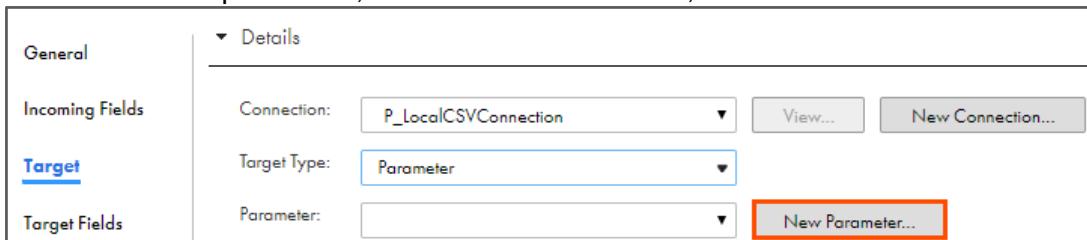
58. From the Connection drop-down, select **P_LocalCSVConnection**.

59. From the Target Type drop-down, select **Parameter**.



General	▼ Details		
Incoming Fields	Connection:	P_LocalCSVConnection	<input type="button" value="View..."/>
Target	Target Type:	Parameter	<input type="button" value="New Connection..."/>
Target Fields	Parameter:		<input type="button" value="New Parameter..."/>

60. To create a new parameter, from the Parameter field, click **New Parameter**.

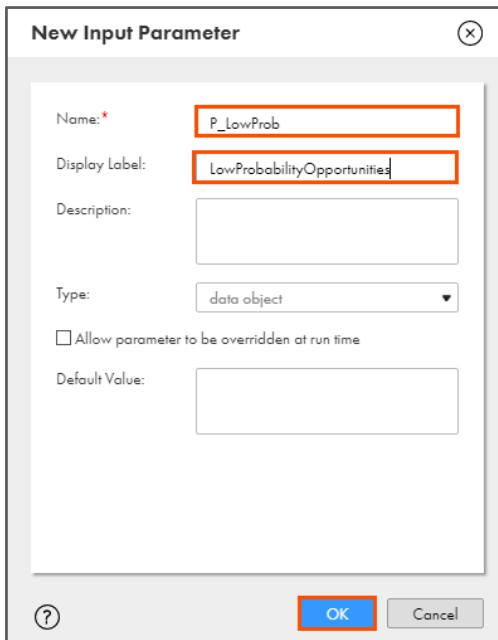


General	▼ Details		
Incoming Fields	Connection:	P_LocalCSVConnection	<input type="button" value="View..."/>
Target	Target Type:	Parameter	<input type="button" value="New Connection..."/>
Target Fields	Parameter:		New Parameter...

Note: The New Input Parameter window appears.

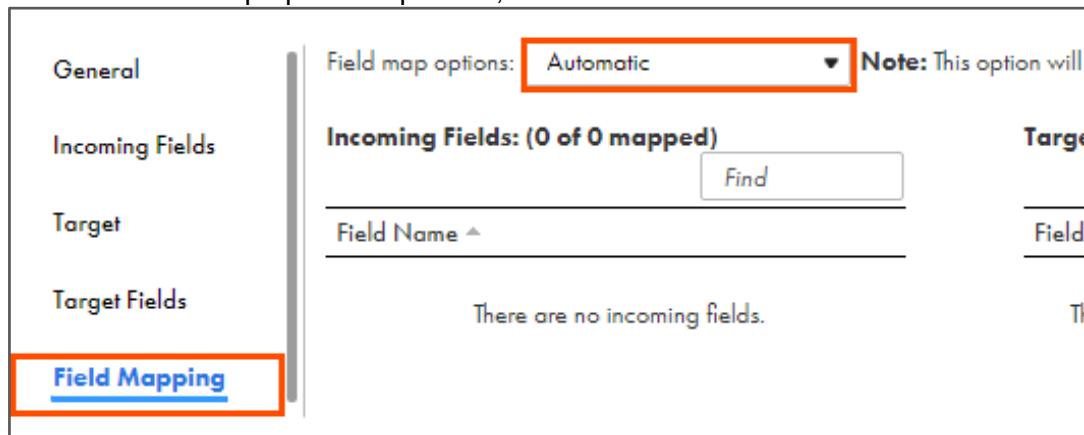
61. Enter Name as **P_LowProb**, and the Display Label as **LowProbabilityOpportunities**.

62. Click **OK**.

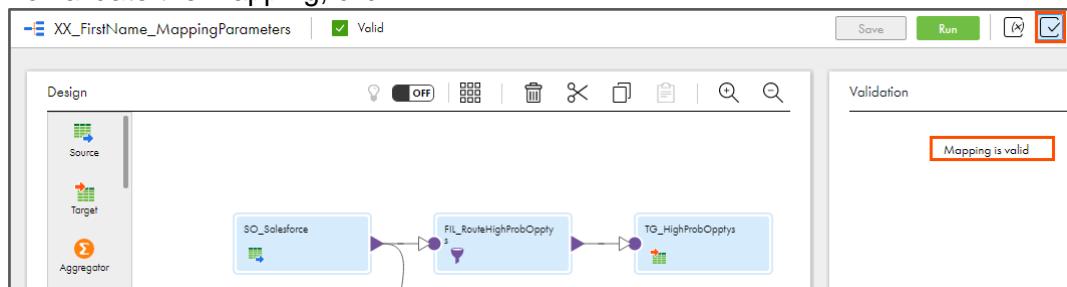


Name: *	P_LowProb
Display Label:	LowProbabilityOpportunities
Description:	<input type="text"/>
Type:	data object
<input type="checkbox"/> Allow parameter to be overridden at run time	
Default Value:	
<input style="width: 20px; height: 20px; vertical-align: middle;" type="button" value="?"/> <input style="margin-left: 10px;" type="button" value="OK"/> <input type="button" value="Cancel"/>	

63. From the properties pane, click **Field Mapping**.
 64. From the Field map option drop-down, select **Automatic**.

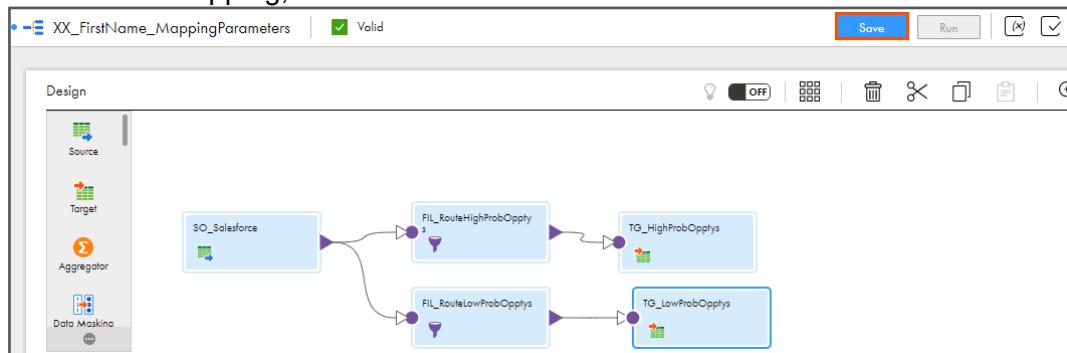


65. To validate the mapping, click .

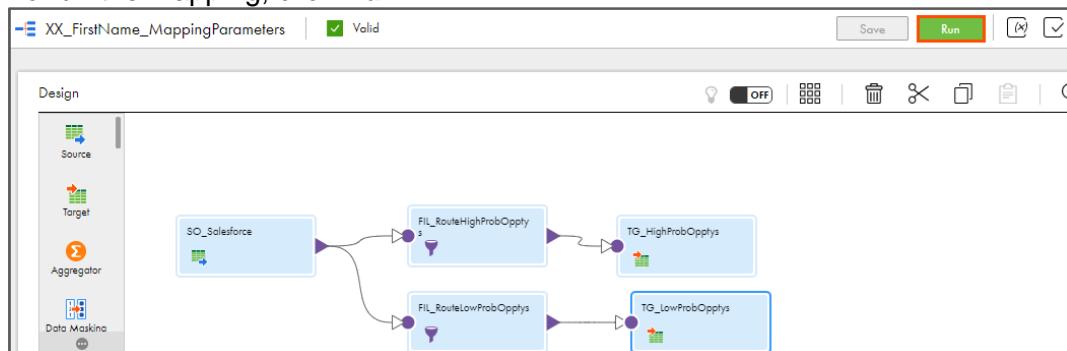


Note: Mapping is valid message appears.

66. To save the mapping, click **Save**.

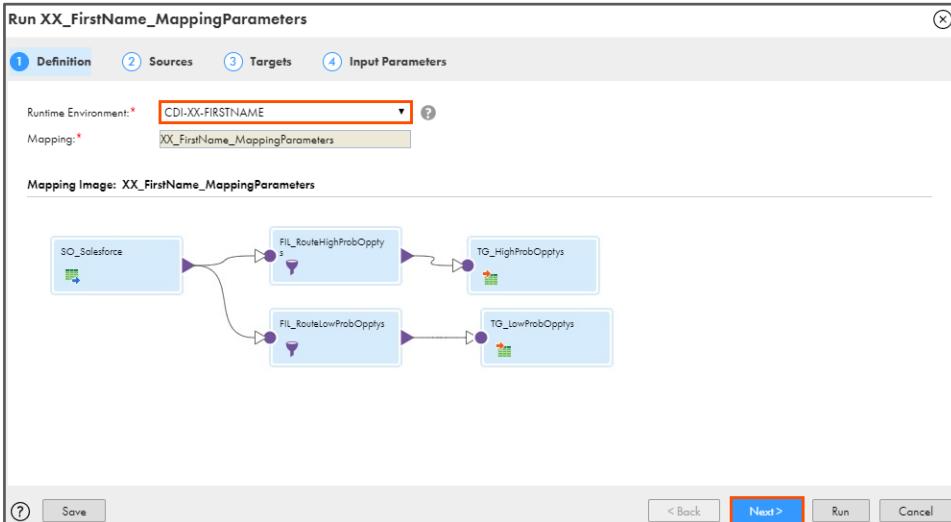


67. To run the mapping, click **Run**.



68. From Runtime Environment drop-down, select your secure agent group.

69. Click **Next**.



70. From the Salesforce (P_SalesforceConnection) Connection drop-down, select **XX_FirstName_SFDCDeveloper**.

71. From the Salesforce Object field, click **Select**.

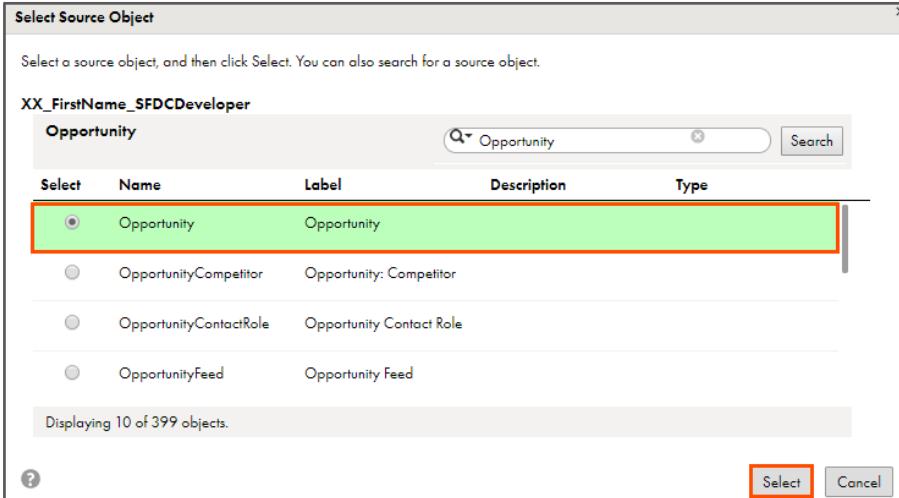


Note: The Select Source Object window appears.

72. From the list, select **Opportunity**.

Note: You can also use the search feature.

73. Click **Select**.



Select	Name	Label	Description	Type
<input checked="" type="radio"/>	Opportunity	Opportunity		
<input type="radio"/>	OpportunityCompetitor	Opportunity: Competitor		
<input type="radio"/>	OpportunityContactRole	Opportunity Contact Role		
<input type="radio"/>	OpportunityFeed	Opportunity Feed		

Displaying 10 of 399 objects.

74. Click **Next**.

Run XX_FirstName_MappingParameters

(1) Definition (2) Sources (3) Targets (4) Input Parameters

Source Parameter Details

Salesforce (P_SalesforceConnection) Connection: * XX_FirstName_SFDCDeveloper View... New... Advanced...

Source Type: Single Select...

Salesforce Object: * Opportunity

Query Options

Filter: Configure...

Display technical names instead of labels

Display source fields in alphabetical order

Data Preview

Opportunity Preview All Columns (Total columns: 42)

Opportunity ID	Deleted	Account ID	Private	Name	...
0063i000000OzgYAAK	false	0013i000004RgXzAAK	false	Dickenson Mobile Generators	...
0063i000000OzgZAAS	false	0013i000004RgXzAAK	false	United Oil Office Portable Gen...	...
0063i000000OzgAAC	false	0013i000004RgY0AAK	false	Express Logistics Standby Gene...	...
0063i000000OzgAAC	false	0013i000004RgY1AAK	false	Genepoint Standby Generator	...

Save Next > Run Cancel

75. From the LocalCSVFile (P_LocalCSVConnection) Connection drop-down, select **XX_FirstName_LocalCSVFiles**.

76. To select the HighProbabilityOpportunities Object, click **Select**.

Run XX_FirstName_MappingParameters

(1) Definition (2) Sources (3) Targets (4) Input Parameters

Target Parameter Details

LocalCSVFile (P_LocalCSVConnection) Connection: * XX_FirstName_LocalCSVFiles View... New... Select... Formatting Options... Create Target...

HighProbabilityOpportunities Object: *

Display target fields in alphabetical order

LowProbabilityOpportunities Object: *

Display target fields in alphabetical order

Note: The Select Target Object window appears.

77. From the list, select **HighProbabilityOpportunities.csv** file.

78. Click **Select**.

Select Target Object

Select a target object, and then click Select. You can also search for a target object.

XX_FirstName_LocalCSVFiles

HighProbabilityOpportunities.csv

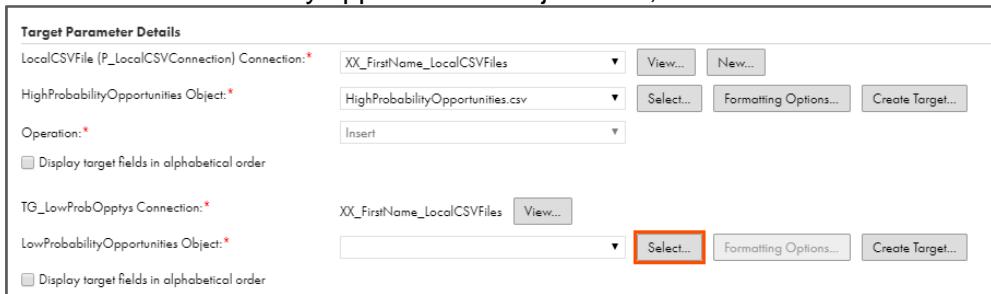
Select	Name	Last Modified	Size
<input type="radio"/>	ExpeditedShipping.csv	2019-07-01 16:05:07	105
<input checked="" type="radio"/>	HighProbabilityOpportunities.csv	2019-06-27 10:18:00	384
<input type="radio"/>	InvestmentOption.txt	2019-06-27 10:18:00	159
<input type="radio"/>	Items.csv	2019-06-28 19:48:38	2362

Displaying all 23 objects.

?

Select Cancel

79. From the LowProbabilityOpportunities Object field, click **Select**.

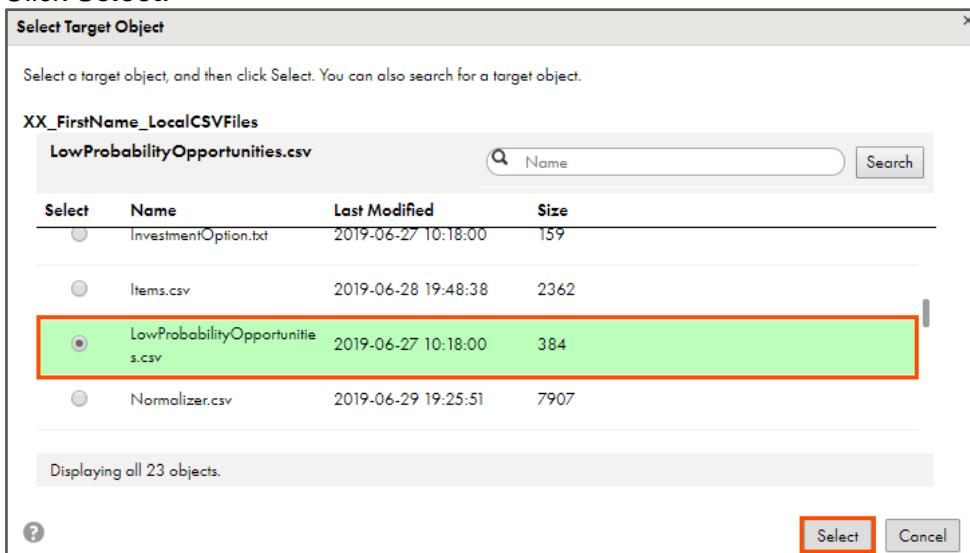


The screenshot shows the 'Target Parameter Details' window. Under 'HighProbabilityOpportunities Object:', the dropdown menu is open, and the 'Select...' button is highlighted with a red box.

Note: The Select Target Object window appears.

80. From the list, select **LowProbabilityOpportunities.csv** file.

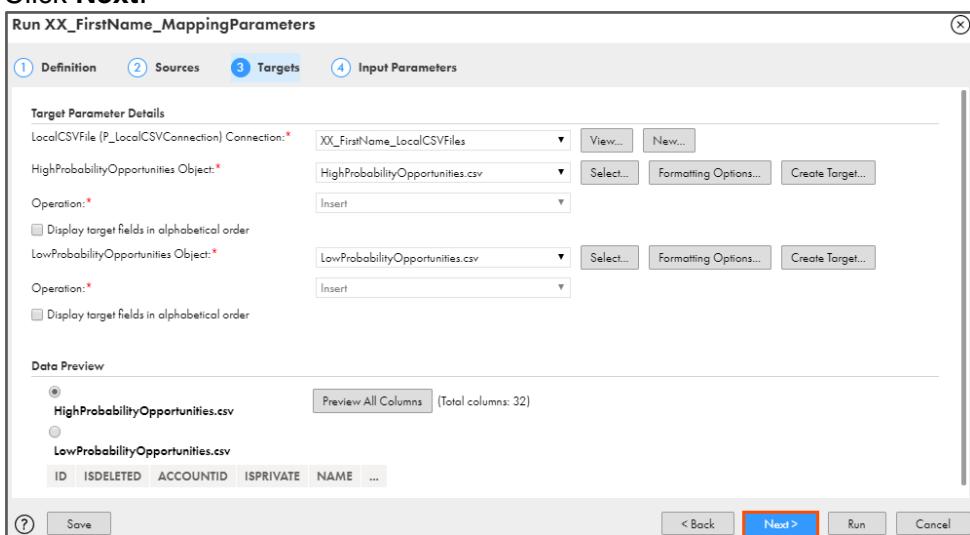
81. Click **Select**.



The screenshot shows the 'Select Target Object' window. It lists files in 'XX_FirstName_LocalCSVFiles'. The 'LowProbabilityOpportunities.csv' file is selected and highlighted with a green box. The 'Select' button at the bottom right is also highlighted with a red box.

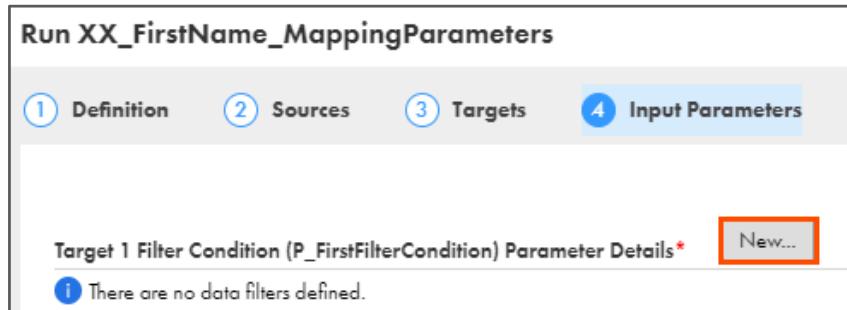
Select	Name	Last Modified	Size
<input type="radio"/>	InvestmentOption.txt	2019-06-27 10:18:00	159
<input type="radio"/>	Items.csv	2019-06-28 19:48:38	2362
<input checked="" type="radio"/>	LowProbabilityOpportunities.csv	2019-06-27 10:18:00	384
<input type="radio"/>	Normalizer.csv	2019-06-29 19:25:51	7907

82. Click **Next**.



The screenshot shows the 'Run XX_FirstName_MappingParameters' window. The 'Targets' tab is selected. In the 'Data Preview' section, the 'HighProbabilityOpportunities.csv' file is selected. The 'Next >' button at the bottom right is highlighted with a red box.

83. To define Target 1 Filter Condition (P_FirstFilterCondition) Parameter Details, click **New...**



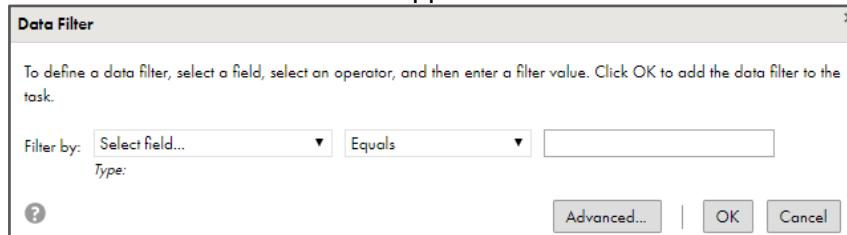
Run XX_FirstName_MappingParameters

① Definition ② Sources ③ Targets ④ Input Parameters

Target 1 Filter Condition (P_FirstFilterCondition) Parameter Details*

There are no data filters defined.

Note: The Data Filter window appears.



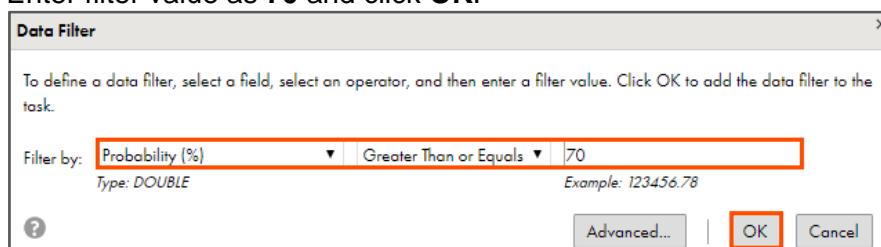
Data Filter

To define a data filter, select a field, select an operator, and then enter a filter value. Click OK to add the data filter to the task.

Filter by: Select field... Equals

Type: Advanced... | OK | Cancel

84. From the Select field drop-down, select **Probability (%)**.
 85. From the Equals drop-down, select **Greater Than or Equals**.
 86. Enter filter value as **70** and click **OK**.



Data Filter

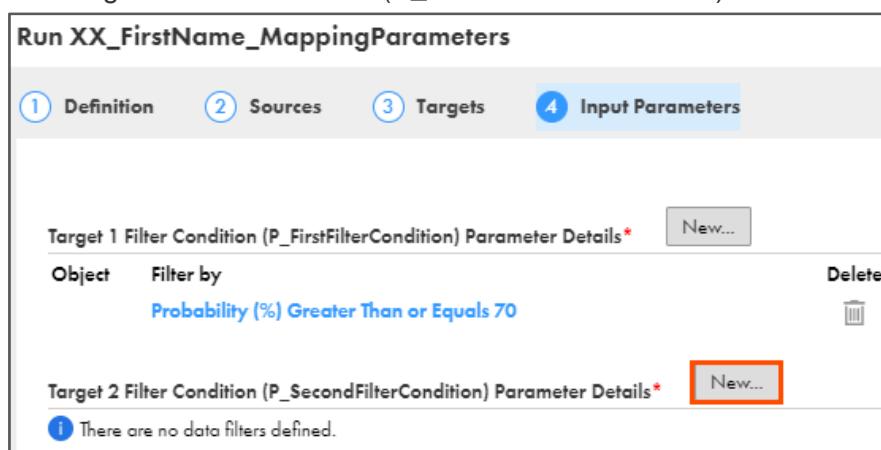
To define a data filter, select a field, select an operator, and then enter a filter value. Click OK to add the data filter to the task.

Filter by: Probability (%) Greater Than or Equals 70

Type: DOUBLE Example: 123456.78

Advanced... | OK | Cancel

87. For Target 2 Filter Condition (P_SecondFilterCondition) Parameter Details, click **New...**



Run XX_FirstName_MappingParameters

① Definition ② Sources ③ Targets ④ Input Parameters

Target 1 Filter Condition (P_FirstFilterCondition) Parameter Details*

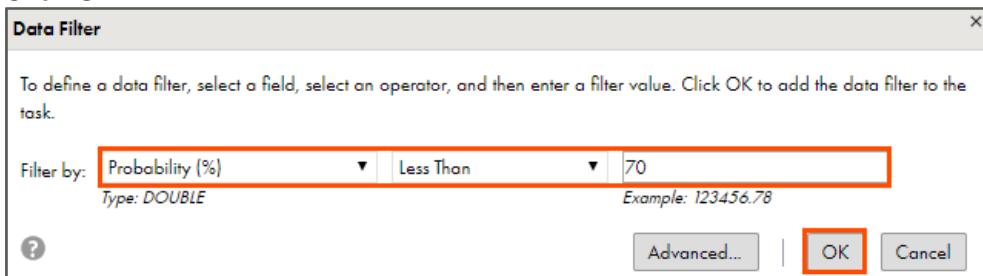
Object	Filter by	Delete
Probability (%)	Greater Than or Equals 70	

Target 2 Filter Condition (P_SecondFilterCondition) Parameter Details*

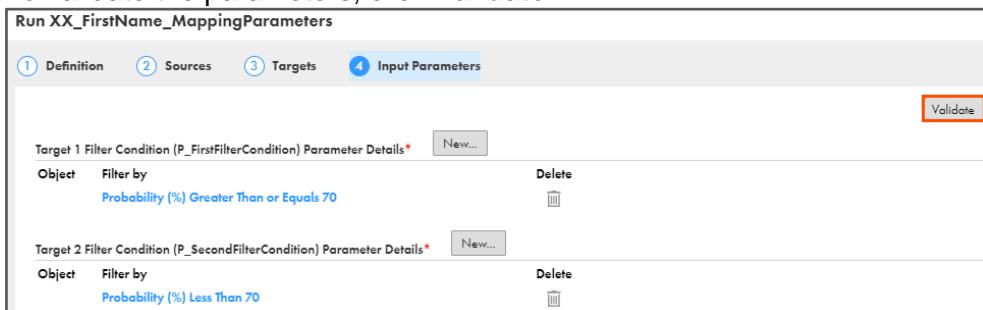
There are no data filters defined.

88. From the Select field drop-down, select **Probability (%)**.
 89. From the Equals drop-down, select **Less Than**.
 90. Enter the filter value as **70**.

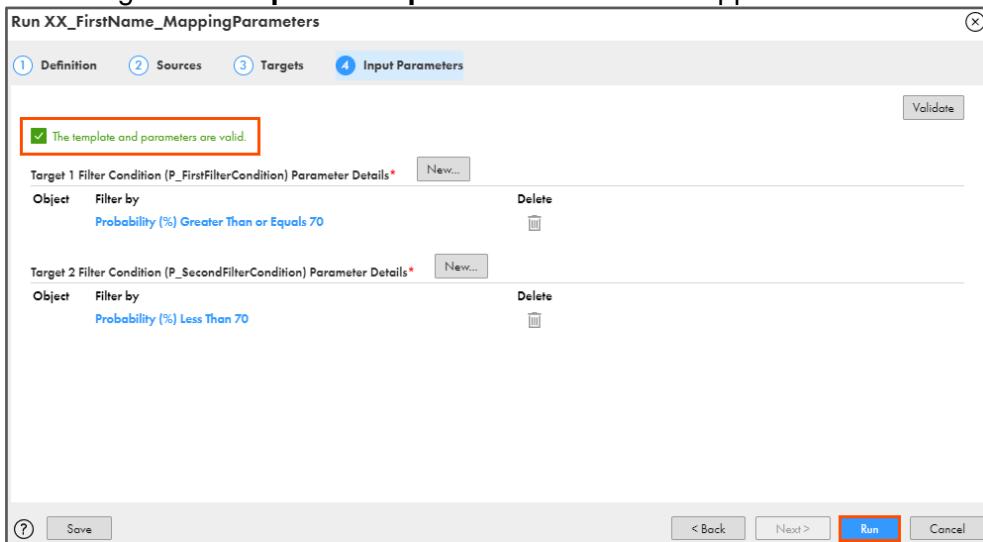
91. Click **OK**.



92. To validate the parameters, click **Validate**.

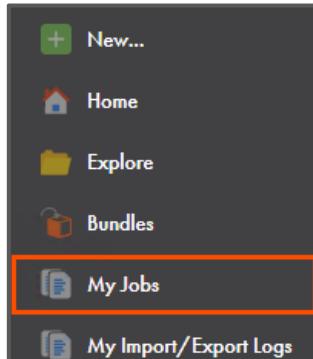


93. A message **The template and parameters are valid** appears. Click **Run**.



Monitor Status:

94. To monitor the task status, from the navigation pane, click **My Jobs**.



95. When the task completes, the status changes to **Success**.

Jobs (1 of 9) <input checked="" type="checkbox"/> Up to date						Updated 7:49:33 AM PDT	↻	↑↓	✖	Find
Asset Name: XX_FirstName_MappingParameters-1		Subtasks	Start Time ▾	End Time	Rows Processed	State				
Instance Name	XX_FirstName_MappingParameters-1	firstname	Aug 7, 2019, 7:48 ...	Aug 7, 2019, ...	35	<input checked="" type="checkbox"/> Success				

Note: You can refresh the job status if it does not change automatically.

96. On your local machine, go to **C:\IICSLabFiles**.

97. Verify that the correct probabilities are written to the following files:

HighProbabilityOpportunities.csv

ID	ISDELETED	ACCOUNT	ISPRIVATE	NAME	DESCRIPTION	STAGE	AMOUNT	PROBABILITY	EXPECTED TOTAL	OP
0062v000C	0	0012v000C	0	Stock Supply	Proposal/	1000000	75	750000		
0062v000C	0	0012v000C	0	Annual Maintenance	Negotiation	50000	90	45000		
0062v000C	0	0012v000C	0	United Oil Office Portable Generators	Negotiation	125000	90	112500		
0062v000C	0	0012v000C	0	Express Logistics Standby Generator	Closed Won	220000	100	220000		
0062v000C	0	0012v000C	0	GenePoint Standby Generator	Closed Won	85000	100	85000		
0062v000C	0	0012v000C	0	United Oil Refinery Generators	Proposal/	270000	75	202500		
0062v000C	0	0012v000C	0	United Oil SLA	Closed Won	120000	100	120000		
0062v000C	0	0012v000C	0	Edge Emergency Generator	Closed Won	75000	100	75000		
0062v000C	0	0012v000C	0	University of AZ Portable Generators	Closed Won	50000	100	50000		
0062v000C	0	0012v000C	0	GenePoint SLA	Closed Won	30000	100	30000		
0062v000C	0	0012v000C	0	United Oil Installations	Negotiation	270000	90	243000		
0062v000C	0	0012v000C	0	Edge Installation	Closed Won	50000	100	50000		
0062v000C	0	0012v000C	0	Edge SLA	Closed Won	60000	100	60000		
0062v000C	0	0012v000C	0	United Oil Installations	Closed Won	270000	100	270000		
0062v000C	0	0012v000C	0	Grand Hotels Generator Installations	Closed Won	350000	100	350000		
0062v000C	0	0012v000C	0	United Oil Refinery Generators	Closed Won	915000	100	915000		
0062v000C	0	0012v000C	0	University of AZ Installations	Proposal/	1000000	75	75000		
0062v000C	0	0012v000C	0	Express Logistics SLA	Perception	120000	70	84000		
0062v000C	0	0012v000C	0	University of AZ SLA	Closed Won	90000	100	90000		
0062v000C	0	0012v000C	0	Burlington Textiles Weaving Plant Generator	Closed Won	235000	100	235000		
0062v000C	0	0012v000C	0	United Oil Installations	Closed Won	235000	100	235000		
0062v000C	0	0012v000C	0	United Oil Emergency Generators	Closed Won	440000	100	440000		

LowProbabilityOpportunities.csv

ID	ISDELETED	ACCOUNT	ISPRIVATE	NAME	DESCRIPTION	STAGE	NAI	AMOUNT	P	PROBABILITY	EXPECTED	TOTALOPP
0062v000C	0	0012v000C	0	Team Training	Prospect	700	10	70				
0062v000C	0	0012v000C	0	Service Contract Renewal	Id. Decisic	95000	60	57000				
0062v000C	0	0012v000C	0	Dickenson Mobile Generators	Qualificat	15000	10	1500				
0062v000C	0	0012v000C	0	Grand Hotels Kitchen Generator	Id. Decisic	15000	60	9000				
0062v000C	0	0012v000C	0	Grand Hotel Guest Portable Generators	Value Pro	250000	50	125000				
0062v000C	0	0012v000C	0	Pyramid Emergency Generators	Prospect	100000	10	10000				
0062v000C	0	0012v000C	0	Express Logistics Portable Truck Generators	Value Pro	80000	50	40000				
0062v000C	0	0012v000C	0	GenePoint Lab Generators	Id. Decisic	60000	60	36000				
0062v000C	0	0012v000C	0	United Oil Plant Standby Generators	Needs An	675000	20	135000				
0062v000C	0	0012v000C	0	Edge Emergency Generator	Id. Decisic	35000	60	21000				

Note: The output for this task may vary depending upon the Opportunities in your Salesforce account.

This concludes the lab.

Module 6: Mapping Parameters

Lab 6-2: Using Parameter File in a Mapping Task

Overview:

Parameterized mapping allows adding inputs to the configuration point at runtime. You can also use Informatica Cloud REST API to create, modify, and run parameterized tasks from a third-party application.

In this lab, you will use the Informatica Cloud Mapping Designer's Parameterized mapping to accomplish the business requirements.

Objective:

- Build a fully parameterized mapping

Duration:

20 minutes

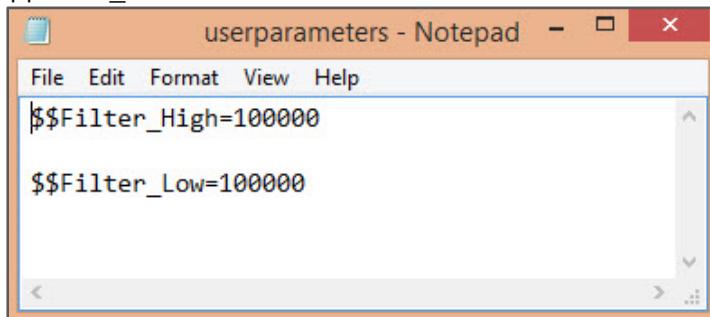
Tasks:

Create a Parameter File:

1. Create a text file with name **userparameters** and add the following content to it:

\$\$Filter_High=100000

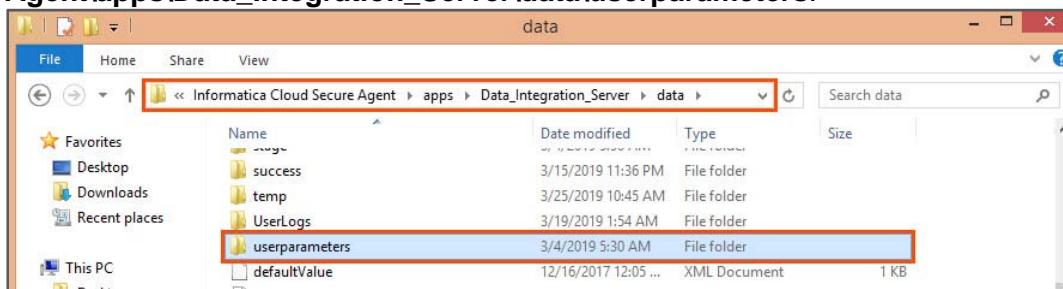
\$\$Filter_Low=100000



2. Copy the **userparameters** file to your Secure Agent directory **C:\Program**

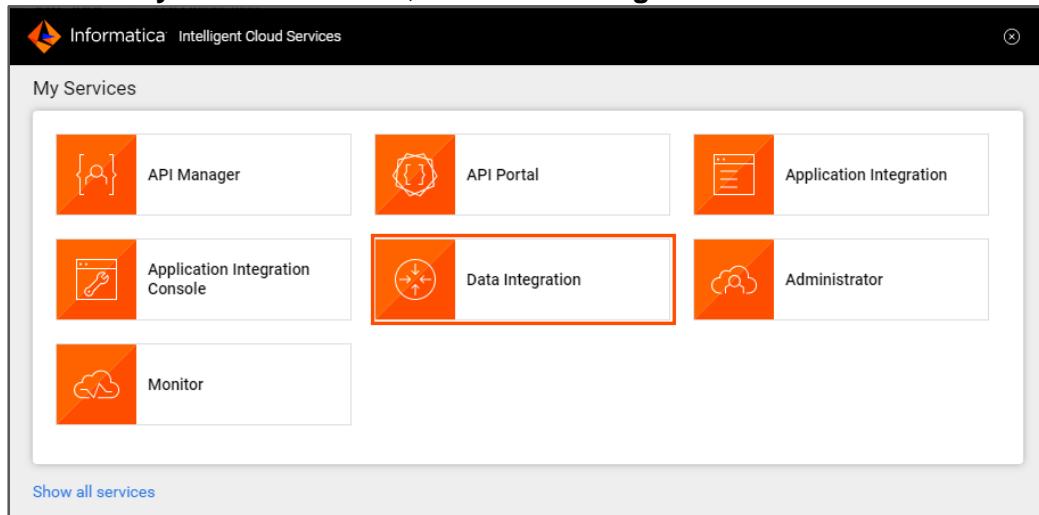
Files\Informatica Cloud Secure

Agent\apps\Data_Integration_Server\data\userparameters.

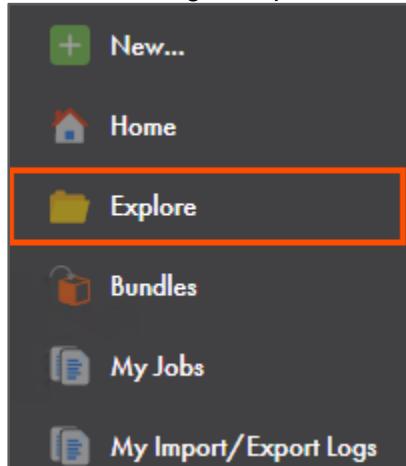


Create Mapping Task:

3. Open the IICS Login page from the Bookmarks bar.
Note: Follow this step if you have navigated away from the login page.
4. Enter the login credentials provided by the Instructor and click **Log In**.
5. From the **My Services** window, select **Data Integration**.



6. From the navigation pane, select **Explore**.



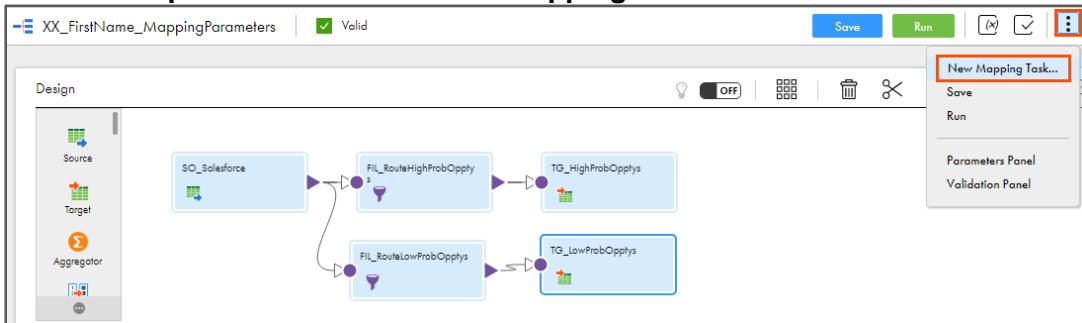
7. Go to **CDI ILT Development\XX-Firstname** folder and select the mapping **XX_FirstName_MappingParameters**.
Note: Here, XX refers to your initials, and FIRSTNAME refers to your First Name.

8. Click the Ellipsis icon and select **Edit**.

XX-Firstname [10] 1 selected ▾						Find
	Name	Type	Updated On	Description	Tags	Status
<input type="checkbox"/>	XX_FirstName_Employee	Synchronization Task	Aug 6, 2019, 7:09 AM			Valid
<input checked="" type="checkbox"/>	XX_FirstName_MappingParameters	Mapping	Aug 7, 2019, 7:39 AM			Valid
<input type="checkbox"/>	XX_FirstName_MultiObject	Synchronization Task	Aug 7, 2019, 12:34 AM			
<input type="checkbox"/>	XX_FirstName_NormalizerAggregator	Mapping	Aug 7, 2019, 4:59 AM			
<input type="checkbox"/>	XX_FirstName_OutletsLoad	Synchronization Task	Aug 6, 2019, 5:07 AM			
<input type="checkbox"/>	XX_FirstName_PrePost	Synchronization Task	Aug 7, 2019, 2:00 AM			
<input type="checkbox"/>	XX_FirstName_ShippingFiles	Mapping	Aug 7, 2019, 3:50 AM			
<input type="checkbox"/>	XX_FirstName_SQLTransformation	Mapping	Aug 7, 2019, 7:02 AM			
<input type="checkbox"/>	XX_FirstName_UnconnectedLookup	Mapping	Aug 7, 2019, 6:39 AM			
<input type="checkbox"/>	XX_NormalizerAggregator_Task	Mapping Task	Aug 7, 2019, 6:15 AM			

Note: The Mapping canvas appears.

9. Click the Ellipsis icon and select **New Mapping Task...**

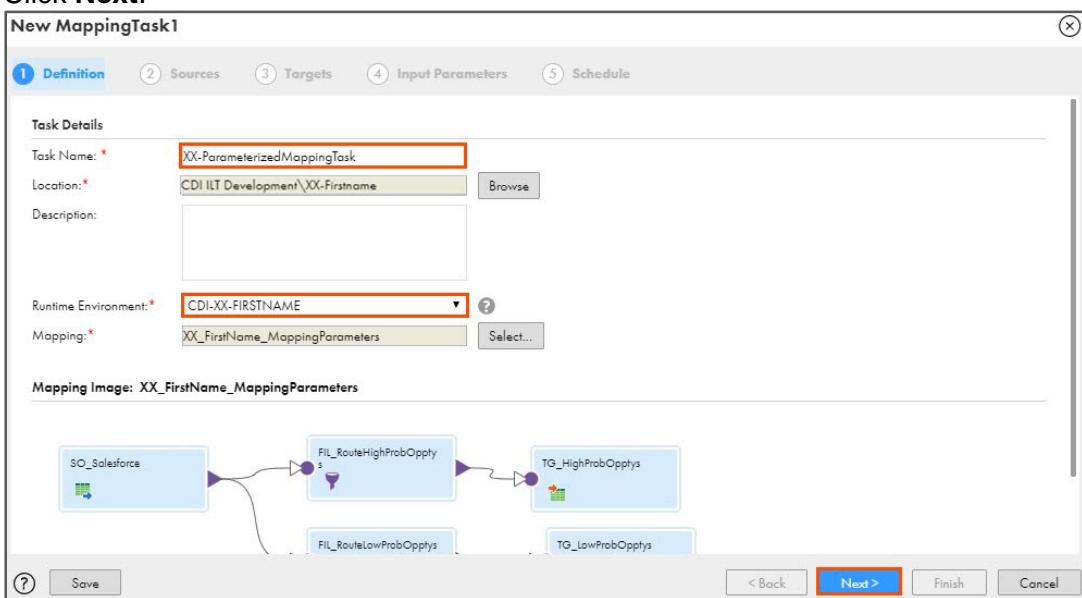


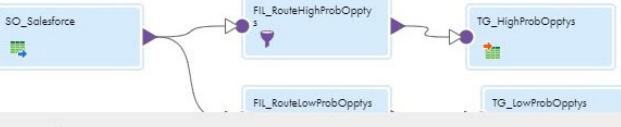
10. In the Task Name field, enter **XX-ParameterizedMappingTask**.

Note: Here, XX refers to your initials.

11. From the Runtime Environment drop-down, select your secure agent group.

12. Click **Next**.



① Definition	② Sources	③ Targets	④ Input Parameters	⑤ Schedule
Task Details Task Name: * XX-ParameterizedMappingTask Location: * CDI ILT Development\XX-Firstname <input type="button" value="Browse"/> Description: Runtime Environment: * CDI-XX-FIRSTNAME Mapping: * XX_FirstName_MappingParameters <input type="button" value="Select..."/> Mapping Image: XX_FirstName_MappingParameters  <input type="button" value="Save"/> <input type="button" value="Next >"/> <input type="button" value="Finish"/> <input type="button" value="Cancel"/>				

13. From the Salesforce (P_SalesforceConnection) Connection drop-down, select **XX_FirstName_SFDCDeveloper**.
14. In the **Salesforce Object** field, click **Select**.

New XX-ParameterizedMappingTask

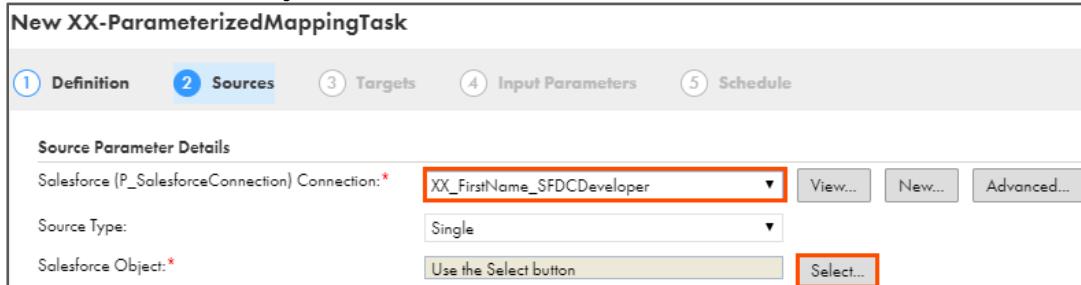
① Definition ② Sources ③ Targets ④ Input Parameters ⑤ Schedule

Source Parameter Details

Salesforce (P_SalesforceConnection) Connection: * **XX_FirstName_SFDCDeveloper** View... New... Advanced...

Source Type: Single

Salesforce Object: * Use the Select button **Select...**



15. From the Select Source Object window, select **Opportunity**, and click **Select**.
Note: You can also use the search feature to locate the Opportunity object.

Select Source Object

Select a source object, and then click Select. You can also search for a source object.

XX_FirstName_SFDCDeveloper

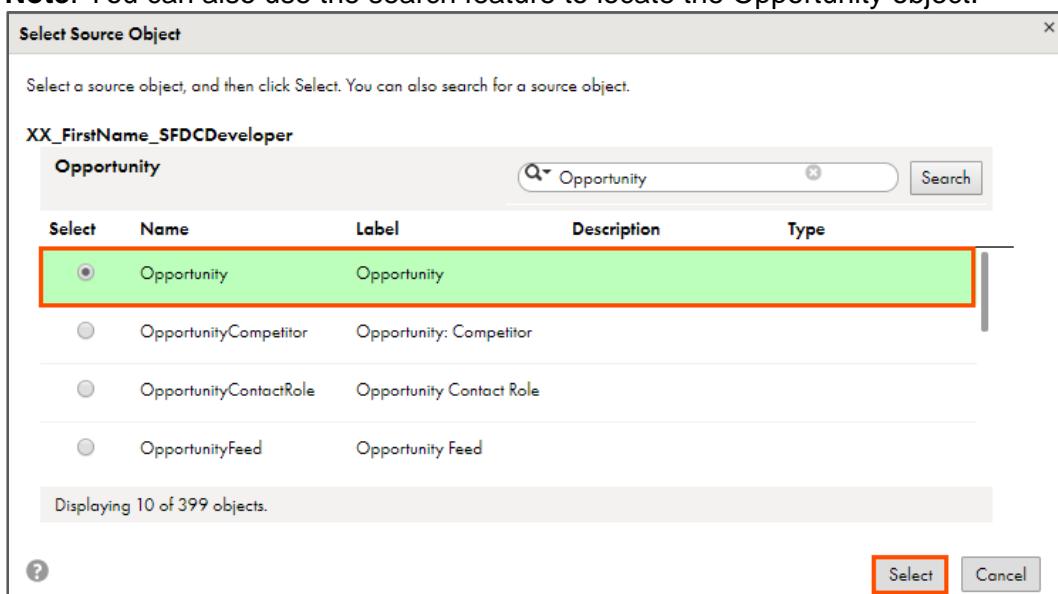
Opportunity

Select	Name	Label	Description	Type
<input checked="" type="radio"/>	Opportunity	Opportunity		
<input type="radio"/>	OpportunityCompetitor	Opportunity: Competitor		
<input type="radio"/>	OpportunityContactRole	Opportunity Contact Role		
<input type="radio"/>	OpportunityFeed	Opportunity Feed		

Displaying 10 of 399 objects.

?

Select **Cancel**



16. Click **Next**.

New XX-ParameterizedMappingTask

① Definition ② Sources ③ Targets ④ Input Parameters ⑤ Schedule

Source Parameter Details

Salesforce (P_SalesforceConnection) Connection: * **XX_FirstName_SFDCDeveloper** View... New... Advanced...

Source Type: Single

Salesforce Object: * **Opportunity** Select...

Query Options

Filter: [Configure...](#)

Display technical names instead of labels
 Display source fields in alphabetical order

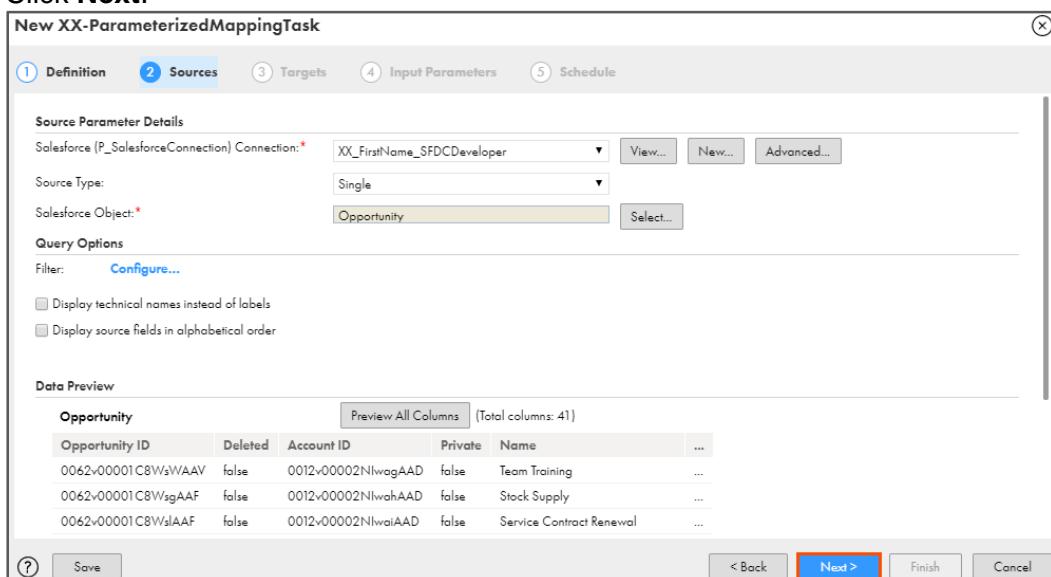
Data Preview

Opportunity					Preview All Columns	(Total columns: 41)
Opportunity ID	Deleted	Account ID	Private	Name	...	
0062-00001C8W5AAV	false	0012-00002NlwagAAD	false	Team Training	...	
0062-00001C8W5gAAF	false	0012-00002NlwahAAD	false	Stock Supply	...	
0062-00001C8WslAAF	false	0012-00002NlwhiAAD	false	Service Contract Renewal	...	

?

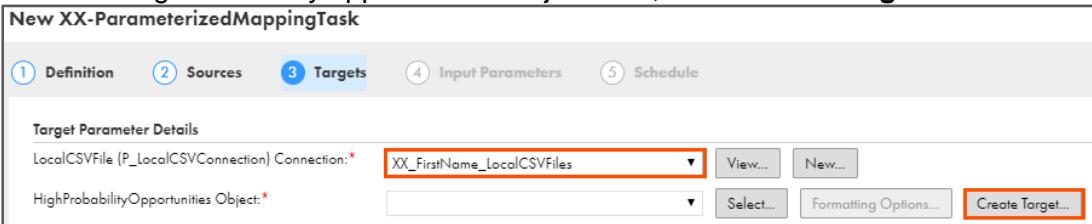
Save

< Back **Next >** Finish Cancel



17. From the LocalCSVFile (P_LocalCSVConnection) Connection drop-down, select **XX_FirstName_LocalCSVFiles**.

18. From the HighProbabilityOpportunities Object field, click **Create Target**.



New XX-ParameterizedMappingTask

① Definition ② Sources ③ Targets ④ Input Parameters ⑤ Schedule

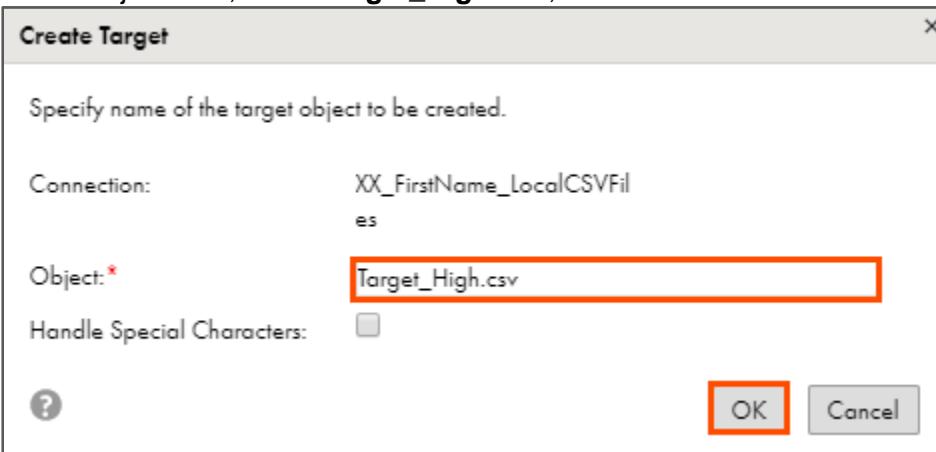
Target Parameter Details

LocalCSVFile (P_LocalCSVConnection) Connection: * **XX_FirstName_LocalCSVFiles** View... New...

HighProbabilityOpportunities Object: * Select... Formatting Options... **Create Target...**

Note: The Create Target window appears.

19. In the Object field, enter **Target_High.csv**, and click **OK**.



Create Target

Specify name of the target object to be created.

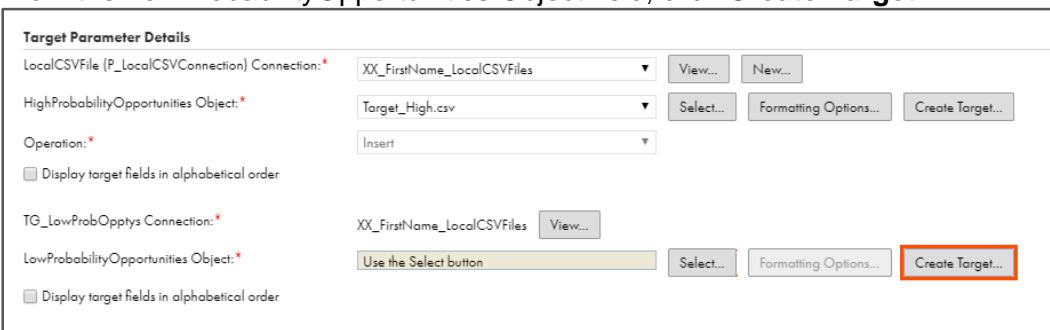
Connection: XX_FirstName_LocalCSVFil
es

Object: * **Target_High.csv**

Handle Special Characters:

OK Cancel

20. From the LowProbabilityOpportunities Object field, click **Create Target**.



Target Parameter Details

LocalCSVFile (P_LocalCSVConnection) Connection: * **XX_FirstName_LocalCSVFiles** View... New...

HighProbabilityOpportunities Object: * **Target_High.csv** Select... Formatting Options... **Create Target...**

Operation: * **Insert**

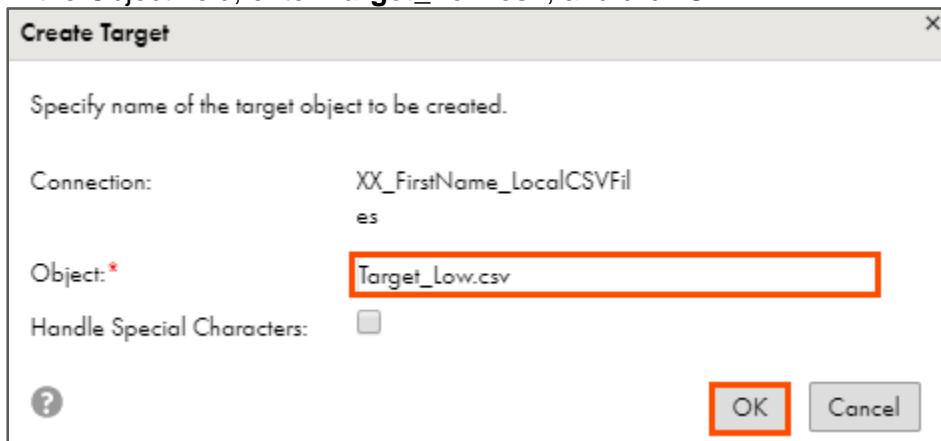
Display target fields in alphabetical order

TG_LowProbOpptys Connection: * **XX_FirstName_LocalCSVFiles** View...

LowProbabilityOpportunities Object: * **Use the Select button** Select... Formatting Options... **Create Target...**

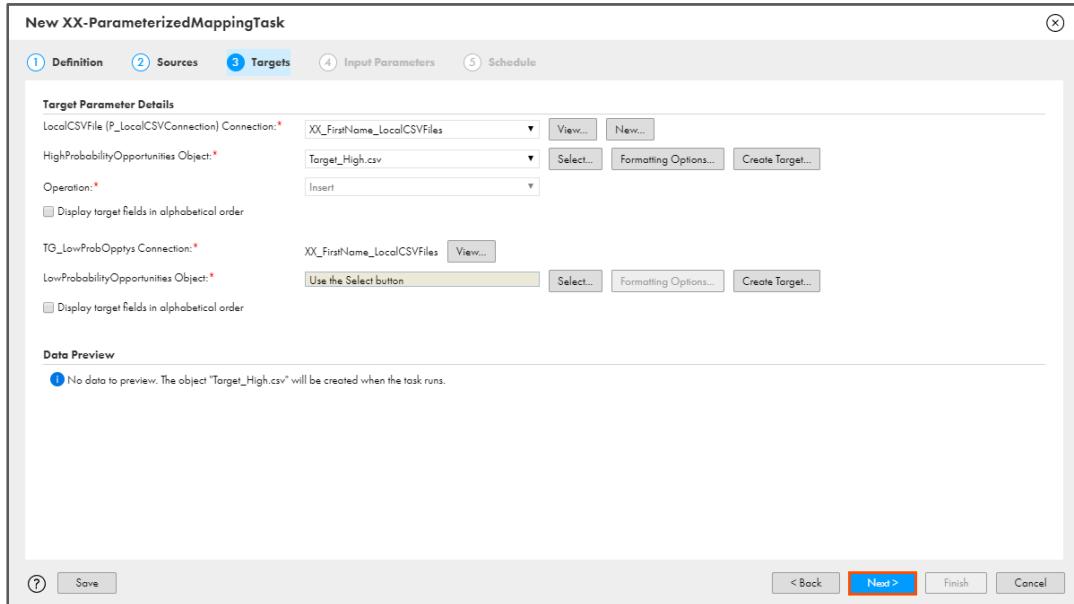
Display target fields in alphabetical order

21. In the Object field, enter **Target_Low.csv**, and click **OK**.

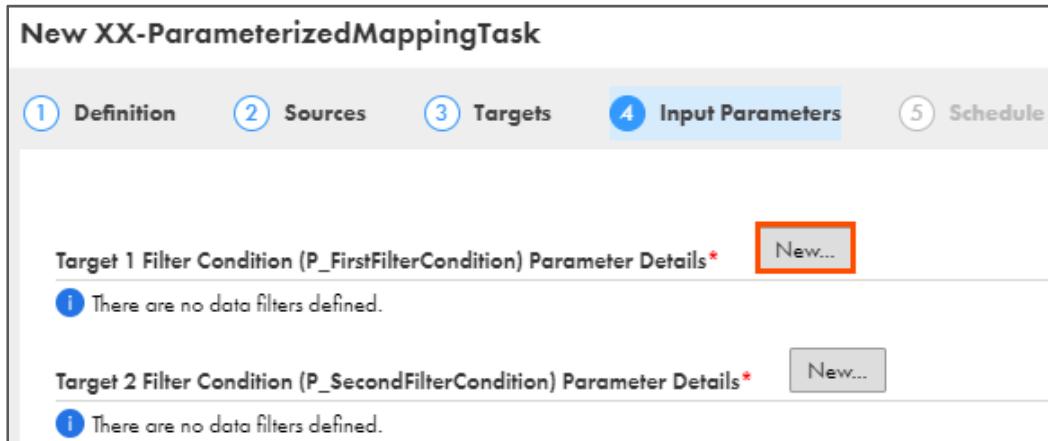


Note: When you set up the target parameters, ensure that the target directory does not contain files with the same names for HighProbabilityOpportunities Object and LowProbabilityOpportunities Object parameters.

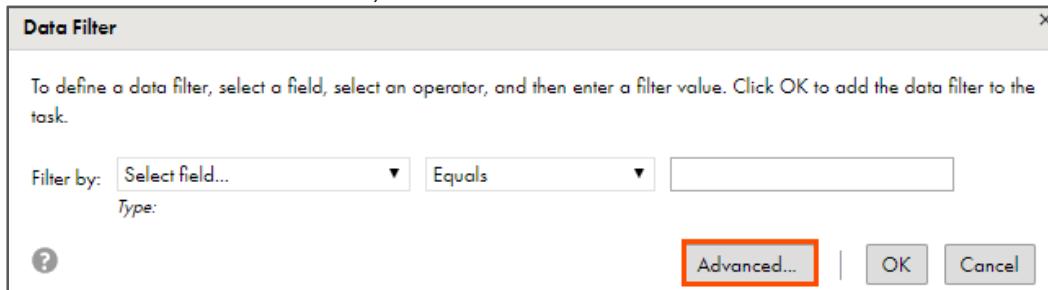
22. Click **Next**.



23. From the Target 1 Filter Condition (P_FirstFilterCondition) Parameter Details field, click **New...**.



24. From the Data Filter window, click **Advanced...**.



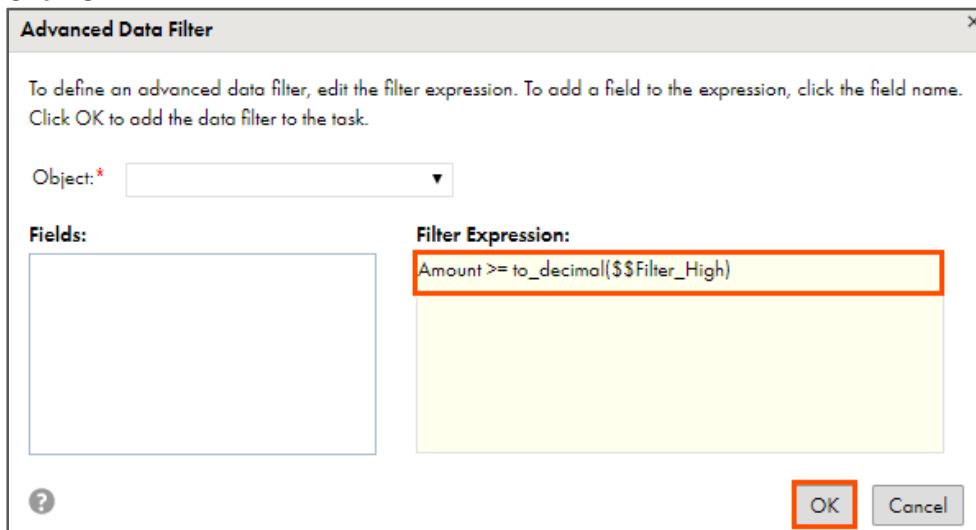
25. In the Filter Expression field, enter the following expression:

Amount >= to_decimal(\$\$Filter_High)

OR

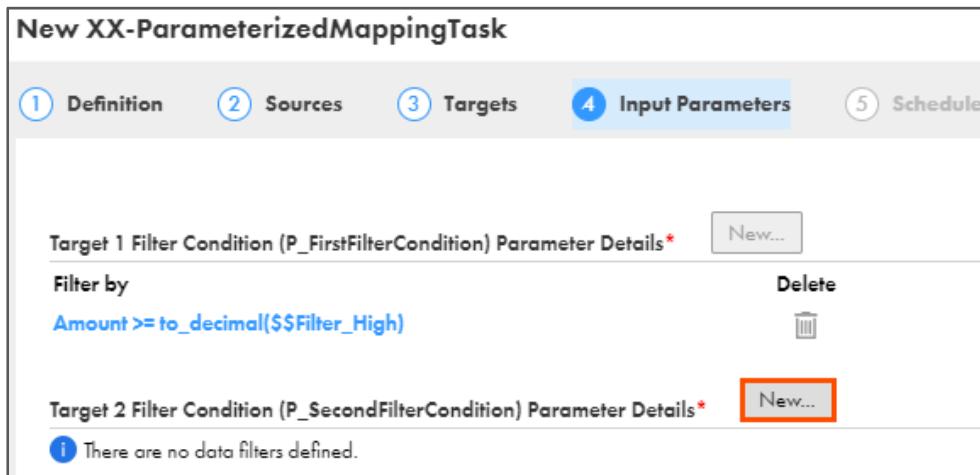
Navigate to the **C:\Students\Commands** directory on your local machine and open the file named **15_LabGuide_UsingParameterFile_6-2**. Copy the command mentioned under **Step 25** and paste it in the Expression field.

26. Click **OK**.



Note: In the Data Filter window, click X to close the window.

27. In the Target 2 Filter Condition (P_SecondFilterCondition) Parameter Details field, click **New**.



New XX-ParameterizedMappingTask

① Definition ② Sources ③ Targets ④ **Input Parameters** ⑤ Schedule

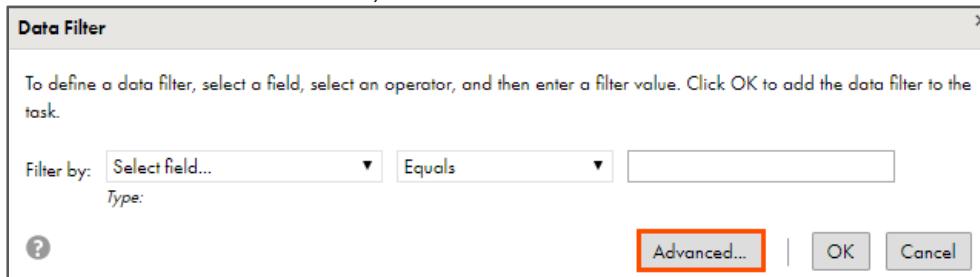
Target 1 Filter Condition (P_FirstFilterCondition) Parameter Details*

Filter by: Amount >= to_decimal(\$\$Filter_High)

Target 2 Filter Condition (P_SecondFilterCondition) Parameter Details*

There are no data filters defined.

28. From the Data Filter window, click **Advanced**.



Data Filter

To define a data filter, select a field, select an operator, and then enter a filter value. Click OK to add the data filter to the task.

Filter by: Select field... Equals Type:

?

Advanced... | OK Cancel

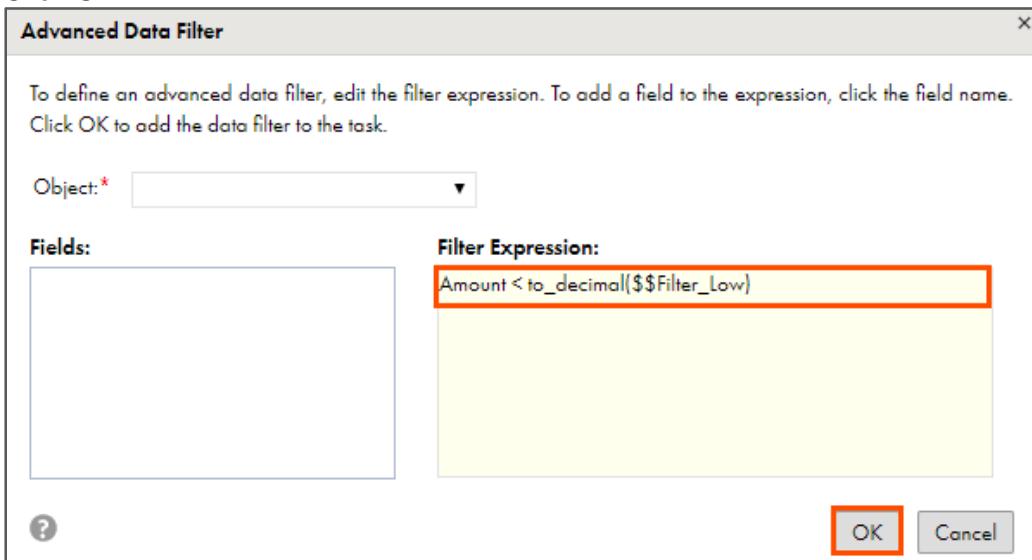
29. In the Filter Expression field, enter the following expression:

Amount < to_decimal(\$\$Filter_Low)

OR

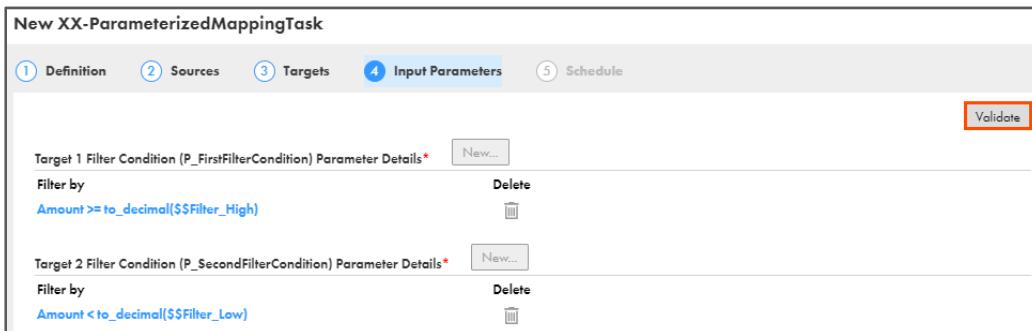
Navigate to the **C:\Students\Commands** directory on your local machine and open the file named **15_LabGuide_UsingParameterFile_6-2**. Copy the command mentioned under **Step 29** and paste it in the Expression field.

30. Click **OK**.



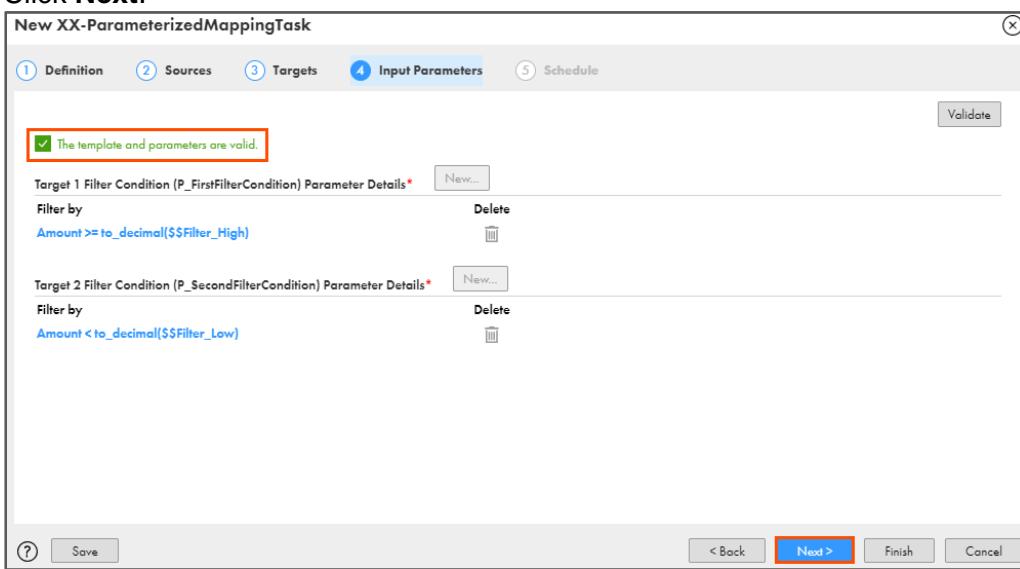
Note: In the Data Filter window, click X to close the window.

31. Click **Validate**.



Note: The template and parameters are valid message appears.

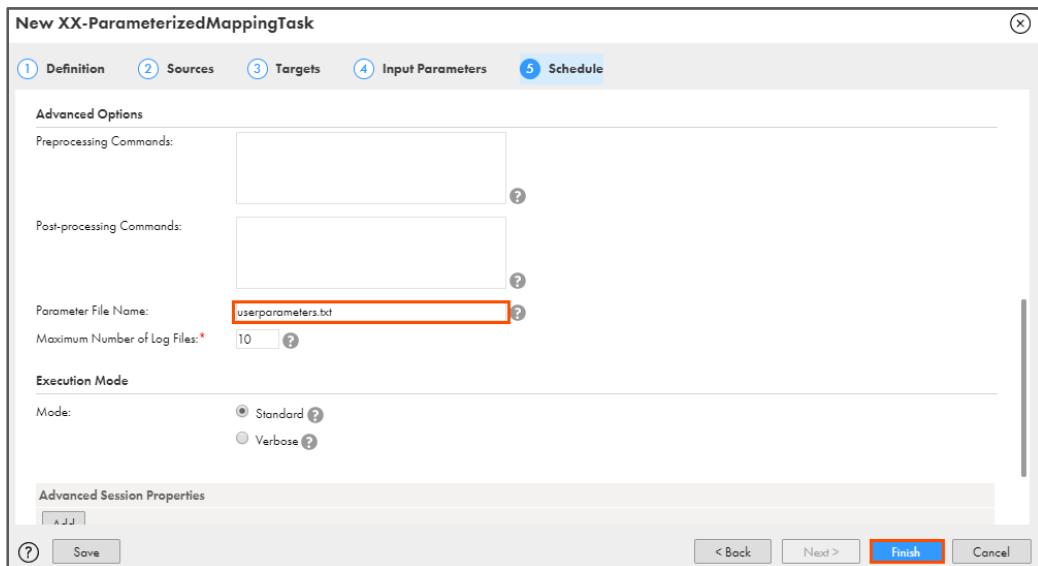
32. Click **Next**.



33. Scroll down to the **Advanced Options** section, and in the Parameter File Name field, enter **userparameters.txt**.

Note: Verify that the file name is exactly same as the created parameter file name, or else the task will fail.

34. Click **Finish**.

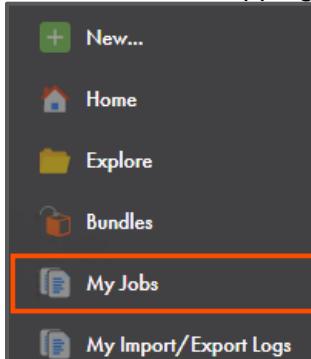


35. Click **Run**.



Monitor Status:

36. To monitor the mapping status, from the navigation pane, click **My Jobs**.



37. When the task completes, the status changes to **Success**.

Jobs (1 of 27) <input checked="" type="checkbox"/> Up to date		Updated 3:33:16 AM PDT    Find				
Asset Name: XX-ParameterizedMap...   Add Field 		Subtasks	Start Time	End Time	Rows Processed	State
Instance Name						
 XX-ParameterizedMappingTask-1			Aug 1, 2019, ...	Aug 1, 2019, ...	29	 Success

Note: The task runs successfully containing rows with zero errors. The number of success rows vary depending on the number of rows present in your source that is the Opportunity object in Salesforce.

Verify Results:

38. On your local machine, go to **C:\IICSLabFiles**.
39. Verify that correct entries are written to **Target_High.csv** and **Target_Low.csv** files.

Target_High.csv:

<u>ID</u>	<u>IsDeleted</u>	<u>AccountId</u>	<u>IsPrivate</u>	<u>Name</u>	<u>Description</u>	<u>StageName</u>	<u>Amount</u>	<u>Probability</u>
0062v000C	0	0012v000C	0	Stock Supply		Proposal/	1000000	75
0062v000C	0	0012v000C	0	United Oil Office Portable Generators		Negotiation	125000	90
0062v000C	0	0012v000C	0	Express Logistics Standby Generator		Closed Won	220000	100
0062v000C	0	0012v000C	0	United Oil Refinery Generators		Proposal/	270000	75
0062v000C	0	0012v000C	0	United Oil SLA		Closed Won	120000	100
0062v000C	0	0012v000C	0	Grand Hotels Guest Portable Generators		Value Proposition	250000	50
0062v000C	0	0012v000C	0	Pyramid Emergency Generators		Prospective	100000	10
0062v000C	0	0012v000C	0	United Oil Installations		Negotiation	270000	90
0062v000C	0	0012v000C	0	United Oil Installations		Closed Won	270000	100
0062v000C	0	0012v000C	0	Grand Hotels Generator Installations		Closed Won	350000	100
0062v000C	0	0012v000C	0	United Oil Refinery Generators		Closed Won	915000	100
0062v000C	0	0012v000C	0	University of AZ Installations		Proposal/	100000	75
0062v000C	0	0012v000C	0	Express Logistics SLA		Perception	120000	70
0062v000C	0	0012v000C	0	Burlington Textiles Weaving Plant Generator		Closed Won	235000	100
0062v000C	0	0012v000C	0	United Oil Installations		Closed Won	235000	100
0062v000C	0	0012v000C	0	United Oil Emergency Generators		Closed Won	440000	100
0062v000C	0	0012v000C	0	United Oil Standby Generators		Closed Won	120000	100
0062v000C	0	0012v000C	0	Grand Hotels Emergency Generators		Closed Won	210000	100
0062v000C	0	0012v000C	0	United Oil Plant Standby Generators		Needs Analysis	675000	20

Target_Low.csv:

<u>ID</u>	<u>IsDeleted</u>	<u>AccountId</u>	<u>IsPrivate</u>	<u>Name</u>	<u>Description</u>	<u>StageName</u>	<u>Amount</u>	<u>Probability</u>
0062v000C	0	0012v000C	0	Team Training		Perspective	700	10
0062v000C	0	0012v000C	0	Service Contract Renewal		Id. Decision	95000	60
0062v000C	0	0012v000C	0	Annual Maintenance		Negotiation	50000	90
0062v000C	0	0012v000C	0	Dickenson Mobile Generators		Qualification	15000	10
0062v000C	0	0012v000C	0	GenePoint Standby Generator		Closed Won	85000	100
0062v000C	0	0012v000C	0	Grand Hotels Kitchen Generator		Id. Decision	15000	60
0062v000C	0	0012v000C	0	Edge Emergency Generator		Closed Won	75000	100
0062v000C	0	0012v000C	0	University of AZ Portable Generators		Closed Won	50000	100
0062v000C	0	0012v000C	0	Express Logistics Portable Truck Generators		Value Proposition	80000	50
0062v000C	0	0012v000C	0	GenePoint Lab Generators		Id. Decision	60000	60
0062v000C	0	0012v000C	0	GenePoint SLA		Closed Won	30000	100
0062v000C	0	0012v000C	0	Edge Installation		Closed Won	50000	100
0062v000C	0	0012v000C	0	Edge SLA		Closed Won	60000	100
0062v000C	0	0012v000C	0	University of AZ SLA		Closed Won	90000	100
0062v000C	0	0012v000C	0	Grand Hotels SLA		Closed Won	90000	100
0062v000C	0	0012v000C	0	Edge Emergency Generator		Id. Decision	35000	60

Note: The output for this task may vary depending upon the Opportunities in your Salesforce account.

This concludes the lab.

Module 6: Mapping Parameters

Lab 6-3: Using In-Out Parameters for Incremental Data Loading

Overview:

In IICS, you can use an in-out parameter as a persistent task variable to manage an incremental data load.

In this lab, you will create a mapping with in-out parameter.

Objective:

- Create a mapping using Input-Output Parameters

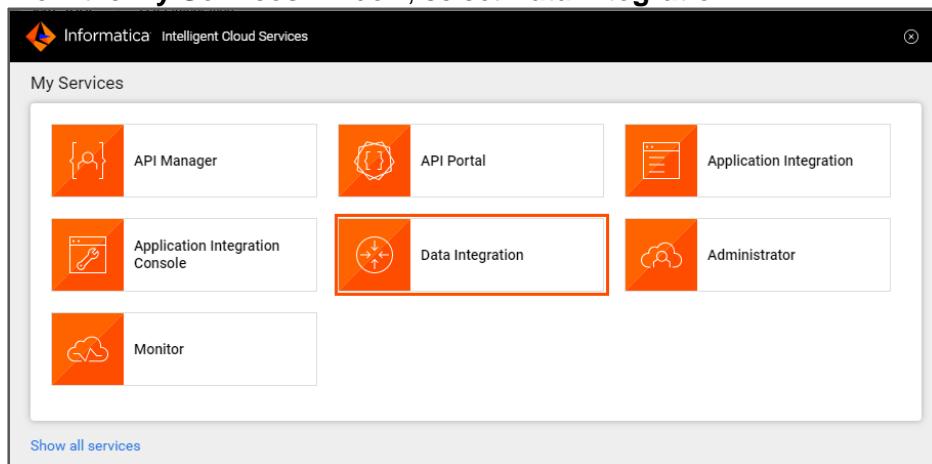
Duration:

20 minutes

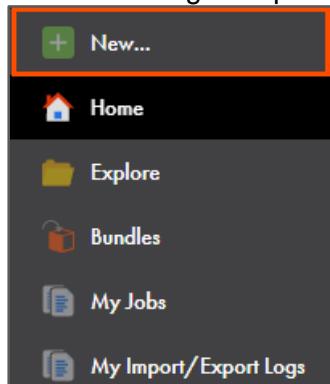
Tasks:

Create Mapping:

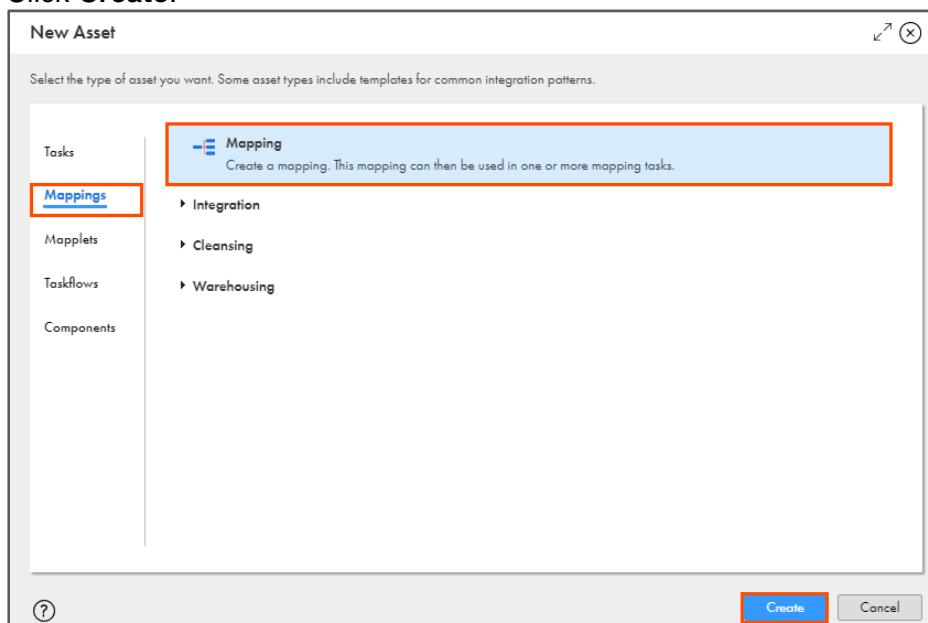
1. Open the IICS Login page from the Bookmarks bar.
Note: Follow this step if you have navigated away from the login page.
2. Enter the login credentials provided by the Instructor and click **Log In**.
3. From the **My Services** window, select **Data Integration**.



4. From the navigation pane, select **New**.



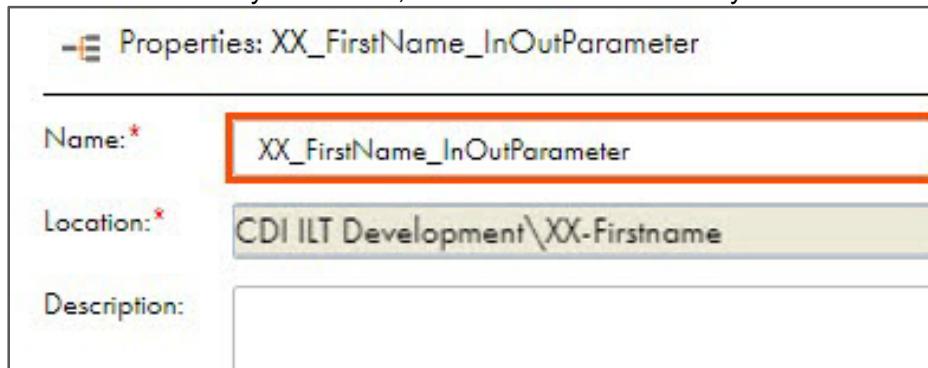
5. From the New Asset window, click the **Mappings** tab, and select **Mapping**.
 6. Click **Create**.



Note: The Mapping page appears.

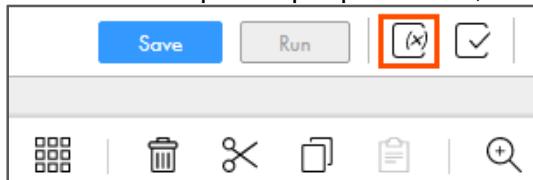
7. In the Name field, enter **XX_FirstName_InOutParameter**.

Note: XX refers to your initials, and FirstName refers to your First Name.



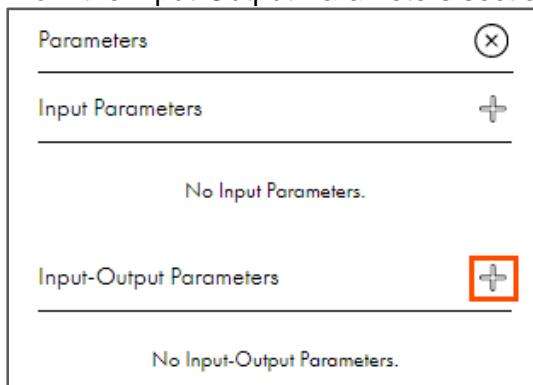
Properties: XX_FirstName_InOutParameter	
Name: *	XX_FirstName_InOutParameter
Location: *	CDI ILT Development\XX-Firstname
Description:	

8. To create an input-output parameter, click .



Note: The Parameters window appears.

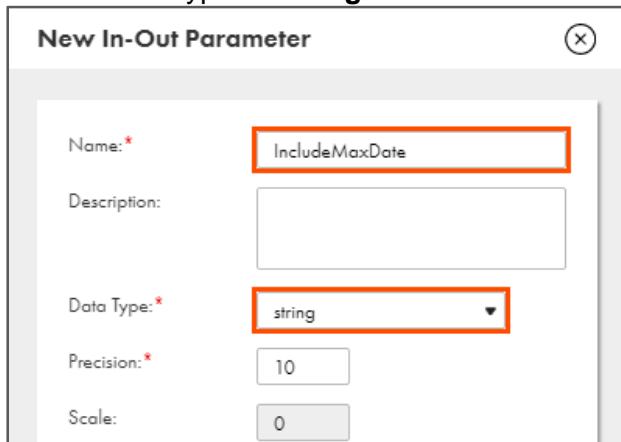
9. From the Input-Output Parameters section, click .



Note: The New In-Out Parameter window appears.

10. In the Name field, enter **IncludeMaxDate**.

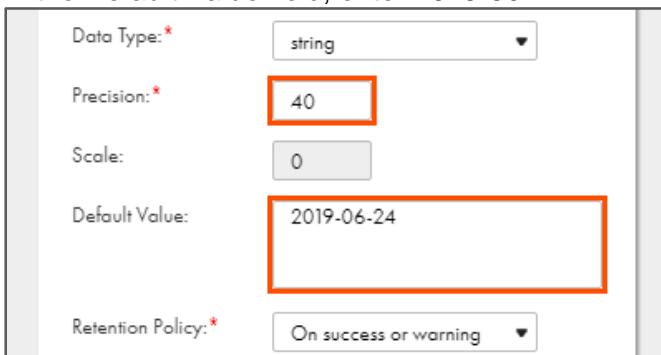
11. Retain Data Type as **string**.



Name: *	IncludeMaxDate
Description:	(empty text area)
Data Type: *	string
Precision: *	10
Scale:	0

12. In the Precision field, enter **40**.

13. In the Default Value field, enter **2019-06-24**.



The screenshot shows the configuration dialog for a new parameter. The 'Default Value' field contains the date '2019-06-24', which is highlighted with a red border.

Data Type:	string
Precision:	40
Scale:	0
Default Value:	2019-06-24
Retention Policy:	On success or warning

14. Click **OK**.



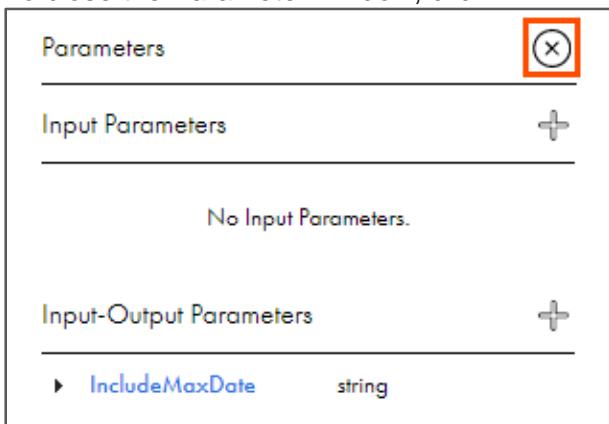
The screenshot shows the 'New In-Out Parameter' dialog box. The 'Default Value' field contains the date '2019-06-24'. The 'OK' button at the bottom is highlighted with a red border.

New In-Out Parameter

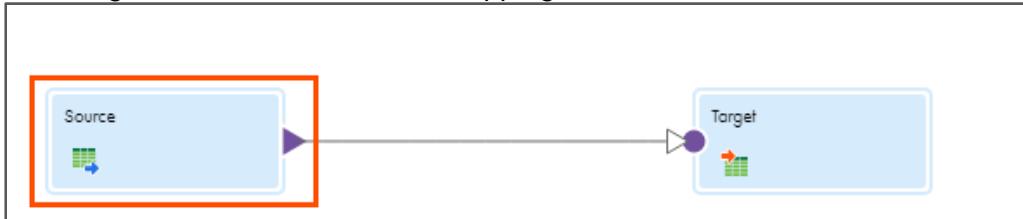
Name:	IncludeMaxDate
Description:	(empty)
Data Type:	string
Precision:	40
Scale:	0
Default Value:	2019-06-24
Retention Policy:	On success or warning
Aggregation Type:	Max

OK Cancel

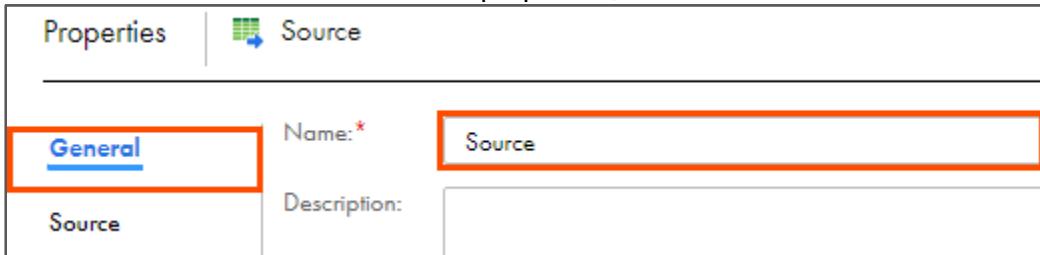
15. To close the Parameter window, click .



16. To configure the source, from the mapping canvas, click the **Source** transformation.

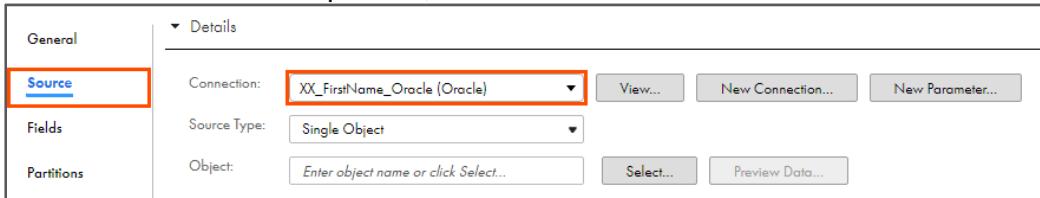


17. In the General section of the Source properties, retain Name as **Source**.



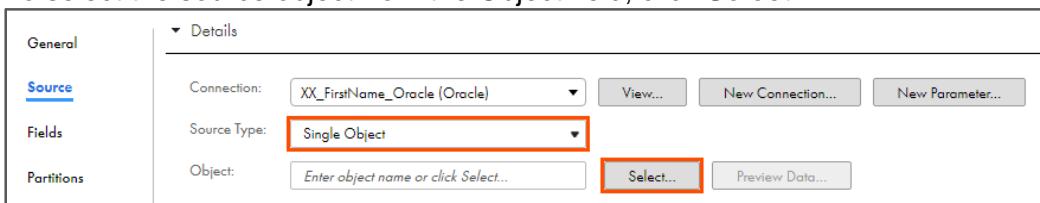
18. From the properties pane, click **Source**.

19. From the Connection drop-down, select **XX_FirstName_Oracle**.



20. Retain Source Type as **Single Object**.

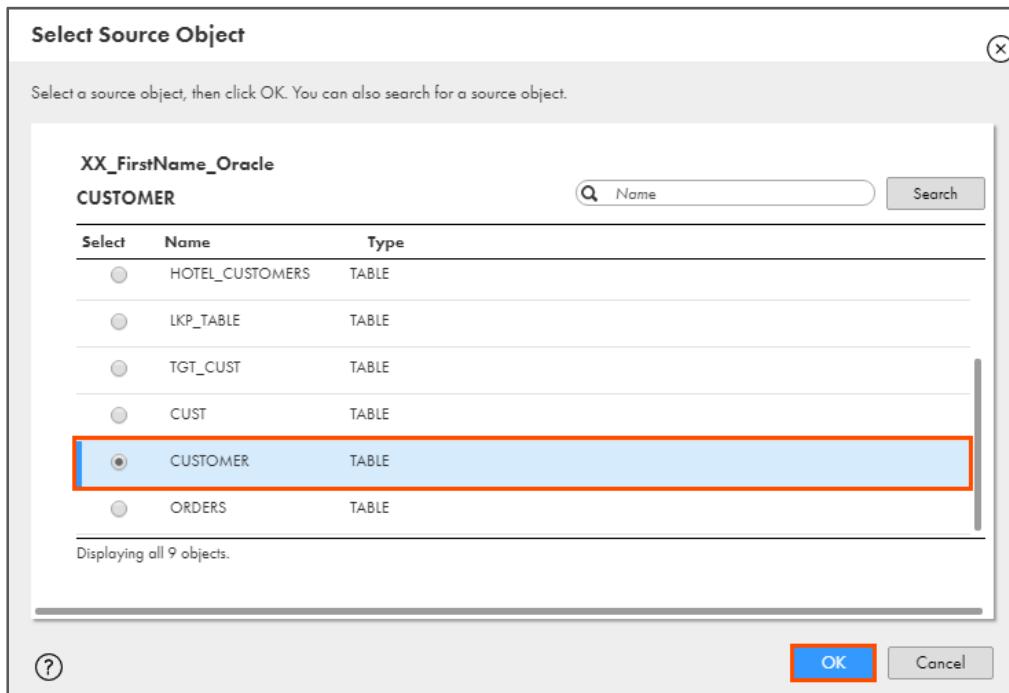
21. To select the source object from the Object field, click **Select**.



Note: The Select Source Object window appears.

22. From the list, select **CUSTOMER**.

23. Click **OK**.



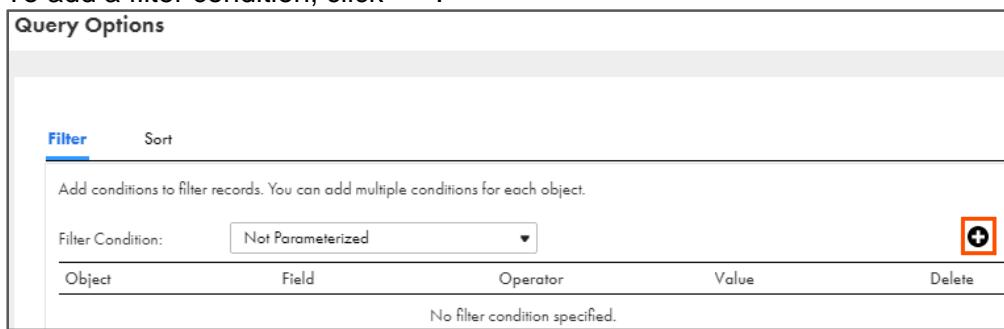
24. From the Source pane, expand **Query Options**.

25. To apply filter to select rows from the CUSTOMER table, click **Configure**.



Note: The Query Options window appears.

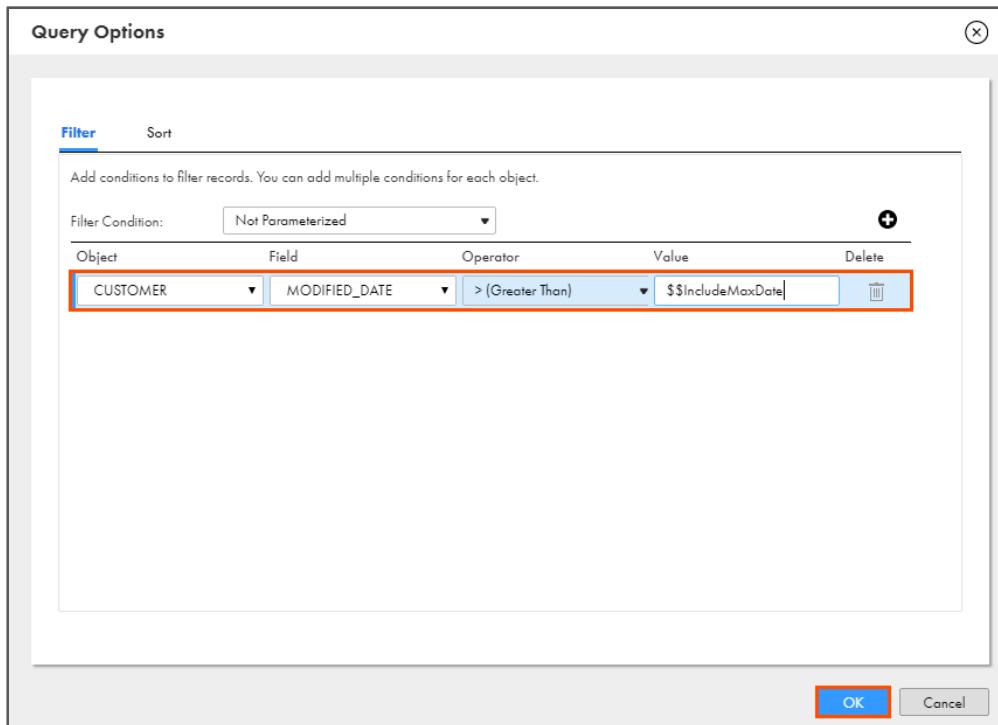
26. To add a filter condition, click .



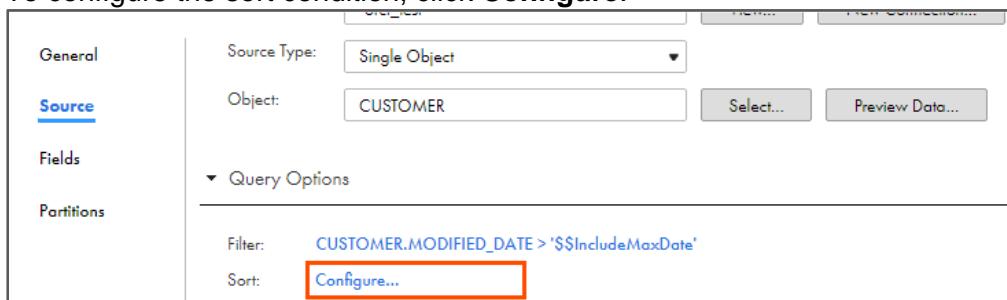
27. Enter the details as shown in table below:

Object	Field	Operator	Value
CUSTOMER	MODIFIED_DATE	Greater Than (>)	\$\$IncludeMaxDate

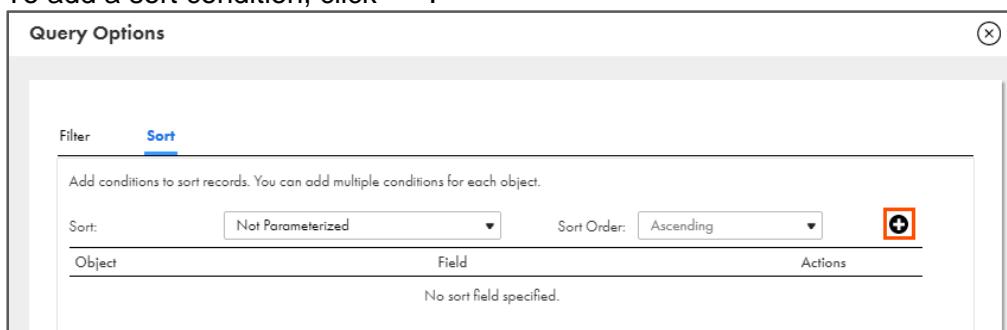
28. Click **OK**.



29. To configure the sort condition, click **Configure**.



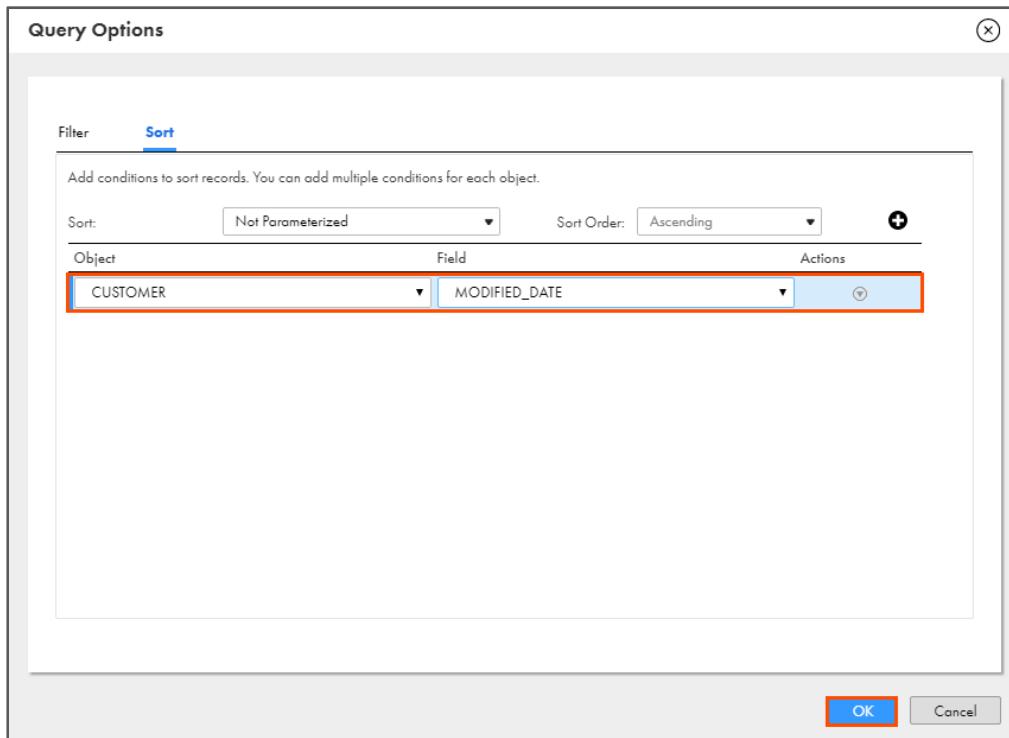
30. To add a sort condition, click .



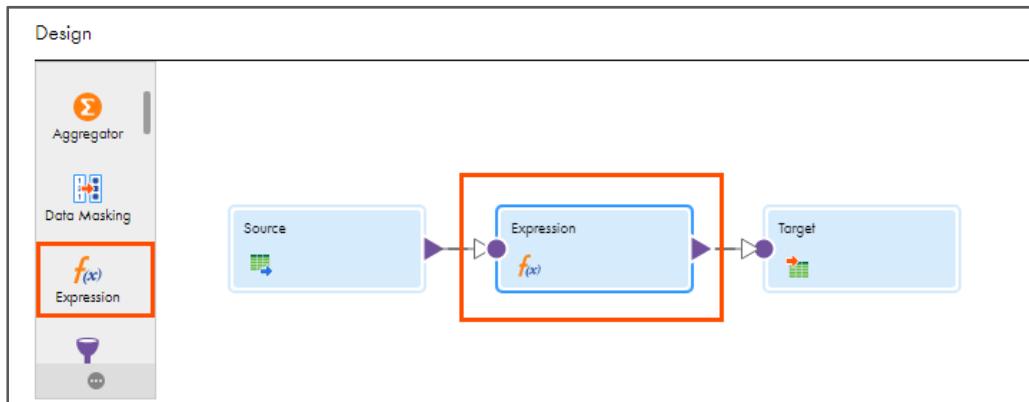
31. Enter the details, as shown in the table below:

Object	Field
CUSTOMER	MODIFIED_DATE

32. Click **OK**.

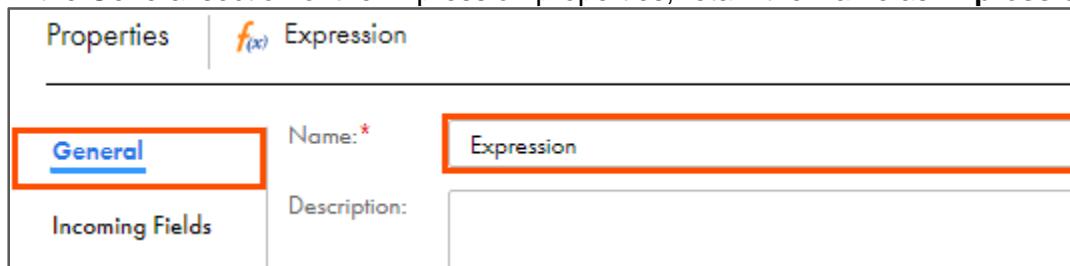


33. From the list of available transformations, drag, and drop **Expression** transformation on the link between **Source** and **Target**.



34. Select the **Expression** transformation from the mapping canvas.

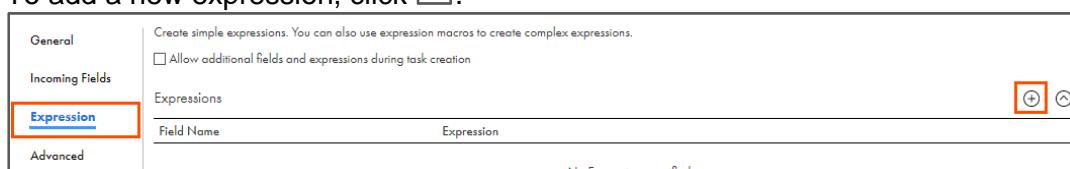
35. In the General section of the Expression properties, retain the Name as **Expression**.



Properties		Expression
General		Name: * Expression
Incoming Fields		Description:

36. From the properties pane, click **Expression**.

37. To add a new expression, click .



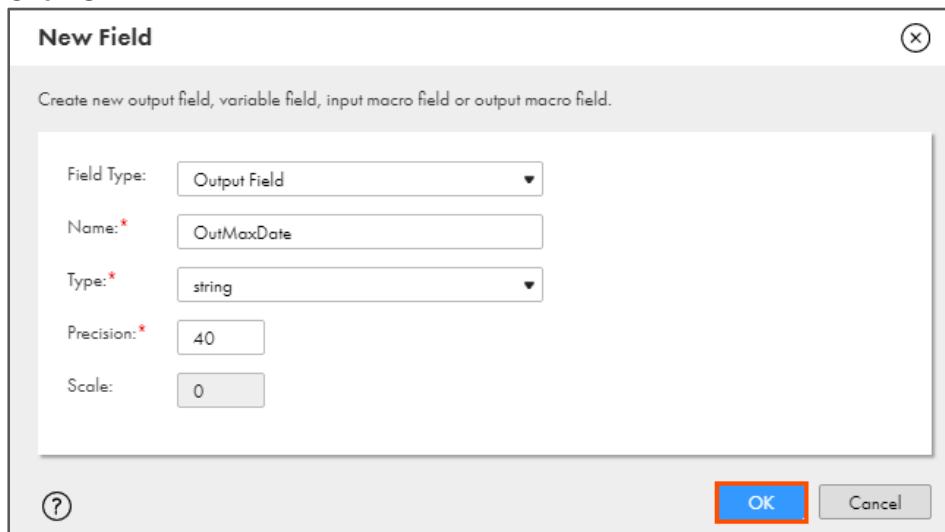
General		Create simple expressions. You can also use expression macros to create complex expressions.	
Incoming Fields		<input type="checkbox"/> Allow additional fields and expressions during task creation	
Expression		Expressions	
Advanced			
Field Name	Expression		

Note: The New Field window appears.

38. Enter the details, as shown in the table below:

Field Type	Name	Type	Precision	Scale
Output Field	OutMaxDate	string	40	0

39. Click **OK**.



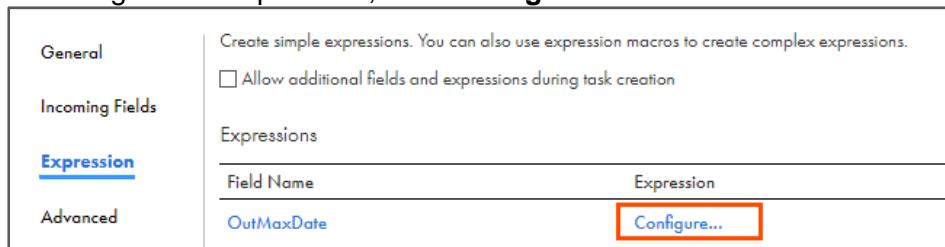
New Field

Create new output field, variable field, input macro field or output macro field.

Field Type:	Output Field
Name: *	OutMaxDate
Type: *	string
Precision: *	40
Scale:	0

OK

40. To configure the expression, click **Configure**.



General		Create simple expressions. You can also use expression macros to create complex expressions.	
Incoming Fields		<input type="checkbox"/> Allow additional fields and expressions during task creation	
Expression		Expressions	
Advanced		Configure...	
Field Name	Expression		
OutMaxDate	Configure...		

Note: The Field Expression window appears.

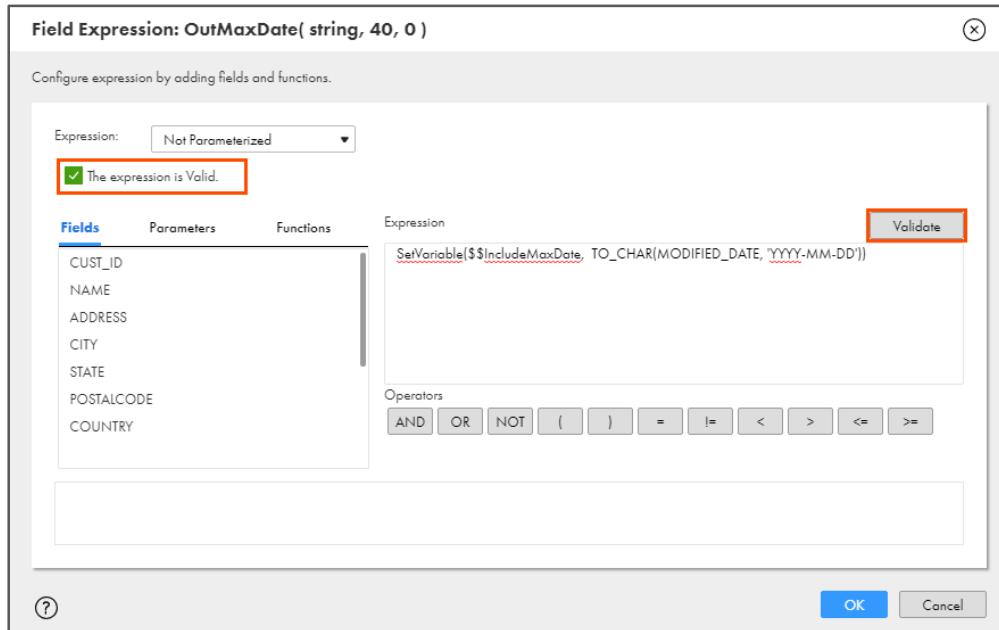
41. In the Expression field, copy and paste the following expression:

`SetVariable($$IncludeMaxDate, TO_CHAR(MODIFIED_DATE, 'YYYY-MM-DD'))`

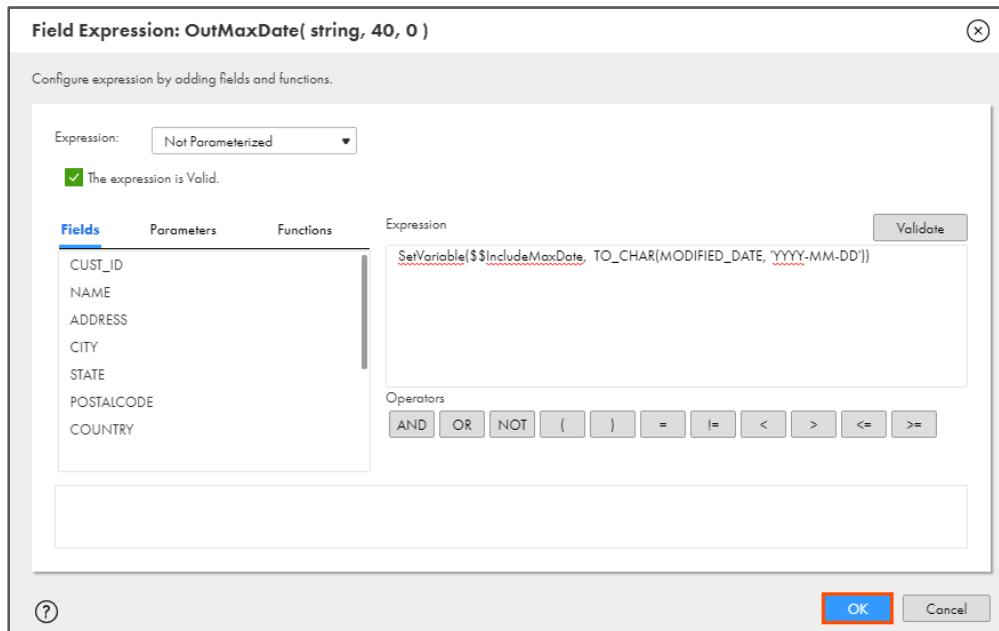
OR

Navigate to the **C:\Students\Commands** directory on your local machine and open the file named **16_LabGuide_UsingInOutParameter_6-3**. Copy the command mentioned under **Step 41** and paste it in the Expression field.

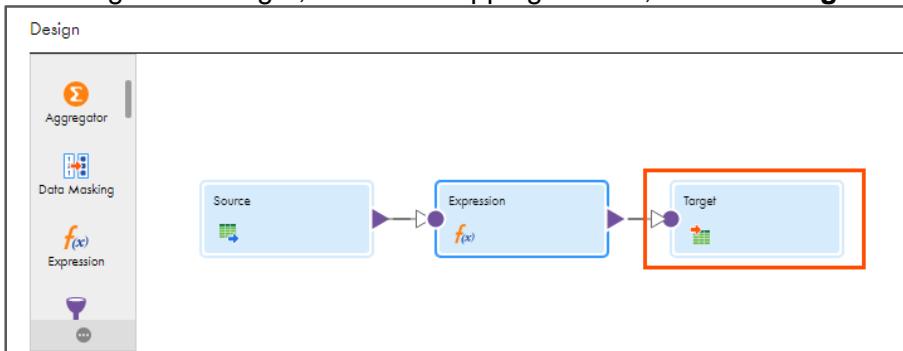
42. Click **Validate**.



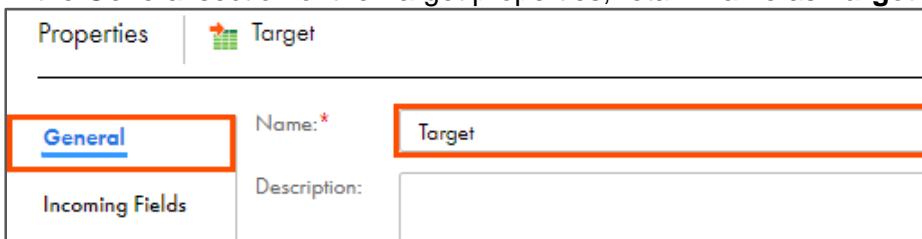
43. Click **OK**.



44. To configure the target, from the mapping canvas, click the **Target** transformation.



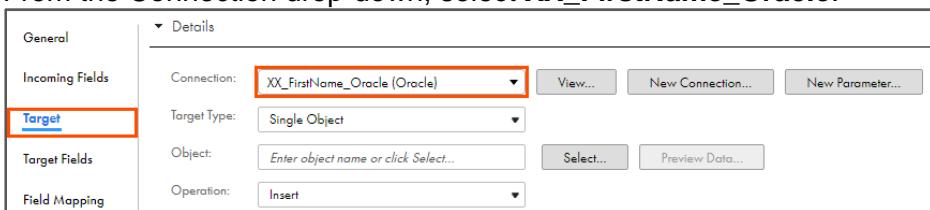
45. In the General section of the Target properties, retain Name as **Target**.



Properties	 Target
General	Name: * Target
Incoming Fields	Description:

46. From the properties pane, click **Target**.

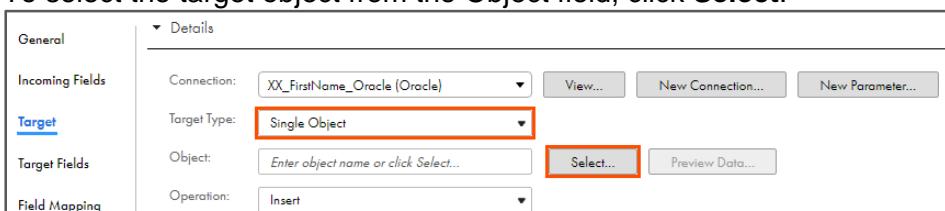
47. From the Connection drop-down, select **XX_FirstName_Oracle**.



General	▼ Details
Incoming Fields	Connection: XX_FirstName_Oracle (Oracle)
Target	Target Type: Single Object
Target Fields	Object: Enter object name or click Select... Select... Preview Data...
Field Mapping	Operation: Insert

48. Retain Target Type as **Single Object**.

49. To select the target object from the Object field, click **Select**.



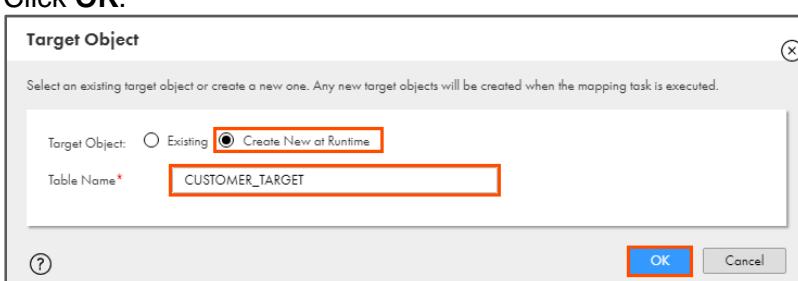
General	▼ Details
Incoming Fields	Connection: XX_FirstName_Oracle (Oracle)
Target	Target Type: Single Object
Target Fields	Object: Enter object name or click Select... Select... Preview Data...
Field Mapping	Operation: Insert

Note: The Target Object window appears.

50. In the Target Object window, select **Create New at Runtime**.

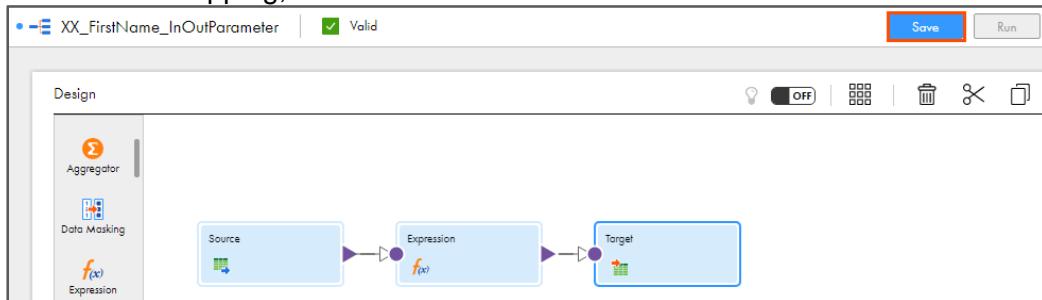
51. In the Table Name field, enter **CUSTOMER_TARGET**.

52. Click **OK**.

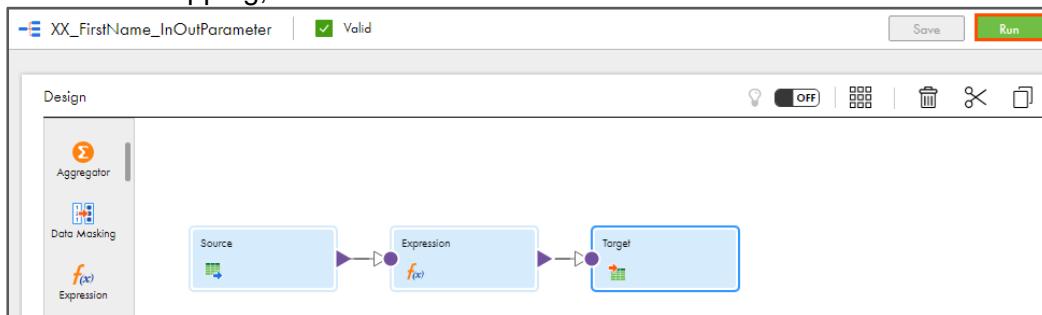


Target Object	(X)
Select an existing target object or create a new one. Any new target objects will be created when the mapping task is executed.	
Target Object:	<input type="radio"/> Existing <input checked="" type="radio"/> Create New at Runtime
Table Name *	CUSTOMER_TARGET
<input type="button" value="OK"/> <input type="button" value="Cancel"/>	

53. To save the mapping, click **Save**.

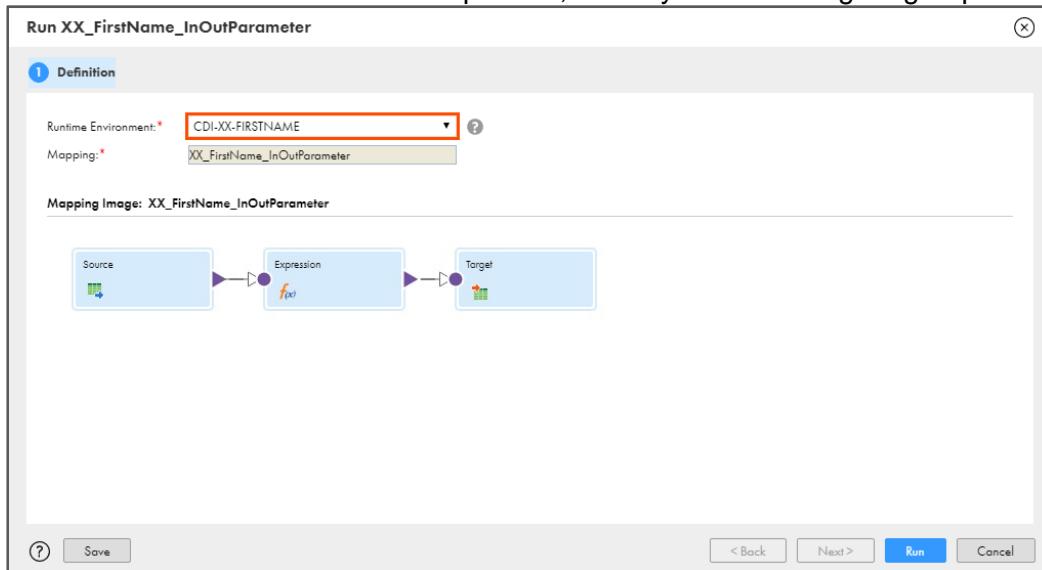


54. To run the mapping, click **Run**.

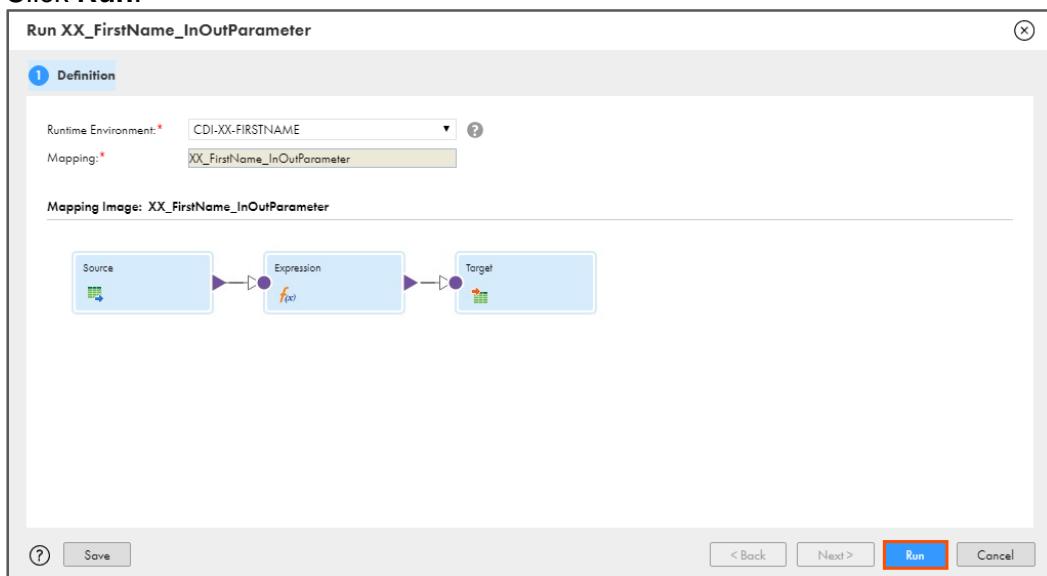


Note: The Run mapping window appears.

55. From the Runtime Environment drop-down, select your secure agent group.

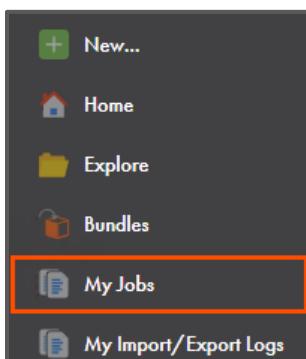


56. Click Run.



Monitor Status:

57. To monitor the mapping status, from the navigation pane, click **My Jobs**.



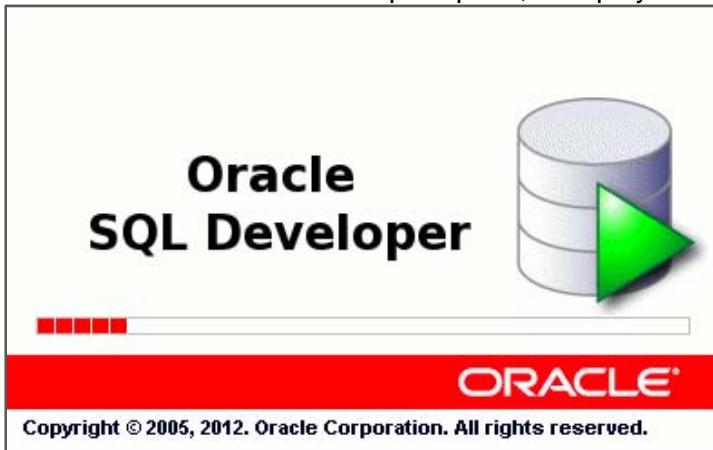
58. When the task completes, the status changes to Success.

Jobs (1 of 27) <input checked="" type="checkbox"/> Up to date		Updated 3:53:07 AM PDT    <input type="checkbox"/> Find				
Asset Name: XX_FirstName_InOutPa...  						
Instance Name	Subtasks	Start Time	End Time	Rows Processed	State	
XX_FirstName_InOutParameter-1		Aug 1, 2019, ...	Aug 1, 2019, ...	7	<input checked="" type="checkbox"/>	Success

Note: Verify that 7 rows are processed by the mapping.

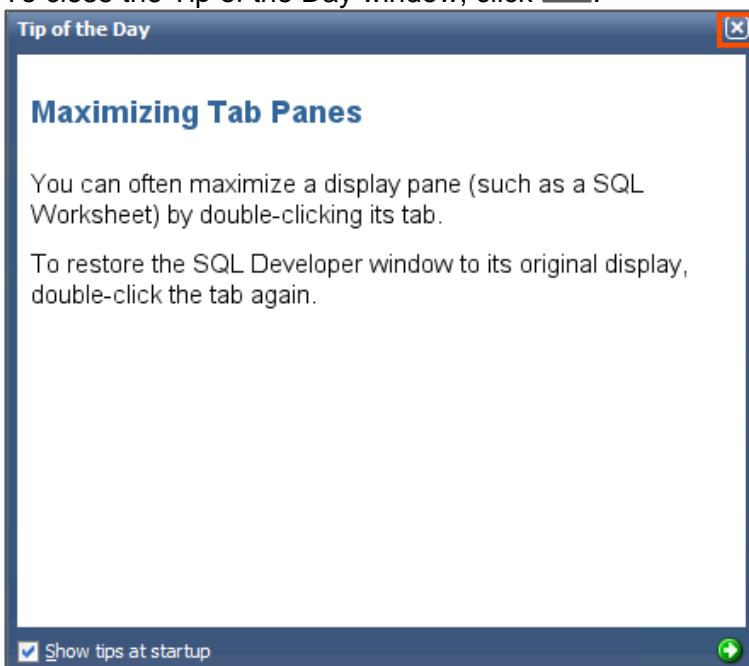
Verify Output:

59. From the windows Start menu, select **SQL Developer**.
60. When the Oracle SQL Developer opens, it displays the following window:

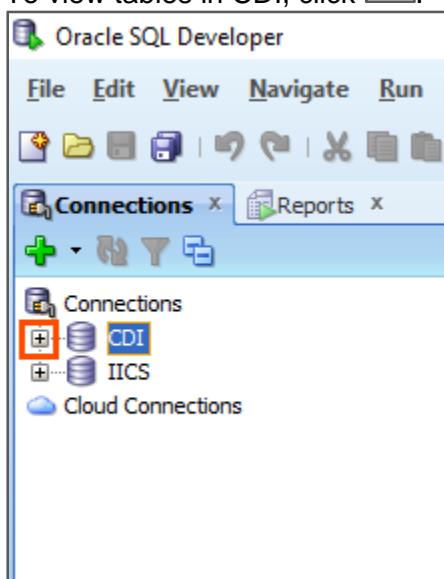


Note: After the application opens, the Tip of the Day window appears.

61. To close the Tip of the Day window, click .



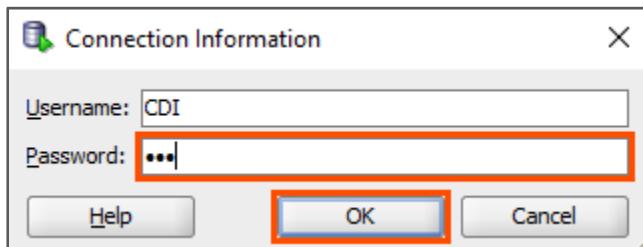
62. To view tables in CDI, click .



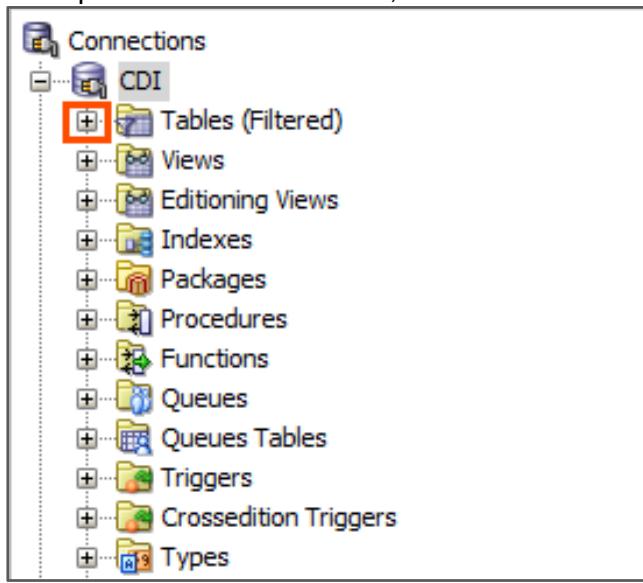
Note: The Connection Information window appears.

63. In the Password field, enter **CDI**.

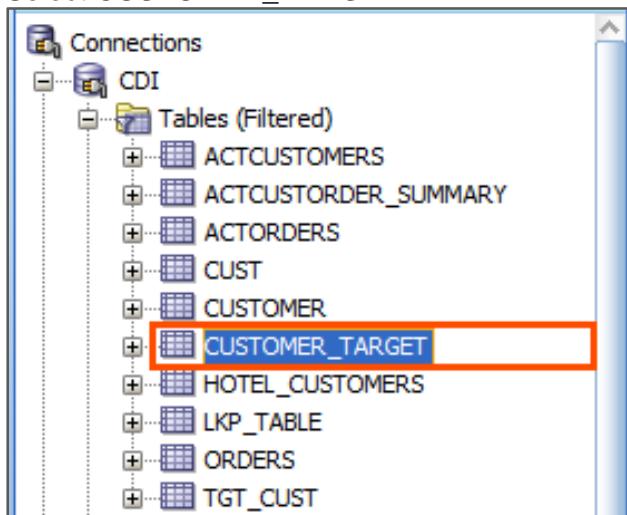
64. Click **OK**.



65. To expand the Tables section, click .



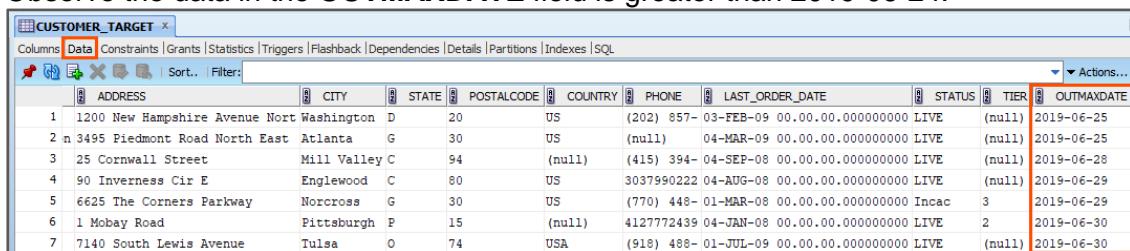
66. Select **CUSTOMER_TARGET**.



The screenshot shows the Informatica PowerCenter interface with the 'Connections' browser open. Under the 'CDI' connection, the 'Tables (Filtered)' folder is expanded, revealing several tables: ACTCUSTOMERS, ACTCUSTORDER_SUMMARY, ACTORDERS, CUST, CUSTOMER, CUSTOMER_TARGET, HOTEL_CUSTOMERS, LKP_TABLE, ORDERS, and TGT_CUST. The 'CUSTOMER_TARGET' table is highlighted with a red box.

67. To view the data in CUSTOMER_TARGET table, click **Data**.

68. Observe the data in the **OUTMAXDATE** field is greater than 2019-06-24.



The screenshot shows the data viewer for the CUSTOMER_TARGET table. The 'Data' tab is selected. The table has columns: ADDRESS, CITY, STATE, POSTALCODE, COUNTRY, PHONE, LAST_ORDER_DATE, STATUS, TIER, and OUTMAXDATE. The data shows various addresses and their corresponding details, with the OUTMAXDATE column values being greater than 2019-06-24. The entire OUTMAXDATE column is highlighted with a red box.

	ADDRESS	CITY	STATE	POSTALCODE	COUNTRY	PHONE	LAST_ORDER_DATE	STATUS	TIER	OUTMAXDATE
1	1200 New Hampshire Avenue Nort	Washington	D	20	US	(202) 857- 03-FEB-09 00.00.00.000000000	LIVE	(null)	2019-06-25	
2	n 3495 Piedmont Road North	East Atlanta	G	30	US	(null)	04-MAR-09 00.00.00.000000000	LIVE	(null)	2019-06-25
3	25 Cornwall Street	Mill Valley	C	94	(null)	(415) 394- 04-SEP-08 00.00.00.000000000	LIVE	(null)	2019-06-28	
4	90 Inverness Cir E	Englewood	C	80	US	3037990222 04-AUG-08 00.00.00.000000000	LIVE	(null)	2019-06-29	
5	6625 The Corners Parkway	Norcross	G	30	US	(770) 448- 01-MAR-08 00.00.00.000000000	Inacac	3	2019-06-29	
6	1 Mobay Road	Pittsburgh	P	15	(null)	4127772439 04-JAN-08 00.00.00.000000000	LIVE	2	2019-06-30	
7	7140 South Lewis Avenue	Tulsa	O	74	USA	(918) 488- 01-JUL-09 00.00.00.000000000	LIVE	(null)	2019-06-30	

This concludes the lab.

Module 7: Expression Macro and Dynamic Linking

Lab 7-1: Using Expression Macro in a Mapping

Overview:

An expression macro creates repetitive or complex expressions in mappings.

In this lab, you will implement expression macro in a mapping.

Objective:

- Use an Expression Macro in a mapping

Duration:

30 minutes

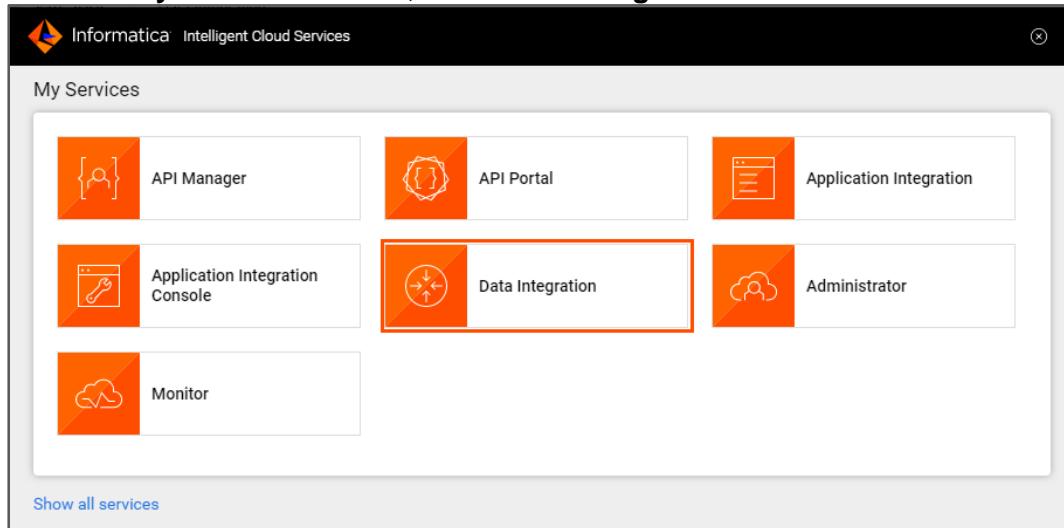
Tasks:

Create Mapping:

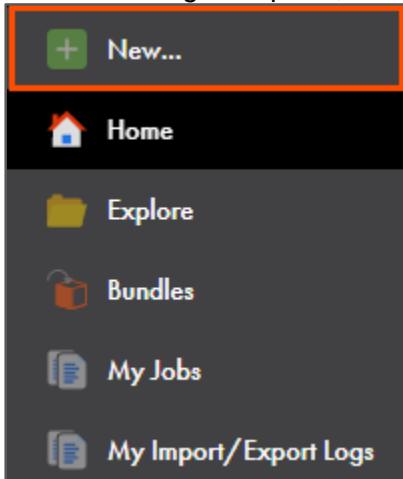
1. Open the IICS Login page from the Bookmarks bar.

Note: Follow this step if you have navigated away from the login page.

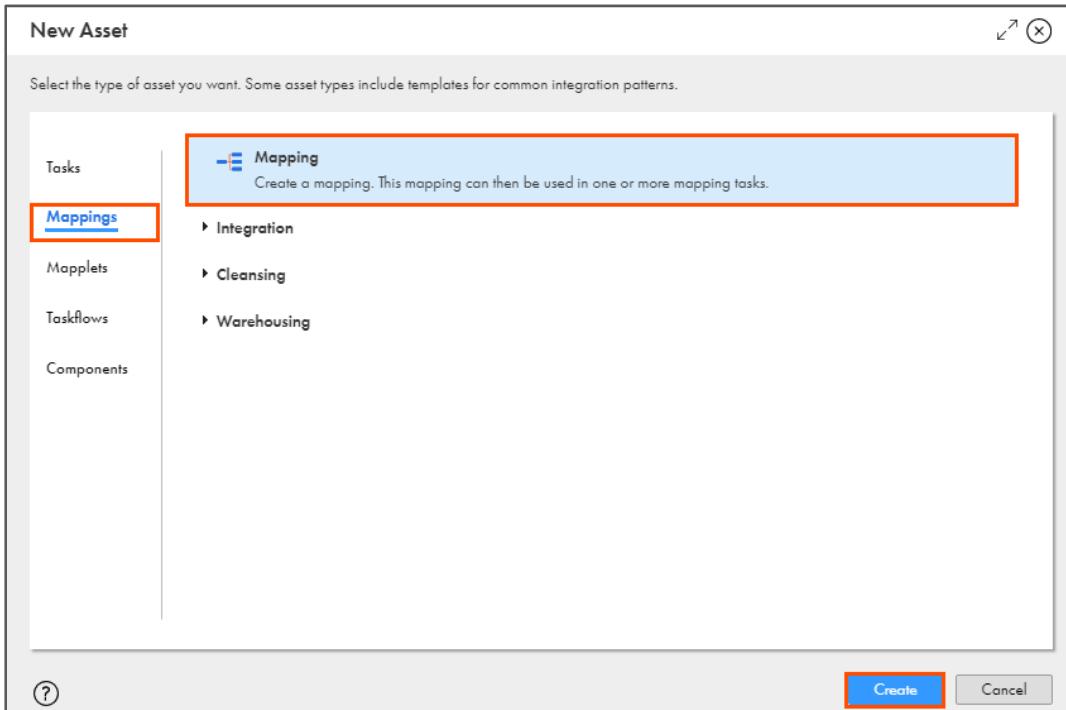
2. Enter the login credentials provided by the Instructor and click **Log In**.
3. From the **My Services** window, select **Data Integration**.



4. From the navigation pane, select **New**.

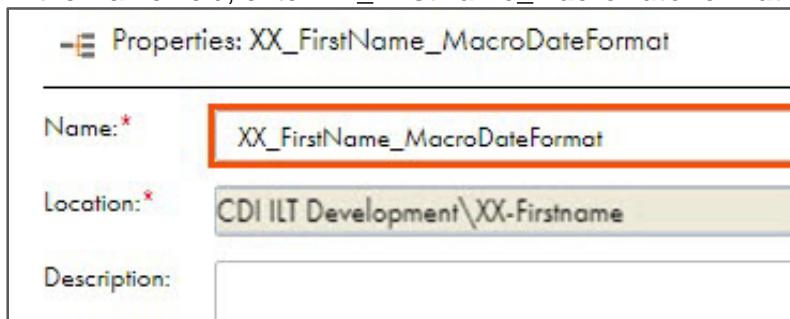


5. From the New Asset window, click the **Mappings** tab, and select **Mapping**.
6. Click **Create**.



Note: The Mapping page appears.

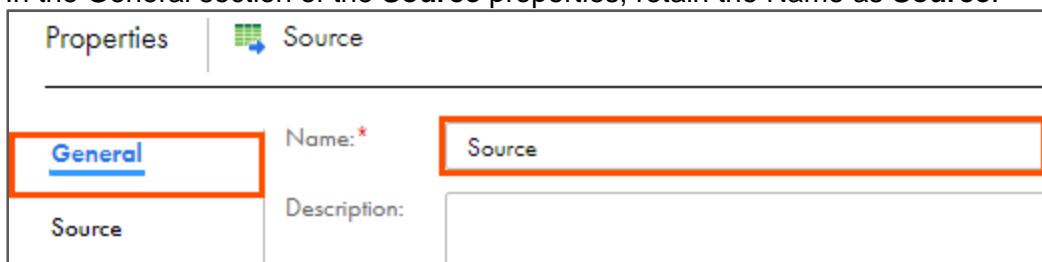
7. In the Name field, enter **XX_FirstName_MacroDateFormat**.



The screenshot shows the 'Properties' pane for a transformation named 'XX_FirstName_MacroDateFormat'. The 'Name' field is highlighted with a red box and contains the value 'XX_FirstName_MacroDateFormat'. The 'Location' field shows the path 'CDI ILT Development\XX-Firstname'. The 'Description' field is empty.

Note: Here, XX refers to your initials, and FIRSTNAME refers to your First Name.

8. To configure the source, from the mapping canvas, click the **Source** transformation.
 9. In the General section of the **Source** properties, retain the Name as **Source**.



The screenshot shows the 'Properties' pane for a 'Source' transformation. The 'General' tab is selected and highlighted with a red box. The 'Name' field is highlighted with a red box and contains the value 'Source'. The 'Description' field is empty.

10. From the properties pane, click **Source**.

11. Select **New Parameter**.

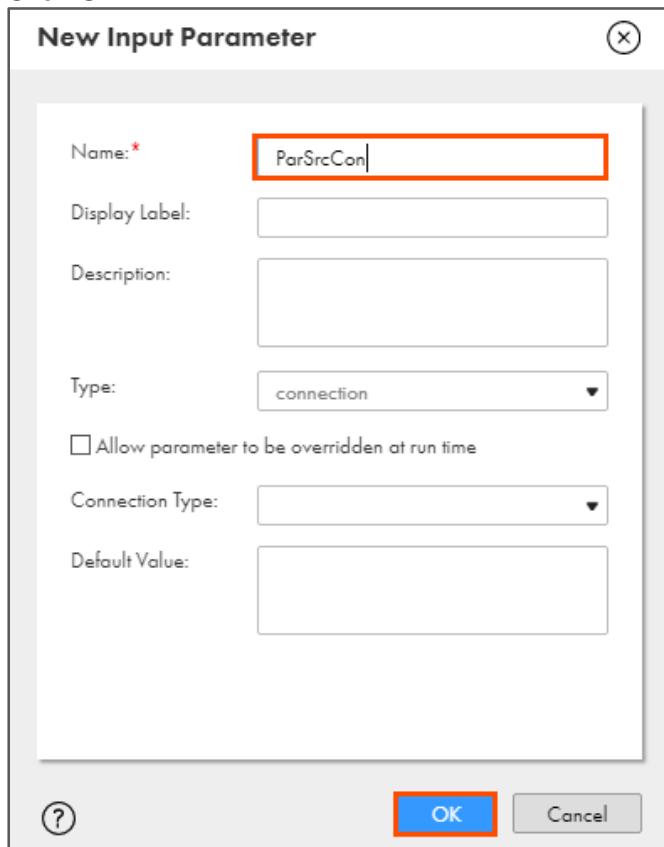


The screenshot shows the 'Properties' pane for a 'Source' transformation. The 'Source' tab is selected and highlighted with a red box. In the 'Details' section, the 'New Parameter...' button is highlighted with a red box.

Note: The New Input Parameter window appears.

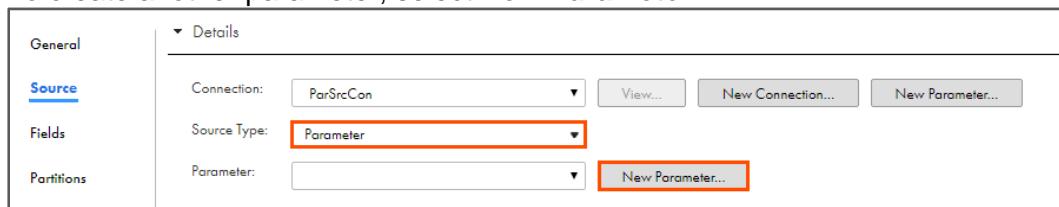
12. In the Name field, enter **ParSrcCon**.

13. Click **OK**.



14. Select the Source Type as **Parameter**.

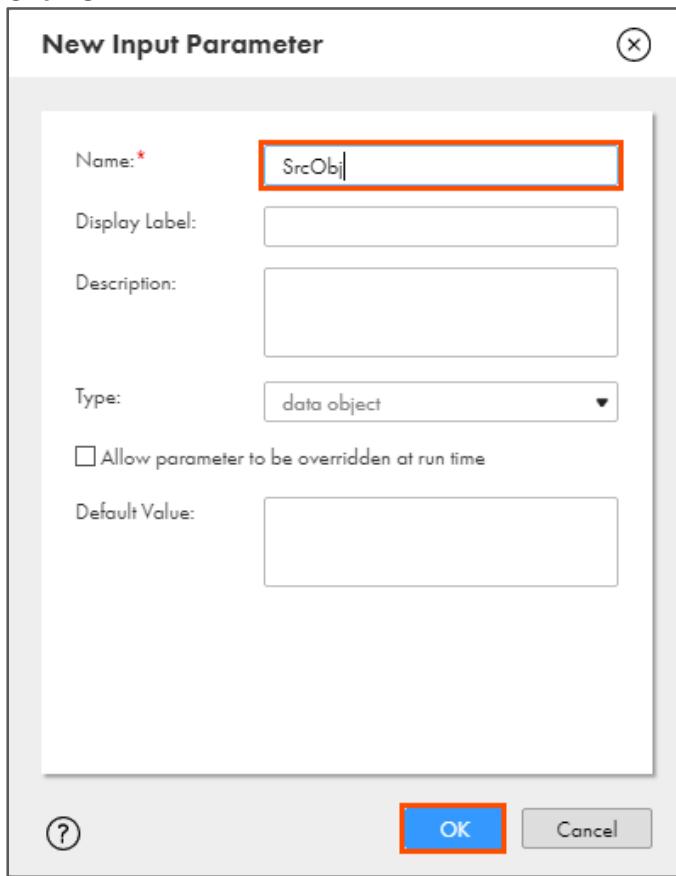
15. To create another parameter, select **New Parameter**.



Note: The New Input Parameter window appears.

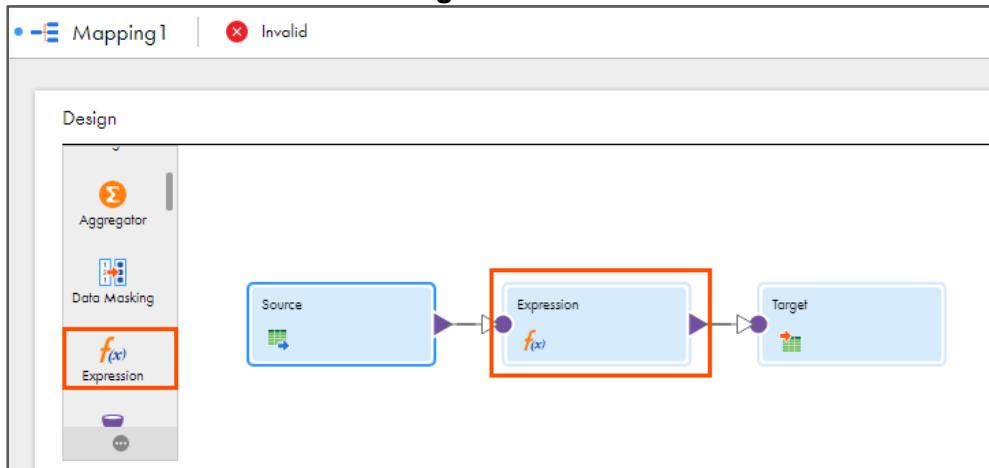
16. In the Name field, enter **SrcObj**.

17. Click **OK**.



Add Expression Transformation:

18. From the list of available transformations, drag, and drop **Expression** transformation on the link between **Source** and **Target**.



19. Select the **Expression** transformation from the mapping canvas.

20. In the **General** section of the Expression properties, enter the Name as **Macro_Expression**.

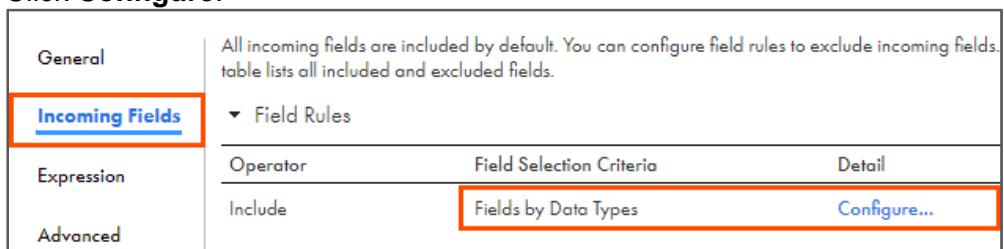


The screenshot shows the Properties pane for an expression named "Macro_Expression". The "General" tab is selected, and the "Name:" field contains "Macro_Expression". The "Description:" field is empty.

21. From the properties pane, click **Incoming Fields**.

22. In the Field Rules section, from Field Selection Criteria drop-down, select **Fields by Data Types**.

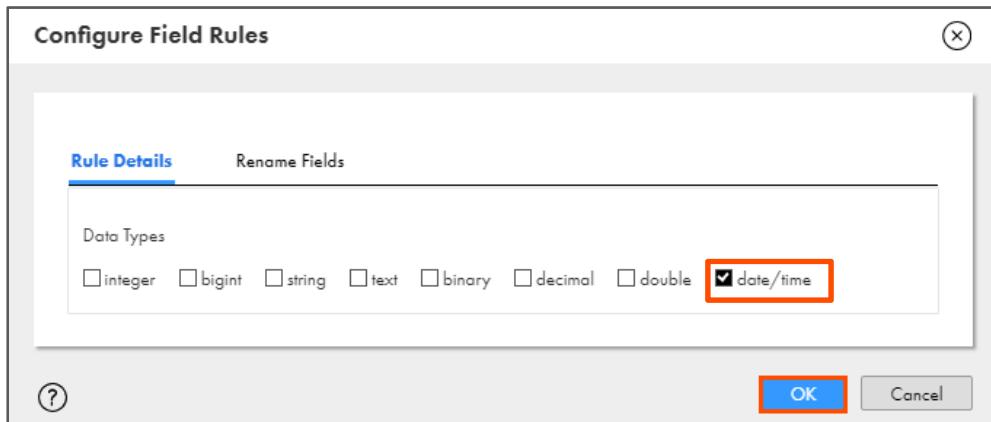
23. Click **Configure**.



The screenshot shows the "Incoming Fields" tab selected in the properties pane. Under "Field Rules", the "Field Selection Criteria" dropdown is set to "Fields by Data Types", which is highlighted with a red box.

Note: The Configure Field Rules window appears.

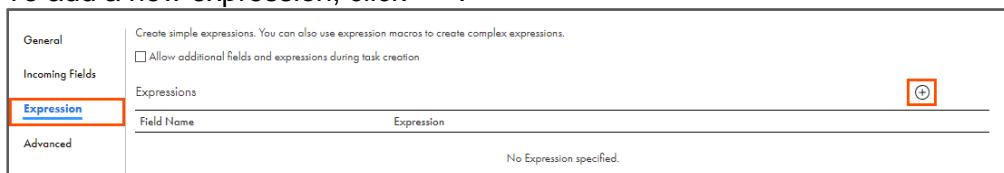
24. Select **date/time** and click **OK**.



The screenshot shows the "Configure Field Rules" dialog box. Under "Rule Details", the "Data Types" section has a checkbox for "date/time" which is checked and highlighted with a red box. The "OK" button is also highlighted with a red box.

25. From the properties pane, click **Expression**.

26. To add a new expression, click .



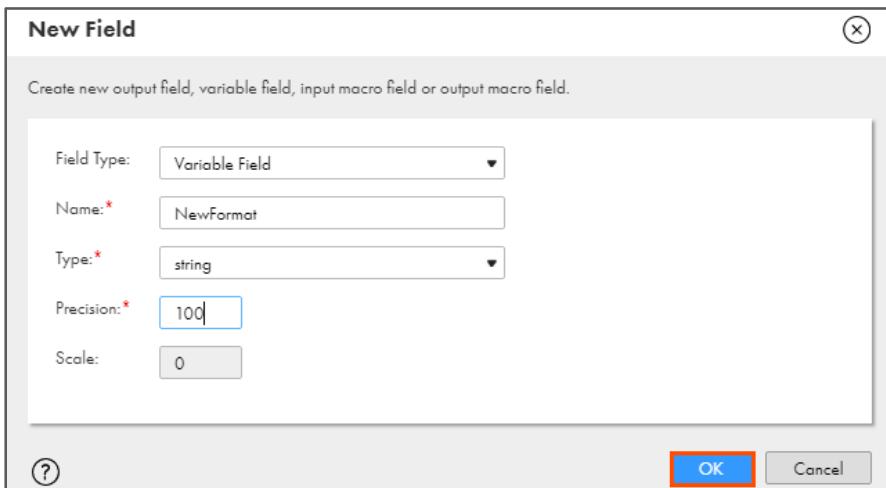
The screenshot shows the "Expression" tab selected in the properties pane. A plus sign icon is located at the top right of the "Expressions" section, which is highlighted with a red box.

Note: The New Field window appears.

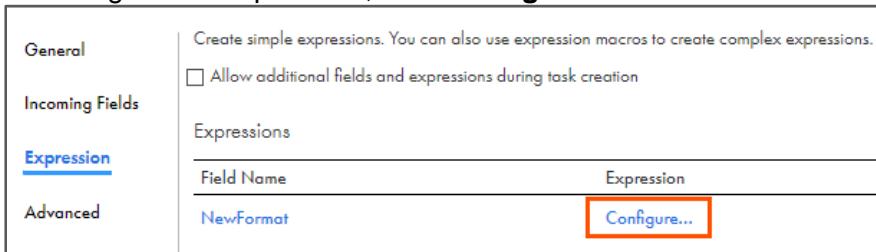
27. Enter the details as shown in table below:

Field Type	Name	Type	Precision	Scale
Variable Field	NewFormat	string	100	0

28. Click **OK**.



29. To configure the expression, click **Configure**.



Note: The Field Expression window appears.

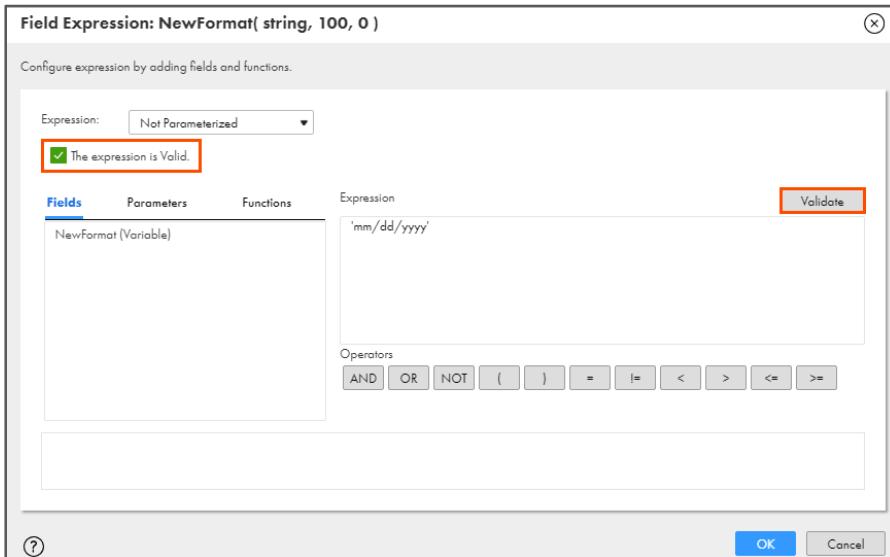
30. In the Expression field, enter the following expression:

'mm/dd/yyyy'

OR

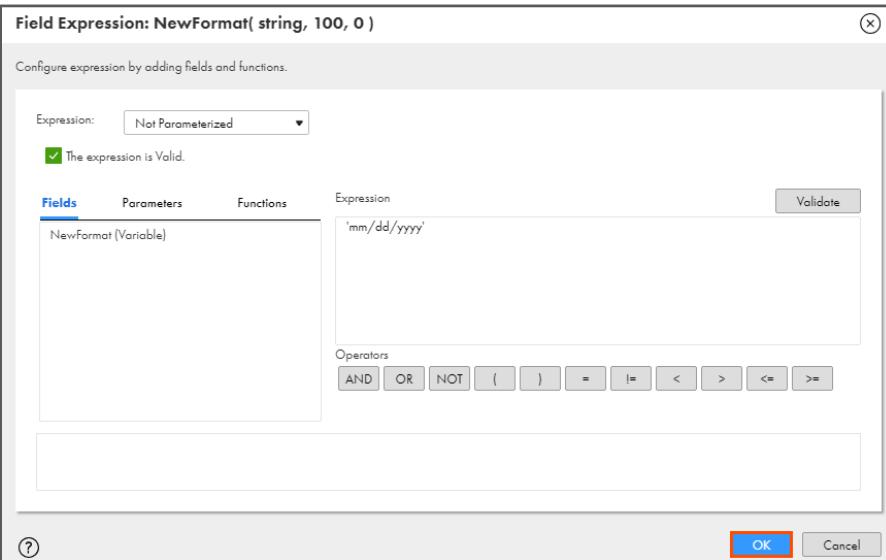
Navigate to the **C:\Students\Commands** directory on your local machine and open the file named **17_LabGuide_UsingExpressionMacroInMapping_7-1**. Copy the command mentioned under **Step 30** and paste it in the Expression field.

31. Click **Validate**.

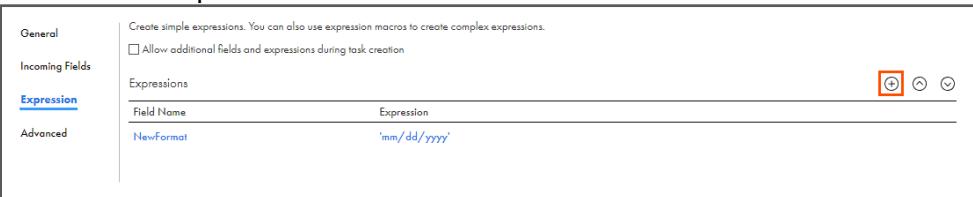


Note: If you copy and paste the above expression, you need to verify the expression to avoid getting an apostrophe error.

32. Click **OK**.



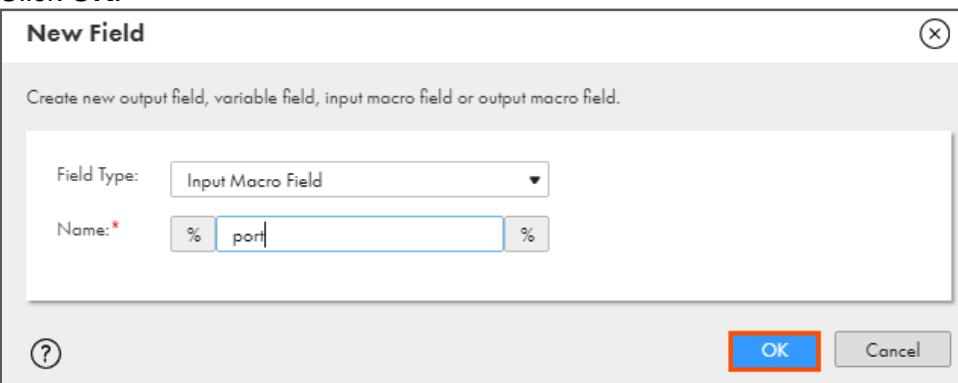
33. Add another expression.



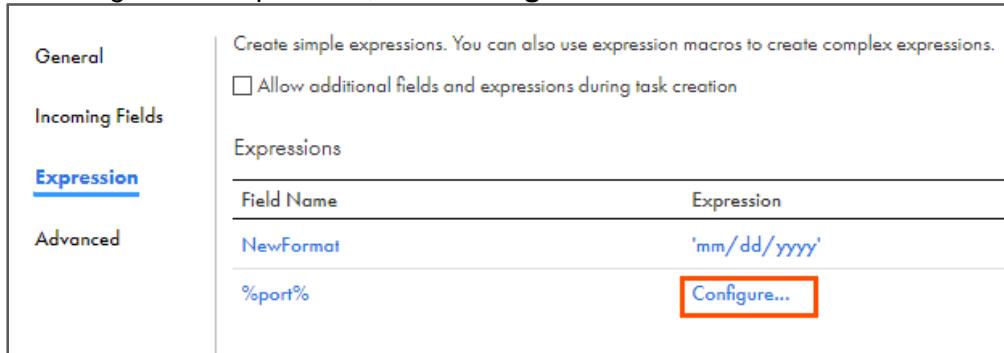
34. From the Field Type drop-down, select **Input Macro Field**.

35. In the Name field, enter **port**.

36. Click **OK**.



37. To configure the expression, click **Configure**.

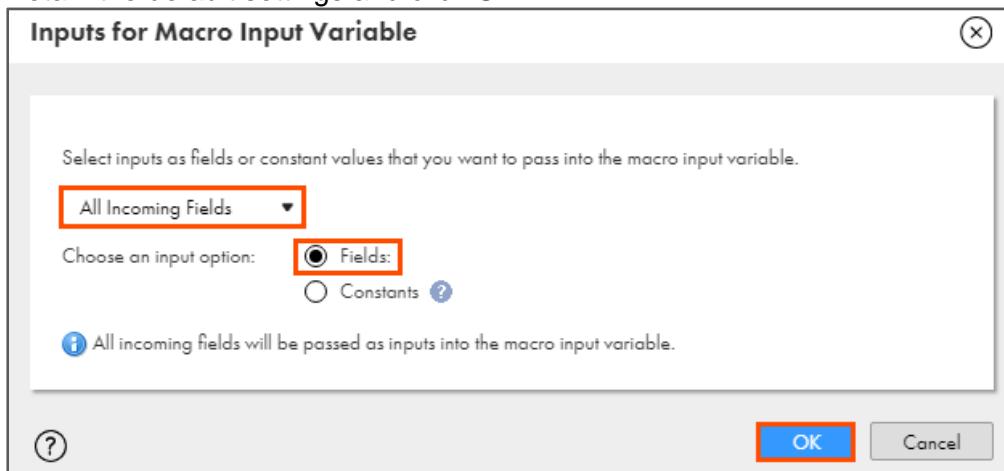


The screenshot shows the 'Expression' tab selected in a configuration dialog. On the right, there's a table for expressions:

Field Name	Expression
NewFormat	'mm/dd/yyyy'
%port%	Configure...

Note: The Inputs for Macro Input Variable window appears.

38. Retain the default settings and click **OK**.



39. To create a new macro output field, click .



The screenshot shows the 'Expression' tab selected in a configuration dialog. On the right, there's a table for expressions:

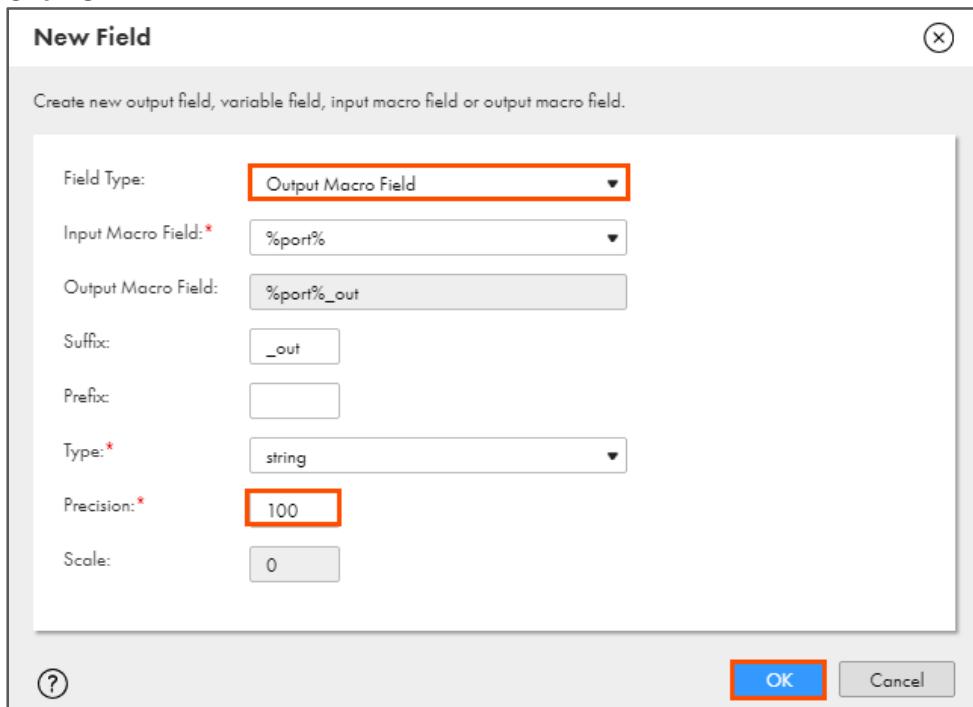
Field Name	Expression
NewFormat	'mm/dd/yyyy'
%port%	 [*port*: "All Ports"]

Note: The New Field window appears.

40. From the Field Type drop-down, select **Output Macro Field**.

41. Set Precision to **100**.

42. Click **OK**.



43. To configure the expression, click **Configure**.

General Incoming Fields Expression Advanced	<p>Create simple expressions. You can also use expression macros to create complex expressions.</p> <p><input type="checkbox"/> Allow additional fields and expressions during task creation</p> <p>Expressions</p> <table border="1"> <thead> <tr> <th>Field Name</th> <th>Expression</th> </tr> </thead> <tbody> <tr> <td>NewFormat</td> <td>'mm/dd/yyyy'</td> </tr> <tr> <td>%port%</td> <td>{"port":"All Ports"}</td> </tr> <tr> <td>%port%_out</td> <td>Configure...</td> </tr> </tbody> </table>	Field Name	Expression	NewFormat	'mm/dd/yyyy'	%port%	{"port":"All Ports"}	%port%_out	Configure...
Field Name	Expression								
NewFormat	'mm/dd/yyyy'								
%port%	{"port":"All Ports"}								
%port%_out	Configure...								

Note: The Field Expression window appears.

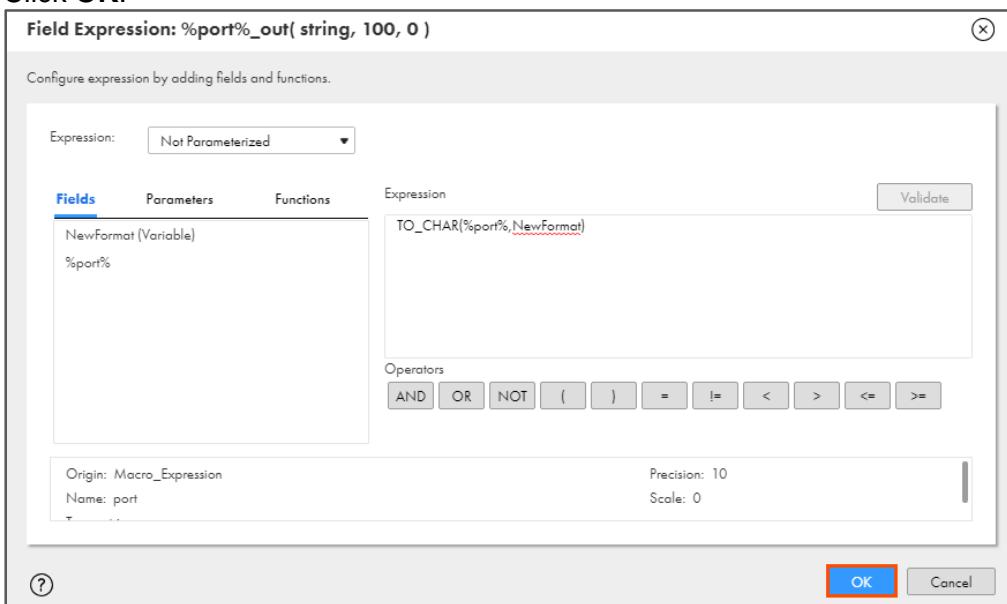
44. In the Expression field, enter the following expression:

TO_CHAR(%port%,NewFormat)

OR

Navigate to the **C:\Students\Commands** directory on your local machine and open the file named **17_LabGuide_UsingExpressionMacroInMapping_7-1**. Copy the command mentioned under **Step 44** and paste it in the Expression field.

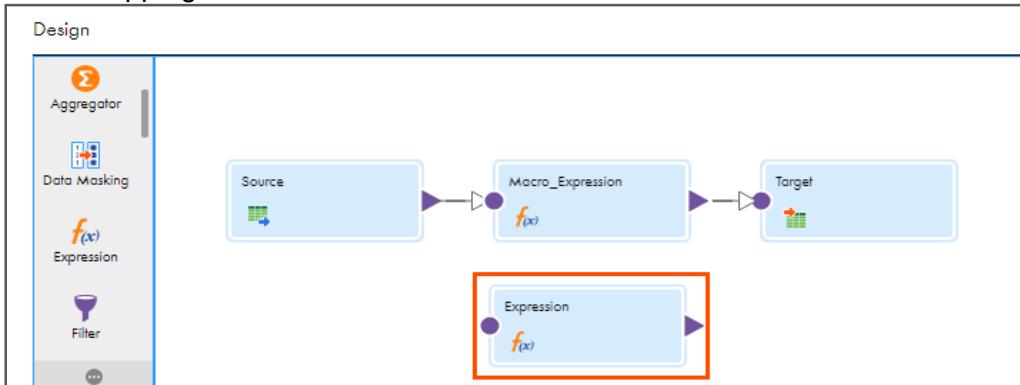
45. Click **OK**.



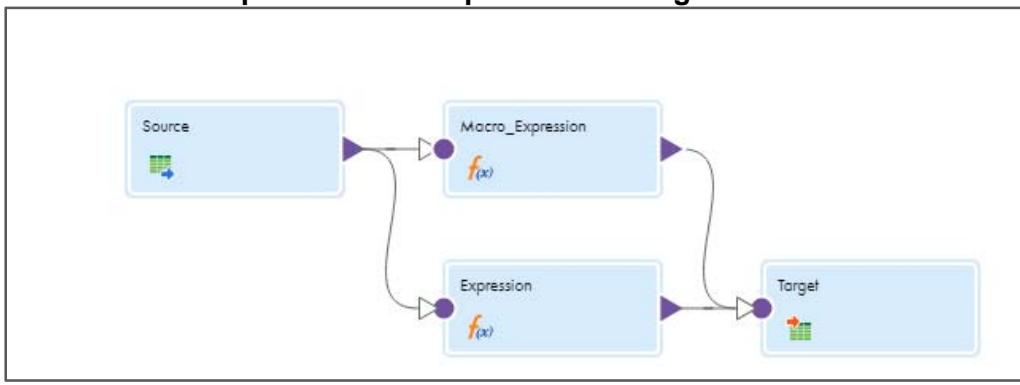
Note: As the field is macro field, the Validate option is disabled.

Add Expression Transformation:

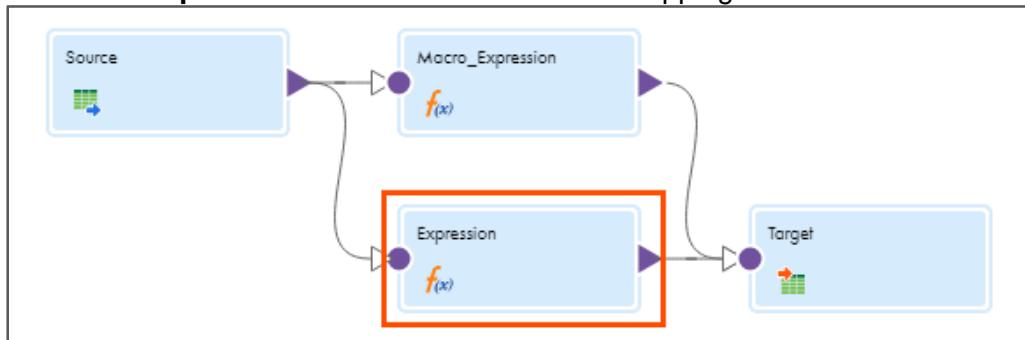
46. From the list of available transformations, drag and drop **Expression** transformation on to the mapping canvas.



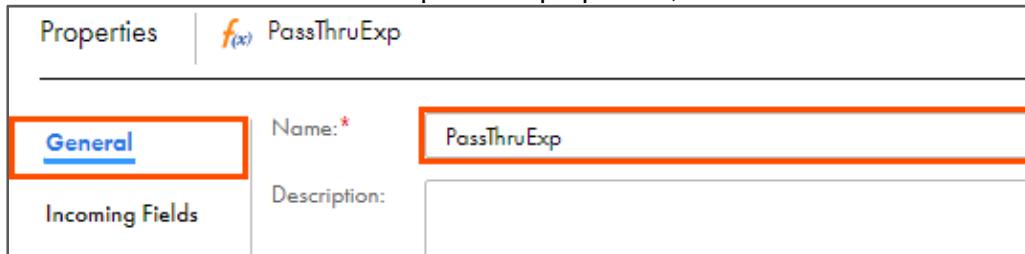
47. Link **Source** to **Expression** and **Expression** to **Target**.



48. Select the **Expression** transformation from the mapping canvas.



49. In the **General** section of the Expression properties, enter Name as **PassThruExp**.



50. From the properties pane, click **Incoming Fields**.

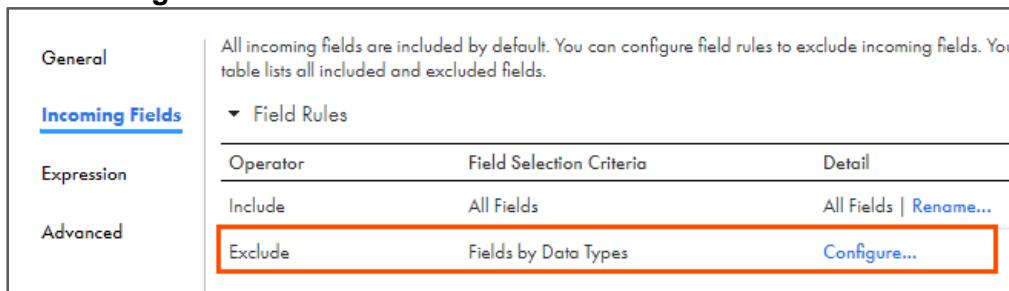
51. To create a new Field Rule, click .



52. From the Operator drop-down, select **Exclude**.

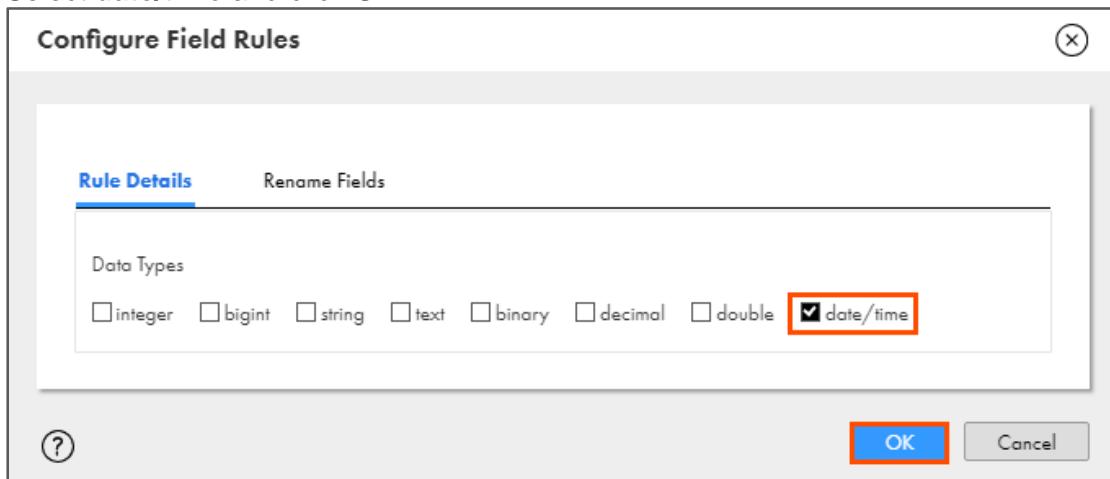
53. From the Field Selection Criteria drop-down, select **Fields By Data Types**.

54. Click **Configure**.



Note: The Configure Field Rules window appears.

55. Select **date/time** and click **OK**.



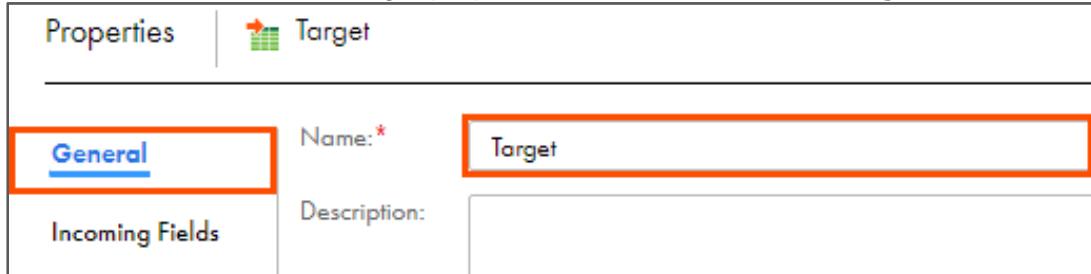
56. Ensure that the Field Selection Criteria for the Include Operator is set to All Fields. If it is not, then change the Field Selection Criteria for the Include Operator to All Fields.



Operator	Field Selection Criteria	Detail	Actions
Exclude	Fields by Data Types	Excluded: Fields of 1 Data Types	(+)
Include	All Fields	All Fields Rename...	(+)

57. To configure the target, from the mapping canvas, click the **Target** transformation.

58. In the **General** section of Target properties, retain the Name as **Target**.



Properties		Target
General	Name: *	Target
Incoming Fields	Description:	

59. From the properties pane, click **Target**.

60. Select **New Parameter**.

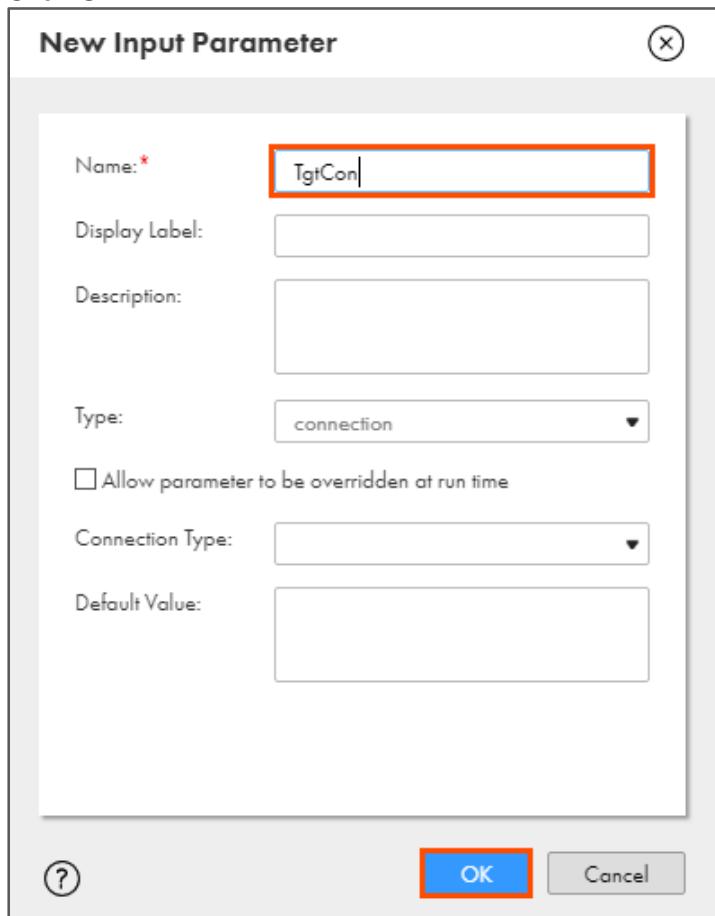


General		Details
Incoming Fields	Connection:	<input type="button" value="View..."/> <input type="button" value="New Connection..."/> <input style="border: 2px solid red;" type="button" value="New Parameter..."/>
Target	Target Type:	
Target Fields	Advanced	
Field Mapping		

Note: The New Input Parameter window appears.

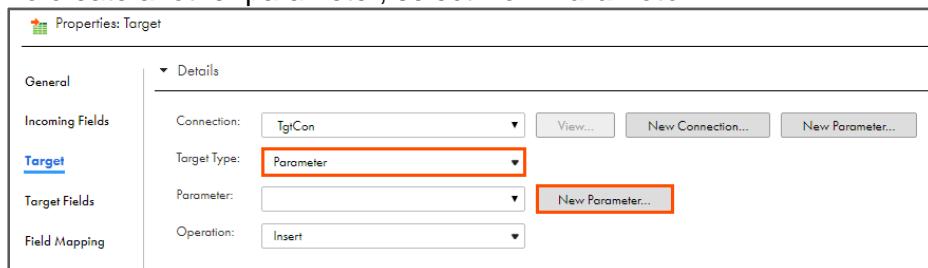
61. In the Name field, enter **TgtCon**.

62. Click **OK**.



63. Select Target Type as **Parameter**.

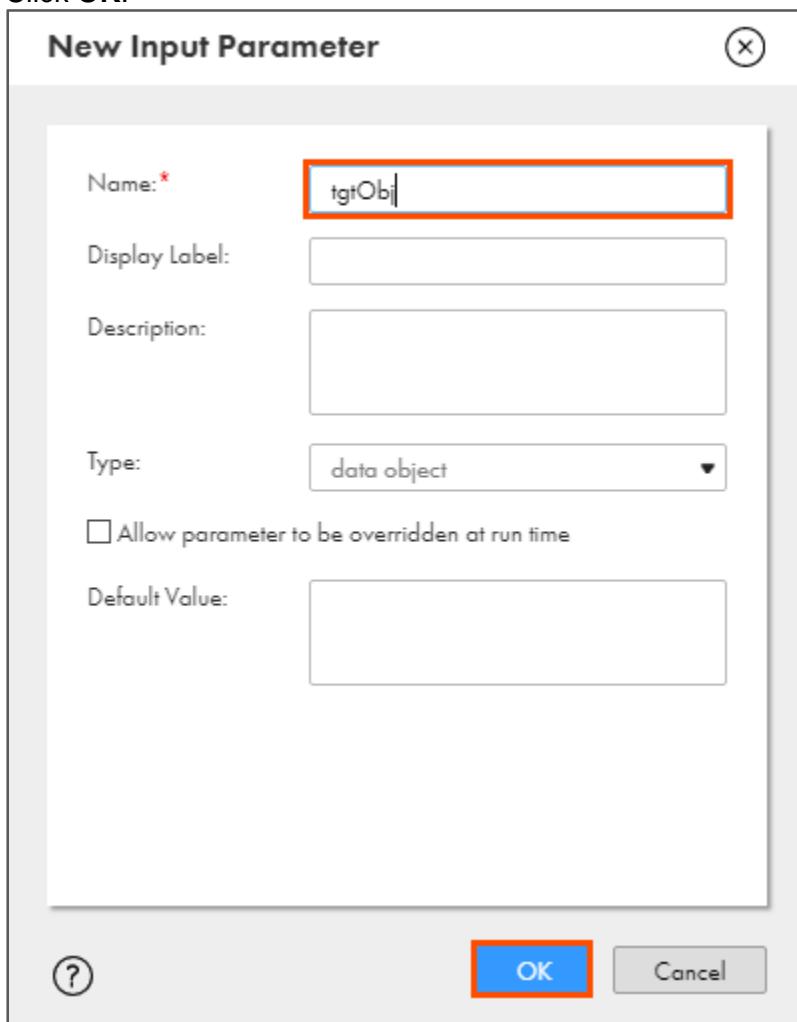
64. To create another parameter, select **New Parameter**.



Note: The New Input Parameter window appears.

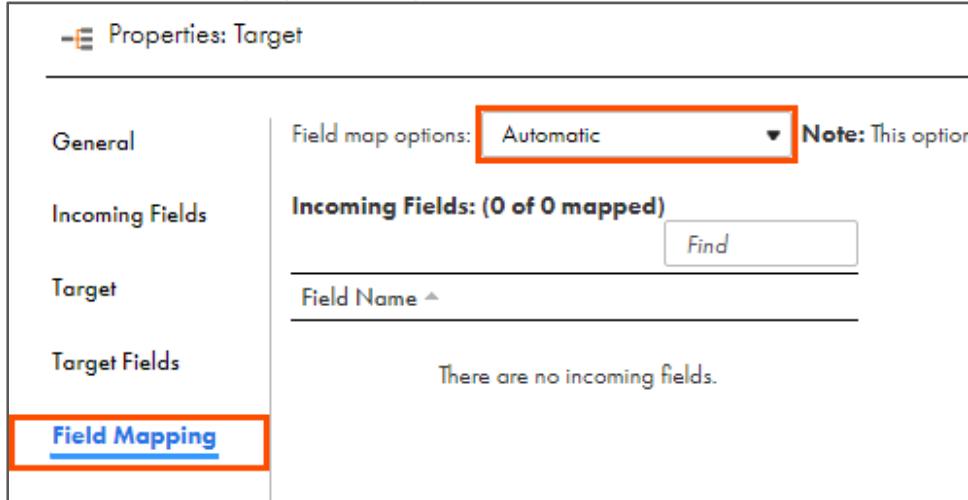
65. In the Name field, enter **tgtObj**.

66. Click **OK**.



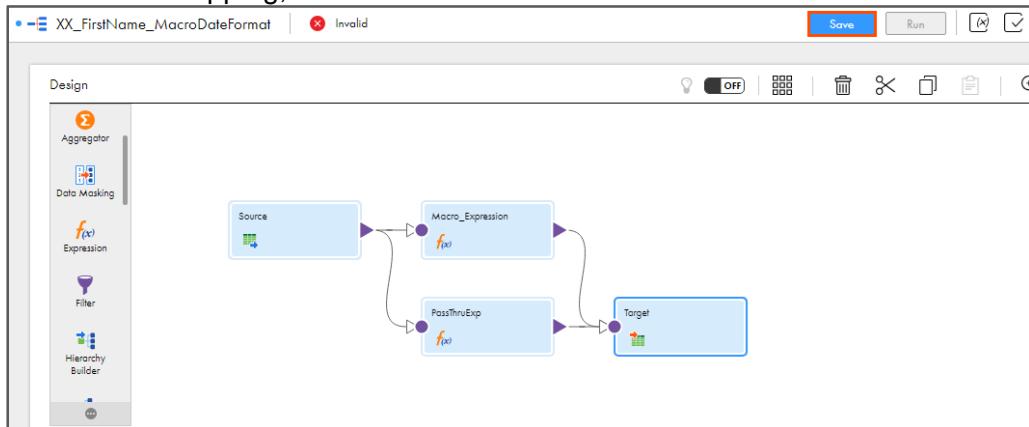
67. From the properties pane, click **Field Mapping**.

68. From the Field map options drop-down, select **Automatic**.

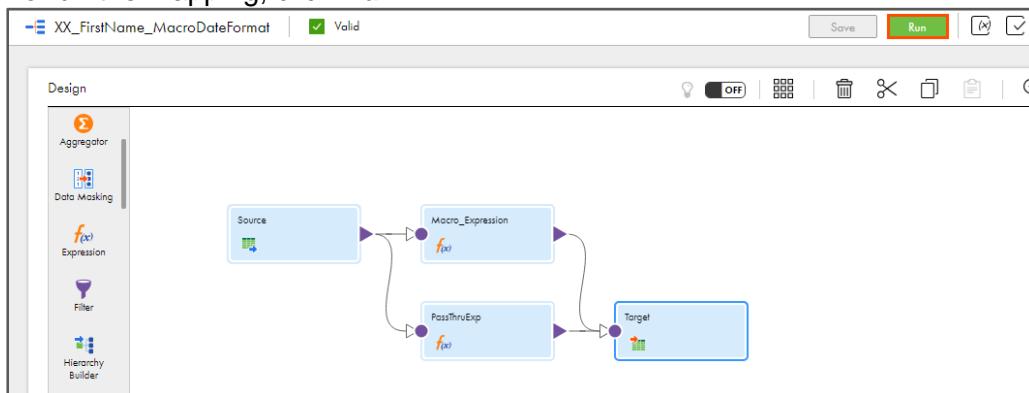


The screenshot shows the 'Properties: Target' pane. On the left is a navigation bar with General, Incoming Fields, Target, Target Fields, and Field Mapping (highlighted with a red border). The main area shows Field map options set to Automatic (highlighted with a red border) and a note: 'Note: This option'. Below it is a section for Incoming Fields (0 of 0 mapped) with a Find button and a Field Name input field. A message says 'There are no incoming fields.'

69. To save the mapping, click **Save**.



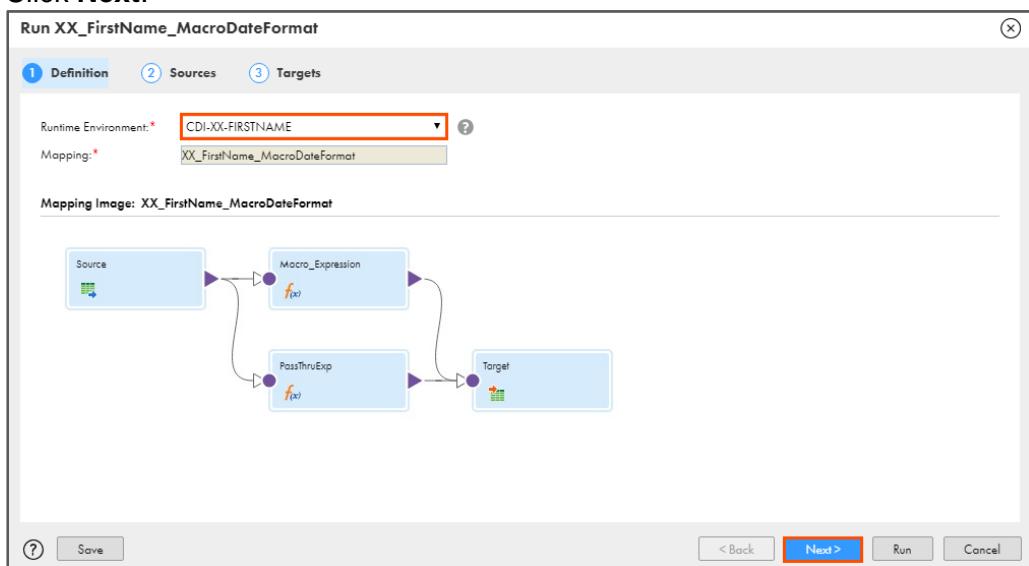
70. To run the mapping, click **Run**.



Note: The Run mapping window appears.

71. From the Runtime Environment drop-down, select your secure agent group.

72. Click **Next**.



The screenshot shows the "Run XX_FirstName_MacroDateFormat" dialog box. The "Definition" tab is selected, showing the "Runtime Environment" dropdown set to "CDI-XX-FIRSTNAME" and the "Mapping" dropdown set to "XX_FirstName_MacroDateFormat". Above the tabs, there are "Sources" and "Targets" buttons. Below the tabs, a preview of the mapping diagram is shown, which is identical to the ones in the previous screenshots. At the bottom of the dialog, there are buttons for "?", "Save", "< Back", "Next >" (highlighted with a red box), "Run", and "Cancel".

73. From the ParSrcCon Connection drop-down, select **XX_FirstName_SFDCDeveloper**.

Source Parameter Details					
ParSrcCon Connection:	XX_FirstName_SFDCDeveloper	<input type="button" value="View..."/>	<input type="button" value="New..."/>	<input type="button" value="Advanced..."/>	
Source Type:	Single	<input type="button" value="Select..."/>			
SrcObj Object:	Use the Select button	<input type="button" value="Select..."/>			

74. Retain the Source Type as **Single**.

75. To select the source object, from the SrcObj Object field, click **Select**.

Source Parameter Details					
ParSrcCon Connection:	XX_FirstName_SFDCDeveloper	<input type="button" value="View..."/>	<input type="button" value="New..."/>	<input type="button" value="Advanced..."/>	
Source Type:	Single	<input type="button" value="Select..."/>			
SrcObj Object:	Use the Select button	<input type="button" value="Select..."/>			

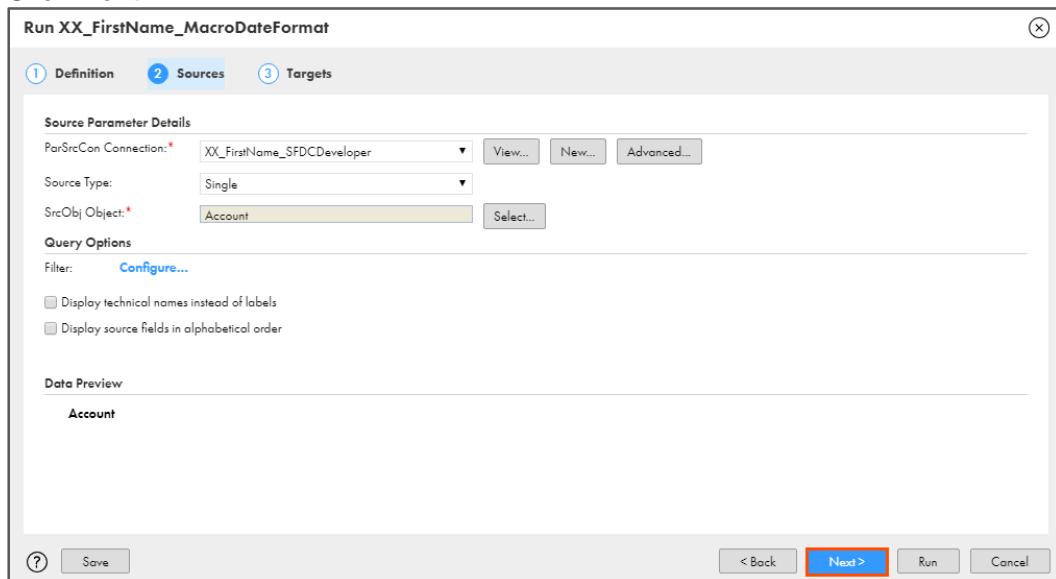
Note: The Select Source Object window appears.

76. From the list, select **Account**.

77. Click **Select**.

Select Source Object																														
Select a source object, and then click Select. You can also search for a source object.																														
XX_FirstName_SFDCDeveloper																														
Account <div style="display: flex; justify-content: space-between;"> Name, Label, Description, Type <input type="button" value="Search"/> </div> <table border="1"> <thead> <tr> <th>Select</th> <th>Name</th> <th>Label</th> <th>Description</th> <th>Type</th> </tr> </thead> <tbody> <tr> <td><input type="radio"/></td> <td>AcceptedEventRelation</td> <td>Accepted Event Relation</td> <td></td> <td></td> </tr> <tr> <td><input checked="" type="radio"/></td> <td>Account</td> <td>Account</td> <td></td> <td></td> </tr> <tr> <td><input type="radio"/></td> <td>AccountCleanInfo</td> <td>Account Clean Info</td> <td></td> <td></td> </tr> <tr> <td><input type="radio"/></td> <td>AccountContactRole</td> <td>Account Contact Role</td> <td></td> <td></td> </tr> </tbody> </table> <p>Displaying all 373 objects.</p>						Select	Name	Label	Description	Type	<input type="radio"/>	AcceptedEventRelation	Accepted Event Relation			<input checked="" type="radio"/>	Account	Account			<input type="radio"/>	AccountCleanInfo	Account Clean Info			<input type="radio"/>	AccountContactRole	Account Contact Role		
Select	Name	Label	Description	Type																										
<input type="radio"/>	AcceptedEventRelation	Accepted Event Relation																												
<input checked="" type="radio"/>	Account	Account																												
<input type="radio"/>	AccountCleanInfo	Account Clean Info																												
<input type="radio"/>	AccountContactRole	Account Contact Role																												
<input type="button" value="Select"/> <input type="button" value="Cancel"/>																														

78. Click **Next**.



Run XX_FirstName_MacroDateFormat

① Definition ② Sources ③ Targets

Source Parameter Details

ParSrcCon Connection: * XX_FirstName_SFDCDeveloper View... New... Advanced...

Source Type: Single Select...

SrcObj Object: * Account

Query Options

Filter: Configure...

Display technical names instead of labels
 Display source fields in alphabetical order

Data Preview

Account

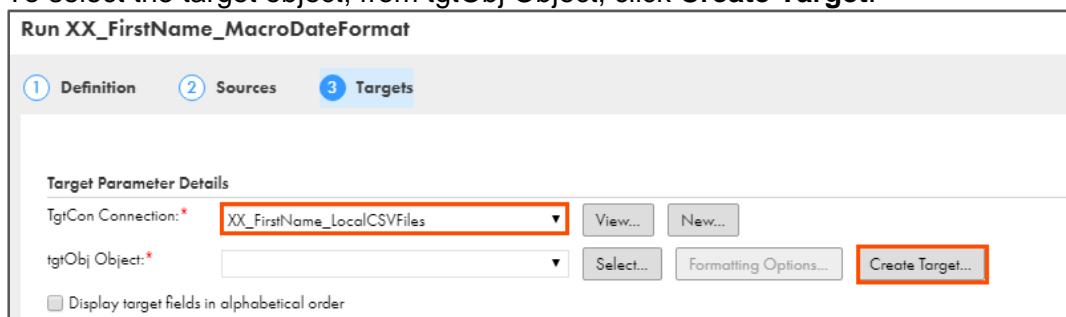
?

Save

< Back Next > Run Cancel

79. From the TgtCon Connection drop-down, select **XX_FirstName_LocalCSVFiles**.

80. To select the target object, from tgtObj Object, click **Create Target**.



Run XX_FirstName_MacroDateFormat

① Definition ② Sources ③ Targets

Target Parameter Details

TgtCon Connection: * XX_FirstName_LocalCSVFiles View... New...

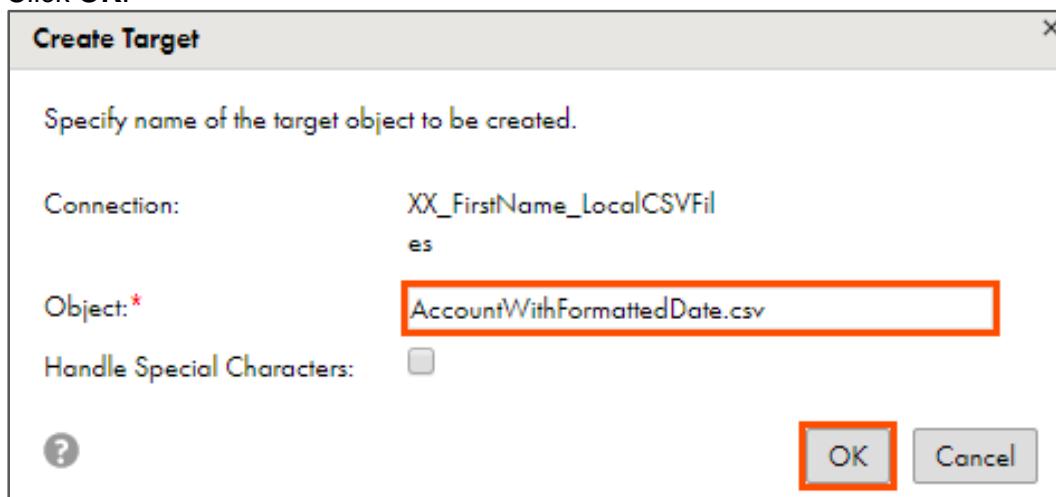
tgtObj Object: Select... Formatting Options... Create Target...

Display target fields in alphabetical order

Note: The Create Target window appears.

81. In the Object field, enter **AccountWithFormattedDate.csv**.

82. Click **OK**.



Create Target

Specify name of the target object to be created.

Connection: XX_FirstName_LocalCSVFil es

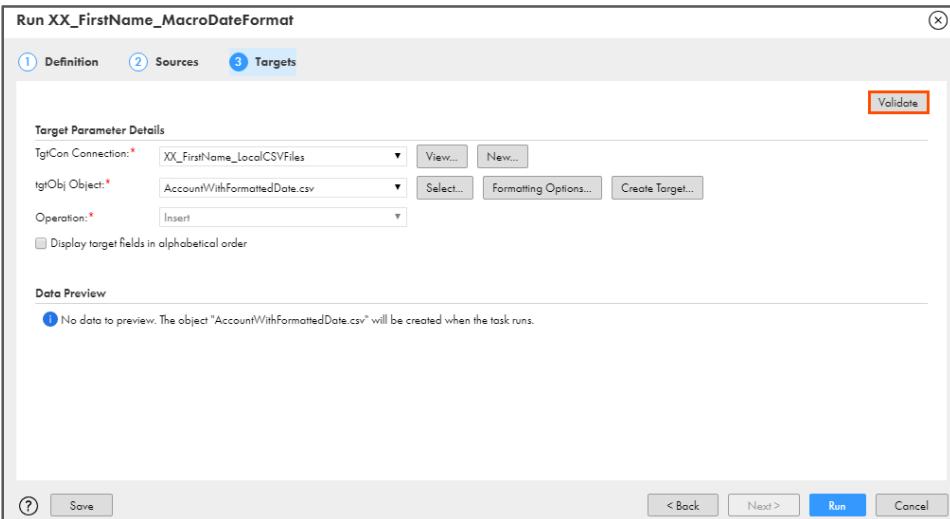
Object: * AccountWithFormattedDate.csv

Handle Special Characters:

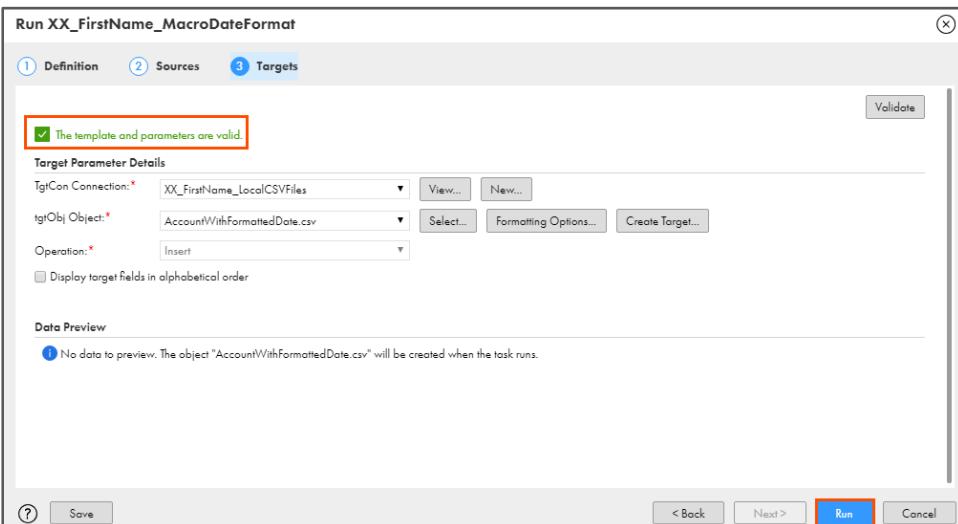
?

OK Cancel

83. Click Validate.

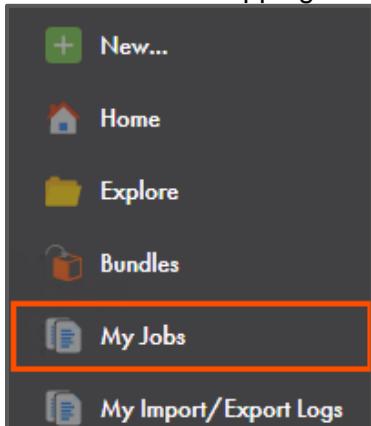


84. Click Run.



Monitor Status:

85. To monitor the mapping status, from the navigation pane, click **My Jobs**.





86. When the task completes, the status changes to **Success**.

Jobs (1 of 27) <input checked="" type="checkbox"/> Up to date		Updated 4:27:11 AM PDT    			
Asset Name: XX_FirstName_MacroD...    					
Instance Name	Subtasks	Start Time	End Time	Rows Processed	State
- XX_FirstName_MacroDateFormat-1		Aug 1, 2019, ...	Aug 1, 20...	18	 Success

87. On your local machine, go to **C:\IICSLabFiles**.

88. Verify that dates are written in MM/DD/YYYY format in **AccountWithFormattedDate.csv** file.

Note: If you see the data in excel sheet as ##, you must select the column and double click on the field to view the data in correct format.

This concludes the lab.

Module 7: Expression Macro and Dynamic Linking

Lab 7-2: Using Dynamic Linking in a Mapping

Overview:

In IICS, the Dynamic Linking creates a new target file at run time.

In this lab, you will create a mapping to sort the data and load it to the target using Dynamic Linking.

Objective:

- Use Dynamic Linking by creating a Flat File at runtime
- Append time stamp in the name of the file

Duration:

20 minutes

Tasks:

Copy Source File:

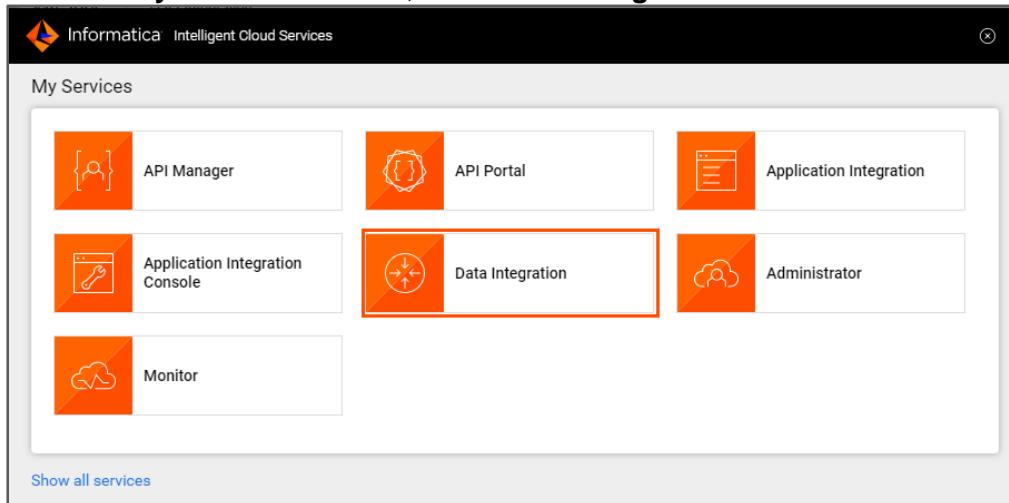
1. Copy the **Customer_Detail.csv** file from the CDI Lab Prep Files folder available on your desktop and paste it in your flat file directory (C:\IICSLabFiles).

Create Mapping:

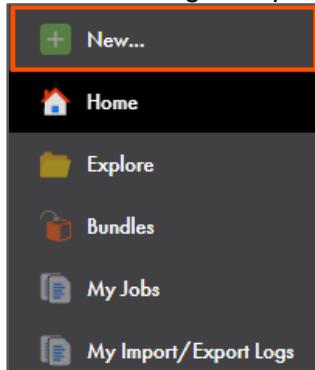
2. Open the IICS Login page from the Bookmarks bar.

Note: Follow this step if you have navigated away from the login page.

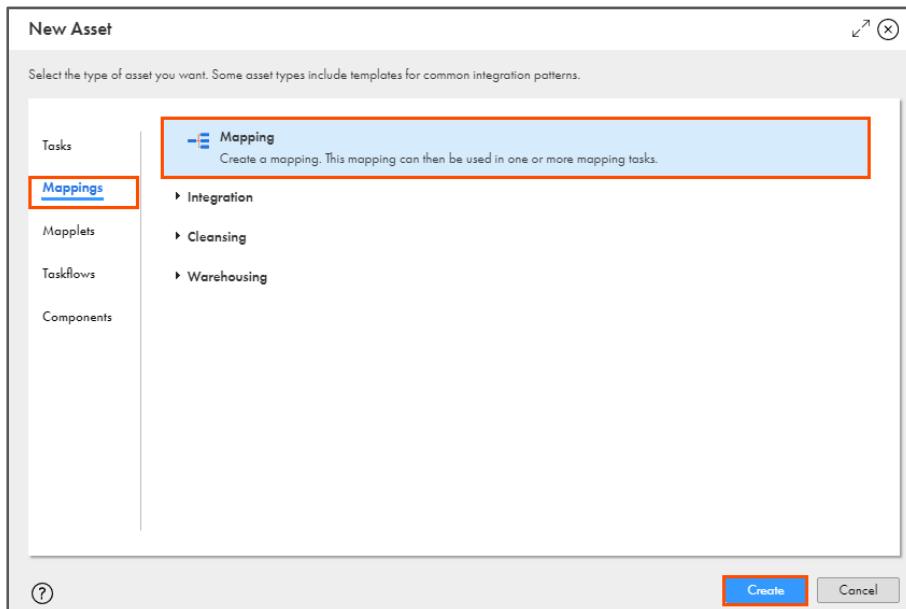
3. Enter the login credentials provided by the Instructor and click **Log In**.
4. From the **My Services** window, select **Data Integration**.



5. From the navigation pane, select **New**.

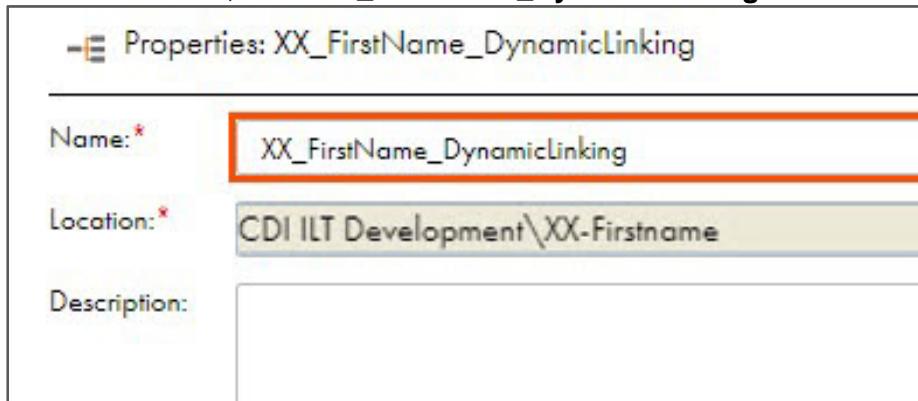


6. From the New Asset window, click the **Mappings** tab, and select **Mapping**.
 7. Click **Create**.



Note: The Mapping page appears.

8. In the Name field, enter **XX_FirstName_DynamicLinking**.

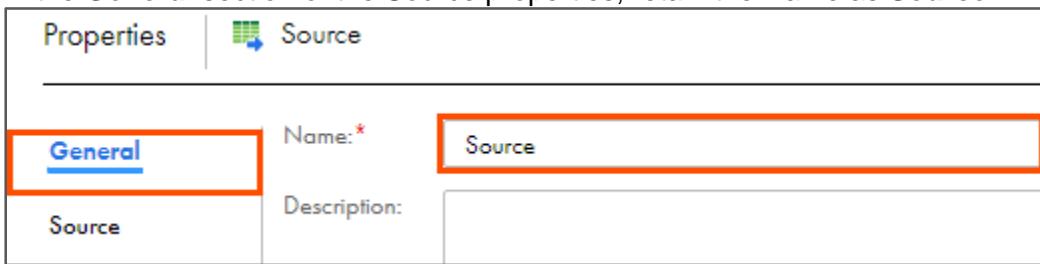


Properties: XX_FirstName_DynamicLinking	
Name:*	XX_FirstName_DynamicLinking
Location:*	CDI ILT Development\XX-Firstname
Description:	

Note: Here, XX refers to your initials, and FIRSTNAME refers to your First Name.

9. To configure the source, from the mapping canvas, click the **Source** transformation.

10. In the **General** section of the Source properties, retain the Name as **Source**.

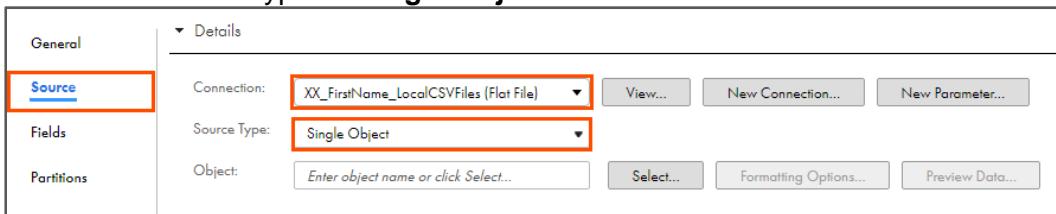


The screenshot shows the 'Properties' pane with the 'Source' icon selected. The 'General' tab is active and highlighted with a red box. The 'Name:' field contains the value 'Source', which is also highlighted with a red box. The 'Description:' field is empty.

11. From the properties pane, click **Source**.

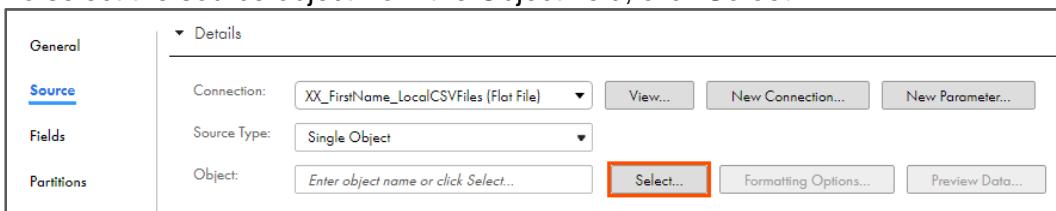
12. From the Connection drop-down, select **XX_FirstName_LocalCSVFiles**.

13. Retain the Source Type as **Single Object**.



The screenshot shows the 'Properties' pane with the 'Source' tab selected. The 'Connection:' dropdown is set to 'XX_FirstName_LocalCSVFiles (Flat File)' and is highlighted with a red box. The 'Source Type:' dropdown is set to 'Single Object' and is also highlighted with a red box. Other tabs like 'Fields' and 'Partitions' are visible but not selected.

14. To select the source object from the Object field, click **Select**.

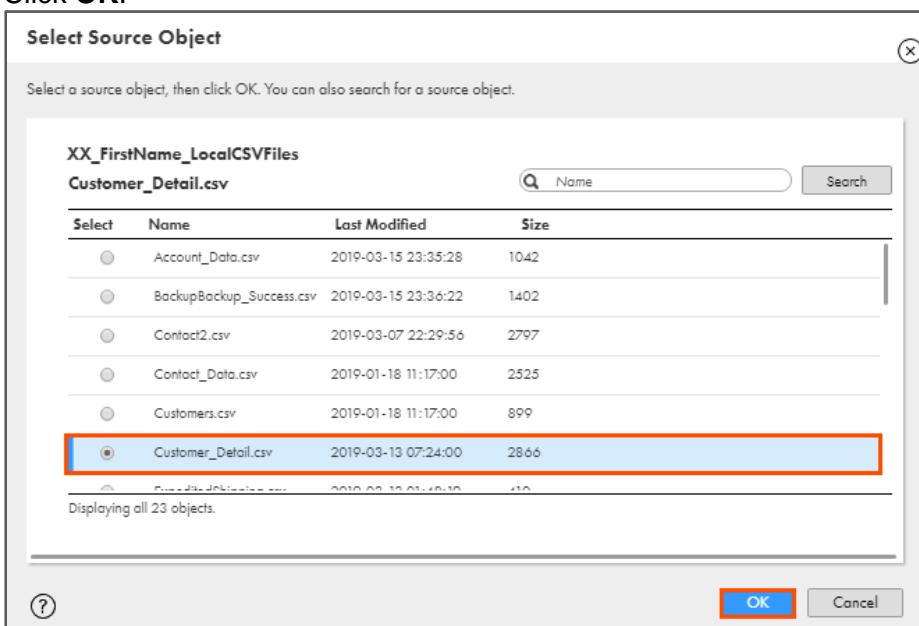


The screenshot shows the 'Properties' pane with the 'Source' tab selected. The 'Object:' field contains 'Enter object name or click Select...' and the 'Select...' button to its right is highlighted with a red box. Other tabs like 'Fields' and 'Partitions' are visible but not selected.

Note: The Select Source Object window appears.

15. Select **Customer_Detail.csv** from the list.

16. Click **OK**.

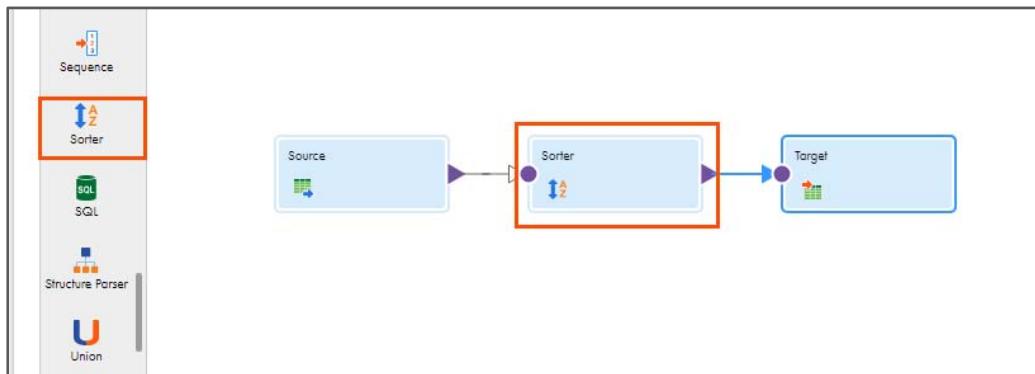


The screenshot shows the 'Select Source Object' dialog box. The title bar says 'Select Source Object'. Below it is a message: 'Select a source object, then click OK. You can also search for a source object.' The main area shows a table titled 'XX_FirstName_LocalCSVFiles' with a single row: 'Customer_Detail.csv'. The 'Customer_Detail.csv' row is highlighted with a red box. At the bottom of the table, it says 'Displaying all 23 objects.' The dialog has a 'Search' input field and two buttons at the bottom: '? (Question Mark)' and 'OK' (highlighted with a red box).

Select	Name	Last Modified	Size
<input type="radio"/>	Account_Data.csv	2019-03-15 23:35:28	1042
<input type="radio"/>	BackupBackup_Success.csv	2019-03-15 23:36:22	1402
<input type="radio"/>	Contact2.csv	2019-03-07 22:29:56	2797
<input type="radio"/>	Contact_Data.csv	2019-01-18 11:17:00	2525
<input type="radio"/>	Customers.csv	2019-01-18 11:17:00	899
<input checked="" type="radio"/>	Customer_Detail.csv	2019-03-13 07:24:00	2866
<input type="radio"/>	Customer_Detail1.csv	2019-03-13 07:24:00	410

Add Sorter Transformation:

17. Drag and drop the **Sorter** transformation on the link between the Source and Target transformations.



Note: Sorter transformation reads the first names of customers from the source and sorts them alphabetically.

18. Select the **Sorter** transformation from the mapping canvas.
 19. In the **General** section of the Sorter properties, retain the Name as **Sorter**.



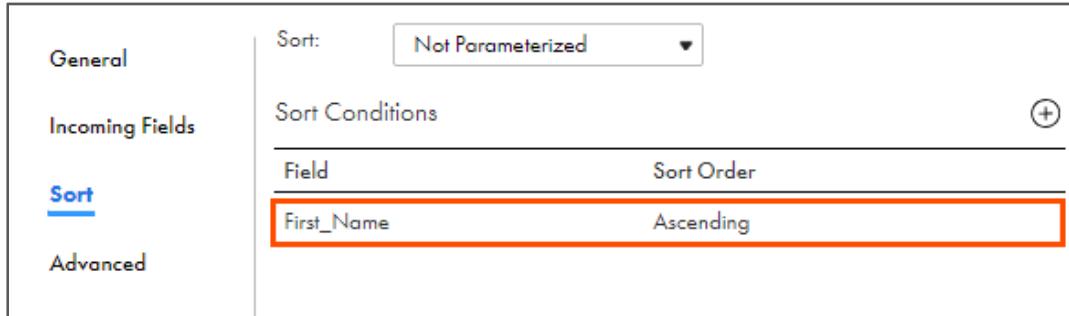
20. From the properties pane, click **Sort**.

21. To add a new sort condition, click



22. Enter the condition, as shown in the table below:

Field Name	Sort Order
First_Name	Ascending



General

Sort: Not Parameterized

Incoming Fields

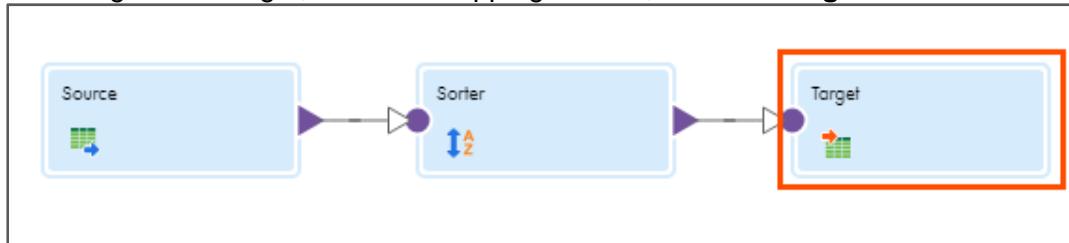
Sort

Advanced

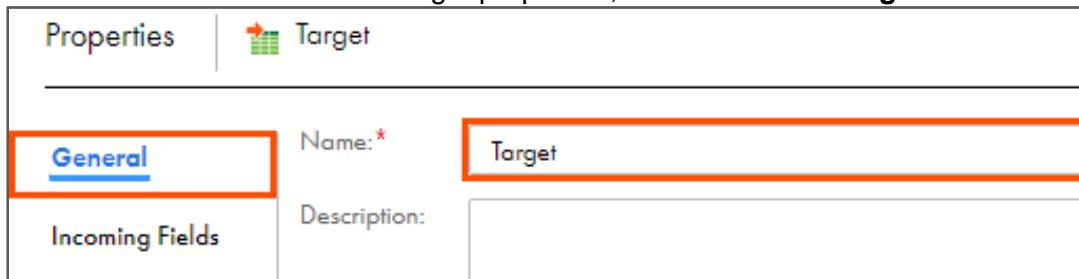
Sort Conditions

Field	Sort Order
First_Name	Ascending

23. To configure the target, from the mapping canvas, click the **Target** transformation.



24. In the **General** section of the Target properties, retain Name as **Target**.



Properties

Target

General

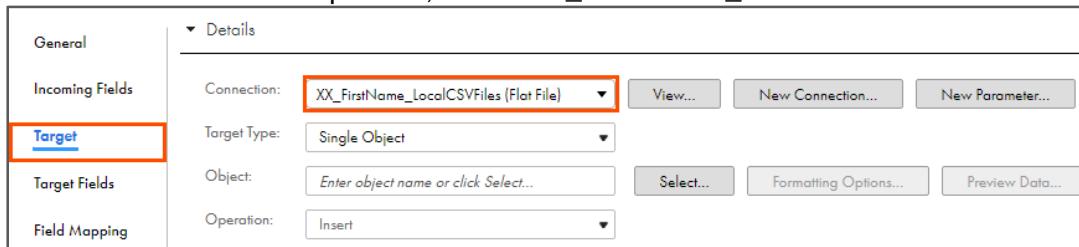
Name: * Target

Incoming Fields

Description:

25. From the properties pane, click **Target**.

26. From the Connection drop-down, select **XX_FirstName_LocalCSVFiles**.



General

Details

Incoming Fields

Target

Target Fields

Field Mapping

Connection: XX_FirstName_LocalCSVFiles (Flat File)

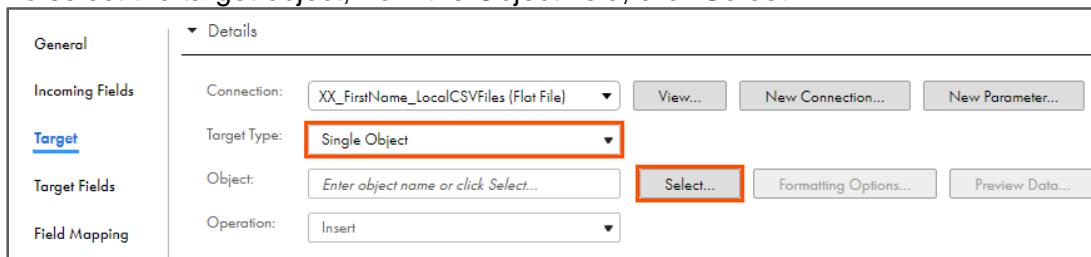
Target Type: Single Object

Object: Enter object name or click Select...

Operation: Insert

27. Retain Target Type as **Single Object**.

28. To select the target object, from the Object field, click **Select**.

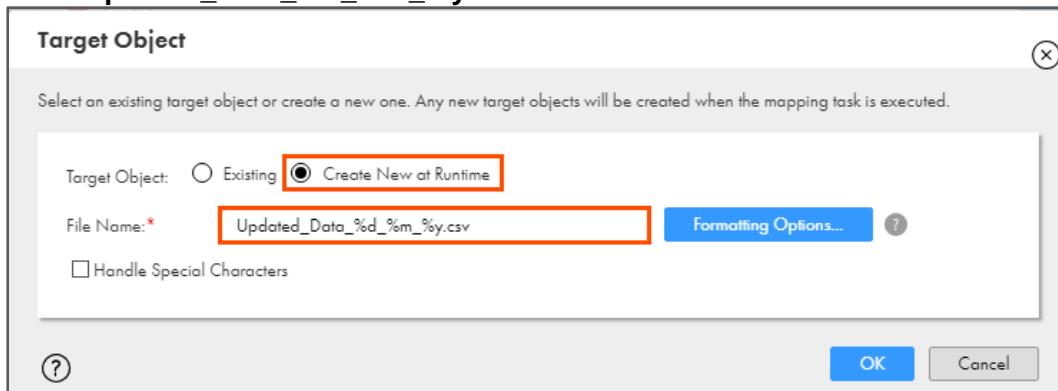


The screenshot shows the 'Target' tab selected in the 'Details' panel of the Informatica interface. Under 'Target Type', 'Single Object' is selected. Below it, the 'Object' field contains the placeholder 'Enter object name or click Select...'. To the right of this field is a red-outlined 'Select...' button, which is the focus of the instruction.

Note: The Target Object window appears.

29. In the Target Object window, select **Create New at Runtime**.

30. Enter Updated_Data_%d_%m_%y.csv as File Name.

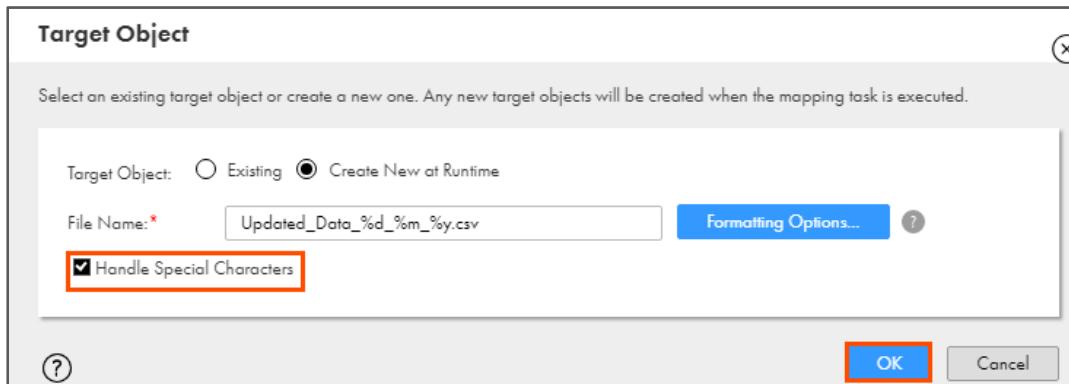


The screenshot shows the 'Target Object' dialog box. Under 'Target Object', the radio button for 'Create New at Runtime' is selected. The 'File Name:' field contains 'Updated_Data_%d_%m_%y.csv'. The 'Handle Special Characters' checkbox is checked. The 'OK' button is visible at the bottom right.

Note: The %d, %m, and %y will determine the date, month, and year respectively. This timestamp also determines when it will create the file.

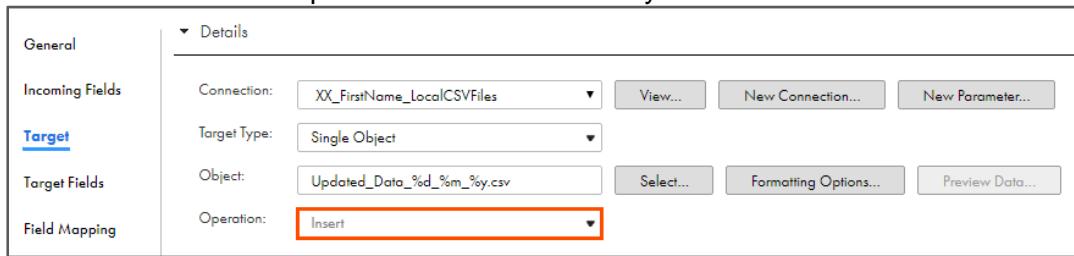
31. To enable the time stamp feature, select **Handle Special Characters**.

32. Click **OK**.



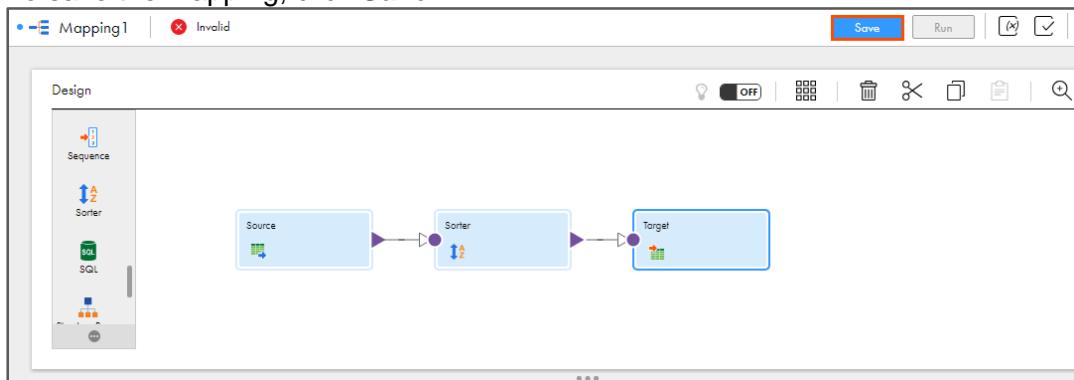
The screenshot shows the 'Target Object' dialog box again. The 'Handle Special Characters' checkbox is checked. The 'OK' button is highlighted with a red box.

Note: As you create a blank new file, you do not need to map the source and target fields. Notice that the Operation is set as **Insert** by default.



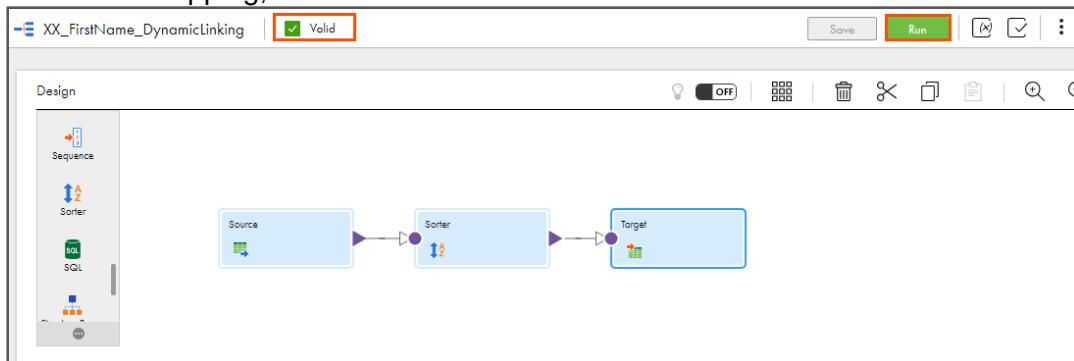
The screenshot shows the 'Target' tab selected in the 'Details' panel. Under 'Operation', the dropdown menu is open and 'Insert' is selected. The 'Object' field contains 'Updated_Data_%d_%m_%y.csv'.

33. To save the mapping, click **Save**.



Note: After you save the mapping, the mapping status (Valid or Invalid) is automatically displayed next to the mapping name.

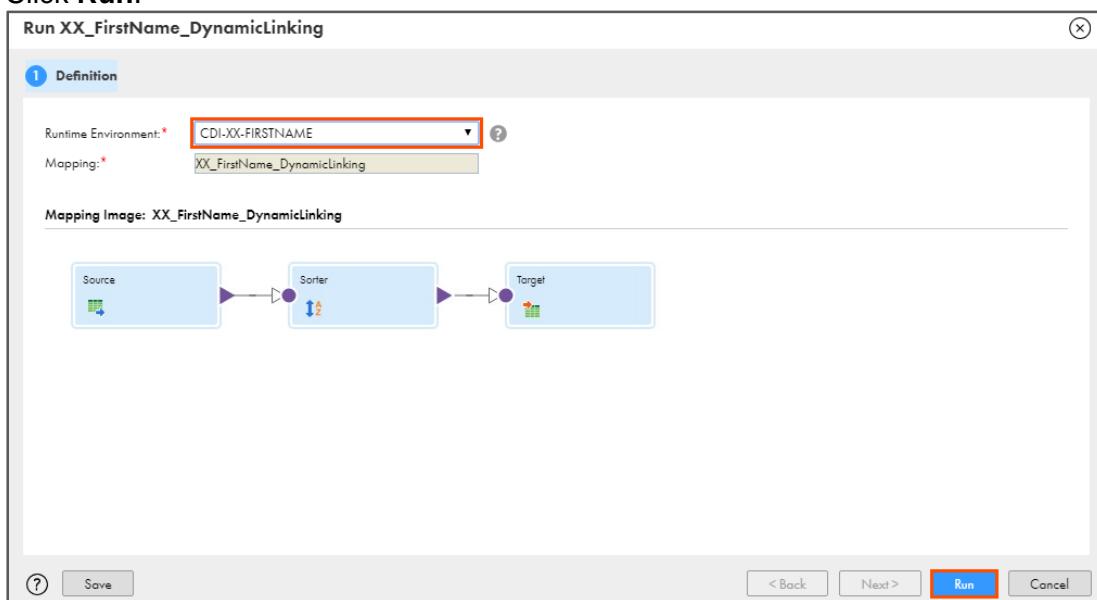
34. To run the mapping, click **Run**.



Note: The Run mapping window appears.

35. From the Runtime Environment drop-down, select your secure agent group.

36. Click **Run**.



Run XX_FirstName_DynamicLinking

1 Definition

Runtime Environment: * CDI-XX-FIRSTNAME

Mapping: * XX_FirstName_DynamicLinking

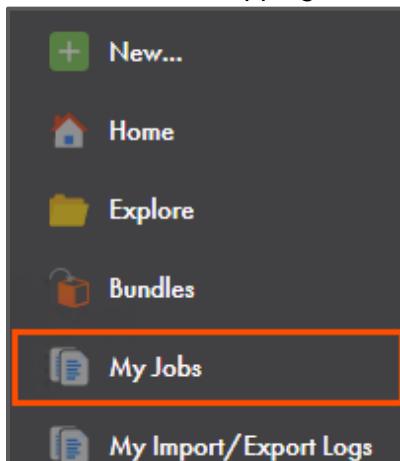
Mapping Image: XX_FirstName_DynamicLinking

Source → Sorter → Target

? Save < Back Next > Run Cancel

Monitor Status:

37. To monitor the mapping status, from the navigation pane, click **My Jobs**.



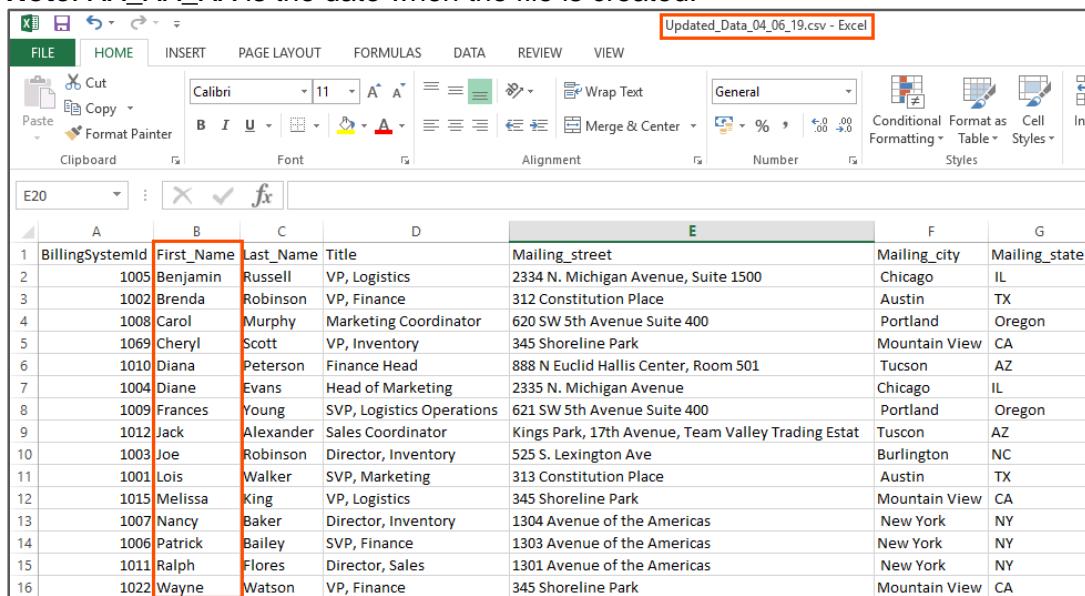
38. When the task completes, the status changes to **Success**.

Jobs (1 of 27) <input checked="" type="checkbox"/> Up to date		Updated 11:54:01 PM PDT			
		Subtasks	Start Time	End Time	Rows Processed
Instance Name					
XX_FirstName_DynamicLinking-1			Aug 1, 2019, ...	Aug 1, 2019, ...	15 <input checked="" type="checkbox"/> Success

39. On your local machine, go to **C:\IICSLabFiles**.

40. Verify that the **Updated_Data_XX_XX_XX.csv** file consists of 15 rows sorted according to the First Name.

Note: XX_XX_XX is the date when the file is created.



A	B	C	D	E	F	G
1	BillingSystemId	First_Name	Last_Name	Title	Mailing_street	Mailing_city
2	1005	Benjamin	Russell	VP, Logistics	2334 N. Michigan Avenue, Suite 1500	Chicago
3	1002	Brenda	Robinson	VP, Finance	312 Constitution Place	Austin
4	1008	Carol	Murphy	Marketing Coordinator	620 SW 5th Avenue Suite 400	Portland
5	1069	Cheryl	Scott	VP, Inventory	345 Shoreline Park	Mountain View
6	1010	Diana	Peterson	Finance Head	888 N Euclid Hallis Center, Room 501	Tucson
7	1004	Diane	Evans	Head of Marketing	2335 N. Michigan Avenue	Chicago
8	1009	Frances	Young	SVP, Logistics Operations	621 SW 5th Avenue Suite 400	Portland
9	1012	Jack	Alexander	Sales Coordinator	Kings Park, 17th Avenue, Team Valley Trading Estat	Tuscon
10	1003	Joe	Robinson	Director, Inventory	525 S. Lexington Ave	Burlington
11	1001	Lois	Walker	SVP, Marketing	313 Constitution Place	Austin
12	1015	Melissa	King	VP, Logistics	345 Shoreline Park	Mountain View
13	1007	Nancy	Baker	Director, Inventory	1304 Avenue of the Americas	New York
14	1006	Patrick	Bailey	SVP, Finance	1303 Avenue of the Americas	New York
15	1011	Ralph	Flores	Director, Sales	1301 Avenue of the Americas	New York
16	1022	Wayne	Watson	VP, Finance	345 Shoreline Park	Mountain View

This concludes the lab.

Module 8: Replication Task

Lab 8-1: Replicating Data to a Flat file

Overview:

A replication task replicates data from a source to a target.

Objective:

- Create a replication task to replicate data to a CSV file

Scenario:

Ruby is concerned that the updated data on the Salesforce Account object is not saved anywhere for backup purposes. So, John suggests creating a replication task to load Account objects in Salesforce to flat file.

Duration:

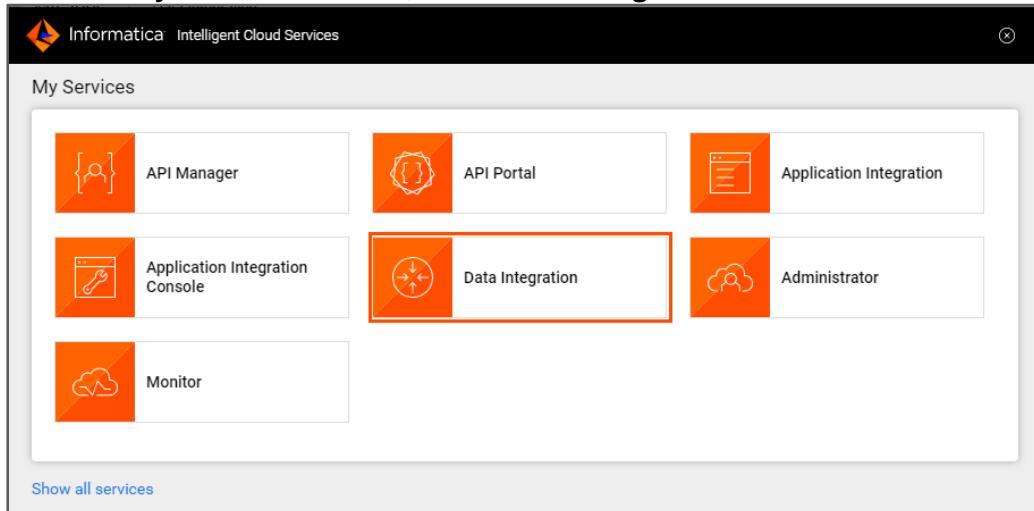
10 minutes

Tasks:**Create Replication Task:**

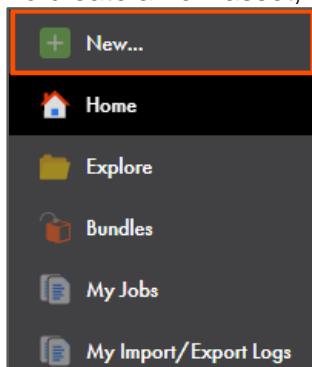
1. Open the IICS Login page from the Bookmarks bar.

Note: Follow this step if you have navigated away from the login page.

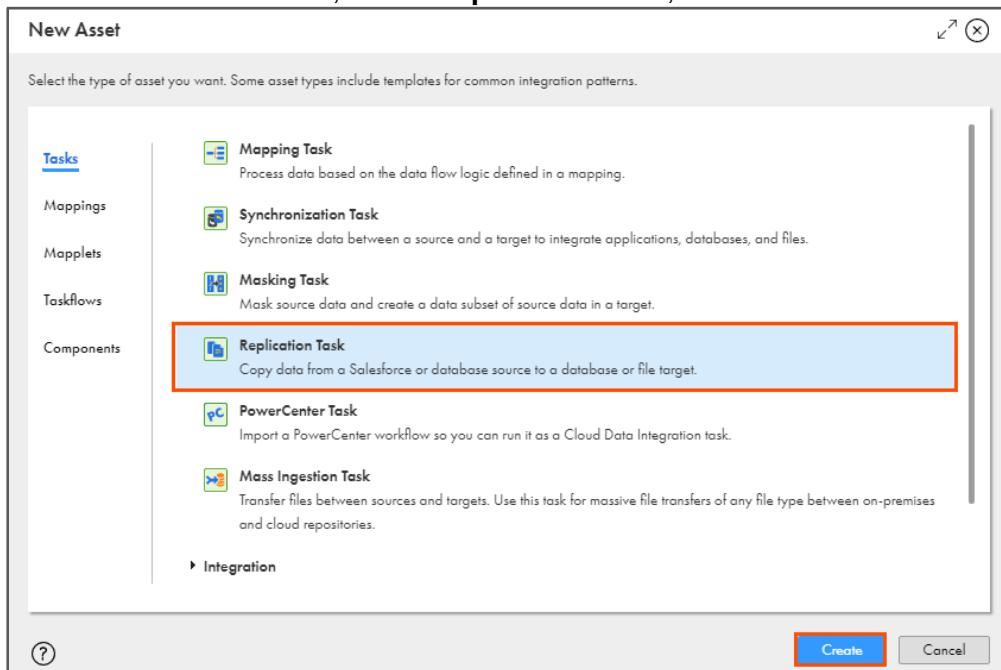
2. Enter the login credentials provided by the Instructor and click **Log In**.
3. From the **My Services** window, select **Data Integration**.



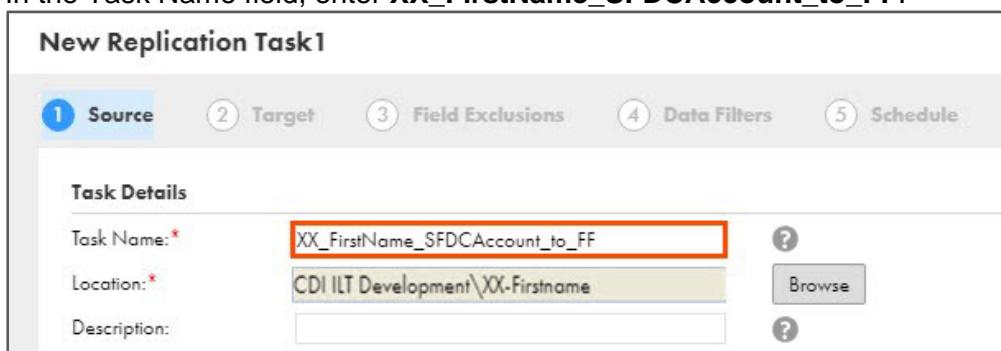
4. To create a new asset, from the navigation pane, select **New**.



5. In the New Asset window, select **Replication Task**, and click **Create**.



6. In the Task Name field, enter **XX_FirstName_SFDCAccount_to_FF**.



Step	Description
1	Source
2	Target
3	Field Exclusions
4	Data Filters
5	Schedule

7. From the Source Connection drop-down, select **XX_FirstName_SFDCDeveloper**.
 8. From Objects to Replicate field, select **Include Objects**.

9. Click **Select**.



Source Details

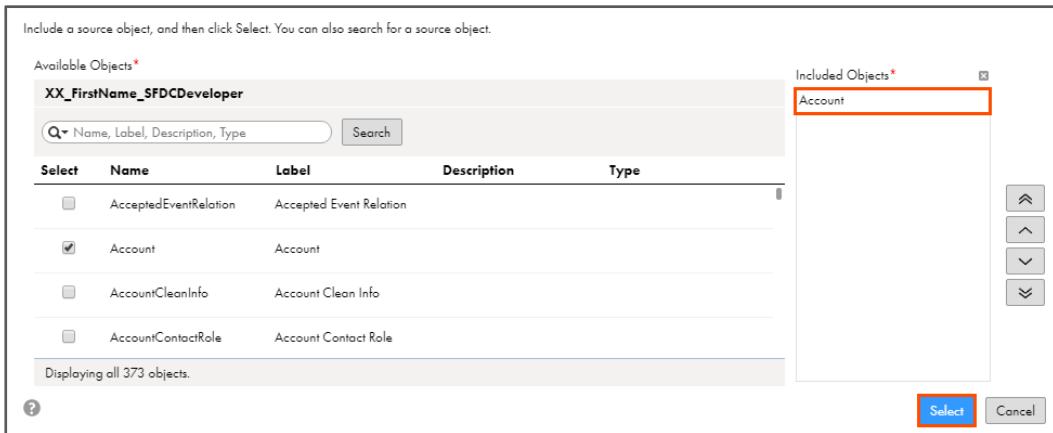
Source Connection: **XX_FirstName_SFDCDeveloper**

Objects to Replicate: All Objects Include Objects Exclude Objects

Note: The Include Source Objects window appears.

10. From the list, select **Account**.

11. Click **Select**.



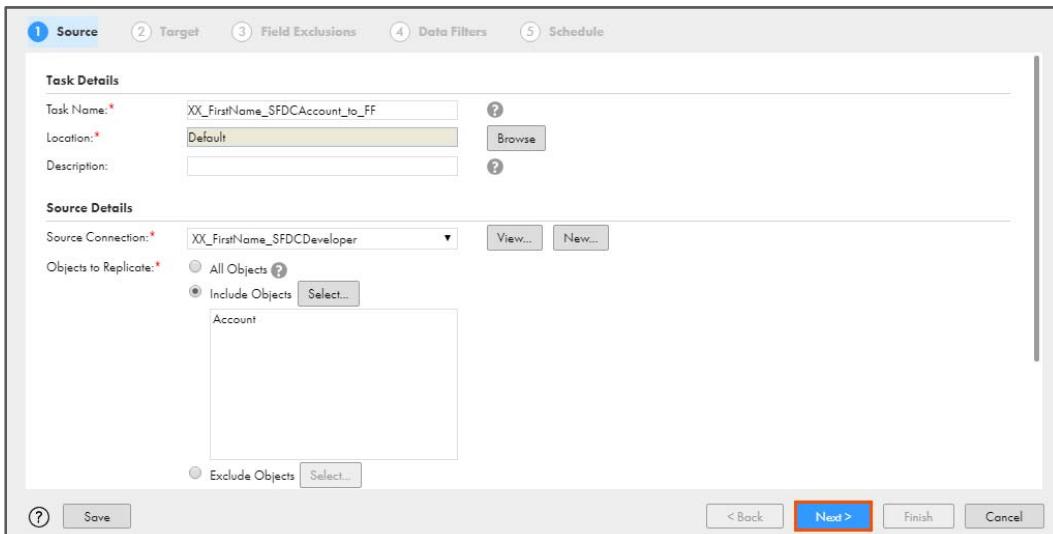
Include a source object, and then click Select. You can also search for a source object.

Available Objects: **XX_FirstName_SFDCDeveloper**

Select	Name	Label	Description	Type
<input type="checkbox"/>	AcceptedEventRelation	Accepted Event Relation		
<input checked="" type="checkbox"/>	Account	Account		
<input type="checkbox"/>	AccountCleanInfo	Account Clean Info		
<input type="checkbox"/>	AccountContactRole	Account Contact Role		

Included Objects: **Account**

12. Select **Next**.



1 Source **2 Target** **3 Field Exclusions** **4 Data Filters** **5 Schedule**

Task Details

Task Name: **XX_FirstName_SFDCAccount_to_FF**

Location: **Default**

Description:

Source Details

Source Connection: **XX_FirstName_SFDCDeveloper**

Objects to Replicate: All Objects Include Objects Exclude Objects

13. From the Connection drop-down, select **XX_FirstName_LocalCSVFiles**.

14. Enter **XX1_** in the Target Prefix field.

New XX_FirstName_SFDCAccount_to_FF

(1) Source (2) **Target** (3) Field Exclusions (4) Data Filters (5) Schedule

Target Details

Connection: * XX_FirstName_LocalCSVFiles View... New... ?

Target Prefix: XX1_

Note: Here, XX is your initials.

15. Click **Next**.

New XX_FirstName_SFDCAccount_to_FF

(1) Source (2) **Target** (3) Field Exclusions (4) Data Filters (5) Schedule

Target Details

Connection: * XX_FirstName_LocalCSVFiles View... New... ?

Target Prefix: XX1_

Replication Options

Load Type: Incremental loads after initial full load
 Incremental loads after initial partial load
Initial load: Rows created or modified after [date range] at [time range]
 Full load each run

Delete Options: Remove deleted columns and rows
 Retain deleted columns and rows

Advanced Options

Commit size: [value] rows

?

Save < Back **Next >** Finish Cancel

16. From the Field Exclusions section, click **Exclude Fields**.

(1) Source (2) Target (3) **Field Exclusions** (4) Data Filters (5) Schedule

Field Exclusions **Exclude Fields...**

There are no fields excluded for any object. All fields for all selected objects will be replicated.

Note: The Field Exclusion window appears.

17. From the Object drop-down, select **Account**.

Field Exclusion

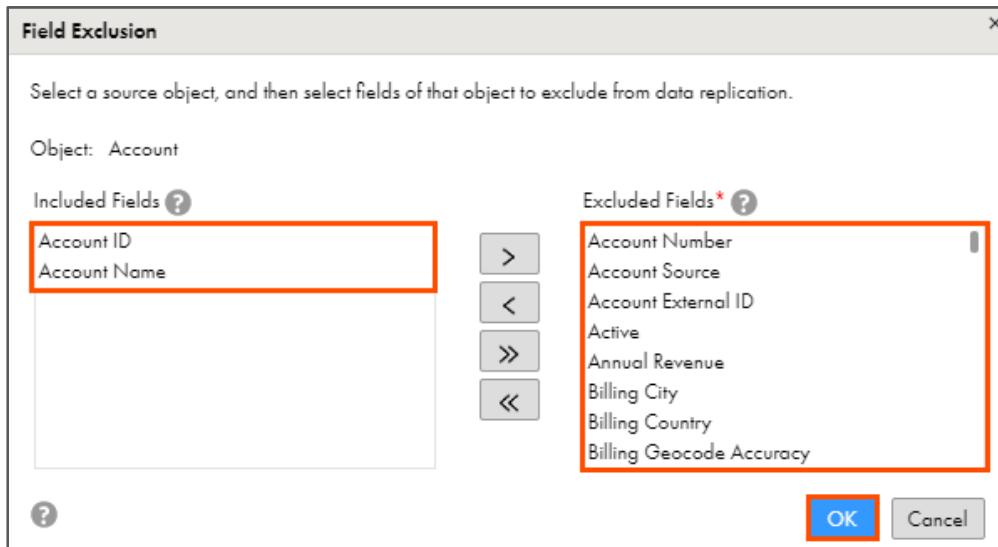
Select a source object, and then select fields of that object to exclude from data replication.

Object: * Account

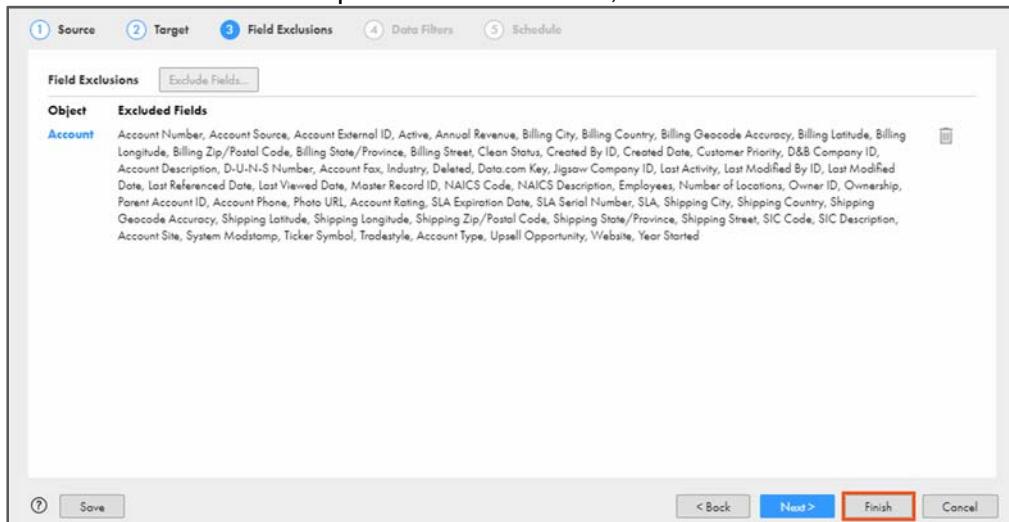
18. In the Included Fields section, retain only **Account Name** and **Account Id**.

Note: To retain Account Name and Account Id, select rest of the fields, and click .

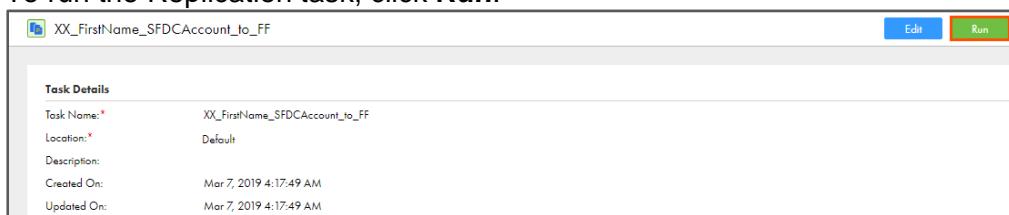
19. Click **OK**.



20. To save and close the Replication Task wizard, click **Finish**.

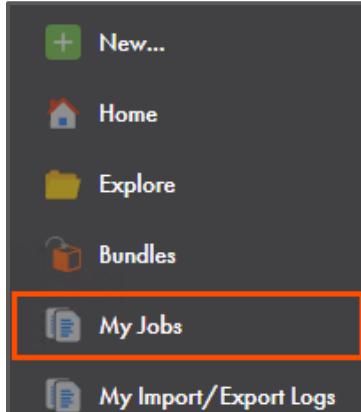


21. To run the Replication task, click **Run**.



Monitor Task:

22. To monitor the task, from the navigation pane, click **My Jobs**.



23. When the task completes, the status changes to **Success**.

Jobs (1 of 27)		Up to date	Updated 4:46:38 AM PDT			
			Asset Name: XX_FirstName_SFDCAccount_to_FF-1	Add Field	Find	
Instance Name	Subtasks	Start Time	End Time	Rows Processed	State	
XX_FirstName_SFDCAccount_to_FF-1	1 Tasks	Aug 1, 2019, ...	Aug 1, 2019, ...	18	✓ Success	

Note: The number of processed rows can change depending upon the data in the Salesforce Account object.

Examine Results:

24. To locate the created files, go to **C:\IICSLabFiles**.
 25. Observe that the file **XX1_ACCOUNT** is created.

File	Home	Share	View	This PC > Local Disk (C:) > IICSLabFiles				Search IICSLab
				Favorites	Name	Date modified	Type	Size
				Desktop	Account_Data	1/18/2019 11:17 AM	Microsoft Excel C...	2 KB

The screenshot shows a Windows File Explorer window displaying files in the 'IICSLabFiles' folder on 'Local Disk (C:)'. The 'XX1_ACCOUNT' file is highlighted with a red box. Other visible files include 'Account_Data', 'Contact_Data', 'Contact2', 'Customers', 'Leads', 'Leads-1', 'Products', 'XX_ACCOUNT', 'XX_OPPORTUNITY', and 'ZipCodeList'.

26. Verify that XX1_ACCOUNT contains only two columns.

ID	NAME
0012v00002NIwacAAD	NH D'needs
0012v00002NIwadAAD	NH Mart
0012v00002NIwaeAAD	NH Groceries
0012v00002NIwafAAD	NH Lifestyle
0012v00002NIwagAAD	NH Digital
0012v00002NIwahAAD	NH Trends
0012v00002NIwaiAAD	NH Everyday
0012v00002NIwajAAD	NH Digiworld
0012v00002NIwakAAD	NH Supplies
0012v00002NcBgnAAF	United Oil & Gas Corp.
0012v00002NcBgtAAF	sForce
0012v00002NcBgsAAF	GenePoint
0012v00002NcBgqAAF	United Oil & Gas, UK
0012v00002NcBgrAAF	United Oil & Gas, Singapore
0012v00002NcBgiAAF	Edge Communications
0012v00002NcB gjAAF	Burlington Textiles Corp of America
0012v00002NcB gkAAF	Pyramid Construction Inc.
0012v00002NcB glAAF	Dickenson plc
0012v00002NcB gmAAF	Grand Hotels & Resorts Ltd
0012v00002NcB goAAF	Express Logistics and Transport
0012v00002NcB gpAAF	University of Arizona

This concludes the lab.

Module 9: Masking Task

Lab 9-1: Creating a Masking Task

Overview:

A masking task masks source data and creates a data subset of the source data in the target.

In this lab, you will mask the account phone number using a masking task.

Objective:

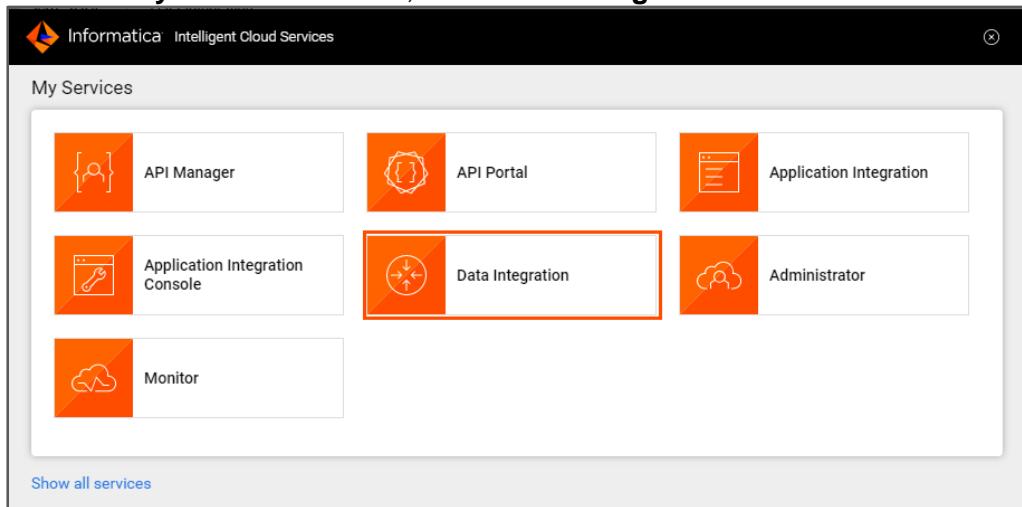
- Create a masking task to mask phone number

Duration:

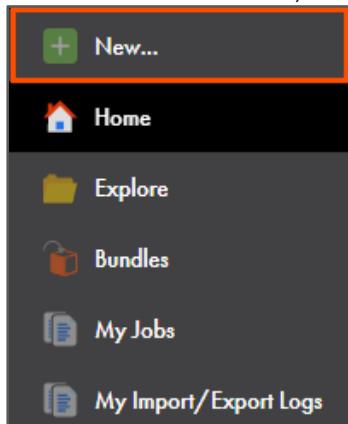
10 minutes

Tasks:**Create Masking Task:**

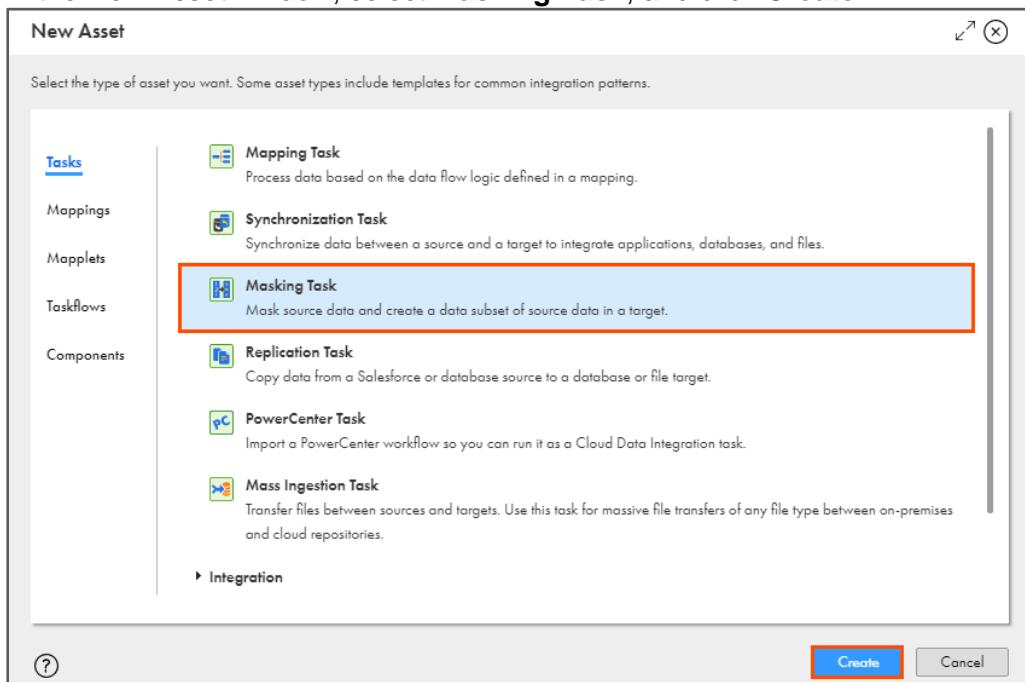
1. Open the **Outlets.csv** file provided in CDI Lab Prep Files folder available on your desktop and note the phone numbers for some of the accounts.
2. Open the IICS Login page from the Bookmarks bar.
Note: Follow this step if you have navigated away from the login page.
3. Enter the login credentials provided by the Instructor and click **Log In**.
4. From the **My Services** window, select **Data Integration**.



5. To create a new asset, from the navigation pane, select **New**.



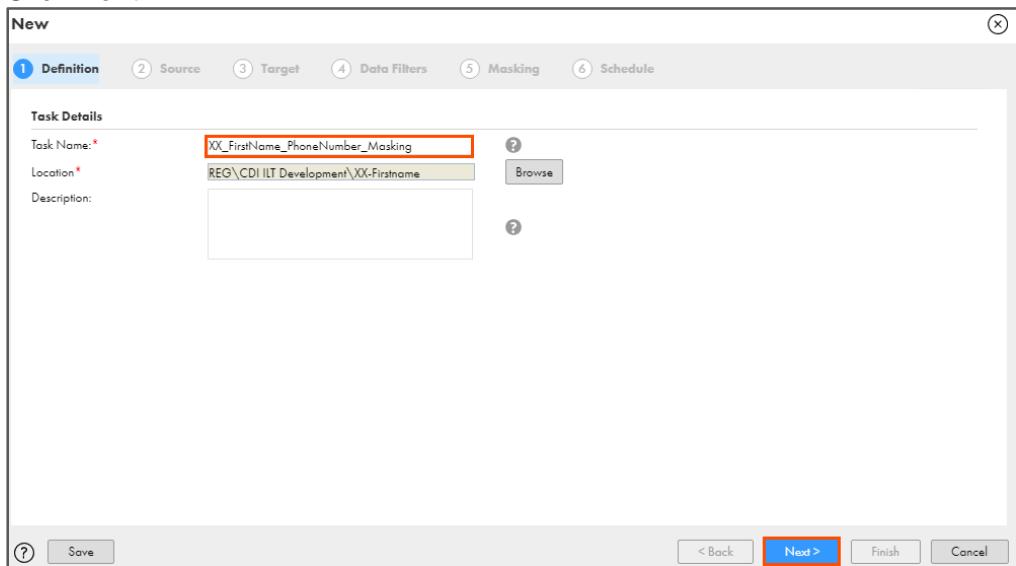
6. In the New Asset window, select **Masking Task**, and click **Create**.



7. In the Task Name field, enter **XX_FirstName_PhoneNumber_Masking**.

Note: Here, XX refers to your initials, and FIRSTNAME refers to your First Name.

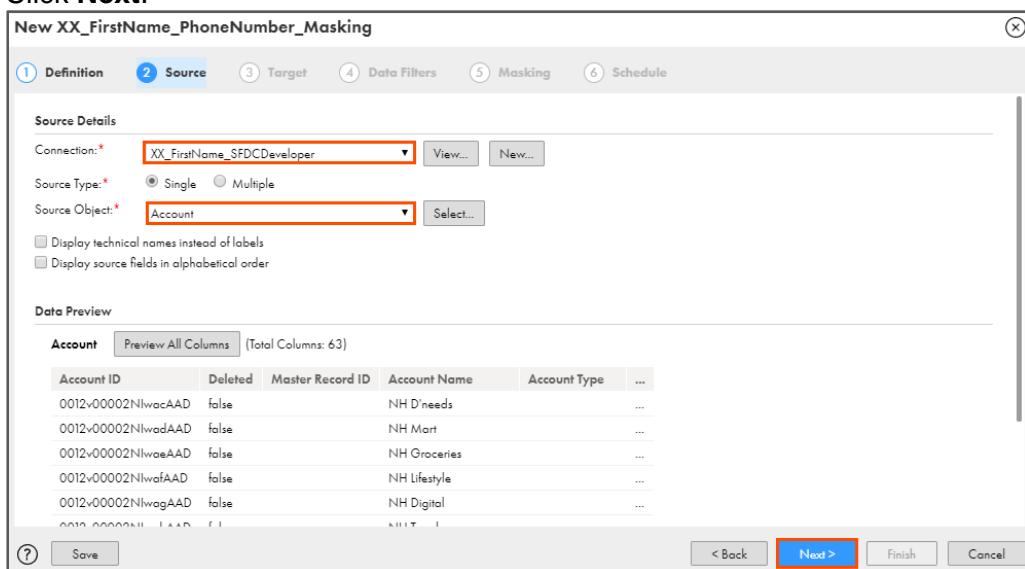
8. Click **Next**.



9. From the Source Connection drop-down, select **XX_FirstName_SFDCDeveloper**.

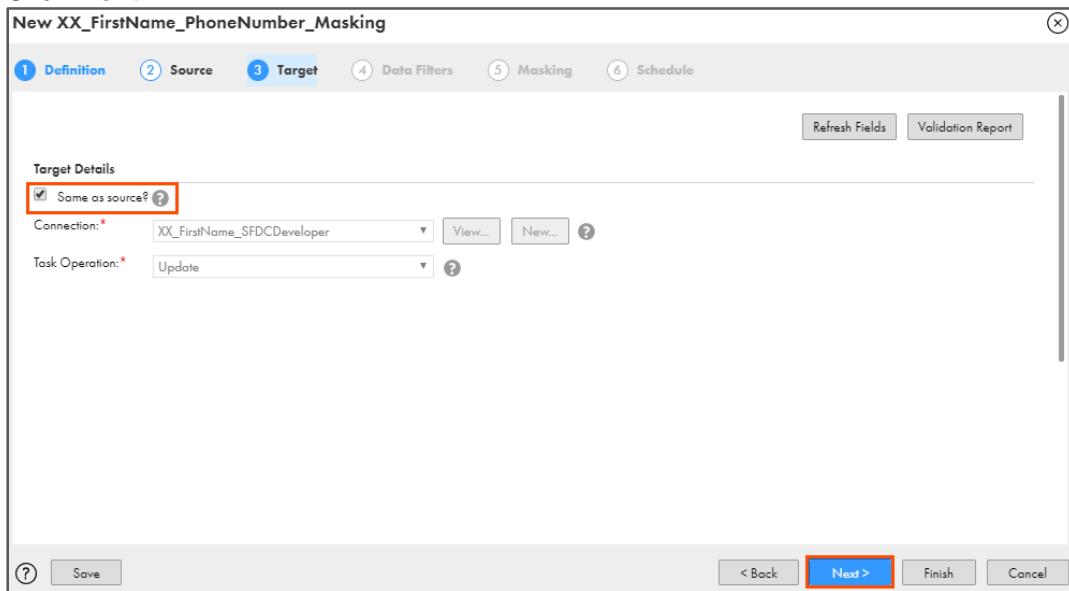
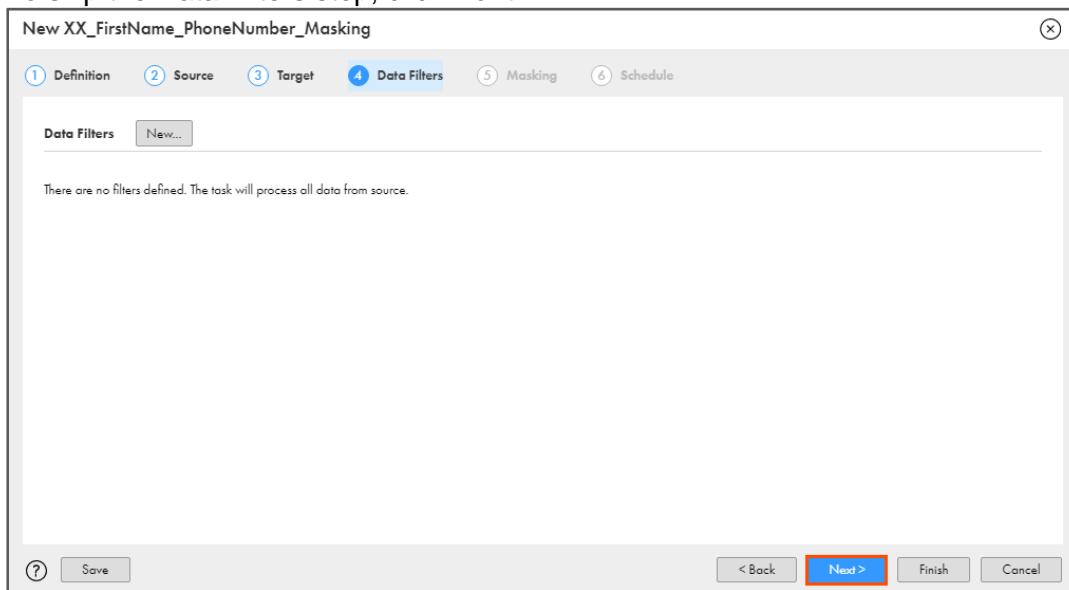
10. From the Source Object drop-down, select **Account**.

11. Click **Next**.

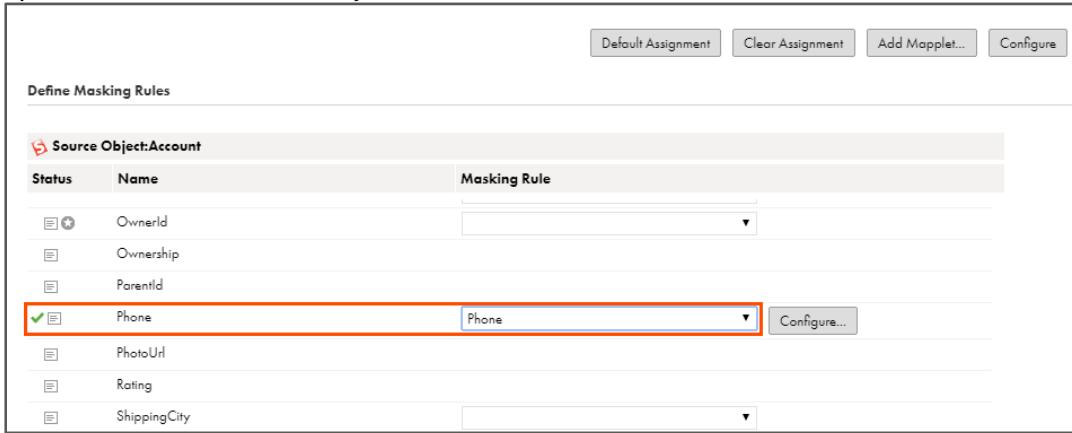


Account ID	Deleted	Master Record ID	Account Name	Account Type	...
0012v00002NlwacAAD	false		NH D'needs		...
0012v00002NlwadAAD	false		NH Mart		...
0012v00002NlwaeAAD	false		NH Groceries		...
0012v00002NlwafAAD	false		NH Lifestyle		...
0012v00002NlwagAAD	false		NH Digital		...
0012v00002NlwahAAD	false		NH Tech		...

12. Verify that the **Same as source?** field is selected.

13. Click **Next**.14. To skip the Data Filters step, click **Next**.

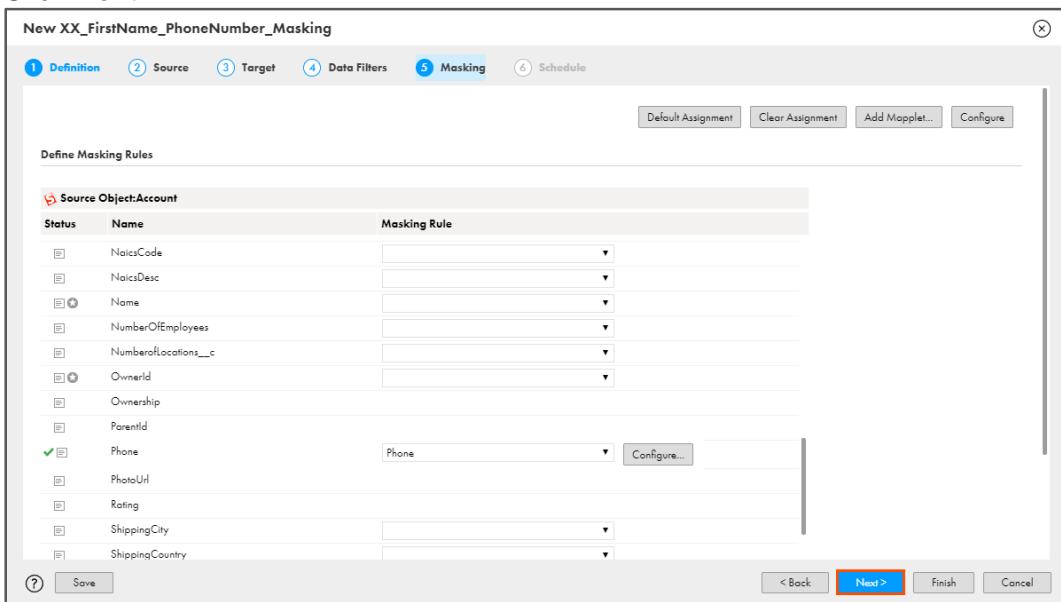
15. In the Define Masking Rules section, from the Phone field drop-down, select **Phone**.
Note: To mask all the fields of the Account object, you can use the Default Assignment option. For this lab, we will just mask the Phone field.



Status	Name	Masking Rule
Owner	OwnerId	
Owner	Ownership	
Owner	ParentId	
Selected	Phone	Phone
Owner	PhotoUrl	
Owner	Rating	
Owner	ShippingCity	

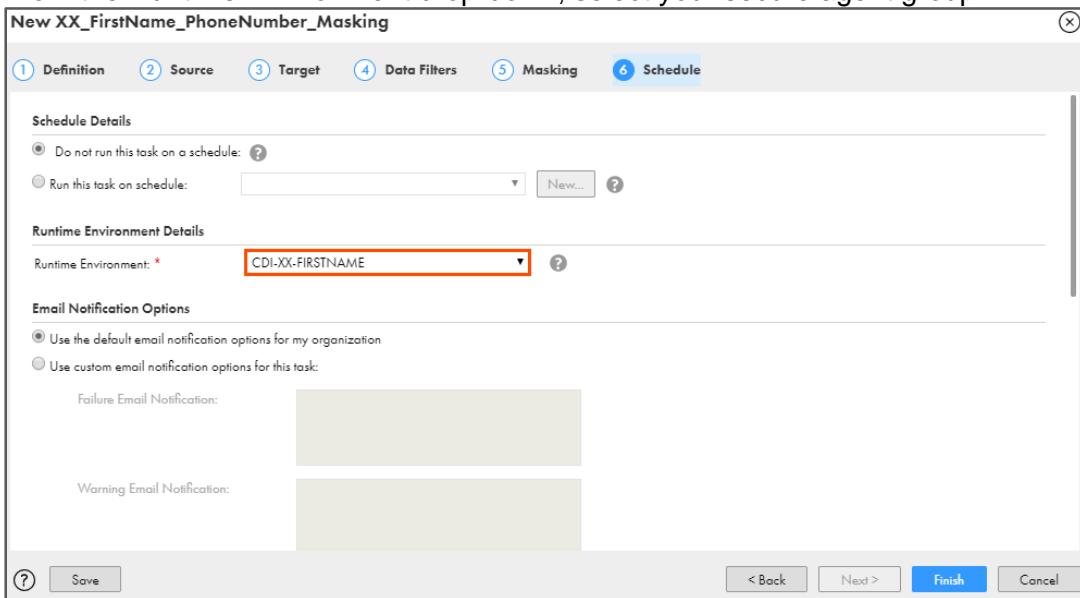
Note: Phone Masking masks a phone number with random numbers in the same format as the original number.

16. Click **Next**.



Status	Name	Masking Rule
Owner	NaicsCode	
Owner	NaicsDesc	
Owner	Name	
Owner	NumberOfEmployees	
Owner	NumberOfLocations__c	
Owner	OwnerId	
Owner	Ownership	
Owner	ParentId	
Selected	Phone	Phone
Owner	PhotoUrl	
Owner	Rating	
Owner	ShippingCity	
Owner	ShippingCountry	

17. From the Runtime Environment drop-down, select your secure agent group.



New XX_FirstName_PhoneNumber_Masking

① Definition ② Source ③ Target ④ Data Filters ⑤ Masking ⑥ Schedule

Schedule Details

Do not run this task on a schedule: ?

Run this task on schedule: ?

Runtime Environment Details

Runtime Environment: * ?

Email Notification Options

Use the default email notification options for my organization

Use custom email notification options for this task:

Failure Email Notification:

Warning Email Notification:

?

Save

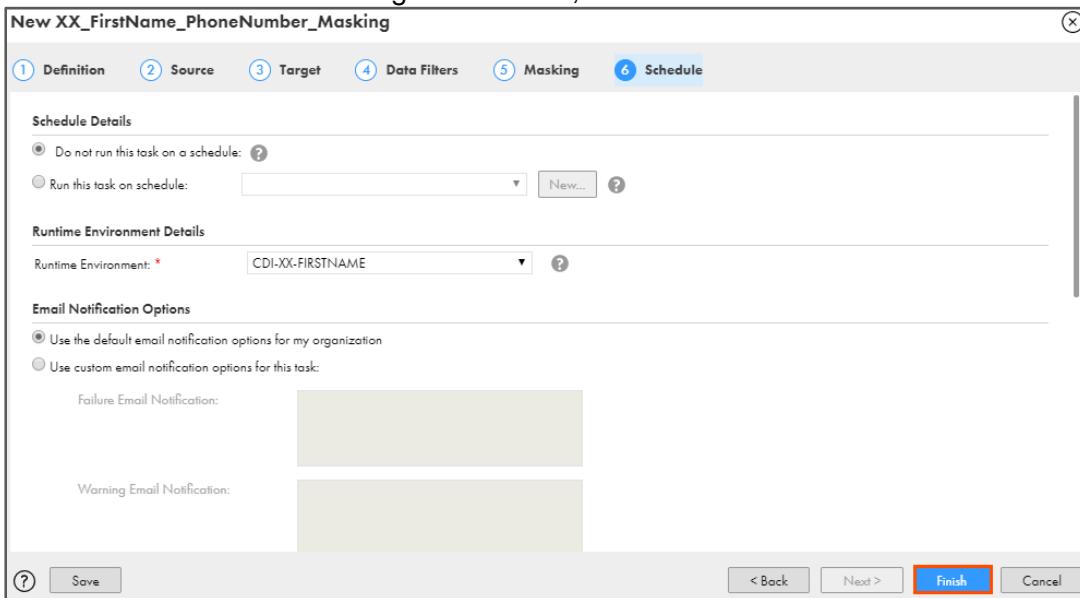
< Back

Next >

Finish

Cancel

18. To save and close the Masking Task wizard, click **Finish**.



New XX_FirstName_PhoneNumber_Masking

① Definition ② Source ③ Target ④ Data Filters ⑤ Masking ⑥ Schedule

Schedule Details

Do not run this task on a schedule: ?

Run this task on schedule: ?

Runtime Environment Details

Runtime Environment: * ?

Email Notification Options

Use the default email notification options for my organization

Use custom email notification options for this task:

Failure Email Notification:

Warning Email Notification:

?

Save

< Back

Next >

Finish

Cancel

19. To run the Masking task, click **Run**.



XX_FirstName_PhoneNumber_Masking

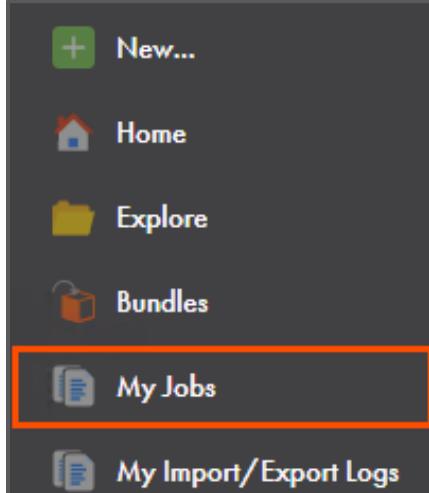
Edit

Run

Task Details	
Task Name: *	XX_FirstName_PhoneNumber_Masking
Location *	Default
Description:	

Monitor the Status:

20. To monitor the task, from the navigation pane, click **My Jobs**.



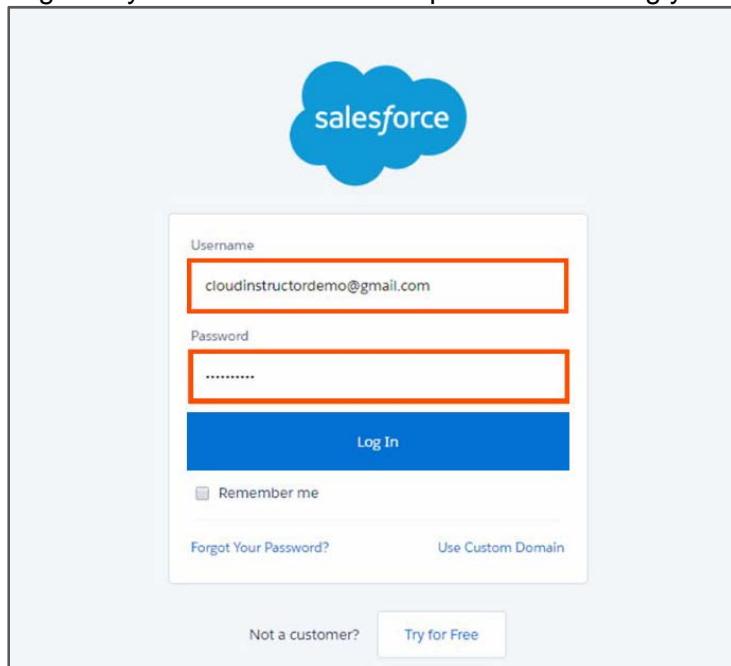
21. When the task completes, the status changes to **Success**.

Jobs (1 of 27) ✓ Up to date		Updated 12:21:54 AM PDT Find			
Asset Name: XX_FirstName_PhoneN... Add Field ▾		Subtasks	Start Time	End Time	Rows Processed
Instance Name					State
XX_FirstName_PhoneNumber_Masking-1			Aug 1, 2019, ...	Aug 1, 20...	18 Success

Note: The number of processed rows can change depending upon the data in Salesforce Account object.

Examine Results:

22. Log in to your Salesforce Developer account using your credentials.



Note: You can use the below mentioned link to login to Salesforce:
<https://login.salesforce.com/>

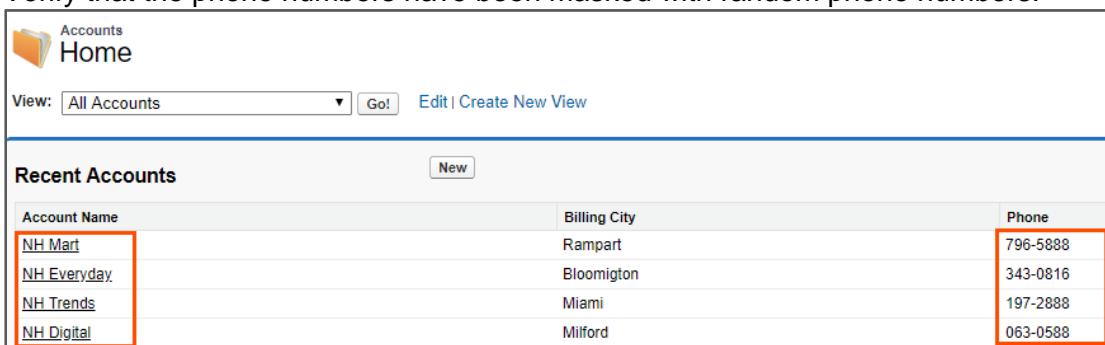
23. On the Salesforce homepage, from the available tabs, select **Accounts**.



A screenshot of the Salesforce homepage. At the top, there is a navigation bar with links for Home, Chatter, Campaigns, Leads, Accounts (which is highlighted with a red box), Contacts, Opportunities, Forecasts, Contracts, Orders, Cases, Solutions, Products, Reports, Dashboards, and a plus sign. Below the navigation bar, there are search fields and links for Switch to Lightning Experience, Informatica Cloud, Setup, Help, and Sales.

24. Observe the phone number for accounts noted in step 1.

25. Verify that the phone numbers have been masked with random phone numbers.



A screenshot of the Salesforce Accounts page. The title bar says "Accounts Home". Below it, there is a "Recent Accounts" section with a "New" button. A dropdown menu shows "View: All Accounts" and a "Go!" button. There is also a "Edit | Create New View" link. The main table has columns for Account Name, Billing City, and Phone. The data is as follows:

Account Name	Billing City	Phone
NH Mart	Rampart	796-5888
NH Everyday	Bloomington	343-0816
NH Trends	Miami	197-2888
NH Digital	Milford	063-0588

This concludes the lab.

Module 10: Mass Ingestion Task

Lab 10-1: Creating a Mass Ingestion Task

Overview:

A mass ingestion task transfers massive file between sources and targets.

In this lab, you will create a mass ingestion task to transfer all the files that you receive from different databases to the server machine.

Objective:

- Create a mass ingestion task to transfers files.

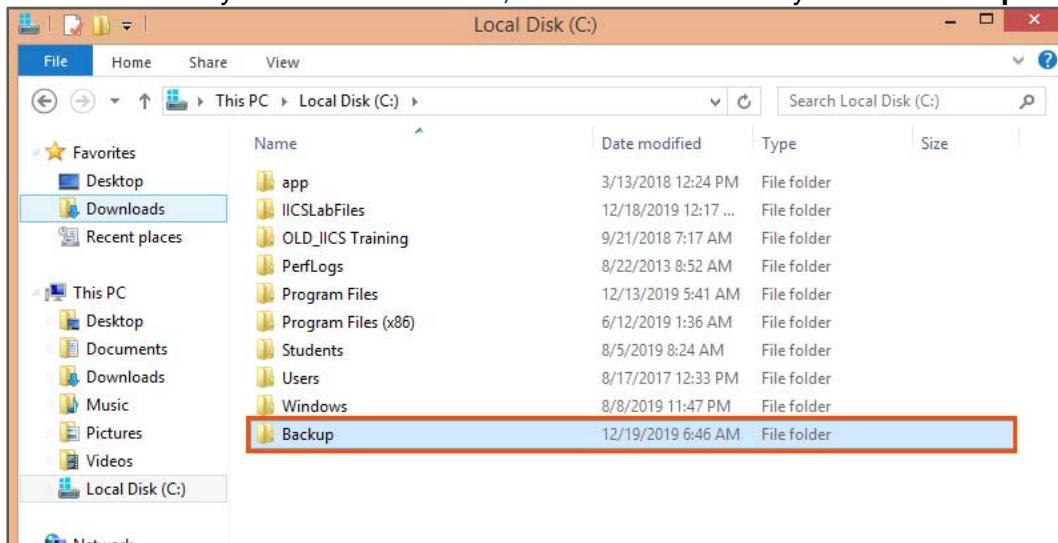
Duration:

10 minutes

Tasks:

Create Mass Ingestion Task:

1. In the C drive of your Ravello machine, create a new directory named **Backup**.

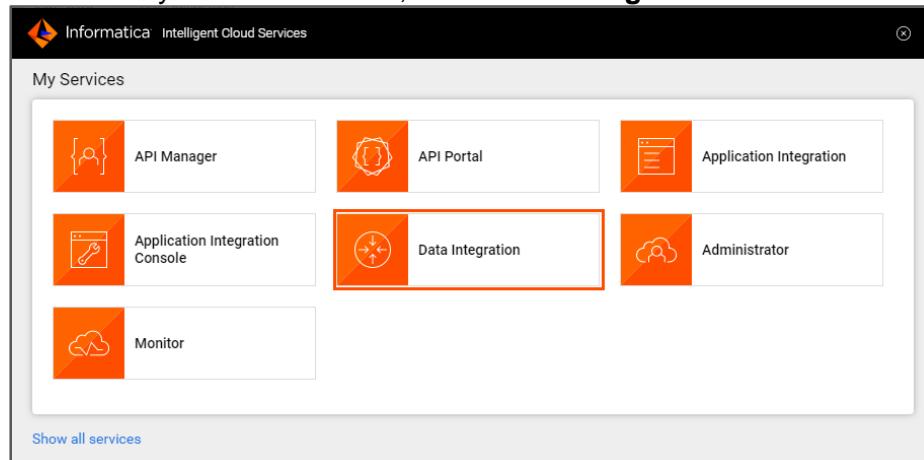


2. Open the IICS Login page from the Bookmarks bar.

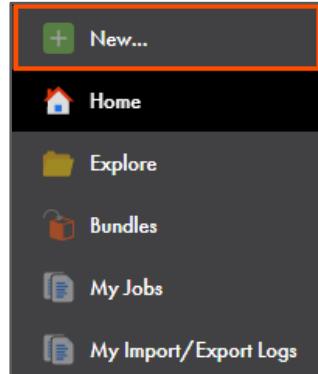
Note: Follow this step if you have navigated away from the login page.

3. Enter the login credentials provided by the Instructor and click **Log In**.

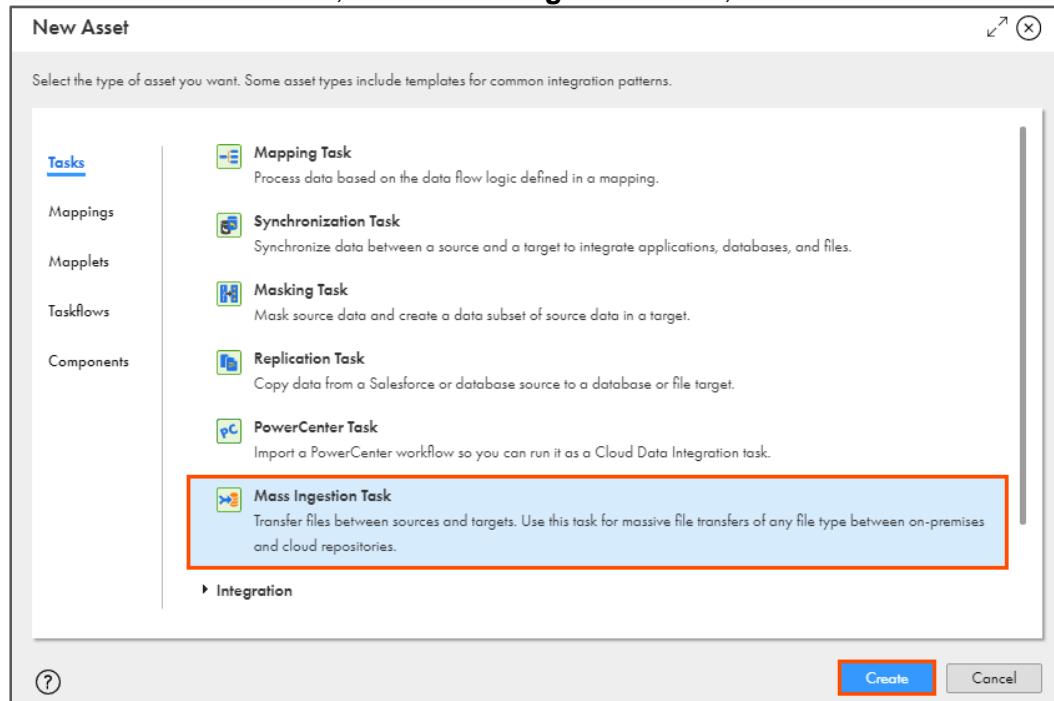
4. From the My Services window, select **Data Integration**.



5. To create a new asset, from the navigation pane, select **New**.



6. In the New Asset window, select **Mass Ingestion Task**, and click **Create**.



7. In the Task Name field, enter **XX_FirstName_MassIngestion**.

Note: Here, XX refers to your initials, and FIRSTNAME refers to your First Name.

8. From the Runtime Environment drop-down, select your secure agent group.

Task Details

Task Name: *	<input type="text" value="XX_FirstName_MassIngestion"/>	
Location: *	<input type="text" value="CDI ILT Development\XX-Firstname"/>	<input type="button" value="Browse"/>
Description:	<input type="text"/>	
Runtime Environment: *	<input type="text" value="CDI-XX-FIRSTNAME"/>	

9. Click **Next**.

New Mass Ingestion Task

<input checked="" type="radio"/> New Mass Ingestion Task	<input type="button" value="< Back"/>	<input type="button" value="Next >"/>	<input type="button" value="Save"/>												
1 Definition 2 Source 3 Target 4 Schedule															
Task Details <hr/> <table border="0"> <tr> <td>Task Name: *</td> <td colspan="2"><input type="text" value="XX_FirstName_MassIngestion"/></td> </tr> <tr> <td>Location: *</td> <td><input type="text" value="CDI ILT Development\XX-Firstname"/></td> <td><input type="button" value="Browse"/></td> </tr> <tr> <td>Description:</td> <td colspan="2"><input type="text"/></td> </tr> <tr> <td>Runtime Environment: *</td> <td colspan="2"><input type="text" value="CDI-XX-FIRSTNAME"/></td> </tr> </table>				Task Name: *	<input type="text" value="XX_FirstName_MassIngestion"/>		Location: *	<input type="text" value="CDI ILT Development\XX-Firstname"/>	<input type="button" value="Browse"/>	Description:	<input type="text"/>		Runtime Environment: *	<input type="text" value="CDI-XX-FIRSTNAME"/>	
Task Name: *	<input type="text" value="XX_FirstName_MassIngestion"/>														
Location: *	<input type="text" value="CDI ILT Development\XX-Firstname"/>	<input type="button" value="Browse"/>													
Description:	<input type="text"/>														
Runtime Environment: *	<input type="text" value="CDI-XX-FIRSTNAME"/>														

10. Retain the Source Type as **Source Connection**.
11. From the Connection Type drop-down, select **Local Folder**.

Source Type

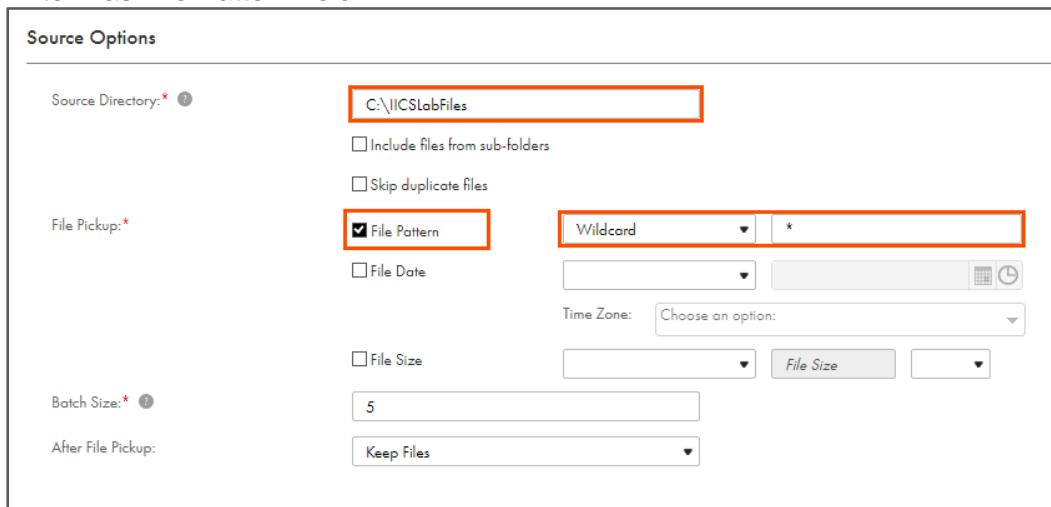
<input checked="" type="radio"/> Source Connection	<input type="radio"/> File Listener
---	-------------------------------------

Source Connection Details

Connection Type: *	<input type="text" value="Local Folder"/>
--------------------	---

12. In the Source Directory field, enter **C:\IICSLabFiles**.
13. From the File Pickup field, select **File Pattern**.
14. From the drop-down, select **Wildcard**.

15. Enter * as File Pattern field.



Source Options

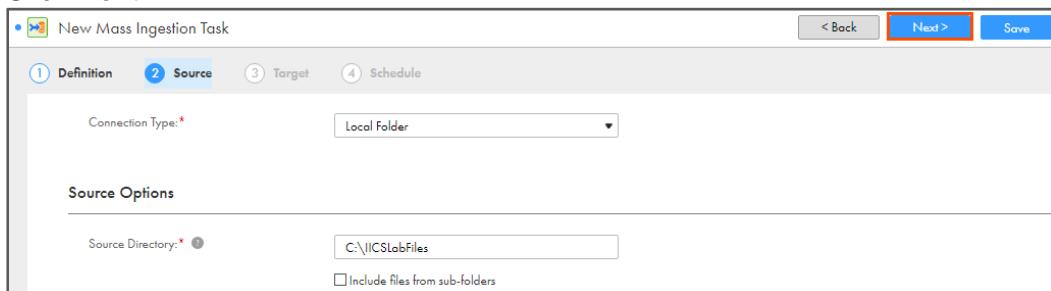
Source Directory*: C:\IICSLabFiles

File Pickup: File Pattern Wildcard *

Batch Size: 5

After File Pickup: Keep Files

16. Click **Next**.



New Mass Ingestion Task

① Definition ② Source ③ Target ④ Schedule

Connection Type: Local Folder

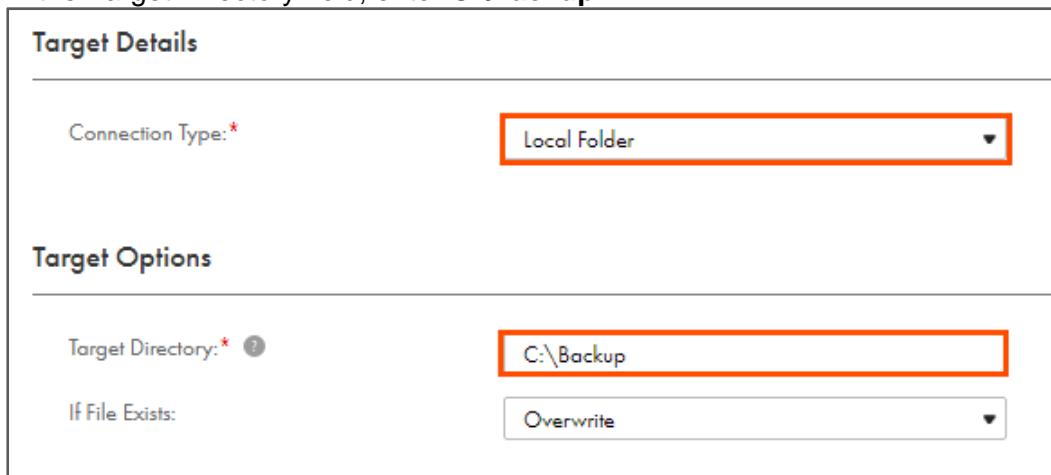
Source Options

Source Directory*: C:\IICSLabFiles

Include files from sub-folders

17. From the Connection Type drop-down, select **Local Folder**.

18. In the Target Directory field, enter **C:\Backup**.



Target Details

Connection Type: Local Folder

Target Options

Target Directory: C:\Backup

If File Exists: Overwrite

19. Click **Next**.



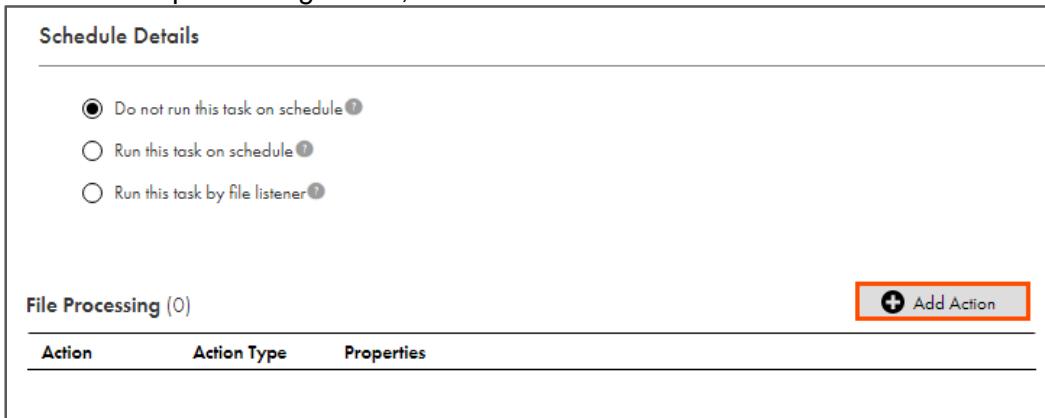
New Mass Ingestion Task

① Definition ② Source ③ Target ④ Schedule

Target Details

Connection Type: Local Folder

20. To add a file processing action, select **Add Action**.



Schedule Details

Do not run this task on schedule ?

Run this task on schedule ?

Run this task by file listener ?

File Processing (0)

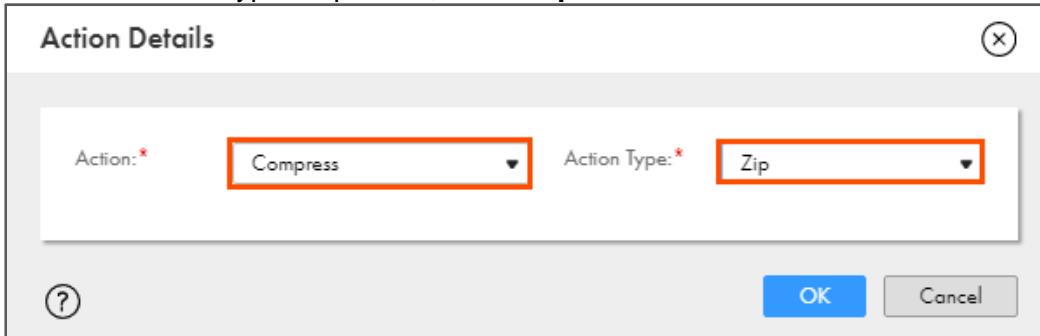
Add Action

Action	Action Type	Properties
--------	-------------	------------

Note: A new Action Details window appears.

21. From the Action drop-down, select **Compress**.

22. From the Action Type drop-down, select **Zip**.



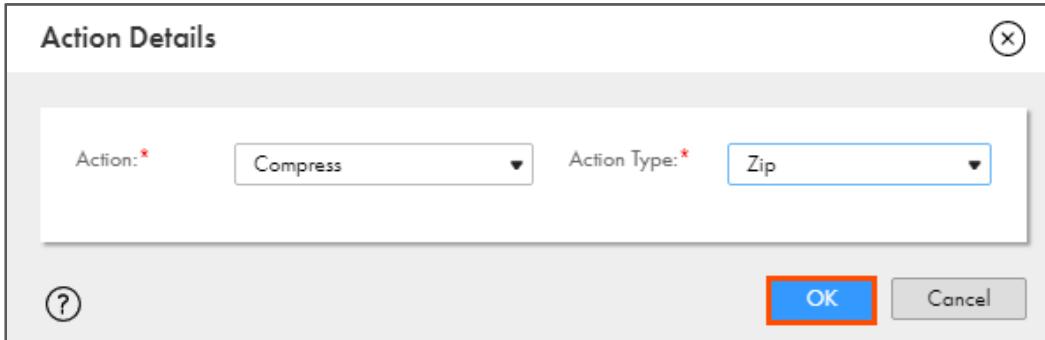
Action Details

Action: * **Compress**

Action Type: * **Zip**

OK Cancel

23. Click **OK**.



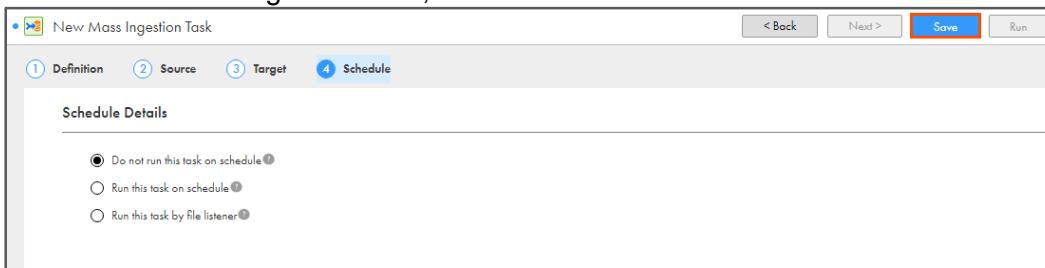
Action Details

Action: * **Compress**

Action Type: * **Zip**

OK Cancel

24. To save the mass ingestion task, click **Save**.



New Mass Ingestion Task

< Back Next > **Save** Run

① Definition ② Source ③ Target ④ Schedule

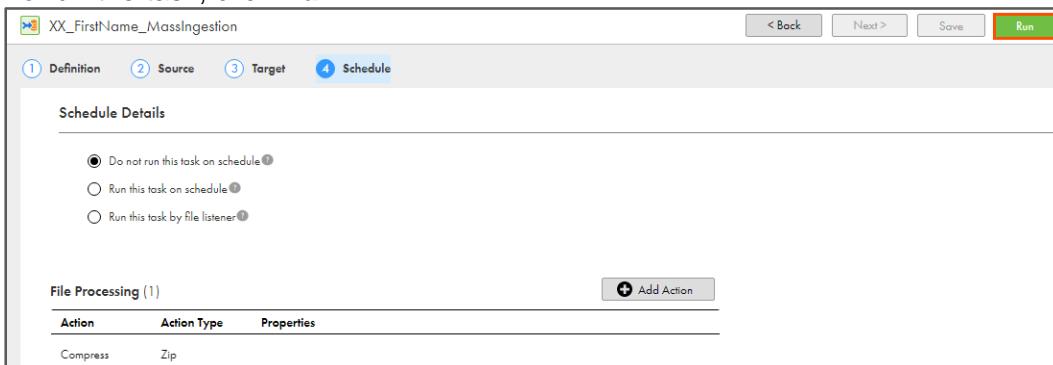
Schedule Details

Do not run this task on schedule ?

Run this task on schedule ?

Run this task by file listener ?

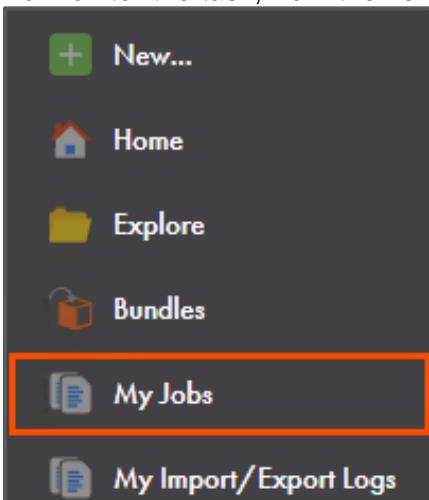
25. To run the task, click **Run**.



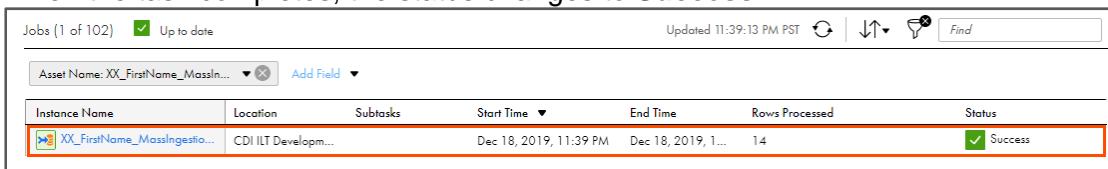
The screenshot shows the 'XX_FirstName_MassIngestion' task configuration. The 'Schedule Details' section has the 'Do not run this task on schedule' radio button selected. Below it, the 'File Processing (1)' section shows a single action: 'Compress' with 'Zip' as the type. The 'Run' button at the top right is highlighted with a green border.

Monitor the Status:

26. To monitor the task, from the navigation pane, click **My Jobs**.



27. When the task completes, the status changes to **Success**.



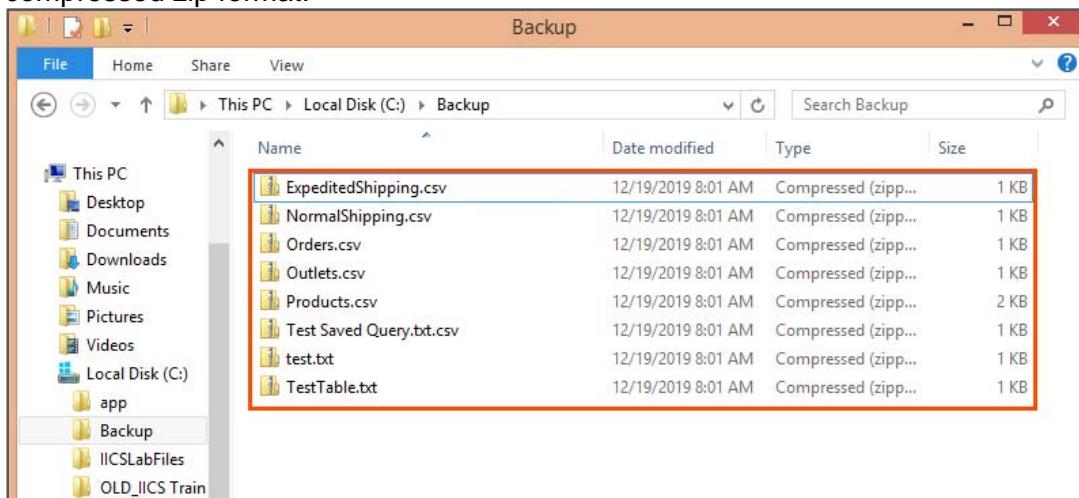
The screenshot shows the 'Jobs (1 of 102)' list. The table includes columns: Instance Name, Location, Subtasks, Start Time, End Time, Rows Processed, and Status. One row is shown, with the 'Status' column containing a green checkmark and the word 'Success'. The entire row is highlighted with a red box.

Instance Name	Location	Subtasks	Start Time	End Time	Rows Processed	Status
XX_FirstName_MassIngestio...	CDI ILT Developm...		Dec 18, 2019, 11:39 PM	Dec 18, 2019, 1...	14	✓ Success

Note: The number of processed rows differs depending upon the number of files in the source directory (C:\IICSLabFiles).

Examine Results:

28. On your Ravello machine, navigate to **C:\Backup**.
29. Observe that the files available in **C:\IICSLabFiles** are now copied to **C:\Backup** in compressed zip format.



This concludes the lab.

Module 11: Taskflows

Lab 11-1: Creating a Parallel Taskflow

Overview:

A taskflow enables you to add multiple data integration tasks and run it in parallel or in a specific sequence.

In this lab, you will create a parallel taskflow.

Objective:

- Configure Taskflow using a template

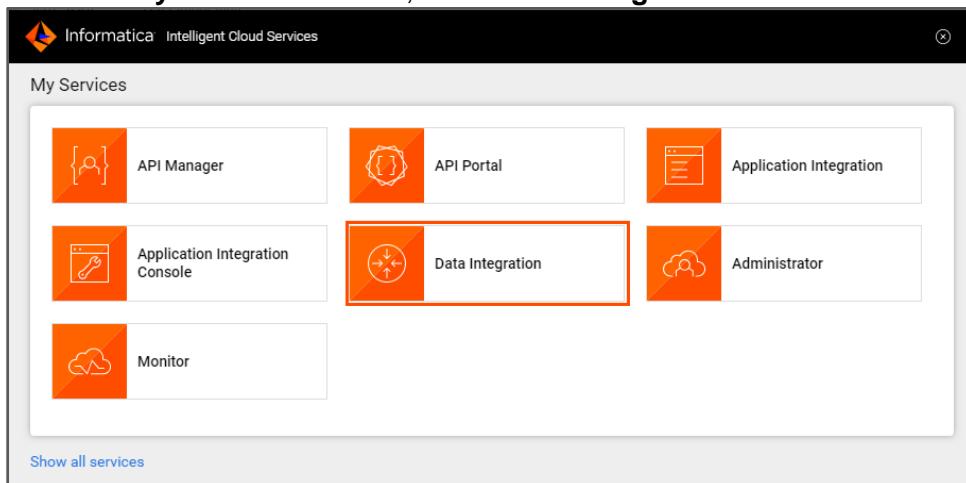
Duration:

10 minutes

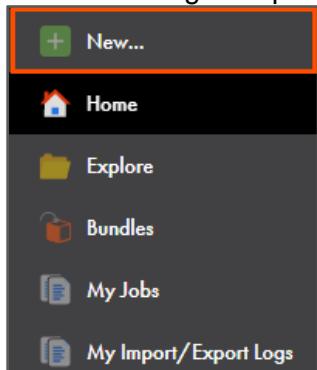
Tasks:

Create Parallel Taskflow:

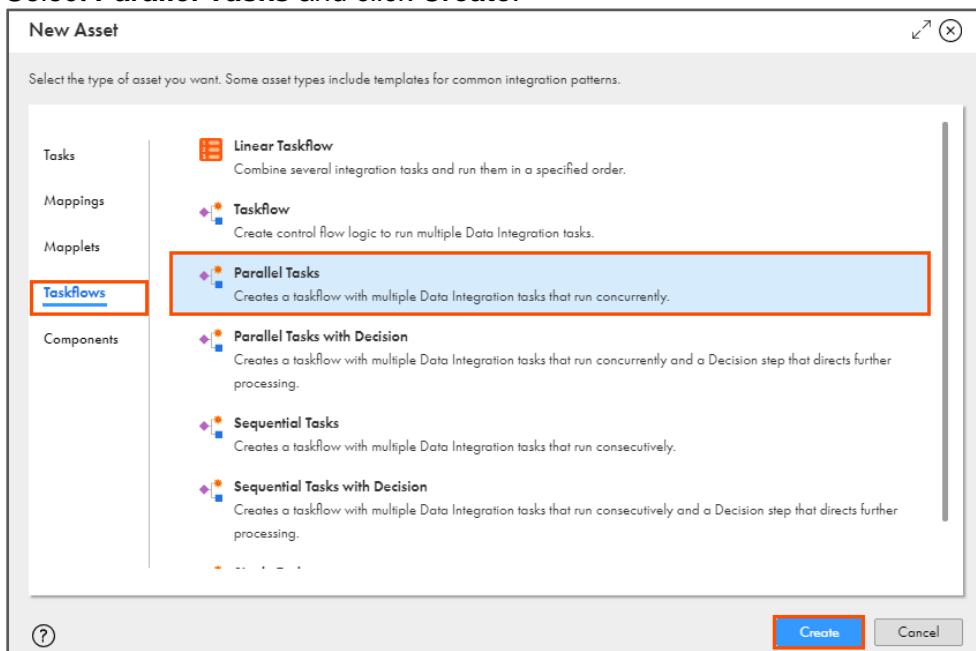
- Open the IICS Login page from the Bookmarks bar.
Note: Follow this step if you have navigated away from the login page.
- Enter the login credentials provided by the Instructor and click **Log In**.
- From the **My Services** window, select **Data Integration**.



4. From the navigation pane, select **New**.



5. From the New Asset window, click the **Taskflows** tab.
 6. Select **Parallel Tasks** and click **Create**.



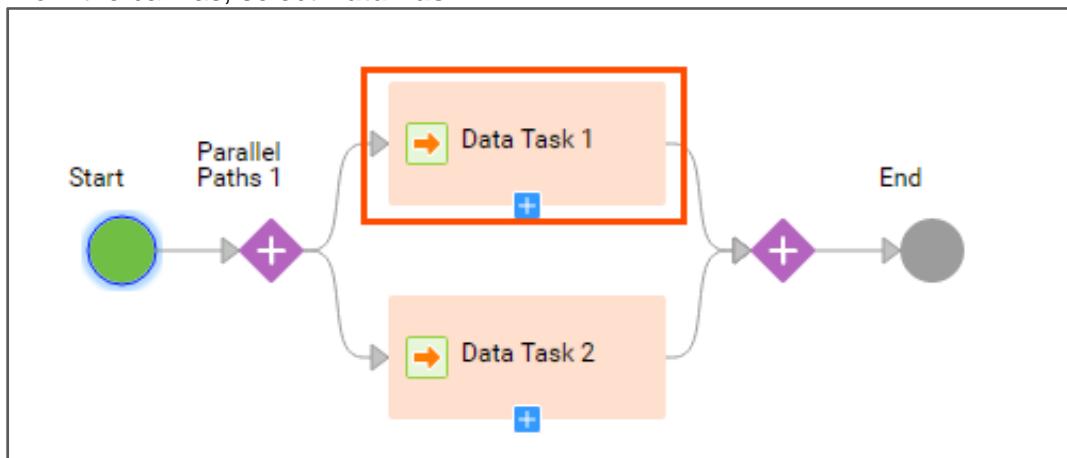
Note: The New Taskflow window appears.

7. From the General section of the Taskflow properties, enter the Name as **XX_FirstName_ParallelTaskflow**.

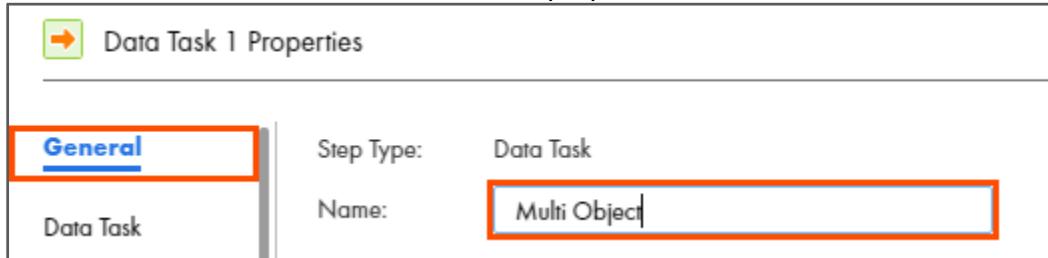
Note: Here, XX refers to your initials, and FIRSTNAME refers to your First Name.



8. From the canvas, select **Data Task 1**.

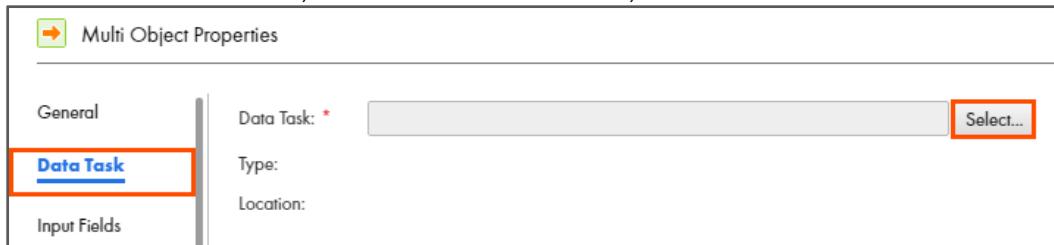


9. In the General section of the Data Task 1 properties, enter the Name as **Multi Object**.



10. From the properties pane, click **Data Task**.

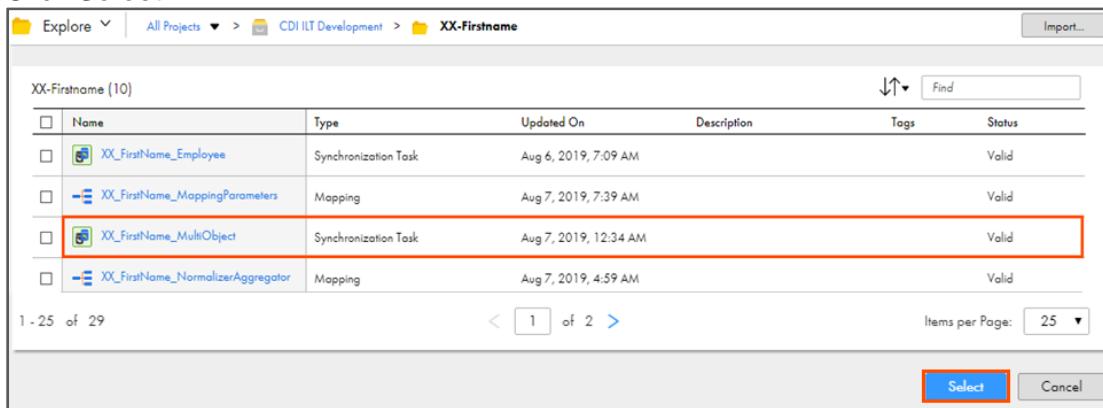
11. To select the data task, from the Data Task field, click **Select**.



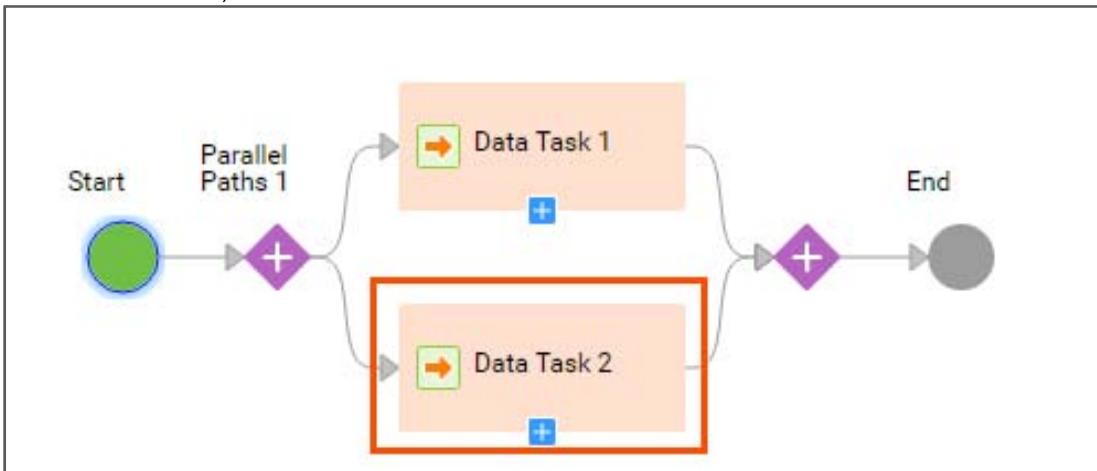
Note: The Select Data Task window appears.

12. From the list, select **XX_FirstName_MultiObject**.

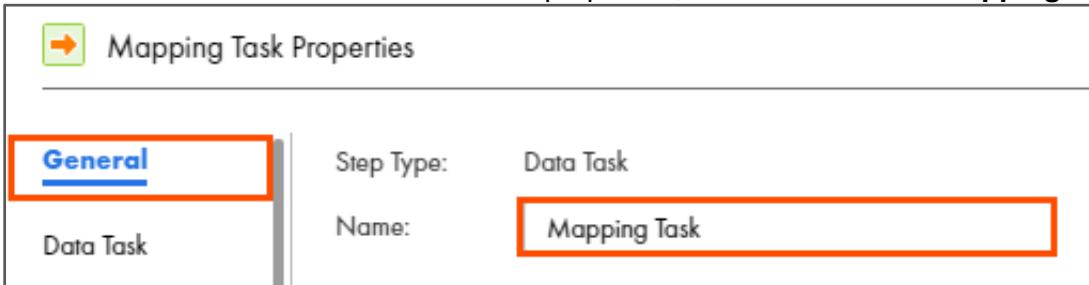
13. Click **Select**.



14. From the canvas, select **Data Task 2**.



15. In the General section of the Data Task 1 properties, enter the Name as **Mapping Task**.



Mapping Task Properties	
General	Step Type: Data Task
Data Task	Name: Mapping Task

16. From the properties pane, click **Data Task**.

17. To select the data task, from the Data Task field, click **Select**.

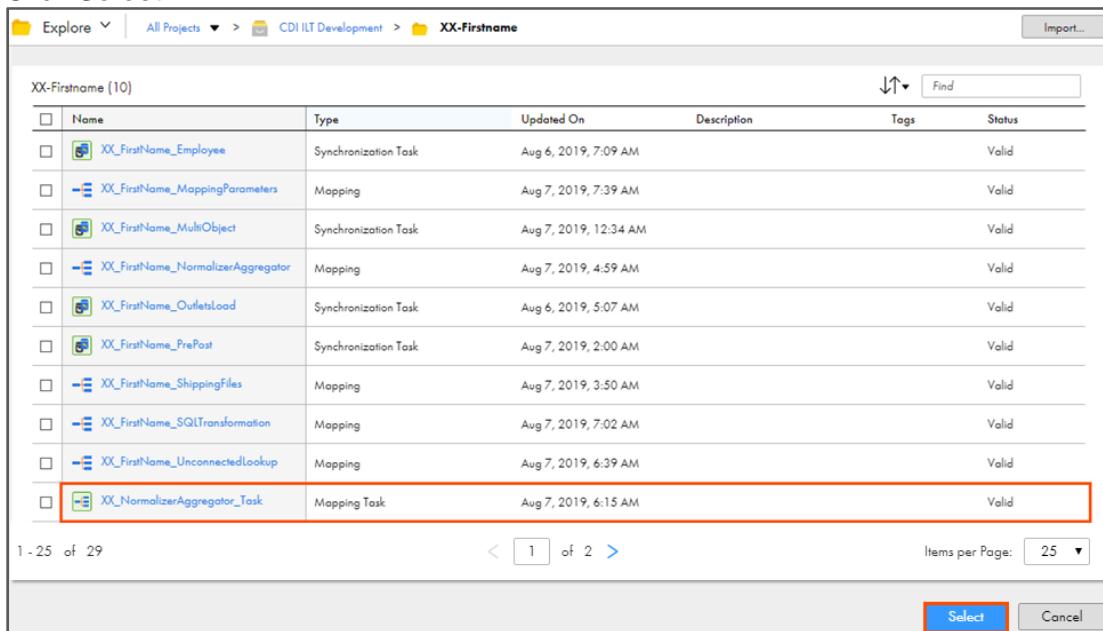


General	Data Task:
Data Task	<input type="text"/> Select...
Input Fields	Type:
Output Fields	Location: Default
Events	

Note: The Select Data Task window appears.

18. From the list, select **XX_NormalizerAggregator_Task**.

19. Click Select.



The screenshot shows the Informatica Project Explorer interface. The current project is 'CDI ILT Development'. Inside it, there is a folder named 'XX-Firstname' which contains 10 objects. The objects are listed in a table with columns: Name, Type, Updated On, Description, Tags, and Status. The last object, 'XX_NormalizerAggregator_Task', is highlighted with a red border. At the bottom right of the table, there are 'Select' and 'Cancel' buttons, with 'Select' being highlighted in blue.

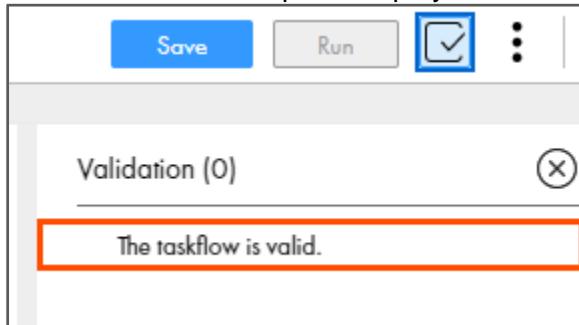
XX-Firstname (10)					
	Name	Type	Updated On	Description	Status
<input type="checkbox"/>	XX_FirstName_Employee	Synchronization Task	Aug 6, 2019, 7:09 AM		Valid
<input type="checkbox"/>	- XX_FirstName_MappingParameters	Mapping	Aug 7, 2019, 7:39 AM		Valid
<input type="checkbox"/>	XX_FirstName_MultiObject	Synchronization Task	Aug 7, 2019, 12:34 AM		Valid
<input type="checkbox"/>	- XX_FirstName_NormalizerAggregator	Mapping	Aug 7, 2019, 4:59 AM		Valid
<input type="checkbox"/>	XX_FirstName_OutletsLoad	Synchronization Task	Aug 6, 2019, 5:07 AM		Valid
<input type="checkbox"/>	XX_FirstName_PrePost	Synchronization Task	Aug 7, 2019, 2:00 AM		Valid
<input type="checkbox"/>	- XX_FirstName_ShippingFiles	Mapping	Aug 7, 2019, 3:50 AM		Valid
<input type="checkbox"/>	- XX_FirstName_SQLTransformation	Mapping	Aug 7, 2019, 7:02 AM		Valid
<input type="checkbox"/>	- XX_FirstName_UnconnectedLookup	Mapping	Aug 7, 2019, 6:39 AM		Valid
<input checked="" type="checkbox"/>	XX_NormalizerAggregator_Task	Mapping Task	Aug 7, 2019, 6:15 AM		Valid

1 - 25 of 29 < 1 of 2 > Items per Page: 25 ▾

Select Cancel

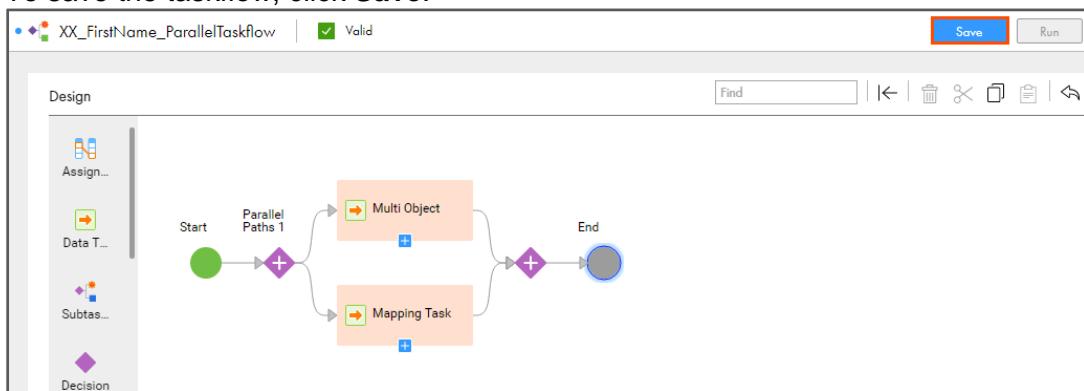
20. To validate the taskflow configuration, click .

Note: The Validation pane displays **The taskflow is valid** message.



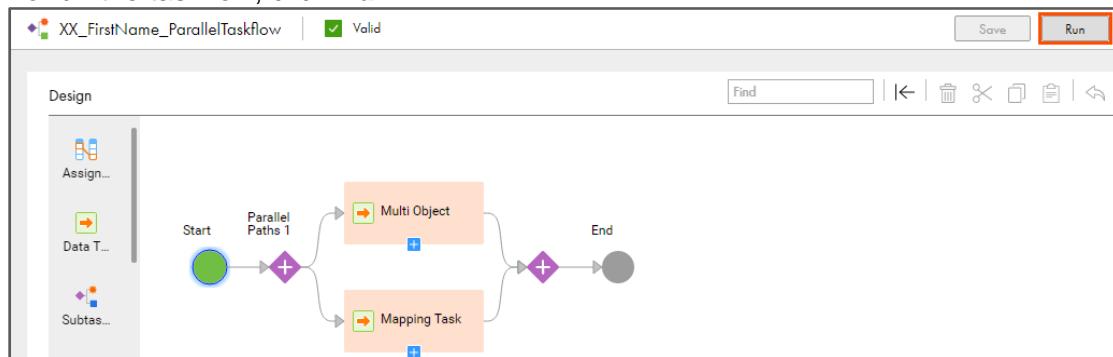
The screenshot shows the Validation pane. It has a header with 'Save', 'Run', a checkmark icon, and a more options menu. Below the header is a section titled 'Validation (0)' with a close button. Inside this section, there is a message box with the text 'The taskflow is valid.' enclosed in a red border.

21. To save the taskflow, click **Save**.



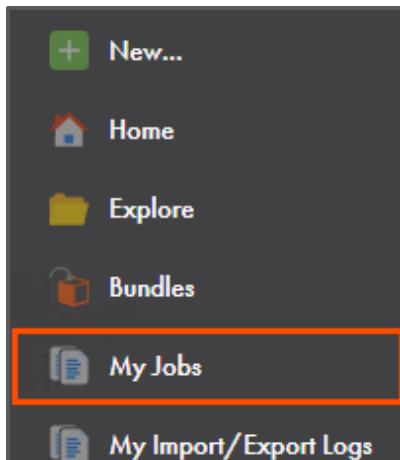
The screenshot shows the Taskflow Designer interface. The title bar indicates the taskflow is named 'XX_FirstName_ParallelTaskflow' and is valid. The main area is titled 'Design' and shows a taskflow diagram. The diagram starts with a green 'Start' node, followed by a purple 'Parallel Paths 1' gateway. From this gateway, two parallel paths lead to a 'Multi Object' task and a 'Mapping Task', both represented by orange rounded rectangles with a plus sign. Both tasks have a plus sign at their end, indicating they can be copied. Finally, the paths converge at another purple gateway, which leads to a grey 'End' node. On the left side of the design area, there is a toolbar with icons for 'Assign...', 'Data T...', 'Subtask...', 'Decision', and a search bar with various icons.

22. To run the taskflow, click **Run**.



Monitor Task:

23. To monitor the task, from the navigation pane, click **My Jobs**.



24. When the task completes, the status changes to **Success**.

Jobs (1 of 27) <input checked="" type="checkbox"/> Up to date		Updated 12:47:16 AM PDT    				
Asset Name: XX_FirstName_ParallelT...  						
Instance Name	Subtasks	Start Time	End Time	Rows Processed	State	
XX_FirstName_ParallelTaskflow-341497629691449344	2 Tasks	Aug 1, 2019, ...	Aug 1, 20...	View Subtasks	 Success	

Note: If the status of the task does not change to success automatically, click  to refresh task status.

25. To view the status of the subtask, click **View Subtasks**.

Jobs (1 of 27) <input checked="" type="checkbox"/> Up to date		Updated 12:47:16 AM PDT    				
Asset Name: XX_FirstName_ParallelT...  						
Instance Name	Subtasks	Start Time	End Time	Rows Processed	State	
XX_FirstName_ParallelTaskflow-341497629691449344	2 Tasks	Aug 1, 2019, ...	Aug 1, 20...	View Subtasks	 Success	

26. Verify that both the tasks are executed successfully.

Jobs (2) 		Updated 12:48:34 AM PDT 				<input type="button" value="Find"/>
Instance Name	Subtasks	Start Time	End Time	Rows Processed	State	
 XX_FirstName_MultiObject-2		Aug 1, 2019, ...	Aug 1, 2019, ...	34	 Success	
 XX_NormalizerAggregator_Task-1		Aug 1, 2019, ...	Aug 1, 2019, ...	180	 Success	

This concludes the lab.

Module 11: Taskflows

Lab 11-2: Passing in-out Parameters in a Taskflow

Overview:

A Taskflow enables you to add multiple data integration tasks and run them in a specific sequence or in parallel.

In this lab, you will create a Taskflow to pass value through in-out parameter.

Objective:

- Create a Taskflow

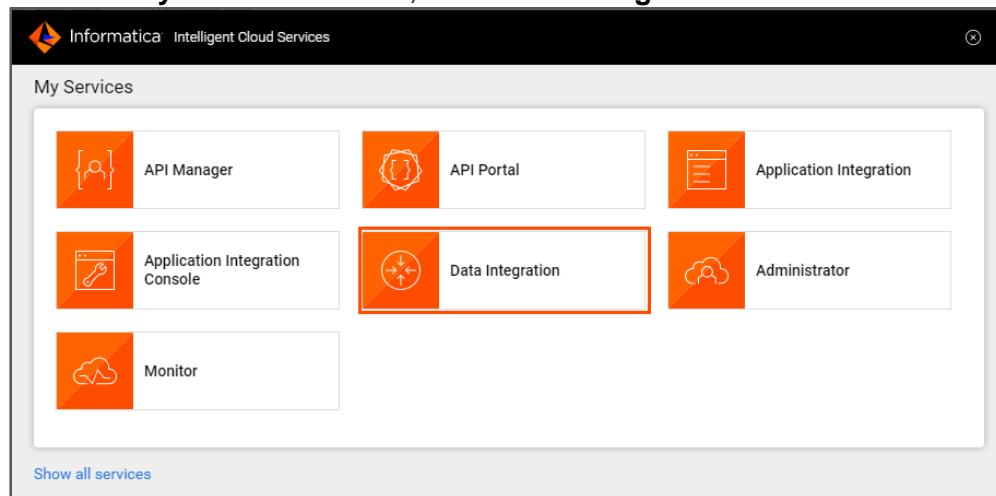
Duration:

15 minutes

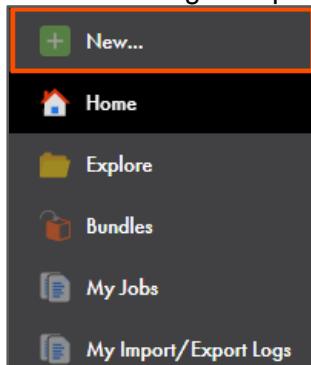
Tasks:

Create Mapping Task:

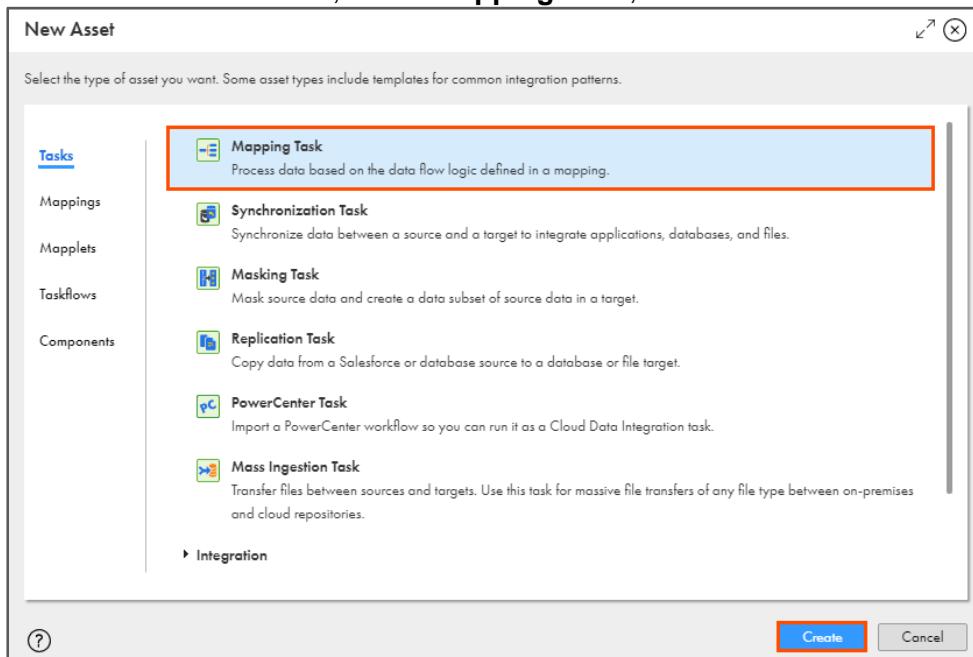
1. Open the IICS Login page from the Bookmarks bar.
Note: Follow this step if you have navigated away from the login page.
2. Enter the login credentials provided by the Instructor and click **Log In**.
3. From the **My Services** window, select **Data Integration**.



4. From the navigation pane, select **New**.



5. In the New Asset window, select **Mapping Task**, and click **Create**.



Note: The New Mapping Task window appears.

6. In the Task Name field, enter **XX_InOutParameter_Task**.

Note: Here, XX refers to your initials, and FIRSTNAME refers to your First Name.

Task Details	
Task Name: *	<input type="text" value="XX_InOutParameter_Task"/>
Location: *	<input type="text" value="CDI ILT Development\XX-Firstname"/> <input type="button" value="Browse"/>

7. From the Runtime Environment drop-down, select your secure agent group.

8. To select the mapping, click **Select**.

Runtime Environment: *	<input type="text" value="CDI-XX-FIRSTNAME"/>	<input type="button" value="?"/>
Mapping: *	<input type="text"/>	<input type="button" value="Select..."/>

9. From the list, select **XX_FirstName_InOutParameter**.

10. Click Select.

Name	Type	Updated On	Location	Description	Status
XX_FirstName_DynamicLinking	Mapping	Aug 1, 2019, 2:54 AM	Default	Val	
XX_FirstName_Employees	Mapping	Aug 1, 2019, 3:52 AM	Default	Val	
XX_FirstName_ErrorHandling	Mapping	Aug 1, 2019, 5:17 AM	Default	Val	
XX_FirstName_HierarchyBuilder	Mapping	Aug 1, 2019, 5:17 AM	Default	Val	
XX_FirstName_InOutParameter	Mapping	Aug 1, 2019, 1:12 AM	Default	Val	
XX_FirstName_LookupOverride	Mapping	Aug 1, 2019, 2:02 AM	Default	Val	
XX_FirstName_MacroDateFormat	Mapping	Aug 1, 2019, 1:46 AM	Default	Val	

Select **Cancel**

11. Click Next.

New XX_InOutParameter_Task

1 Definition **2 In-Out Parameters** **3 Schedule**

Task Details

Task Name: * XX_InOutParameter_Task
 Location: * CDI ILT Development\XX-Firstname **Browse**
 Description:
 Runtime Environment: * CDI-XX-FIRSTNAME **?**
 Mapping: * XX_FirstName_InOutParameter **Select...**

Mapping Image: XX_FirstName_InOutParameter

```

graph LR
    Source[Source] --> Expression[Expression]
    Expression --> Target[Target]
  
```

? **Save** **< Back** **Next >** **Finish** **Cancel**

12. Retain the In-Out Parameters configuration and click Next.

New XX_InOutParameter_Task

1 Definition **2 In-Out Parameters** **3 Schedule**

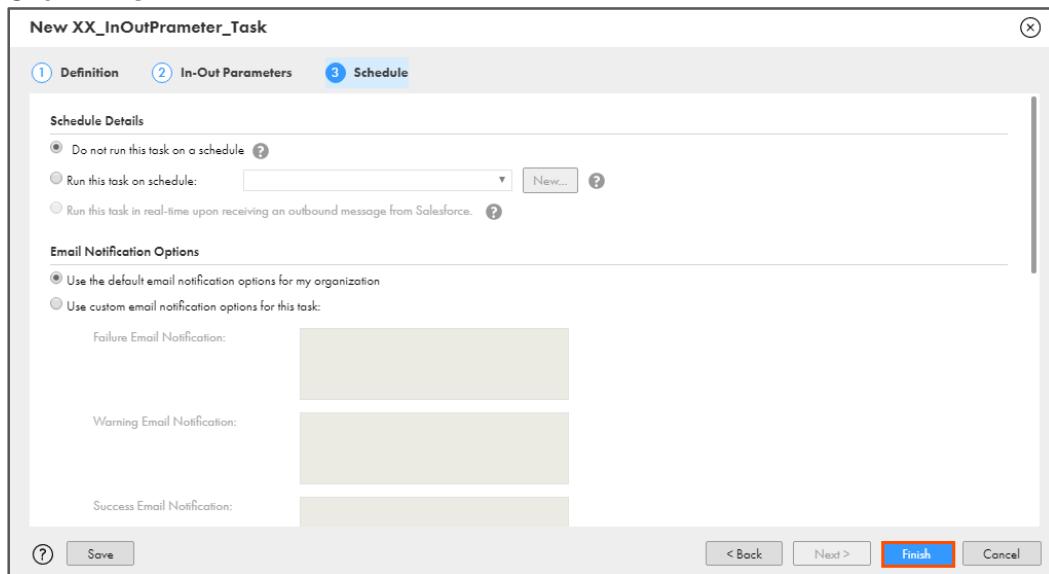
In-Out Parameters

Reset All

Action	Name	Desc	Type(prec, scale)	Default Value	Value	Retention Policy
	IncludeMaxDate		string[40]	2019-06-24	2019-06-24	On success or warning

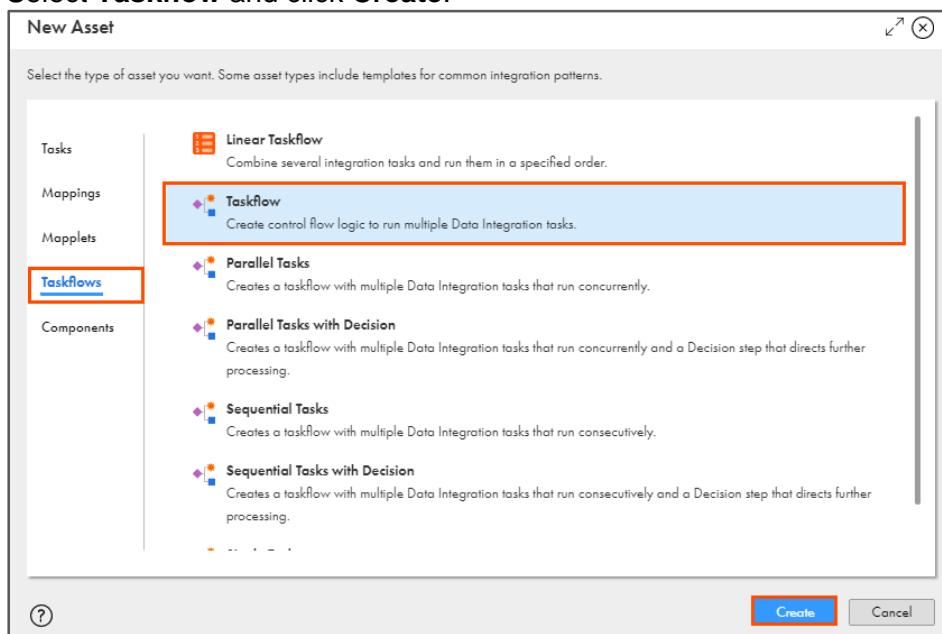
? **Save** **< Back** **Next >** **Finish** **Cancel**

13. Click Finish.



Create a Taskflow:

- 14. From the navigation pane, select **New**.**
- 15. From the New Asset window, click the **Taskflows** tab.**
- 16. Select **Taskflow** and click **Create**.**



Note: The New Taskflow window appears.

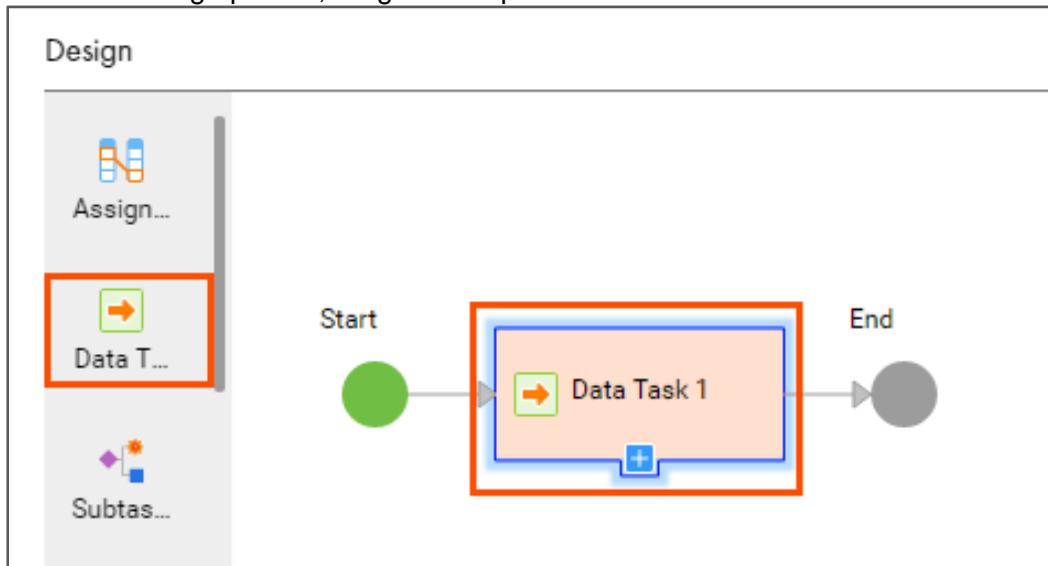
- 17. From the Taskflow properties pane, select **General**.**

18. In the Name field, enter **XX_InOut_Taskflow**.

Note: Here, XX refers to your initials and FIRSTNAME refers to your First Name.

XX_InOut_Taskflow Properties	
General	Step Type: Start
Start	Name: * XX_InOut_Taskflow
Input Fields	Location: CDI ILT Development\XX-Firstname <input type="button" value="Select"/>

19. From the Design palette, drag and drop **Data Task** on the link between Start and End.



20. In the General section of the Data Task properties, enter the Name as **InOutParameter**.

InOutParameter Properties	
General	Step Type: Data Task
Data Task	Name: InOutParameter

21. From the properties pane, click **Data Task**.

22. To select a Data Task, click **Select**.

General	Data Task: *	<input type="button" value="Select..."/>
Data Task	Type:	
Input Fields	Location:	

23. From the list, select **XX_InOutParameter_Task**.

24. Click **Select**.

Name	Type	Updated On	Location	Description	Tags	Status
XX_ErrorHandling_Task	Map...	Aug 1, 2019, 5:19 AM	Default		Valid	
XX_FirstName_MultiObject	Synch...	Aug 1, 2019, 1:27 AM	Default		Valid	
XX_FirstName_PKChunking	Synch...	Aug 1, 2019, 2:29 AM	Default		Valid	
XX_FirstName_PrePost	Synch...	Aug 1, 2019, 11:13 PM	Default		Valid	
XX_FirstName_Pushdown	Map...	Aug 1, 2019, 4:54 AM	Default		Valid	
XX_InOutParameter_Task	Map...	Aug 1, 2019, 3:11 AM	Default		Valid	
XX_NormalizerAggregator_Task	Map...	Aug 1, 2019, 1:20 AM	Default		Valid	

Select **Cancel**

25. From the properties pane, click **Input Fields**.

26. To add an Input Field, click .

General
Data Task
Input Fields (0)


Input Fields

Name	Type	Value
No data to display		

Output Fields

27. From the InOut Parameters drop-down, select **IncludeMaxDate**.

Find

▼ InOut Parameters

IncludeMaxDate



28. To provide value for **IncludeMaxDate**, select the field and click .

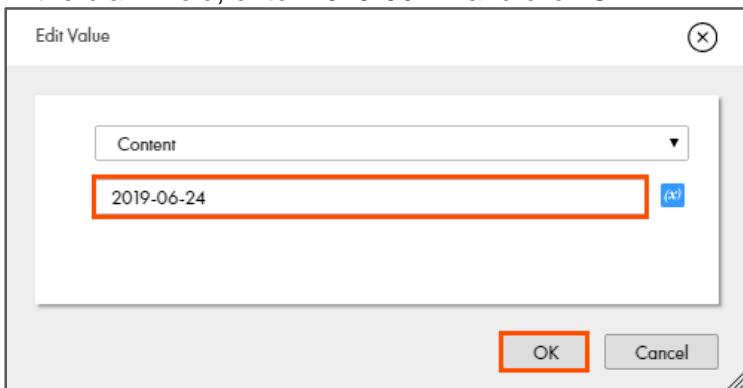
General
Data Task
Input Fields
Output Fields

Input Fields (1)

Name	Type	Value	
IncludeMaxDate	Text		 

Note: The Edit Value window appears.

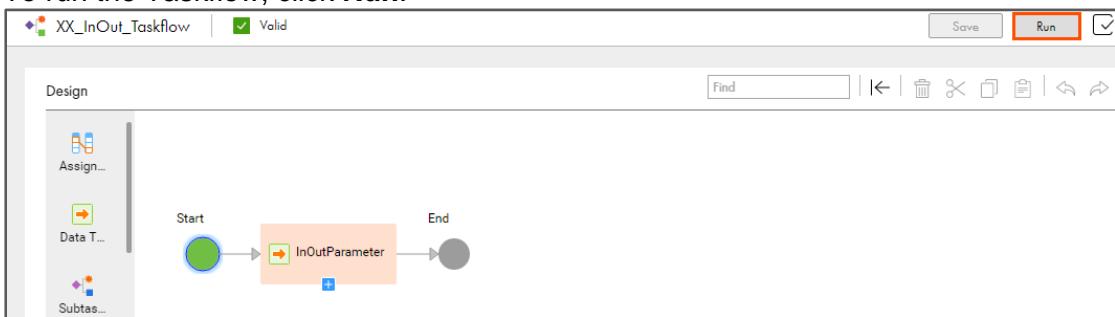
29. In the blank field, enter **2019-06-24** and click **OK**.



30. To save the Taskflow, click **Save**.

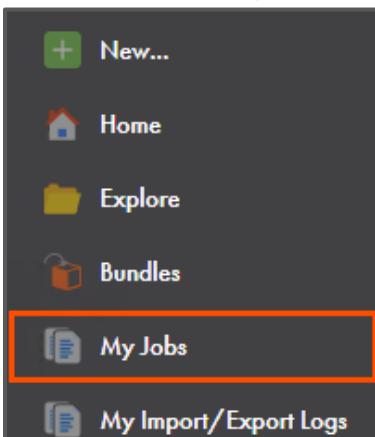


31. To run the Taskflow, click **Run**.



Monitor status:

32. To monitor the task, from the navigation pane, click **My Jobs**.



33. When the task completes, the status changes to **Success**.

Jobs (1 of 27) <input checked="" type="checkbox"/> Up to date		Updated 11:23:00 AM PDT    				
Asset Name: XX_InOut_Taskflow   Add Field 						
Instance Name		Subtasks	Start Time	End Time	Rows Processed	State
  XX_InOut_Taskflow-341524311823458304		1 Tasks	Aug 1, 2019, ...	Aug 1, 20...	View Subtasks	 Success

Note: You can refresh the page if the status does not change automatically.

34. To view the status of the subtask, click **View Subtasks**.

Jobs (1 of 27) <input checked="" type="checkbox"/> Up to date		Updated 11:23:00 AM PDT    				
Asset Name: XX_InOut_Taskflow   Add Field 						
Instance Name		Subtasks	Start Time	End Time	Rows Processed	State
  XX_InOut_Taskflow-341524311823458304		1 Tasks	Aug 1, 2019, ...	Aug 1, 20...	View Subtasks	 Success

35. Verify that 7 rows are processed by the task and the task executed successfully.

Jobs (1)		Updated 11:24:18 AM PDT    				
Instance Name		Subtasks	Start Time	End Time	Rows Processed	State
 XX_InOutParameter_Task-1			Aug 1, 2019, ...	Aug 1, 20...	7	 Success

This concludes the lab.

Module 11: Taskflows

Lab 11-3: Invoking a Taskflow through a File Listener

Overview:

A file listener listens to the files on a defined location. A Taskflow uses file listener to monitor specific folders and receive notifications through a call-back API when a file event occurs.

In this lab, you will invoke a Taskflow through a File Listener.

Objective:

- Create a Synchronization Task
- Create a File Listener
- Create a Taskflow

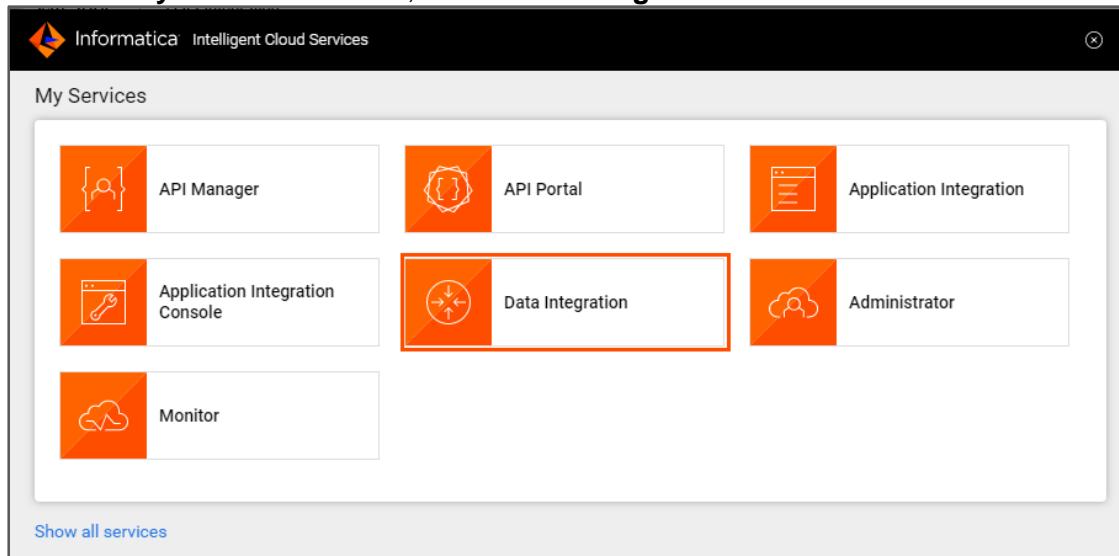
Duration:

15 minutes

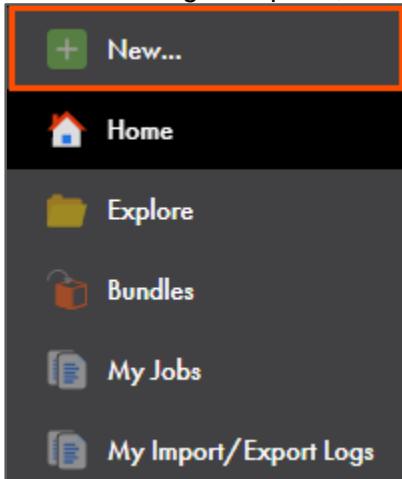
Tasks:

Create Synchronization Task:

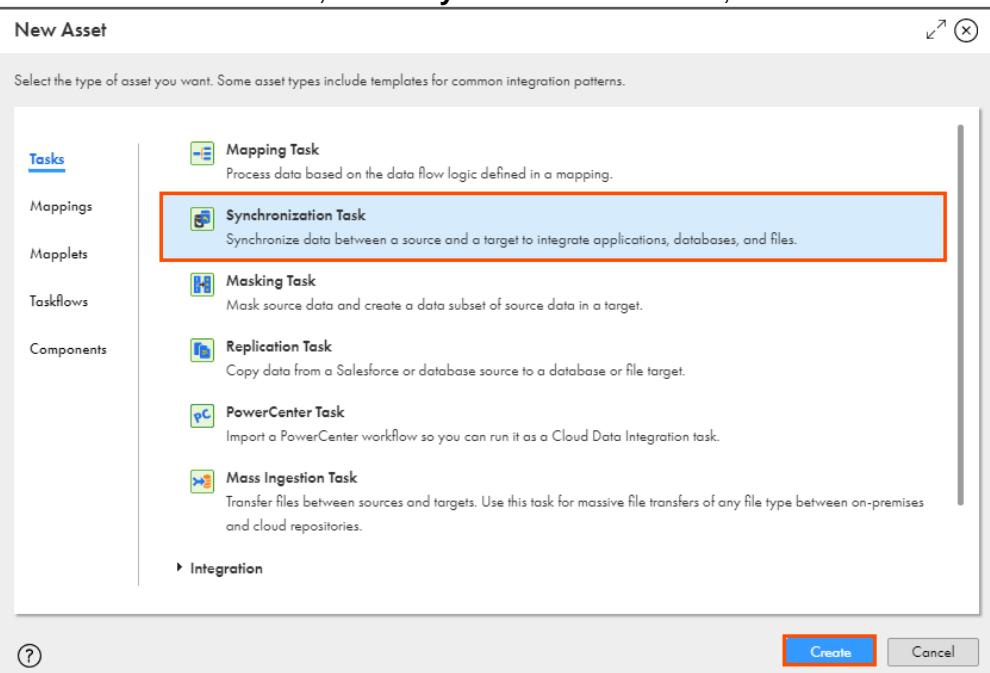
1. Open the IICS Login page from the Bookmarks bar.
Note: Follow this step if you have navigated away from the login page.
2. Enter the login credentials provided by the Instructor and click **Log In**.
3. From the **My Services** window, select **Data Integration**.



4. From the navigation pane, select **New**.



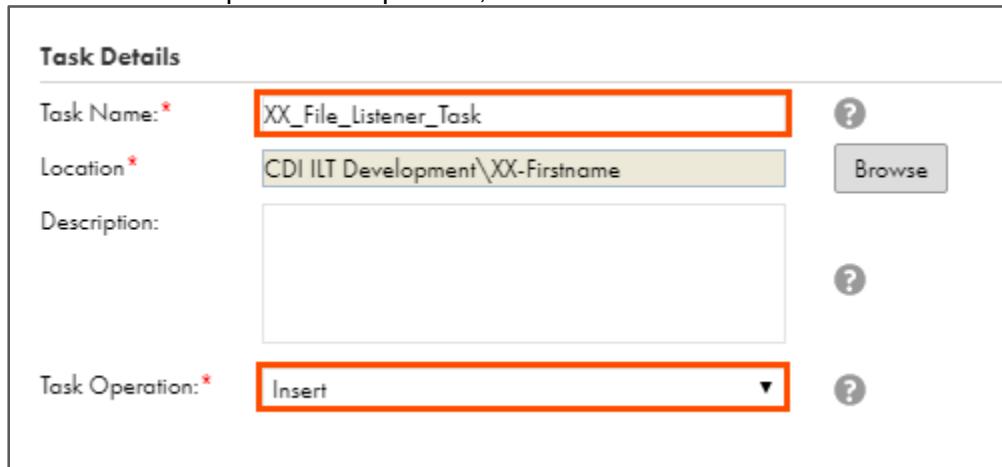
5. In the New Asset window, select **Synchronization Task**, and click **Create**.



Note: The New Synchronization Task window appears.

6. In the Task Name field, enter **XX_File_Listener_Task**.
Note: Here, XX refers to your initials.

7. From the Task Operation drop-down, select **Insert**.



Task Details

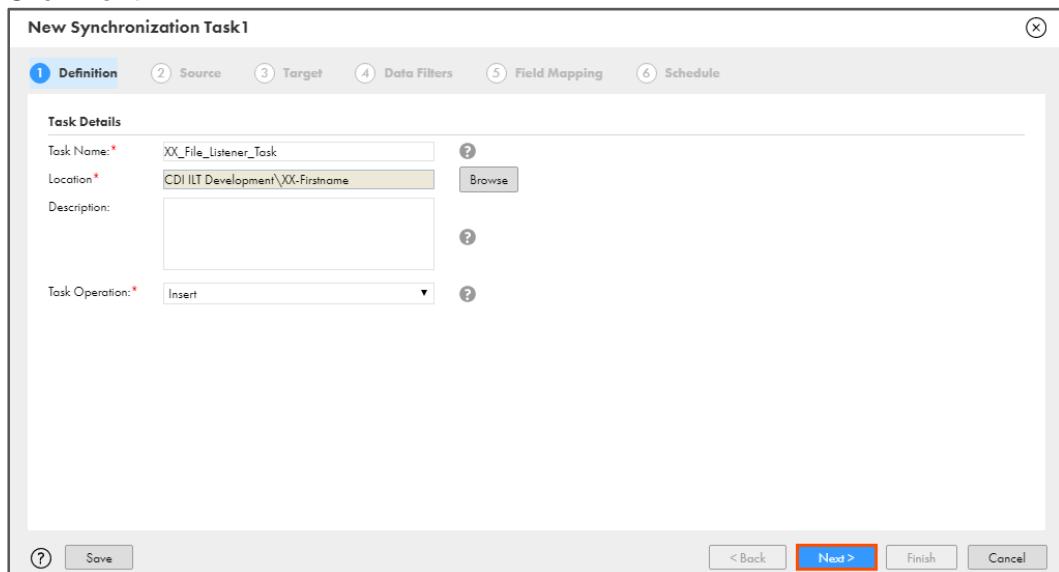
Task Name: **XX_File_Listener_Task**

Location: CDI ILT Development\XX-Firstname

Description:

Task Operation: **Insert**

8. Click **Next**.



New Synchronization Task1

1 Definition 2 Source 3 Target 4 Data Filters 5 Field Mapping 6 Schedule

Task Details

Task Name: **XX_File_Listener_Task**

Location: CDI ILT Development\XX-Firstname

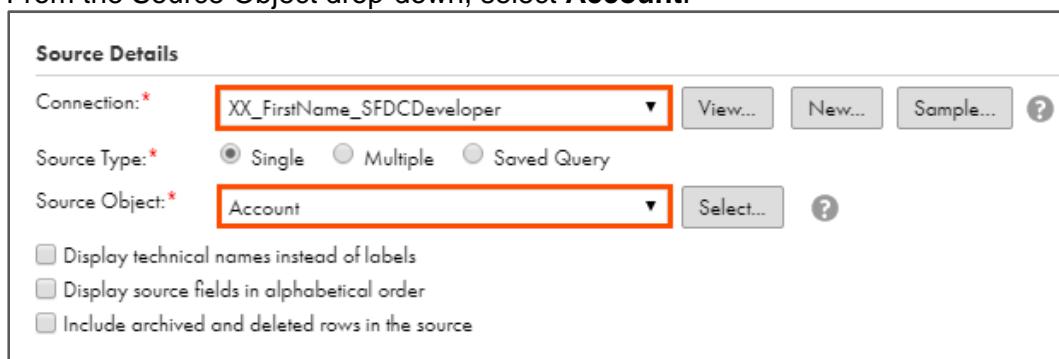
Description:

Task Operation: **Insert**

Next >

9. From the Connection drop-down, select **XX_FirstName_SFDCDeveloper**.

10. From the Source Object drop-down, select **Account**.



Source Details

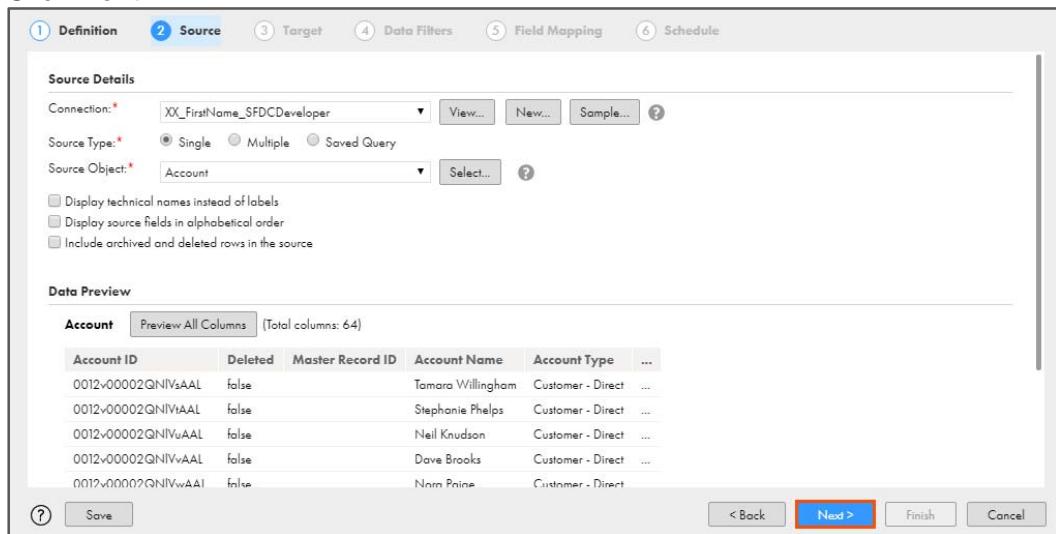
Connection: **XX_FirstName_SFDCDeveloper**

Source Type: Single Multiple Saved Query

Source Object: **Account**

Display technical names instead of labels
 Display source fields in alphabetical order
 Include archived and deleted rows in the source

11. Click Next.



Source Details

Connection: XX_FirstName_SFDCDeveloper

Source Type: Single

Source Object: Account

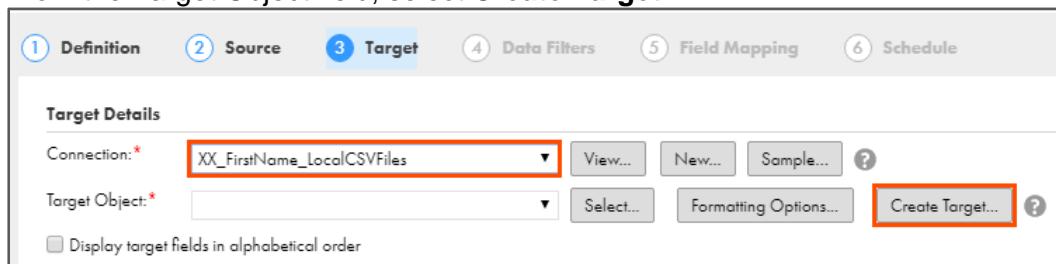
Data Preview

Account ID	Deleted	Master Record ID	Account Name	Account Type	...
0012v00002QNVvAAL	false		Tamara Willingham	Customer - Direct	...
0012v00002QNVvAAL	false		Stephanie Phelps	Customer - Direct	...
0012v00002QNVvAAL	false		Neil Knudson	Customer - Direct	...
0012v00002QNVvAAL	false		Dave Brooks	Customer - Direct	...
0012v00002QNVvAAL	false		Nora Prince	Customer - Direct	...

Next >

12. From the Connection drop-down, select XX_FirstName_LocalCSVFiles.

13. From the Target Object field, select Create Target.



Target Details

Connection: XX_FirstName_LocalCSVFiles

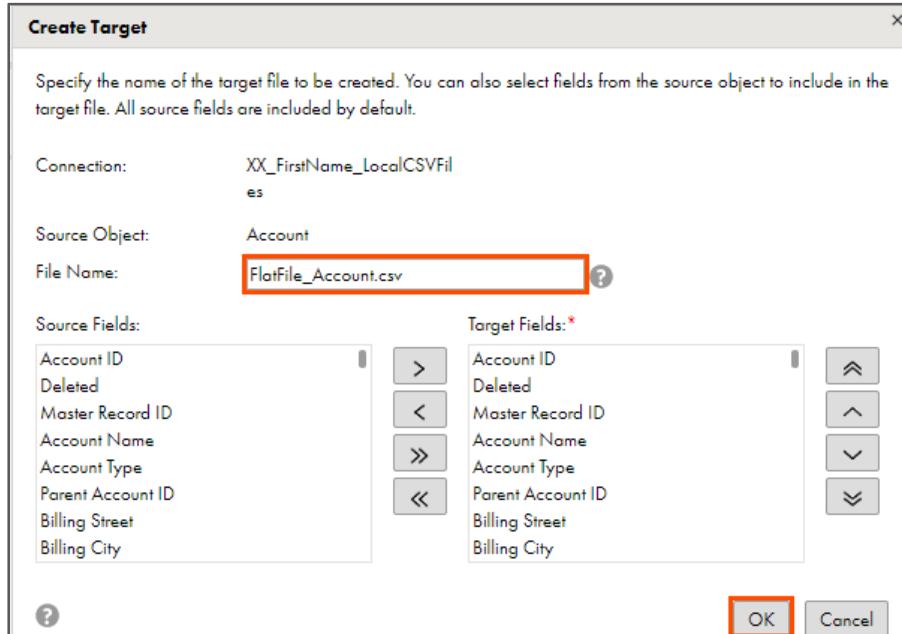
Target Object: Account

Create Target...

Note: The Create Target window appears.

14. In the File Name field, add FlatFile_ before Account.csv.

15. Click OK.



Create Target

Specify the name of the target file to be created. You can also select fields from the source object to include in the target file. All source fields are included by default.

Connection: XX_FirstName_LocalCSVFil es

Source Object: Account

File Name: FlatFile_Account.csv

Source Fields:

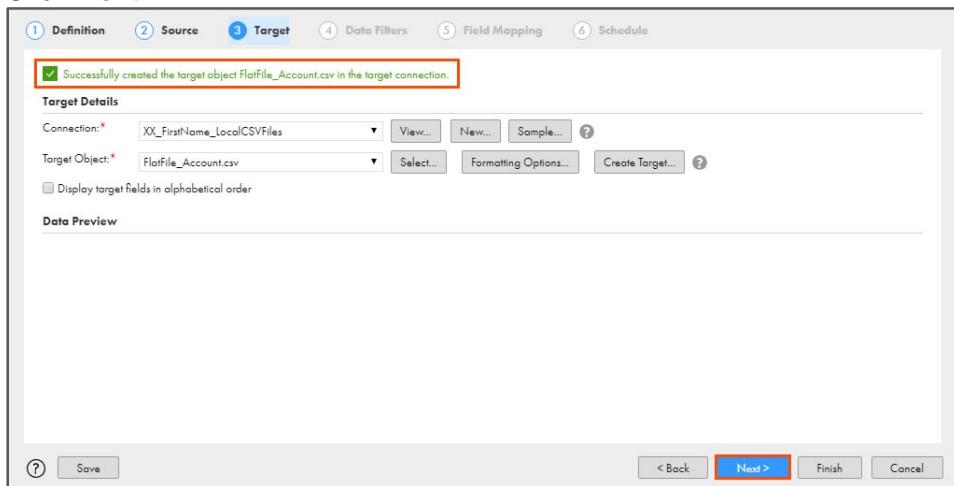
- Account ID
- Deleted
- Master Record ID
- Account Name
- Account Type
- Parent Account ID
- Billing Street
- Billing City

Target Fields:

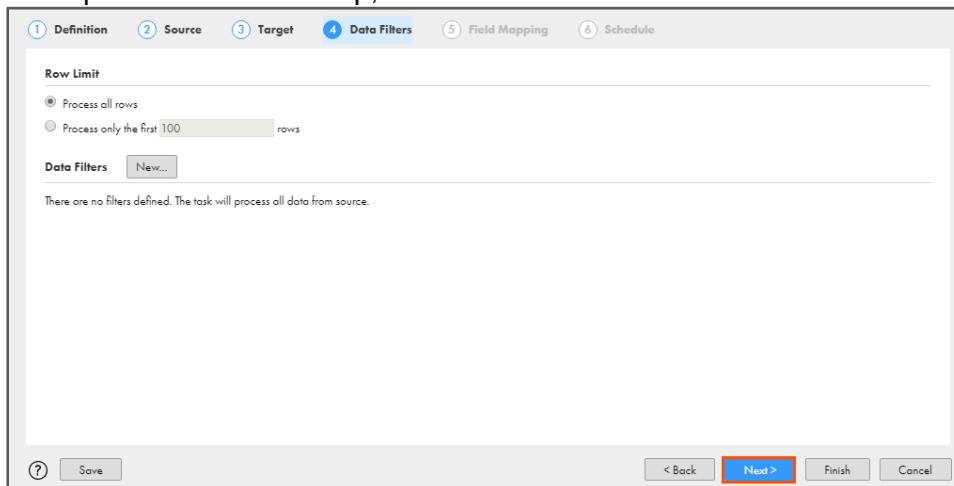
- Account ID
- Deleted
- Master Record ID
- Account Name
- Account Type
- Parent Account ID
- Billing Street
- Billing City

OK Cancel

16. Click Next.



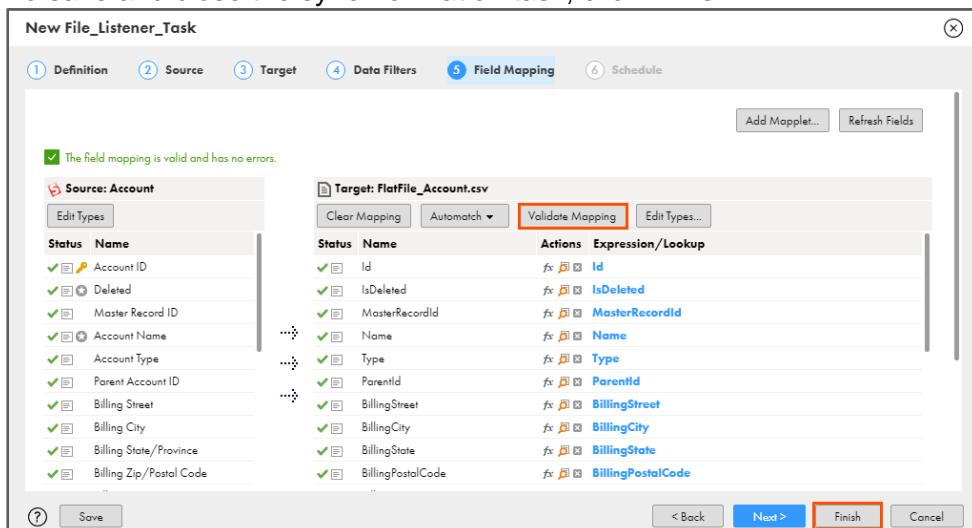
17. To skip the Data Filters step, click **Next.**



18. Verify that all the source fields are mapped with target fields.

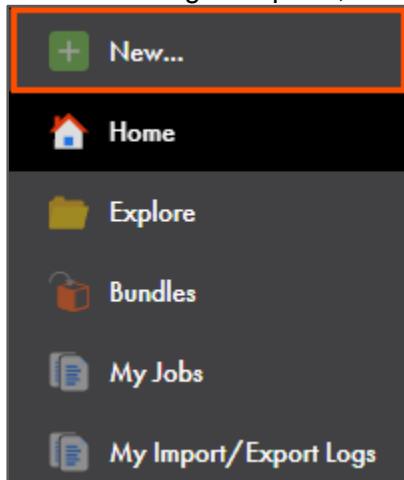
19. To validate the mapping, click **Validate Mapping.**

20. To save and close the synchronization task, click **Finish.**



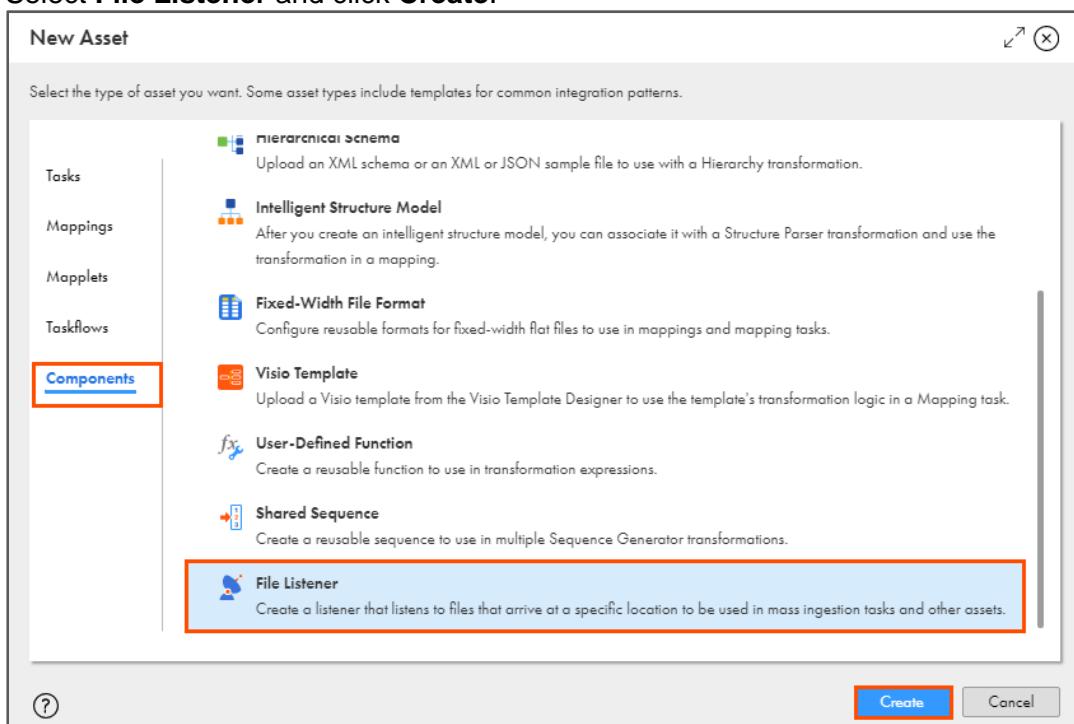
Create File Listener:

21. From the navigation pane, select **New**.



22. From the New Asset window, click the **Components** tab.

23. Select **File Listener** and click **Create**.



24. In the File Listener Name field, enter **XX_File_Listener**.

Note: Here, XX refers to your initials.

File Listener Details

File Listener Name:*	<input type="text" value="XX_File_Listener"/>
Location:*	<input type="text" value="CDI ILT Development\XX-Firstname"/> <input type="button" value="Browse"/>
Description:	<input type="text"/>

25. From the Runtime Environment drop-down, select your secure agent group.

File Listener Details

File Listener Name:*	<input type="text" value="XX_File_Listener"/>
Location:*	<input type="text" value="CDI ILT Development\XX-Firstname"/> <input type="button" value="Browse"/>
Description:	<input type="text"/>
Runtime Environment:*	<input type="text" value="CDI-XX-FIRSTNAME"/>

26. From the Source Type drop-down, select **Connector**.

27. Retain the Status as **Enabled**.

Source Type:*	<input type="text" value="Connector"/>
Status:*	<input type="text" value="Enabled"/>

28. From the Connection Type drop-down, select **Local Folder**.

Source Type:*	<input type="text" value="Connector"/>
Status:*	<input type="text" value="Enabled"/>
Connection Type:*	<input type="text" value="Local Folder"/>

29. In the Listener Rules section, enter the details as shown in the table below:

Folder Path	Pattern Type	File Pattern
C:\IICSLabFiles	Wildcard	*.csv

Listener Rules*						
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr style="background-color: #e0e0e0;"> <th style="padding: 5px;">Folder Path</th> <th style="padding: 5px;">Pattern Type</th> <th style="padding: 5px;">File Pattern</th> </tr> </thead> <tbody> <tr style="background-color: #e0e0e0;"> <td style="padding: 5px;">C:\IICSLabFiles</td> <td style="padding: 5px;">Wildcard</td> <td style="padding: 5px;">*.csv</td> </tr> </tbody> </table>	Folder Path	Pattern Type	File Pattern	C:\IICSLabFiles	Wildcard	*.csv
Folder Path	Pattern Type	File Pattern				
C:\IICSLabFiles	Wildcard	*.csv				

30. In the Notify when file field, select **Arrives** and **Is updated**.

<p>Notify when file: * <input checked="" type="checkbox"/> Arrives <input checked="" type="checkbox"/> Is updated <input type="checkbox"/> Is deleted</p> <p><input type="checkbox"/> Stop checking if rules are met</p> <p><input checked="" type="checkbox"/> Check file stability</p> <p><input type="checkbox"/> Notify if files exist on first run</p>

31. To stop listening to the configured folder, if the rules are met, select **Stop checking if rules are met**.

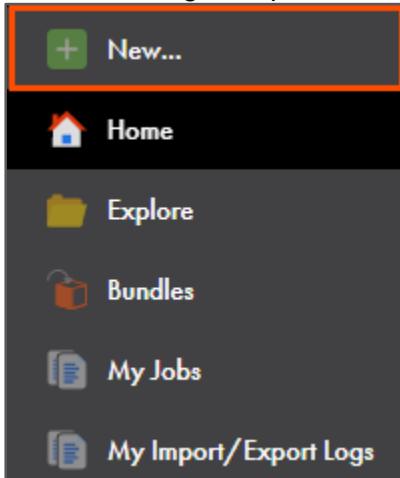
<p>Notify when file: * <input checked="" type="checkbox"/> Arrives <input checked="" type="checkbox"/> Is updated <input type="checkbox"/> Is deleted</p> <p><input checked="" type="checkbox"/> Stop checking if rules are met</p> <p><input checked="" type="checkbox"/> Check file stability</p> <p><input type="checkbox"/> Notify if files exist on first run</p>
--

32. To save the file listener, click **Save**.

New File Listener		<input type="button" value="Save"/> <input type="button" value="Start"/>
<p>File Listener Details</p> <hr/> <p>File Listener Name: * <input type="text" value="XX_File_Listener"/></p> <p>Location: * <input type="text" value="CDI ILT Development\XX-Firstname"/> <input type="button" value="Browse"/></p>		

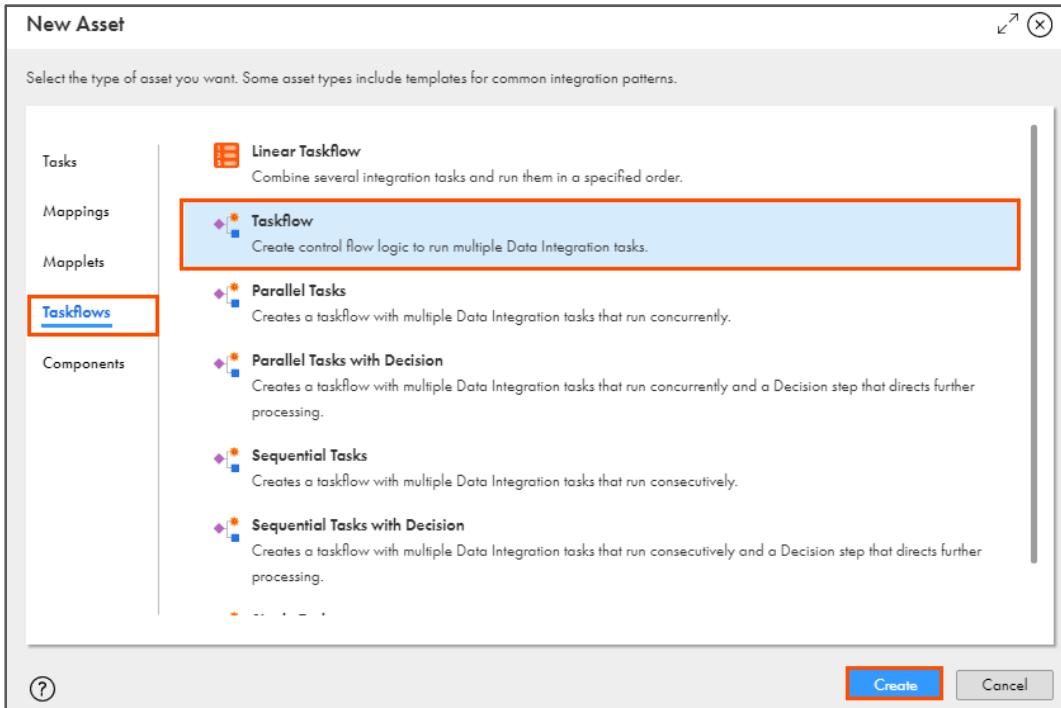
Create Taskflow:

33. From the navigation pane, select **New**.



34. From the New Asset window, click the **Taskflows** tab.

35. Select **Taskflow** and click **Create**.



Note: The New Taskflow window appears.

36. From the Taskflow properties pane, select **General**.

37. In the Name field, enter **XX_Listener_Taskflow**.

Note: Here, XX refers to your initials.

XX_Listener_Taskflow Properties

General	Step Type: Start
Start	Name: * XX_Listener_Taskflow
Input Fields	Location: CDI ILT Development\XX-Firstname <input type="button" value="Select"/>

38. From the Taskflow properties pane, select **Start**.

39. From the Binding drop-down, select **Event**.

XX_Listener_Taskflow Properties

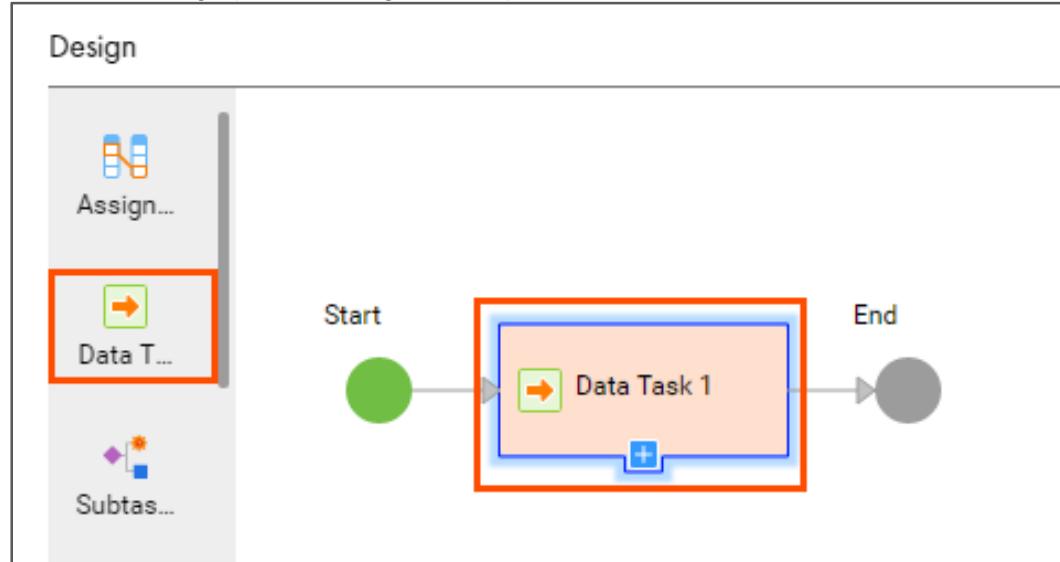
General	Binding: Event
Start	Event Source Name: Select Event Source
Input Fields	

40. From the Event Source Name field drop-down, select **fileListenerTask > fileListenerTask: XX_File_Listener**.

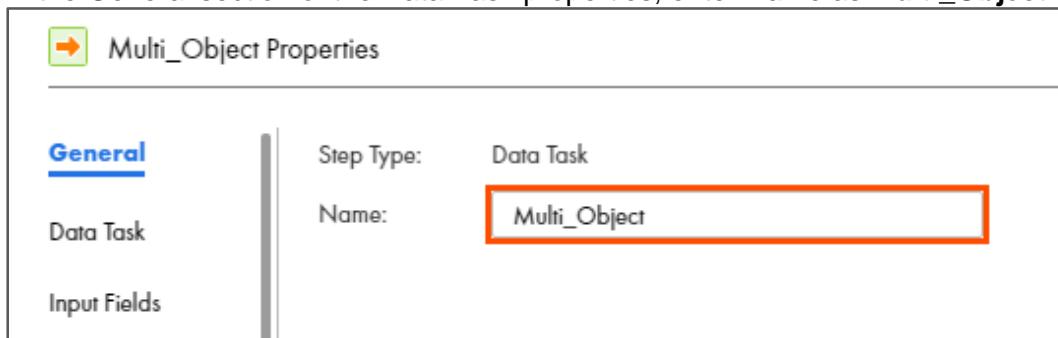
XX_Listener_Taskflow Properties

General	Binding: Event
Start	Event Source Name: fileListenerTask > fileListenerTask:XX_File_Listener
Input Fields	

41. From the Design palette, drag and drop **Data Task** on the link between Start and End.



42. In the General section of the Data Task properties, enter Name as **Multi_Object**.



43. From the properties pane, click **Data Task**.

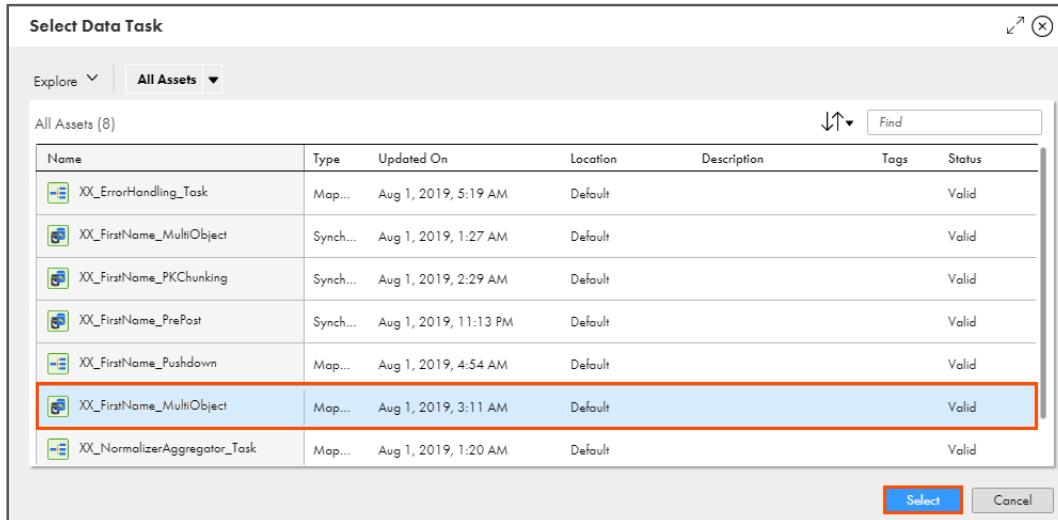
44. To select a Data Task, click **Select**.



Note: The Select Data Task window appears.

45. From the list, select **XX_FirstName_MultiObject**.

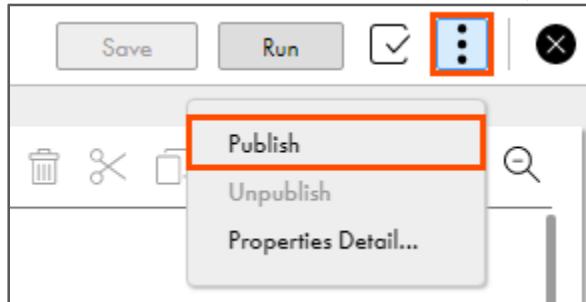
46. Click **Select**.



47. To save the Taskflow, click **Save**.

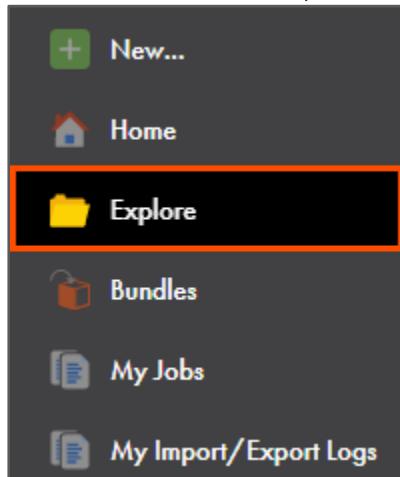


48. To bind the file listener with the taskflow, click  and select **Publish**.



Start the File Listener:

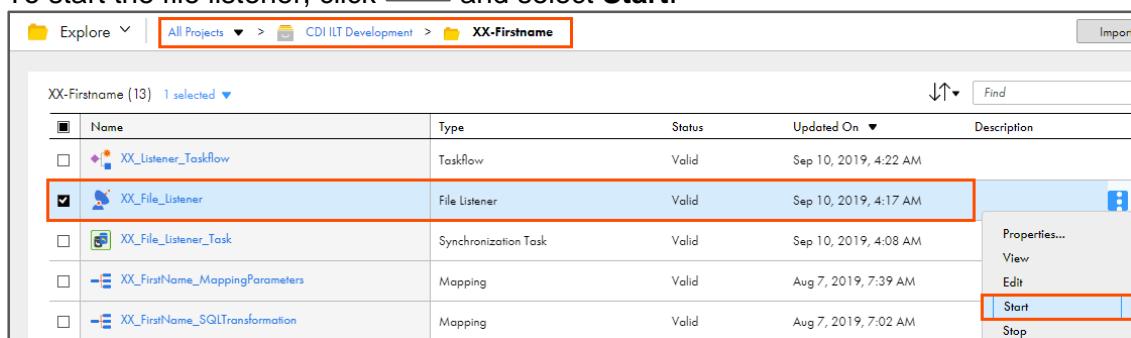
49. To start the file listener, from the navigation pane, click **Explore**.



50. Navigate to **CDI ILT Development > XX-Firstname**.

51. From the list, select **XX_File_Listener**.

52. To start the file listener, click  and select **Start**.



Note: A message **Started XX_File_Listener** appears.

Run Synchronization Task:

53. To run the synchronization task, from the list, select **XX_File_Listener_Task**.



54. Click **Run** and select **Run**.

Name	Type	Status	Updated On	Description
XX_Listener_Taskflow	Taskflow	Valid	Sep 10, 2019, 4:22 AM	
XX_File_Listener	File Listener	Valid	Sep 10, 2019, 4:17 AM	
XX_File_Listener_Task	Synchronization Task	Valid	Sep 10, 2019, 4:08 AM	
XX_FirstName_MappingParameters	Mapping	Valid	Aug 7, 2019, 7:39 AM	
XX_FirstName_SQLTransformation	Mapping	Valid	Aug 7, 2019, 7:02 AM	
XX_FirstName_UnconnectedLookup	Mapping	Valid	Aug 7, 2019, 6:39 AM	

Monitor status:

55. To monitor the task, from the navigation pane, click **My Jobs**.

- New...
- Home
- Explore
- Bundles
- My Jobs
- My Import/Export Logs

56. When the synchronization task (XX_File_Listener_Task) completes, the status changes to **Success**.

57. The file listener automatically starts the taskflow (XX_Listener_Taskflow).

Instance Name	Asset Type	Subtasks	Start Time	End Time	Rows Processed	State
XX_Listener_Taskflow-356038292202168320	Taskflow	1 Tasks	Sep 10, 2019, 4:29 AM	Sep 10, 2...	View Subtasks	✓ Success
XX_File_Listener_Task-1	Synchronization...		Sep 10, 2019, 4:28 AM	Sep 10, 2...	21	✓ Success

58. To verify that the taskflow is started by file listener, click on **XX_Listener_Taskflow**.

Instance Name	Asset Type	Subtasks	Start Time	End Time	Rows Processed	State
XX_Listener_Taskflow-348006032160960...	Taskflow	1 Tasks	Aug 19, 2019, 1:01 PM	Aug 19, 2...	View Subtasks	✓ Success
File_Listener_Task-2	Synchronization...		Aug 19, 2019, 1:01 PM	Aug 19, 2...	48	✓ Success

59. From the XX_Listener_Taskflow (Start) Properties section, select **Input Fields**.

60. Verify that the input for taskflow is **File_Listener**.

XX_Listener_Taskflow(Start) Properties	
Current Run	
Input Fields	
	XX_File_Listener
	C:\IICSLabFiles\FlatFile_Account.csv
	FlatFile_Account.csv
	11399
	1568114920736

This concludes the lab.

Module 13: Hierarchical Connectivity

Lab 13-1: Creating a Mapping using a REST V2 Connector

Overview:

REST is a web standards-based architecture and uses HTTP Protocol for data communication. These commonly used APIs allows you to create web-based applications.

In this lab, you will explore Enterprise Connectivity via REST Web Services using Informatica Cloud REST Connector.

Objective:

- Create a REST connection using the REST V2 connector
- Get the JSON message and write it to a Flat File

Duration:

30 minutes

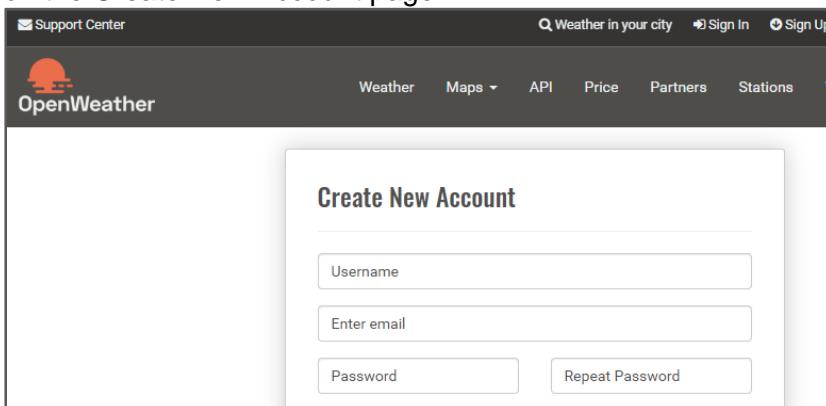
Tasks:

Copy Source File:

1. Copy the **Swagger_api_openweathermap_org_072248.json** file from the CDI Lab Prep Files folder available on your desktop and paste it in your flat file directory (C:\IICSLabFiles).

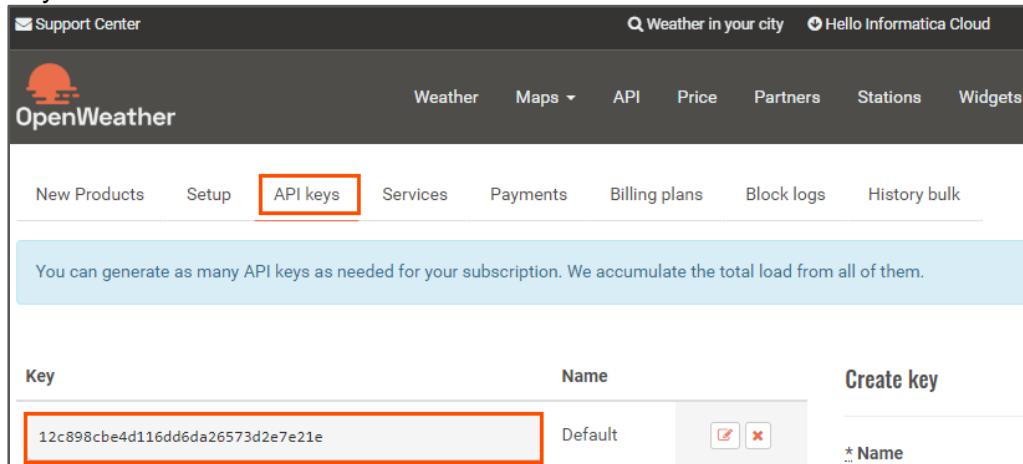
Signup to Access OpenWeatherAPI:

2. Open a web browser and enter the following URL in a new tab:
https://home.openweathermap.org/users/sign_up
Note: You can bookmark this link for future use.
3. To create a new account in OpenWeather, enter your username, e-mail, and password on the Create New Account page.



Note: After you create an account, you can access your unique API key.

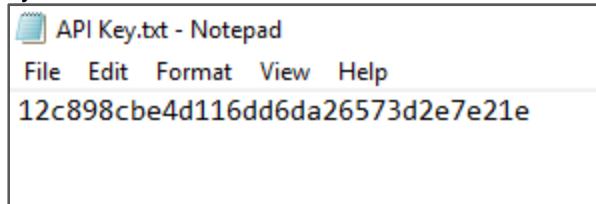
4. To access your unique API Key, select **API Keys** tab, and copy the API key from the Key field.



The screenshot shows the OpenWeather API Keys page. At the top, there are tabs for 'Support Center', 'Weather in your city', and 'Hello Informatica Cloud'. Below that is a navigation bar with links for 'Weather', 'Maps', 'API', 'Price', 'Partners', 'Stations', and 'Widgets'. The main content area has a sub-navigation bar with 'New Products', 'Setup', 'API keys' (which is highlighted with a red box), 'Services', 'Payments', 'Billing plans', 'Block logs', and 'History bulk'. A message below the sub-navigation says, 'You can generate as many API keys as needed for your subscription. We accumulate the total load from all of them.' The main table displays an API key entry:

Key	Name	Create key
12c898cbe4d116dd6da26573d2e7e21e	Default	<input checked="" type="checkbox"/> <input type="checkbox"/> <small>* Name</small>

5. Paste the API key in a notepad and save the notepad file to a suitable location on your system.

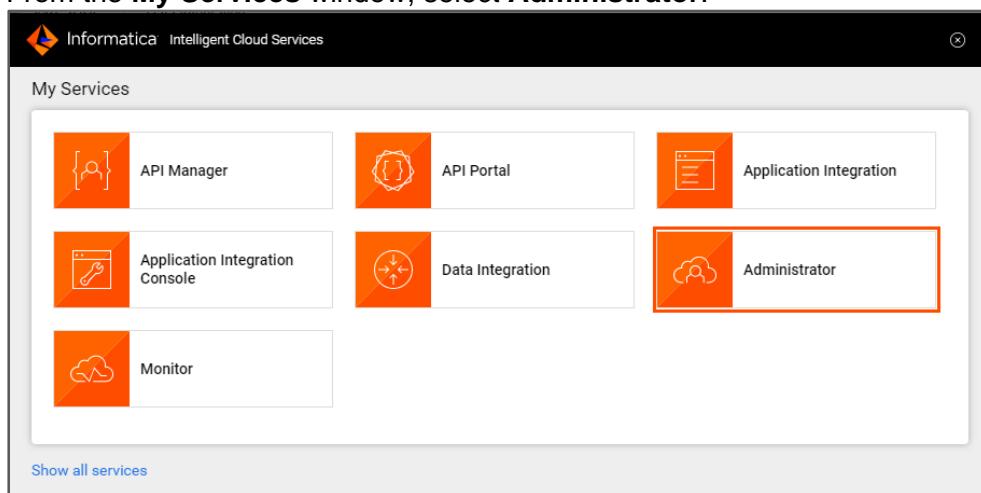


Enable REST V2 Connector:

6. Open the IICS Login page from the Bookmarks bar.

Note: Follow this step if you have navigated away from the login page.

7. Enter the login credentials provided by the Instructor and click **Log In**.
8. From the **My Services** window, select **Administrator**.

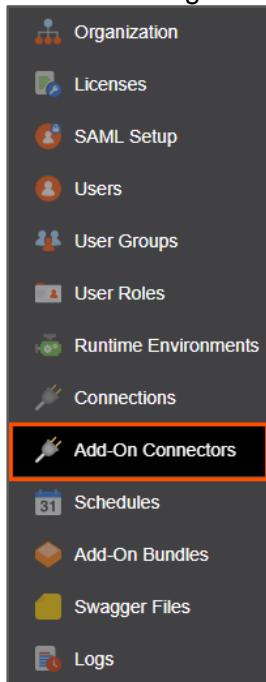


The screenshot shows the 'My Services' window in the Intelligent Cloud Services interface. It displays several service icons and names:

- API Manager
- API Portal
- Application Integration
- Application Integration Console
- Data Integration
- Administrator
- Monitor

The 'Administrator' service is highlighted with a red box. At the bottom left, there is a link 'Show all services'.

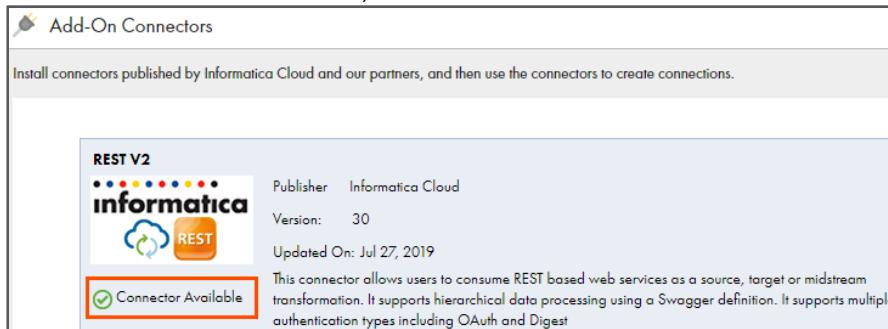
9. From the navigation pane, select **Add-On Connectors**.



10. Scroll-down and locate **REST V2 Connector**.

11. Check if REST V2 connector is available for the org.

12. If the connector is available, it will show as 'Connector Available.'



REST V2

informatica

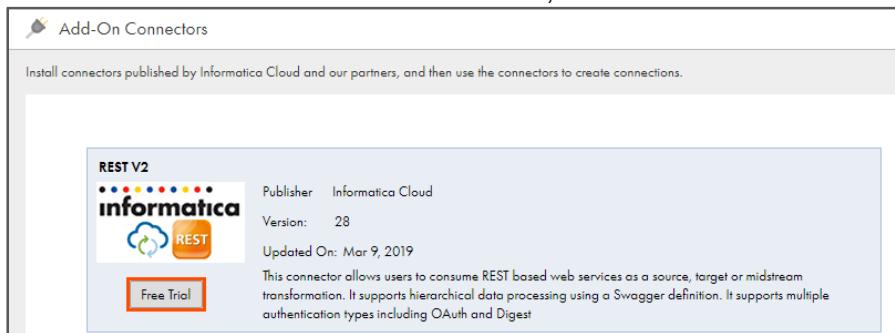
Publisher: Informatica Cloud
Version: 30
Updated On: Jul 27, 2019

This connector allows users to consume REST based web services as a source, target or midstream transformation. It supports hierarchical data processing using a Swagger definition. It supports multiple authentication types including OAuth and Digest

Connector Available

Note: If the connector is already available for the org, you can skip steps 13 and 14.

13. If the REST V2 Connector is not available, click **Free Trial** to enable the connector.



REST V2

informatica

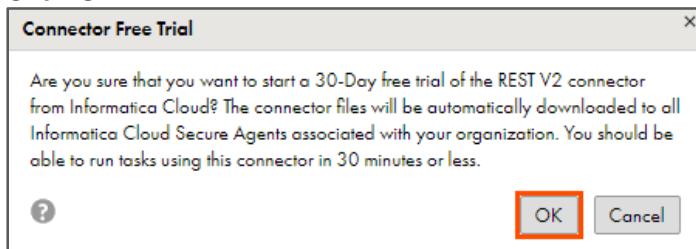
Publisher: Informatica Cloud
Version: 28
Updated On: Mar 9, 2019

This connector allows users to consume REST based web services as a source, target or midstream transformation. It supports hierarchical data processing using a Swagger definition. It supports multiple authentication types including OAuth and Digest

Free Trial

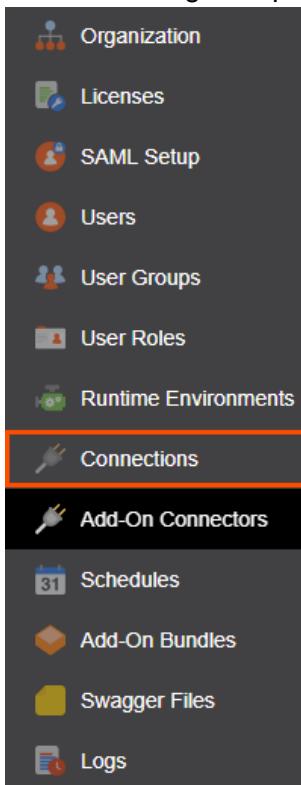
Note: The Connector Free Trial window appears.

14. Click **OK**.

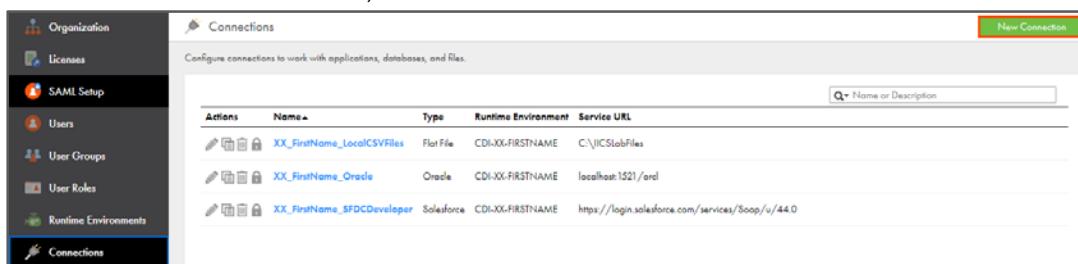


Create REST Connection:

15. From the navigation pane, select **Connections**.



16. To create a new connection, select **New Connection**.



17. In the Name field, enter **XX_FirstName_OpenWeather_RESTv2**.

Note: Here, XX refers to your initials, and FIRSTNAME refers to your First Name.

18. From the Type drop-down, select **REST V2 (Informatica Cloud)**.

Connection Details	
Connection Name: [*]	XX_FirstName_OpenWeather_RESTv2
Description:	<input type="text"/>
Type: [*] ?	REST V2 (Informatica Cloud) ▾

19. From the **Runtime Environment** drop-down, select your secure agent group.

Note: The Runtime Environment name will be in format CDI-XX-FIRSTNAME.

20. From the Authentication drop-down, select **Standard**.

REST V2 Connection Properties	
Runtime Environment: [*] ?	CDI-XX-FIRSTNAME ▾
Authentication: [*] ?	Standard ▾

Note: The Standard Connection Properties section appears.

21. Verify that the Authentication Type is set to **NONE**.

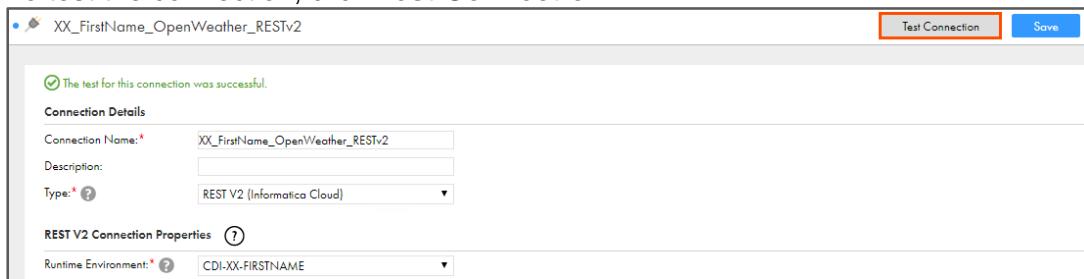
22. In the Swagger File Path field, enter the following path of the json file:

C:\IICSLabFiles\Swagger_api_openweathermap_org_072248.json

23. Verify that **Platform Proxy** is selected as Proxy Type.

Standard Connection Properties	
Authentication Type:	NONE ▾
Auth User ID:	<input type="text"/>
Auth Password:	<input type="password"/>
OAuth Consumer Key:	<input type="text"/>
OAuth Consumer Secret:	<input type="text"/>
OAuth Token:	<input type="text"/>
OAuth Token Secret:	<input type="text"/>
Swagger File Path: [*]	C:\IICSLabFiles\Swagger_api_openweathermap_
TrustStore File Path:	<input type="text"/>
TrustStore Password:	<input type="password"/>
KeyStore File Path:	<input type="text"/>
KeyStore Password:	<input type="password"/>
Proxy Type:	Platform Proxy ▾
Proxy Configuration:	<host>:<port>

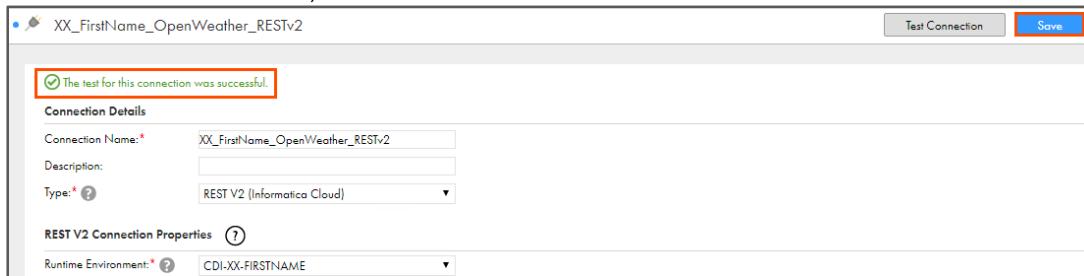
24. To test the connection, click **Test Connection**.



The screenshot shows the 'Connection Details' section of the Informatica Cloud Services interface. The 'Connection Name' is set to 'XX_FirstName_OpenWeather_RESTv2'. The 'Type' is selected as 'REST V2 (Informatica Cloud)'. Under 'REST V2 Connection Properties', the 'Runtime Environment' is set to 'CDI-XX-FIRSTNAME'. A message at the top indicates a successful test: 'The test for this connection was successful.' The 'Test Connection' and 'Save' buttons are visible at the top right.

Note: A message **The test for this connection was successful** appears.

25. To save the connection, click **Save**.



This screenshot is identical to the previous one, showing the 'Connection Details' section with a successful test message. However, the 'Save' button at the top right is now highlighted with a red box, indicating the next step in the process.

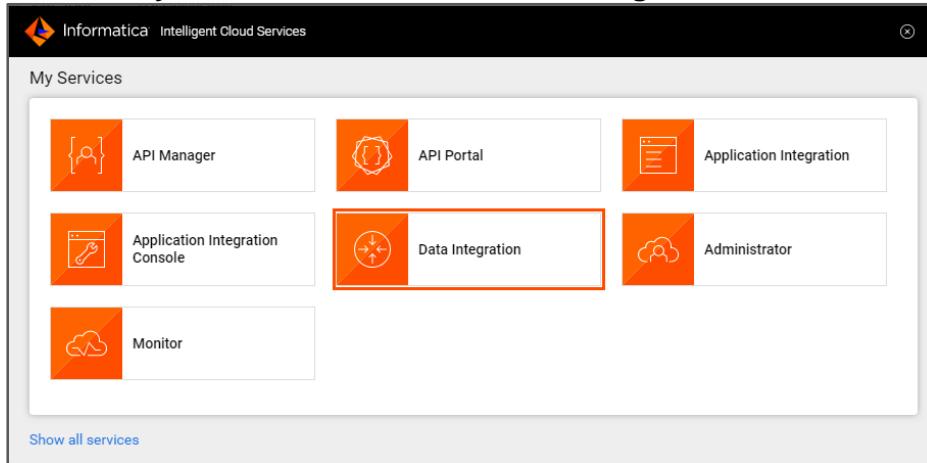
Create Mapping:

26. To switch between the available services, from the toolbar, select the current service **Administrator**.

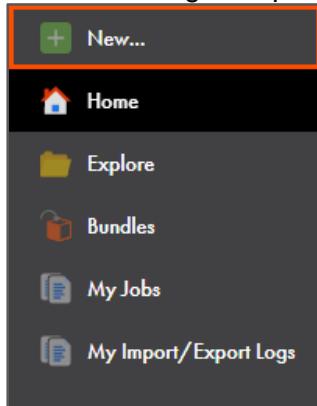


Note: The My Services window appears.

27. From the **My Services** window, select **Data Integration**.

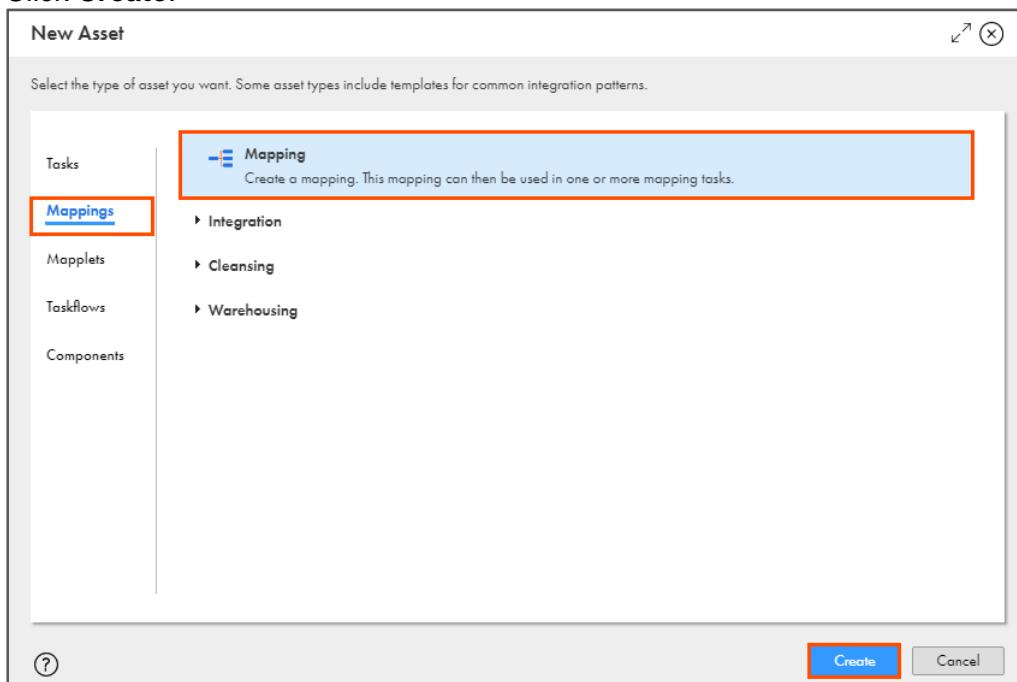


28. From the navigation pane, select **New**.



29. From the New Asset window, click the **Mappings** tab, and select **Mapping**.

30. Click **Create**.



Note: The Mapping page appears.

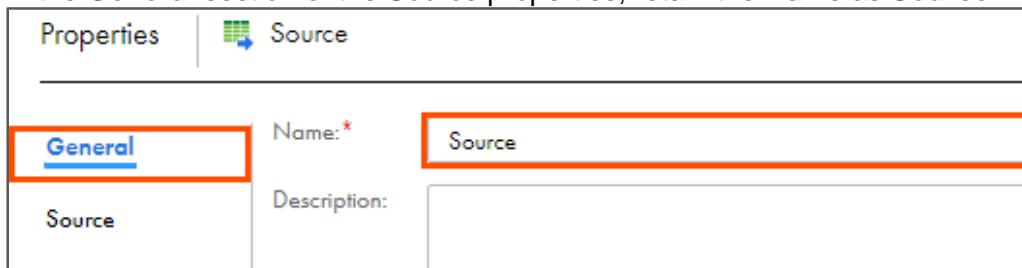
31. In the Name field, enter **XX_FirstName_REST_GetWeather_By_City**.

Properties: XX_FirstName_REST_GetWeather_By_City	
Name:*	XX_FirstName_REST_GetWeather_By_City
Location:*	CDI ILT Development\XX-Firstname
Description:	

Note: Here, XX refers to your initials, and FIRSTNAME refers to your First Name.

32. To configure the source, from the mapping canvas, click the **Source** transformation.

33. In the **General** section of the Source properties, retain the Name as **Source**.



34. From the properties pane, click **Source**.

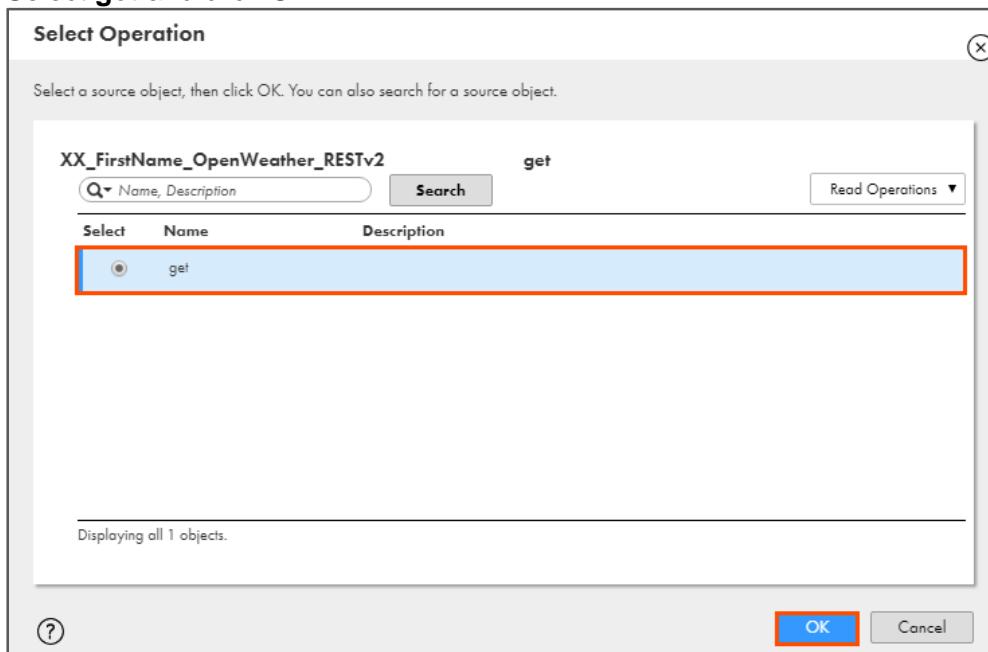
35. From the Connection drop-down, select **XX_FirstName_OpenWeather_RESTv2**.

From the Operation field, click **Select**.

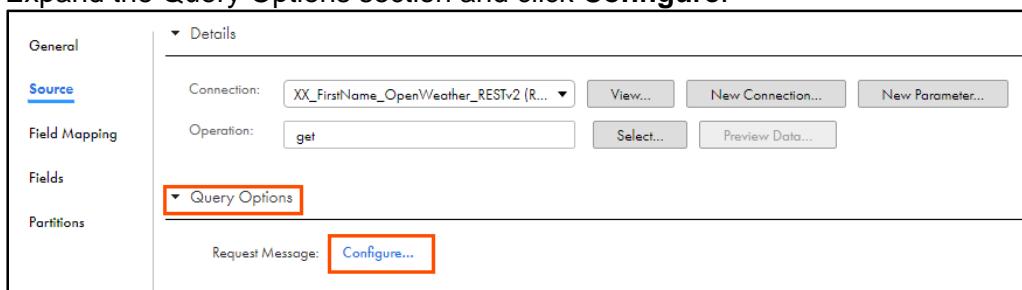


Note: The Select Operation window appears.

36. Select **get** and click **OK**.



37. Expand the Query Options section and click **Configure**.



Note: The Edit Request Message window appears.

38. Expand the **Request Message Template** section and copy all the contents from the field.

39. Paste the copied contents in the **Request Message** field.

Edit Request Message

Use Request Message Template to copy and paste Request Message into the editor below.

Request Message Template

```
<!--1 or more repetitions:-->
<proc:get_INPUT xmlns:proc="http://xml.schemas/infa/procedure/">
  <!--Optional:-->
  <get>
    <!--Optional:-->
    <AppID>
      <!--STRING-->
    </AppID>
    <!--Optional:-->
    <q>
```

Hide optional elements

Request Message

Operation: get

```
<!--1 or more repetitions:-->
<proc:get_INPUT xmlns:proc="http://xml.schemas/infa/procedure/">
  <!--Optional:-->
  <get>
    <!--Optional:-->
    <AppID>
      <!--STRING-->
    </AppID>
    <!--Optional:-->
    <q>
```

40. In the Request Message field, in between **<AppID> </AppID>**, enter the unique API Key that you saved in the notepad file in step 5.

41. In the Request Message field, in between **<q> </q>**, enter **London**.

Example:

```
<AppID>
  12c898cbe4d116dd6da26573d2e7e21e
</AppID>
<q>
  London
</q>
```

Request Message

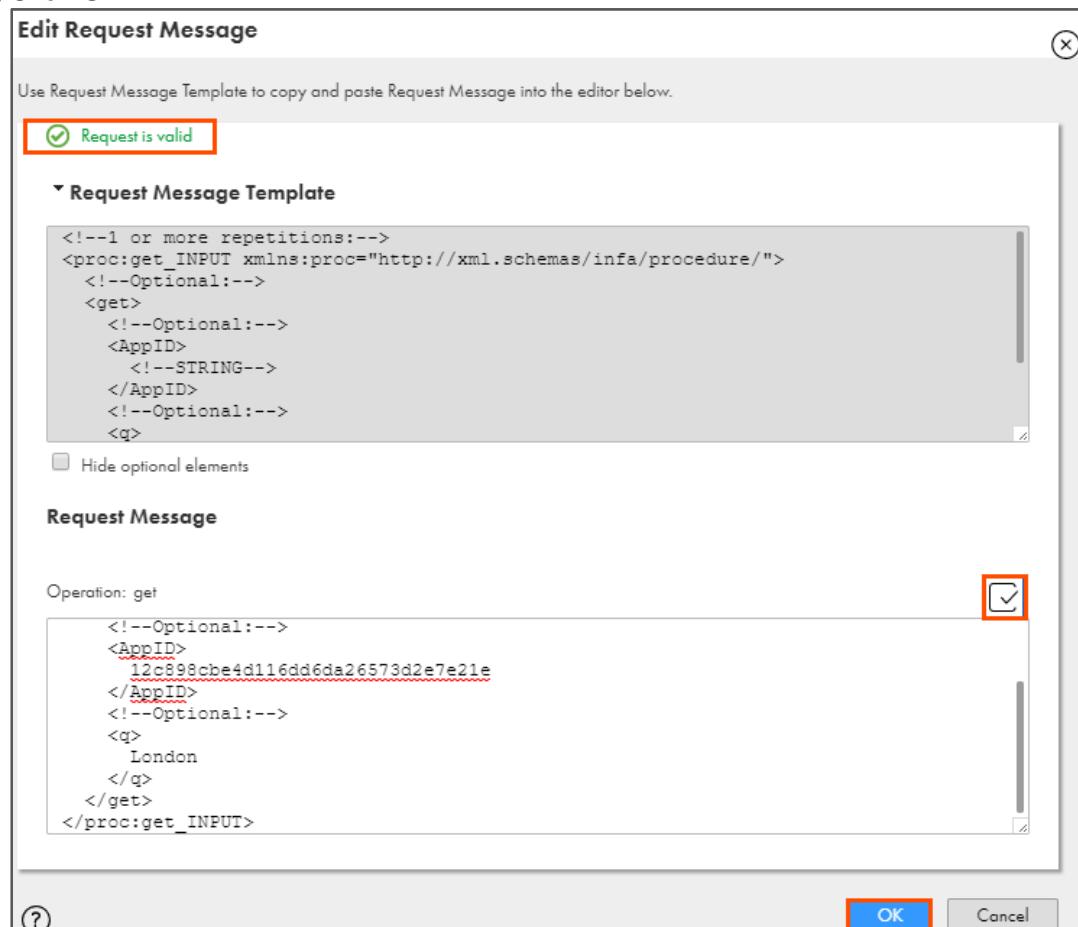
Operation: get

```
<!--Optional:-->
<AppID>
  12c898cbe4d116dd6da26573d2e7e21e
</AppID>
<!--Optional:-->
<q>
  London
</q>
</get>
</proc:get_INPUT>
```

42. To validate the message, click .

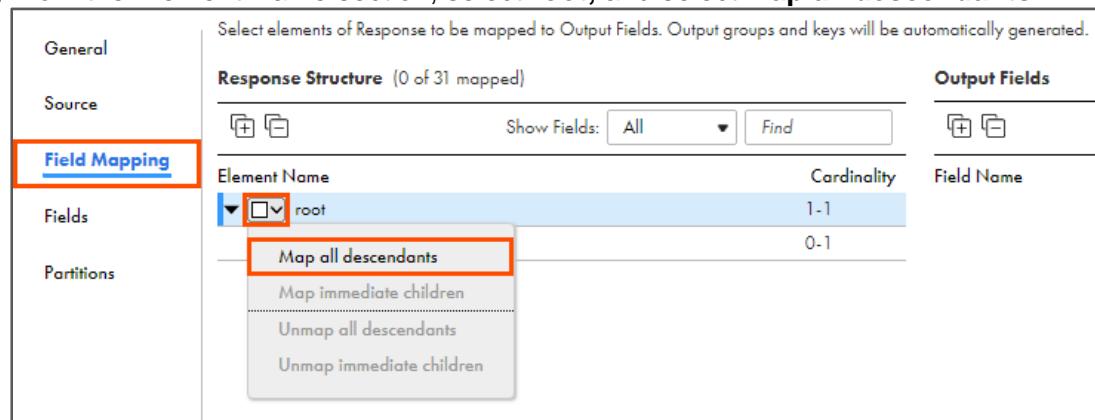
Note: A message appears that the Request is valid.

43. Click **OK**.



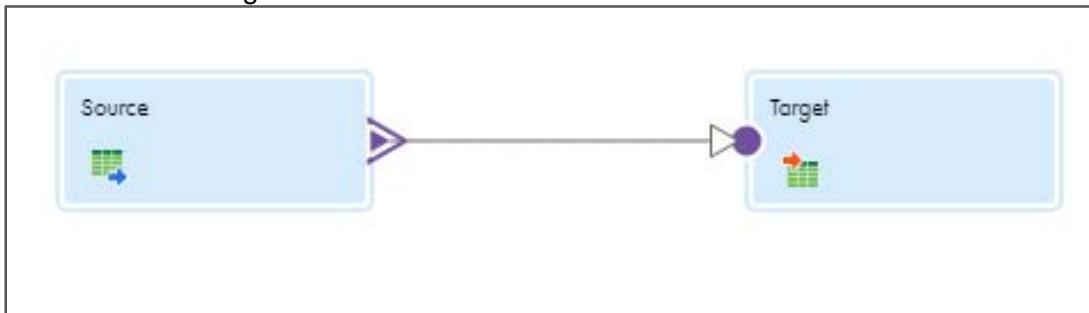
44. From the properties pane, click **Field Mapping**.

45. From the Element Name section, select **root**, and select **Map all descendants**.



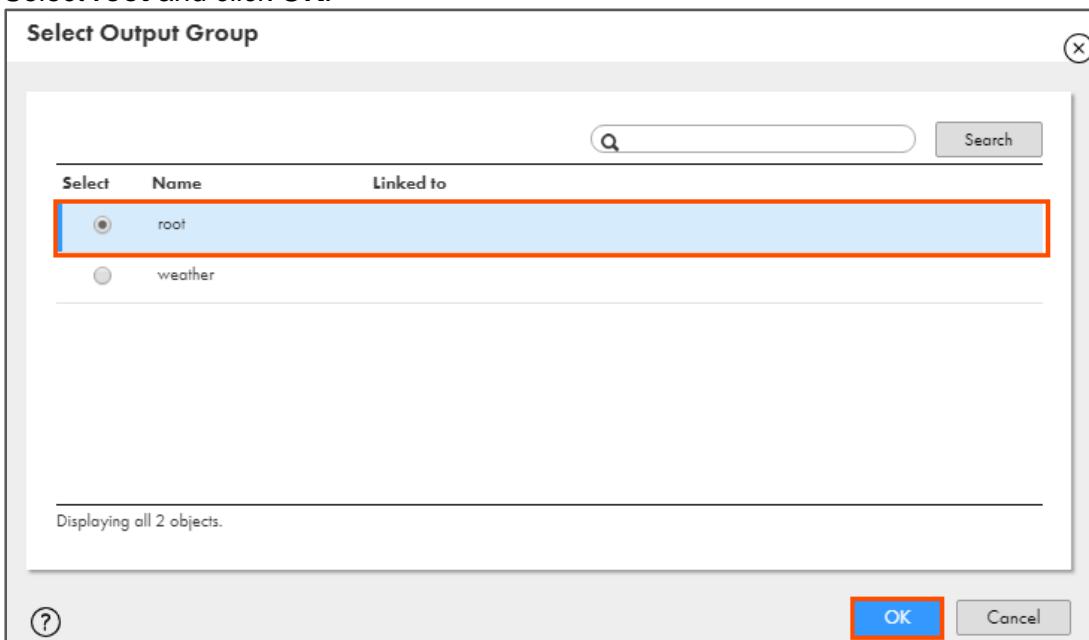
The screenshot shows the 'Field Mapping' properties pane. The 'Field Mapping' tab is selected. In the 'Element Name' section, 'root' is selected, and a context menu is open with 'Map all descendants' highlighted. The 'Output Fields' section is visible on the right.

46. Link Source to Target.



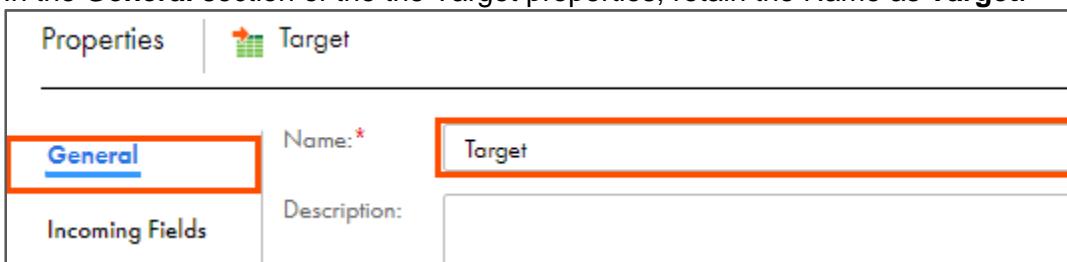
Note: A Select Output Group window appears.

47. Select **root** and click **OK**.



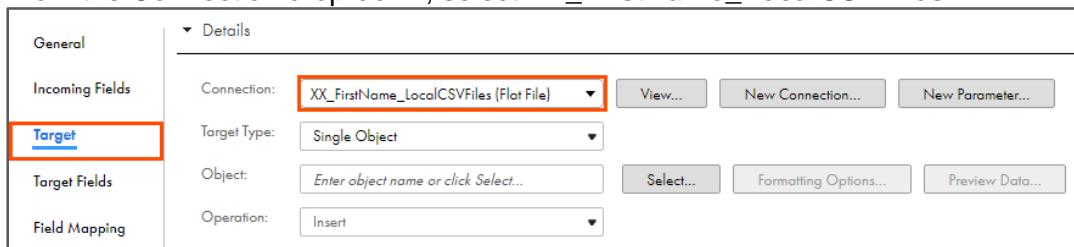
48. To configure the target, from the mapping canvas, click the **Target** transformation.

49. In the **General** section of the the Target properties, retain the Name as **Target**.



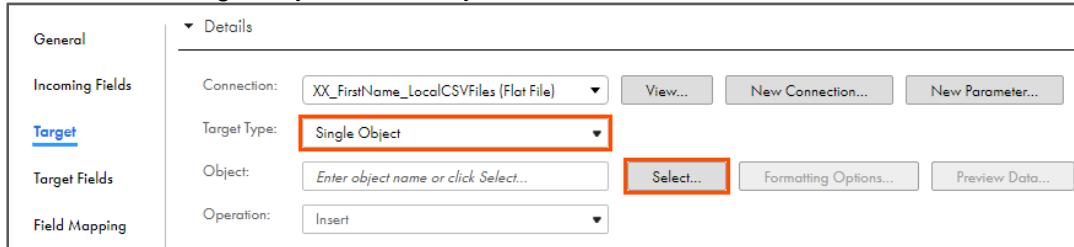
50. From the properties pane, click **Target**.

51. From the Connection drop-down, select **XX_FirstName_LocalCSVFiles**.



52. Retain Target Type as **Single Object**.

53. To select the target object, from Object field, click **Select**.

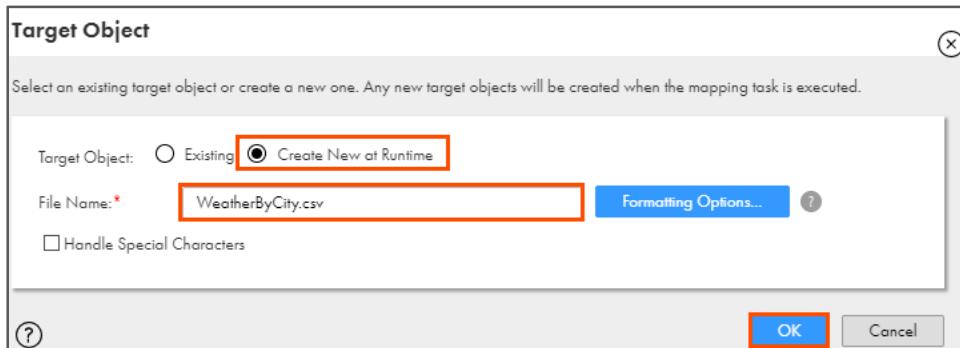


Note: The Target Object window appears.

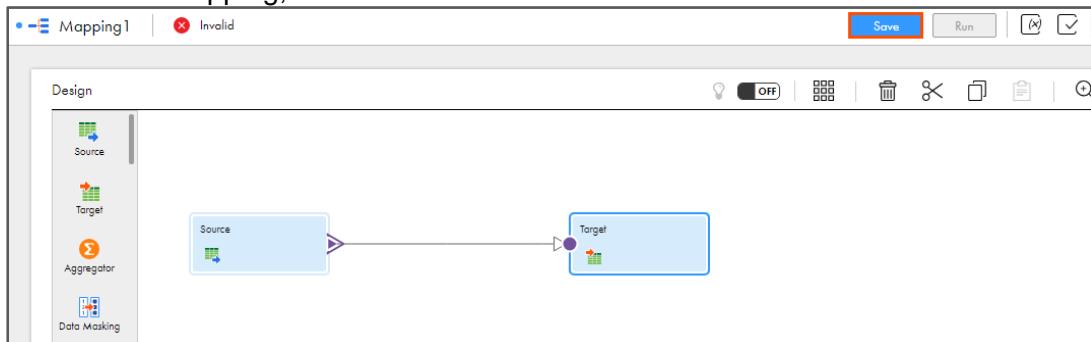
54. In the Target Object window, select **Create New at Runtime**.

55. Enter **WeatherByCity.csv** as File Name.

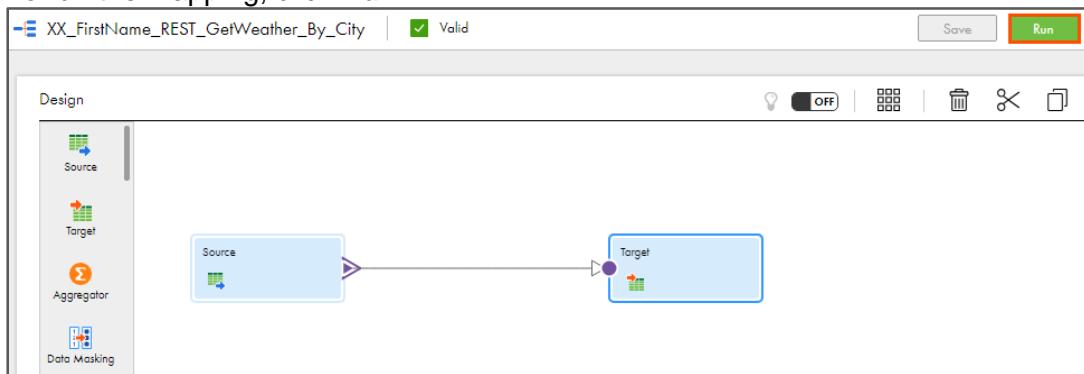
56. Click **OK**.



57. To save the mapping, click **Save**.



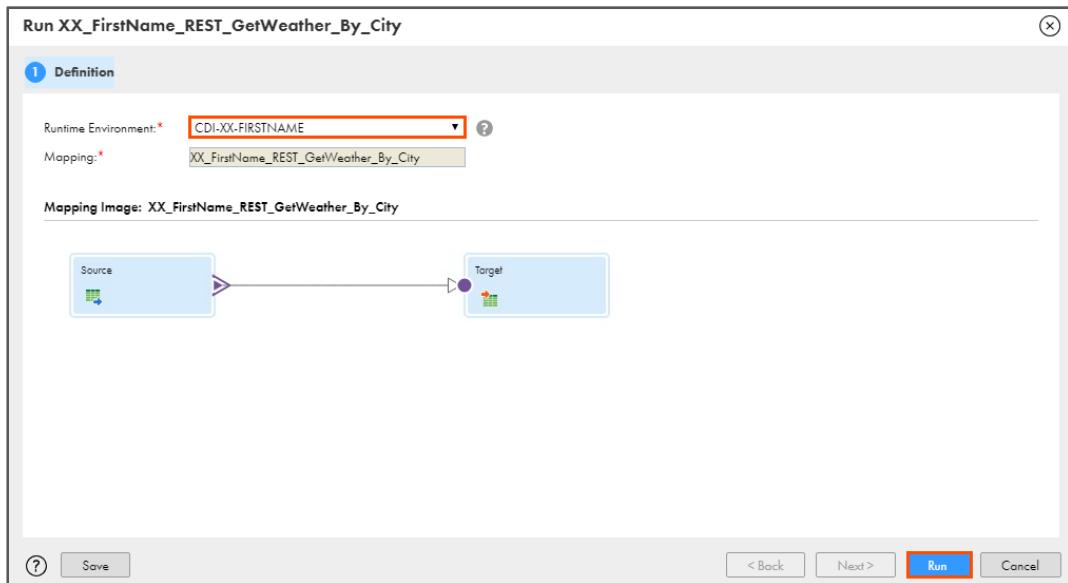
58. To run the mapping, click **Run**.



Note: The Run mapping window appears.

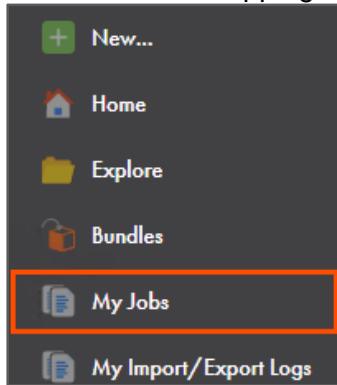
59. From Runtime Environment drop-down, select your secure agent group.

60. Click **Run**.

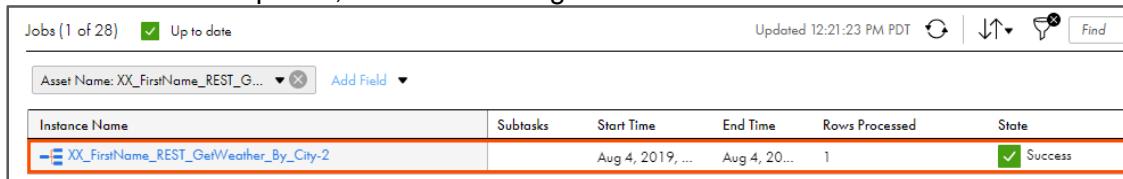


Monitor Status:

61. To monitor the mapping status, from the navigation pane, click **My Jobs**.



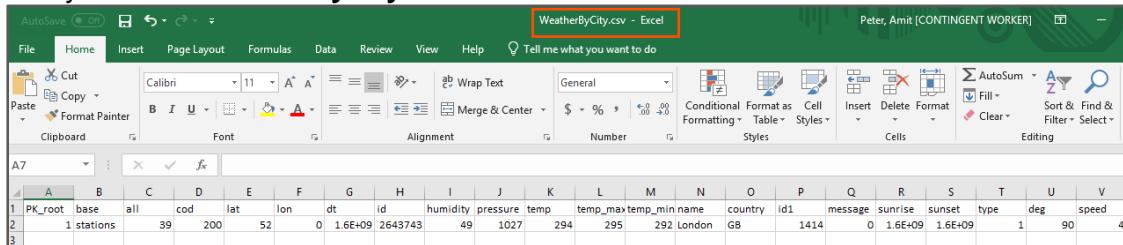
62. When the task completes, the status changes to **Success**.



The screenshot shows a table of job runs. One row is highlighted with a red border, indicating success. The columns include Asset Name, Subtasks, Start Time, End Time, Rows Processed, and State. The highlighted row shows 'XX_FirstName_REST_G...' as the Asset Name, 'XX_FirstName_REST_GetWeather_By_City-2' as the Subtask, and 'Success' as the State.

63. On your local machine, go to **C:\IICSLabFiles**.

64. Verify that the **WeatherByCity.csv** file contains 1 row and weather details of London.



The screenshot shows an Excel spreadsheet titled 'WeatherByCity.csv - Excel'. The data is contained in a single row (row 2) with 25 columns. The columns are labeled from A to V. The data includes various weather parameters such as base, cod, lat, lon, dt, id, humidity, pressure, temp, temp_max, temp_min, name, country, id1, message, sunrise, sunset, type, deg, and speed. The cell containing 'London' under the 'name' column is highlighted.

This concludes the lab.

Module 13: Hierarchical Connectivity

Lab 13-2: Using Web Services Transformation in a Mapping

Overview:

A web service is a system software that enables machine-to-machine interaction over a network. It makes application, platform, and technology independent.

In this lab, you will convert a list of numbers in dollar format data using IICS mappings.

Objective:

- Use Web Services transformation in a mapping

Duration:

30 minutes

Tasks:

Copy Source File:

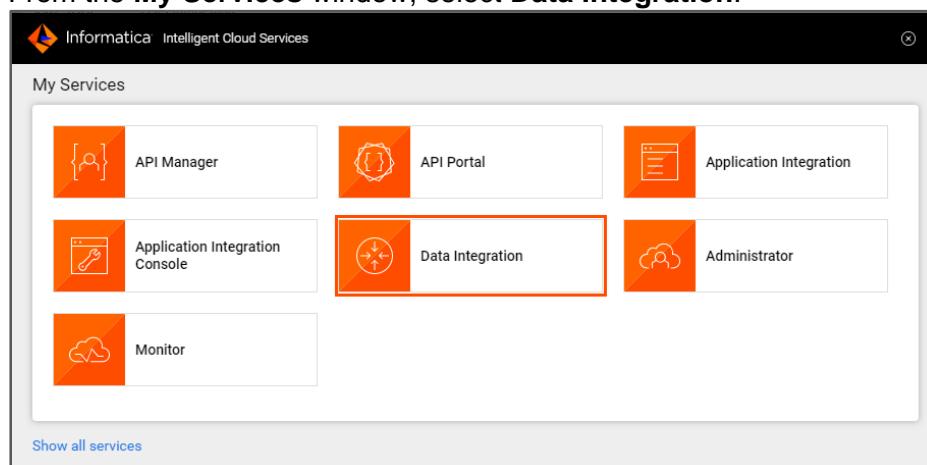
1. Copy the **Input.txt** file from the CDI Lab Prep Files folder available on your desktop and paste it in your flat file directory (C:\IICSLabFiles).

Create Business Service:

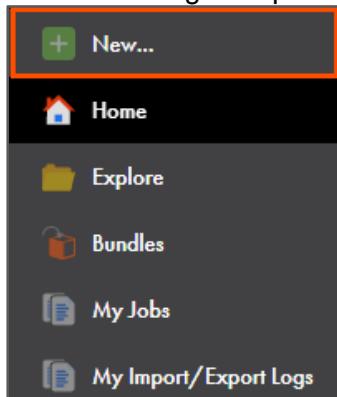
2. Open the IICS Login page from the Bookmarks bar.

Note: Follow this step if you have navigated away from the login page.

3. Enter the login credentials provided by the Instructor and click **Log In**.
4. From the **My Services** window, select **Data Integration**.

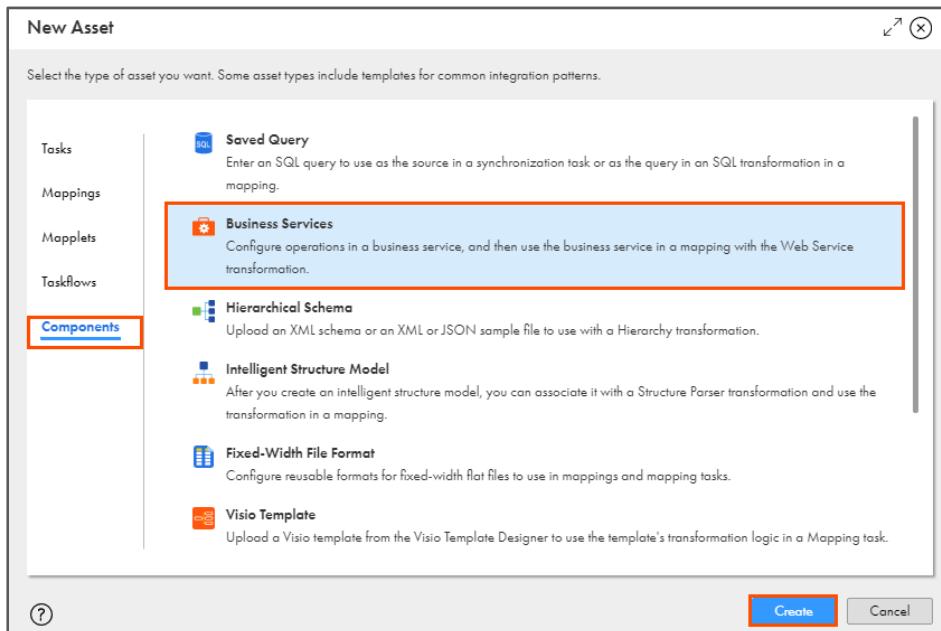


5. From the navigation pane, select **New**.



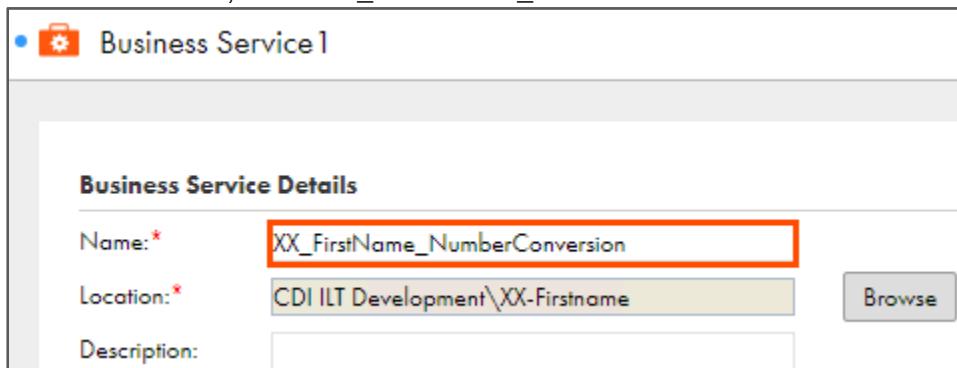
6. From the New Asset window, click the **Components** tab.

7. Select **Business Services** and click **Create**.



Note: The Business Service page appears.

8. In the Name field, enter **XX_FirstName_NumberConversion**.



Business Service Details	
Name:*	XX_FirstName_NumberConversion
Location:*	CDI ILT Development\XX-Firstname
Description:	

Note: Here, XX refers to your initials, and FIRSTNAME refers to your First Name.

9. To create a new connection, click **New**.

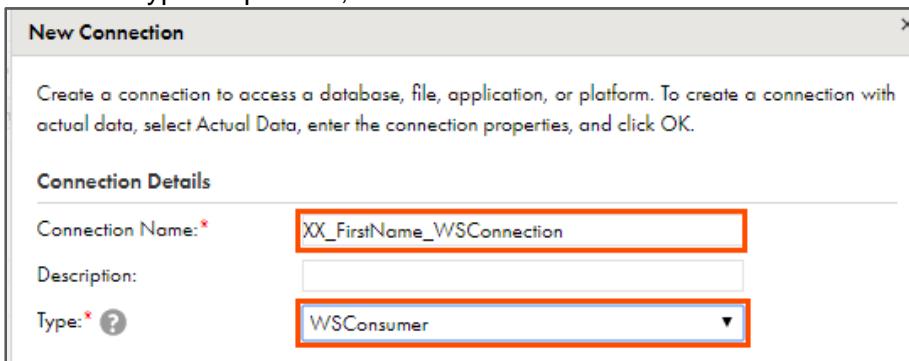


Note: The New Connection window appears.

10. In the Name field, enter **XX_FirstName_WSConnection**.

Note: Here, XX refers to your initials, and FIRSTNAME refers to your First Name.

11. From the Type drop-down, select **WSConsumer**.

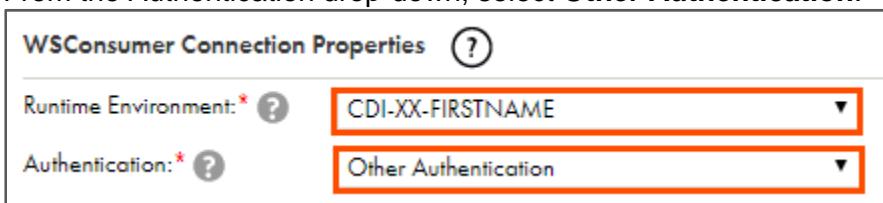


Note: The WSConsumer Connection Properties section appears.

12. From the Runtime Environment drop-down, select your secure agent group.

Note: The Runtime Environment name will be in CDI-XX-FIRSTNAME format.

13. From the Authentication drop-down, select **Other Authentication**.



Note: The Other Authentication Connection Properties section appears.

14. In the WSDL URL field, enter the following URL:

<http://www.dataaccess.com/webservicesserver/numberconversion.wso?WSDL>
OR

Navigate to the **C:\Students\Commands** directory on your local machine and open the file named **26_LabGuide_UsingWebServicesTransformation_13-2**. Copy the URL mentioned under **Step 14** and paste it in the WSDL URL field.

15. In the Endpoint URL field, enter the following URL:

<http://www.dataaccess.com/webservicesserver/numberconversion.wso>
OR

Navigate to the **C:\Students\Commands** directory on your local machine and open the file named **26_LabGuide_UsingWebServicesTransformation_13-2**. Copy the URL mentioned under **Step 15** and paste it in the Endpoint URL field.

16. Click **OK**.

Create a connection to access a database, file, application, or platform. To create a connection with actual data, select Actual Data, enter the connection properties, and click OK.

Connection Details

Connection Name: [*]	XX_FirstName_WSConnection
Description:	
Type: [*]	WSConsumer

WSConsumer Connection Properties (?)

Runtime Environment: [*]	CDI-XX-FIRSTNAME
Authentication: [*]	Other Authentication

Other Authentication Connection Properties (?)

WSDL URL: [*]	http://www.dataaccess.com/webservicesserver/n
Endpoint URL: [*]	http://www.dataaccess.com/webservicesserver/n
HTTP Username:	
HTTP Password:	

? OK Cancel

Note: This action redirects you to the Business Service page.

17. From the Connection drop-down, select **XX_FirstName_WSConnection**.

Note: Skip this step if the created connection is already selected.

18. To add an operation, click **Select Operation**.

Business Service Details

Name: [*]	XX_FirstName_NumberConversion	
Location: [*]	CDI ILT Development\XX-Firstname	Browse
Description:		
Connection: [*]	XX_FirstName_WSConnection	View... New... (?)

Select Operation

Operations

Note: The Select Operation window appears.

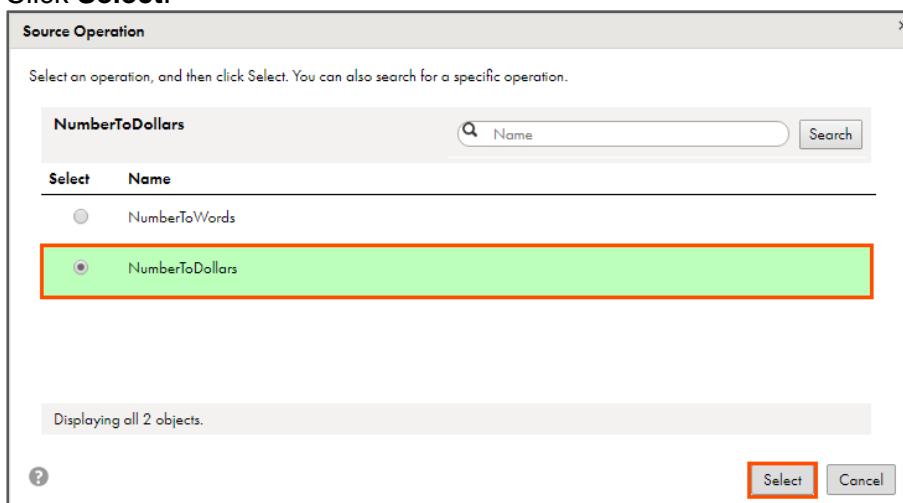
19. To select source operation, click **Select**.



Note: The Source Operation window appears.

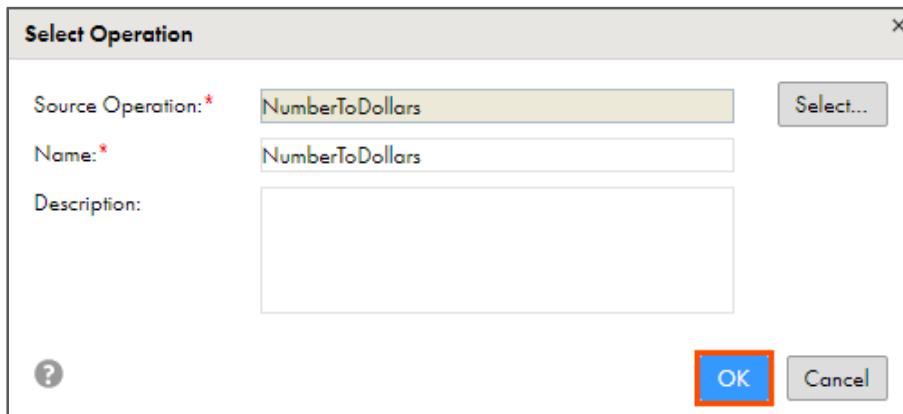
20. From the list, select **NumberToDollars**.

21. Click **Select**.

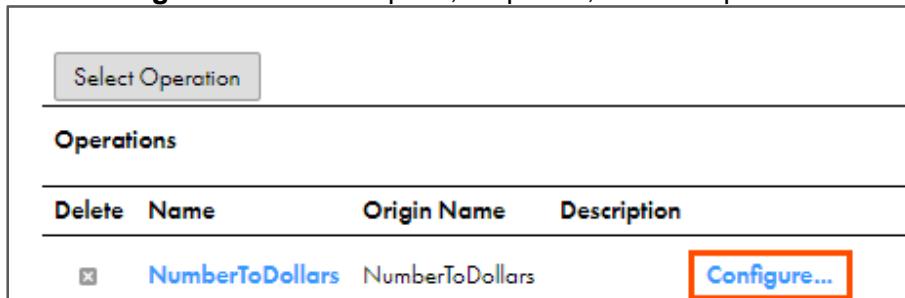


Note: This action redirects you to Select Operation window.

22. Click **OK**.

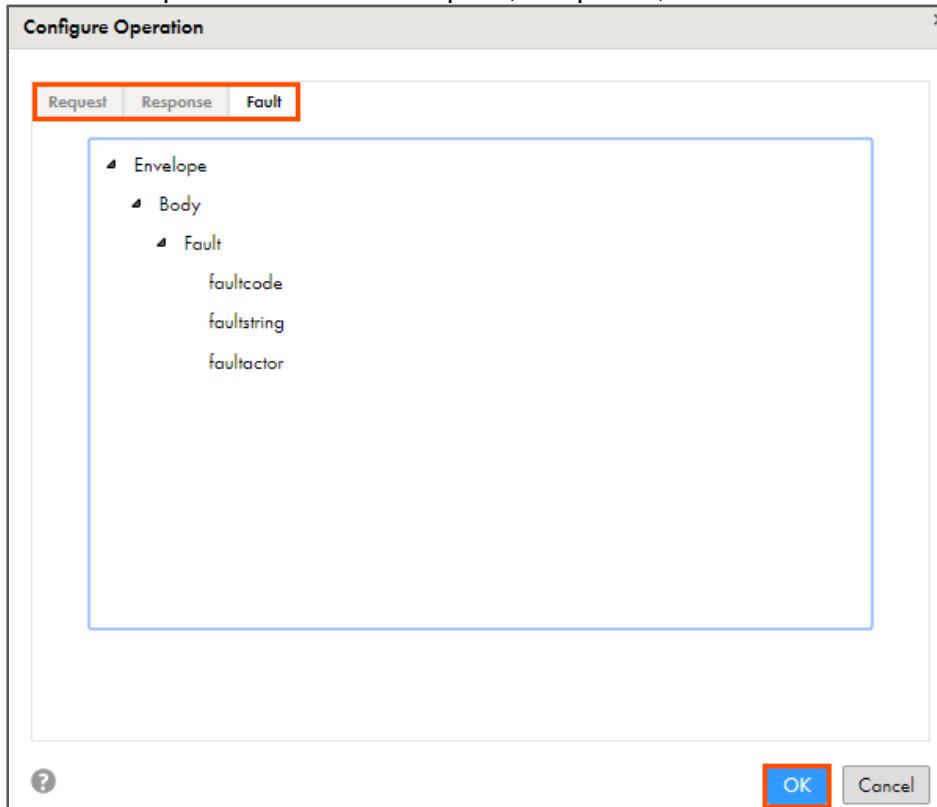


23. Click **Configure** to set the request, response, and fault parameters.



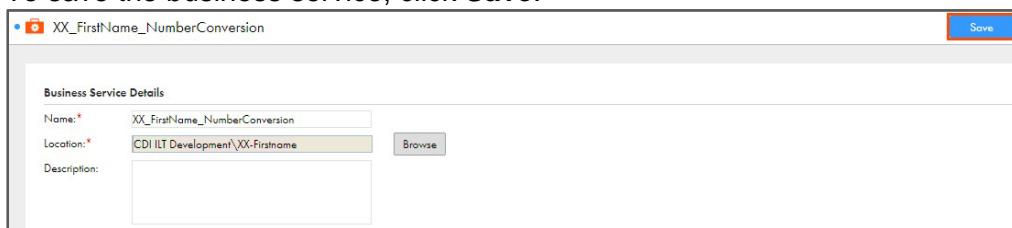
Note: The Configure Operation window appears.

24. View all the parameters in the Request, Response, and Fault tabs and click **OK**.



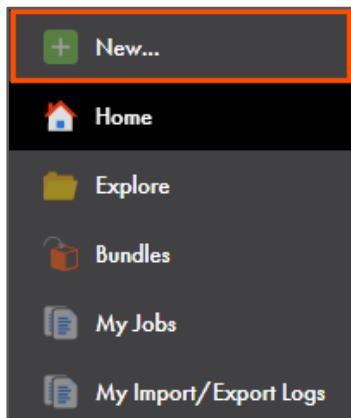
Note: This action redirects you to the Business Service page.

25. To save the business service, click **Save**.



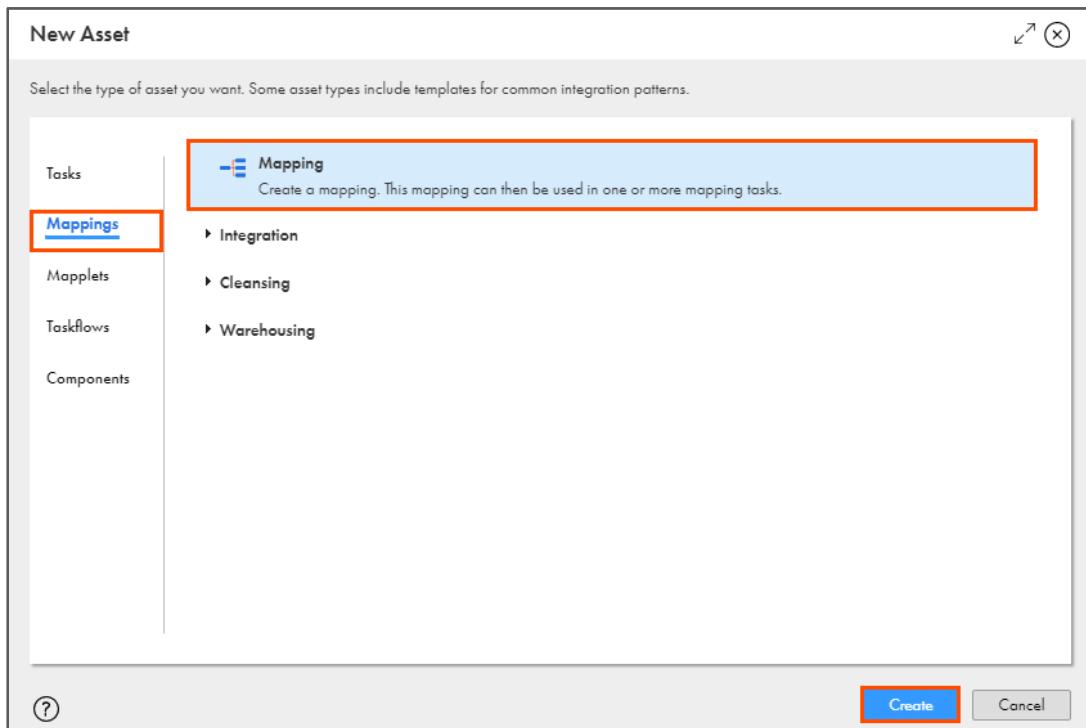
Create Mapping:

26. From the navigation pane, select **New**.



27. From the New Asset window, click the **Mappings** tab, and select **Mapping**.

28. Click **Create**.



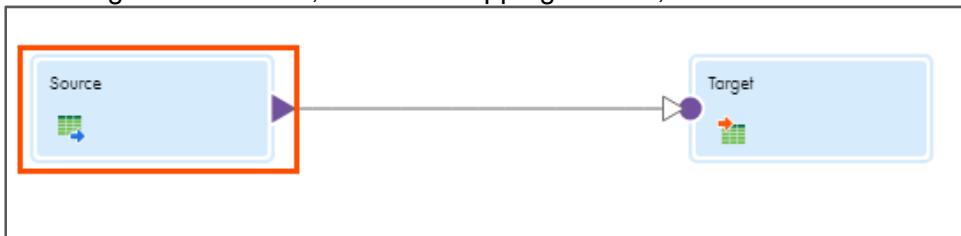
Note: The Mapping page appears.

29. In the Name field, enter **XX_FirstName_WebServices**.

Properties: XX_FirstName_WebServices	
Name:*	XX_FirstName_WebServices
Location:*	CDI ILT Development\XX-Firstname
Description:	

Note: Here, XX refers to your initials, and FIRSTNAME refers to your First Name.

30. To configure the source, from the mapping canvas, click the **Source** transformation.



31. In the **General** section of the Source properties, retain the Name as **Source**.

Properties		Source
General	Name:*	Source
Source	Description:	

32. From the properties pane, click **Source**.

33. From the Connection drop-down, select **XX_FirstName_LocalCSVFiles**.

34. Retain Source Type as **Single Object**.

General		Details
Source	Connection:	XX_FirstName_LocalCSVFiles (Flat File)
Fields	Source Type:	Single Object
Partitions	Object:	Enter object name or click Select...
		Select... Formatting Options... Preview Data...

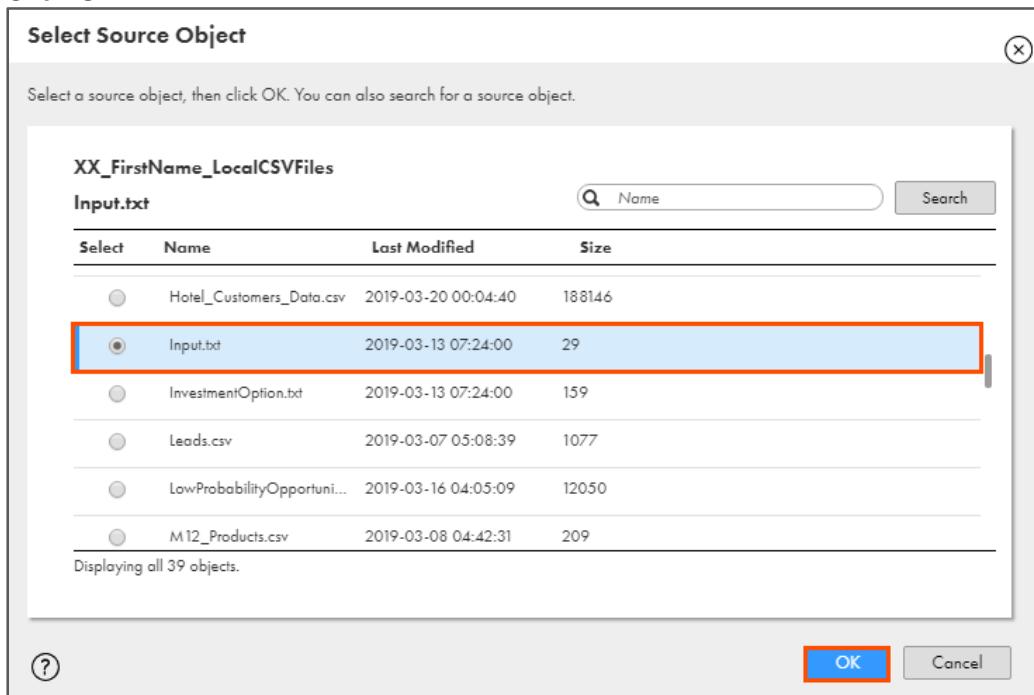
35. To select the source object from the Object field, click **Select**.

General		Details
Source	Connection:	XX_FirstName_LocalCSVFiles (Flat File)
Fields	Source Type:	Single Object
Partitions	Object:	Enter object name or click Select...
		Select... Formatting Options... Preview Data...

Note: The Select Source Object window appears.

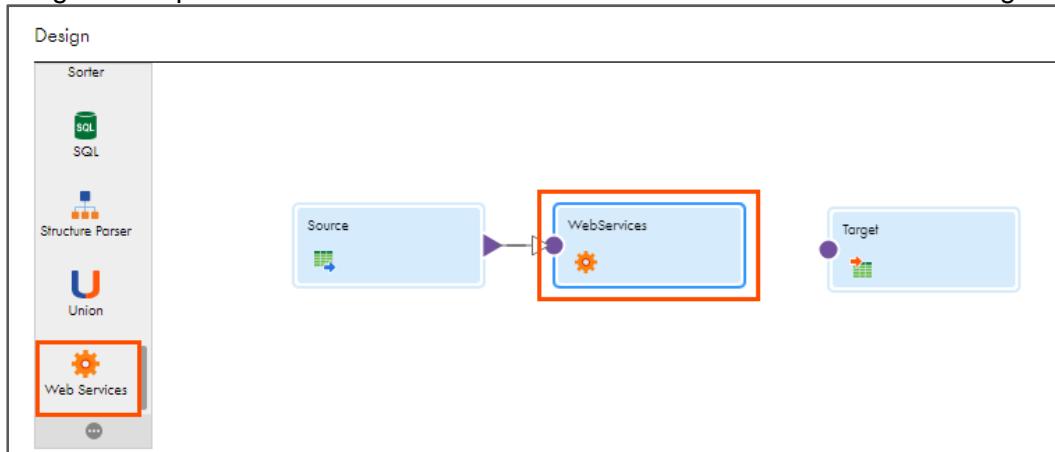
36. From the list, select **Input.txt**.

37. Click **OK**.



Add Web Services Transformation:

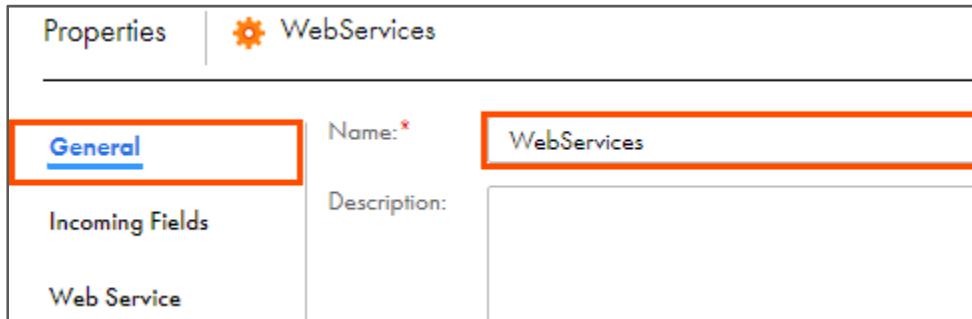
38. Drag and drop the **Web Services** transformation between the source and target.



Note: The Source transformation gets linked to the Web Service transformation.

39. Select the **WebServices** transformation on the mapping canvas.

40. In the **General** section of the WebServices properties, retain the Name as **WebServices**.



41. From the properties pane, click **Web Service**.

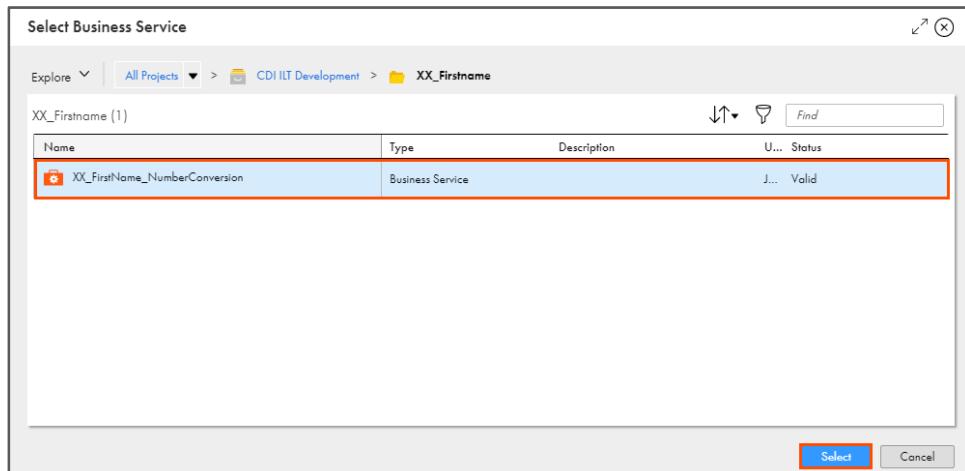
42. To select the business service, click **Select**.



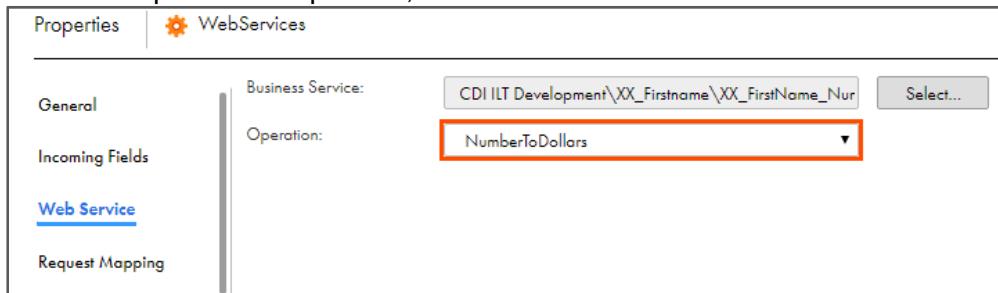
Note: The Select Business Service window appears.

43. Navigate to **CDI ILT Development > XX_Firstname** and select **XX_FirstName_NumberConversion**.

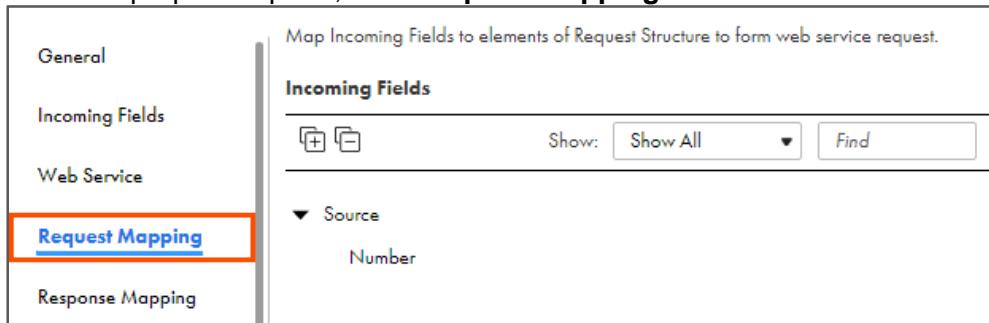
44. Click **Select**.



45. From the Operation drop-down, select **NumberToDollars**.



46. From the properties pane, click **Request Mapping**.

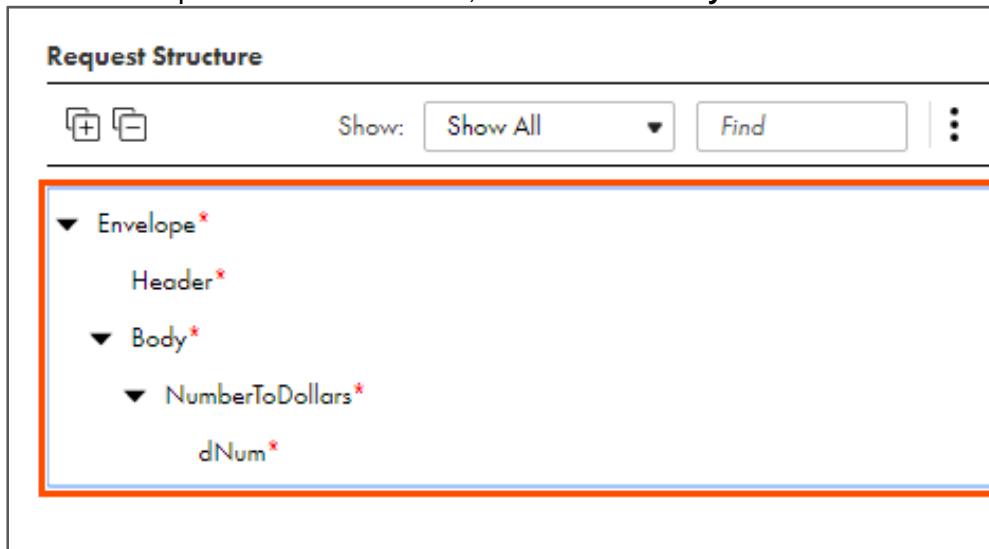


The screenshot shows the properties pane with the following structure:

- General**
- Incoming Fields**
- Web Service**
- Request Mapping** (highlighted with a red border)
- Response Mapping**

On the right, under "Map Incoming Fields to elements of Request Structure to form web service request.", there is a section titled "Incoming Fields" with a "Source" dropdown set to "Number".

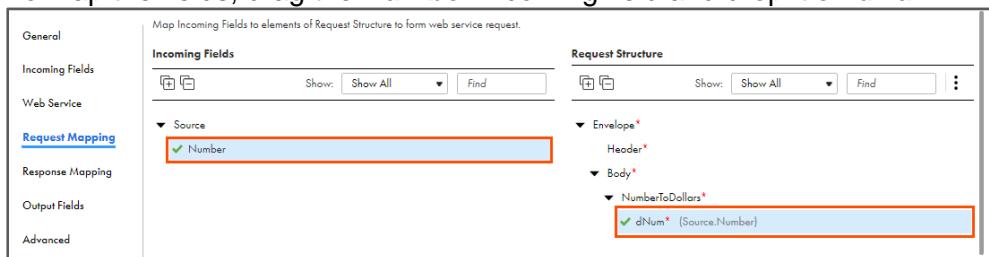
47. From the Request Structure section, drill-down to **Body > NumberToDollars > dNum**.



The screenshot shows the Request Structure tree view with the following path highlighted by a red box:

- Envelope*
- Header*
- Body*
- NumberToDollars*
- dNum*

48. To map the fields, drag the **Number** incoming field and drop it on **dNum**.

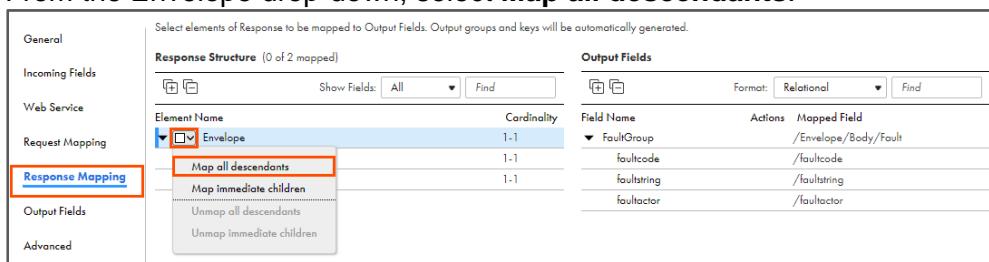


The screenshot shows two panes side-by-side:

- Properties Pane (Left):**
 - Request Mapping** (highlighted with a red border)
 - Source: Number (highlighted with a red box)
- Request Structure (Right):**
 - Envelope*
 - Header*
 - Body*
 - NumberToDollars*
 - dNum* (highlighted with a red box)

49. From the properties pane, click **Response Mapping**.

50. From the Envelope drop-down, select **Map all descendants**.



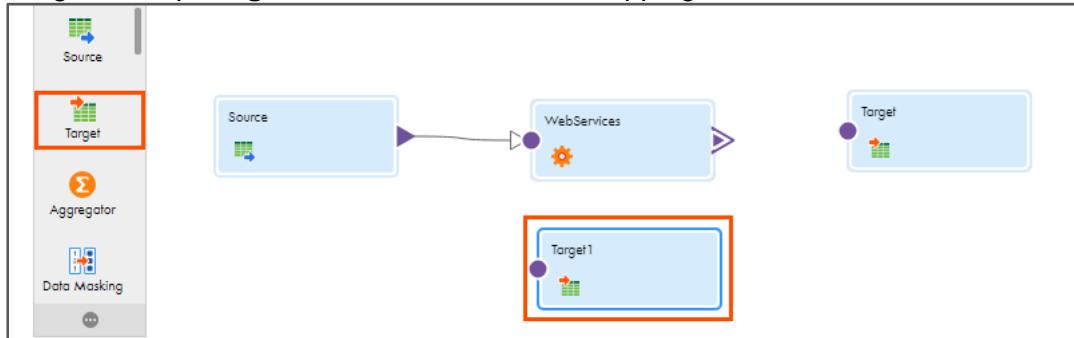
The screenshot shows the properties pane with the following structure:

- General**
- Incoming Fields**
- Web Service**
- Request Mapping**
- Response Mapping** (highlighted with a red border)
- Output Fields**
- Advanced**

On the right, under "Select elements of Response to be mapped to Output Fields. Output groups and keys will be automatically generated.", there is a "Response Structure" section with "Element Name: Envelope" and "Cardinality: 1..1". A dropdown menu next to "Envelope" has "Map all descendants" highlighted with a red box. There is also a "Map immediate children" option.

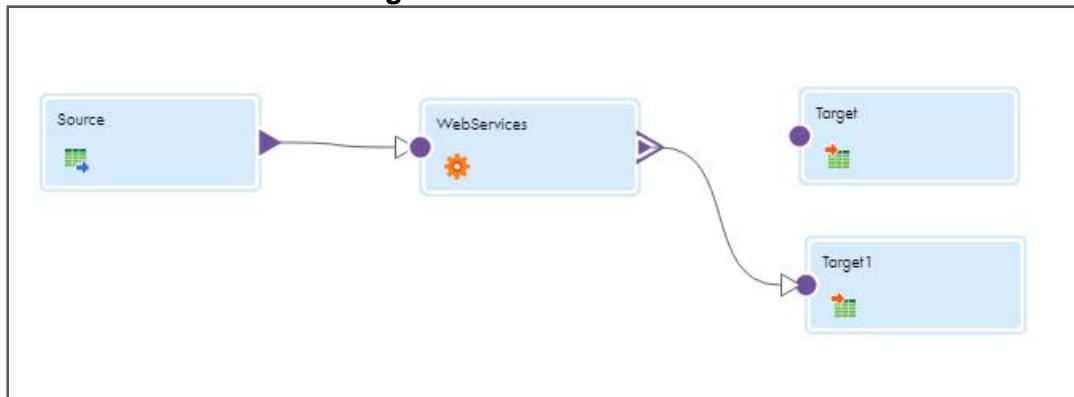
Add a Target Transformation:

51. Drag and drop **Target** transformation on the mapping canvas.



52. Select the added Target transformation (**Target 1**) on the mapping canvas.

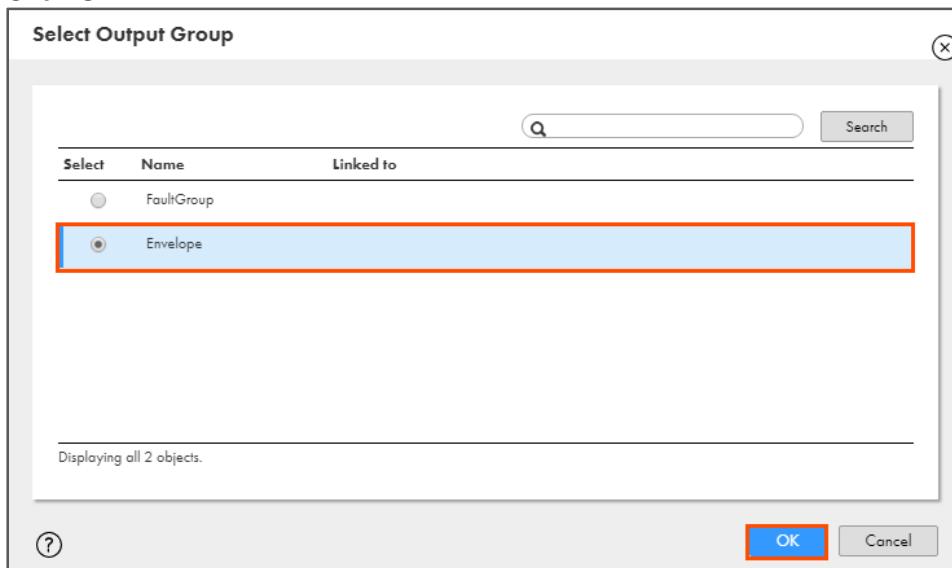
53. Link the **WebServices** to **Target1**.



Note: The Select Output Group window appears.

54. From the list, select **Envelope**.

55. Click **OK**.



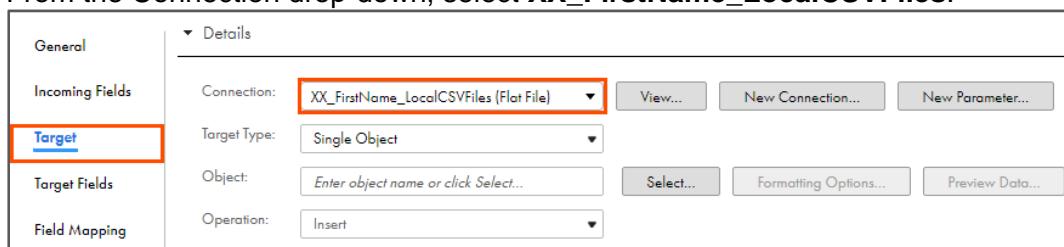
56. In the **General** section of the Target 1 properties, enter Name as **SuccessTarget**.



The screenshot shows the Informatica Properties pane. The title bar says "Properties" and the icon is a green grid with a red star. Below it, the "SuccessTarget" object is selected. The "General" tab is highlighted with a red border. The "Name:" field contains "SuccessTarget". The "Description:" field is empty.

57. From the properties pane, click **Target**.

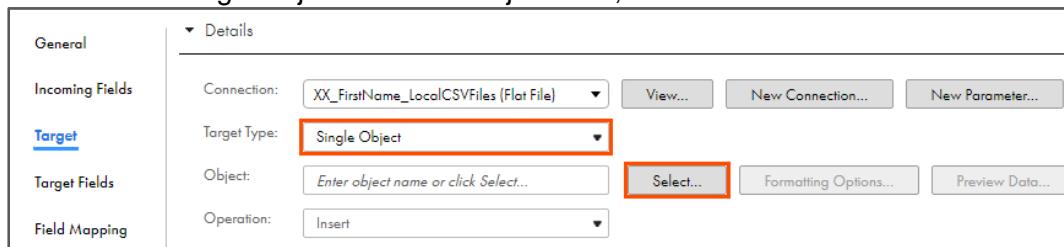
58. From the Connection drop-down, select **XX_FirstName_LocalCSVFiles**.



The screenshot shows the "Target" tab selected in the properties pane. The "Connection:" dropdown is highlighted with a red border and contains "XX_FirstName_LocalCSVFiles (Flat File)". Other tabs visible include "General", "Incoming Fields", "Target Fields", and "Field Mapping".

59. Retain Target Type as **Single Object**.

60. To select the target object from the Object field, click **Select**.



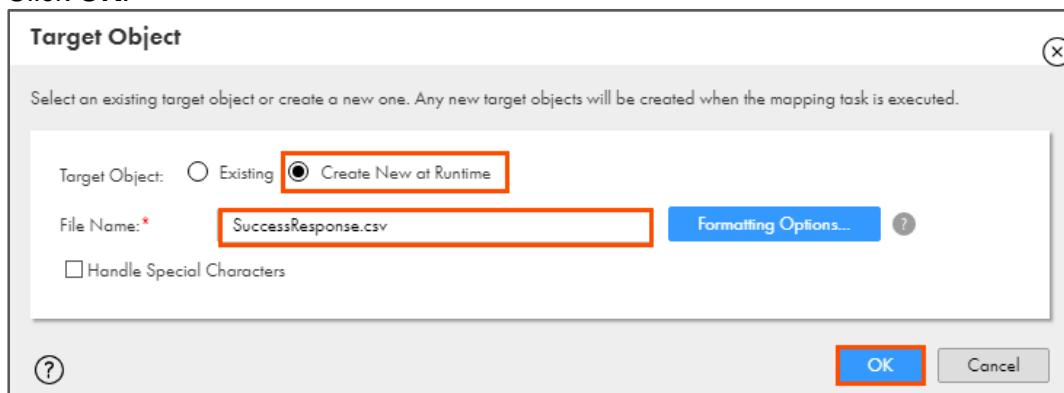
The screenshot shows the "Target" tab selected. The "Target Type:" dropdown is highlighted with a red border and contains "Single Object". The "Object:" field is empty and has a "Select..." button highlighted with a red border. Other tabs visible include "General", "Incoming Fields", "Target Fields", and "Field Mapping".

Note: The Target Object window appears.

61. In the Target Object window, select **Create New at Runtime**.

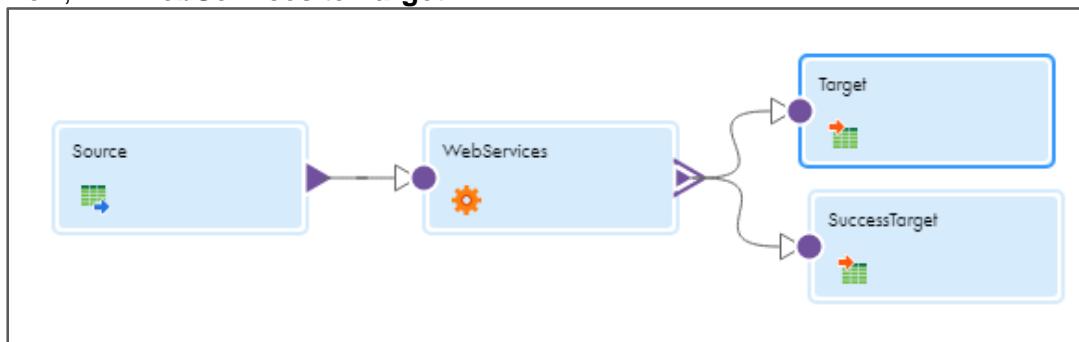
62. Enter **SuccessResponse.csv** as File Name.

63. Click **OK**.



The screenshot shows the "Target Object" dialog box. It has a radio button for "Create New at Runtime" which is selected and highlighted with a red border. The "File Name:" field contains "SuccessResponse.csv". There is a "Formatting Options..." button and a "Handle Special Characters" checkbox. At the bottom are "OK" and "Cancel" buttons.

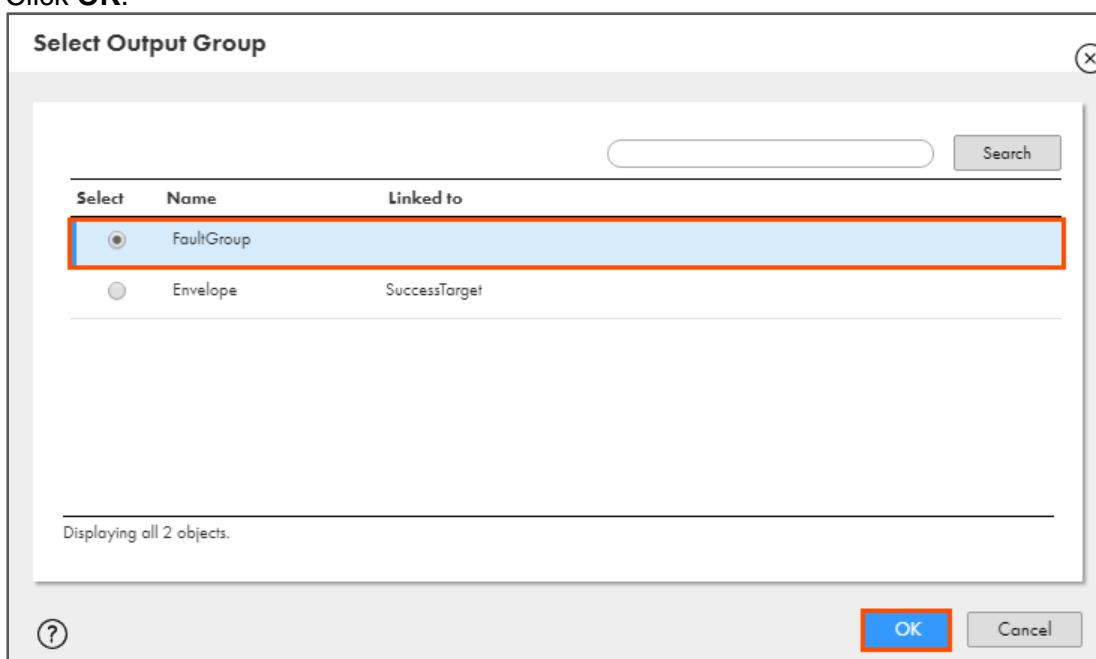
64. Now, link **WebServices** to **Target**.



Note: The Select Output Group window appears.

65. From the list, select **FaultGroup**.

66. Click **OK**.



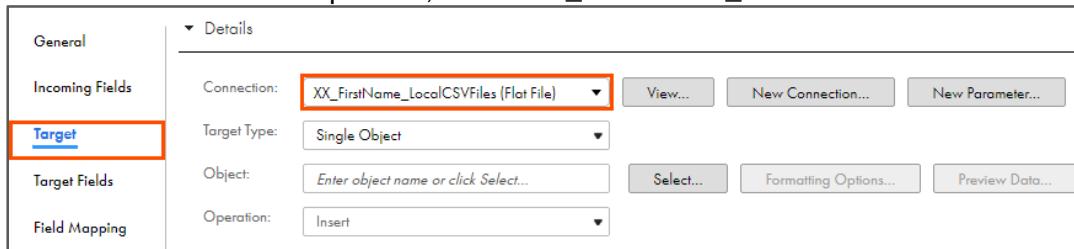
67. Select the Target transformation on the mapping canvas.

68. In the **General** section of the Target properties, enter the Name as **FaultTarget**.



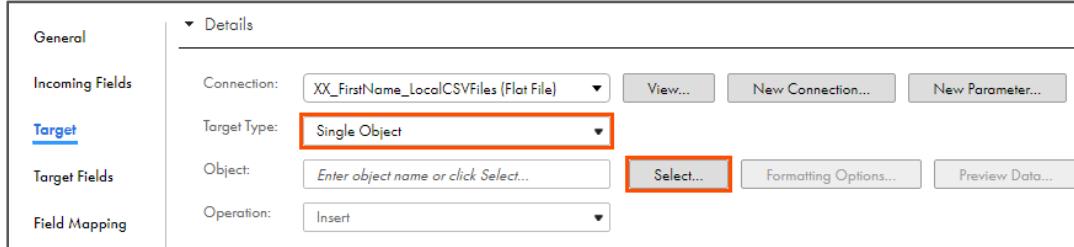
69. From the properties pane, click **Target**.

70. From the Connection drop-down, select **XX_FirstName_LocalCSVFiles**.



71. Retain Target Type as **Single Object**.

72. To select the target object from the Object field, click **Select**.

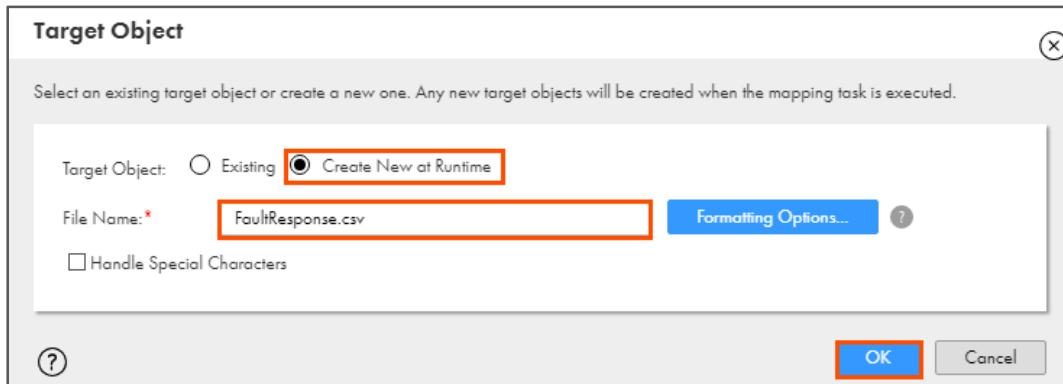


Note: The Target Object window appears.

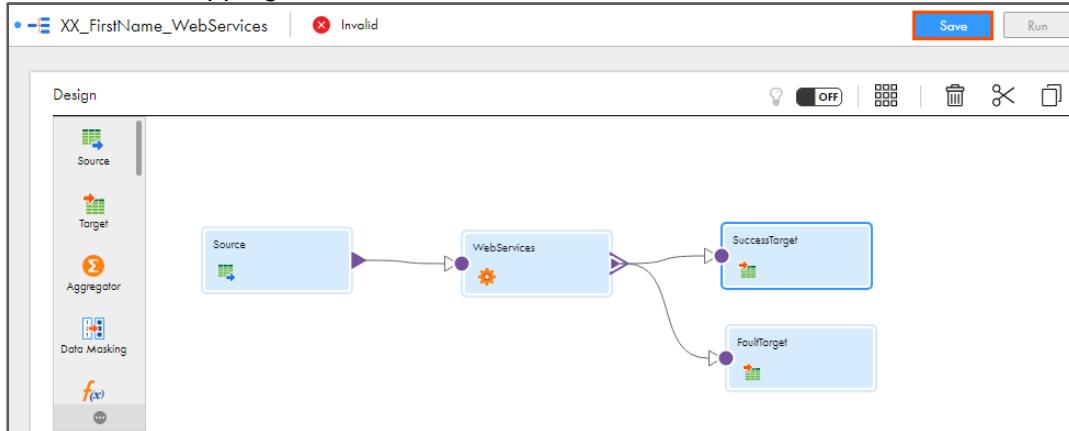
73. In the Target Object window, select **Create New at Runtime**.

74. Enter **FaultResponse.csv** as File Name.

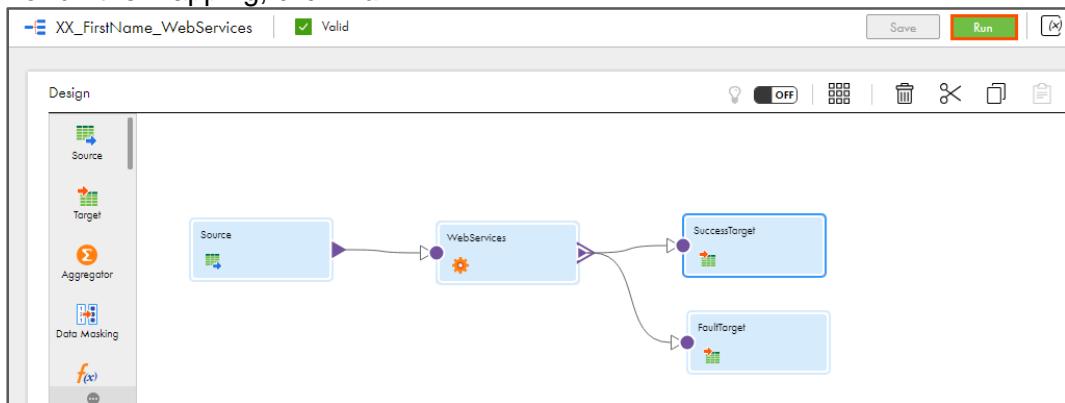
75. Click **OK**.



76. To save the mapping, click **Save**.



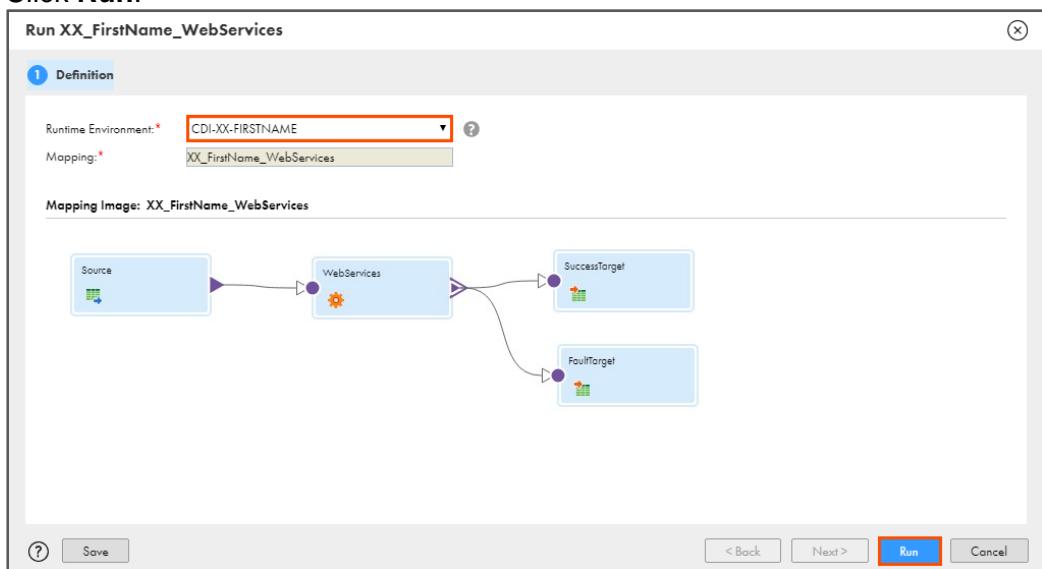
77. To run the mapping, click **Run**.



Note: The Run mapping window appears.

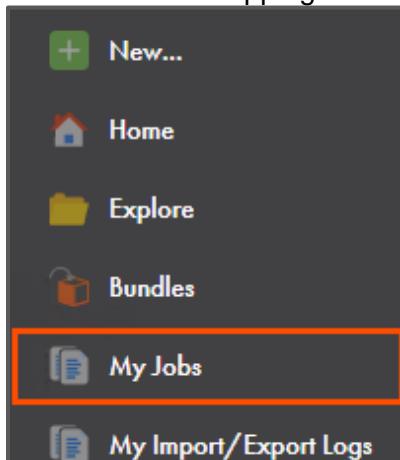
78. From the Runtime Environment drop-down, select your secure agent group.

79. Click **Run**.



Monitor Status:

80. To monitor the mapping status, from the navigation pane, click **My Jobs**.



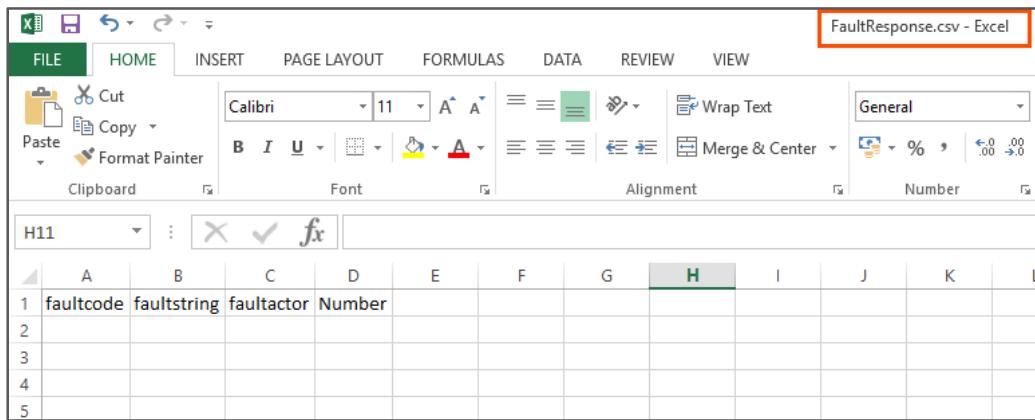
81. When the task completes, the status changes to **Success**.

Jobs (1 of 28) ✓ Up to date		Updated 1:13:46 PM PDT				
		Subtasks	Start Time	End Time	Rows Processed	
Instance Name	Asset Name: XX_FirstName_WebSer...	Add Field ▾				State
XX_FirstName_WebServices-1			Aug 1, 2019, ...	Aug 1, 20...	6	✓ Success

82. On your local machine, go to **C:\IICSLabFiles**.

83. Verify that 6 rows are written to the **SuccessResponse.csv** and that the **FaultResponse.csv** file contains 0 rows.

SuccessResponse.csv - Excel							
FILE	HOME	INSERT	PAGE LAYOUT	FORMULAS	DATA	REVIEW	VIEW
	Cut	Calibri	11	A A	Wrap Text	General	
	Copy	B I U			Merge & Center		
	Format Painter						
	Clipboard	Font		Alignment		Number	
		B4	X ✓ fx	forty five dollars			
A	B	C	D	E	F	G	H
1	Header	NumberToDollarsResult	Number				
2		ten dollars	10				
3		fifty six dollars	56				
4		forty five dollars	45				
5		four dollars	4				
6		fifty three dollars	53				
7		forty five dollars	45				
8							
9							



The screenshot shows a Microsoft Excel window with the title bar "FaultResponse.csv - Excel". The ribbon menu is visible with tabs like FILE, HOME, INSERT, PAGE LAYOUT, FORMULAS, DATA, REVIEW, and VIEW. The HOME tab is selected. The toolbar includes standard options like Cut, Copy, Paste, and Format Painter. The font section shows "Calibri 11". The alignment section includes "Wrap Text" and "Merge & Center". The number section includes "General". The active cell is H11. The spreadsheet has a header row with columns A, B, C, D, E, F, G, H, I, J, K, L. The first row contains the headers: faultcode, faultstring, faultactor, and Number.

	A	B	C	D	E	F	G	H	I	J	K	L
1	faultcode	faultstring	faultactor	Number								
2												
3												
4												
5												

This concludes the lab.

Module 13: Hierarchical Connectivity

Lab 13-3: Creating a Mapping using Hierarchy Parser Transformation

Overview:

Hierarchy Parser Transformation converts hierarchical input into relational output.

In this lab, you will create a mapping using Hierarchy Parser Transformation and convert the Hierarchical Schema into a flat schema.

Objective:

- Import a hierarchical schema
- Create a mapping using Hierarchy Parser transformation

Duration:

30 minutes

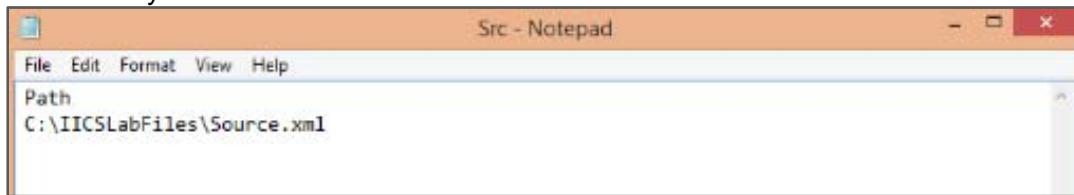
Tasks:

Copy Source Files:

1. Copy the **emp.xsd** and **Source.xml** files from the CDI Lab Prep Files folder available on your desktop and paste it in your flat file directory (C:\IICSLabFiles).

Create File:

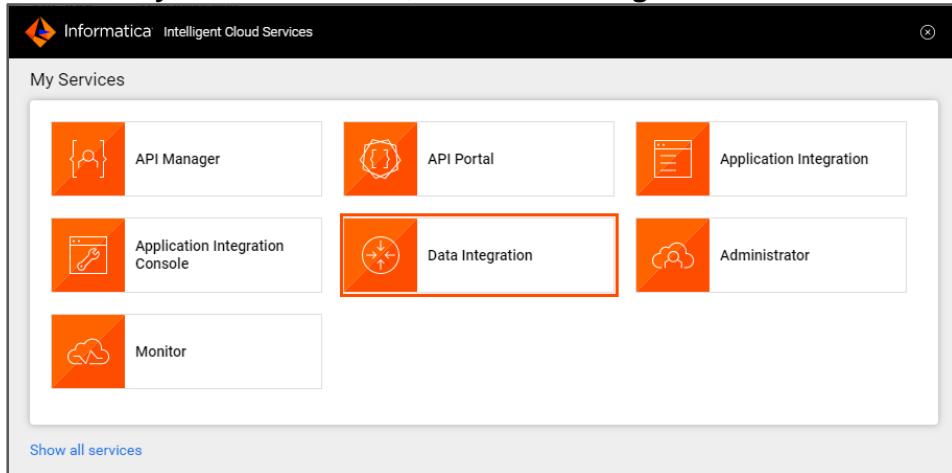
2. Create a text file named **Src** in C:\IICSLabFiles directory, and in that text file, type the location of your Source XML file in the format shown below:



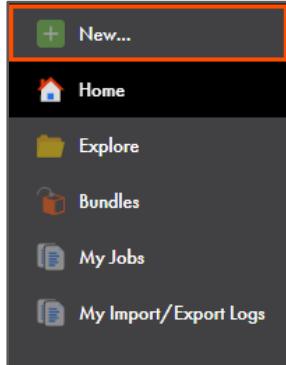
Create Hierarchical Schema:

3. Open the IICS Login page from the Bookmarks bar.
Note: Follow this step if you have navigated away from the login page.
4. Enter the login credentials provided by the Instructor and click **Log In**.

5. From the **My Services** window, select **Data Integration**.

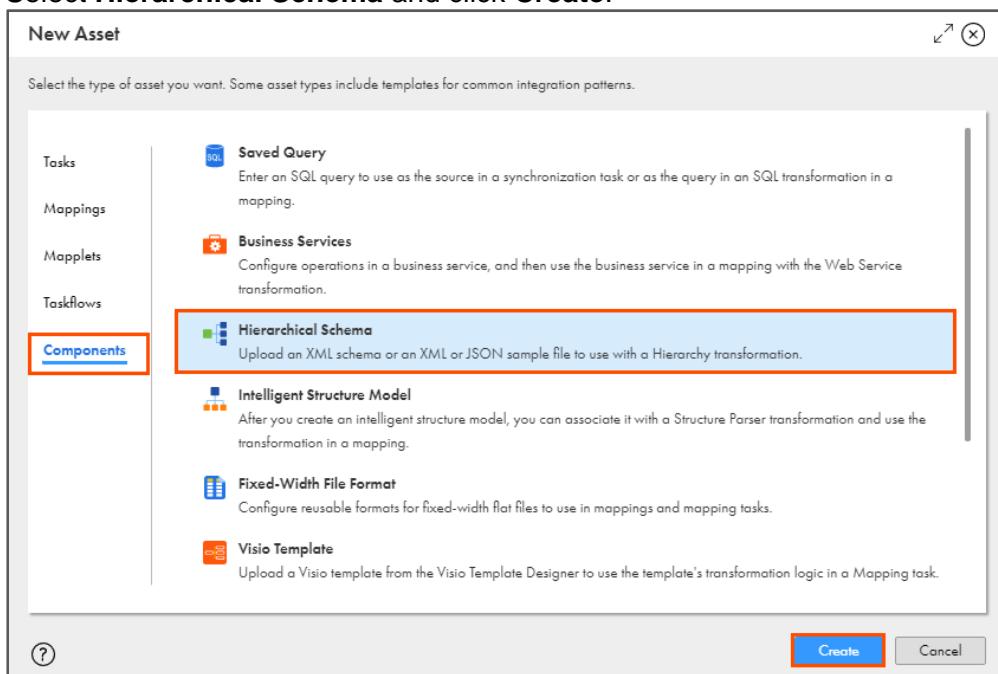


6. From the navigation pane, select **New**.



7. From the New Asset window, click the **Components** tab.

8. Select **Hierarchical Schema** and click **Create**.



Note: The Hierarchical Schema page appears.

9. In the Name field, enter **XX_FirstName_Emp**.

Note: Here, XX refers to your initials, and FIRSTNAME refers to your First Name.

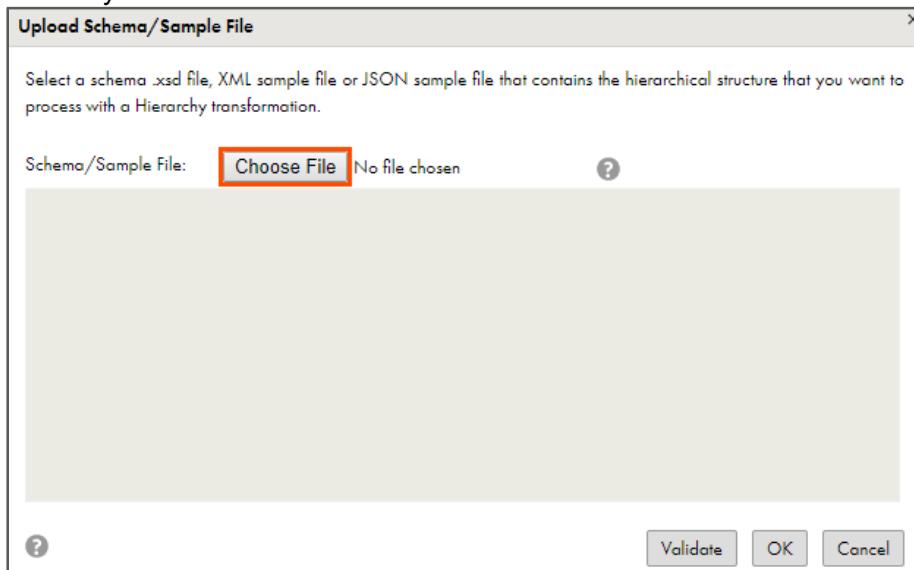
10. To upload the schema file, click **Upload**.

Hierarchical Schema Details

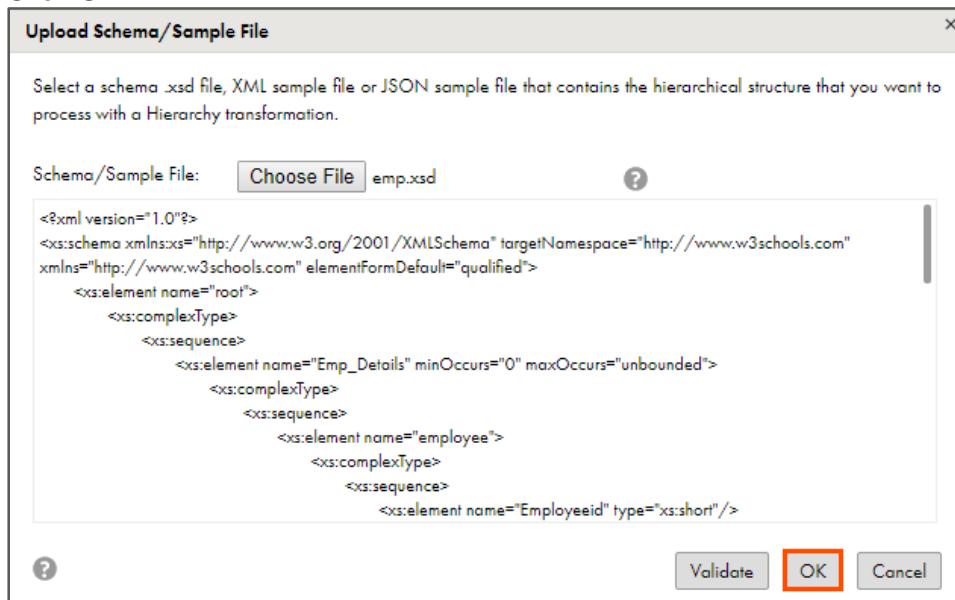
Name:*	XX_FirstName_Emp
Location	CDI ILT Development\XX-Firstname
Description:	<input type="text"/>
Schema/Sample File:*	<input type="button" value="Upload..."/>

Note: The Upload Schema/Sample File window appears.

11. To navigate to xsd file, click **Choose File**, and select **emp.xsd** from your flat file directory.

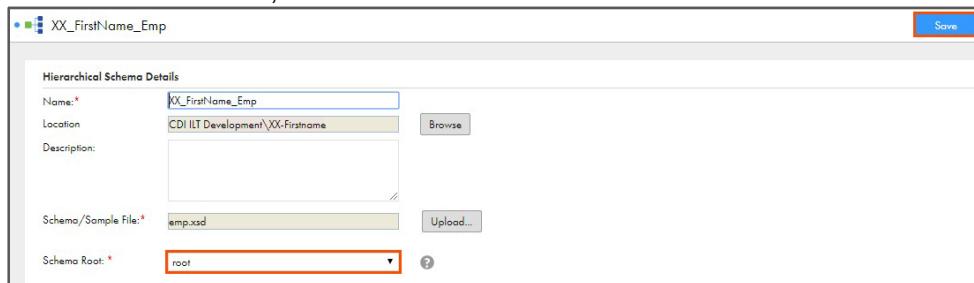


12. Click **OK**.



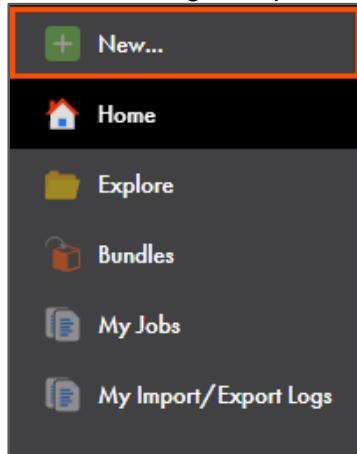
13. In the Schema Root drop-down, retain **root**.

14. To save the schema, click **Save**.



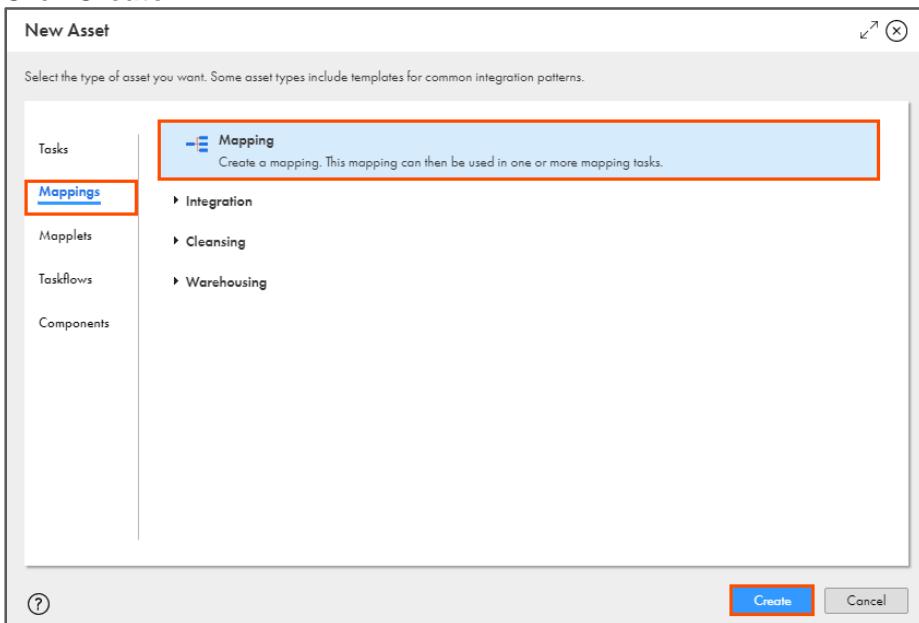
Create a Mapping:

15. From the navigation pane, select **New**.



16. From the New Asset window, click the **Mappings** tab, and select **Mapping**.

17. Click **Create**.



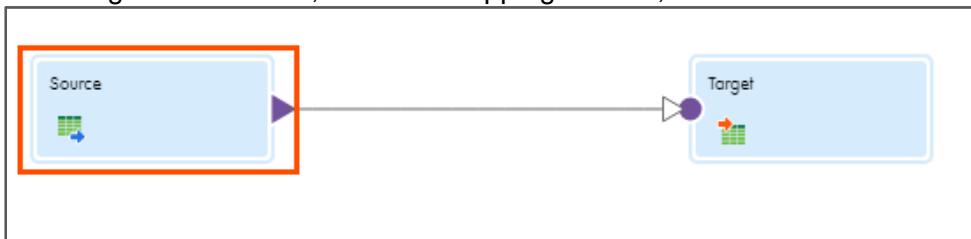
Note: The Mapping page appears.

18. In the Name field, enter **XX_FirstName_Employees**.

Properties: XX_FirstName_Employees	
Name:*	XX_FirstName_Employees
Location:*	CDI ILT Development\XX-Firstname
Description:	

Note: Here, XX refers to your initials, and FIRSTNAME refers to your First Name.

19. To configure the source, from the mapping canvas, click the **Source** transformation.



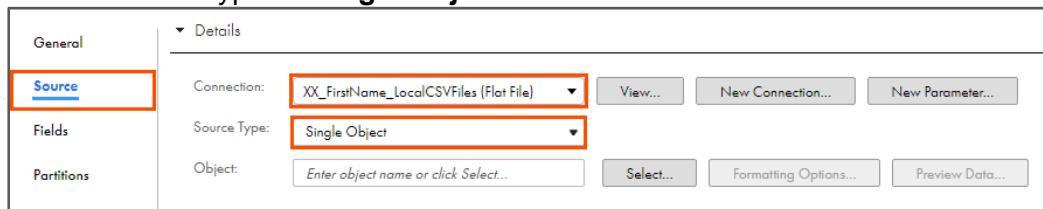
20. In the **General** section of the the Source properties, enter the Name as **Src**.

Properties	
Src	
General	
Name:*	Src
Description:	

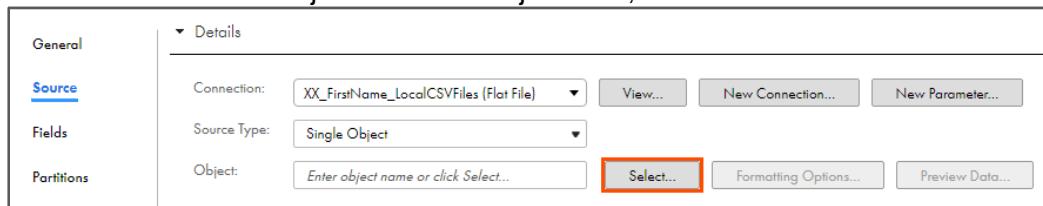
21. From the properties pane, click **Source**.

22. From the Connection drop-down, select **XX_FirstName_LocalCSVFiles**.

23. Retain Source Type as **Single Object**.



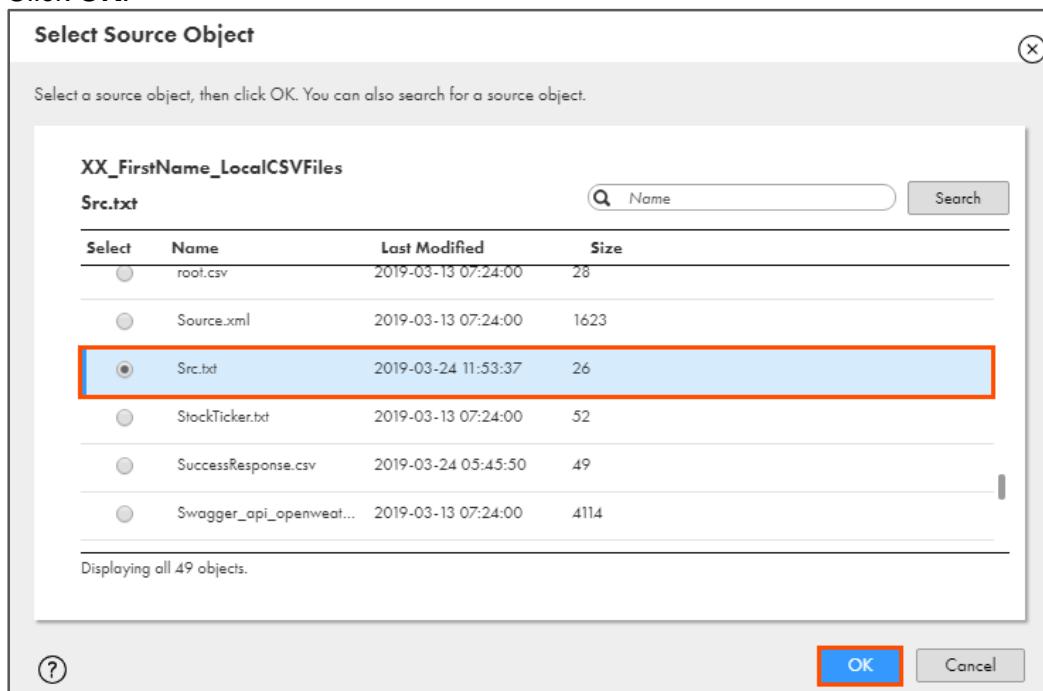
24. To select the source object from the Object field, click **Select**.



Note: The Select Source Object window appears.

25. From the list, select **Src.txt**.

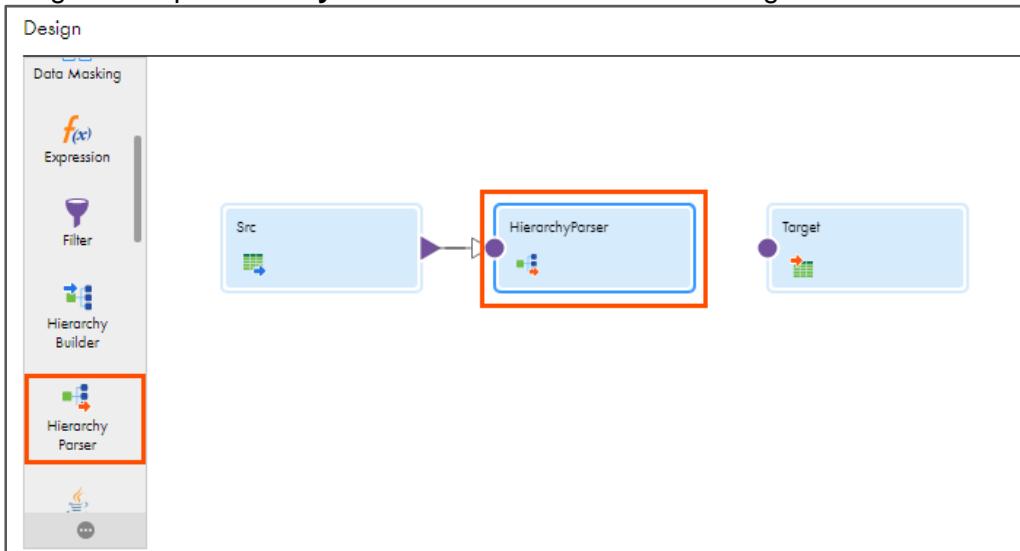
26. Click **OK**.



Select	Name	Last Modified	Size
<input type="radio"/>	root.csv	2019-03-13 07:24:00	28
<input type="radio"/>	Source.xml	2019-03-13 07:24:00	1623
<input checked="" type="radio"/>	Src.txt	2019-03-24 11:53:37	26
<input type="radio"/>	StockTicker.txt	2019-03-13 07:24:00	52
<input type="radio"/>	SuccessResponse.csv	2019-03-24 05:45:50	49
<input type="radio"/>	Swagger_api_openweat...	2019-03-13 07:24:00	4114

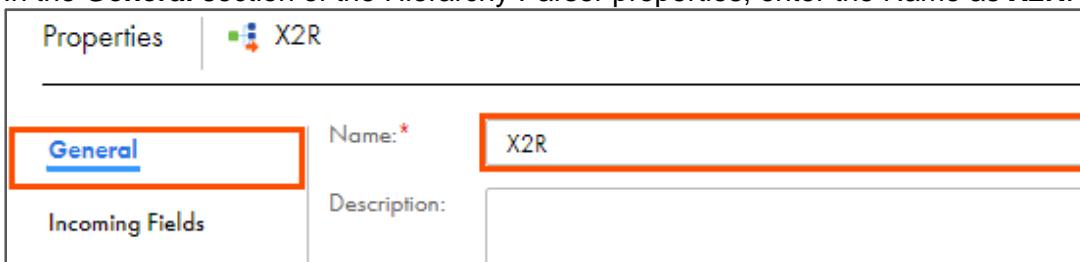
Add a Hierarchy Parser Transformation:

27. Drag and drop **Hierarchy Parser** between the Src and Target transformations.



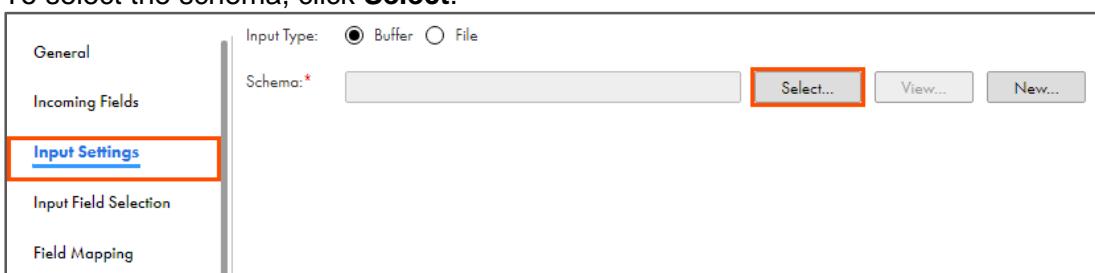
28. Select **Hierarchy Parser** transformation on the mapping canvas.

29. In the **General** section of the Hierarchy Parser properties, enter the Name as **X2R**.



30. From the properties pane, click **Input Settings**.

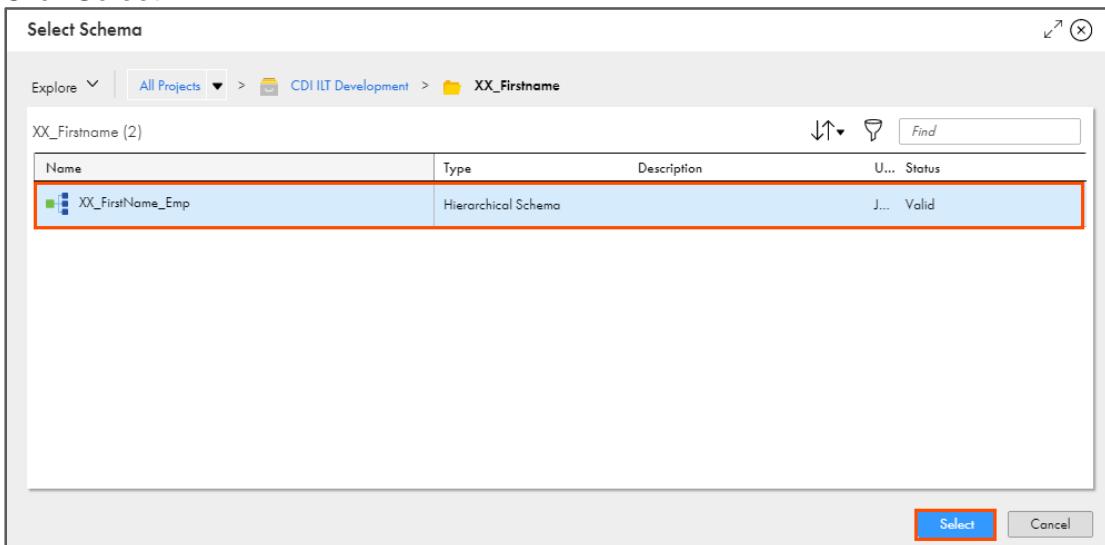
31. To select the schema, click **Select**.



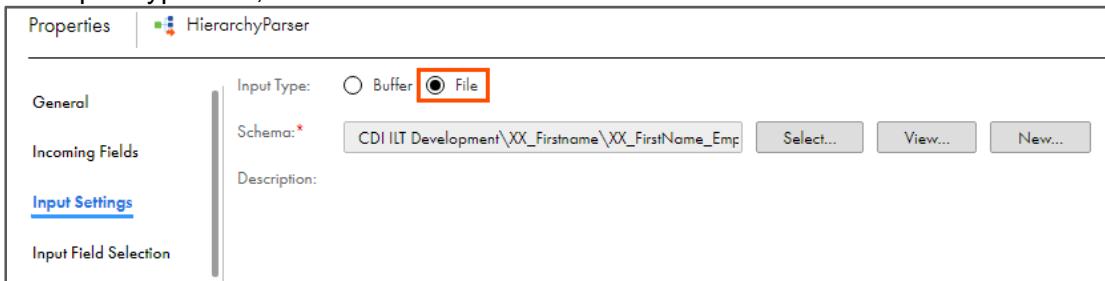
Note: The Select Schema window appears.

32. Navigate to **CDI ILT Development > XX-Firstname** and select **XX_FirstName_Emp**.

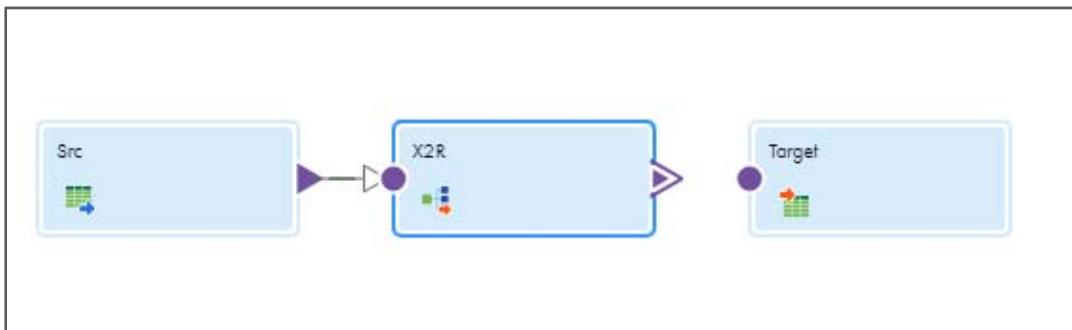
33. Click **Select**.



34. For Input Type field, select **File**.



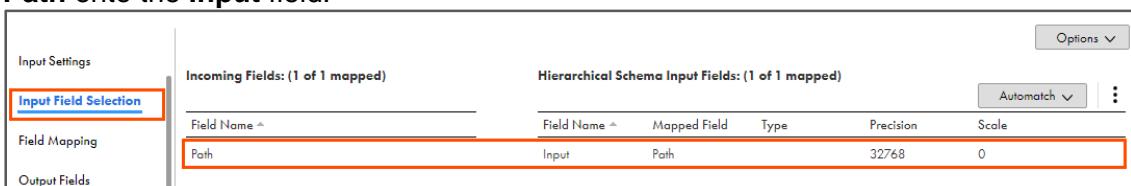
35. Link **Src** to **X2R**.



36. Select **X2R** on the mapping canvas.

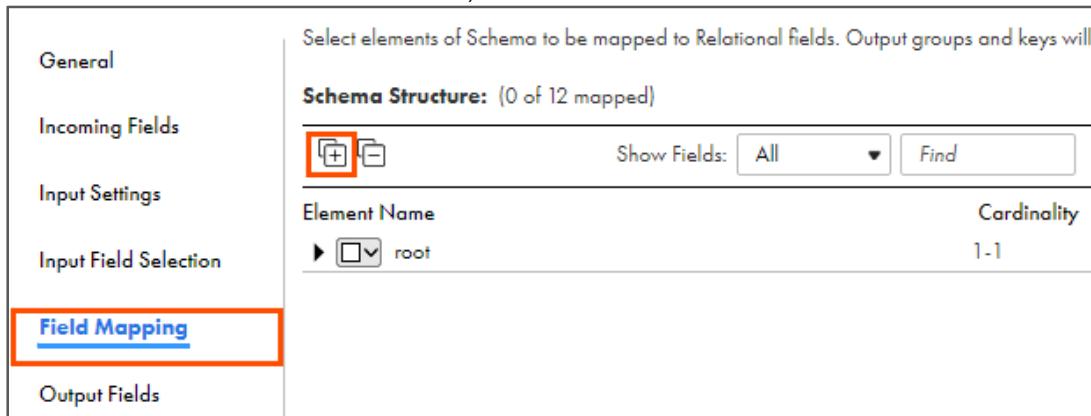
37. From the properties pane, click **Input Field Selection**.

38. To map the Incoming field with the Hierarchical Schema Input field, drag and drop the **Path** onto the **Input** field.



39. From the properties pane, click **Field Mapping**.

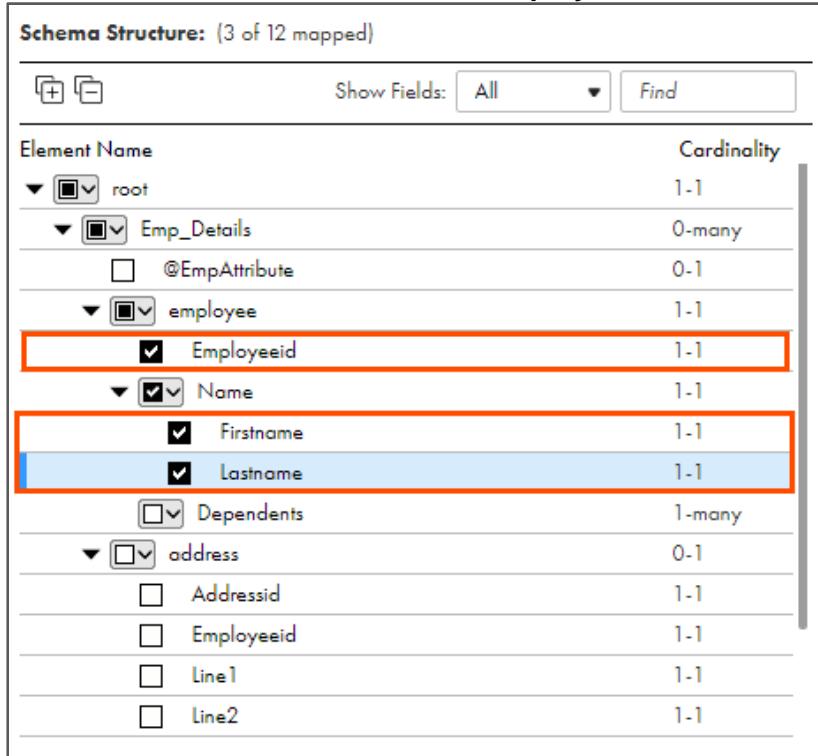
40. From the Schema Structure section, click .



The screenshot shows the Schema Structure section with the following interface elements:

- General**: A tab on the left.
- Incoming Fields**: A tab on the left.
- Input Settings**: A tab on the left.
- Input Field Selection**: A tab on the left.
- Field Mapping**: A tab on the left, highlighted with an orange border.
- Output Fields**: A tab on the left.
- Schema Structure: (0 of 12 mapped)**: A header at the top of the main area.
- Show Fields: All**: A dropdown menu.
- Find**: A search button.
- Element Name**: A column header.
- Cardinality**: A column header.
- root**: An entry under Element Name with a cardinality of 1-1.

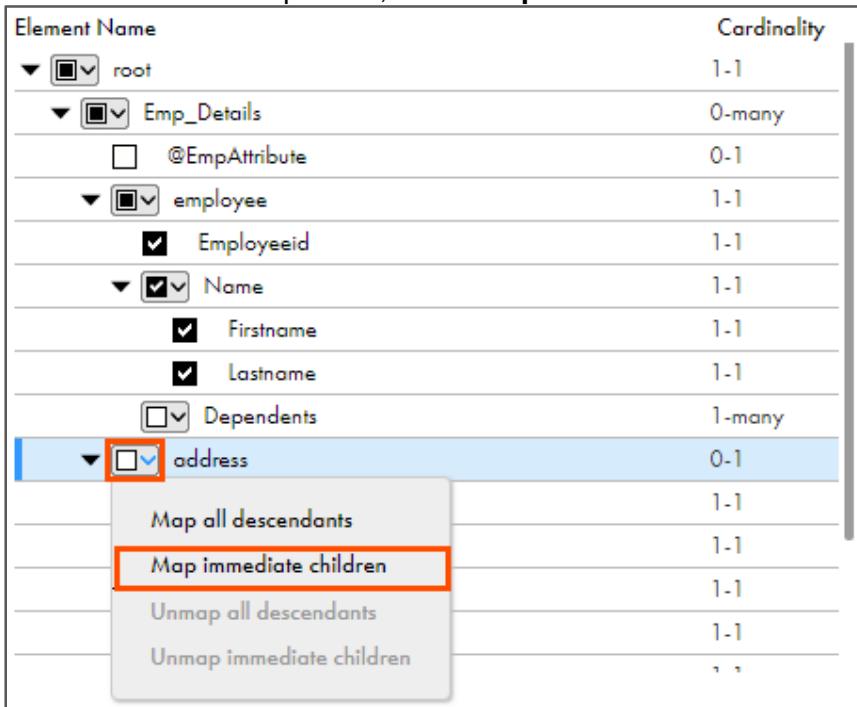
41. From the Element Name lists, select **Employeeid**, **Firstname**, and **Lastname**.



The screenshot shows the Schema Structure section with the following interface elements:

- Schema Structure: (3 of 12 mapped)**: A header at the top of the main area.
- Show Fields: All**: A dropdown menu.
- Find**: A search button.
- Element Name**: A column header.
- Cardinality**: A column header.
- root**: An entry with a cardinality of 1-1.
- Emp_Details**: An entry with a cardinality of 0-many.
 - @EmpAttribute**: An entry with a cardinality of 0-1.
- employee**: An entry with a cardinality of 1-1.
 - Employeeid**: An entry with a cardinality of 1-1, highlighted with an orange border.
 - Name**: A child node of employee.
 - Firstname**: An entry with a cardinality of 1-1, highlighted with an orange border.
 - Lastname**: An entry with a cardinality of 1-1, highlighted with a blue background.
 - Dependents**: An entry with a cardinality of 1-many.
- address**: An entry with a cardinality of 0-1.
 - Addressid**: An entry with a cardinality of 1-1.
 - Employeeid**: An entry with a cardinality of 1-1.
 - Line1**: An entry with a cardinality of 1-1.
 - Line2**: An entry with a cardinality of 1-1.

42. From the address drop-down, select **Map immediate children**.

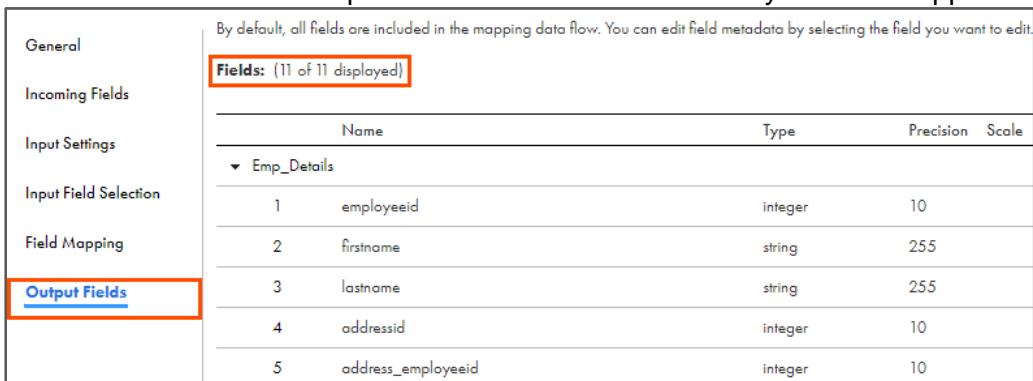


Element Name	Cardinality
root	1-1
Emp_Details	0-many
@EmpAttribute	0-1
employee	1-1
Employeeid	1-1
Name	1-1
Firstname	1-1
Lastname	1-1
Dependents	1-many
address	0-1
Map all descendants	1-1
Map immediate children	1-1
Unmap all descendants	1-1
Unmap immediate children	1-1

Note: Observe that the Relational table Fields are populated with the automatically generated fields.

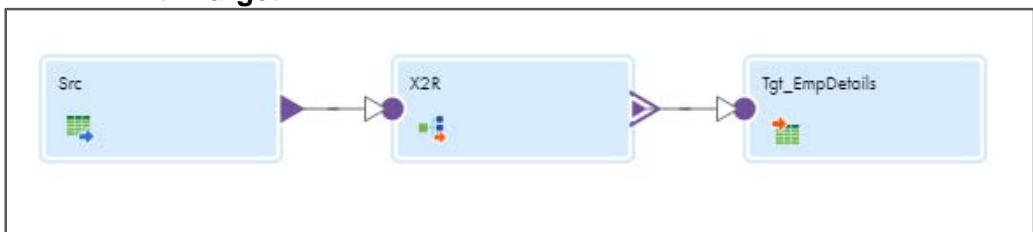
43. From the properties pane, click **Output Fields**.

44. Observe that 11 fields are present based on the fields that you have mapped.



By default, all fields are included in the mapping data flow. You can edit field metadata by selecting the field you want to edit.				
Fields: (11 of 11 displayed)				
	Name	Type	Precision	Scale
▼ Emp_Details	1 employeeid	integer	10	
	2 firstname	string	255	
	3 lastname	string	255	
	4 addressid	integer	10	
	5 address_employeeid	integer	10	

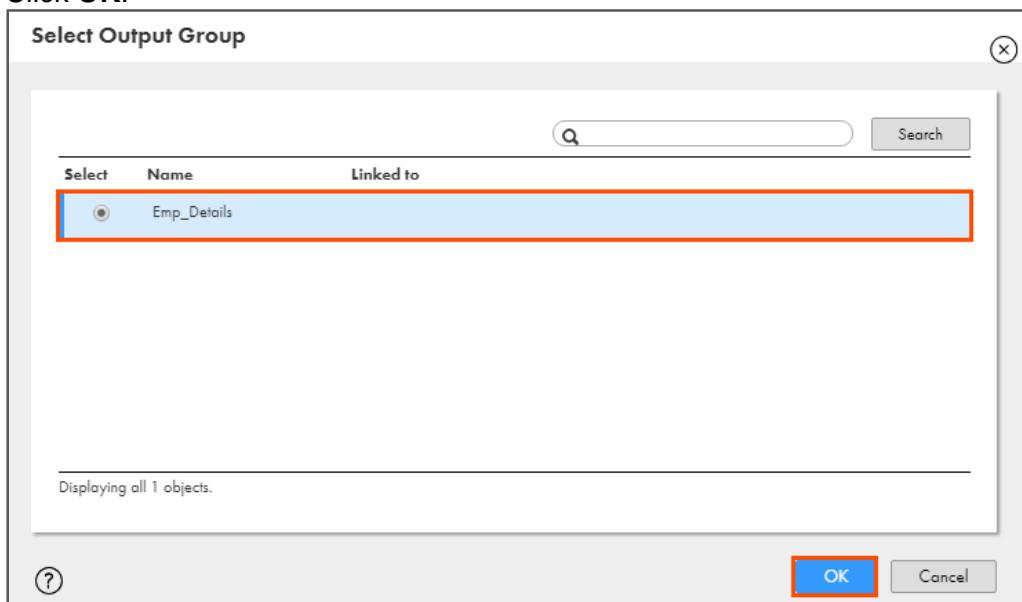
45. Link X2R with Target.



Note: The Select Output Group window appears.

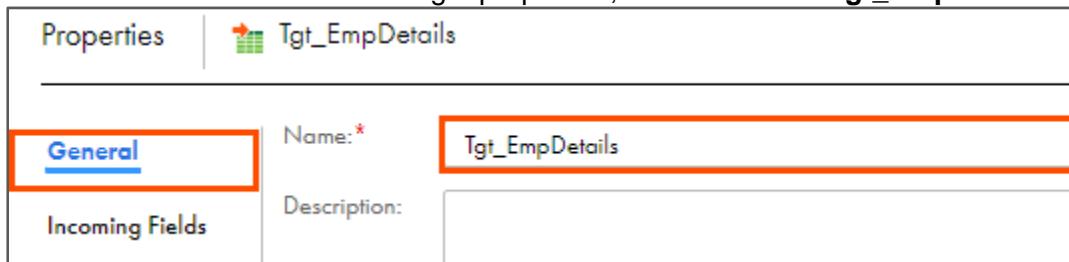
46. Select **Emp_Details**.

47. Click **OK**.



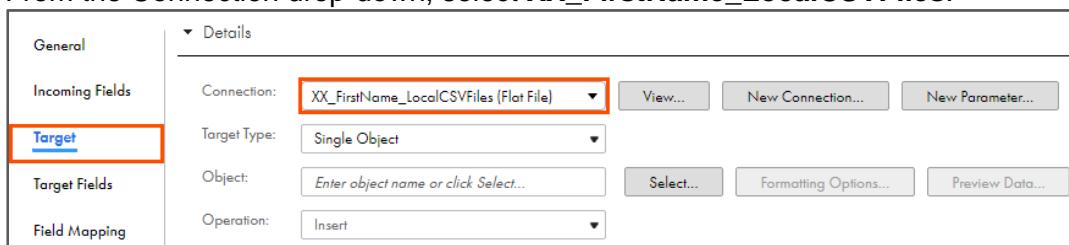
48. To configure the target, from the mapping canvas, click the **Target** transformation.

49. In the **General** section of the Target properties, enter Name as **Tgt_EmpDetails**.



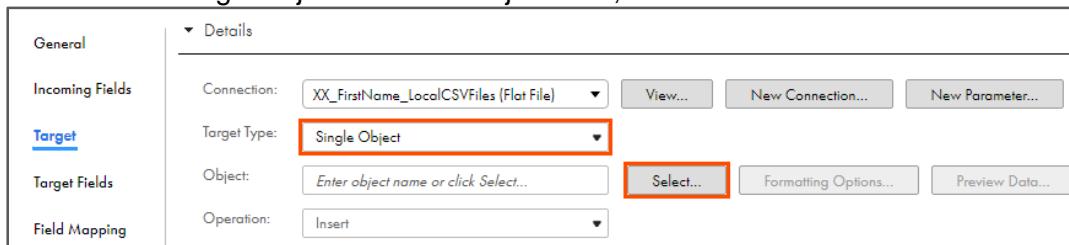
50. From the properties pane, click **Target**.

51. From the Connection drop-down, select **XX_FirstName_LocalCSVFiles**.



52. Retain Target Type as **Single Object**.

53. To select the target object from the Object field, click **Select**.

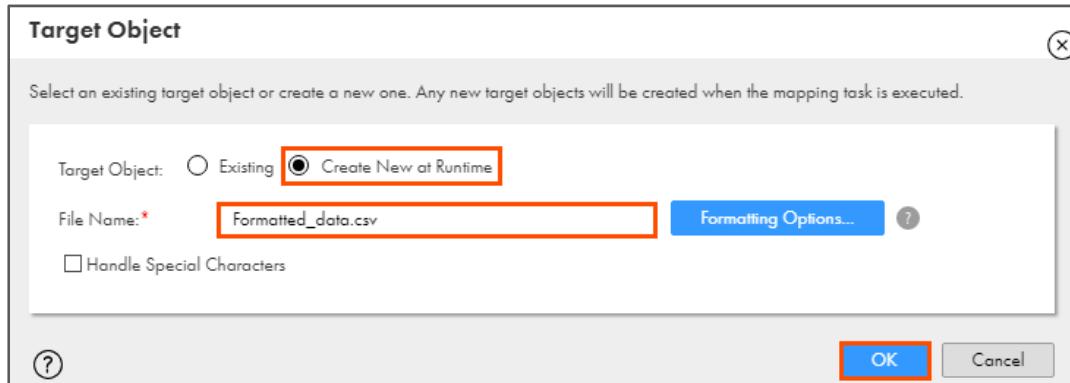


Note: The Target Object window appears.

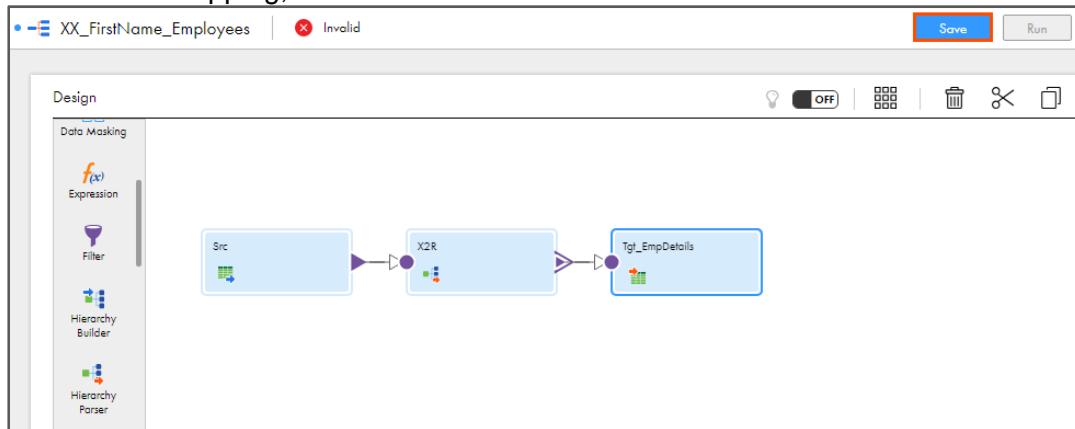
54. On the Target Object window, select **Create New at Runtime**.

55. Enter **Formatted_data.csv** as File Name.

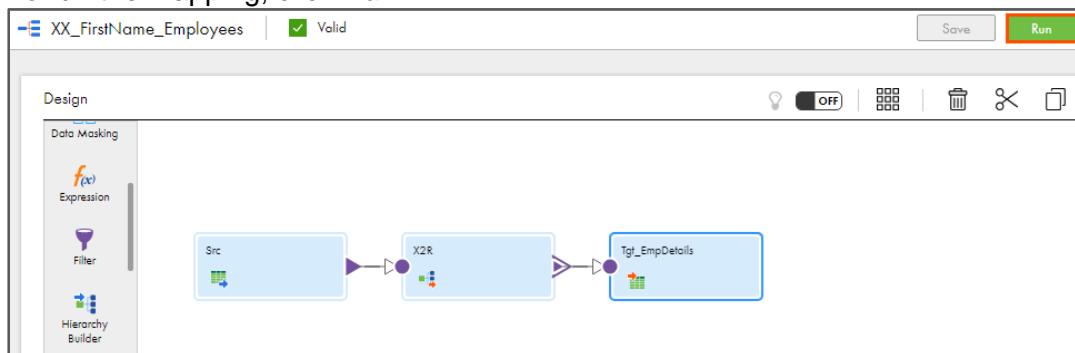
56. Click **OK**.



57. To save the mapping, click **Save**.



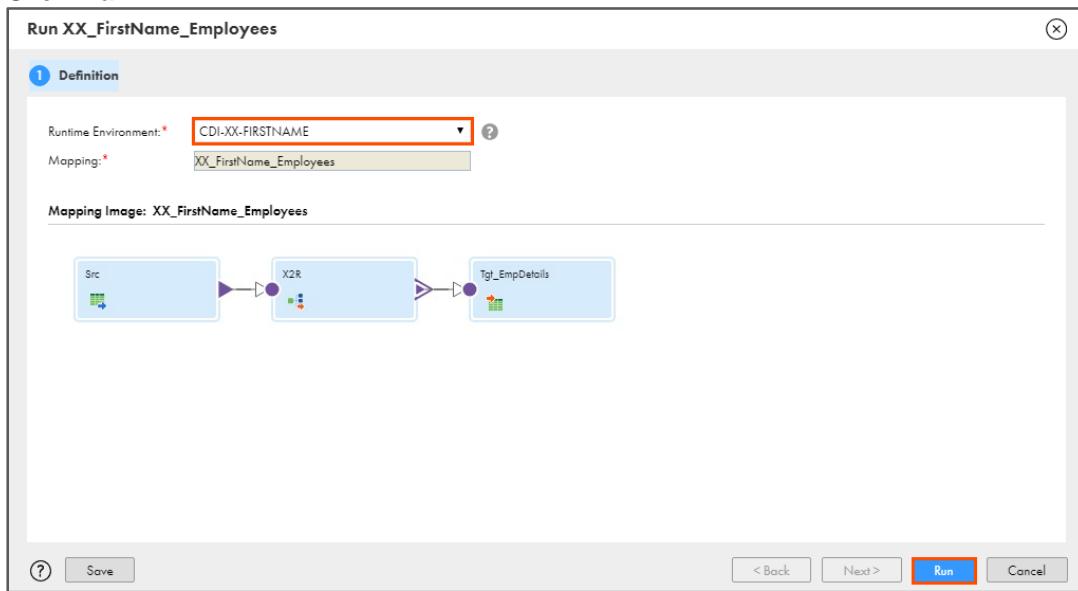
58. To run the mapping, click **Run**.



Note: The Run mapping window appears.

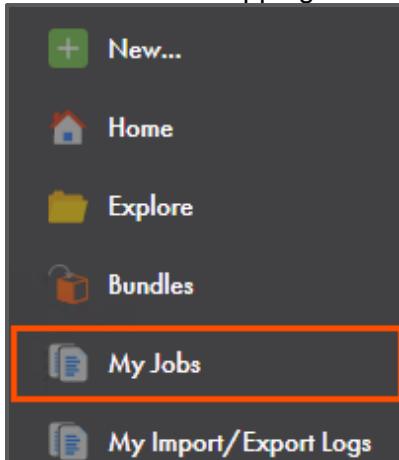
59. From the Runtime Environment drop-down, select your secure agent group.

60. Click Run.



Monitor Status:

61. To monitor the mapping status, from the navigation pane, click **My Jobs**.

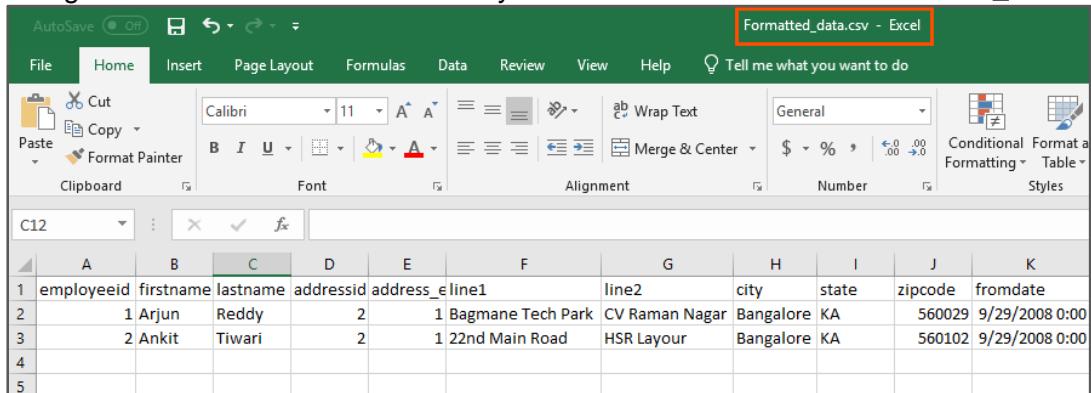


62. When the task completes, the status changes to **Success**.

Jobs (1 of 28) <input checked="" type="checkbox"/> Up to date		Updated 1:28:39 PM PDT    <input type="button" value="Find"/>			
Asset Name: XX_FirstName_Employ...   Add Field 					
Instance Name	Subtasks	Start Time	End Time	Rows Processed	State
XX_FirstName_Employees-1		Aug 1, 2019, ...	Aug 1, 2019, ...	2	 Success

Verify Results:

63. Navigate to **C:\IICSLabFiles** and verify that 2 rows are written to **Formatted_data.csv**.



	A	B	C	D	E	F	G	H	I	J	K
1	employeeid	firstname	lastname	addressid	address_e	line1	line2	city	state	zipcode	fromdate
2	1	Arjun	Reddy	2	1	Bagmane Tech Park	CV Raman Nagar	Bangalore	KA	560029	9/29/2008 0:00
3	2	Ankit	Tiwari	2	1	22nd Main Road	HSR Layout	Bangalore	KA	560102	9/29/2008 0:00
4											
5											

This concludes the lab.

Module 13: Hierarchical Connectivity

Lab 13-4: Creating a Mapping using Hierarchy Builder Transformation

Overview:

Hierarchy Builder Transformation converts input data into a hierarchical output using a schema file.

In this lab, you will create a mapping using Hierarchy Builder transformation and convert multiple flat files into an xml file.

Objective:

- Import a hierarchical schema
- Create a mapping using Hierarchy Builder transformation

Duration:

20 minutes

Tasks:**Copy Source Files:**

1. Copy the following files from the CDI Lab Prep Files folder available on your desktop and paste it in your flat file directory (C:\IICSLabFiles):

Files
root.csv
quiz.csv
question_options.csv
questions.csv
quiz_schema.json

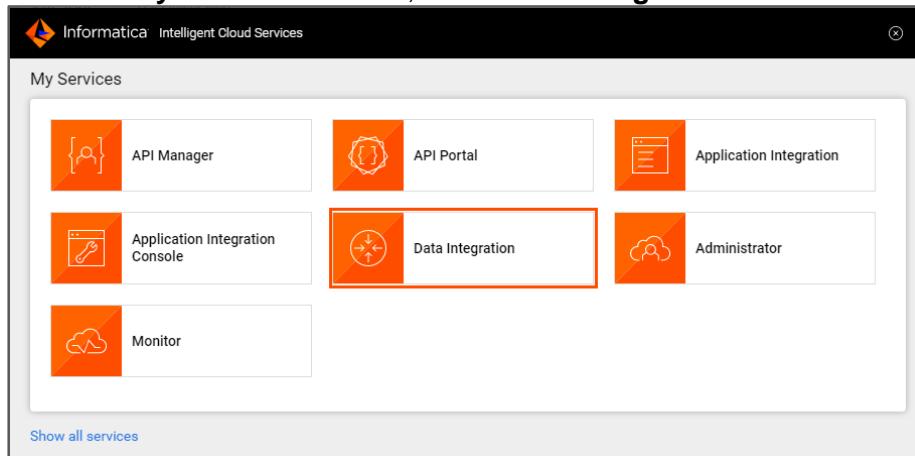
Create Hierarchical Schema:

2. Open the IICS Login page from the Bookmarks bar.

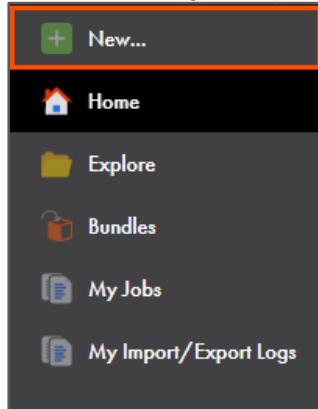
Note: Follow this step if you have navigated away from the login page.

3. Enter the login credentials provided by the Instructor and click **Log In**.

4. From the **My Services** window, select **Data Integration**.

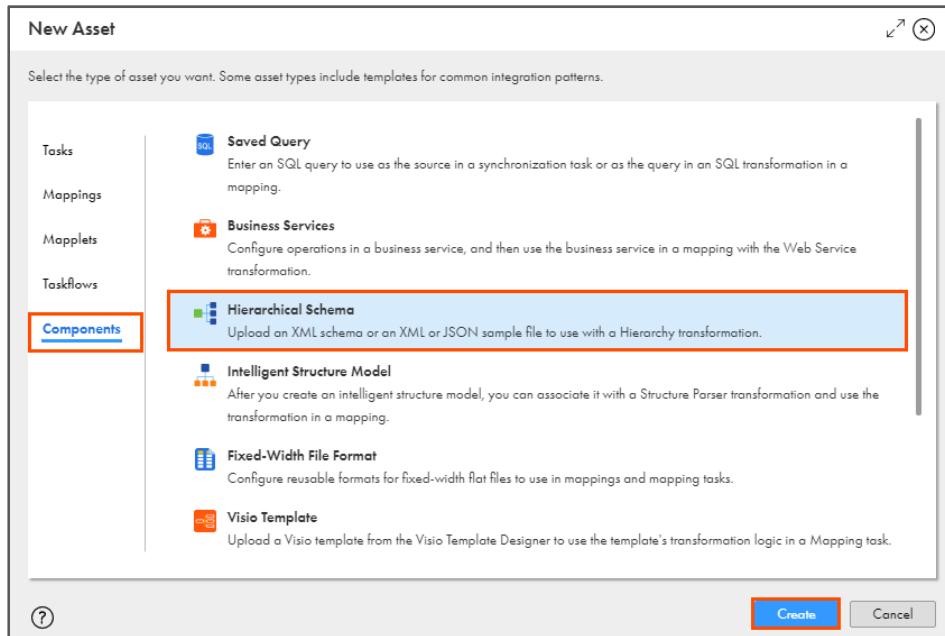


5. From the navigation pane, select **New**.



6. From the New Asset window, click the **Components** tab.

7. Select **Hierarchical Schema** and click **Create**.



Note: The Hierarchical Schema page appears.

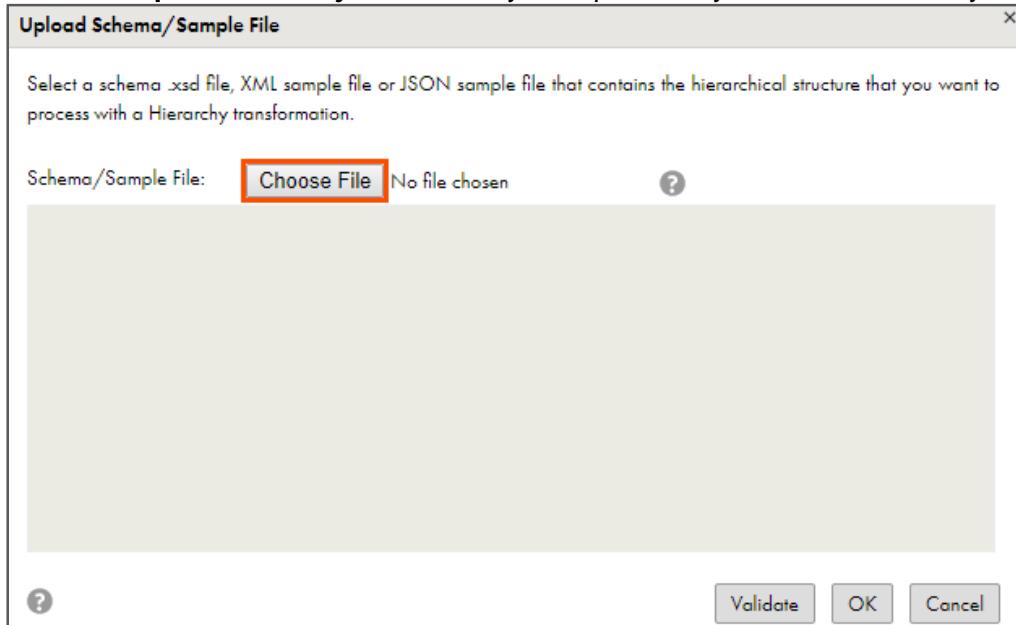
8. In the Name field, enter **XX_FirstName_QuizSchema**.
Note: Here, XX refers to your initials, and FIRSTNAME refers to your First Name.
9. To upload the json file containing the schema, click **Upload**.

Hierarchical Schema Details

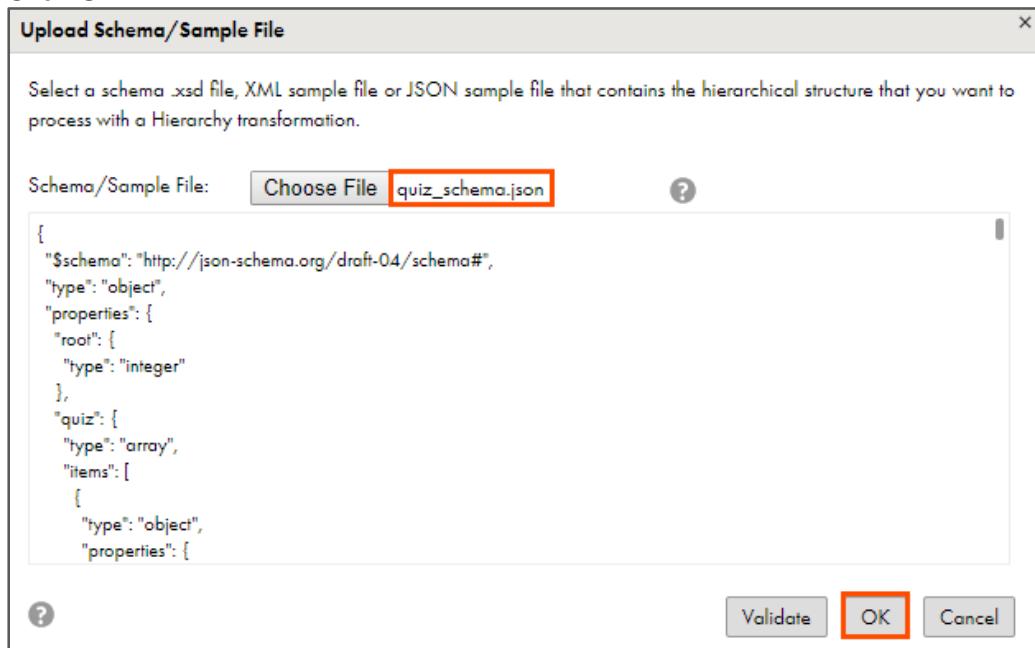
Name:*	<input type="text" value="XX_FirstName_QuizSchema"/>
Location	<input type="text" value="CDI ILT Development\XX-Firstname"/> <input type="button" value="Browse"/>
Description:	<input type="text"/>
Schema/Sample File:*	<input type="text"/> <input type="button" value="Upload..."/>

Note: The Upload Schema/Sample File window appears.

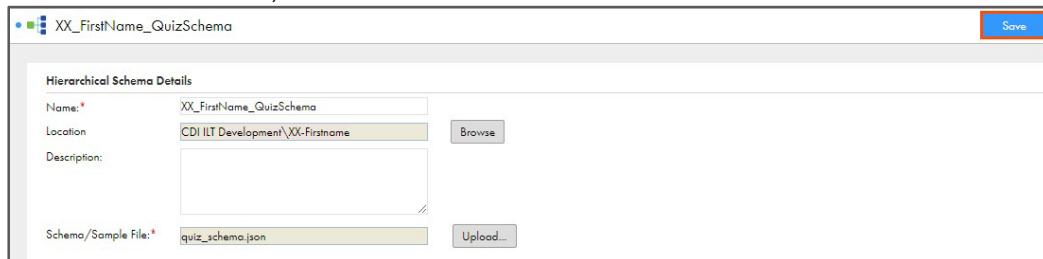
10. To navigate to the json file, click **Choose File**.
11. Select the **quiz_schema.json** file that you copied into your flat file directory.



12. Click **OK**.

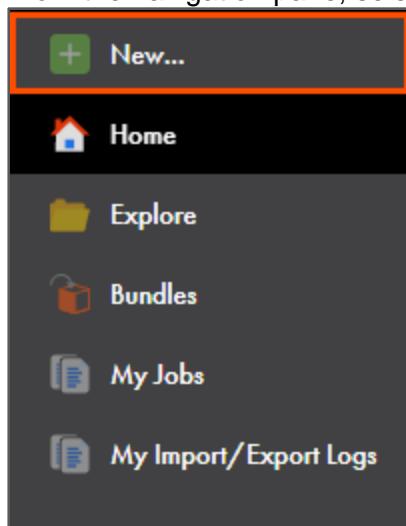


13. To save the schema, click **Save**.



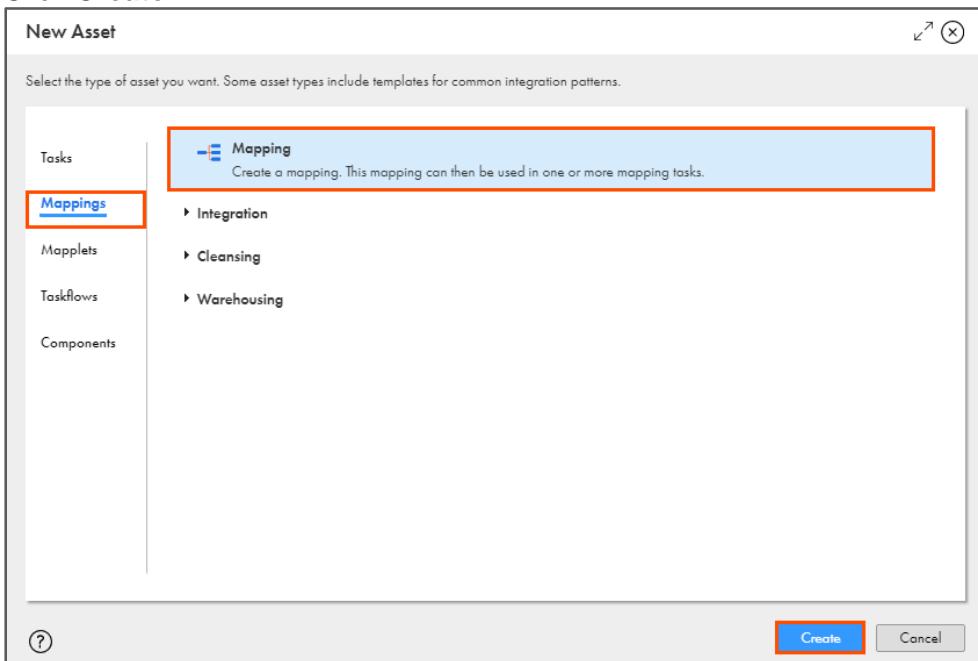
Create Mapping:

14. From the navigation pane, select **New**.



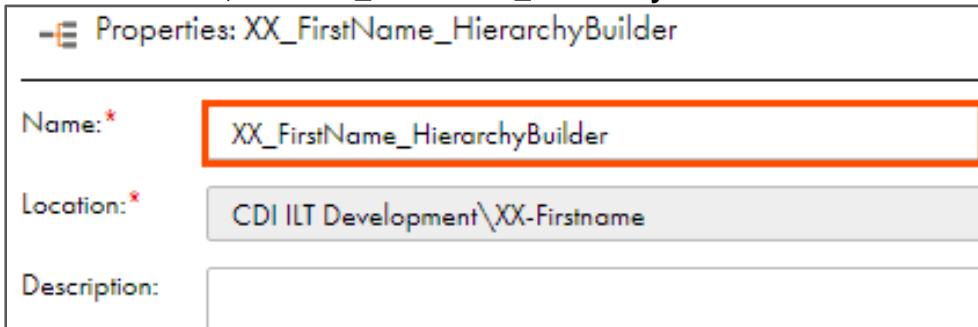
15. From the New Asset window, click the **Mappings** tab, and select **Mapping**.

16. Click **Create**.



Note: The Mapping page appears.

17. In the Name field, enter **XX_FirstName_HierarchyBuilder**.

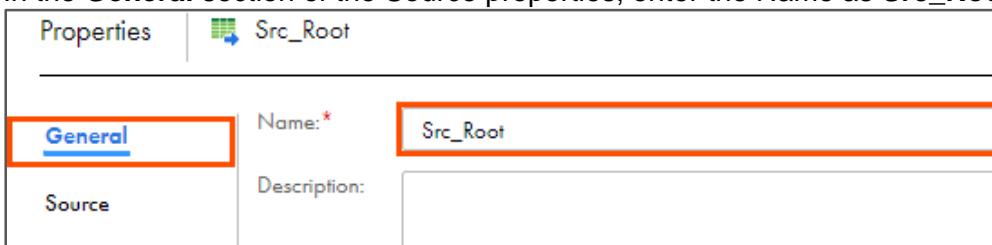


Properties: XX_FirstName_HierarchyBuilder	
Name:*	XX_FirstName_HierarchyBuilder
Location:	CDI ILT Development\XX-Firstname
Description:	

Note: Here, XX refers to your initials, and FIRSTNAME refers to your First Name.

18. To configure the source, from the mapping canvas, click the **Source** transformation.

19. In the **General** section of the Source properties, enter the Name as **Src_Root**.



Properties	
General	Name:*
Source	Description:

20. From the properties pane, click **Source**.

21. From the Connection drop-down, select **XX_FirstName_LocalCSVFiles**.

22. Retain Source Type as **Single Object**.

General	Source Connection: XX_FirstName_LocalCSVFiles (Flat File) <input type="button" value="View..."/> <input type="button" value="New Connection..."/> <input type="button" value="New Parameter..."/> Fields Partitions		
	Details Source Type: Single Object <input type="button" value="Select..."/> <input type="button" value="Formatting Options..."/> <input type="button" value="Preview Data..."/>		
	Object: Enter object name or click Select... <input type="button" value="Select..."/> <input type="button" value="Formatting Options..."/> <input type="button" value="Preview Data..."/>		

23. To select the source object from the Object field, click **Select**.

General	Source Connection: XX_FirstName_LocalCSVFiles (Flat File) <input type="button" value="View..."/> <input type="button" value="New Connection..."/> <input type="button" value="New Parameter..."/> Fields Partitions		
	Details Source Type: Single Object <input type="button" value="Select..."/> <input type="button" value="Formatting Options..."/> <input type="button" value="Preview Data..."/>		
	Object: Enter object name or click Select... <input type="button" value="Select..."/> <input type="button" value="Formatting Options..."/> <input type="button" value="Preview Data..."/>		

Note: The Select Source Object window appears.

24. From the list, select **root.csv**.

25. Click **OK**.

Select Source Object

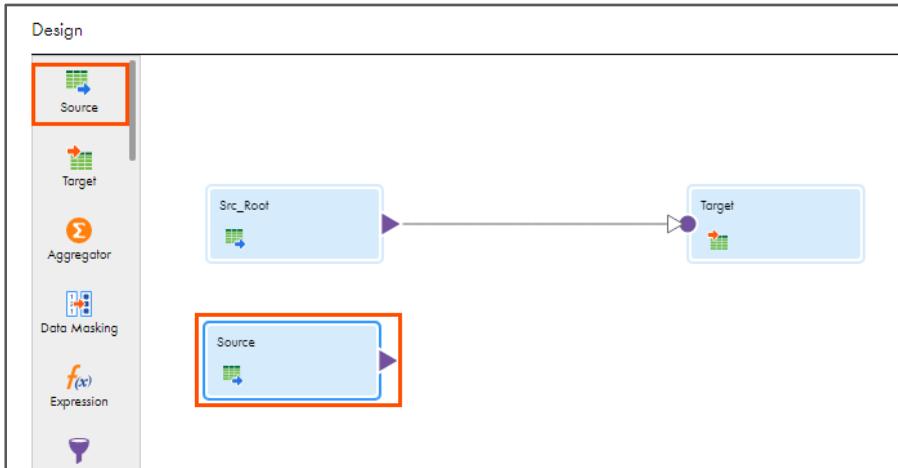
Select a source object, then click OK. You can also search for a source object.

XX_FirstName_LocalCSVFiles			
root.csv		Name	Search
Select	Name	Last Modified	Size
<input type="radio"/>	quiz.csv	2019-03-13 07:24:00	56
<input type="radio"/>	quiz_schema.json	2019-03-13 07:24:00	1050
<input checked="" type="radio"/>	root.csv	2019-03-13 07:24:00	28
<input type="radio"/>	StockTicker.txt	2019-03-13 07:24:00	52
<input type="radio"/>	SuccessResponse.csv	2019-03-24 05:45:50	49
<input type="radio"/>	Swagger_api_openweat...	2019-03-13 07:24:00	4114

Displaying all 46 objects.

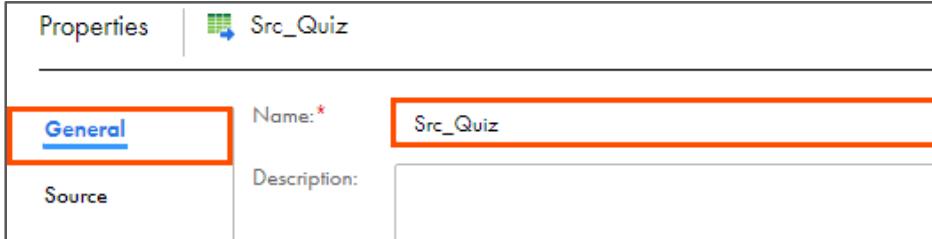
Add Source Transformation:

26. From the list of available transformations, drag and drop **Source** transformation on to the mapping canvas.



27. To configure the source, from the mapping canvas, click the newly added **Source** transformation.

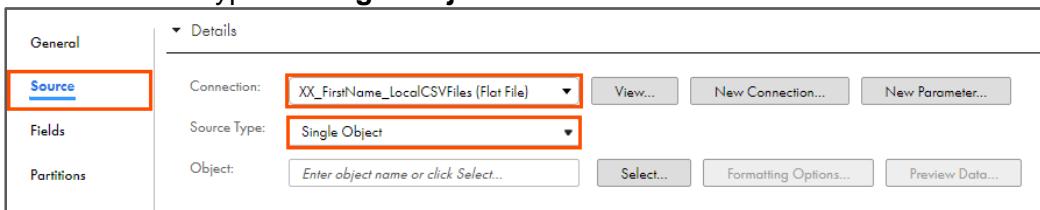
28. In the **General** section of the Source properties, enter the Name as **Src_Quiz**.



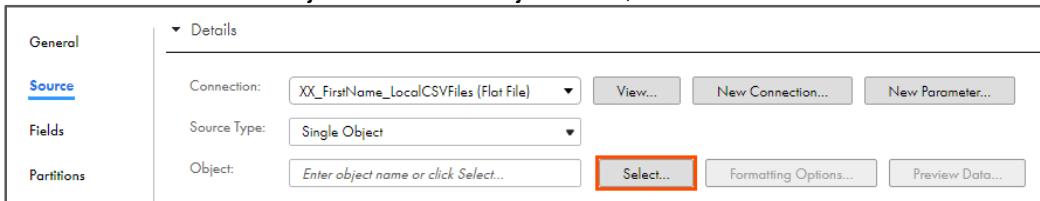
29. From the properties pane, click **Source**.

30. From the Connection drop-down, select **XX_FirstName_LocalCSVFiles**.

31. Retain Source Type as **Single Object**.



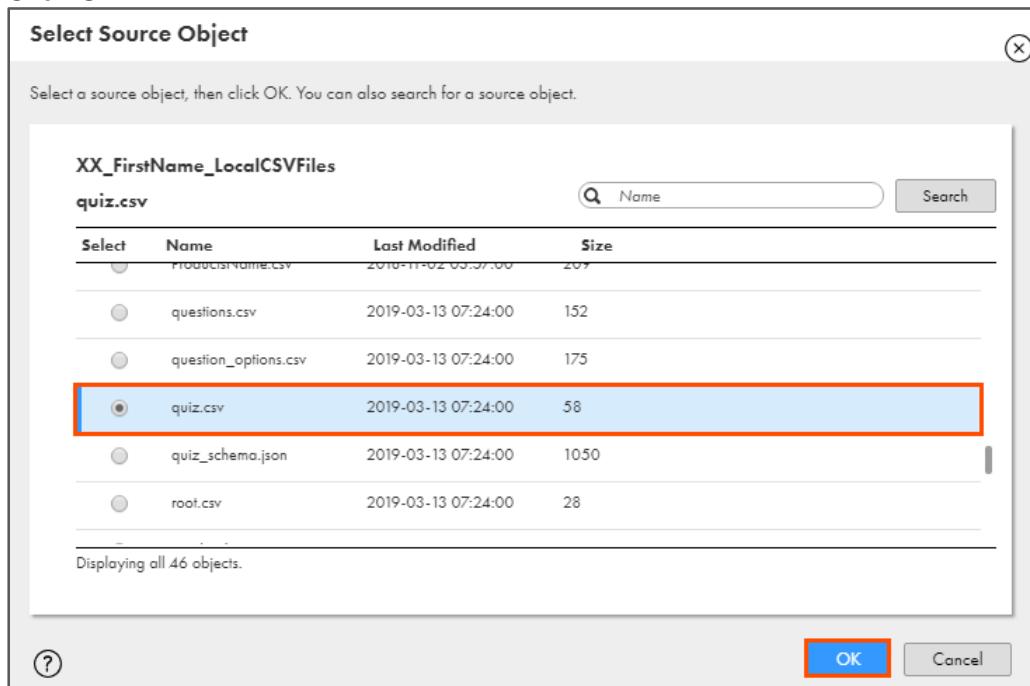
32. To select the source object from the Object field, click **Select**.



Note: The Select Source Object window appears.

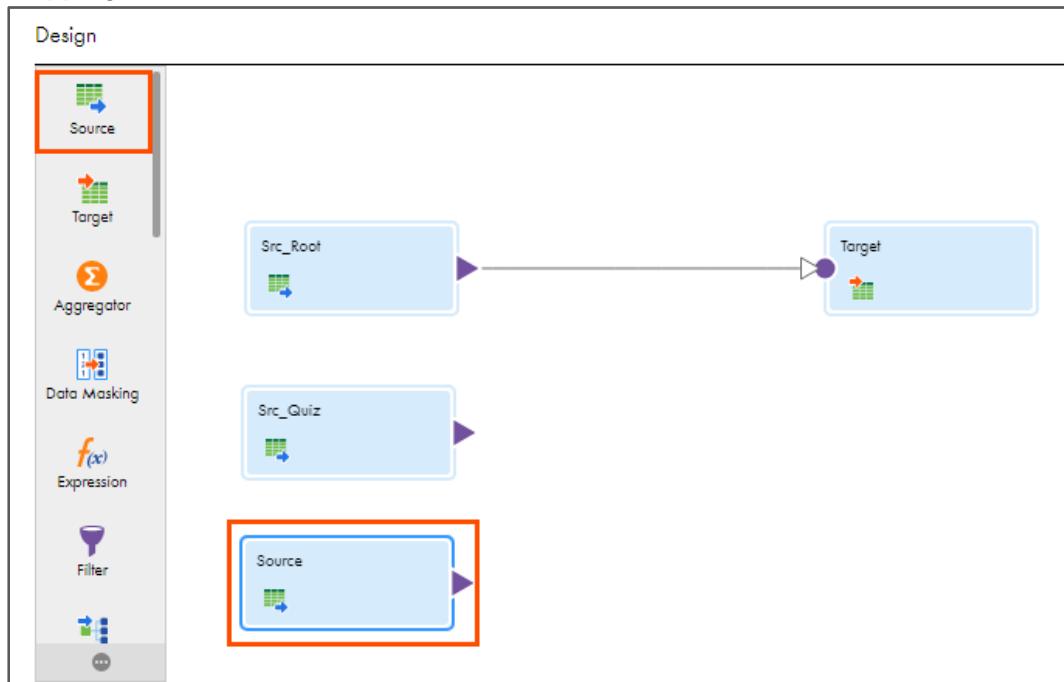
33. From the list, select **quiz.csv**.

34. Click OK.



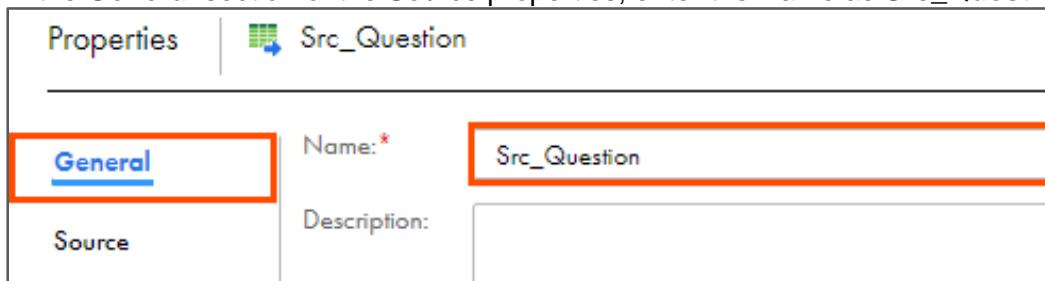
Add Source Transformation:

35. From the list of available transformations, drag and drop **Source** transformation on the mapping canvas.



36. To configure the source, from the mapping canvas, click the newly added **Source** transformation.

37. In the **General** section of the Source properties, enter the Name as **Src_Question**.

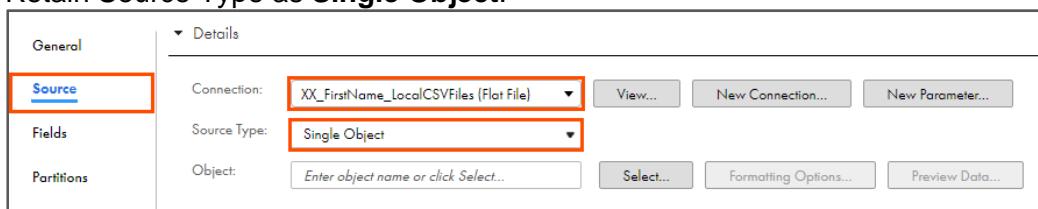


Properties	 Src_Question
General Name: * Src_Question Source Description:	

38. From the properties pane, click **Source**.

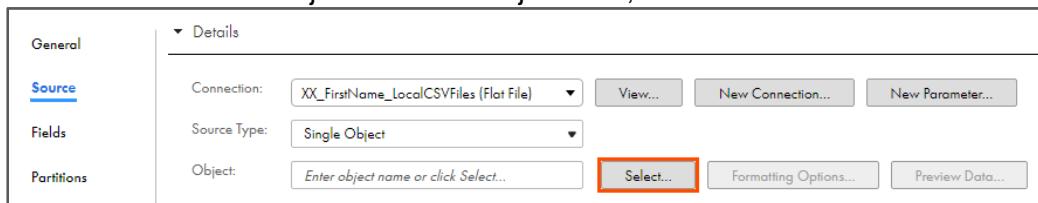
39. From the Connection drop-down, select **XX_FirstName_LocalCSVFiles**.

40. Retain Source Type as **Single Object**.



General	Source Connection: XX_FirstName_LocalCSVFiles (Flat File) Fields Source Type: Single Object Partitions Object: Enter object name or click Select...	
---------	--	--

41. To select the source object from the Object field, click **Select**.

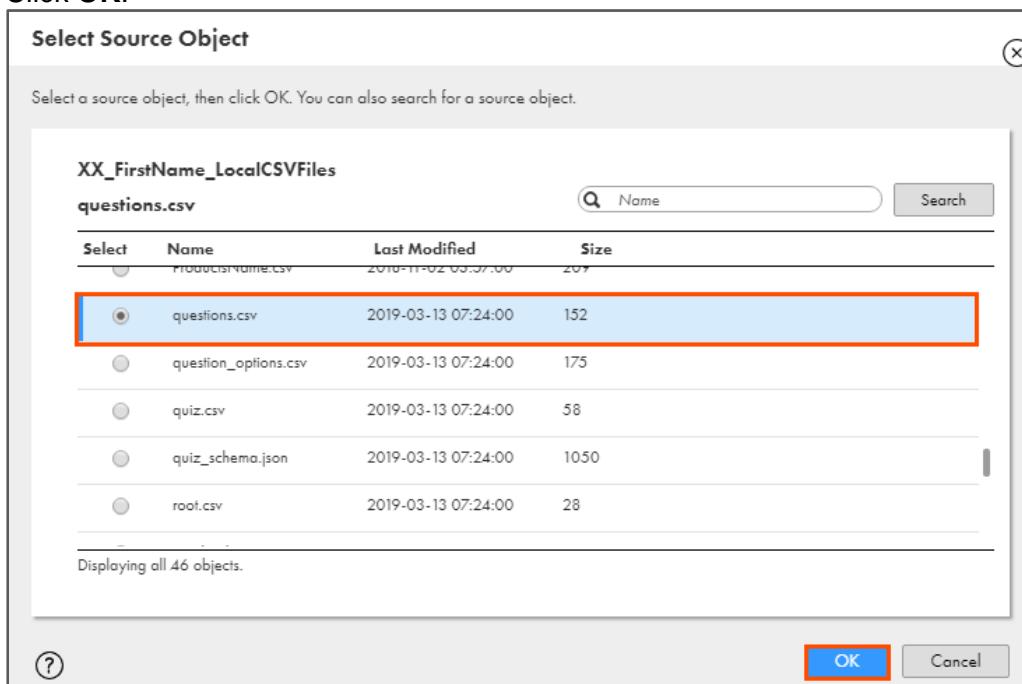


General	Source Connection: XX_FirstName_LocalCSVFiles (Flat File) Fields Source Type: Single Object Partitions Object: Enter object name or click Select... Select...	
---------	---	--

Note: The Select Source Object window appears.

42. From the list, select **questions.csv**.

43. Click **OK**.



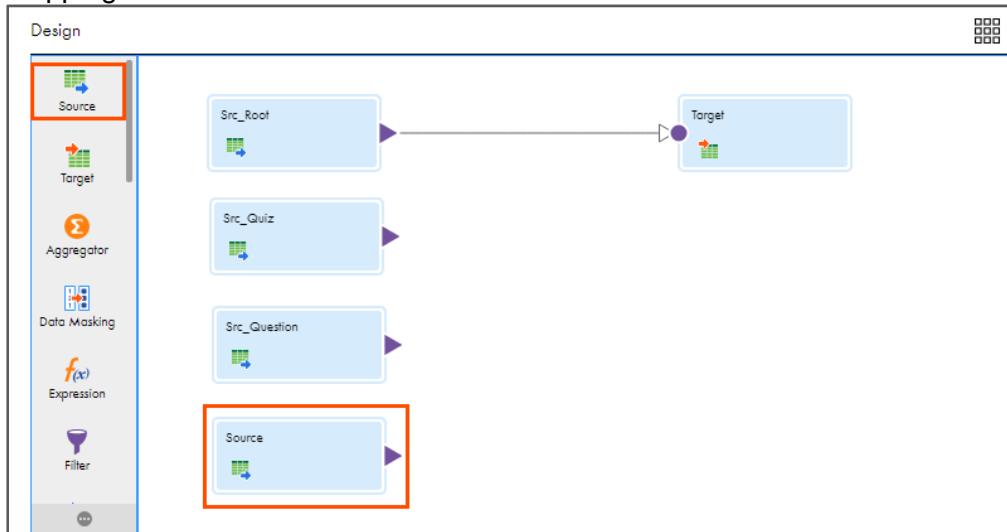
XX_FirstName_LocalCSVFiles			
questions.csv			
Select	Name	Last Modified	Size
<input type="radio"/>	questions.csv	2019-03-13 07:24:00	152
<input type="radio"/>	question_options.csv	2019-03-13 07:24:00	175
<input type="radio"/>	quiz.csv	2019-03-13 07:24:00	58
<input type="radio"/>	quiz_schema.json	2019-03-13 07:24:00	1050
<input type="radio"/>	root.csv	2019-03-13 07:24:00	28

Displaying all 46 objects.

(?) **OK** Cancel

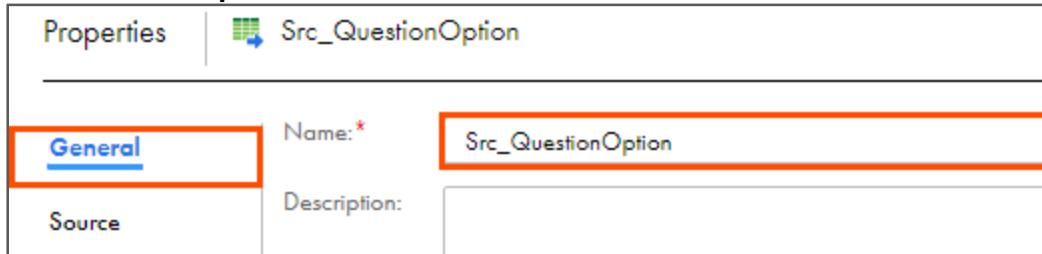
Add Source Transformation:

44. From the list of available transformations, drag and drop **Source** transformation on the mapping canvas.



45. To configure the source, from the mapping canvas, click the newly added **Source** transformation.

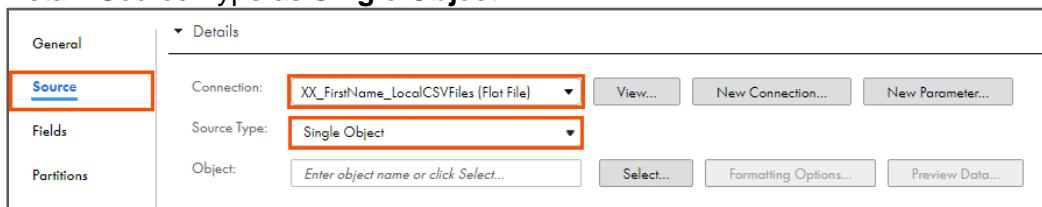
46. In the **General** section of the Source properties, enter the Name as **Src_QuestionOption**.



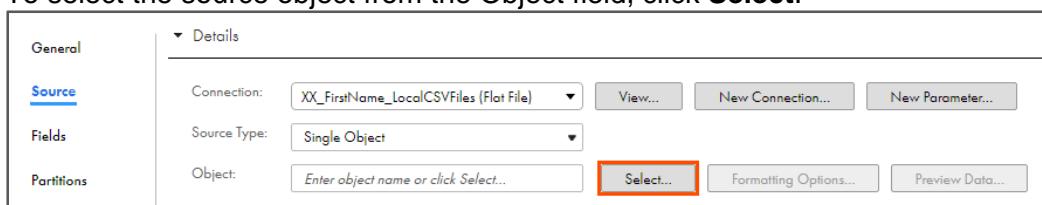
47. From the properties pane, click **Source**.

48. From the Connection drop-down, select **XX_FirstName_LocalCSVFiles**.

49. Retain Source Type as **Single Object**.



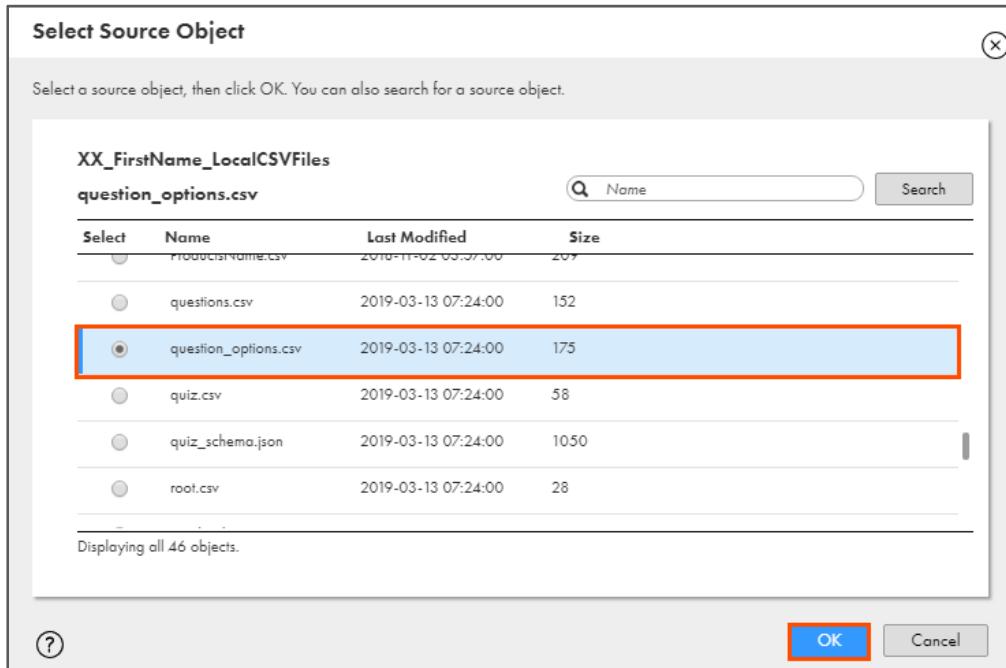
50. To select the source object from the Object field, click **Select**.



Note: The Select Source Object window appears.

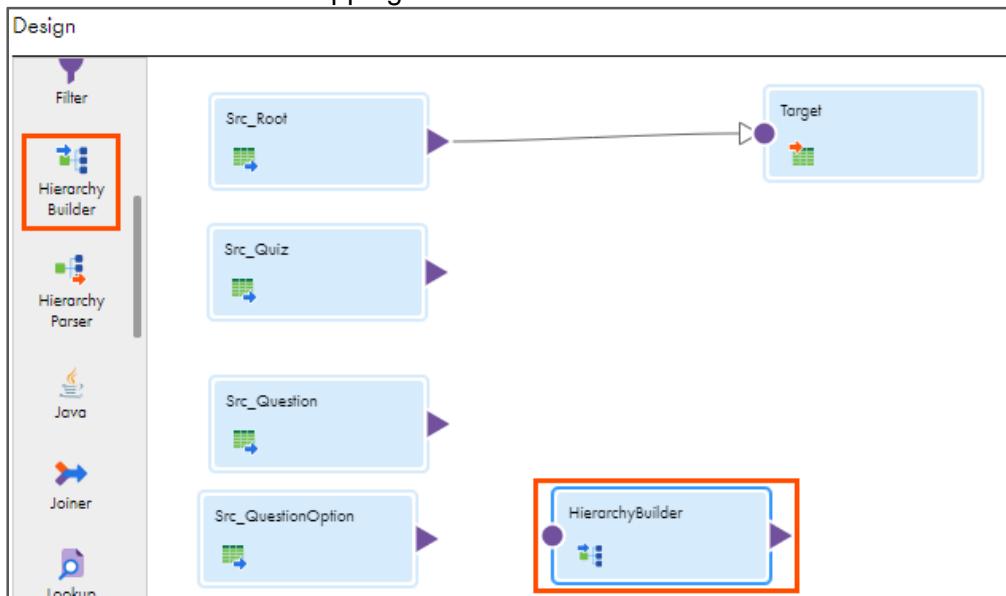
51. From the list, select **question_options.csv**.

52. Click **OK**.



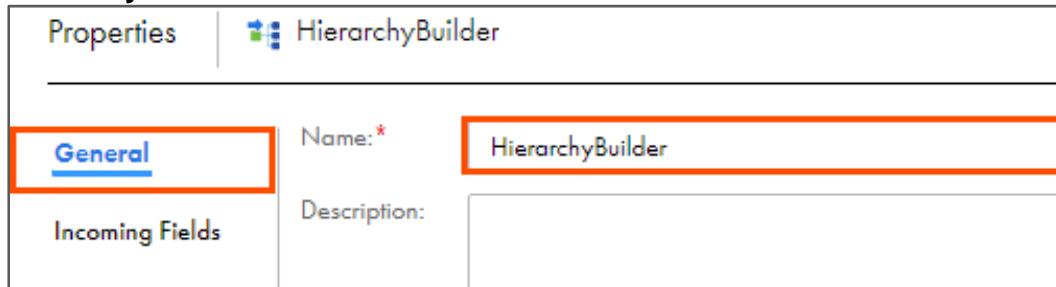
Add Hierarchy Builder Transformation:

53. From the list of available transformations, drag, and drop **Hierarchy Builder** transformation on the mapping canvas.



54. Select the **Hierarchy Builder** transformation on the mapping canvas.

55. In the General section of the Hierarchy Builder properties, retain the Name as **HierarchyBuilder**.



56. From the properties pane, click **Output Settings**.

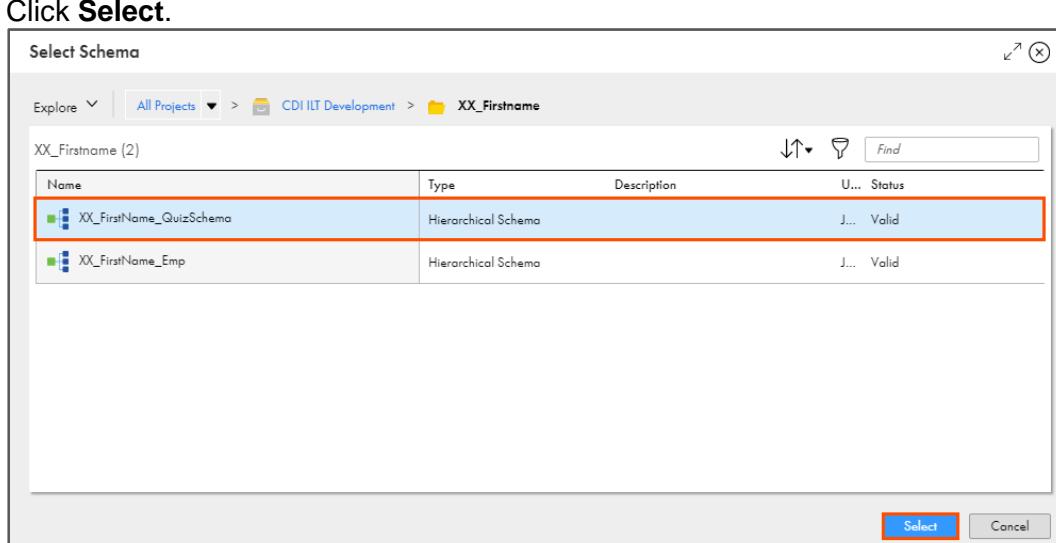
57. To select the Schema, click **Select**.



58. Navigate to **CDI ILT Development/XX-Firstname** and select **XX_FirstName_QuizSchema**.

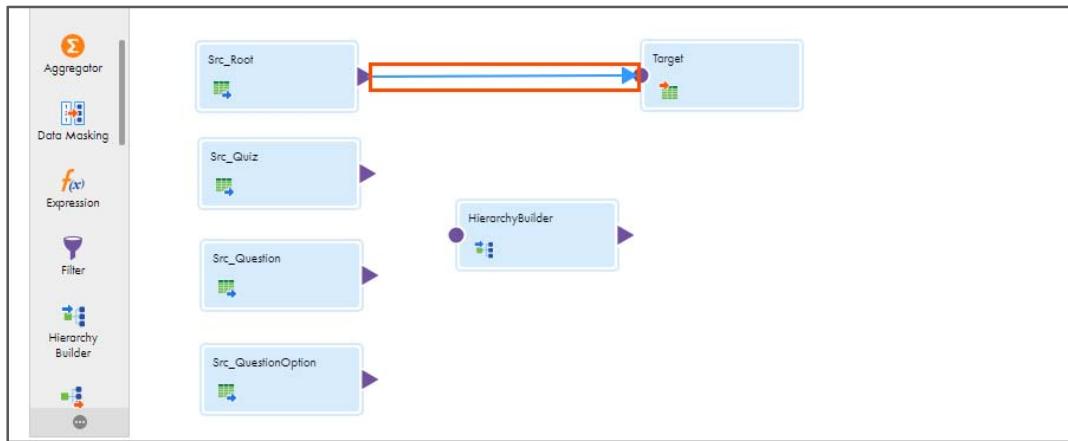
Note: Here, XX refers to your initials, and FIRSTNAME refers to your First Name.

59. Click **Select**.

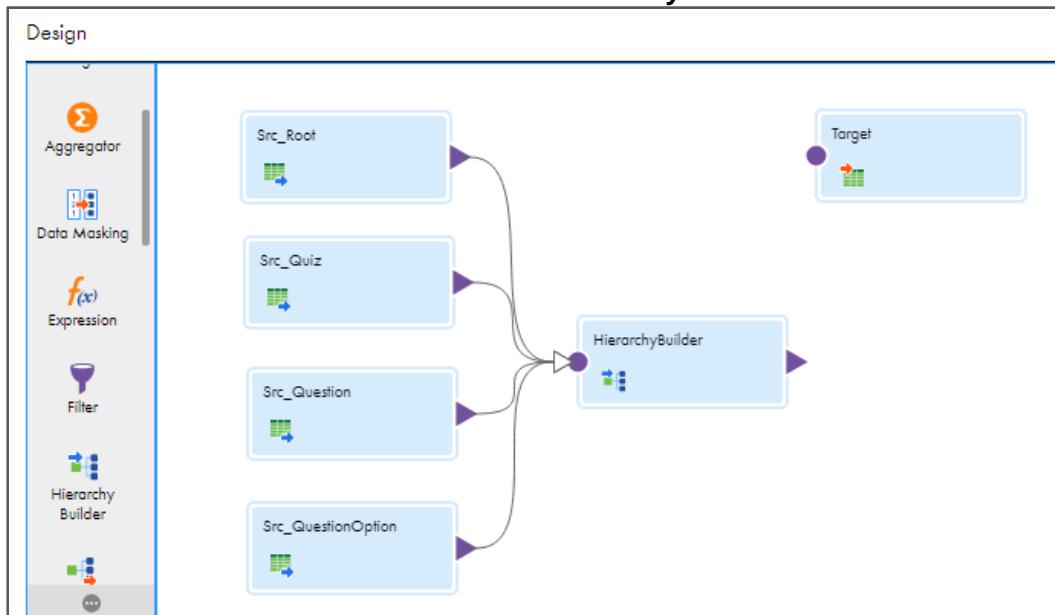


60. To delete the link between **Src_Root** and **Target**, click on the link.

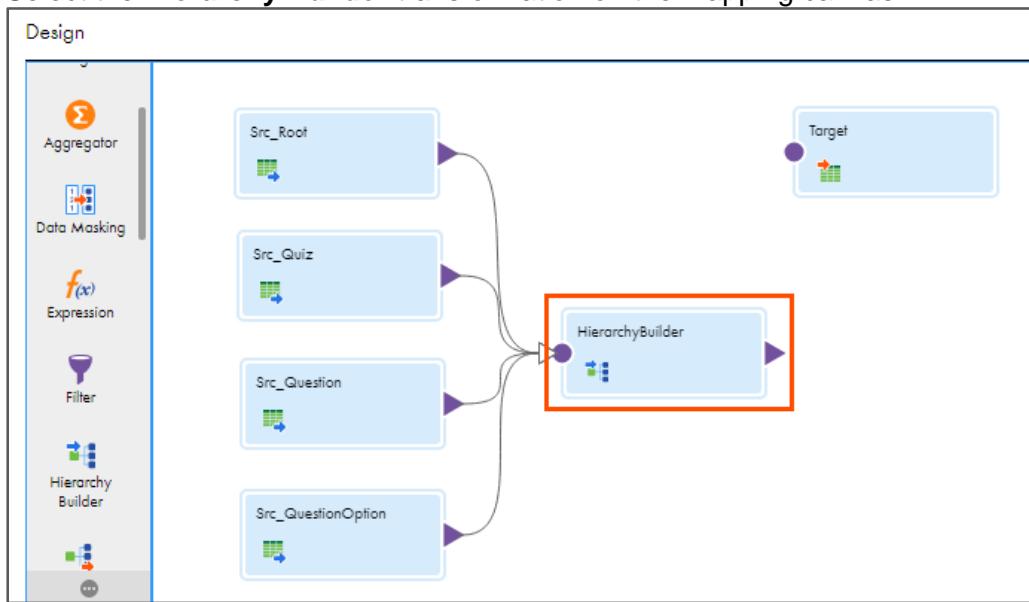
61. Click .



62. Link all the Source transformations to the **Hierarchy Builder** transformation.

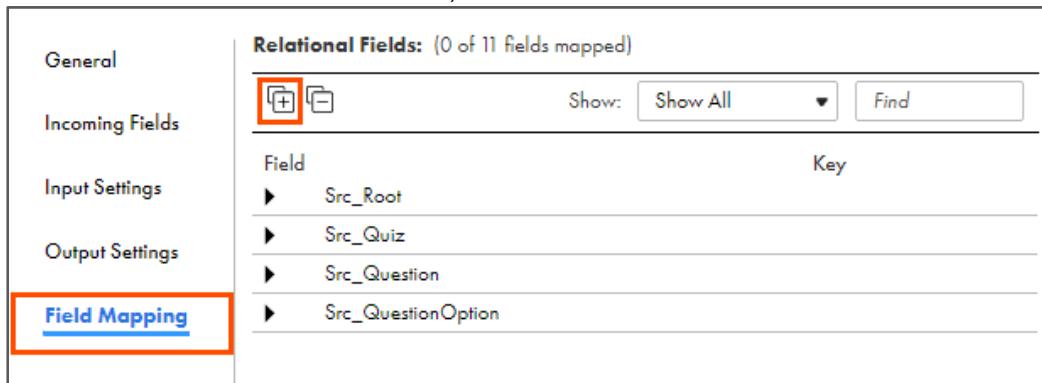


63. Select the **Hierarchy Builder** transformation on the mapping canvas.



64. From the properties pane, click **Field Mapping**.

65. From the Relational Fields section, click .

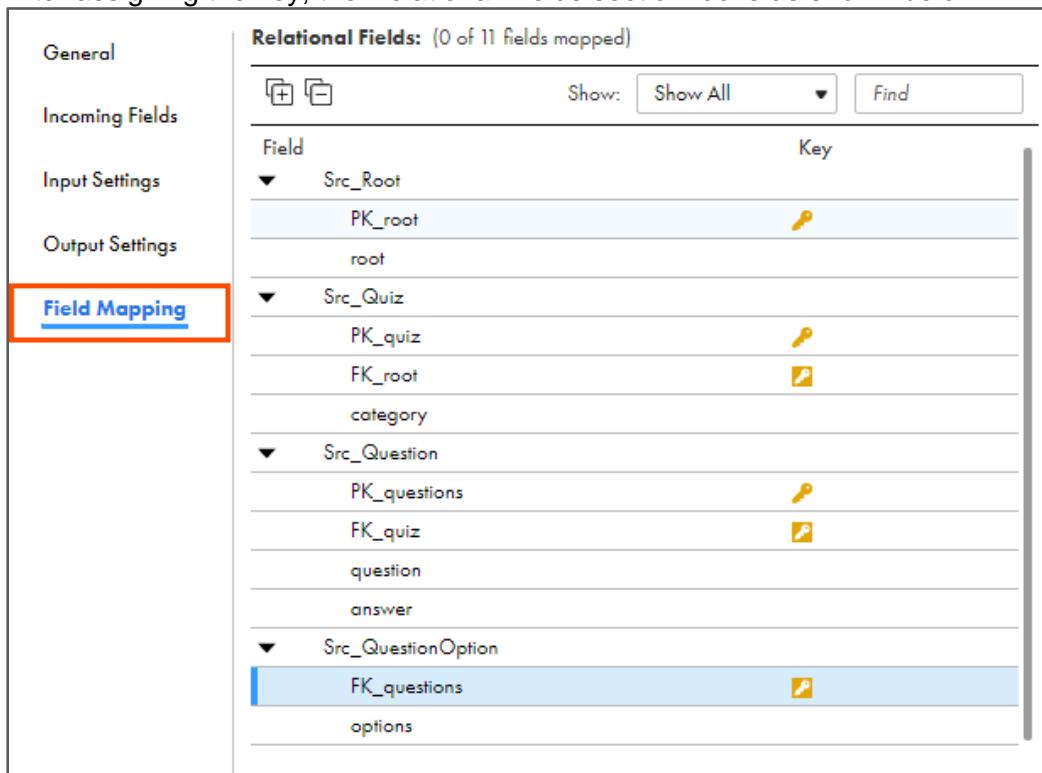


66. Assign keys to the fields, as shown in the table below:

Field	Key	Related Group
PK_root	Primary Key	
PK_quiz	Primary Key	
FK_root	Foreign Key	Src_Root
PK_questions	Primary Key	
FK_quiz	Foreign Key	Src_Quiz
FK_questions	Foreign Key	Src_Question

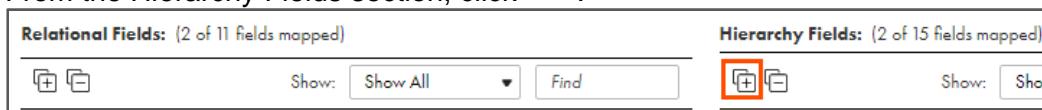
Note: To assign the keys, from the key column, click the Key icon. A **Mark as Key** window appears. In the **Mark as key** window, select the key. Select the **Related Group** from the drop-down.

67. After assigning the key, the Relational Fields section looks as shown below:



Relational Fields: (0 of 11 fields mapped)	
Show: Show All	Find
Field	Key
▼ Src_Root	
PK_root	
root	
▼ Src_Quiz	
PK_quiz	
FK_root	
category	
▼ Src_Question	
PK_questions	
FK_quiz	
question	
answer	
▼ Src_QuestionOption	
FK_questions	
options	

68. From the Hierarchy Fields section, click .

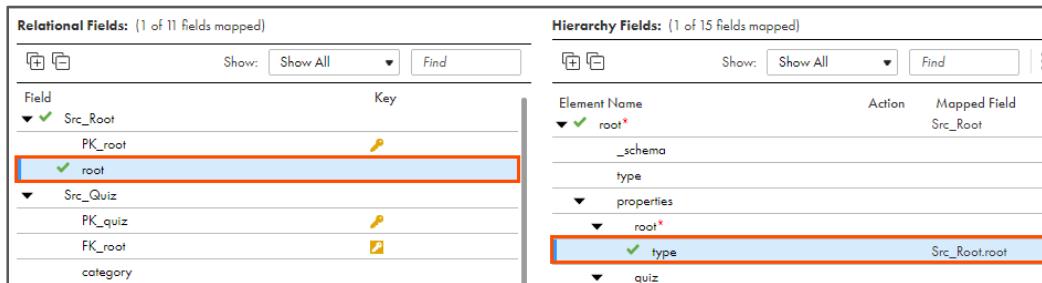


Relational Fields: (2 of 11 fields mapped)		Hierarchy Fields: (2 of 15 fields mapped)	
			Show: Show All
Show: Show All	Find	Show: Show	Find

69. Drag and drop the Relational fields in the Hierarchy Field column, to match the fields as shown in the below tables:

For root:

Incoming Field	Target Field
Src_Root > root	root > properties > root > type



Relational Fields: (1 of 11 fields mapped)		Hierarchy Fields: (1 of 15 fields mapped)			
			Show: Show All		
Show: Show All	Find	Show: Show All	Find		
Field	Key	Element Name	Action Mapped Field		
▼ Src_Root		▼ root*			
PK_root		_schema	Src_Root		
root		type			
▼ Src_Quiz		▼ properties			
PK_quiz		▼ root*			
FK_root		category		▼ type	Src_Root.root
category		▼ type	Src_Root.root		

For quiz:

Incoming Field	Target Field
Src_Quiz > category	root > properties > root > quiz > itemsArray > items > properties > category > type

Relational Fields: (2 of 11 fields mapped)

Field	Action	Mapped Field
PK_root	key	Src_Root
root	key	Src_Root.root
PK_quiz	key	Src_Quiz
FK_root	key	Src_Root
category	key	Src_Quiz.category
PK_questions	key	Src_Question
FK_quiz	key	Src_Quiz
question	key	Src_Question.question
answer	key	Src_Question.answer
PK_questionOption	key	Src_QuestionOption
FK_questions	key	Src_Question
options	key	Src_Question.options

Hierarchy Fields: (2 of 15 fields mapped)

Element Name	Action	Mapped Field
_schema	key	Src_Root
type	key	Src_Root.root
properties	key	Src_Root.root.properties
root*	key	Src_Root.root.root
type	key	Src_Root.root.root.type
quiz	key	Src_Root.root.root.quiz
type	key	Src_Root.root.root.quiz.type
itemsArray	key	Src_Root.root.root.quiz.itemsArray
items	key	Src_Root.root.root.quiz.itemsArray.items
type	key	Src_Root.root.root.quiz.itemsArray.items.type
properties	key	Src_Root.root.root.quiz.itemsArray.items.properties
category	key	Src_Root.root.root.quiz.itemsArray.items.properties.category
type	key	Src_Root.root.root.quiz.itemsArray.items.properties.category.type

For questions:

Incoming Field	Target Field
Src_Question > question	root > properties > root > quiz > itemsArray > items > properties > category > questions > itemsArray > items > properties > question > type

Relational Fields: (3 of 11 fields mapped)

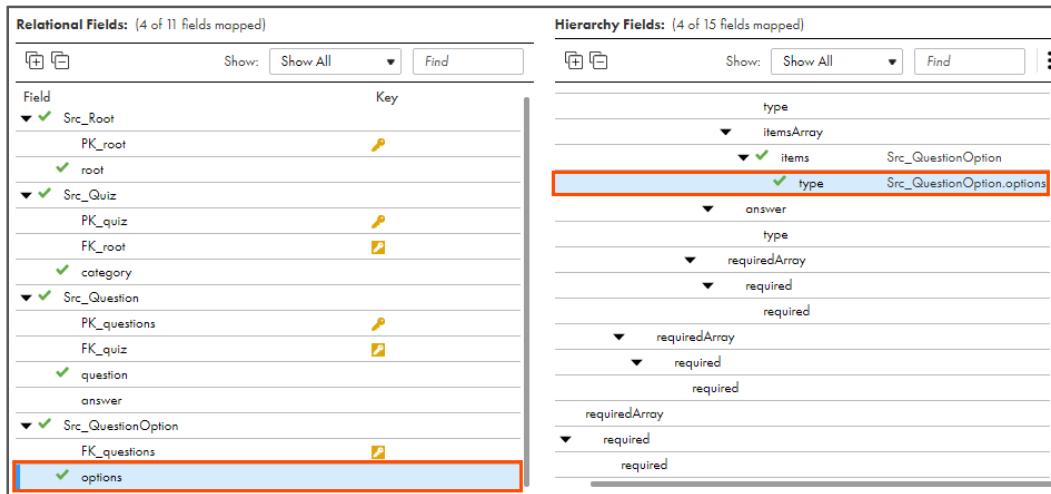
Field	Action	Mapped Field
PK_root	key	Src_Root
root	key	Src_Root.root
PK_quiz	key	Src_Quiz
FK_root	key	Src_Root
category	key	Src_Quiz.category
PK_questions	key	Src_Question
FK_quiz	key	Src_Quiz
question	key	Src_Question.question
answer	key	Src_Question.answer
PK_questionOption	key	Src_QuestionOption
FK_questions	key	Src_Question
options	key	Src_Question.options

Hierarchy Fields: (3 of 15 fields mapped)

Element Name	Action	Mapped Field
itemsArray	key	Src_Question
items	key	Src_Question.items
type	key	Src_Question.items.type
properties	key	Src_Question.items.properties
question	key	Src_Question.items.properties.question
type	key	Src_Question.items.properties.question.type
options	key	Src_Question.items.properties.question.options
type	key	Src_Question.items.properties.question.options.type
itemsArray	key	Src_Question.items.itemsArray
items	key	Src_Question.items.itemsArray.items
type	key	Src_Question.items.itemsArray.items.type
answer	key	Src_Question.items.itemsArray.items.answer
type	key	Src_Question.items.itemsArray.items.answer.type
requiredArray	key	Src_Question.items.itemsArray.requiredArray

For options:

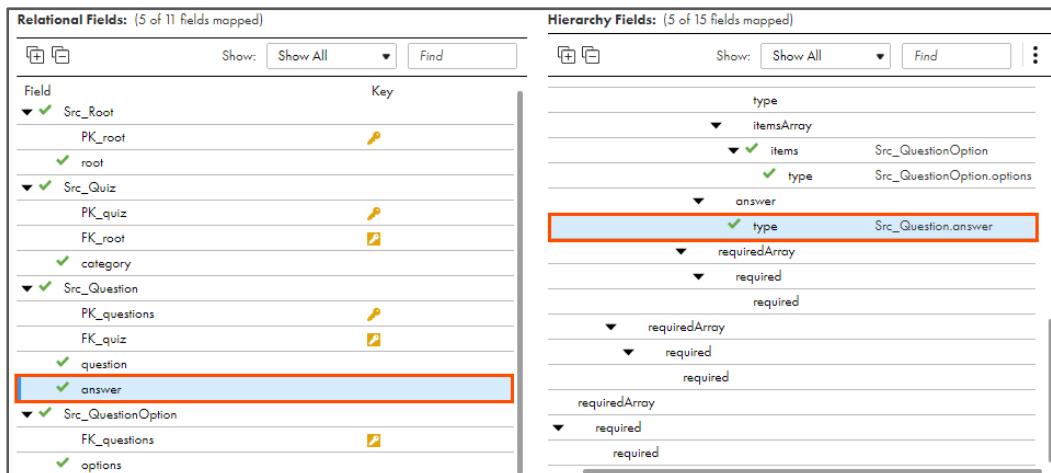
Incoming Field	Target Field
Src_QuestionOption > options	root > properties > root > quiz > itemsArray > items > properties > category > questions > itemsArray > items > properties > question > options > itemsArray > items > type



The screenshot shows the Informatica Mappings Designer interface. On the left, the **Relational Fields** pane lists fields from the source schema, including Src_Root, Src_Quiz, Src_Question, and Src_QuestionOption. The 'options' field under Src_QuestionOption is highlighted with a blue selection bar. On the right, the **Hierarchy Fields** pane shows the target schema structure. The 'type' field under 'items' in the 'Src_QuestionOption' section is also highlighted with a blue selection bar.

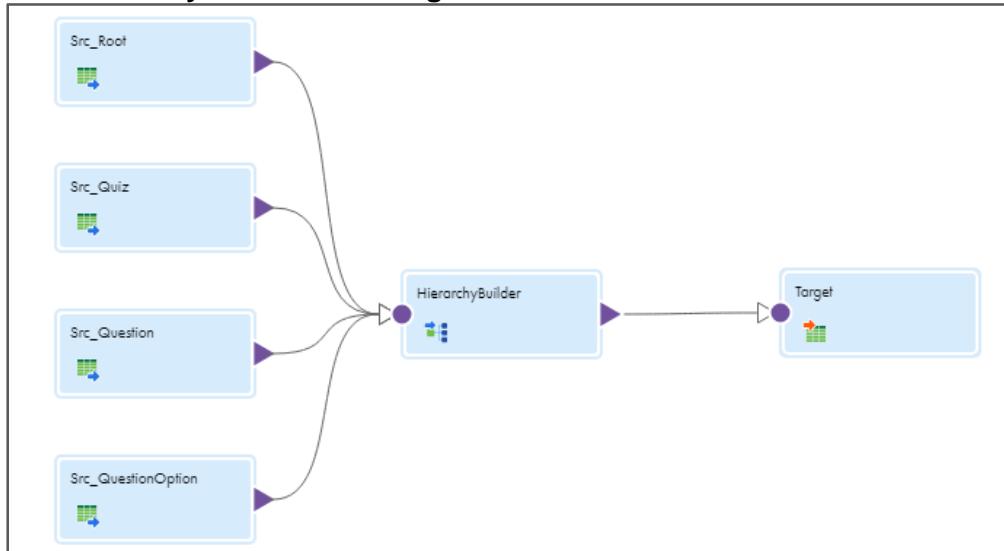
For answer:

Incoming Field	Target Field
Src_Question > answer	root > properties > root > quiz > itemsArray > items > properties > category > questions > itemsArray > items > properties > question > options > itemsArray > items > answer > type



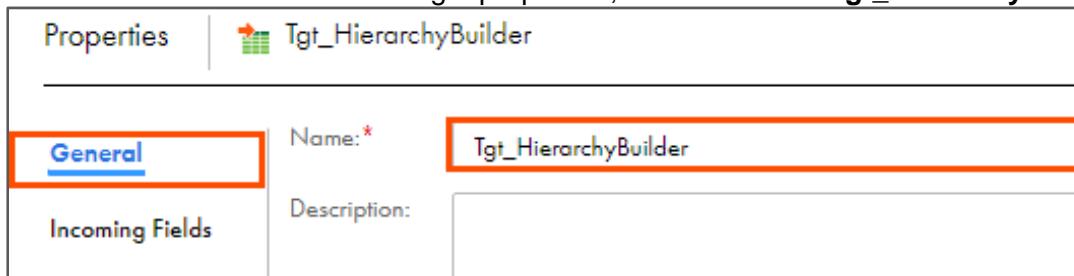
The screenshot shows the Informatica Mappings Designer interface. On the left, the **Relational Fields** pane lists fields from the source schema, including Src_Root, Src_Quiz, Src_Question, and Src_QuestionOption. The 'answer' field under Src_Question is highlighted with a blue selection bar. On the right, the **Hierarchy Fields** pane shows the target schema structure. The 'type' field under 'answer' in the 'Src_Question' section is highlighted with a blue selection bar.

70. Link Hierarchy Builder with Target.



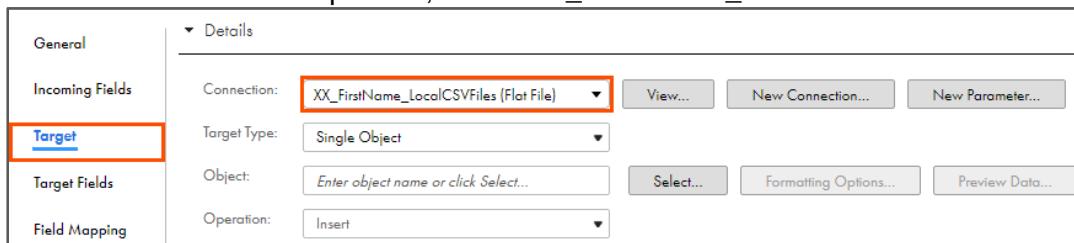
71. To configure the target, from the mapping canvas, click the **Target** transformation.

72. In the **General** section of the Target properties, enter Name as **Tgt_HierarchyBuilder**.



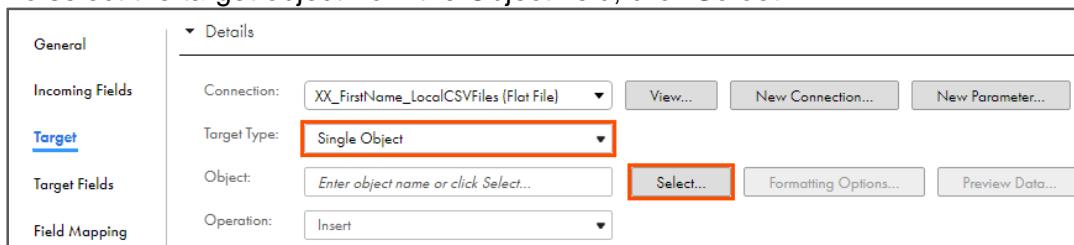
73. From the properties pane, click **Target**.

74. From the Connection drop-down, select **XX_FirstName_LocalCSVFiles**.



75. Retain Target Type as **Single Object**.

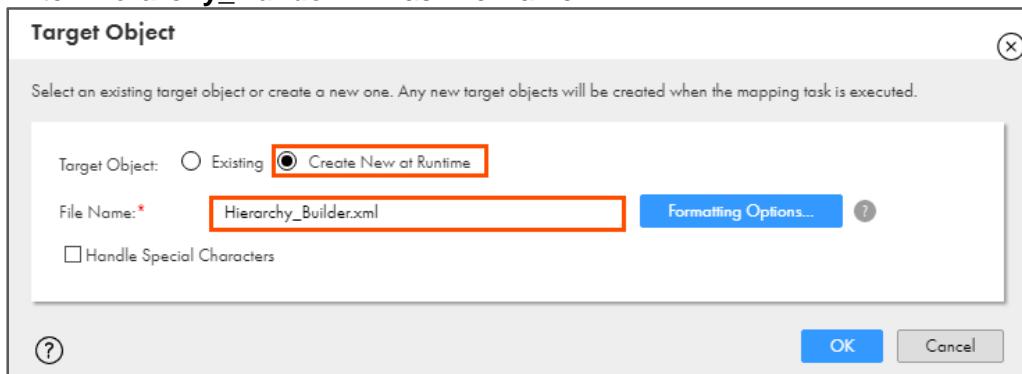
76. To select the target object from the Object field, click **Select**.



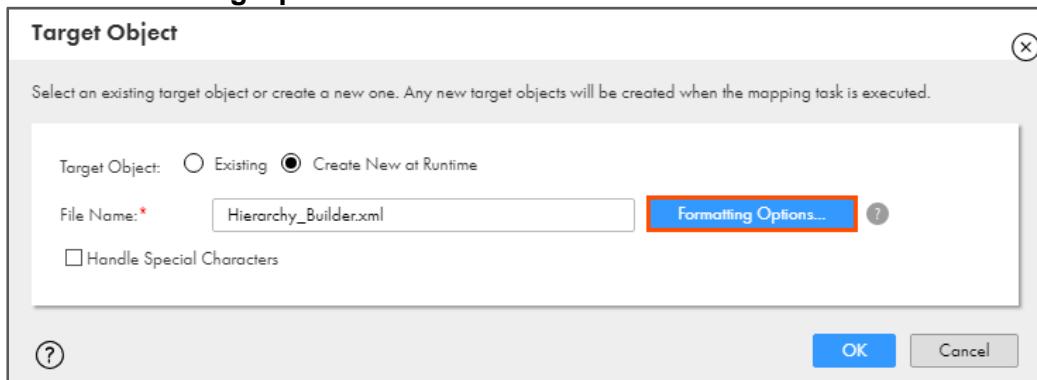
Note: The Target Object window appears.

77. On the Target Object window, select **Create New at Runtime**.

78. Enter **Hierarchy_Builder.xml** as File Name.



79. Select **Formatting Options**.

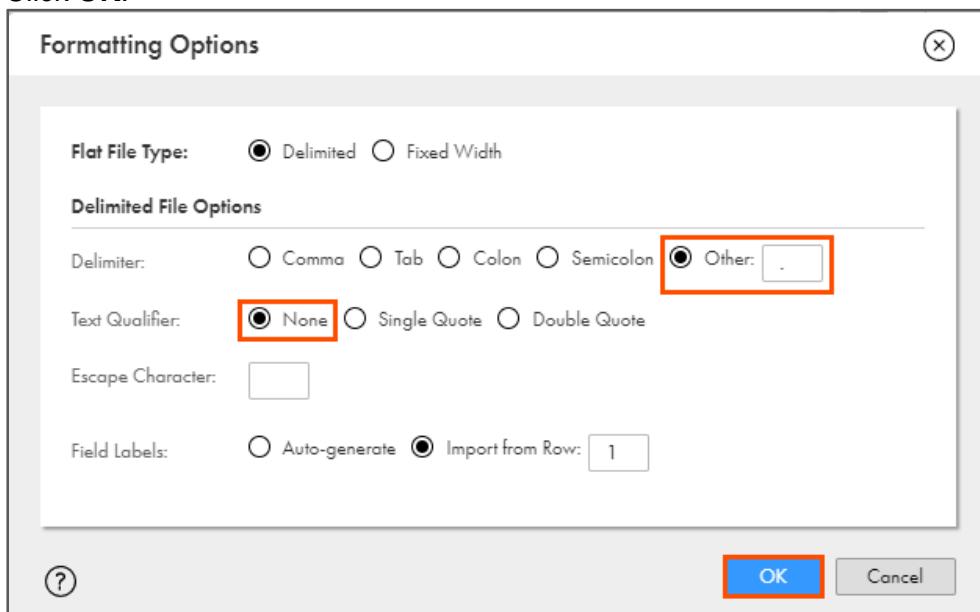


Note: The Formatting Options window appears.

80. For the Delimiter field, select **other**, and enter a period (.)

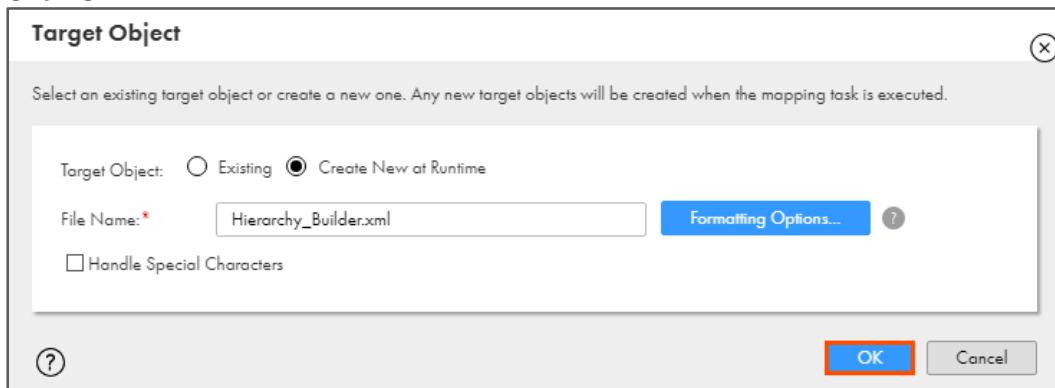
81. Select Text Qualifier as **None**.

82. Click **OK**.

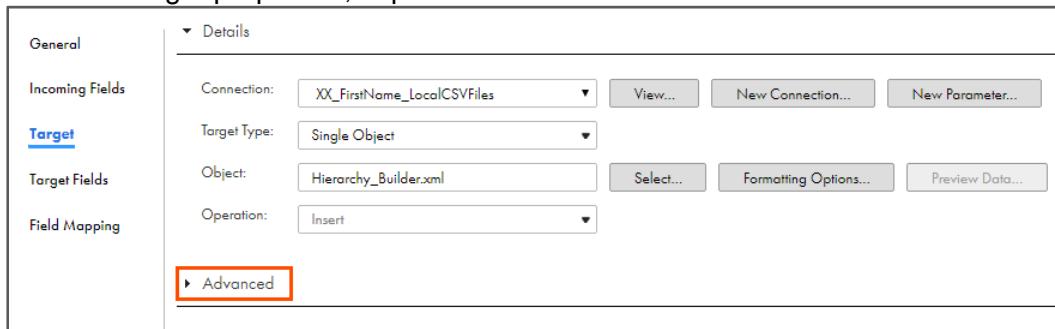


Note: This action redirects you to the Target Object window.

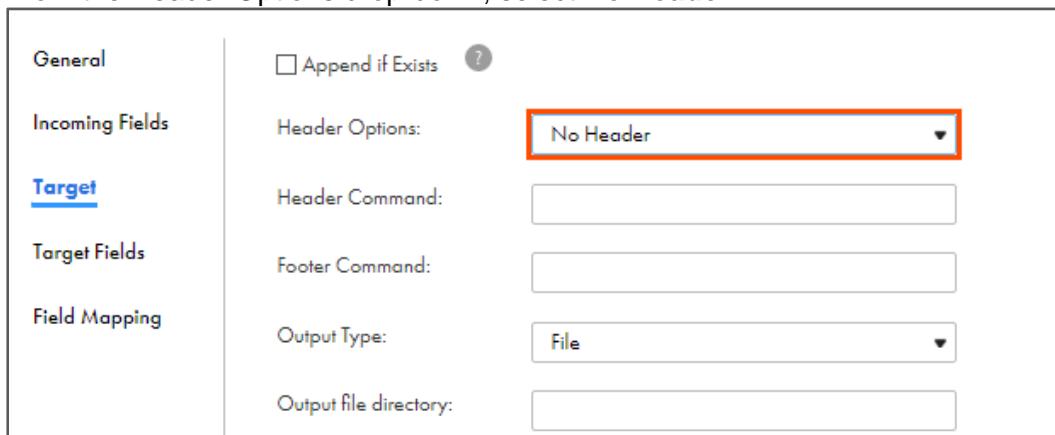
83. Click **OK**.



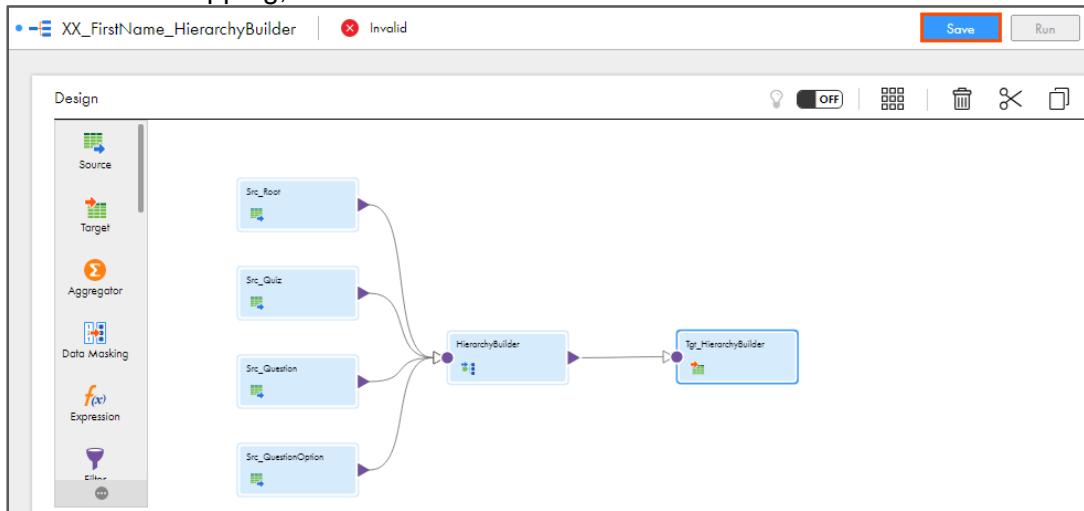
84. From the target properties, expand **Advanced** section.



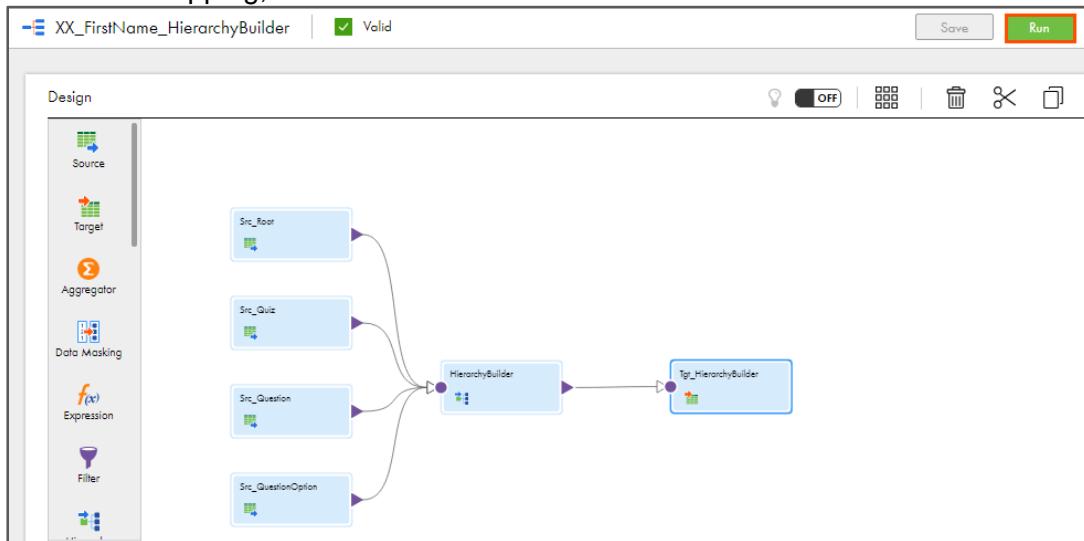
85. From the Header Options drop-down, select **No Header**.



86. To save the mapping, click **Save**.



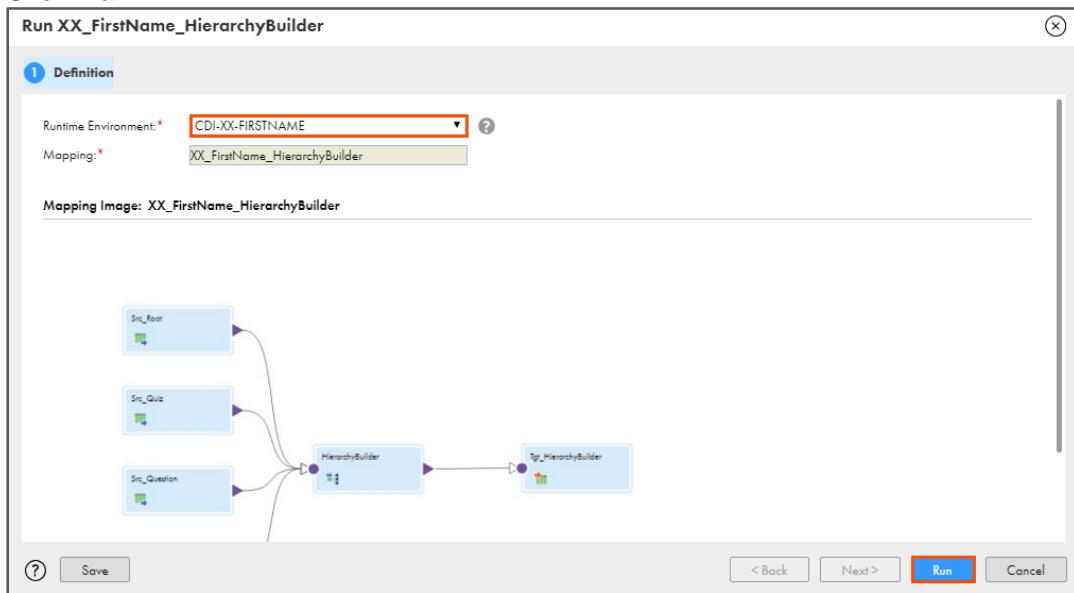
87. To run the mapping, click **Run**.



Note: The Run mapping window appears.

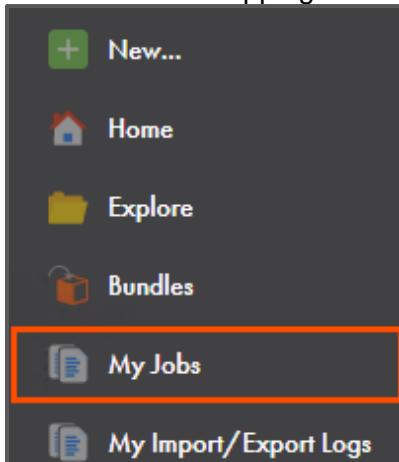
88. From the Runtime Environment drop-down, select your secure agent group.

89. Click **Run**.



Monitor Status:

90. To monitor the mapping status, from the navigation pane, click **My Jobs**.



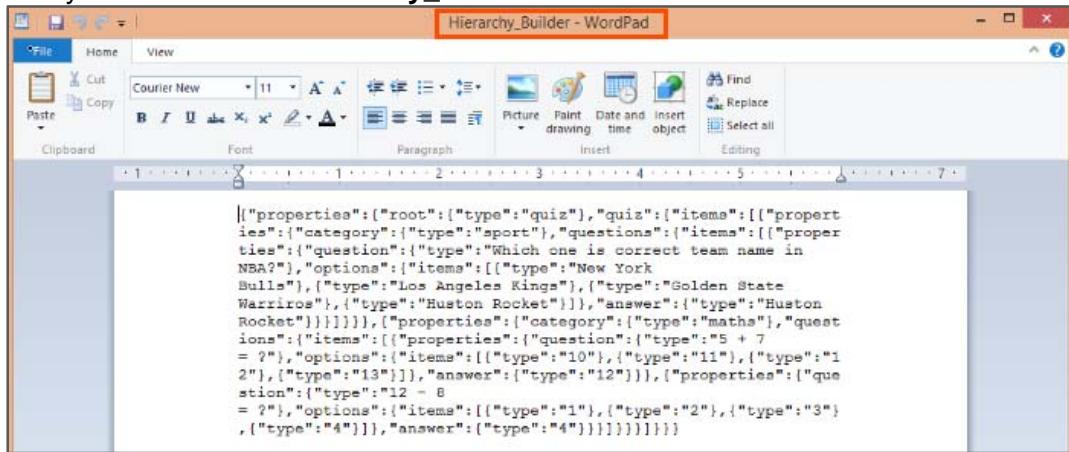
91. When the task completes, the status changes to **Success**.

Jobs (1 of 28)		<input checked="" type="checkbox"/> Up to date	Updated 10:38:11 PM PDT			
			Asset Name: XX_FirstName_Hierarc...	Add Field	Find	
		Instance Name	Subtasks	Start Time	End Time	Rows Processed
		- XX_FirstName_HierarchyBuilder-1		Aug 1, 2019, ...	Aug 1, 20...	1

Note: Observe that 1 success row is processed.

92. On your local machine, go to **C:\IICSLabFiles**.

93. Verify the contents of **Hierarchy_Builder.xml** file.



This concludes the lab.

Module 14: Intelligent Structure Model

Lab 14-1: Creating an Intelligent Structure Model

Overview:

An Intelligent Structure Model is a service that determines the underlying patterns of the sample file and creates a model to transform, parse, and generate output groups.

In this lab, you will create an Intelligent Structure Model for a flat file.

Objective:

- Create Intelligent Structure Model

Duration:

5 minutes

Tasks:

Copy Source Files:

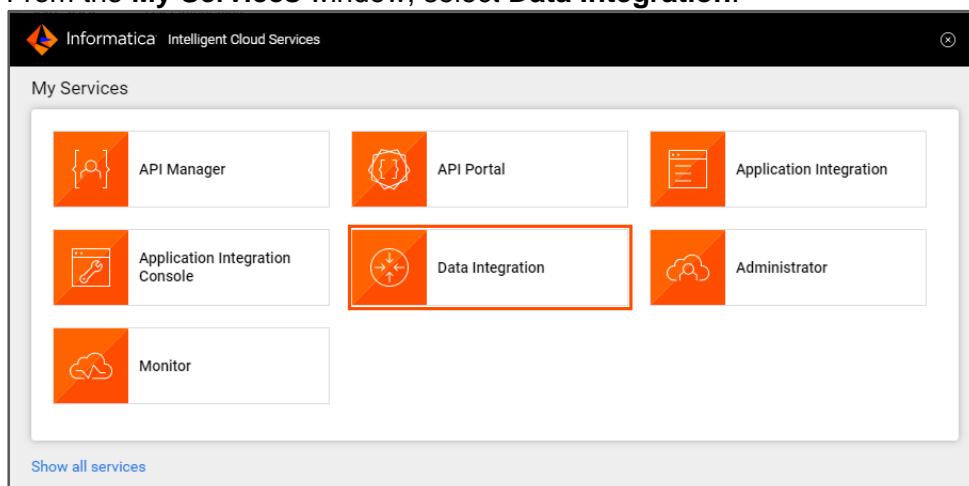
1. Copy the **StructureModel.txt** file from the CDI Lab Prep Files folder available on your desktop and paste it in your flat file directory (C:\IICSLabFiles).

Create Intelligent Structure Model:

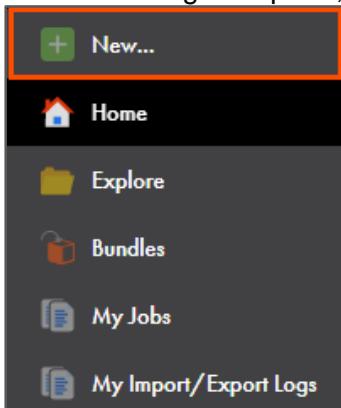
2. Open the IICS Login page from the Bookmarks bar.

Note: Follow this step if you have navigated away from the login page.

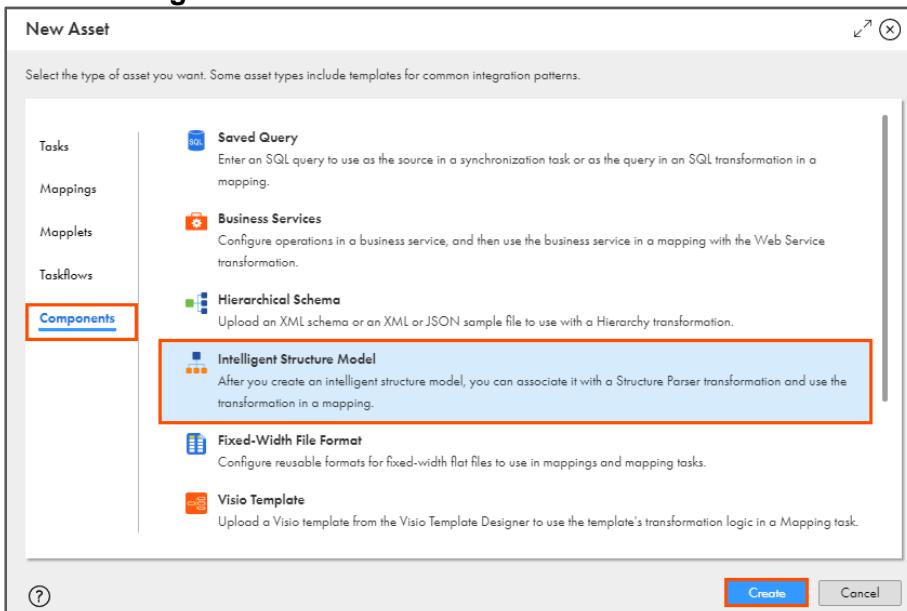
3. Enter the login credentials provided by the Instructor and click **Log In**.
4. From the **My Services** window, select **Data Integration**.



5. From the navigation pane, select **New**.

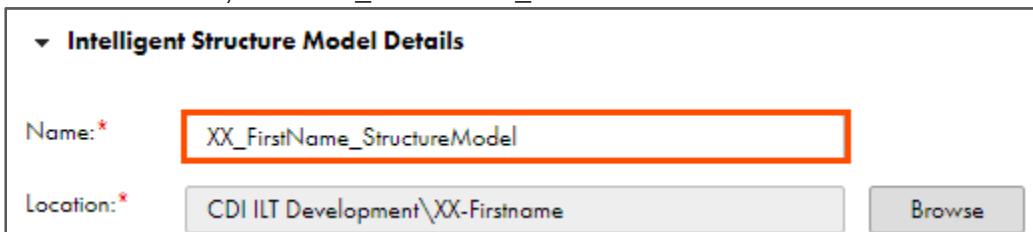


6. From the New Asset window, click the **Components** tab.
 7. Select **Intelligent Structure Model** and click **Create**.



Note: The Intelligent Structure Model page appears.

8. In the Name field, enter **XX_FirstName_StructureModel**.



Name:*	XX_FirstName_StructureModel
Location:*	CDI ILT Development\XX-Firstname

Note: Here, XX refers to your initials, and FIRSTNAME refers to your First Name.

9. To upload a sample file, from the Sample File section, click .

Intelligent Structure Model Details

Name: [*]	XX_FirstName_StructureModel	
Location: [*]	CDI ILT Development\XX-Firstname	Browse
Description:		
Sample File	Choose File	
Discover Structure		

10. Navigate and select the **StructureModel.txt** file that you copied into your flat file directory.

Intelligent Structure Model Details

Name: [*]	XX_FirstName_StructureModel	
Location: [*]	CDI ILT Development\XX-Firstname	Browse
Description:		
Sample File	StructureModel.txt	
Discover Structure		

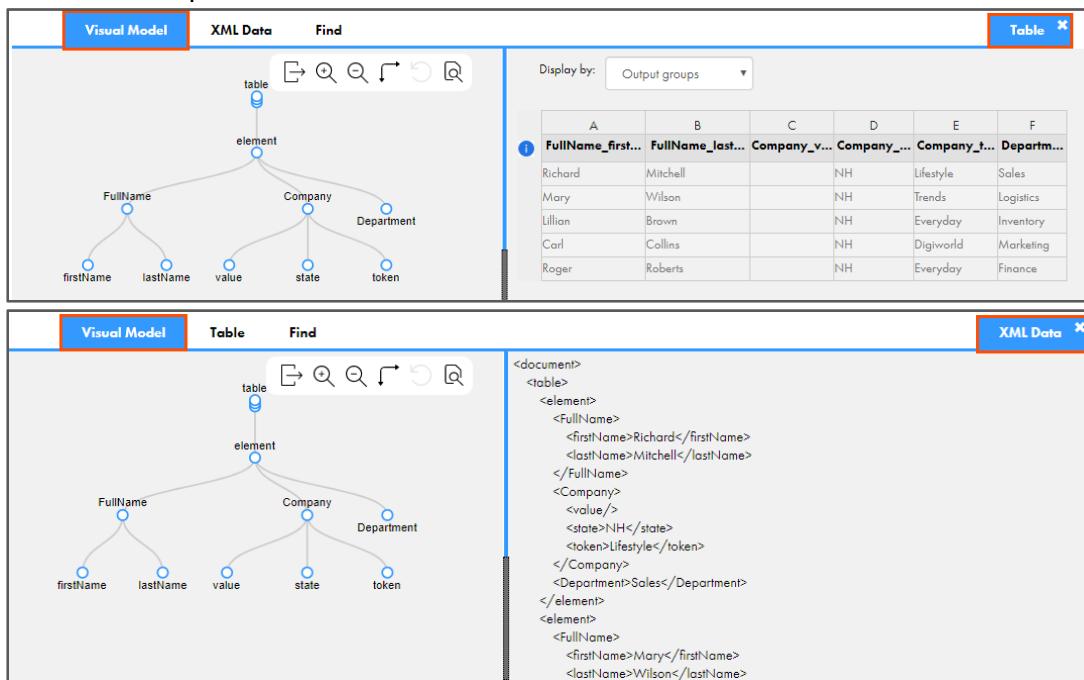
11. To discover the structure of the sample file, click **Discover Structure**.

Intelligent Structure Model Details

Name: [*]	XX_FirstName_StructureModel	
Location: [*]	CDI ILT Development\XX-Firstname	Browse
Description:		
Sample File	StructureModel.txt	
Discover Structure		

Note: You must wait for the structure discovery process to complete.

12. View all the representations of the discovered model.



The screenshot shows the Informatica Intelligent Structure Model interface with three tabs: Visual Model, XML Data, and Table. The Visual Model tab is selected, displaying a hierarchical tree diagram of the discovered schema. The XML Data tab shows the XML representation of the data, and the Table tab shows the data in a tabular format.

Table Representation:

A	B	C	D	E	F
Richard	Mitchell		NH	Lifestyle	Sales
Mary	Wilson		NH	Trends	Logistics
Lillian	Brown		NH	Everyday	Inventory
Carl	Collins		NH	Digiworld	Marketing
Roger	Roberts		NH	Everyday	Finance

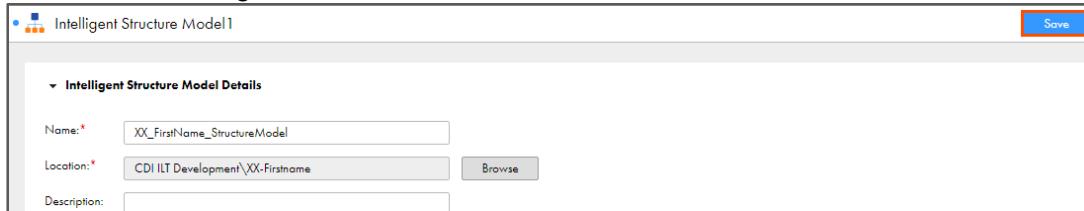
XML Data Representation:

```

<document>
<table>
<element>
<FullName>
<firstName>Richard</firstName>
<lastName>Mitchell</lastName>
</FullName>
<Company>
<value/>
<state>NH</state>
<token>Lifestyle</token>
</Company>
<Department>Sales</Department>
</element>
<element>
<FullName>
<firstName>Mary</firstName>
<lastName>Wilson</lastName>

```

13. To save the Intelligent Structure Model, click **Save**.



The screenshot shows the 'Intelligent Structure Model Details' dialog box. It includes fields for Name (XX_FirstName_StructureModel), Location (CDI ILT Development\XX-Firstname), and Description. A 'Save' button is located at the top right.

This concludes the lab.

Module 14: Intelligent Structure Model

Lab 14-2: Using Structure Parser Transformation in a Mapping

Overview:

The Structure Parser transforms input data into a user defined structure format that is based on an intelligent structure model.

In this lab, you will create a mapping using Structure Parser Transformation to separate valid and invalid entries.

Objective:

- Create a mapping using Structure Parser transformation

Duration:

10 minutes

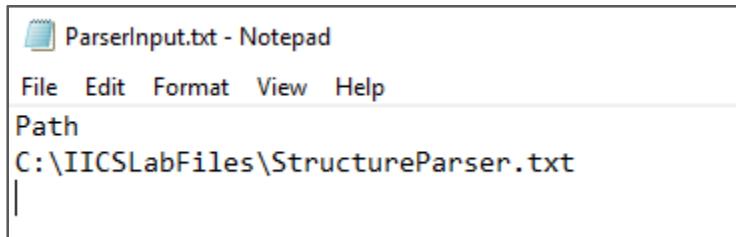
Tasks:

Copy Source Files:

1. Copy the **StructureParser.txt** file from the CDI Lab Prep Files folder available on your desktop and paste it in your flat file directory (C:\IICSLabFiles).

Create File:

2. Create a text file (**ParserInput.txt**) in your flat file directory, and in that text file, type the location of your Source file (**C:\IICSLabFiles\StructureParser.txt**) in the format shown below:



ParserInput.txt - Notepad

File Edit Format View Help

Path

C:\IICSLabFiles\StructureParser.txt

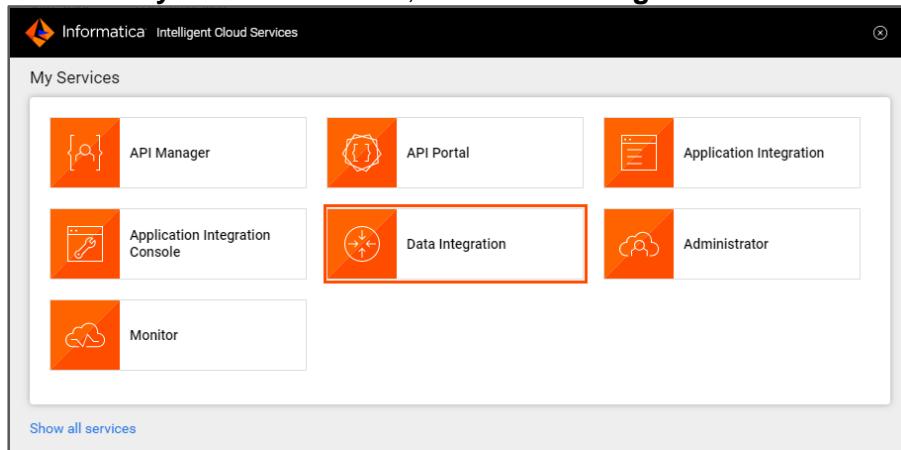
Create Mapping:

3. Open the IICS Login page from the Bookmarks bar.

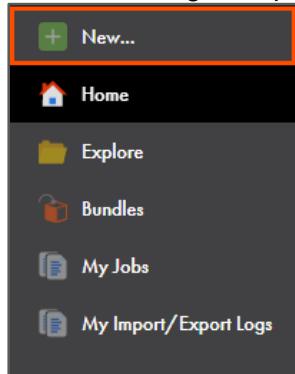
Note: Follow this step if you have navigated away from the login page.

4. Enter the login credentials provided by the Instructor and click **Log In**.

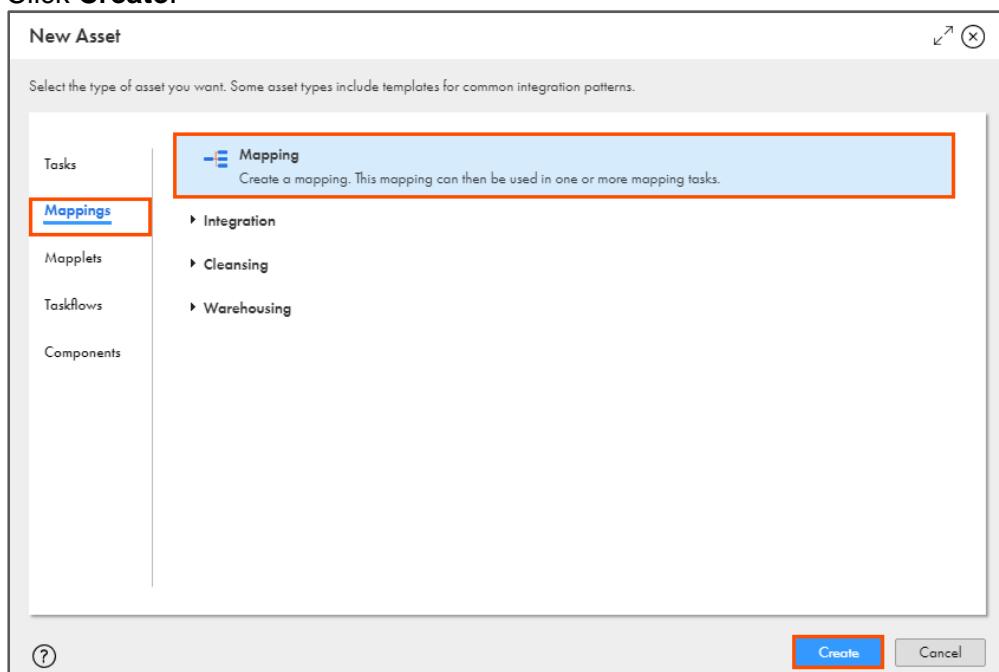
5. From the **My Services** window, select **Data Integration**.



6. From the navigation pane, select **New**.



7. From the New Asset window, click the **Mappings** tab, and select **Mapping**.
 8. Click **Create**.



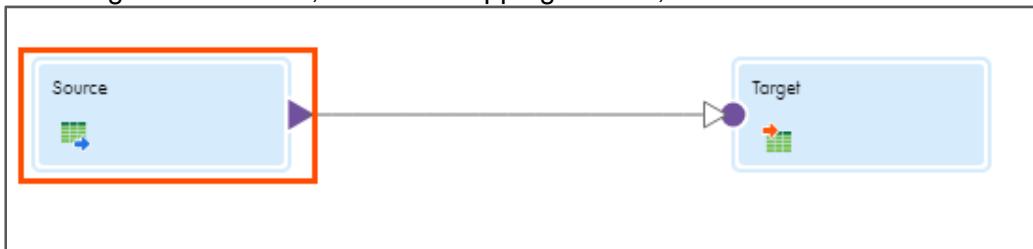
Note: The Mapping page appears.

9. In the Name field, enter **XX_FirstName_StructureParser**.

Properties: XX_FirstName_StructureParser	
Name: *	XX_FirstName_StructureParser
Location: *	CDI ILT Development\XX-Firstname
Description:	

Note: Here, XX refers to your initials, and FIRSTNAME refers to your First Name.

10. To configure the source, from the mapping canvas, click the **Source** transformation.



11. In the **General** section of Source properties, enter the Name as **Src**.

Properties		Src
General	Name: *	Src
Source	Description:	

12. From the properties pane, click **Source**.

13. From the Connection drop-down, select **XX_FirstName_LocalCSVFiles**.

14. Retain Source Type as **Single Object**.

General		Details
Source	Connection: XX_FirstName_LocalCSVFiles (Flat File)	View... New Connection... New Parameter...
Fields	Source Type: Single Object	
Partitions	Object: Enter object name or click Select...	Select... Formatting Options... Preview Data...

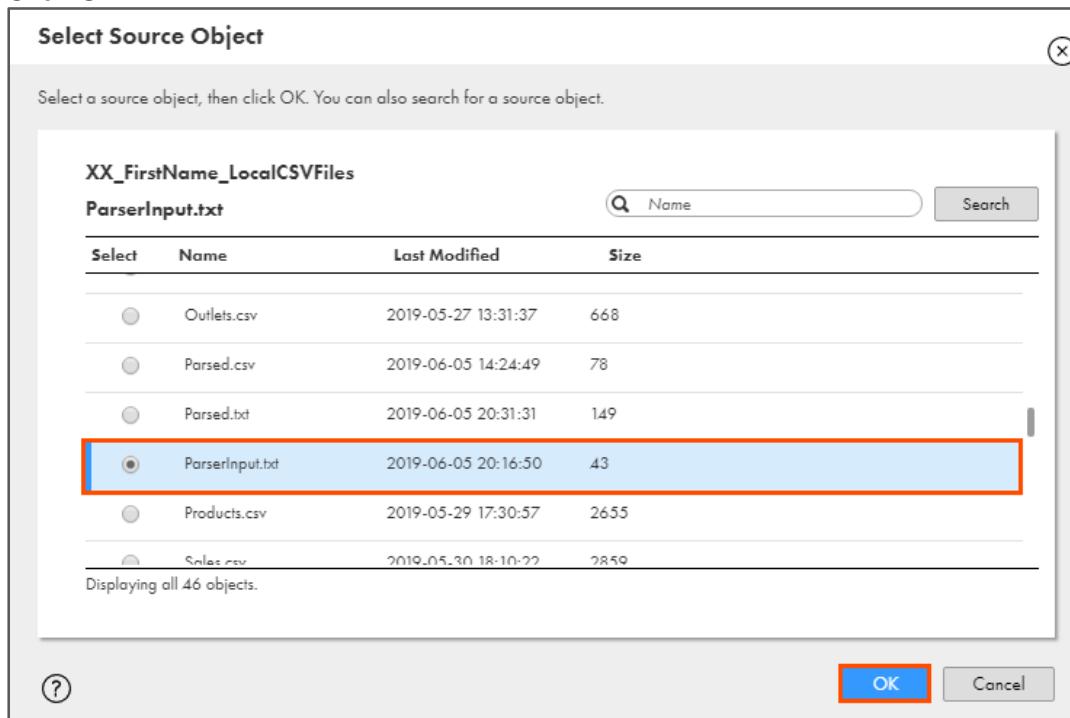
15. To select the source object from the Object field, click **Select**.

General		Details
Source	Connection: XX_FirstName_LocalCSVFiles (Flat File)	View... New Connection... New Parameter...
Fields	Source Type: Single Object	
Partitions	Object: Enter object name or click Select...	Select... Formatting Options... Preview Data...

Note: The Select Source Object window appears.

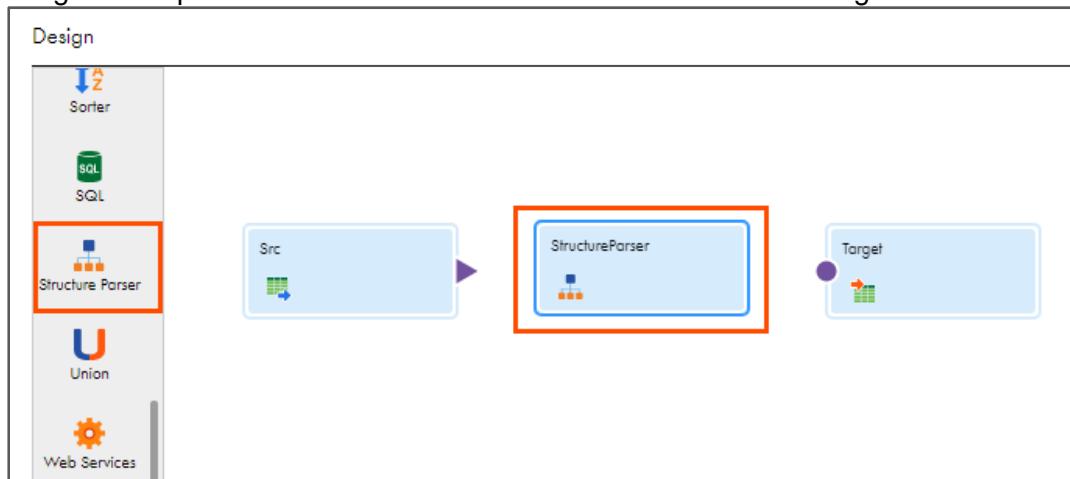
16. From the list, select **ParserInput.txt**.

17. Click OK.



Add Structure Parser Transformation:

18. Drag and drop **Structure Parser** on the link between Src and Target transformations.



Note: The link between Src and Target deletes automatically after you drop the Structure Parser transformation on the link.

19. Select the **Structure Parser** transformation on the mapping canvas.

20. In the **General** section of the Hierarchy Parser properties, retain the Name as **StructureParser**.



21. From the properties pane, click **Structure Parser**.

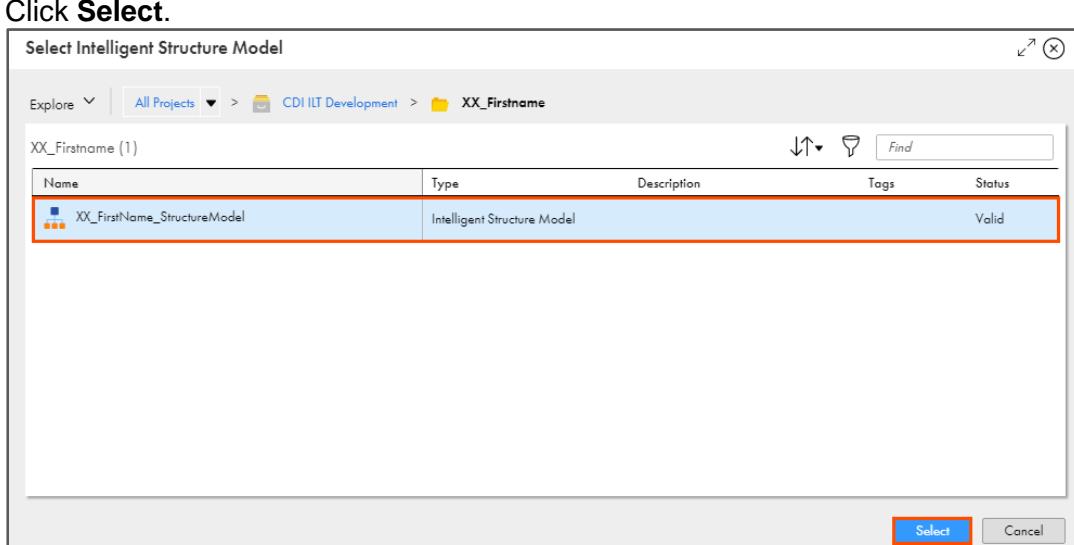
22. To select the Intelligent Structure Model, click **Select**.



23. Navigate to **CDI ILT Development\XX-Firstname** and select **XX_FirstName_StructureModel**.

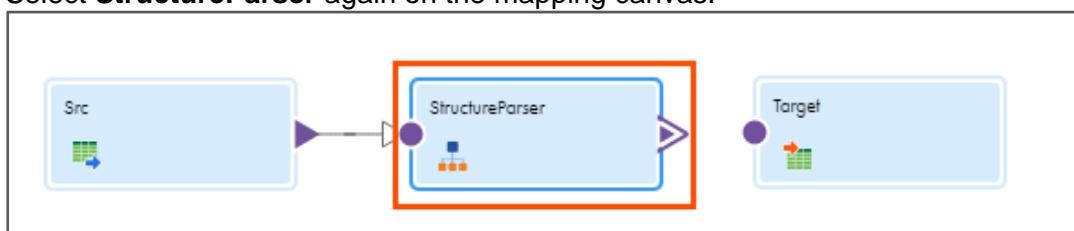
Note: Here, XX refers to your initials, and FIRSTNAME refers to your First Name.

24. Click **Select**.



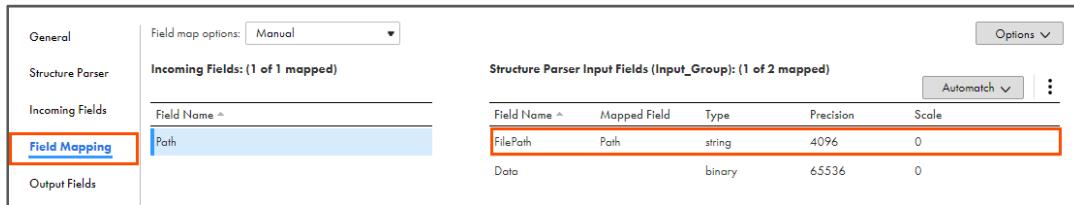
25. Link **Src** to **StructureParser**.

26. Select **StructureParser** again on the mapping canvas.



27. From the properties pane, click **Field Mapping**.

28. To map the Incoming field with the Structure Parser Input field, drag and drop the **Path** field onto the **FilePath** field.



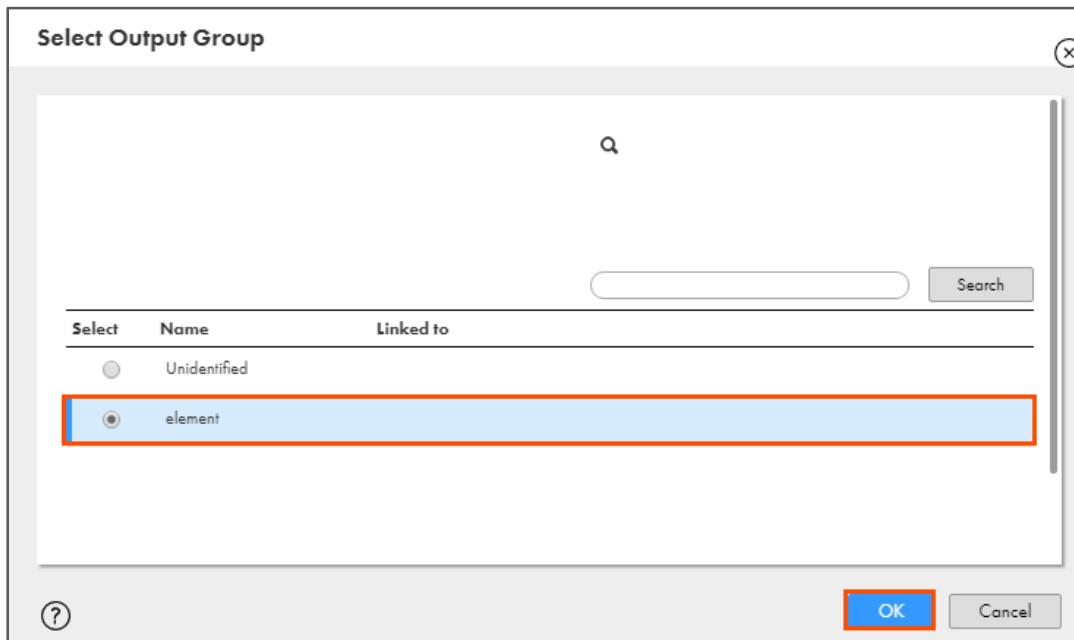
Field Name	Mapped Field	Type	Precision	Scale
Path	FilePath	string	4096	0
	Data	binary	65536	0

Note: Skip this step if the field is already mapped.

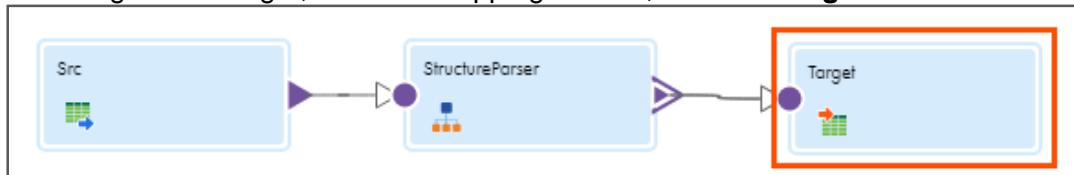
29. Link **StructureParser** with **Target**.

Note: The Select Output Group window appears.

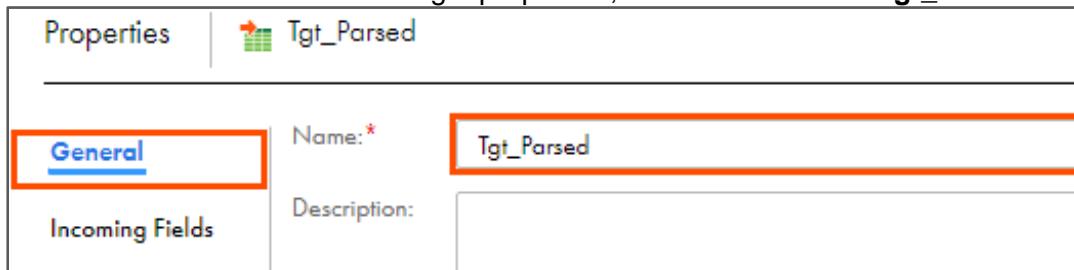
30. Select **element** and click **OK**.



31. To configure the target, from the mapping canvas, click the **Target** transformation.



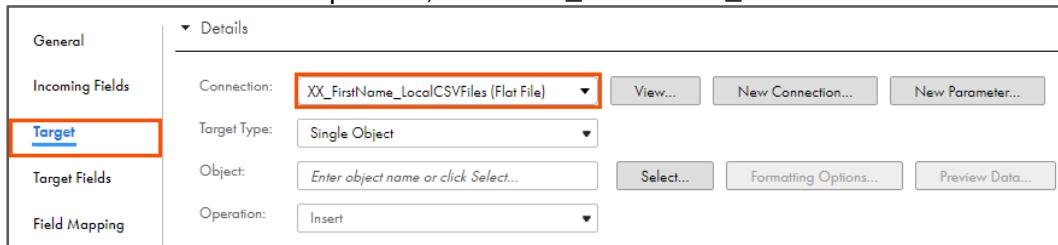
32. In the **General** section of the Target properties, enter the Name as **Tgt_Parsed**.



General	Name: *
Incoming Fields	Description:

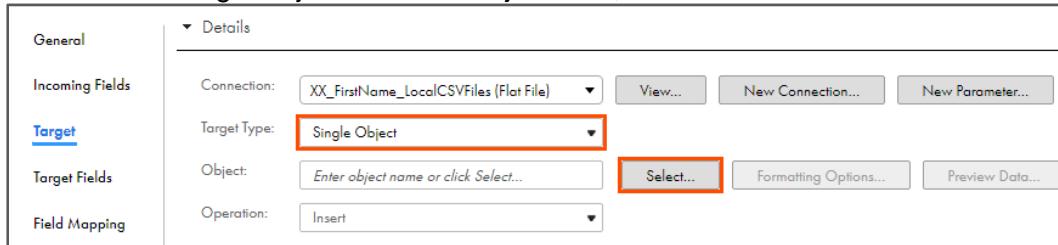
33. From the properties pane, click **Target**.

34. From the Connection drop-down, select **XX_FirstName_LocalCSVFiles**.



35. Retain Target Type as **Single Object**.

36. To select the target object from the Object field, click **Select**.

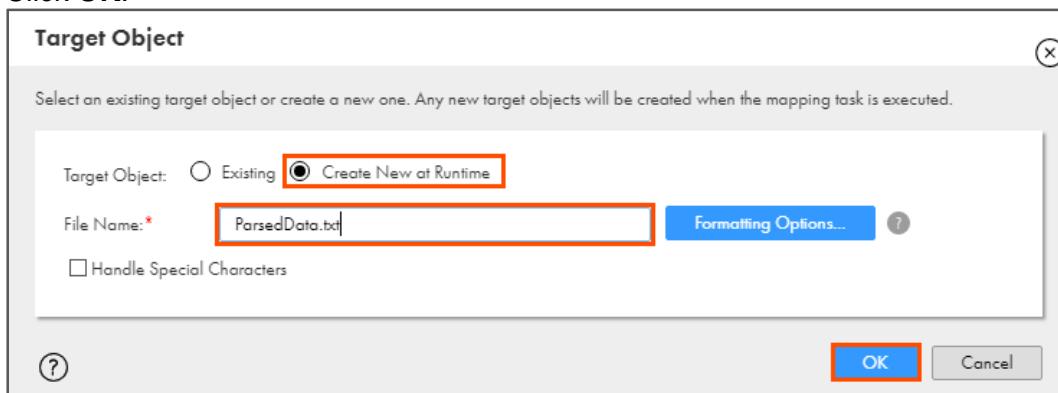


Note: The Target Object window appears.

37. On the Target Object window, select **Create New at Runtime**.

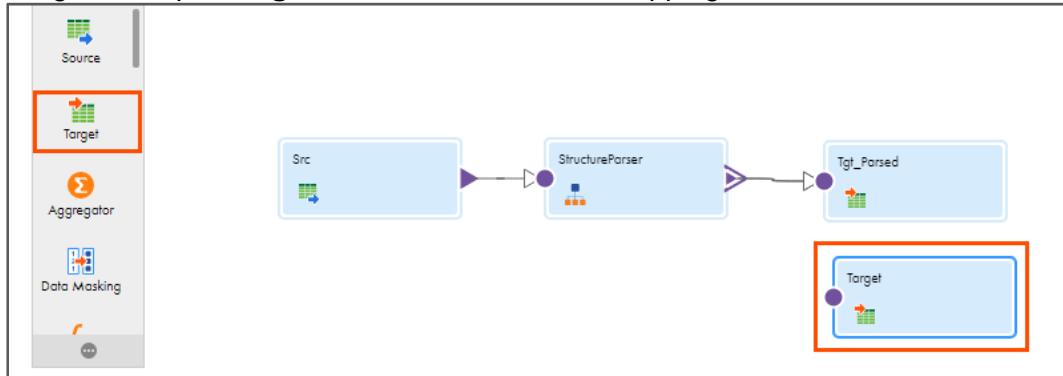
38. Enter **ParsedData.txt** as File Name.

39. Click **OK**.



Add Target Transformation:

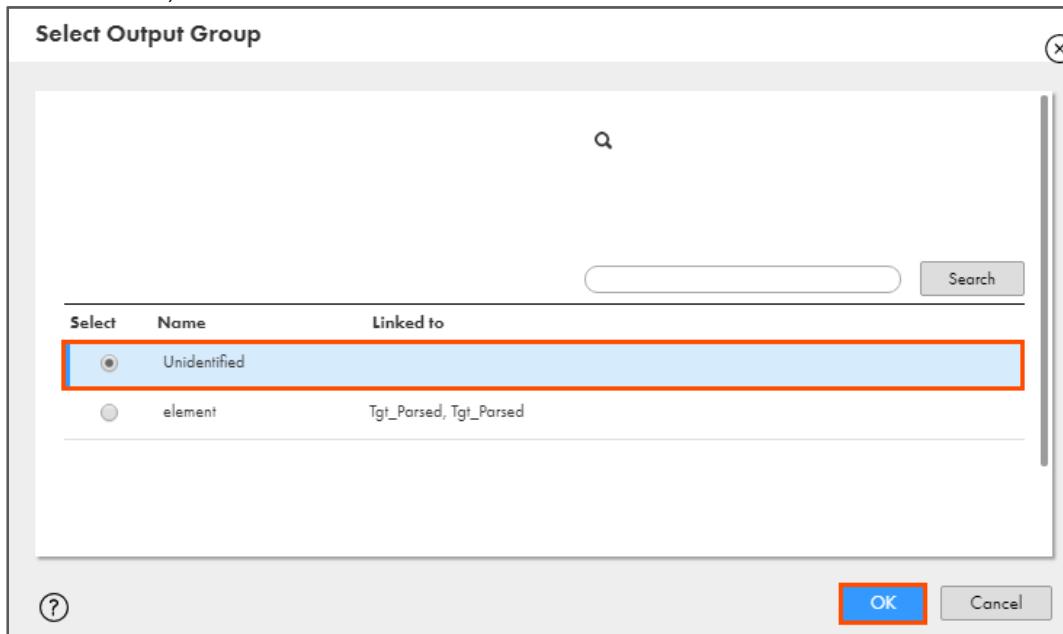
40. Drag and drop a **Target** transformation on the mapping canvas.



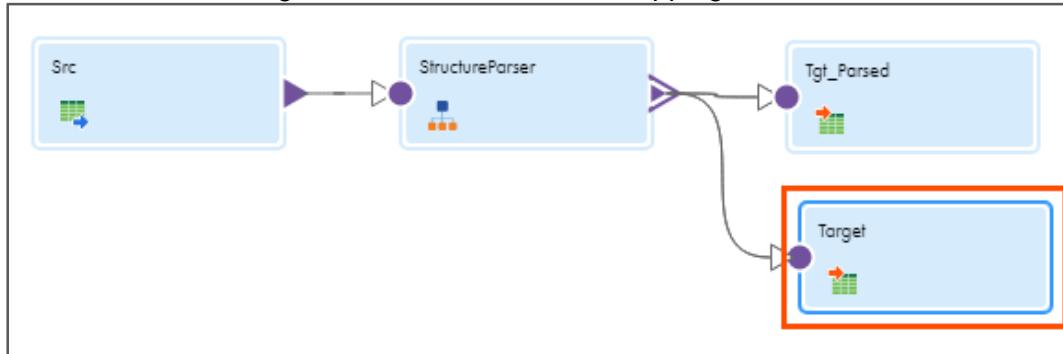
41. Link **StructureParser** to **Target**.

Note: The Select Output Group window appears.

42. From the list, select **Unidentified** and click **OK**.



43. Select the added Target transformation on the mapping canvas.



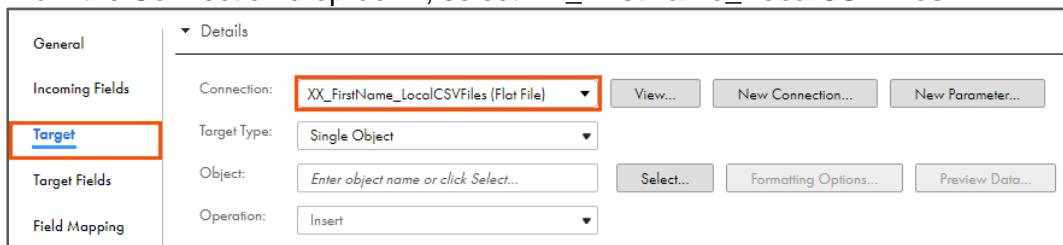
44. In the **General** section of the Target properties, enter the Name as **Tgt_Unparsed**.



Properties	 Tgt_Unparsed
General	Name: * Tgt_Unparsed
Incoming Fields	Description:

45. From the properties pane, click **Target**.

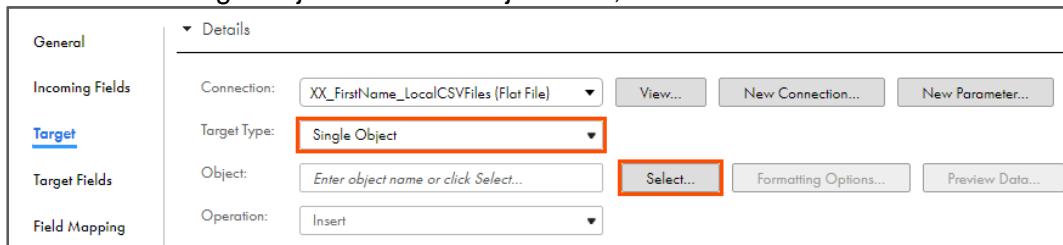
46. From the Connection drop-down, select **XX_FirstName_LocalCSVFiles**.



General	Details
Incoming Fields	Connection: XX_FirstName_LocalCSVFiles (Flat File) View... New Connection... New Parameter...
Target	Target Type: Single Object Select... Formatting Options... Preview Data...
Target Fields	Object: Enter object name or click Select... Select... Formatting Options... Preview Data...
Field Mapping	Operation: Insert

47. Retain Target Type as **Single Object**.

48. To select the target object from the Object field, click **Select**.



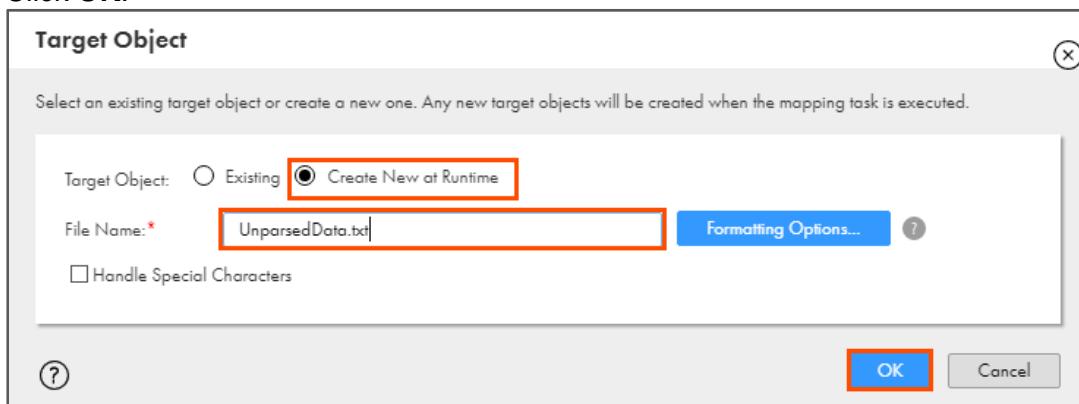
General	Details
Incoming Fields	Connection: XX_FirstName_LocalCSVFiles (Flat File) View... New Connection... New Parameter...
Target	Target Type: Single Object Select... Formatting Options... Preview Data...
Target Fields	Object: Enter object name or click Select... Select... Formatting Options... Preview Data...
Field Mapping	Operation: Insert

Note: The Target Object window appears.

49. In the Target Object window, select **Create New at Runtime**.

50. Enter the file name as **UnparsedData.txt**.

51. Click **OK**.



Target Object

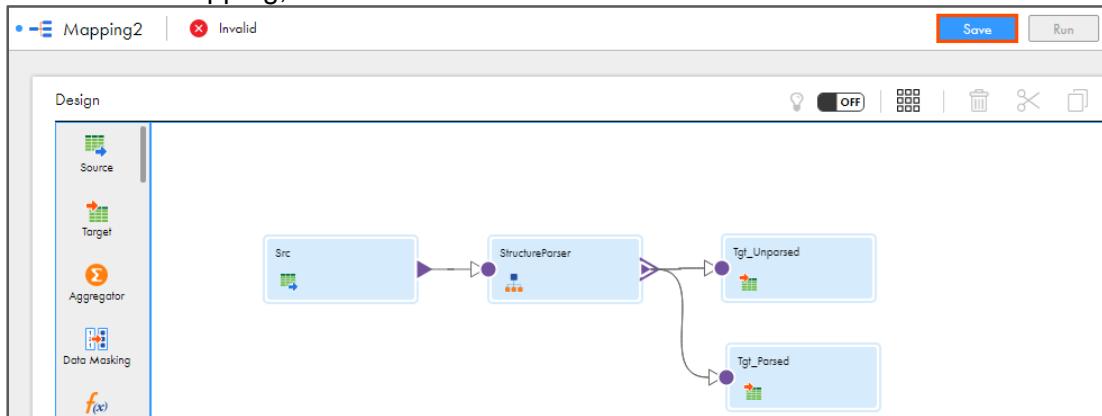
Select an existing target object or create a new one. Any new target objects will be created when the mapping task is executed.

Target Object: Existing Create New at Runtime

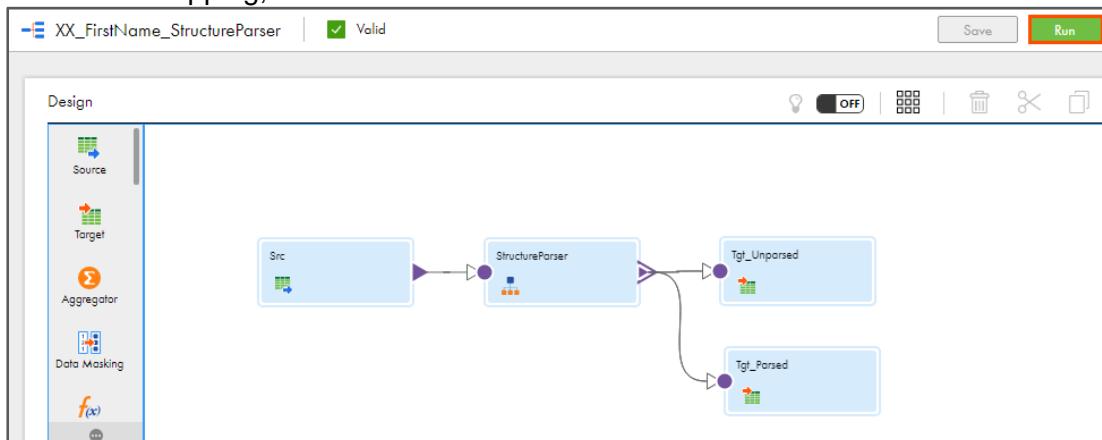
File Name: * **UnparsedData.txt**

Handle Special Characters

52. To save the mapping, click **Save**.

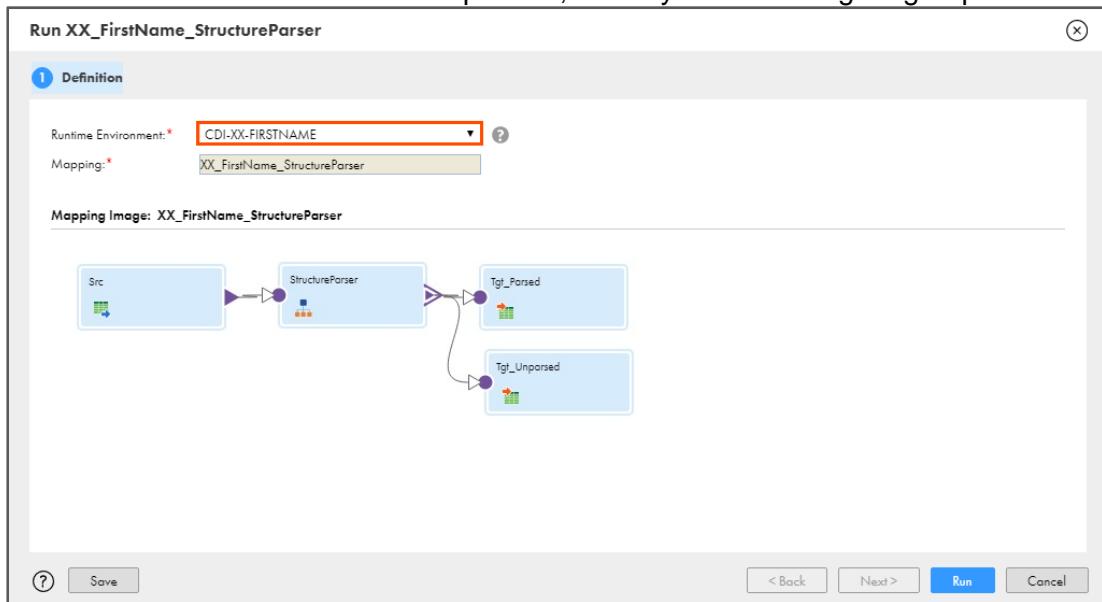


53. To run the mapping, click **Run**.

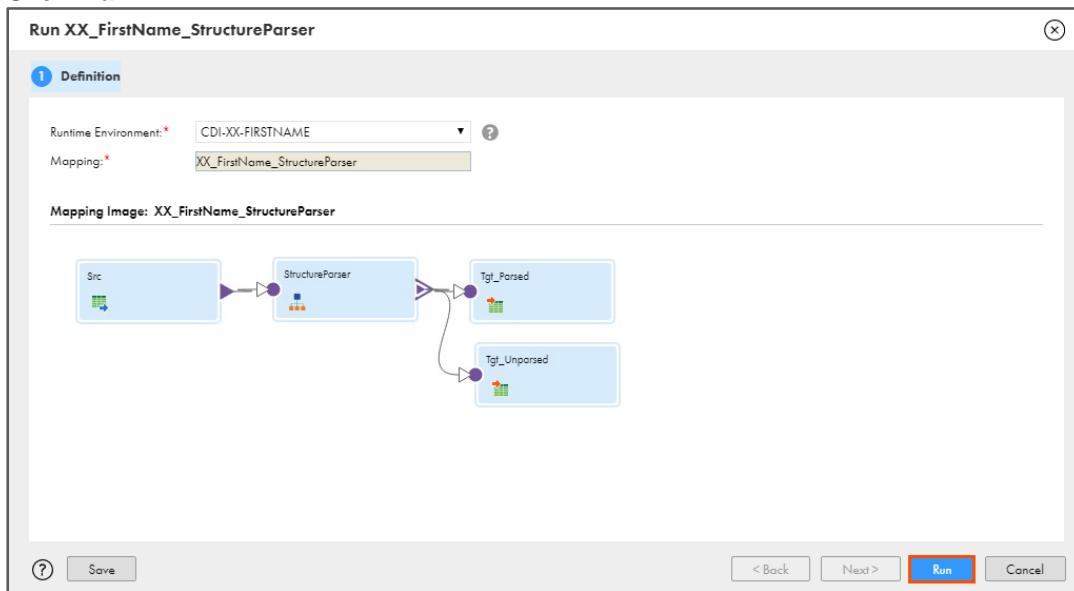


Note: The Run mapping window appears.

54. From the Runtime Environment drop-down, select your secure agent group.

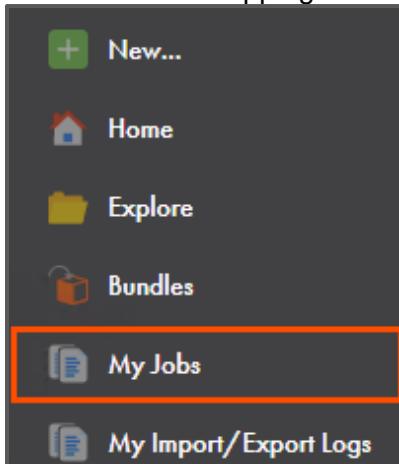


55. Click Run.



Monitor Status:

56. To monitor the mapping status, from the navigation pane, click **My Jobs**.



57. When the task completes, the status changes to **Success**.

Jobs (1 of 28)		Up to date	Updated 11:12:11 PM PDT			Find
Asset Name: XX_FirstName_Structur...		Add Field				
Instance Name	Subtasks	Start Time	End Time	Rows Processed	State	
XX_FirstName_StructureParser-1		Aug 1, 2019, ...	Aug 1, 2019, ...	7	Success	

Verify Results:

58. Go to **C:\IICSLabFiles**.
59. Verify that correct entries are written to the **ParsedData.txt** and **UnparsedData.txt** files.

 ParsedData.txt - Notepad
File Edit Format View Help
"FullName(firstName","FullName(lastName","Company_value","Company_state","Company_token","Department"
"Mary","Wilson","","NH","Trends","Logistics"

 UnparsedData.txt - Notepad
File Edit Format View Help
"unidentified"
"Tim Wood, Google, Logistics"
"www.google.com"
"Rose Gonzalez, Sony, Marketing"
"sean@edge.com"
"212-434-7910"
"Avi, Informatica, Sales"

This concludes the lab.

Module 15: IICS APIs

Lab 15-1: Running a Mapping Task using REST API

Overview:

API Connector uses the REST API to access programs and activities in Informatica Cloud and performs various tasks like login to IICS, run a task, and much more.

In this lab, you will use REST API to login to Informatica Cloud Org and obtain a Session ID. The Session ID allows you to run a Synchronization task.

Objective:

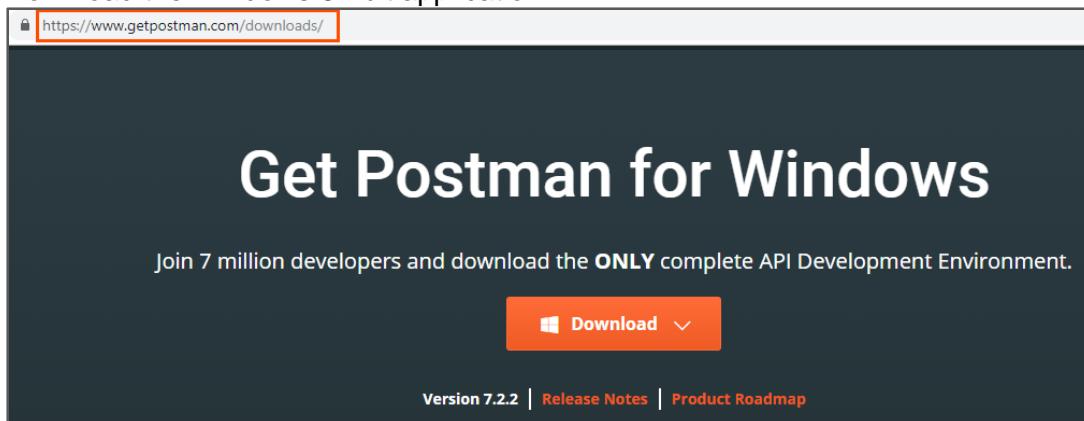
- Use a REST client application to call the login resource and obtain a session ID
- Start a Mapping task
- Log out of the Informatica Cloud API session

Duration:

30 minutes

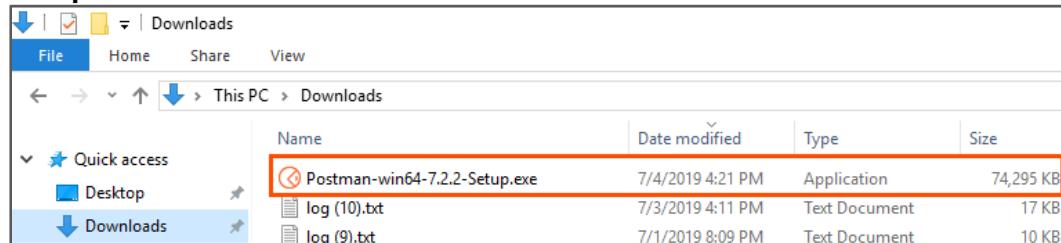
Tasks:**Install Postman:**

1. Open a web browser and enter the following URL:
<https://www.getpostman.com/downloads/>
Note: You can bookmark this link for future use.
2. Download the Windows 64-bit application.



3. Go to the Downloads directory on your local machine and locate the installation file.

4. To install Postman, double-click the downloaded executable file **Postman-win64-7.2.2-Setup.exe**.

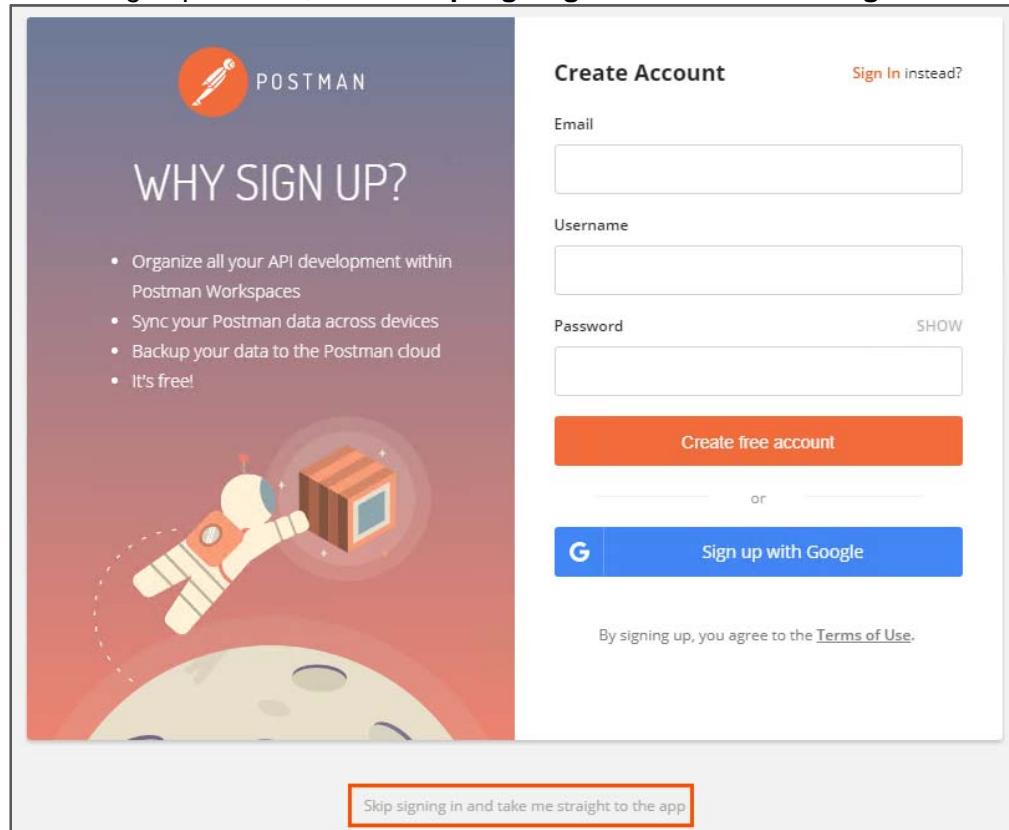


5. When the postman is installing, it displays the postman window.

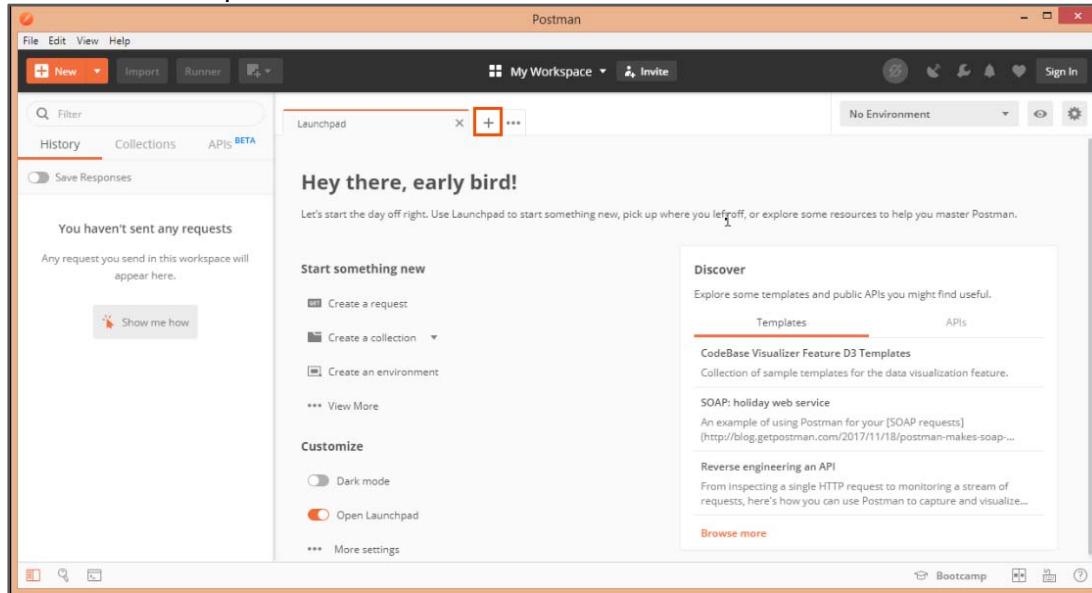


Note: After the installation is complete, the Postman application window appears.

6. On the sign up window, select **Skip signing in and take me straight to the app**.



7. Close the launchpad window and click .

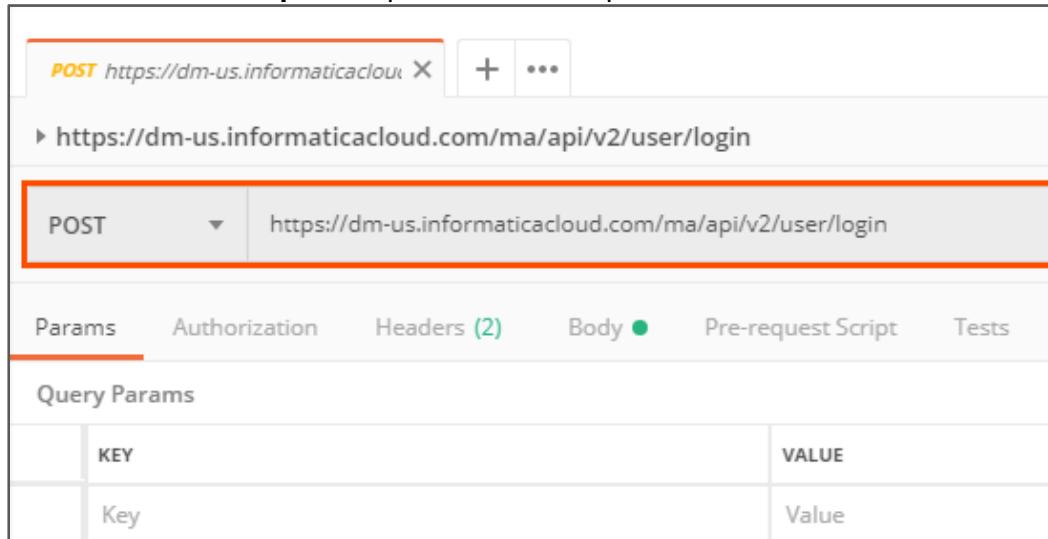


Send Login Request:

8. From the drop-down, select **POST**.
9. Enter the following URL in the request URL field:
<https://dm-us.informaticacloud.com/ma/api/v2/user/login>

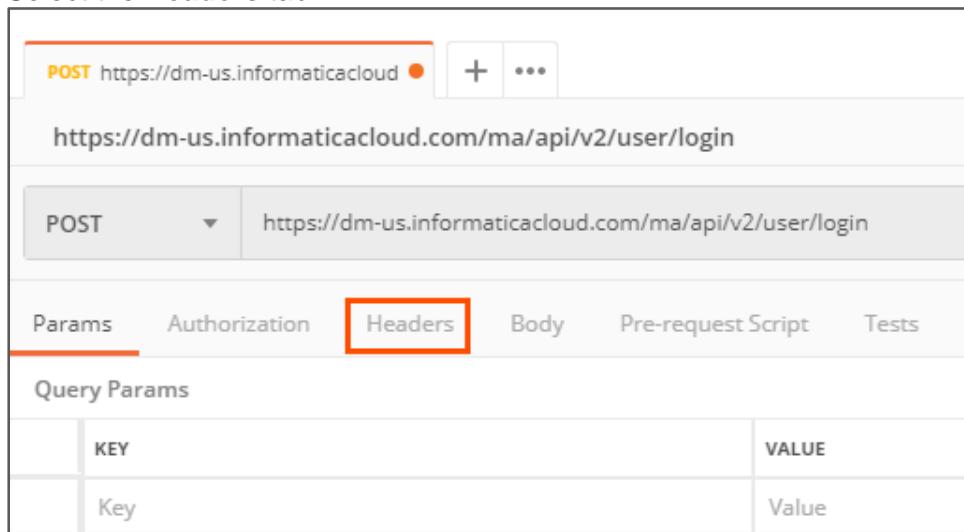
OR

Navigate to the **C:\Students\Commands** directory on your local machine and open the file named **31_LabGuide_RunningMappingTaskUsingRESTAPI_15**. Copy the URL mentioned under **Step 9** and paste it in the request URL field.



KEY	VALUE
Key	Value

10. Select the **Headers** tab.

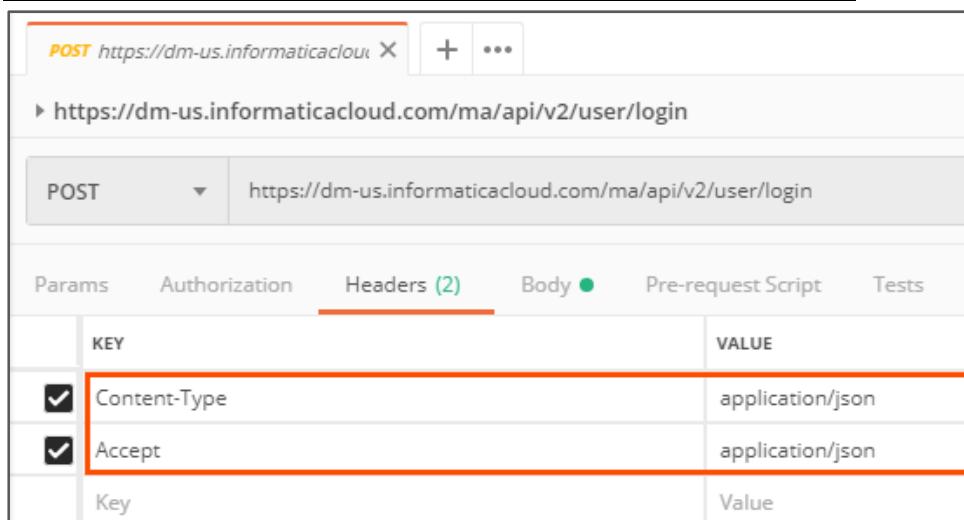


The screenshot shows the Postman interface for a POST request to <https://dm-us.informaticacloud.com/ma/api/v2/user/login>. The 'Headers' tab is highlighted with a red box. Below it, the 'Query Params' section is shown with a table:

KEY	VALUE
Key	Value

11. Enter Key and Value, as shown in the table below:

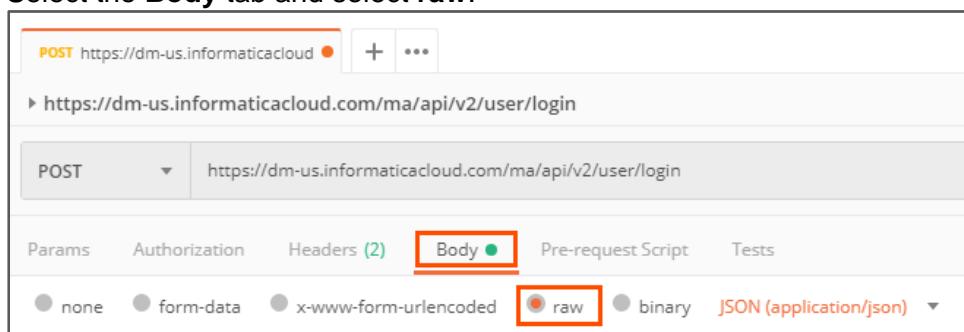
Key	Value
Content-Type	application/json
Accept	application/json



The screenshot shows the Postman interface for the same POST request. The 'Headers (2)' tab is highlighted with a green box. The 'Body' tab has a green dot next to it. Below, the 'Headers' table is shown with two rows selected (Content-Type and Accept), both highlighted with a red box:

KEY	VALUE
<input checked="" type="checkbox"/> Content-Type	application/json
<input checked="" type="checkbox"/> Accept	application/json
Key	Value

12. Select the **Body** tab and select **raw**.



The screenshot shows the Postman interface for the same POST request. The 'Body' tab is highlighted with a red box. Below, the 'Body' dropdown menu is open, showing options: none, form-data, x-www-form-urlencoded, raw (which is selected and highlighted with a red box), and binary. The 'JSON (application/json)' option is also visible.

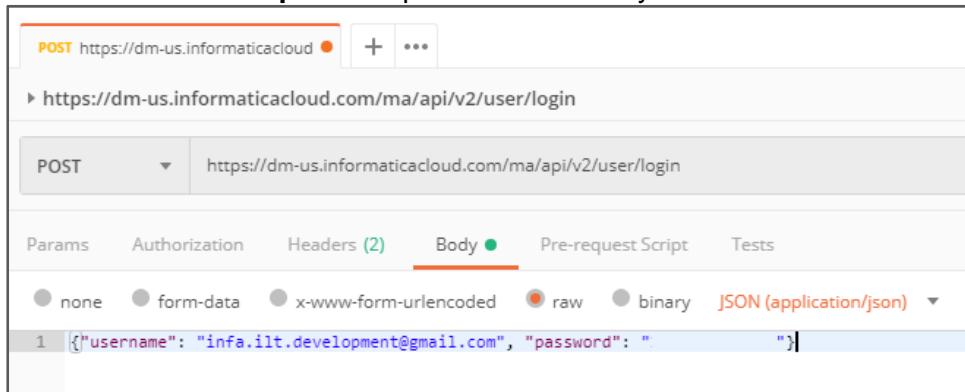
13. Enter the syntax mentioned below:

Note: In this syntax, username is your Informatica Cloud Username, and password is your Informatica Cloud Password.

{ "username": "< Informatica Cloud username>", "password": "< Informatica Cloud password>"}

OR

Navigate to the **C:\Students\Commands** directory on your local machine and open the file named **31_LabGuide_RunningMappingTaskUsingRESTAPI_15**. Copy the syntax mentioned under **Step 13** and paste it in the Body field.

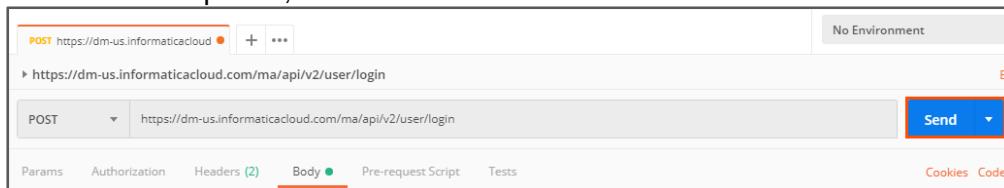


The screenshot shows a Postman interface with a POST request to `https://dm-us.informaticacloud.com/ma/api/v2/user/login`. The Headers tab is selected, showing `Content-Type: application/json`. The Body tab is selected, showing the following JSON payload:

```
{
  "username": "infa.ilt.development@gmail.com",
  "password": "*****"
}
```

Note: For this lab, the password is hidden.

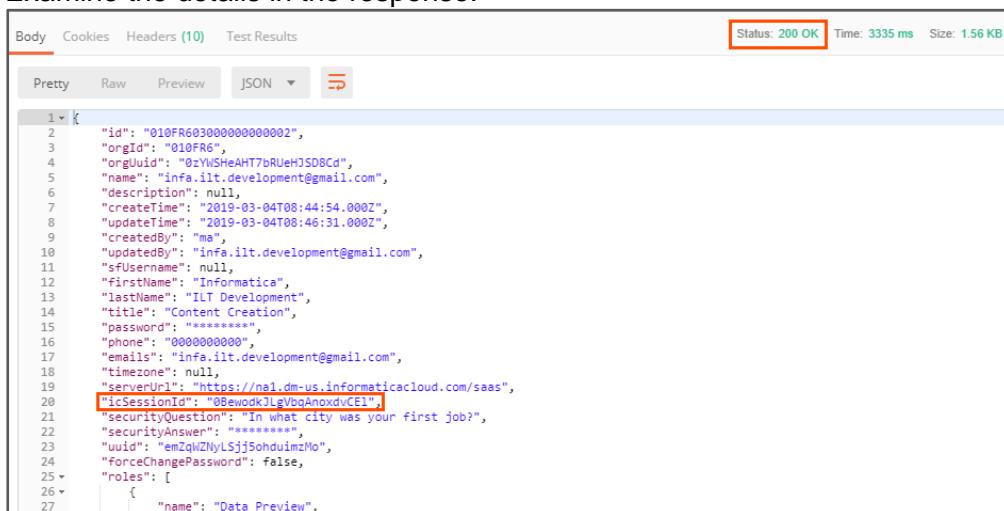
14. To view the response, click **Send**.



The screenshot shows the same Postman interface as above, but the **Send** button is highlighted with a red box.

15. The status of the response is **200 OK**.

16. Examine the details in the response.



The screenshot shows the Postman interface with the response details. The status is **200 OK**. The response body is a JSON object with many fields, including:

```

{
  "id": "010FR6030000000000002",
  "orgId": "010FR6",
  "orgUuid": "02yNSeAHT7bRUEHJSD8Cd",
  "name": "infa.ilt.development@gmail.com",
  "description": null,
  "createTime": "2019-03-04T08:44:54.000Z",
  "updateTime": "2019-03-04T08:46:31.000Z",
  "createdBy": "ma",
  "updatedBy": "infa.ilt.development@gmail.com",
  "sfUsername": null,
  "firstName": "Informatica",
  "lastName": "ILT Development",
  "title": "Content Creation",
  "password": "*****",
  "phone": "0000000000",
  "emails": "infa.ilt.development@gmail.com",
  "timezone": null,
  "serverUrl": "https://na1.dm-us.informaticacloud.com/saas",
  "icSessionId": "0BewodkI1gVbqAnoxdvCE1",
  "securityQuestion": "In what city was your first job?",
  "securityAnswer": "*****",
  "uuid": "emZqlvZhLSjj5ohduimzMo",
  "forceChangePassword": false,
  "roles": [
    {
      "name": "Data Preview",
      ...
    }
  ]
}

```

Note: From the response, note down the value for **icSessionId** in a notepad for future use.

Send Request to run a job:

17. To add a new tab, click 

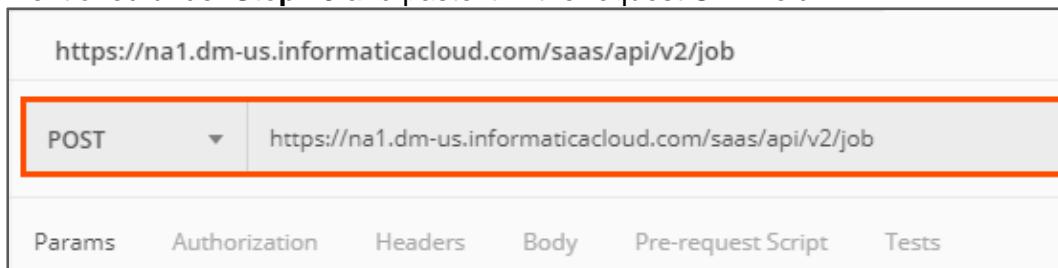
18. From the drop-down, select **POST**.

19. Enter the following URL in the request URL field:

<https://na1.dm-us.informaticacloud.com/saas/api/v2/job>

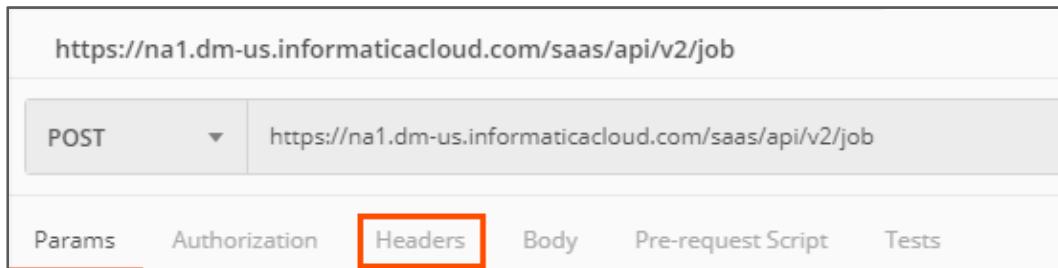
OR

Navigate to the **C:\Students\Commands** directory on your local machine and open the file named **31_LabGuide_RunningMappingTaskUsingRESTAPI_15**. Copy the URL mentioned under **Step 19** and paste it in the request URL field.



The screenshot shows the Postman interface. The URL `https://na1.dm-us.informaticacloud.com/saas/api/v2/job` is entered in the request URL field. The method dropdown is set to **POST**, which is highlighted with a red box. Below the header, there are tabs for **Params**, **Authorization**, **Headers**, **Body**, **Pre-request Script**, and **Tests**.

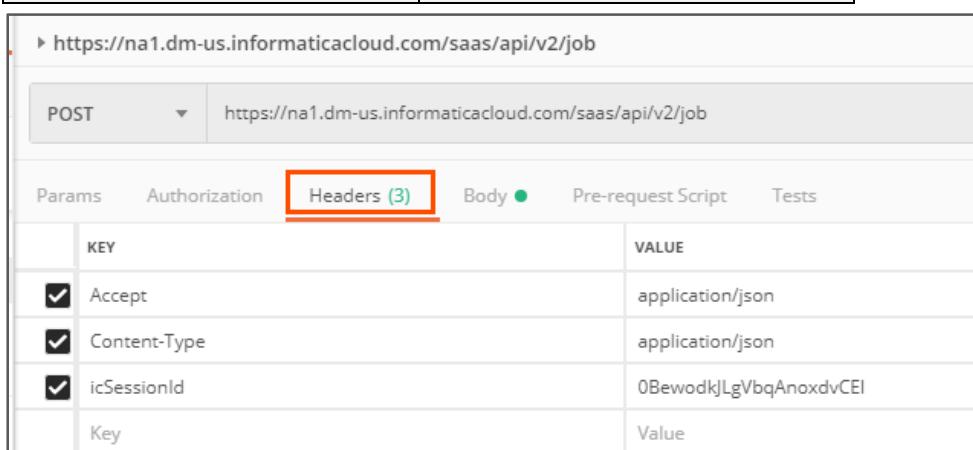
20. Select the **Headers** tab.



The screenshot shows the Postman interface with the **Headers** tab selected, highlighted with a red box. The URL and method remain the same as in the previous step.

21. Enter Key and Value, as shown in the table below:

Key	Value
Accept	application/json
Content-Type	application/json
icSessionId	Enter the icSessionId that you noted earlier



The screenshot shows the Postman interface with the **Headers** section expanded, containing three entries: **Accept**, **Content-Type**, and **icSessionId**. The **Headers (3)** tab is highlighted with a red box. Below the headers, there is a table for setting key-value pairs, with one row for the **icSessionId** entry.

KEY	VALUE
<input checked="" type="checkbox"/> Accept	application/json
<input checked="" type="checkbox"/> Content-Type	application/json
<input checked="" type="checkbox"/> icSessionId	0BewodkJLgVbqAnoxdvCEI
Key	Value

22. Select **Body** tab and select **raw**.

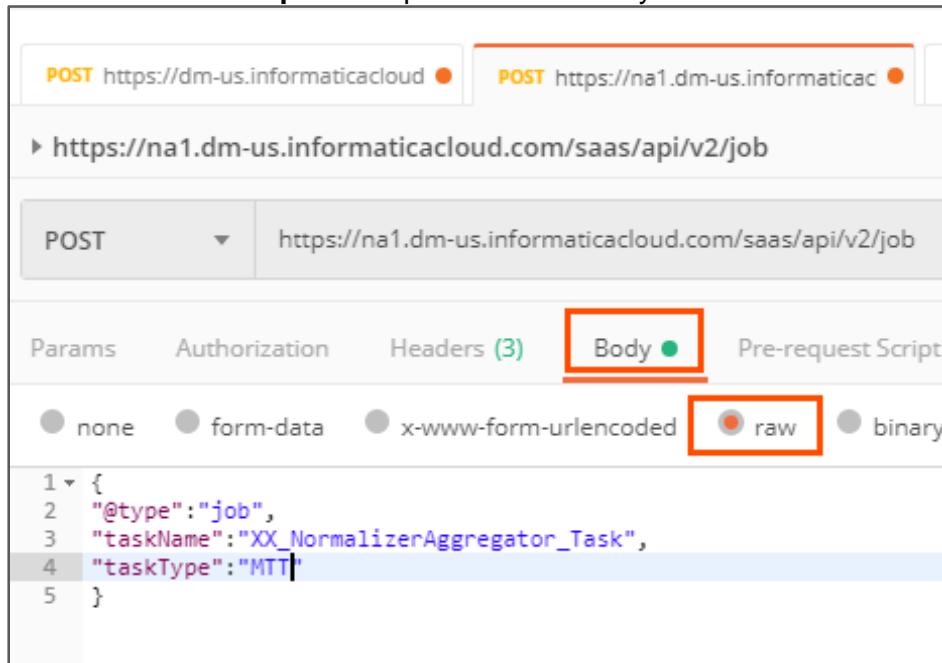
23. Enter the following syntax:

Note: In this syntax, the XX in `taskName` refers to your initials.

```
{
  "@type": "job",
  "taskName": "XX_NormalizerAggregator_Task",
  "taskType": "MTT"
}
```

OR

Navigate to the **C:\Students\Commands** directory on your local machine and open the file named **31_LabGuide_RunningMappingTaskUsingRESTAPI_15**. Copy the syntax mentioned under **Step 23** and paste it in the Body field.



The screenshot shows the Postman application interface. A top navigation bar has two 'POST' buttons: one for `https://dm-us.informaticacloud` and one for `https://na1.dm-us.informaticacloud`. Below this is a header bar with the URL `https://na1.dm-us.informaticacloud.com/saas/api/v2/job`. The main area shows a POST request to the same URL. The 'Body' tab is active and highlighted with a red box. Underneath, the 'raw' radio button is selected and also highlighted with a red box. The JSON payload is displayed in the body field:

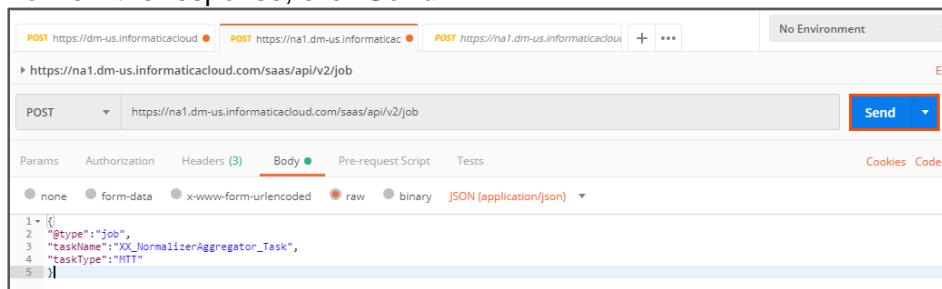
```

1 {
2   "@type": "job",
3   "taskName": "XX_NormalizerAggregator_Task",
4   "taskType": "MTT"
5 }

```

Note: The taskname will be same as the taskname in IICS.

24. To view the response, click **Send**.



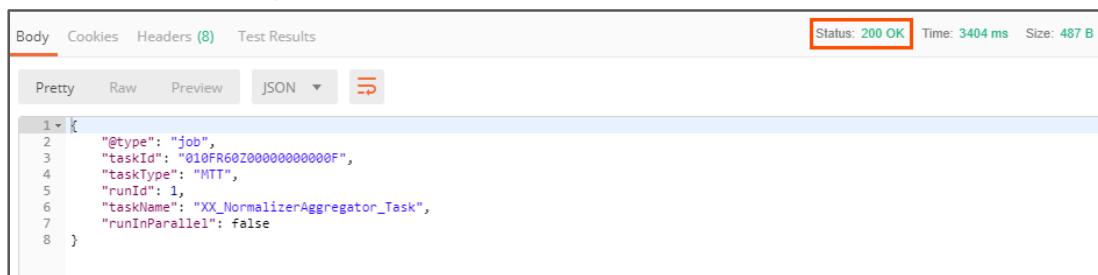
The screenshot shows the Postman application interface again. The 'Send' button is highlighted with a red box. The JSON payload from the previous step is still present in the body field:

```

1 {
2   "@type": "job",
3   "taskName": "XX_NormalizerAggregator_Task",
4   "taskType": "MTT"
5 }

```

25. The status of the response is **200 OK**.



The screenshot shows a browser developer tools Network tab. At the top, there are tabs for Body, Cookies, Headers (8), and Test Results. On the right, it displays the status: **Status: 200 OK**, Time: 3404 ms, and Size: 487 B. Below the tabs, there are buttons for Pretty, Raw, Preview, and JSON, with JSON currently selected. The main area shows a JSON response with the following content:

```

1 <-
2   "@type": "job",
3   "taskId": "010FR60Z0000000000F",
4   "taskType": "MTT",
5   "runId": 1,
6   "taskName": "XX_NormalizerAggregator_Task",
7   "runInParallel": false
8 }

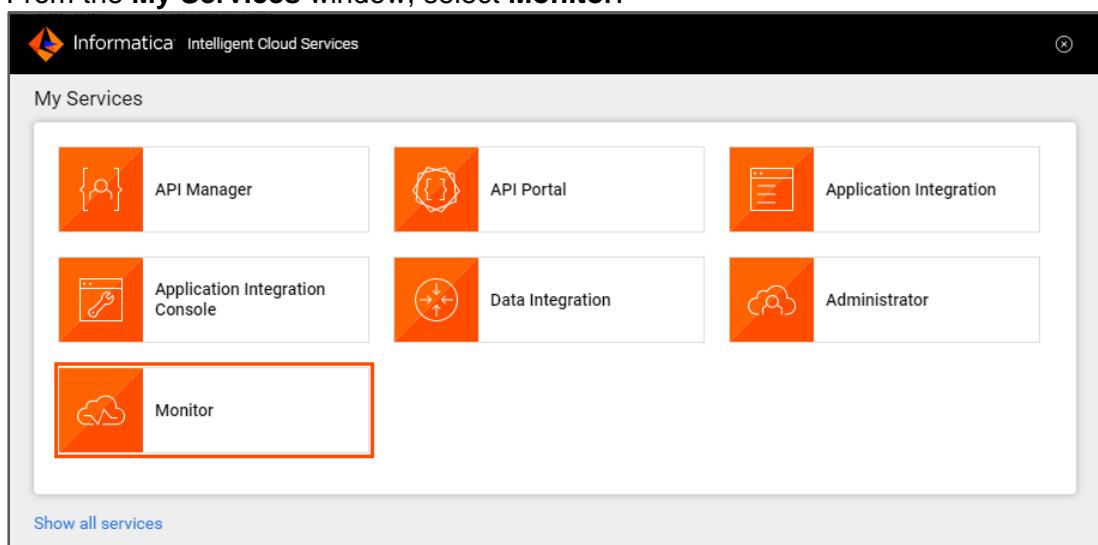
```

26. Open the IICS Login page from the Bookmarks bar.

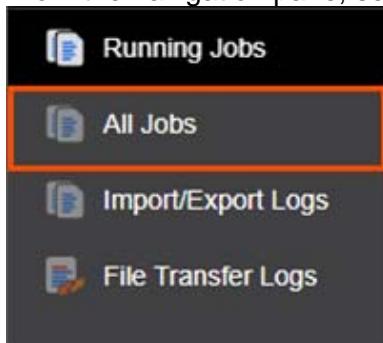
Note: Follow this step if you have navigated away from the login page.

27. Enter the login credentials provided by the Instructor and click **Log In**.

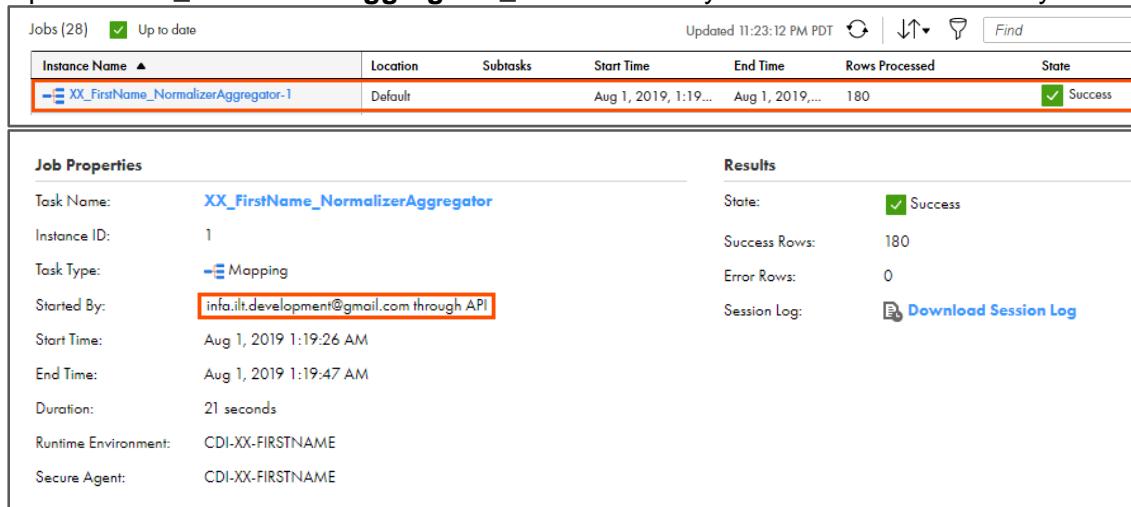
28. From the **My Services** window, select **Monitor**.



29. From the navigation pane, select **All Jobs**.



30. Open the **XX_NormalizerAggregator_Task** and verify that the task is started by API.



The screenshot shows the Informatica University Jobs (28) page. A specific job instance, "XX_FirstName_NormalizerAggregator-1", is highlighted with an orange border. The details for this job are displayed in a modal window:

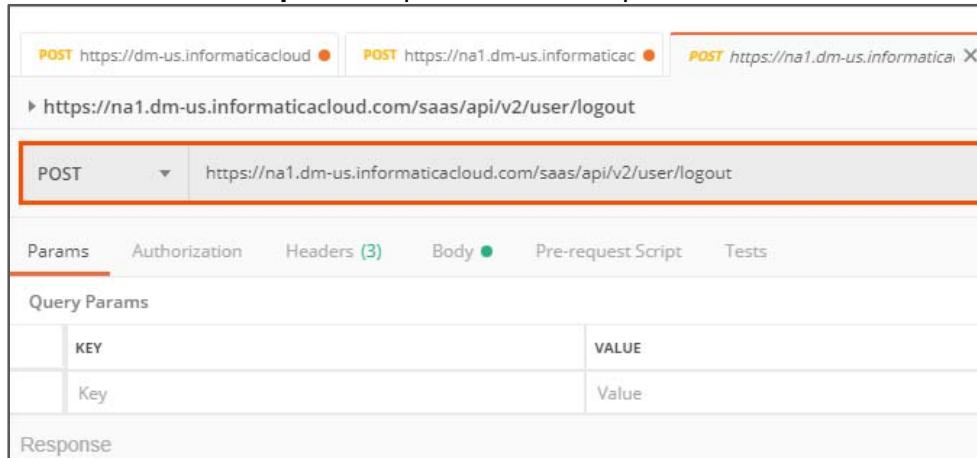
Job Properties		Results	
Task Name:	XX_FirstName_NormalizerAggregator	State:	Success
Instance ID:	1	Success Rows:	180
Task Type:	Mapping	Error Rows:	0
Started By:	info.ilt.development@gmail.com through API	Session Log:	Download Session Log
Start Time:	Aug 1, 2019 1:19:26 AM		
End Time:	Aug 1, 2019 1:19:47 AM		
Duration:	21 seconds		
Runtime Environment:	CDI-XX-FIRSTNAME		
Secure Agent:	CDI-XX-FIRSTNAME		

Send Request to Logout:

31. In Postman, to add a new tab, click .
32. From the drop-down, select **POST**.
33. Enter the following URL in the request URL field:
<https://na1.dm-us.informaticacloud.com/saas/api/v2/user/logout>

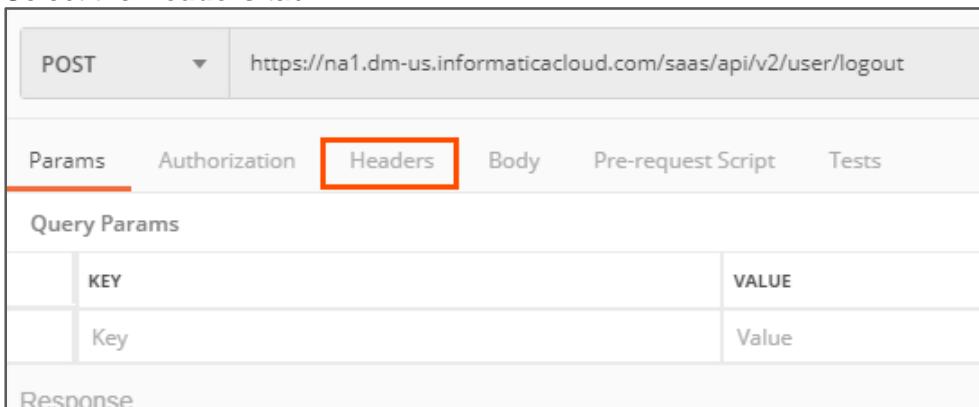
OR

Navigate to the **C:\Students\Commands** directory on your local machine and open the file named **31_LabGuide_RunningMappingTaskUsingRESTAPI_15**. Copy the URL mentioned under **Step 33** and paste it in the request URL field.



The screenshot shows the Postman interface with a single request tab open. The request method is set to **POST**, and the URL is <https://na1.dm-us.informaticacloud.com/saas/api/v2/user/logout>. The "Params" tab is selected, showing a single query parameter named "Key".

34. Select the **Headers** tab.

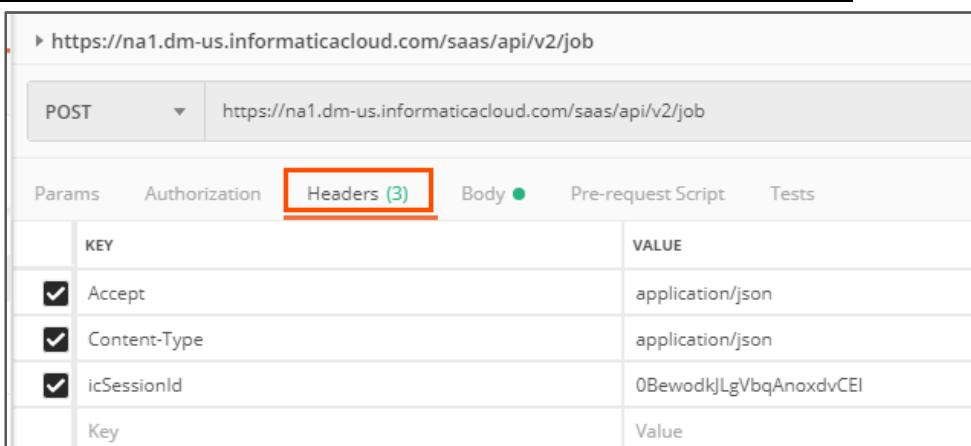


The screenshot shows the Postman interface with a POST request to <https://na1.dm-us.informaticacloud.com/saas/api/v2/user/logout>. The 'Headers' tab is selected, indicated by a red box. Below it, the 'Query Params' section is shown with an empty table:

KEY	VALUE
Key	Value

35. Enter Key and Value, as shown in the table below:

Key	Value
Accept	application/json
Content-Type	application/json
icSessionId	Enter the icSessionId that you noted earlier



The screenshot shows the Postman interface with a POST request to <https://na1.dm-us.informaticacloud.com/saas/api/v2/job>. The 'Headers' tab is selected, indicated by a red box. Below it, the 'Body' tab is selected with a green dot. The 'Headers' table contains three rows with checked keys:

KEY	VALUE
<input checked="" type="checkbox"/> Accept	application/json
<input checked="" type="checkbox"/> Content-Type	application/json
<input checked="" type="checkbox"/> icSessionId	0BewodkJLgVbqAnoxdvCEI
Key	Value

36. Select the **Body** tab and select **raw**.

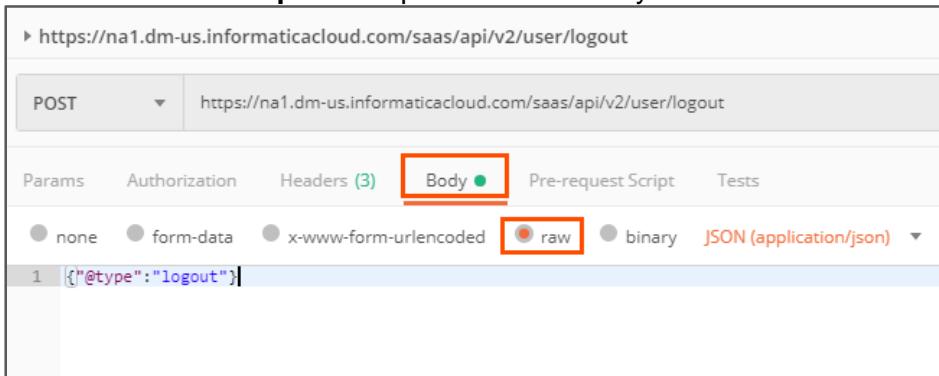
37. Enter the following syntax:

`{"@type":"logout"}`

OR

Navigate to the **C:\Students\Commands** directory on your local machine and open the file named **31_LabGuide_RunningMappingTaskUsingRESTAPI_15**. Copy the syntax

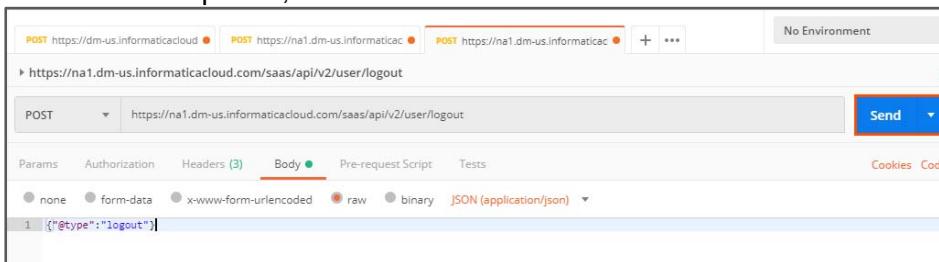
mentioned under **Step 37** and paste it in the Body field.



The screenshot shows the Postman interface for a POST request to `https://na1.dm-us.informaticacloud.com/saas/api/v2/user/logout`. The 'Body' tab is selected, indicated by a red box. The raw JSON data is pasted into the body field:

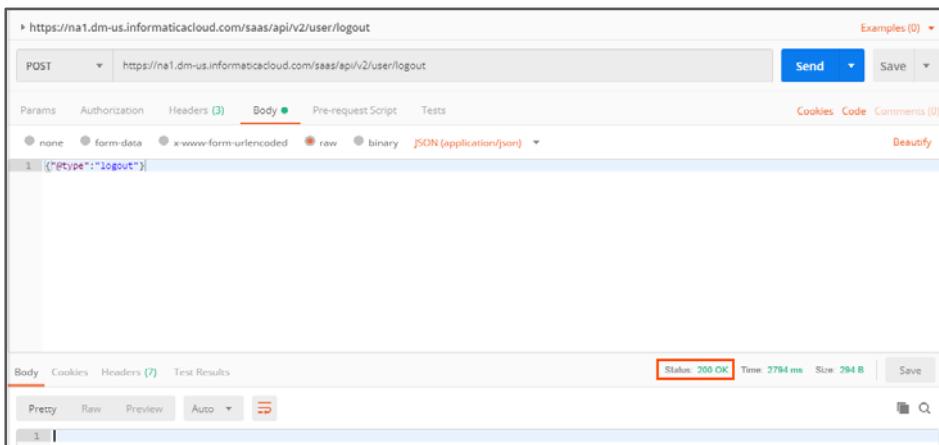
```
1 [{"@type": "logout"}]
```

38. To view the response, click **Send**.



The screenshot shows the Postman interface after clicking the 'Send' button, indicated by a red box. The status bar at the bottom shows 'Status: 200 OK'.

39. The status of the response is **200 OK**.



The screenshot shows the Postman interface after sending the request. The status bar at the bottom indicates a successful response: 'Status: 200 OK'.

Note: There is no response in body for logout request.

This concludes the lab.

Module 16: Exception Handling

Lab 16-1: Creating a Mapping to Handle Non-fatal Errors

Overview:

IICS offers various functions to handle non-fatal errors.

In this lab, you will create a mapping and use error handling functions in the mapping.

Objective:

- Configure a mapping to handle non-fatal errors

Duration:

35 minutes

Tasks:**Copy Source Files:**

- Copy the following files from the CDI Lab Prep Files folder available on your desktop and paste it in your flat file directory (C:\IICSLabFiles):

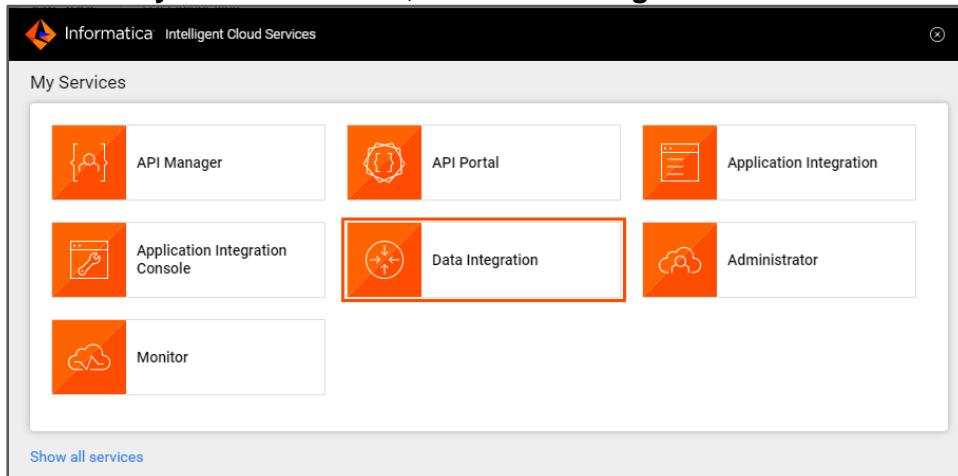
Files
Error Handling.csv
Valid_Data.csv
Invalid_Data.csv

Create Mapping:

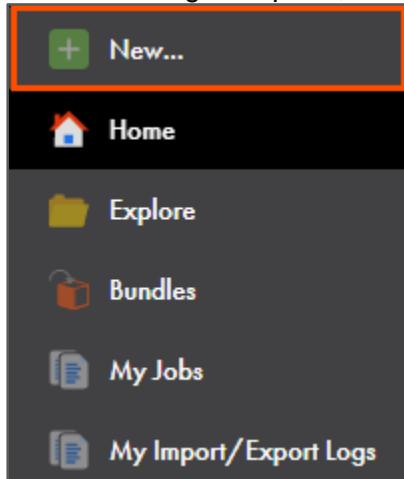
- Open the IICS Login page from the Bookmarks bar.

Note: Follow this step if you have navigated away from the login page.

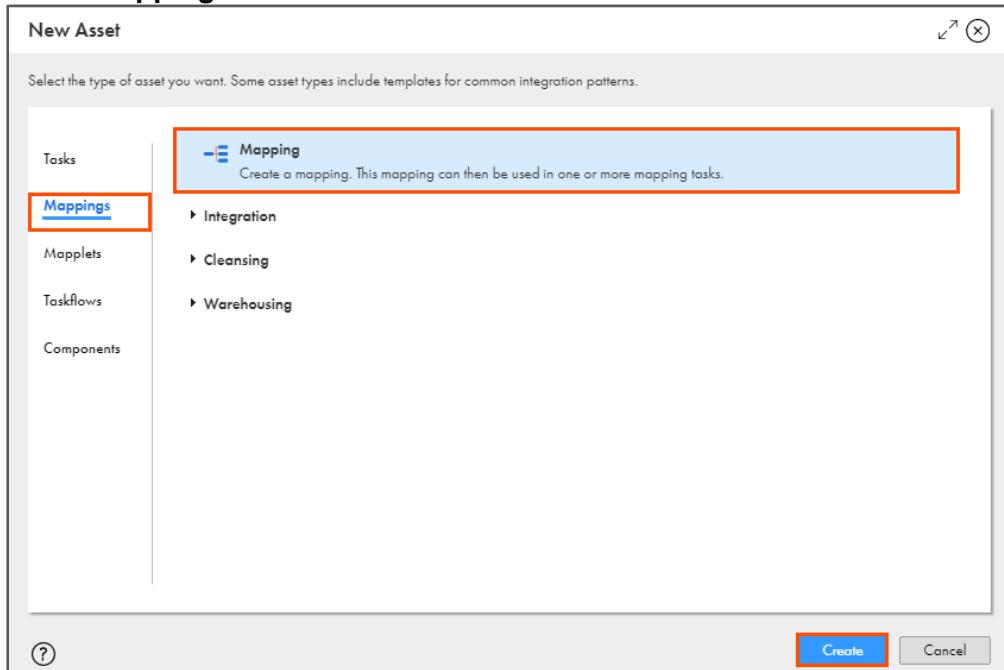
- Enter the login credentials provided by the Instructor and click **Log In**.
- From the **My Services** window, select **Data Integration**.



5. From the navigation pane, select **New**.

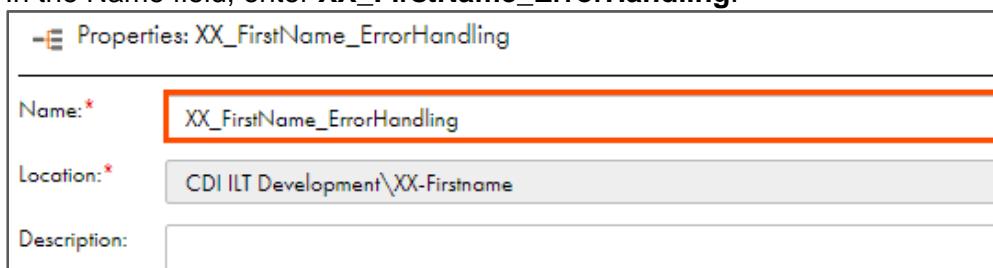


6. From the New Asset window, click the **Mappings** tab.
 7. Select **Mapping** and click **Create**.



Note: The Mapping page appears.

8. In the Name field, enter **XX_FirstName_ErrorHandling**.



Note: Here, XX refers to your initials, and FIRSTNAME refers to your First Name.

9. To configure the source, from the mapping canvas, click the **Source** transformation.

10. In the **General** section of the Source properties, retain the Name as **Source**.



11. From the properties pane, click **Source**.

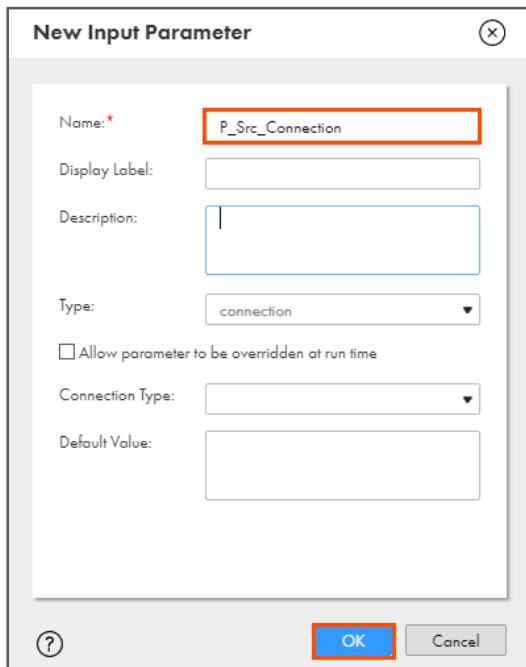
12. To create a new connection parameter, click **New Parameter**.



Note: The New Parameter window appears.

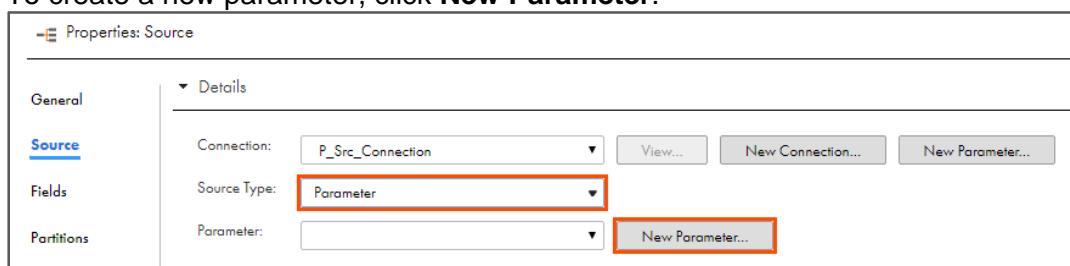
13. Enter Name as **P_Src_Connection**.

14. Click **OK**.



15. From the Source Type drop-down, select **Parameter**.

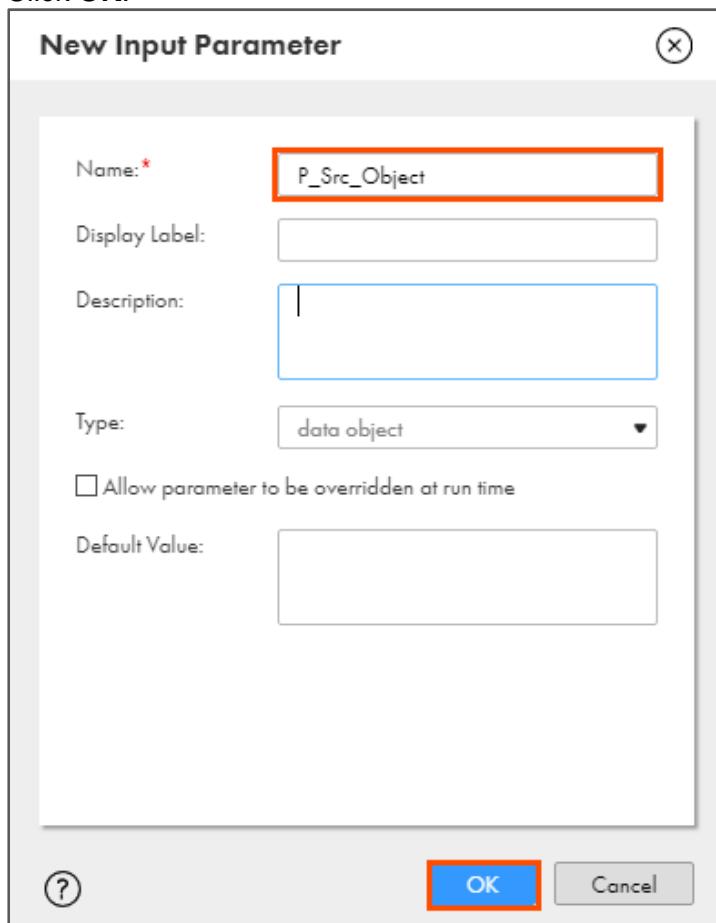
16. To create a new parameter, click **New Parameter**.



Note: The New Input Parameter window appears.

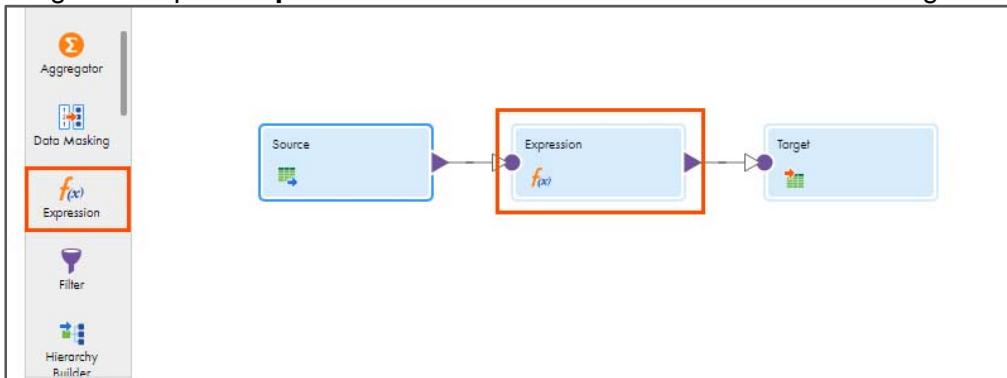
17. Enter the Name as **P_Src_Object**.

18. Click **OK**.

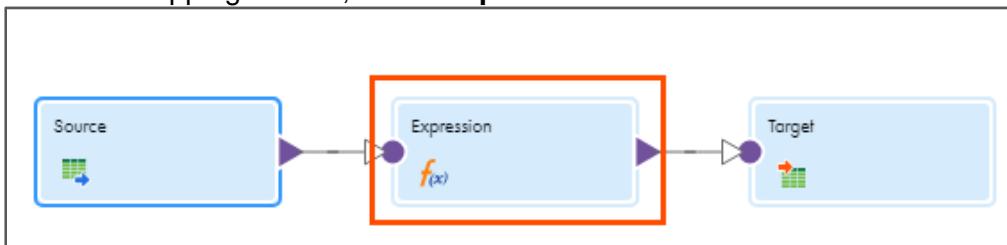


Add Expression Transformation:

19. Drag and drop an **Expression** transformation between Source and Target.



20. From the mapping canvas, select **Expression**.

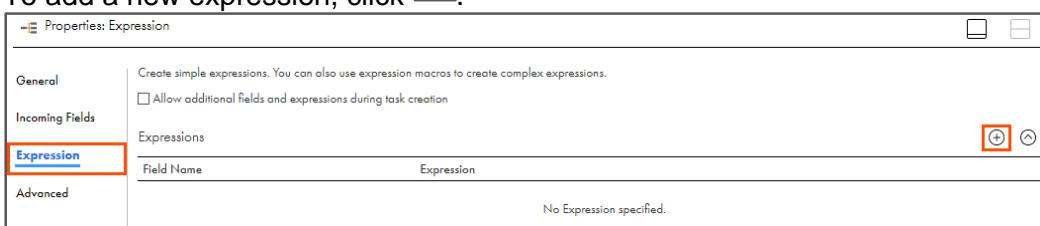


21. In the **General** section of the Expression properties, enter the Name as **Exp_Validation**.



22. From the properties pane, click **Expression**.

23. To add a new expression, click .

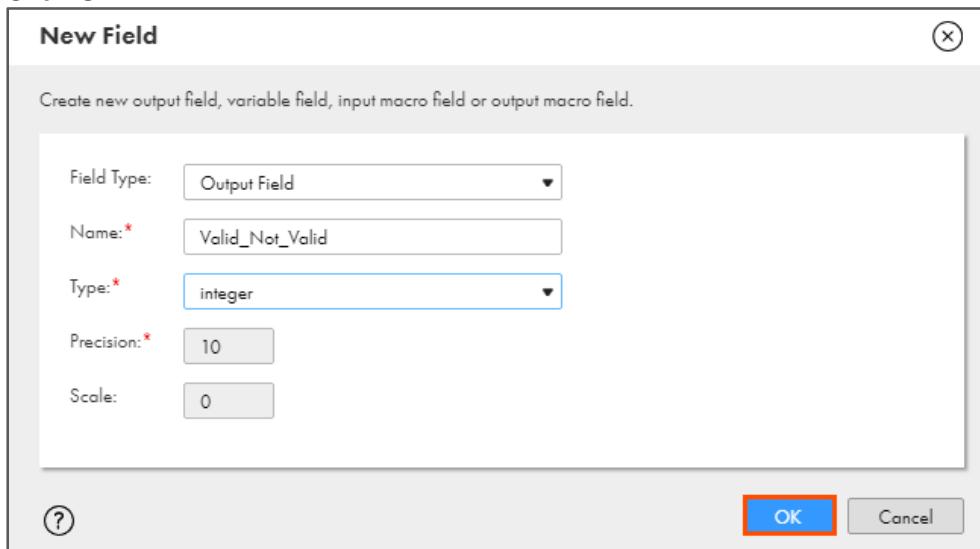


Note: The New Field window appears.

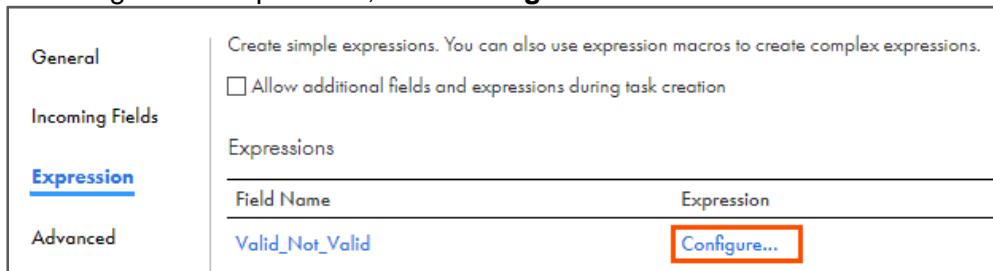
24. Enter the details as shown in table below:

Field Type	Name	Type	Precision	Scale
Output Field	Valid_Not_Valid	integer	10	0

25. Click **OK**.



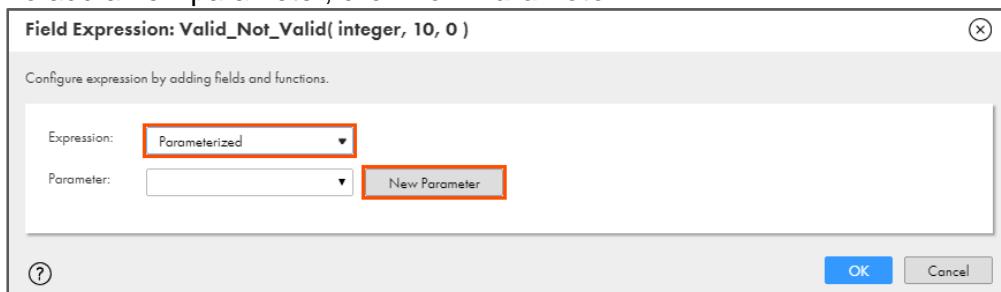
26. To configure the expression, click **Configure**.



Note: The Field Expression window appears.

27. From the Expression drop-down, select **Parameterized**.

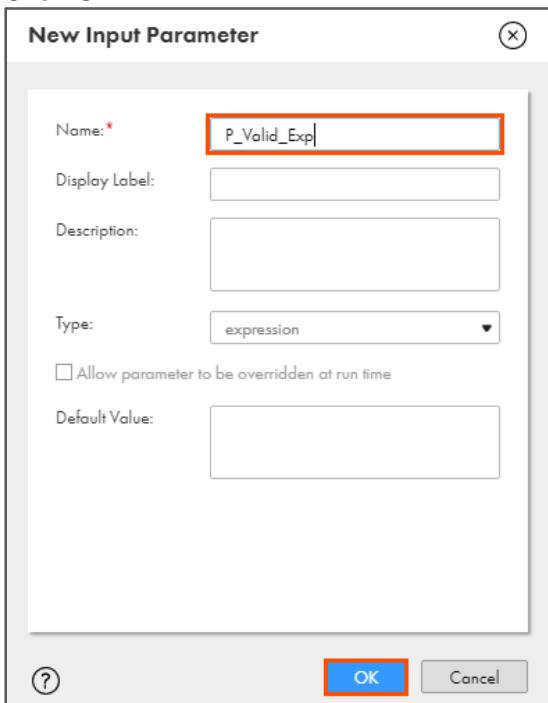
28. To add a new parameter, click **New Parameter**.



Note: The New Input Parameter window appears.

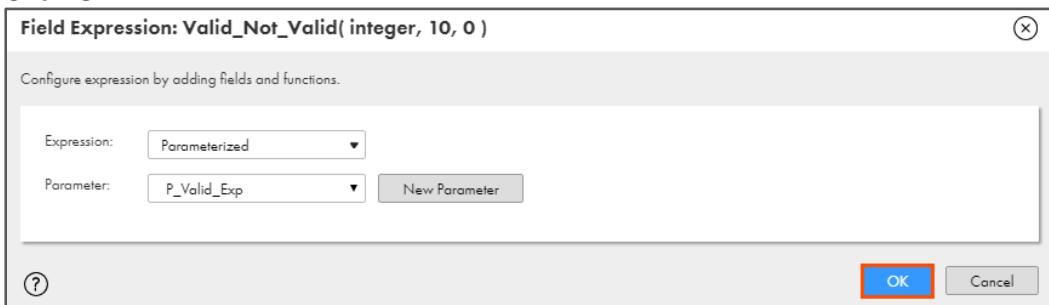
29. Enter Name as **P_Valid_Exp**.

30. Click **OK**.



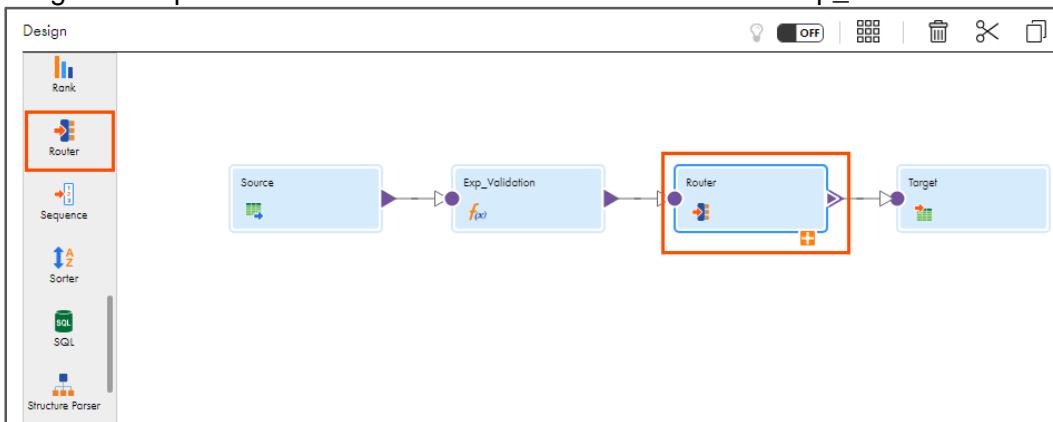
Note: This action redirects you to the Field Expression window.

31. Click **OK**.

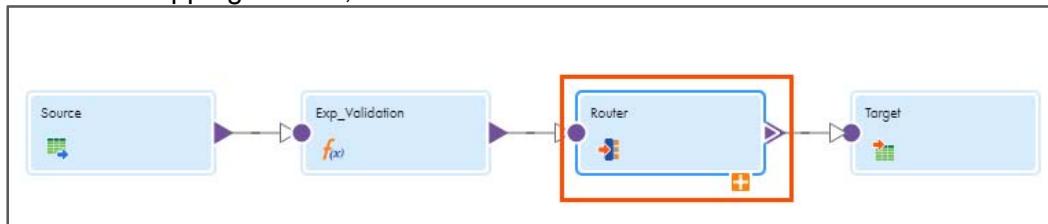


Add a Router Transformation:

32. Drag and drop a **Router** transformation on the link between **Exp_Validation** and **Target**.



33. From the mapping canvas, select **Router**.



34. In the **General** section of the Router properties, enter the Name as **Valid_Invalid**.

Properties	 Valid_Invalid
General	Name: * Valid_Invalid
Incoming Fields	Description:

35. From the properties pane, click **Output Groups**.

36. To add an output group, click .

General	Output Groups	
Incoming Fields	Group Name Condition	
Output Groups	DEFAULT1	
Advanced		

Note: You cannot edit the DEFAULT1 group.

37. In the Group Name field, enter the name as **Invalid_Records**.

38. To configure the output group, click **Configure**.

General	Output Groups
Incoming Fields	Group Name Condition
Output Groups	DEFAULT1
Advanced	Invalid_Records 

Note: The Edit Filter Condition for Invalid_Records appears.

39. Retain the Filter Condition as **Simple**.

40. To add a filter condition, click .

Edit Filter Condition for Invalid_Records

Field Name	Operator	Value
No filter condition specified.		

Filter Condition: Simple 

41. Enter the filter condition, as shown in the table below:

Field Name	Operator	Value
Valid_Not_Valid	=	1

42. Click **OK**.

Edit Filter Condition for Invalid_Records

Field Name	Operator	Value
Valid_Not_Valid	=	1

Filter Condition: Simple 

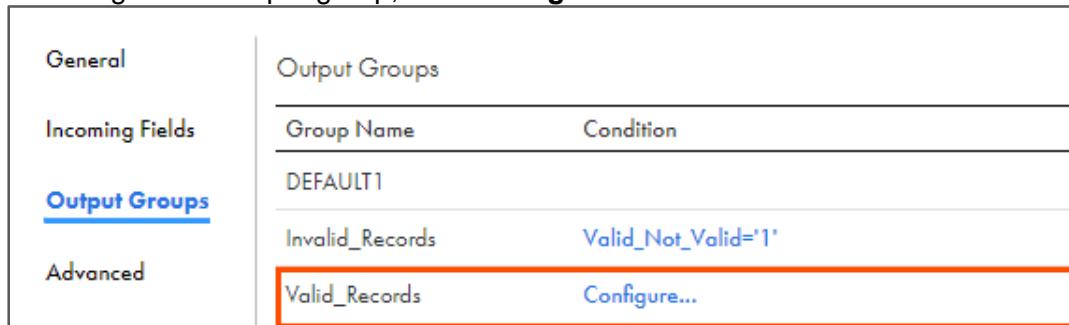
  

43. Add another output group.

General	Output Groups
Incoming Fields	Group Name Condition
<u>Output Groups</u>	DEFAULT1
Advanced	Invalid_Records Valid_Not_Valid='1' 

44. In the Group Name field, enter another group name as **Valid_Records**.

45. To configure the output group, click **Configure**.

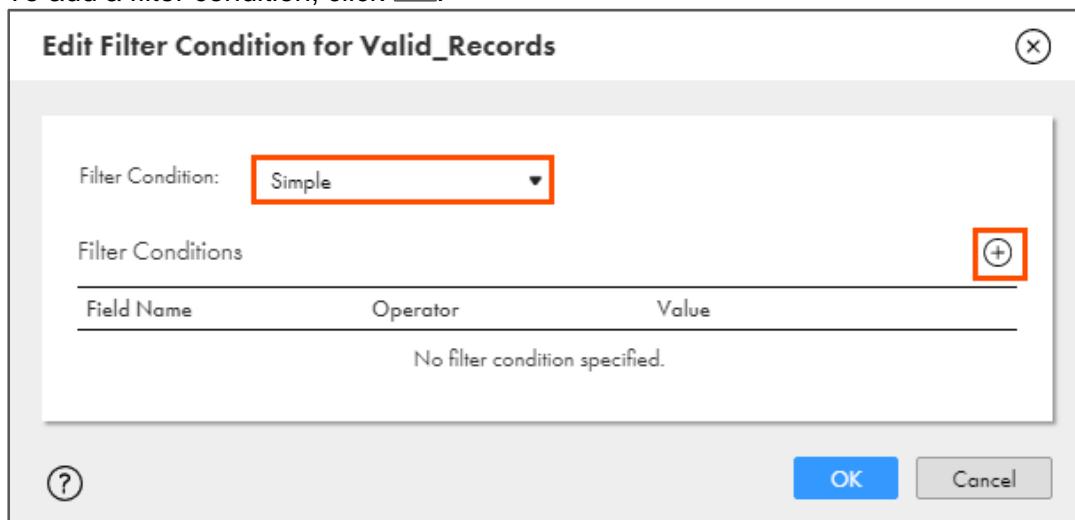


Group Name	Condition
DEFAULT1	
Invalid_Records	Valid_Not_Valid='1'
Valid_Records	Configure...

Note: The Edit Filter Condition for Valid_Records appears.

46. Retain the Filter Condition as **Simple**.

47. To add a filter condition, click .

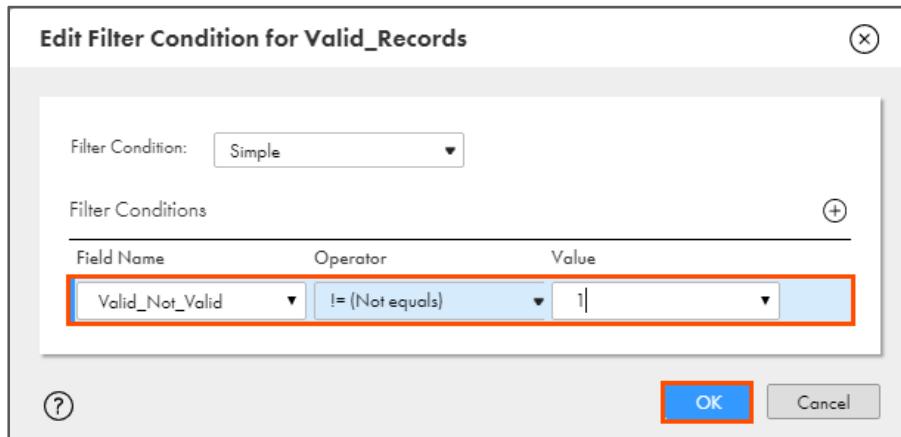


Field Name	Operator	Value
Valid_Not_Valid	!=	1

48. Enter the filter condition, as shown in the table below:

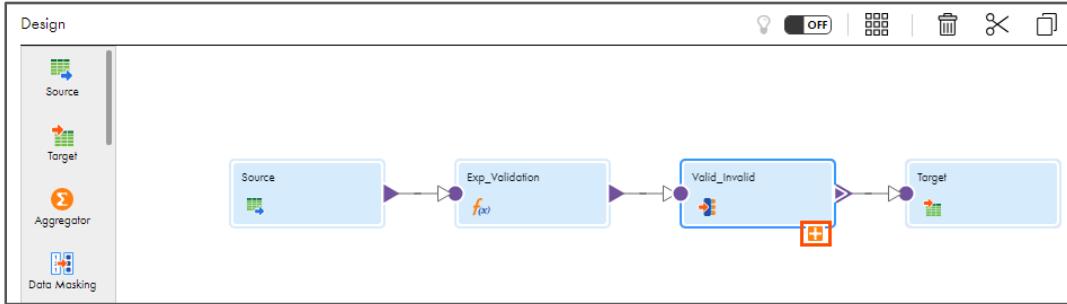
Field Name	Operator	Value
Valid_Not_Valid	!=	1

49. Click **OK**.

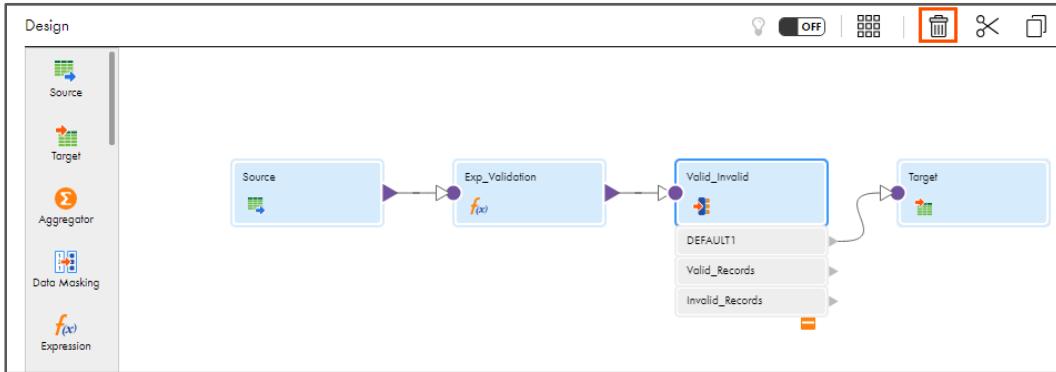


Field Name	Operator	Value
Valid_Not_Valid	!= {Not equals}	1

50. In the mapping canvas, for the router transformation, click .

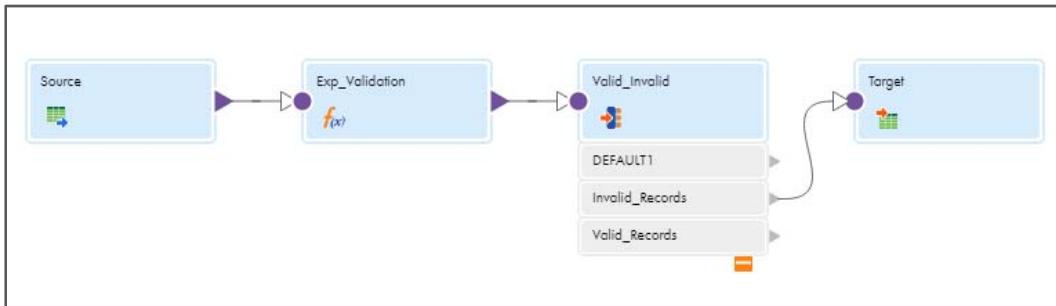


51. To delete the link between DEFAULT1 and Target, select the link, and click .

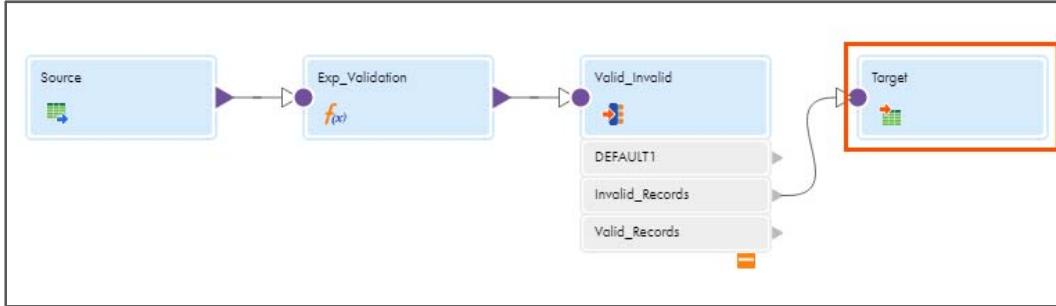


Note: Skip this step, if the link between DEFAULT1 and Target is already deleted.

52. Link **Invalid_Records** with the Target transformation.



53. To configure the target, from the mapping canvas, click the **Target** transformation.



54. In the General section of the Target properties, enter Name as **Tgt_Invalid**.



Properties	
General	Name: * Tgt_Invalid
Incoming Fields	Description:

55. From the properties pane, click **Target**.

56. To create a new connection parameter, click **New Parameter**.

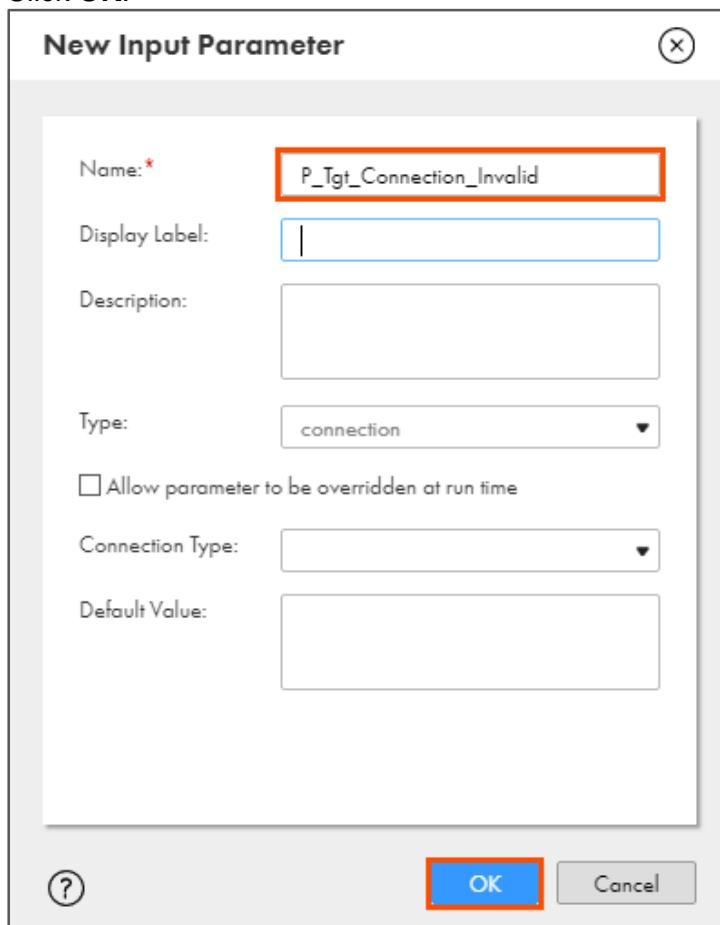


General		Details		
Incoming Fields	Connection:	View...	New Connection...	New Parameter...
Target	Target Type:			
Target Fields	Advanced			
Field Mapping				

Note: The New Parameter window appears.

57. Enter Name as **P_Tgt_Connection_Invalid**.

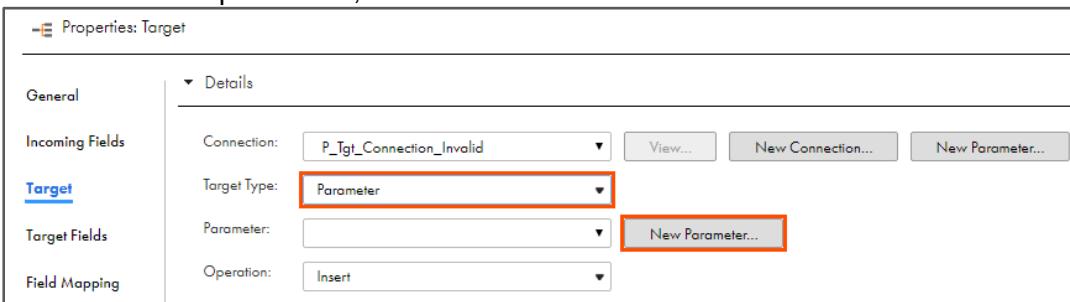
58. Click **OK**.



New Input Parameter	
Name: *	P_Tgt_Connection_Invalid
Display Label:	
Description:	
Type:	connection
<input type="checkbox"/> Allow parameter to be overridden at run time	
Connection Type:	
Default Value:	
<input style="border: none; border-radius: 50%; width: 20px; height: 20px; vertical-align: middle;" type="button" value="?"/> <input style="border: 2px solid #0070C0; background-color: #0070C0; color: white; border-radius: 5px; padding: 5px 10px; margin-right: 10px; vertical-align: middle;" type="button" value="OK"/> <input style="border: none; border-radius: 5px; padding: 5px 10px; vertical-align: middle;" type="button" value="Cancel"/>	

59. From the Target Type drop-down, select **Parameter**.

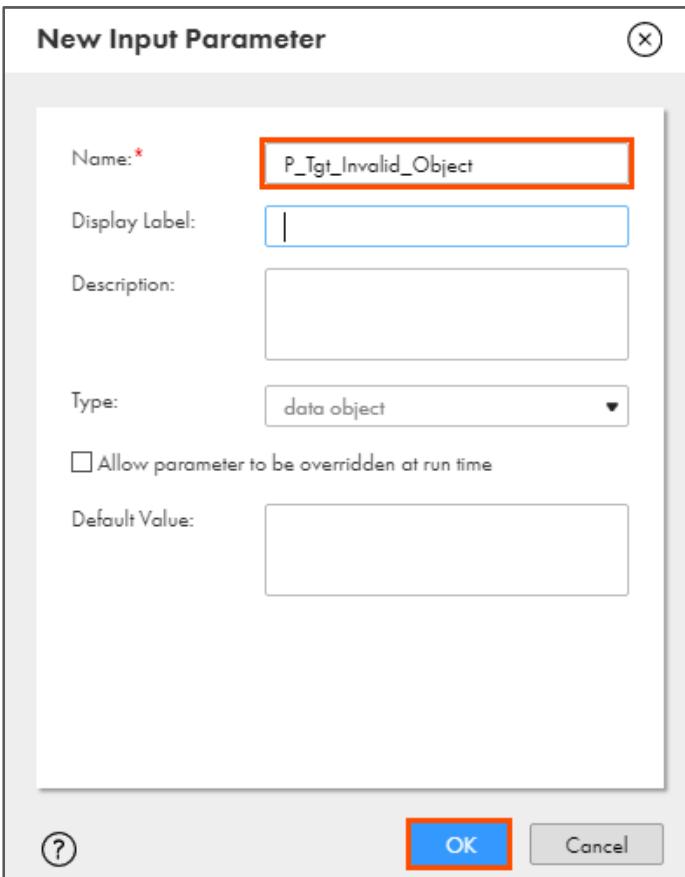
60. To create a new parameter, click **New Parameter...**



Note: The New Input Parameter window appears.

61. Enter Name as **P_Tgt_Invalid_Object**.

62. Click **OK**.



63. Retain Operation as **Insert**.



64. From the properties pane, click **Field Mapping**.

65. From the Field map options drop-down, select **Completely Parameterized**.



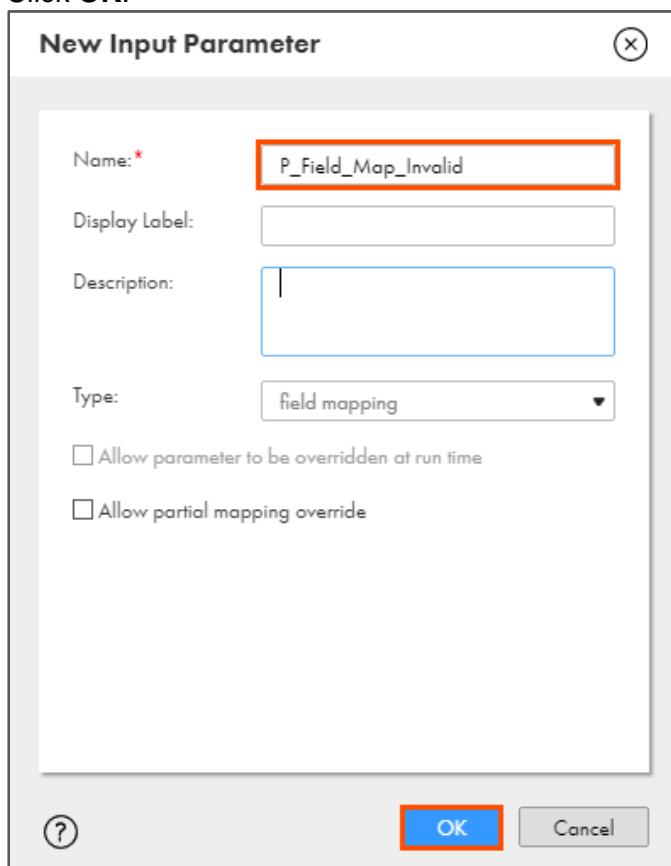
66. To create a new parameter, click **New Parameter**.



Note: The New Input Parameter window appears.

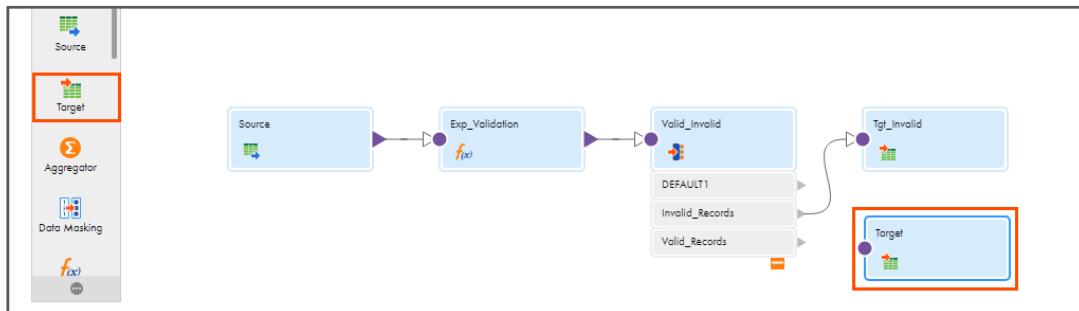
67. Enter Name as **P_Field_Map_Invalid**.

68. Click **OK**.

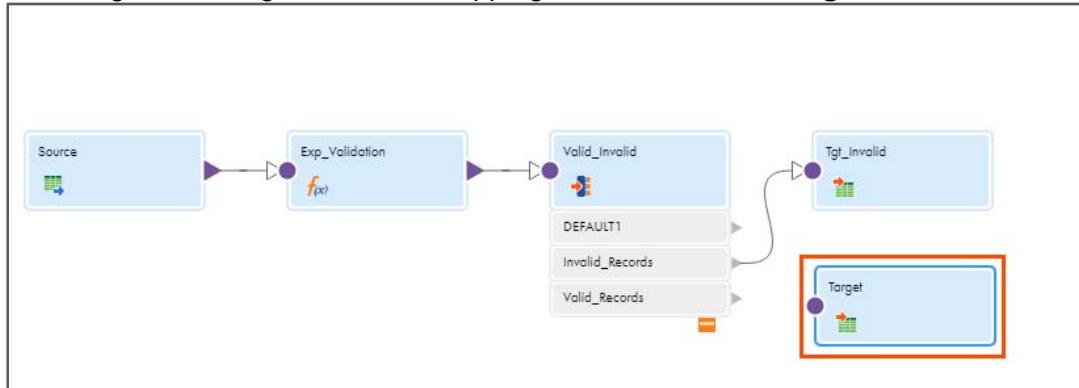


Add Target Transformation:

69. Drag and drop the **Target** transformation on to the mapping canvas.



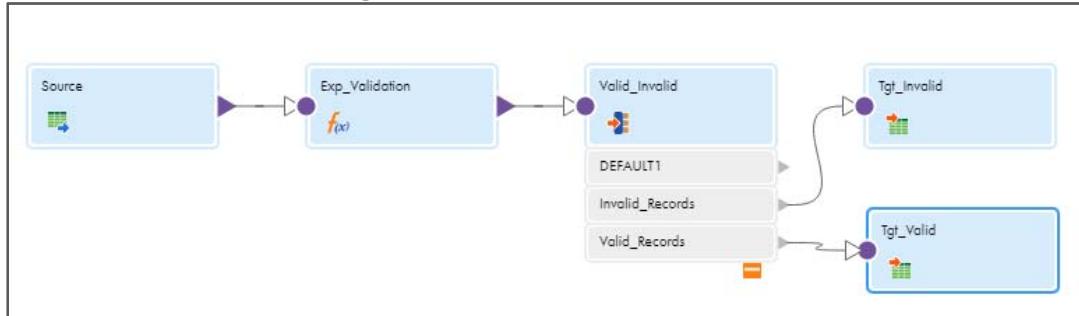
70. To configure the target, from the mapping canvas, click the **Target** transformation.



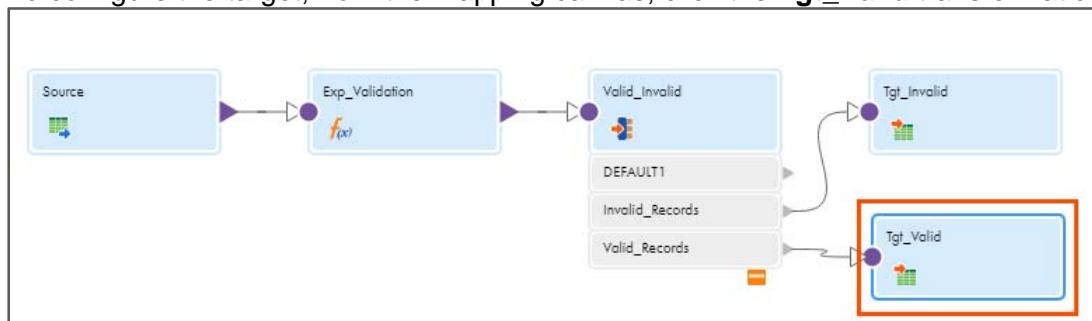
71. In the General section of the Target properties, enter Name as **Tgt_Valid**.

Properties	Tgt_Valid
General	Name: * Tgt_Valid
Incoming Fields	Description:

72. Link **Valid_Records** with **Tgt_Valid**.



73. To configure the target, from the mapping canvas, click the **Tgt_Valid** transformation.



74. From the properties pane, click **Target**.

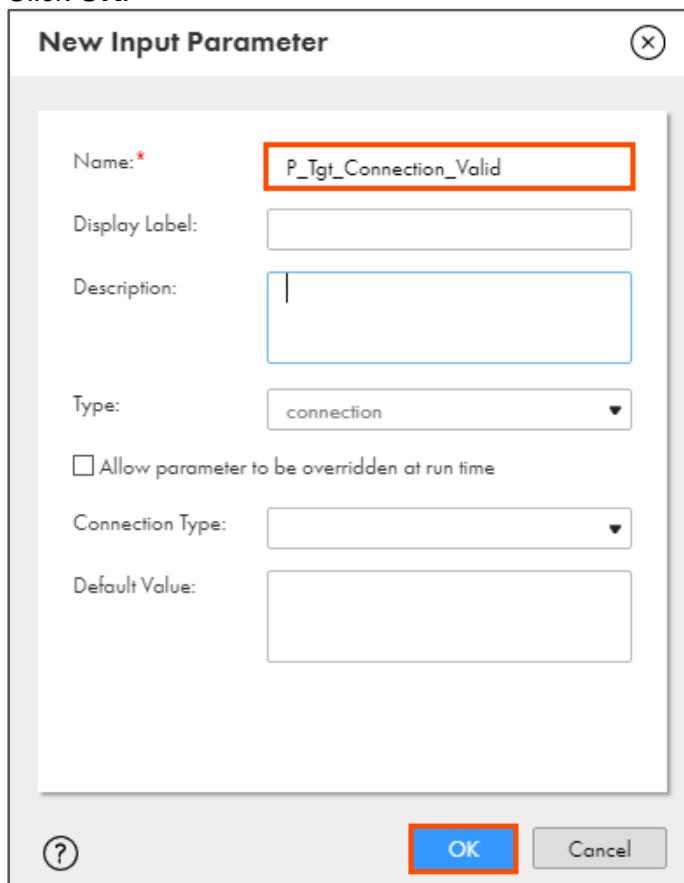
75. To create a new connection parameter, click **New Parameter**.



Note: The New Parameter window appears.

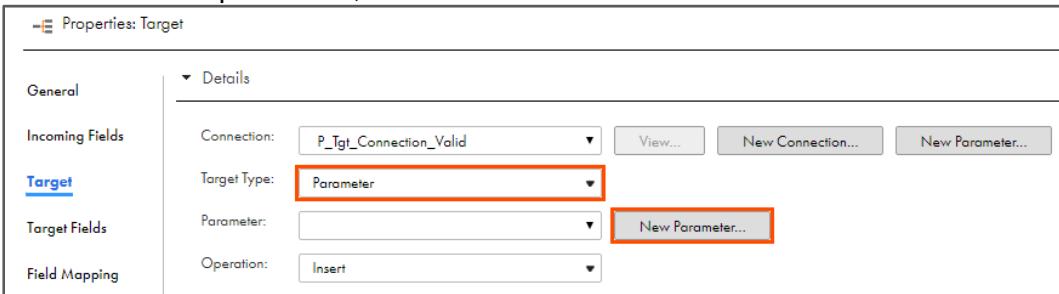
76. Enter Name as **P_Tgt_Connection_Valid**.

77. Click **OK**.



78. From the Target Type drop-down, select **Parameter**.

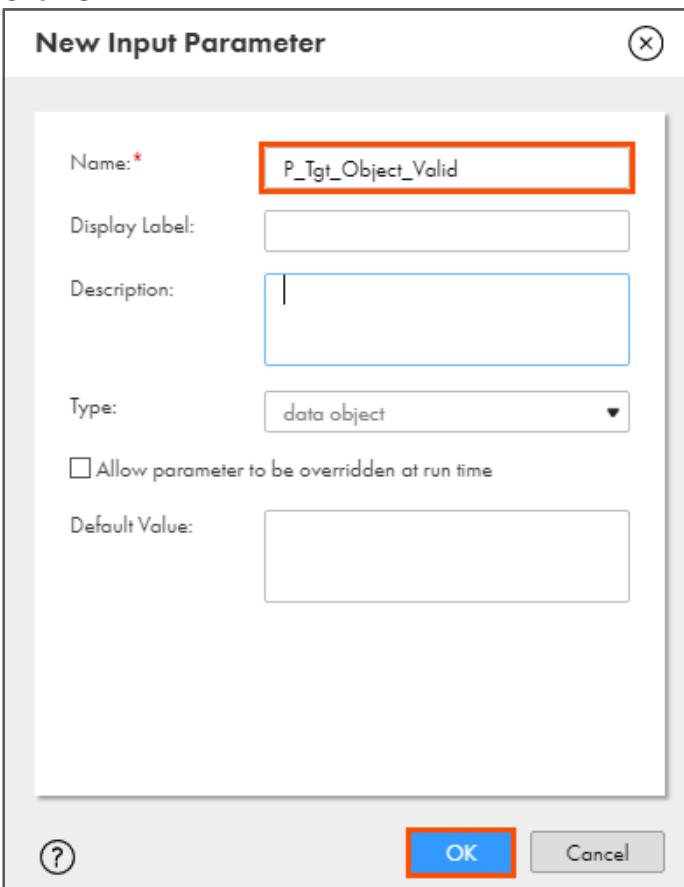
79. To create a new parameter, click **New Parameter...**



Note: The New Input Parameter window appears.

80. Enter Name as **P_Tgt_Object_Valid**.

81. Click **OK**.



82. Retain Operation as **Insert**.



83. From the properties pane, click **Field Mapping**.

84. From the Field map options drop-down, select **Completely Parameterized**.



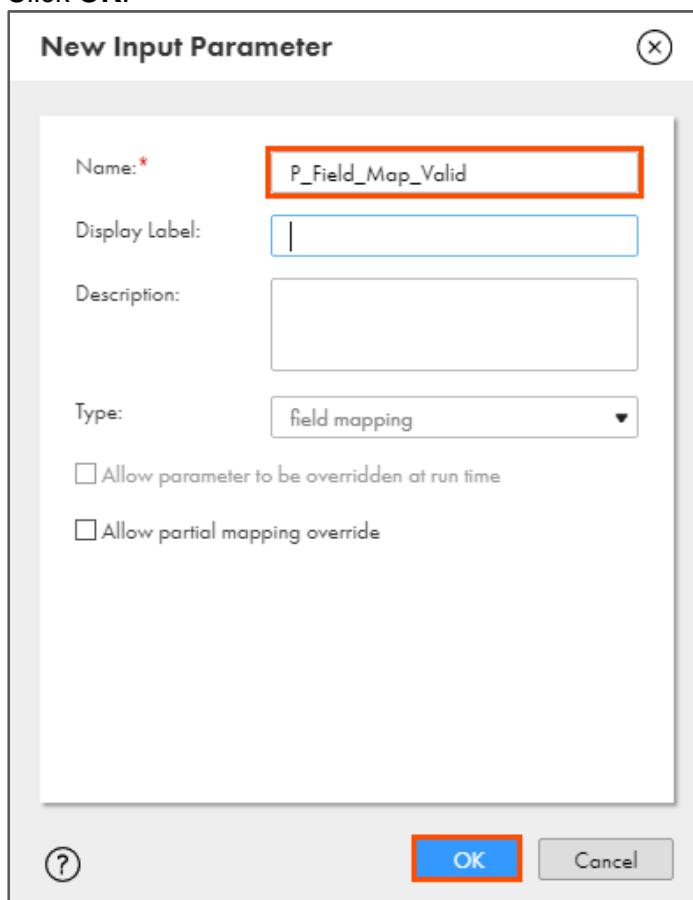
85. To create a new parameter, click **New Parameter**.



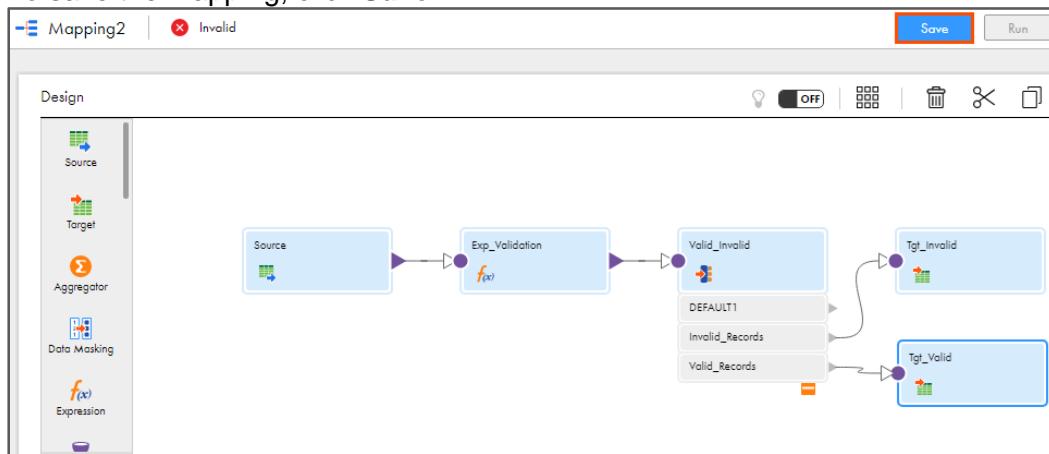
Note: The New Input Parameter window appears.

86. Enter Name as **P_Field_Map_Valid**.

87. Click **OK**.

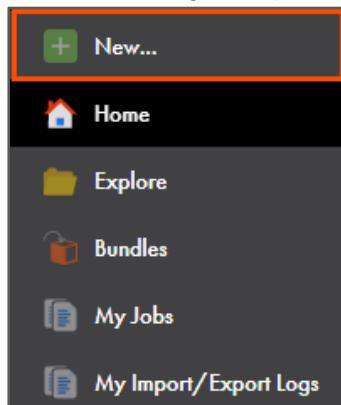


88. To save the mapping, click **Save**.

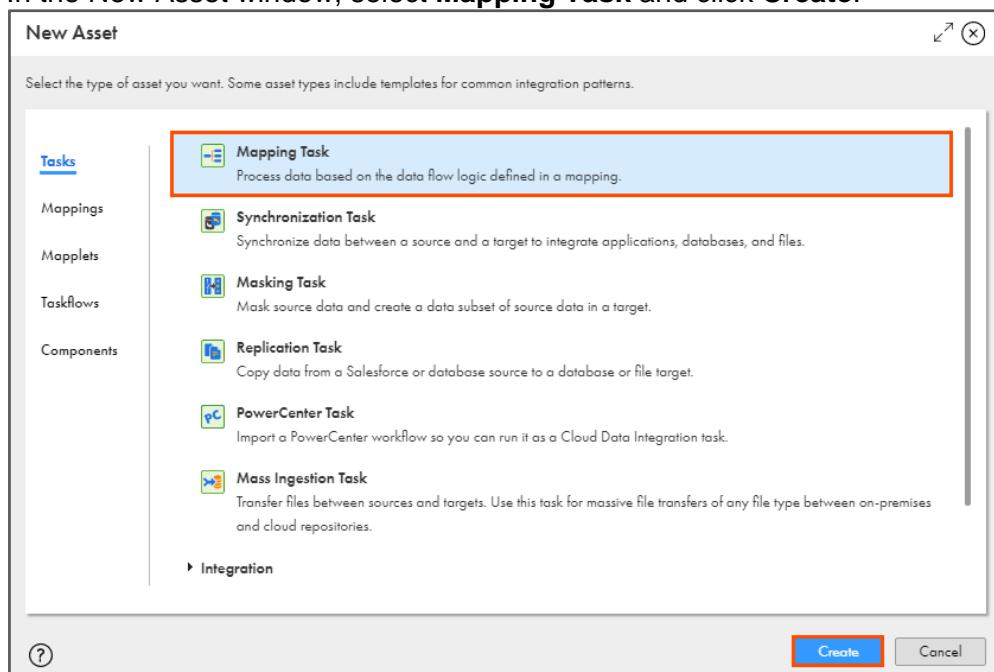


Create Mapping Task:

89. From the navigation pane, select **New**.



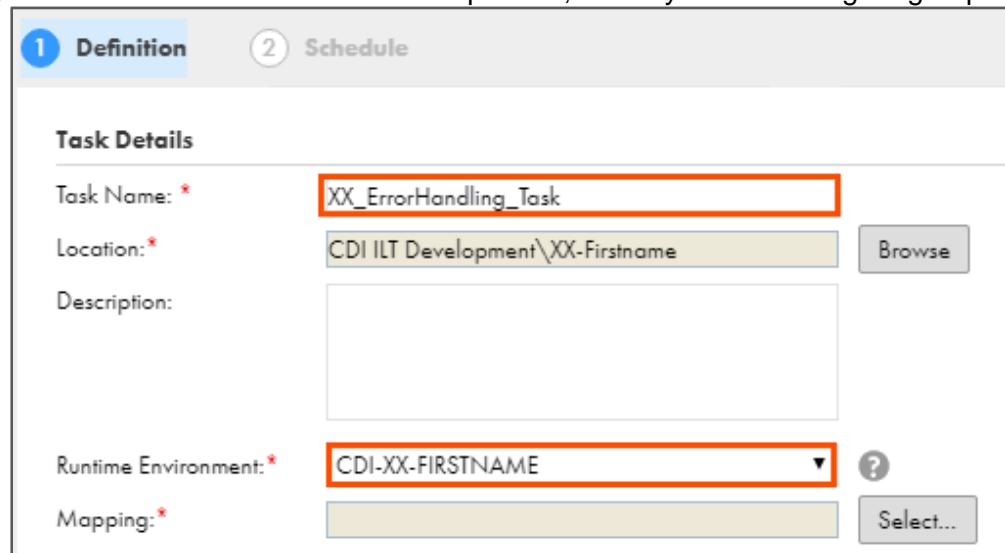
90. In the New Asset window, select **Mapping Task** and click **Create**.



91. In the Task Name field, enter **XX_ErrorHandling_Task**.

Note: Here, XX refers to your initials.

92. From the Runtime Environment drop-down, select your secure agent group.



1 Definition 2 Schedule

Task Details

Task Name: * **XX_ErrorHandling_Task**

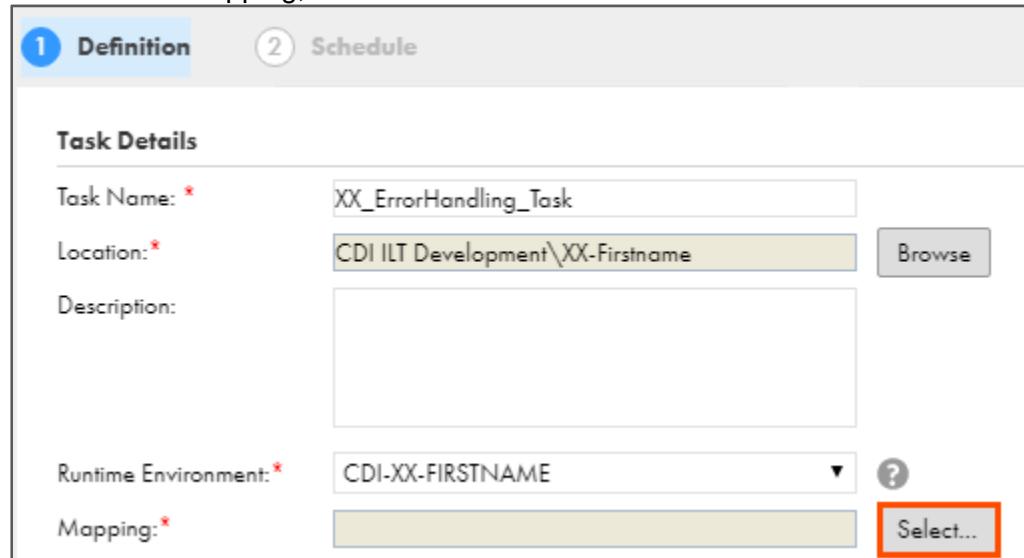
Location: * CDI ILT Development\XX-Firstname

Description:

Runtime Environment: * **CDI-XX-FIRSTNAME**

Mapping: *

93. To select the mapping, click **Select**.



1 Definition 2 Schedule

Task Details

Task Name: * XX_ErrorHandling_Task

Location: * CDI ILT Development\XX-Firstname

Description:

Runtime Environment: * CDI-XX-FIRSTNAME

Mapping: *

94. From the list, select **XX_FirstName_ErrorHandling**.

95. Click **Select**.

Name ▲	Type	Updated On	Location	Status
XX_FirstName_DynamicLinking	Mapping	Aug 1, 2019, 2:54 AM	Default	Valid
XX_FirstName_Employees	Mapping	Aug 1, 2019, 3:52 AM	Default	Valid
XX_FirstName_ErrorHandling	Mapping	Aug 1, 2019, 5:17 AM	Default	Valid
XX_FirstName_HierarchyBuilder	Mapping	Aug 1, 2019, 5:17 AM	Default	Valid
XX_FirstName_InOutParameter	Mapping	Aug 1, 2019, 1:12 AM	Default	Valid
XX_FirstName_LookupOverride	Mapping	Aug 1, 2019, 2:02 AM	Default	Valid
XX_FirstName_MacroDateFormat	Mapping	Aug 1, 2019, 1:46 AM	Default	Valid

96. Click **Next**.

New XX_ErrorHandling_Task

① Definition ② Sources ③ Targets ④ Input Parameters ⑤ Schedule

Task Name: * **XX_ErrorHandling_Task**

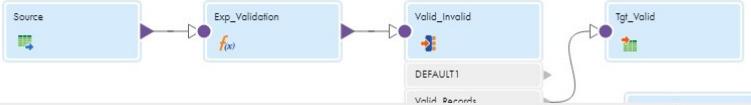
Location: * CDI ILT Development\XX-Firstname

Description:

Runtime Environment: * CDI-XX-FIRSTNAME

Mapping: * **XX_FirstName_ErrorHandling**

Mapping Image: XX_FirstName_ErrorHandling



Source → Exp_Validation → Valid_Invalid → Tgt_Valid

② Save ③ Next > ④ Finish ⑤ Cancel

97. From the P_Src_Connection Connection drop-down, select **XX_FirstName_LocalCSVFiles**.

98. To select a source object, from the P_Src_Object Object drop-down, select **Error Handling.csv**.

Source Parameter Details

P_Src_Connection Connection: * **XX_FirstName_LocalCSVFiles**

Source Type: **Single**

P_Src_Object Object: * **Error Handling.csv**

99. Click **Next**.

New XX_ErrorHandling_Task

(1) Definition (2) Sources (3) Targets (4) Input Parameters (5) Schedule

Source Parameter Details

P_Src_Connection Connection: * XX_FirstName_LocalCSVFiles

Source Type: Single

P_Src_Object Object: * Error Handling.csv

Query Options

Filter and Sort are not supported for this connection type.

Display source fields in alphabetical order

Data Preview

Error Handling.csv (Total columns: 16)

BillingSystemId	First_Name	Last_Name	Title	Mailing_street	...
1001	Jeanine	Smith	SVP, Procurement	313 Constitution Place	...
1002	Jack	Parsons	CFO	312 Constitution Place	...
1003	Joe	Blackwell	VP, Facilities	525 S. Lexington Ave	...
1004	David	Cohen	SVP, Administration and Financ...	2335 N. Michigan Avenue	...

100. From the P_Tgt_Connection_Invalid Connection drop-down, select **XX_FirstName_LocalCSVFiles**.

101. From the P_Tgt_Invalid_Object Object drop-down, select **Invalid_Data.csv**.

Target Parameter Details

P_Tgt_Connection_Invalid Connection: * XX_FirstName_LocalCSVFiles

P_Tgt_Invalid_Object Object: * Invalid_Data.csv

Operation: *

102. From the P_Tgt_Connection_Valid Connection drop-down, select **XX_FirstName_LocalCSVFiles**.

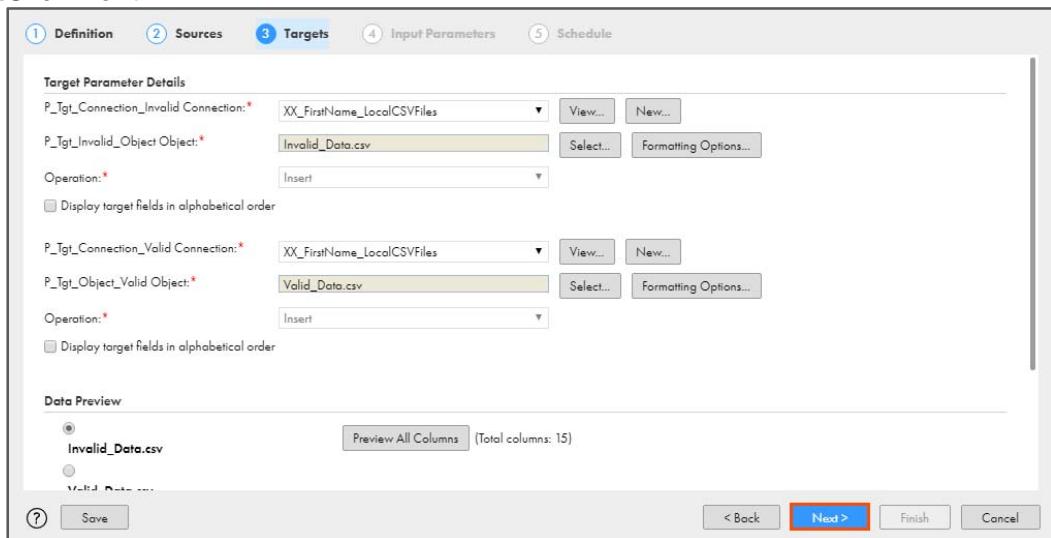
103. From the P_Tgt_Object_Valid Object drop-down, select **Valid_Data.csv**.

P_Tgt_Connection_Valid Connection: * XX_FirstName_LocalCSVFiles

P_Tgt_Object_Valid Object: * Valid_Data.csv

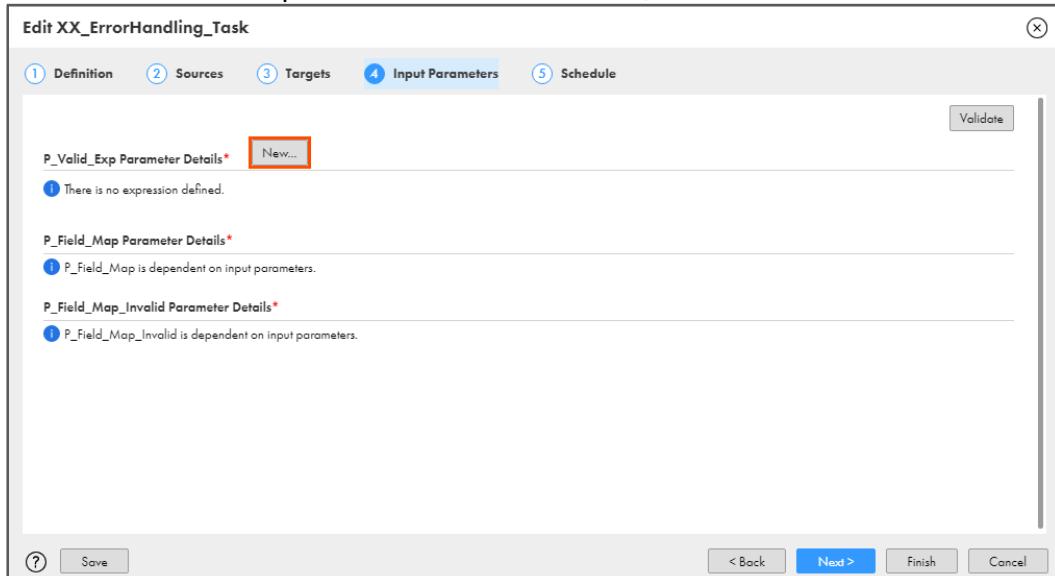
Operation: *

104.Click **Next**.



The screenshot shows the 'Targets' tab of the Informatica interface. It displays two target connections: 'P_Tgt_Connection_Invalid Connection' and 'P_Tgt_Connection_Valid Connection'. Both targets point to 'XX_FirstName_LocalCSVFiles' and have 'Invalid_Data.csv' selected as the target object. The 'Operation' for both is set to 'Insert'. There is a checkbox for 'Display target fields in alphabetical order' which is unchecked. Below this, there is a 'Data Preview' section showing a preview of the 'Invalid_Data.csv' file with 15 columns. At the bottom right, there are buttons for '?', 'Save', '< Back', 'Next >', 'Finish', and 'Cancel'. The 'Next >' button is highlighted with a red box.

105.From the P_Valid_Exp Parameter Details section, click **New**.



The screenshot shows the 'Input Parameters' tab of the 'Edit XX_ErrorHandling_Task' dialog. It lists three parameter details: 'P_Valid_Exp Parameter Details*', 'P_Field_Map Parameter Details*', and 'P_Field_Map_Invalid Parameter Details*'. The 'P_Valid_Exp Parameter Details*' section has a 'New...' button highlighted with a red box. Below each section, there is a note indicating that no expression is defined. At the bottom right, there are buttons for '?', 'Save', '< Back', 'Next >', 'Finish', and 'Cancel'. The 'Next >' button is highlighted with a red box.

Note: The Field Expression window appears.

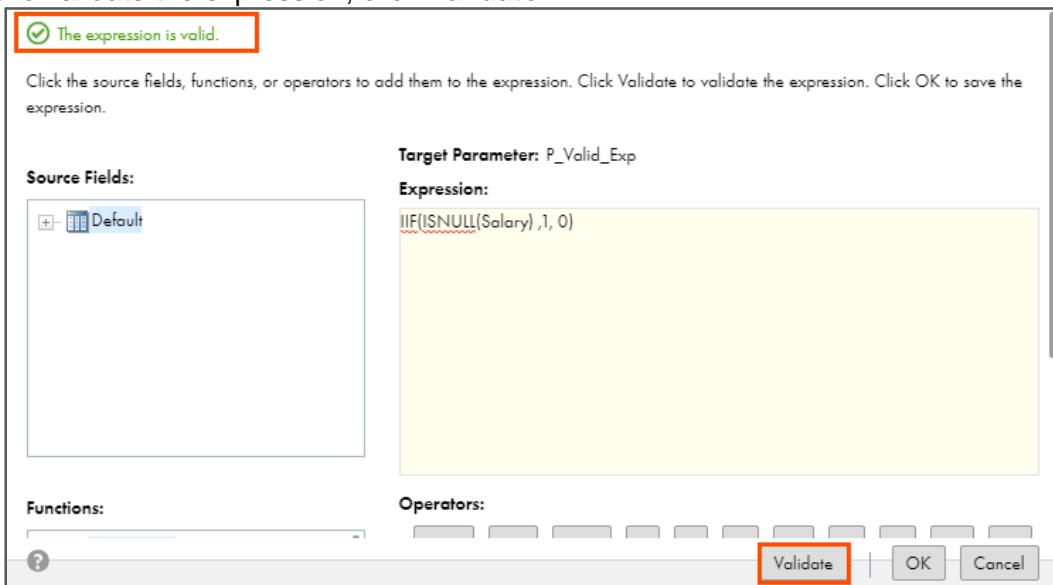
106.In the expression field, enter the following expression:

IIF(ISNULL(Salary) ,1, 0)

OR

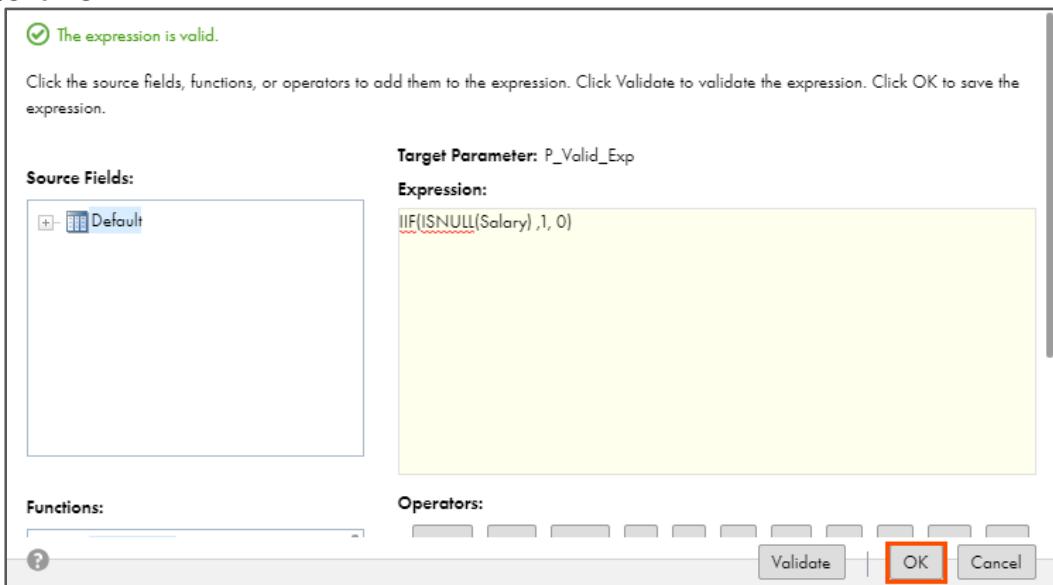
Navigate to the **C:\Students\Commands** directory on your local machine and open the file named **32_LabGuide_MappingToHandleNon-FatalErrors_16**. Copy the command mentioned under **Step 106** and paste it in the Expression field.

107.To validate the expression, click **Validate**.

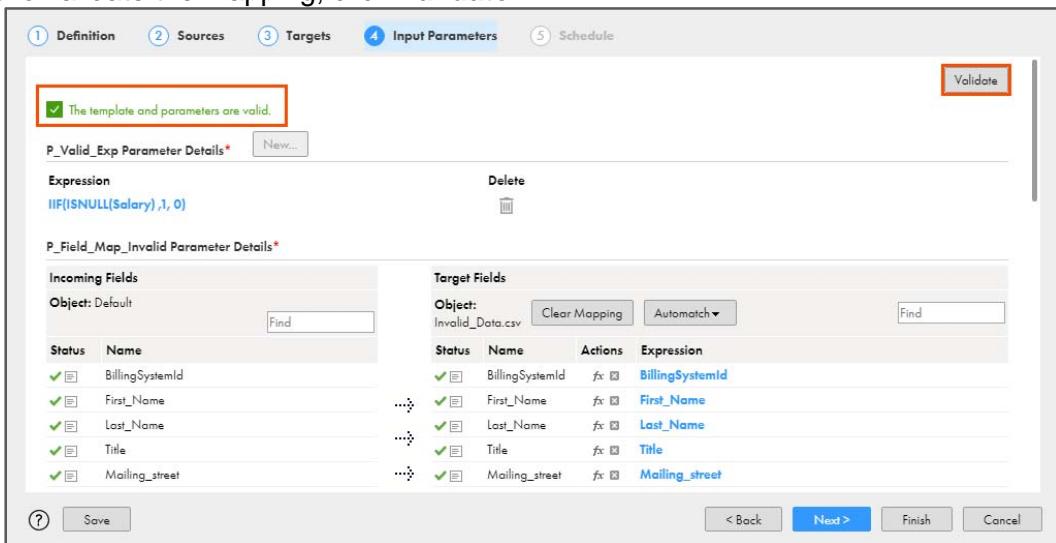


Note: The expression is valid message appears.

108.Click **OK**.



109.To validate the mapping, click **Validate**.



The template and parameters are valid.

P_Valid_Exp Parameter Details*

Expression
IIF(ISNULL(Salary),1,0)

P_Field_Map_Invalid Parameter Details*

Incoming Fields
Object: Default

Status	Name
✓	BillingSystemId
✓	First_Name
✓	Last_Name
✓	Title
✓	Mailing_street

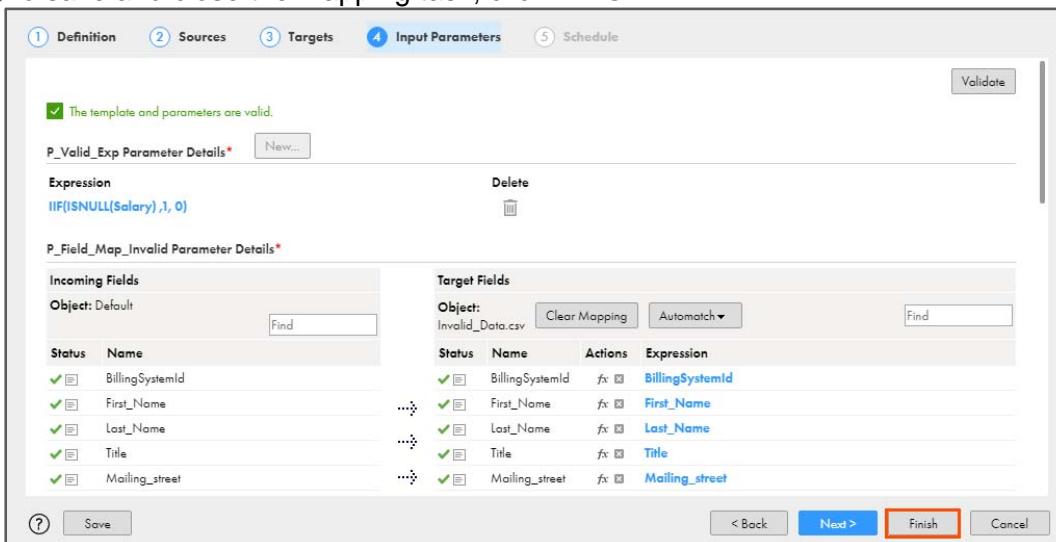
Target Fields
Object: Invalid_Data.csv

Status	Name	Actions	Expression
✓	BillingSystemId	fx	BillingSystemId
✓	First_Name	fx	First_Name
✓	Last_Name	fx	Last_Name
✓	Title	fx	Title
✓	Mailing_street	fx	Mailing_street

Buttons: ? Save < Back Next > Finish Cancel

Note: The template and parameters are valid message appears.

110.To save and close the mapping task, click **Finish**.



The template and parameters are valid.

P_Valid_Exp Parameter Details*

Expression
IIF(ISNULL(Salary),1,0)

P_Field_Map_Invalid Parameter Details*

Incoming Fields
Object: Default

Status	Name
✓	BillingSystemId
✓	First_Name
✓	Last_Name
✓	Title
✓	Mailing_street

Target Fields
Object: Invalid_Data.csv

Status	Name	Actions	Expression
✓	BillingSystemId	fx	BillingSystemId
✓	First_Name	fx	First_Name
✓	Last_Name	fx	Last_Name
✓	Title	fx	Title
✓	Mailing_street	fx	Mailing_street

Buttons: ? Save < Back Next > Finish Cancel

111.To run the mapping task, click **Run**.



XX_ErrorHandling_Task

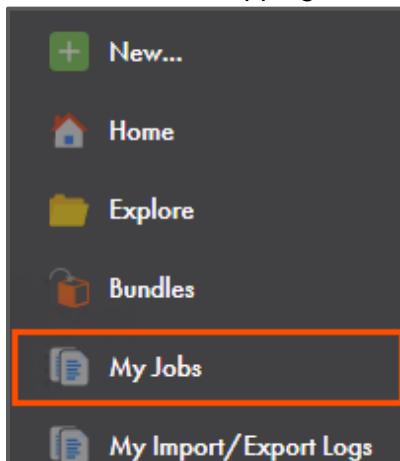
Task Details

Task Name:	XX_ErrorHandling_Task
Location:	Default
Description:	
Runtime Environment:	CDI-XX-FIRSTNAME

Buttons: Edit Run

Monitor Status:

112.To monitor the mapping status, from the navigation pane, click **My Jobs**.



113.When the task completes, the status changes to **Success**.

Jobs (1 of 28) <input checked="" type="checkbox"/> Up to date						Updated 1:24:37 AM PDT				
Asset Name: XX_ErrorHandling_Task		Add Field	Subtasks	Start Time	End Time	Rows Processed	State			
Instance Name	XX_ErrorHandling_Task-1			Aug 1, 2019, ...	Aug 1, 20...	15	Success			

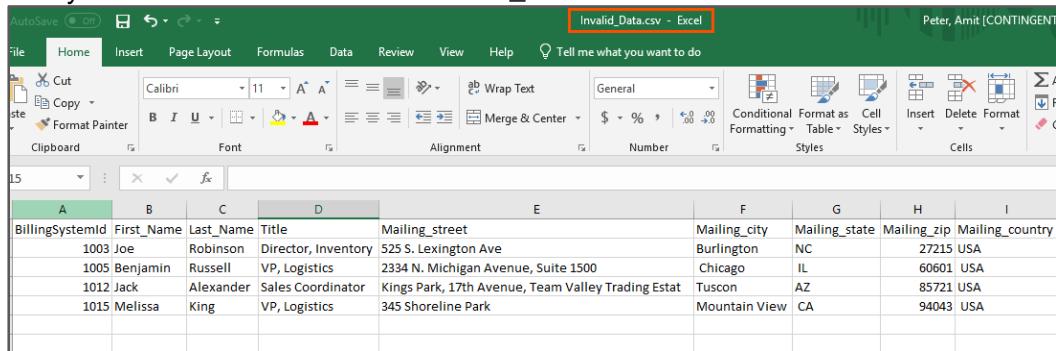
Note: If the status of the task does not change to success automatically, click to refresh task status.

114.On your local machine, navigate to **C:\IICSLabFiles**.

115.Open **Valid_Data.csv** and verify that 11 rows are written in the file.

Valid_Data.csv - Excel									
A	B	C	D	E	F	G	H	I	
BillingSystemId	First_Name	Last_Name	Title	Mailing_street	Mailing_city	Mailing_state	Mailing_zip	Mailing_country	
1001	Lois	Walker	SVP, Marketing	313 Constitution Place	Austin	TX	78767	USA	
1002	Brenda	Robinson	VP, Finance	312 Constitution Place	Austin	TX	78767	USA	
1004	Diane	Evans	Head of Marketing	2335 N. Michigan Avenue	Chicago	IL	60601	USA	
1006	Patrick	Bailey	SVP, Finance	1303 Avenue of the Americas	New York	NY	10019	USA	
1007	Nancy	Baker	Director, Inventory	1304 Avenue of the Americas	New York	NY	10019	USA	
1008	Carol	Murphy	Marketing Coordinator	620 SW 5th Avenue Suite 400	Portland	Oregon	97204	USA	
1009	Frances	Young	SVP, Logistics Operations	621 SW 5th Avenue Suite 400	Portland	Oregon	97204	USA	
1010	Diana	Peterson	Finance Head	888 N Euclid Hallis Center, Room 501	Tucson	AZ	85721	USA	
1011	Ralph	Flores	Director, Sales	1301 Avenue of the Americas	New York	NY	10019	USA	
1022	Wayne	Watson	VP, Finance	345 Shoreline Park	Mountain View	CA	94043	USA	
1069	Cheryl	Scott	VP, Inventory	345 Shoreline Park	Mountain View	CA	94043	USA	

116.Verify that 4 rows are written in **Invalid_Data.csv**.



A	B	C	D	E	F	G	H	I
BillingSystemId	First_Name	Last_Name	Title	Mailing_street	Mailing_city	Mailing_state	Mailing_zip	Mailing_country
1003 Joe	Robinson	Director, Inventory	525 S. Lexington Ave	2334 N. Michigan Avenue, Suite 1500	Burlington	NC	27215	USA
1005 Benjamin	Russell	VP, Logistics	345 Shoreline Park	Kings Park, 17th Avenue, Team Valley Trading Estate	Chicago	IL	60601	USA
1012 Jack	Alexander	Sales Coordinator			Tuscon	AZ	85721	USA
1015 Melissa	King	VP, Logistics			Mountain View	CA	94043	USA

This concludes the lab.

Module 18: Automating and Monitoring Tasks

Lab 18-1: Creating a Schedule

Overview:

In IICS, you can run tasks manually, or you can use schedules to run them at a specific time or interval.

In this lab, you will create a reusable schedule in your IICS org.

Objective:

- Create a schedule

Duration:

5 minutes

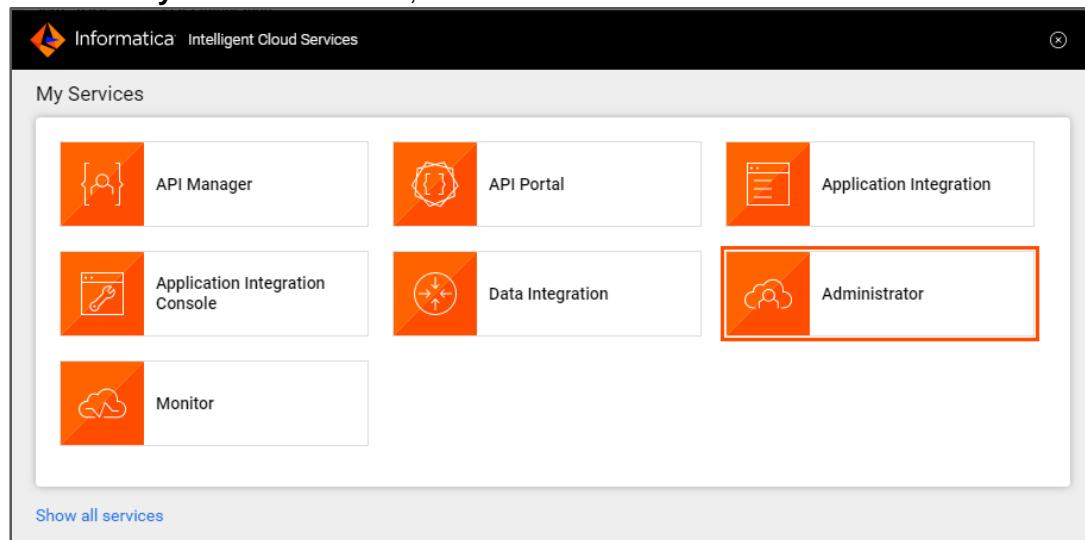
Tasks:

Create Schedule:

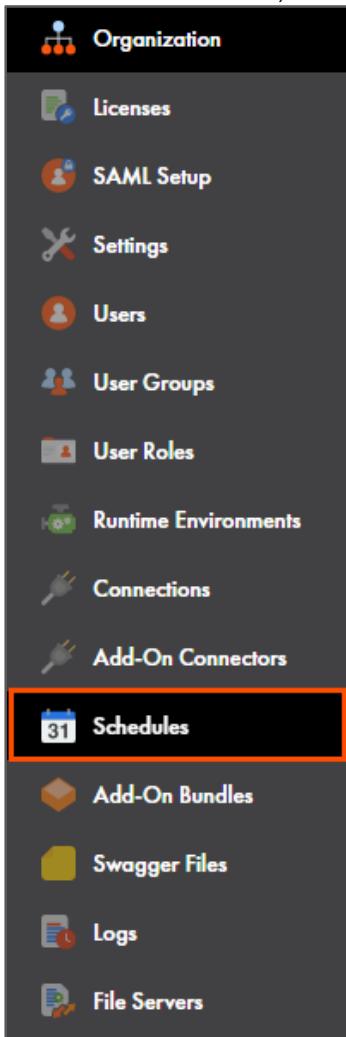
1. Open the IICS Login page from the Bookmarks bar.

Note: Follow this step if you have navigated away from the login page.

2. Enter the login credentials provided by the Instructor and click **Log In**.
3. From the **My Services** window, select **Administrator**.



4. To create a schedule, from the navigation pane, select **Schedules**.



5. To create a new schedule, click **New Schedule**.



The screenshot shows the 'New Schedule' page. At the top, there is a header bar with the title 'Schedules' and two buttons: 'Blackout Period...' and 'New Schedule'. Below the header, a message says 'Configure schedules to run integration tasks.' and 'There are no schedules. To add a schedule, click New Schedule.'.

Note: The New Schedule page appears.

6. In the Schedule Name field, enter **XX_FirstName_Daily**.



The screenshot shows the 'Schedule Details' form. It has two fields: 'Schedule Name:' with a red border around the input field containing 'XX_FirstName_Daily', and 'Description:' with an empty input field.

7. From the Time zone drop-down, select your time zone.

8. From the Repeats drop-down, select **Daily**.

Schedule Options

Starts:*	03/07/2019	at	10	:	30	+ 30 seconds
Time Zone: ?	Indian Standard Time, Bombay, Delhi					
Repeats:	Daily					

9. From the **Run the task** section, select **Every weekday**.

Schedule Options

Starts:*	03/14/2019	at	11	:	00	+ 30 seconds
Time Zone: ?	Indian Standard Time, Bombay, Delhi					
Repeats:	Daily					

Repeat Frequency Options: Daily

Run the task:

Every day
 Every weekday

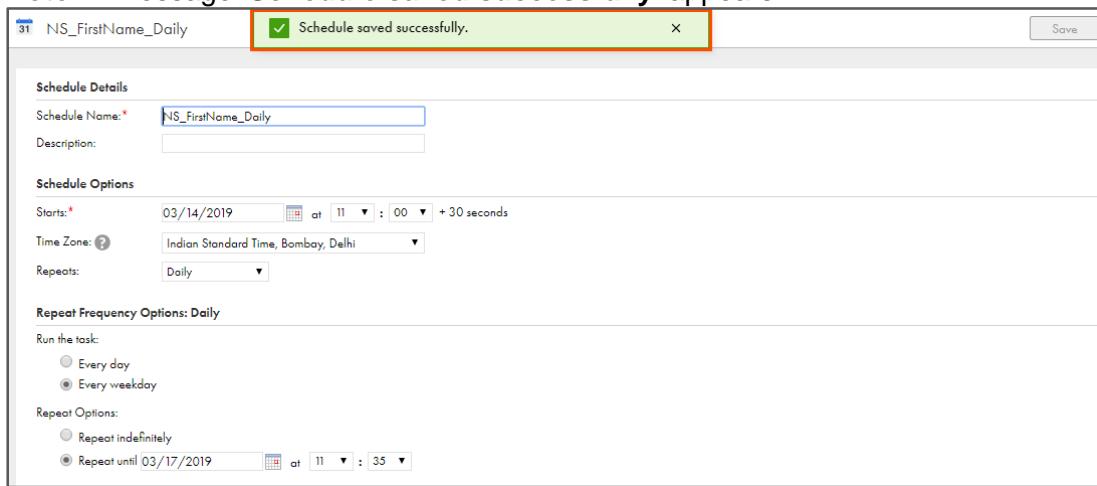
10. In the Repeat Options section, select **Repeat until**, and select the date that is three days after the current date.

11. To save the schedule, click **Save**.

New Schedule

Schedule Details	Save
Schedule Name:*	XX_FirstName_Daily
Description:	
Schedule Options	
Starts:*	03/07/2019
Time Zone: ?	Indian Standard Time, Bombay, Delhi
Repeats:	Daily
Repeat Frequency Options: Daily	
Run the task:	<input type="radio"/> Every day <input checked="" type="radio"/> Every weekday
Repeat Options:	
<input type="radio"/> Repeat indefinitely	
<input checked="" type="radio"/> Repeat until 03/10/2019	at 11 : 00

Note: A message 'Schedule saved successfully' appears.



The screenshot shows the 'Schedule Details' dialog box. At the top, there is a green notification bar with a checkmark icon and the text 'Schedule saved successfully.' Below this, the 'Schedule Details' section contains fields for 'Schedule Name' (NS_FirstName_Daily) and 'Description'. The 'Schedule Options' section includes fields for 'Starts' (03/14/2019 at 11:00:00 +30 seconds), 'Time Zone' (Indian Standard Time, Bombay, Delhi), and 'Repeats' (Daily). Under 'Repeat Frequency Options: Daily', the 'Every weekday' radio button is selected. In the 'Repeat Options' section, the 'Repeat until' option is chosen, with a date set to 03/17/2019 at 11:35:00.

This concludes the lab.

Module 19: Administration

Appendix 1: Configure Administrative Settings for your Informatica Cloud Org

Overview:

An Organization is a secure area within the Informatica Intelligent Cloud Services (IICS) repository that stores your licenses, user accounts, data integration assets such as mappings and tasks, and information about jobs and security. Based on your license, you may have access to one Organization or to a parent Organization and one or more Sub-Organizations. The administrator of an Organization maintains the Organization and Sub-Organizations.

Objectives:

- Configure Administrative settings for the Org
- Disable and Reset a user
- Assign Services to a user
- View Asset Dependency

Scenario:

After creating various connections, John informs Ruby that there are new Developers hired in the IICS development team. She must add these new users of the IICS Org and assign the required permissions and roles to these users.

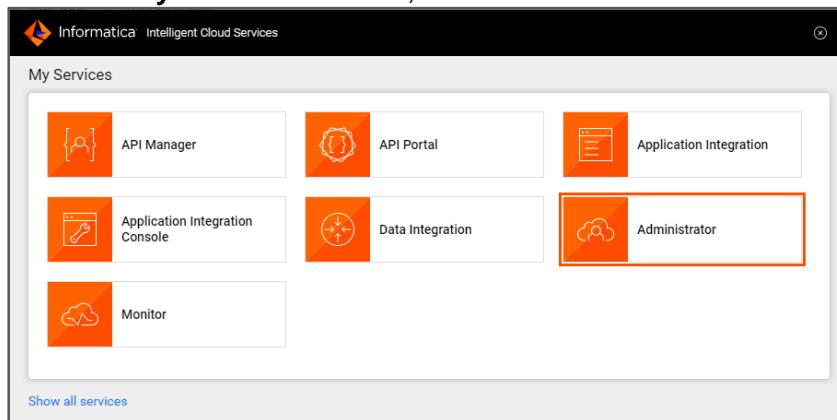
Duration:

15 Minutes

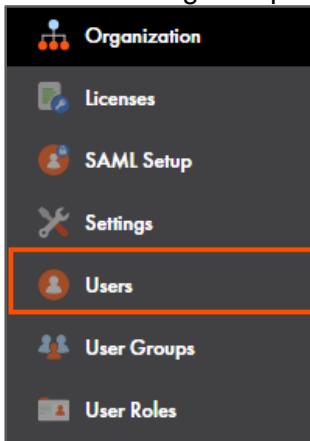
Tasks:

Create a new user:

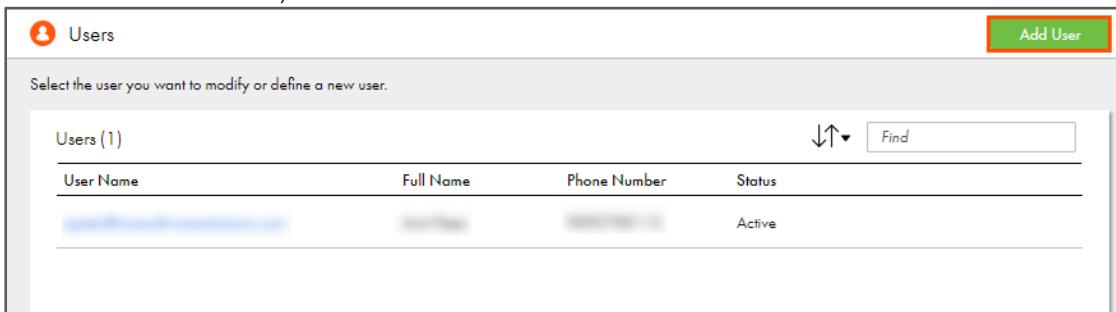
1. Open the IICS Login page from the Bookmarks bar.
2. Enter the login credentials provided by the Instructor and click **Log In**.
3. From the **My Services** window, select **Administrator**.



4. From the navigation pane, select **Users**.



5. To create a new user, click **Add User**.



Select the user you want to modify or define a new user.

User Name	Full Name	Phone Number	Status
[Redacted]	[Redacted]	[Redacted]	Active

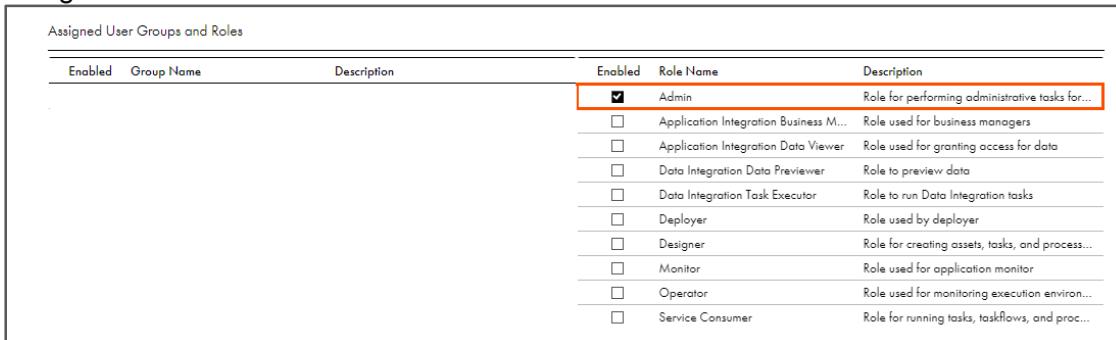
6. In the New User page, enter the mandatory details such as name, job title, phone number, email, authentication type, and user name.



User Information		Login Settings	
First Name:*	John	Authentication:*	Native
Last Name:*	Smith	User Name:*	instructor@informaticacloud.com
Job Title:*	Instructor	Max Login Attempts:	10
Phone Number:*	3120347120		
Email:*	cloudinstructordemo@gmail.com		
Description:			

Note: For this lab, we will create a user with User Name as instructor@informaticacloud.com.

7. Assign the **Admin** role to the user.



Enabled	Group Name	Description	Enabled	Role Name	Description
			<input checked="" type="checkbox"/>	Admin	Role for performing administrative tasks for...
			<input type="checkbox"/>	Application Integration Business M...	Role used for business managers
			<input type="checkbox"/>	Application Integration Data Viewer	Role used for granting access for data
			<input type="checkbox"/>	Data Integration Data Previewer	Role to preview data
			<input type="checkbox"/>	Data Integration Task Executor	Role to run Data Integration tasks
			<input type="checkbox"/>	Deployer	Role used by deployer
			<input type="checkbox"/>	Designer	Role for creating assets, tasks, and process...
			<input type="checkbox"/>	Monitor	Role used for application monitor
			<input type="checkbox"/>	Operator	Role used for monitoring execution environ...
			<input type="checkbox"/>	Service Consumer	Role for running tasks, workflows, and proc...

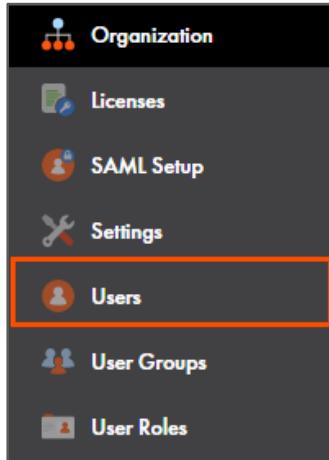
Note: You can assign other roles to a user as per your requirement.

8. Click **Save**.



The screenshot shows a user interface for creating a new user account. At the top left is a blue circular icon with a white person symbol. To its right is the text "New User". In the top right corner are three icons: a blue square with a white "S", a blue square with a white "X", and a blue square with a white arrow pointing down-right. Below the title is a sub-instruction: "Define the user account settings, including group and role assignments." There are two input fields: "Email:" with a red asterisk and "cloudinstructordemo@gmail.com" entered; and "Description:" with a large empty text area below it. In the bottom right corner of the form is a blue rectangular button with the word "Save" in white.

9. To view the status of added user, from the navigation pane, select **Users**.



10. Observe the Account Status of new user is **Pending Activation**

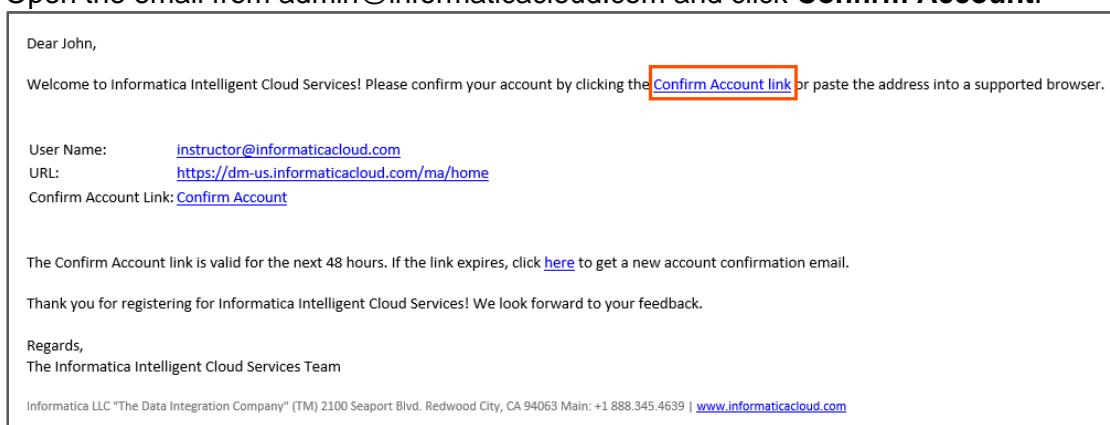


The screenshot shows a table listing users. At the top left is a blue circular icon with a white person symbol. To its right is the text "Users". In the top right corner is a green rectangular button with the text "Add User". Below the title is a sub-instruction: "Select the user you want to modify or define a new user." The table has a header row with columns: "User Name", "Full Name", "Phone Number", and "Status". There is one data row: "instructor@informaticacloud.com", "John Smith", "3120347120", and "Pending Activation". The entire data row is highlighted with a thick orange border.

User Name	Full Name	Phone Number	Status
instructor@informaticacloud.com	John Smith	3120347120	Pending Activation

11. Login to the email account that you specified in the email field for the new user.

12. Open the email from admin@informaticacloud.com and click **Confirm Account**.

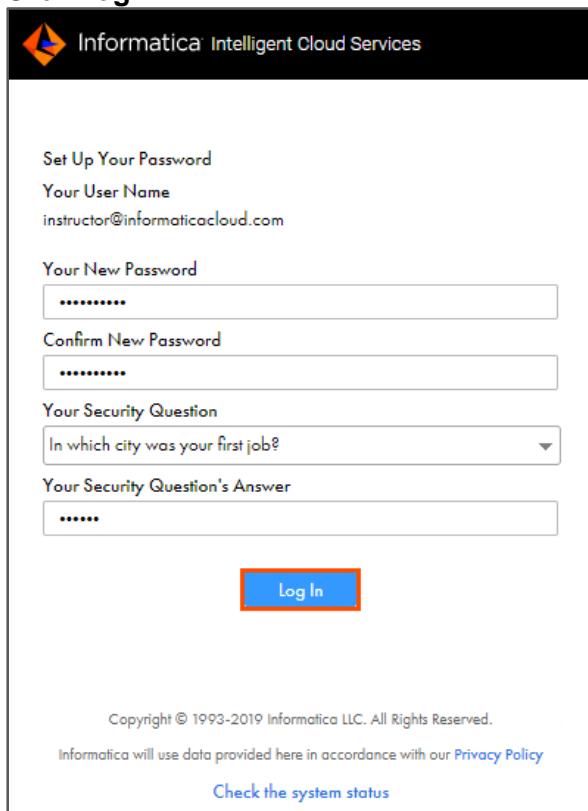


The screenshot shows an email message. It starts with "Dear John," followed by a welcome message: "Welcome to Informatica Intelligent Cloud Services! Please confirm your account by clicking the [Confirm Account link](#) or paste the address into a supported browser." Below this, there is a table with user information: "User Name: instructor@informaticacloud.com", "URL: <https://dm-us.informaticacloud.com/ma/home>", and "Confirm Account Link: [Confirm Account](https://dm-us.informaticacloud.com/ma/home?token=...)". The "Confirm Account Link" is highlighted with a thick orange border. The message continues with "The Confirm Account link is valid for the next 48 hours. If the link expires, click [here](#) to get a new account confirmation email." It ends with "Thank you for registering for Informatica Intelligent Cloud Services! We look forward to your feedback." and "Regards,
The Informatica Intelligent Cloud Services Team". At the bottom, there is a small legal notice: "Informatica LLC "The Data Integration Company" (TM) 2100 Seaport Blvd. Redwood City, CA 94063 Main: +1 888.345.4639 | www.informaticacloud.com"

Note: If you do not see the mail in Inbox, check the Spam folder.

13. Set the password and other security configuration.

14. Click **Log In**.



The screenshot shows a password setup form for Informatica Intelligent Cloud Services. It includes fields for 'Your User Name' (instructor@informaticacloud.com), 'Your New Password' (a masked password), 'Confirm New Password' (a masked password), 'Your Security Question' (In which city was your first job? with a dropdown menu), 'Your Security Question's Answer' (a masked answer), and a 'Log In' button. The 'Log In' button is highlighted with a red border.

Set Up Your Password

Your User Name
instructor@informaticacloud.com

Your New Password
.....

Confirm New Password
.....

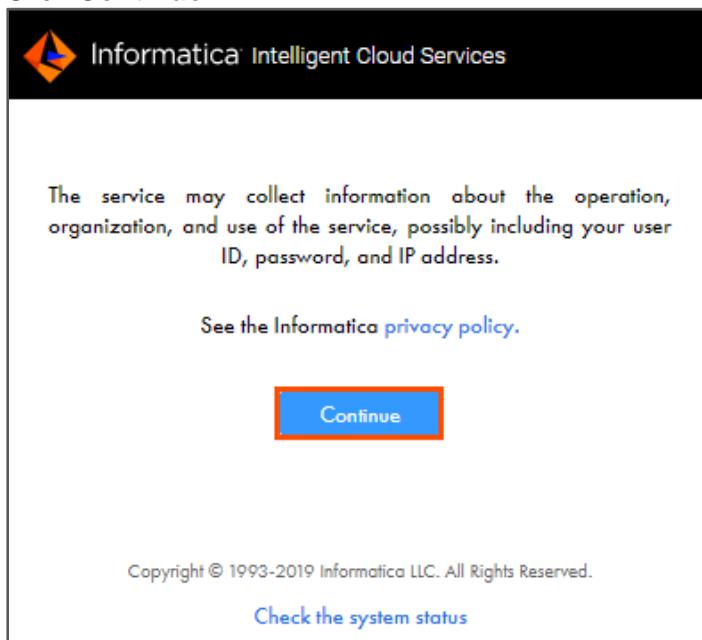
Your Security Question
In which city was your first job?

Your Security Question's Answer
.....

Log In

Copyright © 1993-2019 Informatica LLC. All Rights Reserved.
Informatica will use data provided here in accordance with our [Privacy Policy](#)
[Check the system status](#)

15. Click **Continue**.



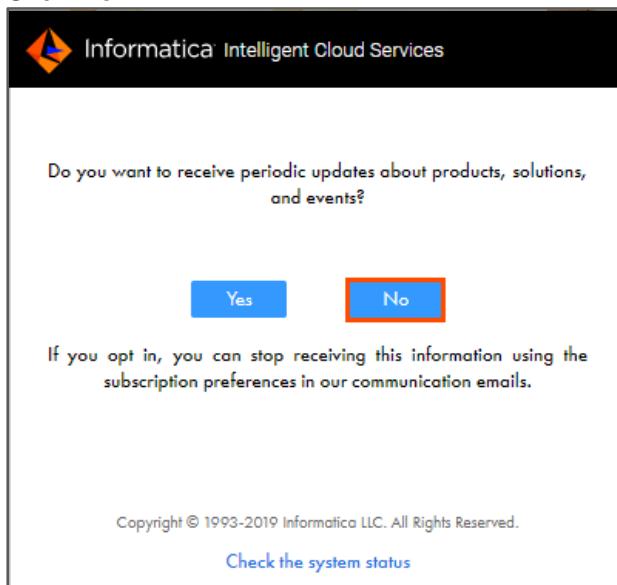
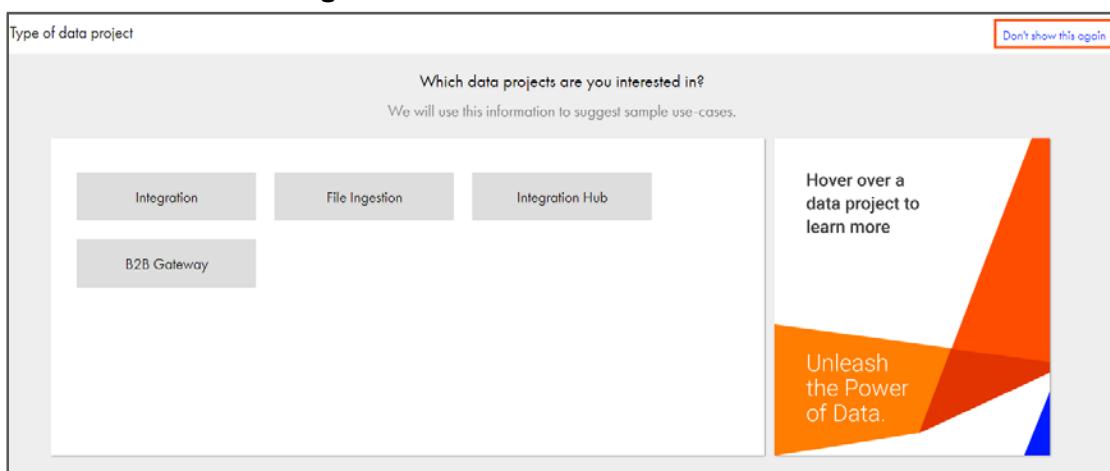
The screenshot shows a confirmation page for accepting the privacy policy. It displays a statement about data collection and a link to the 'Informatica privacy policy'. A 'Continue' button is centered at the bottom, also highlighted with a red border.

The service may collect information about the operation, organization, and use of the service, possibly including your user ID, password, and IP address.

[See the Informatica privacy policy.](#)

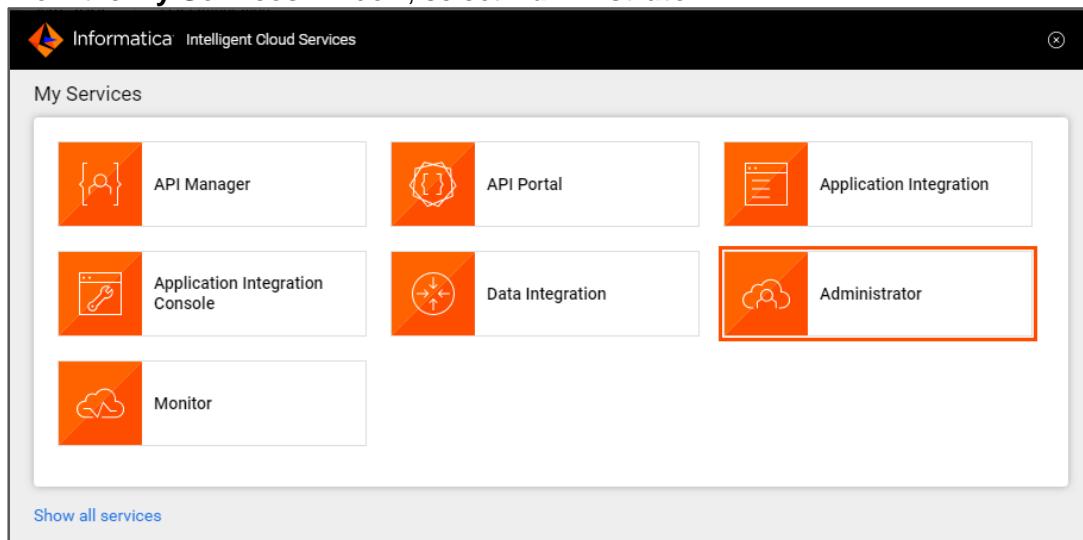
Continue

Copyright © 1993-2019 Informatica LLC. All Rights Reserved.
[Check the system status](#)

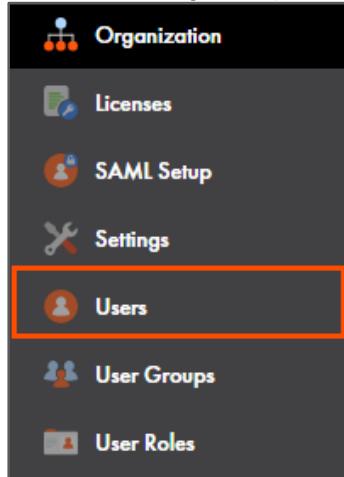
16. Click **No**.17. Click **Don't show this again**.

Note: The My Services window appears.

18. From the **My Services** window, select **Administrator**.



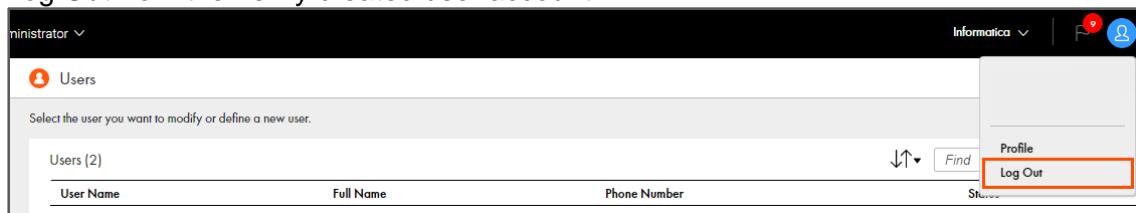
19. From the navigation pane, select **Users**.



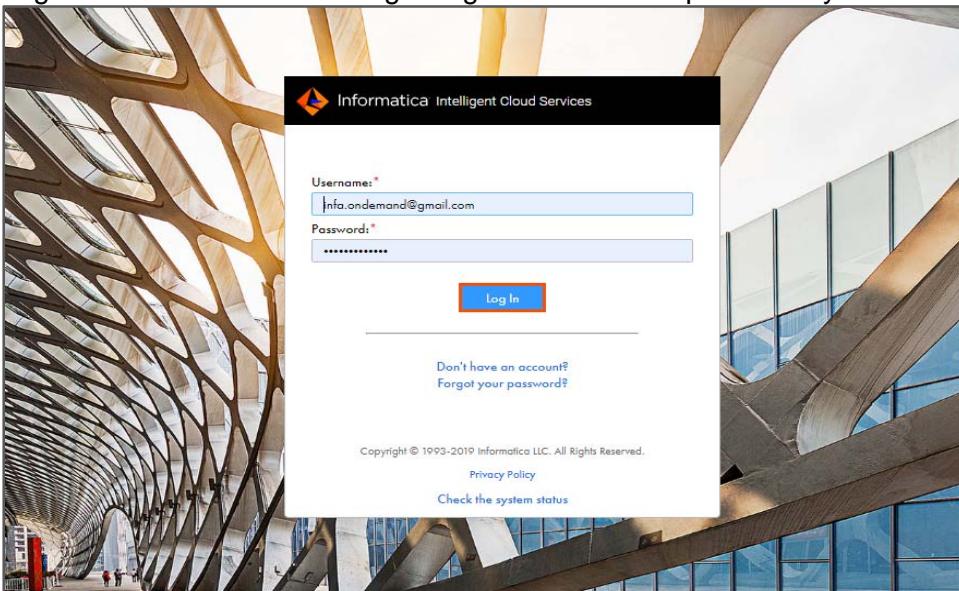
20. Observe that the status of the new user has changed to Active.

Users (2)			
User Name	Full Name	Phone Number	Status
instructor@informaticacloud.com	John Smith	3120347120	Active

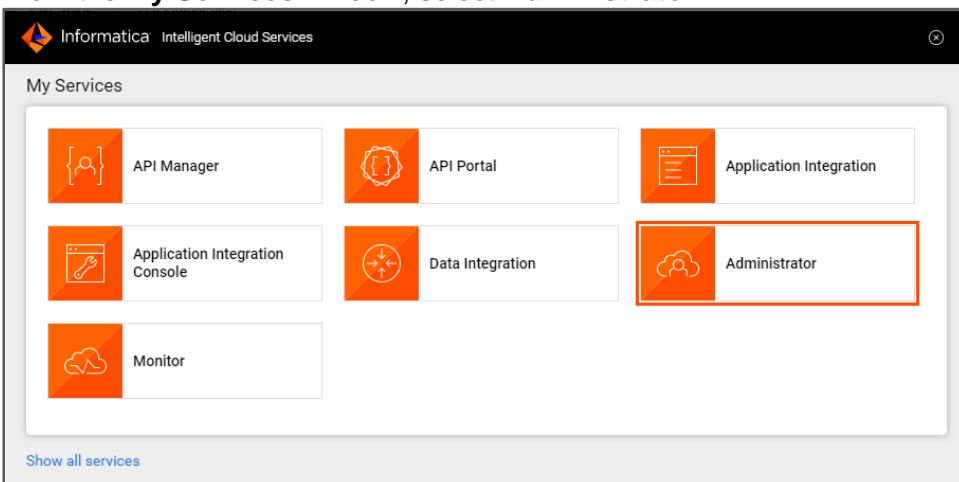
21. Log Out from the newly created user account.



22. Log into Informatica Cloud Org using the credentials provided by the Instructor.



23. From the **My Services** window, select **Administrator**.

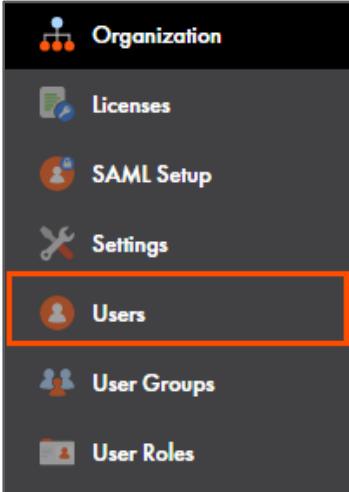


My Services

 API Manager	 API Portal	 Application Integration
 Application Integration Console	 Data Integration	 Administrator
 Monitor		

Show all services

24. From the navigation pane, select **Users**.



-  Organization
-  Licenses
-  SAML Setup
-  Settings
-  **Users**
-  User Groups
-  User Roles

25. To disable the newly created user, click  and select **Disable**.

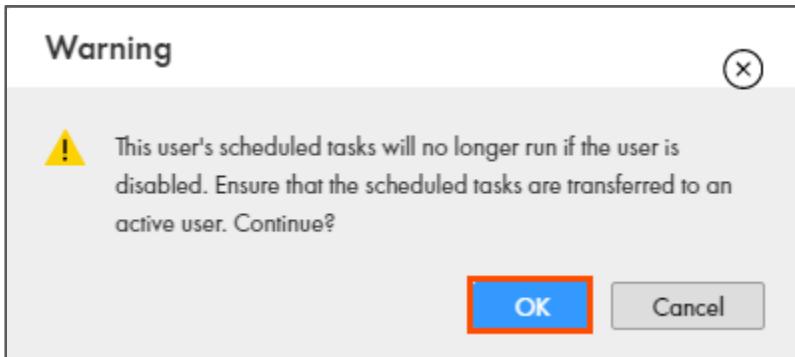
User Name	Full Name	Phone Number	Status
instructor@informaticacloud.com	John Smith	3120347120	Active



[Reset](#)
[Delete](#)
[Disable](#)
[Assign Services](#)

Note: A Warning window appears.

26. Click **OK**.



Note: A message User disabled successfully appears.

27. To reset the disabled user, click  and select **Reset**.

User Name	Full Name	Phone Number	Status
instructor@informaticacloud.com	John Smith	3120347120	Disabled



[Reset](#)
[Delete](#)
[Assign Services](#)

Note: After reset, the user status is set to Pending Activation or to Active based on the authentication method.

Assign Services to a user:

28. To assign service to a user, click  and select **Assign Services**.

User Name	Full Name	Phone Number	Status
instructor@informaticacloud.com	John Smith	3120347120	Active



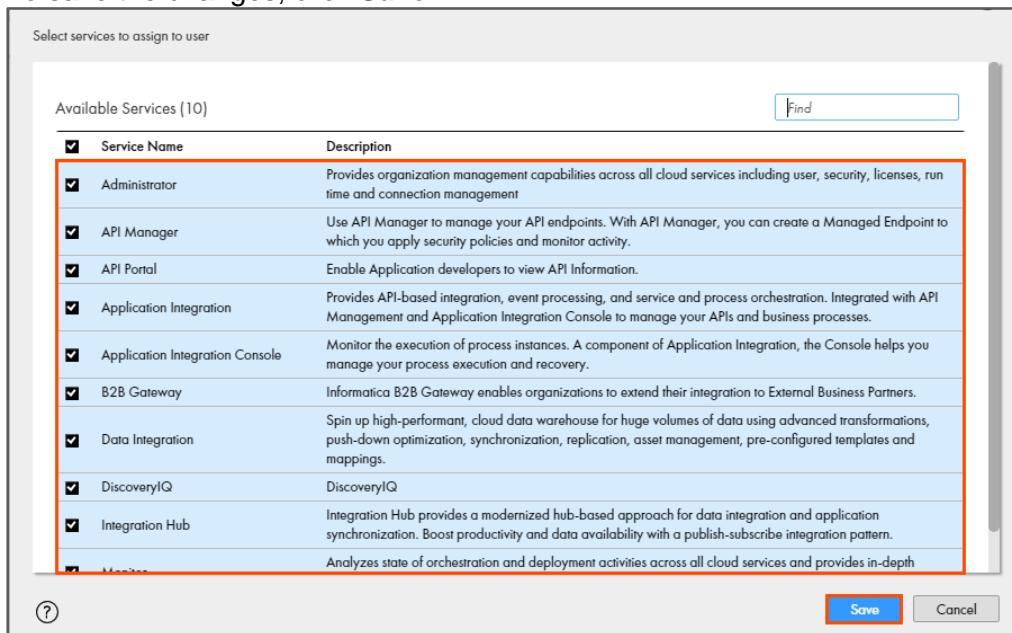
[Reset](#)
[Delete](#)
[Disable](#)
[Assign Services](#)

Note: The Assign Services window appears.

29. From the list, select a service you want to assign to the user.

Note: For the purpose of this lab, select all the available services.

30. To save the changes, click **Save**.



Select services to assign to user

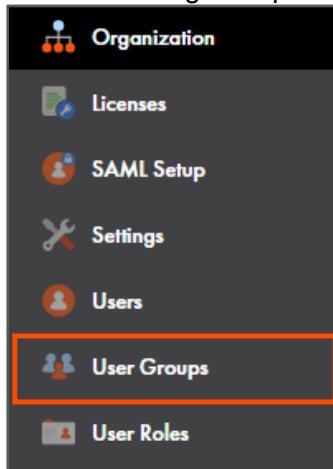
Available Services (10)

Service Name	Description
<input checked="" type="checkbox"/> Administrator	Provides organization management capabilities across all cloud services including user, security, licenses, run time and connection management.
<input checked="" type="checkbox"/> API Manager	Use API Manager to manage your API endpoints. With API Manager, you can create a Managed Endpoint to which you apply security policies and monitor activity.
<input checked="" type="checkbox"/> API Portal	Enable Application developers to view API Information.
<input checked="" type="checkbox"/> Application Integration	Provides API-based integration, event processing, and service and process orchestration. Integrated with API Management and Application Integration Console to manage your APIs and business processes.
<input checked="" type="checkbox"/> Application Integration Console	Monitor the execution of process instances. A component of Application Integration, the Console helps you manage your process execution and recovery.
<input checked="" type="checkbox"/> B2B Gateway	Informatica B2B Gateway enables organizations to extend their integration to External Business Partners.
<input checked="" type="checkbox"/> Data Integration	Spin up high-performant, cloud data warehouse for huge volumes of data using advanced transformations, push-down optimization, synchronization, replication, asset management, pre-configured templates and mappings.
<input checked="" type="checkbox"/> DiscoveryIQ	DiscoveryIQ
<input checked="" type="checkbox"/> Integration Hub	Integration Hub provides a modernized hub-based approach for data integration and application synchronization. Boost productivity and data availability with a publish-subscribe integration pattern.
<input checked="" type="checkbox"/> Orchestrator	Analyzes state of orchestration and deployment activities across all cloud services and provides in-depth

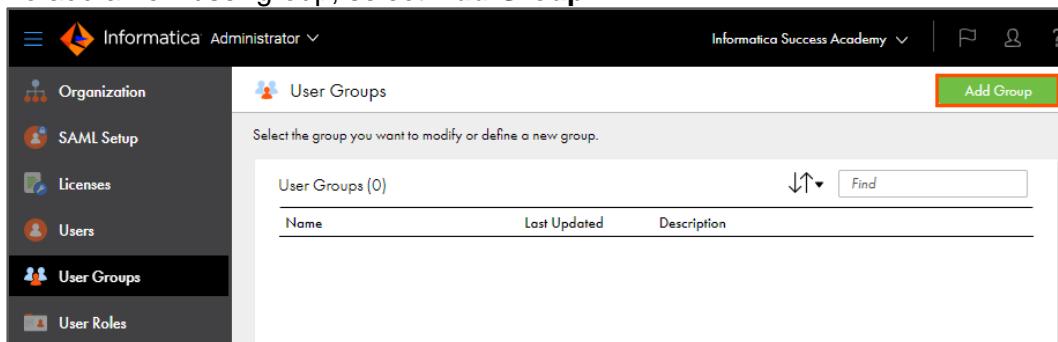
(?) Save Cancel

Create a new User Group:

31. From the navigation pane, select **User Groups**.



32. To add a new user group, select **Add Group**.



Informatica Administrator

User Groups

Select the group you want to modify or define a new group.

Add Group

Name	Last Updated	Description

33. In the Name field, enter **Lab Group**.

34. Assign **Admin** role to the group.

Group Information		
Name: *	<input type="text" value="Lab Group"/>	
Description:	<input type="text"/>	
Assigned Roles		
Enabled	Role Name	Description
<input checked="" type="checkbox"/>	Admin	Role for performing administrative tasks for an organization...
<input type="checkbox"/>	Application Integration Business M...	Role used for business managers
<input type="checkbox"/>	Application Integration Data Viewer	Role used for granting access for data
<input type="checkbox"/>	Data Integration Data Previewer	Role to preview data
<input type="checkbox"/>	Data Integration Task Executor	Role to run Data Integration tasks
<input type="checkbox"/>	Deployer	Role used by deployer

Note: You can assign multiple roles to a group.

35. To add the **instructor@informaticacloud.com** user in the Assigned Users section, select the user and click .

Note: You can add the user you created earlier.

Group Members	
Available Users <div style="border: 1px solid #ccc; padding: 5px; margin-bottom: 10px;"> <input type="checkbox" value="instructor@informaticacloud.com"/> instructor@informaticacloud.com </div> <div style="border: 1px solid #ccc; padding: 5px; margin-bottom: 10px;"> <input type="checkbox" value="instructordemo@informatica.com"/> instructordemo@informatica.com </div>	Assigned Users <div style="border: 1px solid #ccc; padding: 5px; height: 150px;"></div>
   	

36. Click **Save**.



New Group

Select group members, and assign roles to define the application privileges.

Group Information

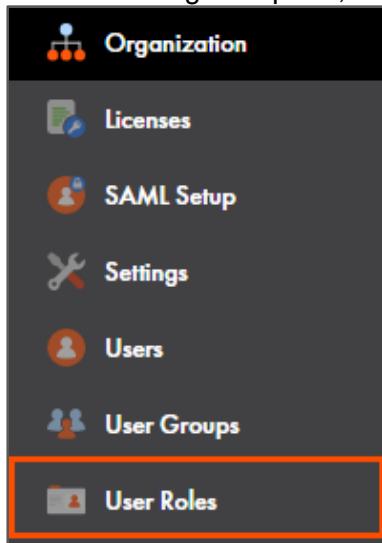
Name: * Lab Group

Description:

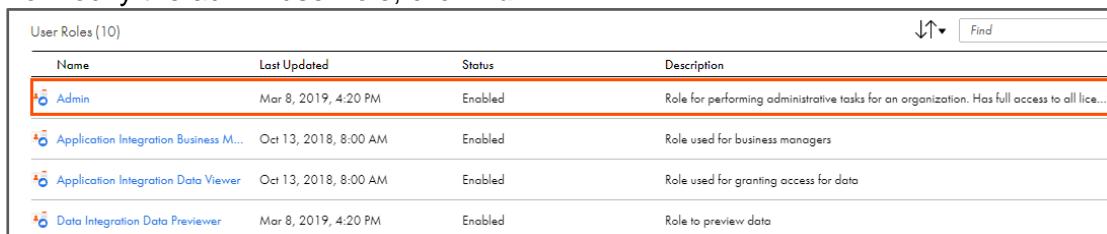
Save

Change the configuration of a role:

37. From the navigation pane, select **User Roles**.



38. To modify the admin user role, click **Admin**.



Name	Last Updated	Status	Description
Admin	Mar 8, 2019, 4:20 PM	Enabled	Role for performing administrative tasks for an organization. Has full access to all lice...
Application Integration Business M...	Oct 13, 2018, 8:00 AM	Enabled	Role used for business managers
Application Integration Data Viewer	Oct 13, 2018, 8:00 AM	Enabled	Role used for granting access for data
Data Integration Data Previewer	Mar 8, 2019, 4:20 PM	Enabled	Role to preview data

39. From the Services drop-down, select the services for which you want to configure the privileges.

Note: For this lab, select **Administrator**.

40. To modify the privileges granted to the specific user role for various assets and features, select or deselect the checkbox.

Admin

Set the privileges for users and groups assigned to the role. Configure privileges separately for each service.

Role Information

Role Name: Admin

Description: Role for performing administrative tasks for an organization. Has full access to all licensed services.

Services: **Administrator**

Assets	Features
Asset Type	Create Read Update Delete Run Set Permission
Connection	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>
Folder	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>
Group	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Organization	<input type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Privilege	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Project	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>
Role	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Schedule	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/>
Scheduler Blackout	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

Note: For this lab, do not make any changes in the Administrator service.

41. To close the window, click .

Admin

Set the privileges for users and groups assigned to the role. Configure privileges separately for each service.

Role Information

Role Name: Admin

Description: Role for performing administrative tasks for an organization. Has full access to all licensed services.

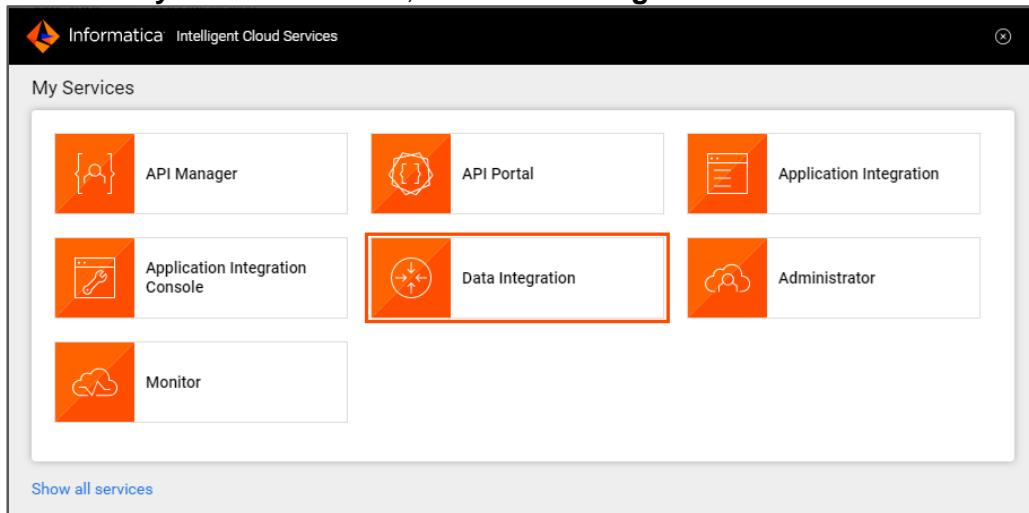
Services: **Administrator**

Set up permissions at the asset level:

42. To switch between the available services, from the toolbar, select the drop-down next to Administrator.

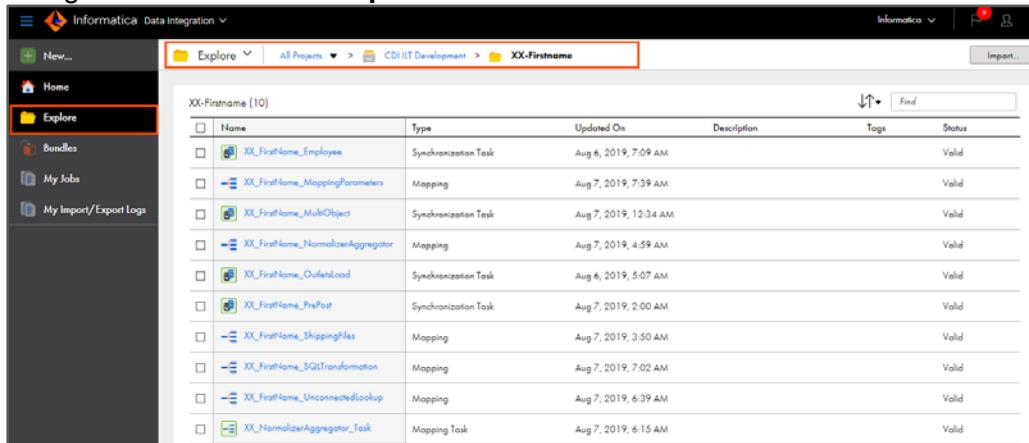


43. From the **My Services** window, select **Data Integration**.



44. From the navigation pane, select **Explore**.

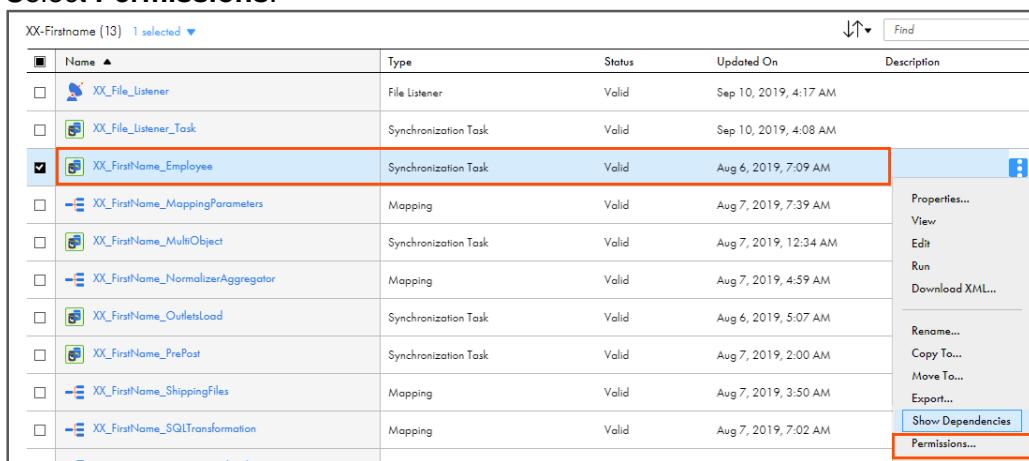
45. Navigate to **CDI ILT Development\XX-Firstname**.



Name	Type	Updated On	Description	Tags	Status
XX_FirstName_Employee	Synchronization Task	Aug 6, 2019, 7:09 AM			Valid
XX_FirstName_MappingParameters	Mapping	Aug 7, 2019, 7:39 AM			Valid
XX_FirstName_MultiObject	Synchronization Task	Aug 7, 2019, 12:34 AM			Valid
XX_FirstName_NormalizerAggregator	Mapping	Aug 7, 2019, 4:59 AM			Valid
XX_FirstName_OutletsLoad	Synchronization Task	Aug 6, 2019, 5:07 AM			Valid
XX_FirstName_PrePost	Synchronization Task	Aug 7, 2019, 2:00 AM			Valid
XX_FirstName_ShippingFiles	Mapping	Aug 7, 2019, 3:50 AM			Valid
XX_FirstName_SQLTransformation	Mapping	Aug 7, 2019, 7:02 AM			Valid
XX_FirstName_UnconnectedLookup	Mapping	Aug 7, 2019, 6:39 AM			Valid
XX_NormalizerAggregator_Task	Mapping Task	Aug 7, 2019, 6:15 AM			Valid

46. To set the permission for an asset, select the **XX_FirstName_Employee** and click .

47. Select **Permissions**.



Name	Type	Status	Updated On	Description
XX_File_Listener	File Listener	Valid	Sep 10, 2019, 4:17 AM	
XX_File_Listener_Task	Synchronization Task	Valid	Sep 10, 2019, 4:08 AM	
XX_FirstName_Employee	Synchronization Task	Valid	Aug 6, 2019, 7:09 AM	
XX_FirstName_MappingParameters	Mapping	Valid	Aug 7, 2019, 7:39 AM	
XX_FirstName_MultiObject	Synchronization Task	Valid	Aug 7, 2019, 12:34 AM	
XX_FirstName_NormalizerAggregator	Mapping	Valid	Aug 7, 2019, 4:59 AM	
XX_FirstName_OutletsLoad	Synchronization Task	Valid	Aug 6, 2019, 5:07 AM	
XX_FirstName_PrePost	Synchronization Task	Valid	Aug 7, 2019, 2:00 AM	
XX_FirstName_ShippingFiles	Mapping	Valid	Aug 7, 2019, 3:50 AM	
XX_FirstName_SQLTransformation	Mapping	Valid	Aug 7, 2019, 7:02 AM	

Properties...
View
Edit
Run
Download XML...

Rename...
Copy To...
Move To...
Export...
Show Dependencies
Permissions...

48. From the permissions window, to add the required user, click **Add**.

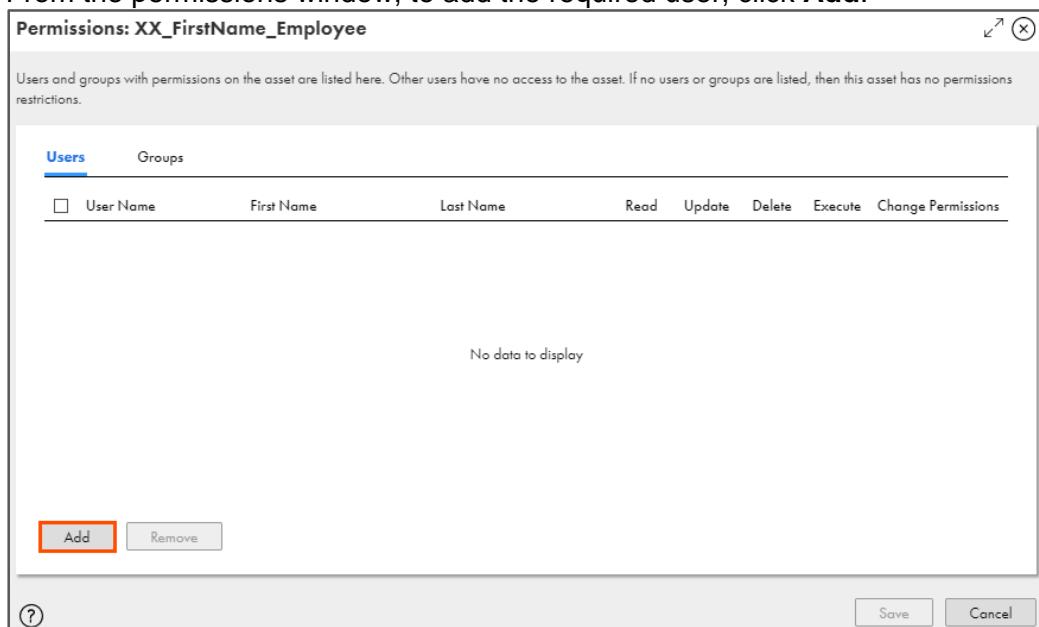
Permissions: XX_FirstName_Employee

Users and groups with permissions on the asset are listed here. Other users have no access to the asset. If no users or groups are listed, then this asset has no permissions restrictions.

User Name	First Name	Last Name	Read	Update	Delete	Execute	Change Permissions
No data to display							

Add **Remove**

(?) **Save** **Cancel**



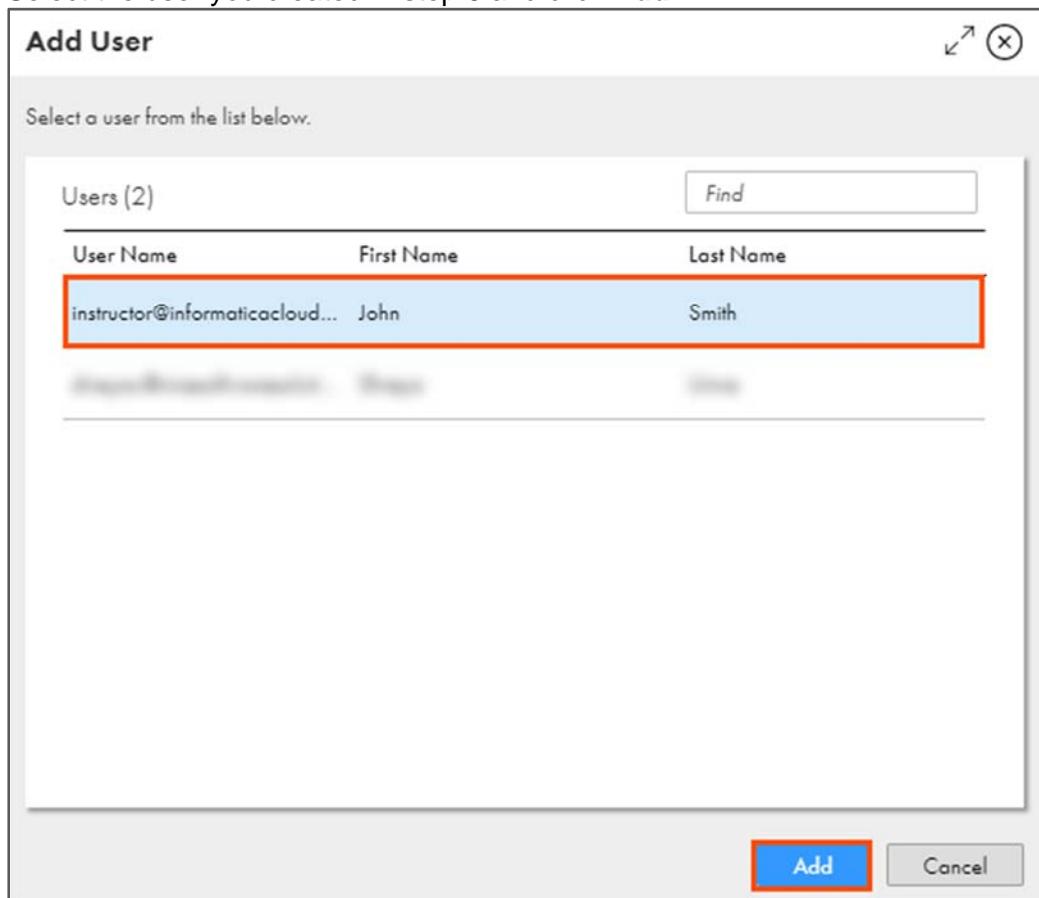
49. Select the user you created in step 6 and click **Add**.

Add User

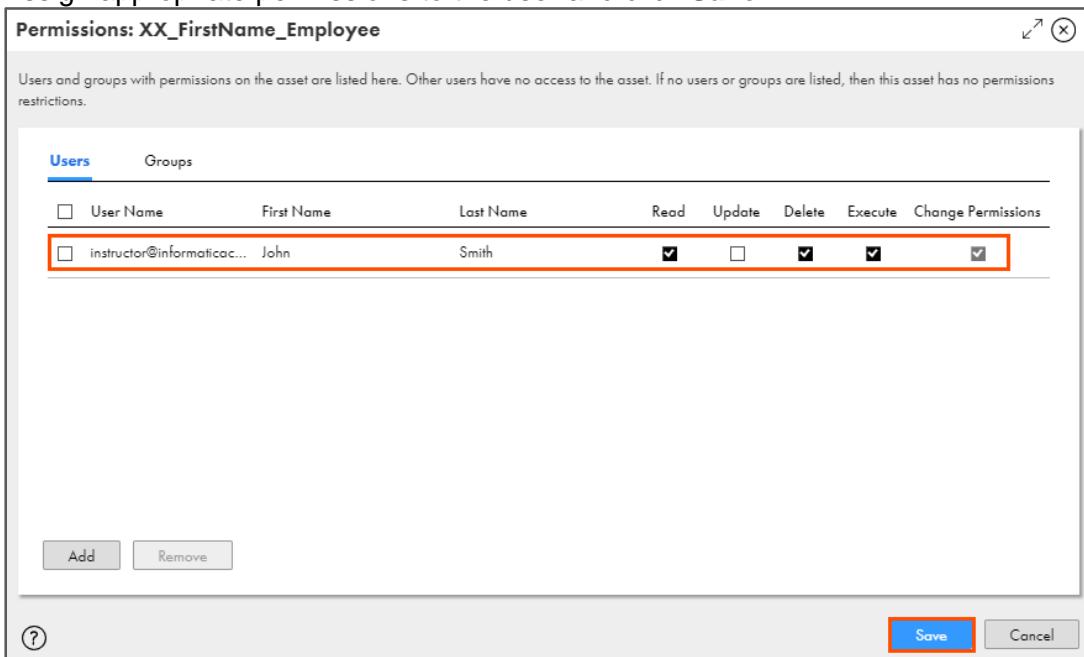
Select a user from the list below.

User Name	First Name	Last Name
instructor@informaticacloud...	John	Smith

Add **Cancel**



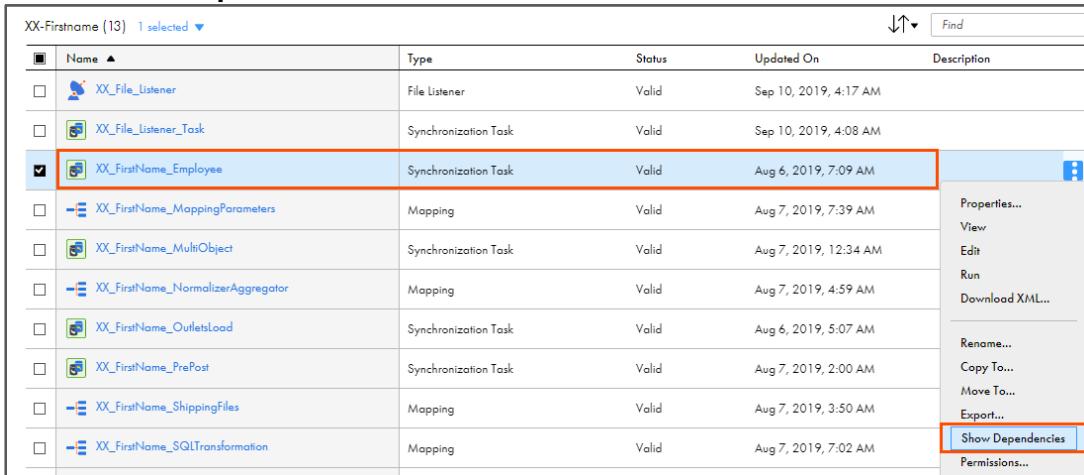
50. Assign appropriate permissions to the user and click **Save**.



User Name	First Name	Last Name	Read	Update	Delete	Execute	Change Permissions
instructor@informaticac...	John	Smith	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

51. To check the asset dependencies of the **XX_FirstName_Employee** asset, click .

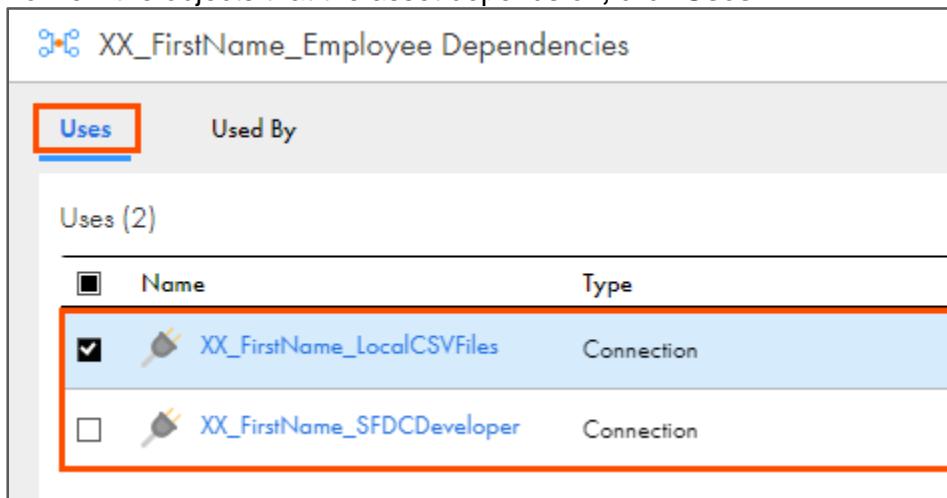
52. Select **Show Dependencies**.



Name	Type	Status	Updated On	Description
XX_File_Listener	File Listener	Valid	Sep 10, 2019, 4:17 AM	
XX_File_Listener_Task	Synchronization Task	Valid	Sep 10, 2019, 4:08 AM	
XX_FirstName_Employee	Synchronization Task	Valid	Aug 6, 2019, 7:09 AM	
XX_FirstName_MappingParameters	Mapping	Valid	Aug 7, 2019, 7:39 AM	
XX_FirstName_MultiObject	Synchronization Task	Valid	Aug 7, 2019, 12:34 AM	
XX_FirstName_NormalizerAggregator	Mapping	Valid	Aug 7, 2019, 4:59 AM	
XX_FirstName_OutletsLoad	Synchronization Task	Valid	Aug 6, 2019, 5:07 AM	
XX_FirstName_PrePost	Synchronization Task	Valid	Aug 7, 2019, 2:00 AM	
XX_FirstName_ShippingFiles	Mapping	Valid	Aug 7, 2019, 3:50 AM	
XX_FirstName_SQLTransformation	Mapping	Valid	Aug 7, 2019, 7:02 AM	

Note: A Dependencies window appears.

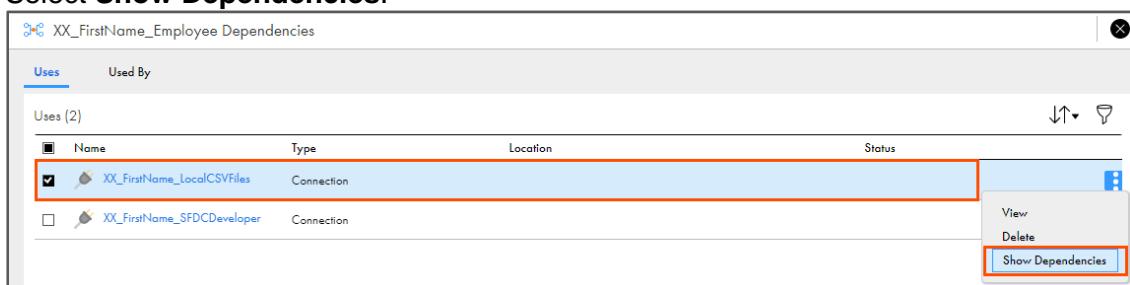
53. To view the objects that the asset depends on, click **Uses**.



Uses (2)
<input type="checkbox"/>  XX_FirstName_LocalCSVFiles Connection
<input type="checkbox"/>  XX_FirstName_SFDCDeveloper Connection

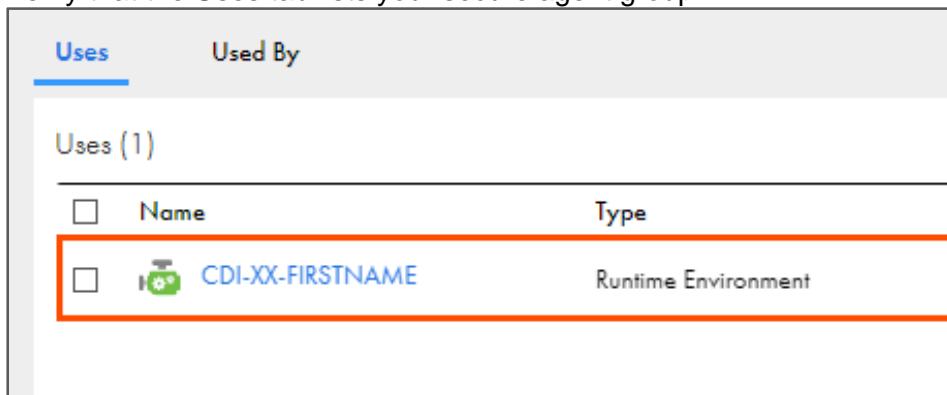
Note: The Uses window is selected by default.

54. To view the dependency for an asset on which XX_FirstName_Employee depends upon, select **XX_FirstName_LocalCSVFiles** and click .
55. Select **Show Dependencies**.



Uses (2)
<input checked="" type="checkbox"/>  XX_FirstName_LocalCSVFiles Connection
<input type="checkbox"/>  XX_FirstName_SFDCDeveloper Connection

56. Verify that the Uses tab lists your secure agent group.



Used By (1)
<input type="checkbox"/>  CDI-XX-FIRSTNAME Runtime Environment

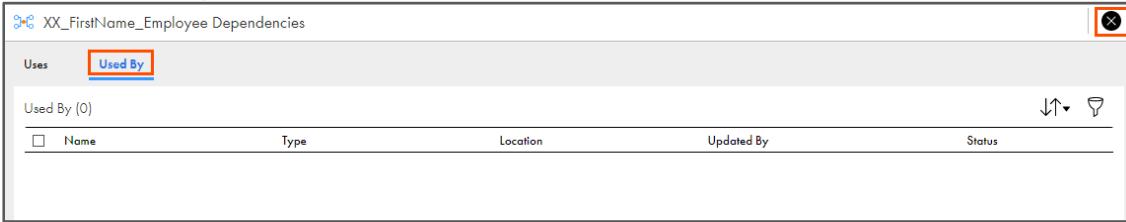
57. To navigate back to the asset dependency of **XX_FirstName_Employee**, click **XX_FirstName_Employee Dependencies**.



<input type="checkbox"/> Name	Type	Location
<input type="checkbox"/>  CDI-XX-FIRSTNAME	Runtime Environment	

58. To view the objects dependent on the selected asset, click **Used By**.

59. To close the dependencies window, click .



<input type="checkbox"/> Name	Type	Location	Updated By	Status
Used By (0)				

Note: The Used By shows no dependencies. It indicated that there are no dependency for this asset.

This concludes the lab.

Module 19: Administration

Appendix 2: Creating a Sub-Organization and Importing/Exporting Assets

Overview:

If your organization has the Organization Hierarchy license, you can create one or more Sub-Organizations within your organization. Create Sub-Organizations to represent different business environments within your company. For example, you may create separate Sub-Organizations to represent your development, testing, and production environments.

Objective:

- Create a Sub-Org for testing environment
- Export an asset from an Org
- Import an asset to the Sub-Org

Scenario:

After creating new users and user groups and assigning them the required permissions, now Ruby must separate two different environments for development and testing of various assets. Ruby must also migrate assets from development to testing environment.

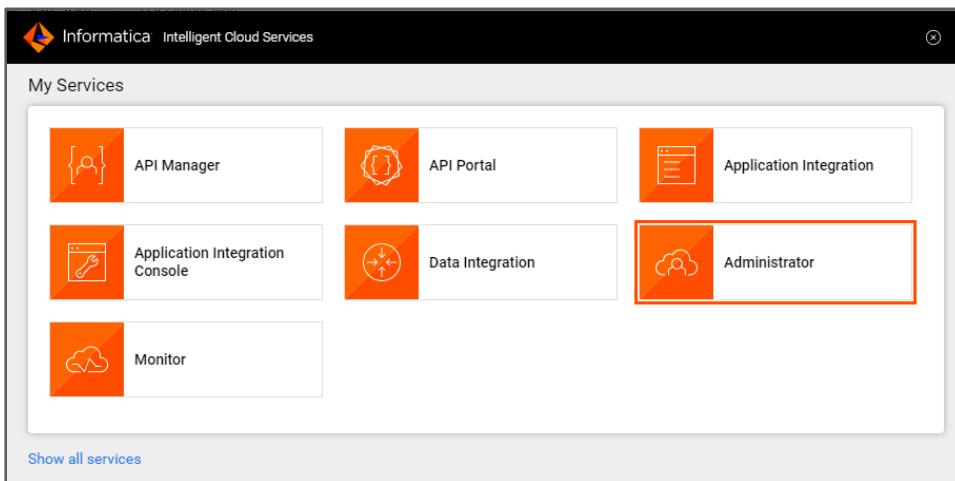
Duration:

30 minutes

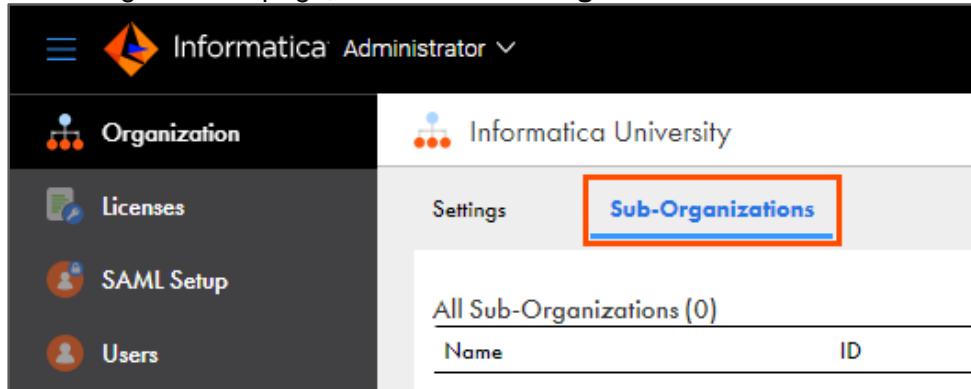
Tasks:

Create a sub org for testing environment:

1. Open the IICS Login page from the Bookmarks bar.
Note: Follow this step, if you have navigated away from the login page.
2. Enter the login credentials provided by the Instructor and click **Log In**.
3. From the **My Services** window, select **Administrator**.

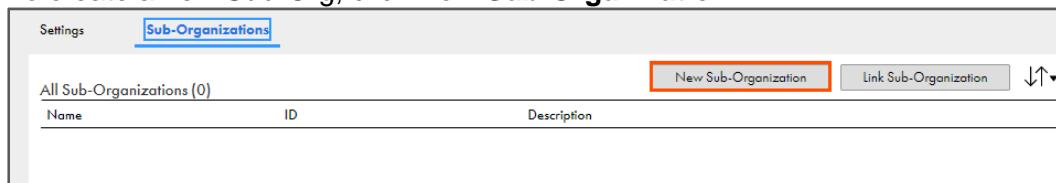


4. In the Organization page, select the **Sub-Organizations** tab.



The screenshot shows the Informatica Administrator interface. The top navigation bar has the Informatica logo and the text "Administrator". On the left, there's a navigation pane with "Organization" (selected), "Licenses", "SAML Setup", and "Users". The main content area is titled "Informatica University" and shows the "Sub-Organizations" tab selected (highlighted with a red box). Below it, it says "All Sub-Organizations (0)". There are columns for "Name" and "ID".

5. To create a new Sub-Org, click **New Sub-Organization**.



The screenshot shows the "Sub-Organizations" list page. At the top right, there are buttons for "New Sub-Organization" (highlighted with a red box) and "Link Sub-Organization". Below the buttons, it says "All Sub-Organizations (0)". There are columns for "Name", "ID", and "Description".

6. In the Name field, enter **Informatica_Cloud_Testing**.

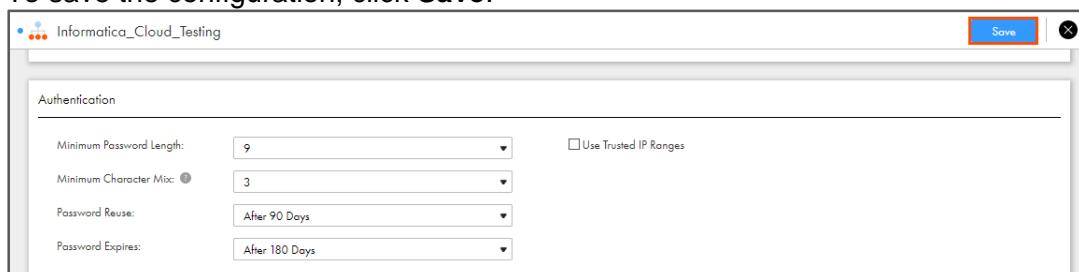
7. In Environment type field, enter **QA**.



The screenshot shows the "New Sub-Organization" configuration form. The "Overview" section contains fields for "Name" (set to "Informatica_Cloud_Testing"), "Parent Organization Id" (set to "13Asy5feWcvlDm3qDMuYYS"), "Environment Type" (set to "QA"), "Description" (empty), and "Number of Employees" (set to "Fewer than 10 employees"). The "Address" section contains fields for "Address 1" through "Address 3", "City", "State", "Zip Code", and "Country" (set to "United States").

8. Retain the default values in the Authentication and Data Integration Service sections.

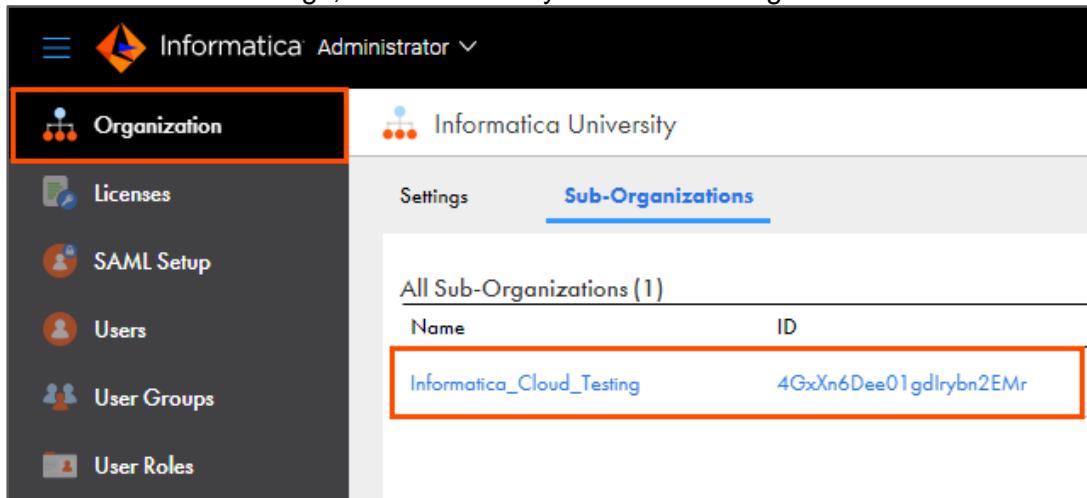
9. To save the configuration, click **Save**.



The screenshot shows the "Sub-Organization" configuration page for "Informatica_Cloud_Testing". The "Authentication" section includes fields for "Minimum Password Length" (set to "9"), "Minimum Character Min" (set to "3"), "Password Reuse" (set to "After 90 Days"), and "Password Expires" (set to "After 180 Days"). The "Data Integration Service" section is partially visible below. At the top right, there is a "Save" button (highlighted with a red box).

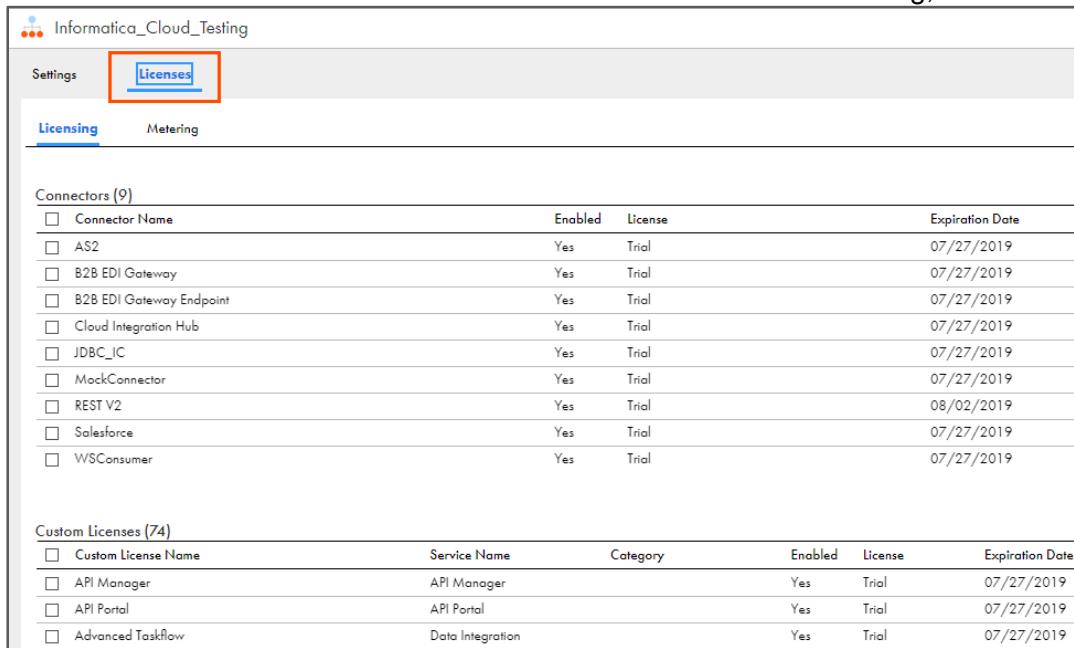
10. From the navigation pane, select **Organization**.

11. From the list of Sub-Orgs, select the newly created Sub-Org.



The screenshot shows the Informatica Admin interface. On the left, there's a sidebar with icons for Organization, Licenses, SAML Setup, Users, User Groups, and User Roles. The 'Organization' icon is highlighted with an orange border. The main panel shows 'Informatica University' with tabs for 'Settings' and 'Sub-Organizations'. The 'Sub-Organizations' tab is active, displaying a table titled 'All Sub-Organizations (1)'. The table has columns for 'Name' and 'ID'. One row is selected, showing 'Informatica_Cloud_Testing' and its ID '4GxXn6Dee01gdlybn2EMr', both highlighted with an orange border.

12. To view the Connectors and Custom Licenses available for the sub-org, click **Licenses**.



The screenshot shows the 'Licenses' tab for the sub-org 'Informatica_Cloud_Testing'. At the top, there are tabs for 'Settings', 'Licenses' (which is selected and highlighted with an orange border), 'Licensing', and 'Metering'. Below these tabs, there are two tables. The first table is titled 'Connectors (9)' and lists various connectors with their status (Enabled/Disabled), license type (Trial), and expiration date (all set to 07/27/2019). The second table is titled 'Custom Licenses (74)' and lists custom licenses with their service name, category, enabled status, license type, and expiration date (all set to 07/27/2019).

Connector Name	Enabled	License	Expiration Date
AS2	Yes	Trial	07/27/2019
B2B EDI Gateway	Yes	Trial	07/27/2019
B2B EDI Gateway Endpoint	Yes	Trial	07/27/2019
Cloud Integration Hub	Yes	Trial	07/27/2019
JDBC_IC	Yes	Trial	07/27/2019
MockConnector	Yes	Trial	07/27/2019
REST V2	Yes	Trial	08/02/2019
Salesforce	Yes	Trial	07/27/2019
WSConsumer	Yes	Trial	07/27/2019

Custom License Name	Service Name	Category	Enabled	License	Expiration Date
API Manager	API Manager		Yes	Trial	07/27/2019
API Portal	API Portal		Yes	Trial	07/27/2019
Advanced Taskflow	Data Integration		Yes	Trial	07/27/2019

Note: You can also check the Expiration Date for Connectors or Custom Licenses in the Licenses tab.

13. To close the window, click .

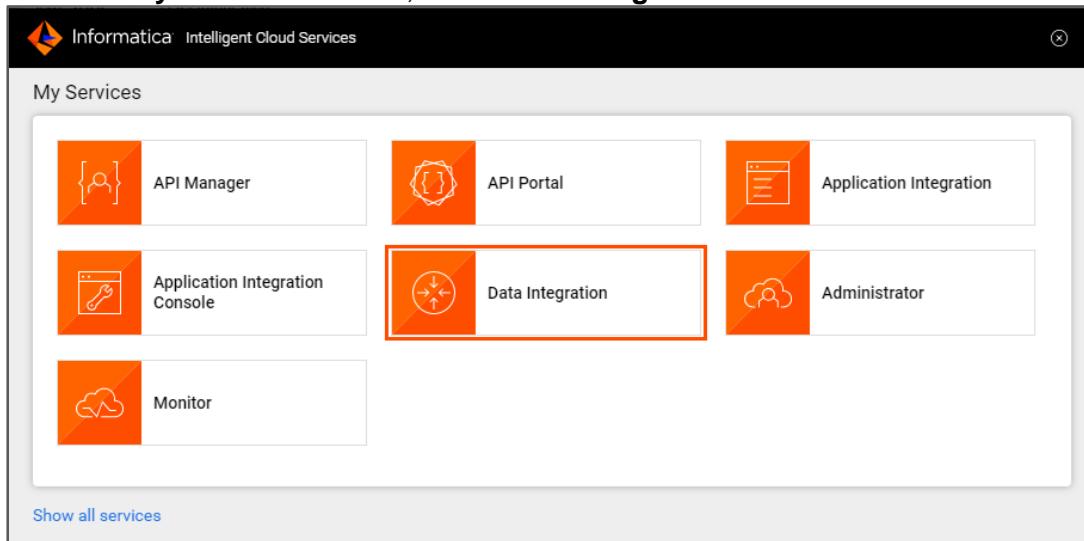
Export asset from the Main Org:

14. To switch between the available services, from the toolbar, select the drop-down next to **Administrator**.



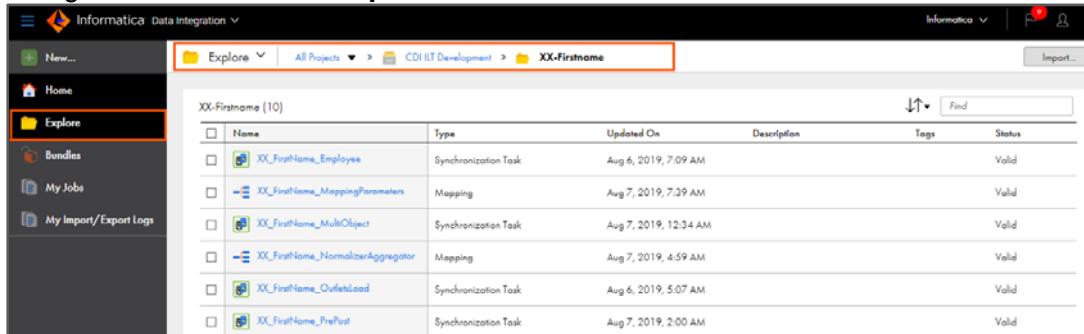
The screenshot shows the Informatica Admin interface. At the top, there's a toolbar with a drop-down menu labeled 'Administrator'. This menu is highlighted with an orange border.

15. From the **My Services** window, select **Data Integration**.



16. From the navigation pane, select **Explore**.

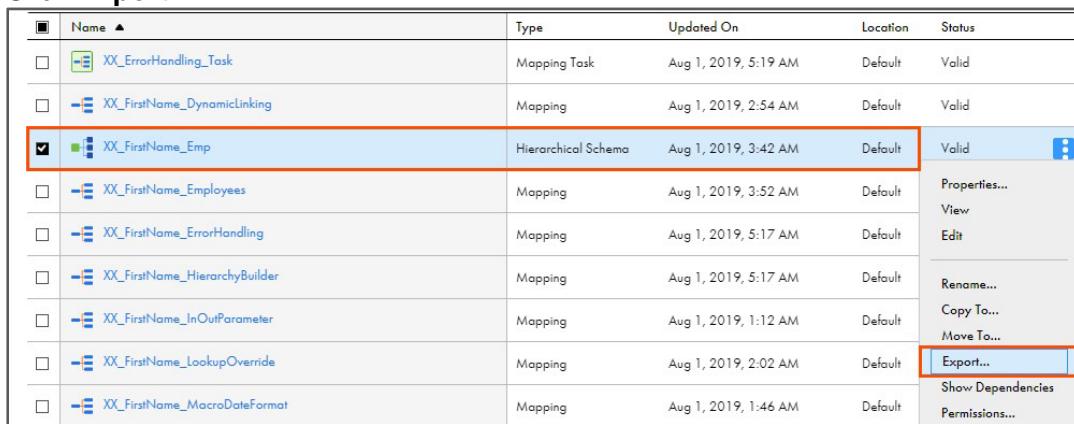
17. Navigate to **CDI ILT Development\XX-Firstname**.



Name	Type	Updated On	Description	Tags	Status
XX_FirstName_Employee	Synchronization Task	Aug 6, 2019, 7:09 AM			Valid
XX_FirstName_MappingParameters	Mapping	Aug 7, 2019, 7:39 AM			Valid
XX_FirstName_MultiObject	Synchronization Task	Aug 7, 2019, 12:34 AM			Valid
XX_FirstName_NormalizerAggregator	Mapping	Aug 7, 2019, 4:59 AM			Valid
XX_FirstName_OutletsLoad	Synchronization Task	Aug 6, 2019, 5:07 AM			Valid
XX_FirstName_PrefPost	Synchronization Task	Aug 7, 2019, 2:00 AM			Valid

18. Locate the **XX_FirstName_Emp** asset and click .

19. Click **Export**.



Name	Type	Updated On	Location	Status
XX_ErrorHandling_Task	Mapping Task	Aug 1, 2019, 5:19 AM	Default	Valid
XX_FirstName_DynamicLinking	Mapping	Aug 1, 2019, 2:54 AM	Default	Valid
XX_FirstName_Emp	Hierarchical Schema	Aug 1, 2019, 3:42 AM	Default	Valid
XX_FirstName_Employees	Mapping	Aug 1, 2019, 3:52 AM	Default	
XX_FirstName_ErrorHandling	Mapping	Aug 1, 2019, 5:17 AM	Default	
XX_FirstName_HierarchyBuilder	Mapping	Aug 1, 2019, 5:17 AM	Default	
XX_FirstName_InOutParameter	Mapping	Aug 1, 2019, 1:12 AM	Default	
XX_FirstName_LookupOverride	Mapping	Aug 1, 2019, 2:02 AM	Default	
XX_FirstName_MacroDateFormat	Mapping	Aug 1, 2019, 1:46 AM	Default	

Properties...
View
Edit

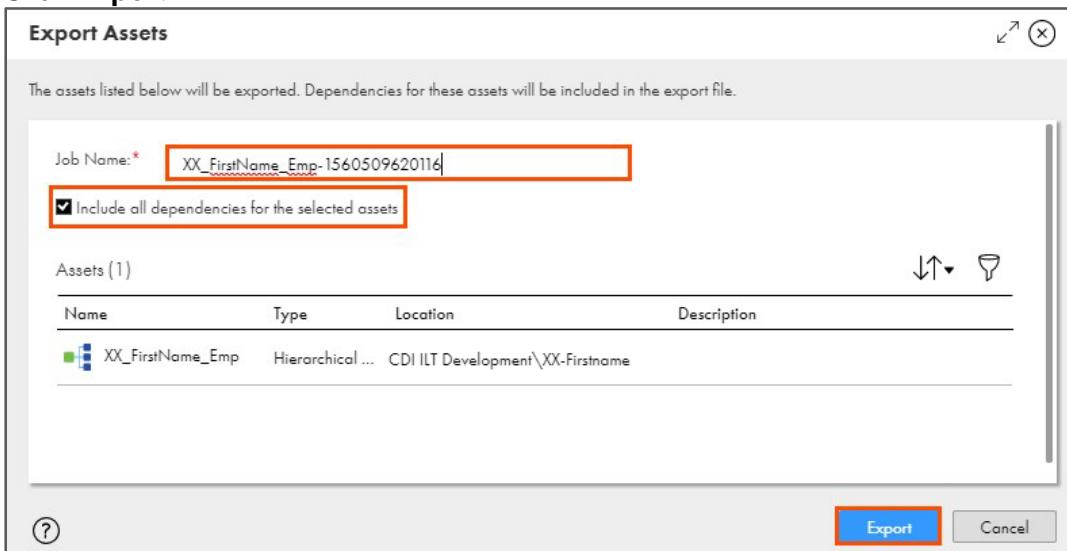
Rename...
Copy To...
Move To...
Export...
Show Dependencies
Permissions...

Note: The Export Assets window appears.

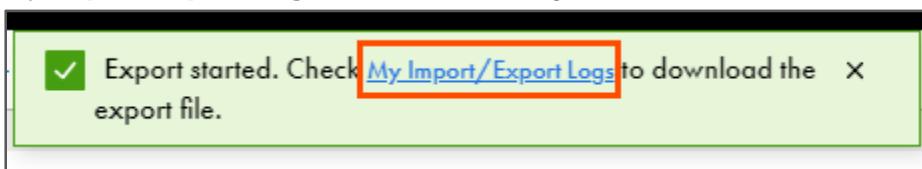
20. Retain the default name of the asset.

21. To export all the required assets and configuration, ensure that **Include all dependencies for the selected assets** is selected.

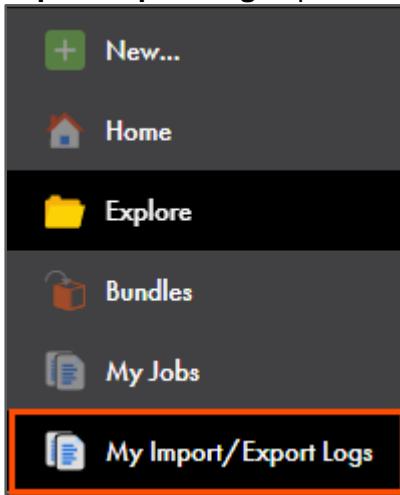
22. Click **Export**.



23. A pop-up message “Export started” will be displayed. To download the xml file, click the **My Import/Export Logs** link in the message.



Note: You can also navigate to the My Import/Export Logs page by selecting the **My Import/Export Logs** option from the navigation pane.



24. To view the exported asset list, click the **Export** tab.

25. After the status displays Export completed successfully, hover over the status message, and click the **Download** to download the xml file of the asset.

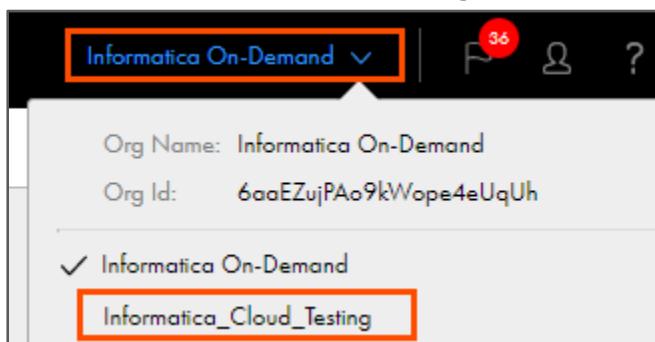


Instance Name	Start Time	User Name	Start Method	Status
XX_FirstName_Emp... [Download]	Jun 14, 2019, 4:16 AM	instructor@informaticacloud.com	UI	Export completed successfully [Download]

Note: It downloads to your system's Downloads directory.

Import it to the other Sub-Org:

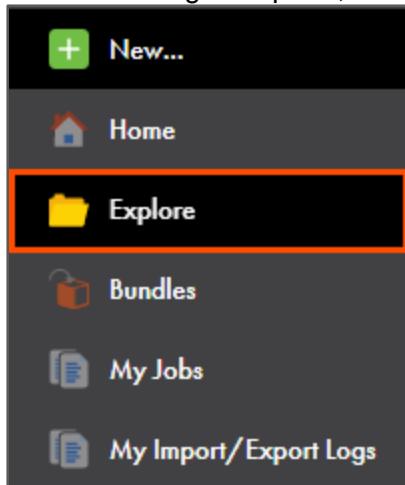
26. To import the downloaded xml in the testing Org, you must change the current Org to Sub-Org.
 27. Click Org name available on the top right corner of the screen.
Note: An information window appears.
 28. Select **Informatica_Cloud_Testing**.



Org Name: Informatica On-Demand
 Org Id: 6aaEZujPAo9kWope4eUqUh

✓ Informatica On-Demand
[Informatica_Cloud_Testing](#)

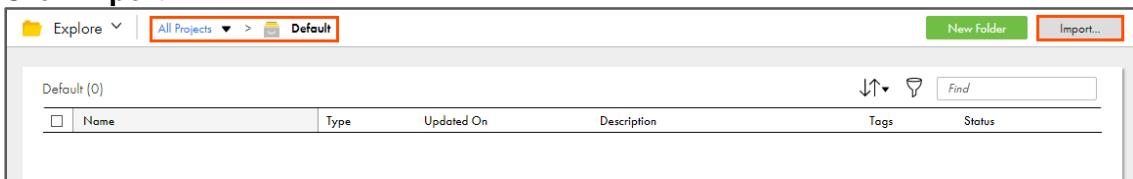
29. From the navigation pane, click **Explore**.



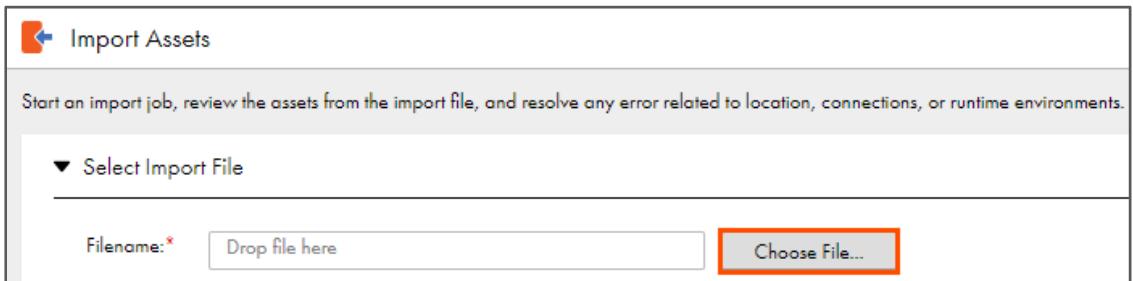
- New...
- Home
- Explore**
- Bundles
- My Jobs
- My Import/Export Logs

30. Navigate to **Default**.

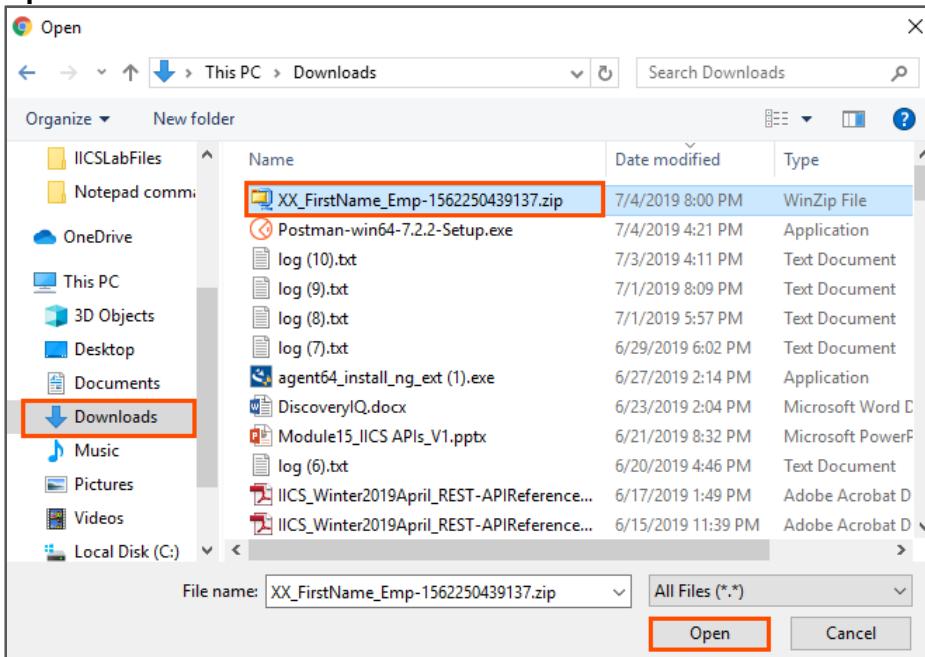
31. Click **Import**.



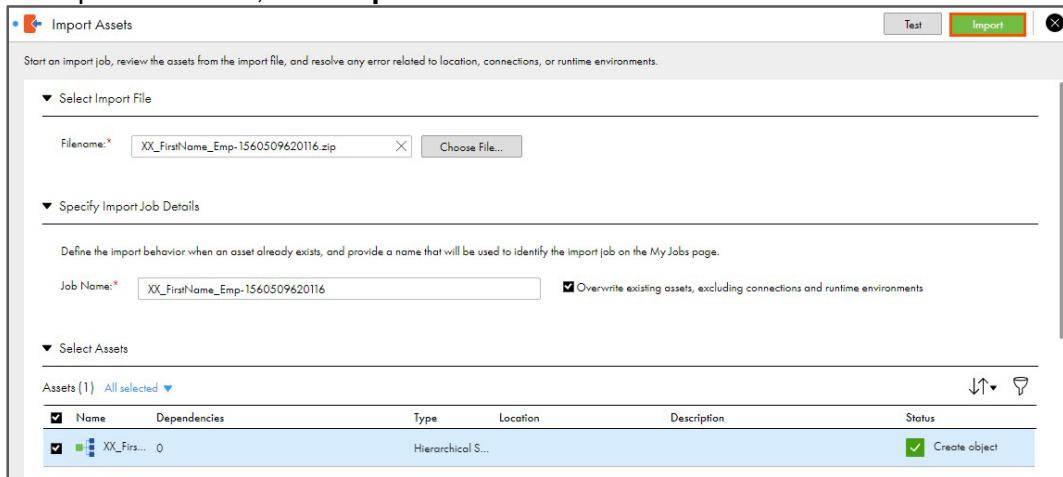
32. Click **Choose File**.



33. Navigate to your system's Downloads directory, select the asset you exported, and click **Open**.



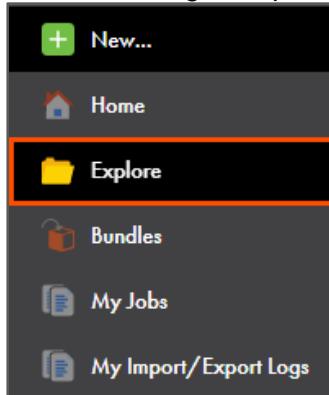
34. To import the asset, click **Import**.



35. To view the status of the job, from the navigation pane, click the **My Import/Export Logs**.

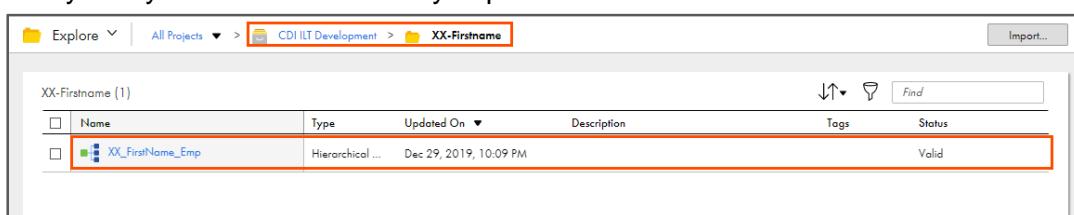


36. From the navigation pane, click **Explore**.



37. Go to **CDI ILT Development\XX-Firstname**.

38. Verify that you can view the newly imported asset.



This concludes the lab.