

# IICS: Cloud Data Integration Services

## OnDemand Lab Guide

Version: IICS-R32-Cloud-DIS-OD-201909



**Informatica™**  
University

IICS: Cloud Data Integration Services OnDemand

Version: IICS-R32-Cloud-DIS-OD-201909

September 2019

Copyright (c) 1998–2019 Informatica LLC. All rights reserved.

This educational service, materials, documentation and related software contain proprietary information of Informatica LLC and are provided under a license agreement containing restrictions on use and disclosure and are also protected by copyright law. Reverse engineering of the software is prohibited. No part of the materials and documentation may be reproduced or transmitted in any form, by any means (electronic, photocopying, recording or otherwise) without prior consent of Informatica LLC. The related software is protected by U.S. and/or international Patents and other Patents Pending.

Use, duplication, or disclosure of the related software by the U.S. Government is subject to the restrictions set forth in the applicable software license agreement and as provided in DFARS 227.7202-1(a) and 227.7702-3(a) (1995), DFARS 252.227-7013(c)(1)(ii) (OCT 1988), FAR 12.212(a) (1995), FAR 52.227-19, or FAR 52.227-14 (ALT III), as applicable.

The information in this educational service, materials, and documentation is subject to change without notice. If you find any problems in this educational service, materials or documentation, please report them to us in writing.

Informatica, Informatica Platform, Informatica Data Services, PowerCenter, PowerCenterRT, PowerCenter Connect, PowerCenter Data Analyzer, PowerExchange, PowerMart, Metadata Manager, Informatica Data Quality, Informatica Data Explorer, Informatica B2B Data Transformation, Informatica B2B Data Exchange Informatica On Demand, Informatica Identity Resolution, Informatica Application Information Lifecycle Management, Informatica Complex Event Processing, Ultra Messaging and Informatica Master Data Management are trademarks or registered trademarks of Informatica LLC in the United States and in jurisdictions throughout the world. All other company and product names may be trade names or trademarks of their respective owners.

Portions of this educational service, materials and/or documentation are subject to copyright held by third parties, including without limitation: Copyright © Adobe Systems Incorporated. All rights reserved. Copyright © Microsoft. All rights reserved. Copyright © Oracle. All rights reserved. Copyright @ the CentOS Project.

This Software is protected by U.S. Patent Numbers 5,794,246; 6,014,670; 6,016,501; 6,029,178; 6,032,158; 6,035,307; 6,044,374; 6,092,086; 6,208,990; 6,339,775; 6,640,226; 6,789,096; 6,820,077; 6,823,373; 6,850,947; 6,895,471; 7,117,215; 7,162,643; 7,243,110; 7,254,590; 7,281,001; 7,421,458; 7,496,588; 7,523,121; 7,584,422; 7,720,842; 7,721,270; and 7,774,791, international Patents and other Patents Pending.

**DISCLAIMER:** Informatica LLC provides this educational services, materials, and documentation “as is” without warranty of any kind, either express or implied, including, but not limited to, the implied warranties of non-infringement, merchantability, or use for a particular purpose. Informatica LLC does not warrant that this educational service, materials, documentation or related software is error free. The information provided in this educational service, materials, documentation and related software may include technical inaccuracies or typographical errors. The information in this educational service, materials, documentation and related software is subject to change at any time without notice.



## Document Conventions

This guide uses the following formatting conventions:

| If you see...          | It means...                                                                  | Example                                                                                                            |
|------------------------|------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| >                      | Indicates a sub menu to navigate to.                                         | Click Repository > Connect.<br>In this example, you should click the Repository menu or button and choose Connect. |
| <b>boldfaced text</b>  | Indicates text you need to type or enter.                                    | Click the Rename button and name the new source definition<br><b>S_EMPLOYEE.</b>                                   |
| 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> .                                                     |
| <b>Note:</b>           | The following paragraph provides additional facts.                           | <b>Note:</b> You can select multiple objects to import by using the Ctrl key.                                      |
| <b>Tip:</b>            | The following paragraph provides suggested uses or a Velocity best practice. | <b>Tip:</b> The m_ prefix for a mapping name is...                                                                 |

## **Other Informatica Resources**

In addition to the student and lab guides, Informatica provides these other resources:

- Documentation and Knowledge Base
- Global Customer Support
- Professional Certification

### **Accessing Documentation and Knowledge Base**

To get the latest documentation and Knowledge Base for your product, go to <https://network.informatica.com>

### **Contacting Global Customer Support**

You can contact a Customer Support Center by telephone or through the Online Support. Online Support requires a username and password. You can request a username and password at

<https://www.informatica.com/services-and-training/support-services/contact-us.html>

### **Obtaining Informatica Professional Certification**

You can take, and pass, exams provided by Informatica to obtain Informatica Professional Certification. For more information, go to

<https://www.informatica.com/services-and-training/certification.html>

## Table of Contents

### **Module 1: Informatica Cloud Overview**

|                                              |   |
|----------------------------------------------|---|
| Lab 1-1: Navigating the IICS Interface ..... | 1 |
|----------------------------------------------|---|

### **Module 2: Runtime Environments and Connections**

|                                                 |    |
|-------------------------------------------------|----|
| Lab 2-1: Creating a Salesforce Connection ..... | 13 |
| Lab 2-2: Creating a Flat File Connection.....   | 21 |
| Lab 2-3: Creating a Oracle Connection .....     | 27 |

### **Module 3: Synchronization Task**

|                                                                                  |    |
|----------------------------------------------------------------------------------|----|
| Lab 3-1: Creating a Synchronization Task .....                                   | 41 |
| Lab 3-2: Using Filter, Expression, and Lookup in a Synchronization Task .....    | 53 |
| Lab 3-3: Creating a Synchronization Task with Multiple Object Source Types ..... | 71 |
| Lab 3-4: Using Pre and Post SQL Commands in a Synchronization Task.....          | 83 |

### **Module 4: Cloud Mapping Designer – Basic Transformations**

|                                                               |    |
|---------------------------------------------------------------|----|
| Lab 4-1: Creating a Mapping Using Basic Transformations ..... | 95 |
|---------------------------------------------------------------|----|

### **Module 5: Advanced Transformations and Mapping Tasks**

|                                                                                 |     |
|---------------------------------------------------------------------------------|-----|
| Lab 5-1: Using Normalizer Aggregator and Rank Transformations in a Mapping..... | 121 |
| Lab 5-2: Creating a Mapping Task .....                                          | 145 |
| Lab 5-3: Creating a Mapping using Unconnected Lookup Transformation .....       | 151 |
| Lab 5-4: Creating a Mapping using SQL Transformation .....                      | 175 |

### **Module 6: Mapping Parameters**

|                                                                    |     |
|--------------------------------------------------------------------|-----|
| Lab 6-1: Performing Complete Parameterization .....                | 191 |
| Lab 6-2: Using Parameter File in a Mapping Task .....              | 215 |
| Lab 6-3: Using In-Out Parameter for Incremental Data Loading ..... | 227 |

### **Module 7: Expression Macro and Dynamic Linking**

|                                                      |     |
|------------------------------------------------------|-----|
| Lab 7-1: Using an Expression Macro in a Mapping..... | 249 |
| Lab 7-2: Using Dynamic Linking in a Mapping .....    | 271 |

### **Module 8: Replication Task**

|                                                |     |
|------------------------------------------------|-----|
| Lab 8-1: Replicating Data to a Flat File ..... | 281 |
|------------------------------------------------|-----|

### **Module 9: Masking Task**

|                                        |     |
|----------------------------------------|-----|
| Lab 9-1: Creating a Masking Task ..... | 289 |
|----------------------------------------|-----|

## **Module 11: Taskflows**

|                                                             |     |
|-------------------------------------------------------------|-----|
| Lab 11-1: Creating a Parallel Taskflow .....                | 299 |
| Lab 11-2: Passing In-out Parameters in a Taskflow.....      | 307 |
| Lab 11-3: Invoking a Taskflow through a File Listener ..... | 317 |

## **Module 12: Advanced Options**

|                                                                             |     |
|-----------------------------------------------------------------------------|-----|
| Lab 12-1: Configuring SQL Override Setting in a Lookup Transformation ..... | 333 |
| Lab 12-2: Using Primary Key Chunking in a Synchronization Task .....        | 347 |

## **Module 13: Hierarchical Connectivity**

|                                                                           |     |
|---------------------------------------------------------------------------|-----|
| Lab 13-1: Creating a Mapping using a REST V2 Connector.....               | 357 |
| Lab 13-2: Using Web Services Transformation in a Mapping .....            | 373 |
| Lab 13-3: Creating a Mapping using Hierarchy Parser Transformation .....  | 393 |
| Lab 13-4: Creating a Mapping using Hierarchy Builder Transformation ..... | 407 |

## **Module 14: Intelligent Structure Model**

|                                                                    |     |
|--------------------------------------------------------------------|-----|
| Lab 14-1: Creating an Intelligent Structure Model.....             | 433 |
| Lab 14-2: Using Structure Parser Transformation in a Mapping ..... | 439 |

## **Module 15: IICS APIs**

|                                                       |     |
|-------------------------------------------------------|-----|
| Lab 15-1: Running a Mapping Task using REST API ..... | 453 |
|-------------------------------------------------------|-----|

## **Module 16: Exception Handling**

|                                                               |     |
|---------------------------------------------------------------|-----|
| Lab 16-1: Creating a Mapping to Handle Non-fatal Errors ..... | 465 |
|---------------------------------------------------------------|-----|

## **Module 17: Performance Tuning**

|                                                              |     |
|--------------------------------------------------------------|-----|
| Lab 17-1: Using Partitions in a Mapping .....                | 495 |
| Lab 17-2: Using Pushdown Optimization in a Mapping Task..... | 505 |

## **Module 18: Automating and Monitoring Tasks**

|                                    |     |
|------------------------------------|-----|
| Lab 18-1: Creating a Schedule..... | 533 |
|------------------------------------|-----|

## **Module 19: Administration**

|                                                                                 |     |
|---------------------------------------------------------------------------------|-----|
| Lab 19-1: Configure Administrative Settings for your Informatica Cloud Org..... | 539 |
| Lab 19-2: Creating a Sub-Organization and Importing/Exporting Assets.....       | 555 |

# 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
- View Asset Dependencies
- 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:

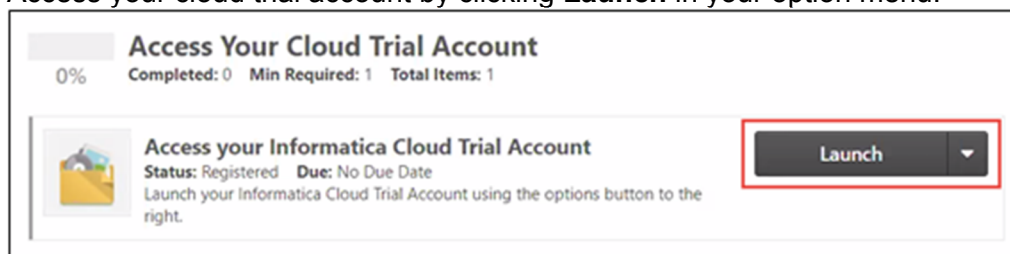
10 minutes

---

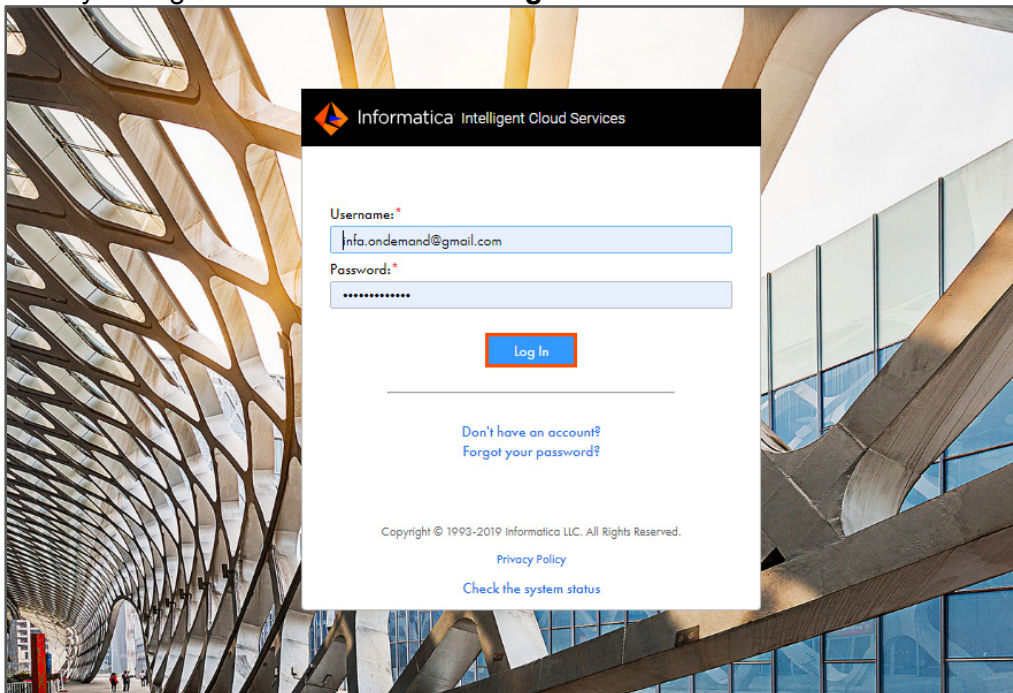
### Tasks:

#### Access IICS Interface:

1. Access your cloud trial account by clicking **Launch** in your option menu.

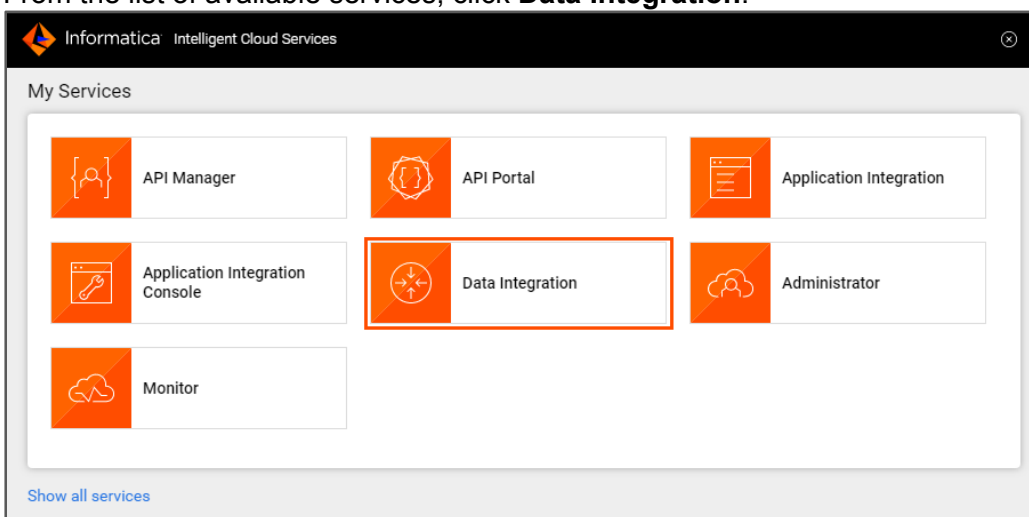


2. Enter your login credentials and click **Log In**.

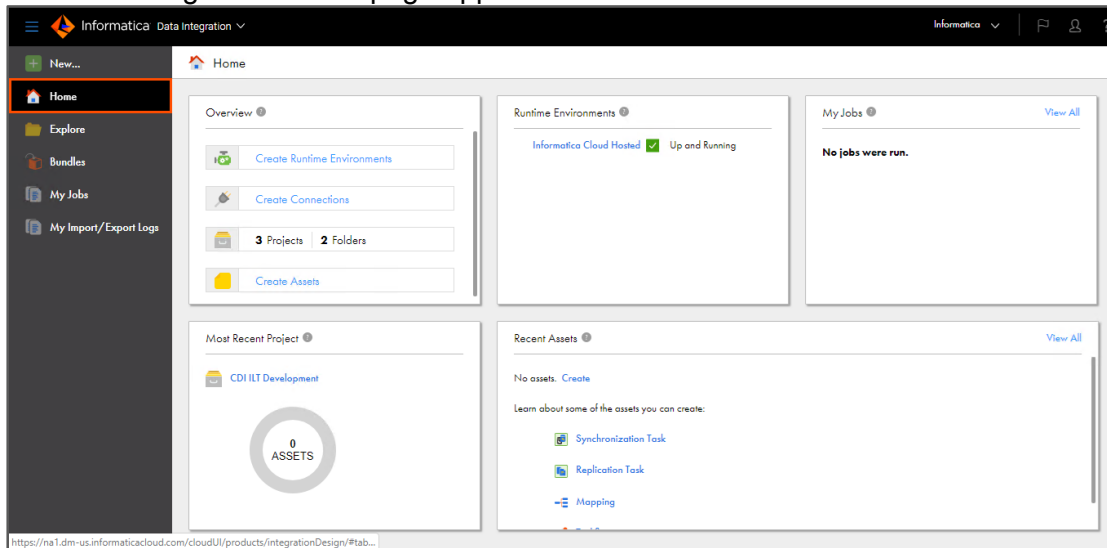


**Note:** The **My Services** window appears.

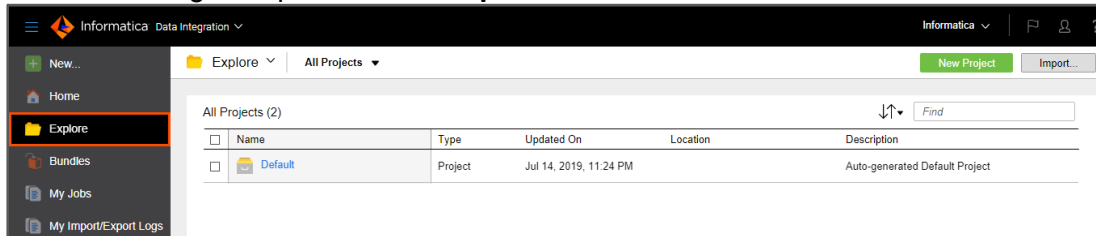
3. From the list of available services, click **Data Integration**.



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



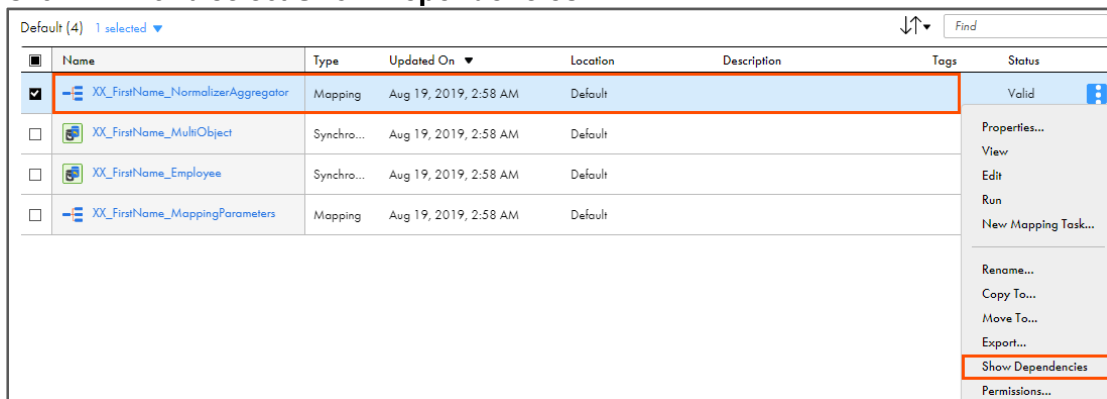
5. From the Navigation pane, select **Explore**.



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

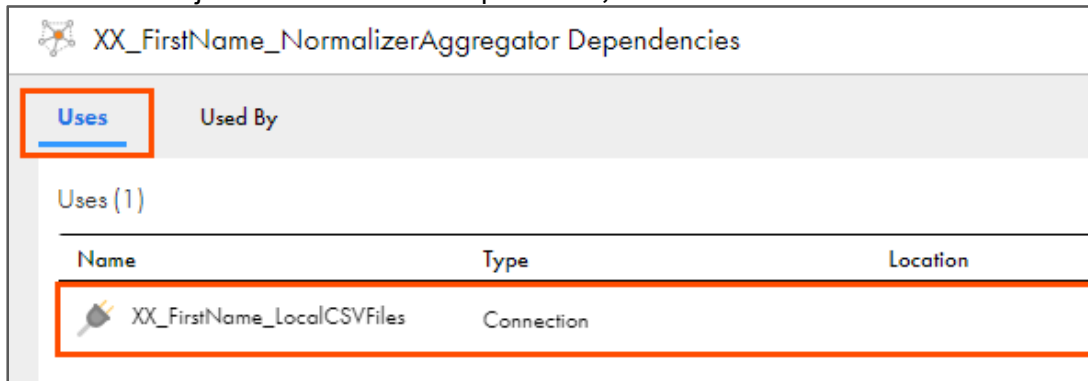
6. To check the asset dependencies, go to **Default** and select any asset.

7. Click  and select **Show Dependencies**.



**Note:** A Dependencies window appears.

8. To view the objects that the asset depends on, click **Uses**.




XX\_FirstName\_NormalizerAggregator Dependencies

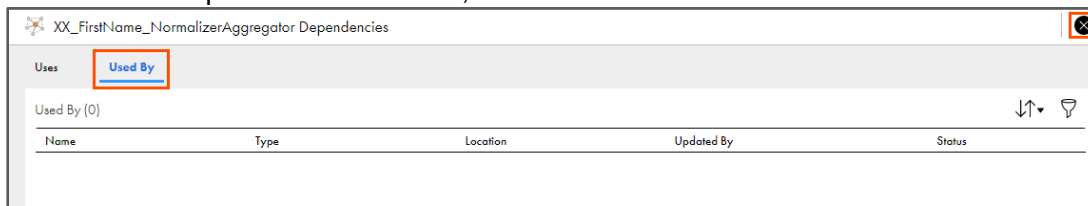
**Uses** Used By

Uses (1)

| Name                       | Type       | Location |
|----------------------------|------------|----------|
| XX_FirstName_LocalCSVFiles | Connection |          |

9. To view the objects that the asset is dependent on, click **Used By**.

10. To close the dependencies window, click .



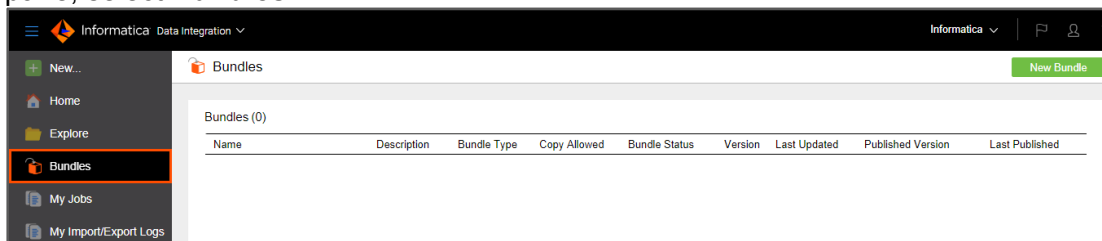
XX\_FirstName\_NormalizerAggregator Dependencies

Uses **Used By**

Used By (0)

| Name | Type | Location | Updated By | Status |
|------|------|----------|------------|--------|
|------|------|----------|------------|--------|

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



Informatica Data Integration

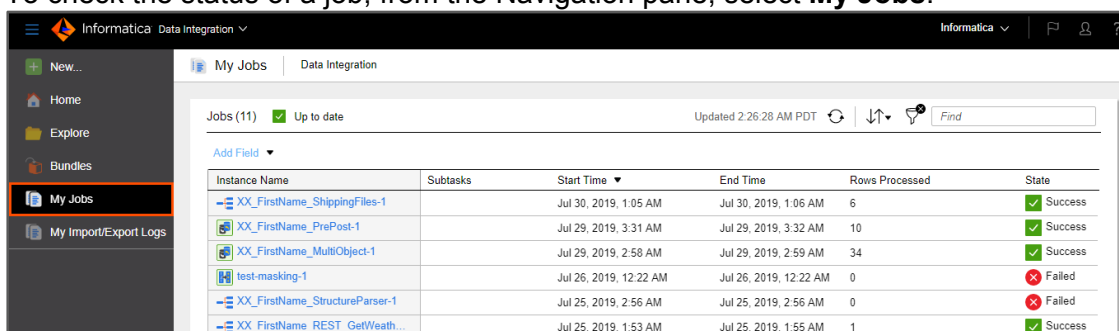
Bundles

Bundles (0)

| 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.

12. To check the status of a job, from the Navigation pane, select **My Jobs**.



Informatica Data Integration

My Jobs Data Integration

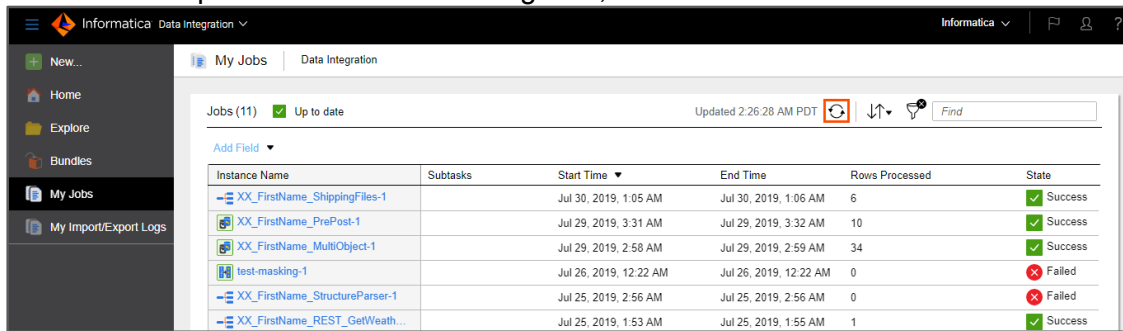
Jobs (11) ☒ Up to date Updated 2:26:28 AM PDT

Add Field

| 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 |






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



Informatica Data Integration

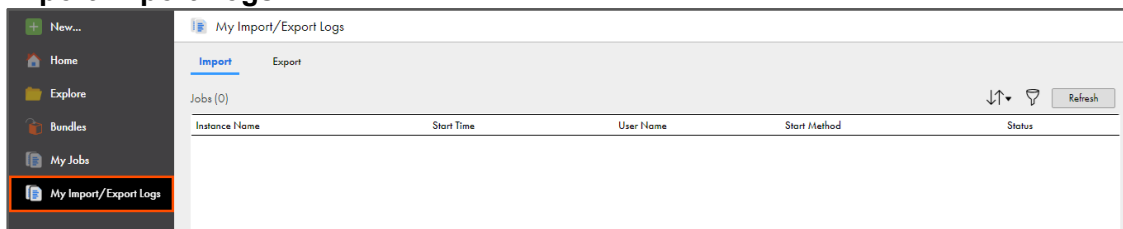
My Jobs | Data Integration

Jobs (11) ☒ Up to date Updated 2:26:28 AM PDT    Find

Add Field

| 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 |



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




Informatica Data Integration

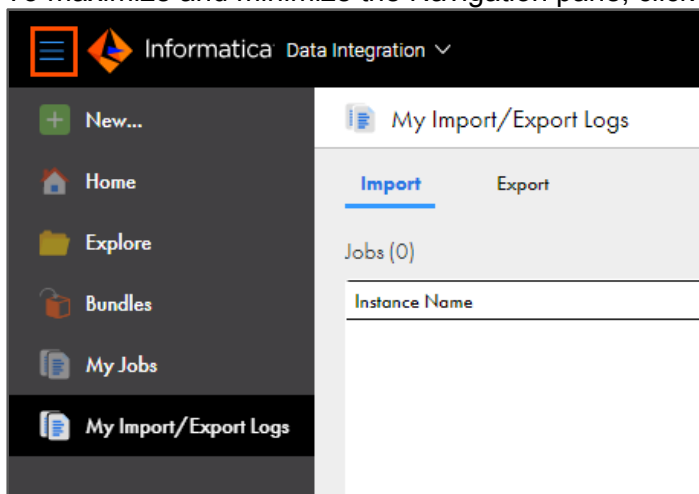
My Import/Export Logs

Import Export

Jobs (0)   Refresh

| Instance Name | Start Time | User Name | Start Method | Status |
|---------------|------------|-----------|--------------|--------|
|---------------|------------|-----------|--------------|--------|

15. To maximize and minimize the Navigation pane, click .



Informatica Data Integration

My Import/Export Logs

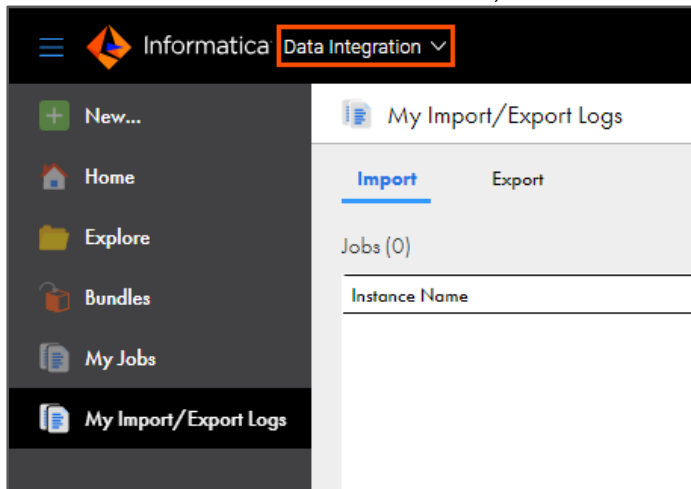
Import Export

Jobs (0)

| Instance Name |
|---------------|
|---------------|

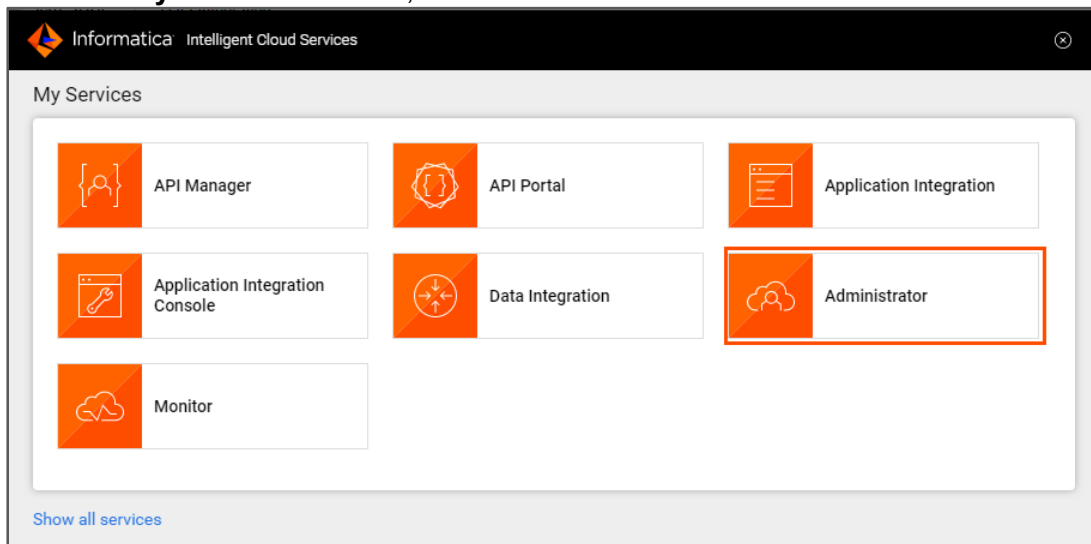
### Switching between Services:

16. 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**.

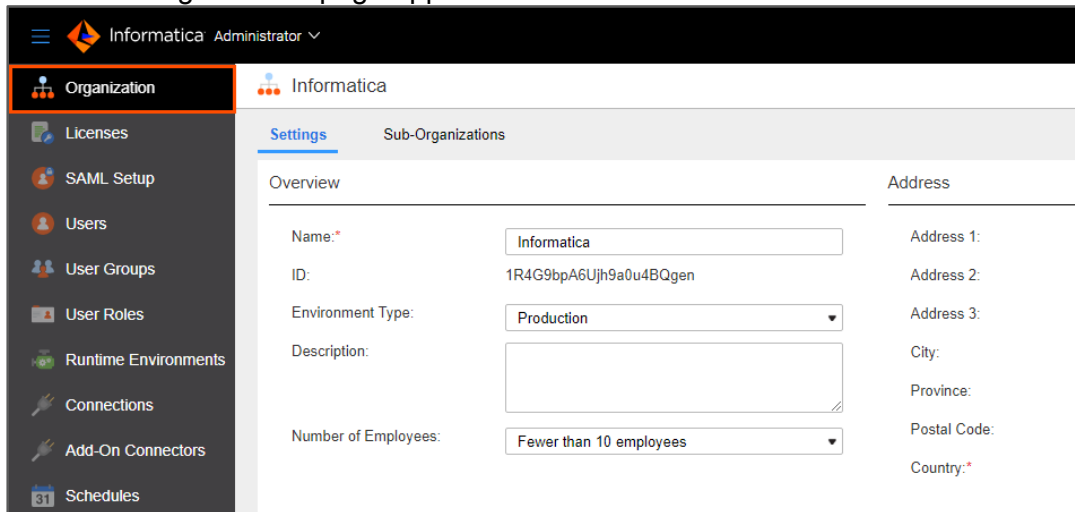


**Note:** The My Services window appears. You can select any available service at the time of log in as well.

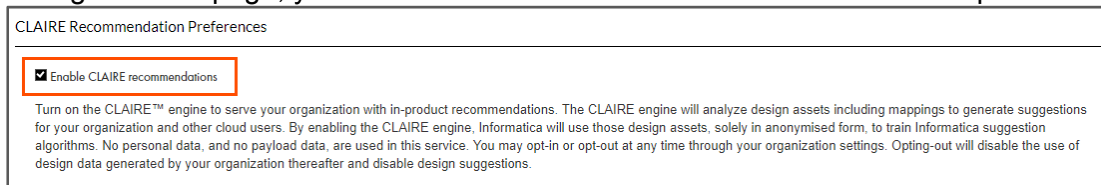
17. From the **My Services** window, select **Administrator**.



**Note:** The Organization page appears.

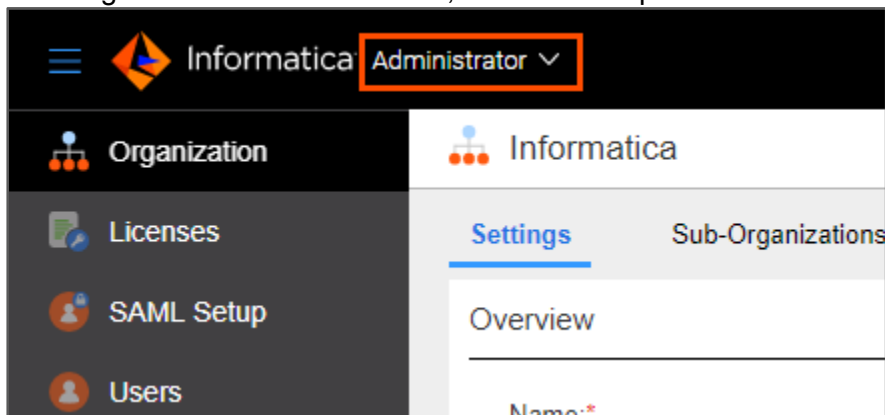


18. In Organization page, you can enable or disable CLAIRE recommendation preference.

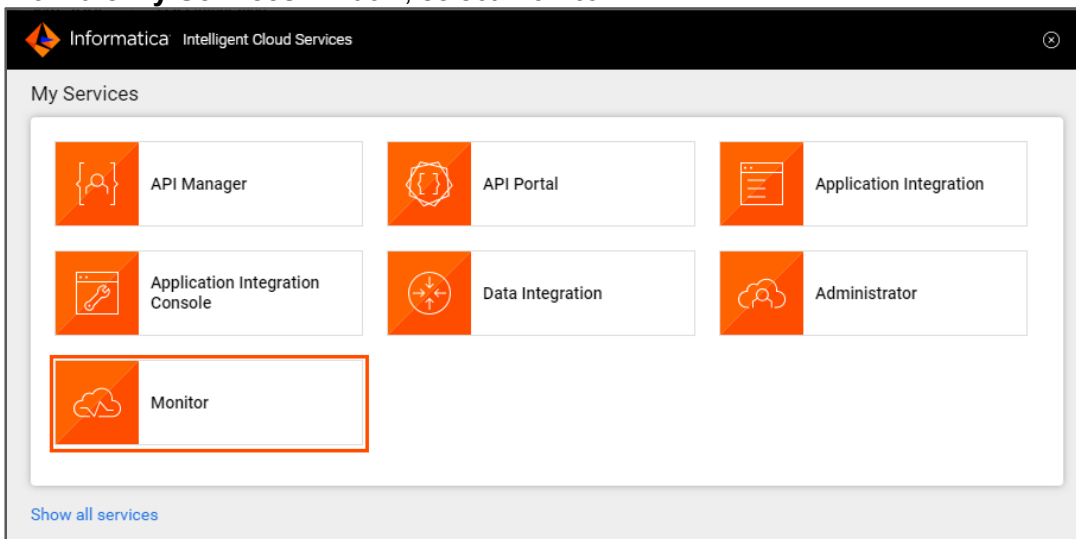


**Note:** By default, CLAIRE recommendation is enabled. For this course, do not make any changes in the Administrator service unless stated in the labs.

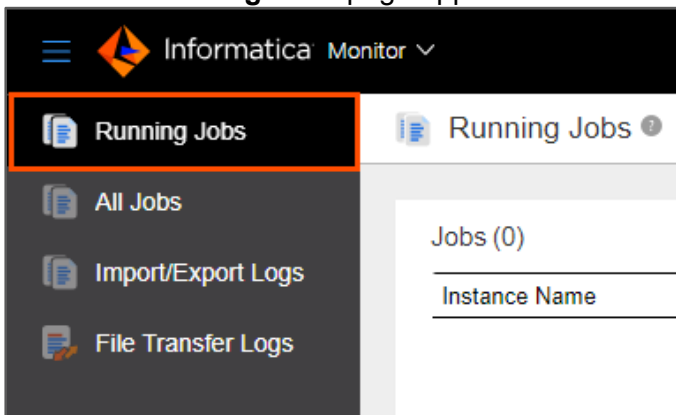
19. To navigate to the Monitor service, select the drop-down next to **Administrator**.



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



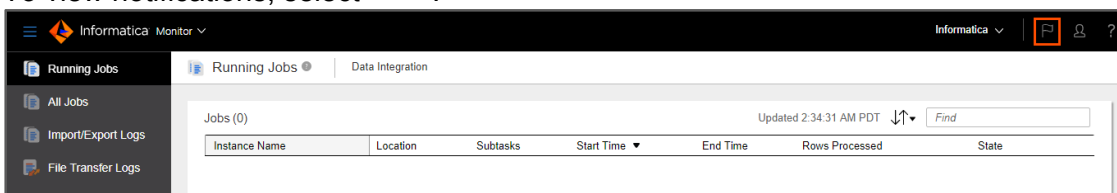
**Note:** The **Running Jobs** page appears.




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

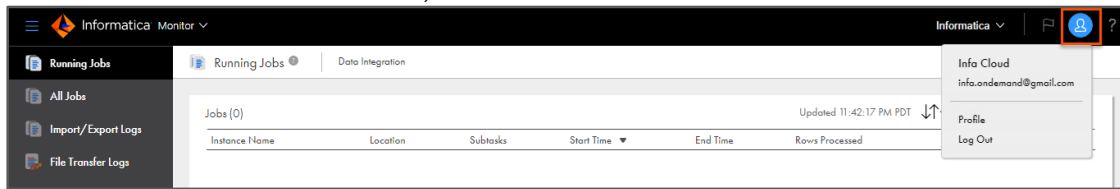
**Accessing Notifications, User details, and Online help:**

21. To view notifications, select .



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

22. To view user related information, click .

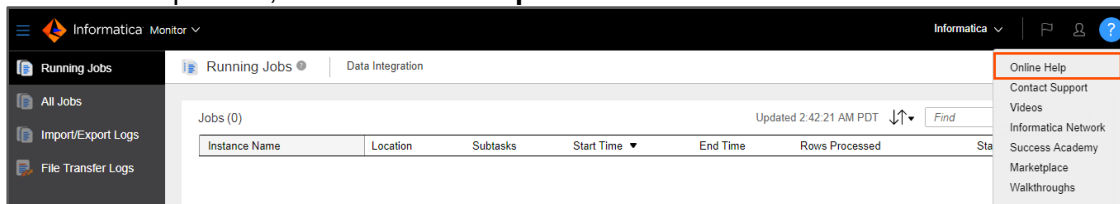


**Note:** You can access user profile from this option.

23. To access online help, click .

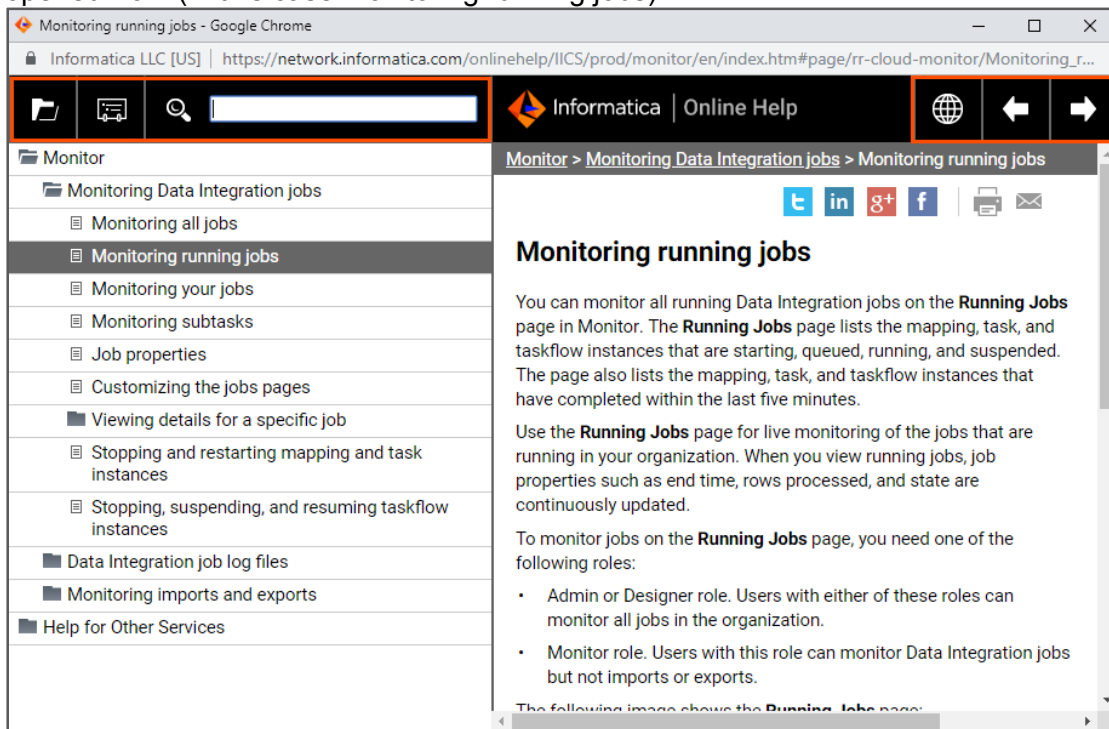


24. From the drop-down, select **Online Help**.



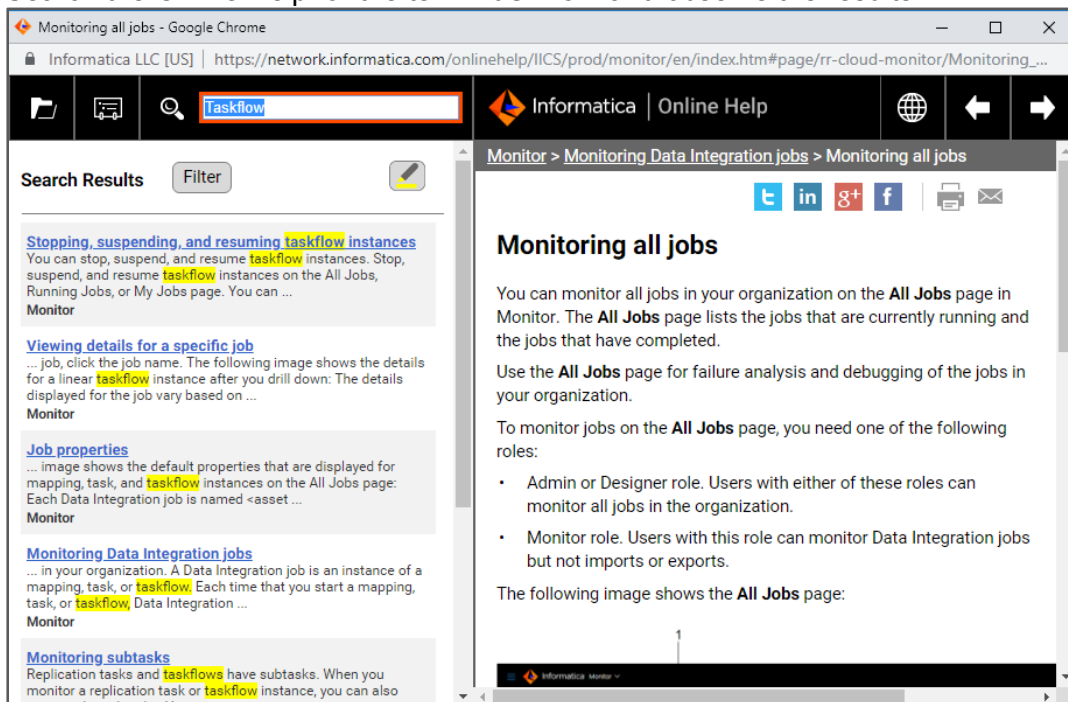
**Note:** The Online Help opens in the new browser window or tab.

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

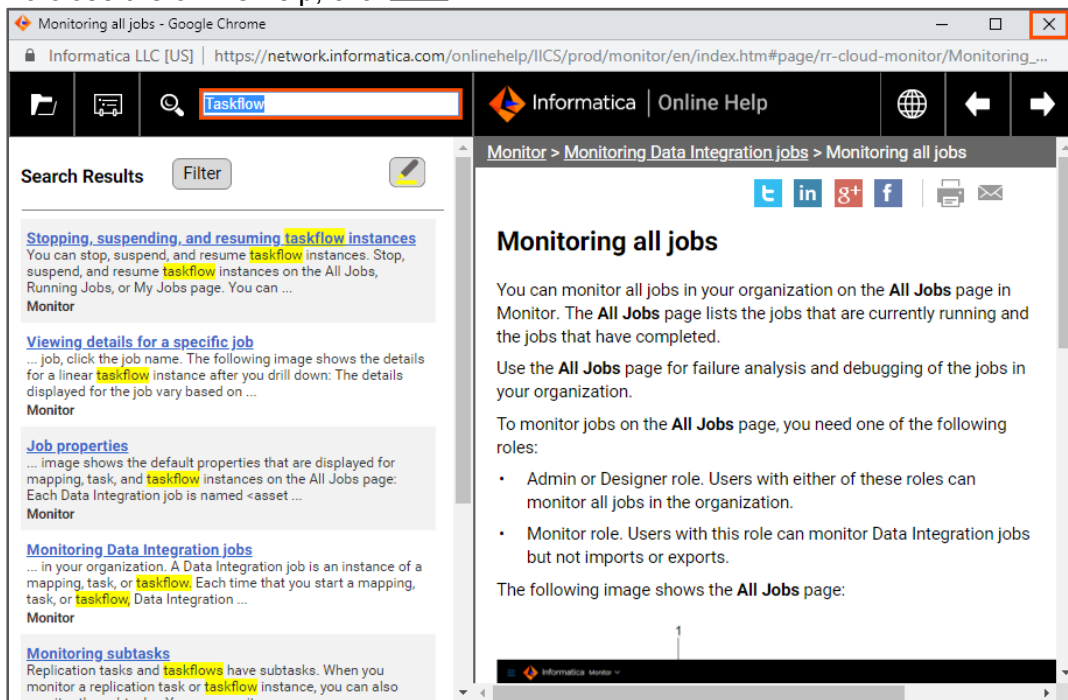


**Note:** You can browse the Online Help as per the Contents, Index, Search, and navigate to the Next and Previous help articles.

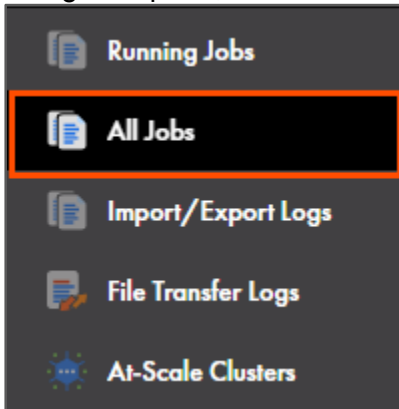
26. Search the Online Help for the term **Taskflow** and observe the results.



27. To close the online help, click .



28. You can also view the status of all your tasks from the **All Jobs** tab. To do so, from the Navigation pane, select **All Jobs**.



---

*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 connections 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.

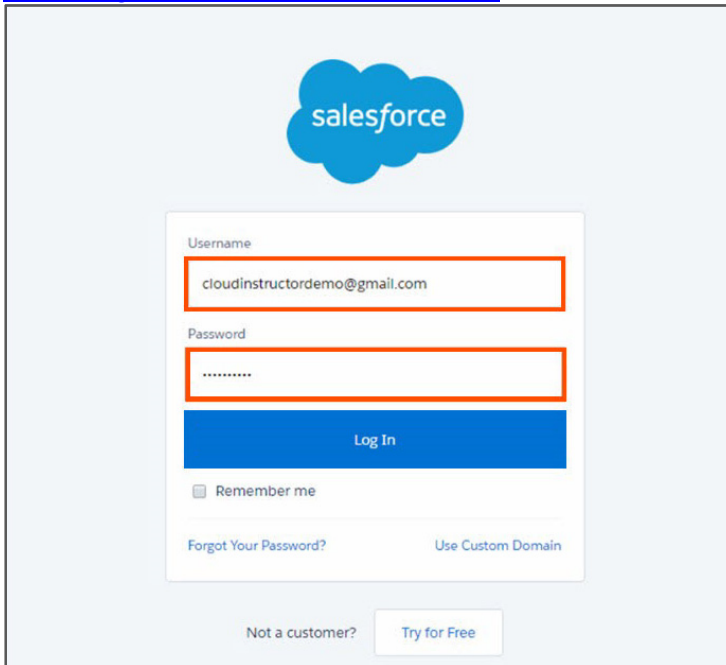
---

## Tasks:

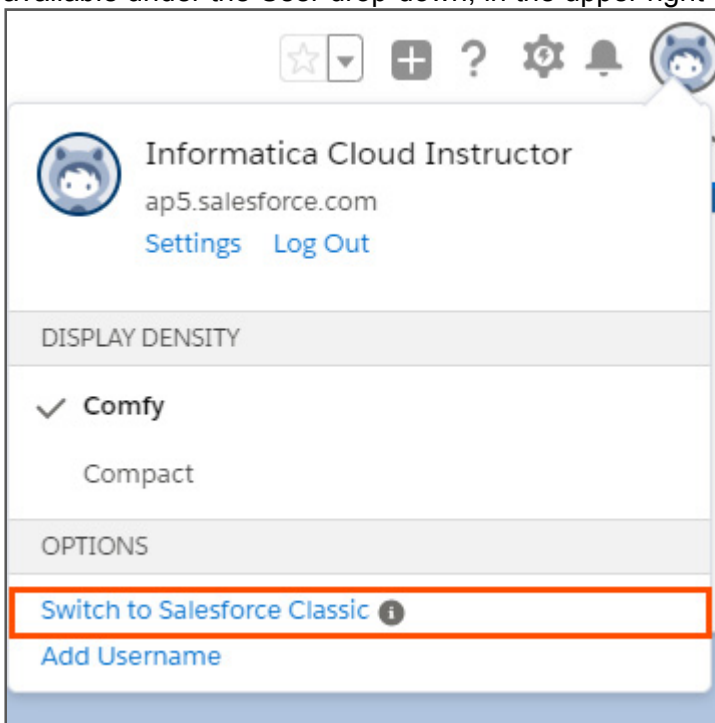
### Reset your Security Token in Salesforce.com:

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

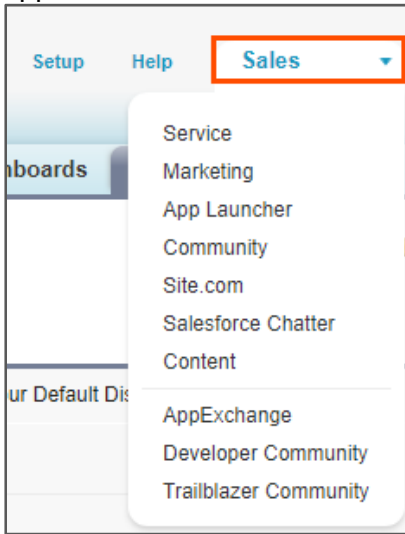
<https://login.salesforce.com/?locale=in>

The image shows the Salesforce login page. At the top is the Salesforce logo. Below it is a login form with fields for 'Username' and 'Password'. The username field contains 'cloudinstructordemo@gmail.com'. Below the password field is a blue 'Log In' button. Under the button is a 'Remember me' checkbox. At the bottom of the form are links for 'Forgot Your Password?' and 'Use Custom Domain'. Below the form are links for 'Not a customer?' and 'Try for Free'.

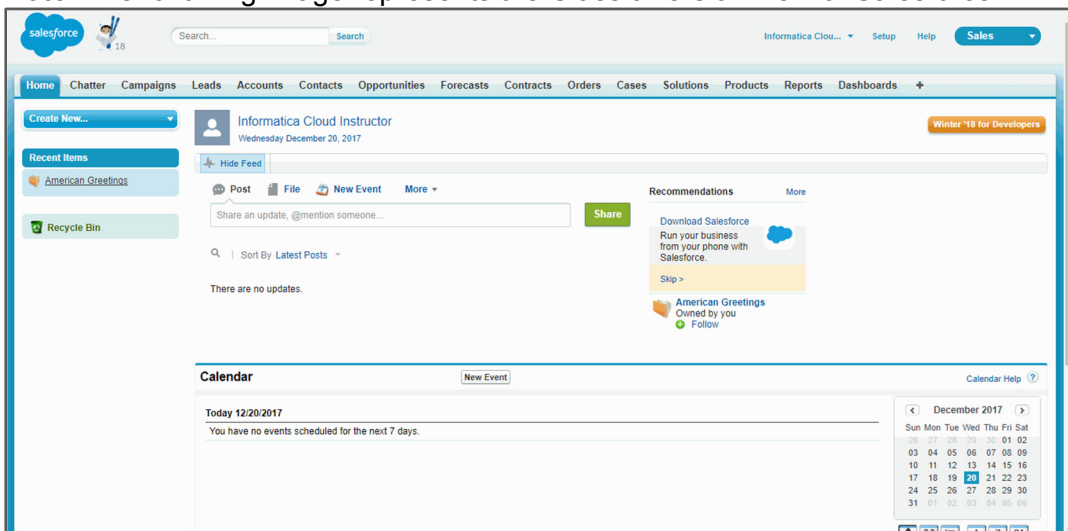
**Note:** This lab is based on the Classic version of Salesforce. If you are using the Lightning version, switch to the Classic version. The option to switch versions is available under the User drop-down, in the upper right corner of the user interface.



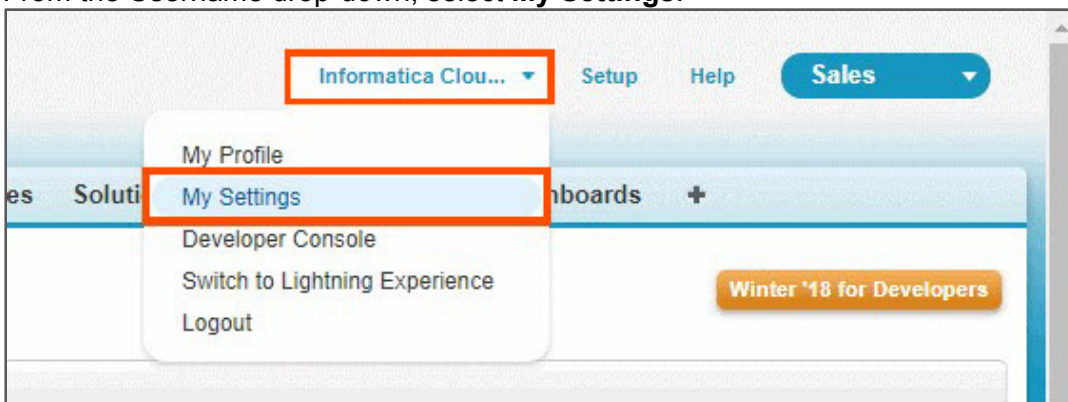
**Note:** For better visibility of tabs in Salesforce, you must select **Sales** from Salesforce app menu.



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

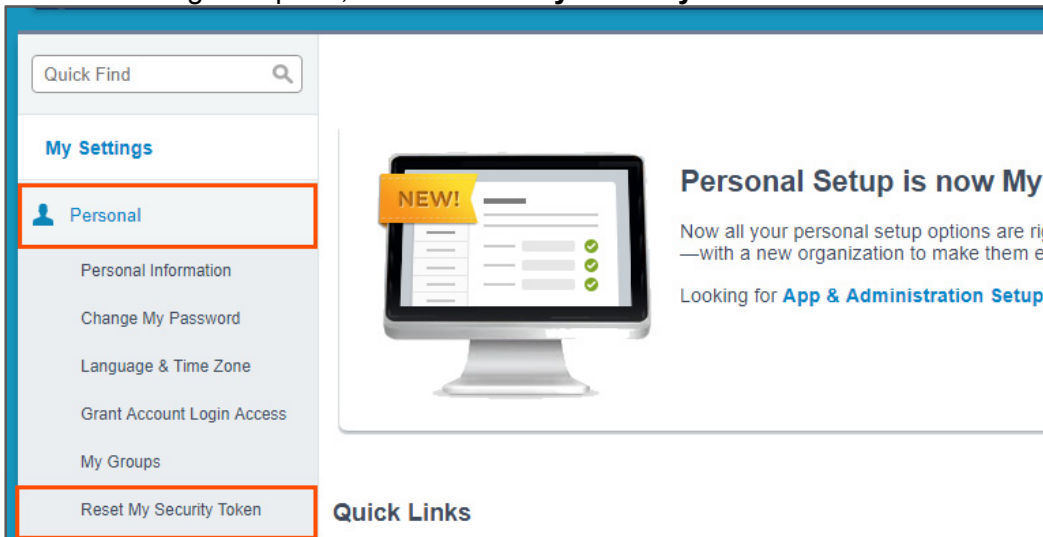


- From the Username drop-down, select **My Settings**.

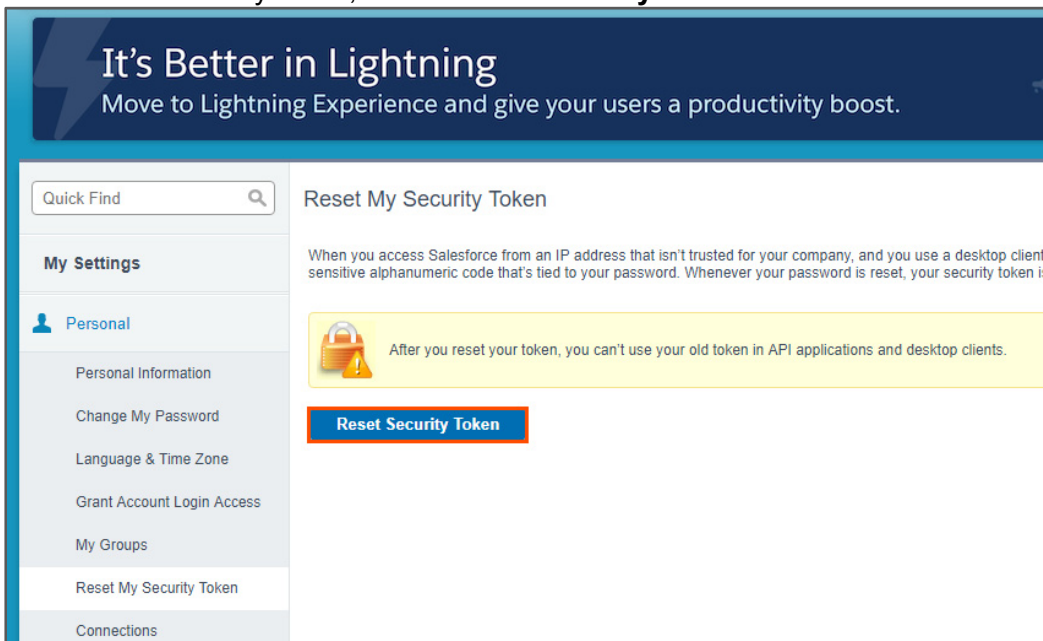


- From the **My Settings** page, drill down to **Personal**.

- From the Navigation pane, select **Reset My Security Token**.



- To reset the security token, select **Reset Security Token**.

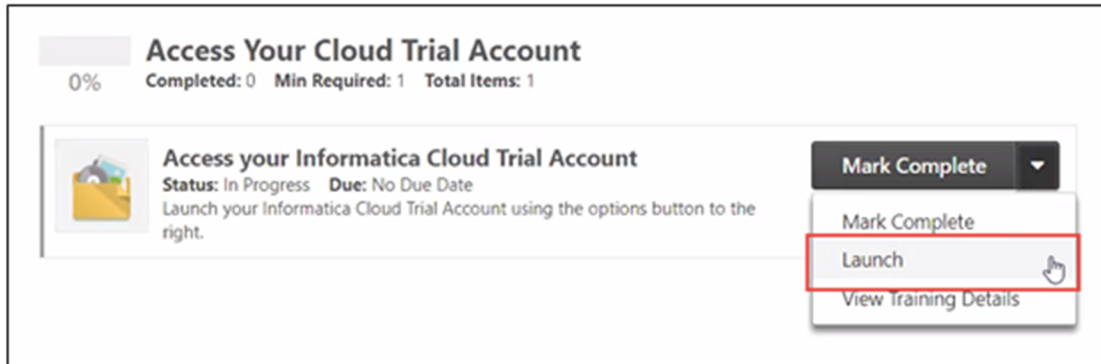


### Copy Security Token:

- After you reset the security token, you will receive an email in your email id registered with Salesforce.
- Open the email from [support@salesforce.com](mailto:support@salesforce.com) from your mailbox.
- Copy your security token and paste it in a text file.

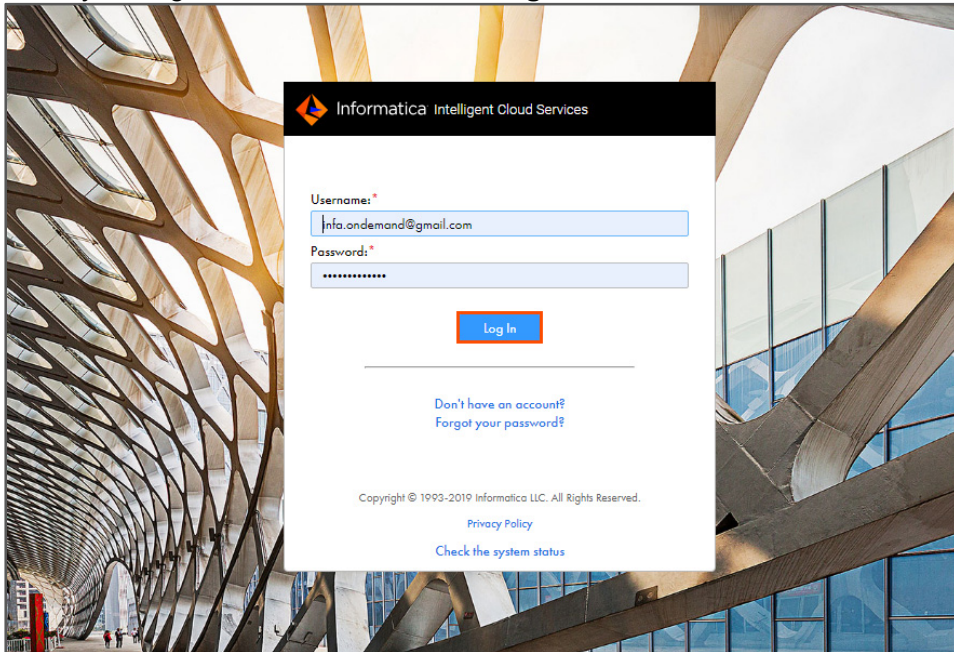
### Create a Salesforce Connection:

10. Access your cloud trial account by clicking **Launch** in your option Menu. If the option menu is labeled anything other than **Launch**, click the down arrow to the right and click **Launch**.

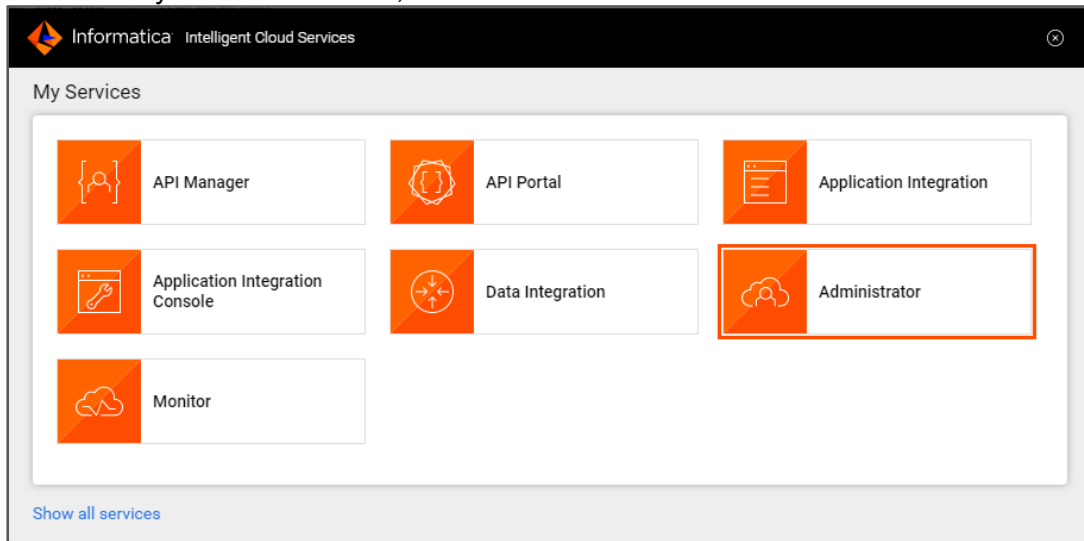


**Note:** Follow this step, if you have navigated away from the login page.

11. Enter your login credentials and click **Log In**.

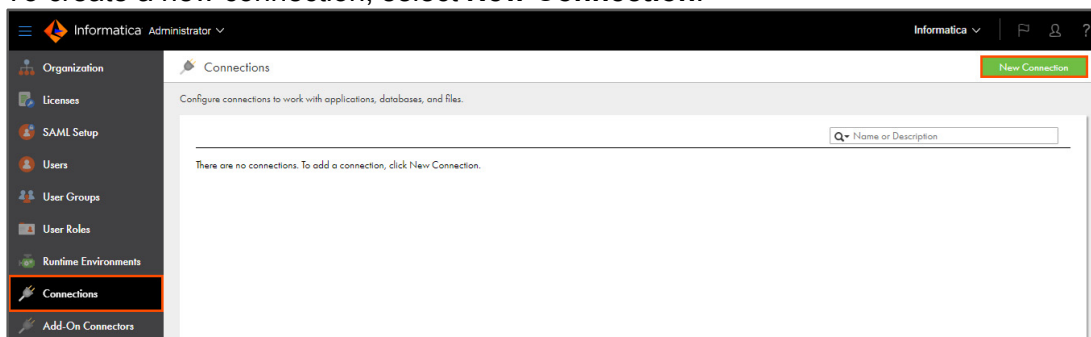


12. From the My Services window, select **Administrator**.



13. From the Navigation pane, select **Connections**.

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

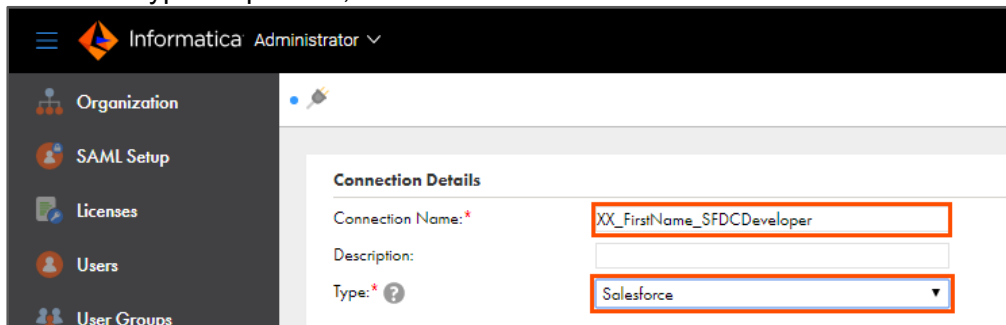


**Note:** The New Connection page appears.

15. Enter the Connection Name as **XX\_FirstName\_SFDCDeveloper**.

**Note:** XX refers to your initials, and FirstName refers to your First Name. For example, if your Name is Bob William, you must name the connection name as BW\_Bob\_SFDCDeveloper.

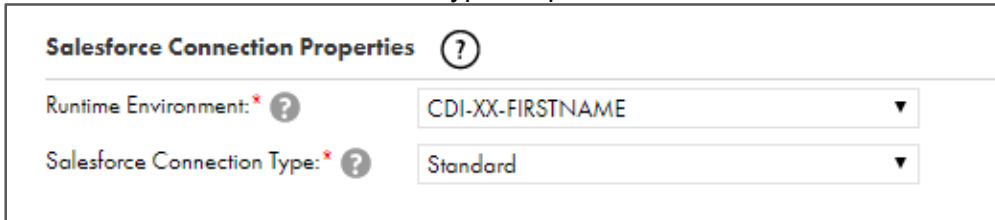
16. From the Type drop-down, select **Salesforce**.



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

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

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



**Salesforce Connection Properties** ?

Runtime Environment: \* ? CDI-XX-FIRSTNAME ▼

Salesforce Connection Type: \* ? Standard ▼

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

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



**Standard Connection Properties** ?

User Name: \* abc@informatica.com

Password: \* . . . . .

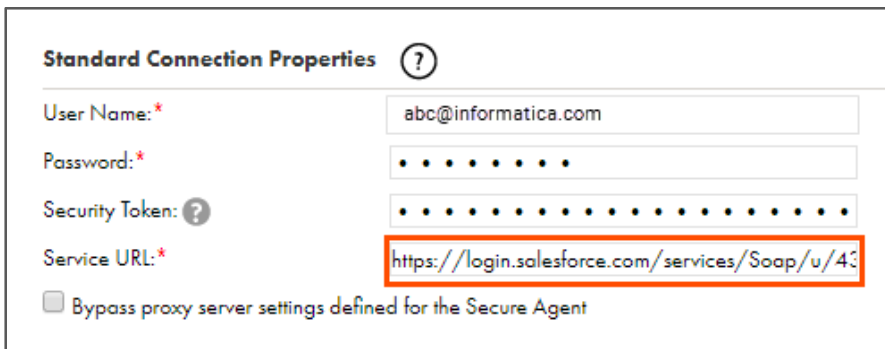
Security Token: ? . . . . .

Service URL: \* https://login.salesforce.com/services/Soap/u/43

☐ Bypass proxy server settings defined for the Secure Agent

21. In the **Security Token** field, paste your Salesforce.com security token copied in step 9.

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



**Standard Connection Properties** ?

User Name: \* abc@informatica.com

Password: \* . . . . .

Security Token: ? . . . . .

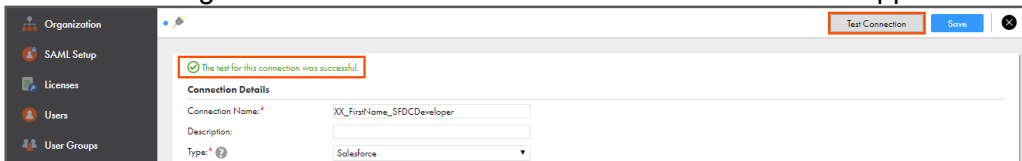
Service URL: \* https://login.salesforce.com/services/Soap/u/43

☐ 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 UR as some of the features are not available for older versions of Salesforce API.

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

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



Organization SAML Setup Licenses Users User Groups

**Test Connection** Save

✓ The test for this connection was successful.

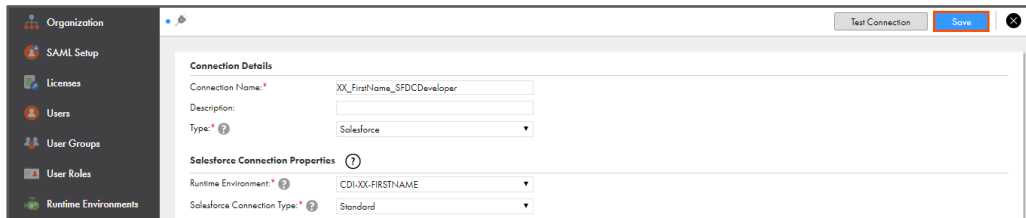
**Connection Details**

Connection Name: \* XX\_FirstName\_SFDCDeveloper

Description: \*

Type: \* Salesforce ▼

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



The screenshot shows the Informatica Cloud Integration console. On the left is a navigation menu with options: Organization, SAML Setup, Licenses, Users, User Groups, User Roles, and Runtime Environments. The main panel displays the 'Connection Details' form. At the top right of the form are two buttons: 'Test Connection' and 'Save'. The 'Save' button is highlighted with a red rectangle. The form fields include: 'Connection Name' (XX\_FirstName\_SFDCDeveloper), 'Description' (empty), 'Type' (Salesforce), 'Runtime Environment' (CDI-XX-FIRST-NAME), and 'Salesforce Connection Type' (Standard).

---

*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 manages 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.

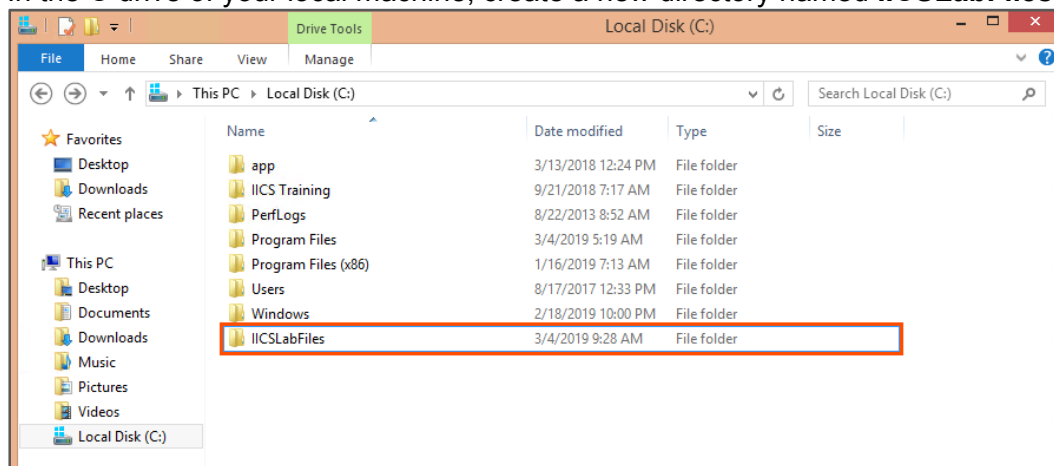
#### Duration:

10 minutes

#### Tasks:

##### Create a Flat File Directory on your local computer:

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




##### Create a Flat File Connection in IICS:

2. Access your cloud trial account by clicking **Launch** in your option Menu. If the option menu is labeled anything other than **Launch**, click the down arrow to the right and click **Launch**.

0%

**Access Your Cloud Trial Account**  
Completed: 0 Min Required: 1 Total Items: 1



**Access your Informatica Cloud Trial Account**  
**Status:** In Progress **Due:** No Due Date  
Launch your Informatica Cloud Trial Account using the options button to the right.

Mark Complete

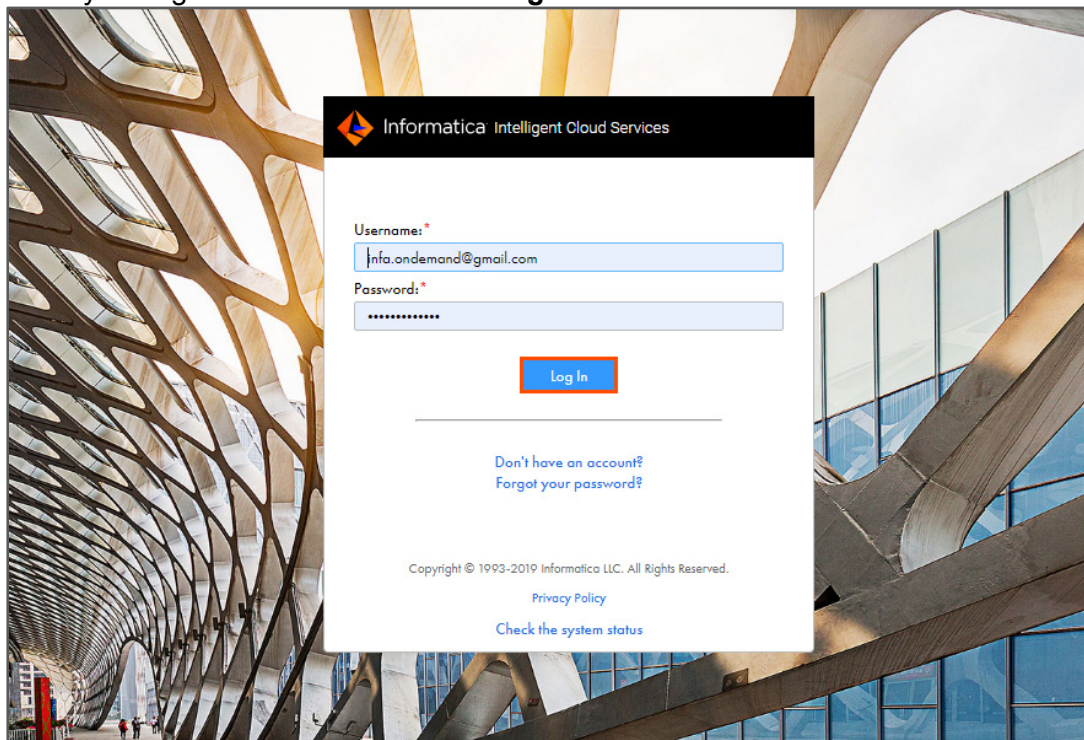
Mark Complete

Launch

View Training Details

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

3. Enter your login credentials and click **Log In**.



The login page features a background image of a modern building's interior with a complex, organic structural design. The login form is centered and includes the Informatica logo and 'Intelligent Cloud Services' text at the top. It has fields for 'Username' (containing 'info.ondemand@gmail.com') and 'Password' (masked with dots). A blue 'Log In' button is positioned below the password field. At the bottom of the form, there are links for 'Don't have an account?' and 'Forgot your password?'. The footer contains copyright information for 1993-2019 Informatica LLC, a 'Privacy Policy' link, and a 'Check the system status' link.

Informatica Intelligent Cloud Services

Username: \*  
info.ondemand@gmail.com

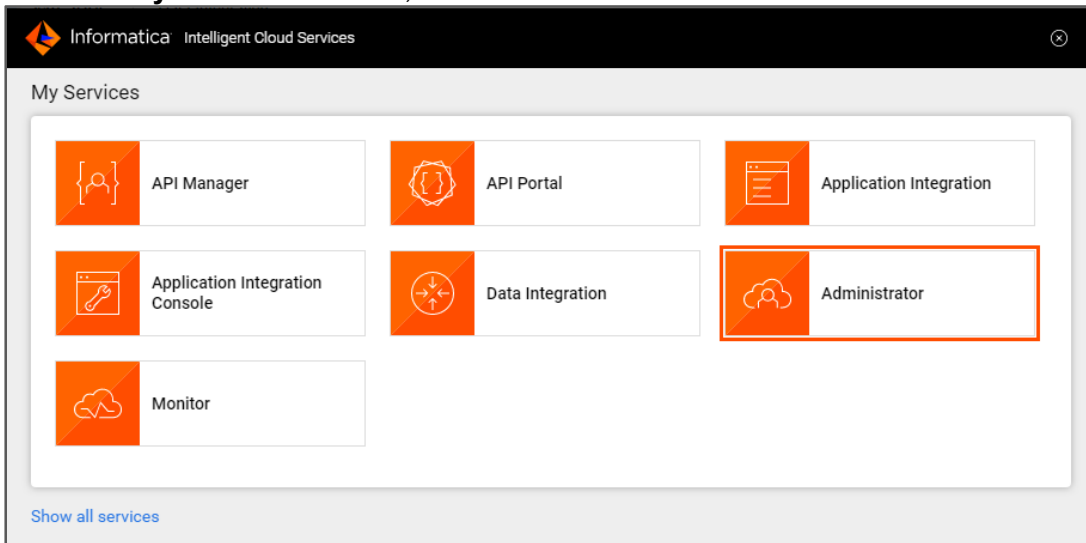
Password: \*  
\*\*\*\*\*

Log In

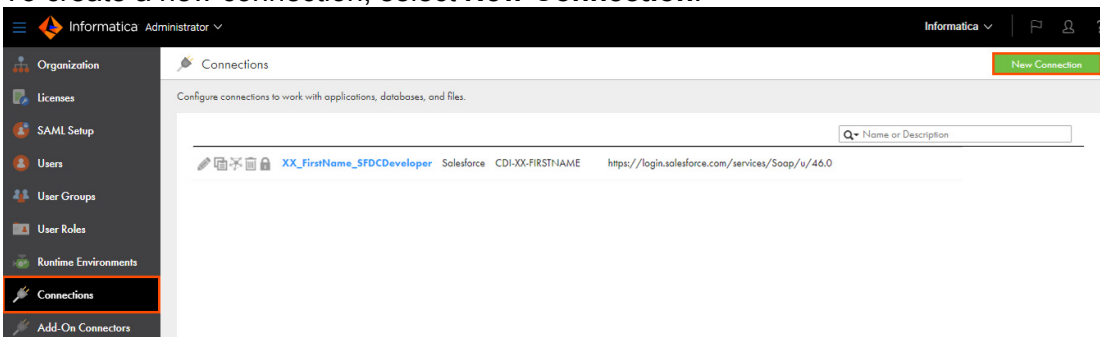
[Don't have an account?](#)  
[Forgot your password?](#)

Copyright © 1993-2019 Informatica LLC. All Rights Reserved.  
[Privacy Policy](#)  
[Check the system status](#)

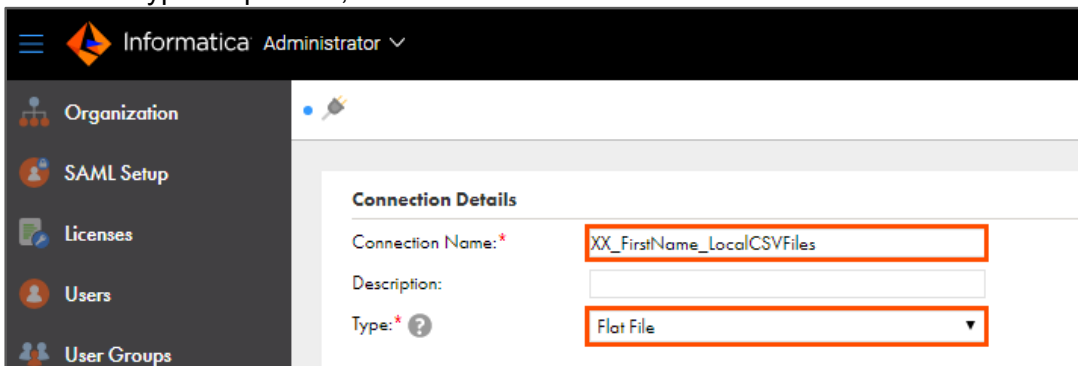
- From the **My Services** window, select **Administrator**.



- From the Navigation pane, select **Connections**.
- To create a new connection, select **New Connection**.

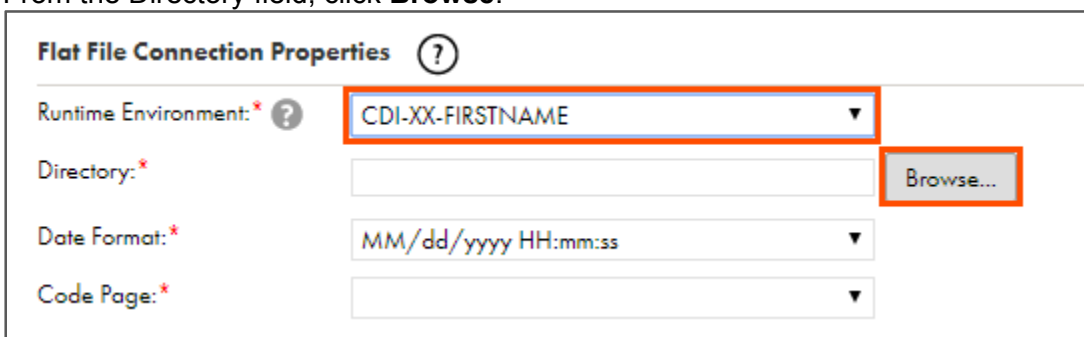


- Enter the Connection Name as **XX\_FirstName\_LocalCSVFiles**.  
**Note:** XX refers to your initials, and FirstName refers to your First Name.
- From the Type drop-down, select **Flat File**.



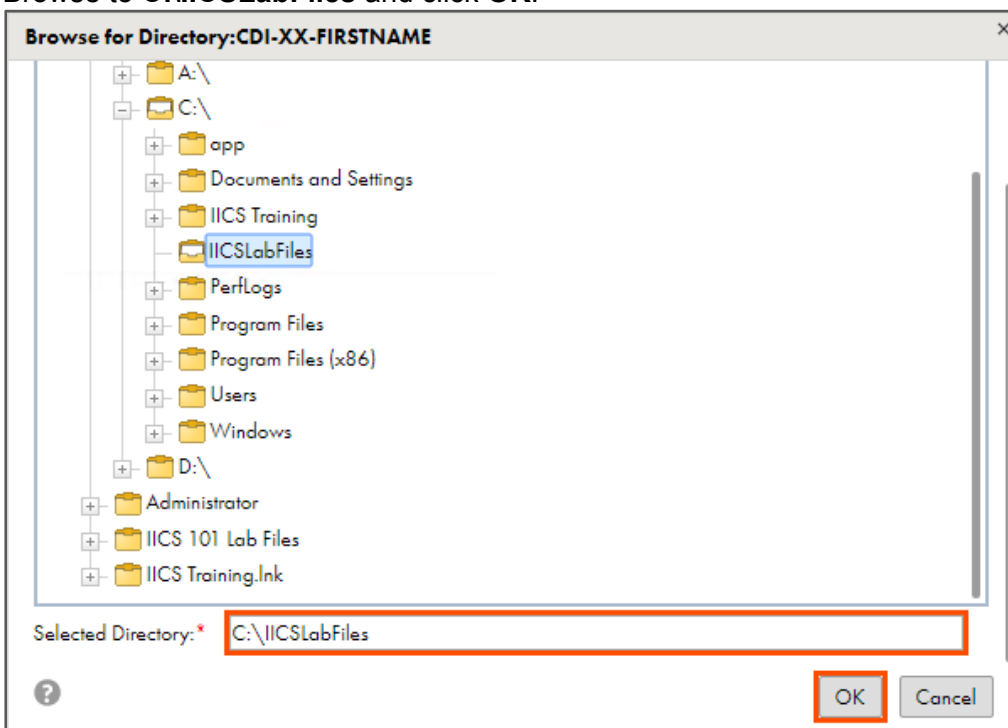
- From the **Runtime Environment** drop-down, select your secure agent group.  
**Note:** The Runtime Environment name will be in format CDI-XX-FIRSTNAME.

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



The 'Flat File Connection Properties' dialog box is shown. The 'Runtime Environment' dropdown is set to 'CDI-XX-FIRSTNAME'. The 'Directory' field is empty, and the 'Browse...' button is highlighted with a red box. The 'Date Format' is set to 'MM/dd/yyyy HH:mm:ss' and the 'Code Page' is set to the default.

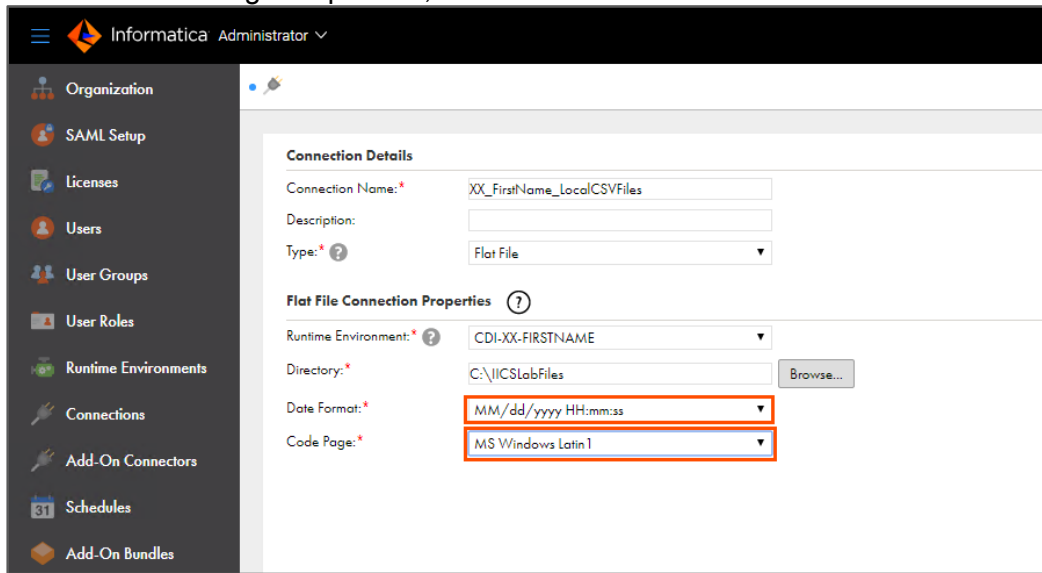
11. Browse to **C:\IICS LabFiles** and click **OK**.



The 'Browse for Directory' dialog box is shown. The directory tree is expanded to 'C:\IICS LabFiles', which is highlighted with a blue selection box. The 'Selected Directory' field at the bottom is set to 'C:\IICS LabFiles' and is highlighted with a red box. The 'OK' button is also highlighted with a red box.

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

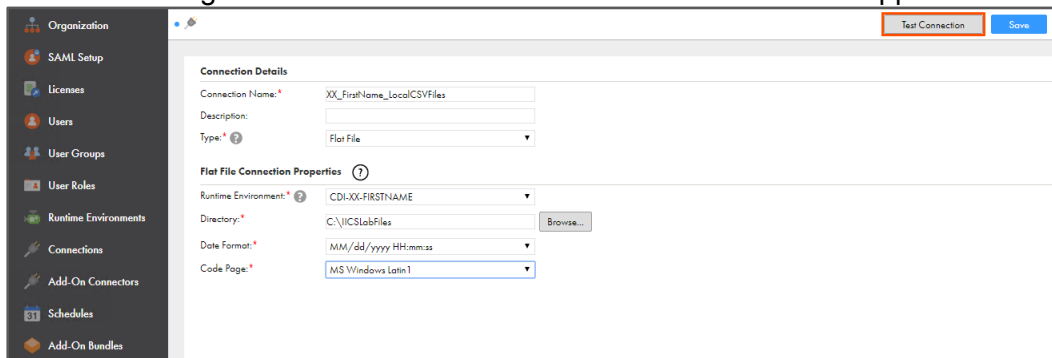
13. From the Code Page drop-down, select **MS Windows Latin1**.



The screenshot shows the Informatica Administrator interface. On the left is a navigation menu with options: Organization, SAML Setup, Licenses, Users, User Groups, User Roles, Runtime Environments, Connections, Add-On Connectors, Schedules, and Add-On Bundles. The main panel displays the 'Connection Details' for a connection named 'XX\_FirstName\_LocalCSVFiles'. The 'Type' is 'Flat File'. Under 'Flat File Connection Properties', the 'Runtime Environment' is 'CDI-XX-FIRSTNAME', the 'Directory' is 'C:\IICSLabFiles', the 'Date Format' is 'MM/dd/yyyy HH:mm:ss', and the 'Code Page' is 'MS Windows Latin1'. The 'Code Page' dropdown is highlighted with a red box.

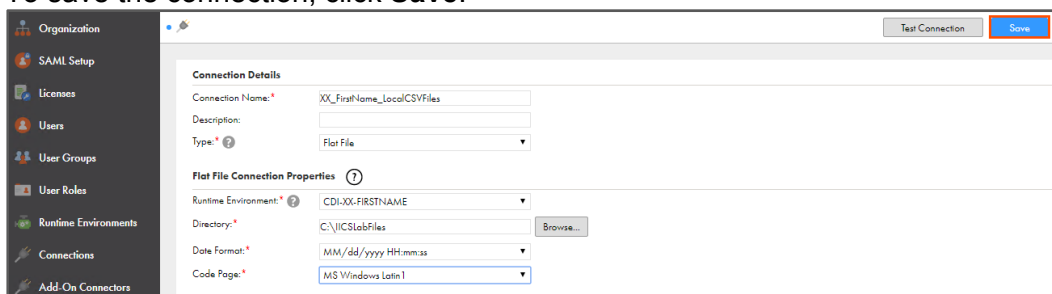
14. To test the connection, click **Test Connection**.

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



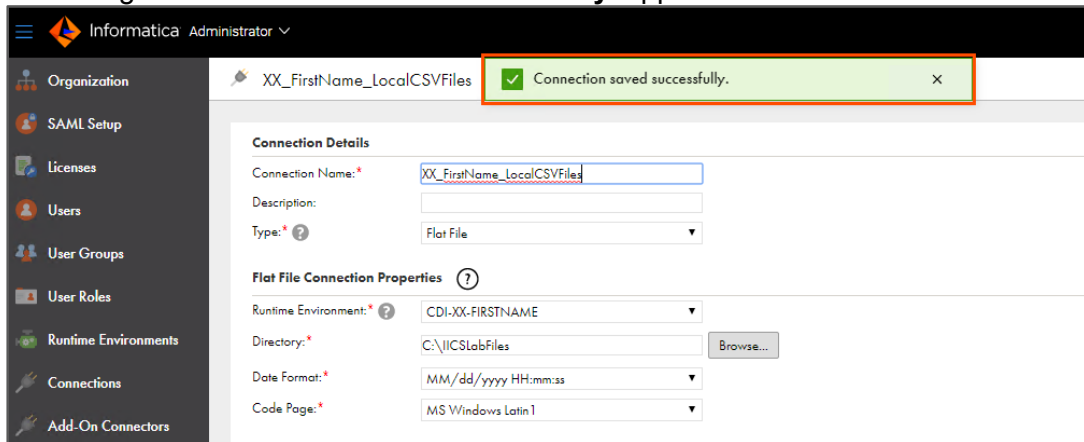
This screenshot is similar to the previous one, but the 'Test Connection' button in the top right corner of the main panel is highlighted with a red box. The configuration details remain the same.

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



This screenshot is similar to the previous ones, but the 'Save' button in the top right corner of the main panel is highlighted with a red box. The configuration details remain the same.

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:

15 minutes

#### Pre-requisite:

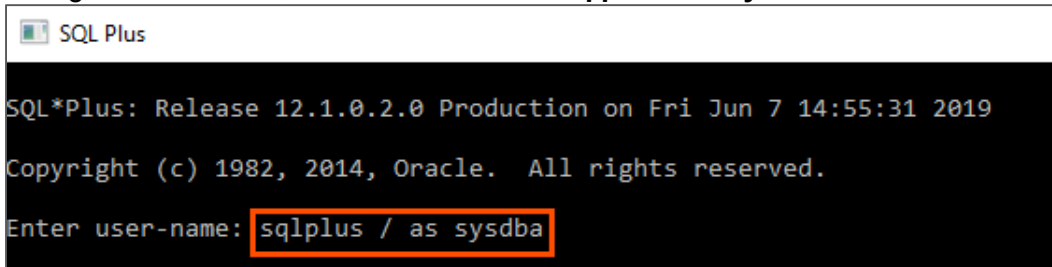
- To perform this lab, you need to install Oracle Database.

---

#### Tasks:

##### Create User in SQL Plus:

1. Select the windows **Start** menu.
2. In the search bar, enter **SQL Plus**, and press **enter**.  
**Note:** The SQL Plus command prompt appears.
3. To log in to SQL Plus, enter user-name as **sqlplus / as sysdba**.



4. Press **enter**.

- From the Enter Password prompt, **press enter** to login without password.

**Note:** The Connected to: message appears.

```
SQL*Plus: Release 12.1.0.2.0 Production on Fri Jun 7 14:55:31 2019

Copyright (c) 1982, 2014, Oracle. All rights reserved.

Enter user-name: sqlplus / as sysdba
Enter password:
Connected to:
Oracle Database 12c Enterprise Edition Release 12.1.0.2.0 - 64bit Production
With the Partitioning, OLAP, Advanced Analytics and Real Application Testing options

SQL> _
```

- To create a user, enter the following command in the SQL> field:  
**CREATE USER CDI IDENTIFIED BY CDI DEFAULT tablespace users TEMPORARY tablespace temp quota unlimited ON users;**  
OR  
Open the file named **04\_LabGuide\_CreatingOracleConnection\_2-3** provided with this lab. Copy the command mentioned under **Step 6** and paste it in the SQL> field.
- Press **Enter**.

```
SQL> CREATE USER CDI IDENTIFIED BY CDI DEFAULT tablespace users TEMPORARY tablespace temp quota unlimited ON users;
User created.

SQL> _
```

**Note:** User created message appears. If you get this **ORA-65096: invalid common user or role name** error while creating a user, then run the following command to reset the session:

**alter session set “\_ORACLE\_SCRIPT”=true;**

```
SQL> alter session set “_ORACLE_SCRIPT”=true;
Session altered.
```

**Note:** After the session is altered, run the command mentioned in step 6 to create the user.

- To grant access to created user, enter the following command in the SQL> field:  
**GRANT CONNECT, resource, DBA TO CDI;**  
OR  
Open the file named **04\_LabGuide\_CreatingOracleConnection\_2-3** provided with this lab. Copy the command mentioned under **Step 8** and paste it in the SQL> field.
- Press **enter**.

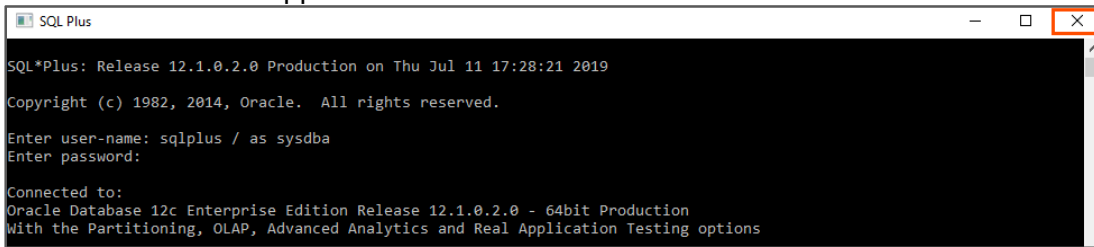
```
SQL> GRANT CONNECT, resource, DBA TO CDI;
Grant succeeded.

SQL>
```

**Note:** Grant succeeded message appears.



10. Close the SQL Plus application.



### Finding Oracle Service Name:

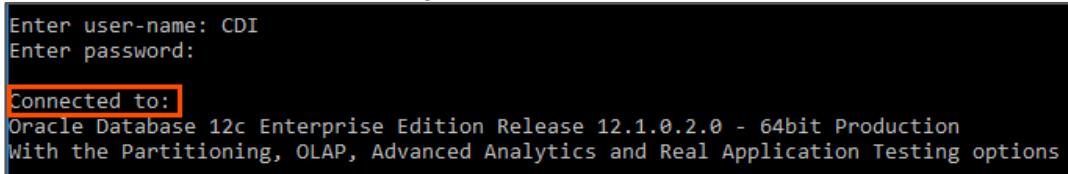
11. From the windows **Start** menu, again open **SQL Plus**.

12. To log in to SQL Plus, enter the user-name and password as **CDI**.

**Note:** The Oracle service name changes from user to user. Thus, to create a connection for CDI user, you must log in with CDI user to find the service name.

13. Press **Enter**.

**Note:** The Connected to: message appears.

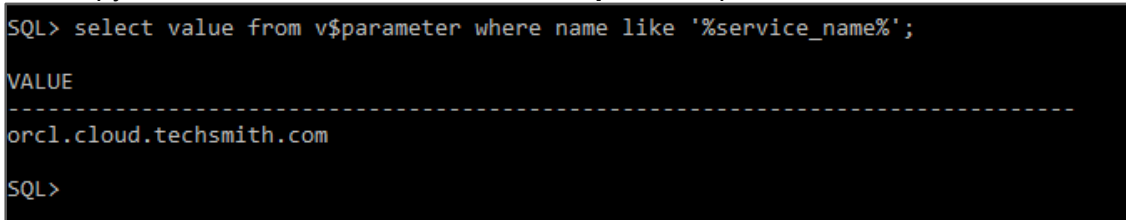


14. To know the service name, enter the following command in the SQL> field:

**select value from v\$parameter where name like '%service\_name%';**

OR

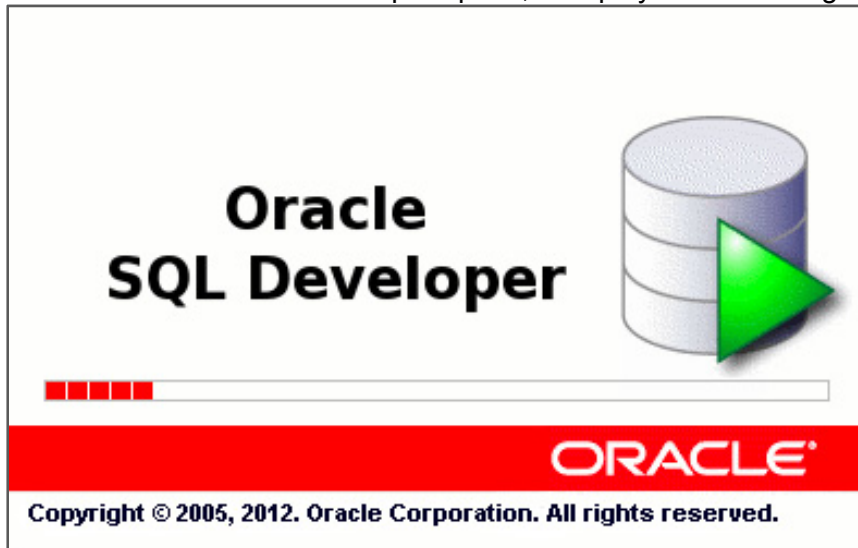
Open the file named **04\_LabGuide\_CreatingOracleConnection\_2-3** provided with this lab. Copy the command mentioned under **Step 14** and paste it in the SQL> field.



**Note:** Here, the service name is **orcl.cloud.techsmith.com**.

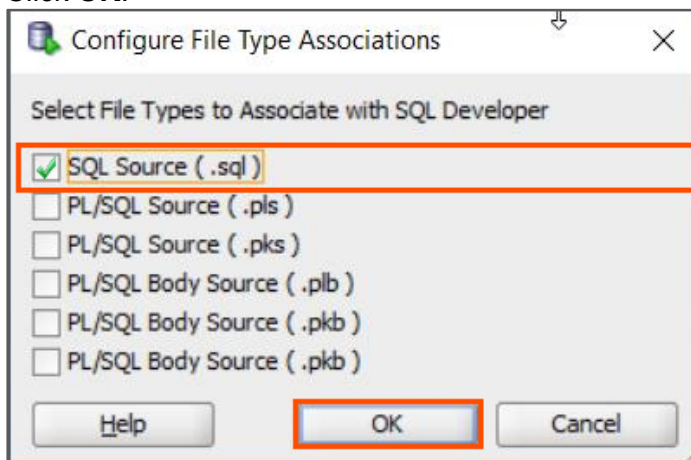
**Create connection in Oracle:**

15. To create a connection in Oracle, from the windows **Start** menu, select **SQL Developer**.
16. When the Oracle SQL Developer opens, it displays the following window.



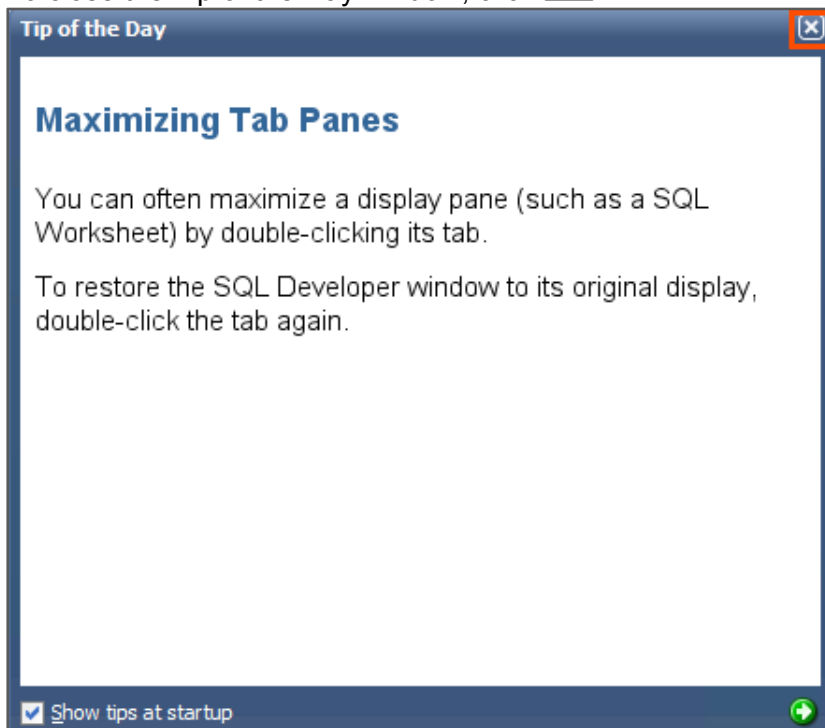
**Note:** After the application opens, the Configure File Type Associations window appears.


17. From the list, select **SQL Source ( .sql )**.
18. Click **OK**.

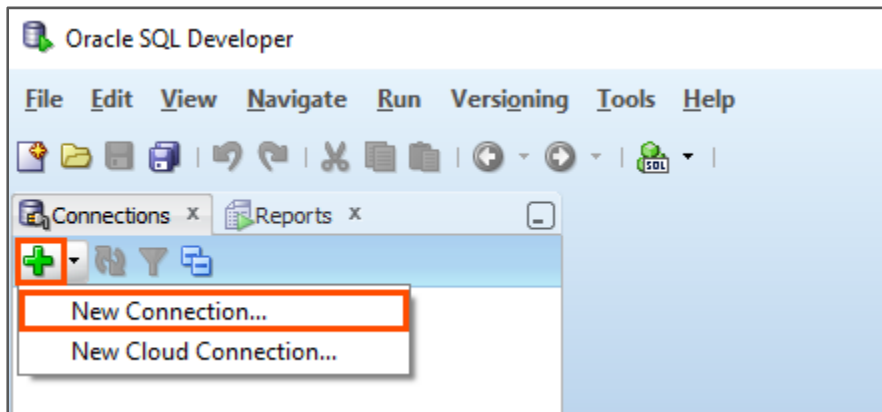


**Note:** The Tip of the Day window appears.

19. To close the Tip of the Day window, click .



20. To create a new connection, click the drop-down next to  and select **New Connection**.

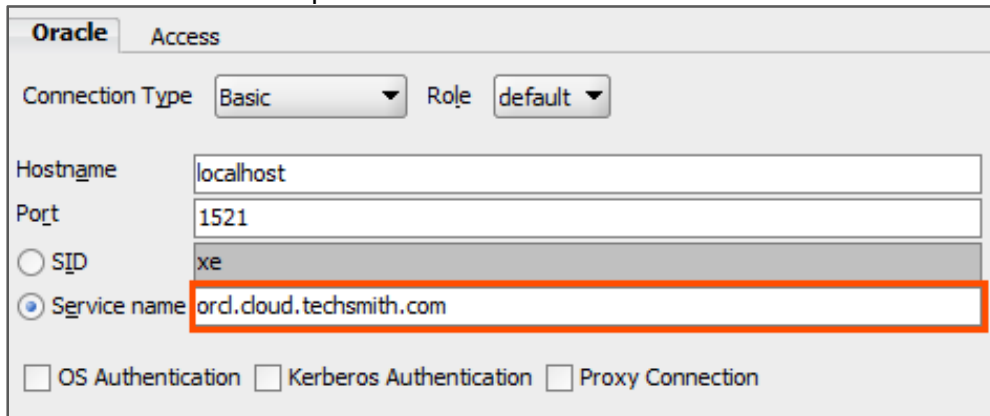


**Note:** The New/Select Database Connection window appears.

21. In the Connection Name field, enter **CDI**.  
22. In the username and password field, enter **CDI**.

|                                        |                                      |
|----------------------------------------|--------------------------------------|
| Connection Name                        | <input type="text" value="CDI"/>     |
| Username                               | <input type="text" value="CDI"/>     |
| Password                               | <input type="password" value="..."/> |
| <input type="checkbox"/> Save Password |                                      |

23. Select **Service Name** option and enter the oracle service name identified in step 14.



**Oracle** Access

Connection Type: Basic Role: default

Hostname: localhost

Port: 1521

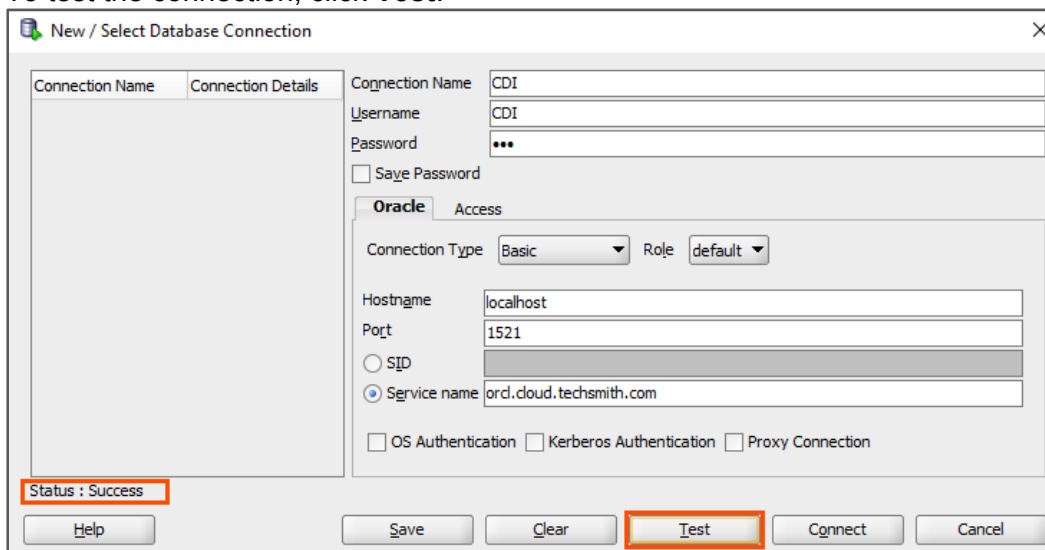
☐ SID: xe

☒ Service name: **ordl.cloud.techsmith.com**

☐ OS Authentication ☐ Kerberos Authentication ☐ Proxy Connection

**Note:** The service name can change from one user to another.

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



New / Select Database Connection

| Connection Name | Connection Details   |
|-----------------|----------------------|
| CDI             | system@//localhos... |

Connection Name: CDI

Username: CDI

Password: ...

☐ Save Password

**Oracle** Access

Connection Type: Basic Role: default

Hostname: localhost

Port: 1521

☐ SID: xe

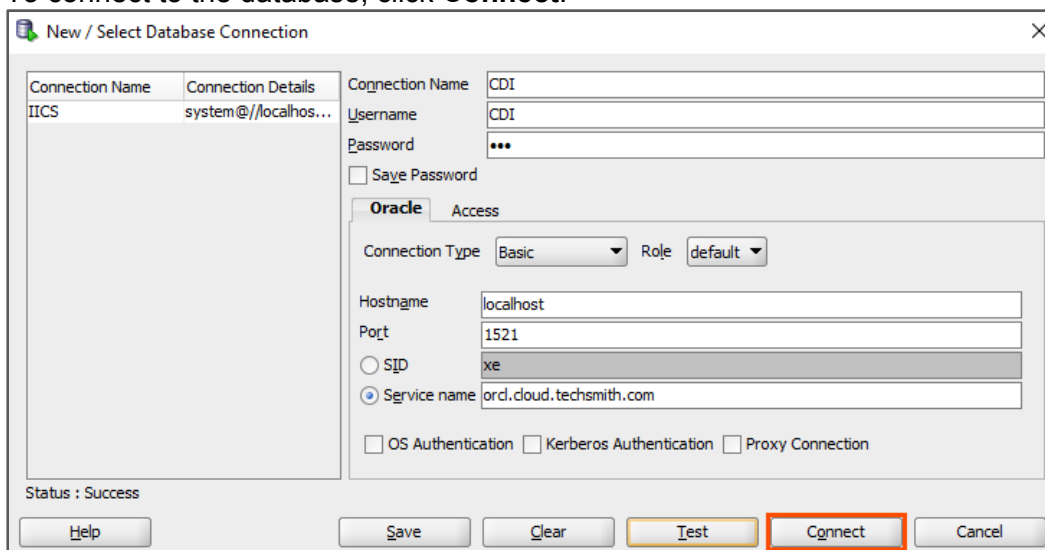
☒ Service name: ordl.cloud.techsmith.com

☐ OS Authentication ☐ Kerberos Authentication ☐ Proxy Connection

Status : **Success**

Buttons: Help, Save, Clear, **Test**, Connect, Cancel

25. To connect to the database, click **Connect**.



New / Select Database Connection

| Connection Name | Connection Details   |
|-----------------|----------------------|
| IICS            | system@//localhos... |

Connection Name: CDI

Username: CDI

Password: ...

☐ Save Password

**Oracle** Access

Connection Type: Basic Role: default

Hostname: localhost

Port: 1521

☐ SID: xe

☒ Service name: ordl.cloud.techsmith.com

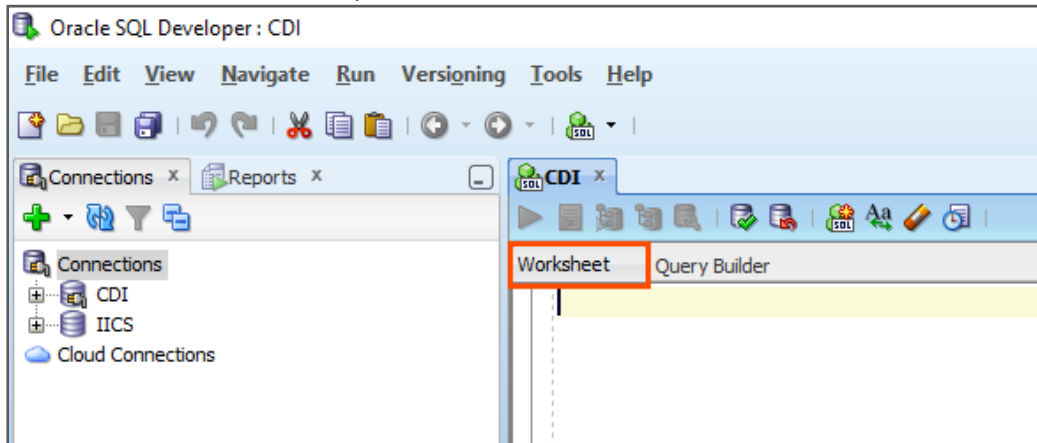
☐ OS Authentication ☐ Kerberos Authentication ☐ Proxy Connection

Status : Success

Buttons: Help, Save, Clear, Test, **Connect**, Cancel

## Create Tables:

26. To create the tables in CDI, select the **Worksheet** tab.

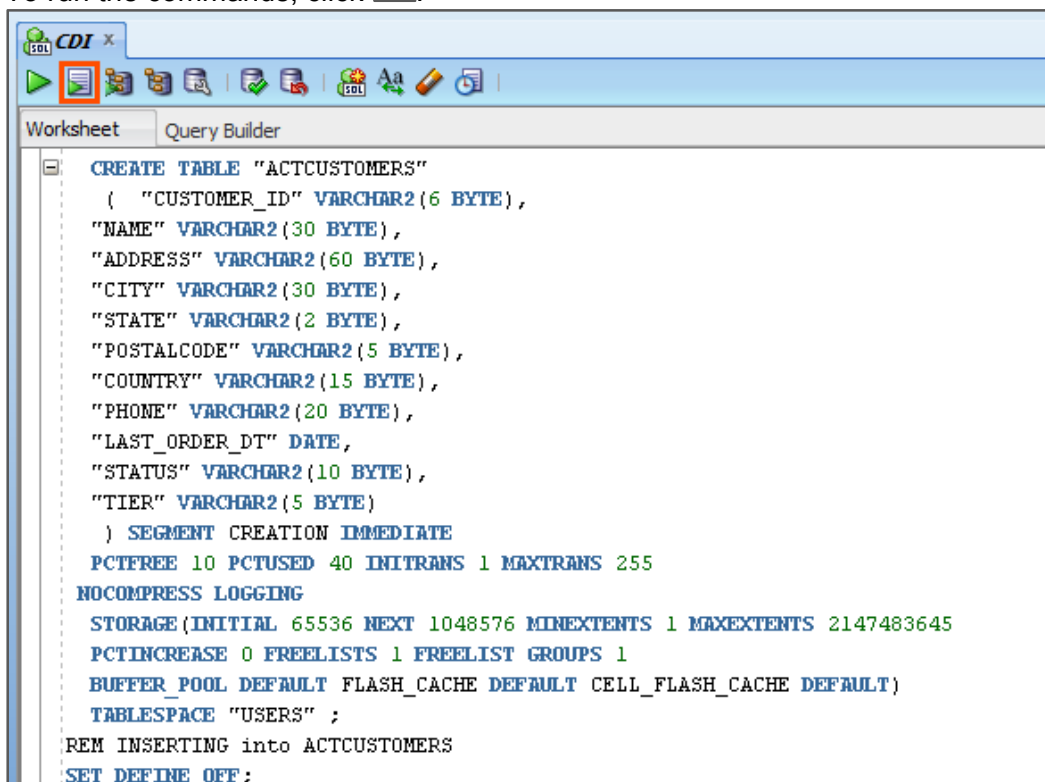


27. Open the **ACTCUSTOMERS.sql** file provided with this lab and copy the commands from the file.

**Note:** To easily copy the commands, open the file in notepad.

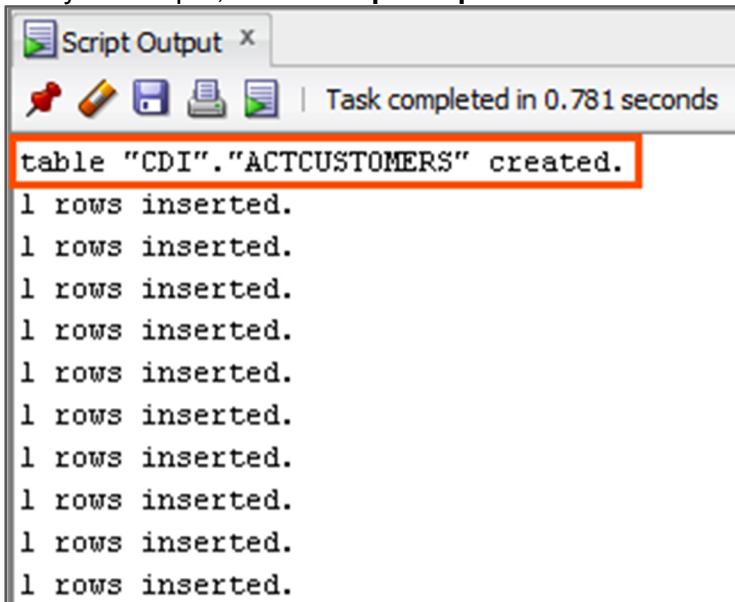
28. Paste the commands under Worksheet section.

29. To run the commands, click .






30. Verify the output, under **Script Output** section.



```
Script Output x
Task completed in 0.781 seconds
table "CDI"."ACTCUSTOMERS" created.
1 rows inserted.
1 rows inserted.
1 rows inserted.
1 rows inserted.
1 rows inserted.
1 rows inserted.
1 rows inserted.
1 rows inserted.
1 rows inserted.
1 rows inserted.
```

**Note:** Follow the steps 26 to 30 to create ACTCUSTORDER\_SUMMARY, ACTORDERS, HOTEL\_CUSTOMERS, CUST, ORDERS, and LKP\_TABLE tables. You can use the following files to create the required tables:

| Files                    |
|--------------------------|
| ACTCUSTORDER_SUMMARY.sql |
| ACTORDERS.sql            |
| HOTEL_CUSTOMERS.sql      |
| CUST.sql                 |
| ORDERS.sql               |
| LKP_TABLE.sql            |

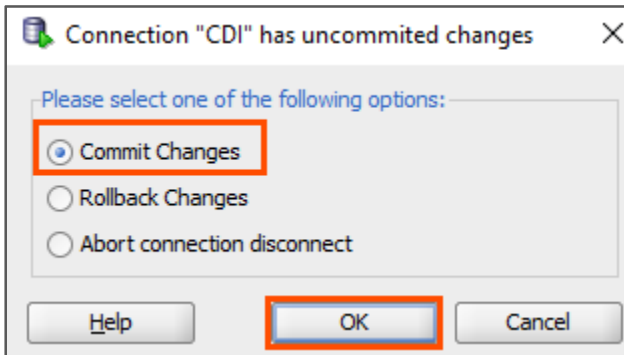
**Note:** Before creating a new table, use  to clear the content from the Worksheet and Script Output sections.

31. To close the SQL Developer, click .

**Note:** A Connection CDI has uncommitted changes window appears.

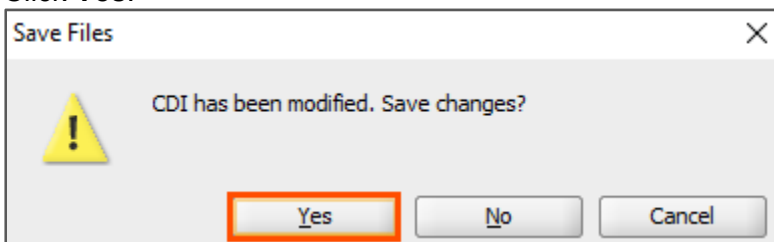
32. Retain **Commit Changes**.

33. Click **OK**.

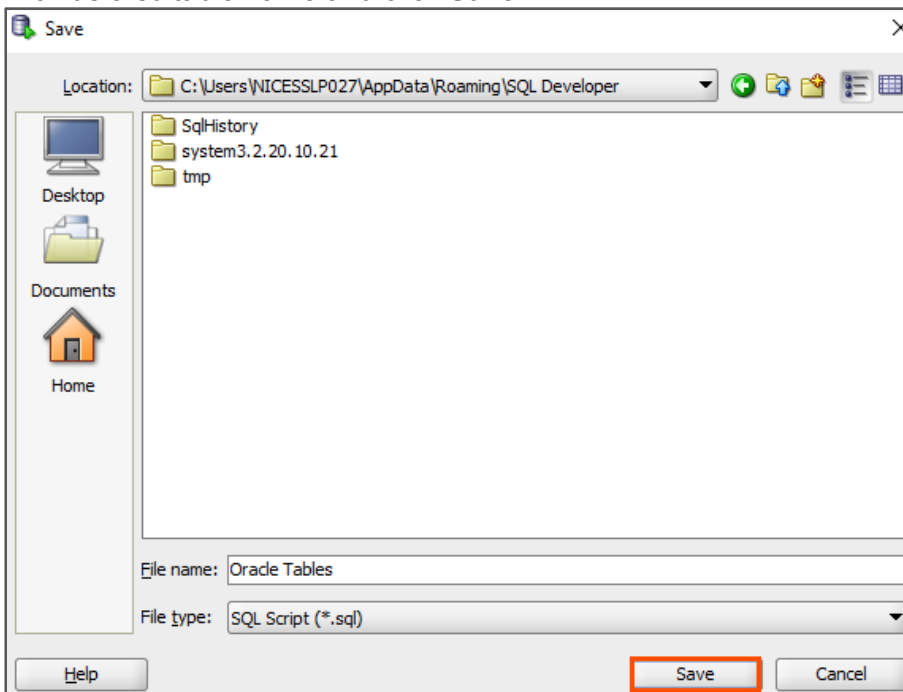


**Note:** The Save Files window appears.

34. Click **Yes**.



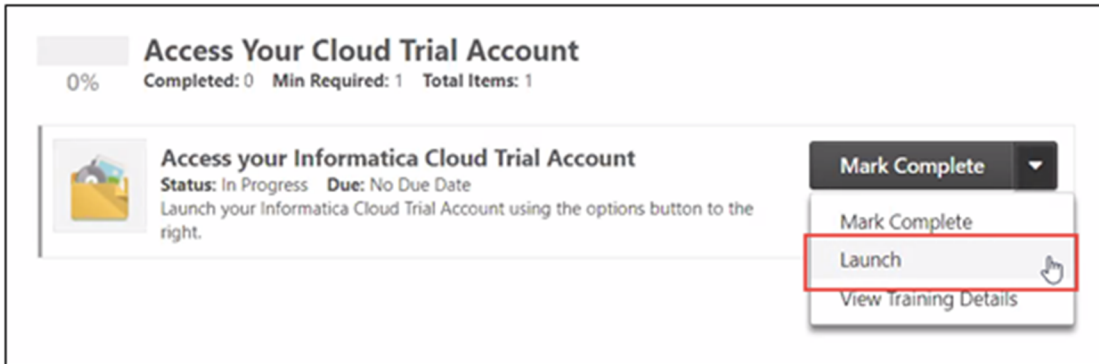
35. Provide a suitable name and click **Save**.



**Note:** SQL Developer window will close.

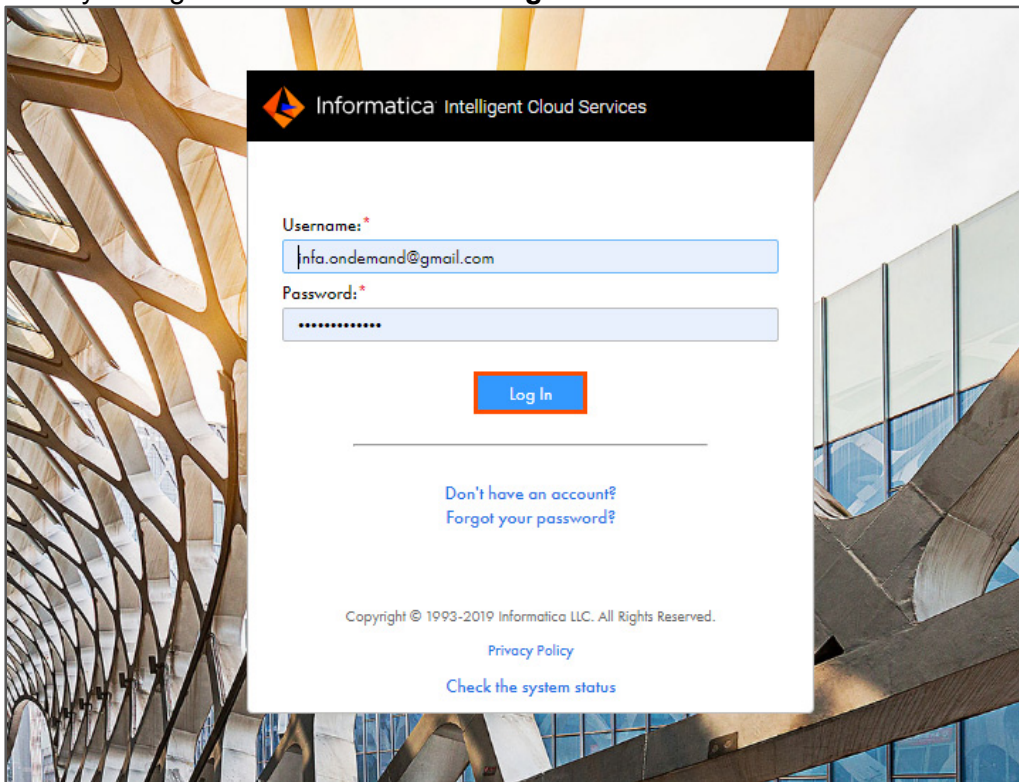
**Create Oracle Connection:**

36. Access your cloud trial account by clicking **Launch** in your option Menu. If the option menu is labeled anything other than **Launch**, click the down arrow to the right and click **Launch**.



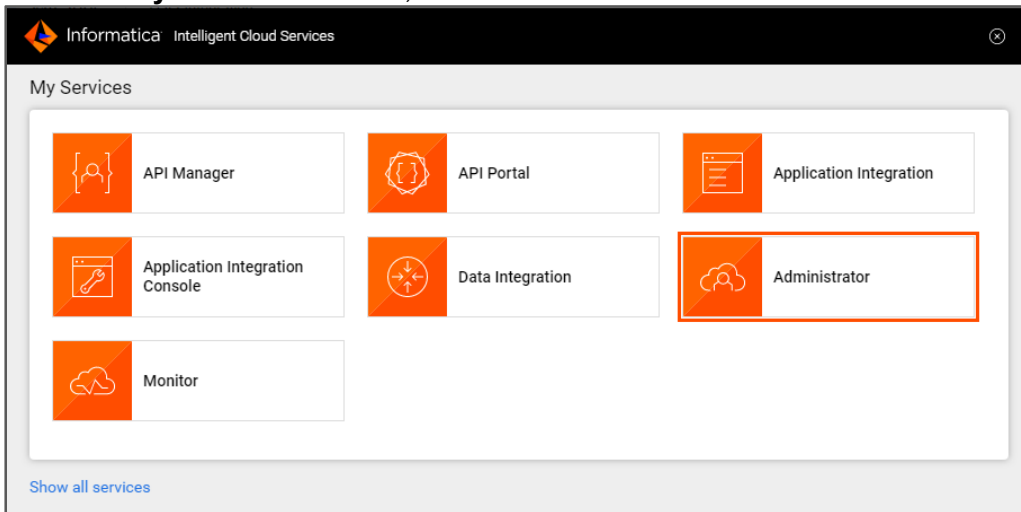
**Note:** Follow this step, if you have navigated away from the login page.

37. Enter your login credentials and click **Log In**.

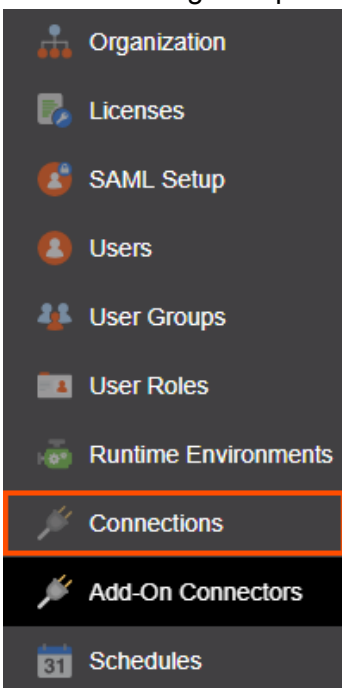




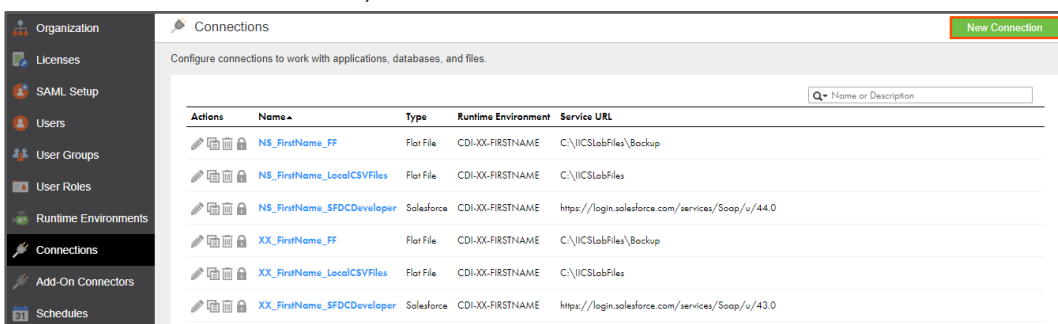
38. From the **My Services** window, select **Administrator**.



39. From the Navigation pane, select **Connections**.



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





41. In the Name field, enter **XX\_FirstName\_Oracle**.  
**Note:** XX refers to your initials, and FirstName refers to your First Name.
42. From the Type drop-down, select **Oracle**.

XX\_FirstName\_Oracle

**Connection Details**

Connection Name: \* XX\_FirstName\_Oracle

Description:

Type: \* ? Oracle

43. 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.

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

Runtime Environment: \* ? CDI-XX-FIRSTNAME

User Name: \* CDI

Password: \* . . .

**Note:** The Password is case-sensitive.

45. In the Host field, enter **localhost**, and retain Port as **1521**.
46. In the Service Name field, enter the oracle service name identified in step 14.

Host: \* localhost

Port: \* 1521

Service Name: \* orcl.cloud.techsmith.com

Schema:

**Note:** Use the Service name you provided while creating the Oracle connection.

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

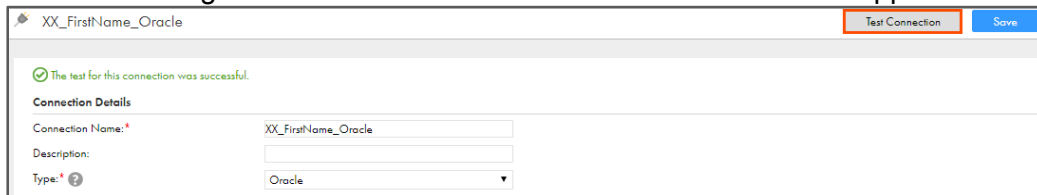
Code Page: \* MS Windows Latin 1

Encryption Method: No Encryption

Crypto Protocol Version: TLSv1

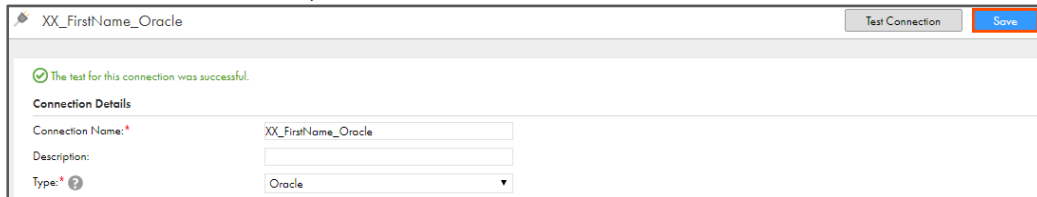
48. To test the connection, click **Test Connection**.

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



The screenshot shows a window titled "XX\_FirstName\_Oracle". At the top right are two buttons: "Test Connection" (highlighted with a red box) and "Save" (highlighted with a blue box). Below the title bar, a green checkmark icon is followed by the text "The test for this connection was successful." Under the heading "Connection Details", there are three fields: "Connection Name:" with the value "XX\_FirstName\_Oracle", "Description:" which is empty, and "Type:" with a dropdown menu showing "Oracle".

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



This screenshot is identical to the previous one, showing the "XX\_FirstName\_Oracle" window with the successful test message. In this view, the "Save" button at the top right is highlighted with a red box, while the "Test Connection" button is now disabled and greyed out.

---

*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 created 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

---

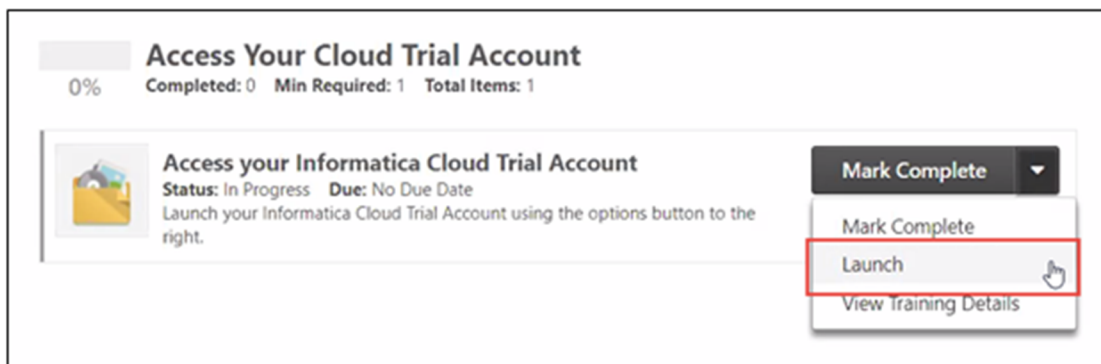
#### Tasks:

##### Copy Source Files:

1. Copy **Outlets.csv** file provided with this lab 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.

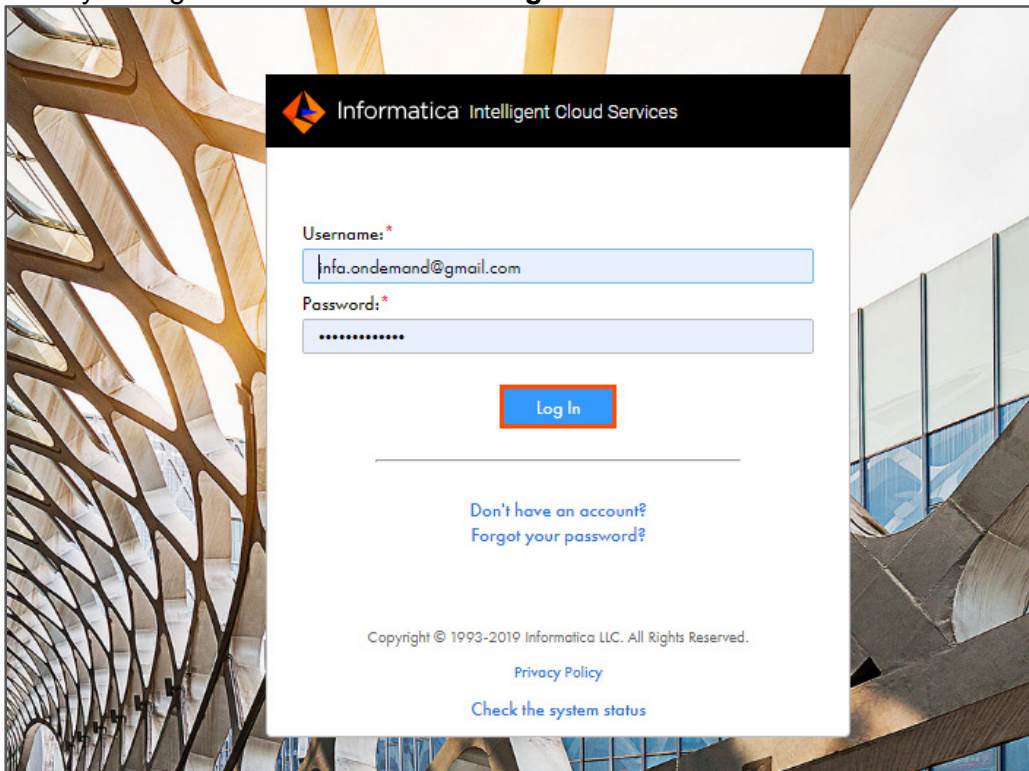
##### Create a Synchronization task in IICS:

3. Access your cloud trial account by clicking **Launch** in your option Menu. If the option menu is labeled anything other than **Launch**, click the down arrow to the right and click **Launch**.



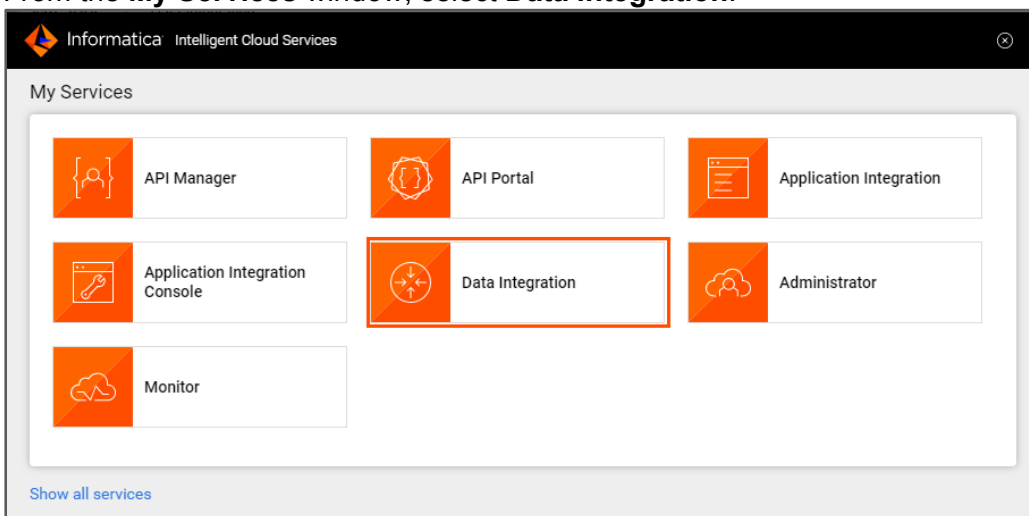
**Note:** Follow this step, if you have navigated away from the login page.

4. Enter your login credentials and click **Log In**.

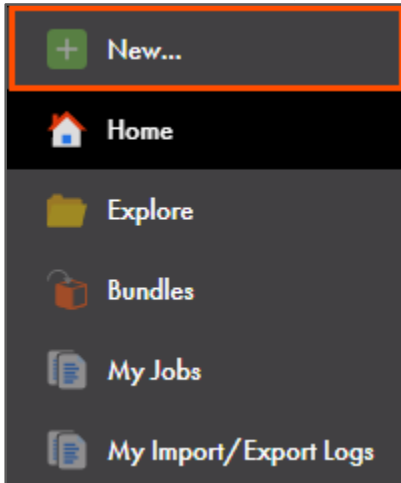


The login page features a white central panel with a black header bar containing the Informatica logo and the text "Informatica Intelligent Cloud Services". The background is a high-angle photograph of a modern building's interior with a complex, branching wooden structure. The login form includes a "Username:" label with a red asterisk, a text input field containing "info.ondemand@gmail.com", a "Password:" label with a red asterisk, and a password input field with masked characters. Below the fields is a blue "Log In" button. Underneath the button are two links: "Don't have an account?" and "Forgot your password?". At the bottom of the panel, there is a copyright notice "Copyright © 1993-2019 Informatica LLC. All Rights Reserved.", a "Privacy Policy" link, and a "Check the system status" link.

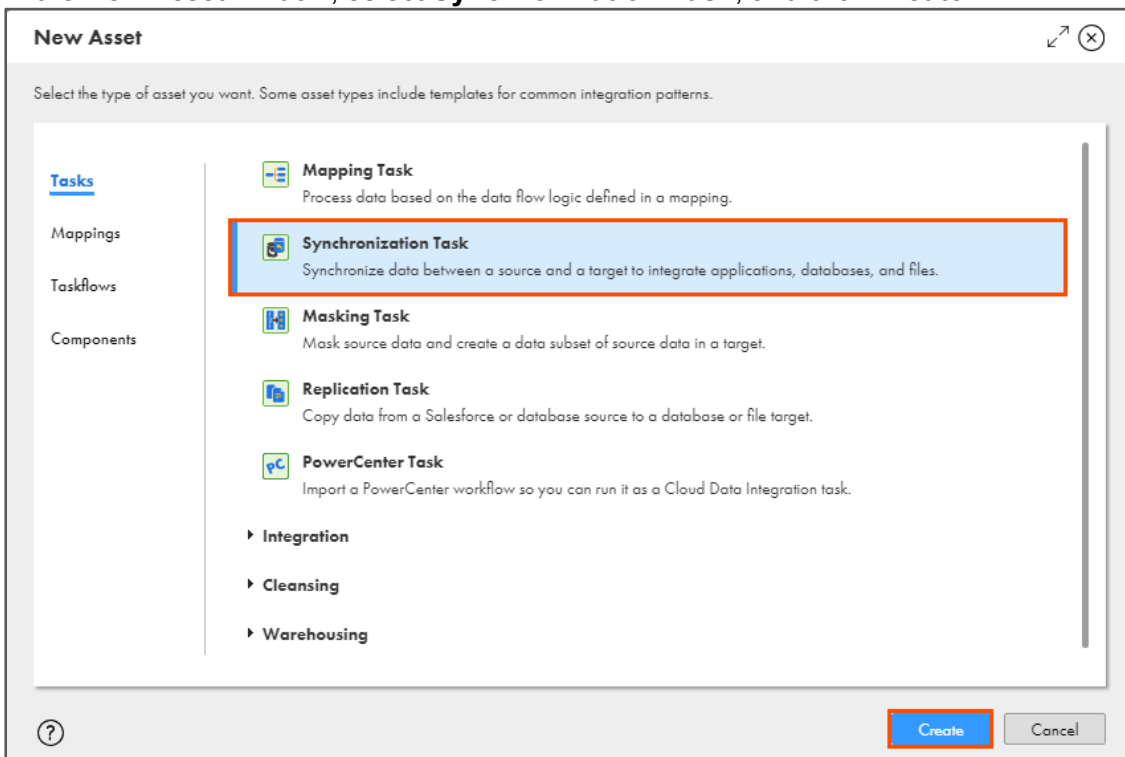
5. From the **My Services** window, select **Data Integration**.



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



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



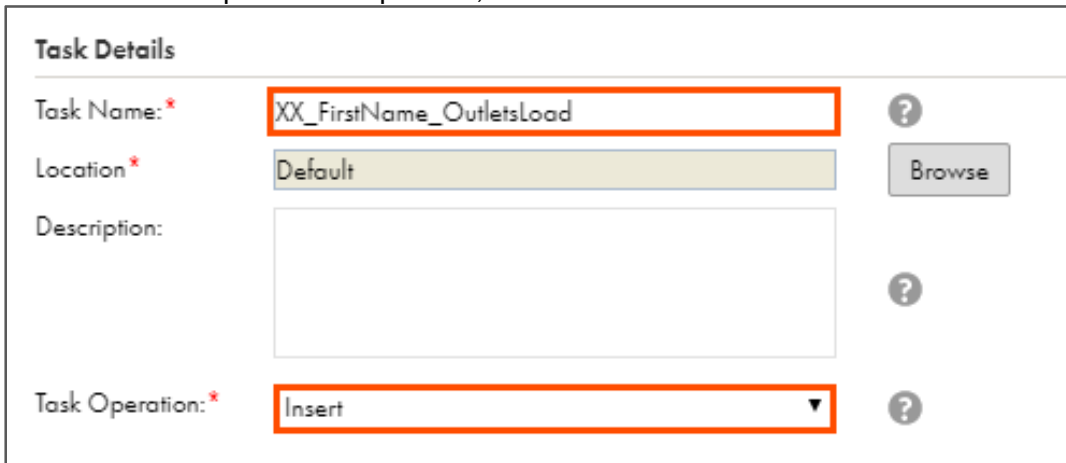
**Note:** A six-step Synchronization Task wizard appears.

### Specify Definition Information:

8. In the Task Name field, enter **XX\_FirstName\_OutletsLoad**.

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

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



**Task Details**

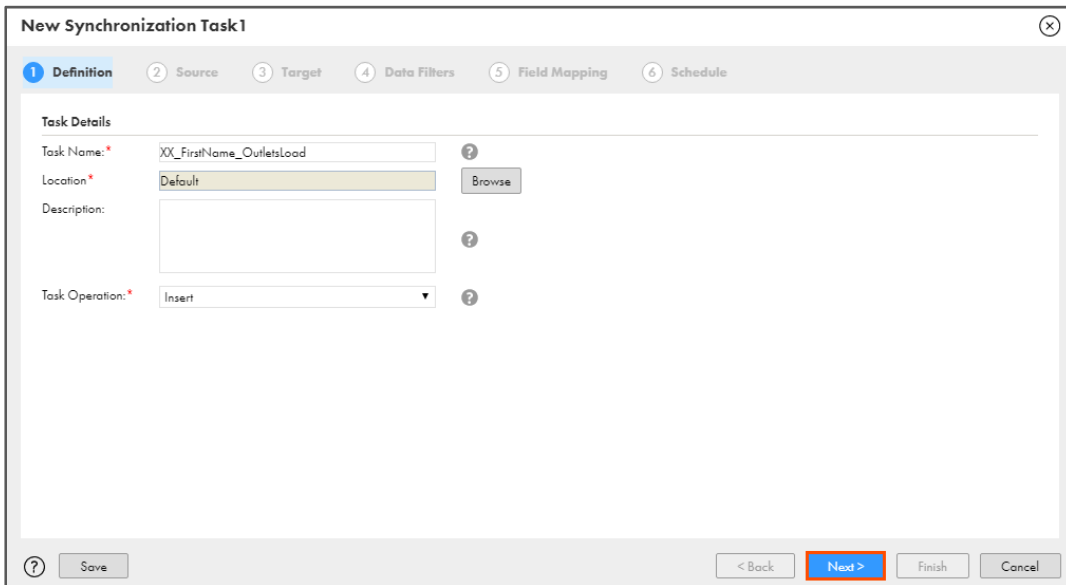
Task Name: \*  ?

Location \*  Browse

Description:  ?

Task Operation: \*  ?

10. Click **Next**.



**New Synchronization Task1** [X]

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

**Task Details**

Task Name: \*  ?

Location \*  Browse

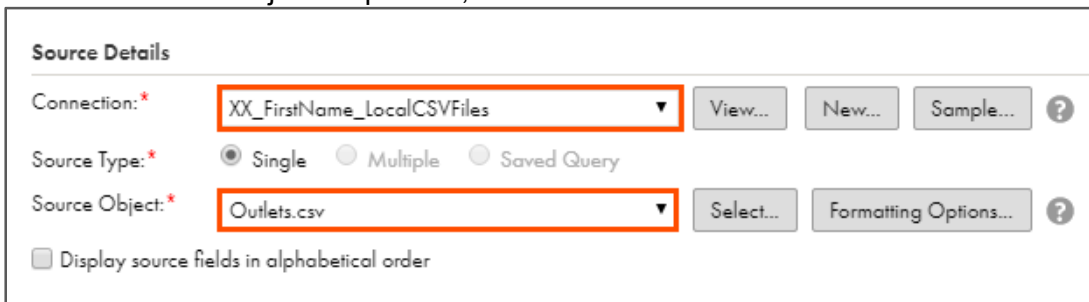
Description:  ?

Task Operation: \*  ?

[?] 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 **Outlets.csv**.



**Source Details**

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

Source Type: \* ☒ Single ☐ Multiple ☐ Saved Query

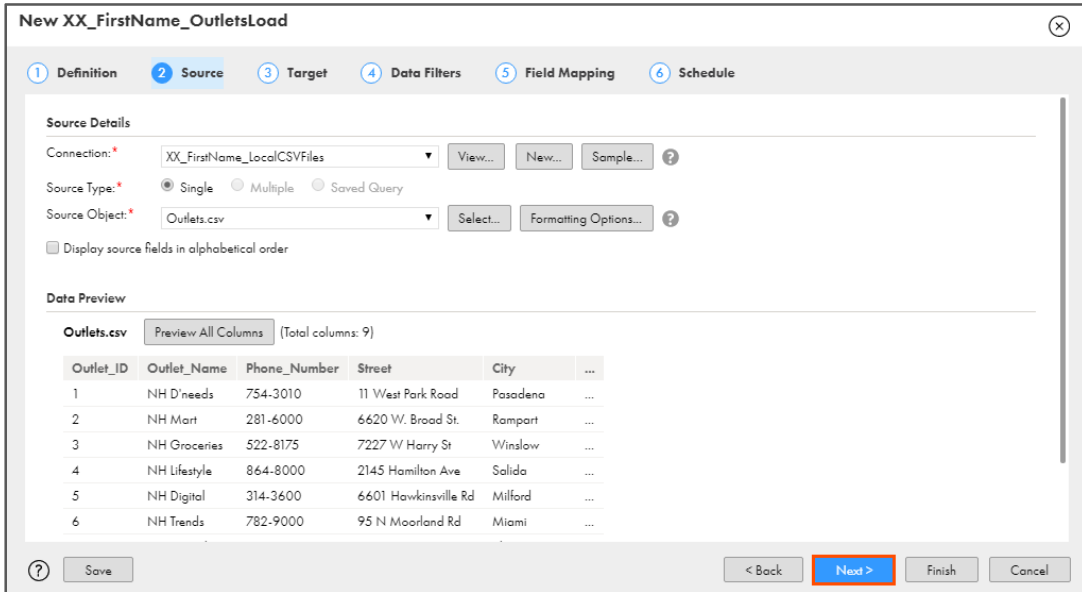
Source Object: \*  Select... Formatting Options... ?

☐ 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 also displays the total number of columns in the object.



### 13. 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 View... New... Sample... ?

Source Type: \* ☒ Single ☐ Multiple ☐ Saved Query

Source Object: \* Outlets.csv Select... Formatting Options... ?

☐ Display source fields in alphabetical order

**Data Preview**

Outlets.csv Preview All Columns (Total columns: 9)

| Outlet_ID | Outlet_Name  | Phone_Number | Street               | City     | ... |
|-----------|--------------|--------------|----------------------|----------|-----|
| 1         | NH D'needs   | 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    | ... |

Save < Back **Next >** Finish Cancel

### Specify Target Information:

14. From the Connection drop-down, select **XX\_FirstName\_SFDCDeveloper**.

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



**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

16. Click **Next**.

**New XX\_FirstName\_OutletsLoad**

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

**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

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

**New XX\_FirstName\_OutletsLoad**

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.

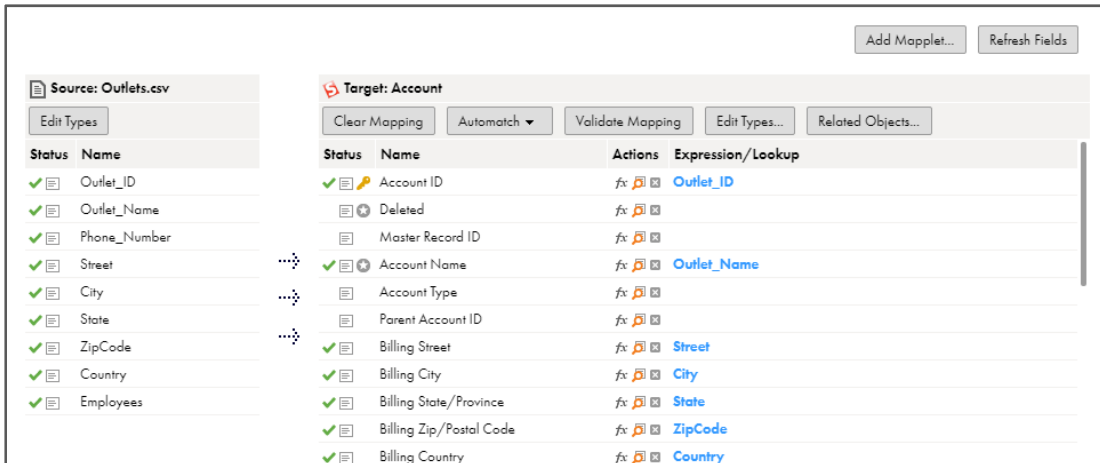
? Save < Back **Next >** Finish Cancel

### Define Field Mappings:

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

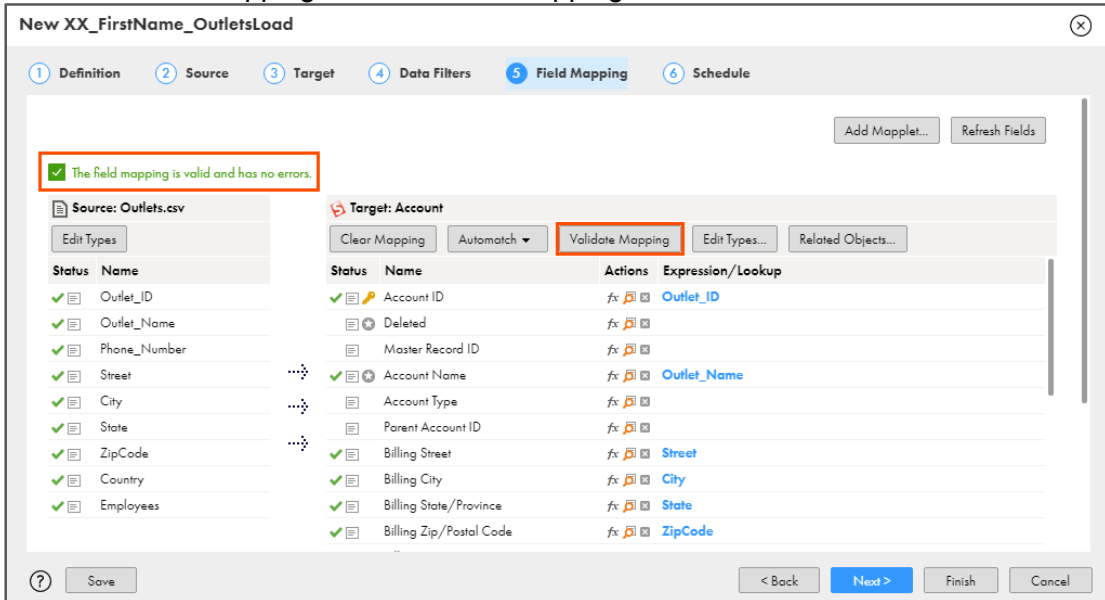
| Source Field Name | Target Field Name       |
|-------------------|-------------------------|
| Outlet_ID         | Account_ID              |
| Outlet_Name       | Account Name            |
| Phone_Number      | Account Phone           |
| Street            | Billing Street          |
| City              | 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 might be mapped automatically. For already mapped fields, do not map the fields again.



The screenshot displays the Informatica Data Integration Designer interface. On the left, the 'Source: Outlets.csv' panel lists fields: Outlet\_ID, Outlet\_Name, Phone\_Number, Street, City, State, ZipCode, Country, and Employees. On the right, the 'Target: Account' panel lists fields: Account ID, Deleted, Master Record ID, Account Name, Account Type, Parent Account ID, Billing Street, Billing City, Billing State/Province, Billing Zip/Postal Code, and Billing Country. The 'Actions' column shows mapping expressions for each target field: Account ID is mapped to Outlet\_ID, Account Name to Outlet\_Name, Billing Street to Street, Billing City to City, Billing State/Province to State, Billing Zip/Postal Code to ZipCode, and Billing Country to Country. The 'Deleted' and 'Master Record ID' fields are marked as 'Deleted' and 'Master Record ID' respectively. The 'Account Type' and 'Parent Account ID' fields are not mapped.

19. To validate the mapping, click Validate Mapping.

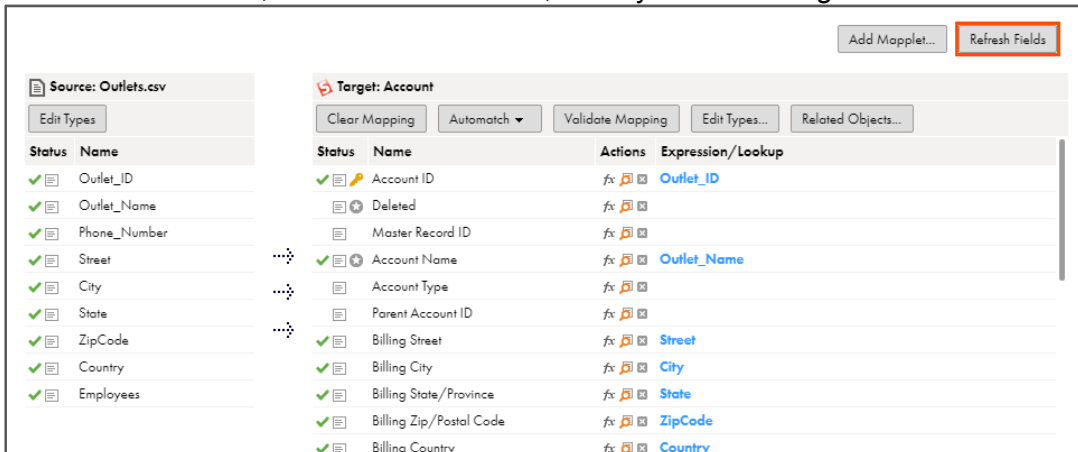


The screenshot shows the 'New XX\_FirstName\_OutletsLoad' window with the 'Field Mapping' tab selected. A green checkmark and the message 'The field mapping is valid and has no errors.' are displayed at the top left. The 'Validate Mapping' button is highlighted with a red box. The source is 'Outlets.csv' and the target is 'Account'. The mapping table shows the following fields and expressions:

| Status | Name         | Actions | Expression/Lookup |
|--------|--------------|---------|-------------------|
| ✓      | Outlet_ID    | fx      | Outlet_ID         |
| ✓      | Outlet_Name  | fx      |                   |
| ✓      | Phone_Number | fx      |                   |
| ✓      | Street       | fx      | Street            |
| ✓      | City         | fx      | City              |
| ✓      | State        | fx      | State             |
| ✓      | ZipCode      | fx      | ZipCode           |
| ✓      | Country      | fx      |                   |
| ✓      | Employees    | fx      |                   |

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

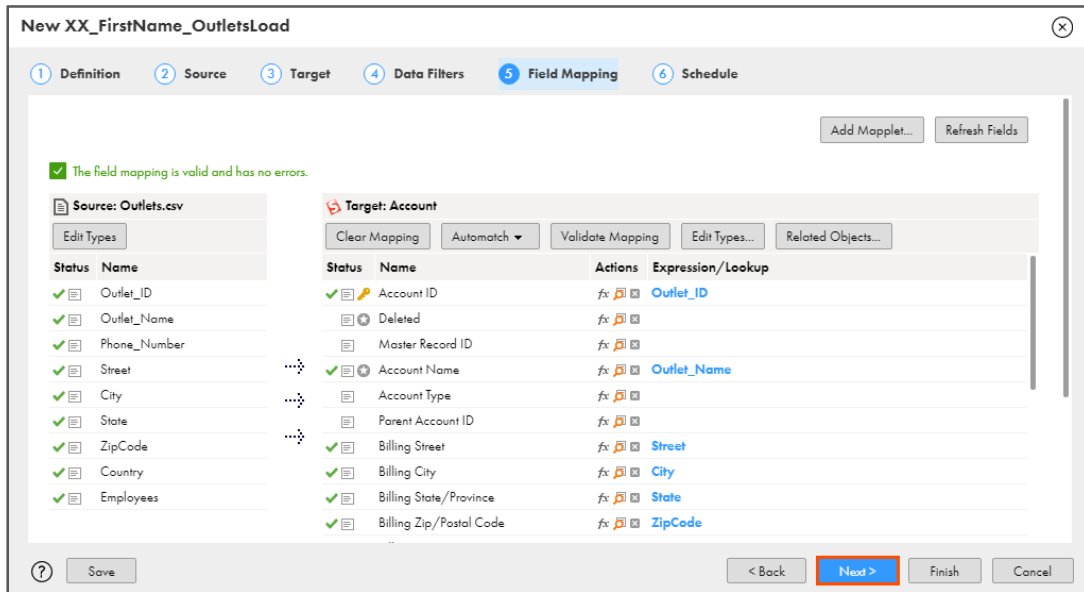
20. If the validation fails, click **Refresh Fields**, and try to validate again.



The screenshot shows the same 'New XX\_FirstName\_OutletsLoad' window, but the 'Refresh Fields' button is highlighted with a red box. The mapping table is identical to the previous screenshot.

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

21. Click **Next**.



**New XX\_FirstName\_OutletsLoad**

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

✓ The field mapping is valid and has no errors.

Source: Outlets.csv

| Status | Name         |
|--------|--------------|
| ✓      | Outlet_ID    |
| ✓      | Outlet_Name  |
| ✓      | Phone_Number |
| ✓      | Street       |
| ✓      | City         |
| ✓      | State        |
| ✓      | ZipCode      |
| ✓      | Country      |
| ✓      | Employees    |

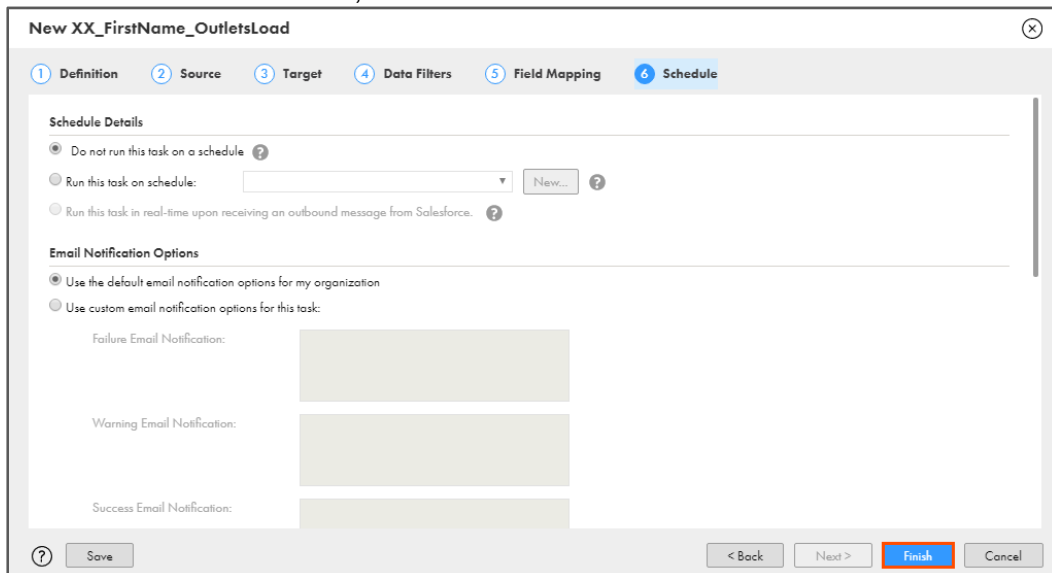
Target: Account

| Status | Name                    | Actions | Expression/Lookup |
|--------|-------------------------|---------|-------------------|
| ✓      | Account ID              | fx      | Outlet_ID         |
| ✓      | Deleted                 | fx      |                   |
| ✓      | Master Record ID        | fx      |                   |
| ✓      | Account Name            | fx      | Outlet_Name       |
| ✓      | Account Type            | fx      |                   |
| ✓      | Parent Account ID       | fx      |                   |
| ✓      | Billing Street          | fx      | Street            |
| ✓      | Billing City            | fx      | City              |
| ✓      | Billing State/Province  | fx      | State             |
| ✓      | Billing Zip/Postal Code | fx      | ZipCode           |

Buttons: Add Mapplet..., Refresh Fields, Clear Mapping, Automatch, Validate Mapping, Edit Types..., Related Objects..., Save, < Back, **Next >**, Finish, Cancel

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

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



**New XX\_FirstName\_OutletsLoad**

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

**Schedule Details**

☒ Do not run this task on a schedule ?

☐ Run this task on schedule: [Dropdown] [New... ?]

☐ 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: [Text Area]

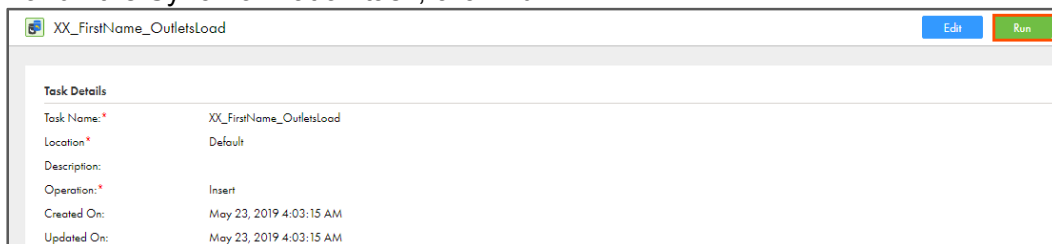
Warning Email Notification: [Text Area]

Success Email Notification: [Text Area]

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

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

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



**XX\_FirstName\_OutletsLoad** [Edit] [Run]

**Task Details**

Task Name: \* XX\_FirstName\_OutletsLoad

Location: \* Default

Description:

Operation: \* Insert

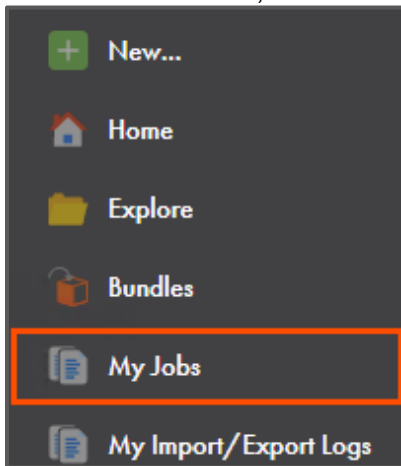
Created On: May 23, 2019 4:03:15 AM

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:

24. To monitor the task, from the Navigation pane, click **My Jobs**.



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

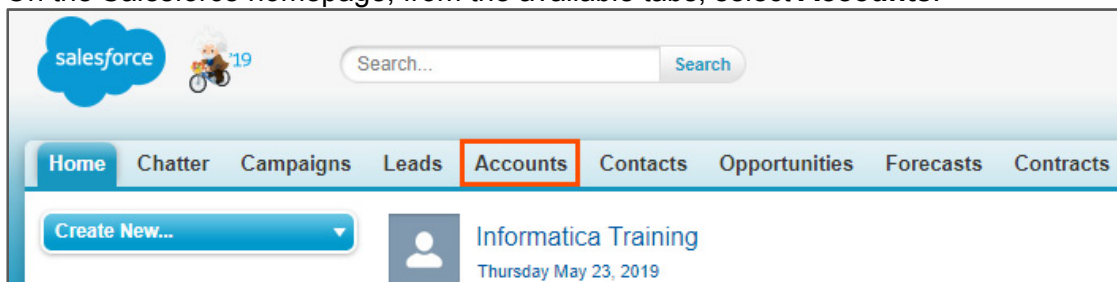
| My Jobs   Data Integration                                          |          |                                                                                                       |                        |                |                        |
|---------------------------------------------------------------------|----------|-------------------------------------------------------------------------------------------------------|------------------------|----------------|------------------------|
| Jobs (1 of 11) <span>Up to date</span>                              |          | Updated 3:00:08 AM PDT <span>↺</span> <span>↻</span> <span>🔍</span> <input type="text" value="Find"/> |                        |                |                        |
| Asset Name: XX_FirstName_O... <span>▼</span> <span>Add Field</span> |          |                                                                                                       |                        |                |                        |
| 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              | <span>✓</span> Success |

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

### Verify the Results:

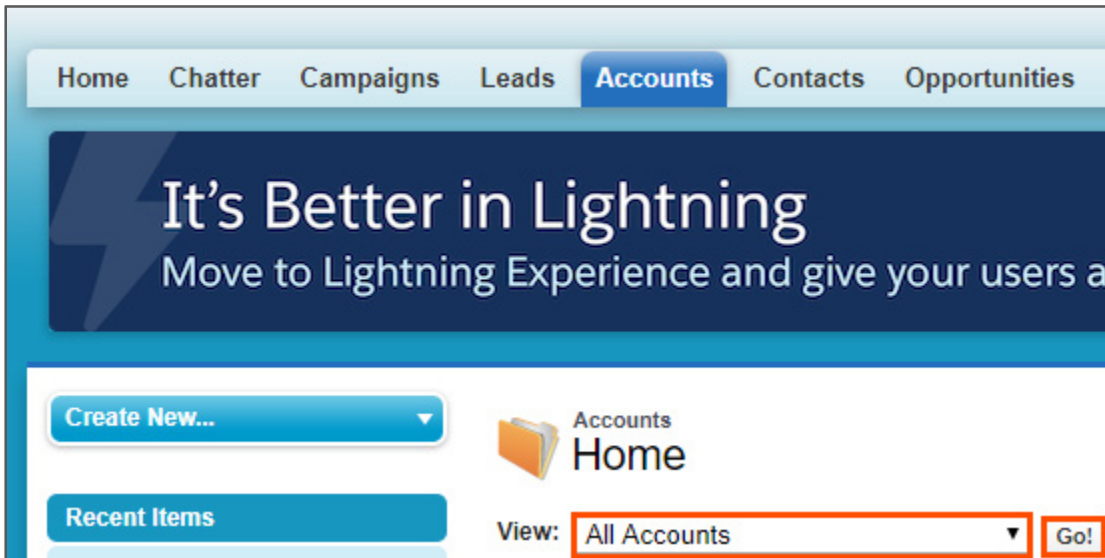
26. Log in to your Salesforce Developer account using your credentials.

27. On the Salesforce homepage, from the available tabs, select **Accounts**.

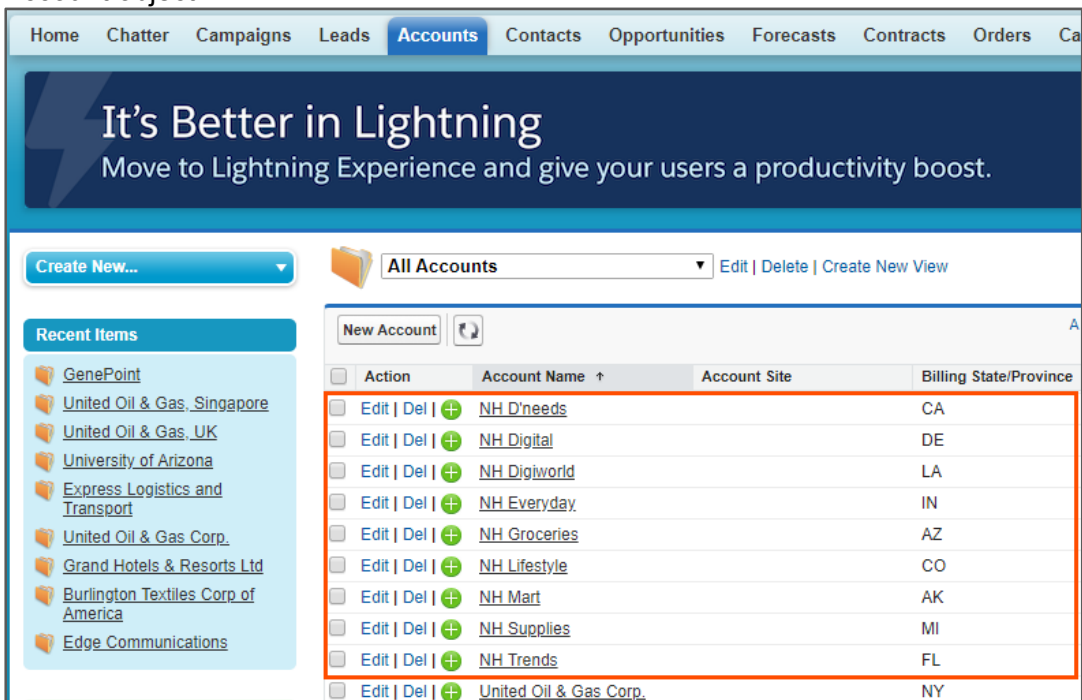


28. From the drop-down, select **All Accounts**.

29. Click **Go!**.



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



*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

---

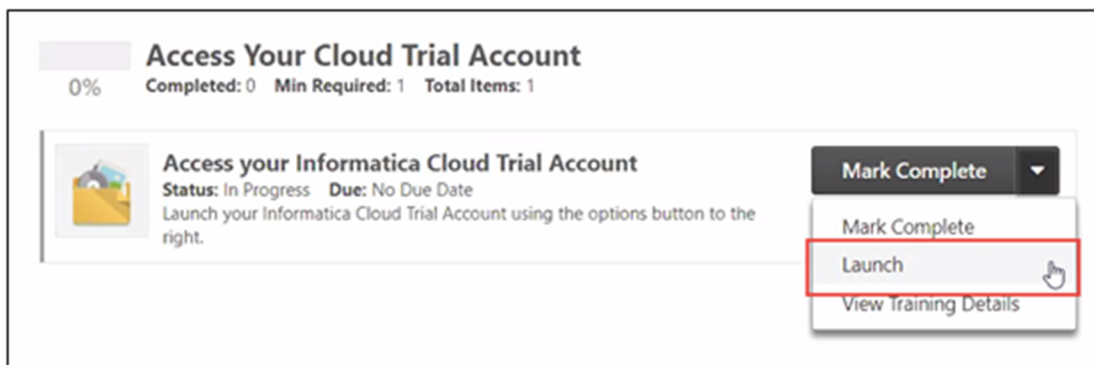
#### Tasks:

##### Copy Source Files:

1. Copy **Employee.csv** file provided with this lab 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.

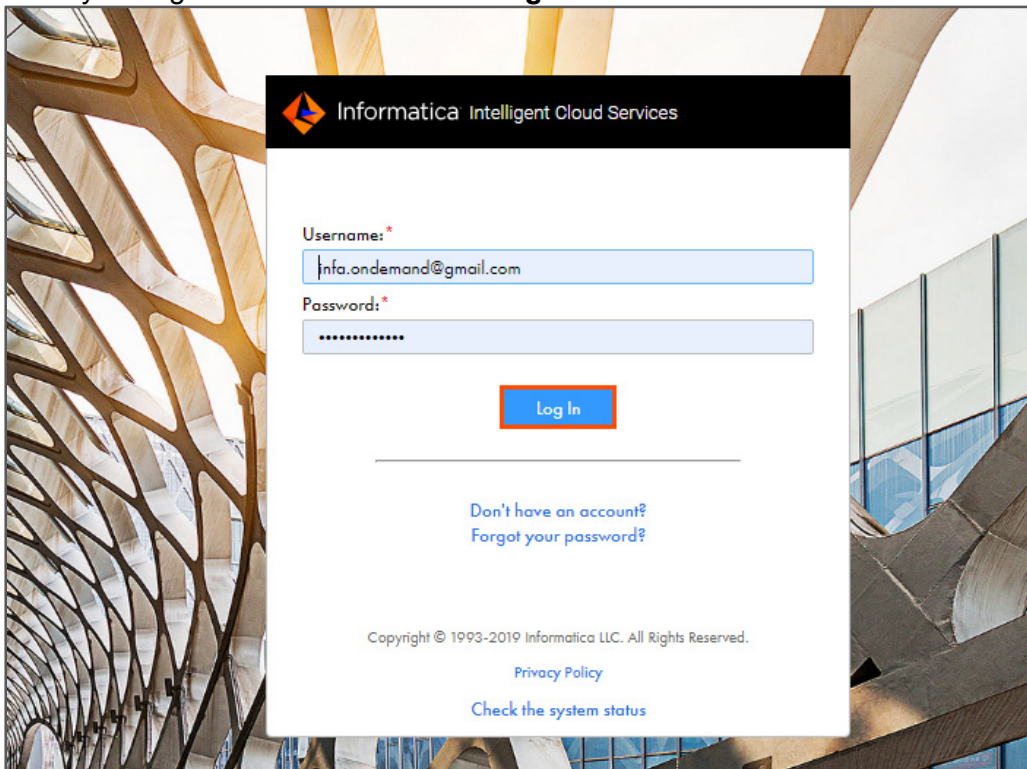
### Create a Synchronization task in IICS:

1. Access your cloud trial account by clicking **Launch** in your option Menu. If the option menu is labeled anything other than **Launch**, click the down arrow to the right and click **Launch**.

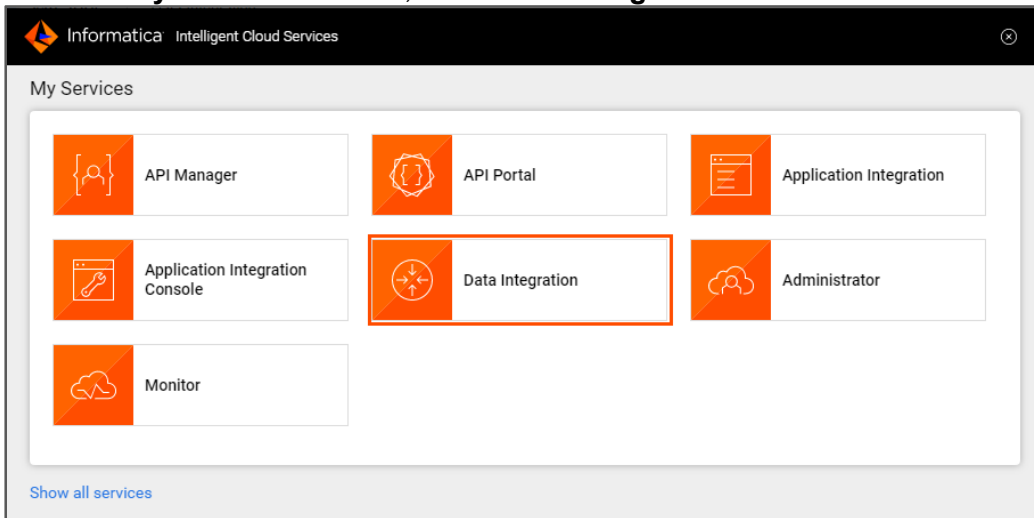


**Note:** Follow this step, if you have navigated away from the login page.

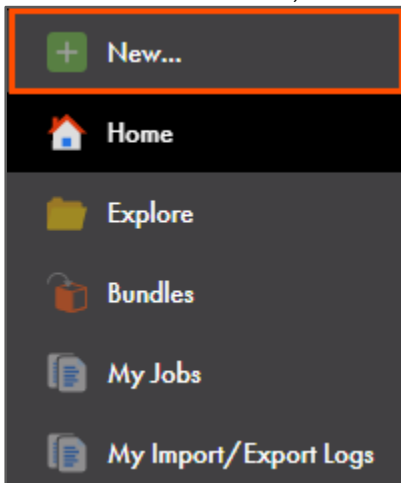
2. Enter your login credentials and click **Log In**.



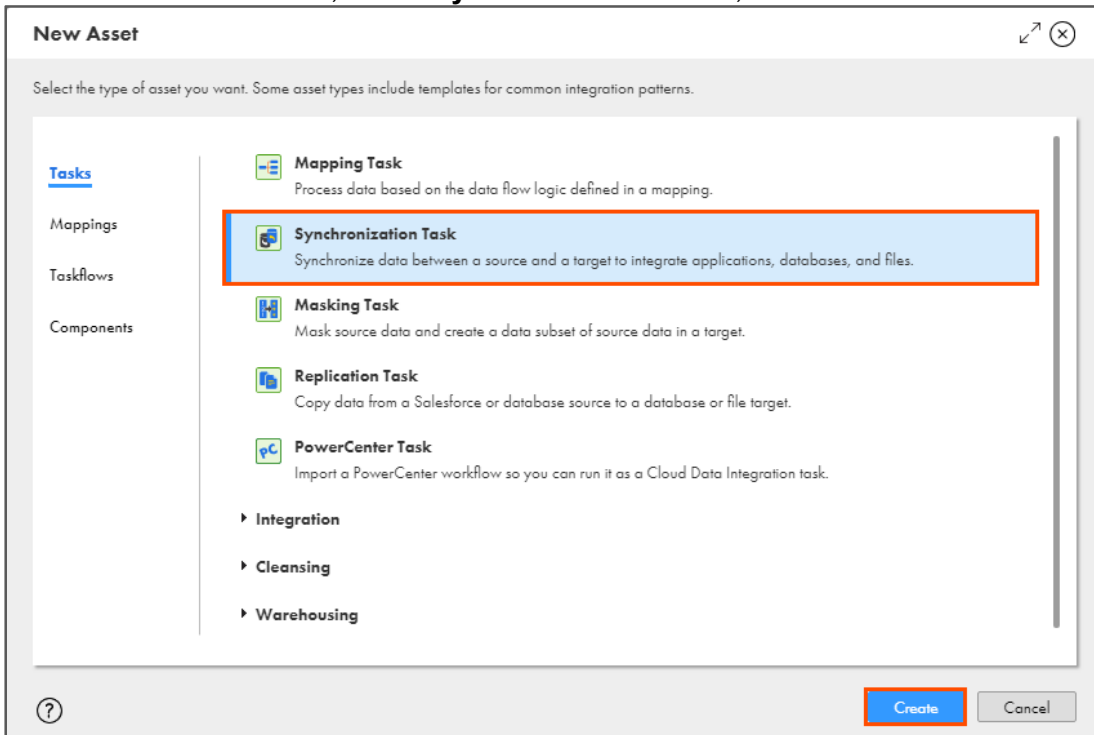
3. From the **My Services** window, select **Data Integration**.



3. To create a new asset, from the Navigation pane, select **New**.



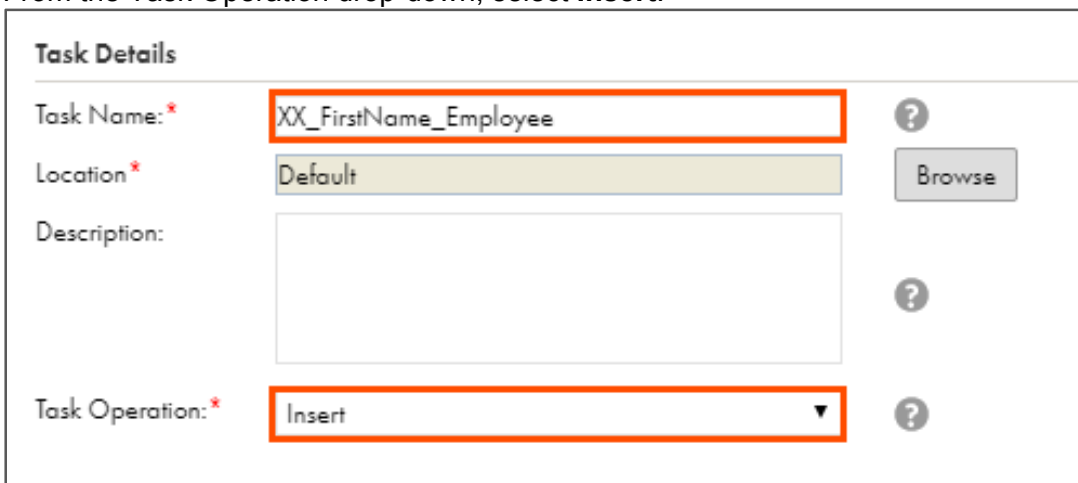
4. In the New Asset window, select **Synchronization Task**, and click **Create**.



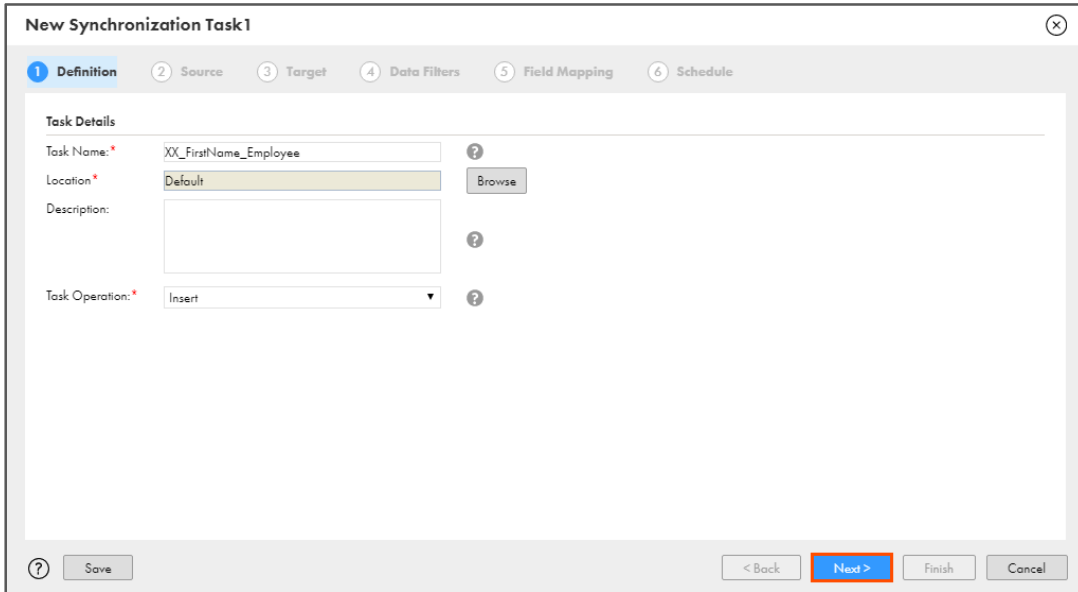
**Note:** A six-step Synchronization Task wizard appears.

#### Specify Definition Information:

5. In the Task Name field, enter **XX\_FirstName\_Employee**.  
**Note:** XX refers to your initials, and FirstName refers to your First Name.
6. From the Task Operation drop-down, select **Insert**.



7. 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\_Employee ?

Location: \* Default Browse ?

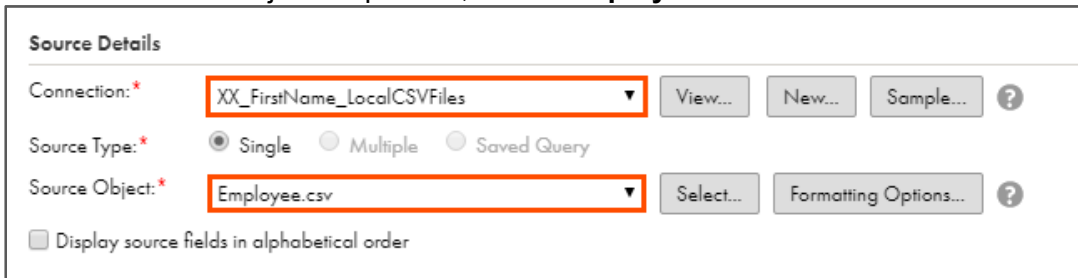
Description: ?

Task Operation: \* Insert ?

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

**Specify Source Information:**

8. From the Connection drop-down, select **XX\_FirstName\_LocalCSVFiles**.
9. From the Source Object drop-down, select **Employee.csv**.



**Source Details**

Connection: \* XX\_FirstName\_LocalCSVFiles View... New... Sample... ?

Source Type: \* ☒ Single ☐ Multiple ☐ Saved Query

Source Object: \* Employee.csv Select... Formatting Options... ?

☐ 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 also displays the total number of columns in the object.

10. 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 View... New... Sample... ?

Source Type: \* ☒ Single ☐ Multiple ☐ Saved Query

Source Object: \* Employee.csv Select... Formatting Options... ?

☐ Display source fields in alphabetical order

**Data Preview**

Employee.csv Preview All Columns (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    | ... |

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

**Specify Target Information:**

11. From the Connection drop-down, select **XX\_FirstName\_SFDCDeveloper**.

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

**Target Details**

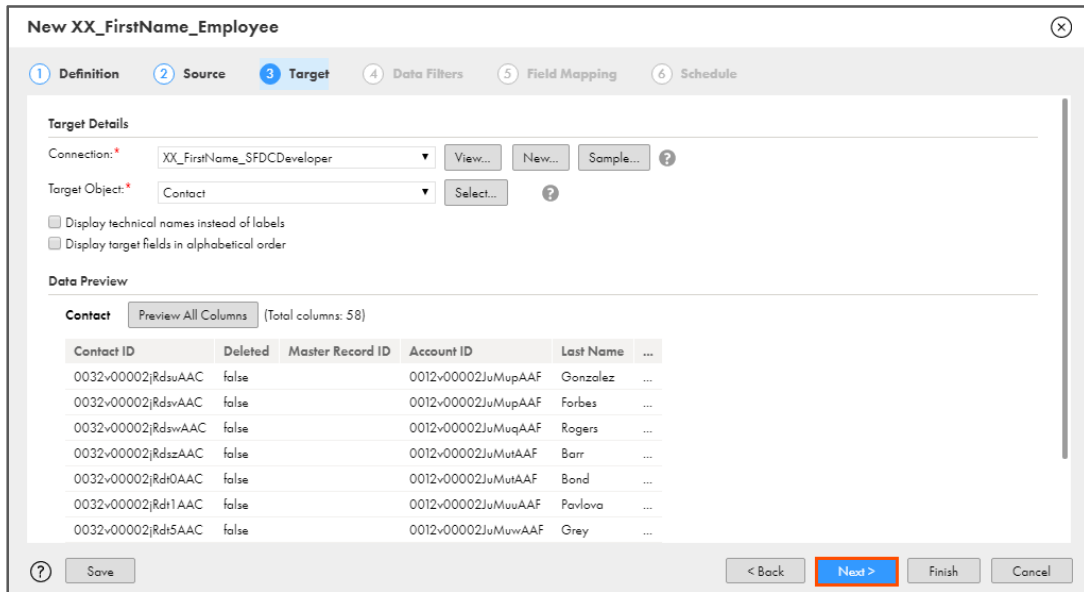
Connection: \* XX\_FirstName\_SFDCDeveloper View... New... Sample... ?

Target Object: \* Contact Select... ?

☐ Display technical names instead of labels

☐ Display target fields in alphabetical order

13. Click **Next**.



**New XX\_FirstName\_Employee**

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

**Target Details**

Connection: \* XX\_FirstName\_SFDCDeveloper View... New... Sample... ?

Target Object: \* Contact Select... ?

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

**Data Preview**

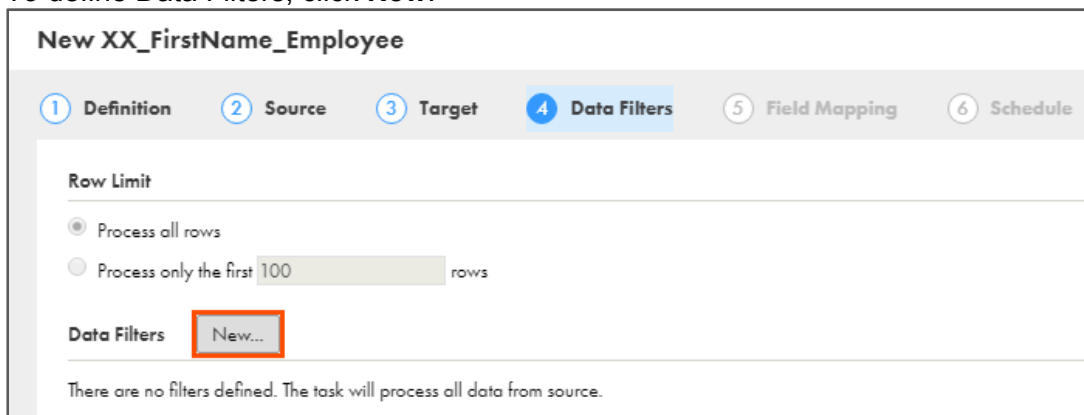
Contact Preview All Columns (Total columns: 58)

| Contact ID          | Deleted | Master Record ID | Account ID         | Last Name | ... |
|---------------------|---------|------------------|--------------------|-----------|-----|
| 0032v00002jRdsuAAC  | false   |                  | 0012v00002juMupAAF | Gonzalez  | ... |
| 0032v00002jRdsxvAAC | false   |                  | 0012v00002juMupAAF | Forbes    | ... |
| 0032v00002jRdswwAAC | false   |                  | 0012v00002juMuqAAF | Rogers    | ... |
| 0032v00002jRdszAAC  | false   |                  | 0012v00002juMutAAF | Barr      | ... |
| 0032v00002jRdt0AAC  | false   |                  | 0012v00002juMutAAF | Bond      | ... |
| 0032v00002jRdt1AAC  | false   |                  | 0012v00002juMuwAAF | Pavlova   | ... |
| 0032v00002jRdt5AAC  | false   |                  | 0012v00002juMuwAAF | Grey      | ... |

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

**Define Data Filters to skip contacts with Department as Sales:**

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



**New XX\_FirstName\_Employee**

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

**Row Limit**

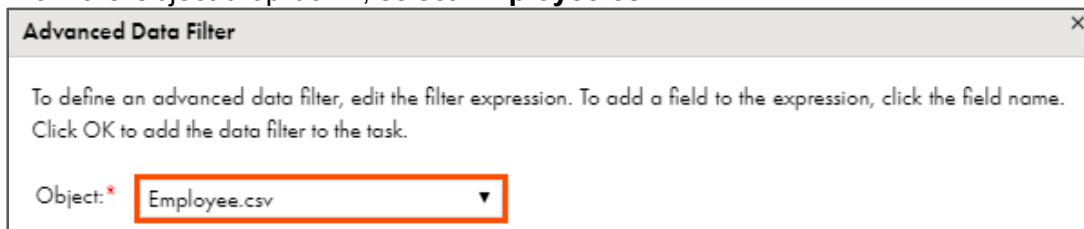
☒ Process all rows  
☐ Process only the first 100 rows

**Data Filters** New...

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

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

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



**Advanced Data Filter**

To define an advanced data filter, edit the filter expression. To add a field to the expression, click the field name. Click OK to add the data filter to the task.

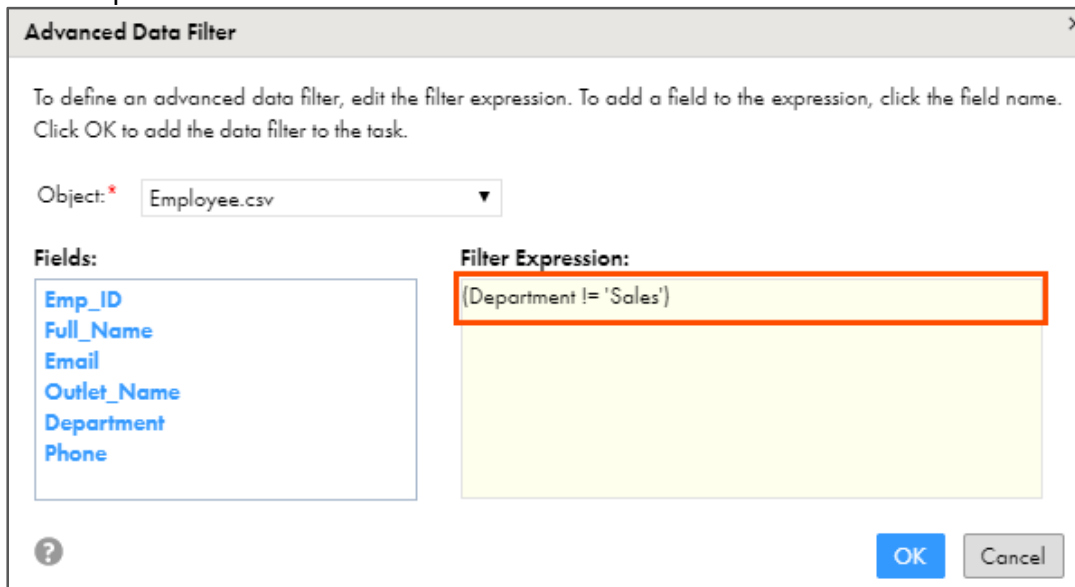
Object: \* Employee.csv

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

**(Department != 'Sales')**

OR

Open the file named **06\_LabGuide\_UsingDataFiltersLookupAndExpressions\_3-2** provided with this lab. Copy the command mentioned under **Step 19** and paste it in the Filter Expression field.



**Advanced Data Filter**

To define an advanced data filter, edit the filter expression. To add a field to the expression, click the field name. Click OK to add the data filter to the task.

Object: \* Employee.csv

**Fields:**

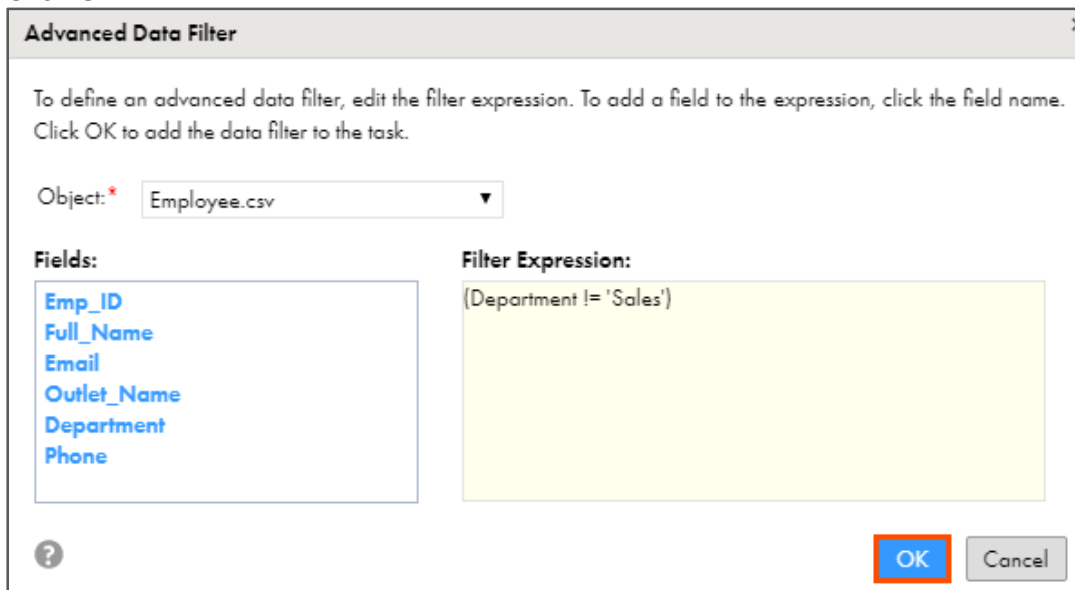
- Emp\_ID
- Full\_Name
- Email
- Outlet\_Name
- Department
- Phone

**Filter Expression:**

(Department != 'Sales')

OK Cancel

17. Click **OK**.



**Advanced Data Filter**

To define an advanced data filter, edit the filter expression. To add a field to the expression, click the field name. Click OK to add the data filter to the task.

Object: \* Employee.csv

**Fields:**

- Emp\_ID
- Full\_Name
- Email
- Outlet\_Name
- Department
- Phone

**Filter Expression:**

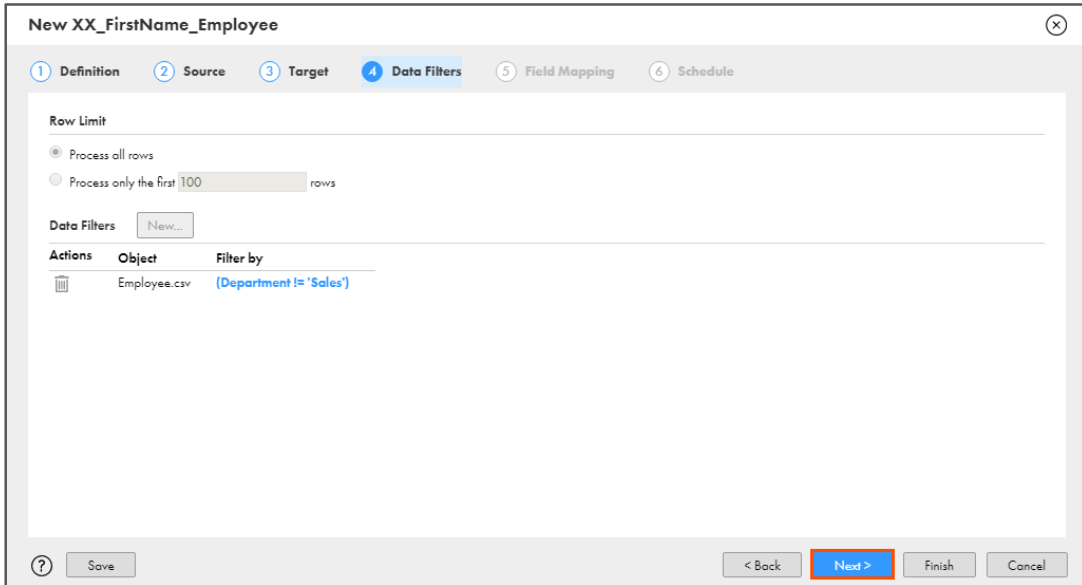
(Department != 'Sales')

OK Cancel

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



18. Click **Next**.

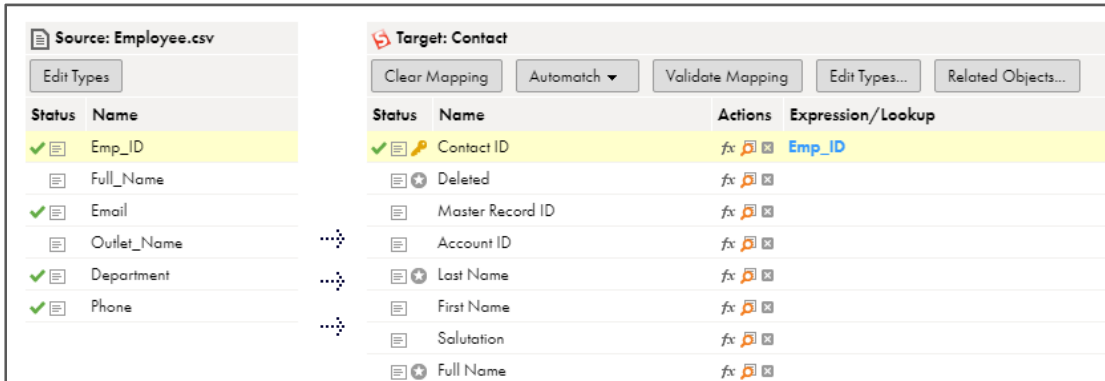


### Define Field Mappings:

19. 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    |

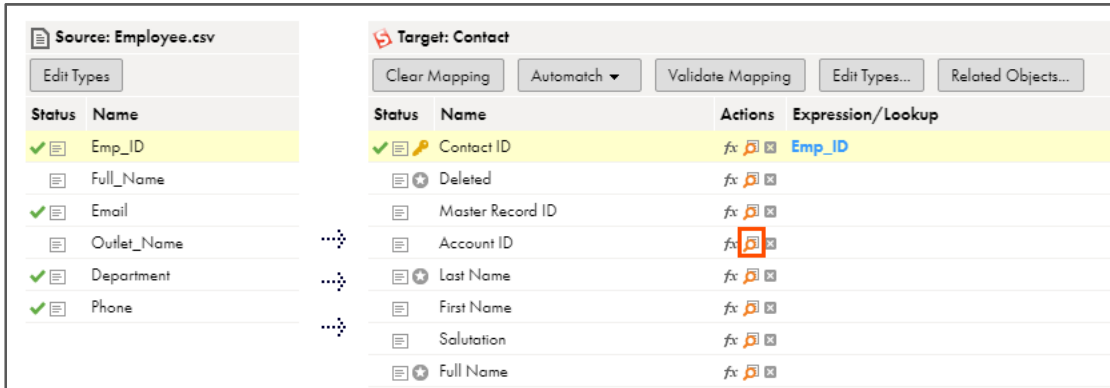
**Note:** For this lab, do not map Full\_Name and Outlet\_Name fields. Some of the fields might be mapped automatically. For already mapped fields, do not map the fields again.



| 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        |

## Add a Lookup Condition:

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

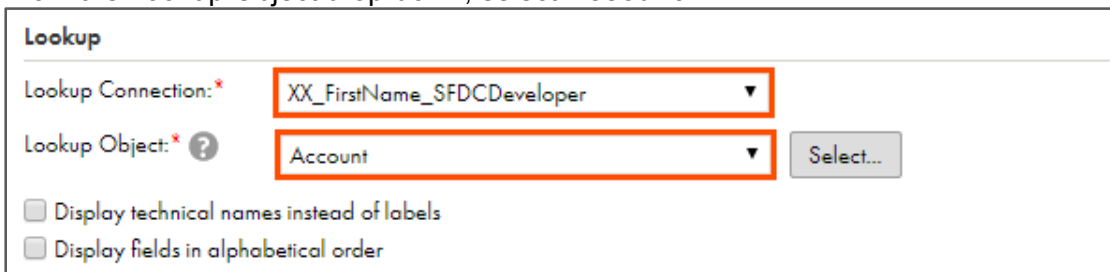


| Source: Employee.csv                                                                                                                                                                                                                                                                                                                               | Target: Contact  |         |                   |        |  |           |   |       |  |             |   |            |   |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |        |      |         |                   |   |            |    |        |  |         |    |  |  |                  |    |  |  |            |    |  |  |           |    |  |  |            |    |  |  |            |    |  |  |           |    |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---------|-------------------|--------|--|-----------|---|-------|--|-------------|---|------------|---|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|------|---------|-------------------|---|------------|----|--------|--|---------|----|--|--|------------------|----|--|--|------------|----|--|--|-----------|----|--|--|------------|----|--|--|------------|----|--|--|-----------|----|--|
| <table border="1"> <thead> <tr> <th>Status</th> <th>Name</th> </tr> </thead> <tbody> <tr> <td>✓</td> <td>Emp_ID</td> </tr> <tr> <td></td> <td>Full_Name</td> </tr> <tr> <td>✓</td> <td>Email</td> </tr> <tr> <td></td> <td>Outlet_Name</td> </tr> <tr> <td>✓</td> <td>Department</td> </tr> <tr> <td>✓</td> <td>Phone</td> </tr> </tbody> </table> | Status           | Name    | ✓                 | Emp_ID |  | Full_Name | ✓ | Email |  | Outlet_Name | ✓ | Department | ✓ | Phone | <table border="1"> <thead> <tr> <th>Status</th> <th>Name</th> <th>Actions</th> <th>Expression/Lookup</th> </tr> </thead> <tbody> <tr> <td>✓</td> <td>Contact ID</td> <td>fx</td> <td>Emp_ID</td> </tr> <tr> <td></td> <td>Deleted</td> <td>fx</td> <td></td> </tr> <tr> <td></td> <td>Master Record ID</td> <td>fx</td> <td></td> </tr> <tr> <td></td> <td>Account ID</td> <td>fx</td> <td></td> </tr> <tr> <td></td> <td>Last Name</td> <td>fx</td> <td></td> </tr> <tr> <td></td> <td>First Name</td> <td>fx</td> <td></td> </tr> <tr> <td></td> <td>Salutation</td> <td>fx</td> <td></td> </tr> <tr> <td></td> <td>Full Name</td> <td>fx</td> <td></td> </tr> </tbody> </table> | Status | Name | Actions | Expression/Lookup | ✓ | Contact ID | fx | Emp_ID |  | Deleted | fx |  |  | Master Record ID | fx |  |  | Account ID | fx |  |  | Last Name | fx |  |  | First Name | fx |  |  | Salutation | fx |  |  | Full Name | fx |  |
| Status                                                                                                                                                                                                                                                                                                                                             | Name             |         |                   |        |  |           |   |       |  |             |   |            |   |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |        |      |         |                   |   |            |    |        |  |         |    |  |  |                  |    |  |  |            |    |  |  |           |    |  |  |            |    |  |  |            |    |  |  |           |    |  |
| ✓                                                                                                                                                                                                                                                                                                                                                  | Emp_ID           |         |                   |        |  |           |   |       |  |             |   |            |   |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |        |      |         |                   |   |            |    |        |  |         |    |  |  |                  |    |  |  |            |    |  |  |           |    |  |  |            |    |  |  |            |    |  |  |           |    |  |
|                                                                                                                                                                                                                                                                                                                                                    | Full_Name        |         |                   |        |  |           |   |       |  |             |   |            |   |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |        |      |         |                   |   |            |    |        |  |         |    |  |  |                  |    |  |  |            |    |  |  |           |    |  |  |            |    |  |  |            |    |  |  |           |    |  |
| ✓                                                                                                                                                                                                                                                                                                                                                  | Email            |         |                   |        |  |           |   |       |  |             |   |            |   |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |        |      |         |                   |   |            |    |        |  |         |    |  |  |                  |    |  |  |            |    |  |  |           |    |  |  |            |    |  |  |            |    |  |  |           |    |  |
|                                                                                                                                                                                                                                                                                                                                                    | Outlet_Name      |         |                   |        |  |           |   |       |  |             |   |            |   |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |        |      |         |                   |   |            |    |        |  |         |    |  |  |                  |    |  |  |            |    |  |  |           |    |  |  |            |    |  |  |            |    |  |  |           |    |  |
| ✓                                                                                                                                                                                                                                                                                                                                                  | Department       |         |                   |        |  |           |   |       |  |             |   |            |   |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |        |      |         |                   |   |            |    |        |  |         |    |  |  |                  |    |  |  |            |    |  |  |           |    |  |  |            |    |  |  |            |    |  |  |           |    |  |
| ✓                                                                                                                                                                                                                                                                                                                                                  | Phone            |         |                   |        |  |           |   |       |  |             |   |            |   |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |        |      |         |                   |   |            |    |        |  |         |    |  |  |                  |    |  |  |            |    |  |  |           |    |  |  |            |    |  |  |            |    |  |  |           |    |  |
| Status                                                                                                                                                                                                                                                                                                                                             | Name             | Actions | Expression/Lookup |        |  |           |   |       |  |             |   |            |   |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |        |      |         |                   |   |            |    |        |  |         |    |  |  |                  |    |  |  |            |    |  |  |           |    |  |  |            |    |  |  |            |    |  |  |           |    |  |
| ✓                                                                                                                                                                                                                                                                                                                                                  | Contact ID       | fx      | Emp_ID            |        |  |           |   |       |  |             |   |            |   |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |        |      |         |                   |   |            |    |        |  |         |    |  |  |                  |    |  |  |            |    |  |  |           |    |  |  |            |    |  |  |            |    |  |  |           |    |  |
|                                                                                                                                                                                                                                                                                                                                                    | Deleted          | fx      |                   |        |  |           |   |       |  |             |   |            |   |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |        |      |         |                   |   |            |    |        |  |         |    |  |  |                  |    |  |  |            |    |  |  |           |    |  |  |            |    |  |  |            |    |  |  |           |    |  |
|                                                                                                                                                                                                                                                                                                                                                    | Master Record ID | fx      |                   |        |  |           |   |       |  |             |   |            |   |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |        |      |         |                   |   |            |    |        |  |         |    |  |  |                  |    |  |  |            |    |  |  |           |    |  |  |            |    |  |  |            |    |  |  |           |    |  |
|                                                                                                                                                                                                                                                                                                                                                    | Account ID       | fx      |                   |        |  |           |   |       |  |             |   |            |   |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |        |      |         |                   |   |            |    |        |  |         |    |  |  |                  |    |  |  |            |    |  |  |           |    |  |  |            |    |  |  |            |    |  |  |           |    |  |
|                                                                                                                                                                                                                                                                                                                                                    | Last Name        | fx      |                   |        |  |           |   |       |  |             |   |            |   |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |        |      |         |                   |   |            |    |        |  |         |    |  |  |                  |    |  |  |            |    |  |  |           |    |  |  |            |    |  |  |            |    |  |  |           |    |  |
|                                                                                                                                                                                                                                                                                                                                                    | First Name       | fx      |                   |        |  |           |   |       |  |             |   |            |   |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |        |      |         |                   |   |            |    |        |  |         |    |  |  |                  |    |  |  |            |    |  |  |           |    |  |  |            |    |  |  |            |    |  |  |           |    |  |
|                                                                                                                                                                                                                                                                                                                                                    | Salutation       | fx      |                   |        |  |           |   |       |  |             |   |            |   |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |        |      |         |                   |   |            |    |        |  |         |    |  |  |                  |    |  |  |            |    |  |  |           |    |  |  |            |    |  |  |            |    |  |  |           |    |  |
|                                                                                                                                                                                                                                                                                                                                                    | Full Name        | fx      |                   |        |  |           |   |       |  |             |   |            |   |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |        |      |         |                   |   |            |    |        |  |         |    |  |  |                  |    |  |  |            |    |  |  |           |    |  |  |            |    |  |  |            |    |  |  |           |    |  |

**Note:** The Field Lookup window appears.

21. From the Lookup Connection drop-down, select **XX\_FirstName\_SFDCDeveloper**.

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



**Lookup**

Lookup Connection: \* XX\_FirstName\_SFDCDeveloper

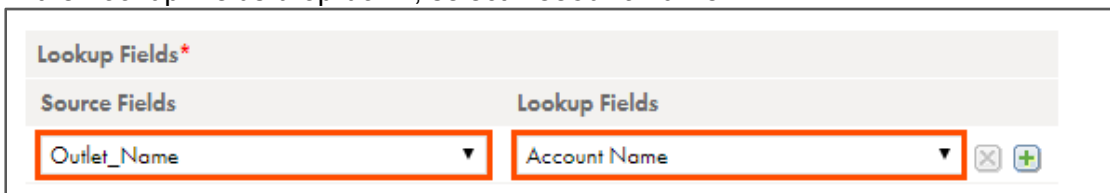
Lookup Object: \* ? Account Select...

☐ Display technical names instead of labels

☐ Display fields in alphabetical order

23. In the Source Fields drop-down, select **Outlet\_Name**.

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

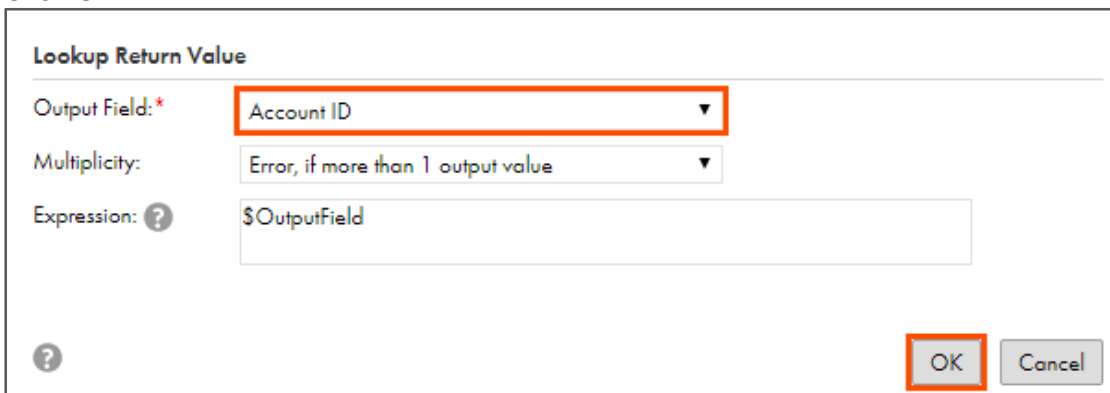


**Lookup Fields\***

| Source Fields            | Lookup Fields             |
|--------------------------|---------------------------|
| <span>Outlet_Name</span> | <span>Account Name</span> |

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

26. Click **OK**.



**Lookup Return Value**


Output Field: \* Account ID

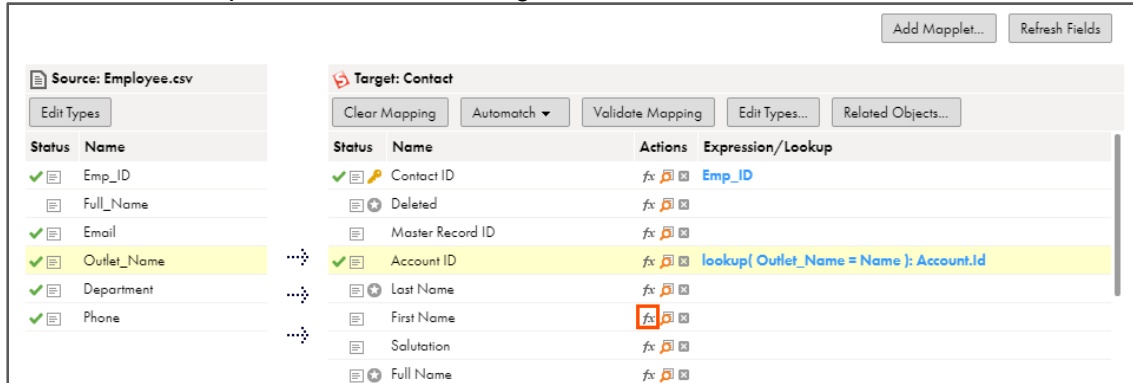
Multiplicity: Error, if more than 1 output value

Expression: ? \$OutputField

? OK Cancel

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

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



| Status | Name        | Actions | Expression/Lookup |
|--------|-------------|---------|-------------------|
| ✓      | Emp_ID      | fx      | Emp_ID            |
|        | Full_Name   |         |                   |
| ✓      | Email       |         |                   |
| ✓      | Outlet_Name |         |                   |
| ✓      | Department  |         |                   |
| ✓      | Phone       |         |                   |

| Status | Name             | Actions | Expression/Lookup                      |
|--------|------------------|---------|----------------------------------------|
| ✓      | Contact ID       | fx      |                                        |
|        | Deleted          | fx      |                                        |
|        | Master Record ID | fx      |                                        |
| ✓      | Account ID       | fx      | lookup(Outlet_Name = Name): Account.Id |
|        | Last Name        | fx      |                                        |
|        | First Name       | fx      |                                        |
|        | Salutation       | fx      |                                        |
|        | Full Name        | fx      |                                        |

**Note:** The Field Expression window appears.

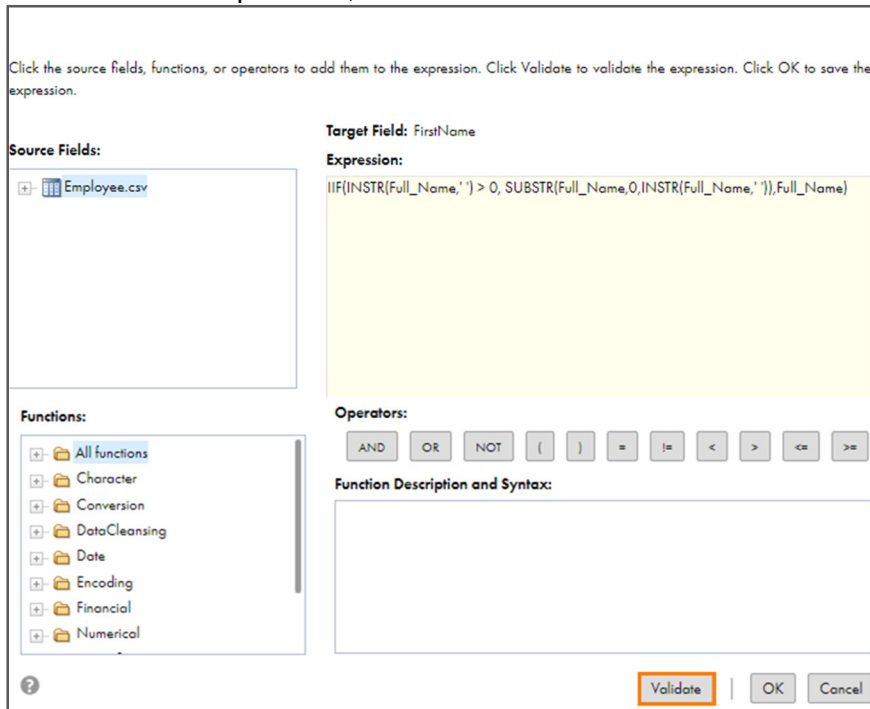
28. In the **Expression** field, enter the following expression:

**IIF(INSTR(Full\_Name,' ') > 0, SUBSTR(Full\_Name,0,INSTR(Full\_Name,' ')),Full\_Name)**

OR

Open the file named **06\_LabGuide\_UsingDataFiltersLookupAndExpressions\_3-2** provided with this lab. Copy the command mentioned under **Step 31** and paste it in the Expression field.

29. 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.

**Source Fields:**

- Employee.csv

**Target Field:** FirstName

**Expression:**

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

**Functions:**

- All functions
- Character
- Conversion
- DataCleansing
- Date
- Encoding
- Financial
- Numerical

**Operators:**

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

**Function Description and Syntax:**

**Validate** | OK | Cancel

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

✓ The expression is valid.

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.

**Source Fields:**

Employee.csv

**Target Field:** FirstName

**Expression:**

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

**Functions:**

- All functions
- Character
- Conversion
- DataCleansing
- Date
- Encoding
- Financial
- Numerical

**Operators:**

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

**Function Description and Syntax:**

Validate OK Cancel

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

Add Mapplet... Refresh Fields

**Source: Employee.csv**

Edit Types

| Status | Name        |
|--------|-------------|
| ✓      | Emp_ID      |
| ✓      | Full_Name   |
| ✓      | Email       |
| ✓      | Outlet_Name |
| ✓      | Department  |
| ✓      | Phone       |

**Target: Contact**

Clear Mapping Automatch Validate Mapping Edit Types... Related Objects...

| 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      |                                                                                        |
| ✓      | 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.

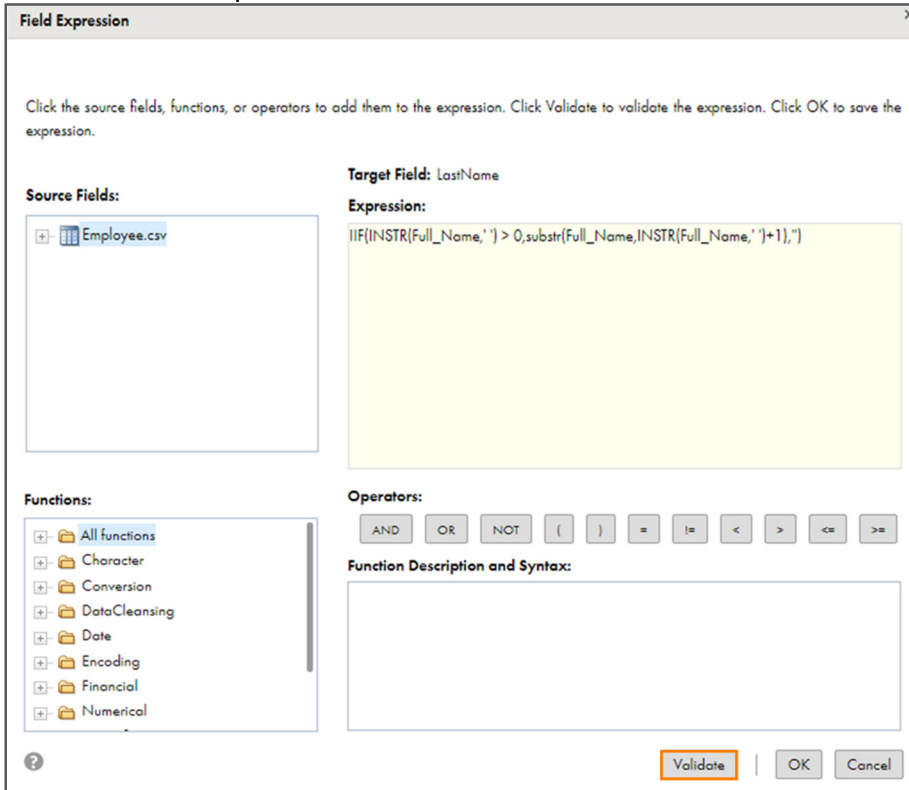
32. In the **Expression** field, enter the following expression:

**IIF(INSTR(Full\_Name, ' ') > 0, substr(Full\_Name, INSTR(Full\_Name, ' ')+1,))**

OR

Open the file named **06\_LabGuide\_UsingDataFiltersLookupAndExpressions\_3-2** provided with this lab. Copy the command mentioned under **Step 35** and paste it in the Expression field.

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



Field Expression

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.

Source Fields:

- Employee.csv

Target Field: LastName

Expression:

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

Functions:

- All functions
- Character
- Conversion
- DataCleansing
- Date
- Encoding
- Financial
- Numerical

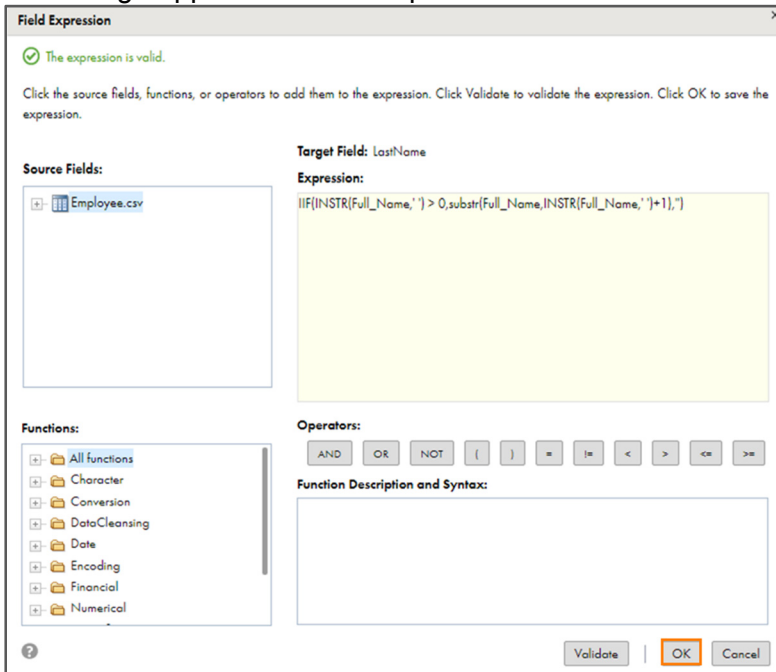
Operators:

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

Function Description and Syntax:

Validate OK Cancel

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



Field Expression

✓ The expression is valid.

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.

Source Fields:

- Employee.csv

Target Field: LastName

Expression:

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

Functions:

- All functions
- Character
- Conversion
- DataCleansing
- Date
- Encoding
- Financial
- Numerical

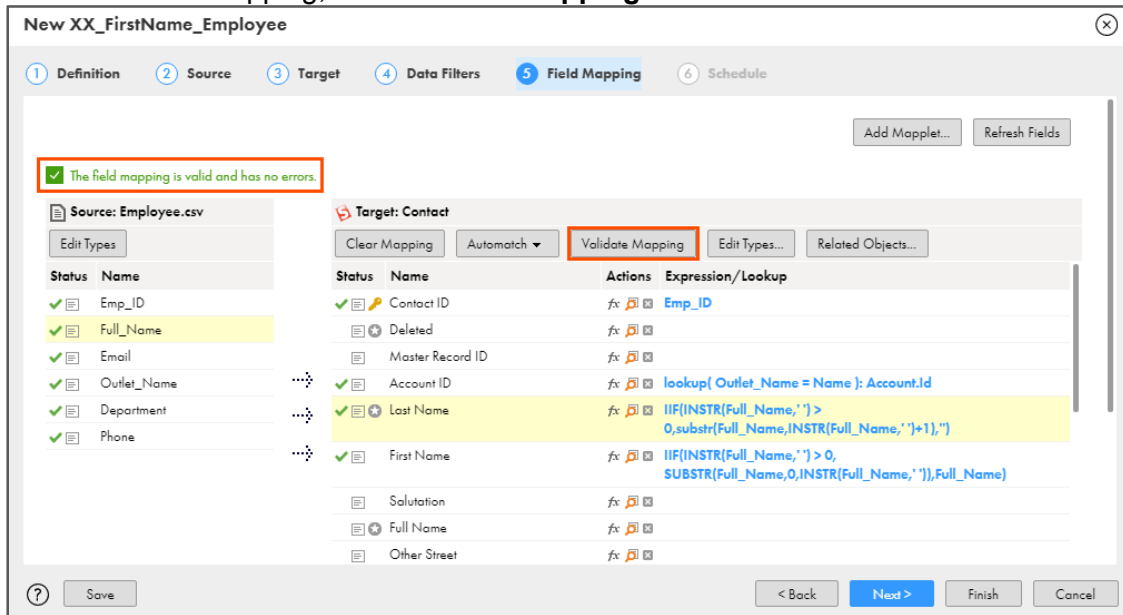
Operators:

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

Function Description and Syntax:

Validate OK Cancel

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



**New XX\_FirstName\_Employee**

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

Add Mapplet... Refresh Fields

✓ The field mapping is valid and has no errors.

Source: Employee.csv

Edit Types

| Status | Name        |
|--------|-------------|
| ✓      | Emp_ID      |
| ✓      | Full_Name   |
| ✓      | Email       |
| ✓      | Outlet_Name |
| ✓      | Department  |
| ✓      | Phone       |

Target: Contact

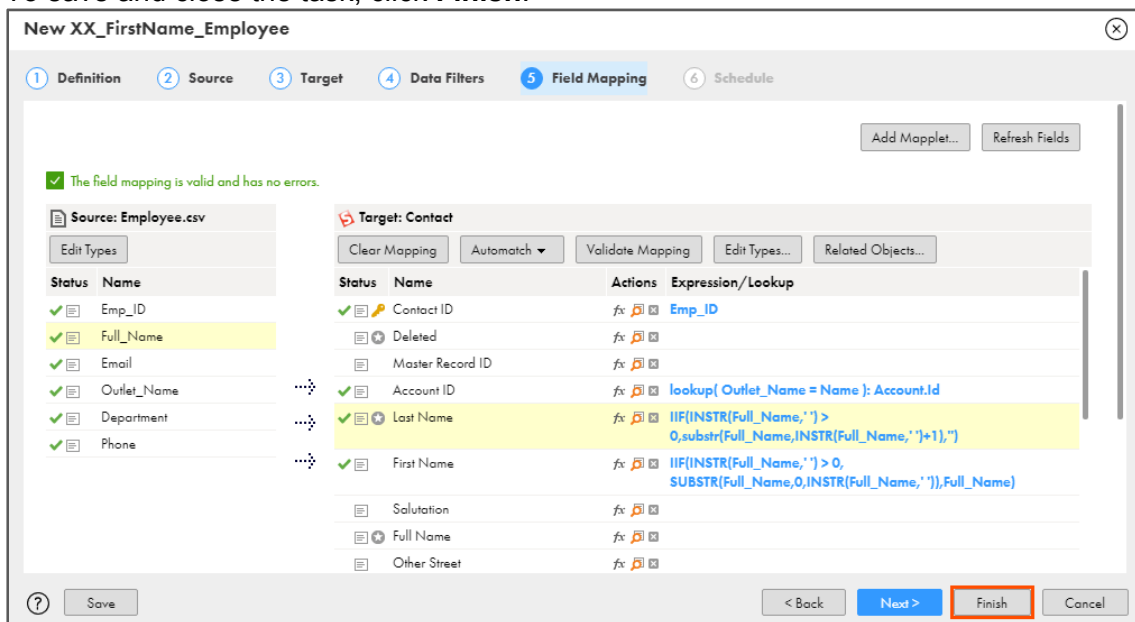
Clear Mapping Automatch **Validate Mapping** Edit Types... Related Objects...

| 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      |                                                                                        |

Save < Back Next > Finish Cancel

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

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



**New XX\_FirstName\_Employee**

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

Add Mapplet... Refresh Fields

✓ The field mapping is valid and has no errors.

Source: Employee.csv

Edit Types

| Status | Name        |
|--------|-------------|
| ✓      | Emp_ID      |
| ✓      | Full_Name   |
| ✓      | Email       |
| ✓      | Outlet_Name |
| ✓      | Department  |
| ✓      | Phone       |

Target: Contact

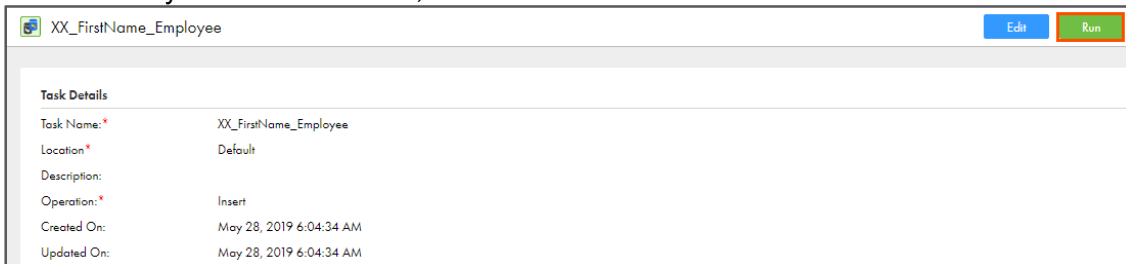
Clear Mapping Automatch Validate Mapping Edit Types... Related Objects...

| 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      |                                                                                        |

Save < Back Next > **Finish** Cancel

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

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



XX\_FirstName\_Employee

Task Details

Task Name: \* XX\_FirstName\_Employee

Location: \* Default

Description:

Operation: \* Insert

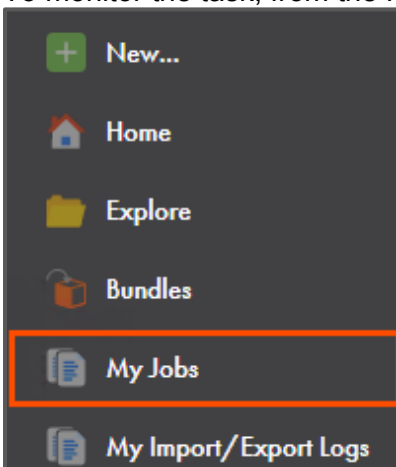
Created On: May 28, 2019 6:04:34 AM

Updated On: May 28, 2019 6:04:34 AM

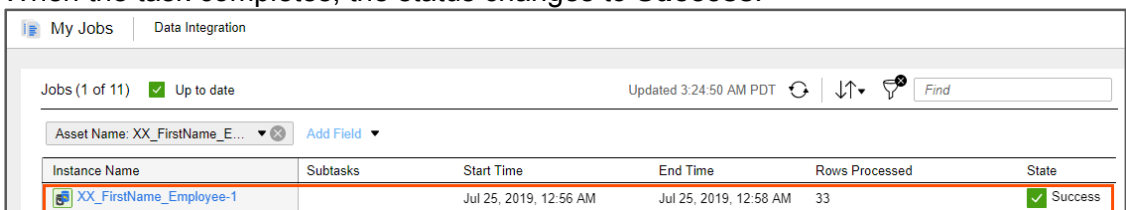
**Note:** If you want to re-run a task, delete the records inserted by the task in the first run to avoid getting duplication errors.

### Monitor the Synchronization Task:


38. To monitor the task, from the Navigation pane, click **My Jobs**.



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

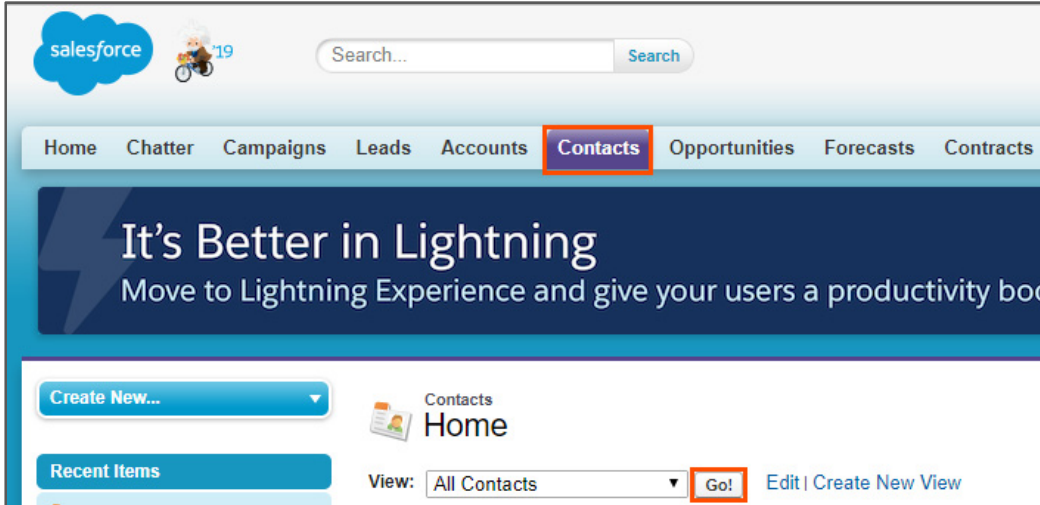


| Instance Name           | Subtasks | Start Time             | End Time               | Rows Processed | State   |
|-------------------------|----------|------------------------|------------------------|----------------|---------|
| XX_FirstName_Employee-1 |          | Jul 25, 2019, 12:56 AM | Jul 25, 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:

40. Log in to your Salesforce Developer account using your credentials.
41. To view the new account records that were inserted, click **Contacts**.
42. Click **Go!**.



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

| New Contact   Add to Campaign   [Icon]                                                                |                 |                            |                               |                |                              |                     |
|-------------------------------------------------------------------------------------------------------|-----------------|----------------------------|-------------------------------|----------------|------------------------------|---------------------|
| A   B   C   D   E   F   G   H   I   J   K   L   M   N   O   P   Q   R   S   T   U   V   W   X   Y   Z |                 |                            |                               |                |                              |                     |
| Action                                                                                                | Name ↑          | Account Name               | Title                         | Phone          | Email                        | Contact Owner Alias |
| <input type="checkbox"/> Edit   Del   [Icon]                                                          | Bailey, Patrick | NH Trends                  |                               | 319-812-6957   | patrick.bailey@nhsupplies... | ITrai               |
| <input type="checkbox"/> Edit   Del   [Icon]                                                          | Baker, Nancy    | NH Supplies                |                               | 229-336-5117   | nancy.baker@nhsupplies...    | ITrai               |
| <input type="checkbox"/> Edit   Del   [Icon]                                                          | Barr, Tim       | Grand Hotels & Resorts Ltd | SVP, Administration and FI... | (312) 596-1000 | barr_tim@grandhotels.com     | ITrai               |
| <input type="checkbox"/> Edit   Del   [Icon]                                                          | Bond, John      | Grand Hotels & Resorts Ltd | VP, Facilities                | (312) 596-1000 | bond_john@grandhotels.c...   | ITrai               |
| <input type="checkbox"/> Edit   Del   [Icon]                                                          | Boyle, Lauren   | United Oil & Gas Corp.     | SVP, Technology               | (212) 842-5500 | lboyle@uog.com               | ITrai               |
| <input type="checkbox"/> Edit   Del   [Icon]                                                          | Brown, Donna    | NH Everyday                |                               | 212-434-7910   | donna.brown@nhsupplies...    | ITrai               |

44. 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

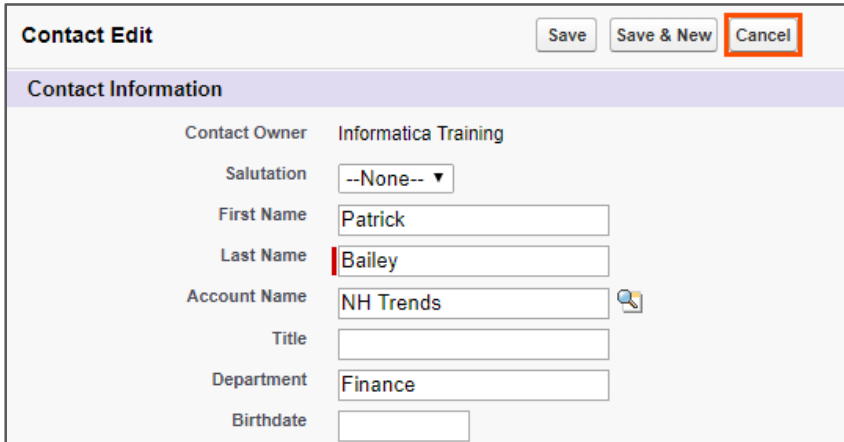
Title:

Department: Finance

Birthdate:



45. Click **Cancel**.



**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:

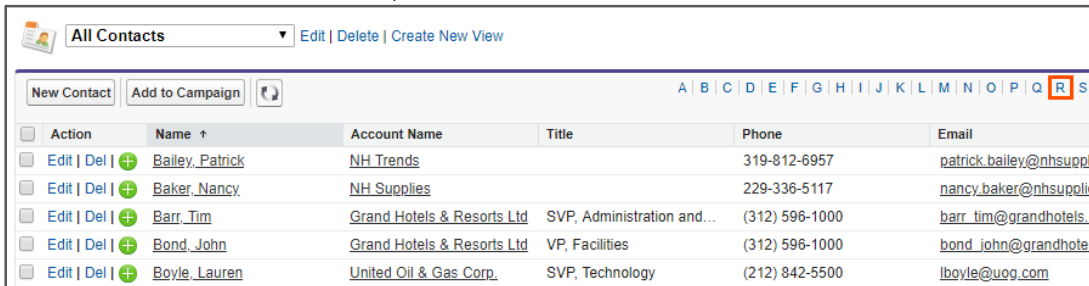
Department: Finance

Birthdate:

46. Search for contact 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.

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



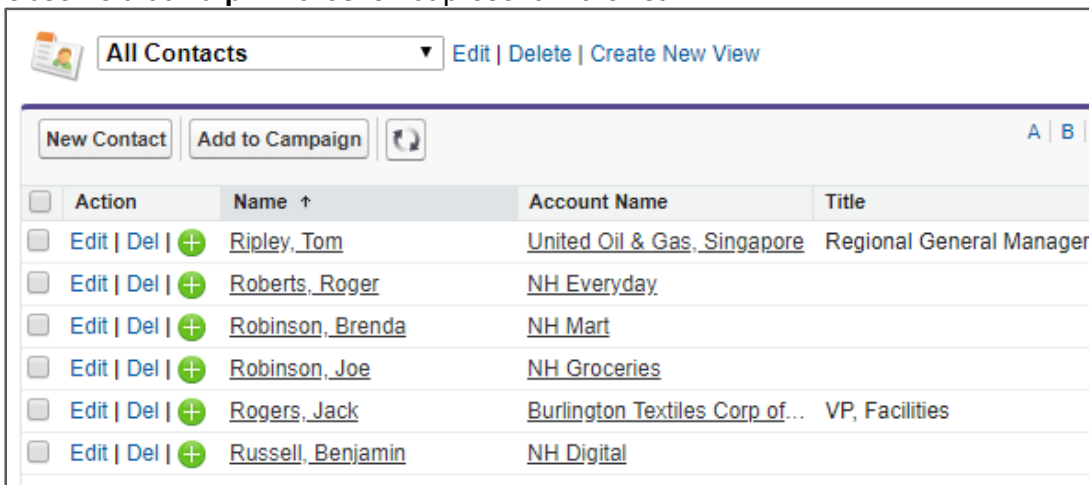
**All Contacts** [Edit] [Delete] [Create New View]

[New Contact] [Add to Campaign] [Filter]

A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | **R** | S

| Action             | Name ↑          | Account Name               | Title                      | Phone          | Email                  |
|--------------------|-----------------|----------------------------|----------------------------|----------------|------------------------|
| [Edit] [Del] [Add] | Bailey, Patrick | NH Trends                  |                            | 319-812-6957   | patrick.bailey@nhsuppl |
| [Edit] [Del] [Add] | Baker, Nancy    | NH Supplies                |                            | 229-336-5117   | nancy.baker@nhsupplie  |
| [Edit] [Del] [Add] | Barr, Tim       | Grand Hotels & Resorts Ltd | SVP, Administration and... | (312) 596-1000 | barr_tim@grandhotels.d |
| [Edit] [Del] [Add] | Bond, John      | Grand Hotels & Resorts Ltd | VP, Facilities             | (312) 596-1000 | bond_john@grandhotel   |
| [Edit] [Del] [Add] | Boyle, Lauren   | United Oil & Gas Corp.     | SVP, Technology            | (212) 842-5500 | lboyle@uog.com         |

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



**All Contacts** [Edit] [Delete] [Create New View]

[New Contact] [Add to Campaign] [Filter]

A | B |

| Action             | Name ↑            | Account Name                   | Title                    |
|--------------------|-------------------|--------------------------------|--------------------------|
| [Edit] [Del] [Add] | Ripley, Tom       | United Oil & Gas, Singapore    | Regional General Manager |
| [Edit] [Del] [Add] | Roberts, Roger    | NH Everyday                    |                          |
| [Edit] [Del] [Add] | Robinson, Brenda  | NH Mart                        |                          |
| [Edit] [Del] [Add] | Robinson, Joe     | NH Groceries                   |                          |
| [Edit] [Del] [Add] | Rogers, Jack      | Burlington Textiles Corp of... | VP, Facilities           |
| [Edit] [Del] [Add] | Russell, Benjamin | NH Digital                     |                          |

*This concludes the lab.*



## Module 3: Synchronization Task

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

#### 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

---

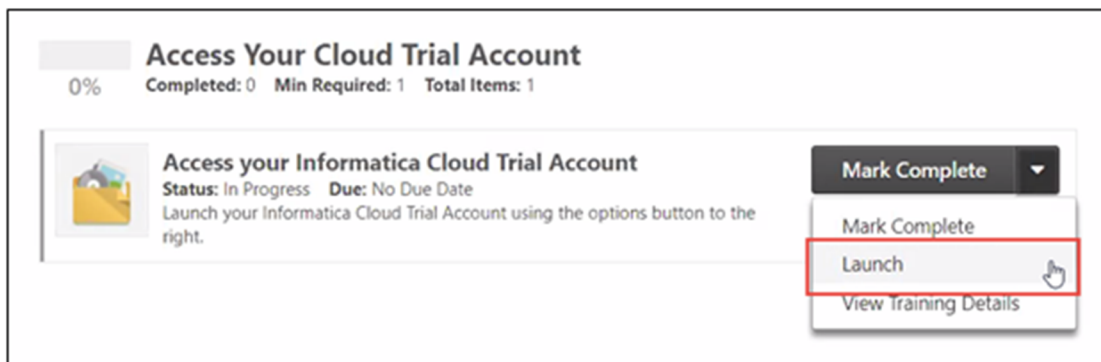
#### Tasks:

##### Copy Source Files:

1. Copy **Items.csv** file provided with this lab and place the file in your flat file directory (C:\IICS\LabFiles).

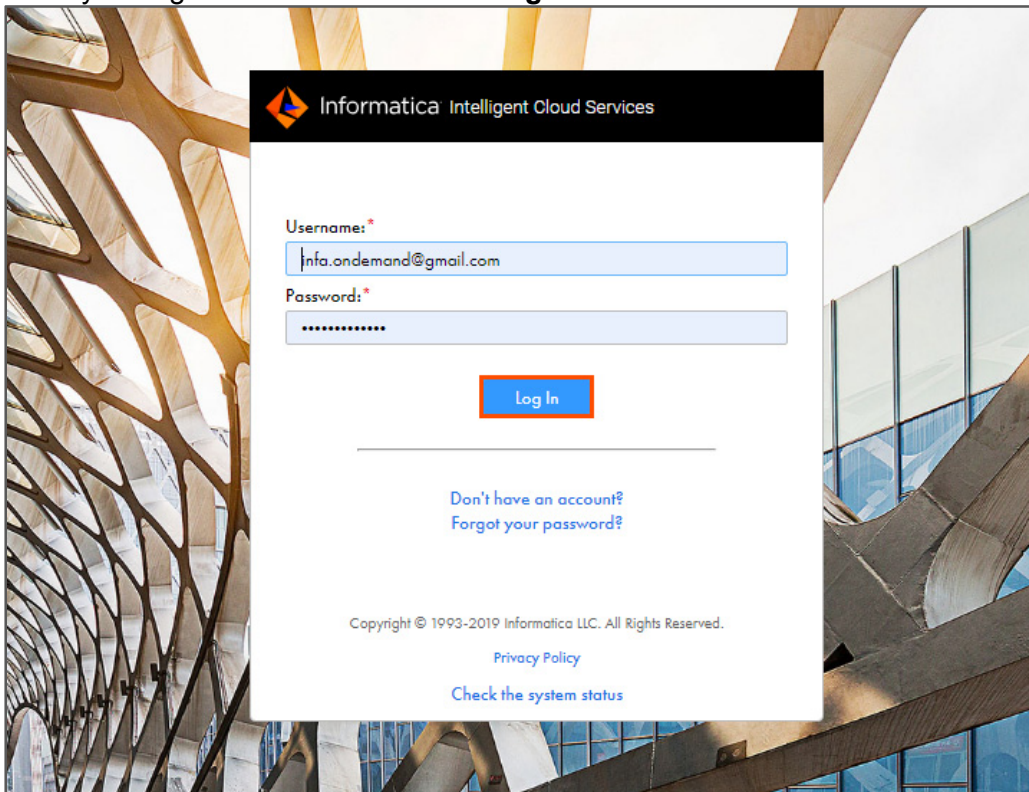
##### Create a Data Synchronization task:

1. Access your cloud trial account by clicking **Launch** in your option Menu. If the option menu is labeled anything other than **Launch**, click the down arrow to the right and click **Launch**.



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

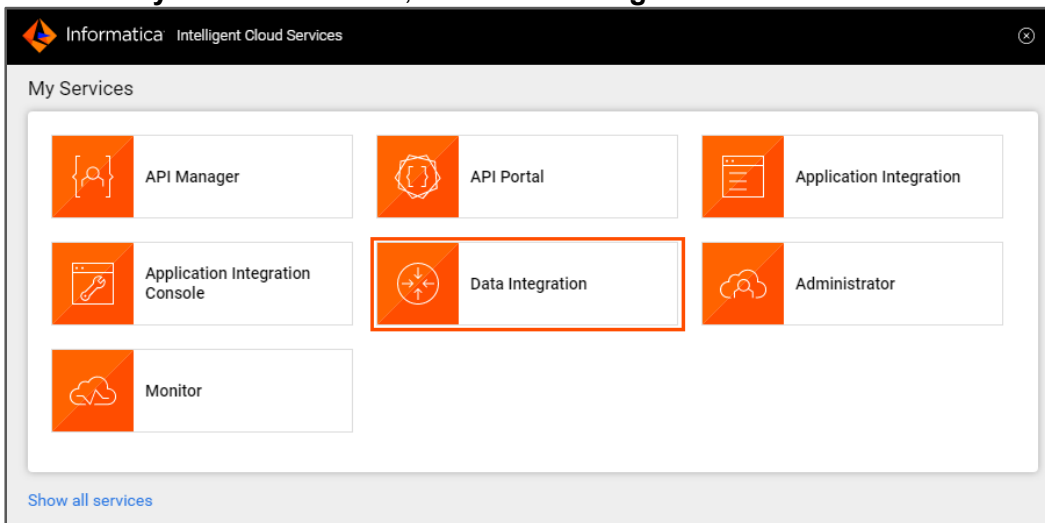
2. Enter your login credentials and click **Log In**.



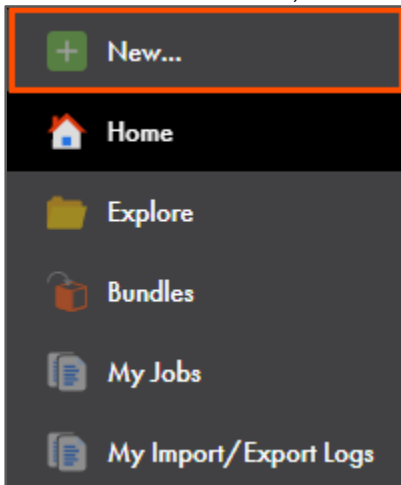
The login screen for Informatica Intelligent Cloud Services is displayed over a background image of a modern building's interior structure. The login form is centered and contains the following elements:

- Informatica Intelligent Cloud Services** header with the logo.
- Username:** \* field with the email address `info.ondemand@gmail.com` entered.
- Password:** \* field with masked characters (dots).
- A blue **Log In** button.
- Links for [Don't have an account?](#) and [Forgot your password?](#).
- Footer text: Copyright © 1993-2019 Informatica LLC. All Rights Reserved.
- Links for [Privacy Policy](#) and [Check the system status](#).

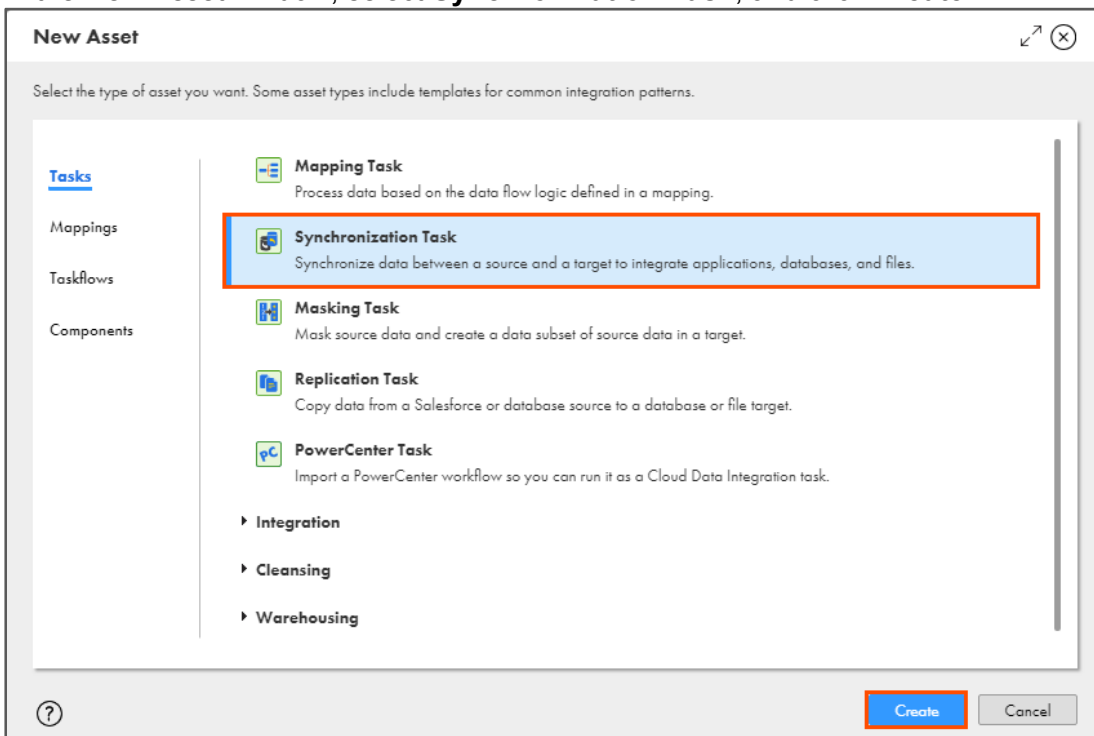
3. From the **My Services** window, select **Data Integration**.



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



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



6. In the Task Name field, enter **XX\_FirstName\_MultiObject**.

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

**New Synchronization Task1**

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

**Task Details**

Task Name: \* XX\_FirstName\_MultiObject ?

Location \* Default Browse

Description: ?

Task Operation: \* Insert ?

- Click **Next**.

**New Synchronization Task1** (X)

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

**Task Details**

Task Name: \* XX\_FirstName\_MultiObject ?

Location \* Default Browse

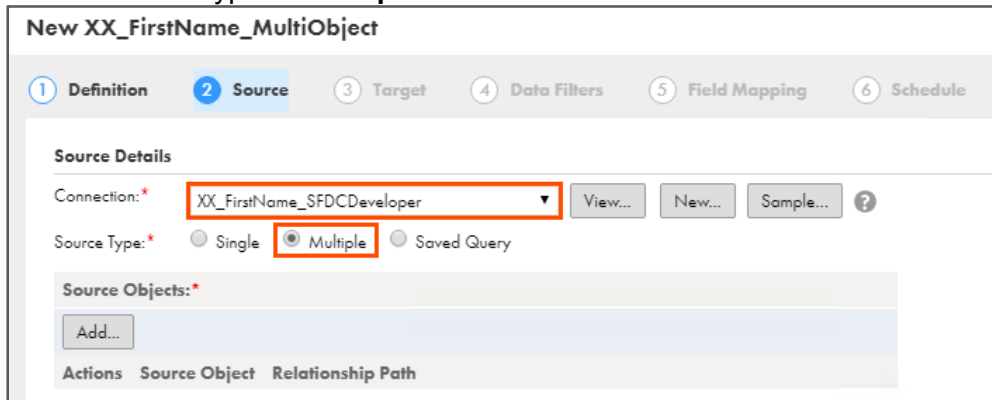
Description: ?

Task Operation: \* Insert ?

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

- From the Connection drop-down, select **XX\_FirstName\_SFDCDeveloper**.

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



**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... ?

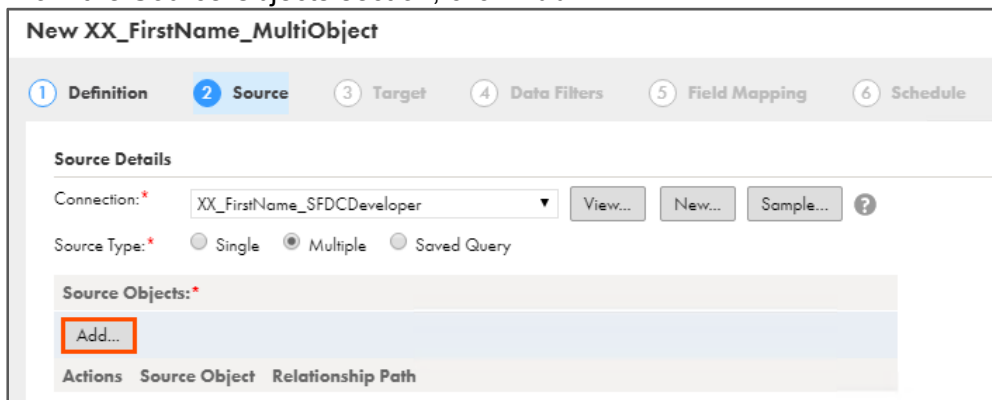
Source Type: \* ☐ Single ☒ **Multiple** ☐ Saved Query

**Source Objects: \***

Add...

Actions Source Object Relationship Path

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



**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

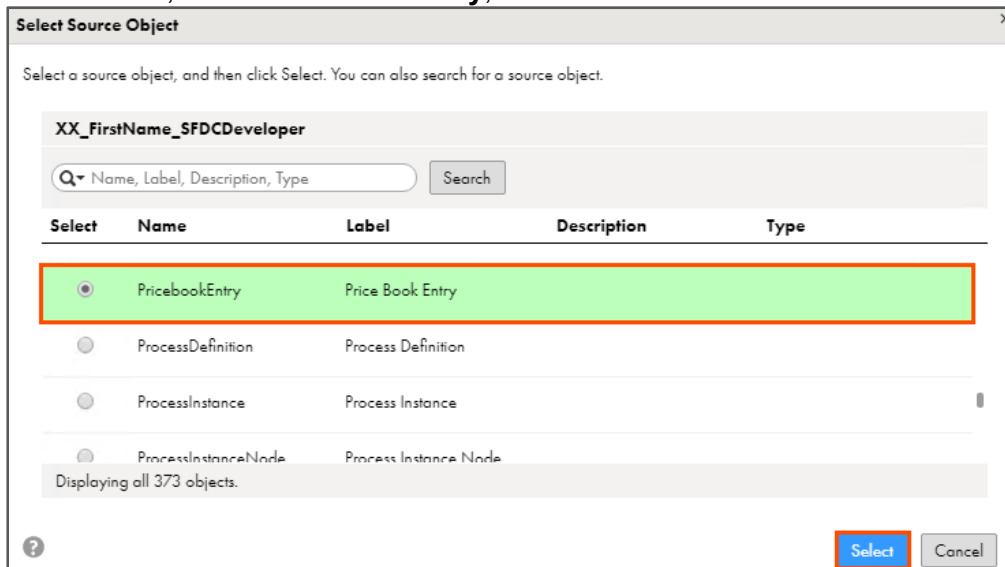
**Source Objects: \***

**Add...**

Actions Source Object Relationship Path

**Note:** The Select Source Object window appears.

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



**Select Source Object**

Select a source object, and then click Select. You can also search for a source object.

**XX\_FirstName\_SFDCDeveloper**

Q Name, Label, Description, Type Search

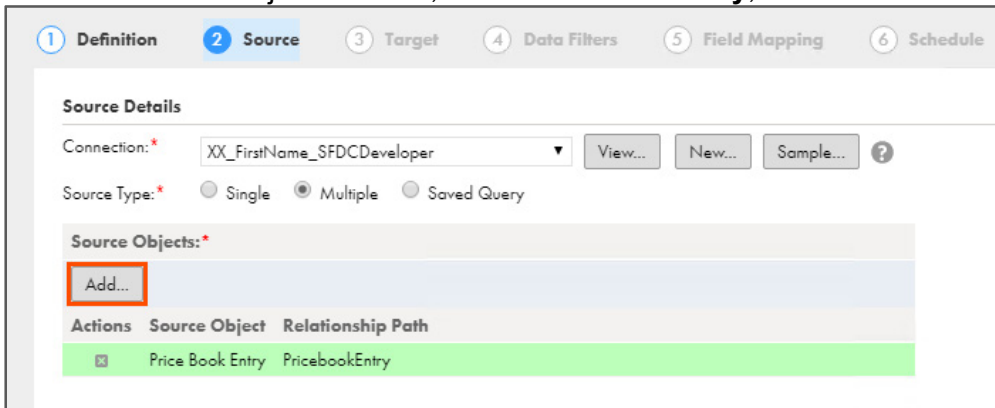
| Select                           | Name                | Label                 | Description | Type |
|----------------------------------|---------------------|-----------------------|-------------|------|
| <input checked="" type="radio"/> | PricebookEntry      | Price Book Entry      |             |      |
| <input type="radio"/>            | ProcessDefinition   | Process Definition    |             |      |
| <input type="radio"/>            | ProcessInstance     | Process Instance      |             |      |
| <input type="radio"/>            | ProcessInstanceNode | Process Instance Node |             |      |

Displaying all 373 objects.

? **Select** Cancel

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

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



**Source Details**

Connection: \* XX\_FirstName\_SFDCDeveloper [View...] [New...] [Sample...] [?]

Source Type: \* ☐ Single ☒ Multiple ☐ Saved Query

**Source Objects: \***

[Add...]

| Actions | Source Object    | Relationship Path |
|---------|------------------|-------------------|
| [X]     | Price Book Entry | PricebookEntry    |

**Note:** The Add Related Object window appears.

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



**Add Related Object** [X]

Select the relationship you want to use to add a related object. The related object fields will be accessed using this relationship name.

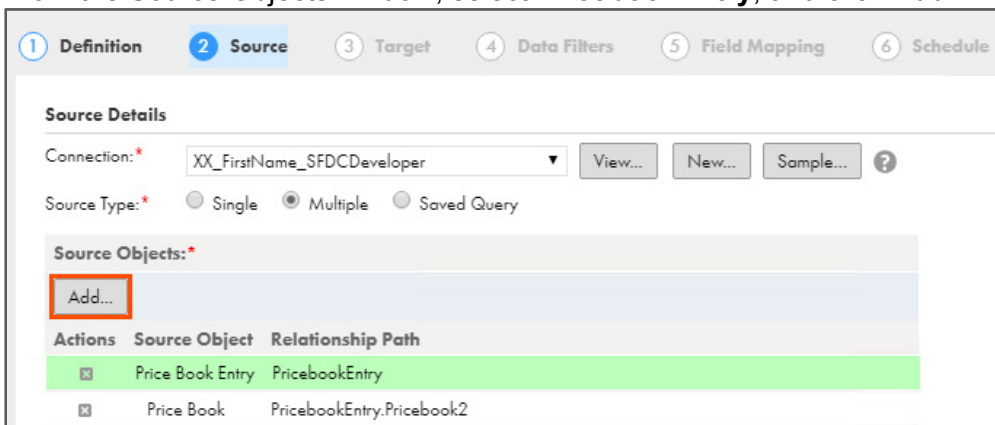
Source Object: Price Book Entry

Relationship Name: \* Pricebook2 [v]

Related Object: \* Pricebook2 [v]

[?] [OK] [Cancel]

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



**Source Details**

Connection: \* XX\_FirstName\_SFDCDeveloper [View...] [New...] [Sample...] [?]

Source Type: \* ☐ Single ☒ Multiple ☐ Saved Query

**Source Objects: \***

[Add...]

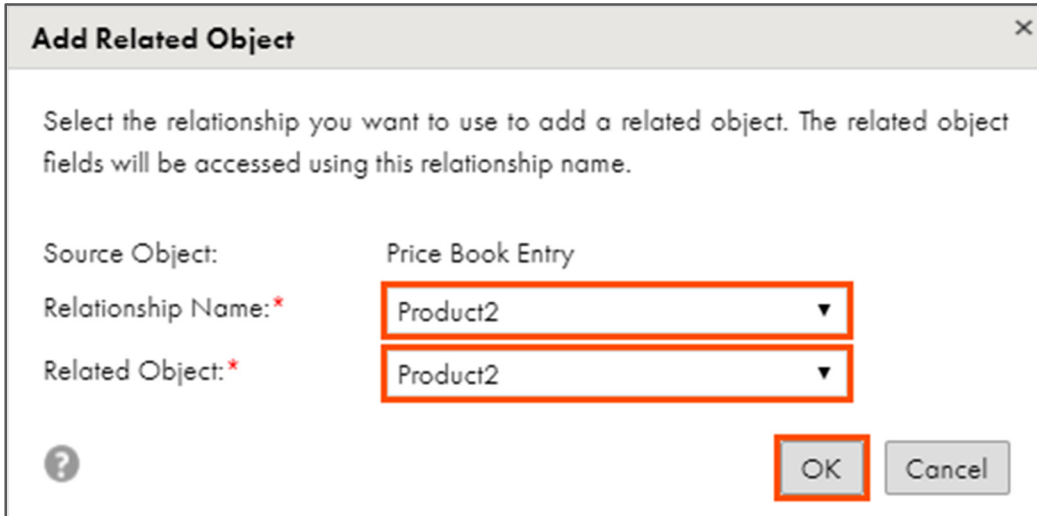
| Actions | Source Object    | Relationship Path         |
|---------|------------------|---------------------------|
| [X]     | Price Book Entry | PricebookEntry            |
| [X]     | Price Book       | PricebookEntry.Pricebook2 |

**Note:** The Add Related Object window appears.

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



18. Click **OK**.



**Add Related Object**

Select the relationship you want to use to add a related object. The related object fields will be accessed using this relationship name.

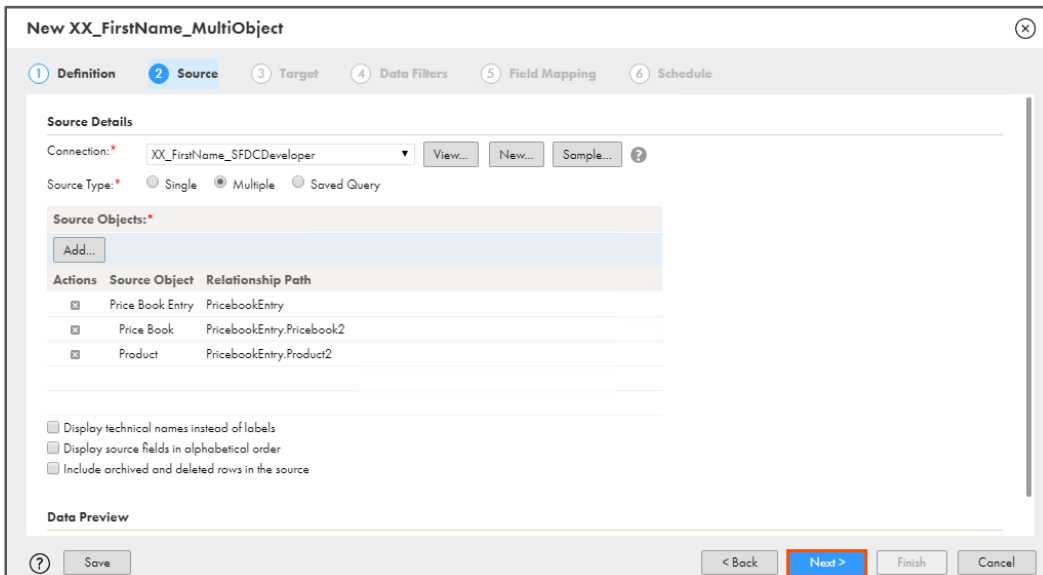
Source Object: Price Book Entry

Relationship Name: Product2 ▼

Related Object: Product2 ▼

OK Cancel

19. 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   |

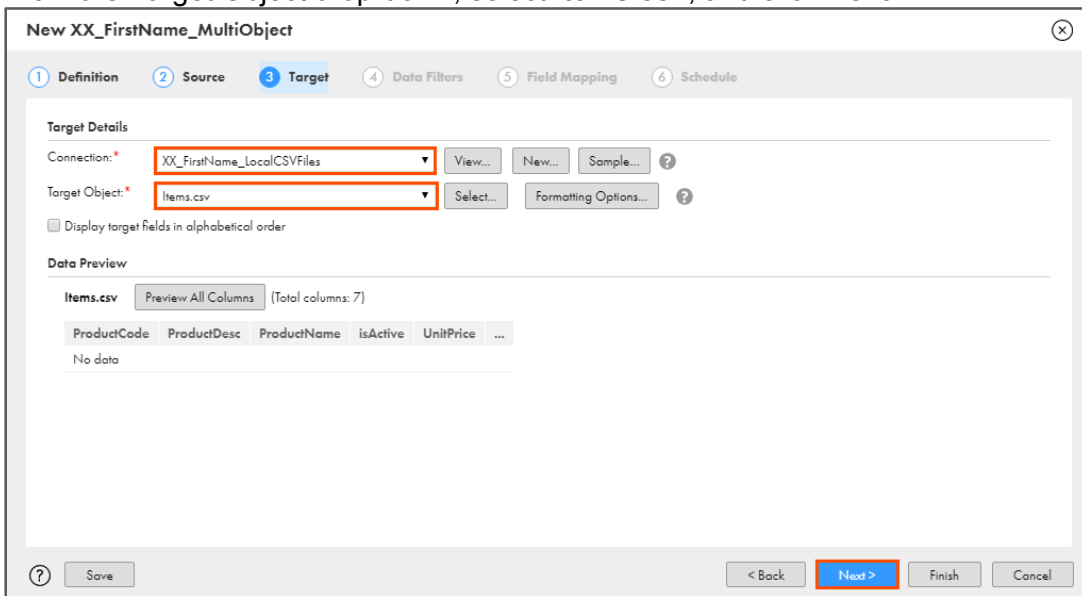
☐ Display technical names instead of labels  
☐ Display source fields in alphabetical order  
☐ Include archived and deleted rows in the source

**Data Preview**

Save Next > < Back Finish Cancel

20. From the Connection drop-down, select **XX\_FirstName\_LocalCSVFiles**.

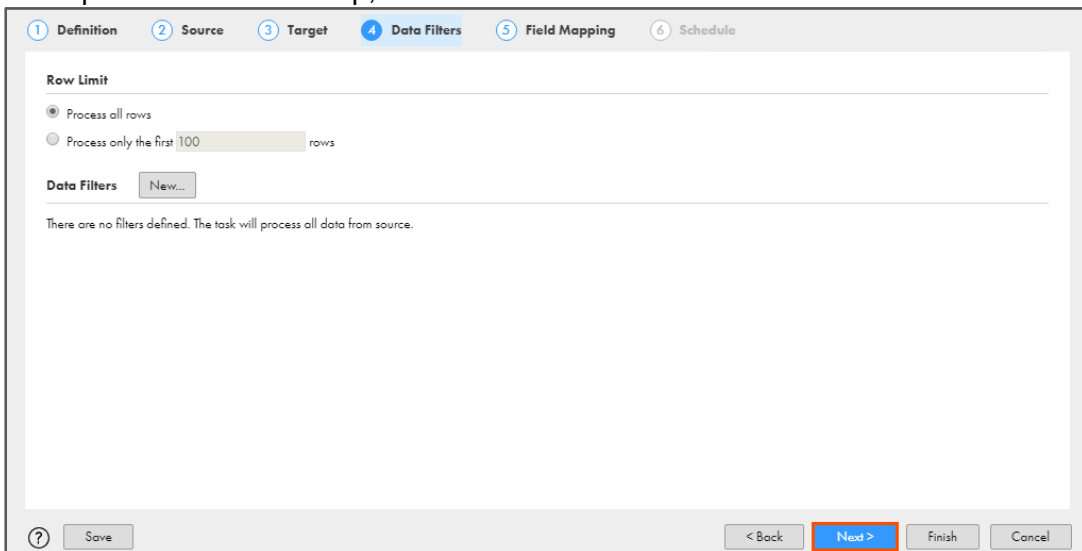
21. From the Target Object drop-down, select **Items.csv**, and click **Next**.



The screenshot shows the 'New XX\_FirstName\_MultiObject' dialog box with the 'Target' tab selected. The 'Target Details' section shows 'Connection' set to 'XX\_FirstName\_LocalCSVFiles' and 'Target Object' set to 'Items.csv'. The 'Data Preview' section shows a table with columns: ProductCode, ProductDesc, ProductName, isActive, UnitPrice, and ... (Total columns: 7). The 'Next >' button is highlighted in blue.

**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.

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



The screenshot shows the 'New XX\_FirstName\_MultiObject' dialog box with the 'Data Filters' tab selected. The 'Row Limit' section shows 'Process all rows' selected. The 'Data Filters' section shows a 'New...' button and the text 'There are no filters defined. The task will process all data from source.' The 'Next >' button is highlighted in blue.

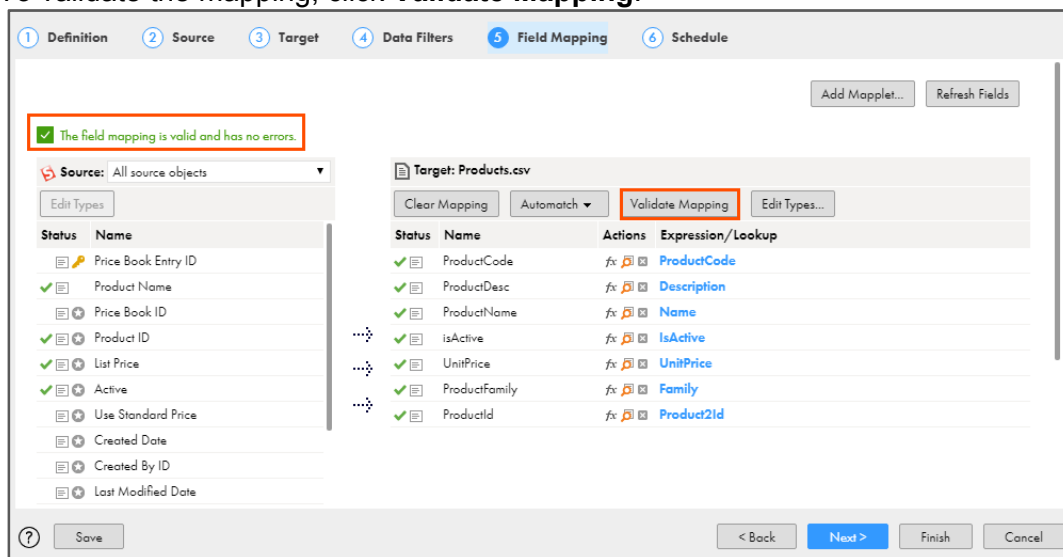
23. Map the fields, as shown in the table below:

**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     |

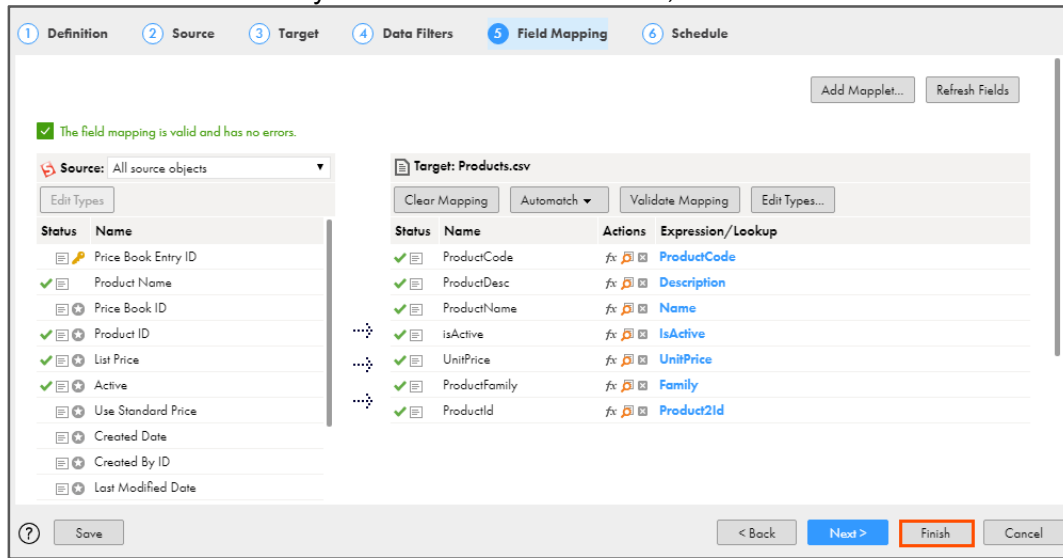
**Note:** The field name displayed in the field mapping are the technical field names of the respective source fields. Thus, after mapping, Product ID is displayed as Product2Id, Active is displayed as IsActive, Product Name is displayed as Name, and Product Family is displayed as Family.

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



The screenshot shows the 'Field Mapping' tab in the Informatica tool. At the top, a status bar indicates 'The field mapping is valid and has no errors.' Below this, the 'Source' section lists various objects and fields, including 'Price Book Entry ID', 'Product Name', 'Price Book ID', 'Product ID', 'List Price', 'Active', 'Use Standard Price', 'Created Date', 'Created By ID', and 'Last Modified Date'. The 'Target' section, labeled 'Products.csv', shows a list of mapped fields: 'ProductCode' (mapped to 'ProductCode'), 'ProductDesc' (mapped to 'Description'), 'ProductName' (mapped to 'Name'), 'isActive' (mapped to 'IsActive'), 'UnitPrice' (mapped to 'UnitPrice'), 'ProductFamily' (mapped to 'Family'), and 'ProductId' (mapped to 'Product2Id'). The 'Validate Mapping' button is highlighted with a red box. At the bottom, there are navigation buttons: '< Back', 'Next >', 'Finish', and 'Cancel'.

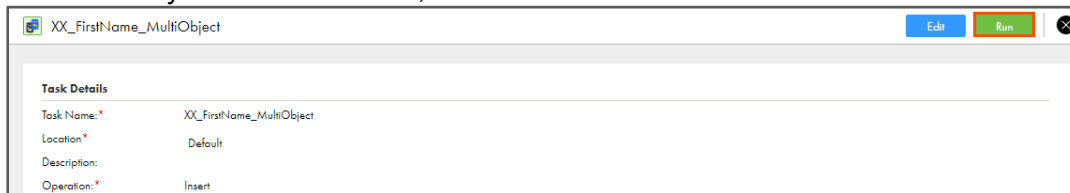
25. To save and close the Synchronization Task wizard, click **Finish**.



The screenshot shows the 'Field Mapping' step of the Synchronization Task wizard. The 'Source' is set to 'All source objects' and the 'Target' is 'Products.csv'. A message at the top states: 'The field mapping is valid and has no errors.' Below this, there are two tables. The left table lists source fields with checkboxes, and the right table lists target fields with their corresponding expressions. The 'Finish' button at the bottom right is highlighted with a red box.

| Status | Name          | Actions | Expression/Lookup |
|--------|---------------|---------|-------------------|
| ✓      | ProductCode   | fx      | ProductCode       |
| ✓      | ProductDesc   | fx      | Description       |
| ✓      | ProductName   | fx      | Name              |
| ✓      | isActive      | fx      | IsActive          |
| ✓      | UnitPrice     | fx      | UnitPrice         |
| ✓      | ProductFamily | fx      | Family            |
| ✓      | ProductId     | fx      | Product2Id        |

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

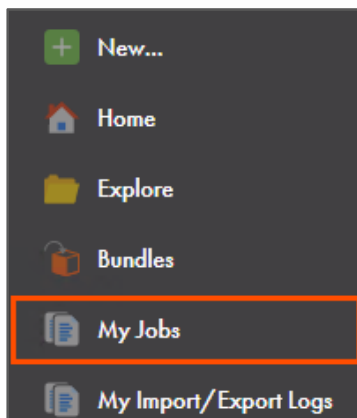


The screenshot shows the task configuration window for 'XX\_FirstName\_MultiObject'. The 'Run' button at the top right is highlighted with a red box.

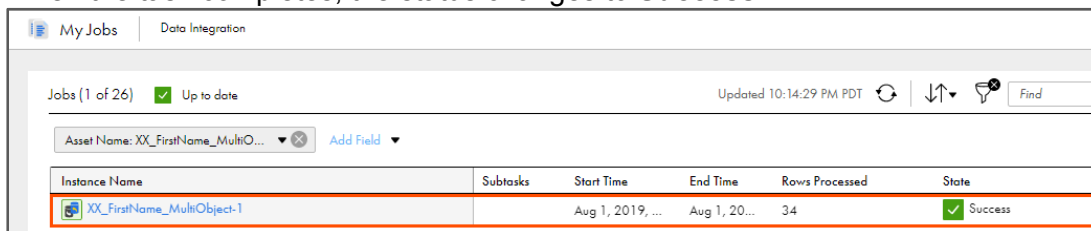
| Task Details |                          |
|--------------|--------------------------|
| Task Name:   | XX_FirstName_MultiObject |
| Location:    | Default                  |
| Description: |                          |
| Operation:   | Insert                   |

### Monitor the Synchronization Task:

27. To monitor the task, from the Navigation pane, click **My Jobs**.



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



The screenshot shows the 'My Jobs' table with the following data:

| Instance Name              | Subtasks | Start Time       | End Time     | Rows Processed | State     |
|----------------------------|----------|------------------|--------------|----------------|-----------|
| XX_FirstName_MultiObject-1 |          | Aug 1, 2019, ... | Aug 1, 20... | 34             | ✓ Success |

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

### Examine Results:

29. Open the **Items.csv** file and review the added rows. The output should 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 developer account.

---

*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:

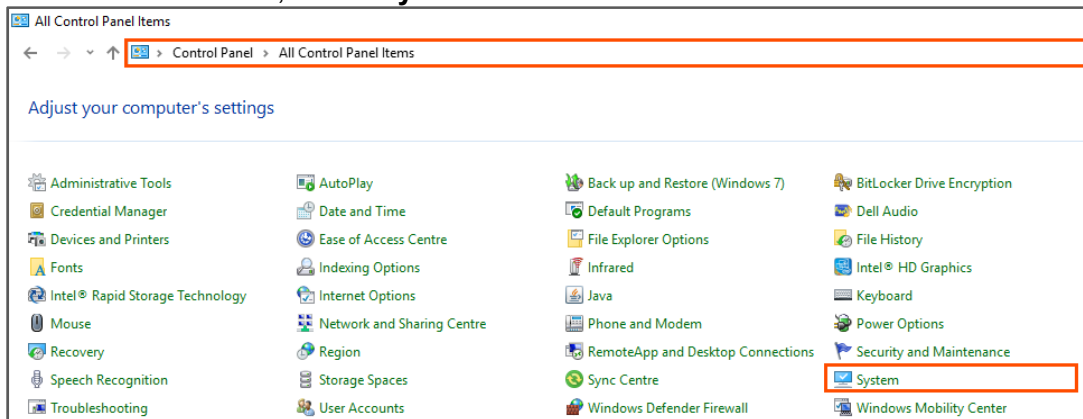
20 minutes

---

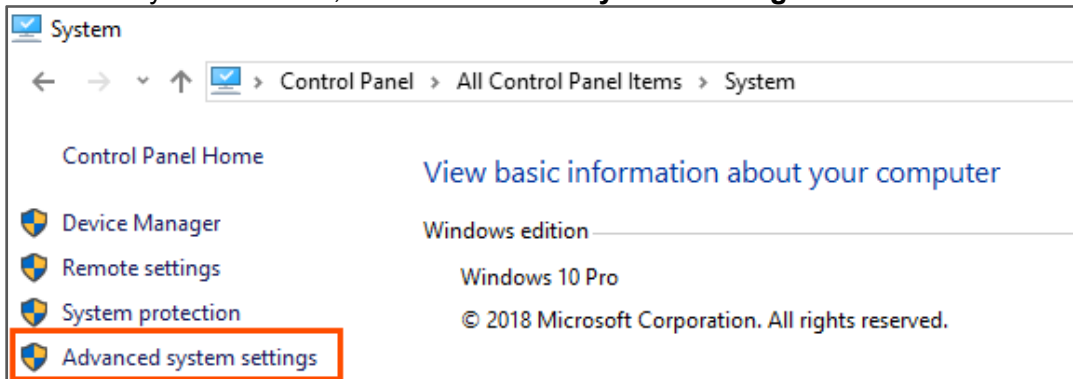
#### Tasks:

##### 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**.

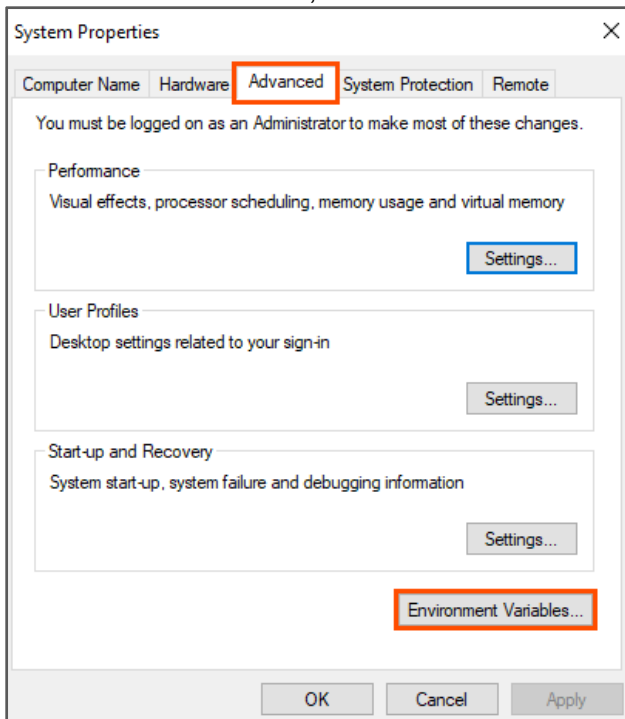


- From the System window, select **Advanced system settings**.



**Note:** The System Properties window appears. If you face any permission issues, kindly contact your system administrator.

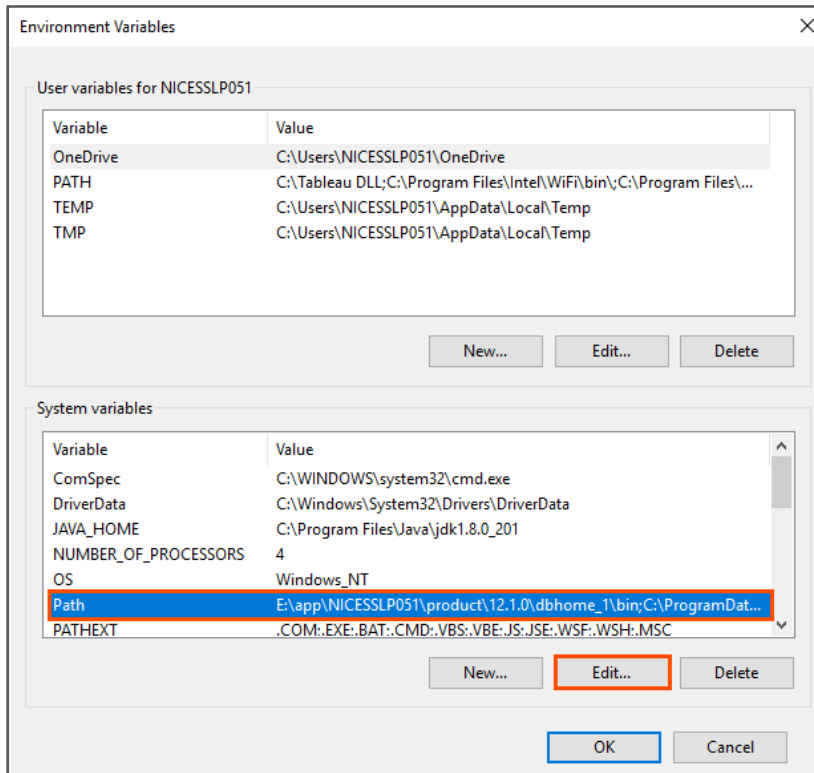
- From the Advanced tab, select **Environment Variables**.



- From the System variables section, locate the **Path** variable.

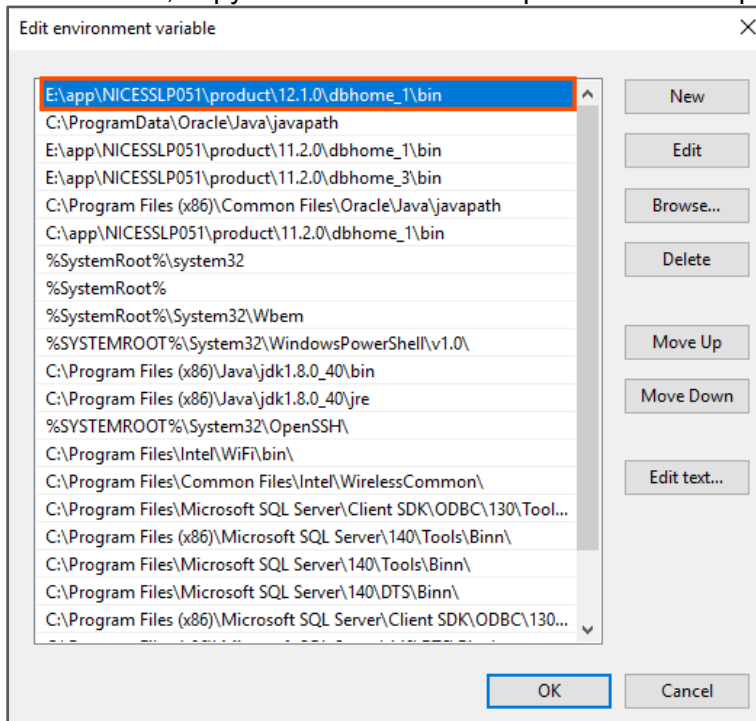


7. Click **Edit**.



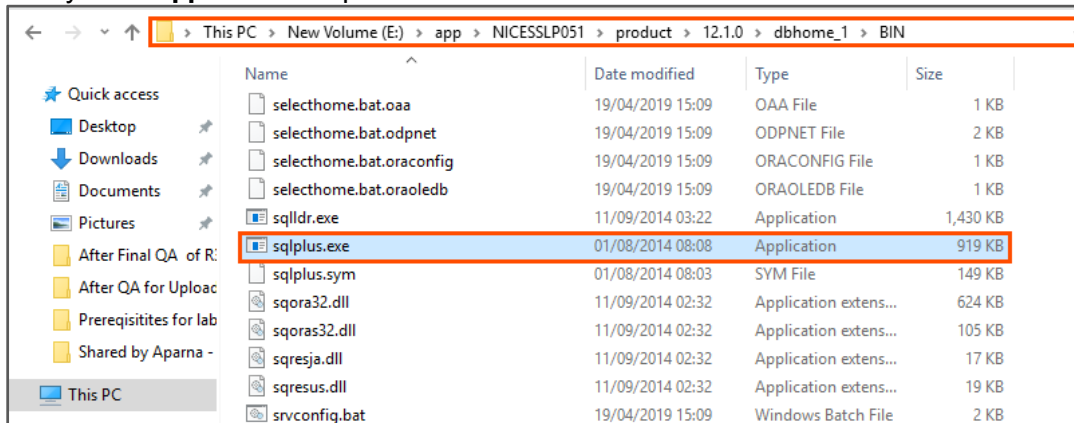
**Note:** The Edit environment variable window appears.

8. From the list, copy the first location and paste it in a notepad.



**Note:** In this case, the location is **E:\app\NICESSLP051\product\12.1.0\dbhome\_1\bin**. This location will change from user to user.

9. On your system, navigate to the location you copied and pasted in the notepad.
10. Verify that **sqlplus.exe** is present in this location.

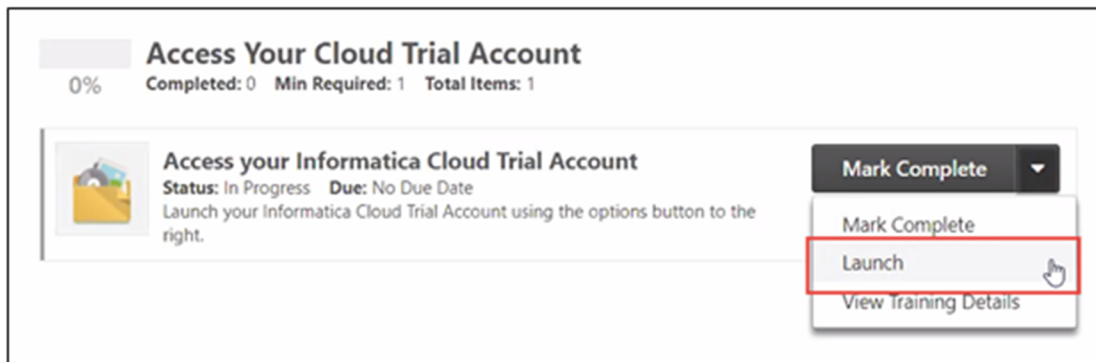


### Copy Source Files:

11. Copy **del.sql** and **create.sql** files provided with this lab and paste it in your flat file directory (**C:\IICS LabFiles**).

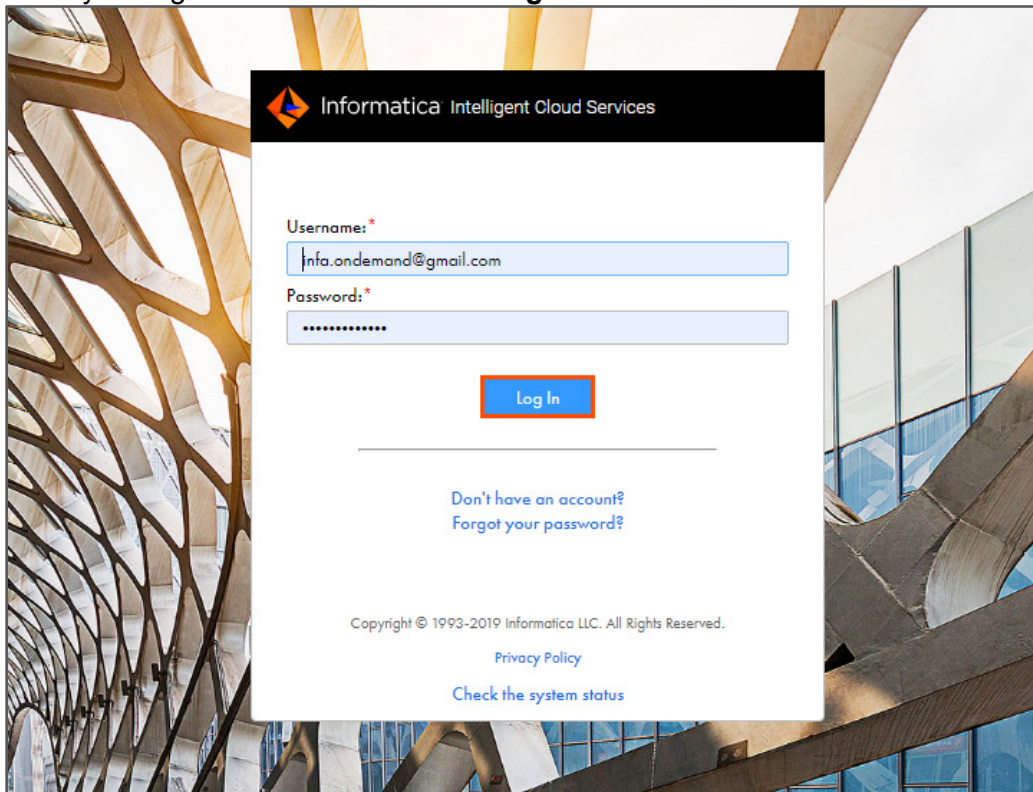
### Create Synchronization Task:

12. Access your cloud trial account by clicking **Launch** in your option Menu. If the option menu is labeled anything other than **Launch**, click the down arrow to the right and click **Launch**.



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

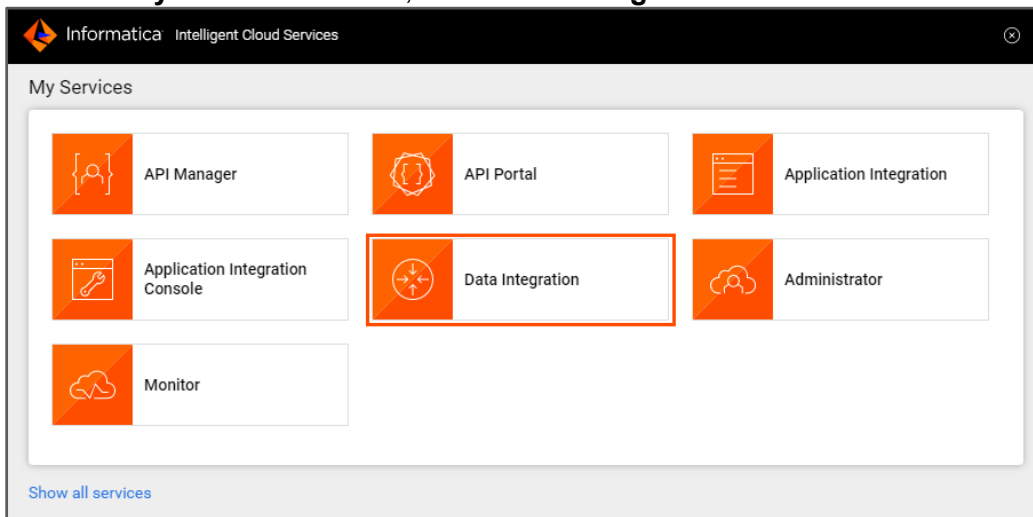
13. Enter your login credentials and click **Log In**.



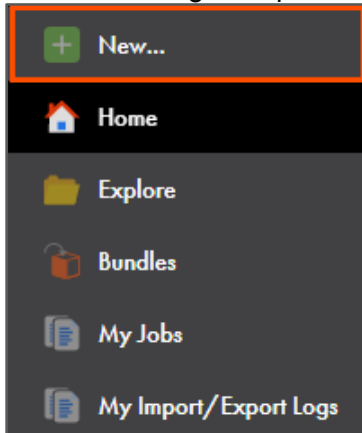
The login screen for Informatica Intelligent Cloud Services is displayed over a background image of a modern building's interior with a complex, branching structural design. The login form is centered and includes the following elements:

- Header:** Informatica Intelligent Cloud Services logo and text.
- Username field:** Labeled "Username:" with a red asterisk, containing the text "info.ondemand@gmail.com".
- Password field:** Labeled "Password:" with a red asterisk, containing masked characters "\*\*\*\*\*".
- Log In button:** A blue button with a red border labeled "Log In".
- Links:** Below the password field, there are two links: "Don't have an account?" and "Forgot your password?".
- Footer:** Copyright © 1993-2019 Informatica LLC. All Rights Reserved. Below this are links for "Privacy Policy" and "Check the system status".

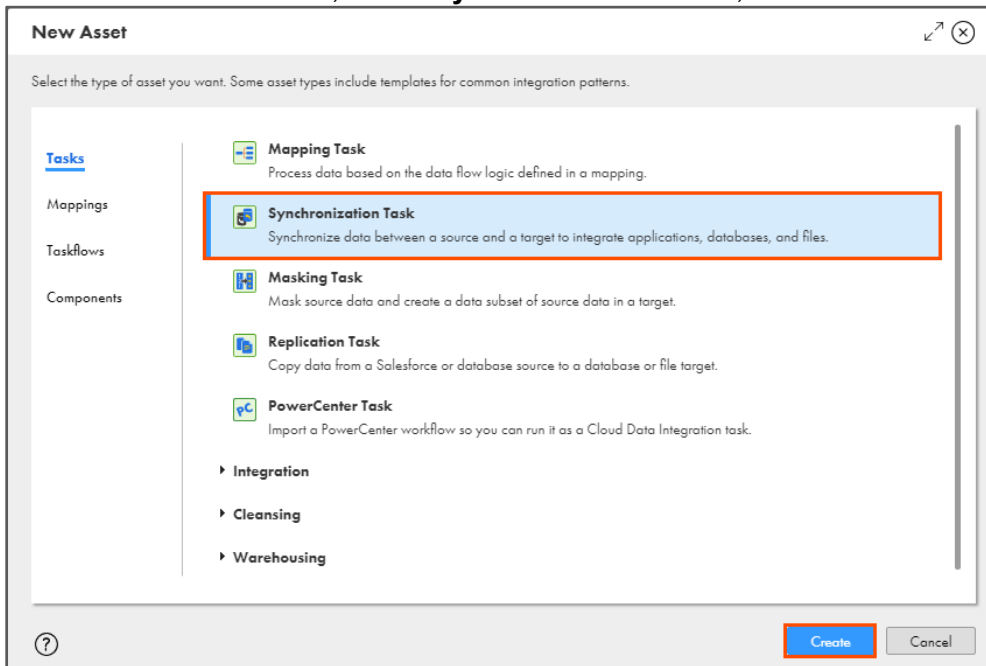
14. From the **My Services** window, select **Data Integration**.



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

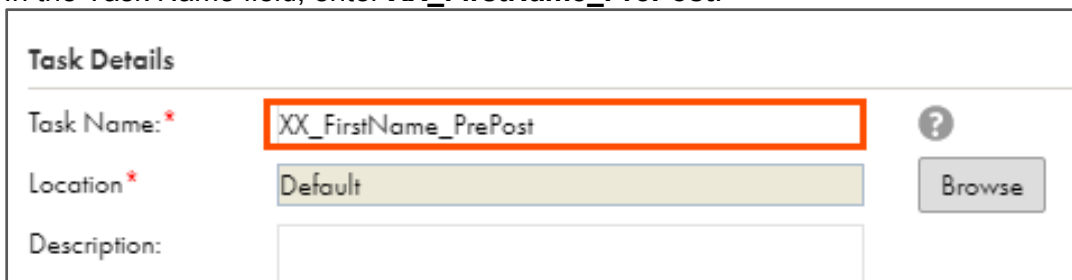


16. In the New Asset window, select **Synchronization Task**, and click **Create**.



**Note:** A six-step Synchronization Task wizard appears.

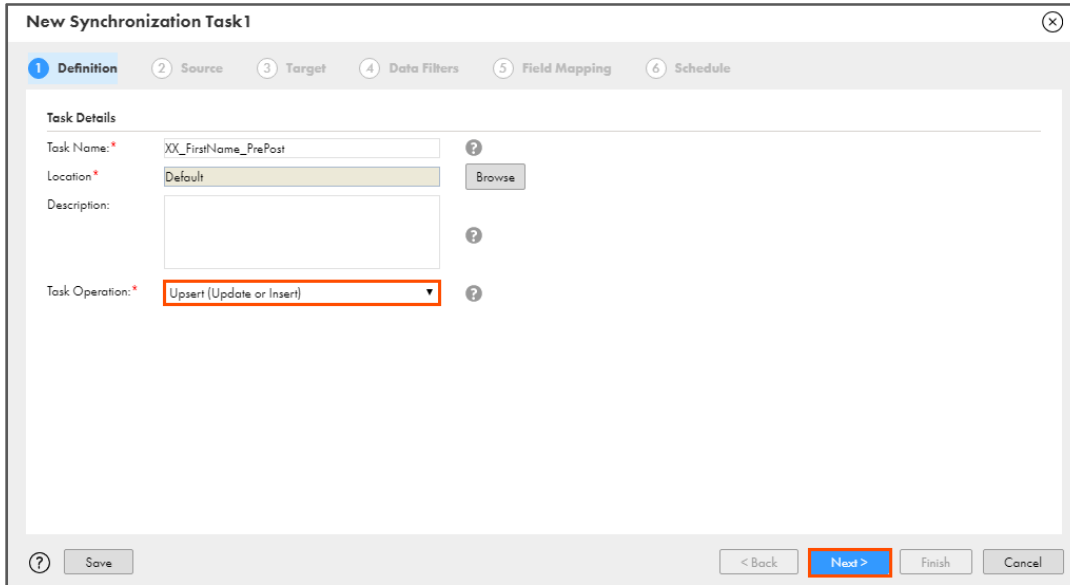
17. In the Task Name field, enter **XX\_FirstName\_PrePost**.



The image shows the 'Task Details' form. The 'Task Name' field is highlighted with a red rectangle and contains the text 'XX\_FirstName\_PrePost'. Below it is the 'Location' field with the value 'Default' and a 'Browse' button. The 'Description' field is empty.

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

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: \* Default Browse

Description: ?

Task Operation: \* Upsert (Update or Insert) ?

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

20. From the Connection drop-down, select **XX\_FirstName\_Oracle**.

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



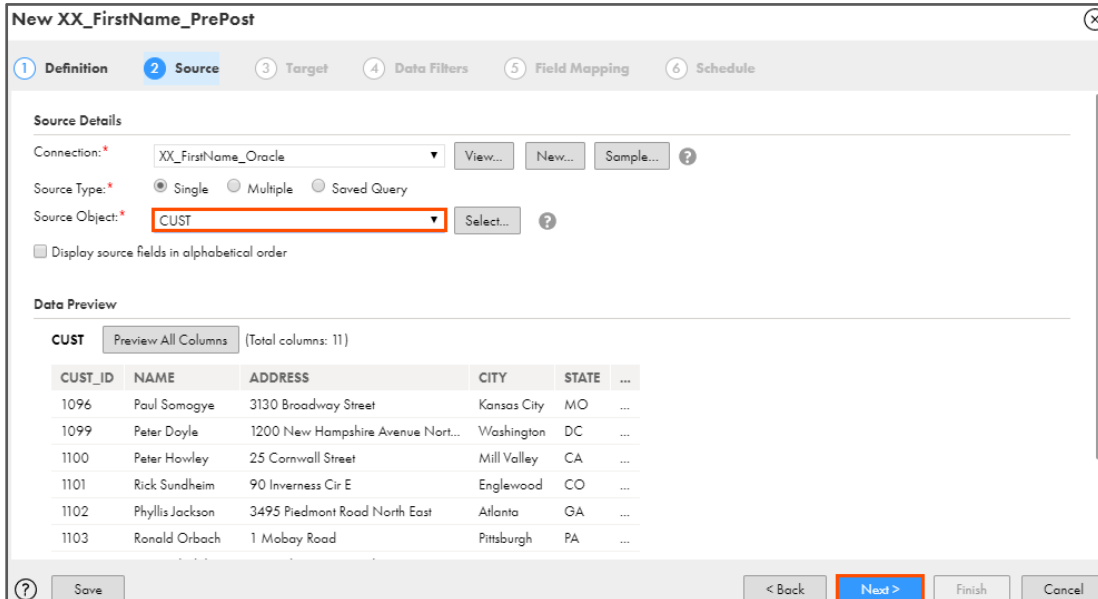
**Source Details**

Connection: \* XX\_FirstName\_Oracle View... New... Sample... ?

Source Type: \* ☒ Single ☐ Multiple ☐ Saved Query

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 View... New... Sample... ?

Source Type: \* ☒ Single ☐ Multiple ☐ Saved Query

Source Object: \* CUST Select... ?

☐ Display source fields in alphabetical order

**Data Preview**

**CUST** Preview All Columns (Total columns: 11)

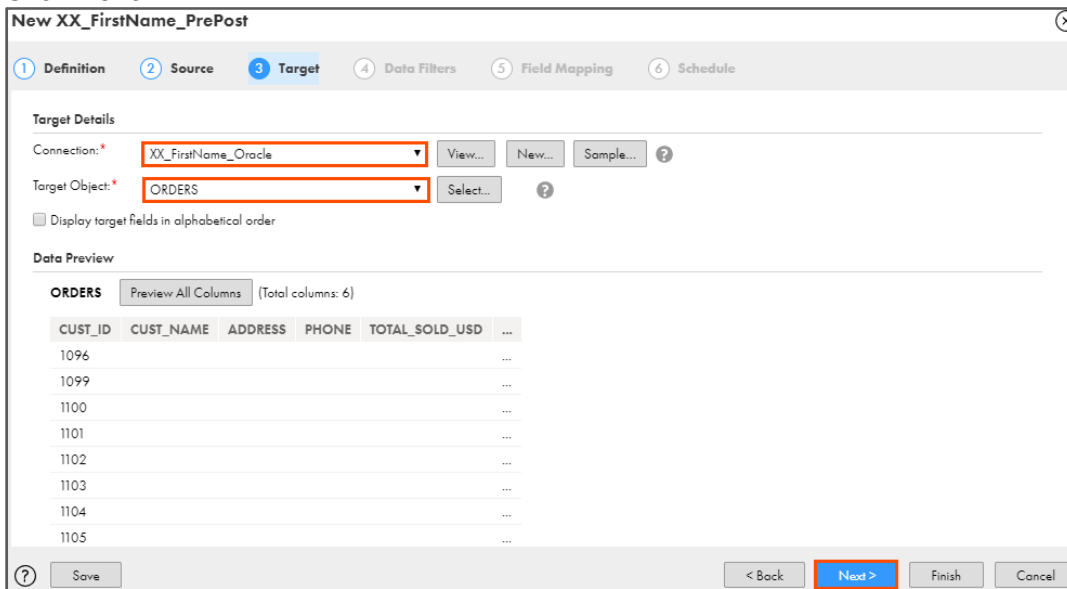
| CUST_ID | NAME            | ADDRESS                           | CITY        | STATE | ... |
|---------|-----------------|-----------------------------------|-------------|-------|-----|
| 1096    | Paul Samogye    | 3130 Broadway Street              | Kansas City | MO    | ... |
| 1099    | Peter Doyle     | 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    | ... |

? 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

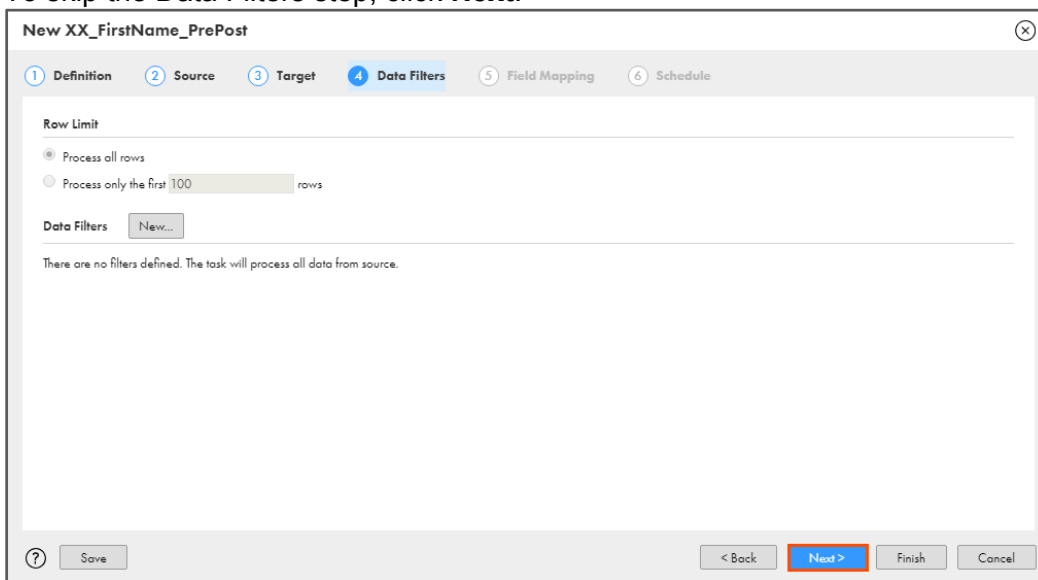
**Data Preview**

**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

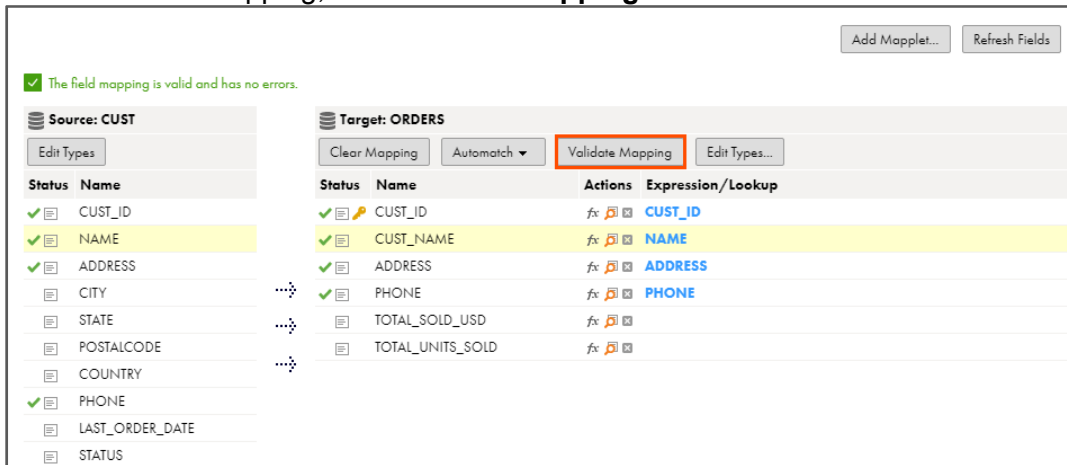
28. Map the fields, as shown in the table below:

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 might be mapped automatically. For already mapped fields, do not map the fields again.

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

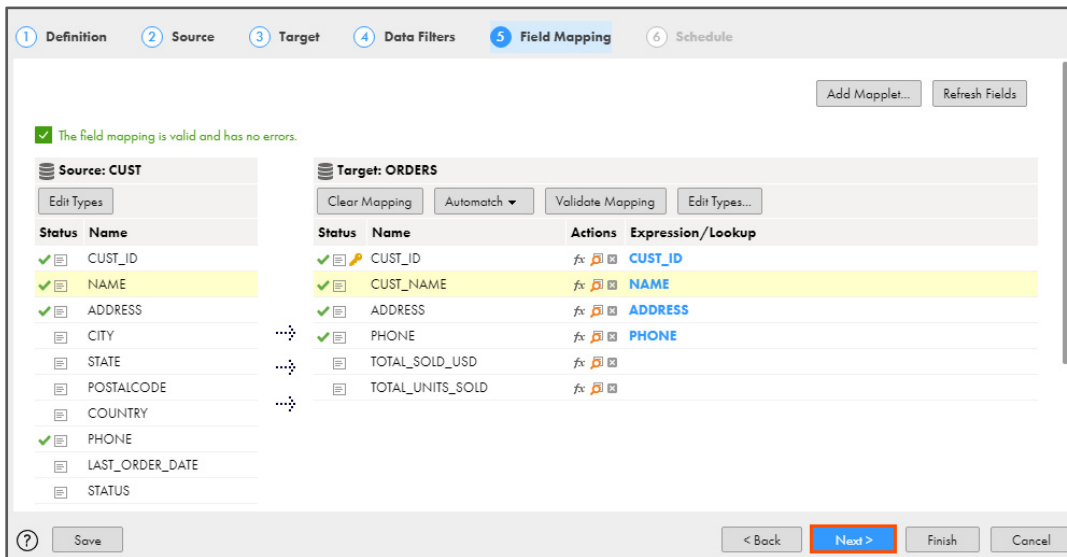


The screenshot shows the 'Field Mapping' window in Informatica. At the top, a green checkmark indicates 'The field mapping is valid and has no errors.' Below this, the 'Source' is 'CUST' and the 'Target' is 'ORDERS'. The 'Validate Mapping' button is highlighted with a red rectangle. The mapping table shows the following fields and actions:

| Status | Name             | Actions | Expression/Lookup |
|--------|------------------|---------|-------------------|
| ✓      | CUST_ID          | fx      | CUST_ID           |
| ✓      | CUST_NAME        | fx      | NAME              |
| ✓      | ADDRESS          | fx      | ADDRESS           |
| ✓      | PHONE            | fx      | PHONE             |
|        | TOTAL_SOLD_USD   | fx      |                   |
|        | TOTAL_UNITS_SOLD | fx      |                   |

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

30. Click **Next**.



The screenshot shows the 'Field Mapping' window in Informatica. At the top, a green checkmark indicates 'The field mapping is valid and has no errors.' Below this, the 'Source' is 'CUST' and the 'Target' is 'ORDERS'. The 'Next >' button is highlighted with a red rectangle. The mapping table shows the following fields and actions:

| Status | Name             | Actions | Expression/Lookup |
|--------|------------------|---------|-------------------|
| ✓      | CUST_ID          | fx      | CUST_ID           |
| ✓      | CUST_NAME        | fx      | NAME              |
| ✓      | ADDRESS          | fx      | ADDRESS           |
| ✓      | PHONE            | fx      | PHONE             |
|        | TOTAL_SOLD_USD   | fx      |                   |
|        | TOTAL_UNITS_SOLD | fx      |                   |

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

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

**<path copied and pasted in notepad in step 8>\sqlplus.exe CDI/CDI@<Oracle Service Name> @C:\IICSLabFiles\create.sql**

**Note:** To find the oracle service name, refer the lab guide

**04\_LabGuide\_CDI\_CreatingOracleConnection \_2-3** and follow steps 11 to 14.

| Advanced Options               |                                                                                                                                 |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| Preprocessing Commands:        | E:\app\NICESSLP051\product\12.1.0\dbhome_1\BIN\sqlplus.exe<br>CDI/CDI@orcl.cloud.techsmith.com<br>@C:\IICSLabFiles\create.sql ? |
| Post-processing Commands:      | <div style="border: 1px solid blue; height: 40px;"></div> ?                                                                     |
| Parameter File Name:           | <input type="text"/> ?                                                                                                          |
| Maximum Number of Log Files: * | 10 ?                                                                                                                            |

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

**<path copied and pasted in notepad in step 8>sqlplus.exe CDI/CDI@<Oracle Service Name> @C:\IICSLabFiles\del.sql**

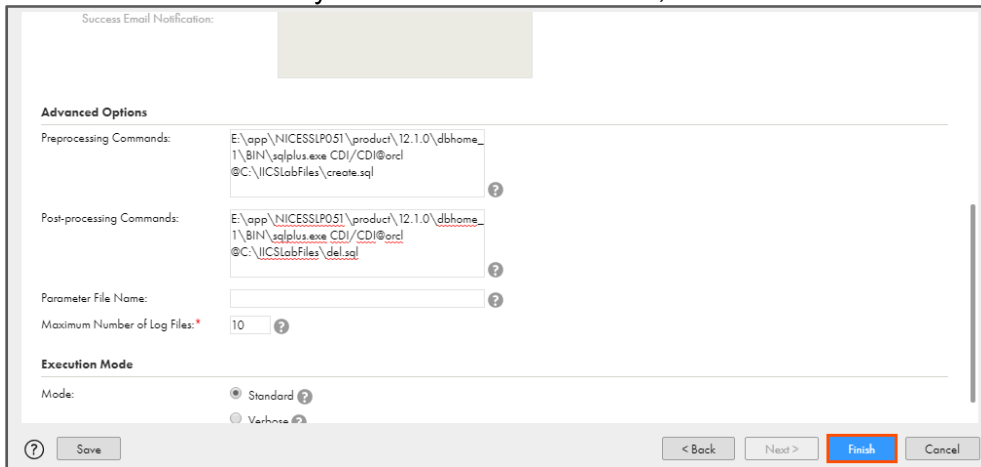
**Note:** To find the oracle service name, refer the lab guide

**04\_LabGuide\_CDI\_CreatingOracleConnection \_2-3**, and follow steps 11 to 14.

| Advanced Options               |                                                                                                          |
|--------------------------------|----------------------------------------------------------------------------------------------------------|
| Preprocessing Commands:        | E:\app\NICESSLP051\product\12.1.0\dbhome_1\BIN\sqlplus.exe CDI/CDI@orcl<br>@C:\IICSLabFiles\create.sql ? |
| Post-processing Commands:      | E:\app\NICESSLP051\product\12.1.0\dbhome_1\BIN\sqlplus.exe CDI/CDI@orcl<br>@C:\IICSLabFiles\del.sql ?    |
| Parameter File Name:           | <input type="text"/> ?                                                                                   |
| Maximum Number of Log Files: * | 10 ?                                                                                                     |



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



Success Email Notification:

**Advanced Options**

Preprocessing Commands: E:\app\NICESLP051\product\12.1.0\dbhome\_1\BIN\sqlplus.exe CDI/CDI@orcl @C:\IICSLabFiles\create.sql

Post-processing Commands: E:\app\NICESLP051\product\12.1.0\dbhome\_1\BIN\sqlplus.exe CDI/CDI@orcl @C:\IICSLabFiles\del.sql

Parameter File Name:

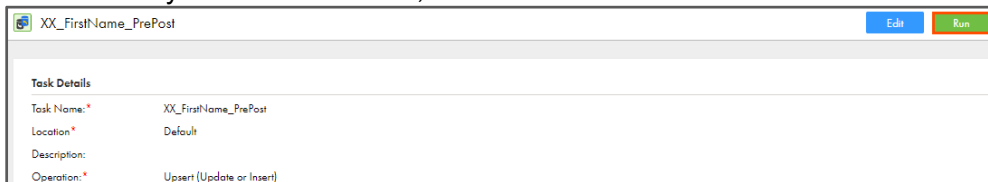
Maximum Number of Log Files: 10

**Execution Mode**

Mode: ☒ Standard ☐ Verbose

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

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



XX\_FirstName\_PrePost

Buttons: Edit, **Run**

**Task Details**

Task Name: XX\_FirstName\_PrePost

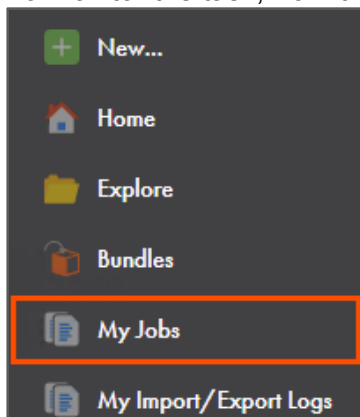
Location: Default

Description:

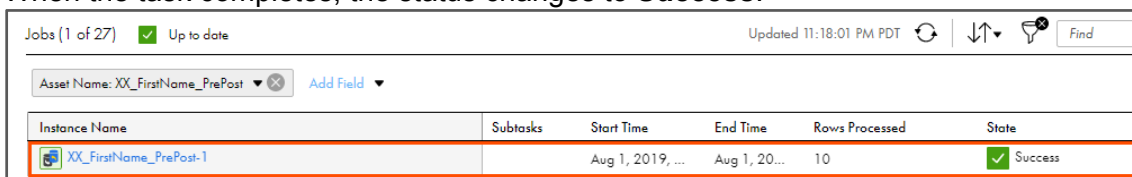
Operation: Upsert (Update or Insert)

### 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**.



| Instance Name          | Subtasks | Start Time       | End Time     | Rows Processed | State   |
|------------------------|----------|------------------|--------------|----------------|---------|
| XX_FirstName_PrePost-1 |          | Aug 1, 2019, ... | Aug 1, 20... | 10             | Success |

*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, Lookup, Filter, and Expression transformations in a mapping

**Scenario:**

NH Suppliers recently started offering express delivery to their customers having order value more than 1000 dollars. However, Ruby, the owner of NH suppliers want to automate the delivery selection process. John, who is the Lead Developer in NH Suppliers suggests to use 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

---

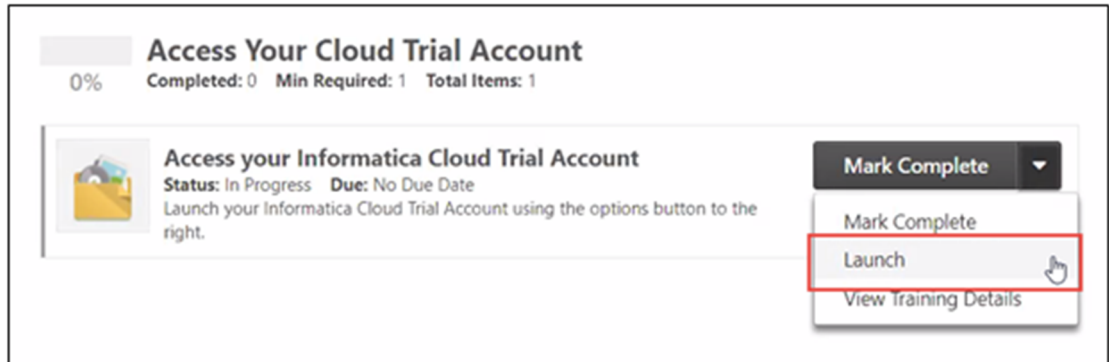
**Tasks:****Copy Source Files:**

1. Copy the following files provided with this lab and place the files in your flat file directory (**C:\IICSLabFiles**):

| Files                 |
|-----------------------|
| ExpeditedShipping.csv |
| NormalShipping.csv    |
| Orders.csv            |
| Products.csv          |

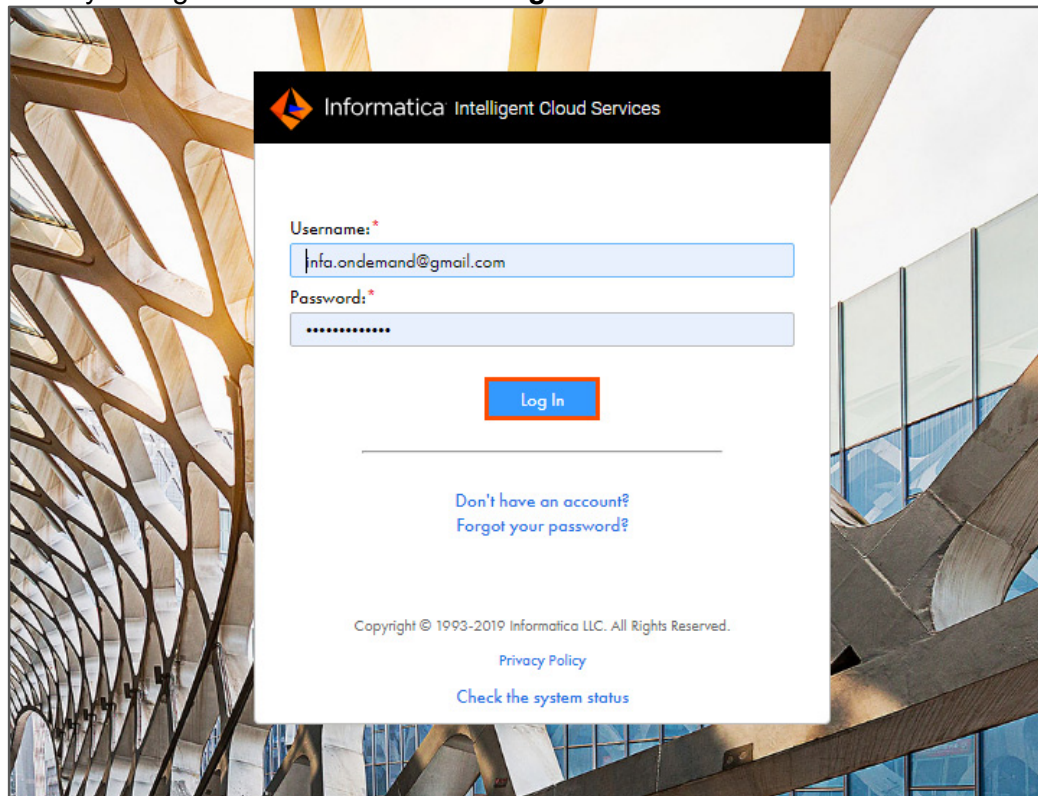
### Create Mapping:

2. Access your cloud trial account by clicking **Launch** in your option Menu. If the option menu is labeled anything other than **Launch**, click the down arrow to the right and click **Launch**.

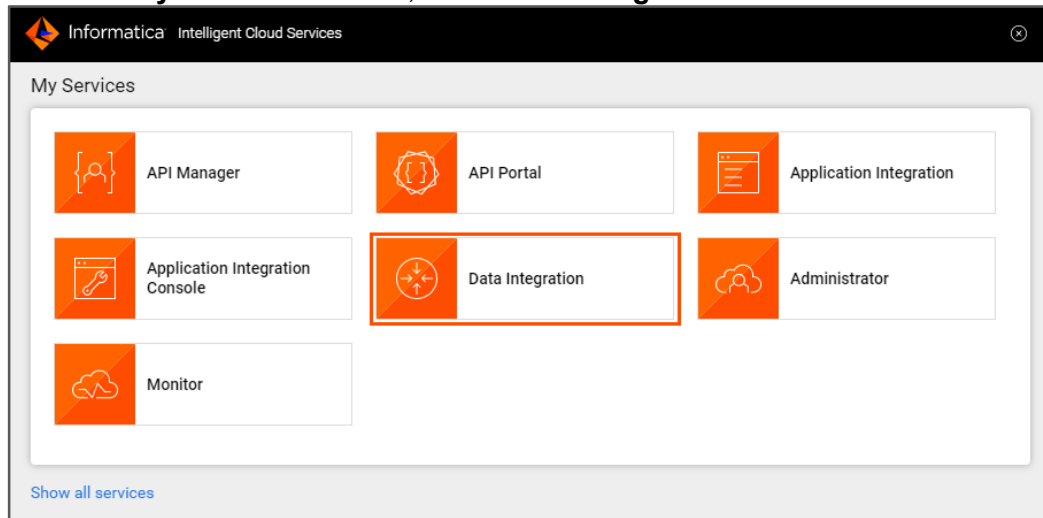


**Note:** Follow this step, if you have navigated away from the login page.

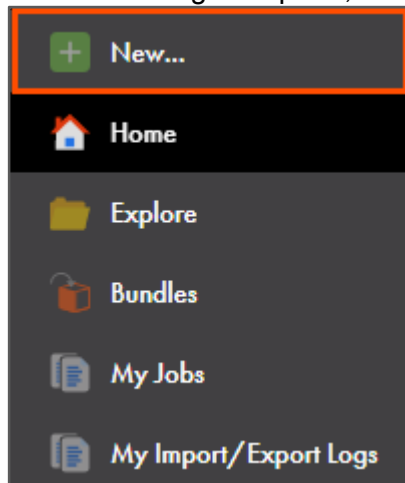
3. Enter your login credentials and click **Log In**.



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



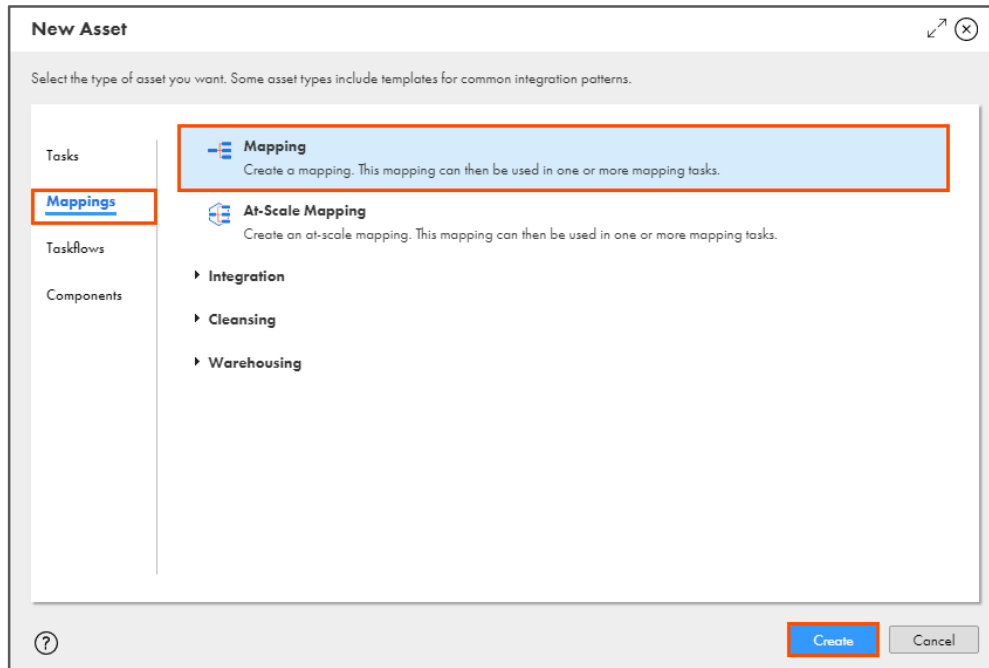
5. From the Navigation pane, select **New**.



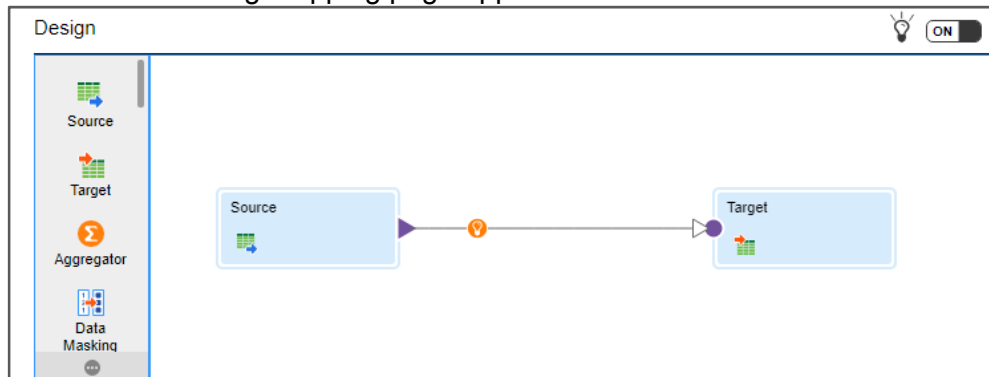
6. From the New Asset window, click the **Mappings** tab, and select **Mapping**.



7. Click **Create**.



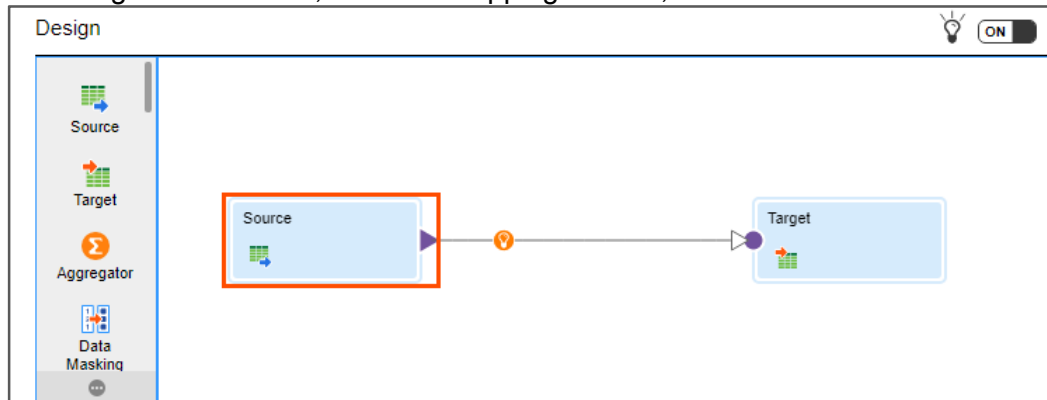
**Note:** The following Mapping page appears.



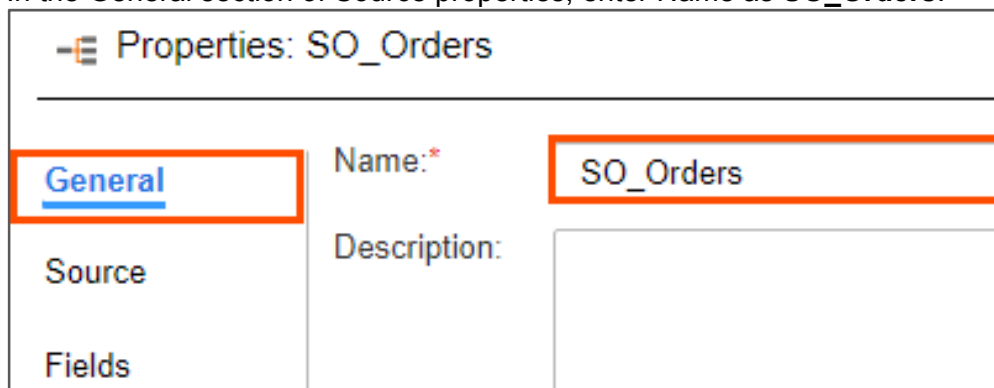
8. In the Name field, enter **XX\_FirstName\_ShippingFiles**.

The 'Properties' panel for the mapping asset is shown. The title bar says 'Properties: XX\_FirstName\_ShippingFiles'. There are three fields: 'Name:' with the value 'XX\_FirstName\_ShippingFiles' (highlighted with a red box), 'Location:' with the value 'Default', and 'Description:' which is empty.

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

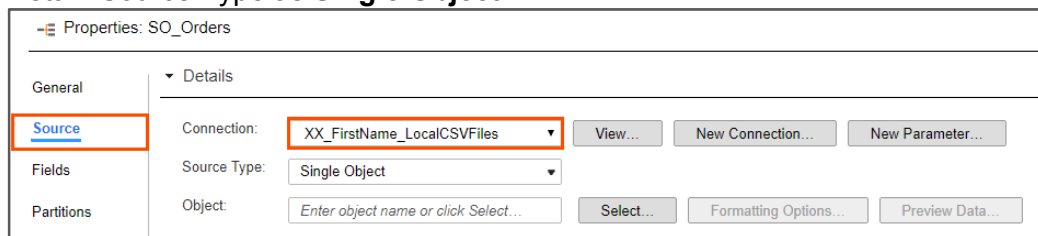


10. In the General section of Source properties, enter Name as **SO\_Orders**.



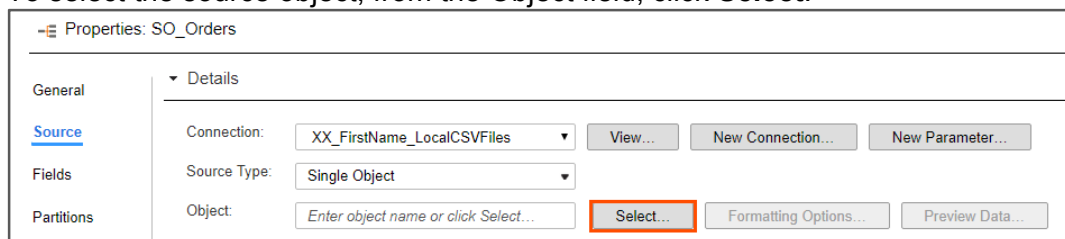
The 'Properties: SO\_Orders' dialog box is shown with the 'General' tab selected. The 'Name' field is set to 'SO\_Orders'. The 'Description' field is empty. The 'Source' and 'Fields' tabs are also visible on the left.

11. From the properties pane, click **Source**.  
 12. From Connection drop-down, select **XX\_FirstName\_LocalCSVFiles**.  
 13. Retain Source Type as **Single Object**.



The 'Properties: SO\_Orders' dialog box is shown with the 'Source' tab selected. The 'Connection' dropdown is set to 'XX\_FirstName\_LocalCSVFiles'. The 'Source Type' dropdown is set to 'Single Object'. The 'Object' field is empty with a placeholder text 'Enter object name or click Select...'. Buttons for 'View...', 'New Connection...', 'New Parameter...', 'Select...', 'Formatting Options...', and 'Preview Data...' are visible.

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

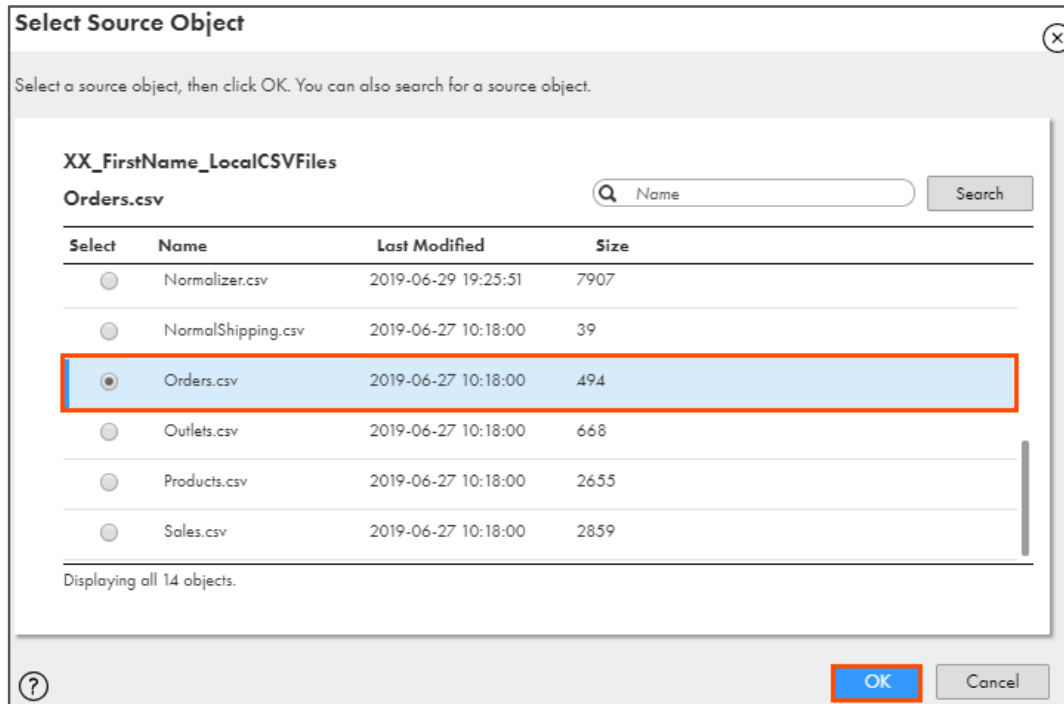


The 'Properties: SO\_Orders' dialog box is shown with the 'Source' tab selected. The 'Select...' button in the 'Object' field is highlighted with a red rectangular box.

**Note:** The Select Source Object window appears.


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

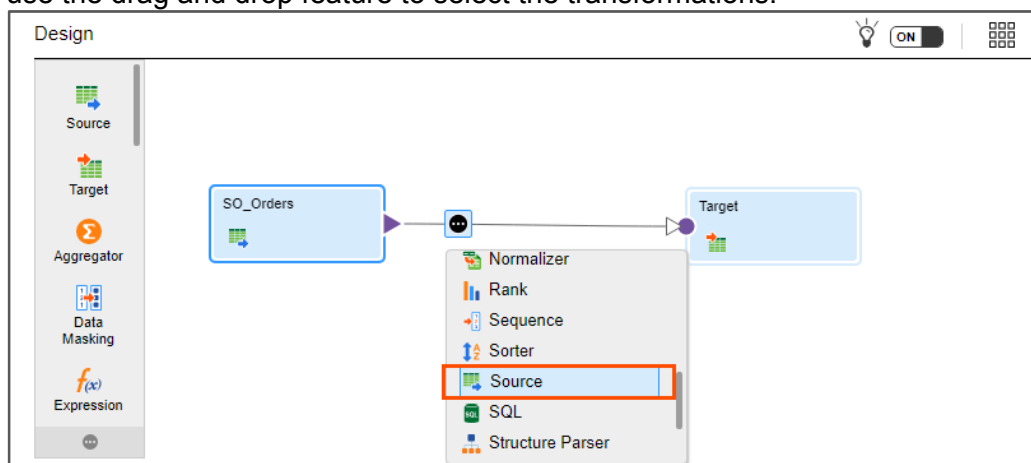
16. Click **OK**.



### 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 to a mapping directly on the mapping canvas. The Add Transformation icon appears when you hover over the link between transformations. For the purpose of this lab, we will use the drag and drop feature to select the transformations.



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



19. In the General section of Source properties, enter Name as **SO\_Products**.



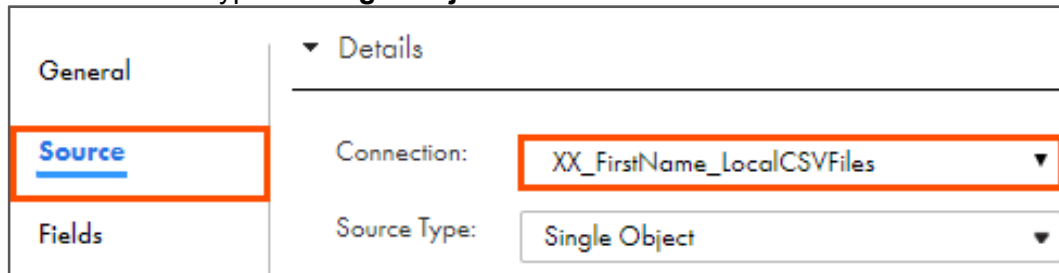
Properties: Source

General

Name:\* SO\_Products

Description:

20. From the properties pane, click **Source**.
21. From Connection drop-down, select **XX\_FirstName\_LocalCSVFiles**.
22. Retain Source Type as **Single Object**.



General

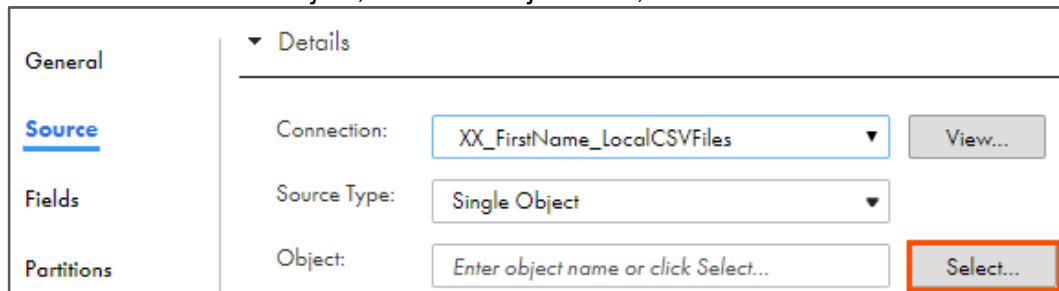
Source

Details

Connection: XX\_FirstName\_LocalCSVFiles

Source Type: Single Object

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



General

Source

Details

Connection: XX\_FirstName\_LocalCSVFiles View...

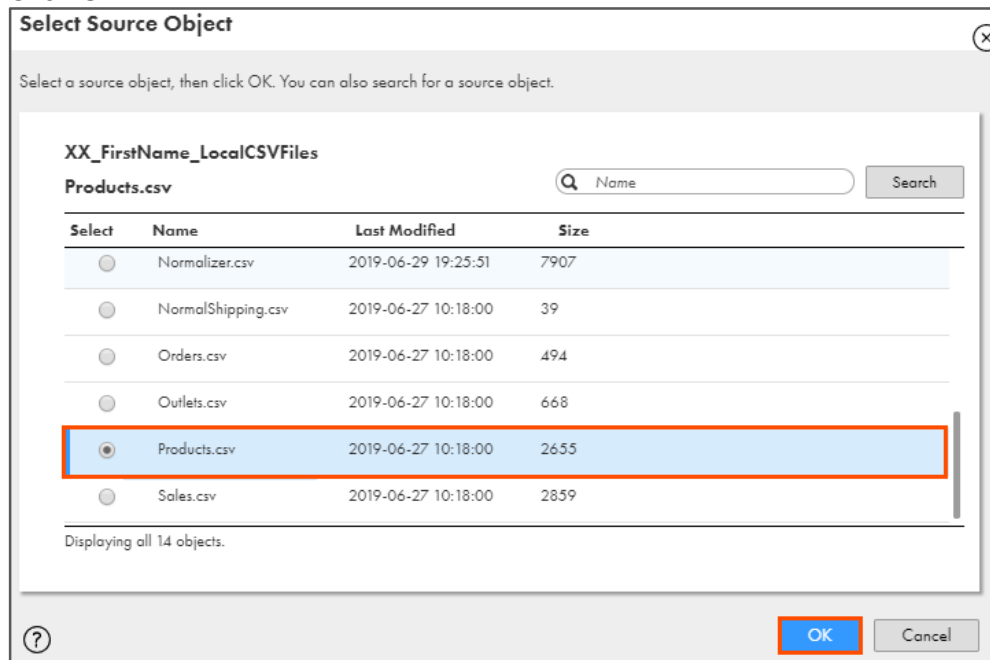
Source Type: Single Object

Object: Enter object name or click Select... Select...

**Note:** The Select Source Object window appears.


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

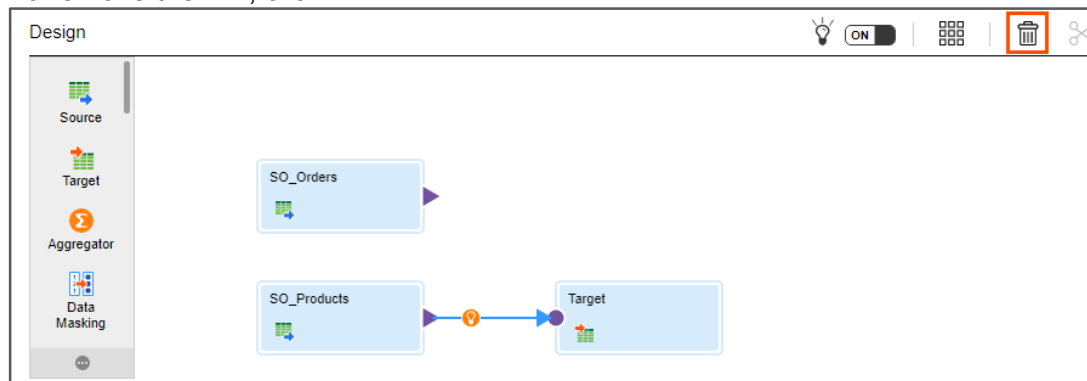
25. Click **OK**.



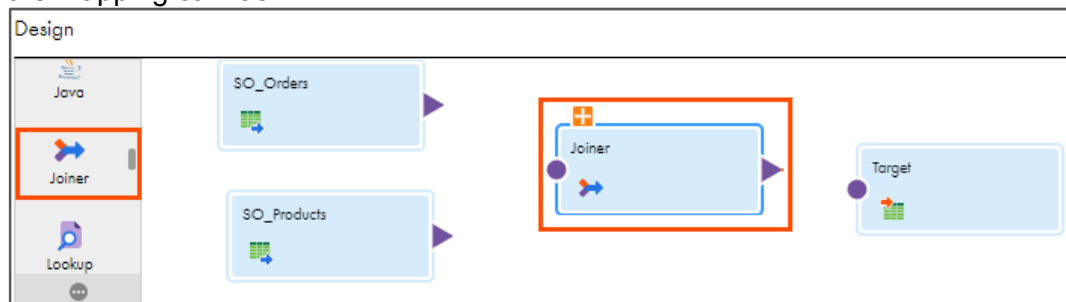
**Add Joiner Transformation:**


26. Click the link joining the **SO\_Products** and **Target**.

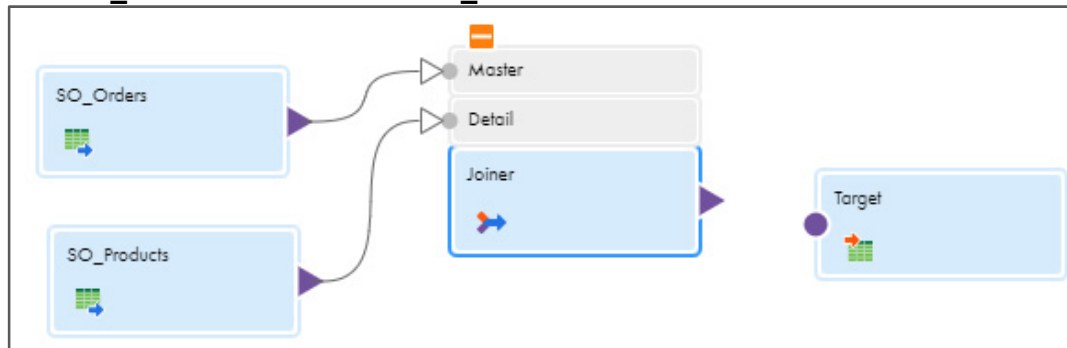
27. To remove the link, click .



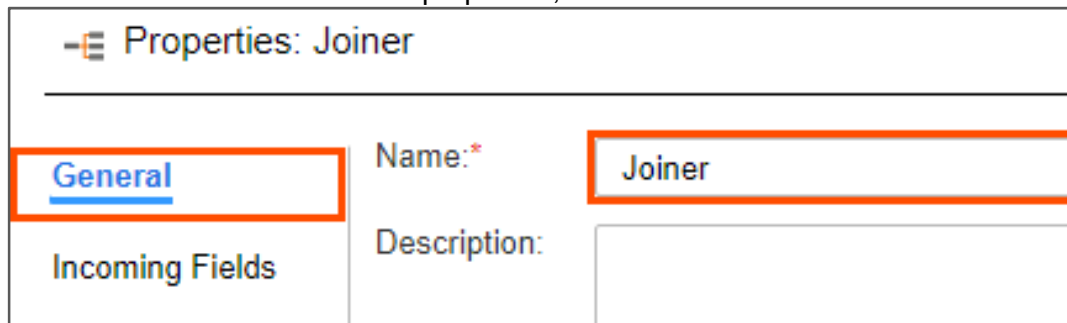
28. From the list of available transformations, drag and drop a **Joiner** transformation onto the mapping canvas.



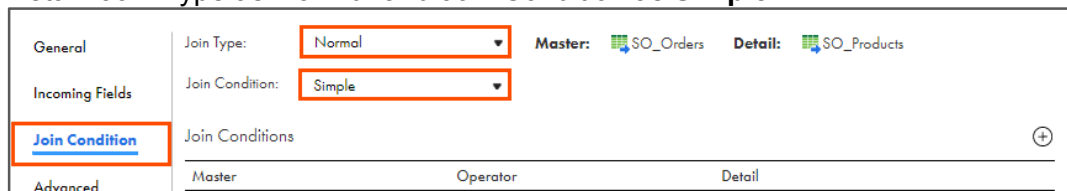
29. To expand the join options, click .
30. Link **SO\_Orders** to Master and **SO\_Products** to Detail.




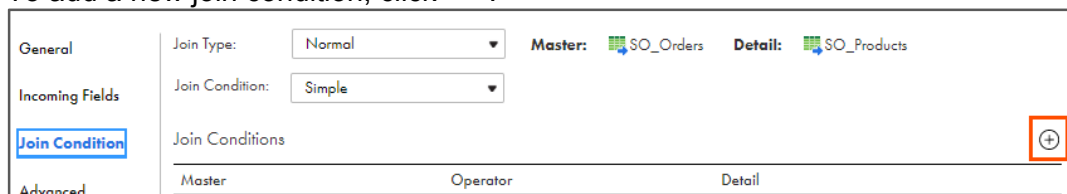
31. To configure the joiner, from the mapping canvas, click the **Joiner** transformation.
32. In the General section of Joiner properties, retain the Name as **Joiner**.



33. From the properties pane, click **Join Condition**.
34. Retain Join Type as **Normal** and Join Condition as **Simple**.



35. To add a new join condition, click .



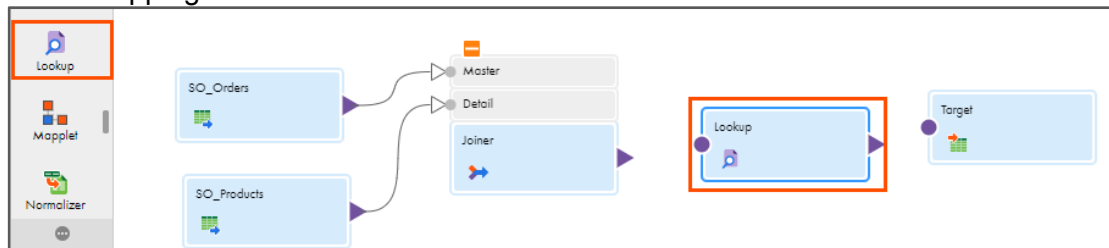
36. Enter join condition as shown in the table below:

| Master    | Operator | Detail     |
|-----------|----------|------------|
| ProductID | =        | Product_ID |

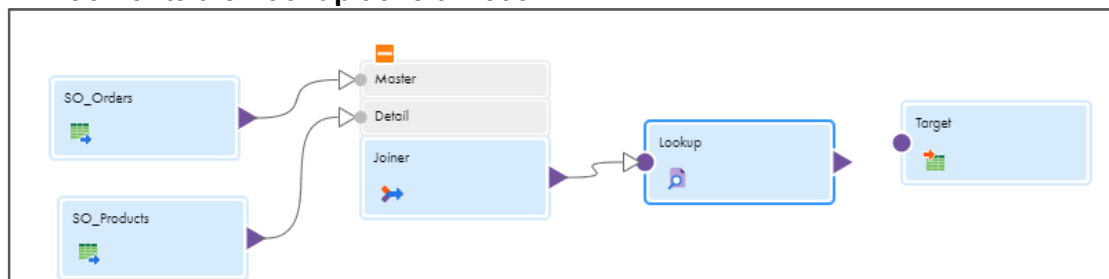
|                                                                 |                     |          |            |           |         |             |
|-----------------------------------------------------------------|---------------------|----------|------------|-----------|---------|-------------|
| General<br>Incoming Fields<br><b>Join Condition</b><br>Advanced | Join Type:          | Normal   | Master:    | SO_Orders | Detail: | SO_Products |
|                                                                 | Join Condition:     | Simple   |            |           |         |             |
|                                                                 | Join Conditions (+) |          |            |           |         |             |
|                                                                 | Master              | Operator | Detail     |           |         |             |
|                                                                 | ProductID           | =        | Product_ID |           |         |             |

### Add Lookup Transformation:

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



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

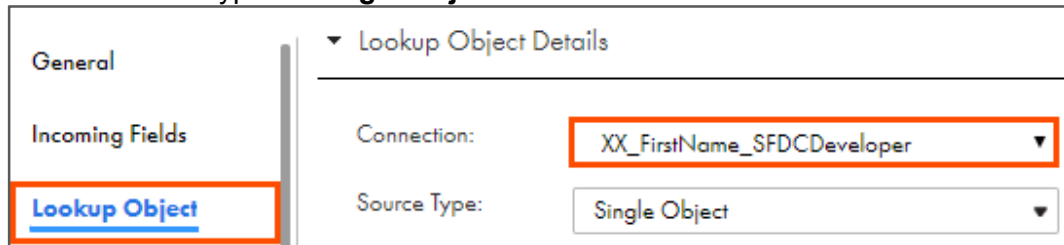


39. Select the **Lookup** transformation from the mapping canvas.  
40. In General section of Lookup properties, retain the Name as **Lookup**.

|                      |              |
|----------------------|--------------|
| - Properties: Lookup |              |
| <b>General</b>       | Name: *      |
|                      | Lookup       |
| Incoming Fields      | Description: |

41. From the properties pane, click **Lookup Object**.  
42. From Connection drop-down, select **XX\_FirstName\_SFDCDeveloper**.

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



**General**

**Incoming Fields**

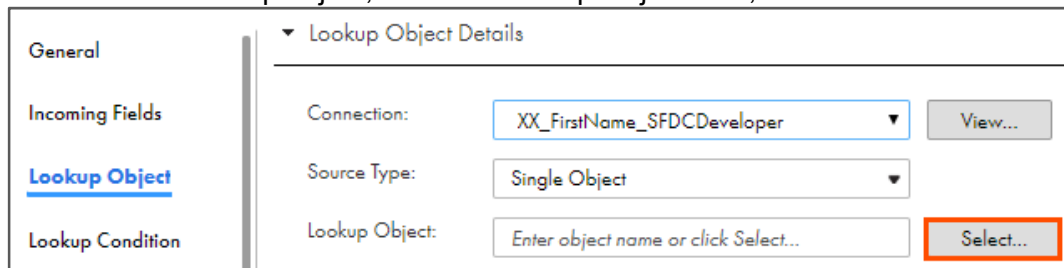
**Lookup Object**

**Lookup Object Details**

Connection: XX\_FirstName\_SFDCDeveloper

Source Type: Single Object

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



**General**

**Incoming Fields**

**Lookup Object**

**Lookup Condition**

**Lookup Object Details**

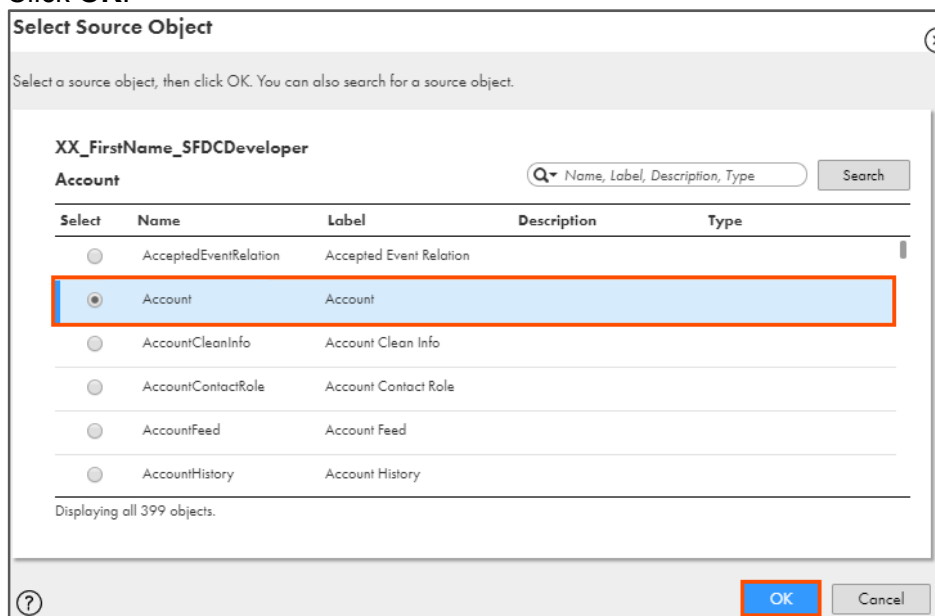
Connection: XX\_FirstName\_SFDCDeveloper View...

Source Type: Single Object

Lookup Object: Enter object name or click Select... Select...

45. From the list, select **Account**.

46. Click **OK**.



**Select Source Object**

Select a source object, then click OK. You can also search for a source object.

XX\_FirstName\_SFDCDeveloper

**Account**

Q Name, Label, Description, Type Search

| 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="radio"/>            | AccountFeed           | Account Feed            |             |      |
| <input type="radio"/>            | AccountHistory        | Account History         |             |      |

Displaying all 399 objects.

OK Cancel

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

48. Retain Lookup Condition as **Simple**.



**Incoming Fields**

**Lookup Object**

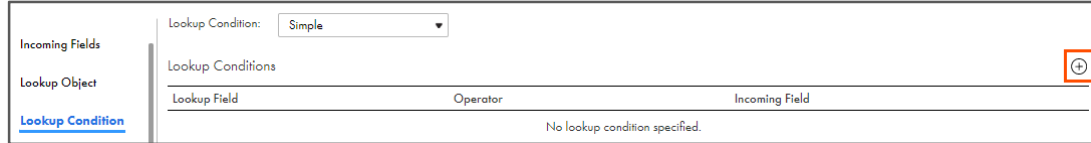
**Lookup Condition**

Lookup Condition: Simple

Lookup Conditions

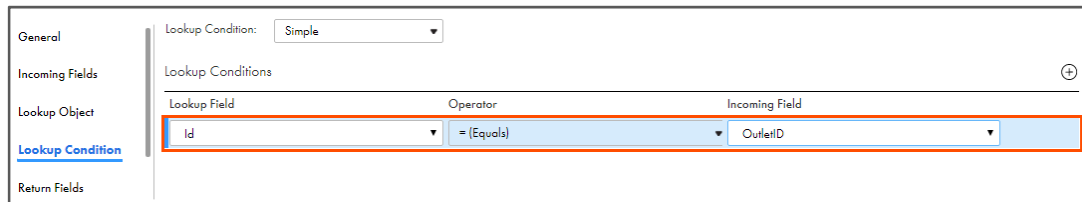
| Lookup Field                   | Operator | Incoming Field |
|--------------------------------|----------|----------------|
| No lookup condition specified. |          |                |

49. To add a new lookup condition, click .



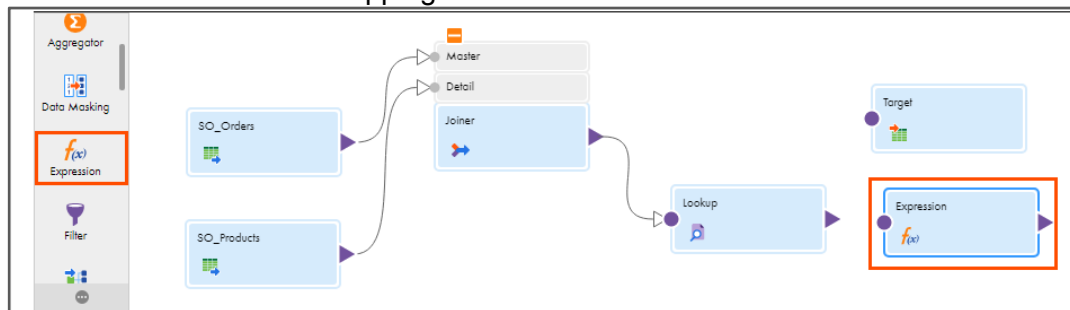
50. Enter lookup condition as shown in the table below:

| Lookup Field | Operator   | Incoming Field |
|--------------|------------|----------------|
| Id           | = (Equals) | OutletID       |

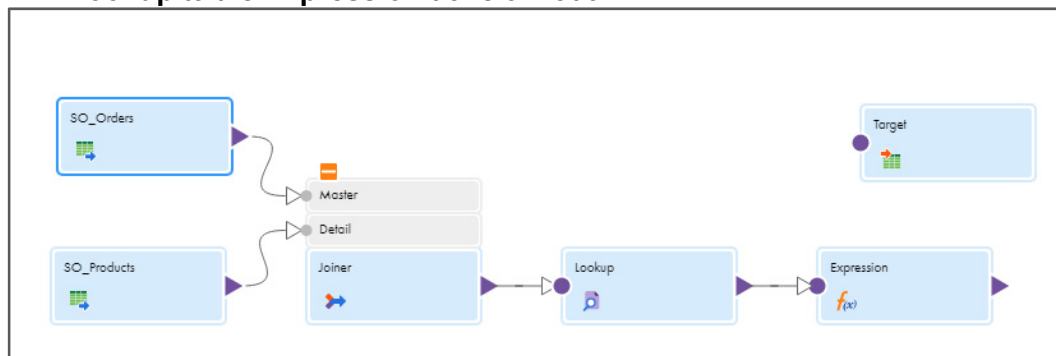


### Add Expression Transformation:

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

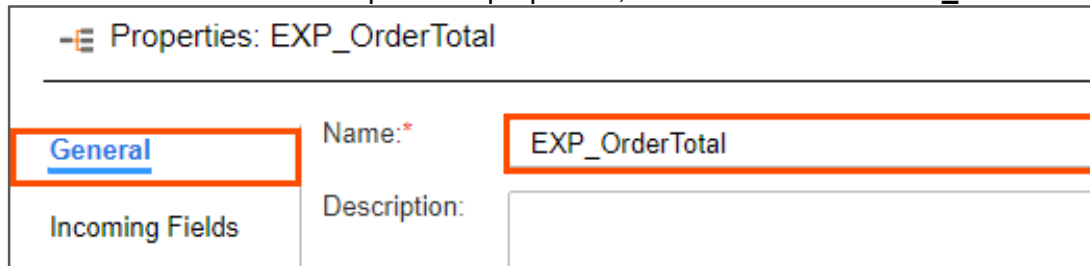


52. Link **Lookup** to the **Expression** transformation.



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

53. In the General section of Expression properties, enter the Name as **EXP\_OrderTotal**.



Properties: EXP\_OrderTotal


**General**

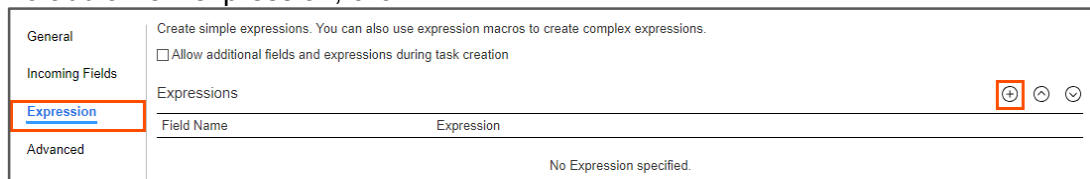
Name:\* EXP\_OrderTotal

Incoming Fields Description:

**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.

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

55. To add a new expression, click .



General

Incoming Fields

**Expression**

Advanced

Create simple expressions. You can also use expression macros to create complex expressions.

☐ Allow additional fields and expressions during task creation

Expressions

Field Name Expression

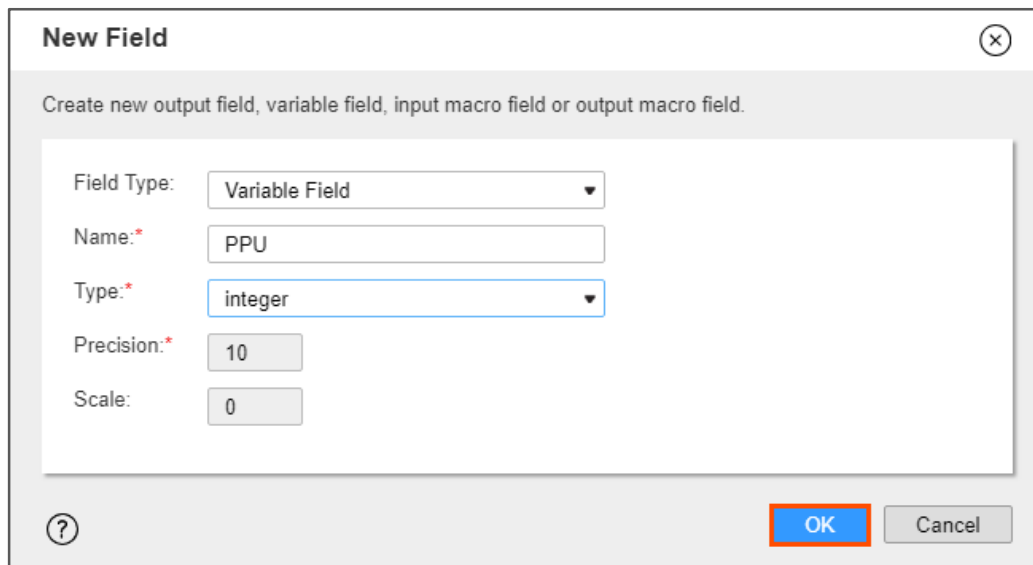
No Expression specified.

**Note:** The New Field window appears.

56. Enter the details as shown in table below:

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

57. Click **OK**.



**New Field**

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

Field Type: Variable Field

Name:\* PPU

Type:\* integer

Precision:\* 10

Scale: 0

OK Cancel



58. To add expression for PPU, select **Configure**.

| Field Name | Expression                   |
|------------|------------------------------|
| PPU        | <a href="#">Configure...</a> |

59. In expression window, enter following expression:


**TO\_INTEGER(UnitPrice)**

OR

Open the file named

**9\_LabGuide\_CreatingMappingUsingBasicTransformations\_4** provided with this lab. Copy the command mentioned under **Step 59** and paste it in the Expression field.

60. Click **OK**.

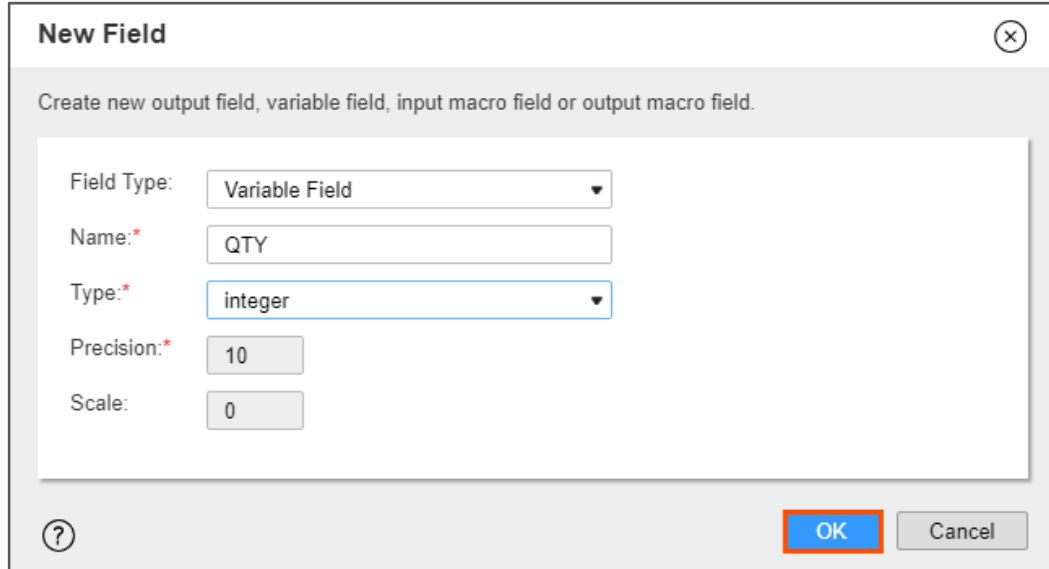
61. To add a new expression, click .

62. Enter the details as shown in table below:

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



63. Click **OK**.



**New Field** (Close button)

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

Field Type: Variable Field

Name: QTY

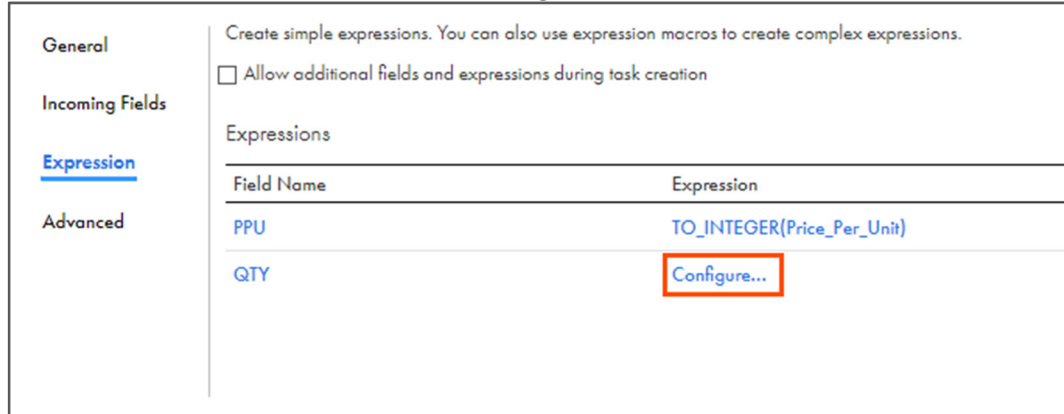
Type: integer

Precision: 10

Scale: 0

(Help icon) **OK** Cancel

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



General  
Incoming Fields  
**Expression**  
Advanced

Create simple expressions. You can also use expression macros to create complex expressions.

☐ Allow additional fields and expressions during task creation

Expressions

| Field Name | Expression                 |
|------------|----------------------------|
| PPU        | TO_INTEGER(Price_Per_Unit) |
| QTY        | <b>Configure...</b>        |

65. In expression window, enter following expression:

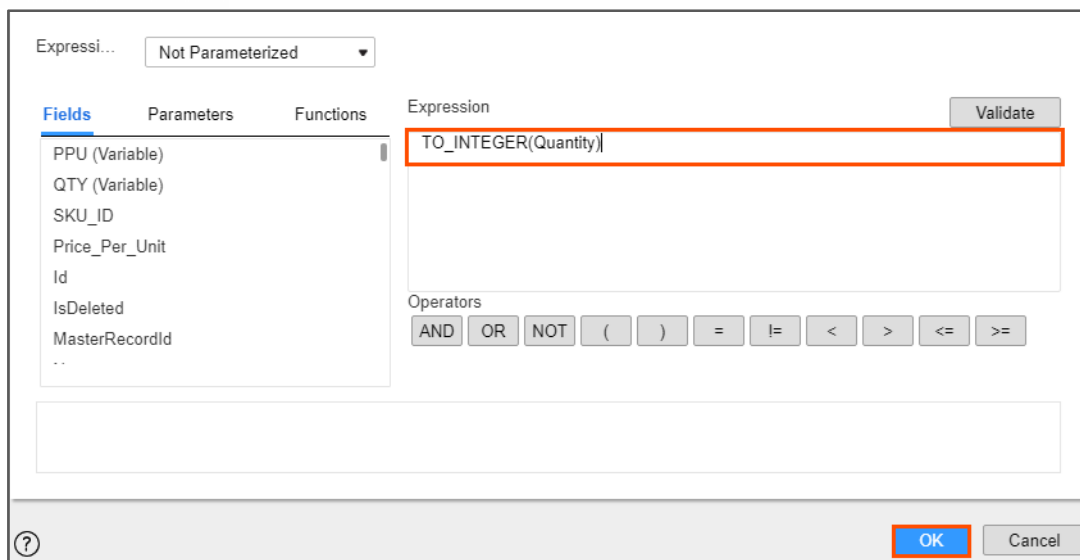
**TO\_INTEGER(Quantity)**

OR

Open the file named

**9\_LabGuide\_CreatingMappingUsingBasicTransformations\_4**. Copy the command mentioned under **Step 65** and paste it in the Expression field.

66. Click **OK**.



Expressi... Not Parameterized

**Fields** Parameters Functions Expression Validate


PPU (Variable)  
QTY (Variable)  
SKU\_ID  
Price\_Per\_Unit  
Id  
IsDeleted  
MasterRecordId  
...

TO\_INTEGER(Quantity)

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

?

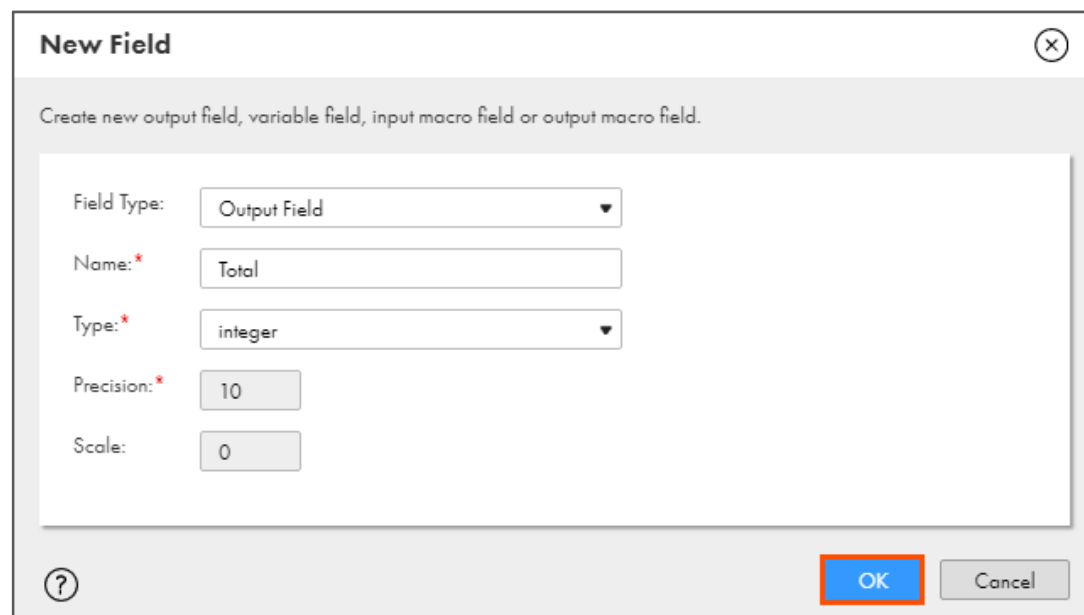
OK Cancel

67. To add a new expression, click .

68. Enter the details as shown in table below:

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

69. Click **OK**.



**New Field** (X)

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

Field Type: Output Field

Name: \* Total

Type: \* integer

Precision: \* 10

Scale: 0

?

OK Cancel

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

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

71. In expression window, enter following expression:

**PPU\*QTY**

OR

Open the file named

**9\_LabGuide\_CreatingMappingUsingBasicTransformations\_4**. Copy the command mentioned under **Step 71** and paste it in the Expression field.

72. Click **OK**.

Expressi... Not Parameterized

|                                                                                                         |            |           |                               |          |
|---------------------------------------------------------------------------------------------------------|------------|-----------|-------------------------------|----------|
| <b>Fields</b>                                                                                           | Parameters | Functions | Expression                    | Validate |
| PPU (Variable)<br>QTY (Variable)<br>SKU_ID<br>Price_Per_Unit<br>Id<br>IsDeleted<br>MasterRecordId<br>.. |            |           | <b>PPU*QTY</b>                |          |
|                                                                                                         |            |           | Operators                     |          |
|                                                                                                         |            |           | AND OR NOT ( ) = != < > <= >= |          |

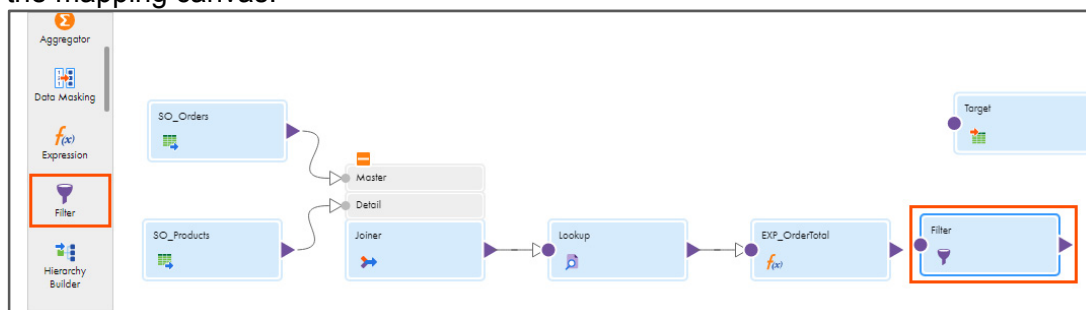
?
**OK**
Cancel

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

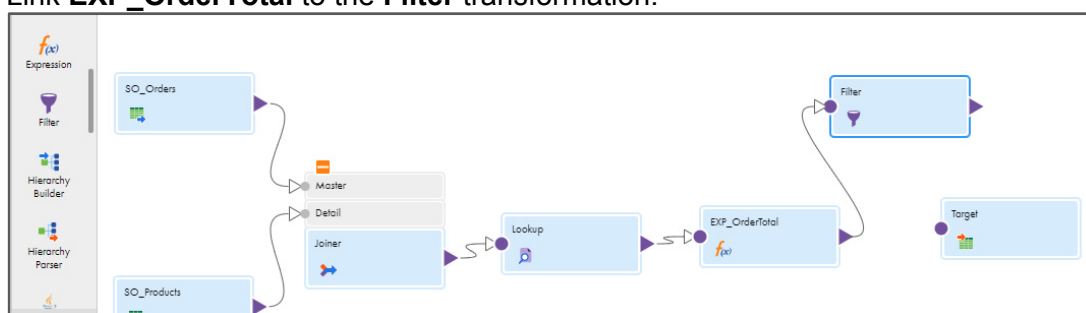
|                   |                                                                                              |                       |
|-------------------|----------------------------------------------------------------------------------------------|-----------------------|
| <b>General</b>    | 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        |                       |
| <b>Expression</b> | Expressions                                                                                  |                       |
| Advanced          | Field Name                                                                                   | Expression            |
|                   | PPU                                                                                          | TO_INTEGER(UnitPrice) |
|                   | QTY                                                                                          | TO_INTEGER(Quantity)  |
|                   | Total                                                                                        | PPU*QTY               |

### Add Filter Transformation:

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



75. Link **EXP OrderTotal** to the **Filter** transformation.



76. In the General section of Filter properties, enter the Name as **FIL\_ExpeditedShipping**.

Properties: FIL\_ExpeditedShipping

---

General

Incoming Fields

Filter

Name: \* FIL\_ExpeditedShipping

Description:

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

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

Return the Filter Condition as Simple:

General

Incoming Fields

Filter

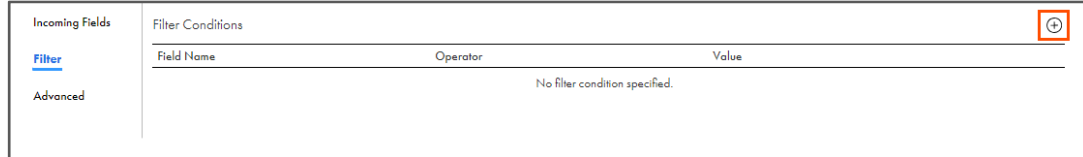
Advanced

Filter Condition: Simple

Filter Conditions

| Field Name                     | Operator | Value |
|--------------------------------|----------|-------|
| No filter condition specified. |          |       |

79. To add a new filter, click .

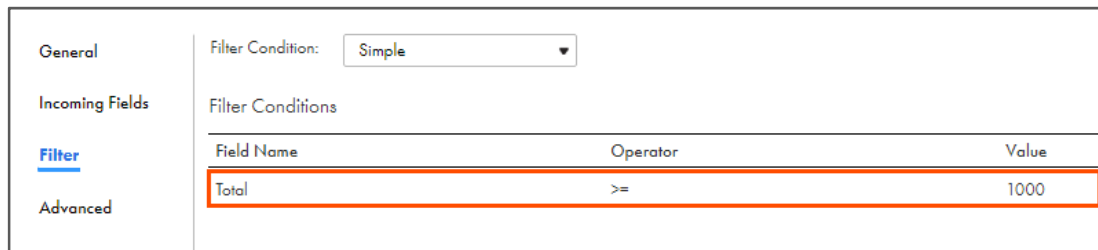


The dialog box shows the 'Filter Conditions' section with a table for adding conditions. A red box highlights the '+' icon in the top right corner.

| Field Name                     | Operator | Value |
|--------------------------------|----------|-------|
| No filter condition specified. |          |       |

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

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

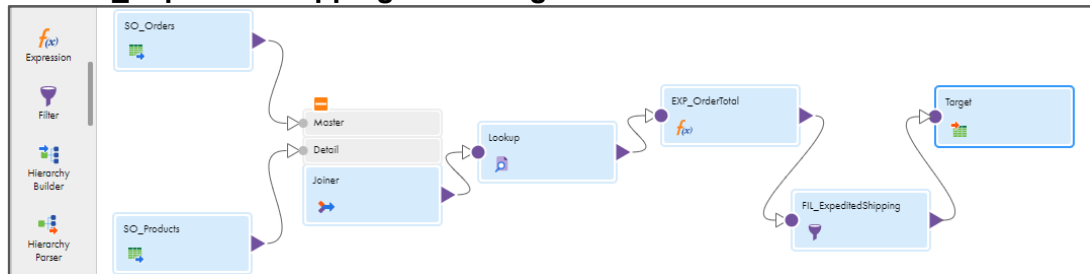


The dialog box shows the 'Filter Conditions' section with the condition entered. A red box highlights the row containing the condition.

| Field Name | Operator | Value |
|------------|----------|-------|
| Total      | >=       | 1000  |

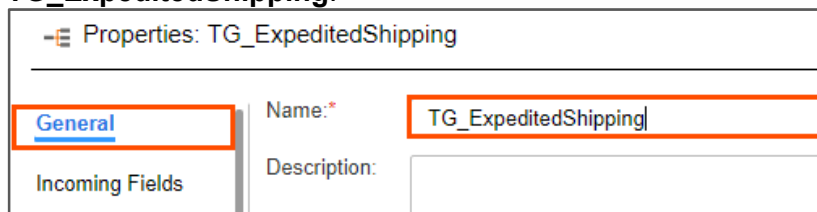
### Configure Target Transformation:

81. Link **FIL\_ExpeditiedShipping** to the **Target** transformation.



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

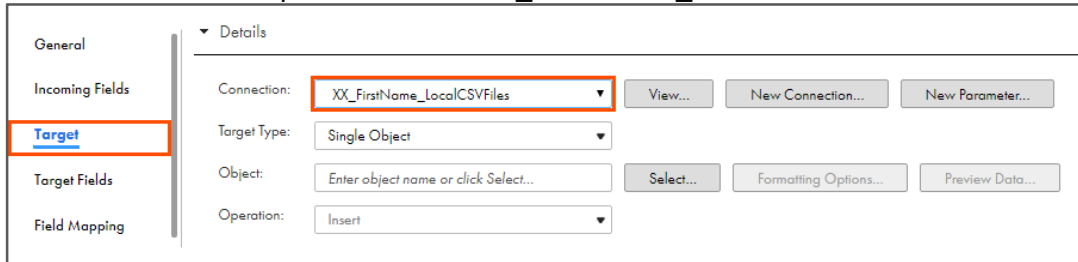
83. In the General section of Target properties, enter the Name as **TG\_ExpeditiedShipping**.



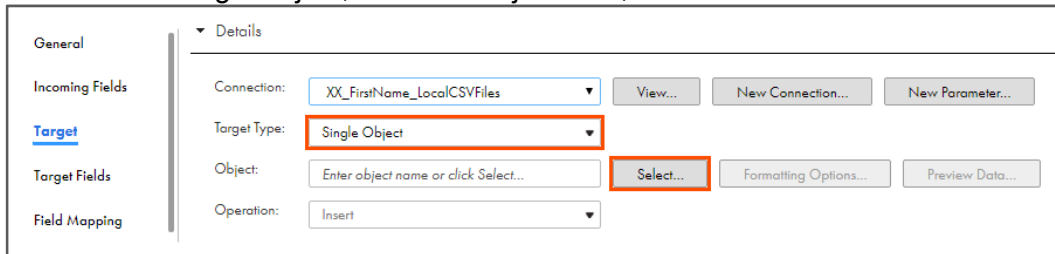
The dialog box shows the 'Properties: TG\_ExpeditiedShipping' section. The 'General' tab is selected, and the 'Name' field is highlighted with a red box, containing the text 'TG\_ExpeditiedShipping'.

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

85. From Connection drop-down, select **XX\_FirstName\_LocalCSVFiles**.

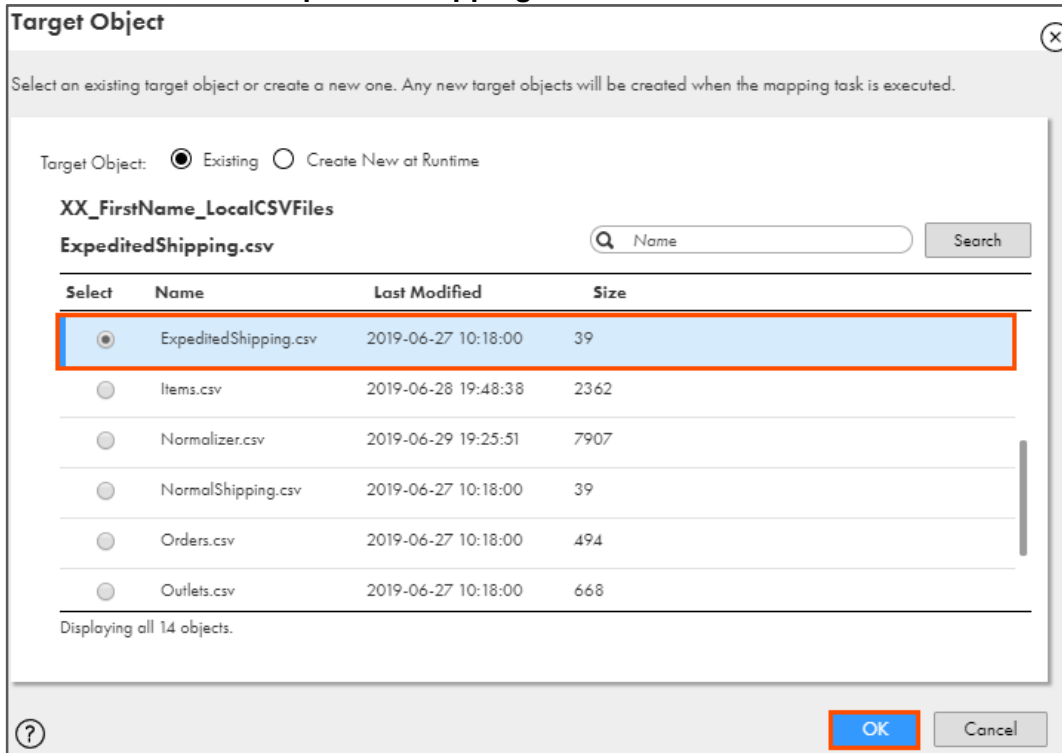


86. Retain Target Type as **Single Object**.
87. To select the target object, from the Object field, click **Select**.



**Note:** The Target Object window appears.

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



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

**XX\_FirstName\_LocalCSVFiles**

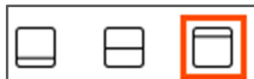
**ExpeditedShipping.csv**


Search:  Name

| Select                           | Name                  | Last Modified       | Size |
|----------------------------------|-----------------------|---------------------|------|
| <input checked="" type="radio"/> | ExpeditedShipping.csv | 2019-06-27 10:18:00 | 39   |
| <input type="radio"/>            | Items.csv             | 2019-06-28 19:48:38 | 2362 |
| <input type="radio"/>            | Normalizer.csv        | 2019-06-29 19:25:51 | 7907 |
| <input type="radio"/>            | NormalShipping.csv    | 2019-06-27 10:18:00 | 39   |
| <input type="radio"/>            | Orders.csv            | 2019-06-27 10:18:00 | 494  |
| <input type="radio"/>            | Outlets.csv           | 2019-06-27 10:18:00 | 668  |

Displaying all 14 objects.

89. From the properties pane, click **Field Mapping**.
90. To maximize the view, in the properties pane, click **Maximize**.



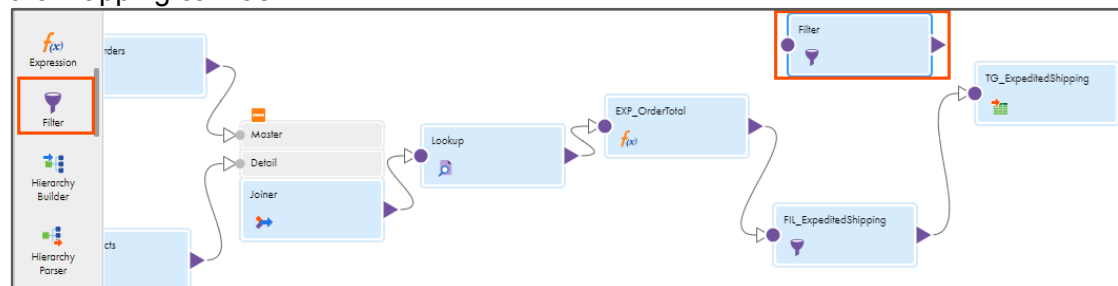
91. To restore the view, click .
92. Match the fields as shown in table below:  
**Note:** Some of the fields might be mapped automatically. For the already mapped fields, do not map the fields again.

| Incoming Field     | Target Field       |
|--------------------|--------------------|
| OrderId            | OrderID            |
| ProductDescription | ProductDescription |
| Total              | OrderTotal         |

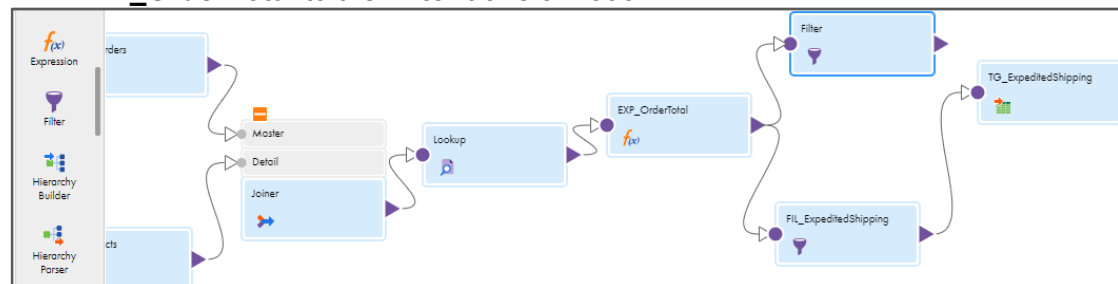
|                      |                                                            |                                                                             |
|----------------------|------------------------------------------------------------|-----------------------------------------------------------------------------|
| General              | Incoming Fields: (3 of 76 mapped)                          | Target Fields: (3 of 3 mapped)                                              |
| Incoming Fields      | Field Name ^<br>Total<br>Id<br>IsDeleted<br>MasterRecordId | Field Name ^<br>Mapped Field<br>OrderID<br>ProductDescription<br>OrderTotal |
| Target               |                                                            |                                                                             |
| Target Fields        |                                                            |                                                                             |
| <b>Field Mapping</b> |                                                            |                                                                             |

### Add Filter Transformation:

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



94. Link **EXP\_OrderTotal** to the **Filter** transformation.



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



96. In the General section of Filter properties, enter Name as **FIL\_NormalShipping**.

Properties: FIL\_NormalShipping

**General**

Name: \* FIL\_NormalShipping

Description:

Incoming Fields

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

98. Retain Filter Condition as **Simple**.

99. To add a new filter, click

General

Filter Condition: Simple

Incoming Fields

**Filter**

Advanced

Filter Conditions

| Field Name                     | Operator | Value |
|--------------------------------|----------|-------|
| No filter condition specified. |          |       |

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

| Field Name | Operator      | Value |
|------------|---------------|-------|
| Total      | < (Less than) | 1000  |

General

Filter Condition: Simple

Incoming Fields

**Filter**

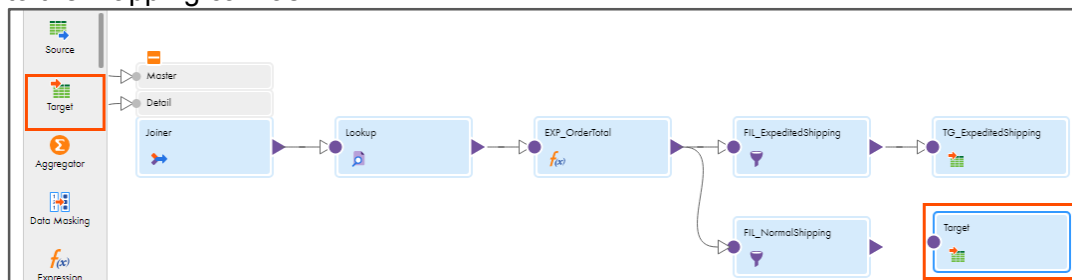
Advanced

Filter Conditions

| Field Name | Operator | Value |
|------------|----------|-------|
| Total      | <        | 1000  |

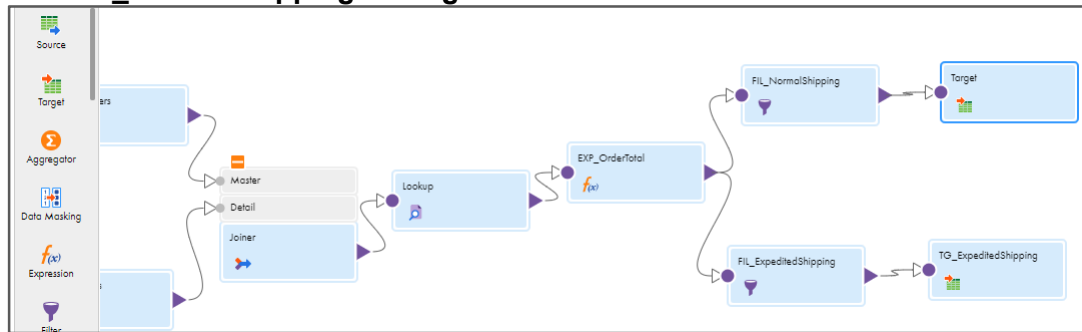
### Configure Target Transformation:

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

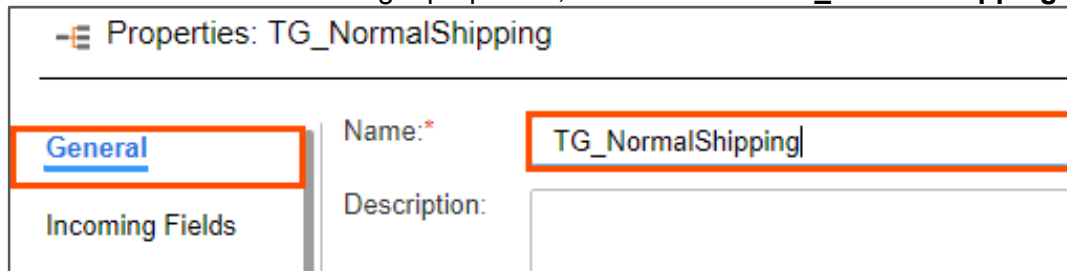




102. Link **FIL\_NormalShipping** to **Target** transformation.

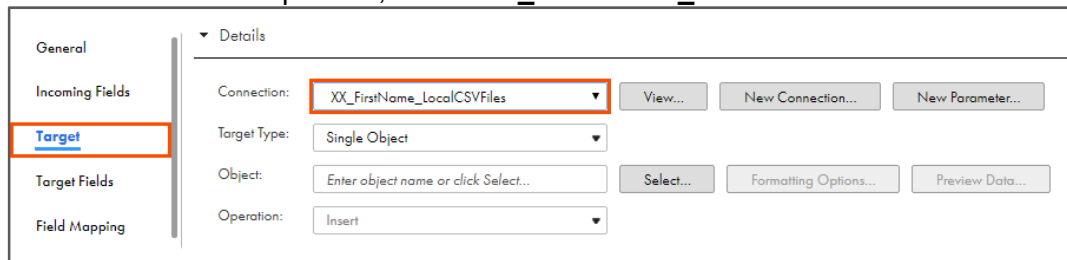


103. In the General section of Target properties, enter Name as **TG\_NormalShipping**.



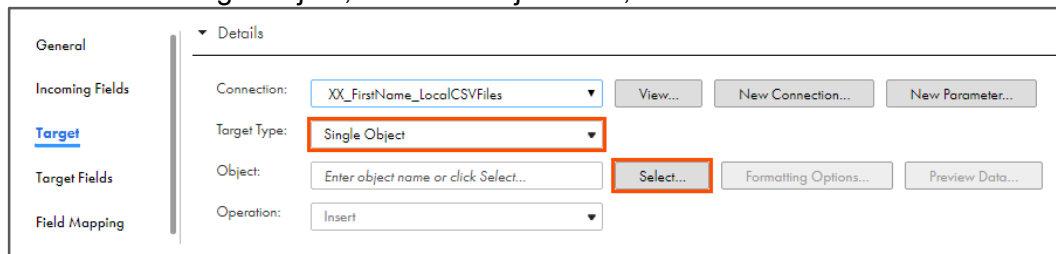
104. From the properties pane, click **Target**.

105. From Connection drop-down, select **XX\_FirstName\_LocalCSVFiles**.



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

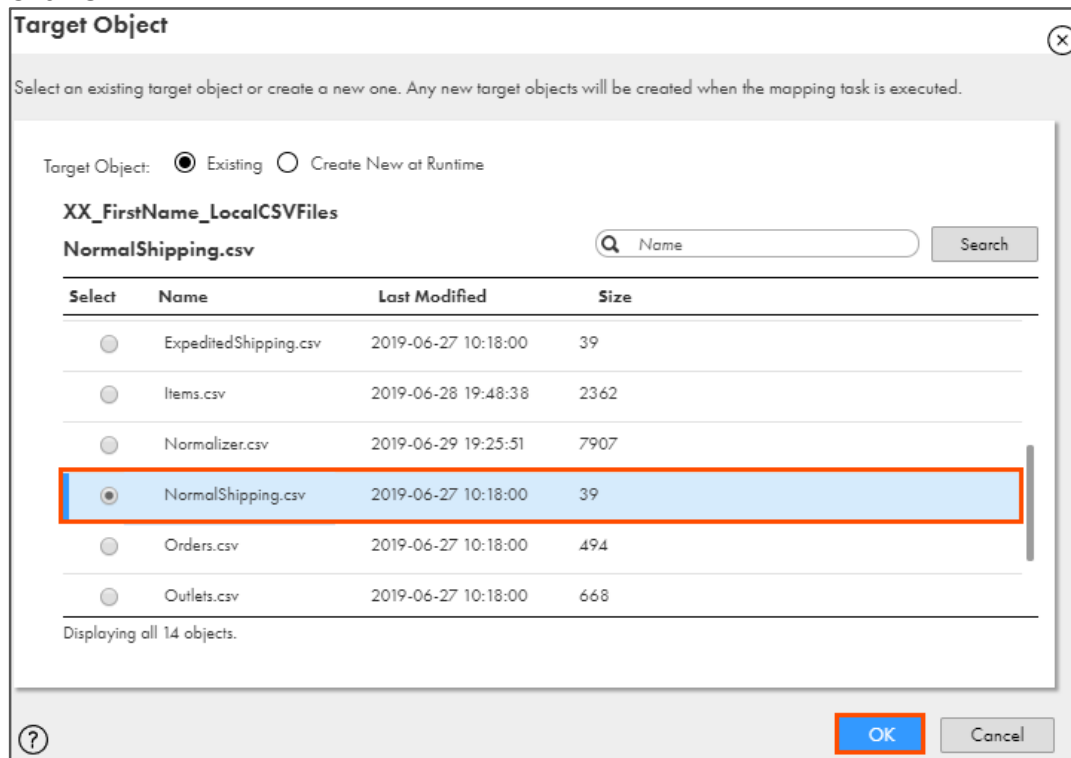
107. To select the target object, from the Object field, click **Select**.



**Note:** The Target Object window appears.

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

109. Click **OK**.



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

111. To maximize the view, in the properties pane, click **Maximize**.

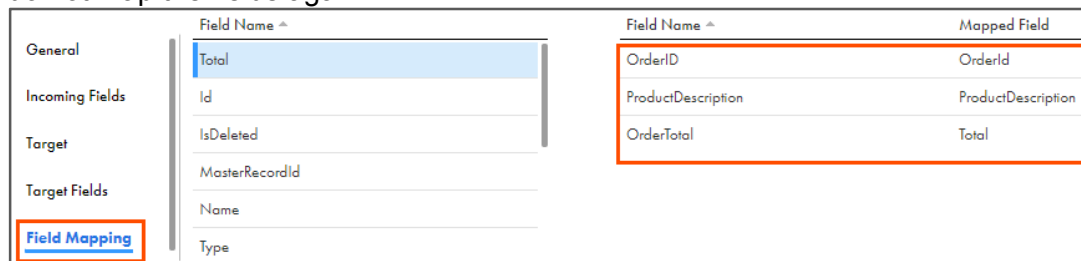


112. To restore the view, click

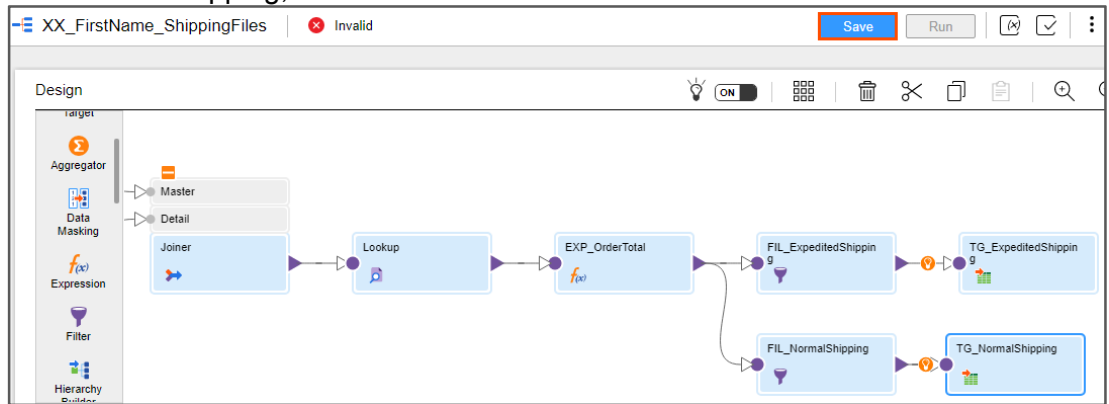
113. Match the fields as shown in table below:

| Incoming Field     | Target Field       |
|--------------------|--------------------|
| OrderId            | OrderID            |
| ProductDescription | ProductDescription |
| Total              | OrderTotal         |

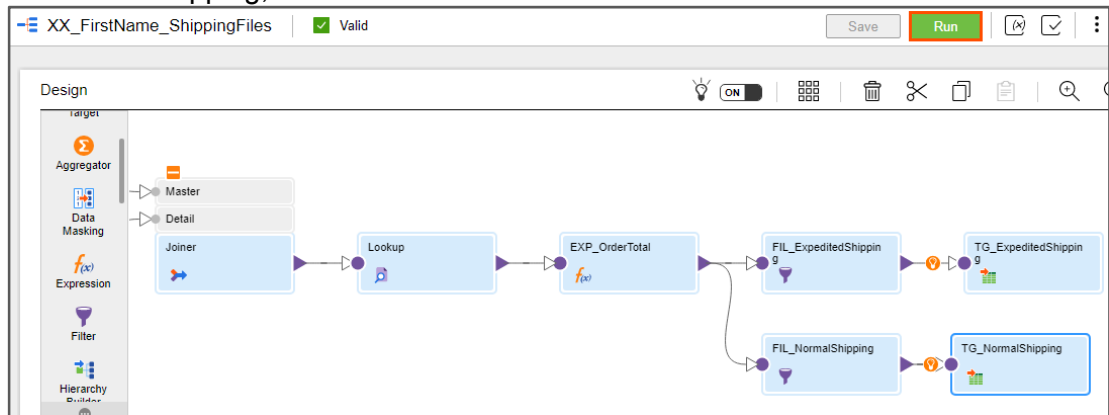
**Note:** Some of the fields might be mapped automatically. For already mapped fields, do not map the fields again.



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



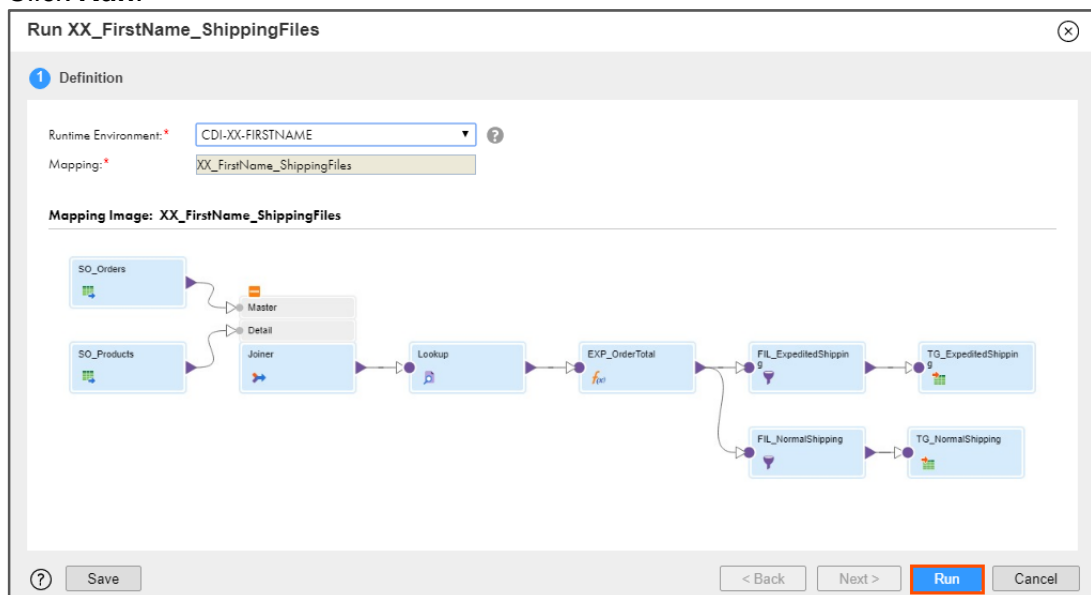
115. To run the mapping, click **Run**.



**Note:** The Run mapping window appears.

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

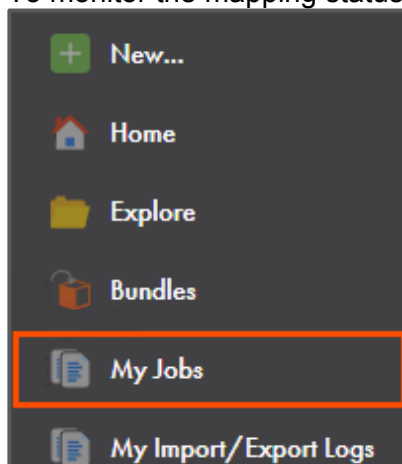
117. Click **Run**.



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

## Monitor Status:

118. To monitor the mapping status, from the Navigation pane, click **My Jobs**.



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

When the task completes, the status changes to Success.

Jobs (1 of 11) ☒ Up to date

Updated 1:07:03 AM PDT

Find

Asset Name: XX\_FirstName\_S...

Add Field

| Instance Name                                      | Subtasks | Start Time            | End Time              | Rows Processed | State                         |
|----------------------------------------------------|----------|-----------------------|-----------------------|----------------|-------------------------------|
| <div><div></div>XX_FirstName_ShippingFiles-1</div> |          | Jul 30, 2019, 1:05 AM | Jul 30, 2019, 1:06 AM | 6              | <div><div></div>Success</div> |

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

120. On your local machine, go to **C:\ICS LabFiles**.

121. 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:**

Normalizer transformation represents the data in a smarter and organized manner. Aggregator transformation performs the aggregate calculations on groups of data. These calculations can be average, sum, count, and so on. 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 wanted to know the top performers in the store for last four quarter. 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 quarter. He will use the Rank transformation to list the top twenty performers based on the overall sales percentage.

**Duration:**

30 minutes

---

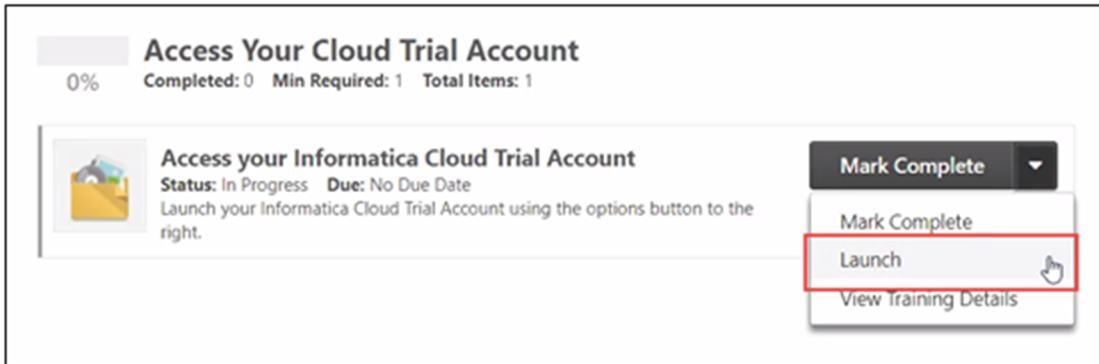
**Tasks:****Copy Source Files:**

1. Copy the following files provided with this lab and place the file in your flat file directory (C:\IICSLabFiles):

| Files          |
|----------------|
| Sales.csv      |
| Normalizer.csv |
| Aggregated.csv |

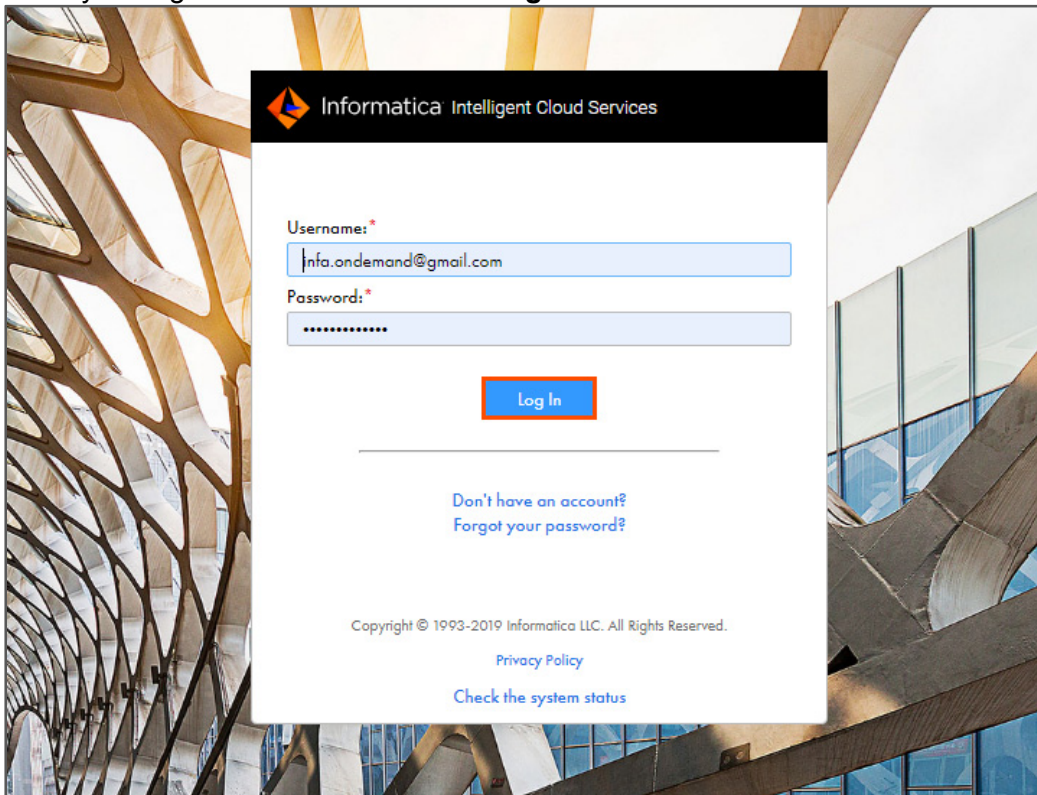
### Create Mapping:

2. Access your cloud trial account by clicking **Launch** in your option Menu. If the option menu is labeled anything other than **Launch**, click the down arrow to the right and click **Launch**.

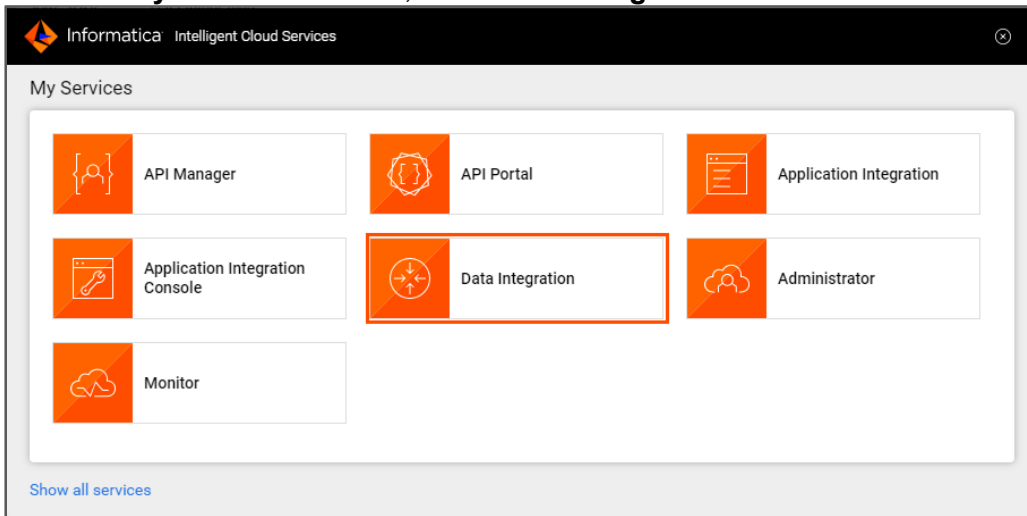


**Note:** Follow this step, if you have navigated away from the login page.

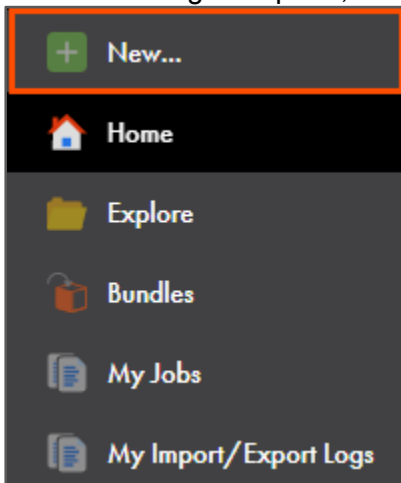
3. Enter your login credentials and click **Log In**.



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

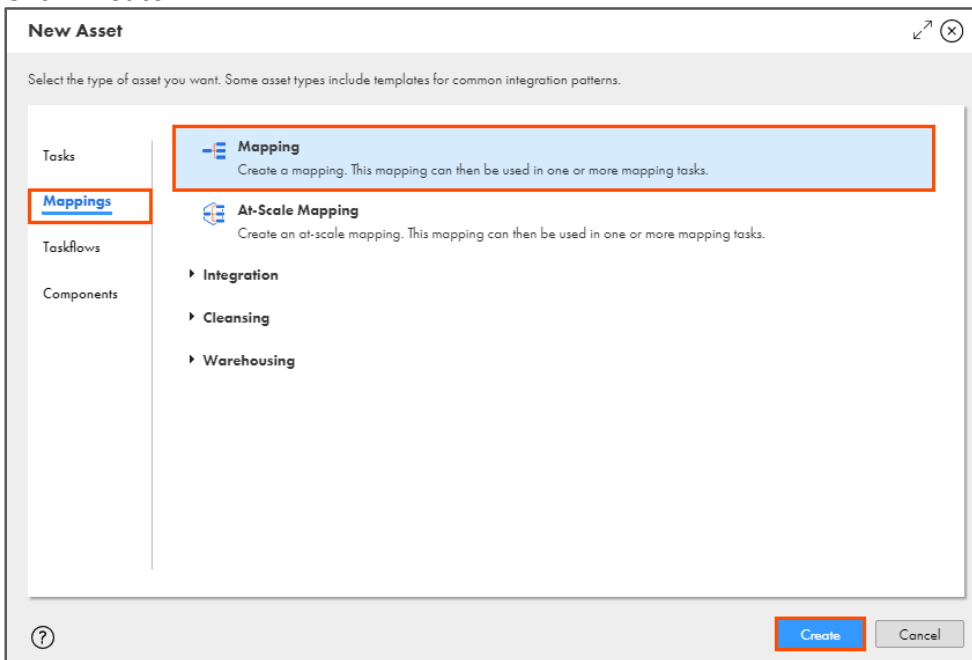


5. From the Navigation pane, select **New**.



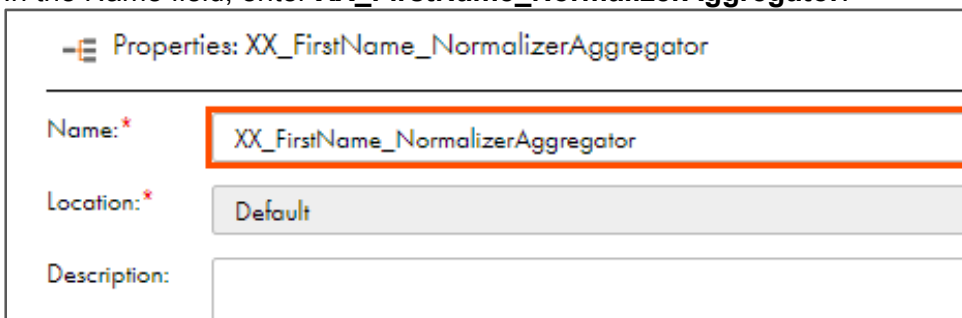
6. From the New Asset window, click the **Mappings** tab, and select **Mapping**.

7. Click **Create**.

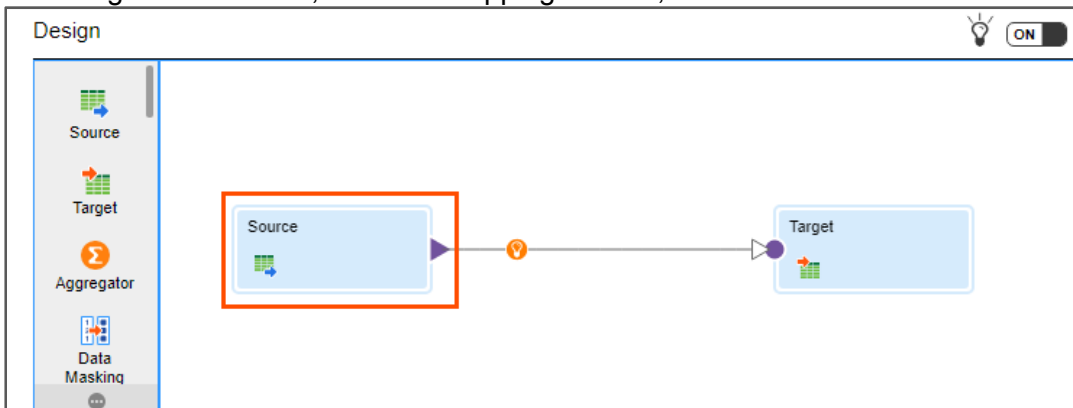


**Note:** The Mapping page appears.

8. In the Name field, enter **XX\_FirstName\_NormalizerAggregator**.

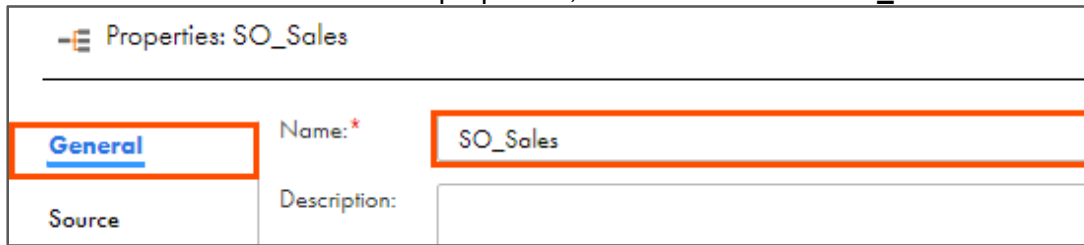


9. To configure the source, from the mapping canvas, click the **Source** transformation.





10. In the **General** section of Source properties, enter the Name as **SO\_Sales**.



Properties: SO\_Sales

**General**


Name: \* SO\_Sales

Description:

Source

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

12. From Connection drop-down, select **XX\_FirstName\_LocalCSVFiles**.



General

**Source**

Fields

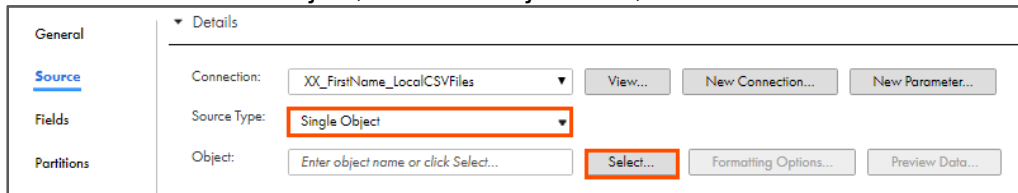
Details

Connection: XX\_FirstName\_LocalCSVFiles View... New Connection... New Parameter...

Source Type: Single Object

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

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



General

**Source**

Fields

Partitions

Details

Connection: XX\_FirstName\_LocalCSVFiles View... New Connection... New Parameter...

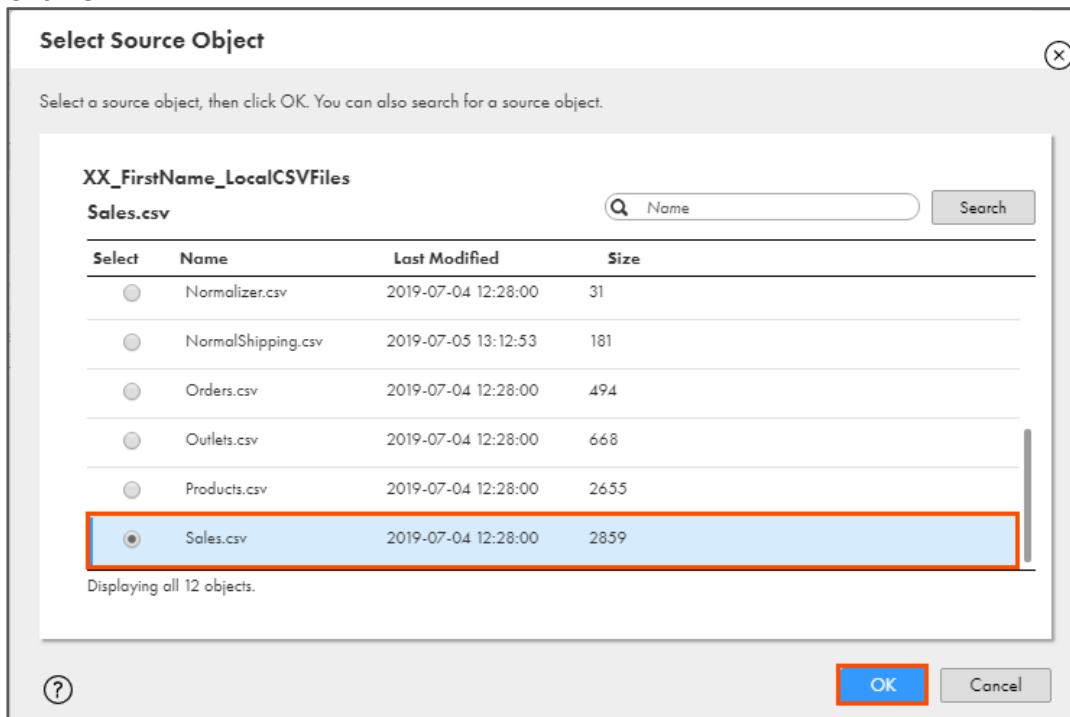
Source Type: Single Object

Object: Enter object name or click Select... **Select...** Formatting Options... Preview Data...

**Note:** The Select Source Object window appears.

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

16. Click **OK**.



Select Source Object

Select a source object, then click OK. You can also search for a source object.

XX\_FirstName\_LocalCSVFiles

Sales.csv

Search Name Search

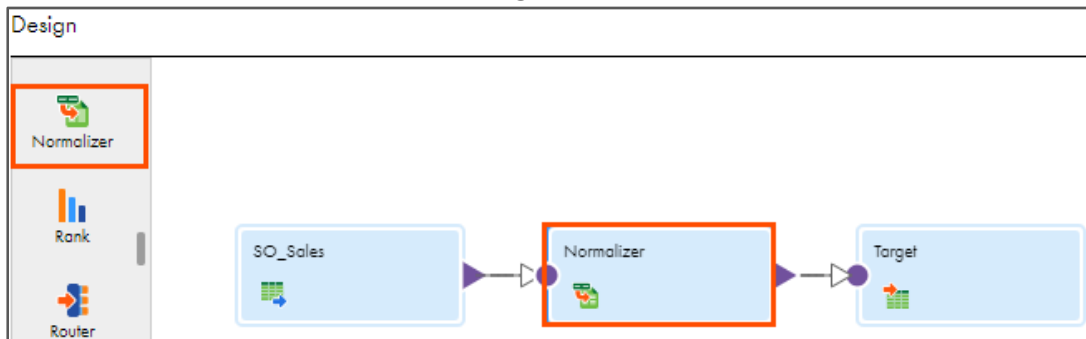
| Select                           | Name               | Last Modified       | Size |
|----------------------------------|--------------------|---------------------|------|
| <input type="radio"/>            | Normalizer.csv     | 2019-07-04 12:28:00 | 31   |
| <input type="radio"/>            | NormalShipping.csv | 2019-07-05 13:12:53 | 181  |
| <input type="radio"/>            | Orders.csv         | 2019-07-04 12:28:00 | 494  |
| <input type="radio"/>            | Outlets.csv        | 2019-07-04 12:28:00 | 668  |
| <input type="radio"/>            | Products.csv       | 2019-07-04 12:28:00 | 2655 |
| <input checked="" type="radio"/> | Sales.csv          | 2019-07-04 12:28:00 | 2859 |

Displaying all 12 objects.

OK Cancel

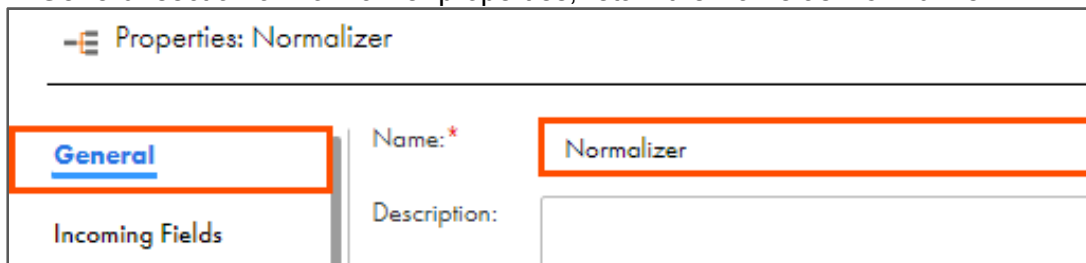
### Add Normalizer Transformation:

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

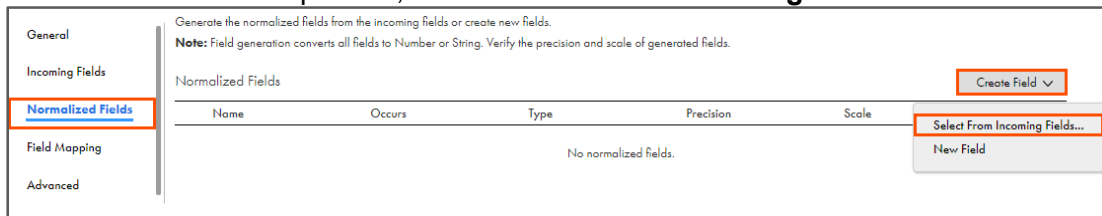


The screenshot shows the 'Properties: Normalizer' dialog box. The 'General' tab is selected and highlighted with a red box. The 'Name' field is set to 'Normalizer' and is also highlighted with a red box. The 'Description' field is empty.

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

**Note:** You must define the multiple-occurring fields and specify additional fields that you want to use in the mapping in the Normalized Fields tab.

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



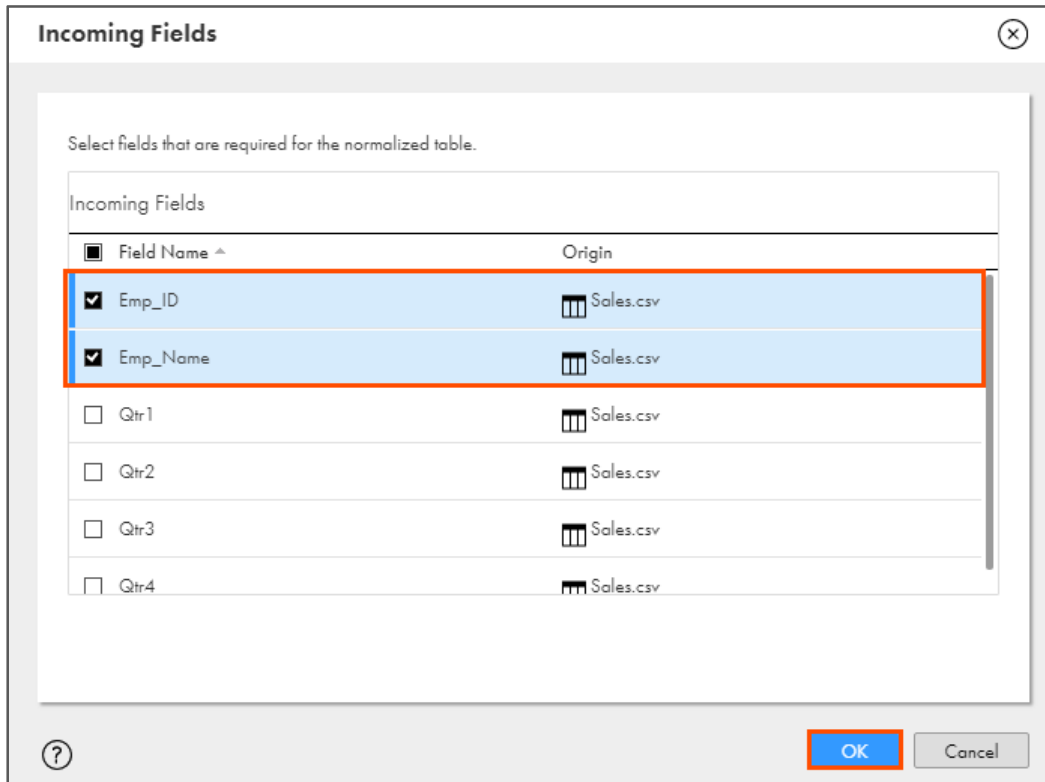
The screenshot shows the 'Normalized Fields' tab in the 'Properties: Normalizer' dialog box. The 'Create Field' dropdown menu is open, and 'Select From Incoming Fields...' is selected and highlighted with a red box. The table below is empty, showing columns for Name, Occurs, Type, Precision, and Scale.

| Name                  | Occurs | Type | Precision | Scale |
|-----------------------|--------|------|-----------|-------|
| No normalized fields. |        |      |           |       |

**Note:** The Incoming Fields window appears.

22. Select **Emp\_ID** and **Emp\_Name**.

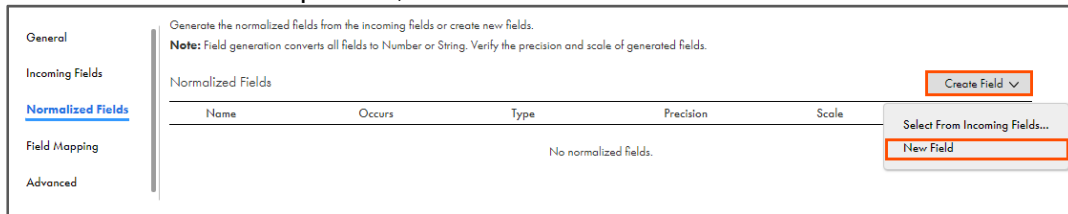
23. Click **OK**.



The 'Incoming Fields' dialog box is shown. It contains a list of fields with checkboxes. The fields 'Emp\_ID' and 'Emp\_Name' are selected and highlighted with a red box. The 'Origin' column shows 'Sales.csv' for these fields. The 'OK' button is highlighted with a red box.

| Field Name                                   | Origin    |
|----------------------------------------------|-----------|
| <input checked="" type="checkbox"/> Emp_ID   | Sales.csv |
| <input checked="" type="checkbox"/> Emp_Name | Sales.csv |
| <input type="checkbox"/> Qtr1                | Sales.csv |
| <input type="checkbox"/> Qtr2                | Sales.csv |
| <input type="checkbox"/> Qtr3                | Sales.csv |
| <input type="checkbox"/> Qtr4                | Sales.csv |

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



The 'Normalized Fields' window is shown. The 'Create Field' drop-down menu is open, and 'New Field' is selected. The 'Normalized Fields' table is empty.

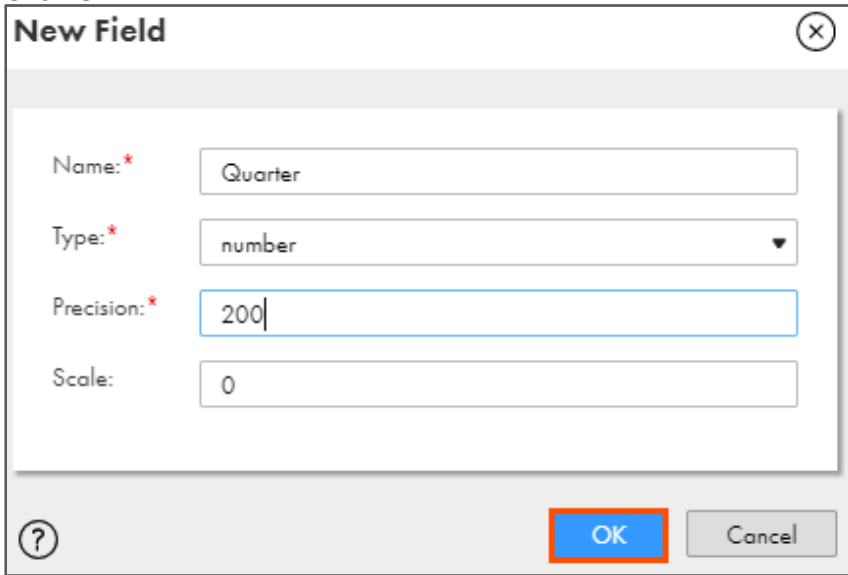
| Name                  | Occurs | Type | Precision | Scale |
|-----------------------|--------|------|-----------|-------|
| No normalized fields. |        |      |           |       |

**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**.



The 'New Field' dialog box is shown with the following fields:

- Name:** Quarter
- Type:** number
- Precision:** 200
- Scale:** 0

The **OK** button is highlighted with a red box.

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.

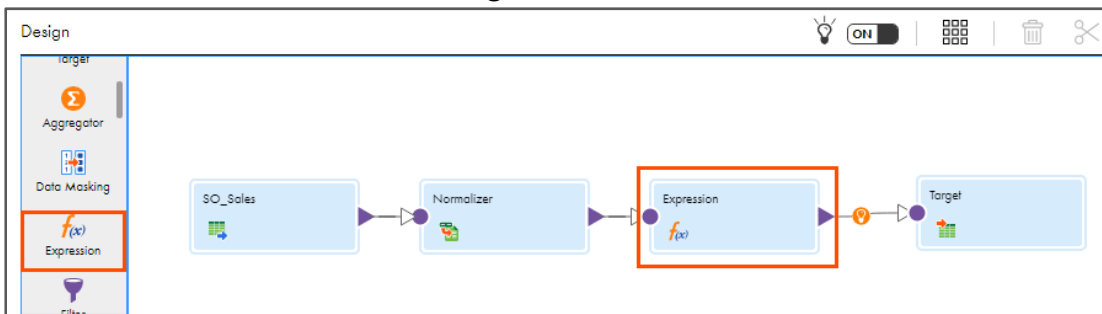
28. From the properties pane, click **Field Mapping**.

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

**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         |

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



- [-] Properties: NormalizerExpression

---

**General**

Incoming Fields

Name: \* NormalizerExpression


Description:

34. To add a new expression, click .

**General** Create simple expressions. You can also use expression macros to create complex expressions.

☐ Allow additional fields and expressions during task creation

**Incoming Fields**

Expressions 

| Field Name               | Expression |
|--------------------------|------------|
| No Expression specified. |            |

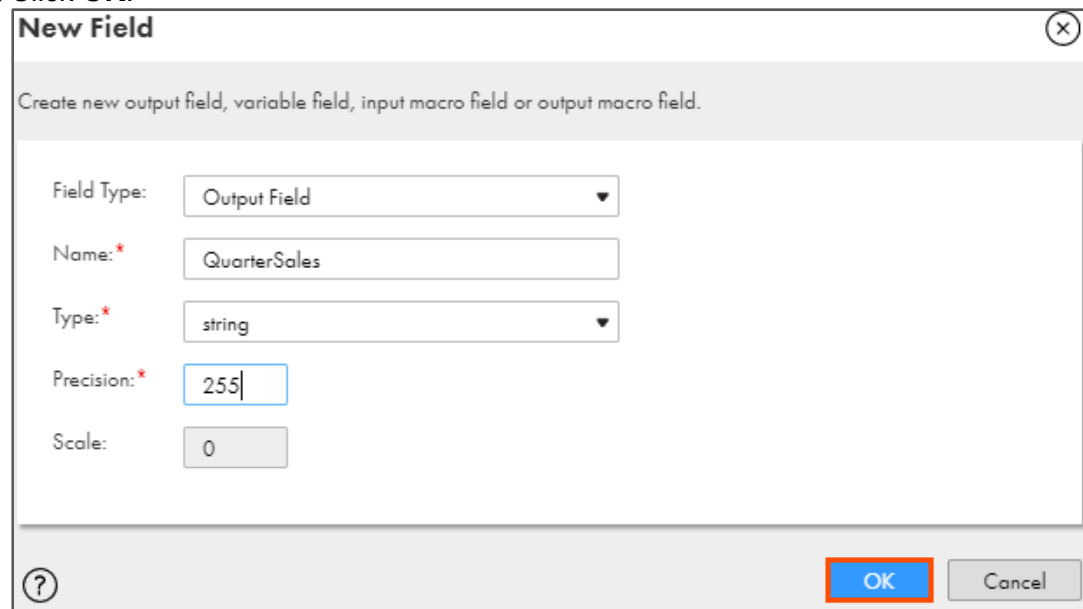
**Advanced**

## Module 5: Advanced Transformations and Mapping Tasks

35. Enter the details as shown in table below:

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

36. Click **OK**.



**New Field** (Close button)

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

Field Type: Output Field (dropdown)

Name: \* QuarterSales (text box)

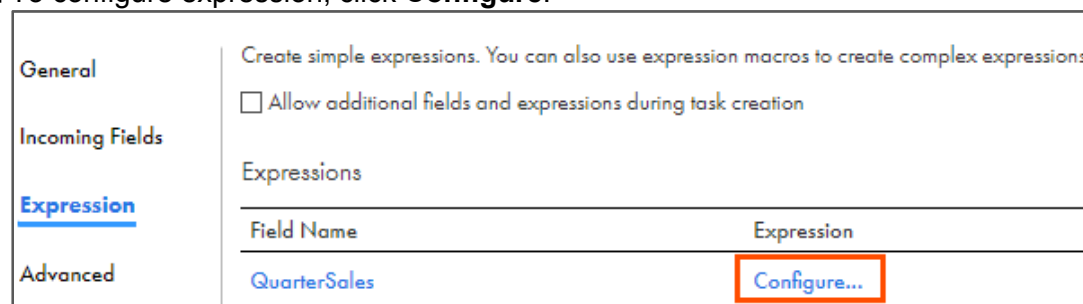
Type: \* string (dropdown)

Precision: \* 255 (text box)

Scale: 0 (text box)

(Help icon) **OK** Cancel

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



**General** | Create simple expressions. You can also use expression macros to create complex expressions.  
☐ Allow additional fields and expressions during task creation

**Incoming Fields**

**Expression** (selected)

**Advanced**

| Field Name   | Expression          |
|--------------|---------------------|
| QuarterSales | <b>Configure...</b> |

**Note:** The Field Expression window appears.

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

**DECODE(GCID\_Quarter, GCID\_Quarter=1, 'Qtr1', GCID\_Quarter=2, 'Qtr2', GCID\_Quarter=3, 'Qtr3', GCID\_Quarter=4, 'Qtr4')**

OR

Open the file named

**10\_LabGuide\_UsingNormalizerAggregatorRankTransformations\_5-1** provided with this lab. Copy the command mentioned under **Step 38** and paste it in the Expression field.

39. Click **Validate**.



Field Expression: QuarterSales( string, 255, 0 )

Configure expression by adding fields and functions.

Expression: Not Parameterized

**Fields** Parameters Functions Expression

Emp\_ID  
Emp\_Name  
Quarter  
GCID\_Quarter  
GK\_Quarter

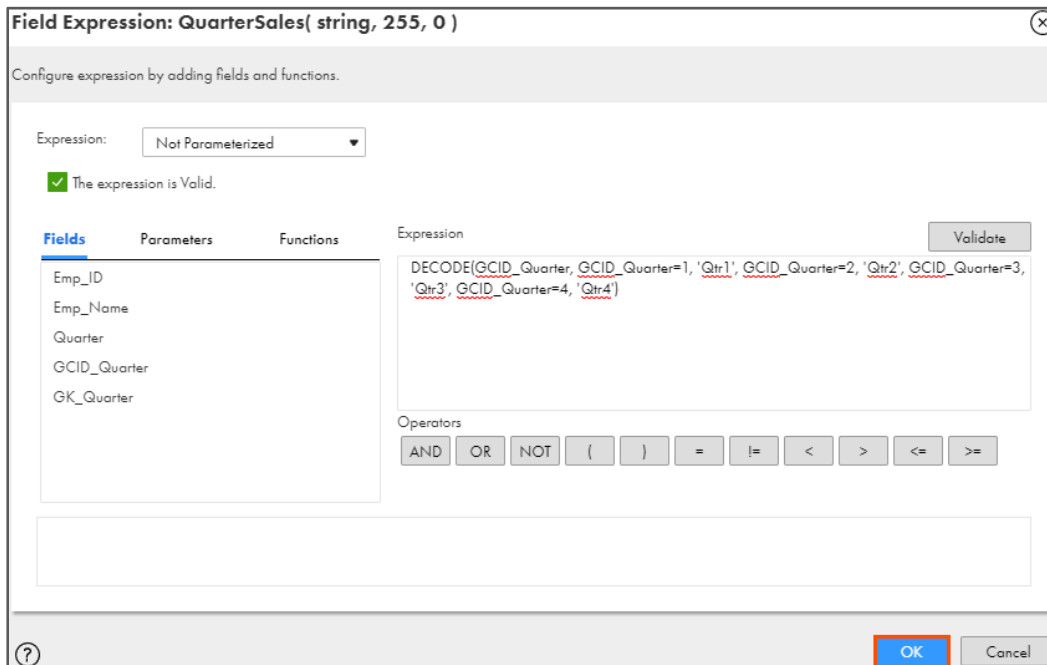
DECODE(GCID\_Quarter, GCID\_Quarter=1, 'Qtr1', GCID\_Quarter=2, 'Qtr2', GCID\_Quarter=3, 'Qtr3', GCID\_Quarter=4, 'Qtr4')

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

**Validate**

OK Cancel

40. Click **OK**.



Field Expression: QuarterSales( string, 255, 0 )

Configure expression by adding fields and functions.

Expression: Not Parameterized

✓ The expression is Valid.

**Fields** Parameters Functions Expression

Emp\_ID  
Emp\_Name  
Quarter  
GCID\_Quarter  
GK\_Quarter

DECODE(GCID\_Quarter, GCID\_Quarter=1, 'Qtr1', GCID\_Quarter=2, 'Qtr2', GCID\_Quarter=3, 'Qtr3', GCID\_Quarter=4, 'Qtr4')

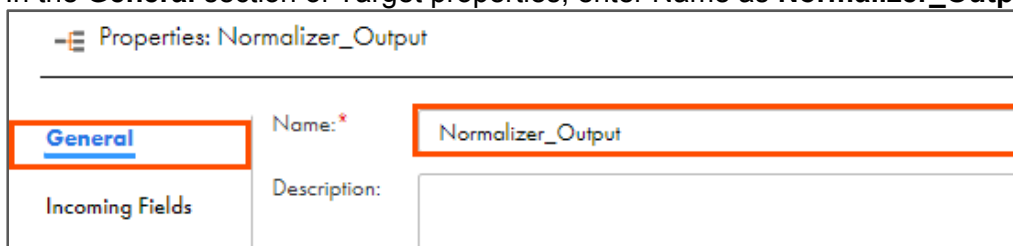
Operators: AND OR NOT ( ) = != < > <= >=

**Validate**

**OK** Cancel

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

42. In the **General** section of Target properties, enter Name as **Normalizer\_Output**.



Properties: Normalizer\_Output

**General**

Name: \* Normalizer\_Output

Description:

Incoming Fields

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.                                                         |                          |                              |              |      |           |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|------------------------------|--------------|------|-----------|
| <b>Incoming Fields</b> | Field Rules                                                                                                                                                                                                  |                          |                              |              |      |           |
| Target                 | Operator                                                                                                                                                                                                     | Field Selection Criteria | Detail                       |              |      |           |
| Target Fields          | Include                                                                                                                                                                                                      | Named Fields             | <a href="#">Configure...</a> |              |      |           |
| Field Mapping          | <div> <a href="#">Included Fields</a> <a href="#">Excluded Fields</a> </div> <table border="1"> <thead> <tr> <th>Field Name ^</th> <th>Type</th> <th>Precision</th> </tr> </thead> <tbody> </tbody> </table> |                          |                              | Field Name ^ | Type | Precision |
| Field Name ^           | Type                                                                                                                                                                                                         | Precision                |                              |              |      |           |

**Note:** The Configure Field Rule window appears.

46. Select **Emp\_ID**, **Emp\_Name**, **Quarter**, and **QuarterSales**.
47. Click **OK**.

### Configure Field Rules

Rule Details

Rename Fields

Incoming Fields (4 of 6 selected)

Field Name ^

Origin

☒ Emp\_ID

Normalizer

☒ Emp\_Name

Normalizer

☒ Quarter

Normalizer

☒ QuarterSales

NormalizerExpression

Parameters (0 of 0 selected)

☒ Show only selected fields and parameters

?

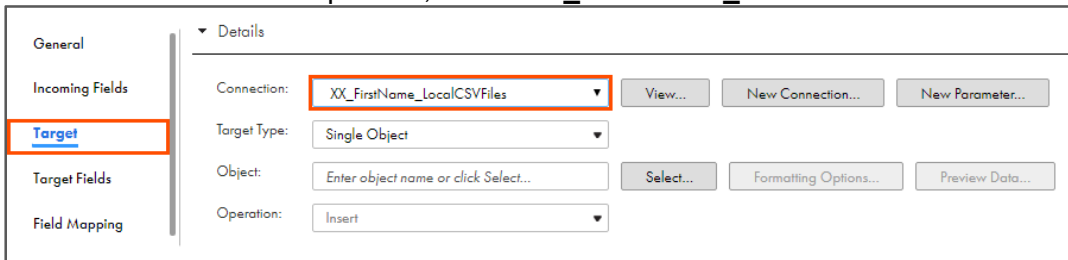
OK

Cancel

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

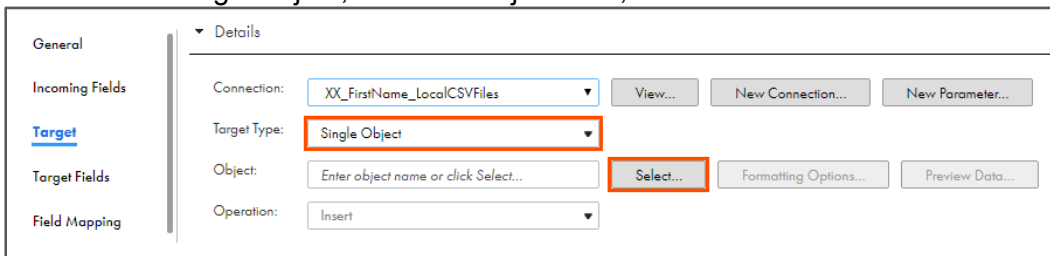


49. From the Connection drop-down, select **XX\_FirstName\_LocalCSVFiles**.



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

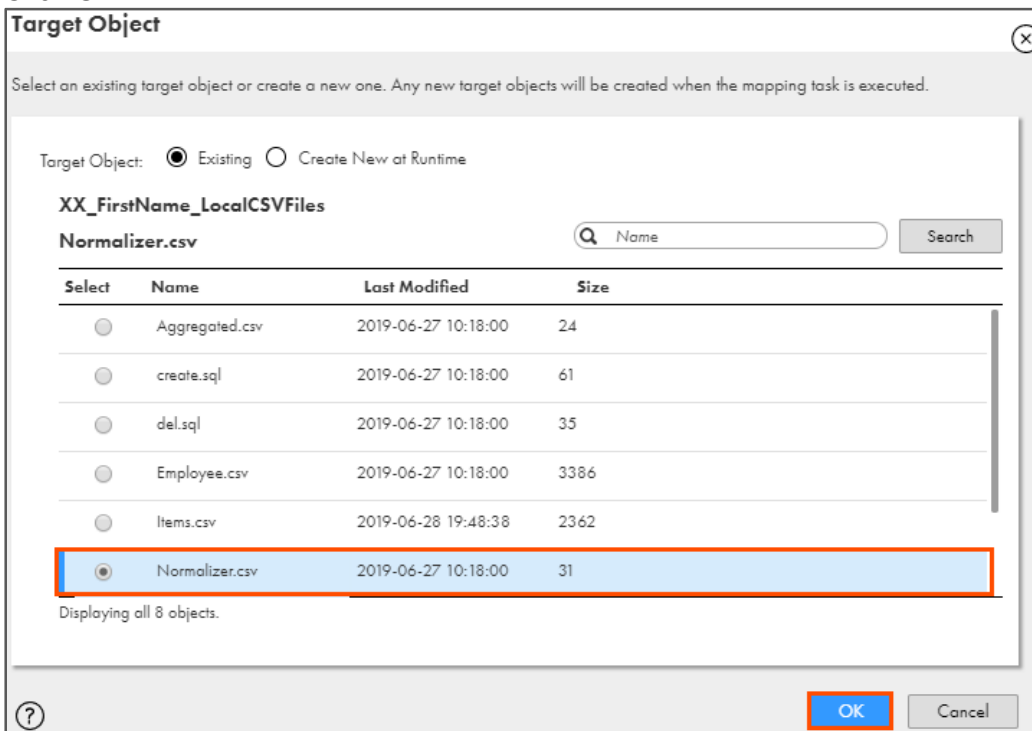
51. To select the target object, from the Object field, click **Select**.



**Note:** The Target Object window appears.

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

53. Click **OK**.



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

**XX\_FirstName\_LocalCSVFiles**

**Normalizer.csv**

Q Name Search

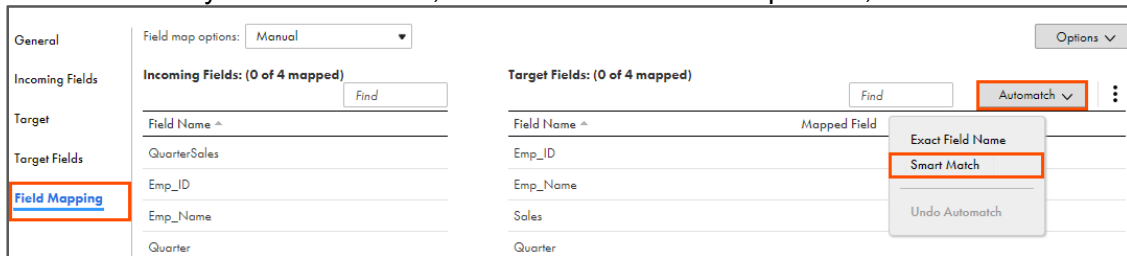
| Select                           | Name           | Last Modified       | Size |
|----------------------------------|----------------|---------------------|------|
| <input type="radio"/>            | Aggregated.csv | 2019-06-27 10:18:00 | 24   |
| <input type="radio"/>            | create.sql     | 2019-06-27 10:18:00 | 61   |
| <input type="radio"/>            | del.sql        | 2019-06-27 10:18:00 | 35   |
| <input type="radio"/>            | Employee.csv   | 2019-06-27 10:18:00 | 3386 |
| <input type="radio"/>            | Items.csv      | 2019-06-28 19:48:38 | 2362 |
| <input checked="" type="radio"/> | Normalizer.csv | 2019-06-27 10:18:00 | 31   |

Displaying all 8 objects.

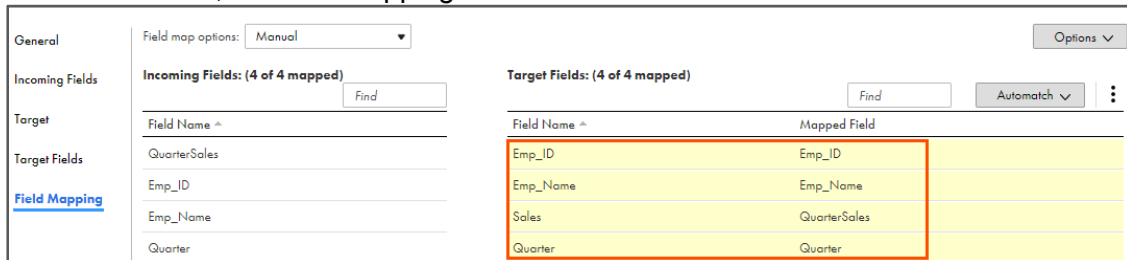
OK Cancel

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

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

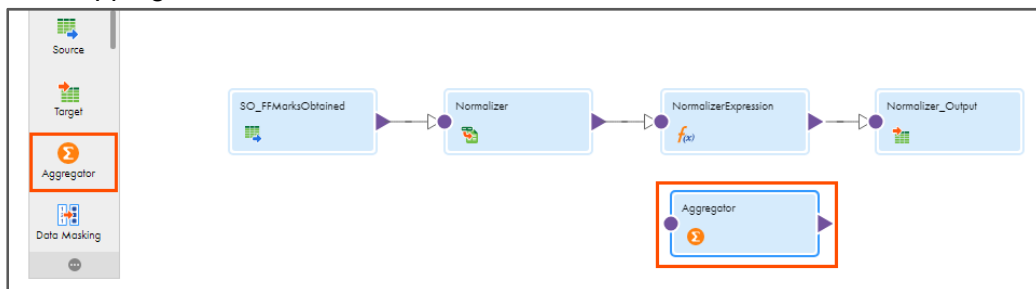


56. After Automatch, the field mapping looks as shown below:

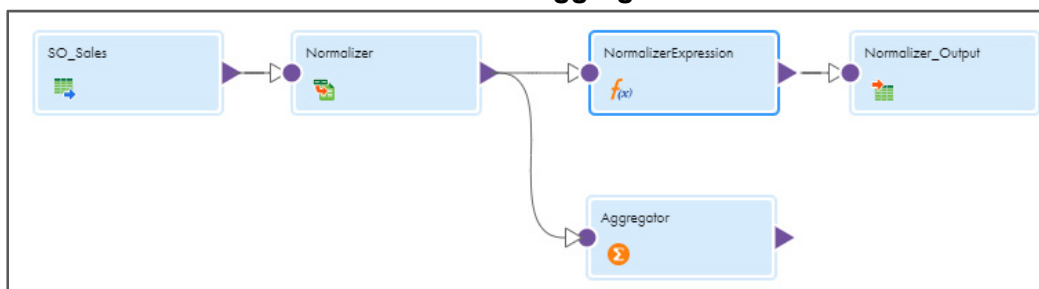


### Add Aggregator Transformation:

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



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




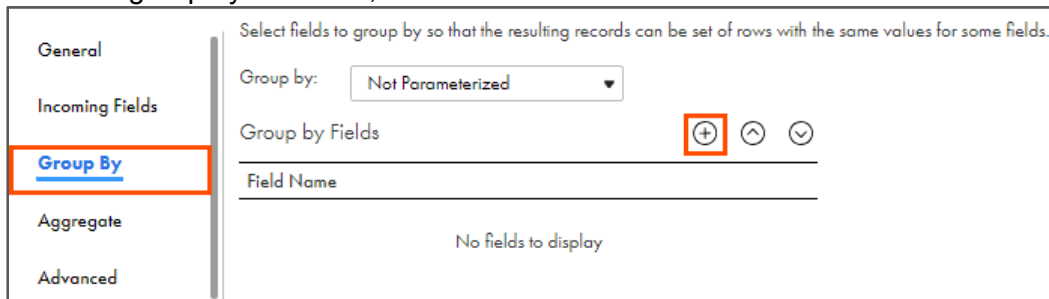
59. Select the **Aggregator** transformation from the mapping canvas.

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

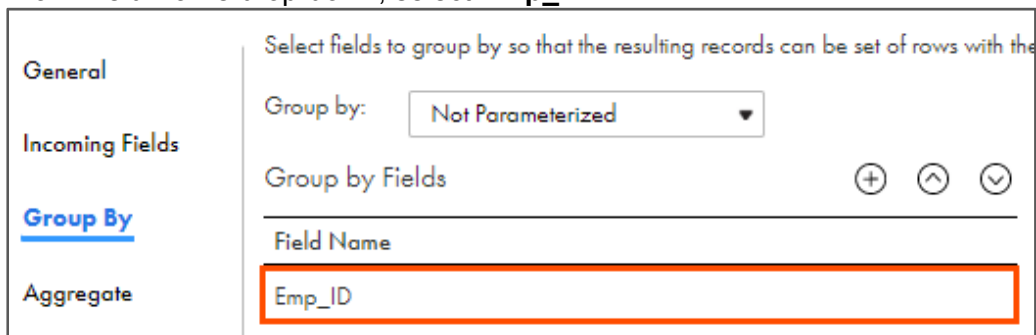


61. From the properties pane, click **Group By**.

62. To add a group by condition, click .

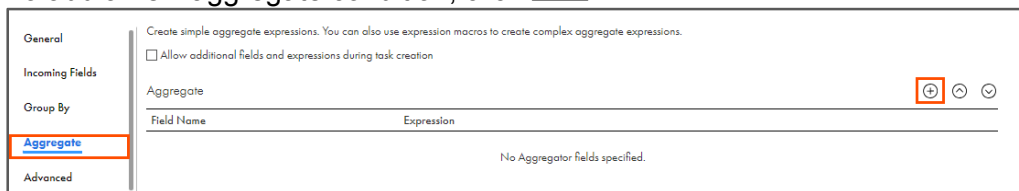


63. From Field Name drop-down, select **Emp\_ID**.



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

65. To add a new aggregate condition, click .

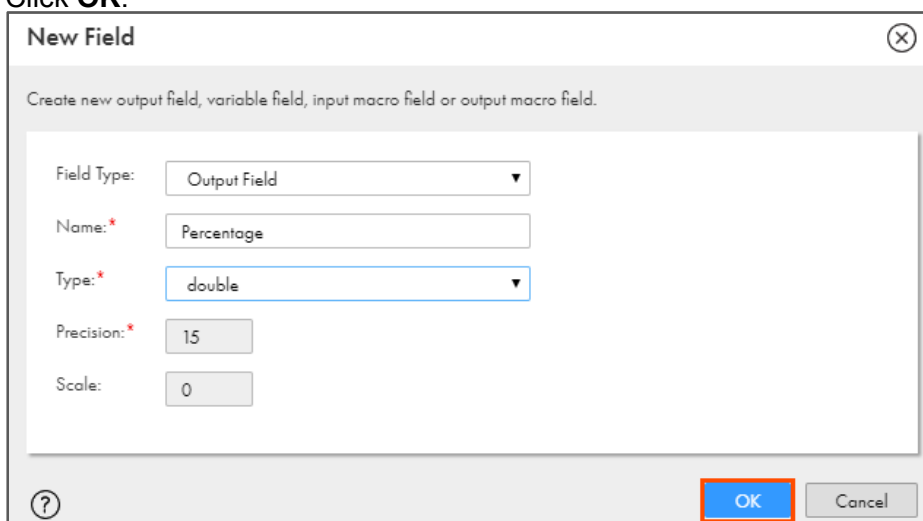


**Note:** The New Field window appears.

66. Enter the details as shown in table below:

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

67. Click **OK**.



**New Field**

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

Field Type: Output Field ▼

Name: \* Percentage

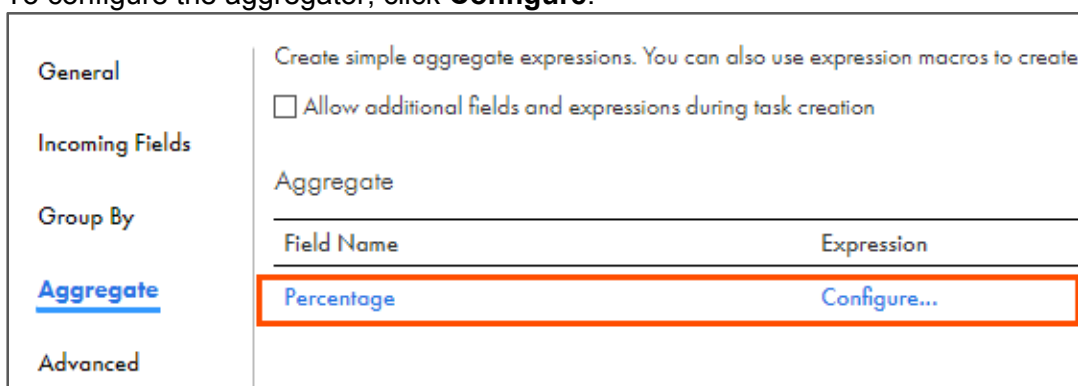
Type: \* double ▼

Precision: \* 15

Scale: 0

? OK Cancel

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



**General**

Create simple aggregate expressions. You can also use expression macros to create

☐ Allow additional fields and expressions during task creation

**Incoming Fields**

**Group By**

**Aggregate**

| Field Name | Expression   |
|------------|--------------|
| Percentage | Configure... |

**Advanced**

**Note:** The Field Expression window appears.

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

**(SUM(Quarter) / 400) \* 100**

OR

Open the file named

**10\_LabGuide\_UsingNormalizerAggregatorRankTransformations\_5-1** provided with this lab. 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

- Emp\_ID
- Emp\_Name
- Quarter
- GCID\_Quarter
- GK\_Quarter

**Expression**

`SUM(Quarter)/400)*100`

**Operators**

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

**Validate**

? 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

- Emp\_ID
- Emp\_Name
- Quarter
- GCID\_Quarter
- GK\_Quarter

**Expression**

`(SUM(Quarter)/400)*100`

**Operators**

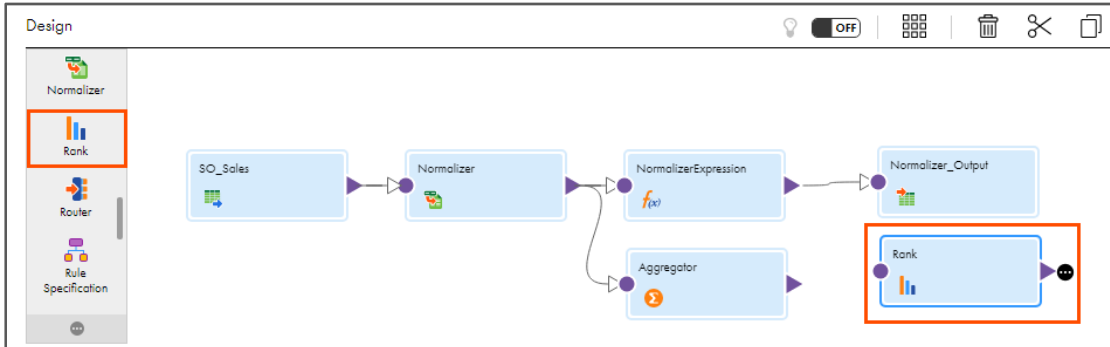
AND OR NOT ( ) = != < > <= >=

**Validate**

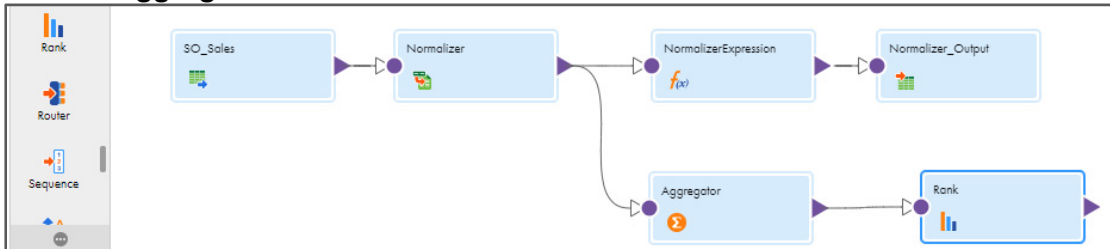
? OK Cancel

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

| Properties: Rank |                                                                        |
|------------------|------------------------------------------------------------------------|
| <b>General</b>   | Name: * <span style="border: 1px solid red; padding: 2px;">Rank</span> |
| 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**.

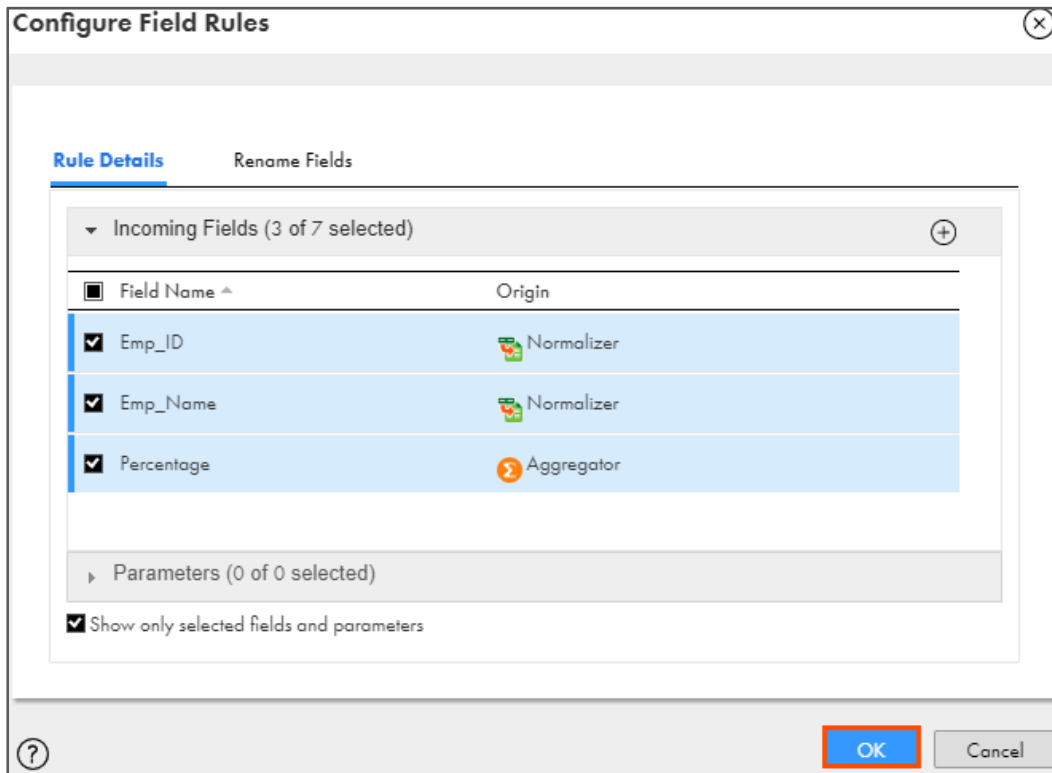
79. In the Number of Rows section, in the Number of Rows field, enter **20**.

|                 |                                                                                                            |
|-----------------|------------------------------------------------------------------------------------------------------------|
| General         | Rank By: * ? <span style="border: 1px solid red; padding: 2px;">Percentage</span>                          |
| Incoming Fields | Rank Order: * ? <span style="border: 1px solid red; padding: 2px;">Top</span>                              |
| <b>Rank</b>     | Number of Rows                                                                                             |
| Group By        | Parameterize Number of Rows: * <span style="border: 1px solid red; padding: 2px;">Not Parameterized</span> |
| Advanced        | Number of Rows: * ? <span style="border: 1px solid red; padding: 2px;">20</span>                           |



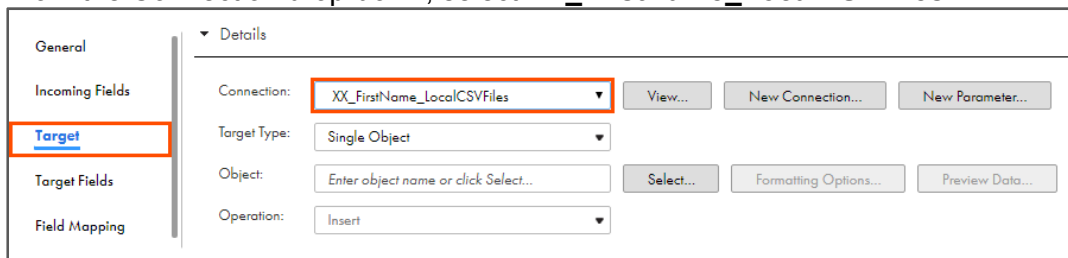
87. Select **Emp\_ID**, **Emp\_Name**, and **Percentage**.

88. Click **OK**.



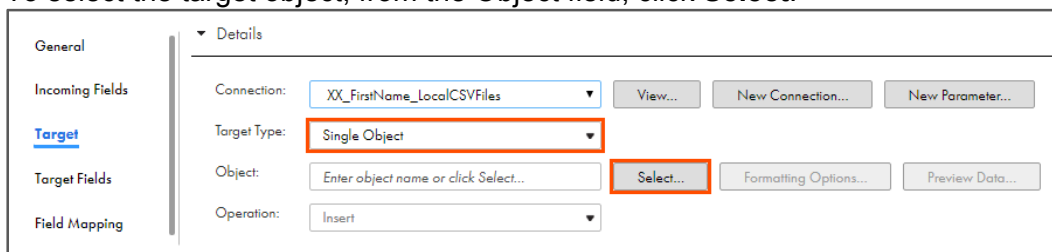
89. From the properties pane, click **Target**.

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**.

**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

**XX\_FirstName\_LocalCSVFiles**

**Aggregated.csv**

| Select                           | Name           | Last Modified       | Size |
|----------------------------------|----------------|---------------------|------|
| <input checked="" type="radio"/> | Aggregated.csv | 2019-06-27 10:18:00 | 24   |
| <input type="radio"/>            | create.sql     | 2019-06-27 10:18:00 | 61   |
| <input type="radio"/>            | del.sql        | 2019-06-27 10:18:00 | 35   |
| <input type="radio"/>            | Employee.csv   | 2019-06-27 10:18:00 | 3386 |
| <input type="radio"/>            | Items.csv      | 2019-06-28 19:48:38 | 2362 |
| <input type="radio"/>            | Normalizer.csv | 2019-06-27 10:18:00 | 31   |

Displaying all 8 objects.

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

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

Field map options:

**General**

**Incoming Fields: (0 of 3 mapped)**

**Target Fields: (0 of 3 mapped)**

**Field Mapping**

**Incoming Fields:**

| Field Name ^ |
|--------------|
| Percentage   |
| Emp_ID       |
| Emp_Name     |

**Target Fields:**

| Field Name ^ | Mapped Field |
|--------------|--------------|
| Emp_ID       |              |
| Name         |              |
| Percentage   |              |

**Exact Field Name**

**Smart Match**

**Undo Automatch**

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

Field map options:

**General**

**Incoming Fields: (3 of 3 mapped)**

**Target Fields: (3 of 3 mapped)**

**Field Mapping**

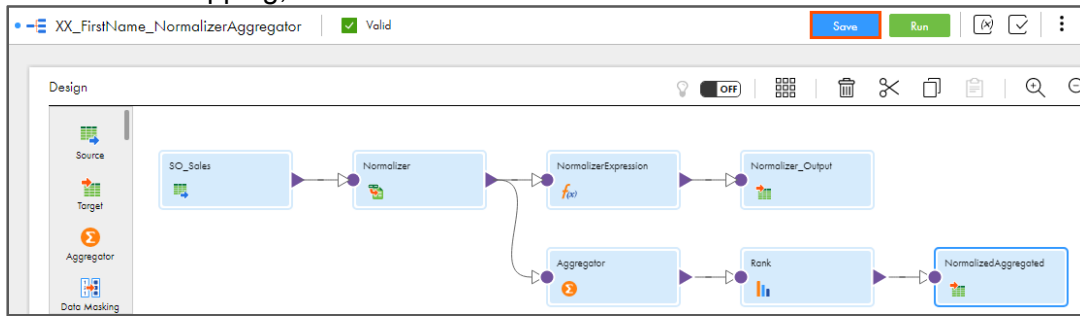
**Incoming Fields:**

| Field Name ^ |
|--------------|
| Percentage   |
| Emp_ID       |
| Emp_Name     |

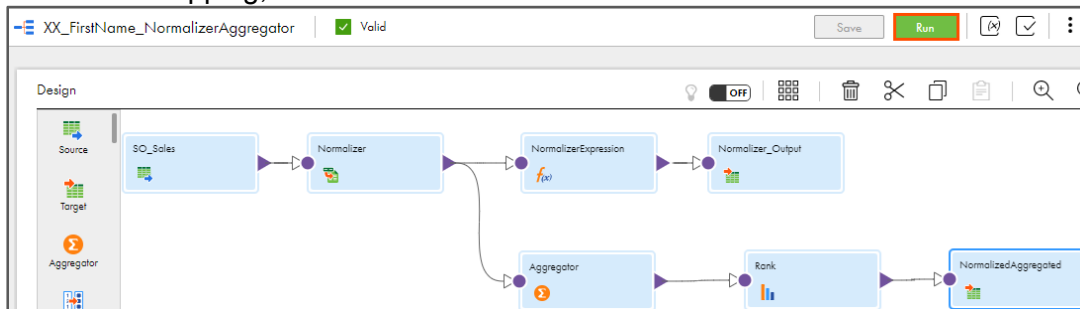
**Target Fields:**

| Field Name ^ | Mapped Field |
|--------------|--------------|
| Emp_ID       | Emp_ID       |
| Name         | Emp_Name     |
| Percentage   | Percentage   |

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



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

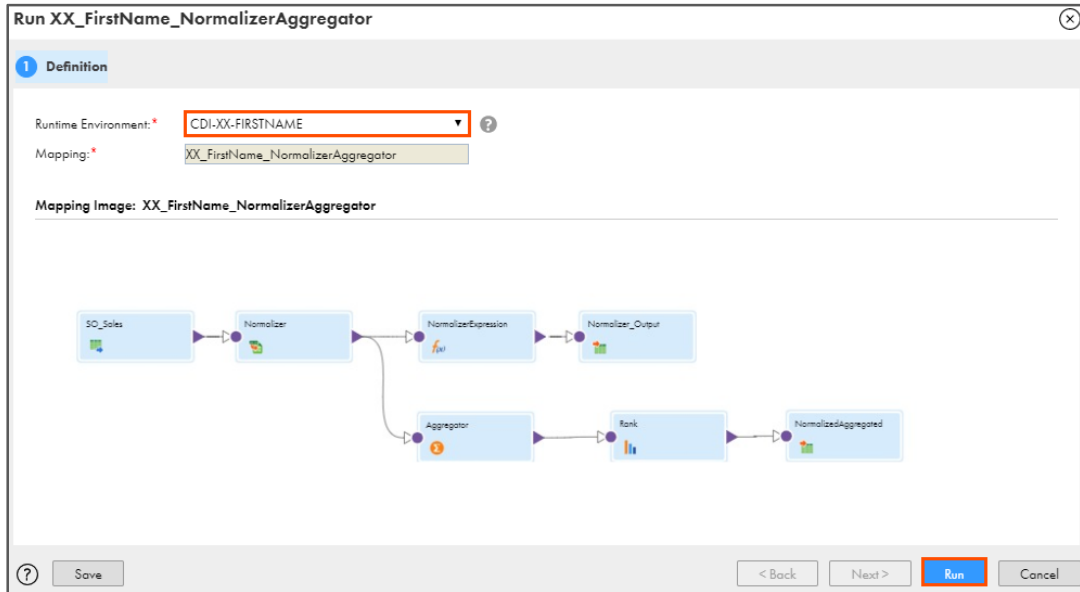


**Note:** The Run mapping window appears.

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

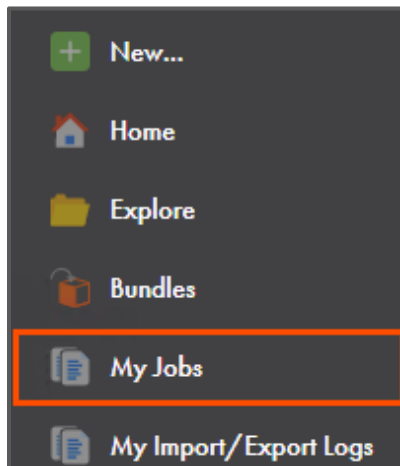
**Note:** The Runtime Environment name will be in format CDI-XX-FIRSTNAME.

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)

Up to date

Updated 12:20:29 AM PDT

Find

Asset Name: XX\_FirstName\_Normali...

Add Field

| Instance Name                                  | Subtasks | Start Time       | End Time     | Rows Processed | State              |
|------------------------------------------------|----------|------------------|--------------|----------------|--------------------|
| <div>XX_FirstName_NormalizerAggregator-1</div> |          | Aug 1, 2019, ... | Aug 1, 20... | 180            | <div>Success</div> |

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

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 | F | G |
|----|--------|------------------|-------|---------|---|---|---|
| 1  | Emp_ID | Emp_Name         | Sales | Quarter |   |   |   |
| 2  | 677509 | Lois Walker      | Qtr1  | 32      |   |   |   |
| 3  | 677509 | Lois Walker      |       | 534     |   |   |   |
| 4  | 677509 | Lois Walker      |       | 746     |   |   |   |
| 5  | 677509 | Lois Walker      |       | 12      |   |   |   |
| 6  | 940761 | Brenda Robinson  | Qtr1  | 13      |   |   |   |
| 7  | 940761 | Brenda Robinson  |       | 645     |   |   |   |
| 8  | 940761 | Brenda Robinson  |       | 76      |   |   |   |
| 9  | 940761 | Brenda Robinson  |       | 30      |   |   |   |
| 10 | 428945 | Joe Robinson     | Qtr1  | 37      |   |   |   |
| 11 | 428945 | Joe Robinson     |       | 36      |   |   |   |
| 12 | 428945 | Joe Robinson     |       | 2       |   |   |   |
| 13 | 428945 | Joe Robinson     |       | 1       |   |   |   |
| 14 | 408351 | Diane Evans      | Qtr1  | 529     |   |   |   |
| 15 | 408351 | Diane Evans      |       | 962     |   |   |   |
| 16 | 408351 | Diane Evans      |       | 114     |   |   |   |
| 17 | 408351 | Diane Evans      |       | 986     |   |   |   |
| 18 | 193819 | Benjamin Russell | Qtr1  | 13      |   |   |   |
| 19 | 193819 | Benjamin Russell |       | 23      |   |   |   |

---

*This concludes the lab.*

## Module 5: Advanced Transformations and Mapping Tasks

### Lab 5-2: 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:

As 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:

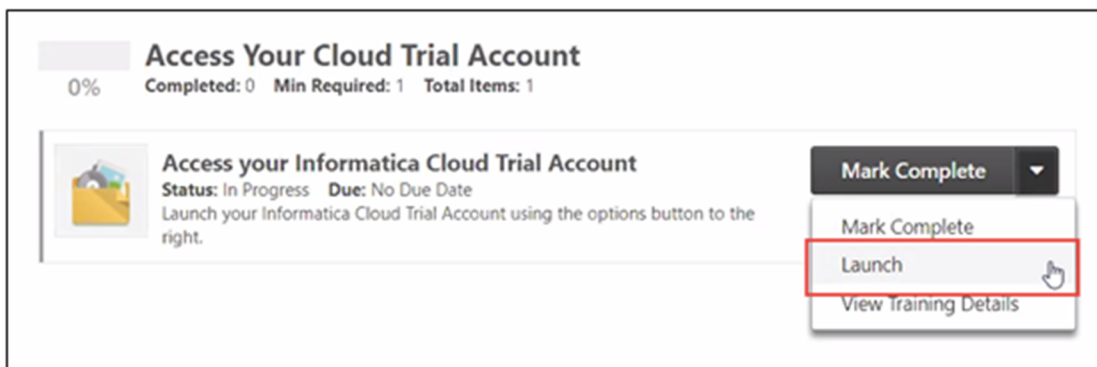
5 minutes

---

#### Tasks:

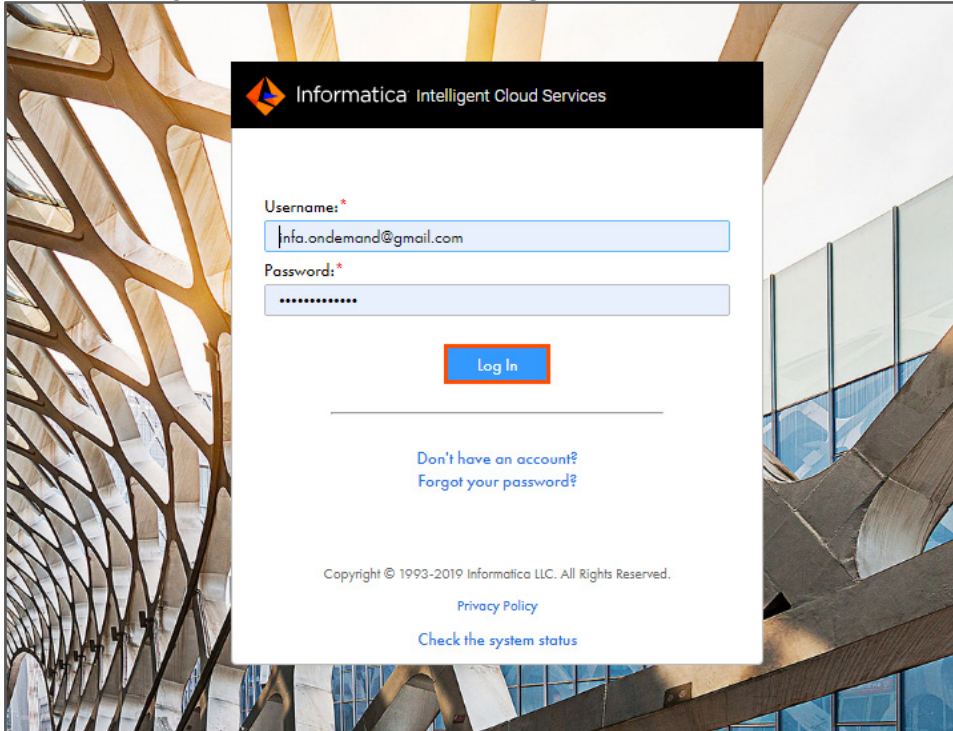
##### Create a Mapping Task:

1. Access your cloud trial account by clicking **Launch** in your option Menu. If the option menu is labeled anything other than **Launch**, click the down arrow to the right and click **Launch**.



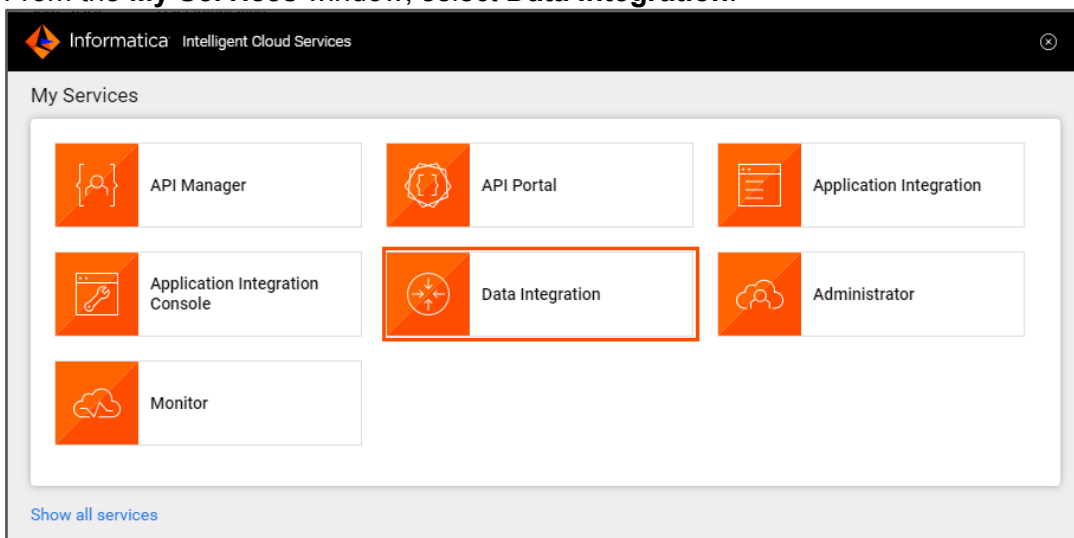
**Note:** Follow this step, if you have navigated away from the login page.

2. Enter your login credentials and click **Log In**.

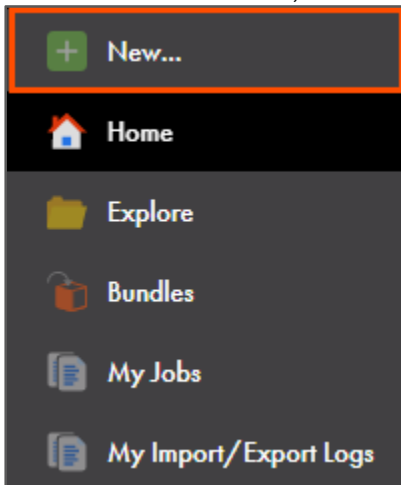


The login screen for Informatica Intelligent Cloud Services is displayed over a background image of a modern building's interior with a complex, branching structural design. The login form is a white rectangular box with a black header bar containing the Informatica logo and the text "Informatica Intelligent Cloud Services". Inside the form, there are two input fields: "Username:" with the email "info.ondemand@gmail.com" and "Password:" with masked characters. Below these fields is a blue "Log In" button. Underneath the button are two links: "Don't have an account?" and "Forgot your password?". At the bottom of the form, there is a copyright notice "Copyright © 1993-2019 Informatica LLC. All Rights Reserved.", a "Privacy Policy" link, and a "Check the system status" link.

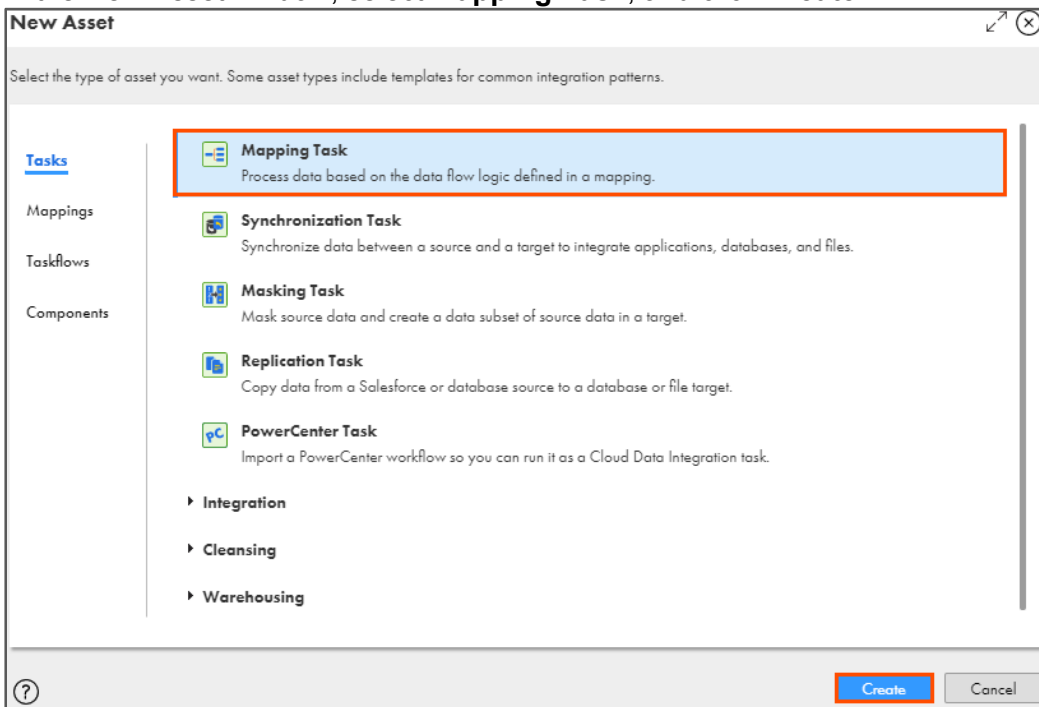
3. From the **My Services** window, select **Data Integration**.



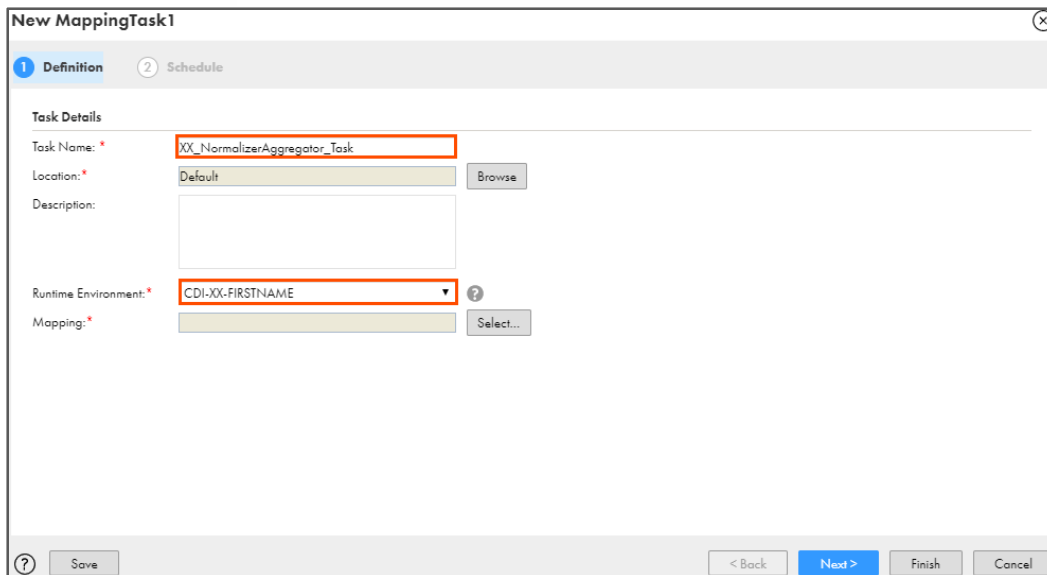
4. To create a new asset, from the Navigation pane, select **New**.



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



6. In the Task Name field, enter **XX\_NormalizerAggregator\_Task**.
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: \* Default

Description:

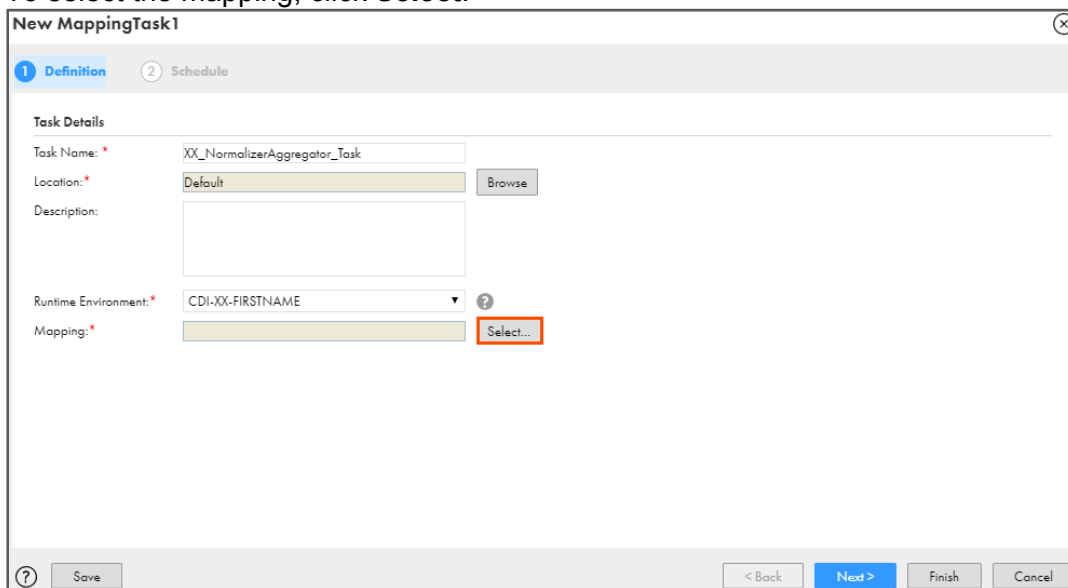
Runtime Environment: \* CDI-XX-FIRSTNAME ?

Mapping: \*

< Back Next > Finish Cancel

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

8. To select the mapping, click **Select**.



**New MappingTask1**

1 Definition 2 Schedule

**Task Details**

Task Name: \* XX\_NormalizerAggregator\_Task

Location: \* Default

Description:

Runtime Environment: \* CDI-XX-FIRSTNAME ?

Mapping: \*

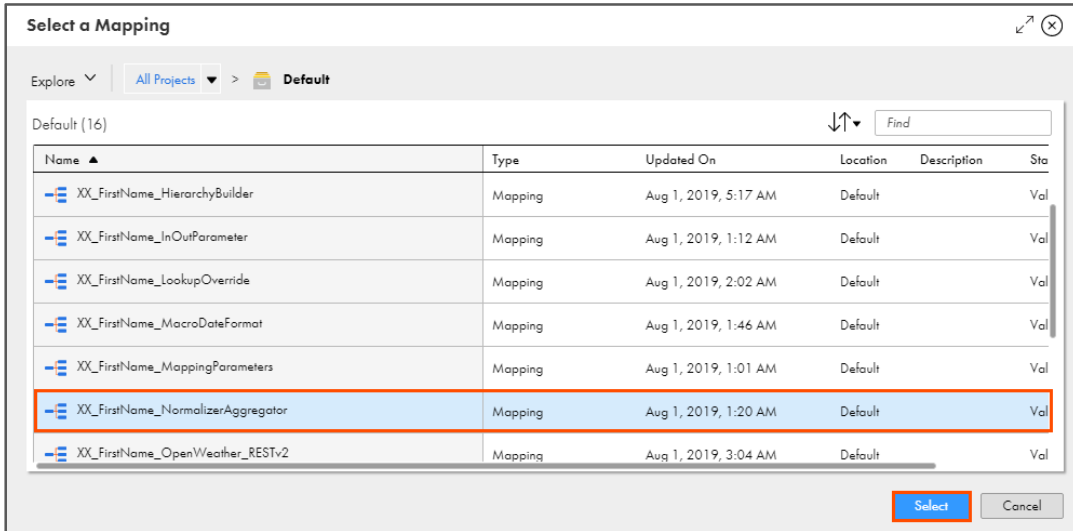
< Back Next > Finish Cancel

**Note:** The Select a Mapping window appears.

9. From the list, select **XX\_FirstName\_NormalizerAggregator**.



10. Click **Select**.



**Select a Mapping**

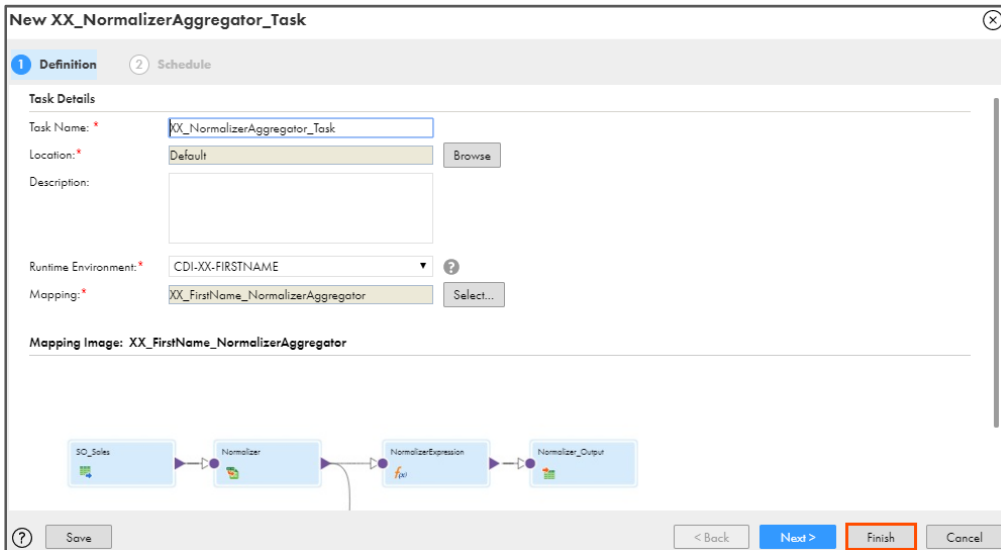
Explore ▾ | All Projects ▾ | > Default

Default (16) Find

| Name ▲                            | Type    | Updated On           | Location | Description | Sta |
|-----------------------------------|---------|----------------------|----------|-------------|-----|
| 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 |
| XX_FirstName_MappingParameters    | Mapping | Aug 1, 2019, 1:01 AM | Default  |             | Val |
| XX_FirstName_NormalizerAggregator | Mapping | Aug 1, 2019, 1:20 AM | Default  |             | Val |
| XX_FirstName_OpenWeather_RESTv2   | Mapping | Aug 1, 2019, 3:04 AM | Default  |             | Val |

Select Cancel

11. Click **Finish**.



**New XX\_NormalizerAggregator\_Task**

1 Definition 2 Schedule

**Task Details**

Task Name: \*

Location: \*  Browse

Description:

Runtime Environment: \*  ?

Mapping: \*  Select...

Mapping Image: XX\_FirstName\_NormalizerAggregator

```

graph LR
    SO_Sales[SO_Sales] --> Normalizer[Normalizer]
    Normalizer --> NormalizeExpression[NormalizeExpression]
    NormalizeExpression --> Normalizer_Output[Normalizer_Output]
  
```

Save < Back Next > Finish Cancel

*This concludes the lab.*



## Module 5: Advanced Transformations and Mapping Tasks

### Lab 5-3: 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

---

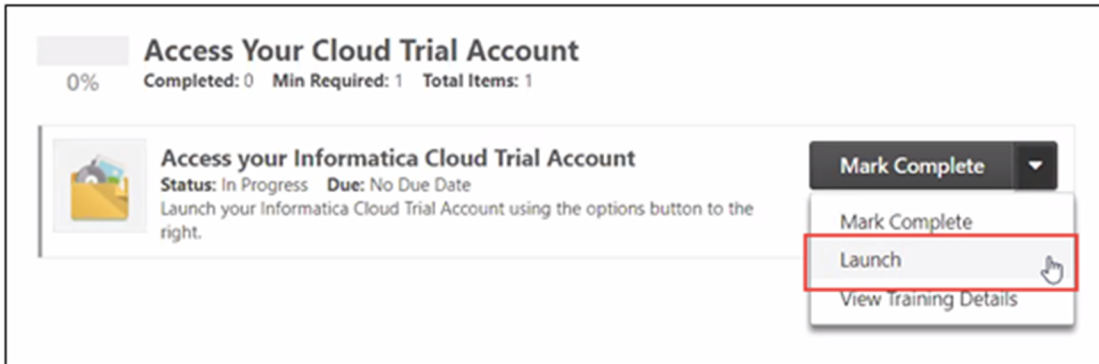
**Tasks:****Copy Source Files:**

1. Copy the following files provided with this lab and place the file in your flat file directory (**C:\IICSLabFiles**):

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

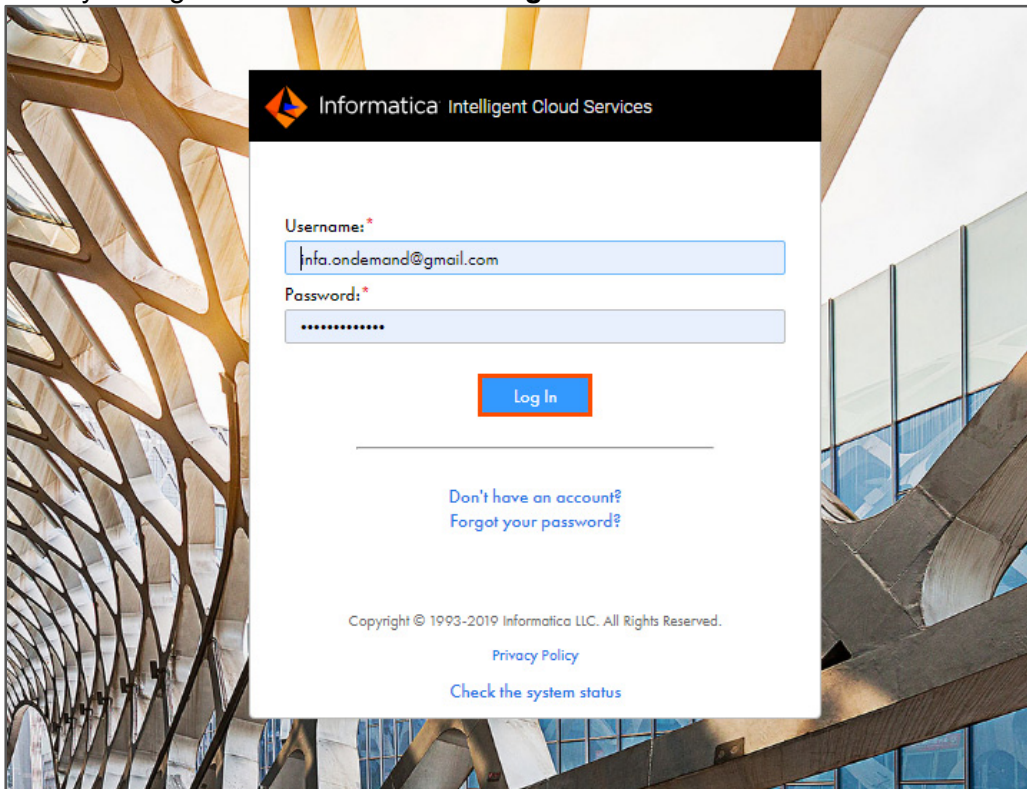
### Create Mapping:

2. Access your cloud trial account by clicking **Launch** in your option Menu. If the option menu is labeled anything other than **Launch**, click the down arrow to the right and click **Launch**.

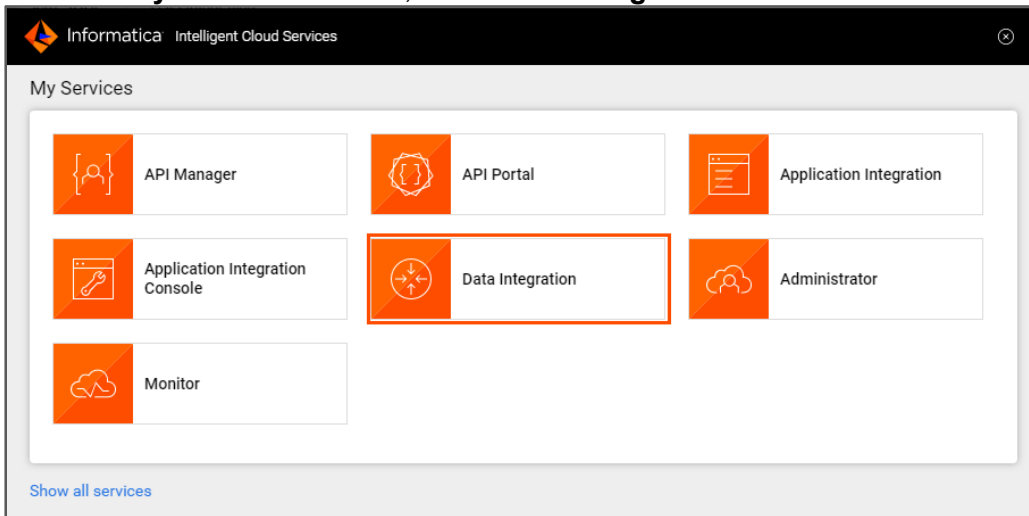


**Note:** Follow this step, if you have navigated away from the login page.

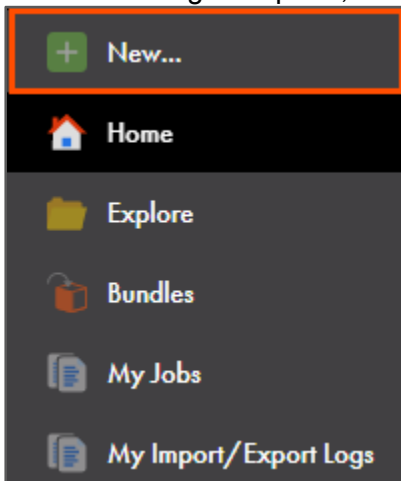
3. Enter your login credentials and click **Log In**.



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

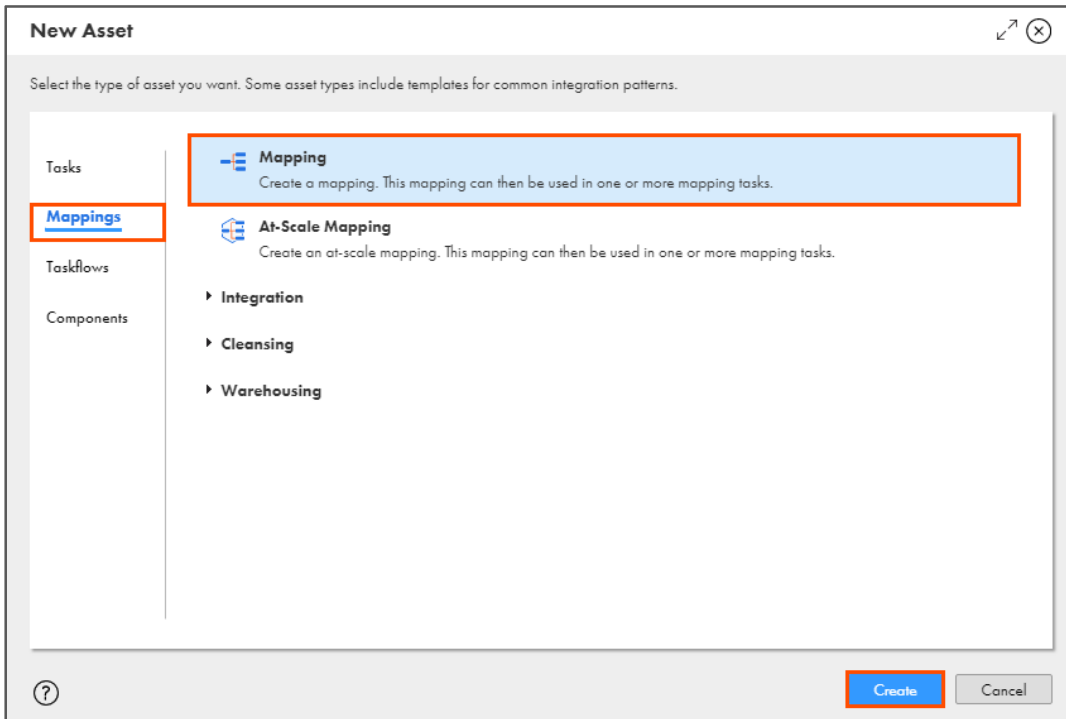


- From the Navigation pane, select **New**.

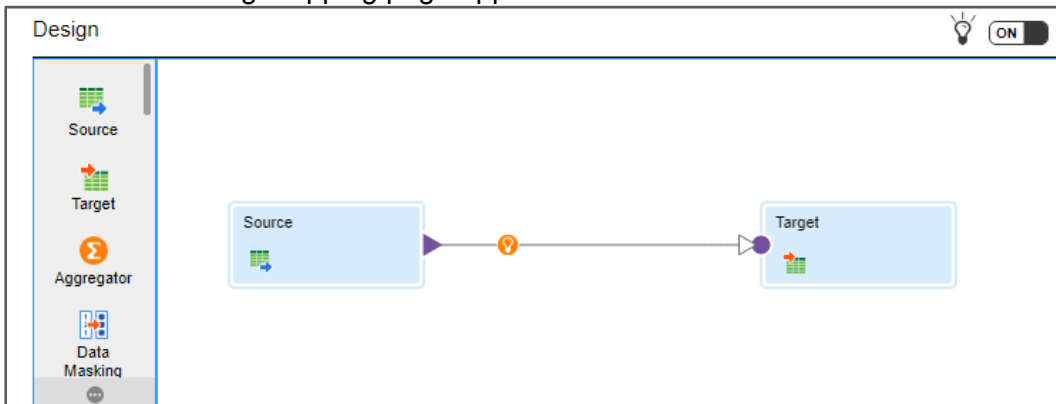


- From the New Asset window, click the **Mappings** tab, and select **Mapping**.

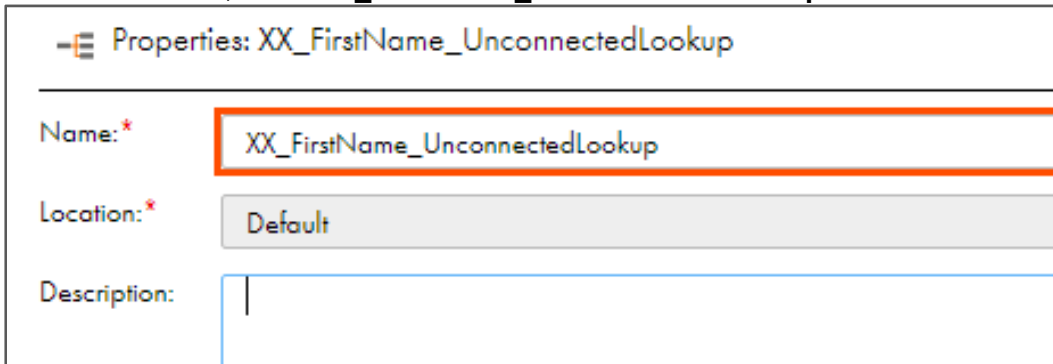
7. Click **Create**.



**Note:** The following Mapping page appears.




8. In the Name field, enter **XX\_FirstName\_UnconnectedLookup**.



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**.



Properties: Src\_Lookup

**General**

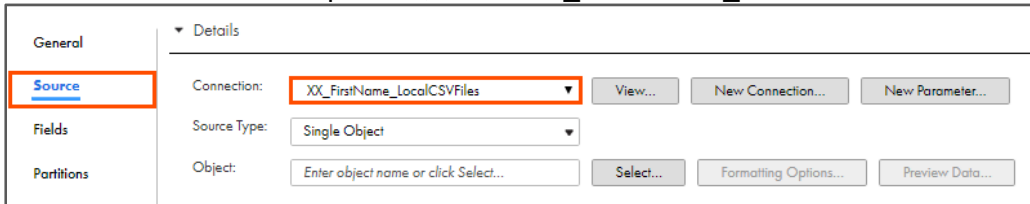
Name: \* Src\_Lookup

Source

Description:

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

12. From the Connection drop-down, select **XX\_FirstName\_LocalCSVFiles**.



General

**Source**

Fields

Partitions

Details

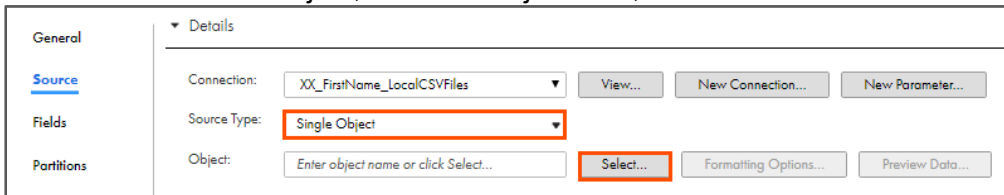
Connection: XX\_FirstName\_LocalCSVFiles View... New Connection... New Parameter...

Source Type: Single Object

Object: Enter object name or click Select... Select... Formatting Options... Preview Data...

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

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



General

**Source**

Fields

Partitions

Details

Connection: XX\_FirstName\_LocalCSVFiles View... New Connection... New Parameter...

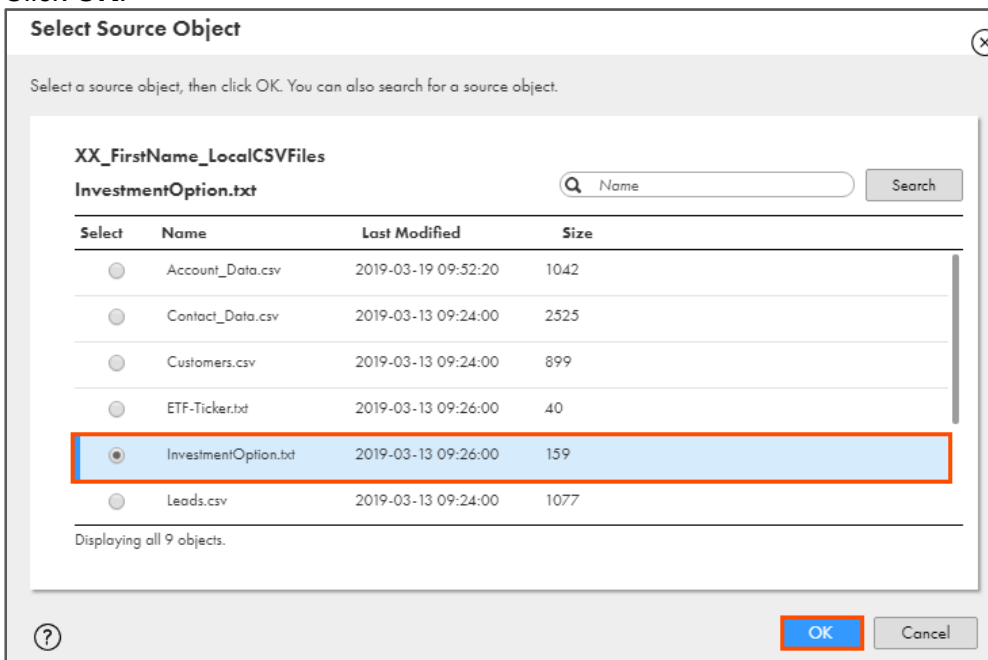
Source Type: Single Object

Object: Enter object name or click Select... Select... Formatting Options... Preview Data...

**Note:** The Select Source Object window appears.

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

16. Click **OK**.



Select Source Object

Select a source object, then click OK. You can also search for a source object.

XX\_FirstName\_LocalCSVFiles

InvestmentOption.txt

Search

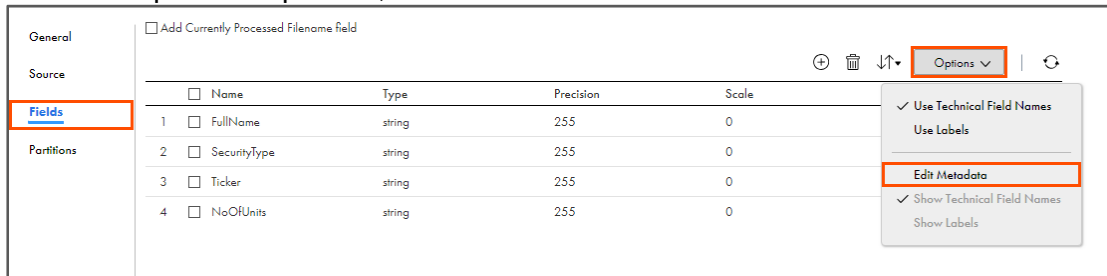
| Select                           | Name                 | Last Modified       | Size |
|----------------------------------|----------------------|---------------------|------|
| <input type="radio"/>            | Account_Data.csv     | 2019-03-19 09:52:20 | 1042 |
| <input type="radio"/>            | Contact_Data.csv     | 2019-03-13 09:24:00 | 2525 |
| <input type="radio"/>            | Customers.csv        | 2019-03-13 09:24:00 | 899  |
| <input type="radio"/>            | ETF-Ticker.txt       | 2019-03-13 09:26:00 | 40   |
| <input checked="" type="radio"/> | InvestmentOption.txt | 2019-03-13 09:26:00 | 159  |
| <input type="radio"/>            | Leads.csv            | 2019-03-13 09:24:00 | 1077 |

Displaying all 9 objects.

OK Cancel

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

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



General ☐ Add Currently Processed Filename field

Source

**Fields**

Partitions

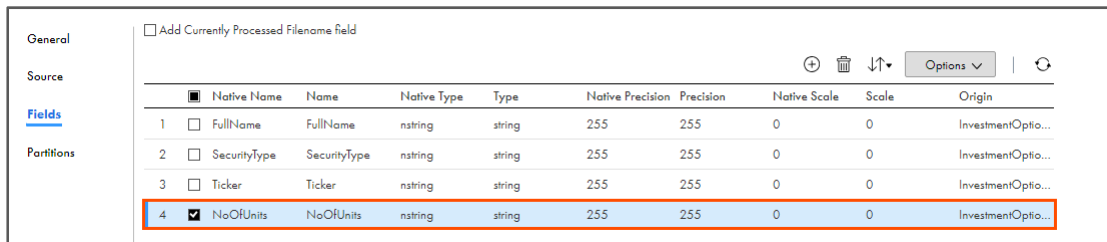
|   | <input type="checkbox"/> Name         | Type   | Precision | Scale |
|---|---------------------------------------|--------|-----------|-------|
| 1 | <input type="checkbox"/> FullName     | string | 255       | 0     |
| 2 | <input type="checkbox"/> SecurityType | string | 255       | 0     |
|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

Options ▼

- ✓ Use Technical Field Names
- Use Labels
- Edit Metadata**
- ✓ Show Technical Field Names
- Show Labels

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

19. Select **NoOfUnits** field.



General ☐ Add Currently Processed Filename field

Source

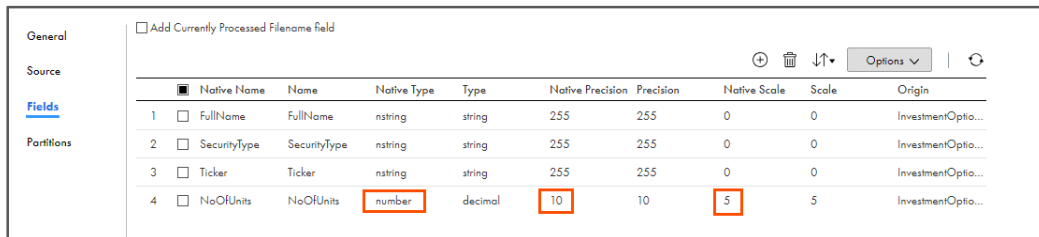
**Fields**

Partitions

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



General ☐ Add Currently Processed Filename field

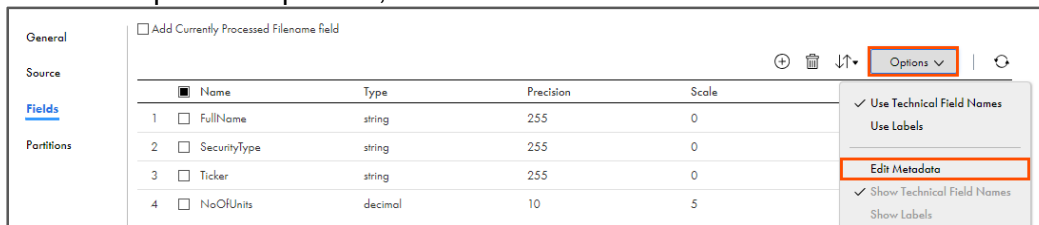
Source

**Fields**

Partitions

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

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



General ☐ Add Currently Processed Filename field

Source

**Fields**

Partitions

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

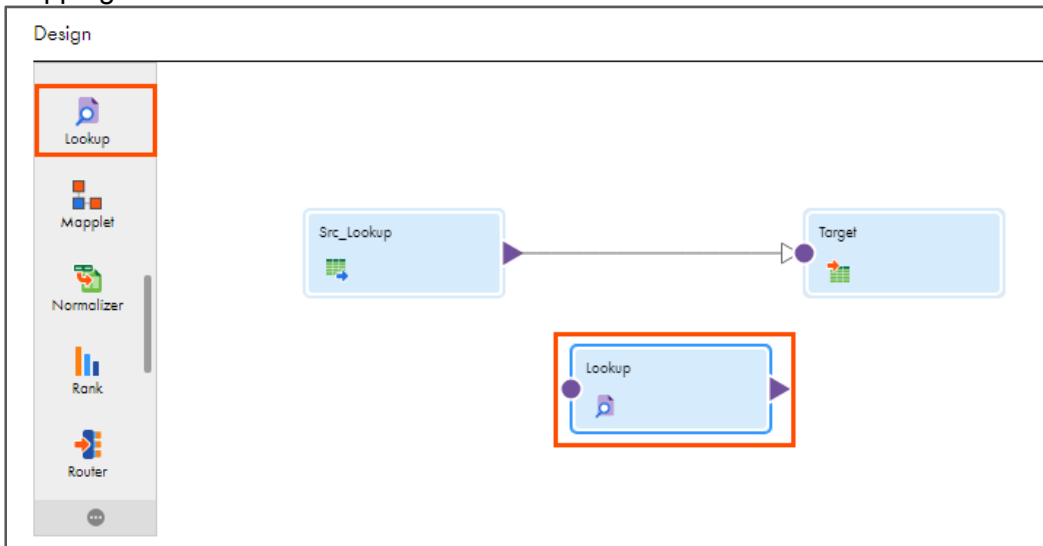
Options ▼

- ✓ Use Technical Field Names
- Use Labels
- Edit Metadata**
- ✓ Show Technical Field Names
- Show Labels



### Add Lookup Transformation:

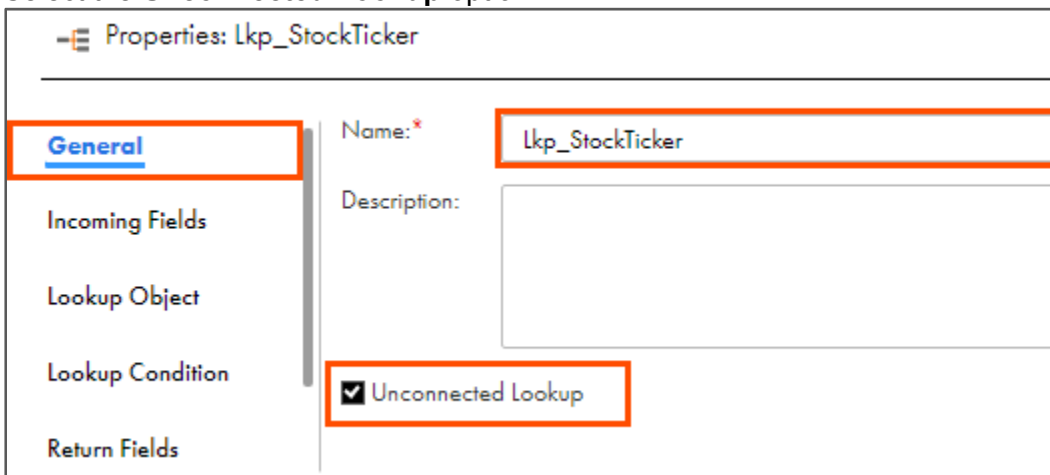
23. From the list of available transformations, drag and drop **Lookup** transformation on the mapping canvas.



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

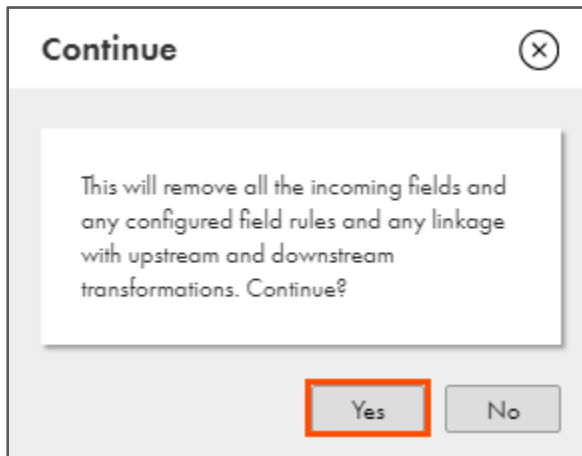
25. In the **General** section of Lookup properties, enter Name as **Lkp\_StockTicker**.

26. Select the **Unconnected Lookup** option.




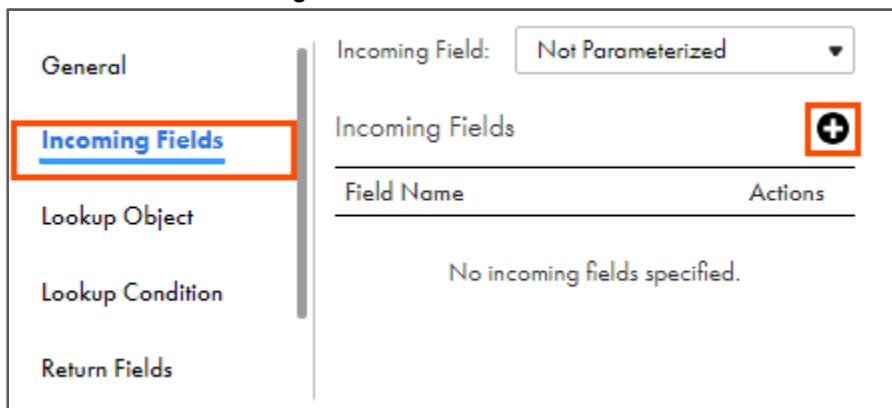
**Note:** A Continue pop-up window appears.

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

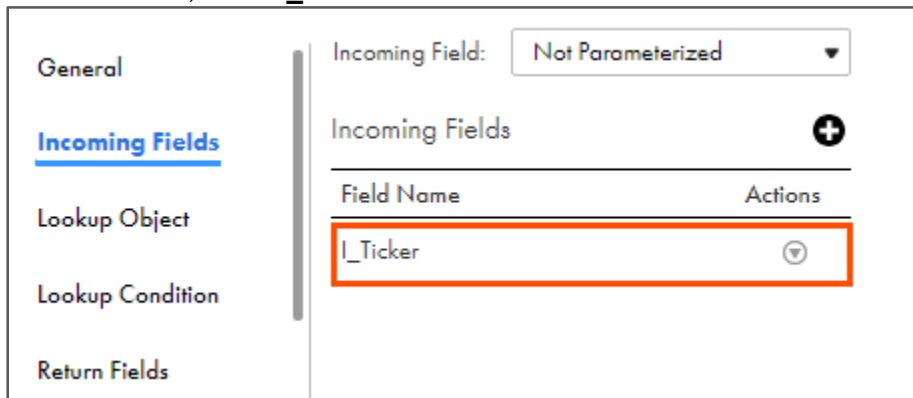


28. From the properties pane, click **Incoming Fields**.

29. To add a new incoming field, click .

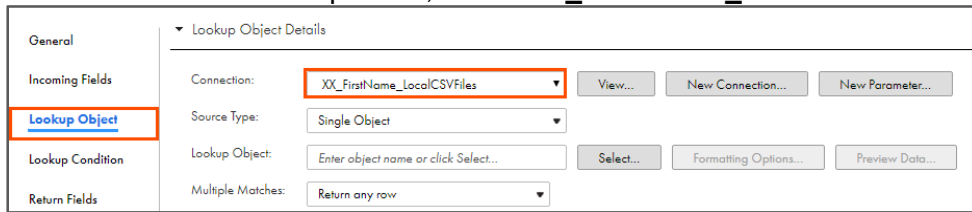


30. In Field Name, enter **I\_Ticker**.



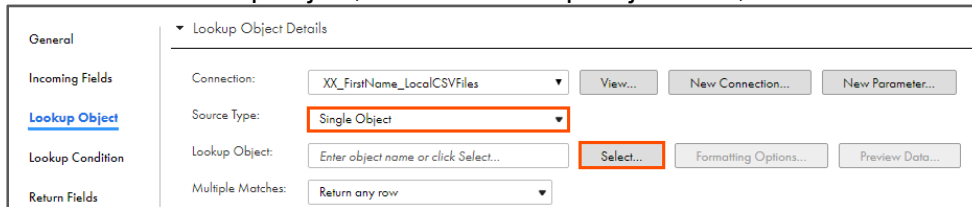
31. From the properties pane, click **Lookup Object**.

32. From the Connection drop-down, select **XX\_FirstName\_LocalCSVFiles**.



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

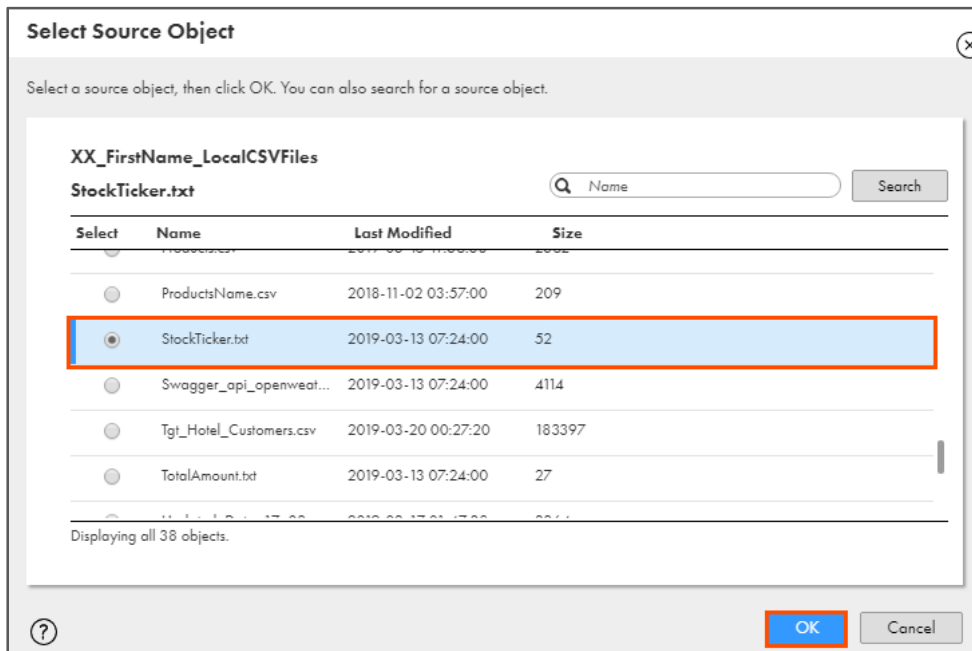
34. To select the lookup object, from the Lookup Object field, click **Select**.



**Note:** The Select Source Object window appears.

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

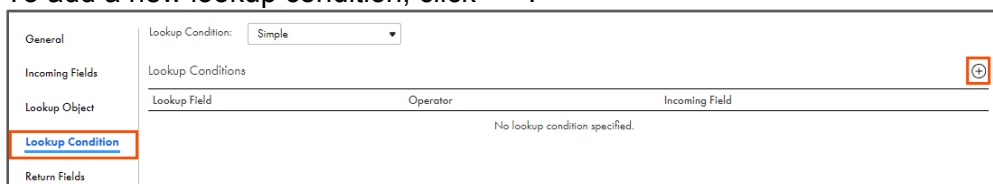
36. Click **OK**.



| 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     |

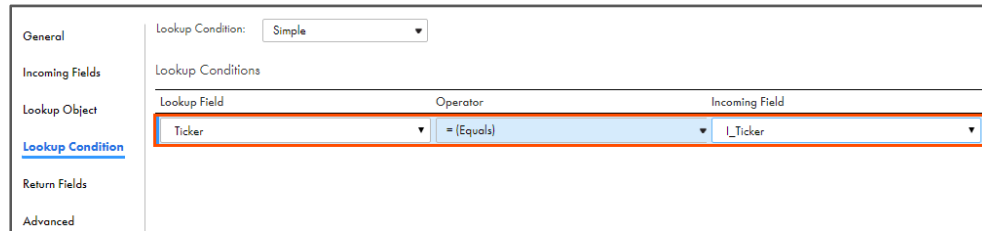
37. From the properties pane, click **Lookup Condition**.

38. To add a new lookup condition, click .



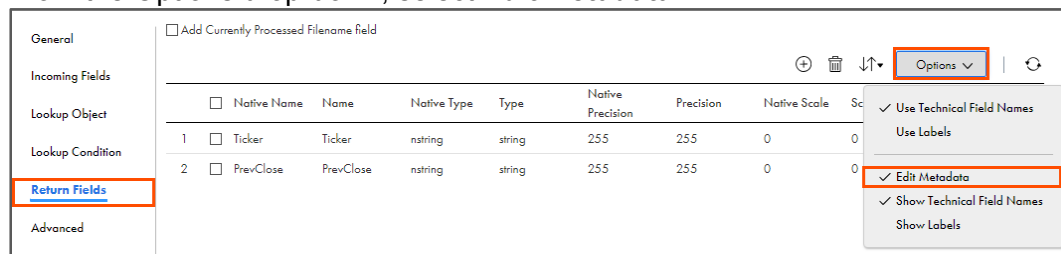
39. Enter the lookup condition, as shown in the table below:

| Lookup Field | Operator | Incoming Field |
|--------------|----------|----------------|
| Ticker       | =        | I_Ticker       |

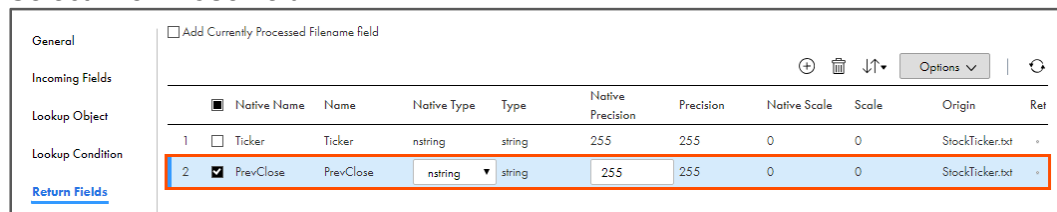


40. From the properties pane, click **Return Fields**.

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

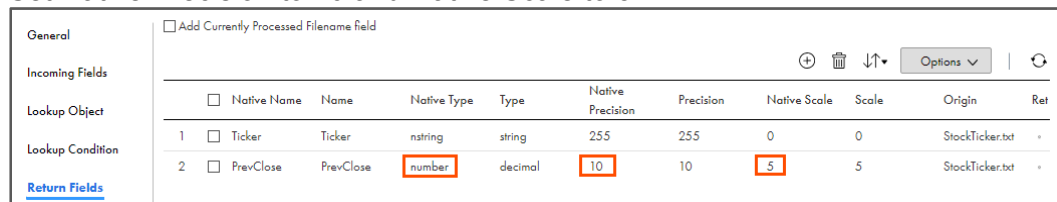


42. Select **PrevClose** field.

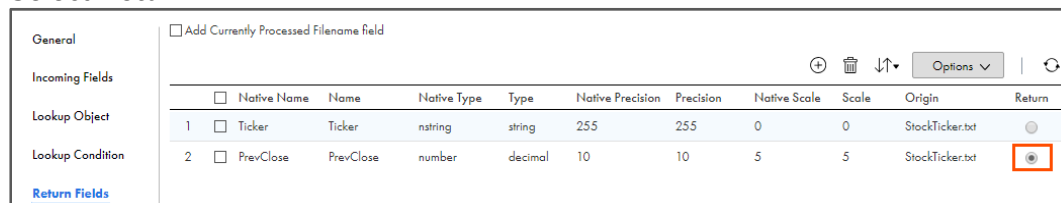


43. From the Native Type drop-down, select **number**.

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



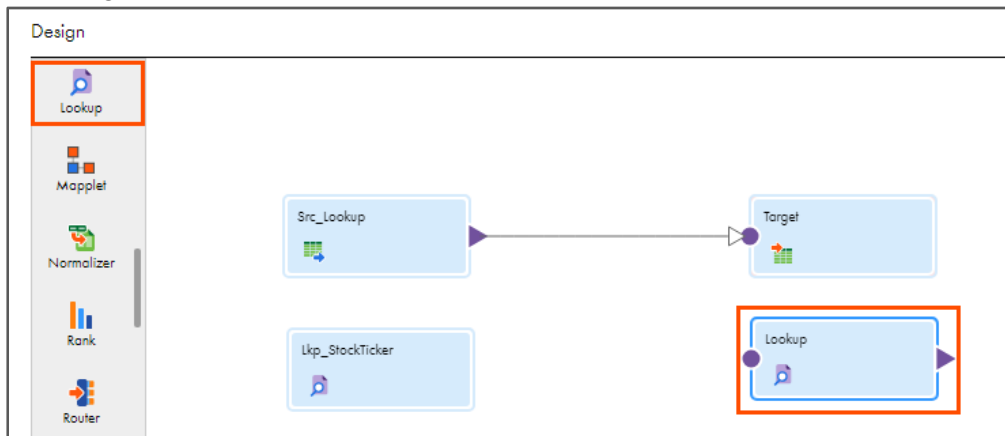
45. Select **Return**.



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

### Add second Lookup Transformation:

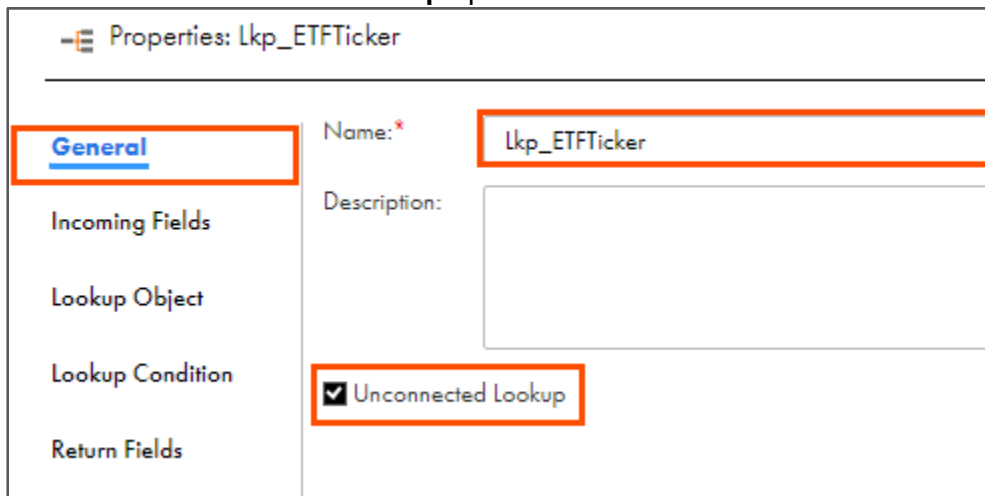
46. From the list of available transformations, drag and drop **Lookup** transformation on the mapping canvas.



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

48. In the **General** section of Lookup properties, enter the Name as **Lkp\_ETFTicker**.

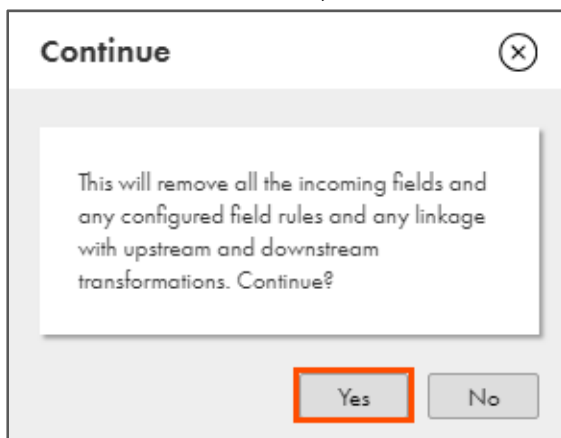
49. Select the **Unconnected Lookup** option.



The screenshot shows the Properties: Lkp\_ETFTicker dialog box. The 'General' tab is selected and highlighted with a red box. The 'Name' field is set to 'Lkp\_ETFTicker' and is highlighted with a red box. The 'Unconnected Lookup' checkbox is checked and highlighted with a red box. Other tabs visible include Incoming Fields, Lookup Object, Lookup Condition, and Return Fields.

**Note:** A Continue pop-up window appears.

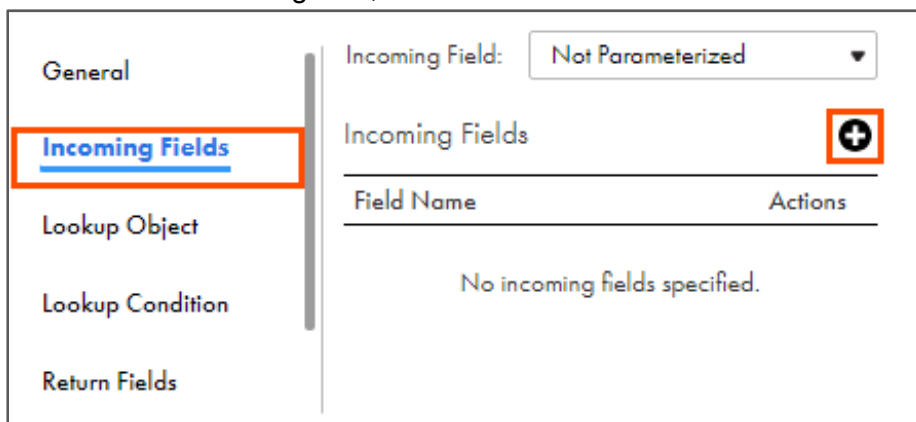
50. In the **Continue** window, select **Yes**.



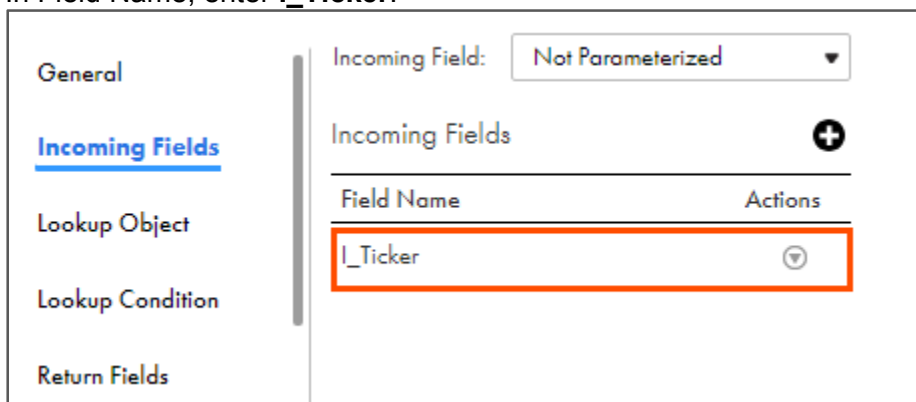
The screenshot shows the Continue dialog box with the following text: "This will remove all the incoming fields and any configured field rules and any linkage with upstream and downstream transformations. Continue?". The 'Yes' button is highlighted with a red box.

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

52. To add a new incoming field, click .

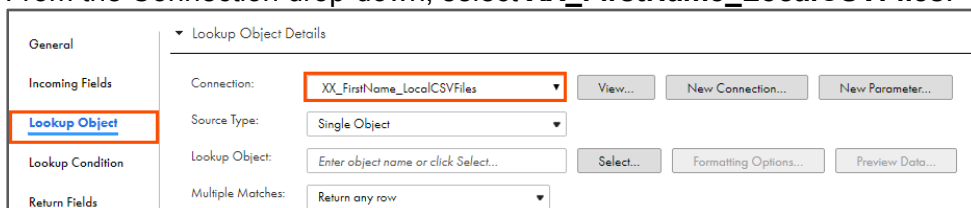


53. In Field Name, enter **I\_Ticker**.



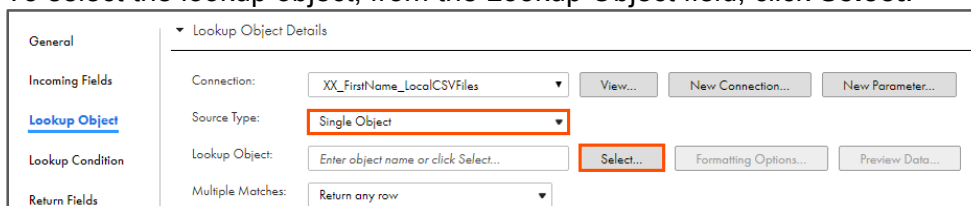
54. From the properties pane, click **Lookup Object**.

55. From the Connection drop-down, select **XX\_FirstName\_LocalCSVFiles**.



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

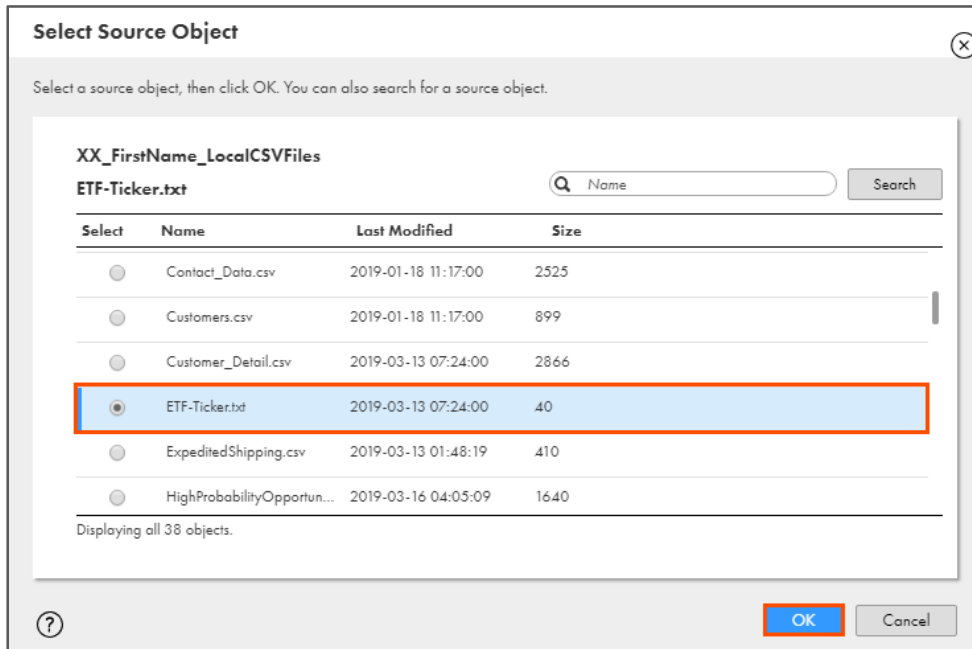
57. To select the lookup object, from the Lookup Object field, click **Select**.



**Note:** The Select Source Object window appears.

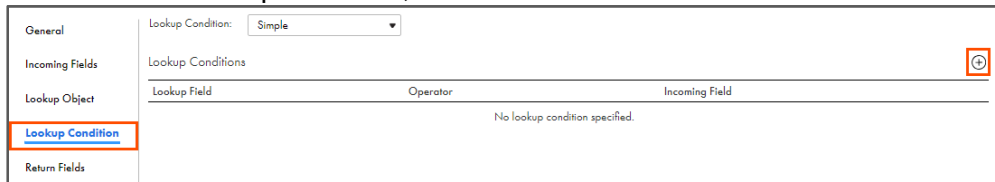
58. From the list, select **ETF-Ticker.txt**.

59. Click **OK**.



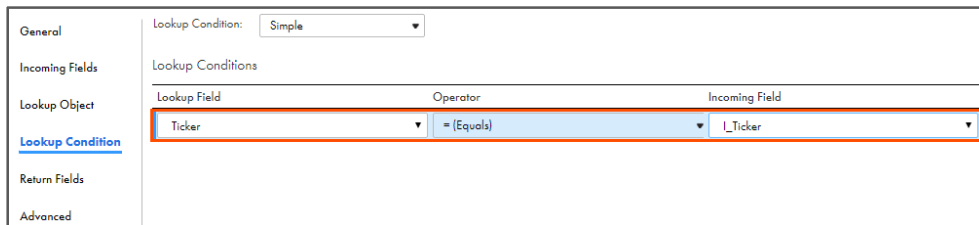
60. From the properties pane, click **Lookup Condition**.

61. To add a new lookup condition, click .



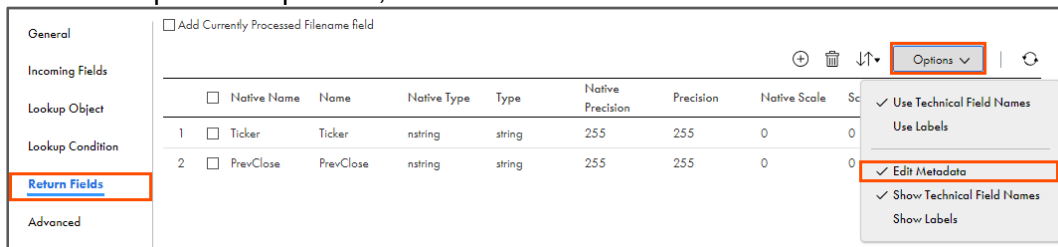
62. Enter the lookup condition, as shown in the table below:

| Lookup Field | Operator | Incoming Field |
|--------------|----------|----------------|
| Ticker       | =        | I_Ticker       |



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

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



### 65. Select **PrevClose** field.

General ☐ Add Currently Processed Filename field

Incoming Fields

Lookup Object

Lookup Condition

[Return Fields](#)

|   | <input checked="" type="checkbox"/> Native Name | Name      | Native Type | Type   | Native Precision | Precision | Native Scale | Scale | Origin         | Ret |
|---|-------------------------------------------------|-----------|-------------|--------|------------------|-----------|--------------|-------|----------------|-----|
| 1 | <input type="checkbox"/>                        | Ticker    | nstring     | string | 255              | 255       | 0            | 0     | StockTicker.bt | +   |
| 2 | <input checked="" type="checkbox"/>             | PrevClose | nstring     | string | 255              | 255       | 0            | 0     | StockTicker.bt | +   |

### 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

Incoming Fields

Lookup Object

Lookup Condition

[Return Fields](#)

|   | <input type="checkbox"/> Native Name | Name      | Native Type | Type    | Native Precision | Precision | Native Scale | Scale | Origin         | Ret |
|---|--------------------------------------|-----------|-------------|---------|------------------|-----------|--------------|-------|----------------|-----|
| 1 | <input type="checkbox"/>             | Ticker    | nstring     | string  | 255              | 255       | 0            | 0     | StockTicker.bt | +   |
| 2 | <input type="checkbox"/>             | PrevClose | number      | decimal | 10               | 10        | 5            | 5     | StockTicker.bt | +   |

### 68. Select **Return**.

General ☐ Add Currently Processed Filename field

Incoming Fields

Lookup Object

Lookup Condition

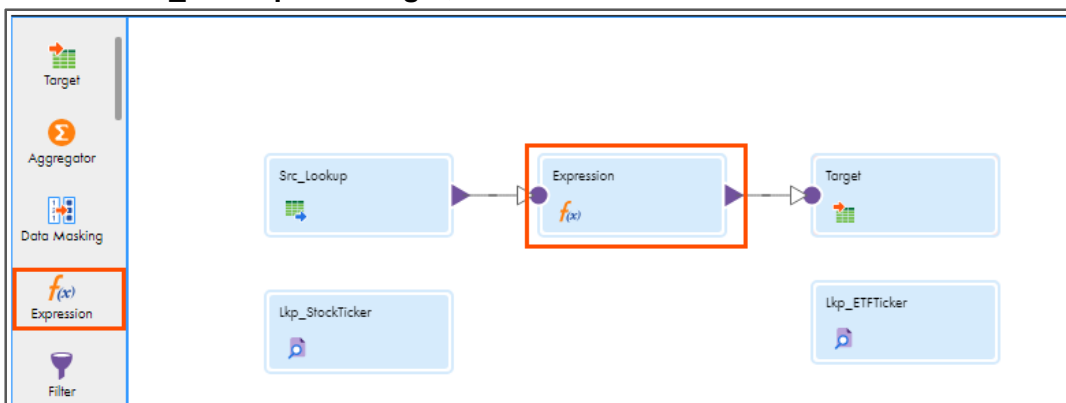
[Return Fields](#)

Advanced

|   | <input type="checkbox"/> Native Name | Name      | Native Type | Type    | Native Precision | Precision | Native Scale | Scale | Origin        | Return                           |
|---|--------------------------------------|-----------|-------------|---------|------------------|-----------|--------------|-------|---------------|----------------------------------|
| 1 | <input type="checkbox"/>             | Ticker    | nstring     | string  | 255              | 255       | 0            | 0     | ETF-Ticker.bt | <input type="radio"/>            |
| 2 | <input type="checkbox"/>             | PrevClose | number      | decimal | 10               | 10        | 5            | 5     | ETF-Ticker.bt | <input checked="" type="radio"/> |

### Add Expression Transformation:

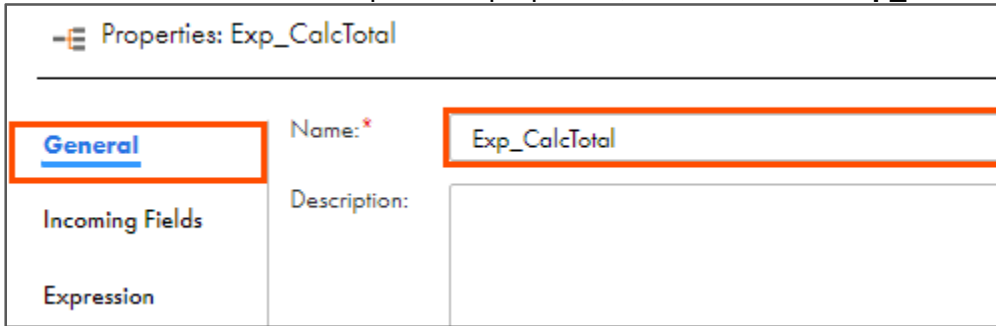
### 69. From the list of available transformations, drag and drop the **Expression** transformation between **Src\_Lookup** and **Target**, and link them.



### 70. Select **Expression** transformation from the mapping canvas.

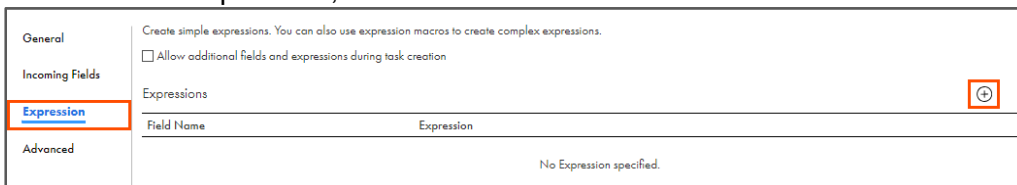


71. In the **General** section of Expression properties, enter Name as **Exp\_CalcTotal**.



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

73. To add a new expression, click .

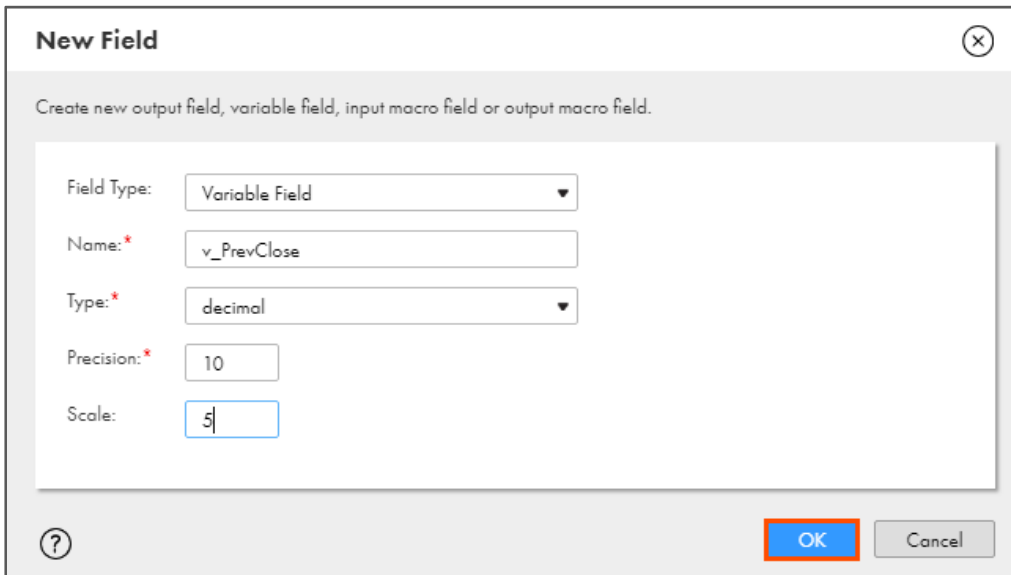


**Note:** The New Field window appears.

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 expression, click **Configure**.

| <b>General</b>         | Create simple expressions. You can also use expression macros to create complex expressions.                                                                                           |            |            |             |                              |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------|-------------|------------------------------|
| <b>Incoming Fields</b> | <input type="checkbox"/> Allow additional fields and expressions during task creation                                                                                                  |            |            |             |                              |
| <b>Expression</b>      | Expressions                                                                                                                                                                            |            |            |             |                              |
| <b>Advanced</b>        | <table border="1"> <thead> <tr> <th>Field Name</th> <th>Expression</th> </tr> </thead> <tbody> <tr> <td>v_PrevClose</td> <td><a href="#">Configure...</a></td> </tr> </tbody> </table> | Field Name | Expression | v_PrevClose | <a href="#">Configure...</a> |
| Field Name             | Expression                                                                                                                                                                             |            |            |             |                              |
| v_PrevClose            | <a href="#">Configure...</a>                                                                                                                                                           |            |            |             |                              |

**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

Open the file named **12\_LabGuide\_UsingUnconnectedLookupTransformations\_5-3** provided with this lab. Copy the command mentioned under **Step 77** and paste it in the Expression field.

78. Click **Validate**.

Field Expression: v\_PrevClose( decimal, 10, 5 )

Configure expression by adding fields and functions.

Expression: Not Parameterized

☒ The expression is Valid.

| Fields                                                                    | Parameters | Functions | Expression                                                                                           |
|---------------------------------------------------------------------------|------------|-----------|------------------------------------------------------------------------------------------------------|
| v_PrevClose (Variable)<br>FullName<br>SecurityType<br>Ticker<br>NoOfUnits |            |           | Decode(SecurityType,'Stock',<br>:LKP.Lkp_StockTicker(Ticker),'ETF',<br>:LKP.Lkp_ETFTicker(Ticker),0) |

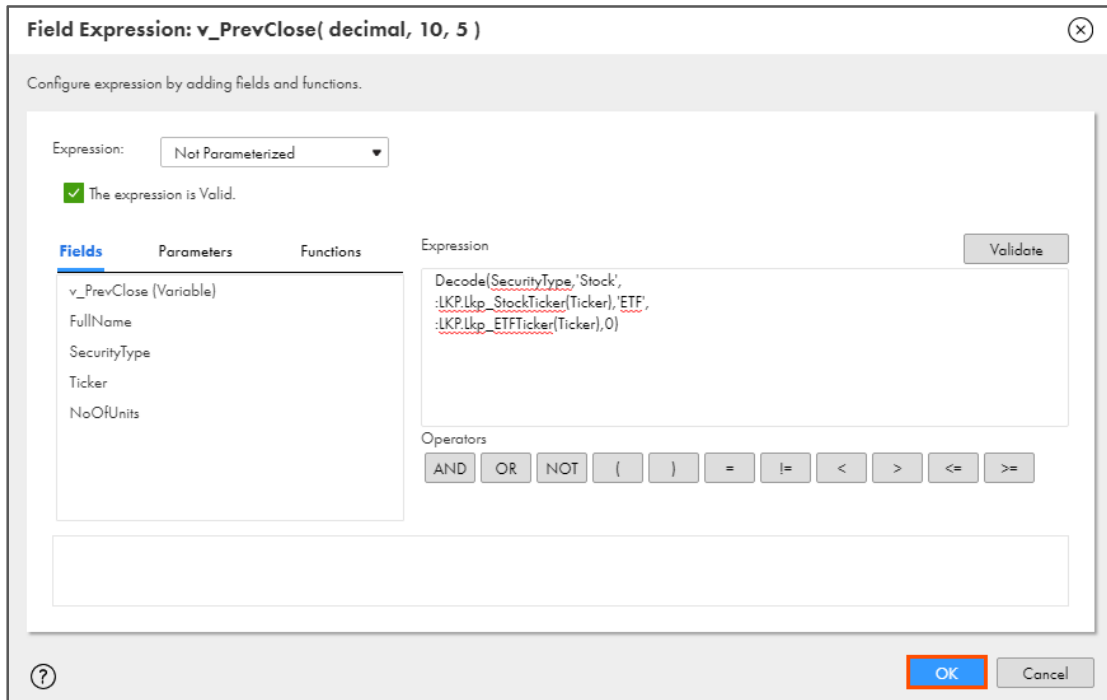
Operators: AND OR NOT ( ) = != < > <= >=

[Validate](#)

OK Cancel

**Note:** The expression is Valid message appears.

79. Click **OK**.



**Field Expression: v\_PrevClose( decimal, 10, 5 )**

Configure expression by adding fields and functions.

Expression: Not Parameterized

☒ The expression is Valid.

**Fields**   Parameters   Functions   Expression   Validate

**Fields**

- v\_PrevClose (Variable)
- FullName
- SecurityType
- Ticker
- NoOfUnits

**Expression**

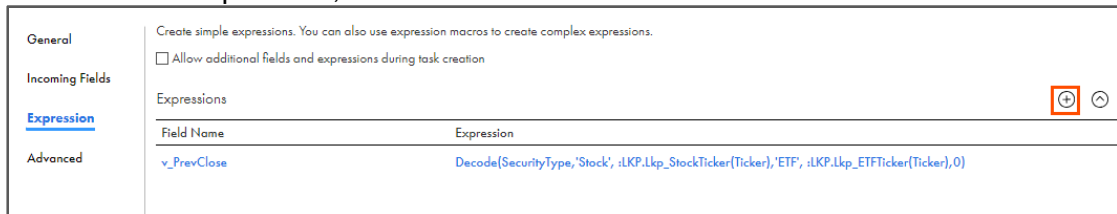
```
Decode(SecurityType,'Stock',
:LKP.Lkp_StockTicker(Ticker),'ETF',
:LKP.Lkp_ETFTicker(Ticker),0)
```

**Operators**

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

? OK Cancel

80. To add a new expression, click .



**General**



Create simple expressions. You can also use expression macros to create complex expressions.

☐ Allow additional fields and expressions during task creation

**Incoming Fields**

**Expression**

**Advanced**

**Expressions**  

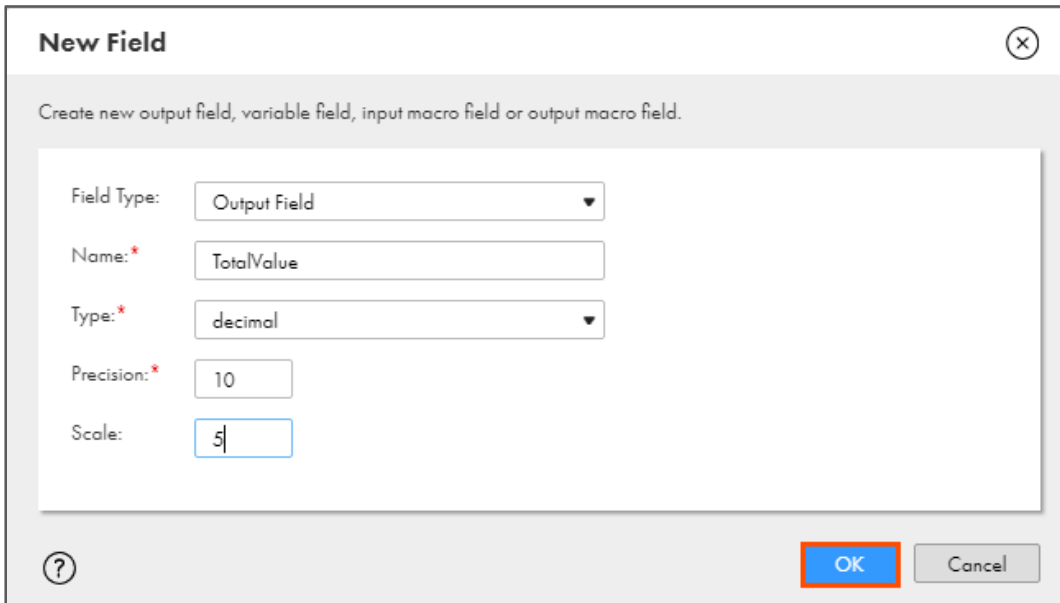
| Field Name  | Expression                                                                                     |
|-------------|------------------------------------------------------------------------------------------------|
| v_PrevClose | Decode(SecurityType,'Stock', :LKP.Lkp_StockTicker(Ticker),'ETF', :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**.



**New Field** [Close]

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

Field Type: Output Field ▼

Name: \* TotalValue

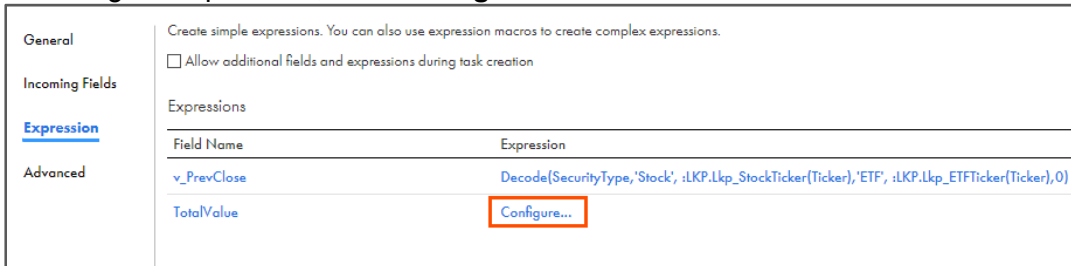
Type: \* decimal ▼

Precision: \* 10

Scale: 5

[?] [OK] [Cancel]

83. To configure expression, click **Configure**.



**General**

Create simple expressions. You can also use expression macros to create complex expressions.

☐ Allow additional fields and expressions during task creation

**Incoming Fields**

**Expression**

| Field Name  | Expression                                                                                     |
|-------------|------------------------------------------------------------------------------------------------|
| v_PrevClose | Decode(SecurityType,'Stock', :LKP.Lkp_StockTicker(Ticker),'ETF', :LKP.Lkp_ETFTicker(Ticker),0) |
| TotalValue  | <a href="#">Configure...</a>                                                                   |

**Advanced**

**Note:** The Field Expression window appears.

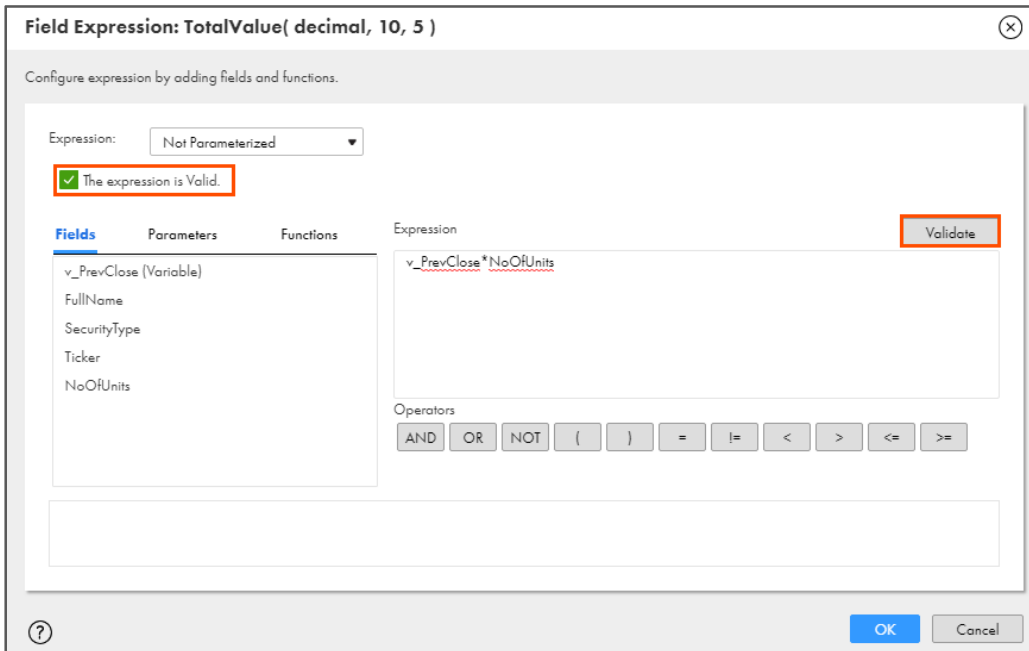
84. In the Expression field, enter the following expression:

**v\_PrevClose\*NoOfUnits**

OR

Open the file named **12\_LabGuide\_UsingUnconnectedLookupTransformations\_5-3** provided with this lab. Copy the command mentioned under **Step 84** and paste it in the Expression field.

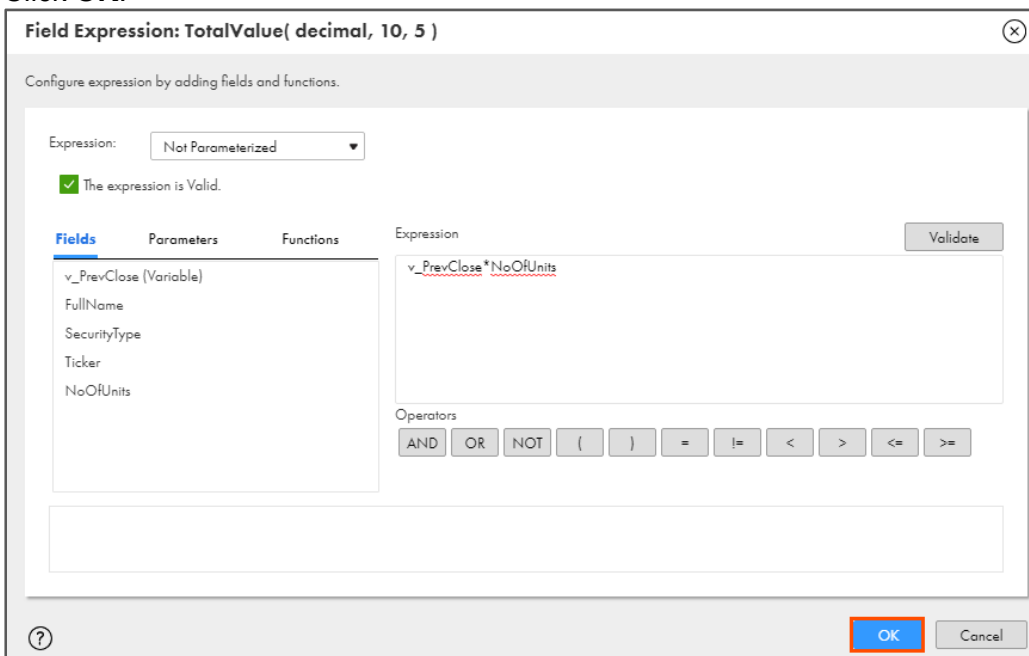
85. Click **Validate**.



The dialog box is titled "Field Expression: TotalValue( decimal, 10, 5 )". It contains a section for configuring the expression. The "Expression:" dropdown is set to "Not Parameterized". Below it, a green checkmark icon is next to the text "The expression is Valid.", which is highlighted with a red rectangle. The "Fields" tab is selected, showing a list of fields: v\_PrevClose (Variable), FullName, SecurityType, Ticker, and NoOfUnits. The "Expression" text box contains the formula "v\_PrevClose \* NoOfUnits". The "Operators" section shows various operators: AND, OR, NOT, (, ), =, !=, <, >, <=, and >=. A "Validate" button is highlighted with a red rectangle. At the bottom, there are "OK" and "Cancel" buttons.

**Note:** The expression is Valid message appears.

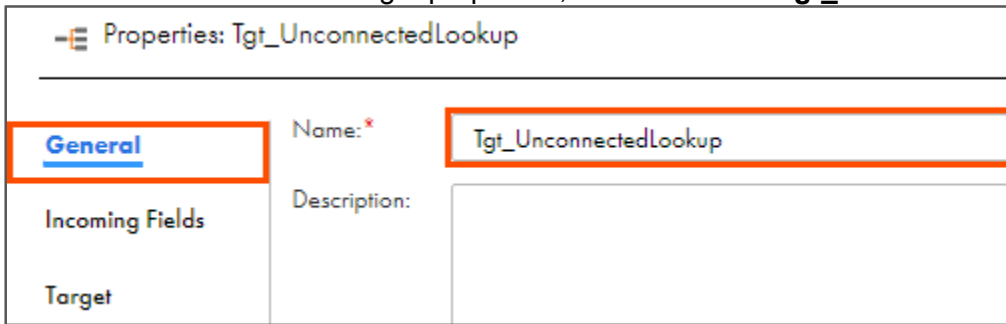
86. Click **OK**.



This dialog box is identical to the one in the previous step, showing the same configuration and validation message. However, the "OK" button at the bottom right is now highlighted with a red rectangle, indicating the next step in the process.

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**.



Properties: Tgt\_UnconnectedLookup

**General**

Name: \* Tgt\_UnconnectedLookup

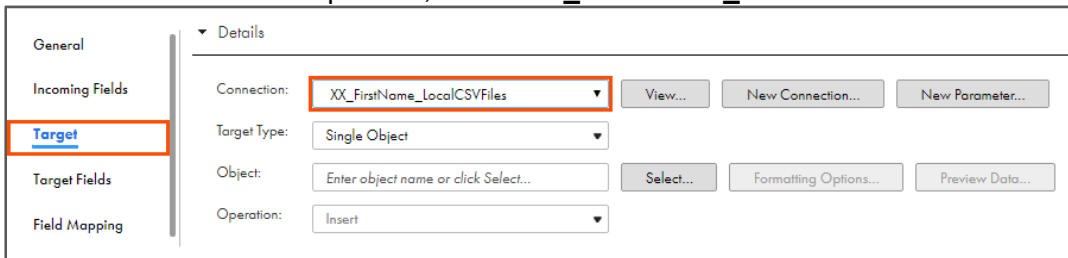
Description:

Incoming Fields

Target

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

90. From the Connection drop-down, select **XX\_FirstName\_LocalCSVFiles**.



General

Incoming Fields

**Target**

Target Fields

Field Mapping

Details

Connection: XX\_FirstName\_LocalCSVFiles View... New Connection... New Parameter...

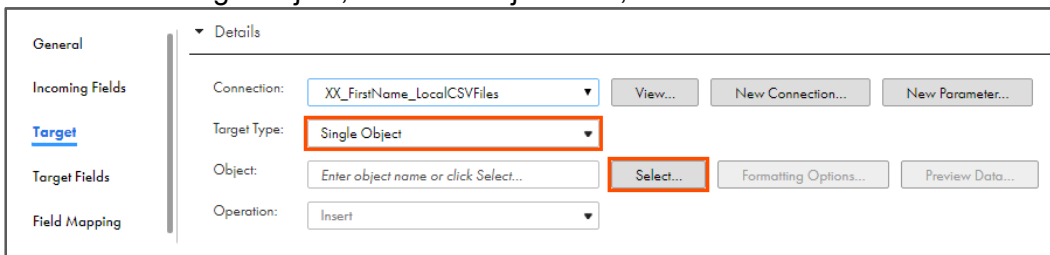
Target Type: Single Object

Object: Enter object name or click Select... Select... Formatting Options... Preview Data...

Operation: Insert

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

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



General

Incoming Fields

**Target**

Target Fields

Field Mapping

Details

Connection: XX\_FirstName\_LocalCSVFiles View... New Connection... New Parameter...

Target Type: Single Object

Object: Enter object name or click Select... Select... Formatting Options... Preview Data...

Operation: Insert

**Note:** The Target Object window appears.

93. From the list, select **TotalAmount.txt**.

94. 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

XX\_FirstName\_LocalCSVFiles

TotalAmount.txt

Name

Search

| Select                           | Name                    | Last Modified       | Size   |
|----------------------------------|-------------------------|---------------------|--------|
| <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 checked="" type="radio"/> | TotalAmount.txt         | 2019-03-13 07:24:00 | 27     |
| <input type="radio"/>            | Updated_Data_17_03_...  | 2019-03-17 01:47:38 | 3364   |
| <input type="radio"/>            | WeatherByCity.csv       | 2019-03-19 01:55:00 | 294    |
| <input type="radio"/>            | XX1_ACCOUNT.csv         | 2019-03-07 22:31:53 | 1026   |

Displaying all 38 objects.

| Incoming Field | Target Field |
|----------------|--------------|
| TotalValue     | AccountValue |
| FullName       | FullName     |

General

Incoming Fields

Target

Target Fields

Field Mapping

Field map options: Manual

Incoming Fields: (2 of 5 mapped)

Find

| Field Name ^ |
|--------------|
| TotalValue   |
| FullName     |
| SecurityType |
| Ticker       |
| NoOfUnits    |

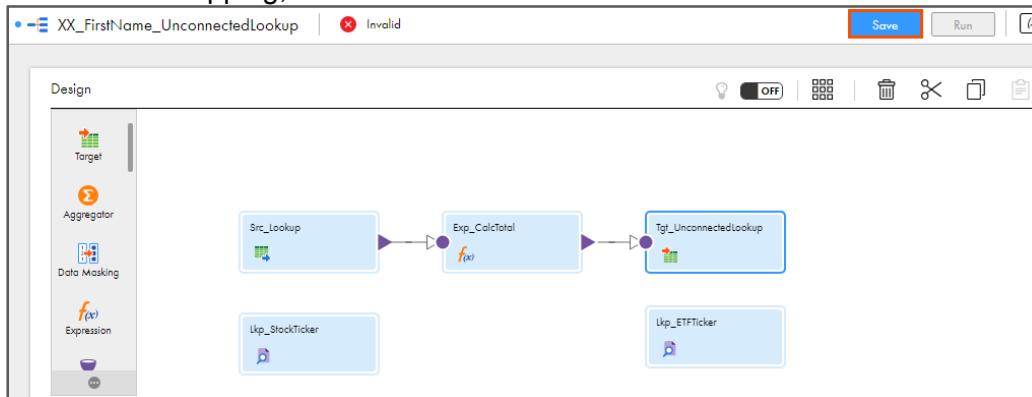
Incoming Fields: (2 of 5 mapped)

Target Fields: (2 of 2 mapped)

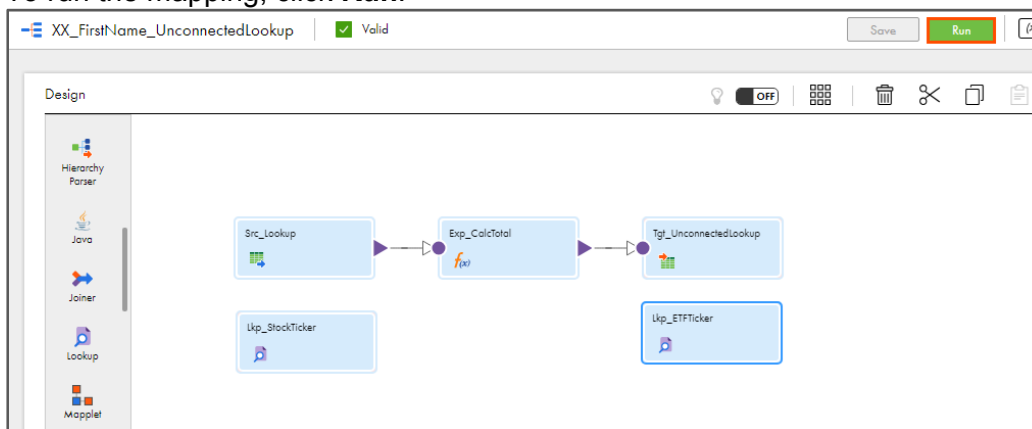
Find

| Field Name ^ | Mapped Field |
|--------------|--------------|
| FullName     | FullName     |
| AccountValue | TotalValue   |

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



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

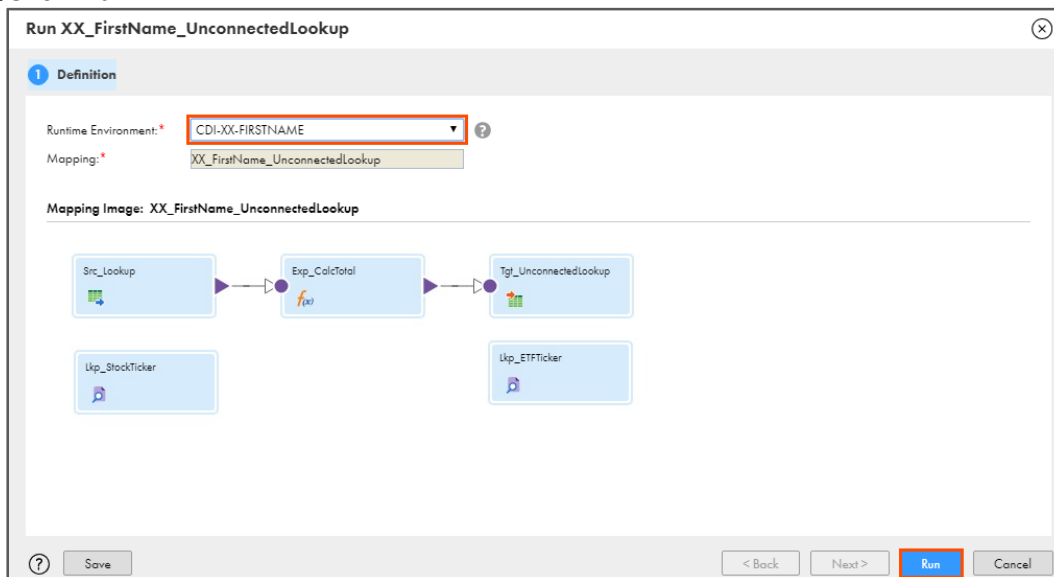


**Note:** The Run mapping window appears.

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

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

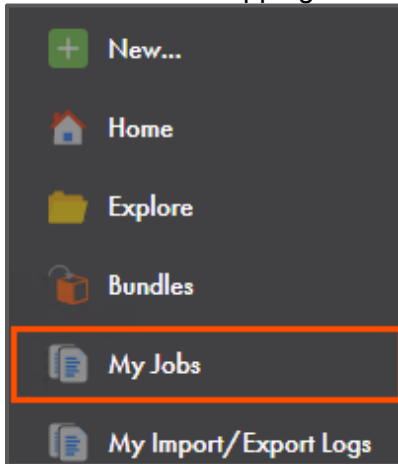
100. Click **Run**.





## Monitor Status:

101. To monitor the mapping status, from the Navigation pane, click **My Jobs**.



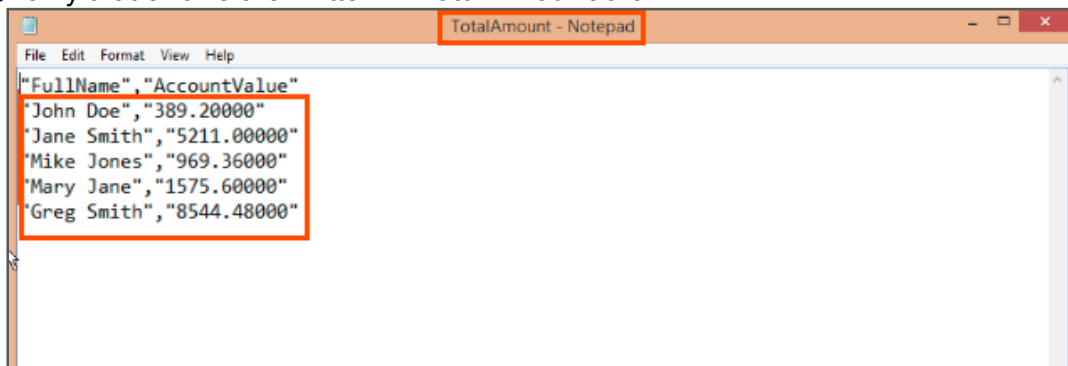
102. When the task completes, the status changes to **Success**.

| Jobs (1 of 27) <span>Up to date</span> |          | Updated 2:29:54 AM PDT |              |                |                      |
|----------------------------------------|----------|------------------------|--------------|----------------|----------------------|
| 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, 20... | 5              | <span>Success</span> |

**Note:** Observe that 5 success rows are processed.

103. On your local machine, go to **C:\IICS LabFiles**.

104. Verify that 5 rows are written in **TotalAmount.txt**.



*This concludes the lab.*



## Module 5: Advanced Transformations and Mapping Tasks

### Lab 5-4: Creating a Mapping using SQL Transformation

#### Overview:

In IICS, you can use the SQL transformation to call a stored procedure or function in a Microsoft SQL Server or an Oracle database.

In this lab, you will create a mapping using SQL transformation.

#### Objective:

- Create a mapping using SQL Transformation

#### Scenario:

Ruby wants to use stored procedure to fetch the total units sold for a given customer id from ORDERS table. So, she asks John to create a mapping using SQL transformation to read the data using Oracle database.

#### Duration:

15 minutes

---

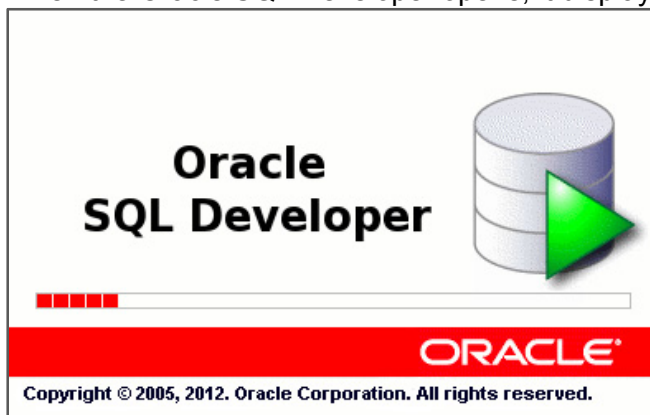
#### Tasks:

##### Copy Source File:


1. Copy **SQL\_Input.txt** file provided with this lab and paste it in your flat file directory (C:\IICSLabFiles).

##### Create Procedure:


1. To open Oracle, from the windows **Start** menu, select **SQL Developer**.
2. When the Oracle SQL Developer opens, it displays the following window:

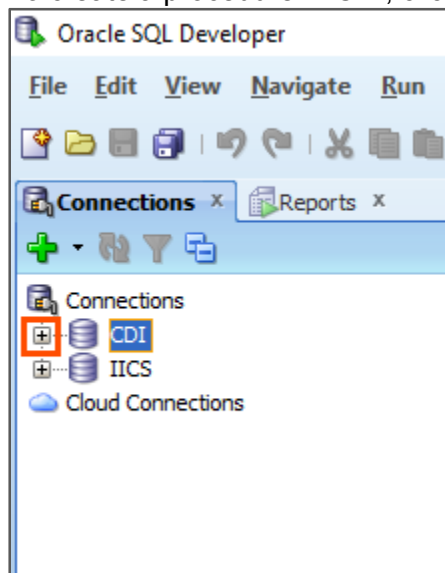


**Note:** After the application opens, the Tip of the Day window appears.

3. To close the Tip of the Day window, click .



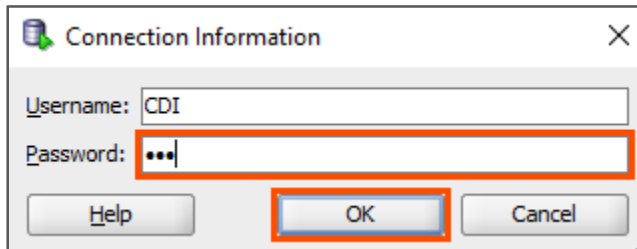
4. To create a procedure in CDI, click .



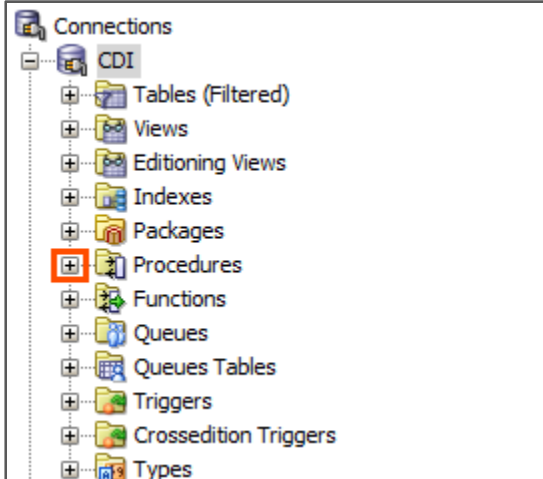
**Note:** The Connection Information window appears.

5. In the Password field, enter **CDI**.

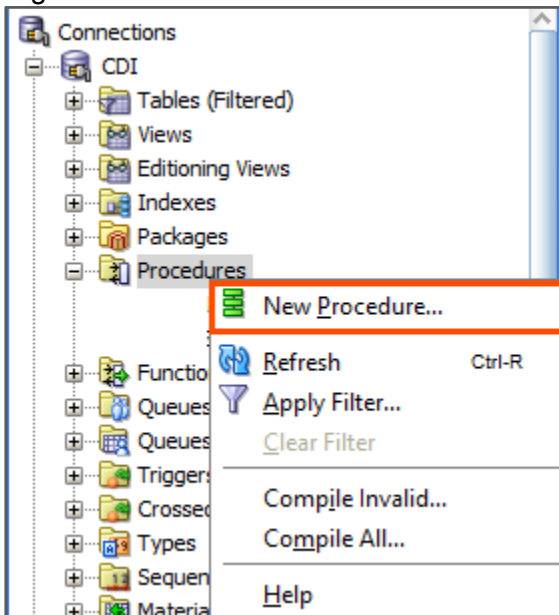
6. Click **OK**.



7. To expand the Procedures section, click .




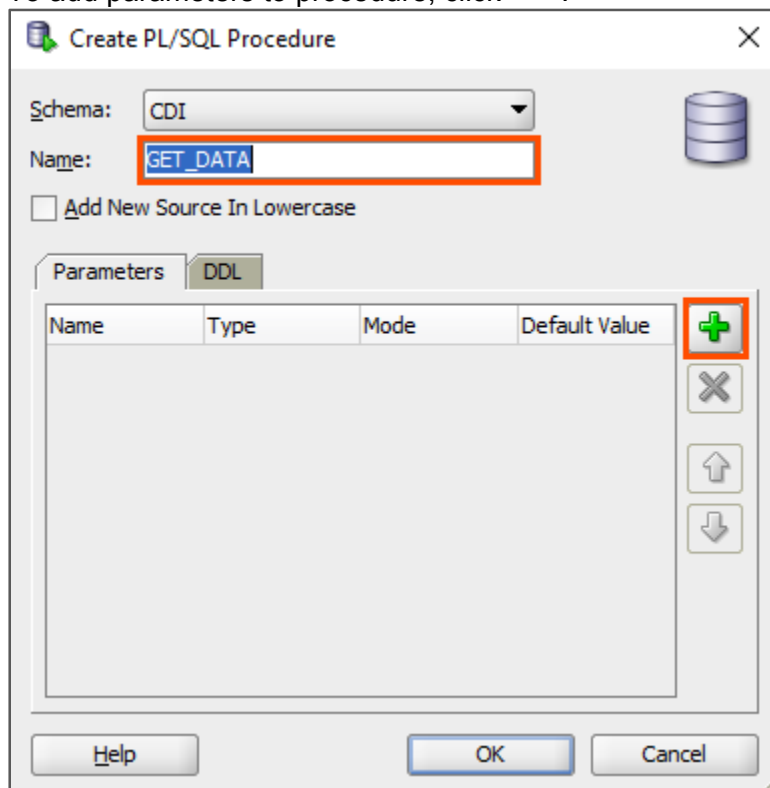
8. Right click Procedures and click **New Procedure**.



**Note:** The Create PL/SQL Procedure window appears.

9. In the Name field, enter **GET\_DATA**.

10. To add parameters to procedure, click .



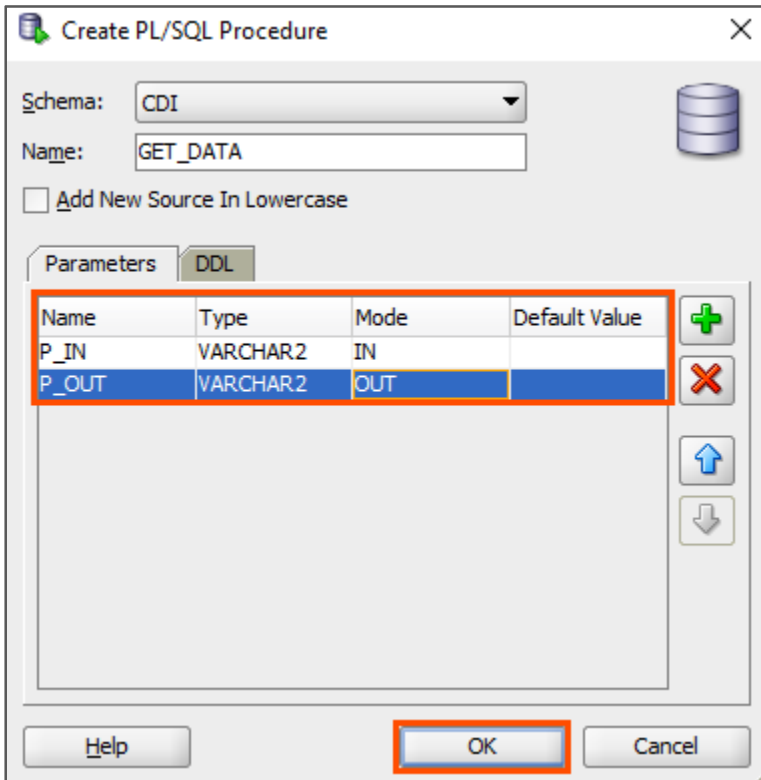
The dialog box titled "Create PL/SQL Procedure" shows the "Parameters" tab selected. The "Schema" dropdown is set to "CDI". The "Name" text box contains "GET\_DATA" and is highlighted with a red rectangle. Below the "Name" text box is a checkbox labeled "Add New Source In Lowercase". The "Parameters" table is empty, and the "Add" button (a green plus icon) is highlighted with a red rectangle. The "DDL" tab is also visible. At the bottom are "Help", "OK", and "Cancel" buttons.

11. Enter the details as shown in table below:

| Name  | Type     | Mode |
|-------|----------|------|
| P_IN  | VARCHAR2 | IN   |
| P_OUT | VARCHAR2 | OUT  |

12.

13. Click **OK**.



The dialog box 'Create PL/SQL Procedure' is shown. The 'Schema' dropdown is set to 'CDI'. The 'Name' text box contains 'GET\_DATA'. The 'Add New Source In Lowercase' checkbox is unchecked. The 'Parameters' tab is selected, showing a table with two parameters: P\_IN (VARCHAR2, IN) and P\_OUT (VARCHAR2, OUT). The 'OK' button is highlighted with a red box.

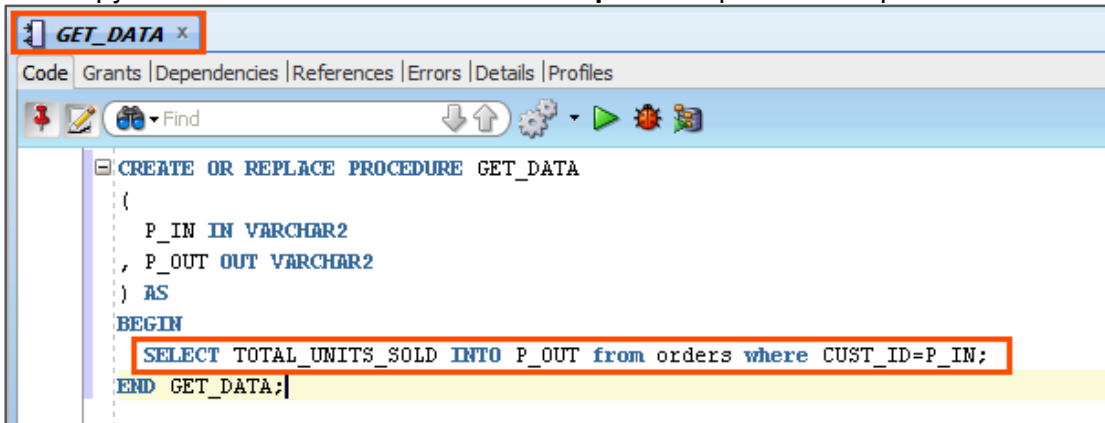
| Name  | Type     | Mode | Default Value |
|-------|----------|------|---------------|
| P_IN  | VARCHAR2 | IN   |               |
| P_OUT | VARCHAR2 | OUT  |               |

**Note:** The GET\_DATA tab appears.

14. In the GET\_DATA tab, replace **NULL;** with following statement.

**SELECT TOTAL\_UNITS\_SOLD INTO P\_OUT from orders where CUST\_ID=P\_IN;**  
OR

Open the file named **13\_LabGuide\_UsingSQLTransformation\_5-4** provided with this lab. Copy the command mentioned under **Step 13** and paste it to replace NULL.




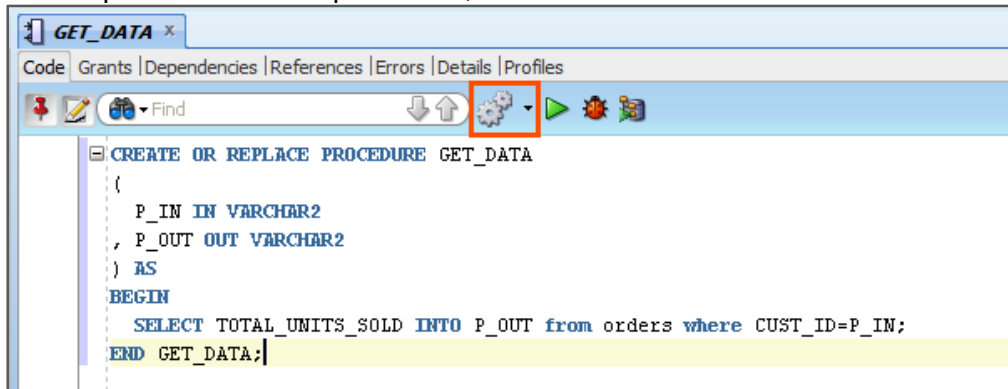
The SQL Developer interface shows the 'GET\_DATA' tab selected. The code editor displays the following SQL code:


```

CREATE OR REPLACE PROCEDURE GET_DATA
(
  P_IN IN VARCHAR2
, P_OUT OUT VARCHAR2
) AS
BEGIN
  SELECT TOTAL_UNITS_SOLD INTO P_OUT from orders where CUST_ID=P_IN;
END GET_DATA;
  
```

The line `SELECT TOTAL_UNITS_SOLD INTO P_OUT from orders where CUST_ID=P_IN;` is highlighted with a red box.

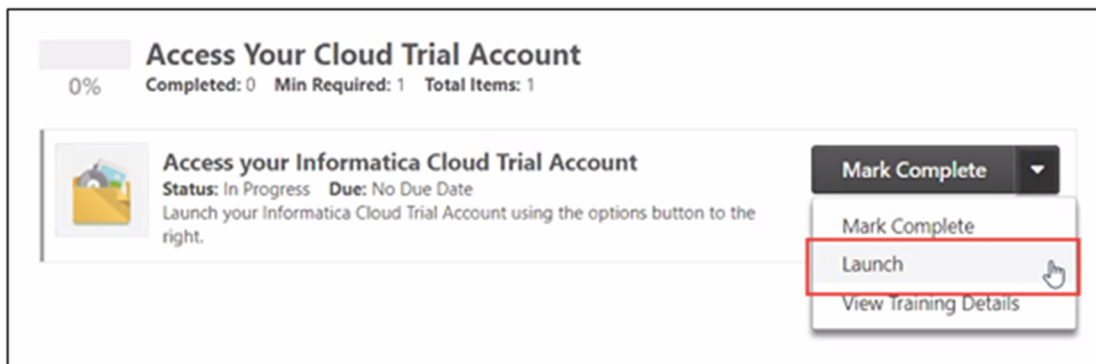
15. To compile and save the procedure, click .



16. To close the SQL Developer, click .

### Create Mapping:

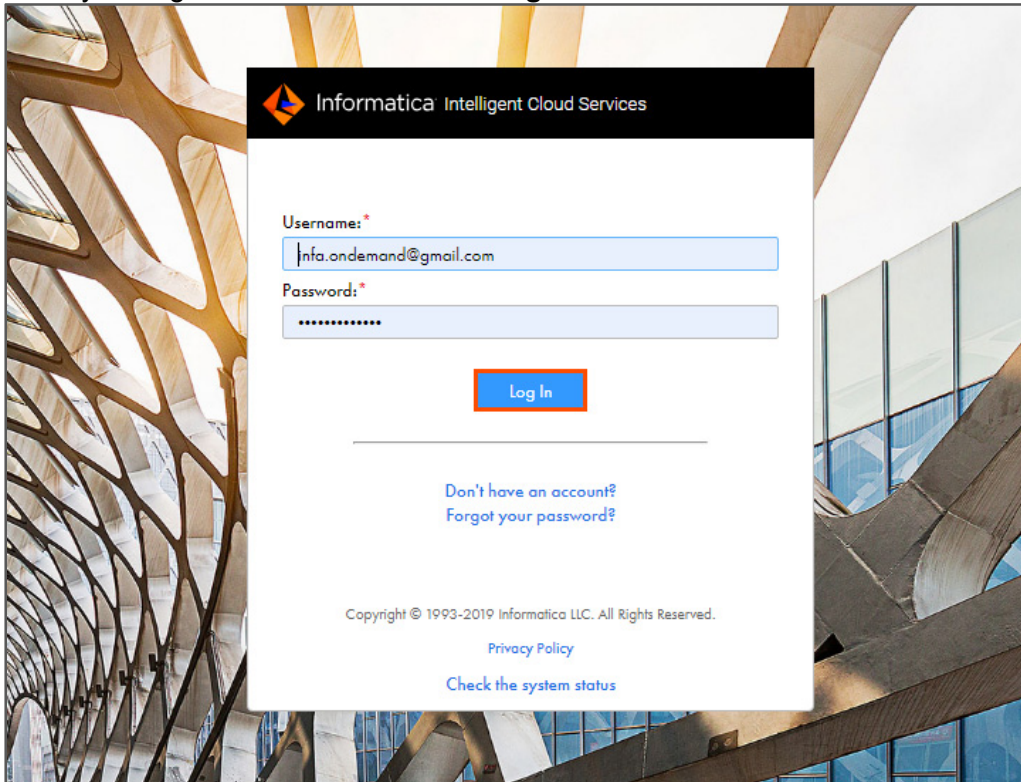
17. Access your cloud trial account by clicking **Launch** in your option Menu. If the option menu is labeled anything other than **Launch**, click the down arrow to the right and click **Launch**.



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

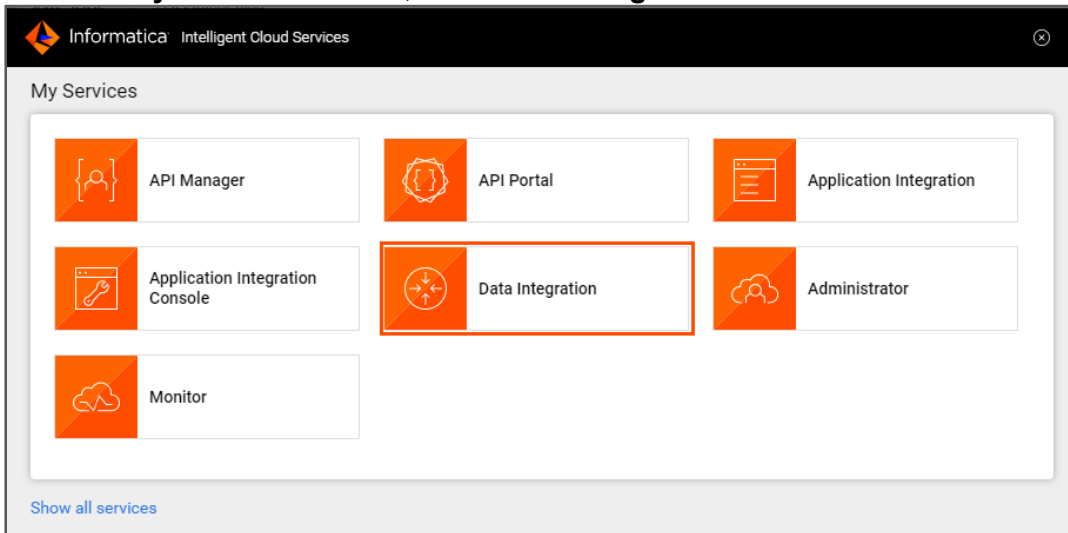


18. Enter your login credentials and click **Log In**.

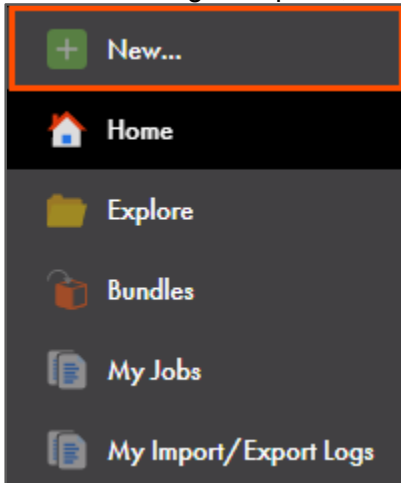


The login screen for Informatica Intelligent Cloud Services is displayed over a background image of a modern building's interior with a complex, organic structural design. The login form is a white rectangular box with a black header containing the Informatica logo and the text "Informatica Intelligent Cloud Services". Inside the form, there are two input fields: "Username:" with the email "info.ondemand@gmail.com" and "Password:" with masked characters. Below these fields is a blue "Log In" button. Underneath the button, there are two links: "Don't have an account?" and "Forgot your password?". At the bottom of the form, there is a copyright notice "Copyright © 1993-2019 Informatica LLC. All Rights Reserved.", a link to the "Privacy Policy", and a link to "Check the system status".

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

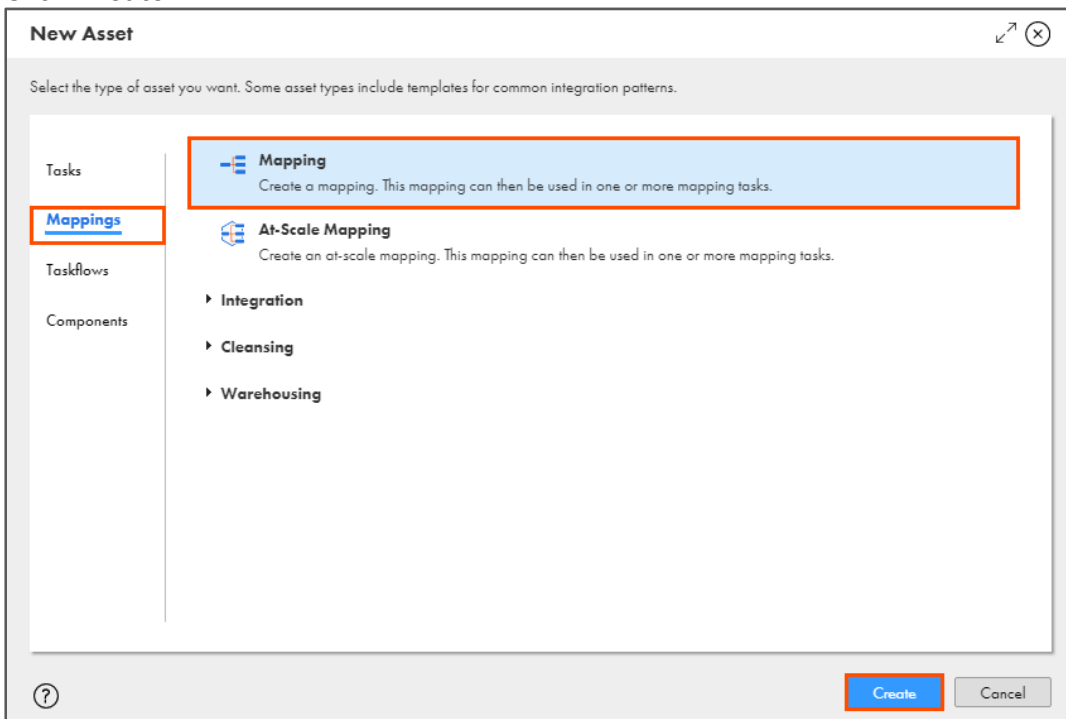


20. From the Navigation pane, select **New**.



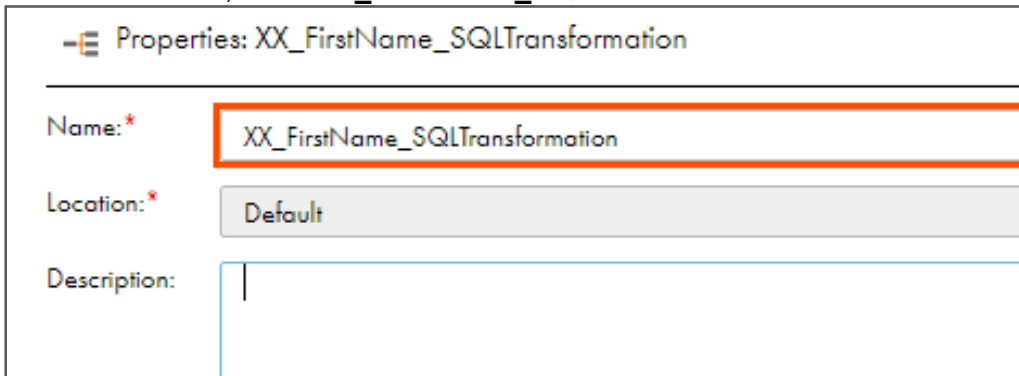
21. From the New Asset window, click the **Mappings** tab, and select **Mapping**.

22. Click **Create**.



**Note:** The Mapping page appears.

23. In the Name field, enter **XX\_FirstName\_SQLTransformation**.



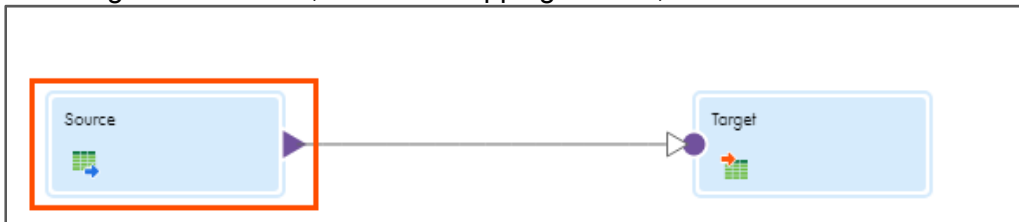
Properties: XX\_FirstName\_SQLTransformation

Name: \* XX\_FirstName\_SQLTransformation

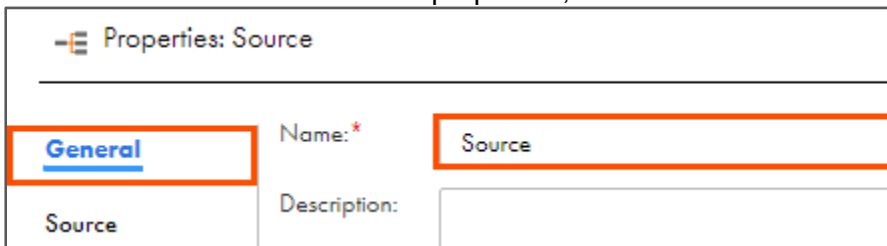
Location: \* Default

Description:

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



25. In the General section of Source properties, retain Name as **Source**.



Properties: Source

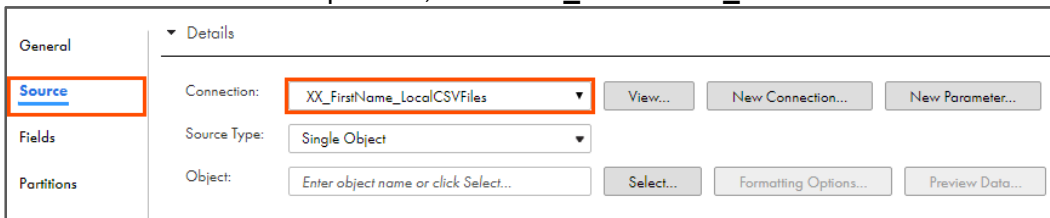
General

Name: \* Source

Description:

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

27. From the Connection drop-down, select **XX\_FirstName\_LocalCSVFiles**.



General

Source

Fields

Partitions

Details

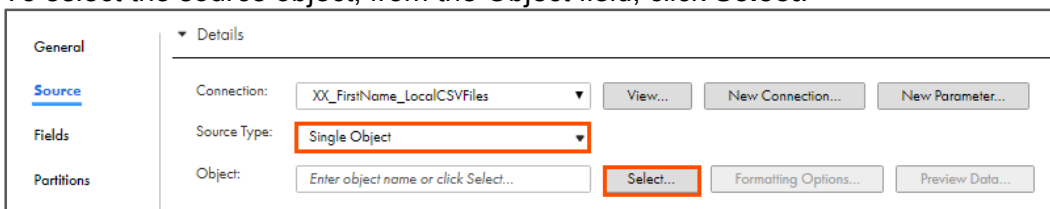
Connection: XX\_FirstName\_LocalCSVFiles View... New Connection... New Parameter...

Source Type: Single Object

Object: Enter object name or click Select... Select... Formatting Options... Preview Data...

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

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



General

Source

Fields

Partitions

Details

Connection: XX\_FirstName\_LocalCSVFiles View... New Connection... New Parameter...

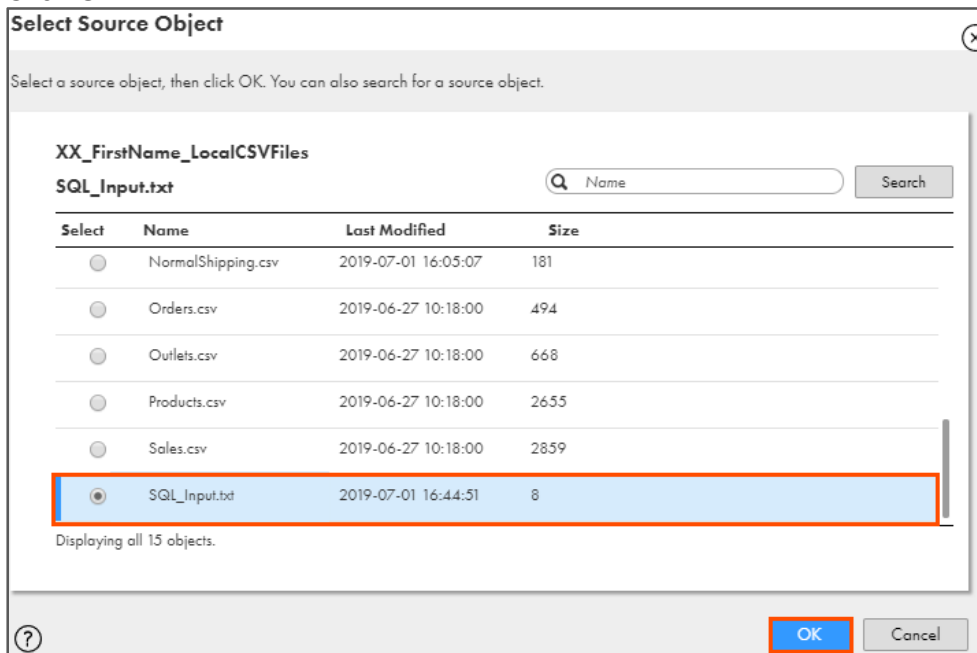
Source Type: Single Object

Object: Enter object name or click Select... Select... Formatting Options... Preview Data...

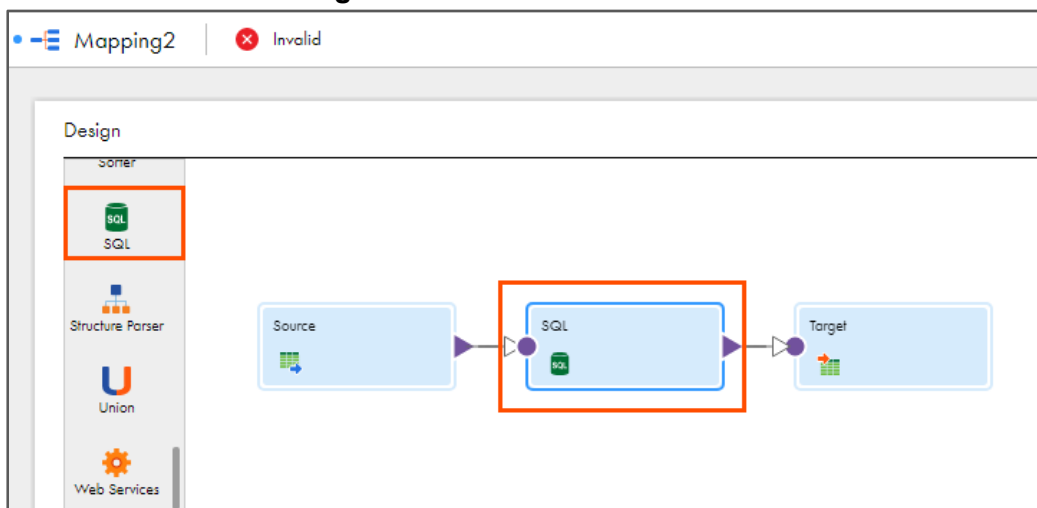
**Note:** The Select Source Object window appears.

30. From the list, select **SQL\_Input.txt**.

31. Click **OK**.

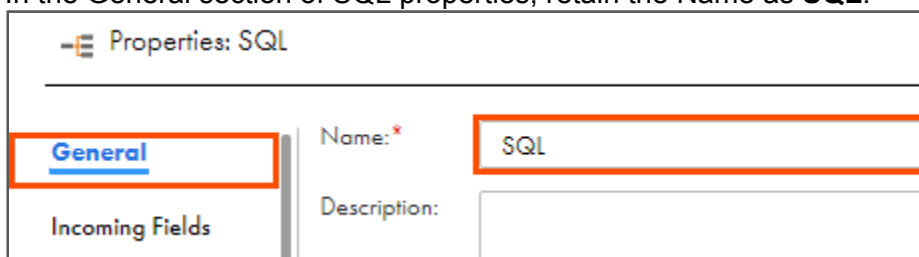


32. From the list of available transformations, drag and drop **SQL** transformation on the link between **Source** and **Target**.



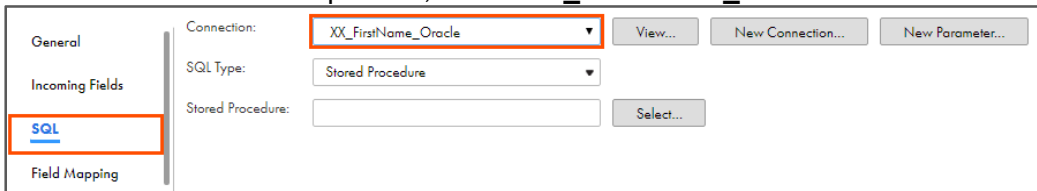
33. Select the **SQL** transformation from the mapping canvas.

34. In the General section of SQL properties, retain the Name as **SQL**.



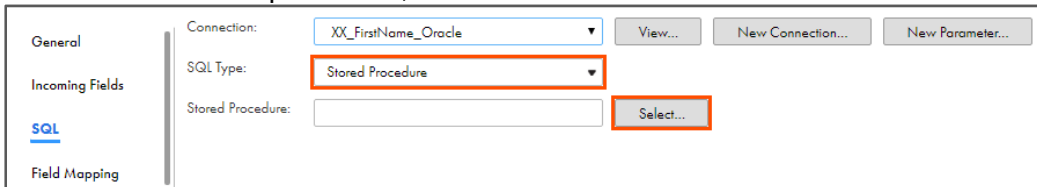
35. From the properties pane, click **SQL**.

36. From the Connection drop-down, select **XX\_FirstName\_Oracle**.



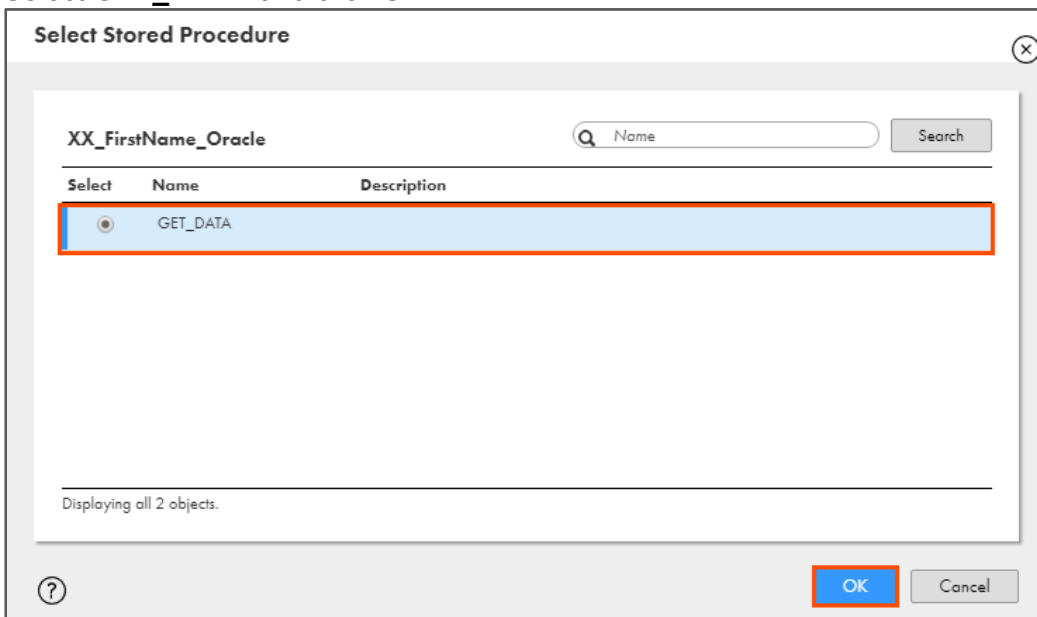
37. Retain SQL Type as **Stored Procedure**.

38. To select the stored procedure, click **Select**.



**Note:** The Select Stored Procedure window appears.

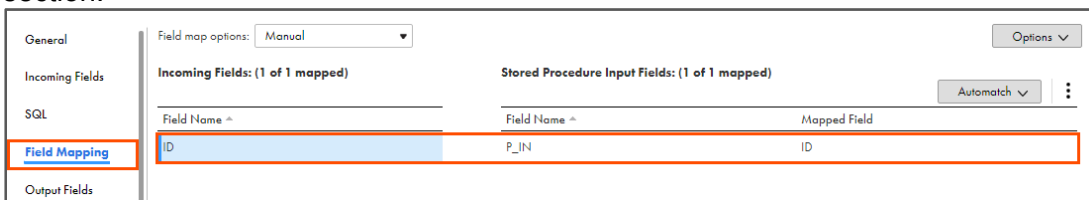
39. Select **GET\_DATA** and click **OK**.



| Select                           | Name     | Description |
|----------------------------------|----------|-------------|
| <input checked="" type="radio"/> | GET_DATA |             |

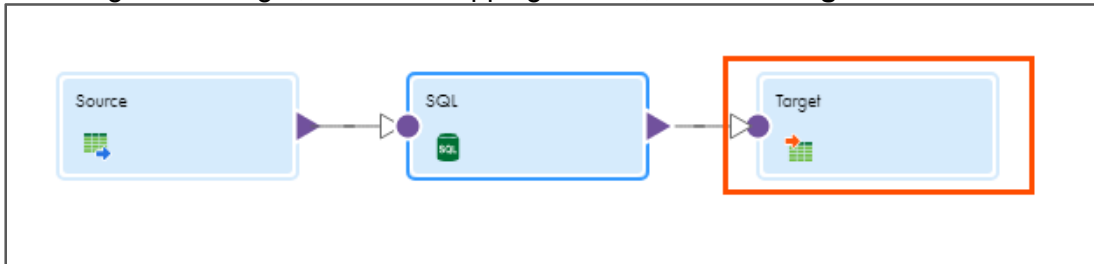
40. From the properties pane, click **Field Mapping**.

41. Drag **ID** from Incoming Fields section and drop it in the Stored Procedure Input Fields section.

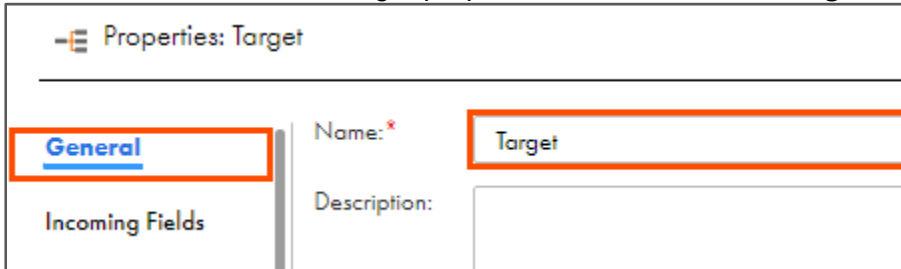


| Field Name | Field Name | Mapped Field |
|------------|------------|--------------|
| ID         | P_IN       | ID           |

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



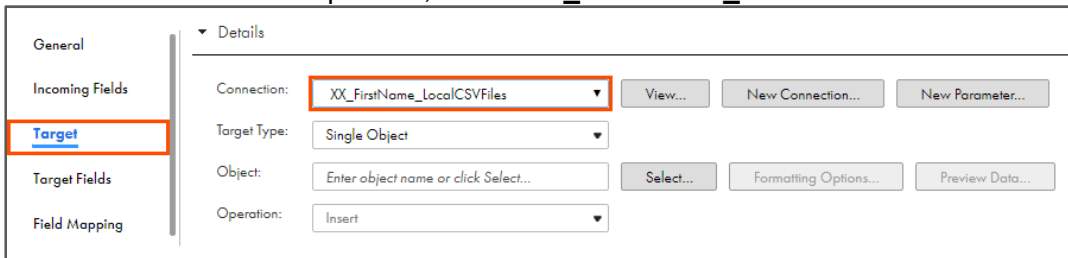
43. In the General section of Target properties, retain Name as **Target**.



The screenshot shows the 'Properties: Target' dialog box. The 'General' tab is selected. The 'Name' field is set to 'Target'. The 'Description' field is empty.

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

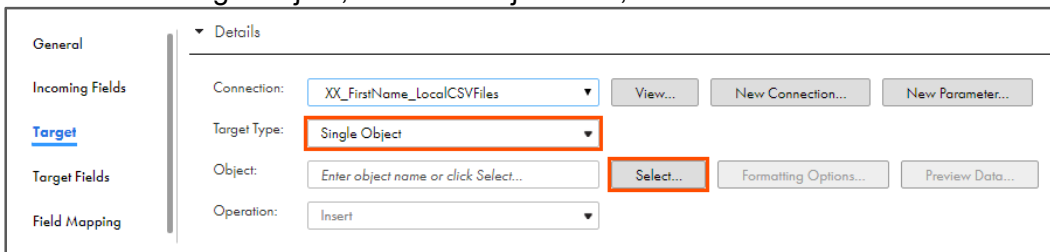
45. From the Connection drop-down, select **XX\_FirstName\_LocalCSVFiles**.



The screenshot shows the 'Target' properties dialog box. The 'Connection' field is set to 'XX\_FirstName\_LocalCSVFiles'. The 'Target Type' is 'Single Object'. The 'Object' field is empty. The 'Operation' is 'Insert'.

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

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



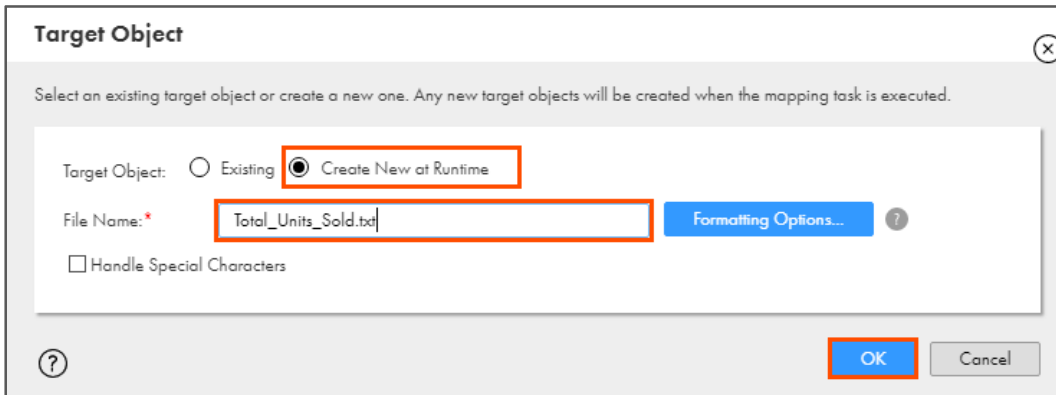
The screenshot shows the 'Target' properties dialog box. The 'Select...' button is highlighted. The 'Connection' field is 'XX\_FirstName\_LocalCSVFiles'. The 'Target Type' is 'Single Object'. The 'Object' field is empty. The 'Operation' is 'Insert'.

**Note:** The Target Object window appears.

48. On the Target Object window, select **Create New at Runtime**.

49. In the File Name field, enter **Total\_Units\_Sold.txt**.

50. 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.

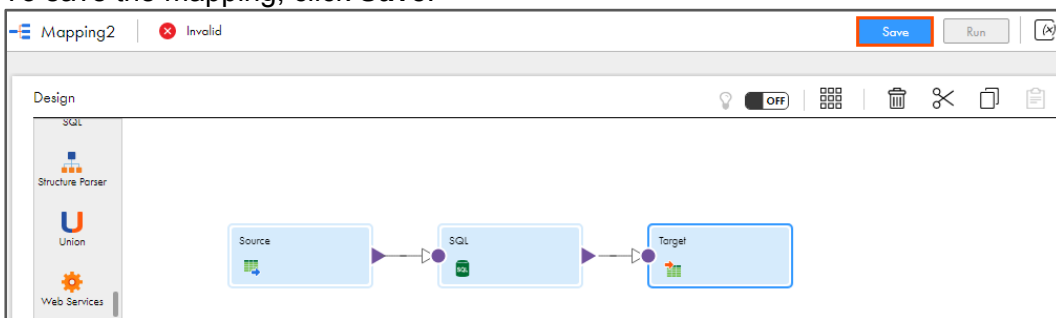
Target Object: ☐ Existing ☒ Create New at Runtime

File Name: \*  [Formatting Options...](#) ?

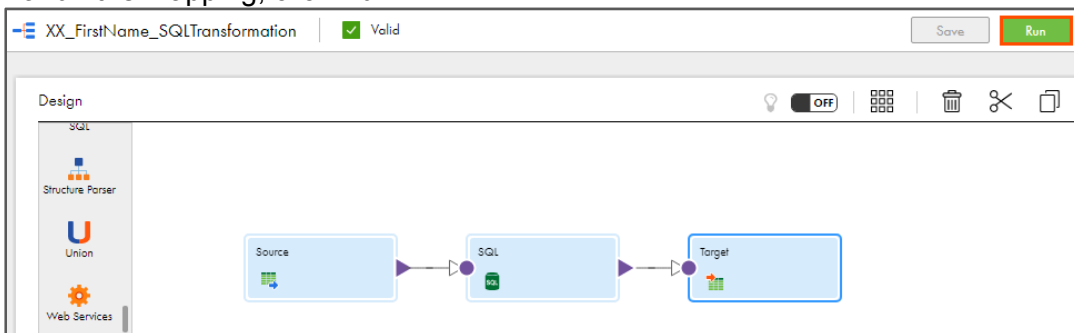
☐ Handle Special Characters

? [OK](#) [Cancel](#)

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

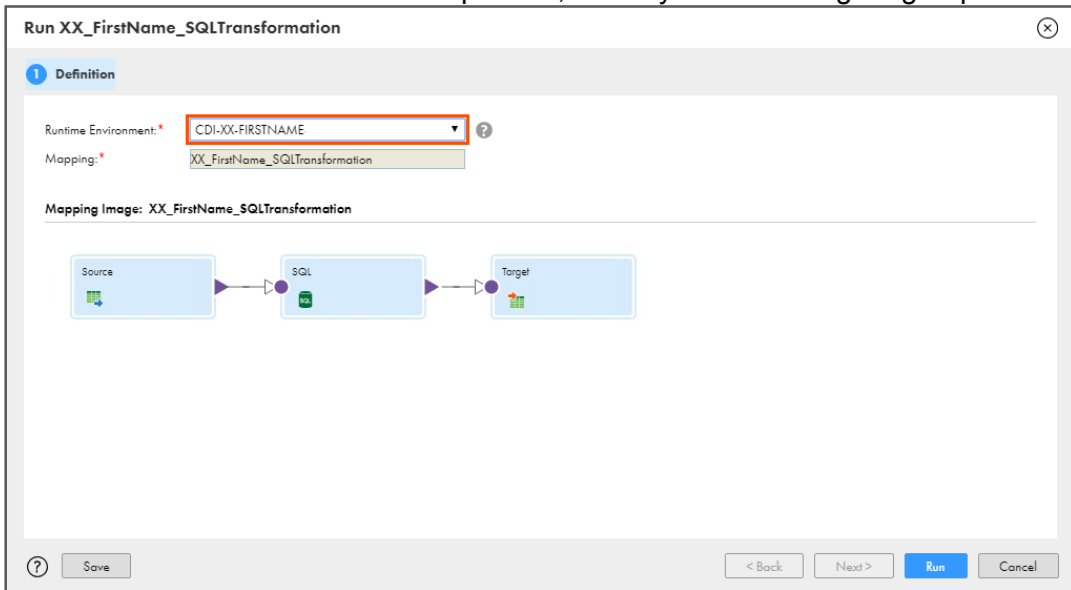


52. To run the mapping, click **Run**.



**Note:** The Run mapping window appears.

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



Run XX\_FirstName\_SQLTransformation

1 Definition

Runtime Environment: \* CDI-XX-FIRSTNAME ?

Mapping: \* XX\_FirstName\_SQLTransformation

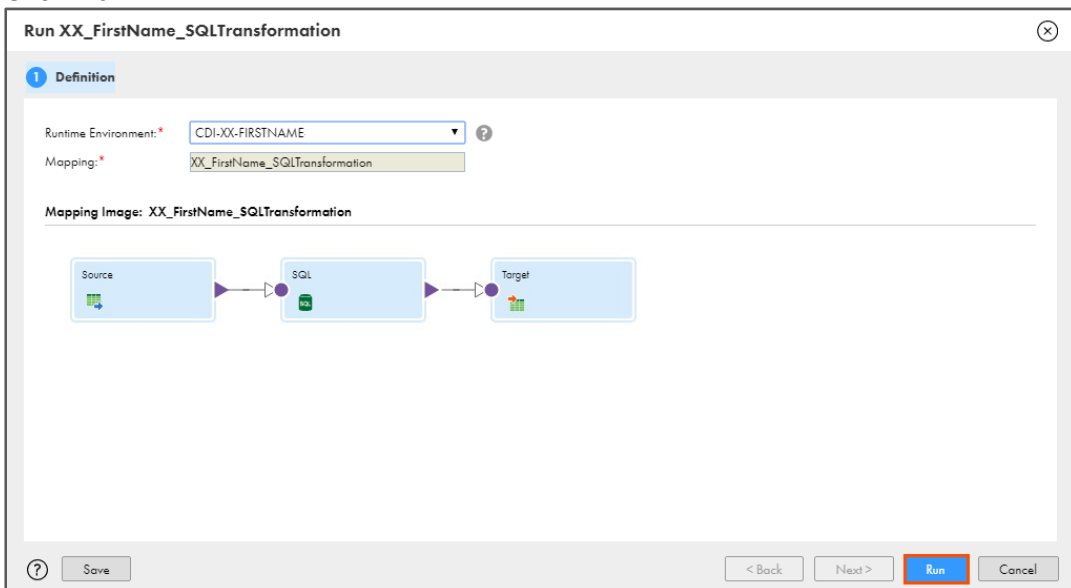
Mapping Image: XX\_FirstName\_SQLTransformation

Source → SQL → Target

? Save < Back Next > Run Cancel

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

54. Click **Run**.



Run XX\_FirstName\_SQLTransformation

1 Definition

Runtime Environment: \* CDI-XX-FIRSTNAME ?

Mapping: \* XX\_FirstName\_SQLTransformation

Mapping Image: XX\_FirstName\_SQLTransformation

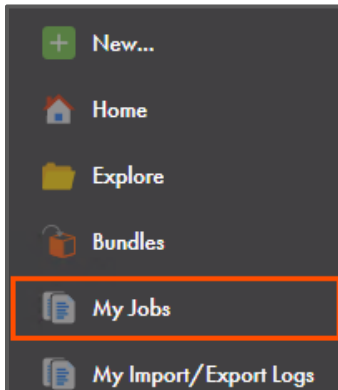
Source → SQL → Target

? Save < Back Next > Run Cancel



### Monitor Status:

55. To monitor the mapping status, from the Navigation pane, click **My Jobs**.



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

Jobs (1 of 27) 

Up to date

Updated 2:50:07 AM PDT 

Find

Asset Name: XX\_FirstName\_SQLTra... 

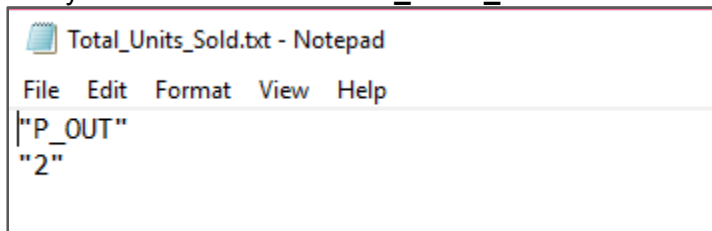
Add Field

| Instance Name                               | Subtasks | Start Time       | End Time     | Rows Processed | State              |
|---------------------------------------------|----------|------------------|--------------|----------------|--------------------|
| <div>XX_FirstName_SQLTransformation-1</div> |          | Aug 1, 2019, ... | Aug 1, 20... | 1              | <div>Success</div> |

### Verify Output:

57. On your local machine, go to **C:\IICS LabFiles**.

58. Verify that 2 is written in **Total\_Units\_Sold.txt**.




---

*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, but the process of creating 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 provided with this lab and place the file in your flat file directory (**C:\IICSLabFiles**):

| Files                            |
|----------------------------------|
| LowProbabilityOpportunities.csv  |
| HighProbabilityOpportunities.csv |

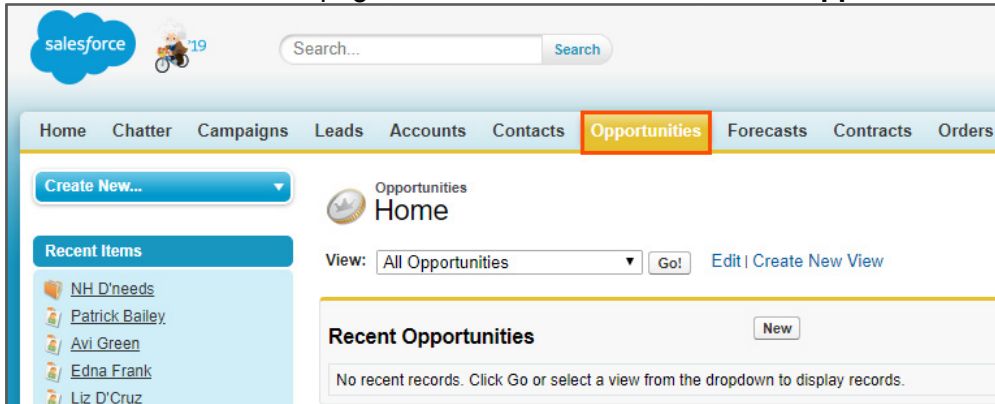
**Create Opportunities in Salesforce:**

2. Log in to your Salesforce Developer account using your credentials.

**Note:** You can use the below mentioned link to log in:

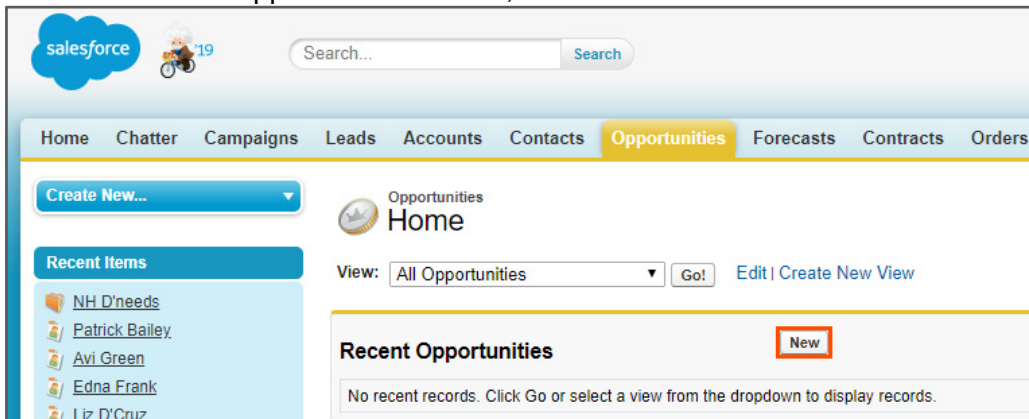
<https://login.salesforce.com/>

3. On the Salesforce homepage, from the available tabs, select **Opportunities**.



The screenshot shows the Salesforce homepage with the 'Opportunities' tab highlighted in the top navigation bar. The left sidebar shows 'Recent Items' including 'NH D'needs', 'Patrick Bailey', 'Avi Green', 'Edna Frank', and 'Liz D'Cruz'. The main content area shows the 'Opportunities Home' view with a 'View: All Opportunities' dropdown and a 'Go!' button. Below this, the 'Recent Opportunities' section is empty, with a 'New' button highlighted in red.

4. From the Recent Opportunities section, select **New**.

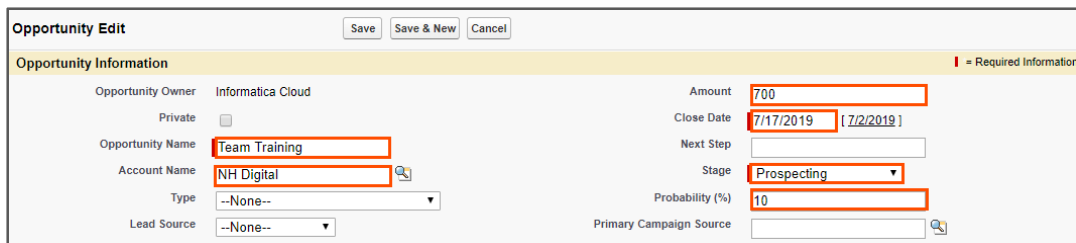


This screenshot is identical to the previous one, but the 'New' button in the 'Recent Opportunities' section is highlighted with a red box.

**Note:** The New Opportunity window appears.

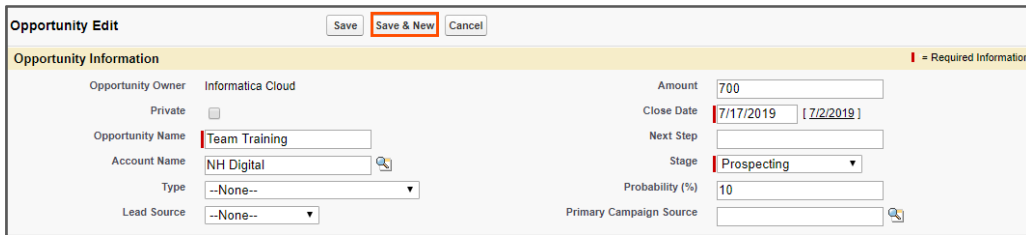
5. Enter the details, as shown in the table below:

| 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 in Salesforce. The fields are filled out as follows: Opportunity Owner: Informatica Cloud; Private: ☐; 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; Primary Campaign Source: (empty). The 'New' button is highlighted in red.

6. Click **Save & New**.

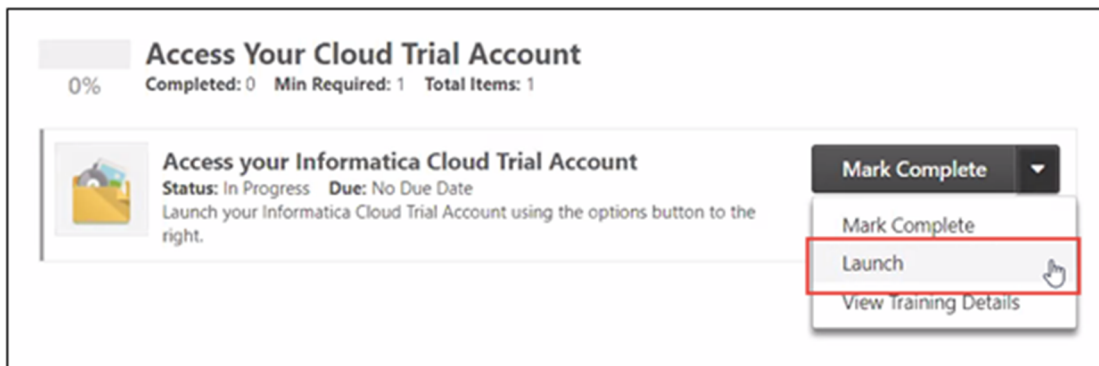


7. Similarly, create several opportunities in Salesforce.

**Note:** You can refer the **Salesforce\_Opportunities.csv** file provided with this lab to create opportunities in Salesforce.

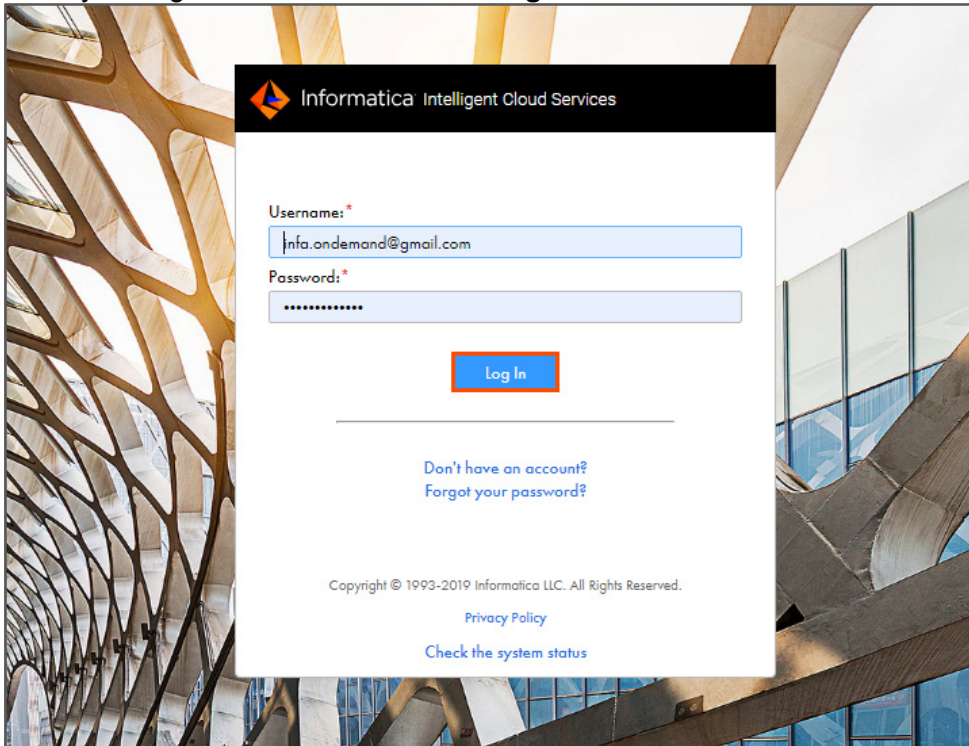
**Create Mapping:**

8. Access your cloud trial account by clicking **Launch** in your option Menu. If the option menu is labeled anything other than **Launch**, click the down arrow to the right and click **Launch**.

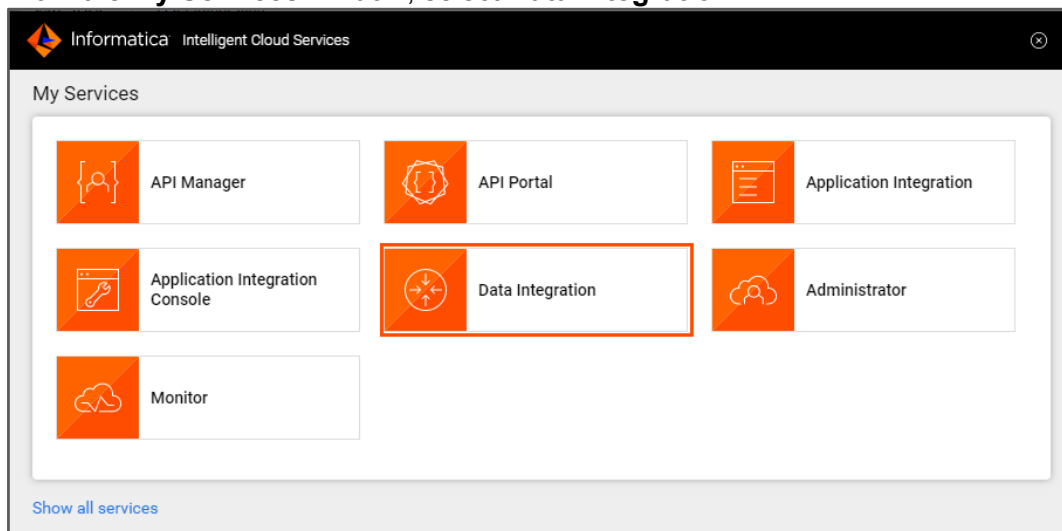


**Note:** Follow this step, if you have navigated away from the login page.

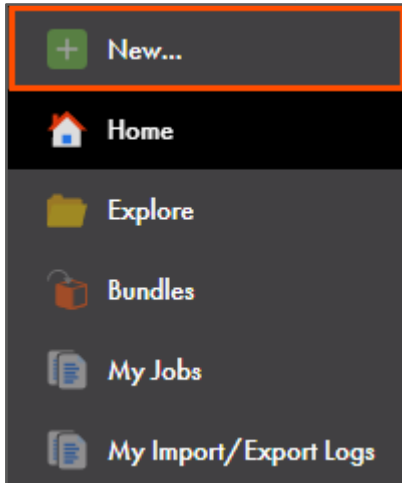
9. Enter your login credentials and click **Log In**.

The image shows the login page for Informatica Intelligent Cloud Services. The page has a white background with a black header bar at the top containing the Informatica logo and the text "Informatica Intelligent Cloud Services". Below the header, there are two input fields: "Username:" with the email "info.ondemand@gmail.com" and "Password:" with masked characters. A blue "Log In" button is positioned below the password field. Underneath the button, there are two links: "Don't have an account?" and "Forgot your password?". At the bottom of the page, there is a copyright notice "Copyright © 1993-2019 Informatica LLC. All Rights Reserved." and two more links: "Privacy Policy" and "Check the system status". The entire login form is overlaid on a background image of a modern building's interior with a complex, branching structural design.

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

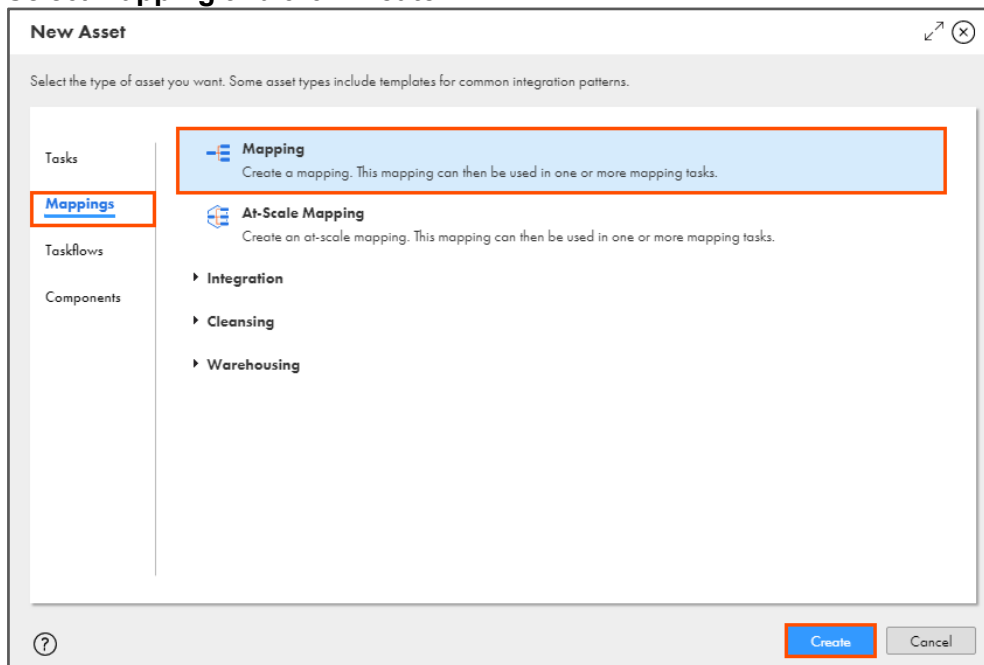


11. To create a new asset, from the Navigation pane, select **New**.



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**.

Properties: XX\_FirstName\_MappingParameters

Name: \* XX\_FirstName\_MappingParameters

Location: \* Default

Description:

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

16. In the General section of Source properties, enter Name as **SO\_Salesforce**.

Properties: SO\_Salesforce

General

Name: \* SO\_Salesforce

Description:

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

18. To create a new connection parameter, click **New Parameter**.

General

Source

Fields

Details

Connection: View... New Connection... New Parameter...

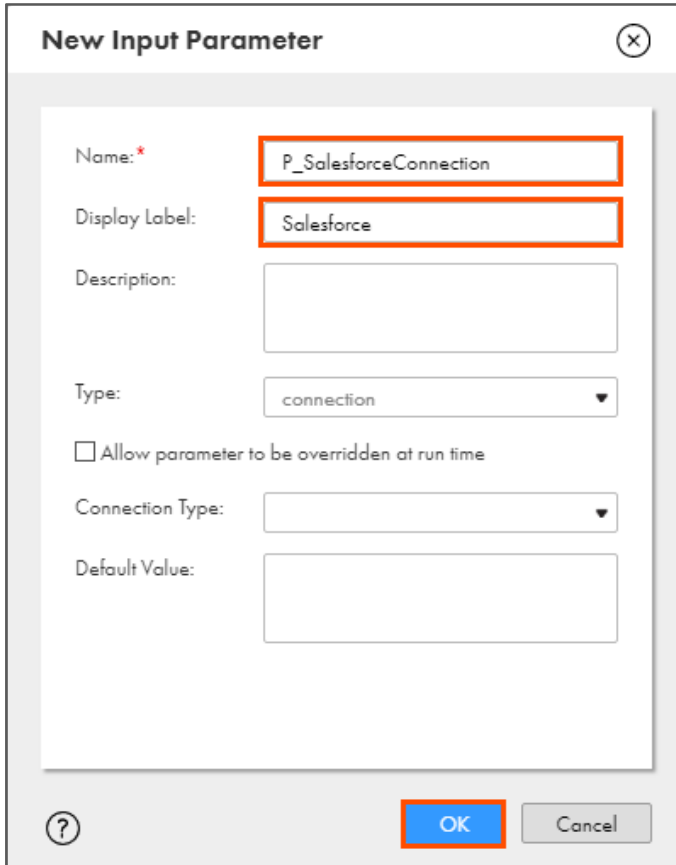
Source Type:

**Note:** The New Input Parameter window appears.

19. Enter Name as **P\_SalesforceConnection**, and Display Label as **Salesforce**.

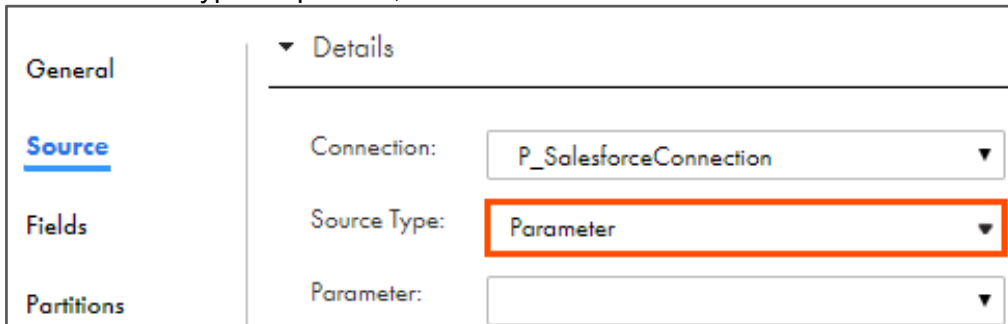


20. Click **OK**.



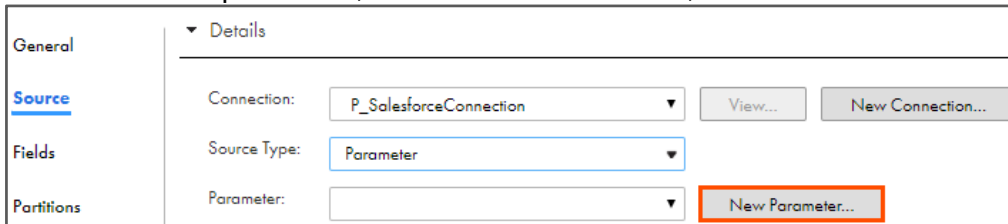
The 'New Input Parameter' dialog box is shown. The 'Name' field is set to 'P\_SalesforceConnection' and the 'Display Label' is set to 'Salesforce'. The 'Type' is set to 'connection'. The 'Allow parameter to be overridden at run time' checkbox is unchecked. The 'Connection Type' and 'Default Value' fields are empty. The 'OK' button is highlighted with a red border.

21. From Source Type drop-down, select **Parameter**.



The 'Source' configuration panel is shown. The 'Connection' is set to 'P\_SalesforceConnection'. The 'Source Type' is set to 'Parameter'. The 'Parameter' field is empty. The 'Source Type' dropdown is highlighted with a red border.

22. To create a new parameter, from the Parameter field, click **New Parameter**.

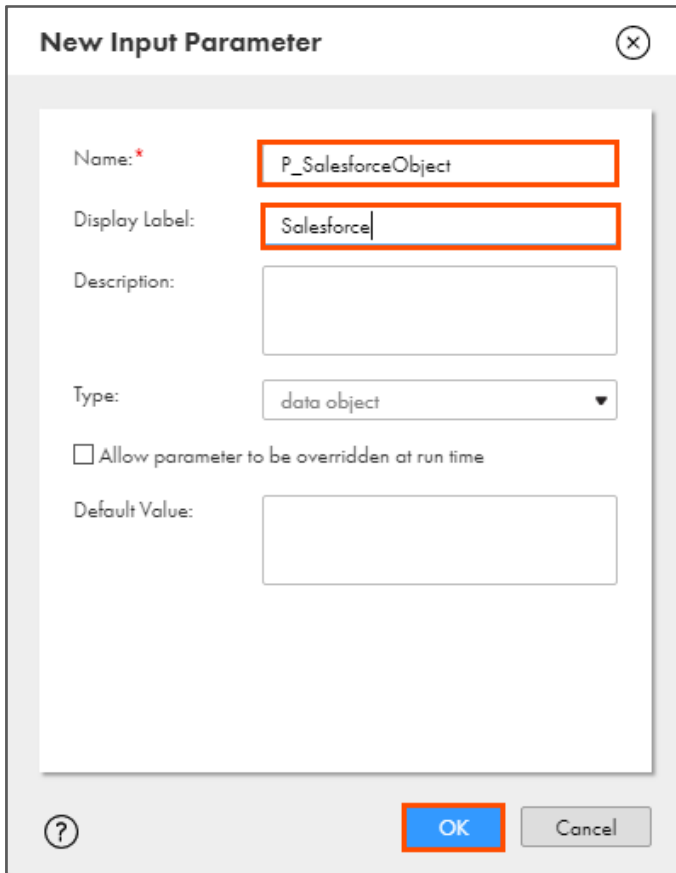


The 'Source' configuration panel is shown. The 'Connection' is set to 'P\_SalesforceConnection'. The 'Source Type' is set to 'Parameter'. The 'Parameter' field is empty. The 'New Parameter...' button is highlighted with a red border.

**Note:** The New Input Parameter window appears.

23. Enter Name as **P\_SalesforceObject**, and the Display Label as **Salesforce**.

24. Click **OK**.

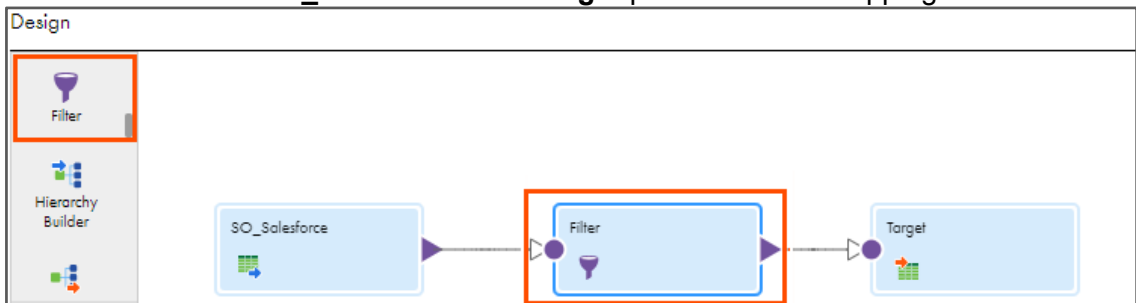


The 'New Input Parameter' dialog box is shown. It has a title bar with a close button. The fields are as follows:

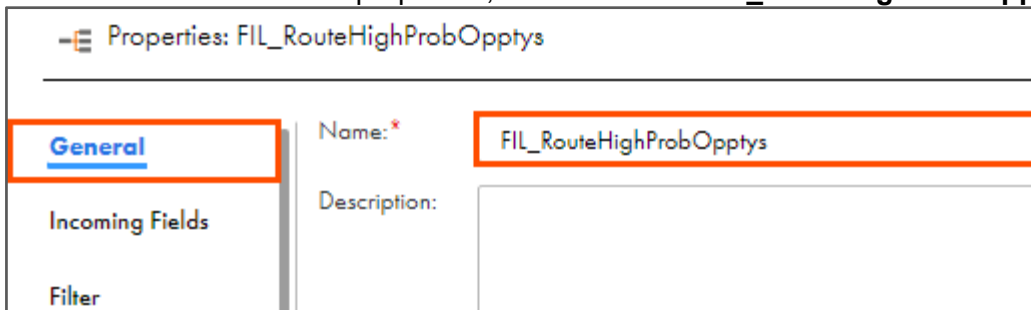
- Name:** P\_SalesforceObject
- Display Label:** Salesforce
- Description:** (empty text box)
- Type:** data object
- ☐ Allow parameter to be overridden at run time
- Default Value:** (empty text box)

At the bottom, there is a question mark icon, an **OK** button, and a **Cancel** button.

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 General section of Filter properties, enter Name as **FIL\_RouteHighProbOpptys**.

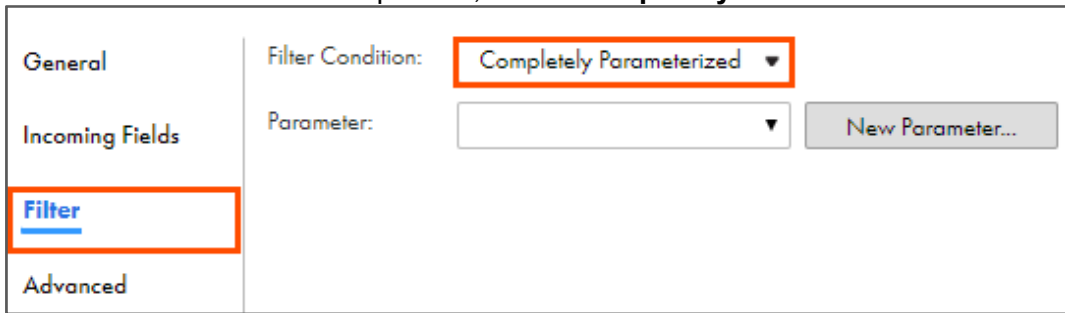


The 'Properties: FIL\_RouteHighProbOpptys' pane is shown. It has a left sidebar with 'General', 'Incoming Fields', and 'Filter' sections. The 'General' section is selected and highlighted with a red box. The fields are as follows:

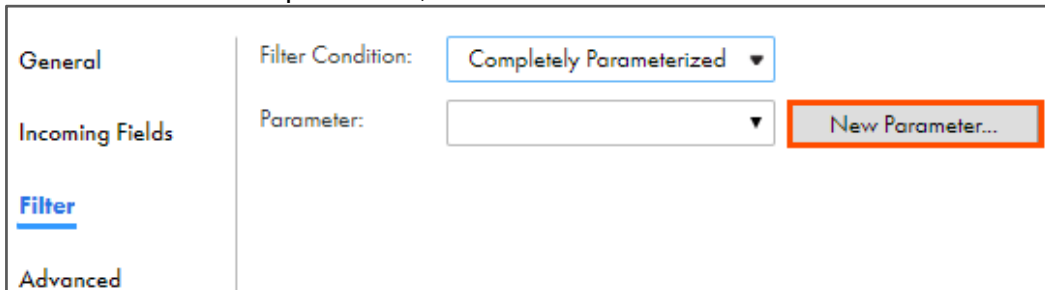
- Name:** FIL\_RouteHighProbOpptys
- Description:** (empty text box)

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

28. From the Filter Condition drop-down, select **Completely Parameterized**.



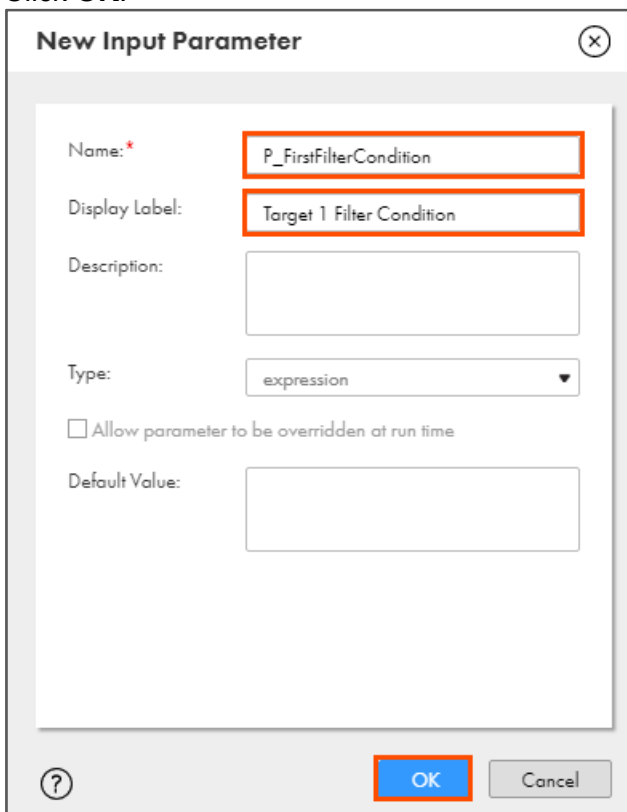
29. To create a new filter parameter, click **New Parameter**.



**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 Target properties, enter Name as **TG\_HighProbOpptys**.

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

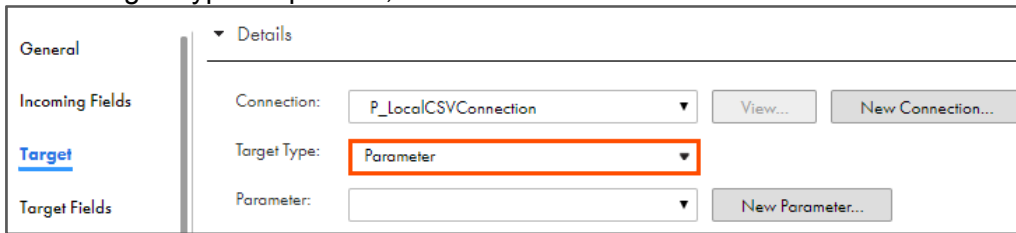
35. To create a new connection parameter, click **New Parameter**.

**Note:** The New Input Parameter window appears.

36. Enter Name as **P\_LocalCSVConnection**, and Display Label as **LocalCSVFile**.

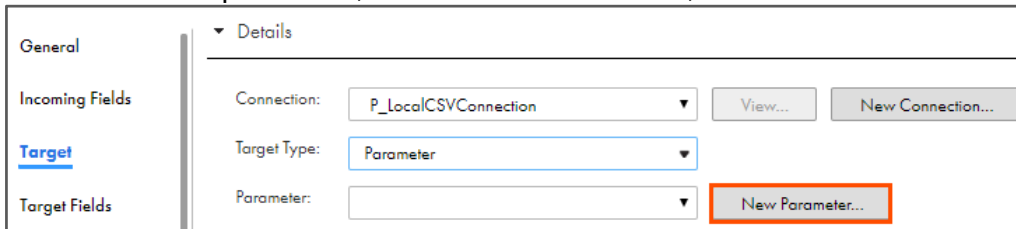
37. Click **OK**.

38. From Target Type drop-down, select **Parameter**.



The screenshot shows the 'Details' pane of the 'Target' tab. The 'Target Type' dropdown menu is set to 'Parameter' and is highlighted with a red rectangular box. Other fields include 'Connection' set to 'P\_LocalCSVConnection' and 'Parameter' set to an empty field.

39. To create a new parameter, from the Parameter field, click **New Parameter**.

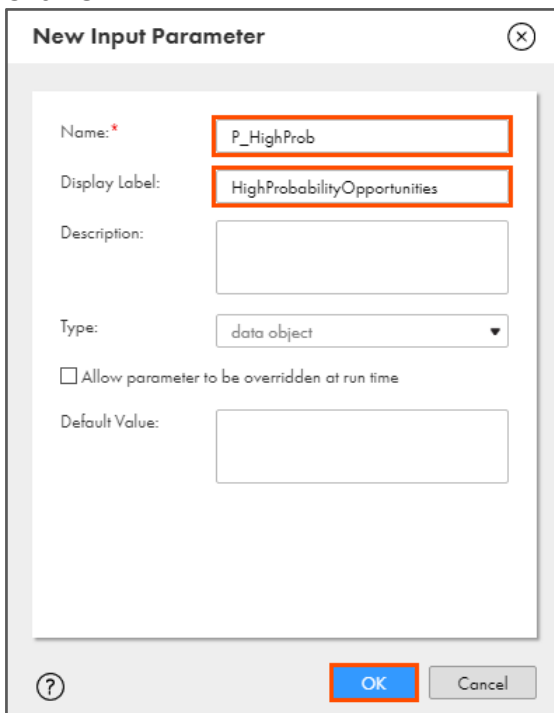


The screenshot shows the 'Details' pane of the 'Target' tab. The 'New Parameter...' button, located next to the 'Parameter' field, is highlighted with a red rectangular box.

**Note:** The New Input Parameter window appears.

40. Enter Name as **P\_HighProb**, and the Display Label as **HighProbabilityOpportunities**.

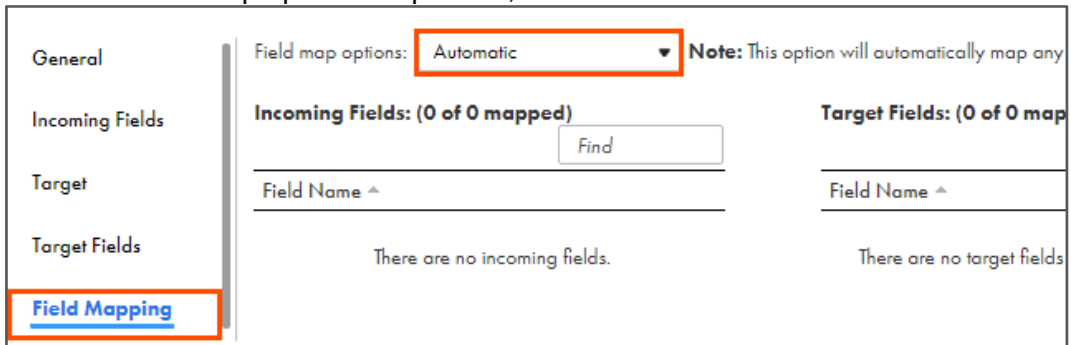
41. Click **OK**.



The screenshot shows the 'New Input Parameter' dialog box. The 'Name' field contains 'P\_HighProb' and the 'Display Label' field contains 'HighProbabilityOpportunities'. Both fields are highlighted with red rectangular boxes. The 'OK' button at the bottom right is also highlighted with a red rectangular box.

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

43. From the Field map options drop-down, select **Automatic**.



General | Field map options: **Automatic** ▼ **Note:** This option will automatically map any

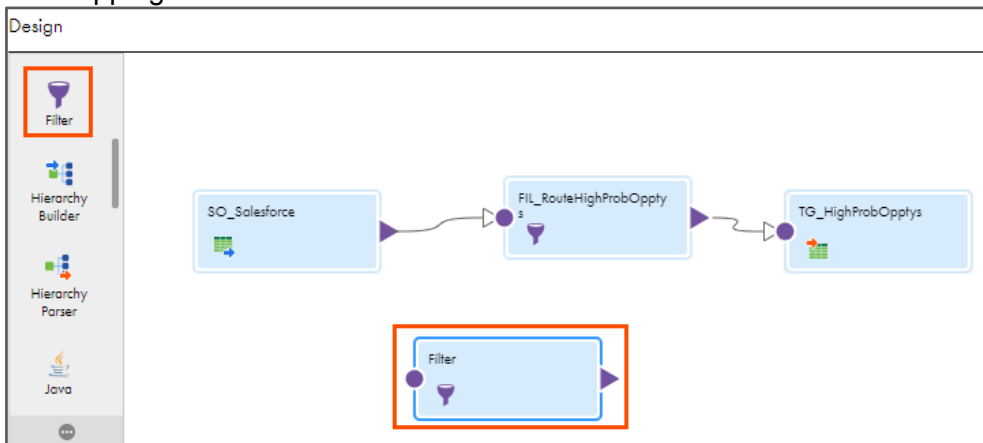
Incoming Fields | Incoming Fields: (0 of 0 mapped) | Find | Target Fields: (0 of 0 mapped)

Target | Field Name ^ | Field Name ^

Target Fields | There are no incoming fields. | There are no target fields

**Field Mapping**

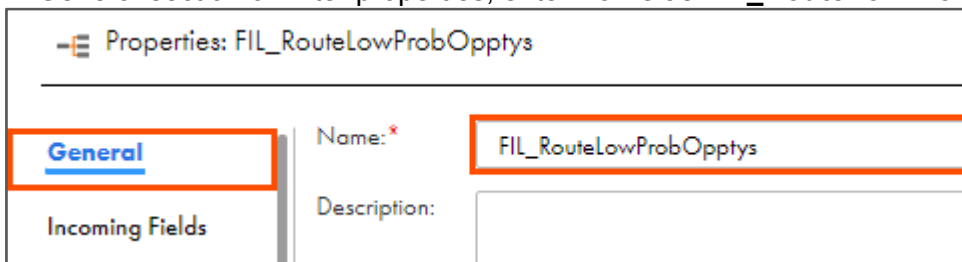
44. From the list of available transformations, drag and drop a **Filter** transformation on to the mapping canvas.



45. Link **SO\_Salesforce** to the **Filter** transformation.

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

47. In General section of Filter properties, enter Name as **FIL\_RouteLowProbOppty**.



Properties: FIL\_RouteLowProbOppty

**General**

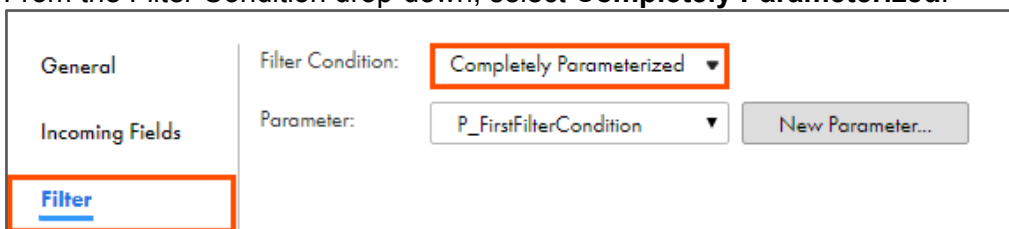
Name: \* **FIL\_RouteLowProbOppty**

Description:

Incoming Fields

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

49. From the Filter Condition drop-down, select **Completely Parameterized**.

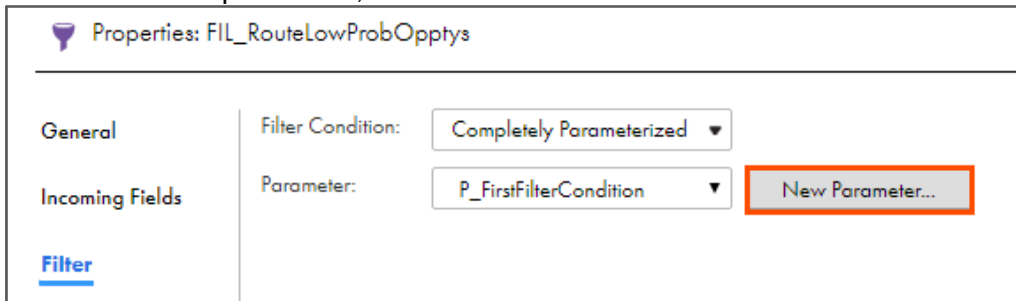


General | Filter Condition: **Completely Parameterized** ▼

Incoming Fields | Parameter: P\_FirstFilterCondition ▼ | New Parameter...

**Filter**

50. To create a new parameter, click **New Parameter**.

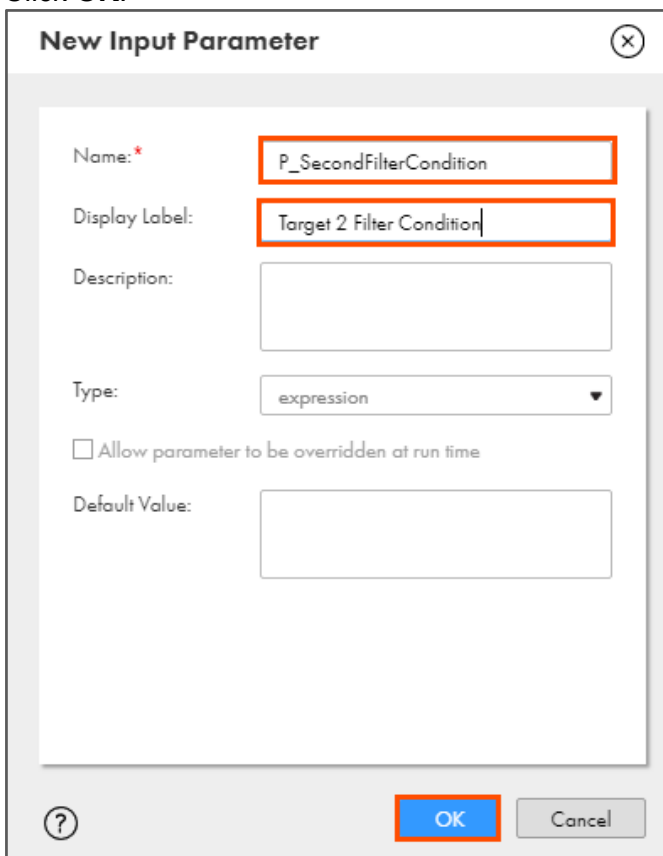


The screenshot shows the 'Properties: FIL\_RouteLowProbOpptys' window. It has three tabs: 'General', 'Incoming Fields', and 'Filter'. The 'Filter' tab is selected. In the 'Filter Condition' dropdown, 'Completely Parameterized' is selected. In the 'Parameter' dropdown, 'P\_FirstFilterCondition' is selected. A red box highlights the 'New Parameter...' button.

**Note:** The New Input Parameter window appears.

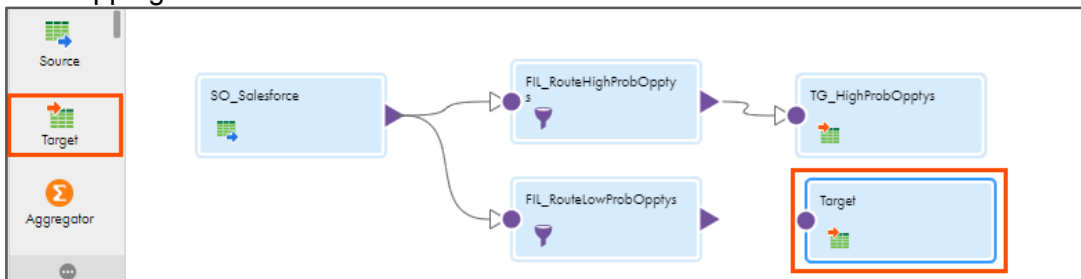
51. Enter Name as **P\_SecondFilterCondition**, and Display Label as **Target 2 Filter Condition**.

52. Click **OK**.

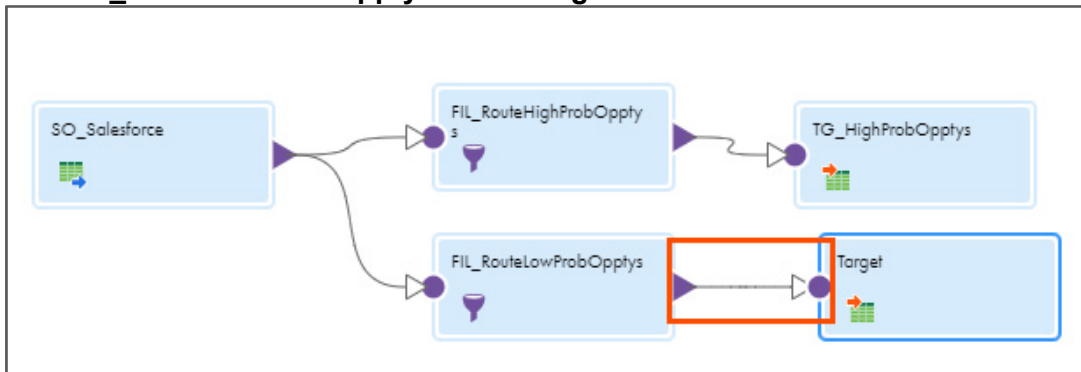


The screenshot shows the 'New Input Parameter' dialog box. The 'Name' field contains 'P\_SecondFilterCondition' and the 'Display Label' field contains 'Target 2 Filter Condition'. The 'Type' dropdown is set to 'expression'. There is an unchecked checkbox for 'Allow parameter to be overridden at run time'. The 'Default Value' field is empty. A red box highlights the 'OK' button.

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



54. Link **FIL\_RouteLowProbOppty**s 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\_LowProbOppty**.

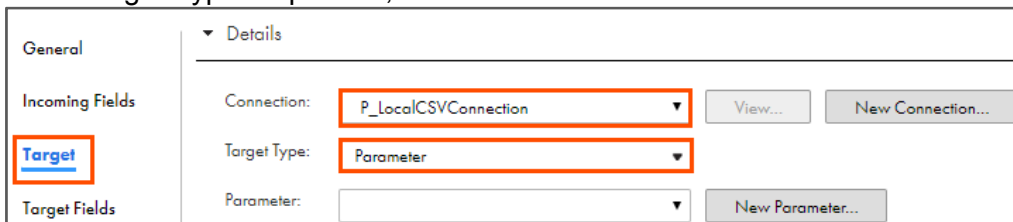


The screenshot shows the **Properties: TG\_LowProbOppty** dialog box. The **General** tab is selected, and the **Name** field is set to **TG\_LowProbOppty**. The **Description** field is empty.

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

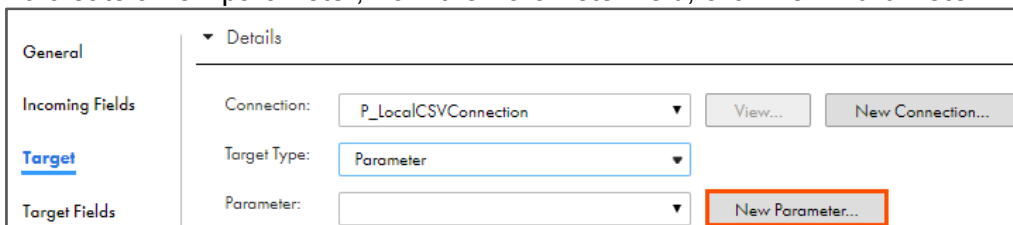
58. From the Connection drop-down, select **P\_LocalCSVConnection**.

59. From Target Type drop-down, select **Parameter**.



The screenshot shows the **Properties: TG\_LowProbOppty** dialog box. The **Target** tab is selected. The **Connection** dropdown is set to **P\_LocalCSVConnection**, and the **Target Type** dropdown is set to **Parameter**. The **Parameter** field is empty.

60. To create a new parameter, from the Parameter field, click **New Parameter**.



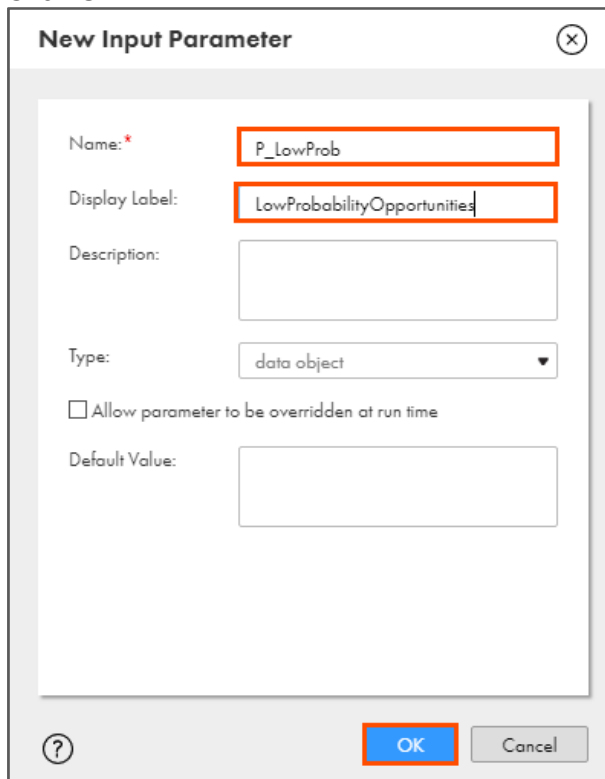
The screenshot shows the **Properties: TG\_LowProbOppty** dialog box. The **Target** tab is selected. The **New Parameter...** button is highlighted with a red box.

**Note:** The New Input Parameter window appears.

61. Enter Name as **P\_LowProb**, and the Display Label as **LowProbabilityOpportunities**.



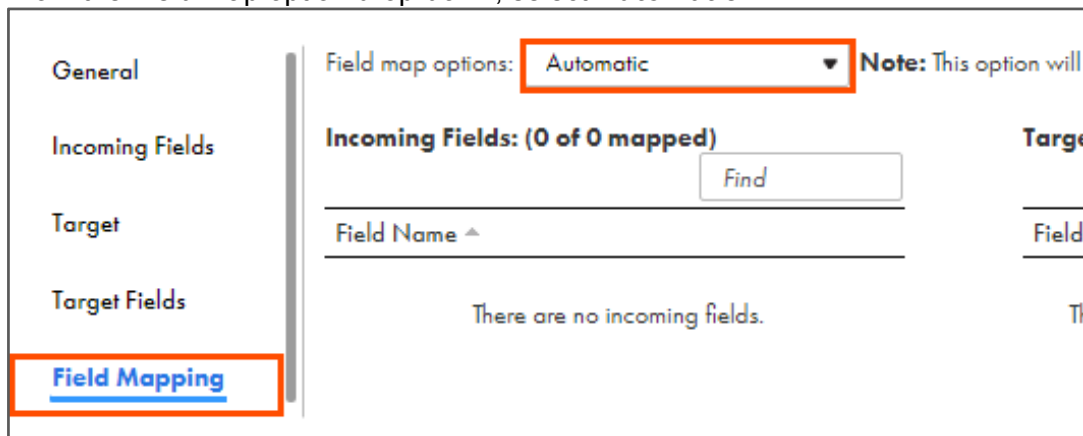
62. Click **OK**.




The 'New Input Parameter' dialog box is shown. The 'Name' field contains 'P\_LowProb' and the 'Display Label' field contains 'LowProbabilityOpportunities'. The 'Type' is set to 'data object'. The 'OK' button is highlighted with a red box.

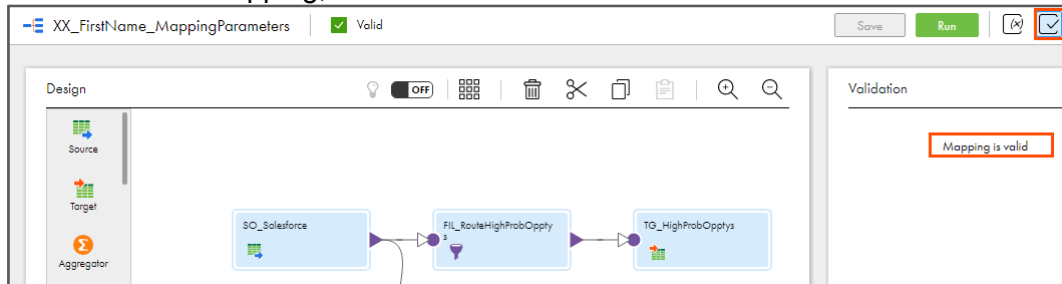
63. From the properties pane, click **Field Mapping**.

64. From the Field map option drop-down, select **Automatic**.



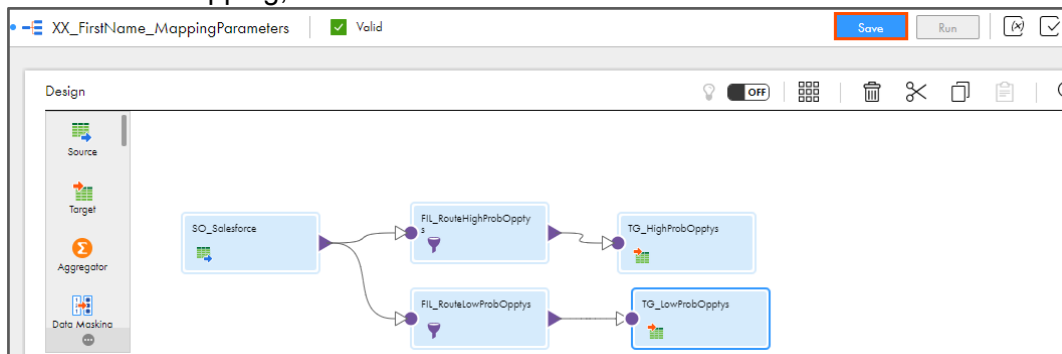
The 'Field Mapping' properties pane is shown. The 'Field map options' drop-down is set to 'Automatic'. The 'Field Mapping' tab is selected in the left-hand pane. The 'Incoming Fields' section shows '0 of 0 mapped'.

65. To validate the mapping, click .

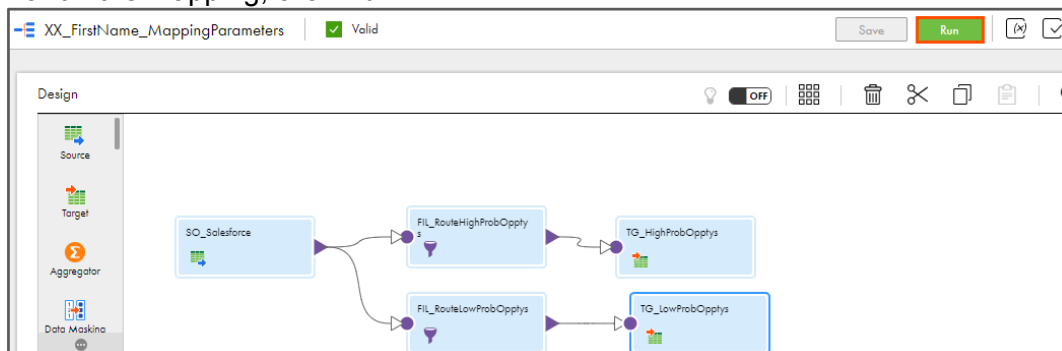


**Note:** Mapping is valid message appears.

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



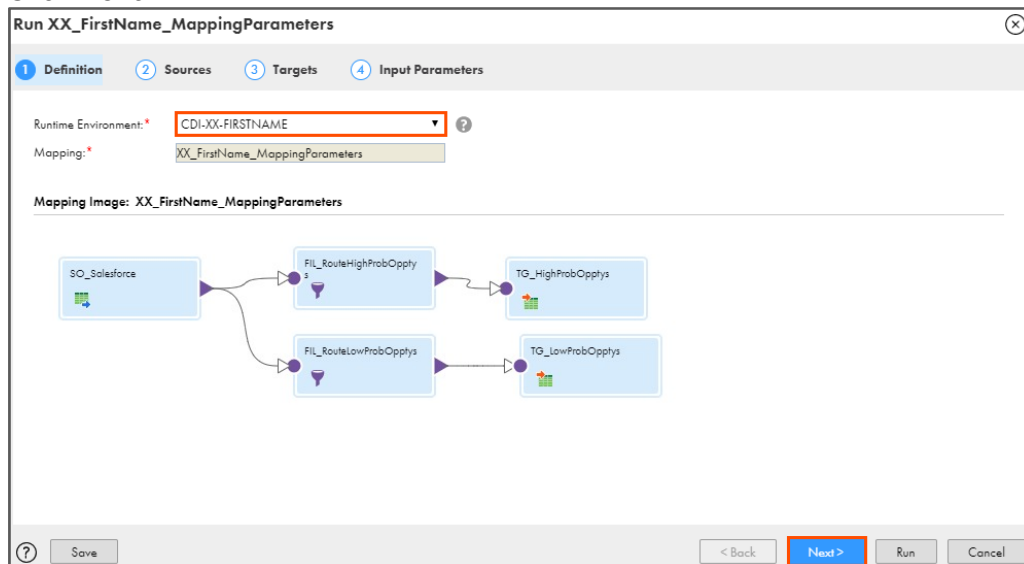
67. To run the mapping, click **Run**.



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

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

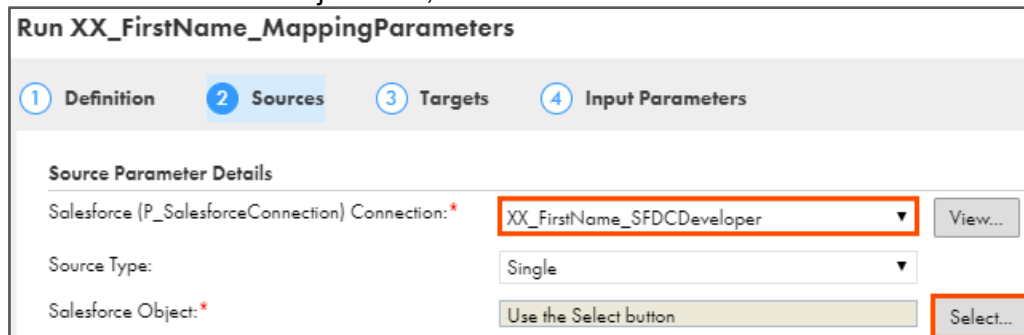
69. Click **Next**.



The dialog box titled "Run XX\_FirstName\_MappingParameters" shows the "Definition" tab. The "Runtime Environment" dropdown is set to "CDI-XX-FIRSTNAME" and is highlighted with a red box. The "Mapping" field shows "XX\_FirstName\_MappingParameters". Below, the "Mapping Image" section displays a flow diagram with four components: "SO\_Salesforce", "Fil\_RouteHighProbOppty", "TG\_HighProbOppty", "Fil\_RouteLowProbOppty", and "TG\_LowProbOppty". At the bottom, the "Next >" button is highlighted with a red box.

70. From the Salesforce (P\_SalesforceConnection) Connection drop-down, select **XX\_FirstName\_SFDCDeveloper**.

71. From the Salesforce Object field, click **Select**.



The dialog box is now on the "Sources" tab. Under "Source Parameter Details", the "Salesforce (P\_SalesforceConnection) Connection:" dropdown is set to "XX\_FirstName\_SFDCDeveloper" and is highlighted with a red box. The "Source Type:" dropdown is set to "Single". The "Salesforce Object:" field is set to "Use the Select button" and is highlighted with a red box. A "Select..." button is visible to the right of this field.

**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 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.

### 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

Source Type: Single

Salesforce Object: \* Opportunity

**Query Options**

Filter: [Configure...](#)

☐ Display technical names instead of labels

☐ Display source fields in alphabetical order

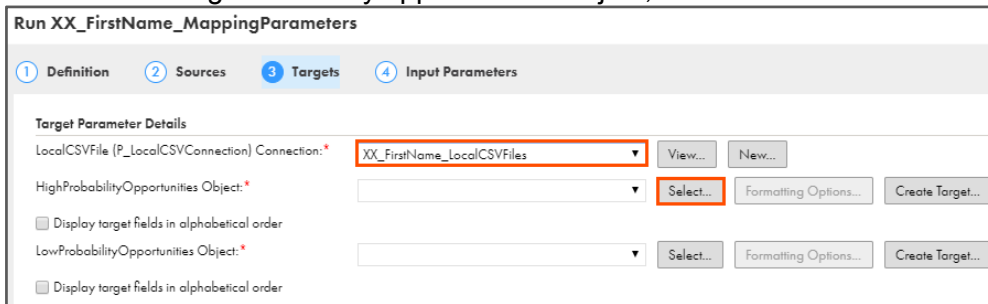
**Data Preview**

(Total columns: 41)

| Opportunity ID     | Deleted | Account ID         | Private | Name                     | ... |
|--------------------|---------|--------------------|---------|--------------------------|-----|
| 0062v00001C8WgWAAV | false   | 0012v00002NlwagAAD | false   | Team Training            | ... |
| 0062v00001C8WgAaAF | false   | 0012v00002NlwahAAD | false   | Stock Supply             | ... |
| 0062v00001C8WgIAAF | false   | 0012v00002NlwaiAAD | false   | Service Contract Renewal | ... |

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...

HighProbabilityOpportunities Object:\* Select... Formatting Options... Create Target...

☐ Display target fields in alphabetical order

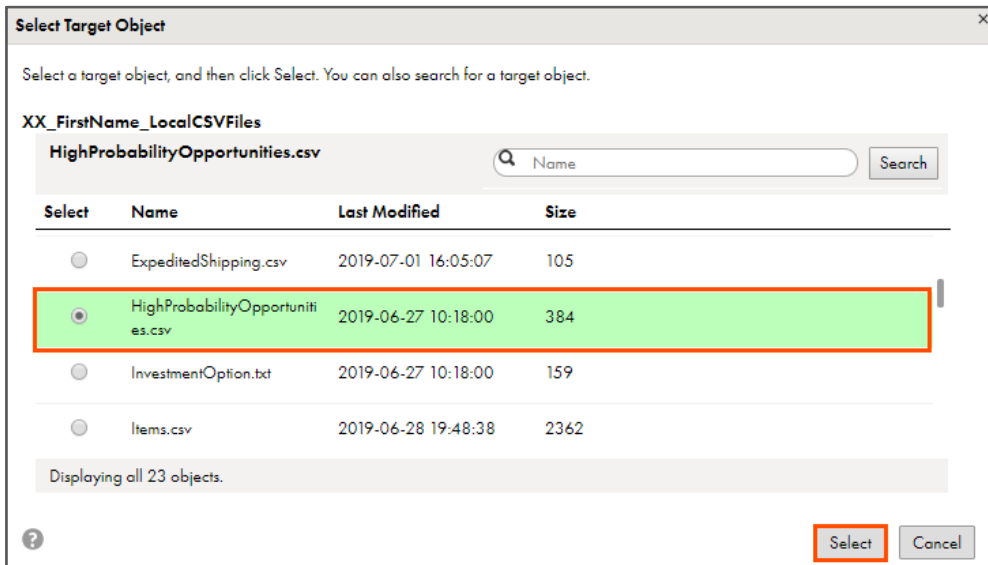
LowProbabilityOpportunities Object:\* Select... Formatting Options... Create Target...

☐ 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

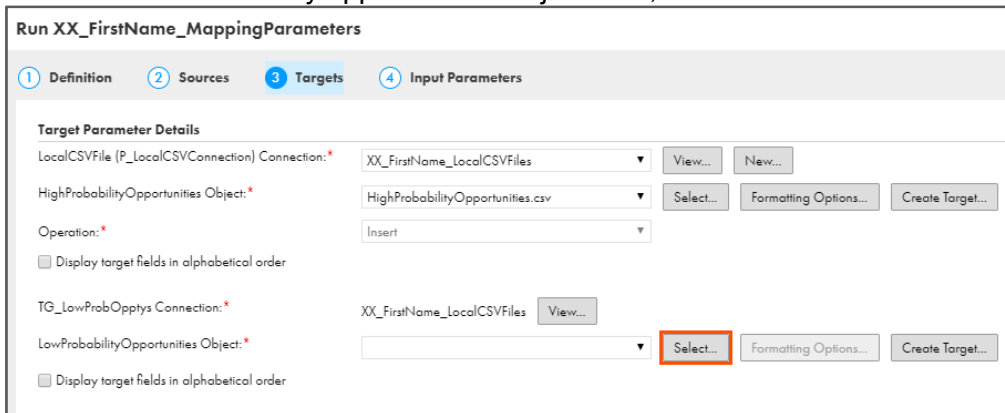
Search Name Search

| 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**.



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...

HighProbabilityOpportunities Object:\* HighProbabilityOpportunities.csv Select... Formatting Options... Create Target...

Operation:\* Insert

☐ Display target fields in alphabetical order

TG\_LowProbOppty Connection:\* XX\_FirstName\_LocalCSVFiles View...

LowProbabilityOpportunities Object:\* Select... Formatting Options... Create Target...

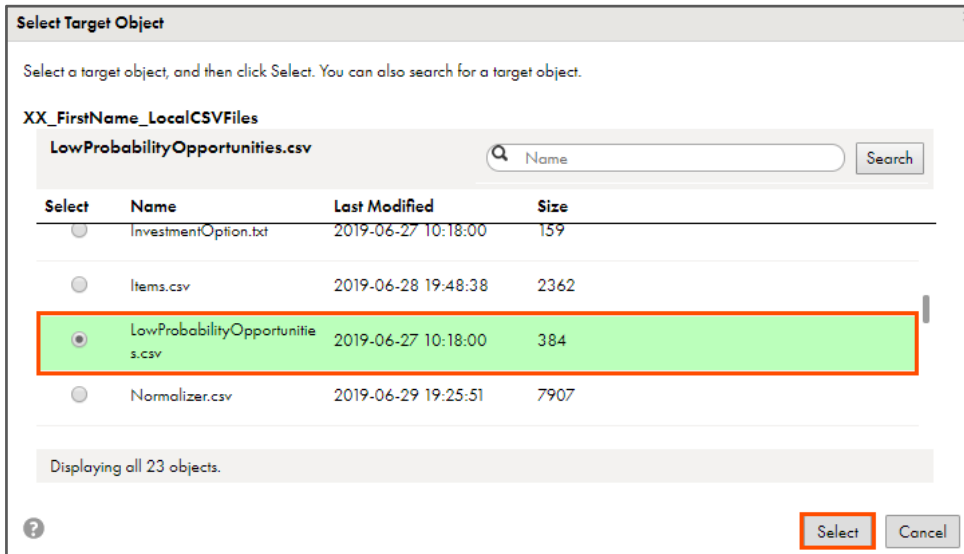
☐ Display target fields in alphabetical order

**Note:** The Target Object window appears.



80. From the list, select **LowProbabilityOpportunities.csv** file.

81. Click **Select**.



Select a target object, and then click Select. You can also search for a target object.

XX\_FirstName\_LocalCSVFiles

LowProbabilityOpportunities.csv

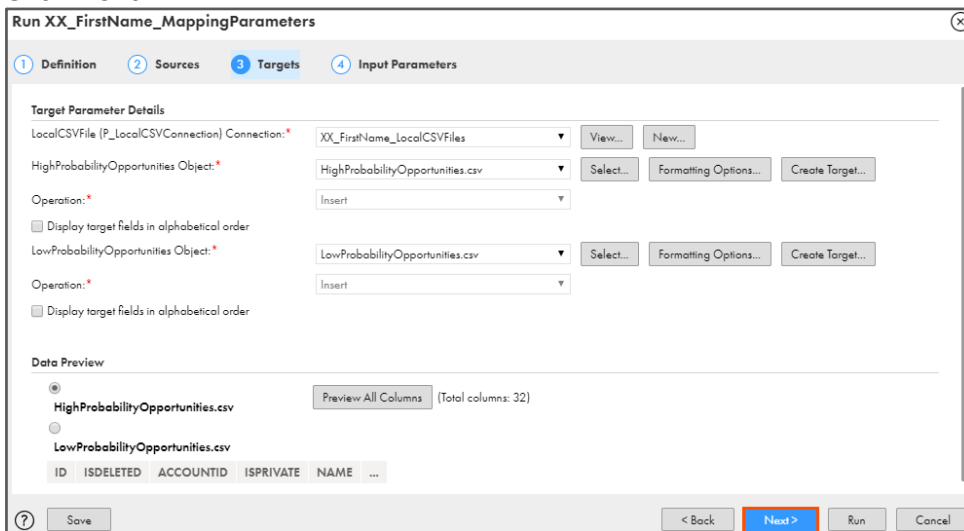
Search

| 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 |

Displaying all 23 objects.

Select Cancel

82. Click **Next**.



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...

HighProbabilityOpportunities Object: HighProbabilityOpportunities.csv Select... Formatting Options... Create Target...

Operation: Insert

☐ Display target fields in alphabetical order

LowProbabilityOpportunities Object: LowProbabilityOpportunities.csv Select... Formatting Options... Create Target...

Operation: Insert

☐ Display target fields in alphabetical order

Data Preview

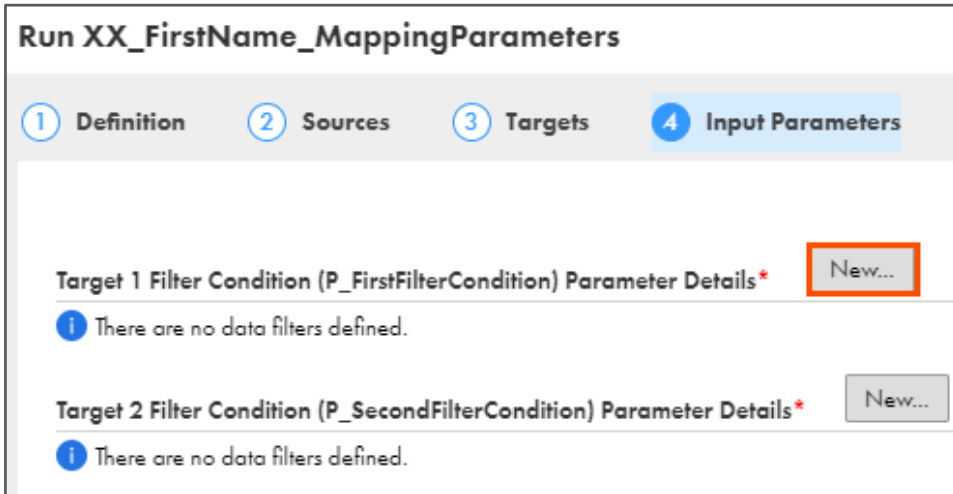
☒ HighProbabilityOpportunities.csv Preview All Columns (Total columns: 32)

☐ LowProbabilityOpportunities.csv

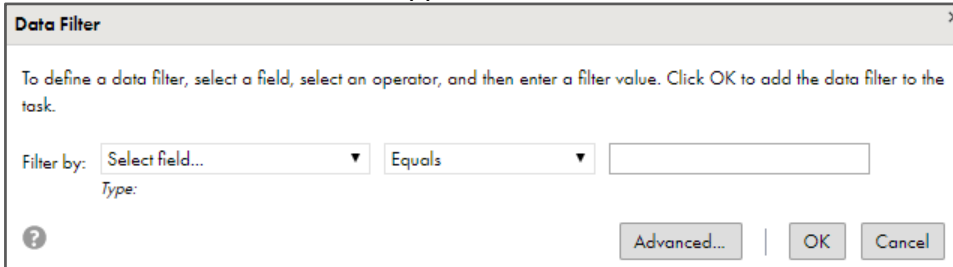
ID ISDELETED ACCOUNTID ISPRIVATE NAME ...

Save < Back Next > Run Cancel

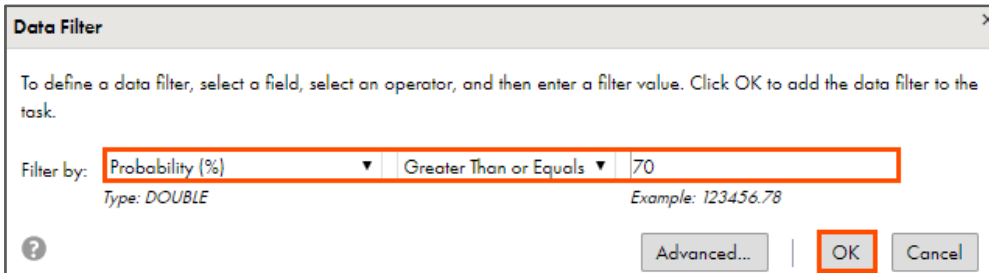
83. To define Target 1 Filter Condition (P\_FirstFilterCondition) Parameter Details, click **New**.



**Note:** The Data Filter window appears.



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**.  
 87. Click **OK**.





88. Similarly, for Target 2 Filter Condition (P\_SecondFilterCondition) Parameter Details, click **New**.

The dialog box shows the 'Input Parameters' tab. It contains two sections for filter conditions. The first section, 'Target 1 Filter Condition (P\_FirstFilterCondition) Parameter Details', has a 'New...' button. The second section, 'Target 2 Filter Condition (P\_SecondFilterCondition) Parameter Details', also has a 'New...' button, which is highlighted with a red rectangle. Below these sections, a message states: 'There are no data filters defined.'

Note: The **Data Filter** window appears.

The 'Data Filter' dialog box is shown. It contains instructions: '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.' Below this, there are three input fields: 'Filter by:' with a dropdown menu showing 'Select field...', an operator dropdown showing 'Greater Than or Equals', and a text box for the filter value. The 'Type:' is set to 'DOUBLE'. At the bottom, there are buttons for 'Advanced...', 'OK', and 'Cancel'.

89. From the Select field drop-down, select **Probability (%)**.  
90. From the Equals drop-down, select **Less Than**.  
91. Enter filter value as **70**.  
92. Click **OK**.

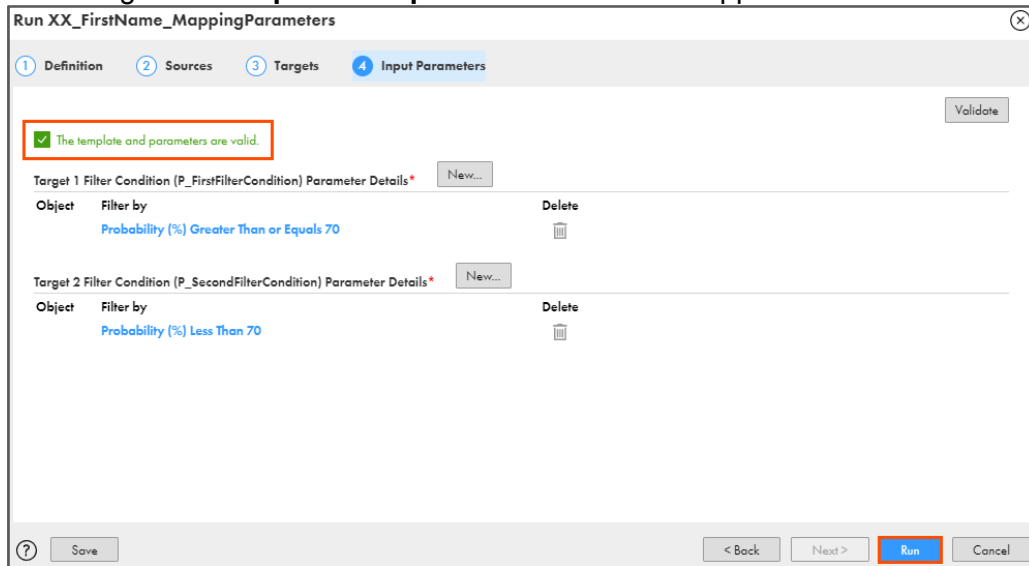
The 'Data Filter' dialog box is shown with the filter defined. The 'Filter by:' dropdown now shows 'Probability (%)', the operator dropdown shows 'Less Than', and the filter value text box contains '70'. The 'Type:' is still 'DOUBLE'. The 'OK' button is highlighted with a red rectangle.

93. To validate the parameters, click **Validate**.

The dialog box shows the 'Input Parameters' tab after validation. The 'Target 1 Filter Condition' section now shows 'Probability (%) Greater Than or Equals 70'. The 'Target 2 Filter Condition' section now shows 'Probability (%) Less Than 70'. A 'Validate' button is highlighted with a red rectangle in the top right corner.

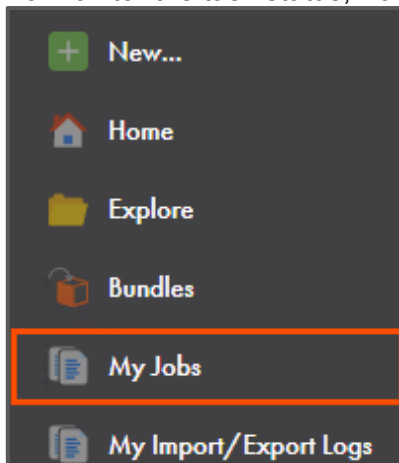


94. A message **The template and parameters are valid** appears. Click **Run**.



### Monitor Status:

95. To monitor the task status, from the Navigation pane, click **My Jobs**.





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

Jobs (1 of 27) Up to date

Updated 3:21:28 AM PDT

Asset Name: XX\_FirstName\_Mappin... Add Field

| Instance Name                                                                                                        | Subtasks | Start Time       | End Time     | Rows Processed | State                                                                                       |
|----------------------------------------------------------------------------------------------------------------------|----------|------------------|--------------|----------------|---------------------------------------------------------------------------------------------|
|  XX_FirstName_MappingParameters-1 |          | Aug 1, 2019, ... | Aug 1, 20... | 30             |  Success |

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

97. On your local machine, go to **C:\IICS LabFiles**.

98. Verify that the correct probabilities are written to the following files:



### HighProbabilityOpportunities.csv

| ID        | ISDELETED | ACCOUNT   | ISPRIVATE | NAME                                        | DESCRIPTION | STAGENA | AMOUNT | PROBABILITY | EXPECTED TOTALOP |
|-----------|-----------|-----------|-----------|---------------------------------------------|-------------|---------|--------|-------------|------------------|
| 0062v000C | 0         | 0012v000C | 0         | Stock Supply                                | Proposal/   | 100000  |        | 75          | 750000           |
| 0062v000C | 0         | 0012v000C | 0         | Annual Maintenance                          | Negotiat    | 50000   |        | 90          | 450000           |
| 0062v000C | 0         | 0012v000C | 0         | United Oil Office Portable Generators       | Negotiat    | 125000  |        | 90          | 112500           |
| 0062v000C | 0         | 0012v000C | 0         | Express Logistics Standby Generator         | Closed W    | 220000  |        | 100         | 220000           |
| 0062v000C | 0         | 0012v000C | 0         | GenePoint Standby Generator                 | Closed W    | 85000   |        | 100         | 85000            |
| 0062v000C | 0         | 0012v000C | 0         | United Oil Refinery Generators              | Proposal/   | 270000  |        | 75          | 202500           |
| 0062v000C | 0         | 0012v000C | 0         | United Oil SLA                              | Closed W    | 120000  |        | 100         | 120000           |
| 0062v000C | 0         | 0012v000C | 0         | Edge Emergency Generator                    | Closed W    | 75000   |        | 100         | 75000            |
| 0062v000C | 0         | 0012v000C | 0         | University of AZ Portable Generators        | Closed W    | 50000   |        | 100         | 50000            |
| 0062v000C | 0         | 0012v000C | 0         | GenePoint SLA                               | Closed W    | 30000   |        | 100         | 30000            |
| 0062v000C | 0         | 0012v000C | 0         | United Oil Installations                    | Negotiat    | 270000  |        | 90          | 243000           |
| 0062v000C | 0         | 0012v000C | 0         | Edge Installation                           | Closed W    | 50000   |        | 100         | 50000            |
| 0062v000C | 0         | 0012v000C | 0         | Edge SLA                                    | Closed W    | 60000   |        | 100         | 60000            |
| 0062v000C | 0         | 0012v000C | 0         | United Oil Installations                    | Closed W    | 270000  |        | 100         | 270000           |
| 0062v000C | 0         | 0012v000C | 0         | Grand Hotels Generator Installations        | Closed W    | 350000  |        | 100         | 350000           |
| 0062v000C | 0         | 0012v000C | 0         | United Oil Refinery Generators              | Closed W    | 915000  |        | 100         | 915000           |
| 0062v000C | 0         | 0012v000C | 0         | University of AZ Installations              | Proposal/   | 100000  |        | 75          | 75000            |
| 0062v000C | 0         | 0012v000C | 0         | Express Logistics SLA                       | Perceptio   | 120000  |        | 70          | 84000            |
| 0062v000C | 0         | 0012v000C | 0         | University of AZ SLA                        | Closed W    | 90000   |        | 100         | 90000            |
| 0062v000C | 0         | 0012v000C | 0         | Burlington Textiles Weaving Plant Generator | Closed W    | 235000  |        | 100         | 235000           |
| 0062v000C | 0         | 0012v000C | 0         | United Oil Installations                    | Closed W    | 235000  |        | 100         | 235000           |
| 0062v000C | 0         | 0012v000C | 0         | United Oil Emergency Generators             | Closed W    | 440000  |        | 100         | 440000           |

### LowProbabilityOpportunities.csv

| ID        | ISDELETED | ACCOUNT   | ISPRIVATE | NAME                                        | DESCRIPTION | STAGENA | AMOUNT | PROBABILITY | EXPECTED TOTALOP |
|-----------|-----------|-----------|-----------|---------------------------------------------|-------------|---------|--------|-------------|------------------|
| 0062v000C | 0         | 0012v000C | 0         | Team Training                               | Prospecti   | 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 Hotels Guest Portable Generators      | Value Pro   | 250000  |        | 50          | 125000           |
| 0062v000C | 0         | 0012v000C | 0         | Pyramid Emergency Generators                | Prospecti   | 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            |

*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

---

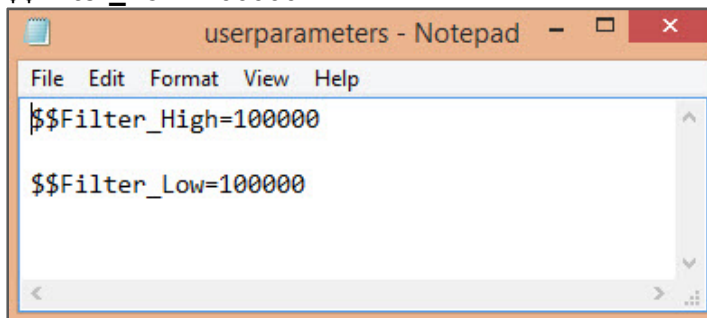
#### Tasks:

##### Create a Parameter File:

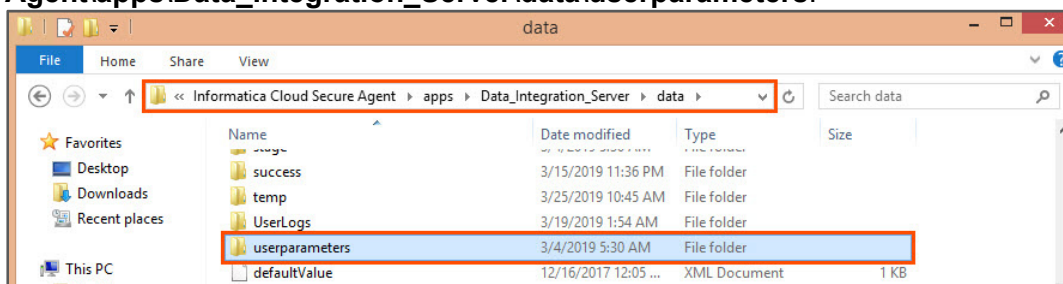
1. Create a text file with name **userparameters.txt** and add the following content to it:

**\$\$Filter\_High=100000**

**\$\$Filter\_Low=100000**

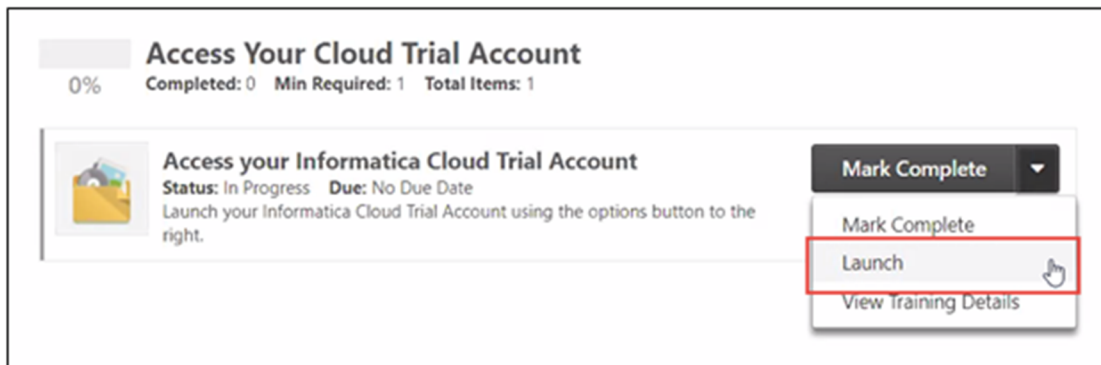


2. Copy the **userparameters.txt** file to your Secure Agent directory **C:\Program Files\Informatica Cloud Secure Agent\apps\Data\_Integration\_Server\data\userparameters**.

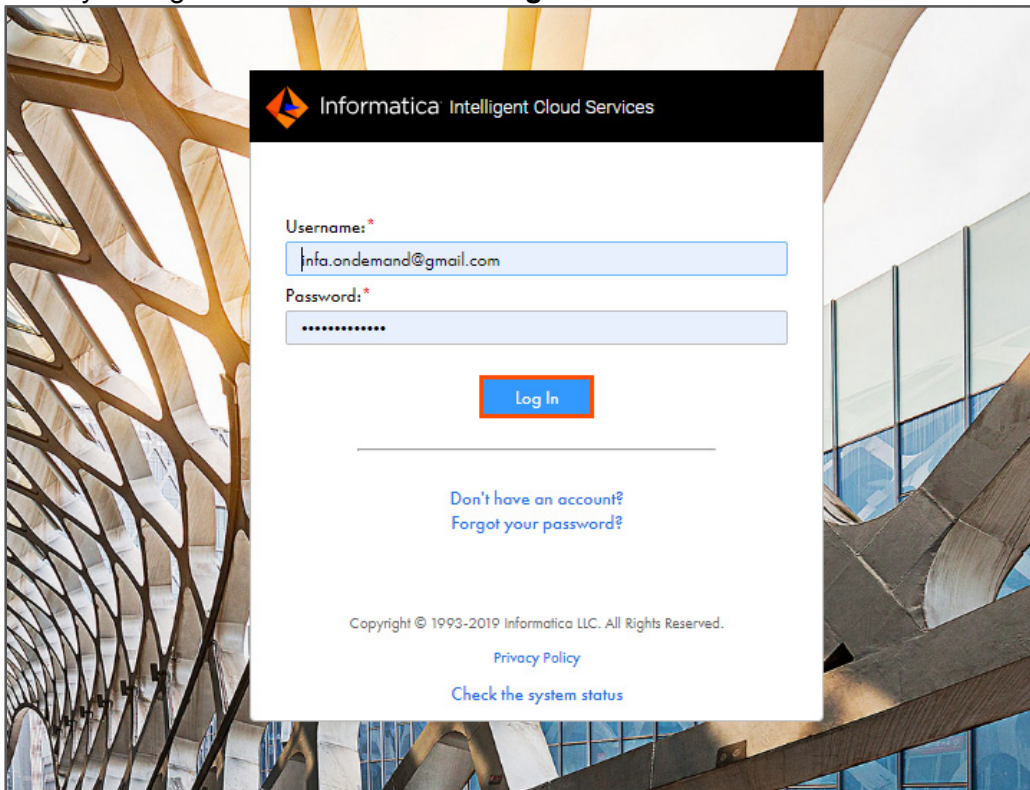


### Create Mapping Task:

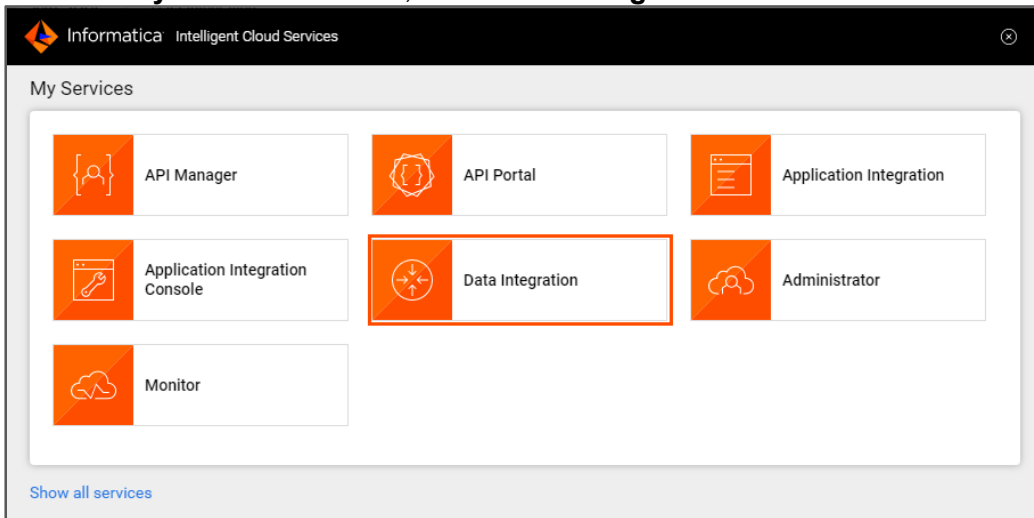
3. Access your cloud trial account by clicking **Launch** in your option Menu. If the option menu is labeled anything other than **Launch**, click the down arrow to the right and click **Launch**.



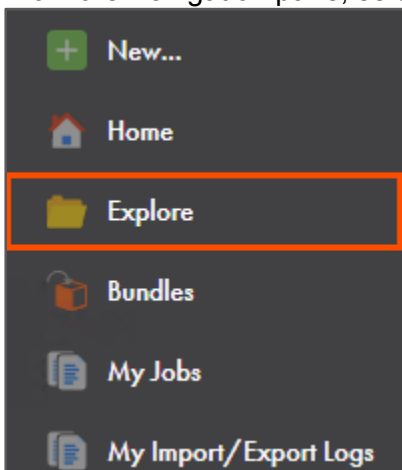
4. Enter your login credentials and click **Log In**.



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



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



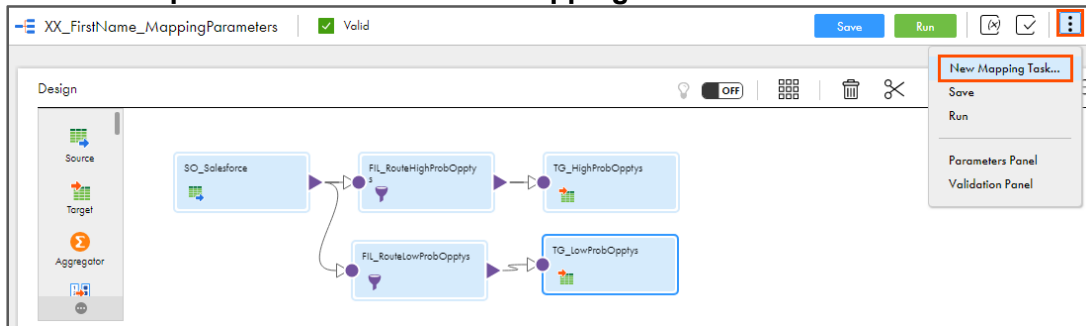
7. Go to **Default** folder and select the mapping **XX\_FirstName\_MappingParameters**.  
8. Click on the **Ellipsis** icon and select **Edit**.

| Default (32) 1 selected             |                                   |                      |                      |          |             |      |        |
|-------------------------------------|-----------------------------------|----------------------|----------------------|----------|-------------|------|--------|
|                                     | Name                              | Type                 | Updated On           | Location | Description | Tags | Status |
| <input type="checkbox"/>            | XX_FirstName_ErrorHandling        | Mapping              | Aug 1, 2019, 5:17 AM | Default  |             |      | Valid  |
| <input type="checkbox"/>            | XX_FirstName_HierarchyBuilder     | Mapping              | Aug 1, 2019, 5:17 AM | Default  |             |      | Valid  |
| <input type="checkbox"/>            | XX_FirstName_InOutParameter       | Mapping              | Aug 1, 2019, 1:12 AM | Default  |             |      | Valid  |
| <input type="checkbox"/>            | XX_FirstName_LookupOverride       | Mapping              | Aug 1, 2019, 2:02 AM | Default  |             |      |        |
| <input type="checkbox"/>            | XX_FirstName_MacroDateFormat      | Mapping              | Aug 1, 2019, 1:46 AM | Default  |             |      |        |
| <input checked="" type="checkbox"/> | XX_FirstName_MappingParameters    | Mapping              | Aug 1, 2019, 1:01 AM | Default  |             |      |        |
| <input type="checkbox"/>            | XX_FirstName_MultiObject          | Synchronization Task | Aug 1, 2019, 1:27 AM | Default  |             |      |        |
| <input type="checkbox"/>            | XX_FirstName_NormalizerAggregator | Mapping              | Aug 1, 2019, 1:20 AM | Default  |             |      |        |
| <input type="checkbox"/>            | XX_FirstName_NumberConversion     | Business Service     | Aug 1, 2019, 3:17 AM | Default  |             |      |        |
| <input type="checkbox"/>            | XX_FirstName_OpenWeather_RESTv2   | Mapping              | Aug 1, 2019, 3:04 AM | Default  |             |      |        |

Properties...  
 View  
**Edit**  
 Run  
 New Mapping Task...  
 Rename...  
 Copy To...  
 Move To...  
 Export...  
 Show Dependencies

**Note:** The Mapping canvas appears.

9. Click the **Ellipsis** icon and select **New Mapping Task...**

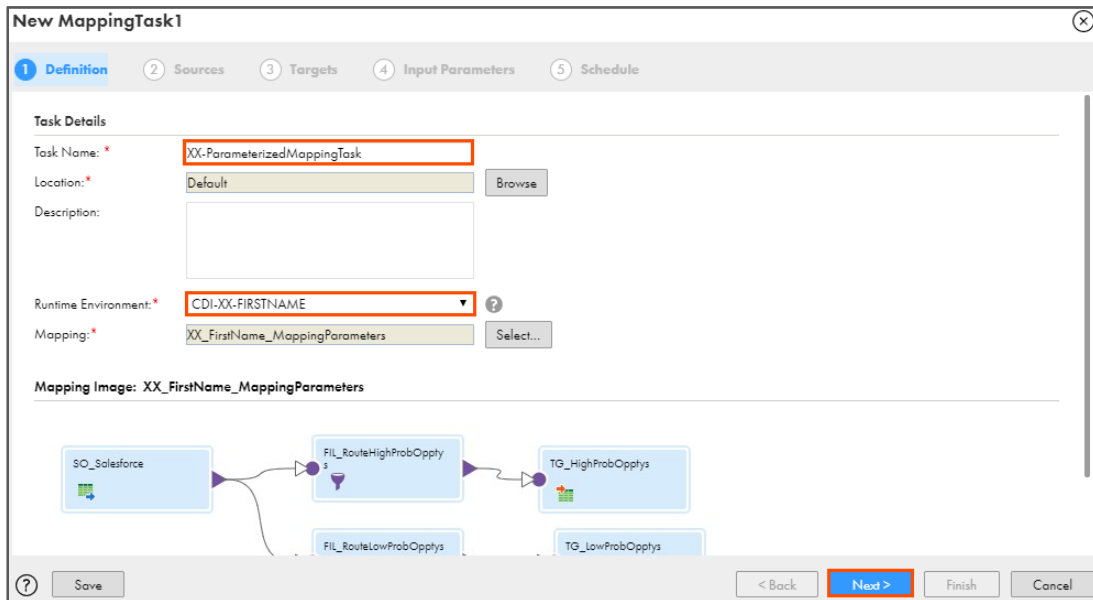


10. In the Task Name field, enter **XX-ParameterizedMappingTask**.

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

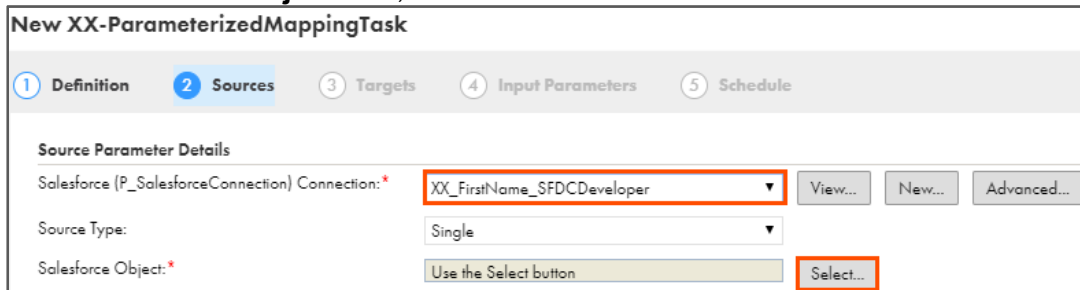
**Note:** The Runtime Environment name will be in CDI-XX-FIRSTNAME format.

12. Click **Next**.



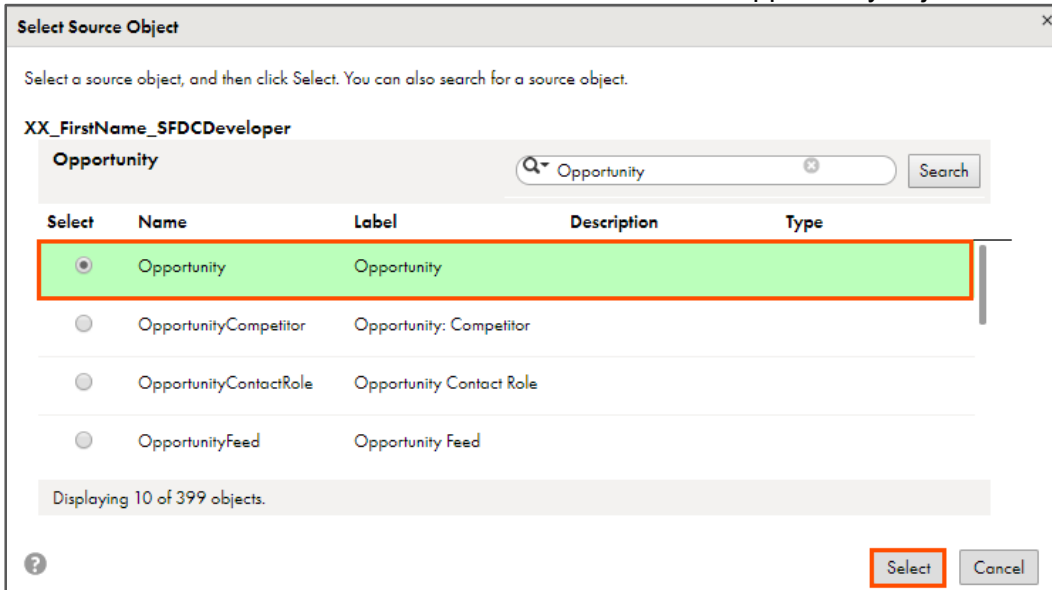
13. From the Salesforce (P\_SalesforceConnection) Connection drop-down, select **XX\_FirstName\_SFDCDeveloper**.

14. In the **Salesforce Object** field, click **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 a source object, and then click Select. You can also search for a source object.

XX\_FirstName\_SFDCDeveloper

Opportunity

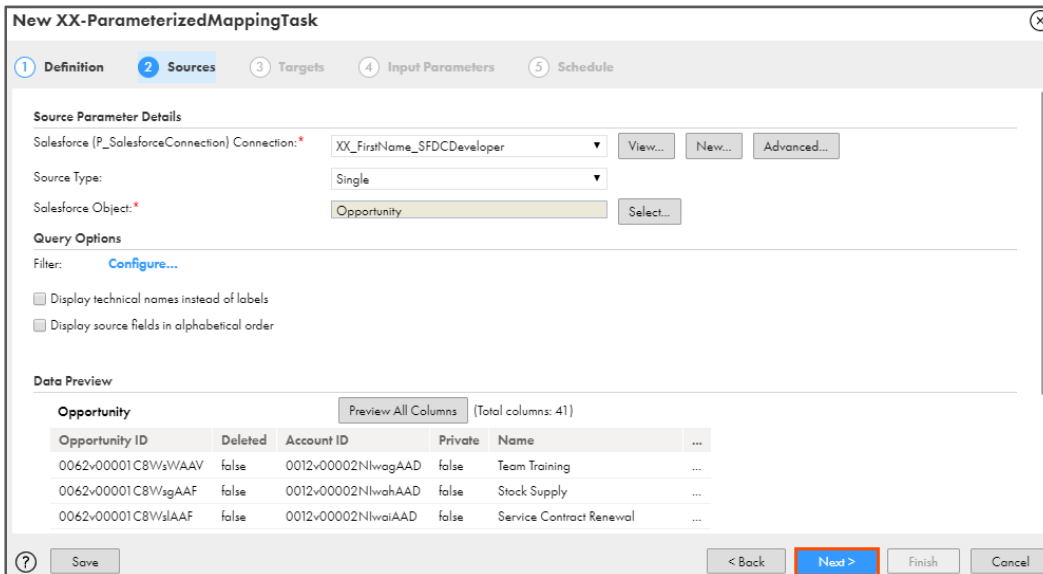
Search

| 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

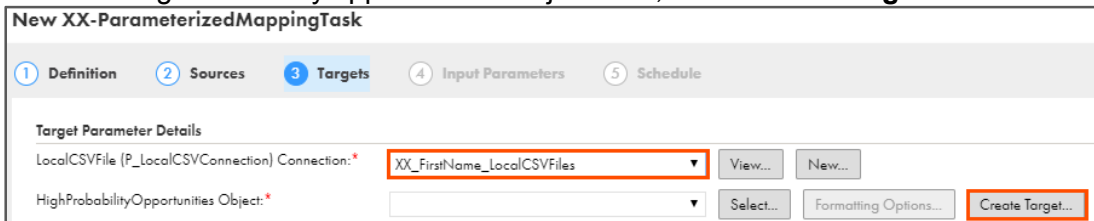
Opportunity Preview All Columns (Total columns: 41)

| Opportunity ID     | Deleted | Account ID         | Private | Name                     | ... |
|--------------------|---------|--------------------|---------|--------------------------|-----|
| 0062v00001C8W3WAAV | false   | 0012v00002NhwagAAD | false   | Team Training            | ... |
| 0062v00001C8W3gAAF | false   | 0012v00002NhwahAAD | false   | Stock Supply             | ... |
| 0062v00001C8W3jAAF | false   | 0012v00002NhwaiAAD | 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

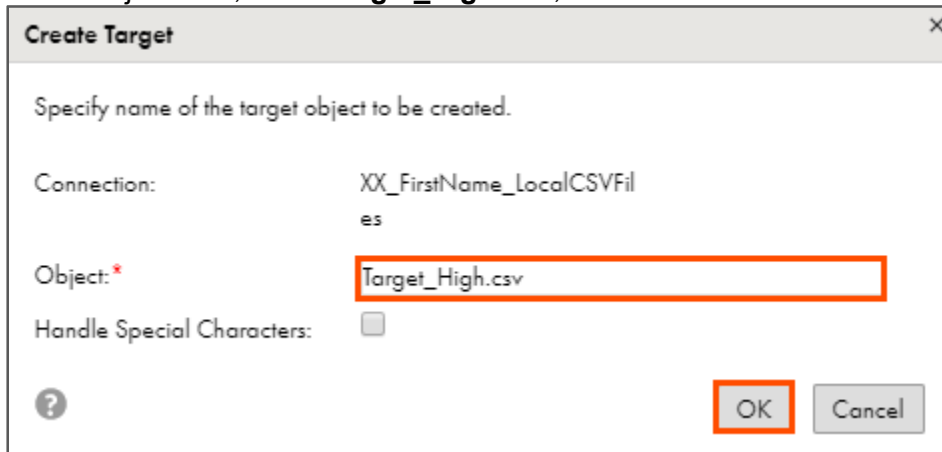
LocalCSVFile (P\_LocalCSVConnection) Connection: \* XX\_FirstName\_LocalCSVFiles View... New...

HighProbabilityOpportunities Object: \* Select... Formatting Options... Create Target...

**Note:** The Create Target window appears.

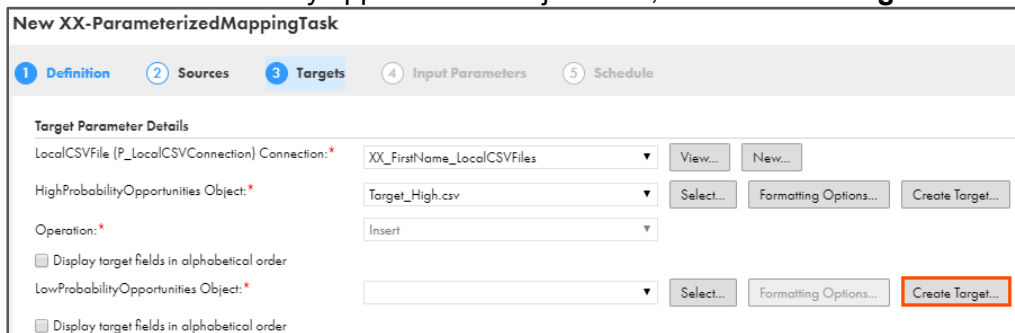


19. In the Object field, enter **Target\_High.csv**, and click **OK**.



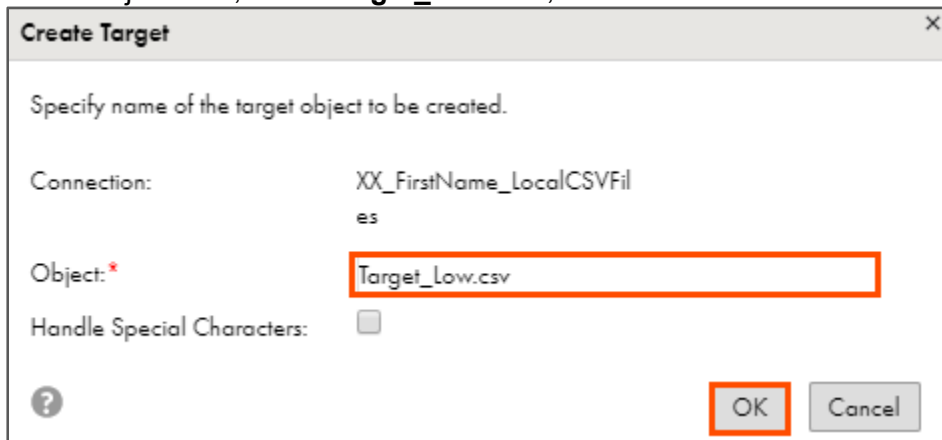
The 'Create Target' dialog box is shown. It has a title bar with a close button (X). The main text says 'Specify name of the target object to be created.' Below this, there are three fields: 'Connection:' with the value 'XX\_FirstName\_LocalCSVFiles', 'Object:\*' with the value 'Target\_High.csv' (highlighted with a red box), and 'Handle Special Characters:' with an unchecked checkbox. At the bottom right, there are two buttons: 'OK' (highlighted with a red box) and 'Cancel'.

20. From the LowProbabilityOpportunities Object field, click **Create Target**.



The 'New XX-ParameterizedMappingTask' dialog box is shown. It has a title bar and a tabbed interface with five tabs: 'Definition' (selected), 'Sources', 'Targets', 'Input Parameters', and 'Schedule'. Under the 'Definition' tab, there are several fields and buttons. The 'LocalCSVFile (P\_LocalCSVConnection) Connection:\*' field has a dropdown menu showing 'XX\_FirstName\_LocalCSVFiles' and buttons 'View...' and 'New...'. The 'HighProbabilityOpportunities Object:\*' field has a dropdown menu showing 'Target\_High.csv' and buttons 'Select...', 'Formatting Options...', and 'Create Target...'. The 'Operation:\*' field has a dropdown menu showing 'Insert'. There are two checkboxes: 'Display target fields in alphabetical order' and 'Display target fields in alphabetical order'. The 'LowProbabilityOpportunities Object:\*' field has a dropdown menu and buttons 'Select...', 'Formatting Options...', and 'Create Target...' (highlighted with a red box).

21. In the Object field, enter **Target\_Low.csv**, and click **OK**.

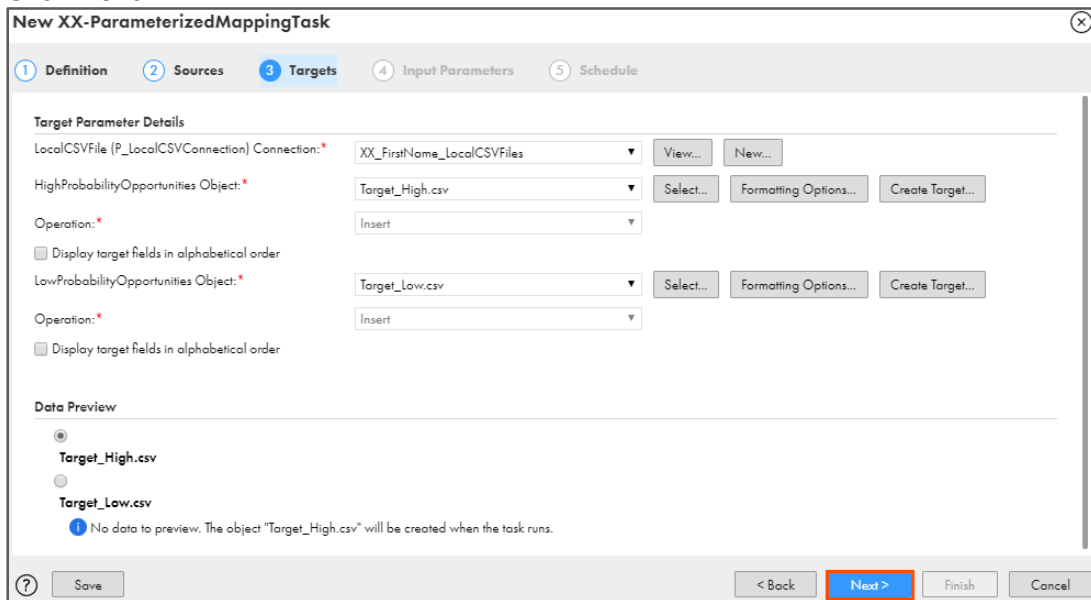


The 'Create Target' dialog box is shown. It has a title bar with a close button (X). The main text says 'Specify name of the target object to be created.' Below this, there are three fields: 'Connection:' with the value 'XX\_FirstName\_LocalCSVFiles', 'Object:\*' with the value 'Target\_Low.csv' (highlighted with a red box), and 'Handle Special Characters:' with an unchecked checkbox. At the bottom right, there are two buttons: 'OK' (highlighted with a red box) and 'Cancel'.

**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.

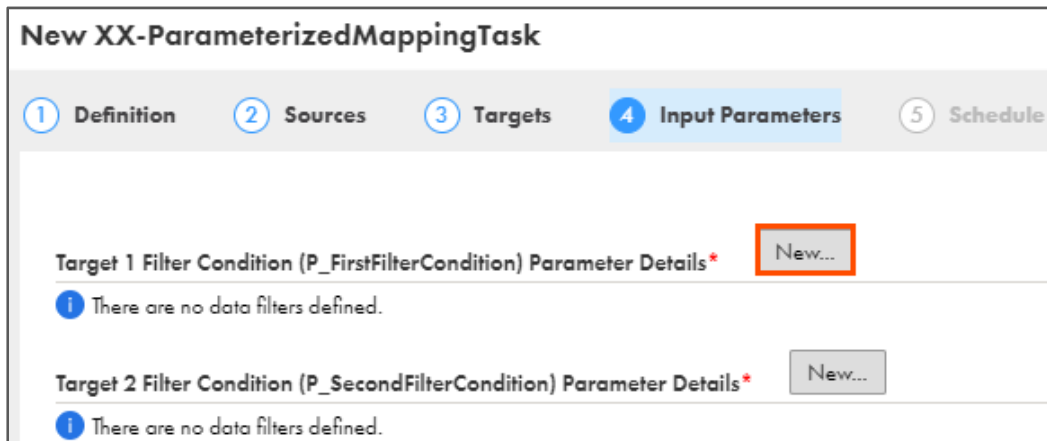


22. Click **Next**.



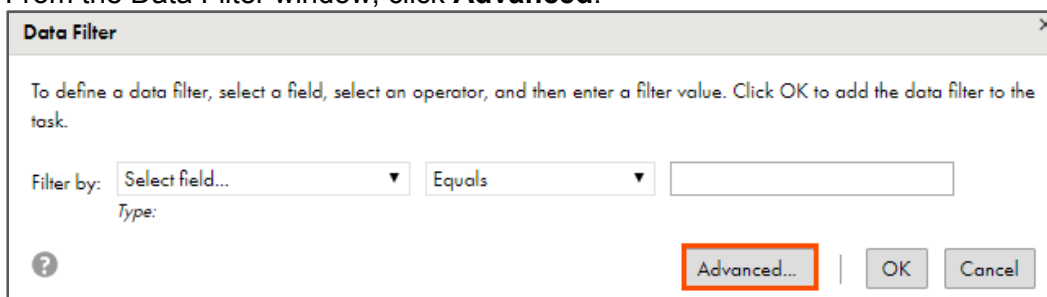
The dialog box shows the 'Targets' tab. It contains two target configurations. The first target is 'Target\_High.csv' with a connection of 'XX\_FirstName\_LocalCSVFiles' and an operation of 'Insert'. The second target is 'Target\_Low.csv' with the same connection and operation. There are buttons for 'View...', 'New...', 'Select...', 'Formatting Options...', and 'Create Target...' for each target. A 'Data Preview' section at the bottom shows that no data is available for preview as the targets are new.

23. From the Target 1 Filter Condition (P\_FirstFilterCondition) Parameter Details field, click **New**.



The dialog box shows the 'Input Parameters' tab. It contains two filter condition fields: 'Target 1 Filter Condition (P\_FirstFilterCondition) Parameter Details\*' and 'Target 2 Filter Condition (P\_SecondFilterCondition) Parameter Details\*'. Both fields have a 'New...' button next to them, which is highlighted with a red box in the image.

24. From the Data Filter window, click **Advanced**.



The 'Data Filter' dialog box is shown. It has a text area with instructions: '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.' Below this, there are dropdown menus for 'Filter by:' (set to 'Select field...') and 'Type:' (set to 'Equals'), followed by an empty text input field for the filter value. At the bottom, there are buttons for 'Advanced...' (highlighted with a red box), 'OK', and 'Cancel'.

25. In the Filter Expression field, enter the following expression:

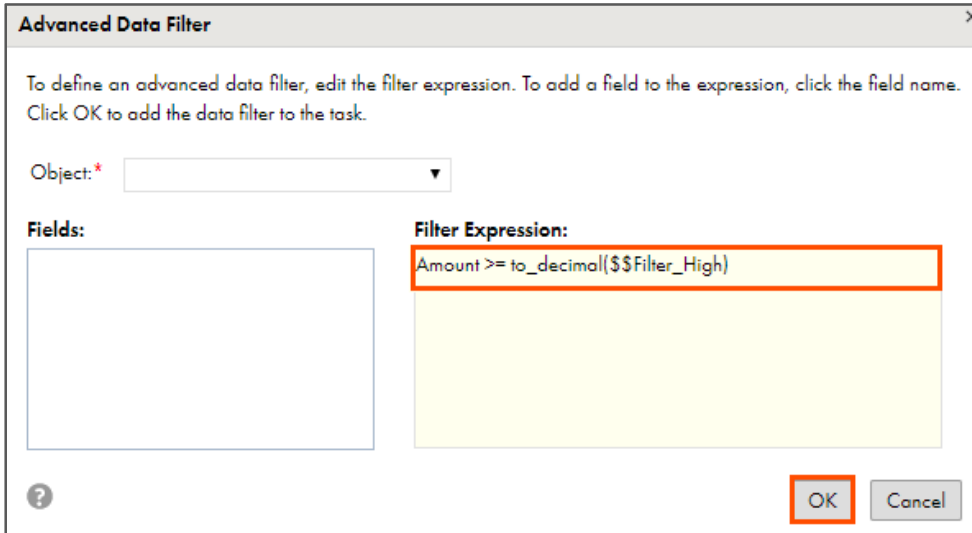
**Amount >= to\_decimal(\$\$Filter\_High)**

OR

Open the file named **15\_LabGuide\_UsingParameterFile\_6-2** provided with this lab. Copy the command mentioned under **Step 25** and paste it in the Expression field.



26. Click **OK**.



**Advanced Data Filter**

To define an advanced data filter, edit the filter expression. To add a field to the expression, click the field name. Click OK to add the data filter to the task.

Object: \*

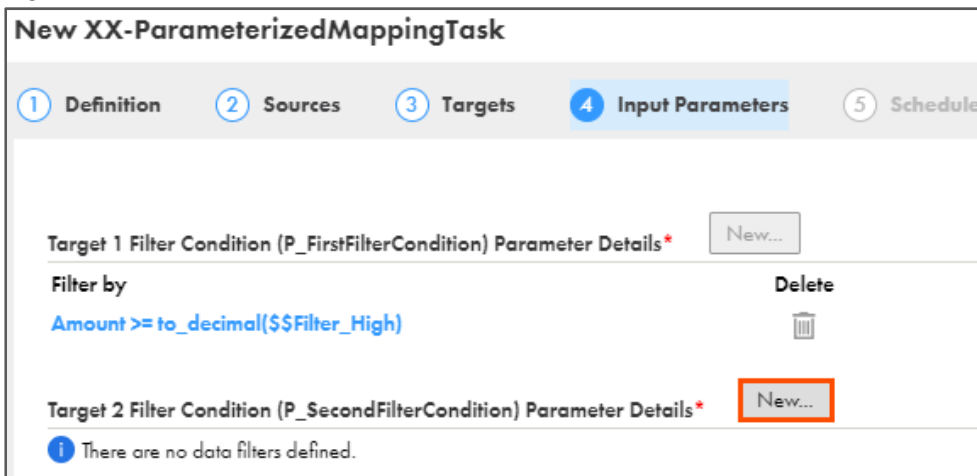
Fields:

Filter Expression:  
Amount >= to\_decimal(\$\$Filter\_High)

OK Cancel

**Note:** If the Data Filter window appears again, 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

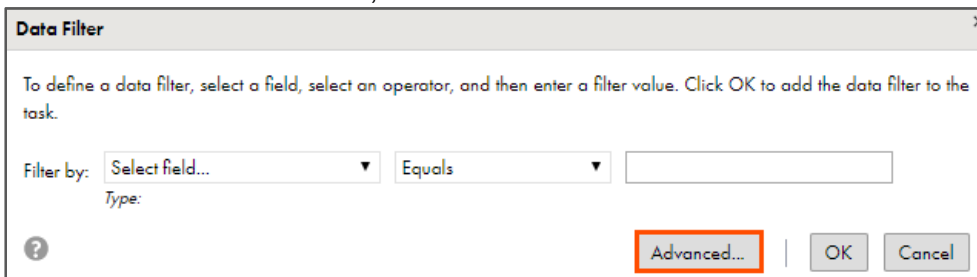
Target 1 Filter Condition (P\_FirstFilterCondition) Parameter Details\* New...

Filter by Amount >= to\_decimal(\$\$Filter\_High) Delete

Target 2 Filter Condition (P\_SecondFilterCondition) Parameter Details\* New...

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

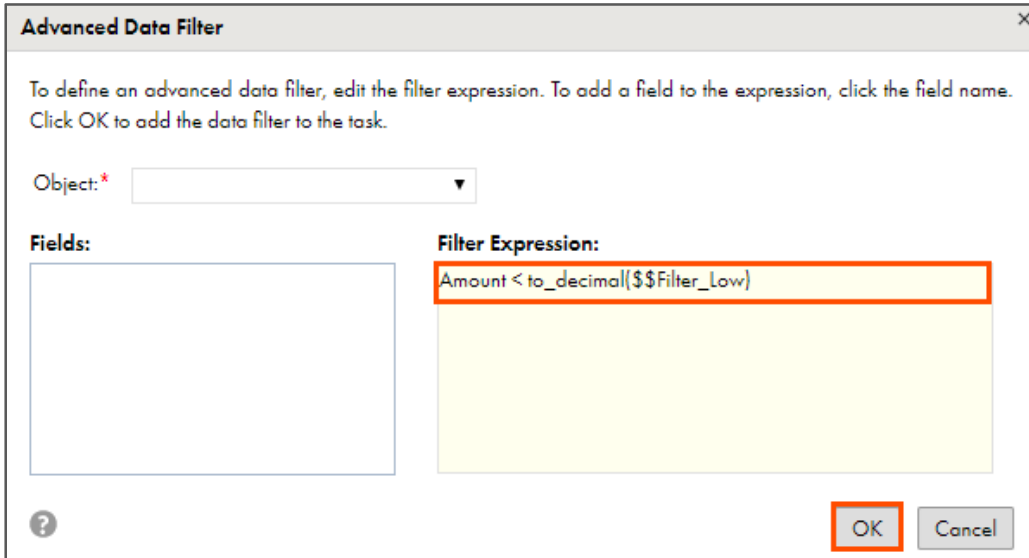
29. In the Filter Expression field, enter the following expression:

**Amount < to\_decimal(\$\$Filter\_Low)**

OR

Open the file named **15\_LabGuide\_UsingParameterFile\_6-2** provided with this lab. Copy the command mentioned under **Step 29** and paste it in the Expression field.

30. Click **OK**.



**Advanced Data Filter**

To define an advanced data filter, edit the filter expression. To add a field to the expression, click the field name. Click OK to add the data filter to the task.

Object: \*

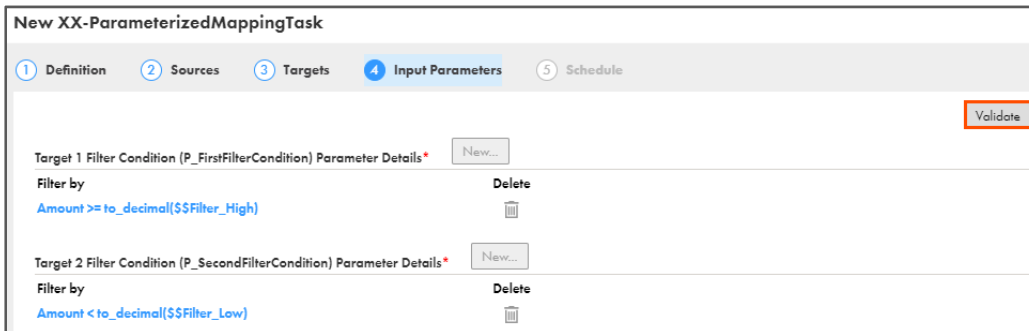
**Fields:**

**Filter Expression:**  
Amount < to\_decimal(\$\$Filter\_Low)

OK Cancel

**Note:** If the Data Filter window appears again, close the window.

31. Click **Validate**.



**New XX-ParameterizedMappingTask**

1 Definition 2 Sources 3 Targets 4 **Input Parameters** 5 Schedule

Validate

Target 1 Filter Condition (P\_FirstFilterCondition) Parameter Details\* New...

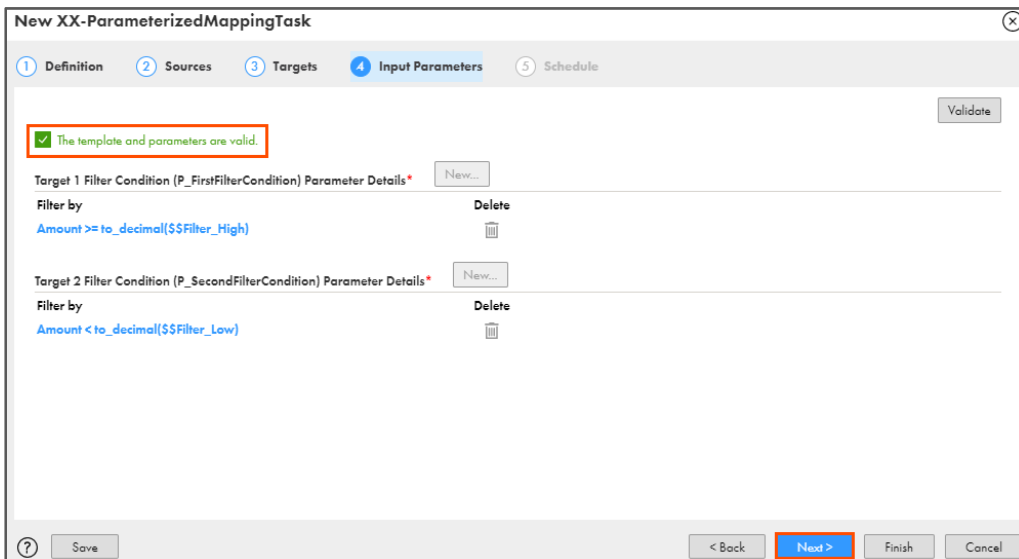
Filter by  
Amount >= to\_decimal(\$\$Filter\_High) Delete

Target 2 Filter Condition (P\_SecondFilterCondition) Parameter Details\* New...

Filter by  
Amount < to\_decimal(\$\$Filter\_Low) Delete

**Note:** The template and parameters are valid message appears.

32. Click **Next**.



**New XX-ParameterizedMappingTask**

1 Definition 2 Sources 3 Targets 4 **Input Parameters** 5 Schedule

Validate

✓ The template and parameters are valid.

Target 1 Filter Condition (P\_FirstFilterCondition) Parameter Details\* New...

Filter by  
Amount >= to\_decimal(\$\$Filter\_High) Delete

Target 2 Filter Condition (P\_SecondFilterCondition) Parameter Details\* New...

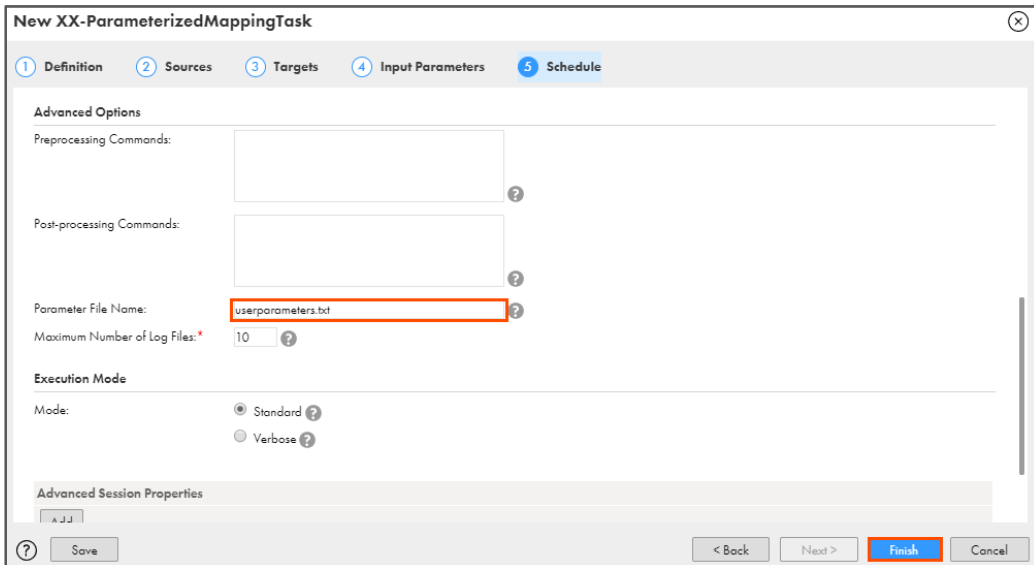
Filter by  
Amount < to\_decimal(\$\$Filter\_Low) Delete

Save < Back **Next >** Finish Cancel

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**.



The screenshot shows the 'New XX-ParameterizedMappingTask' dialog box with the 'Schedule' tab selected. The 'Parameter File Name' field is highlighted with a red box and contains the text 'userparameters.txt'. Other fields include 'Preprocessing Commands', 'Post-processing Commands', 'Maximum Number of Log Files' (set to 10), and 'Execution Mode' (set to Standard).

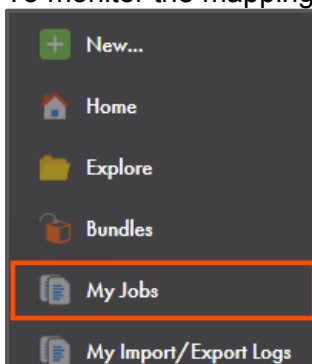
35. Click **Run**.




The screenshot shows the 'XX-ParameterizedMappingTask' task details window. The 'Run' button is highlighted with a red box. The task details show 'Task Name: XX-ParameterizedMappingTask' and 'Location: Default'.

## 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**.



The screenshot shows the 'Jobs' table with the following data:

| Instance Name                 | Subtasks | Start Time       | End Time     | Rows Processed | State   |
|-------------------------------|----------|------------------|--------------|----------------|---------|
| XX-ParameterizedMappingTask-1 |          | Aug 1, 2019, ... | Aug 1, 20... | 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:\IICS LabFiles**.

39. Verify that correct entries are written to **Target\_High.csv** and **Target\_Low.csv** files.

#### Target\_High.csv:

| Id        | IsDeleted | AccountId | IsPrivate | Name                                        | Descriptio | StageName | Amount  | Probability |
|-----------|-----------|-----------|-----------|---------------------------------------------|------------|-----------|---------|-------------|
| 0062v0000 | 0         | 0012v0000 | 0         | Stock Supply                                |            | Proposal/ | 1000000 | 75          |
| 0062v0000 | 0         | 0012v0000 | 0         | United Oil Office Portable Generators       |            | Negotiati | 125000  | 90          |
| 0062v0000 | 0         | 0012v0000 | 0         | Express Logistics Standby Generator         |            | Closed W  | 220000  | 100         |
| 0062v0000 | 0         | 0012v0000 | 0         | United Oil Refinery Generators              |            | Proposal/ | 270000  | 75          |
| 0062v0000 | 0         | 0012v0000 | 0         | United Oil SLA                              |            | Closed W  | 120000  | 100         |
| 0062v0000 | 0         | 0012v0000 | 0         | Grand Hotels Guest Portable Generators      |            | Value Pro | 250000  | 50          |
| 0062v0000 | 0         | 0012v0000 | 0         | Pyramid Emergency Generators                |            | Prospecti | 100000  | 10          |
| 0062v0000 | 0         | 0012v0000 | 0         | United Oil Installations                    |            | Negotiati | 270000  | 90          |
| 0062v0000 | 0         | 0012v0000 | 0         | United Oil Installations                    |            | Closed W  | 270000  | 100         |
| 0062v0000 | 0         | 0012v0000 | 0         | Grand Hotels Generator Installations        |            | Closed W  | 350000  | 100         |
| 0062v0000 | 0         | 0012v0000 | 0         | United Oil Refinery Generators              |            | Closed W  | 915000  | 100         |
| 0062v0000 | 0         | 0012v0000 | 0         | University of AZ Installations              |            | Proposal/ | 100000  | 75          |
| 0062v0000 | 0         | 0012v0000 | 0         | Express Logistics SLA                       |            | Perceptio | 120000  | 70          |
| 0062v0000 | 0         | 0012v0000 | 0         | Burlington Textiles Weaving Plant Generator |            | Closed W  | 235000  | 100         |
| 0062v0000 | 0         | 0012v0000 | 0         | United Oil Installations                    |            | Closed W  | 235000  | 100         |
| 0062v0000 | 0         | 0012v0000 | 0         | United Oil Emergency Generators             |            | Closed W  | 440000  | 100         |
| 0062v0000 | 0         | 0012v0000 | 0         | United Oil Standby Generators               |            | Closed W  | 120000  | 100         |
| 0062v0000 | 0         | 0012v0000 | 0         | Grand Hotels Emergency Generators           |            | Closed W  | 210000  | 100         |
| 0062v0000 | 0         | 0012v0000 | 0         | United Oil Plant Standby Generators         |            | Needs An  | 675000  | 20          |

#### Target\_Low.csv:

| Id        | IsDeleted | AccountId | IsPrivate | Name                                        | Descriptio | StageName  | Amount | Probability |
|-----------|-----------|-----------|-----------|---------------------------------------------|------------|------------|--------|-------------|
| 0062v0000 | 0         | 0012v0000 | 0         | Team Training                               |            | Prospecti  | 700    | 10          |
| 0062v0000 | 0         | 0012v0000 | 0         | Service Contract Renewal                    |            | Id. Decisi | 95000  | 60          |
| 0062v0000 | 0         | 0012v0000 | 0         | Annual Maintenance                          |            | Negotiati  | 50000  | 90          |
| 0062v0000 | 0         | 0012v0000 | 0         | Dickenson Mobile Generators                 |            | Qualificat | 15000  | 10          |
| 0062v0000 | 0         | 0012v0000 | 0         | GenePoint Standby Generator                 |            | Closed W   | 85000  | 100         |
| 0062v0000 | 0         | 0012v0000 | 0         | Grand Hotels Kitchen Generator              |            | Id. Decisi | 15000  | 60          |
| 0062v0000 | 0         | 0012v0000 | 0         | Edge Emergency Generator                    |            | Closed W   | 75000  | 100         |
| 0062v0000 | 0         | 0012v0000 | 0         | University of AZ Portable Generators        |            | Closed W   | 50000  | 100         |
| 0062v0000 | 0         | 0012v0000 | 0         | Express Logistics Portable Truck Generators |            | Value Pro  | 80000  | 50          |
| 0062v0000 | 0         | 0012v0000 | 0         | GenePoint Lab Generators                    |            | Id. Decisi | 60000  | 60          |
| 0062v0000 | 0         | 0012v0000 | 0         | GenePoint SLA                               |            | Closed W   | 30000  | 100         |
| 0062v0000 | 0         | 0012v0000 | 0         | Edge Installation                           |            | Closed W   | 50000  | 100         |
| 0062v0000 | 0         | 0012v0000 | 0         | Edge SLA                                    |            | Closed W   | 60000  | 100         |
| 0062v0000 | 0         | 0012v0000 | 0         | University of AZ SLA                        |            | Closed W   | 90000  | 100         |
| 0062v0000 | 0         | 0012v0000 | 0         | Grand Hotels SLA                            |            | Closed W   | 90000  | 100         |
| 0062v0000 | 0         | 0012v0000 | 0         | Edge Emergency Generator                    |            | Id. Decisi | 35000  | 60          |

*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:

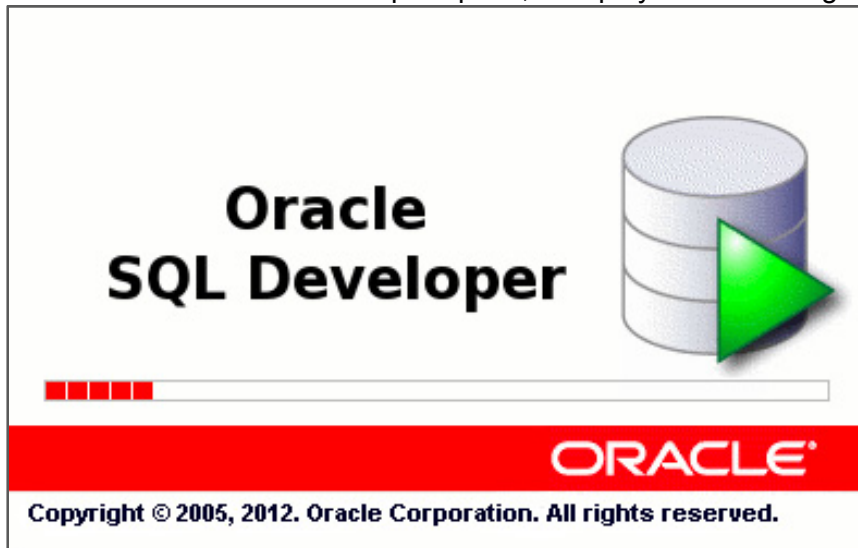
20 minutes

---

#### Tasks:

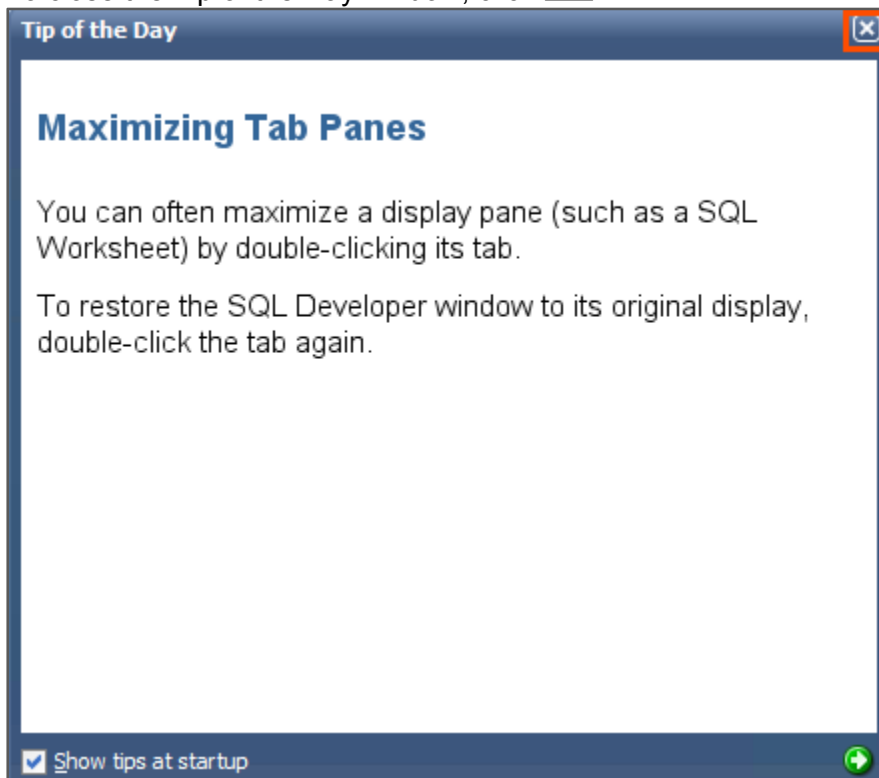
##### Insert Table:

1. To insert table in Oracle, from the windows **Start** menu, select **SQL Developer**.
2. When the Oracle SQL Developer opens, it displays the following window:

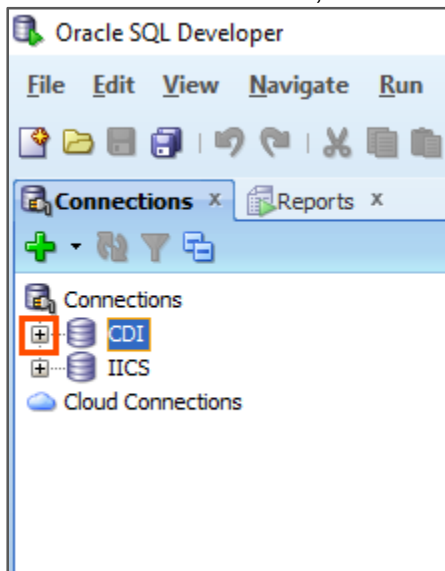


**Note:** After the application opens, the Tip of the Day window appears.

3. To close the Tip of the Day window, click .



4. To create a table in CDI, click .

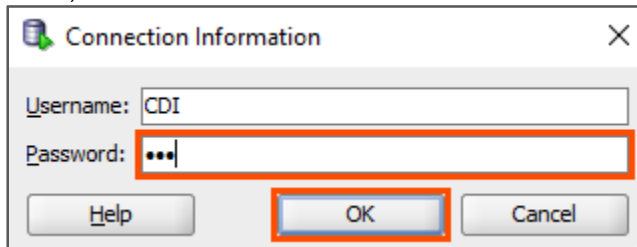


**Note:** The Connection Information window appears.

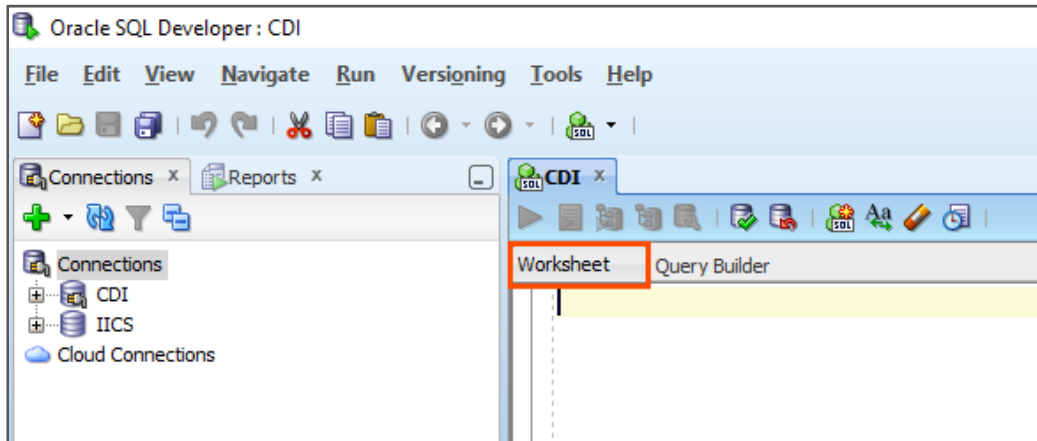
5. In the Password field, enter **CDI**.




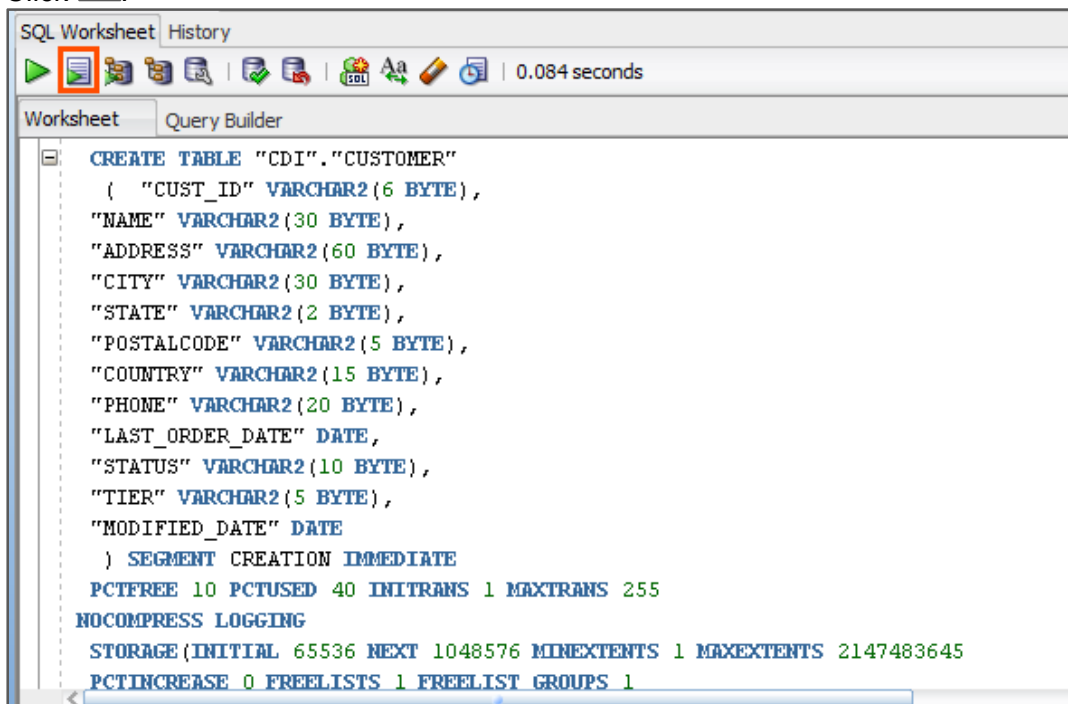
6. Click, **OK**.



7. Select the **Worksheet** tab.

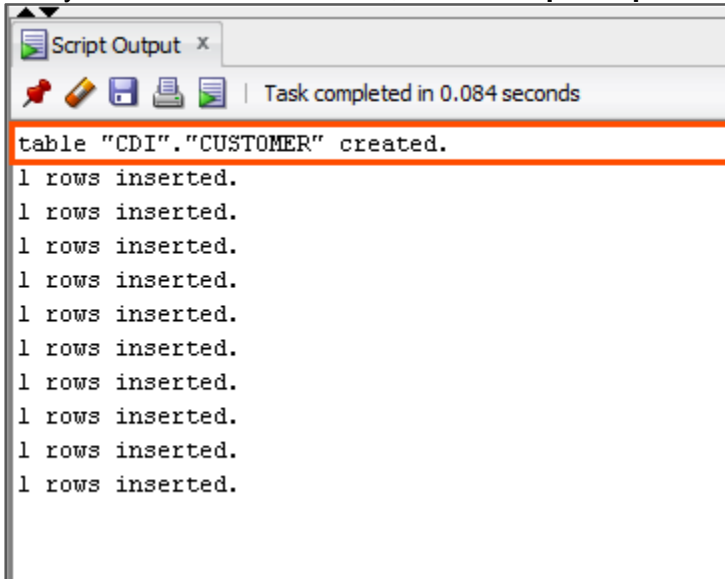



8. Open the **CUSTOMER.sql** file (use the Open with Notepad option) provided with this lab and copy the command from the file.
9. Paste the commands under Worksheet section.
10. Click .



**Note:** The script runs automatically.

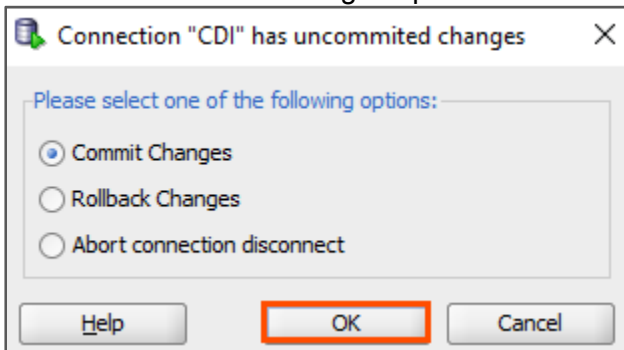
11. Verify that the table is created, under **Script Output** section.



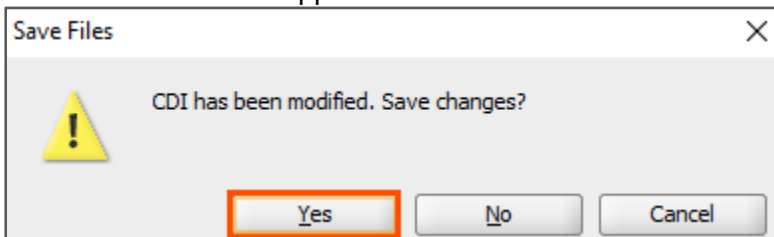
12. To close the SQL Developer, click .

**Note:** A Connection "CDI" has uncommitted changes window appears.

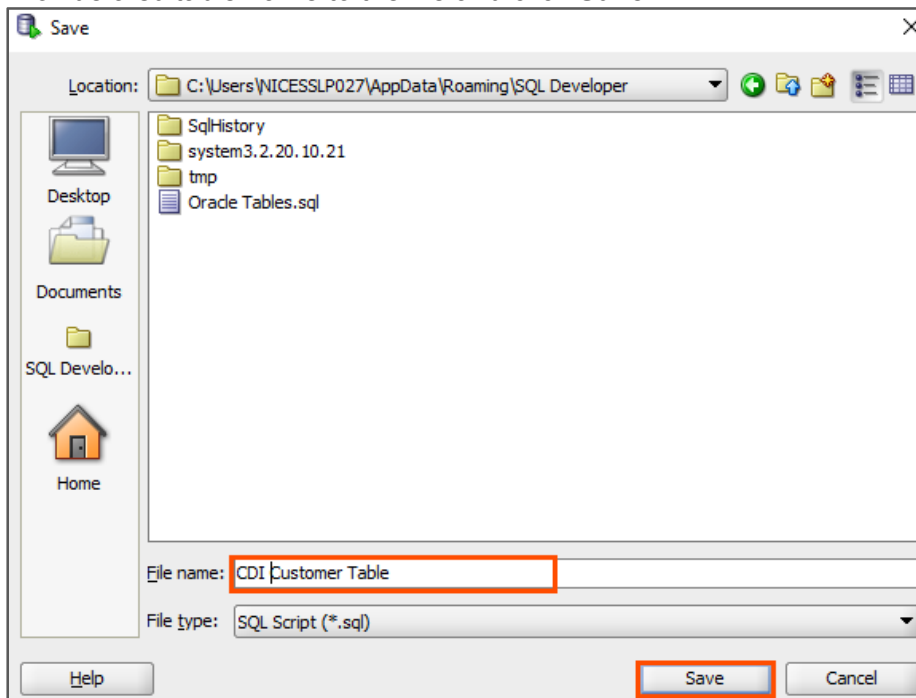
13. Ensure that Commit Changes option is selected and click **OK**.



14. A Save Files window appears. Click **Yes**.



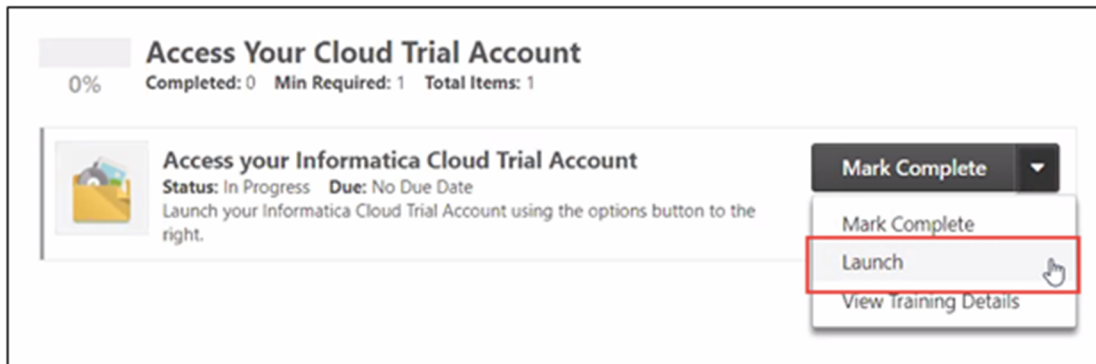
15. Provide a suitable name to the file and click **Save**.



**Note:** The SQL Developer closes.

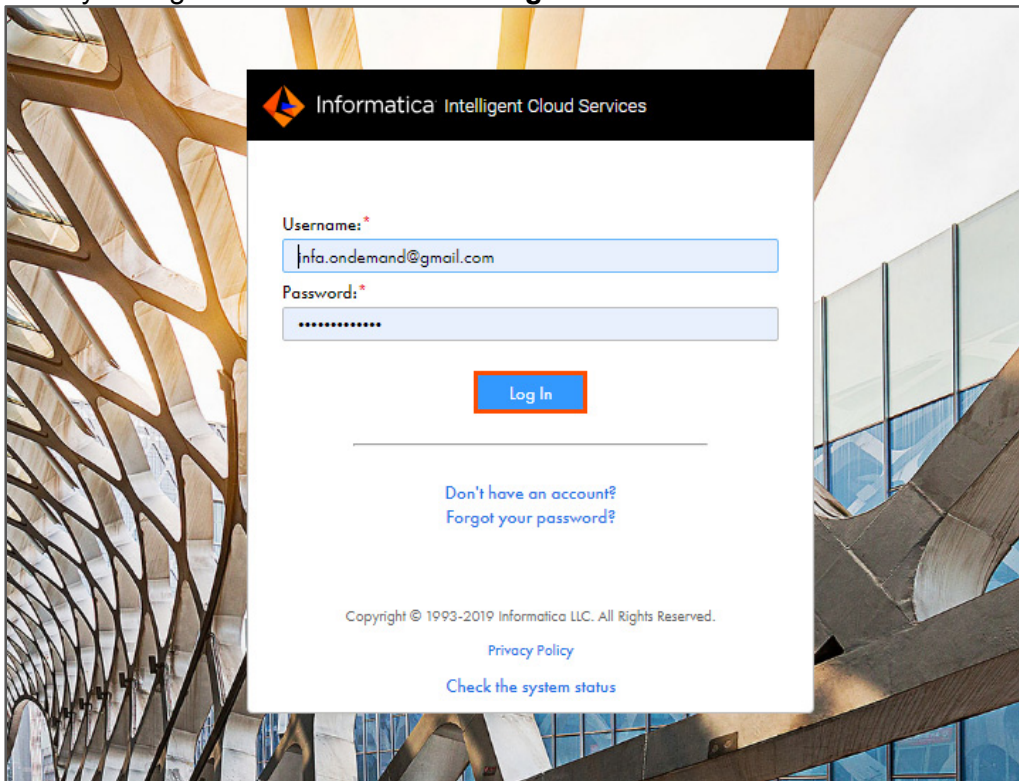
### Create Mapping:

16. Access your cloud trial account by clicking **Launch** in your option Menu. If the option menu is labeled anything other than **Launch**, click the down arrow to the right and click **Launch**.



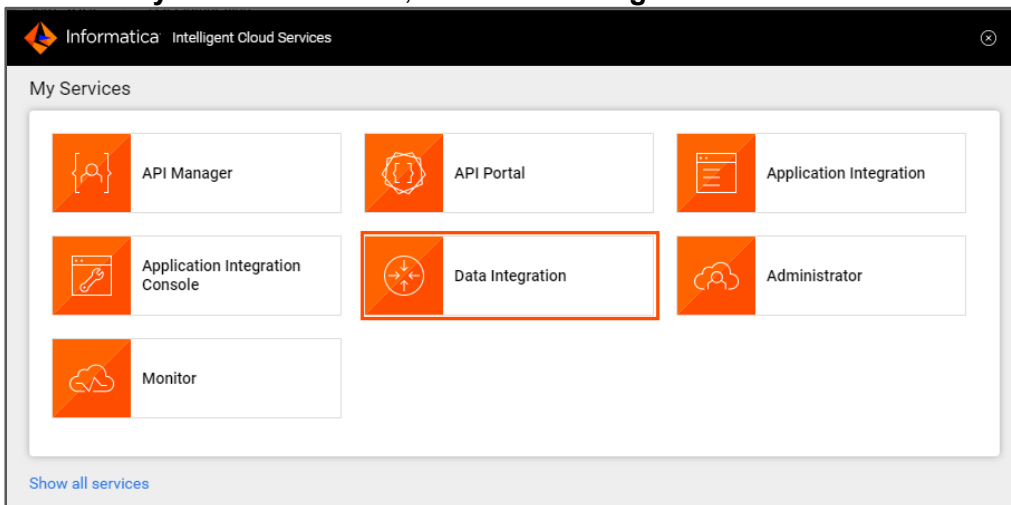
**Note:** Follow this step, if you have navigated away from the login page.

17. Enter your login credentials and click **Log In**.

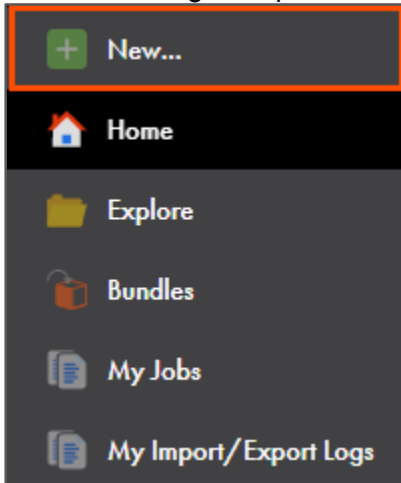


The login page features a white central panel with a black header bar containing the Informatica logo and the text "Informatica Intelligent Cloud Services". The background is a photograph of a modern building's interior with a complex, branching wooden structure. The login form includes a "Username:" label with an asterisk, a text input field containing "info.ondemand@gmail.com", a "Password:" label with an asterisk, and a password input field with masked characters. A blue "Log In" button is positioned below the password field. Below the button, there are two links: "Don't have an account?" and "Forgot your password?". At the bottom of the panel, the copyright notice "Copyright © 1993-2019 Informatica LLC. All Rights Reserved." is displayed, along with links for "Privacy Policy" and "Check the system status".

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

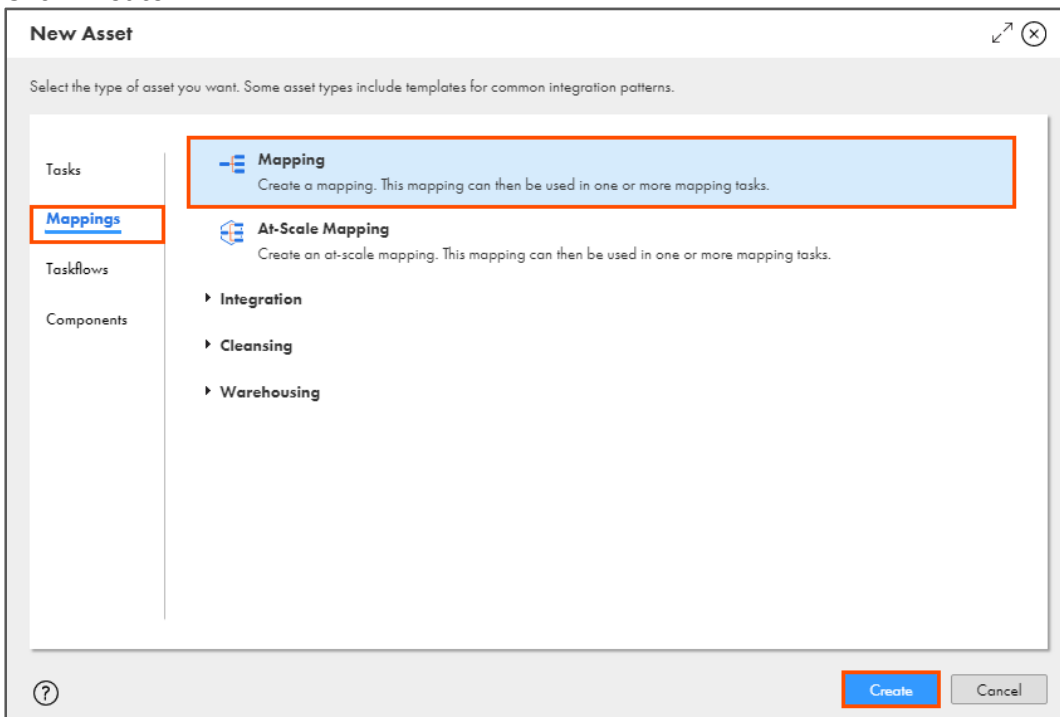


19. From the Navigation pane, select **New**.



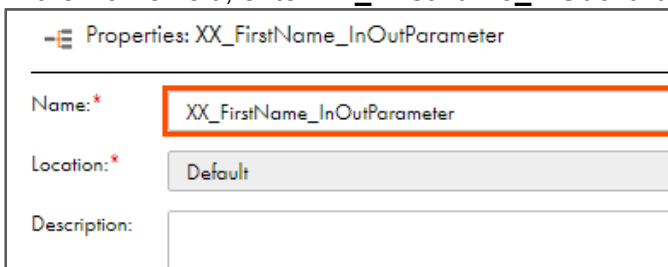
20. From the New Asset window, click the **Mappings** tab, and select **Mapping**.

21. Click **Create**.



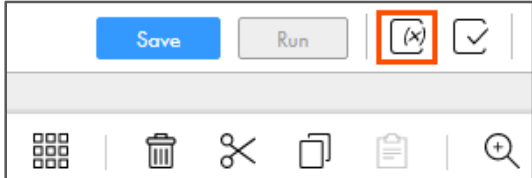
**Note:** The Mapping page appears.

22. In the Name field, enter **XX\_FirstName\_InOutParameter**.



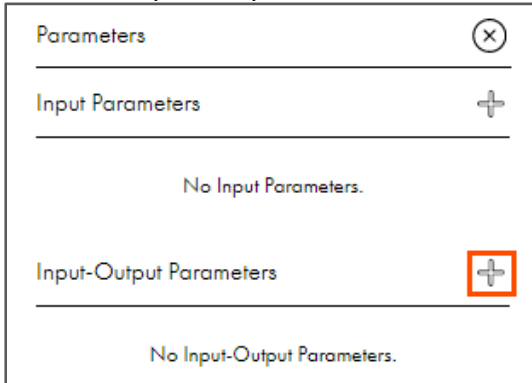
The image shows a form titled 'Properties: XX\_FirstName\_InOutParameter'. It has three fields: 'Name:' with the value 'XX\_FirstName\_InOutParameter' (highlighted with a red box), 'Location:' with the value 'Default', and 'Description:' which is empty.

23. To create an input-output parameter, click .



**Note:** The Parameters window appears.

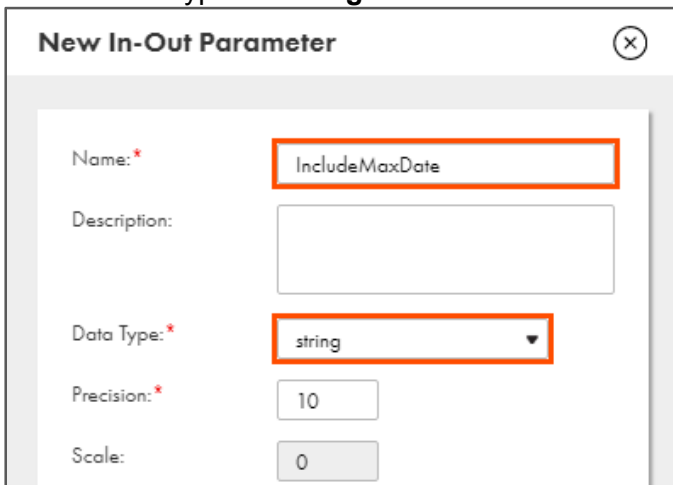
24. From the Input-Output Parameters section, click .



**Note:** The New In-Out Parameter window appears.

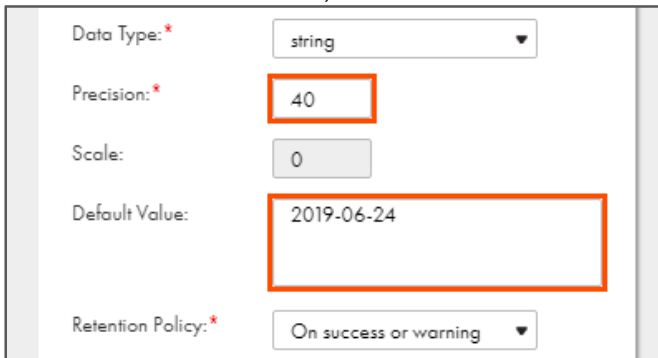
25. In the Name field, enter **IncludeMaxDate**.

26. Retain Data Type as **String**.



27. In the Precision field, enter **40**.

28. In the Default Value field, enter **2019-06-24**.



Data Type: \* string ▼

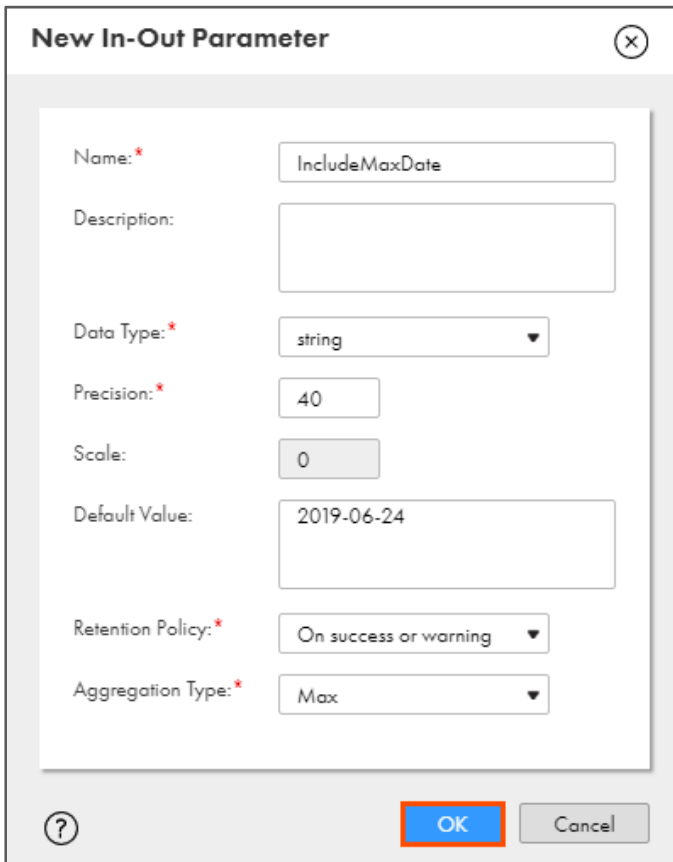
Precision: \* 40

Scale: 0

Default Value: 2019-06-24

Retention Policy: \* On success or warning ▼

29. Click **OK**.



**New In-Out Parameter** (X)

Name: \* IncludeMaxDate

Description:

Data Type: \* string ▼

Precision: \* 40

Scale: 0

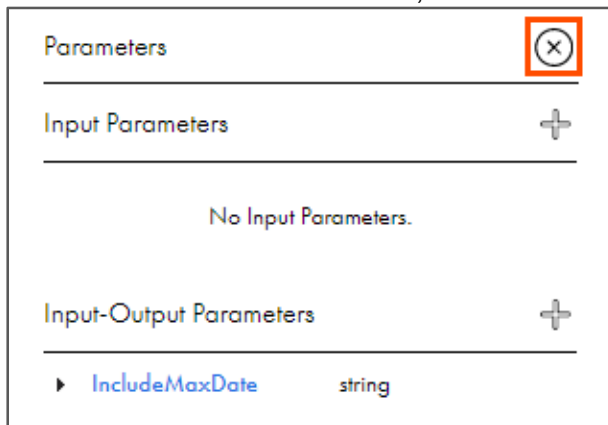
Default Value: 2019-06-24

Retention Policy: \* On success or warning ▼

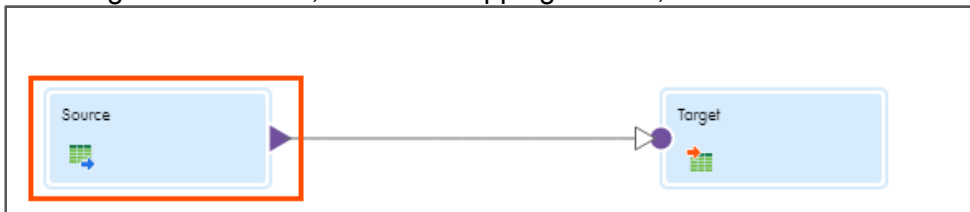
Aggregation Type: \* Max ▼

? OK Cancel

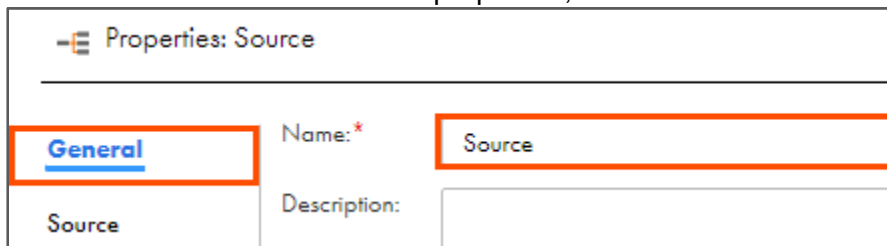
30. To close the Parameter window, click .



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

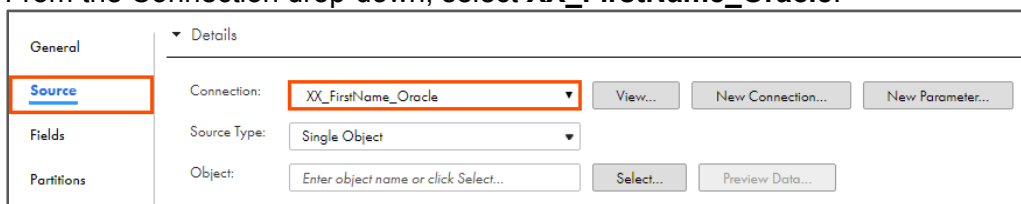


32. In the General section of Source properties, retain Name as **Source**.



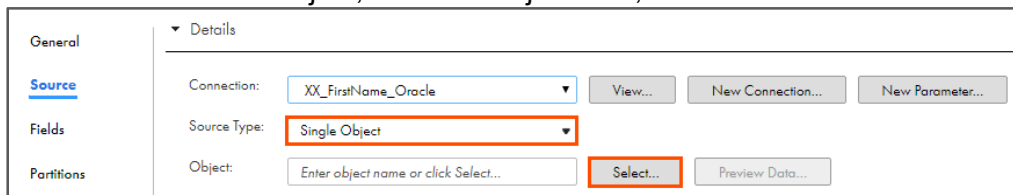
33. From the properties pane, click **Source**.

34. From the Connection drop-down, select **XX\_FirstName\_Oracle**.



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

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

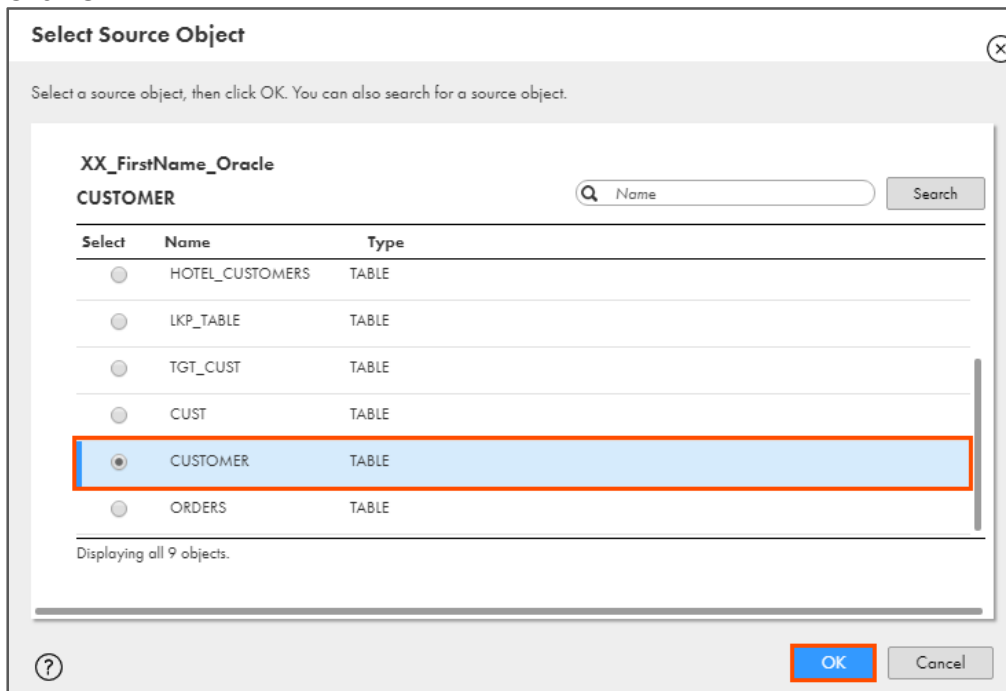


**Note:** The Select Source Object window appears.

37. From the list, select **CUSTOMER**.



38. Click **OK**.




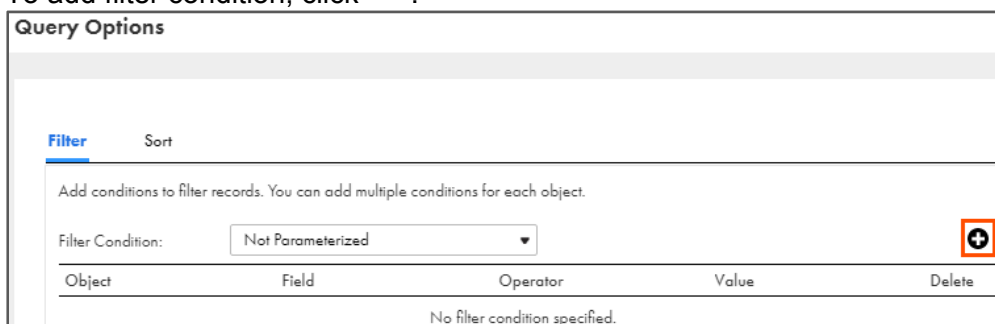
39. From the Source pane, expand **Query Options**.

40. To apply filter to select rows from CUSTOMER table, click **Configure**.



**Note:** The Query Options window appears.

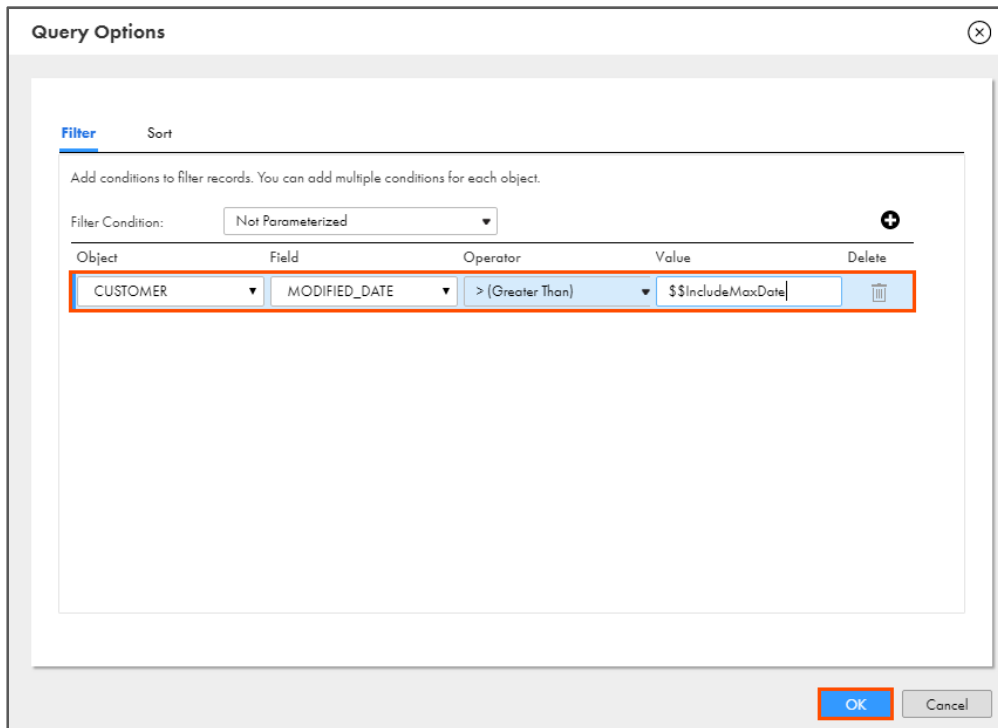
41. To add filter condition, click .



42. Enter the details as shown in table below:

| Object   | Field         | Operator           | Value              |
|----------|---------------|--------------------|--------------------|
| CUSTOMER | MODIFIED_DATE | Greater Than ( > ) | \$\$IncludeMaxDate |

43. Click **OK**.



**Query Options**

**Filter** Sort

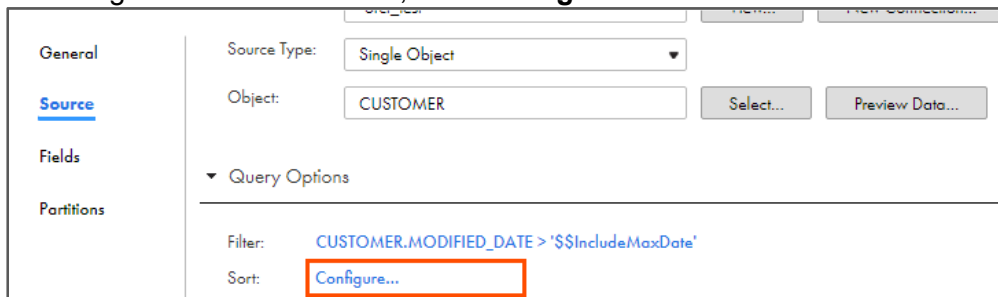
Add conditions to filter records. You can add multiple conditions for each object.

Filter Condition: Not Parameterized

| Object   | Field         | Operator         | Value              | Delete |
|----------|---------------|------------------|--------------------|--------|
| CUSTOMER | MODIFIED_DATE | > (Greater Than) | \$\$IncludeMaxDate |        |

OK Cancel

44. To configure the sort condition, click **Configure**.



**Query Options**

**General** Source Fields Partitions

Source Type: Single Object


Object: CUSTOMER

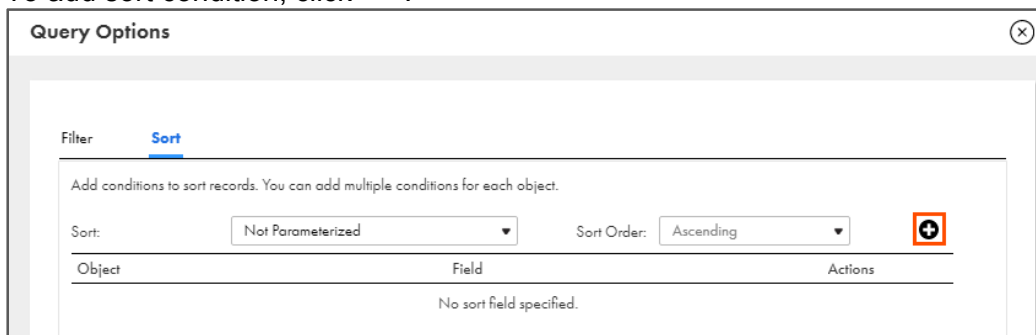
Select... Preview Data...

Query Options

Filter: CUSTOMER.MODIFIED\_DATE > '\$\$IncludeMaxDate'

Sort: Configure...

45. To add sort condition, click .



**Query Options**

**Filter** Sort

Add conditions to sort records. You can add multiple conditions for each object.

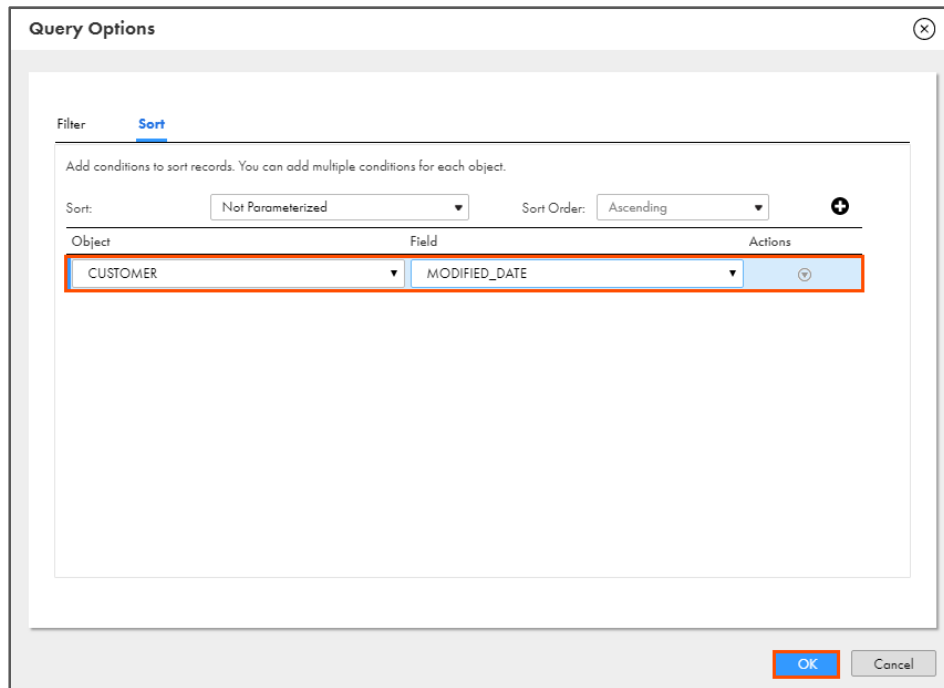
Sort: Not Parameterized Sort Order: Ascending

| Object                   | Field | Actions |
|--------------------------|-------|---------|
| No sort field specified. |       |         |

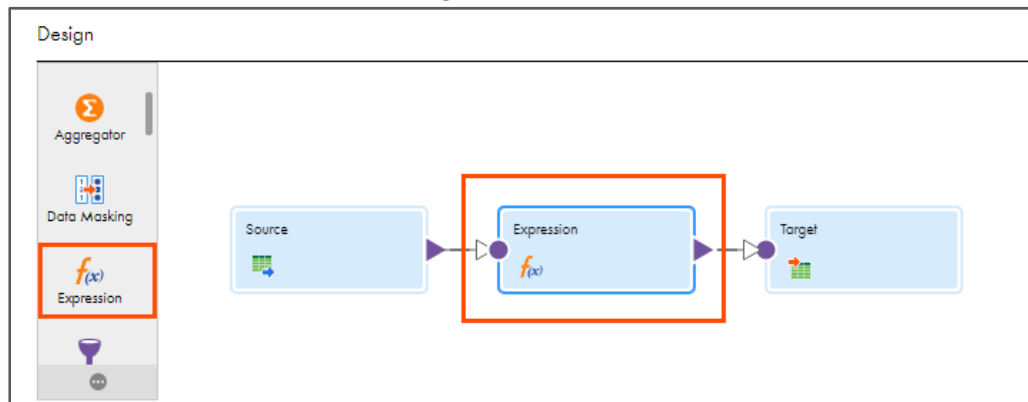
46. Enter the details, as shown in the table below:

| Object   | Field         |
|----------|---------------|
| CUSTOMER | MODIFIED_DATE |

47. Click **OK**.



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




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



50. In the General section of Expression properties, retain the Name as **Expression**.

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

52. To add a new expression, click .

**Note:** The New Field window appears.

53. Enter the details as shown in table below:

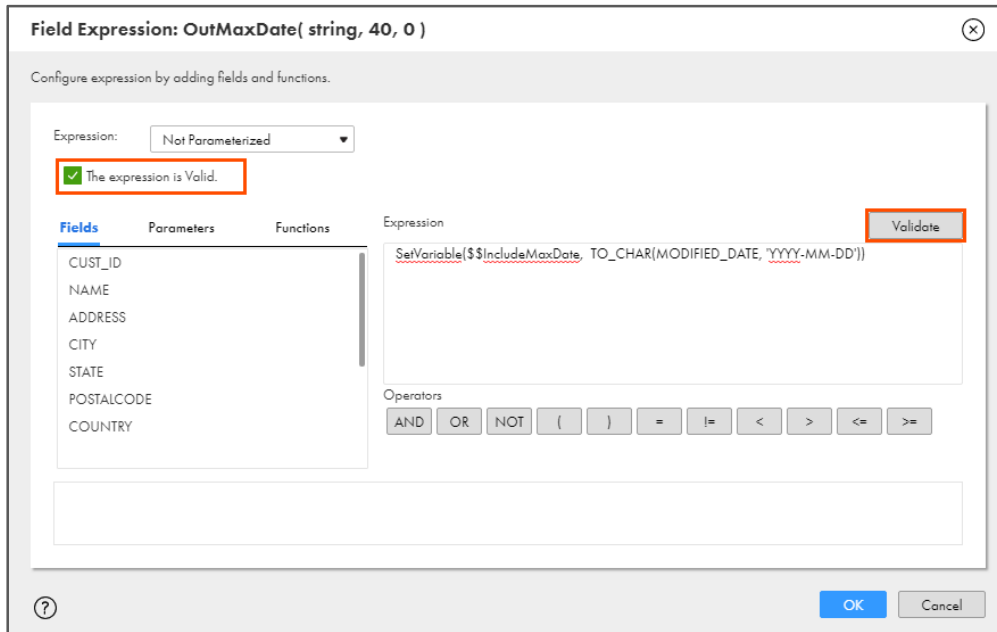
| Field Type   | Name       | Type   | Precision | Scale |
|--------------|------------|--------|-----------|-------|
| Output Field | OutMaxDate | string | 40        | 0     |

54. Click **OK**.

55. To configure expression, click **Configure**.

**Note:** The Field Expression window appears.

56. In the Expression field, copy and paste the following expression:  
**SetVariable(\$\$IncludeMaxDate, TO\_CHAR(MODIFIED\_DATE, 'YYYY-MM-DD'))**  
 OR  
 Open the file named **16\_LabGuide\_UsingInOutParameter\_6-3** provided with this lab.  
 Copy the command mentioned under **Step 56** and paste it in the Expression field.
57. Click **Validate**.



**Field Expression: OutMaxDate( string, 40, 0 )**

Configure expression by adding fields and functions.

Expression: Not Parameterized

☒ The expression is Valid.

**Fields** Parameters Functions Expression **Validate**

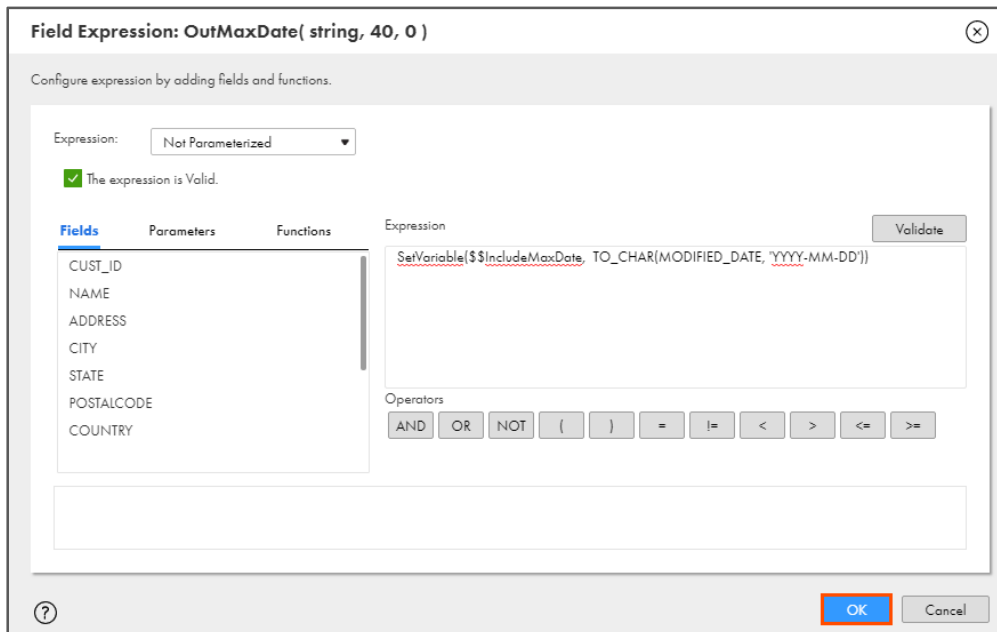
CUST\_ID  
NAME  
ADDRESS  
CITY  
STATE  
POSTALCODE  
COUNTRY

SetVariable(\$\$IncludeMaxDate, TO\_CHAR(MODIFIED\_DATE, 'YYYY-MM-DD'))

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

OK Cancel

58. Click **OK**.



**Field Expression: OutMaxDate( string, 40, 0 )**

Configure expression by adding fields and functions.

Expression: Not Parameterized

☒ The expression is Valid.

**Fields** Parameters Functions Expression **Validate**

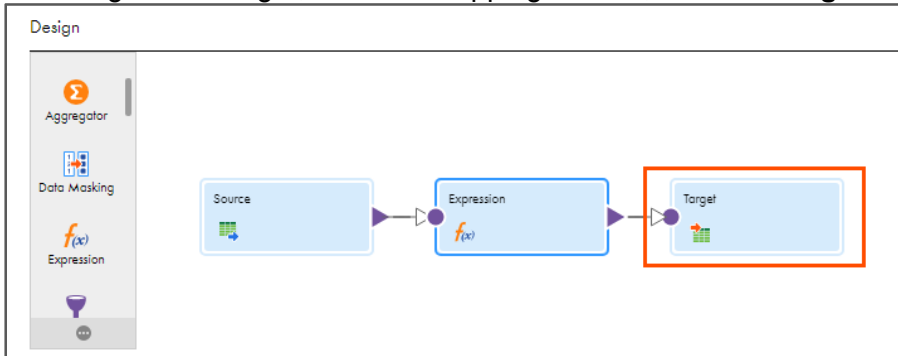
CUST\_ID  
NAME  
ADDRESS  
CITY  
STATE  
POSTALCODE  
COUNTRY

SetVariable(\$\$IncludeMaxDate, TO\_CHAR(MODIFIED\_DATE, 'YYYY-MM-DD'))

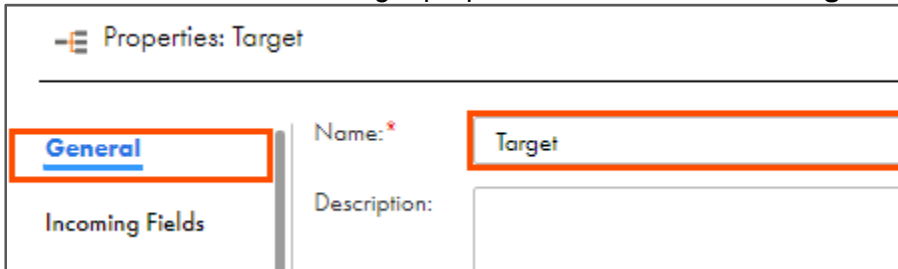
Operators: AND OR NOT ( ) = != < > <= >=

**OK** Cancel

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



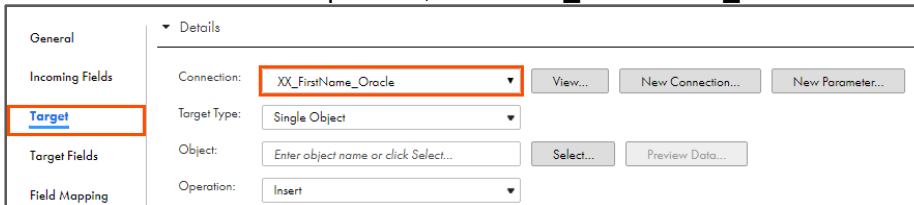
60. In the General section of Target properties, retain Name as **Target**.



The Properties: Target dialog box is shown. The General tab is selected and highlighted with a red box. The Name field is set to "Target" and is also highlighted with a red box. The Description field is empty.

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

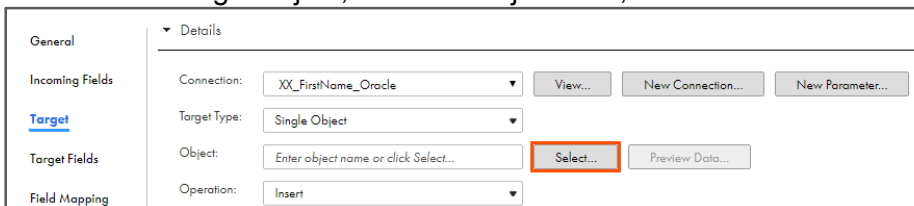
62. From the Connection drop-down, select **XX\_FirstName\_Oracle**.



The Properties: Target dialog box is shown. The Target tab is selected and highlighted with a red box. In the Details section, the Connection drop-down is set to "XX\_FirstName\_Oracle" and is highlighted with a red box. Other fields include Target Type (Single Object), Object (Enter object name or click Select...), and Operation (Insert).

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

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



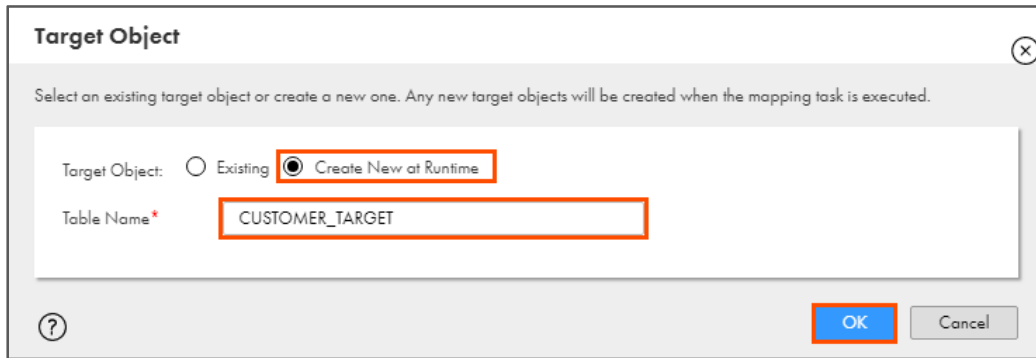
The Properties: Target dialog box is shown. The Target tab is selected. In the Details section, the Object field has a "Select..." button highlighted with a red box. The Connection is still "XX\_FirstName\_Oracle" and Target Type is "Single Object".

**Note:** The Target Object window appears.

65. In the Target Object window, select **Create New at Runtime**.

66. In the Table Name field, enter **CUSTOMER\_TARGET**.

67. Click **OK**.



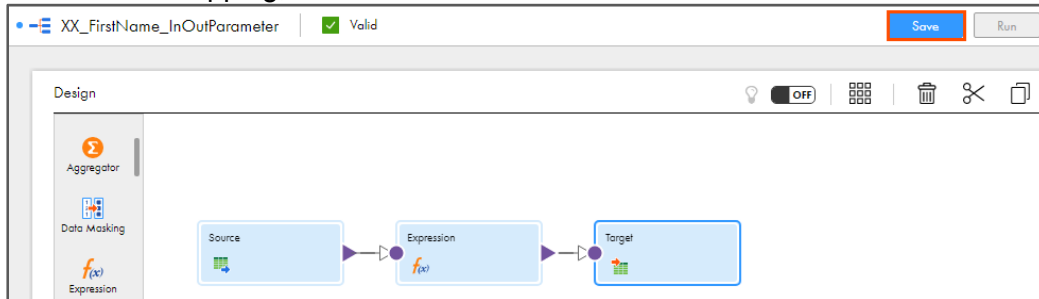
**Target Object**

Select an existing target object or create a new one. Any new target objects will be created when the mapping task is executed.

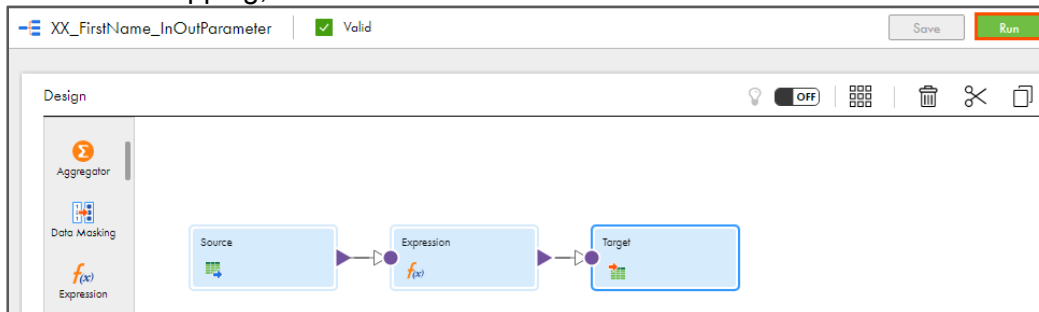
Target Object: ☐ Existing ☒ Create New at Runtime

Table Name\*

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

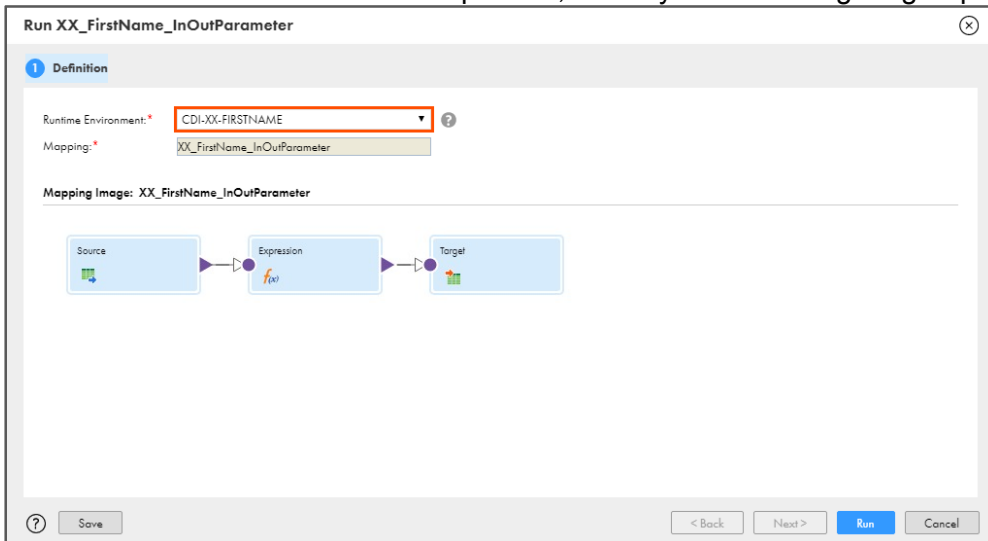


69. To run the mapping, click **Run**.



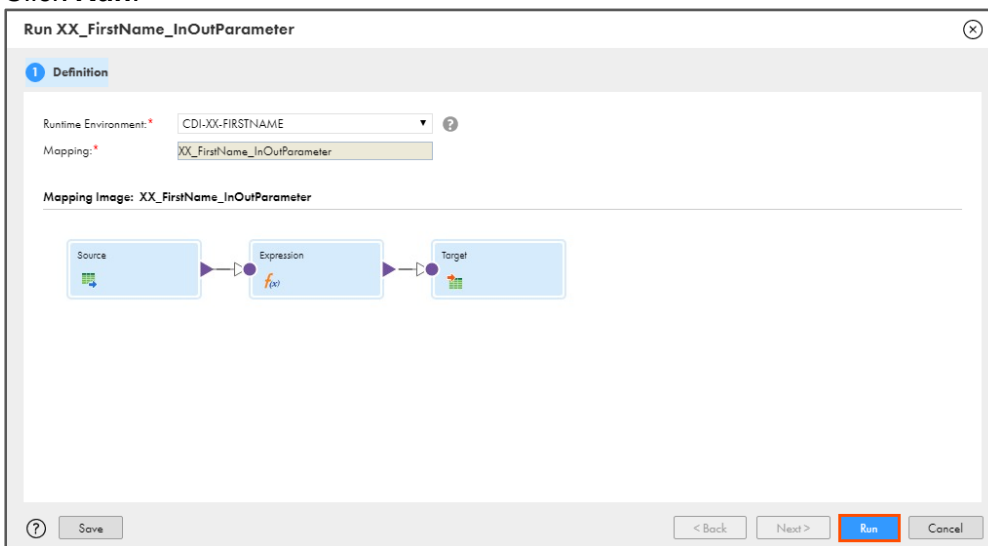
**Note:** The Run mapping window appears.

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



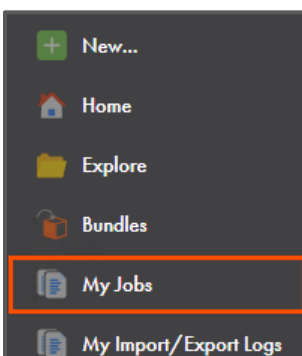
**Note:** The Runtime Environment name will be in format CDI-XX-FIRSTNAME.

71. Click **Run**.



### Monitor Status:

72. To monitor the mapping status, from the Navigation pane, click **My Jobs**.





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

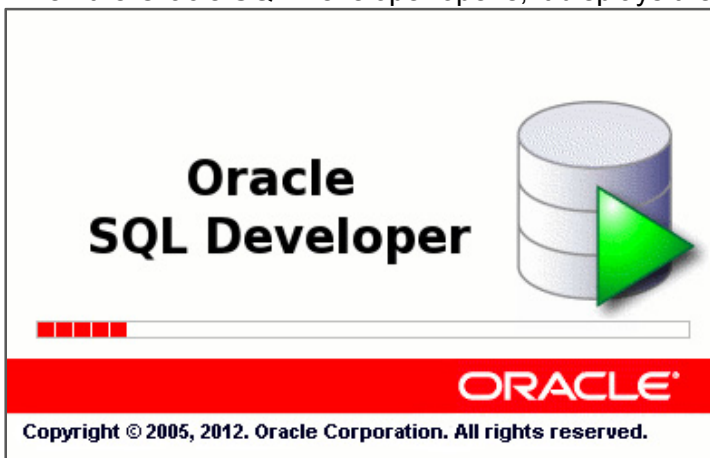
| Jobs (1 of 27) <span>Up to date</span>                     |          | Updated 3:53:07 AM PDT |              |                |                      |
|------------------------------------------------------------|----------|------------------------|--------------|----------------|----------------------|
| Asset Name: XX_FirstName_InOutPa... <span>Add Field</span> |          |                        |              |                |                      |
| Instance Name                                              | Subtasks | Start Time             | End Time     | Rows Processed | State                |
| XX_FirstName_InOutParameter-1                              |          | Aug 1, 2019, ...       | Aug 1, 20... | 7              | <span>Success</span> |

**Note:** Verify that 7 rows are processed by the mapping.


### Verify Output:

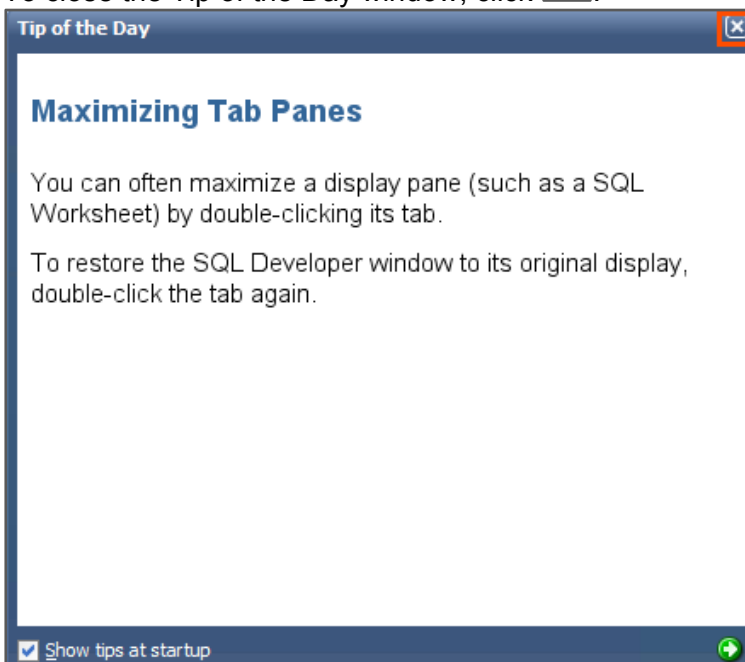
74. From the windows Start menu, select **SQL Developer**.

75. When the Oracle SQL Developer opens, it displays the following window:

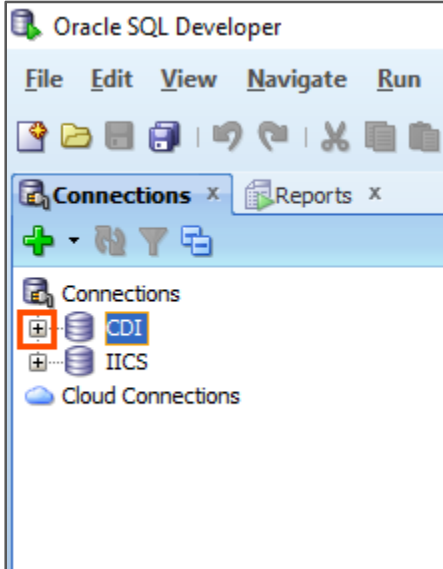


**Note:** After the application opens, the Tip of the Day window appears.

76. To close the Tip of the Day window, click .



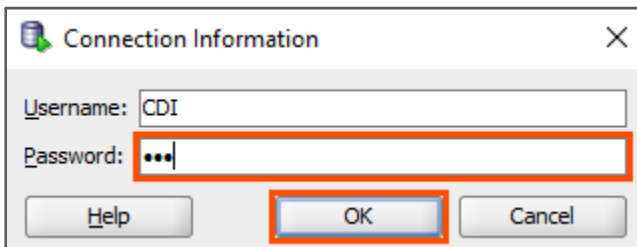
77. To view tables in CDI, click .



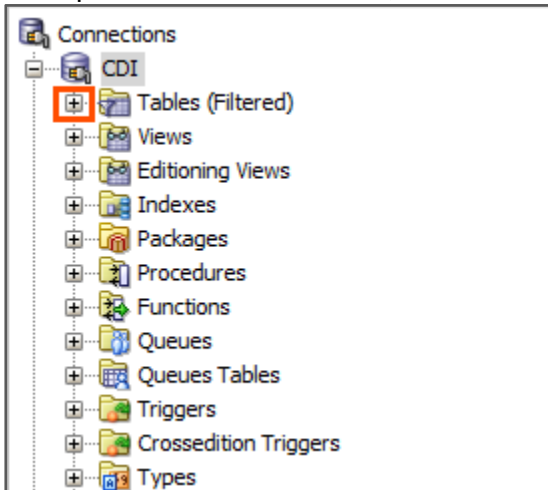
**Note:** The Connection Information window appears.

78. In the Password field, enter **CDI**.

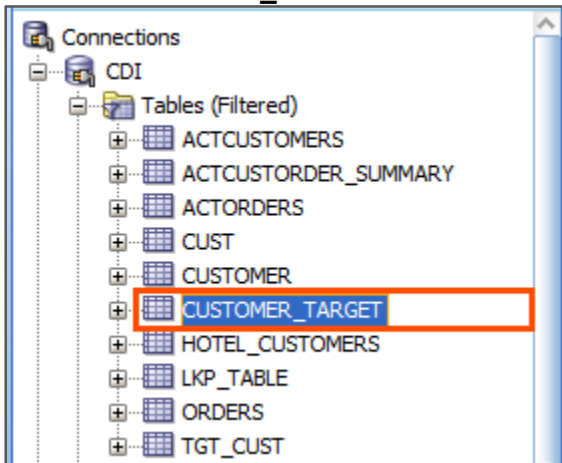
79. Click **OK**.



80. To expand the Tables section, click .



81. Select **CUSTOMER\_TARGET**.



82. To view the data in CUSTOMER\_TARGET table, click **Data**.

83. Observe the data in the **OUTMAXDATE** field is greater than 2019-06-24.

| CUSTOMER_TARGET                                                                                                                 |                                 |             |       |            |         |            |                               |        |        |            |
|---------------------------------------------------------------------------------------------------------------------------------|---------------------------------|-------------|-------|------------|---------|------------|-------------------------------|--------|--------|------------|
| Columns   Data   Constraints   Grants   Statistics   Triggers   Flashback   Dependencies   Details   Partitions   Indexes   SQL |                                 |             |       |            |         |            |                               |        |        |            |
|                                                                                                                                 | ADDRESS                         | CITY        | STATE | POSTALCODE | COUNTRY | PHONE      | LAST_ORDER_DATE               | STATUS | TIER   | OUTMAXDATE |
| 1                                                                                                                               | 1200 New Hampshire Avenue North | Washington  | D     | 20         | US      | (202) 857- | 03-FEB-09 00.00.00.0000000000 | LIVE   | (null) | 2019-06-25 |
| 2                                                                                                                               | 3495 Piedmont Road North East   | Atlanta     | G     | 30         | US      | (null)     | 04-MAR-09 00.00.00.0000000000 | LIVE   | (null) | 2019-06-25 |
| 3                                                                                                                               | 25 Cornwell Street              | Mill Valley | C     | 94         | (null)  | (415) 394- | 04-SEP-08 00.00.00.0000000000 | LIVE   | (null) | 2019-06-28 |
| 4                                                                                                                               | 90 Inverness Cir E              | Englewood   | C     | 80         | US      | 3037990222 | 04-AUG-08 00.00.00.0000000000 | LIVE   | (null) | 2019-06-29 |
| 5                                                                                                                               | 6625 The Corners Parkway        | Norcross    | G     | 30         | US      | (770) 448- | 01-MAR-08 00.00.00.0000000000 | Incac  | 3      | 2019-06-29 |
| 6                                                                                                                               | 1 Mobay Road                    | Pittsburgh  | P     | 15         | (null)  | 4127772439 | 04-JAN-08 00.00.00.0000000000 | LIVE   | 2      | 2019-06-30 |
| 7                                                                                                                               | 7140 South Lewis Avenue         | Tulsa       | O     | 74         | USA     | (918) 488- | 01-JUL-09 00.00.00.0000000000 | 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:

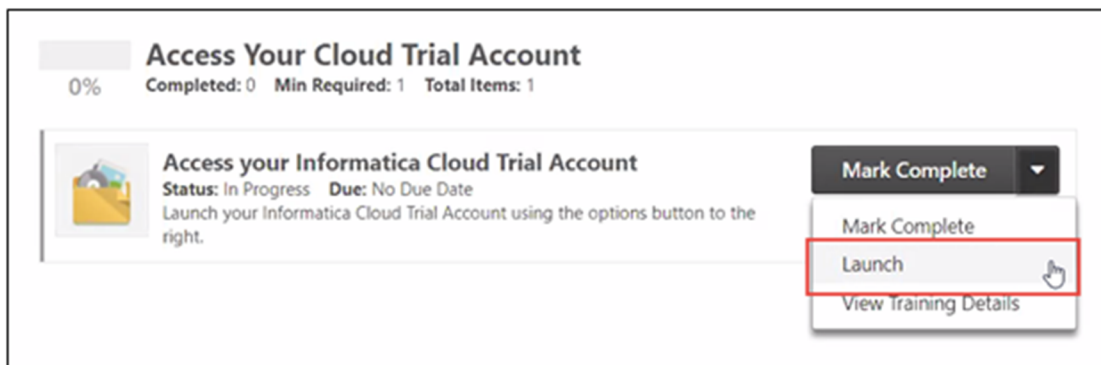
30 minutes

---

#### Tasks:

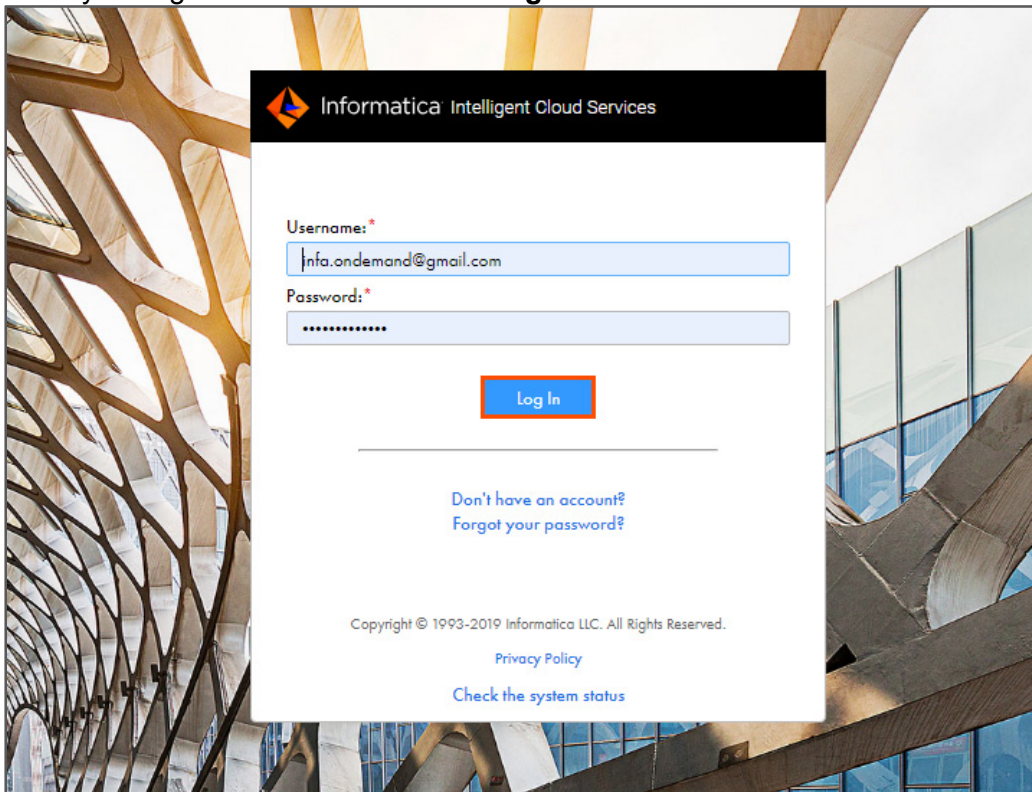
##### Create Mapping:

1. Access your cloud trial account by clicking **Launch** in your option Menu. If the option menu is labeled anything other than **Launch**, click the down arrow to the right and click **Launch**.



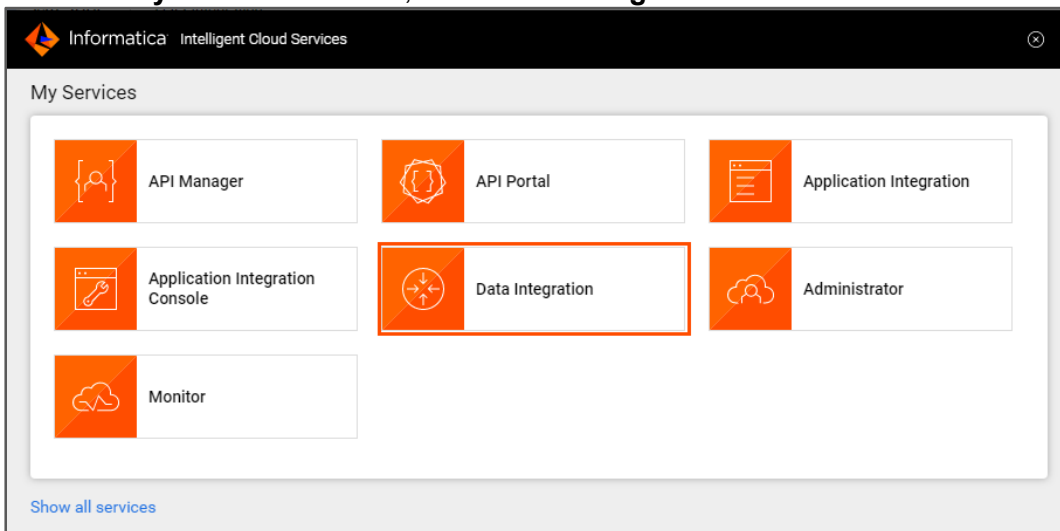
**Note:** Follow this step, if you have navigated away from the login page.

2. Enter your login credentials and click **Log In**.

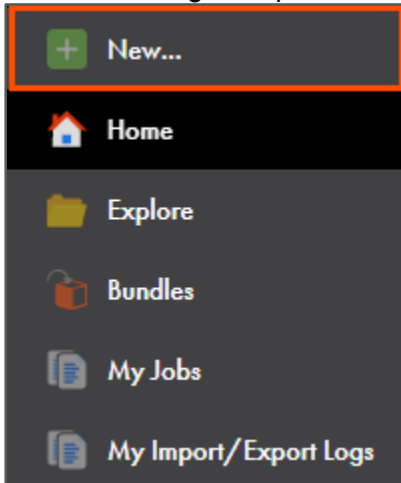


The login page for Informatica Intelligent Cloud Services is displayed. It features a white login box centered on a background image of a modern building's interior with a complex, branching structural design. The login box has a black header with the Informatica logo and the text "Informatica Intelligent Cloud Services". Below the header, there are two input fields: "Username:" with the email "info.ondemand@gmail.com" and "Password:" with masked characters. A blue "Log In" button is positioned below the password field. Underneath the button, there are two links: "Don't have an account?" and "Forgot your password?". At the bottom of the login box, there is a copyright notice "Copyright © 1993-2019 Informatica LLC. All Rights Reserved." and two more links: "Privacy Policy" and "Check the system status".

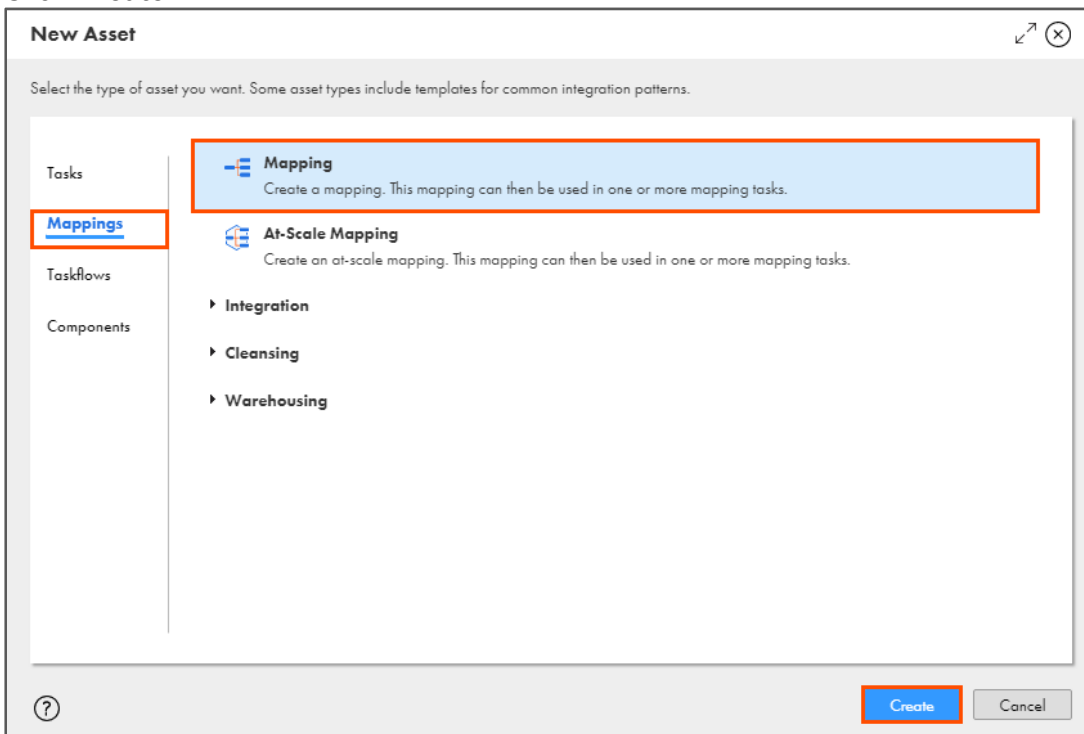
3. From the **My Services** window, select **Data Integration**.



4. From the Navigation pane, select **New**.

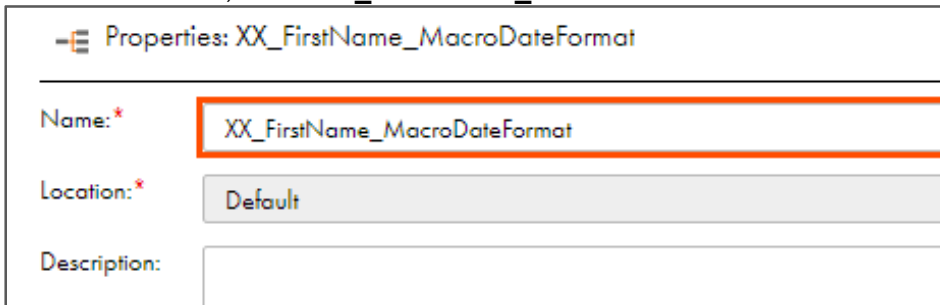


5. From the New Asset window, click the **Mappings** tab, and select **Mapping**.
6. Click **Create**.



**Note:** The Mapping page appears.

7. In the Name field, enter **XX\_FirstName\_MacroDateFormat**.



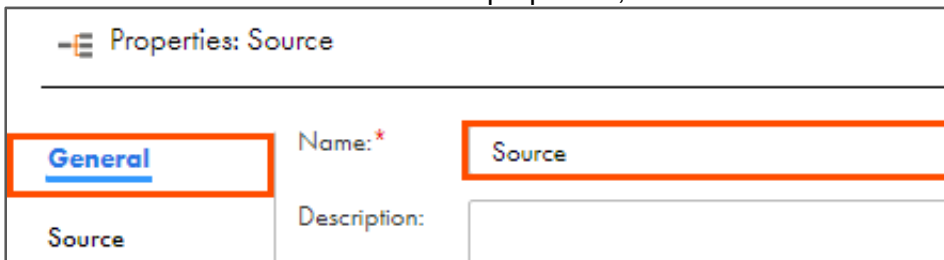
Properties: XX\_FirstName\_MacroDateFormat

Name: \* **XX\_FirstName\_MacroDateFormat**

Location: \* Default

Description:

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**.



Properties: Source

**General**

Name: \* **Source**

Source

Description:

10. From the properties pane, click **Source**.
11. Select **New Parameter**.



General

**Source**

Fields

Partitions

Details

Connection: [Dropdown] View... New Connection... **New Parameter...**

Source Type: [Dropdown]

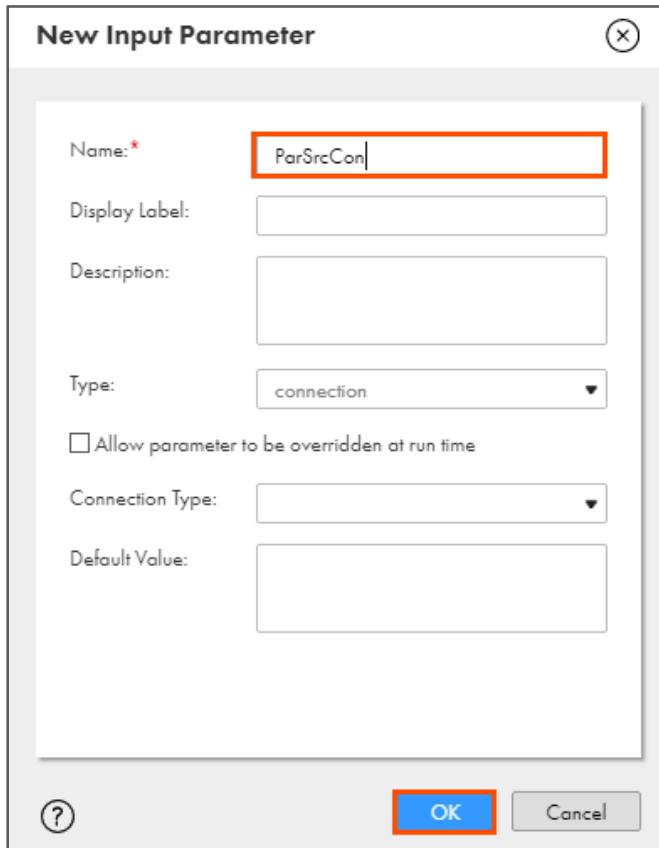
Query Options

**Note:** The New Input Parameter window appears.

12. In the Name field, enter **ParSrcCon**.



13. Click **OK**.



The 'New Input Parameter' dialog box is shown. The 'Name' field is highlighted with a red box and contains the text 'ParSrcCon'. The 'Type' dropdown menu is set to 'connection'. The 'OK' button is highlighted with a red box.

14. Select Source Type as **Parameter**.

15. To create another parameter, select **New Parameter**.

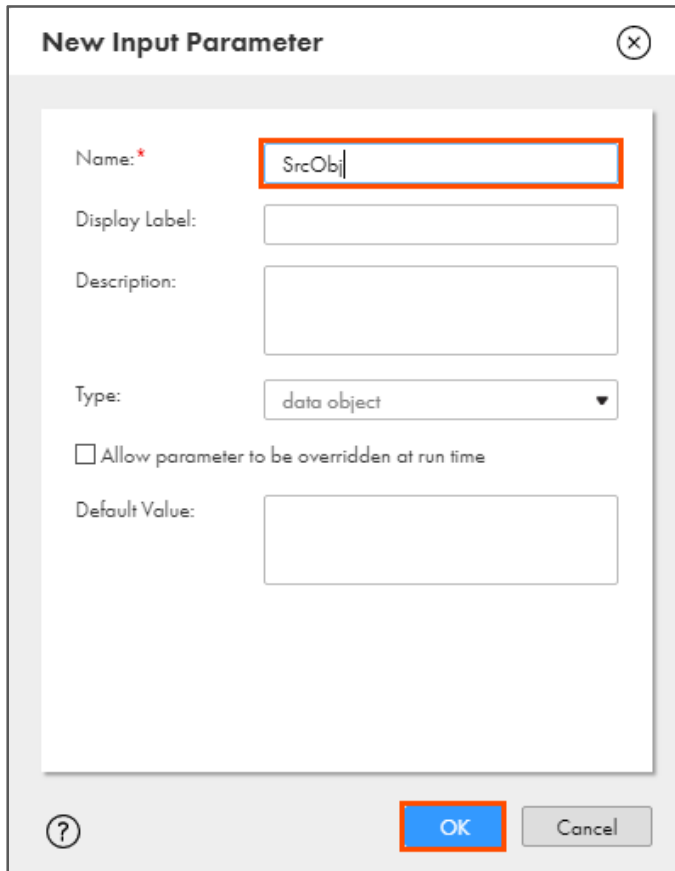


The 'Source' configuration window is shown. The 'Source Type' dropdown menu is highlighted with a red box and set to 'Parameter'. The 'New Parameter...' button is also highlighted with a red box.

**Note:** The New Input Parameter window appears.

16. In the Name field, enter **SrcObj**.

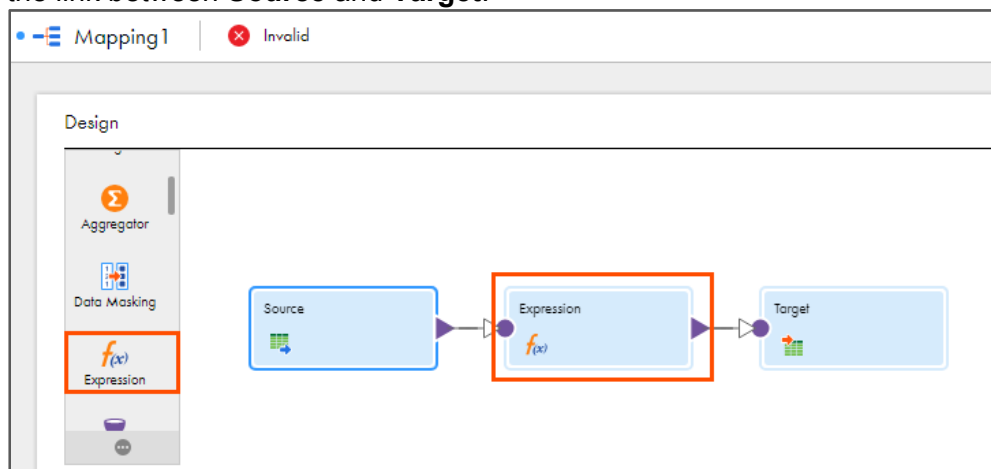
17. Click **OK**.



The 'New Input Parameter' dialog box is shown. The 'Name' field is highlighted with a red box and contains the text 'SrcObj'. The 'Type' dropdown menu is set to 'data object'. The 'OK' button is also highlighted with a red box.

### 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 Expression properties, enter Name as **Macro\_Expression**.



Properties: Macro\_Expression

**General**

Name: \* Macro\_Expression

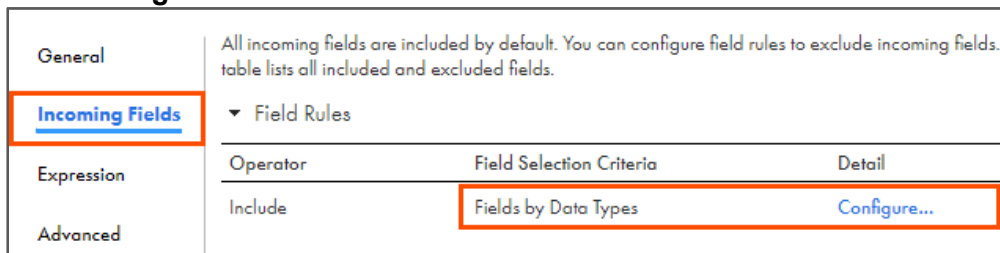
Description:

Incoming Fields

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**.



General

**Incoming Fields**

Expression

Advanced

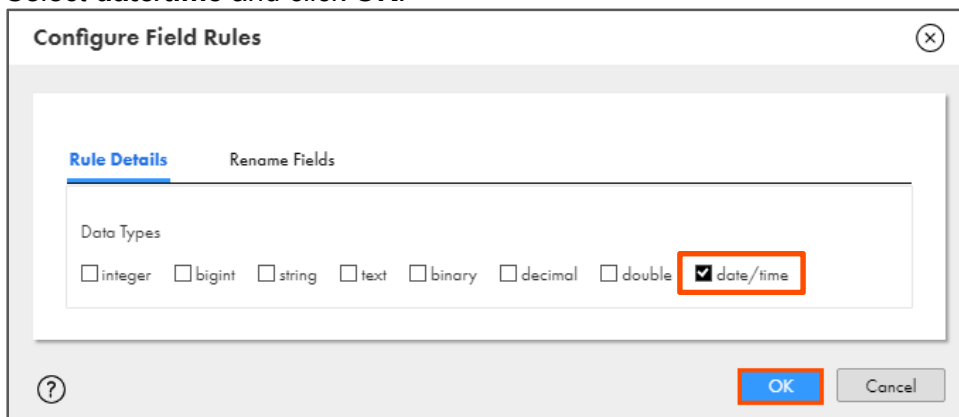
All incoming fields are included by default. You can configure field rules to exclude incoming fields. table lists all included and excluded fields.

Field Rules

| Operator | Field Selection Criteria | Detail       |
|----------|--------------------------|--------------|
| Include  | Fields by Data Types     | Configure... |

**Note:** The Configure Field Rules window appears.

24. Select **date/time** and click **OK**.



Configure Field Rules

Rule Details

Rename Fields

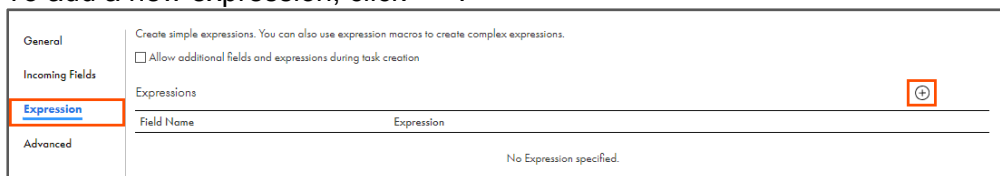
Data Types

☐ integer ☐ bigint ☐ string ☐ text ☐ binary ☐ decimal ☐ double ☒ date/time

OK Cancel

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

26. To add a new expression, click .



General

Incoming Fields

**Expression**

Advanced

Create simple expressions. You can also use expression macros to create complex expressions.

☐ Allow additional fields and expressions during task creation

Expressions

| Field Name               | Expression |
|--------------------------|------------|
| No Expression specified. |            |

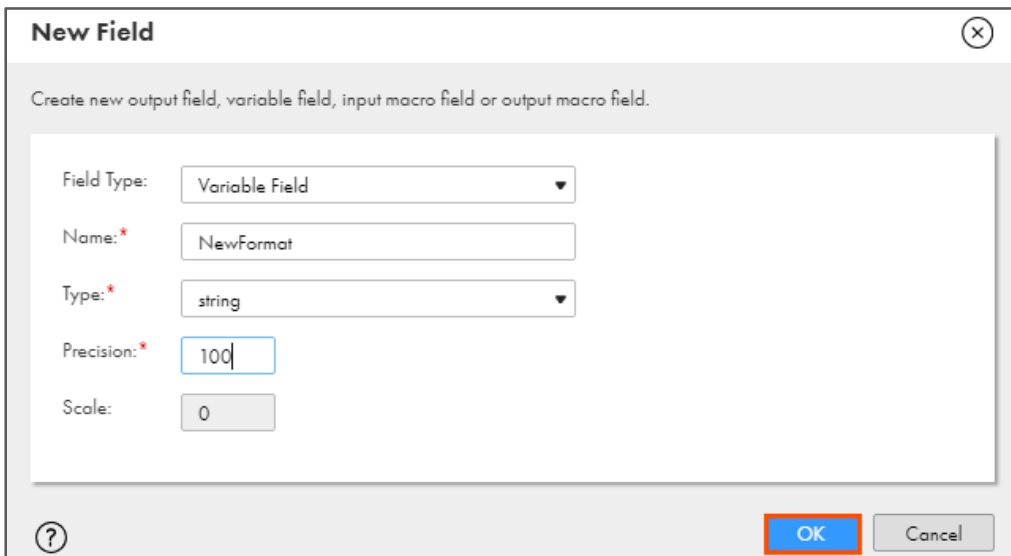
Add

**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**.



**New Field**

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

Field Type: Variable Field

Name: NewFormat

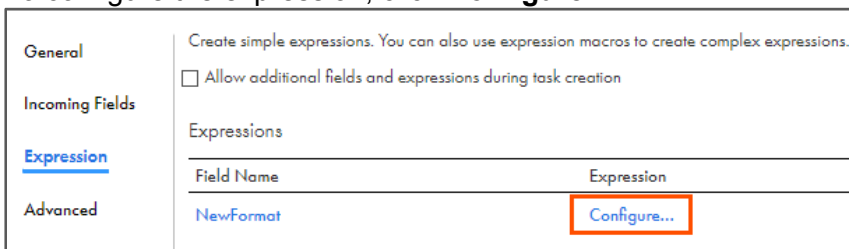
Type: string

Precision: 100

Scale: 0

OK Cancel

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



**General**

Create simple expressions. You can also use expression macros to create complex expressions.

☐ Allow additional fields and expressions during task creation

**Incoming Fields**

**Expression**

**Advanced**

| Field Name | Expression   |
|------------|--------------|
| NewFormat  | Configure... |

**Note:** The Field Expression window appears.

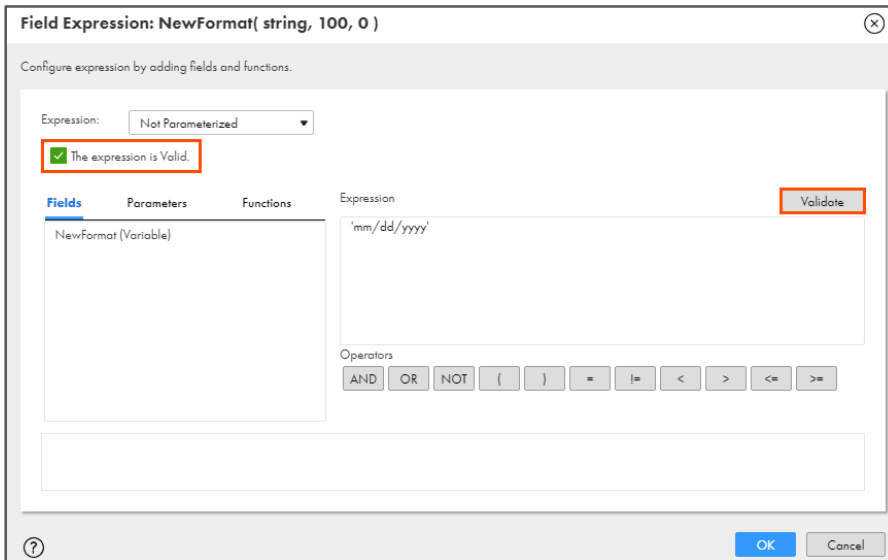
30. In the Expression field, enter the following expression:

**'mm/dd/yyyy'**

OR

Open the file named **17\_LabGuide\_UsingExpressionMacroInMapping\_7-1** provided with this lab. Copy the command mentioned under **Step 30** and paste it in the Expression field.

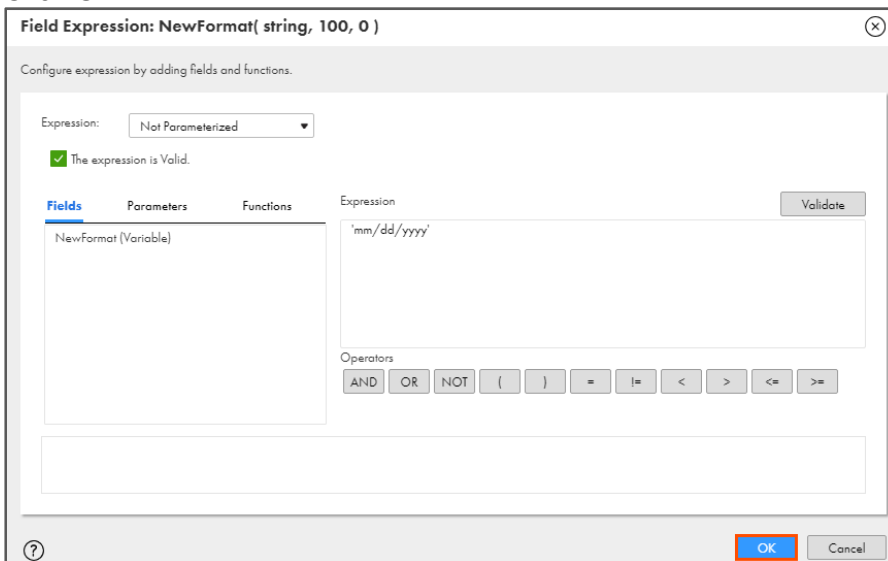
31. Click **Validate**.



The dialog box is titled "Field Expression: NewFormat( string, 100, 0 )". It contains a section "Configure expression by adding fields and functions." with a dropdown menu set to "Not Parameterized". Below this, a green checkmark icon is next to the text "The expression is Valid." The "Fields" tab is selected, showing a list with "NewFormat (Variable)". The "Expression" text area contains the text "'mm/dd/yyyy'". To the right of this text area is a "Validate" button. Below the text area is an "Operators" section with buttons for AND, OR, NOT, (, ), =, !=, <, >, <=, and >=.

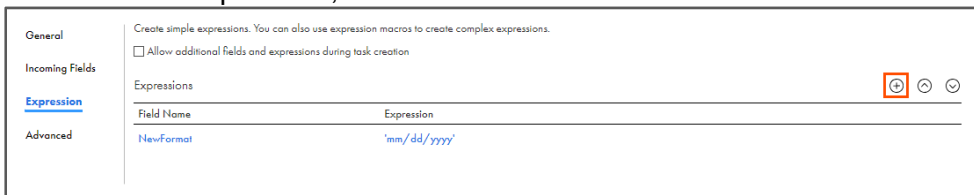
**Note:** If you copy and paste the above expression, you should verify the expression to avoid getting an apostrophes error.

32. Click **OK**.



This dialog box is identical to the one in step 31, but the "OK" button at the bottom right is highlighted with a red box.

33. To add a new expression, click .

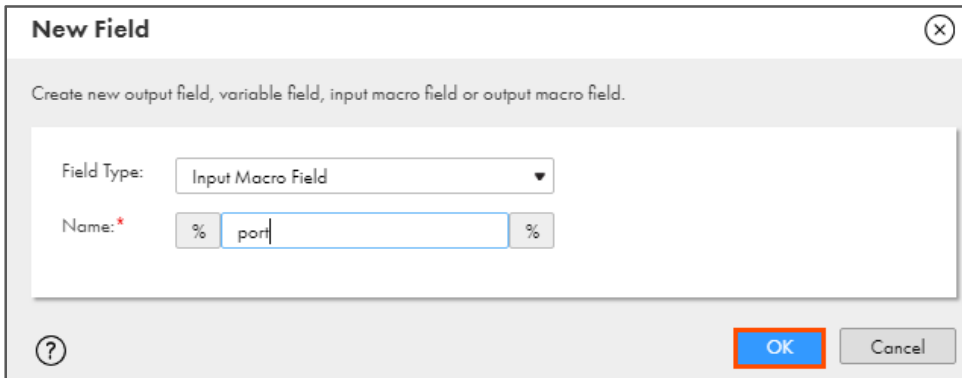


The dialog box has tabs for "General", "Incoming Fields", "Expression", and "Advanced". The "Expression" tab is selected. It shows a table with two columns: "Field Name" and "Expression". The first row has "NewFormat" in the "Field Name" column and "'mm/dd/yyyy'" in the "Expression" column. To the right of the table are three buttons: a plus icon (highlighted with a red box), a minus icon, and a refresh icon.

34. From Field Type drop-down, select **Input Macro Field**.

35. In the Name field, enter **port**.

36. Click **OK**.



**New Field**

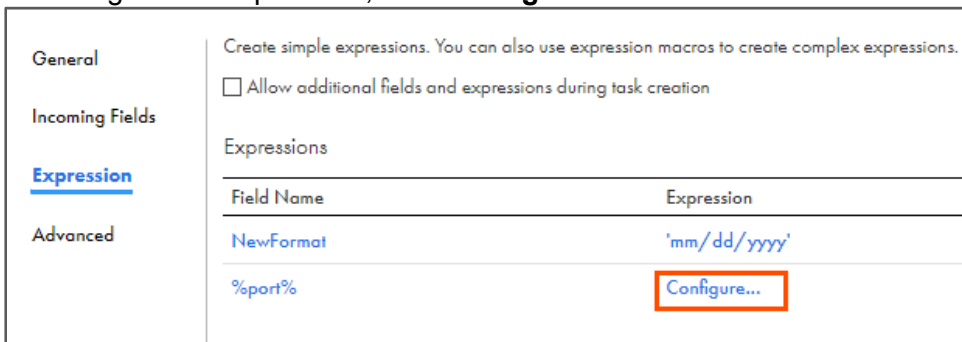
Create new output field, variable field, input macro field or output macro field.

Field Type:

Name: \*  %

**OK** Cancel

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



**General**

Create simple expressions. You can also use expression macros to create complex expressions.

☐ Allow additional fields and expressions during task creation

**Incoming Fields**

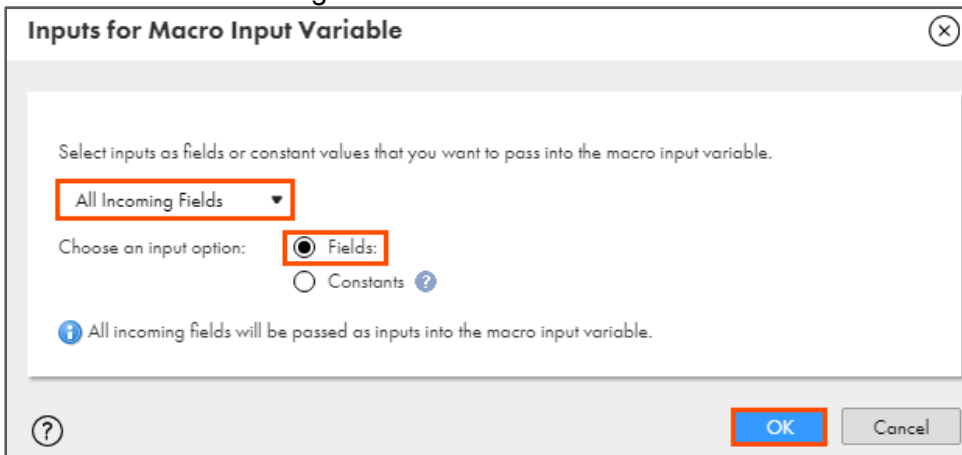
**Expression**

**Advanced**

| Field Name | Expression          |
|------------|---------------------|
| NewFormat  | 'mm/dd/yyyy'        |
| %port%     | <b>Configure...</b> |

**Note:** The Inputs for Macro Input Variable window appears.

38. Retain the default settings and click **OK**.



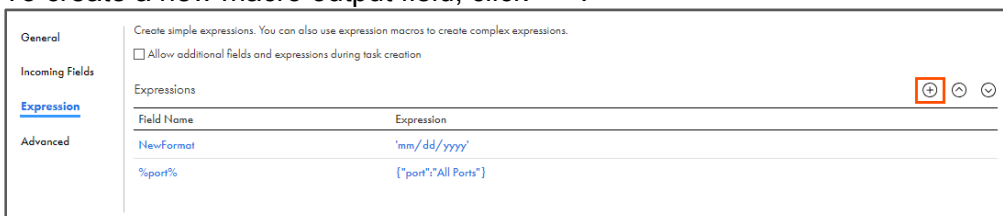
**Inputs for Macro Input Variable**

Select inputs as fields or constant values that you want to pass into the macro input variable.

Choose an input option: ☒ **Fields:** ☐ Constants ?

**OK** Cancel

39. To create a new macro output field, click .



**General**

Create simple expressions. You can also use expression macros to create complex expressions.

☐ Allow additional fields and expressions during task creation

**Incoming Fields**

**Expression**

**Advanced**

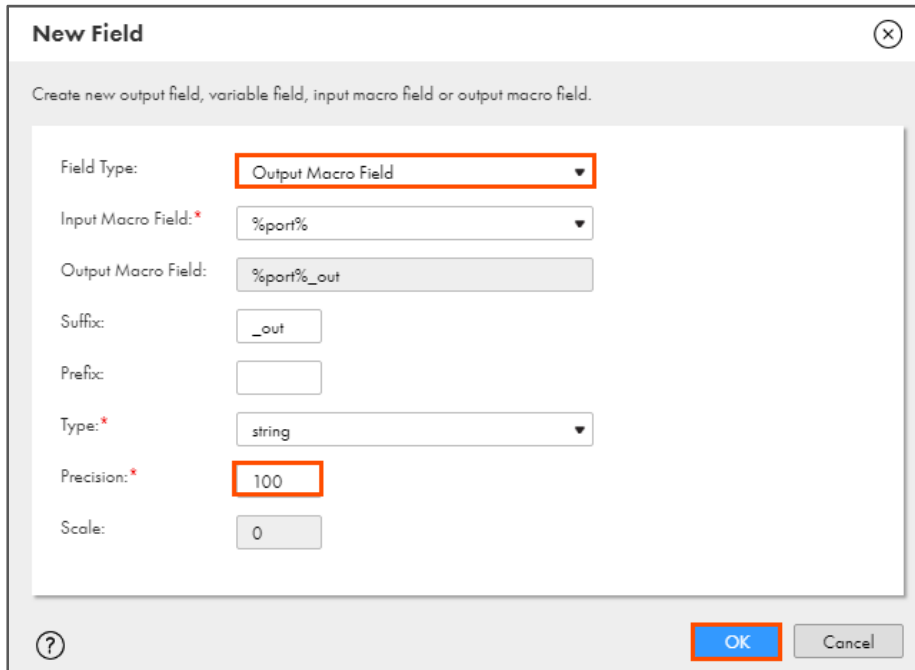
| Field Name | Expression            |
|------------|-----------------------|
| NewFormat  | 'mm/dd/yyyy'          |
| %port%     | ["port"; "All Ports"] |

**Note:** The New Field window appears.

40. From Field Type drop-down, select **Output Macro Field**.

41. Set Precision to **100**.

42. Click **OK**.



**New Field** [X]

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

Field Type: **Output Macro Field** ▼

Input Macro Field: \* %port% ▼

Output Macro Field: %port%\_out

Suffix: \_out

Prefix:

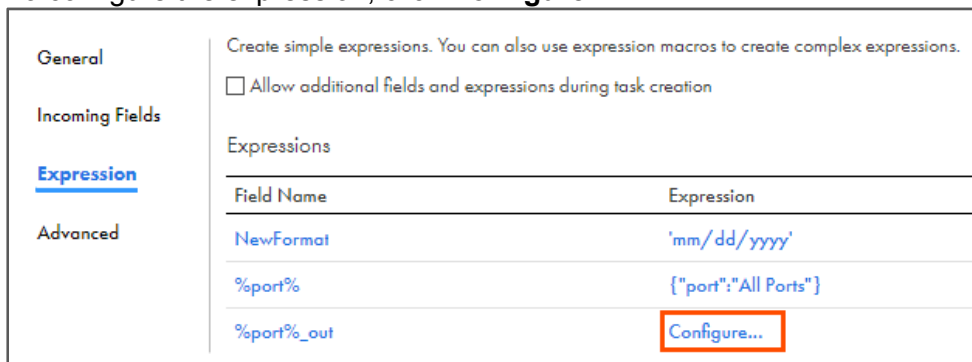
Type: \* string ▼

Precision: \* **100**

Scale: 0

[?] [OK] [Cancel]

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



**General**

Create simple expressions. You can also use expression macros to create complex expressions.

☐ Allow additional fields and expressions during task creation

**Incoming Fields**

**Expression**

**Advanced**

Expressions

| Field Name | Expression            |
|------------|-----------------------|
| NewFormat  | 'mm/dd/yyyy'          |
| %port%     | {"port"; "All Ports"} |
| %port%_out | <b>Configure...</b>   |

**Note:** The Field Expression window appears.

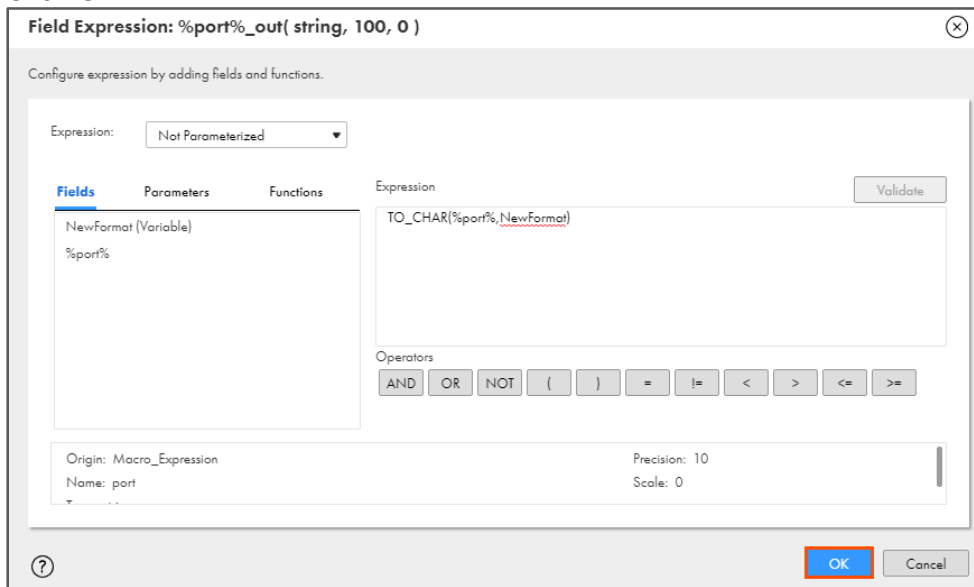
44. In the Expression field, enter the following expression:

**TO\_CHAR(%port%,NewFormat)**

OR

Open the file named **17\_LabGuide\_UsingExpressionMacroInMapping\_7-1** provided with this lab. Copy the command mentioned under **Step 44** and paste it in the Expression field.

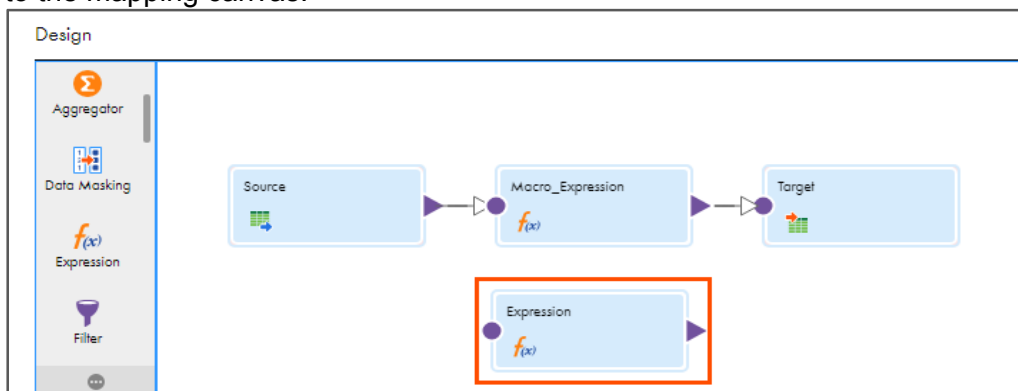
45. Click **OK**.



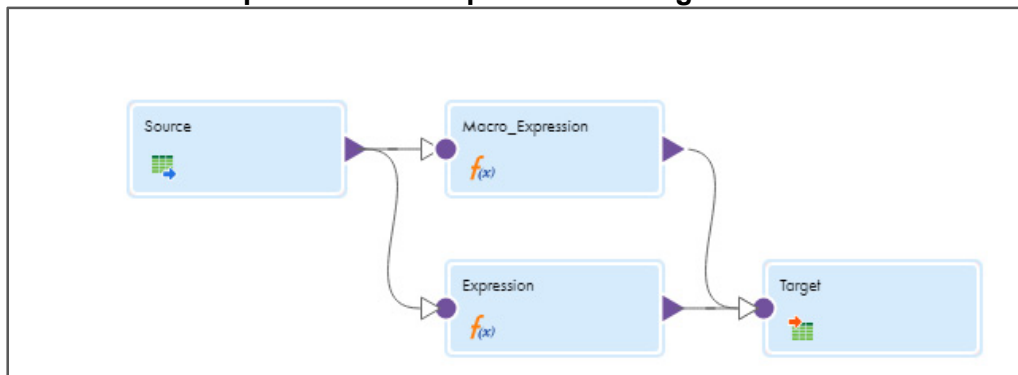
**Note:** As the field is macro field, Validate option is disabled.

### Add Expression Transformation:

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

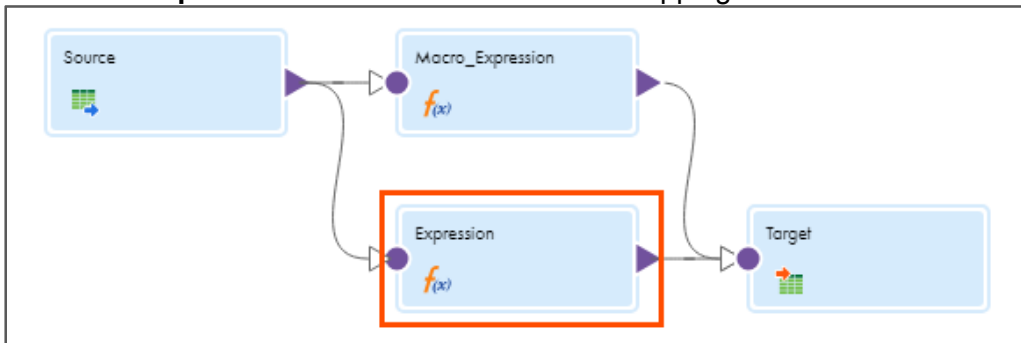


47. Link **Source** to **Expression** and **Expression** to **Target**.





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







49. In the **General** section of Expression properties, enter Name as **PassThruExp**.

Properties: PassThruExp

|                 |              |             |
|-----------------|--------------|-------------|
| <b>General</b>  | Name: *      | PassThruExp |
| Incoming Fields | Description: |             |

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

51. To create a new Field Rule, click .

| General                | All incoming fields are included by default. You can configure field rules to exclude incoming fields. You can also rename incoming fields to avoid field name conflicts. The Preview Fields table lists all included and excluded fields.                                                                                                                                                                                                                |                        |                                                                                       |          |                          |        |         |         |            |                        |                                                                                       |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|---------------------------------------------------------------------------------------|----------|--------------------------|--------|---------|---------|------------|------------------------|---------------------------------------------------------------------------------------|
| <b>Incoming Fields</b> | <div>Field Rules </div> <table border="1"> <thead> <tr> <th>Operator</th> <th>Field Selection Criteria</th> <th>Detail</th> <th>Actions</th> </tr> </thead> <tbody> <tr> <td>Include</td> <td>All Fields</td> <td>All Fields   Rename...</td> <td></td> </tr> </tbody> </table> |                        |                                                                                       | Operator | Field Selection Criteria | Detail | Actions | Include | All Fields | All Fields   Rename... |  |
| Operator               | Field Selection Criteria                                                                                                                                                                                                                                                                                                                                                                                                                                  | Detail                 | Actions                                                                               |          |                          |        |         |         |            |                        |                                                                                       |
| Include                | All Fields                                                                                                                                                                                                                                                                                                                                                                                                                                                | All Fields   Rename... |  |          |                          |        |         |         |            |                        |                                                                                       |
| Expression             |                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                        |                                                                                       |          |                          |        |         |         |            |                        |                                                                                       |
| Advanced               |                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                        |                                                                                       |          |                          |        |         |         |            |                        |                                                                                       |

52. From the Operator drop-down, select **Exclude**.

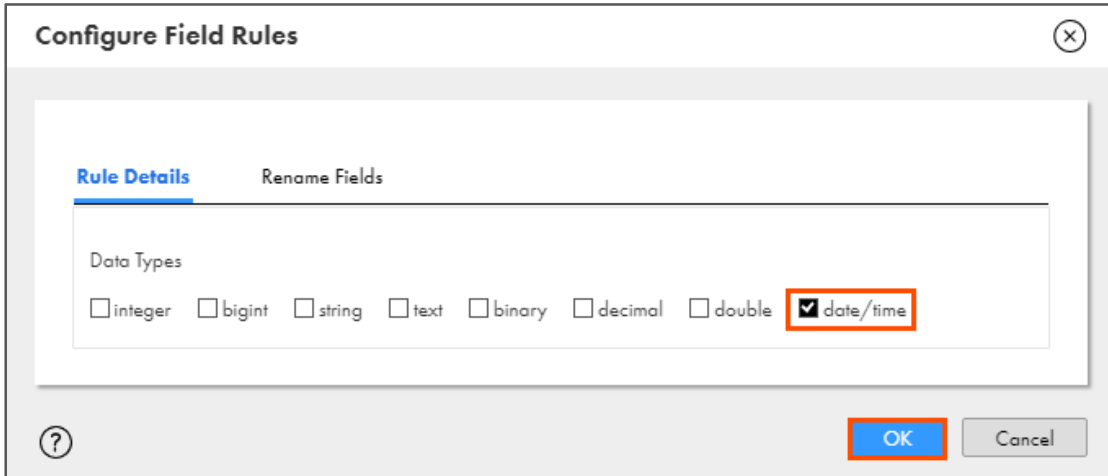
53. From Field Selection Criteria drop-down, select **Fields By Data Types**.

54. Click **Configure**.

| General                | All incoming fields are included by default. You can configure field rules to exclude incoming fields. You can also rename incoming fields to avoid field name conflicts. The Preview Fields table lists all included and excluded fields.                                                                                                                                        |                                        |  |          |                          |        |         |            |                                        |                |                             |                              |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|--|----------|--------------------------|--------|---------|------------|----------------------------------------|----------------|-----------------------------|------------------------------|
| <b>Incoming Fields</b> | <div>Field Rules</div> <table border="1"> <thead> <tr> <th>Operator</th> <th>Field Selection Criteria</th> <th>Detail</th> </tr> </thead> <tbody> <tr> <td>Include</td> <td>All Fields</td> <td>All Fields   <a href="#">Rename...</a></td> </tr> <tr> <td><b>Exclude</b></td> <td><b>Fields by Data Types</b></td> <td><a href="#">Configure...</a></td> </tr> </tbody> </table> |                                        |  | Operator | Field Selection Criteria | Detail | Include | All Fields | All Fields   <a href="#">Rename...</a> | <b>Exclude</b> | <b>Fields by Data Types</b> | <a href="#">Configure...</a> |
| Operator               | Field Selection Criteria                                                                                                                                                                                                                                                                                                                                                          | Detail                                 |  |          |                          |        |         |            |                                        |                |                             |                              |
| Include                | All Fields                                                                                                                                                                                                                                                                                                                                                                        | All Fields   <a href="#">Rename...</a> |  |          |                          |        |         |            |                                        |                |                             |                              |
| <b>Exclude</b>         | <b>Fields by Data Types</b>                                                                                                                                                                                                                                                                                                                                                       | <a href="#">Configure...</a>           |  |          |                          |        |         |            |                                        |                |                             |                              |
| Expression             |                                                                                                                                                                                                                                                                                                                                                                                   |                                        |  |          |                          |        |         |            |                                        |                |                             |                              |
| Advanced               |                                                                                                                                                                                                                                                                                                                                                                                   |                                        |  |          |                          |        |         |            |                                        |                |                             |                              |

**Note:** The Configure Field Rules window appears.

55. Select **date/time** and click **OK**.



The **Configure Field Rules** dialog box is shown with the **Rule Details** tab selected. Under the **Data Types** section, the **date/time** checkbox is checked and highlighted with a red box. The **OK** button is also highlighted with a red box.

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.

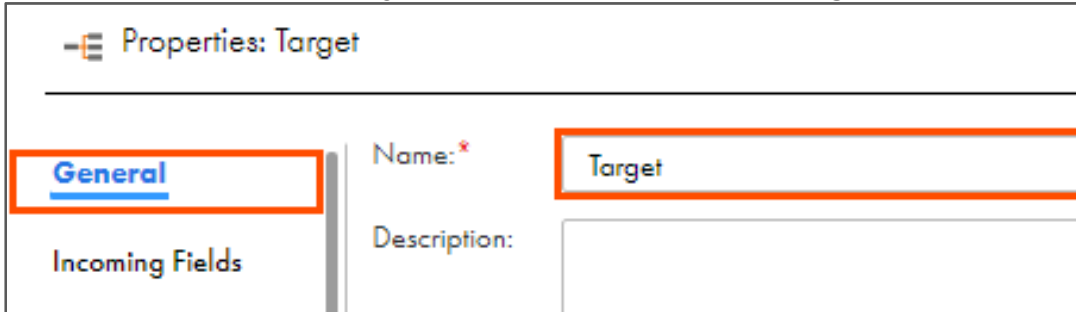


The **Field Rules** configuration table is shown. The **Include** row is highlighted with a red box, and its **Field Selection Criteria** is set to **All Fields**.

| 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 Name as **Target**.



The **Properties: Target** pane is shown. The **General** tab is selected and highlighted with a red box. The **Name** field is set to **Target** and is also highlighted with a red box.

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

60. Select **New Parameter**.

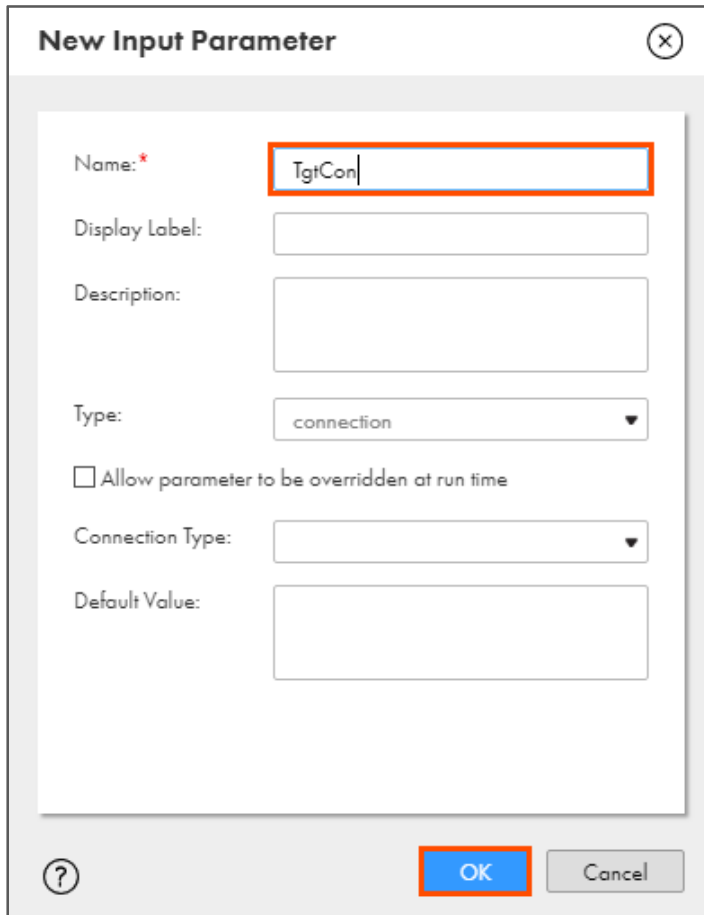


The **Target** transformation details pane is shown. The **Details** section is expanded, and the **New Parameter...** button is highlighted with a red box.

**Note:** The New Input Parameter window appears.

61. In the Name field, enter **TgtCon**.

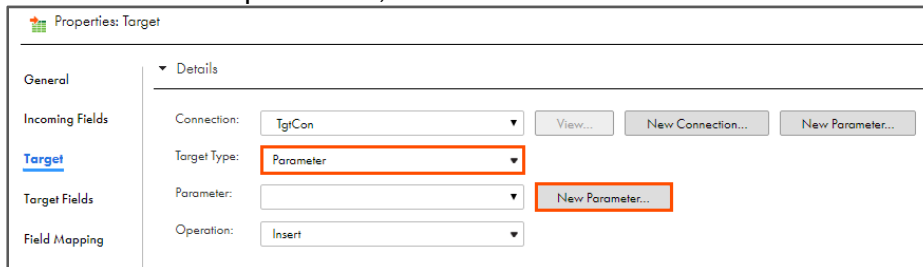
62. Click **OK**.



The 'New Input Parameter' dialog box is shown. The 'Name' field is highlighted with a red box and contains the text 'TgtCon'. The 'Type' dropdown menu is set to 'connection'. The 'OK' button is highlighted with a red box.

63. Select Target Type as **Parameter**.

64. To create another parameter, select **New Parameter**.

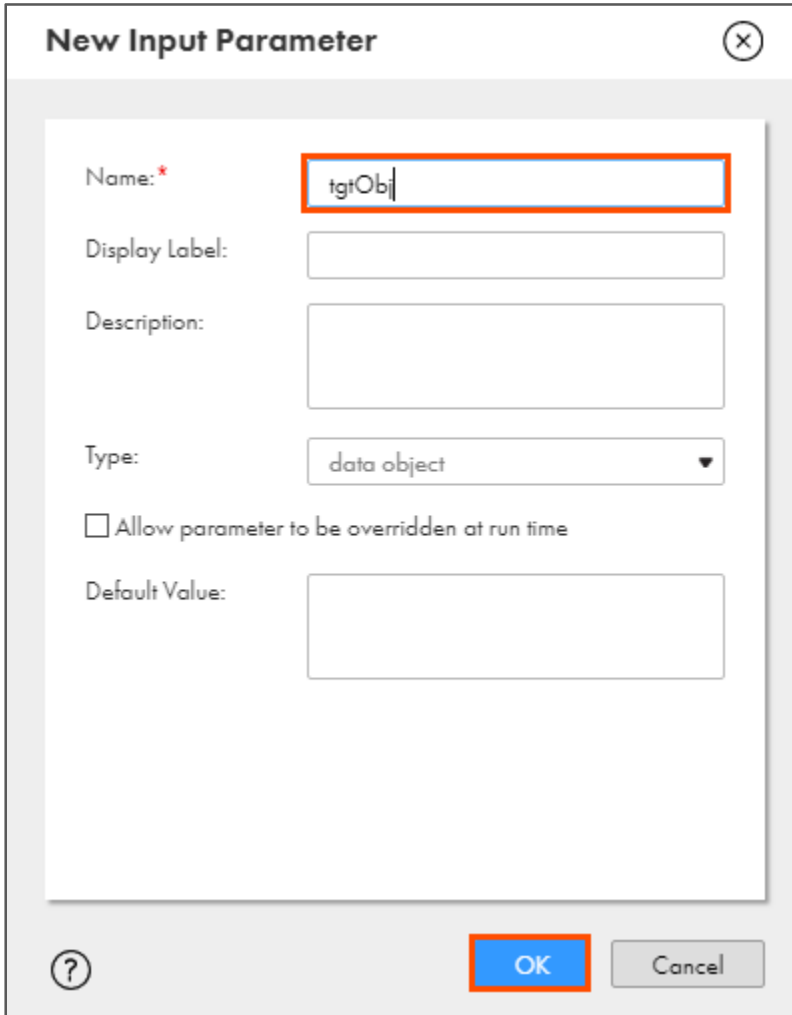


The 'Properties: Target' dialog box is shown. The 'Target Type' dropdown menu is highlighted with a red box and set to 'Parameter'. The 'New Parameter...' button is also highlighted with a red box.

**Note:** The New Input Parameter window appears.

65. In the Name field, enter **tgtObj**.

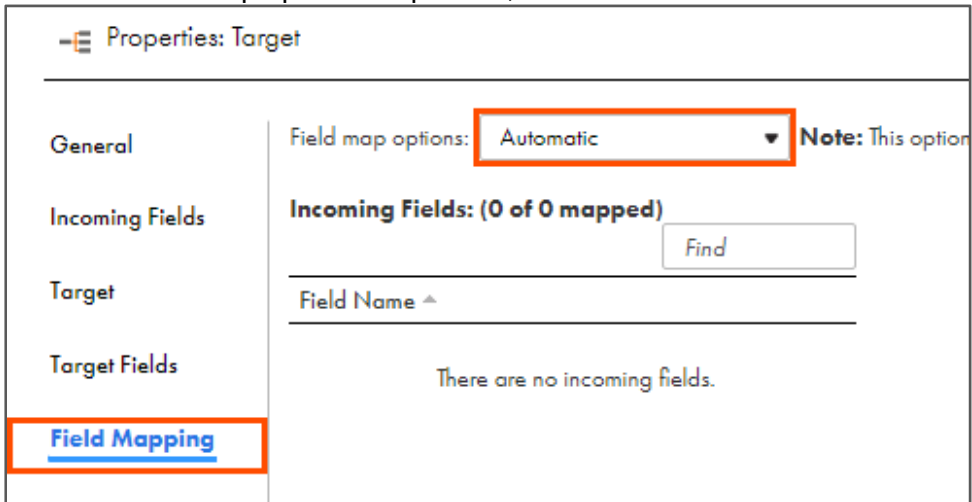
66. Click **OK**.



The "New Input Parameter" dialog box is shown. The "Name:" field is highlighted with a red box and contains the text "tgtObj". The "Type:" dropdown menu is set to "data object". The "OK" button is highlighted with a red box. The "Cancel" button is also visible.

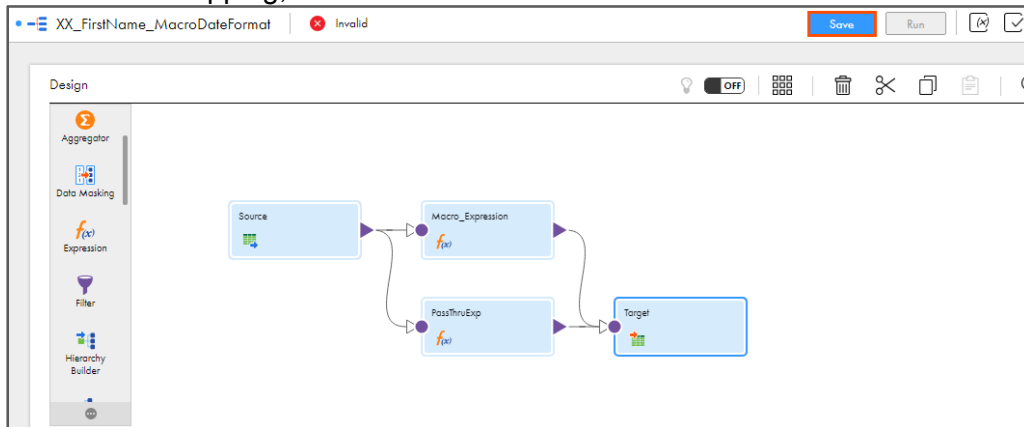
67. From the properties pane, click **Field Mapping**.

68. From the Field map options drop-down, select **Automatic**.

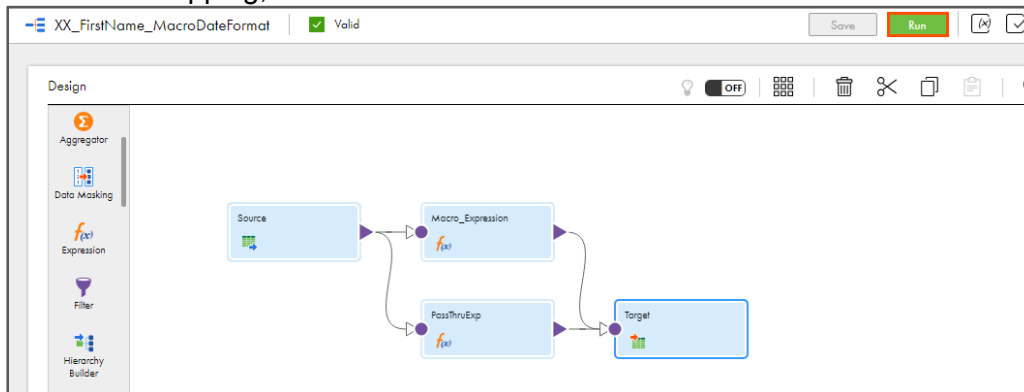


The "Properties: Target" dialog box is shown. The "Field map options:" dropdown menu is highlighted with a red box and set to "Automatic". The "Field Mapping" tab is selected and highlighted with a red box. The "Incoming Fields" section shows "Incoming Fields: (0 of 0 mapped)" and a "Find" button. The "Field Name" field is empty. The text "There are no incoming fields." is displayed at the bottom.

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



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

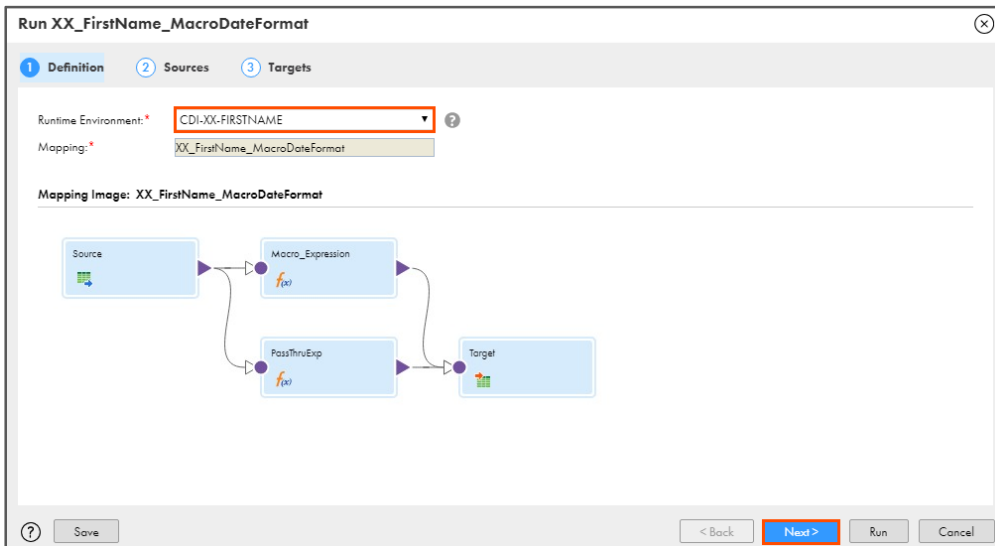


**Note:** The Run mapping window appears.

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

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

72. Click **Next**.



73. From the ParSrcCon Connection drop-down, select **XX\_FirstName\_SFDCDeveloper**.



**Source Parameter Details**

ParSrcCon Connection: \* **XX\_FirstName\_SFDCDeveloper** View... New... Advanced...

Source Type: Single

SrcObj Object: \* Use the Select button Select...

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

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



**Source Parameter Details**

ParSrcCon Connection: \* XX\_FirstName\_SFDCDeveloper View... New... Advanced...

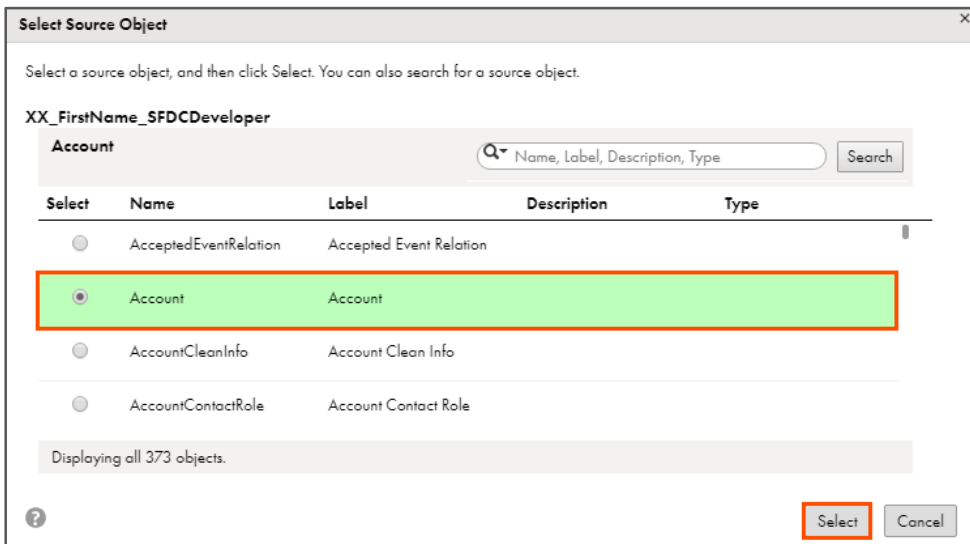
Source Type: **Single**

SrcObj Object: \* Use the Select button **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

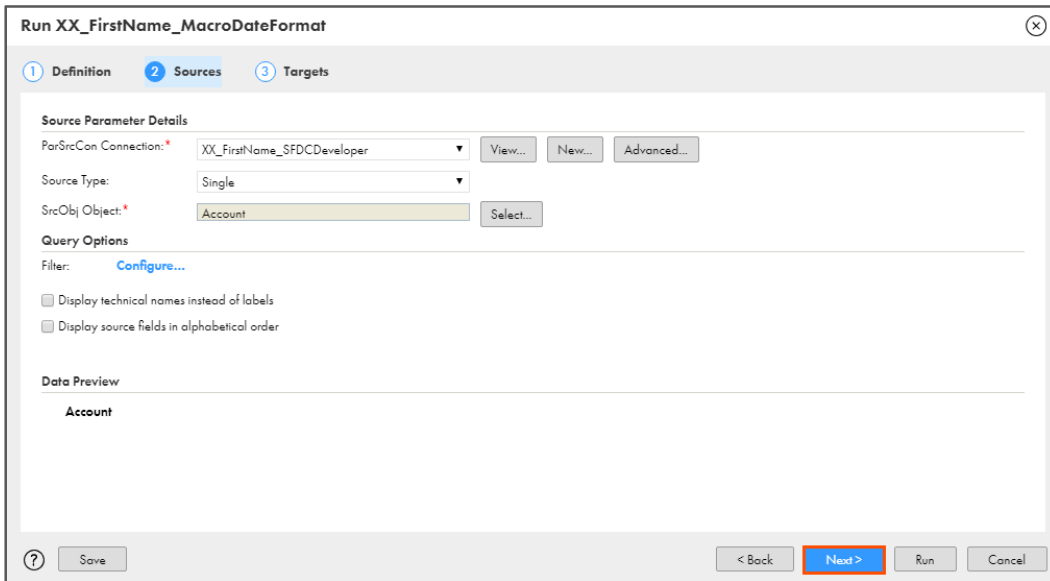
**Account**  Search

| 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    |             |      |

Displaying all 373 objects.

**Select** Cancel

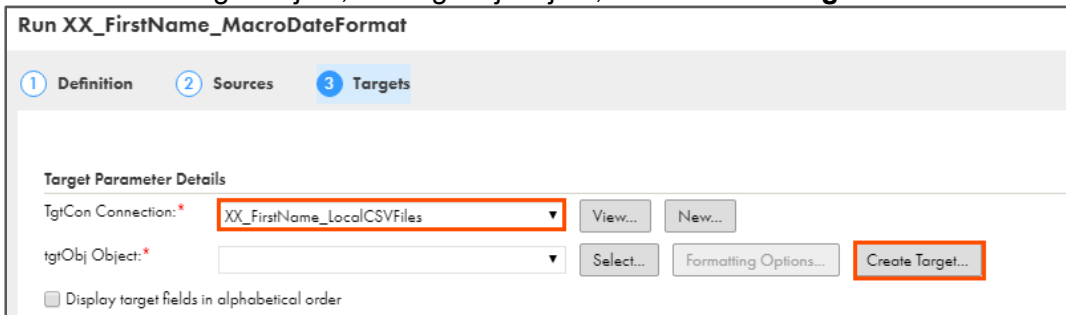
78. Click **Next**.



The dialog box shows the 'Sources' tab. Under 'Source Parameter Details', 'ParSrcCon Connection' is set to 'XX\_FirstName\_SFDCDeveloper'. 'Source Type' is 'Single'. 'SrcObj Object' is 'Account'. Under 'Query Options', 'Filter' is 'Configure...'. There are checkboxes for 'Display technical names instead of labels' and 'Display source fields in alphabetical order'. The 'Data Preview' section shows 'Account'. At the bottom, the 'Next>' button is highlighted with a red box.

79. From TgtCon Connection drop-down, select **XX\_FirstName\_LocalCSVFiles**.

80. To select the target object, from tgtObj Object, click **Create Target**.

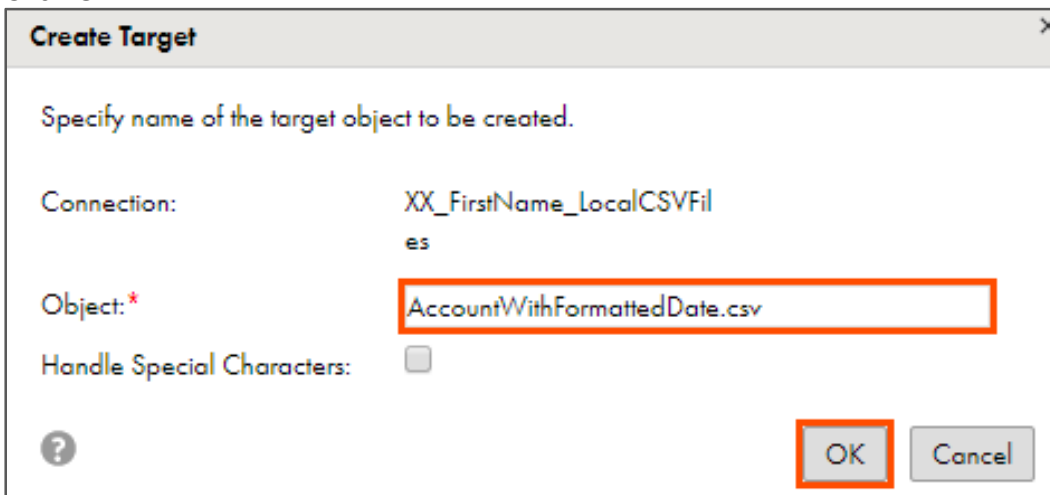


The dialog box shows the 'Targets' tab. Under 'Target Parameter Details', 'TgtCon Connection' is set to 'XX\_FirstName\_LocalCSVFiles'. 'tgtObj Object' is empty. There are buttons for 'View...', 'New...', 'Select...', 'Formatting Options...', and 'Create Target...'. The 'Create Target...' button is highlighted with a red box. There is a checkbox for 'Display target fields in alphabetical order'.

**Note:** The Create Target window appears.

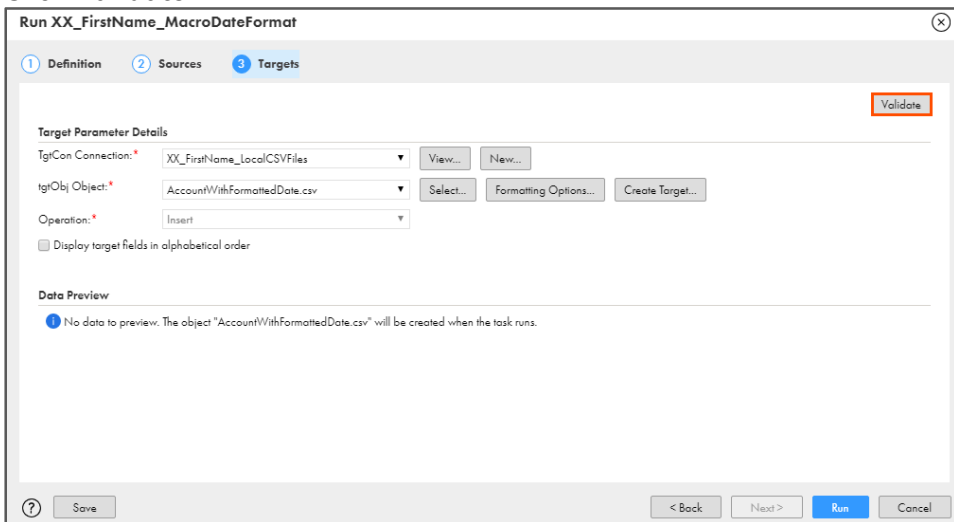
81. In the Object field, enter **AccountWithFormattedDate.csv**.

82. Click **OK**.



The 'Create Target' dialog box prompts the user to 'Specify name of the target object to be created.' The 'Connection' is 'XX\_FirstName\_LocalCSVFiles'. The 'Object' field contains 'AccountWithFormattedDate.csv' and is highlighted with a red box. There is a checkbox for 'Handle Special Characters'. At the bottom, the 'OK' button is highlighted with a red box.

83. Click **Validate**.



The screenshot shows the 'Run XX\_FirstName\_MacroDateFormat' dialog box with the 'Targets' tab selected. The 'Validate' button in the top right corner is highlighted with a red box. The dialog includes sections for 'Target Parameter Details' and 'Data Preview'.

**Target Parameter Details**

TgtCon Connection: \* XX\_FirstName\_LocalCSVFiles [View... New...]

TgtObj Object: \* AccountWithFormattedDate.csv [Select... Formatting Options... Create Target...]

Operation: \* Insert

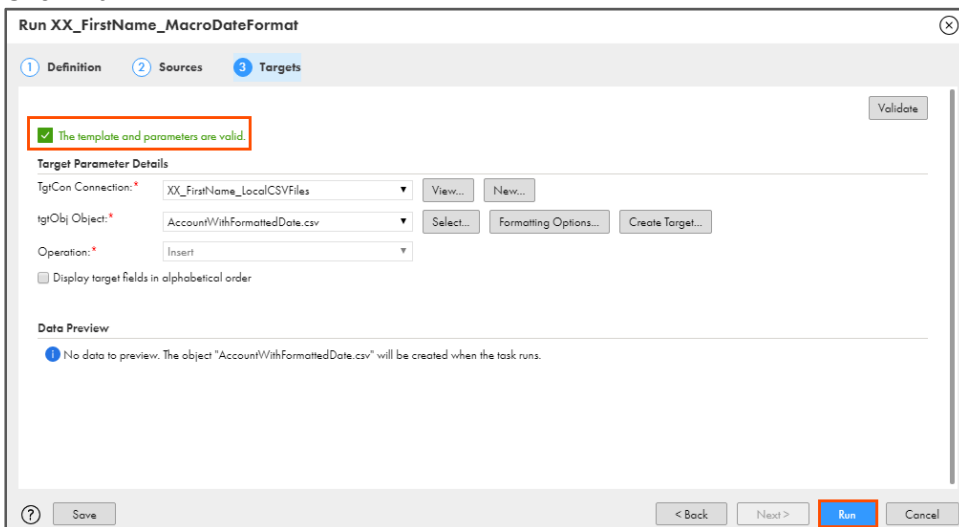
☐ Display target fields in alphabetical order

**Data Preview**

❗ No data to preview. The object "AccountWithFormattedDate.csv" will be created when the task runs.

Buttons at the bottom: Save, < Back, Next >, Run, Cancel.

84. Click **Run**.



The screenshot shows the same dialog box as before, but now a green checkmark and the text 'The template and parameters are valid.' are displayed at the top left. The 'Run' button at the bottom right is highlighted with a red box.

**Target Parameter Details**

TgtCon Connection: \* XX\_FirstName\_LocalCSVFiles [View... New...]

TgtObj Object: \* AccountWithFormattedDate.csv [Select... Formatting Options... Create Target...]

Operation: \* Insert

☐ Display target fields in alphabetical order

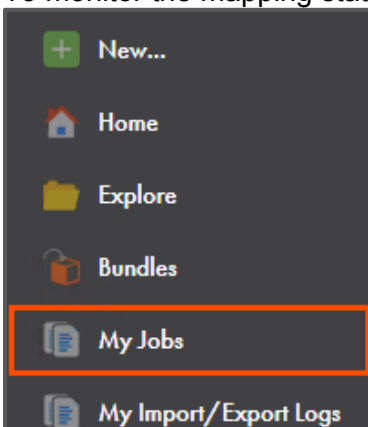
**Data Preview**

❗ No data to preview. The object "AccountWithFormattedDate.csv" will be created when the task runs.

Buttons at the bottom: Save, < Back, Next >, Run, Cancel.

**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) Up to date

Updated 4:27:11 AM PDT

Asset Name: XX\_FirstName\_MacroD... Add Field

| 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.

| CreatedDate     | LastModifiedDate | SystemModstamp  | LastAc | LastVie | LastReferencedDate | SLAExpirationDate__c | CreatedDate_out | LastModifiedDate_out | SystemModstamp_out |
|-----------------|------------------|-----------------|--------|---------|--------------------|----------------------|-----------------|----------------------|--------------------|
| 6/27/2019 13:42 | 6/27/2019 13:42  | 6/27/2019 13:42 |        |         | 7/2/2019 10:39     |                      | 6/27/2019       | 6/27/2019            | 6/27/2019          |
| 6/27/2019 13:42 | 6/27/2019 13:42  | 6/27/2019 13:42 |        |         | 7/2/2019 10:39     |                      | 6/27/2019       | 6/27/2019            | 6/27/2019          |
| 6/27/2019 13:42 | 6/27/2019 13:42  | 6/27/2019 13:42 |        |         | 7/2/2019 10:40     |                      | 6/27/2019       | 6/27/2019            | 6/27/2019          |
| 6/27/2019 13:42 | 6/27/2019 13:42  | 6/27/2019 13:42 |        |         | 7/2/2019 10:40     |                      | 6/27/2019       | 6/27/2019            | 6/27/2019          |
| 6/27/2019 12:06 | 6/27/2019 12:06  | 6/27/2019 12:06 |        |         |                    | 1/22/2020 0:00       | 6/27/2019       | 6/27/2019            | 6/27/2019          |
| 6/27/2019 12:06 | 6/27/2019 12:06  | 6/27/2019 12:06 |        |         |                    |                      | 6/27/2019       | 6/27/2019            | 6/27/2019          |
| 6/27/2019 12:06 | 6/27/2019 12:06  | 6/27/2019 12:06 |        |         |                    | 7/22/2019 0:00       | 6/27/2019       | 6/27/2019            | 6/27/2019          |
| 6/27/2019 13:42 | 6/27/2019 13:42  | 6/27/2019 13:42 |        |         |                    |                      | 6/27/2019       | 6/27/2019            | 6/27/2019          |
| 6/27/2019 12:06 | 6/27/2019 12:06  | 6/27/2019 12:06 |        |         |                    | 7/22/2019 0:00       | 6/27/2019       | 6/27/2019            | 6/27/2019          |
| 6/27/2019 12:06 | 6/27/2019 12:06  | 6/27/2019 12:06 |        |         |                    | 1/22/2020 0:00       | 6/27/2019       | 6/27/2019            | 6/27/2019          |
| 6/27/2019 12:06 | 6/27/2019 12:06  | 6/27/2019 12:06 |        |         |                    | 7/22/2019 0:00       | 6/27/2019       | 6/27/2019            | 6/27/2019          |
| 6/27/2019 12:06 | 6/27/2019 12:06  | 6/27/2019 12:06 |        |         |                    | 7/22/2019 0:00       | 6/27/2019       | 6/27/2019            | 6/27/2019          |
| 6/27/2019 12:06 | 6/27/2019 12:06  | 6/27/2019 12:06 |        |         |                    | 1/22/2020 0:00       | 6/27/2019       | 6/27/2019            | 6/27/2019          |
| 6/27/2019 13:42 | 6/27/2019 13:42  | 6/27/2019 13:42 |        |         |                    |                      | 6/27/2019       | 6/27/2019            | 6/27/2019          |
| 6/27/2019 12:06 | 6/27/2019 12:06  | 6/27/2019 12:06 |        |         |                    | 1/22/2020 0:00       | 6/27/2019       | 6/27/2019            | 6/27/2019          |
| 6/27/2019 12:06 | 6/27/2019 12:06  | 6/27/2019 12:06 |        |         |                    | 1/22/2020 0:00       | 6/27/2019       | 6/27/2019            | 6/27/2019          |
| 6/27/2019 12:06 | 6/27/2019 12:06  | 6/27/2019 12:06 |        |         |                    |                      | 6/27/2019       | 6/27/2019            | 6/27/2019          |
| 6/27/2019 13:42 | 6/27/2019 13:42  | 6/27/2019 13:42 |        |         |                    |                      | 6/27/2019       | 6/27/2019            | 6/27/2019          |
| 6/27/2019 13:42 | 6/27/2019 13:42  | 6/27/2019 13:42 |        |         |                    |                      | 6/27/2019       | 6/27/2019            | 6/27/2019          |
| 6/27/2019 12:06 | 6/27/2019 12:06  | 6/27/2019 12:06 |        |         |                    | 1/22/2020 0:00       | 6/27/2019       | 6/27/2019            | 6/27/2019          |
| 6/27/2019 13:42 | 6/27/2019 13:42  | 6/27/2019 13:42 |        |         |                    |                      | 6/27/2019       | 6/27/2019            | 6/27/2019          |
| 6/27/2019 12:06 | 6/27/2019 12:06  | 6/27/2019 12:06 |        |         |                    | 1/22/2020 0:00       | 6/27/2019       | 6/27/2019            | 6/27/2019          |

*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

---

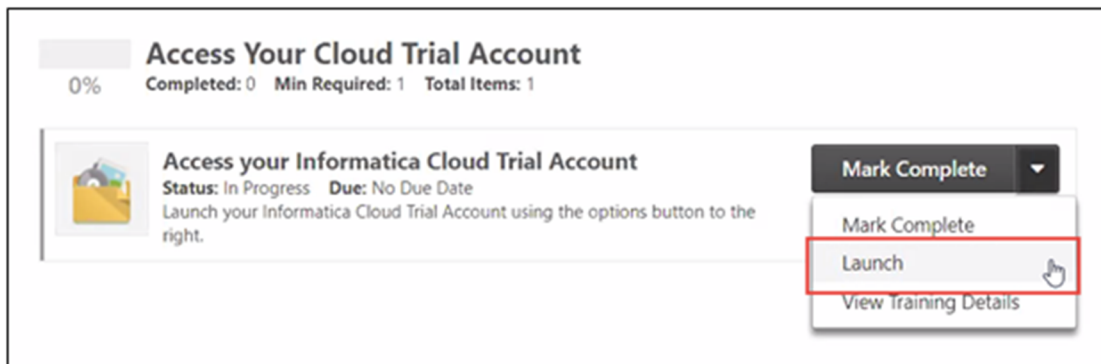
#### Tasks:

##### Copy Source File:

1. Copy **Customer\_Detail.csv** provided with this lab and place the file in your flat file directory (**C:\IICSLabFiles**).

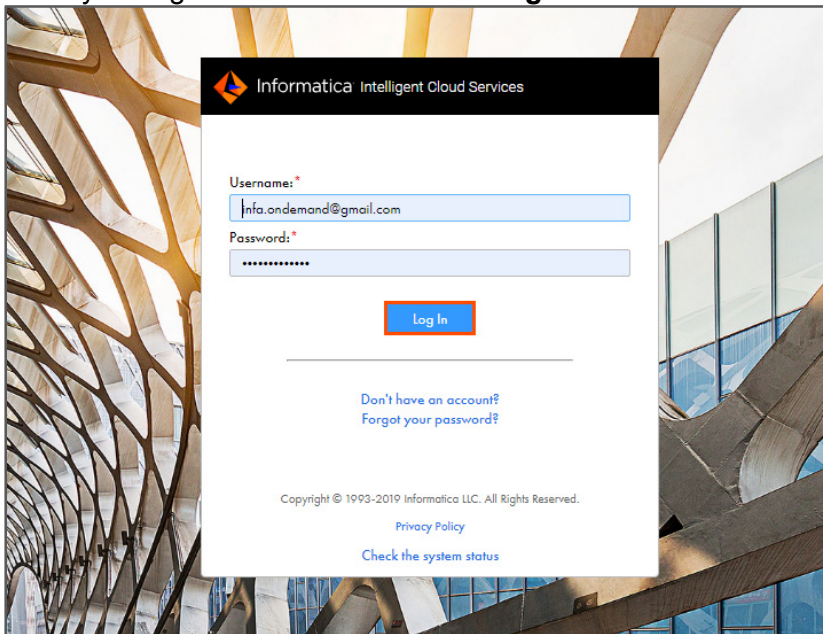
##### Create Mapping:

2. Access your cloud trial account by clicking **Launch** in your option Menu. If the option menu is labeled anything other than **Launch**, click the down arrow to the right and click **Launch**.



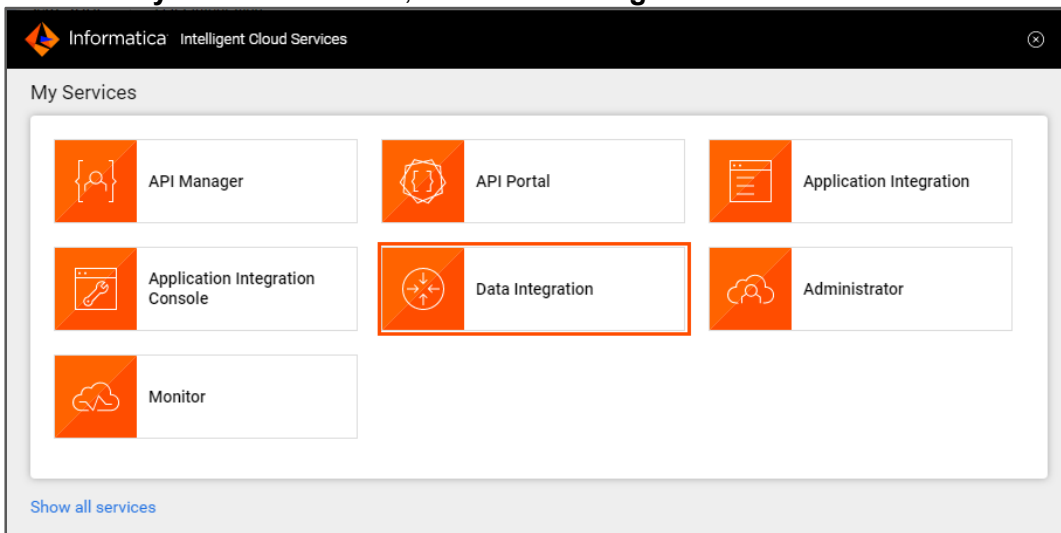
**Note:** Follow this step, if you have navigated away from the login page.

3. Enter your login credentials and click **Log In**.

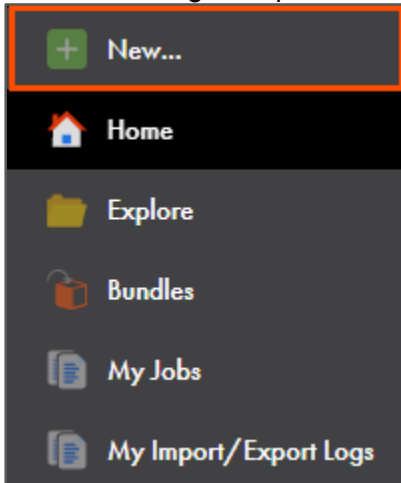


The login page for Informatica Intelligent Cloud Services is displayed. It features a white login box centered on a background image of a modern building's interior with a complex, branching structural design. The login box has a black header with the Informatica logo and the text "Informatica Intelligent Cloud Services". Below the header, there are two input fields: "Username:" with the email "info.ondemand@gmail.com" and "Password:" with masked characters. A blue "Log In" button is positioned below the password field. Underneath the button, there are links for "Don't have an account?" and "Forgot your password?". At the bottom of the login box, there is a copyright notice "Copyright © 1993-2019 Informatica LLC. All Rights Reserved." and links for "Privacy Policy" and "Check the system status".

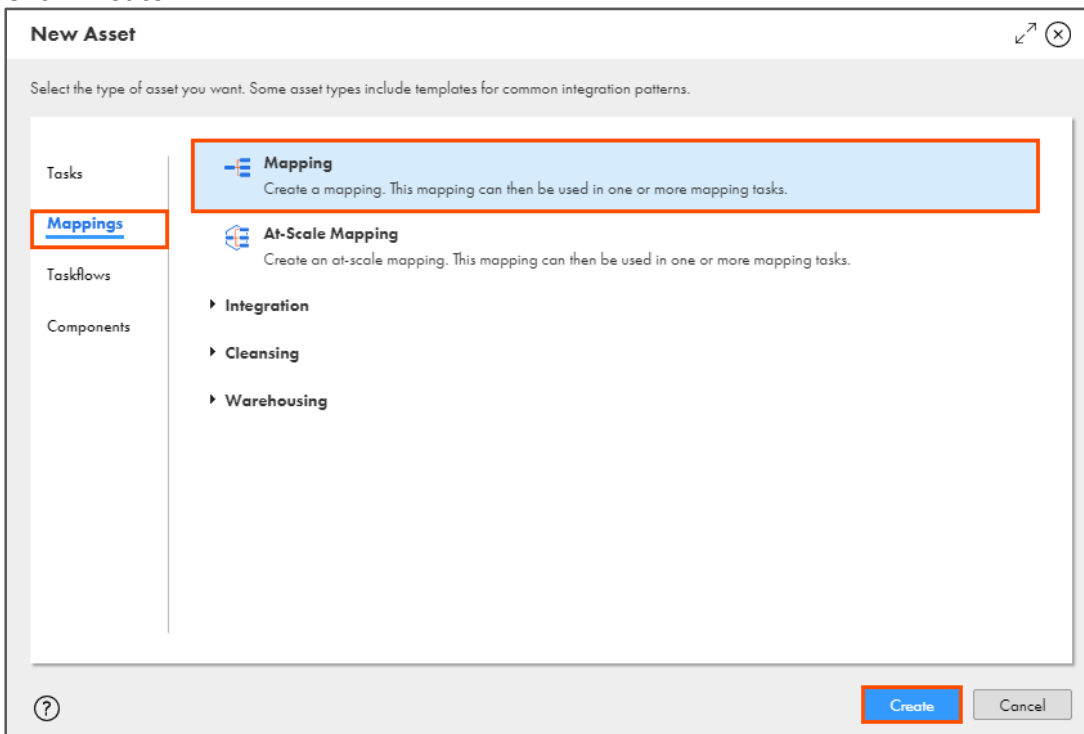
4. From the **My Services** window, select **Data Integration**.



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: \* Default

Description:

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

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

Properties: Source

General

Name: \* Source

Description:

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

12. From the Connection drop-down, select **XX\_FirstName\_LocalCSVFiles**.

General

Source

Fields

Partitions

Details

Connection: XX\_FirstName\_LocalCSVFiles View... New Connection... New Parameter...

Source Type: Single Object

Object: Enter object name or click Select... Select... Formatting Options... Preview Data...

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

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

General

Source

Fields

Partitions

Details

Connection: XX\_FirstName\_LocalCSVFiles View... New Connection... New Parameter...

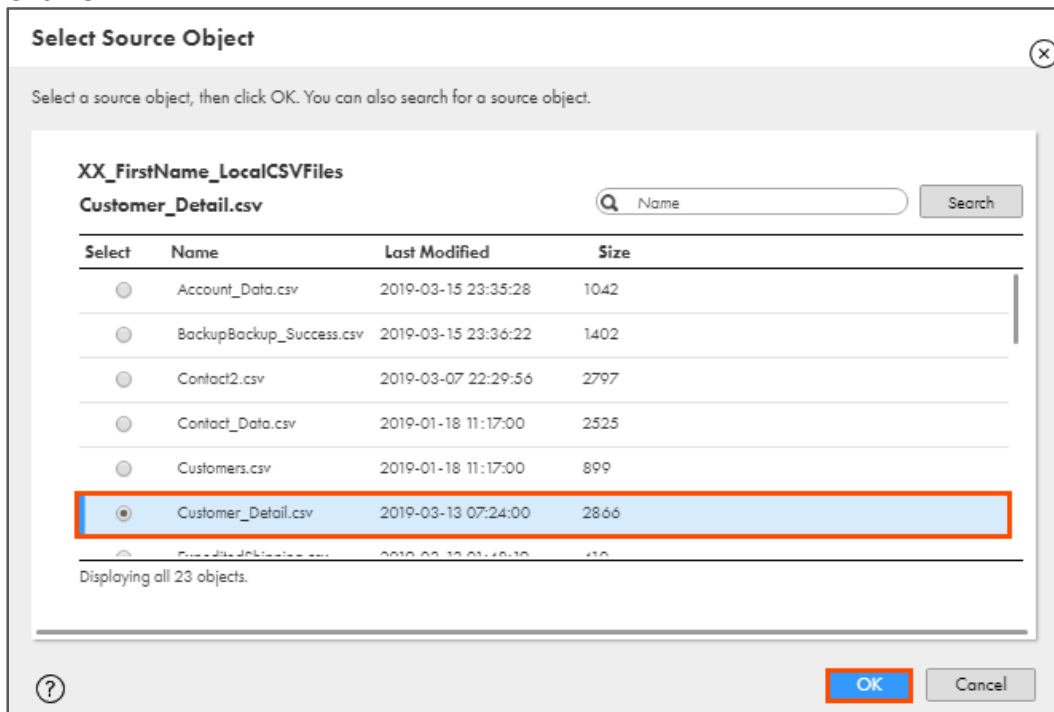
Source Type: Single Object

Object: Enter object name or click Select... Select... Formatting Options... Preview Data...

**Note:** The Select Source Object window appears.

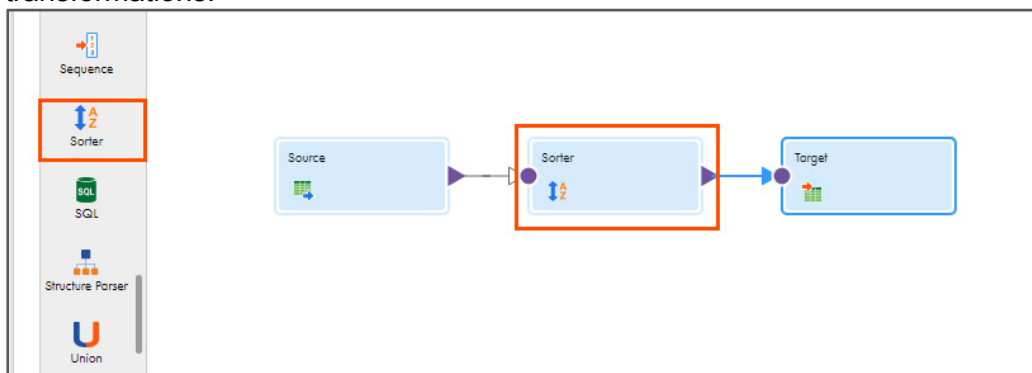
15. Select **Customer\_Detail.csv** from the list.

16. Click **OK**.



### 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 **General** section of Sorter properties, retain the Name as **Sorter**.

Properties: Sorter


**General**

Name: \* **Sorter**

Description:

Incoming Fields

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

21. To add a new sort condition, click .

General

Incoming Fields

**Sort**

Advanced

Sort: Not Parameterized

Sort Conditions

Field Sort Order

No sort conditions specified.

22. Enter the condition, as shown in the table below:

| Field Name | Sort Order |
|------------|------------|
| First_Name | Ascending  |

General

Incoming Fields

**Sort**

Advanced

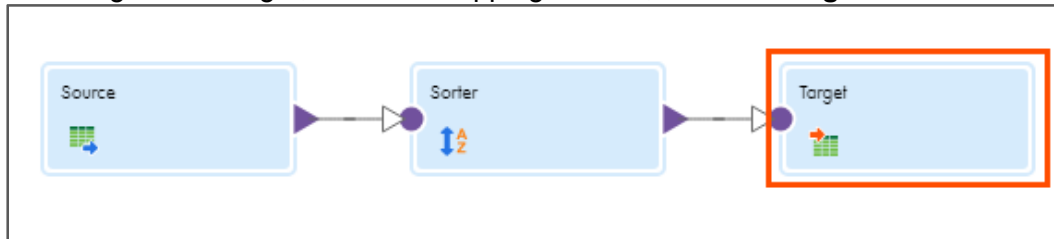
Sort: Not Parameterized

Sort Conditions

Field Sort Order

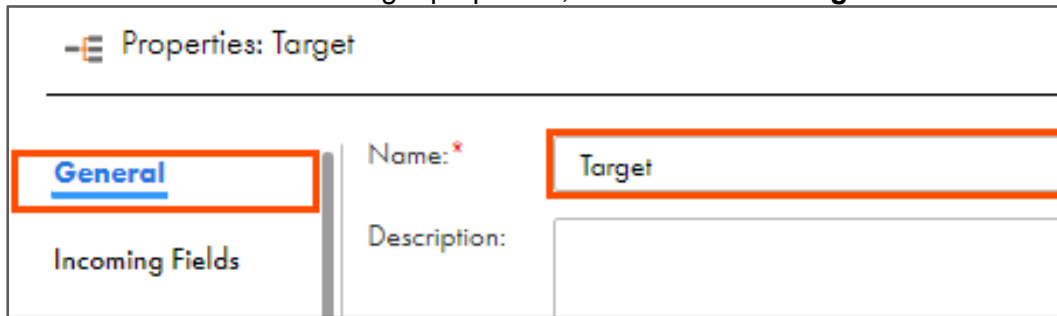
First\_Name Ascending

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



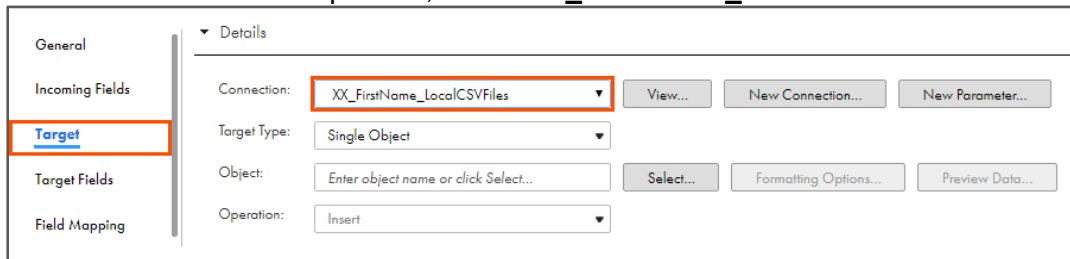


24. In the **General** section of Target properties, retain Name as **Target**.



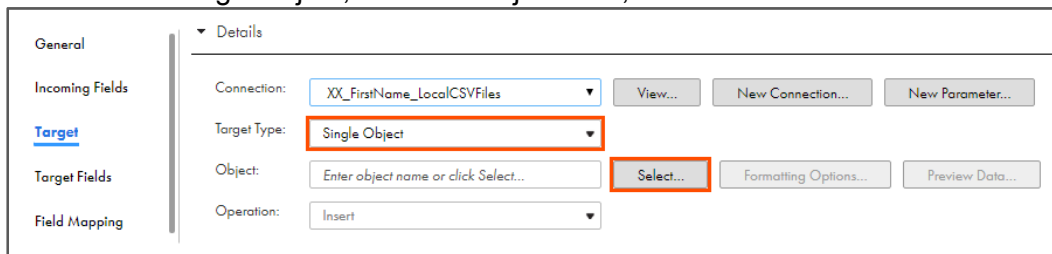
25. From the properties pane, click **Target**.

26. From the Connection drop-down, select **XX\_FirstName\_LocalCSVFiles**.



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

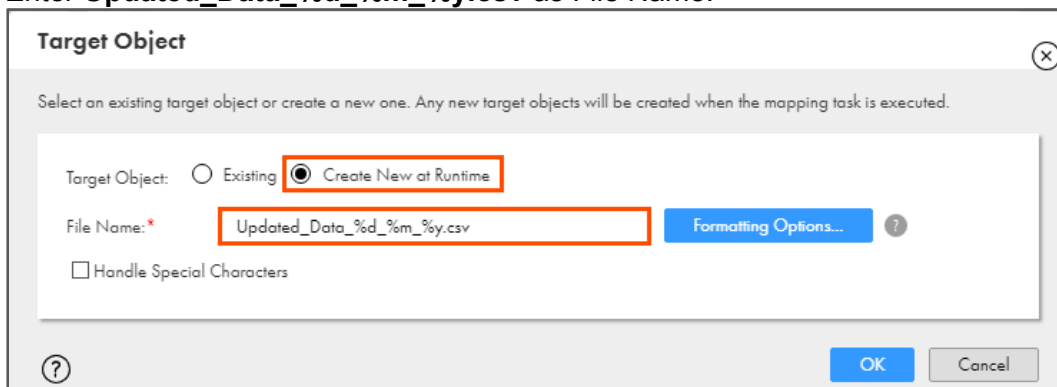
28. To select the target object, from the Object field, click **Select**.



**Note:** The Target Object window appears.

29. In the Target Object window, select **Create New at Runtime**.

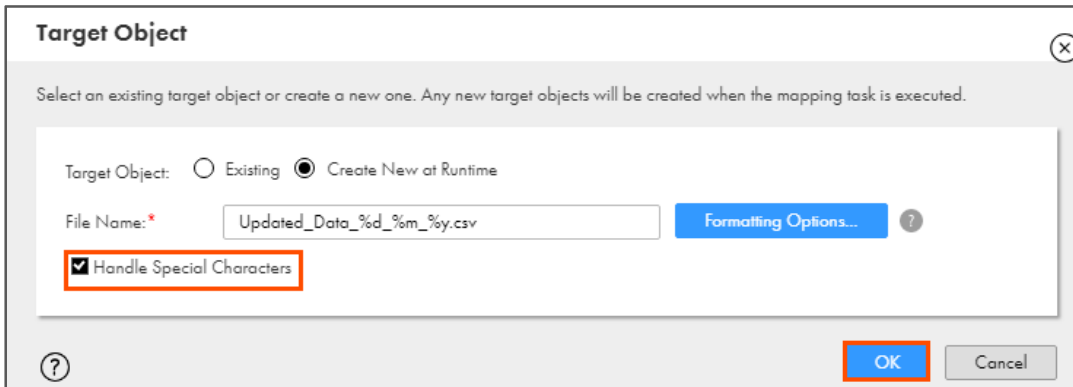
30. Enter **Updated\_Data\_%d\_%m\_%y.csv** as File Name.



**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 time stamp feature, select **Handle Special Characters**.

32. 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.

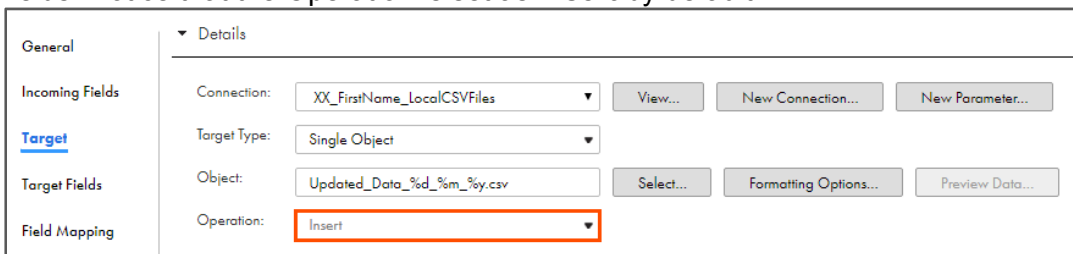
Target Object: ☐ Existing ☒ Create New at Runtime

File Name:  [Formatting Options...](#) ?

☒ Handle Special Characters

? [OK](#) [Cancel](#)

**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.



**General**

Incoming Fields

**Target**

Target Fields

Field Mapping

**Details**

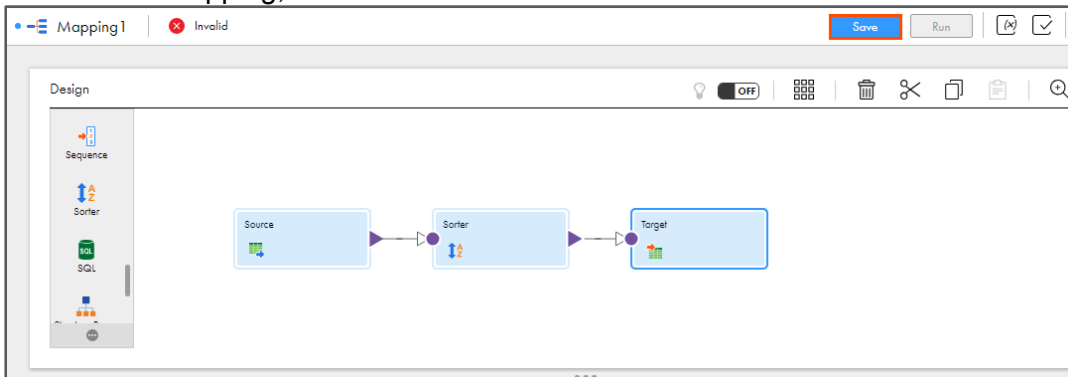
Connection:  [View...](#) [New Connection...](#) [New Parameter...](#)

Target Type:

Object:  [Select...](#) [Formatting Options...](#) [Preview Data...](#)

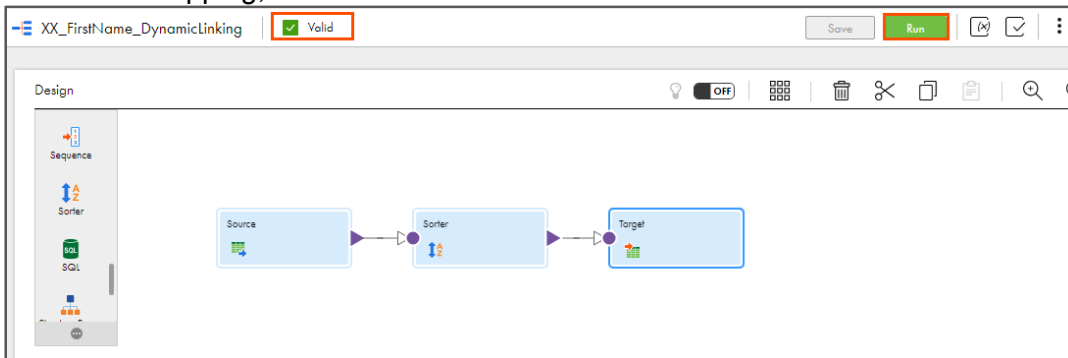
Operation:

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



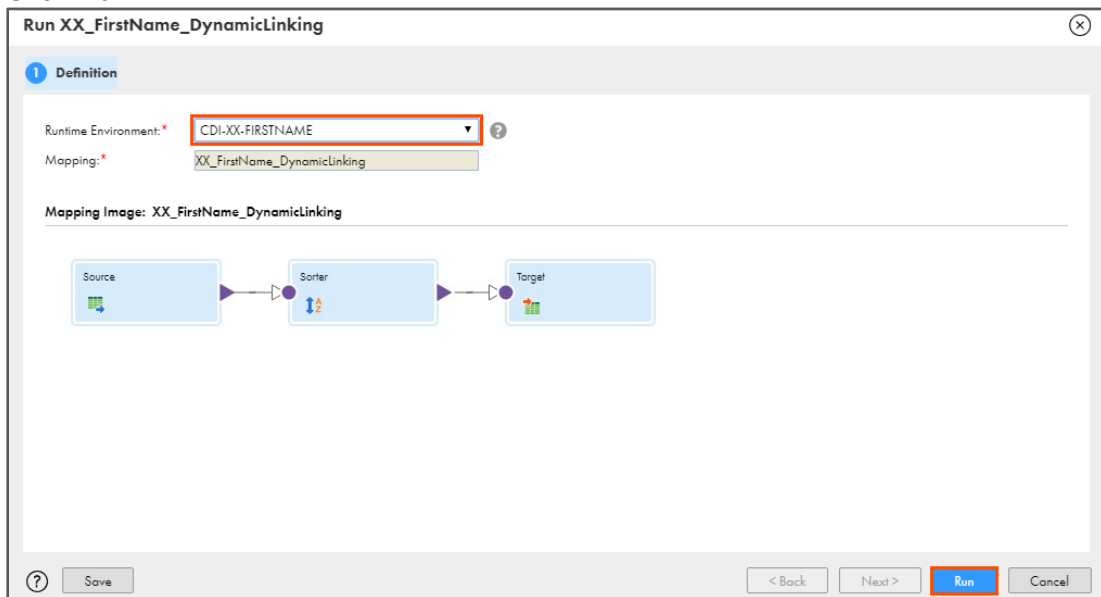
**Note:** After you save the mapping, the mapping status (Valid or Invalid) is automatically displayed next to the mapping name.

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



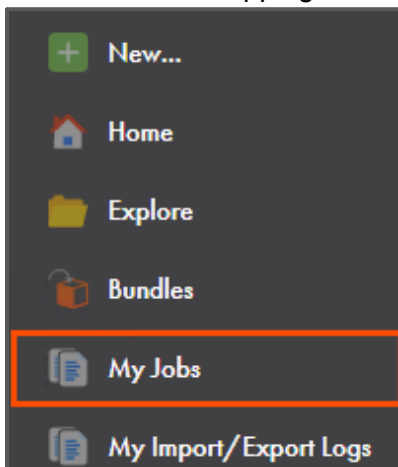
**Note:** The Run mapping window appears.

35. From Runtime Environment drop-down, select your secure agent group.  
**Note:** The Runtime Environment name will be in format CDI-XX-FIRSTNAME.  
 36. Click **Run**.



### 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) <span>Up to date</span> |          | Updated 11:54:01 PM PDT |              |                |         |
|----------------------------------------|----------|-------------------------|--------------|----------------|---------|
| Asset Name: XX_FirstName_Dynami...     |          | Add Field               |              |                |         |
| Instance Name                          | Subtasks | Start Time              | End Time     | Rows Processed | State   |
| XX_FirstName_DynamicLinking-1          |          | Aug 1, 2019, ...        | Aug 1, 20... | 15             | Success |

39. On your local machine, go to **C:\IICS LabFiles**.  
 40. Verify that the **Updated\_Data\_XX\_XX\_XX.csv** file consist 15 rows that are sorted order according to the First Name.

**Note:** XX\_XX\_XX is the date when the file is created.

Updated\_Data\_04\_06\_19.csv - Excel

|    | A               | B          | C         | D                         | E                                                  | F             | G             |
|----|-----------------|------------|-----------|---------------------------|----------------------------------------------------|---------------|---------------|
| 1  | BillingSystemId | First_Name | Last_Name | Title                     | Mailing_street                                     | Mailing_city  | Mailing_state |
| 2  | 1005            | Benjamin   | Russell   | VP, Logistics             | 2334 N. Michigan Avenue, Suite 1500                | Chicago       | IL            |
| 3  | 1002            | Brenda     | Robinson  | VP, Finance               | 312 Constitution Place                             | Austin        | TX            |
| 4  | 1008            | Carol      | Murphy    | Marketing Coordinator     | 620 SW 5th Avenue Suite 400                        | Portland      | Oregon        |
| 5  | 1069            | Cheryl     | Scott     | VP, Inventory             | 345 Shoreline Park                                 | Mountain View | CA            |
| 6  | 1010            | Diana      | Peterson  | Finance Head              | 888 N Euclid Hallis Center, Room 501               | Tucson        | AZ            |
| 7  | 1004            | Diane      | Evans     | Head of Marketing         | 2335 N. Michigan Avenue                            | Chicago       | IL            |
| 8  | 1009            | Frances    | Young     | SVP, Logistics Operations | 621 SW 5th Avenue Suite 400                        | Portland      | Oregon        |
| 9  | 1012            | Jack       | Alexander | Sales Coordinator         | Kings Park, 17th Avenue, Team Valley Trading Estat | Tuscon        | AZ            |
| 10 | 1003            | Joe        | Robinson  | Director, Inventory       | 525 S. Lexington Ave                               | Burlington    | NC            |
| 11 | 1001            | Lois       | Walker    | SVP, Marketing            | 313 Constitution Place                             | Austin        | TX            |
| 12 | 1015            | Melissa    | King      | VP, Logistics             | 345 Shoreline Park                                 | Mountain View | CA            |
| 13 | 1007            | Nancy      | Baker     | Director, Inventory       | 1304 Avenue of the Americas                        | New York      | NY            |
| 14 | 1006            | Patrick    | Bailey    | SVP, Finance              | 1303 Avenue of the Americas                        | New York      | NY            |
| 15 | 1011            | Ralph      | Flores    | Director, Sales           | 1301 Avenue of the Americas                        | New York      | NY            |
| 16 | 1022            | Wayne      | Watson    | VP, Finance               | 345 Shoreline Park                                 | Mountain View | CA            |

*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 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:

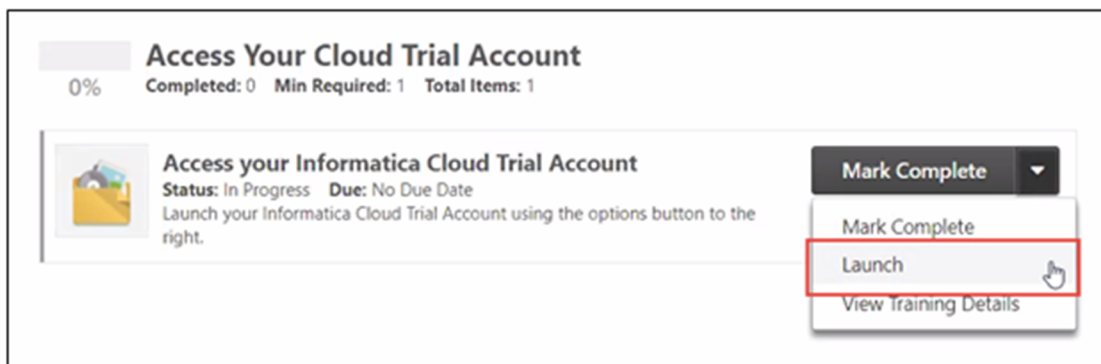
10 minutes

---

#### Tasks:

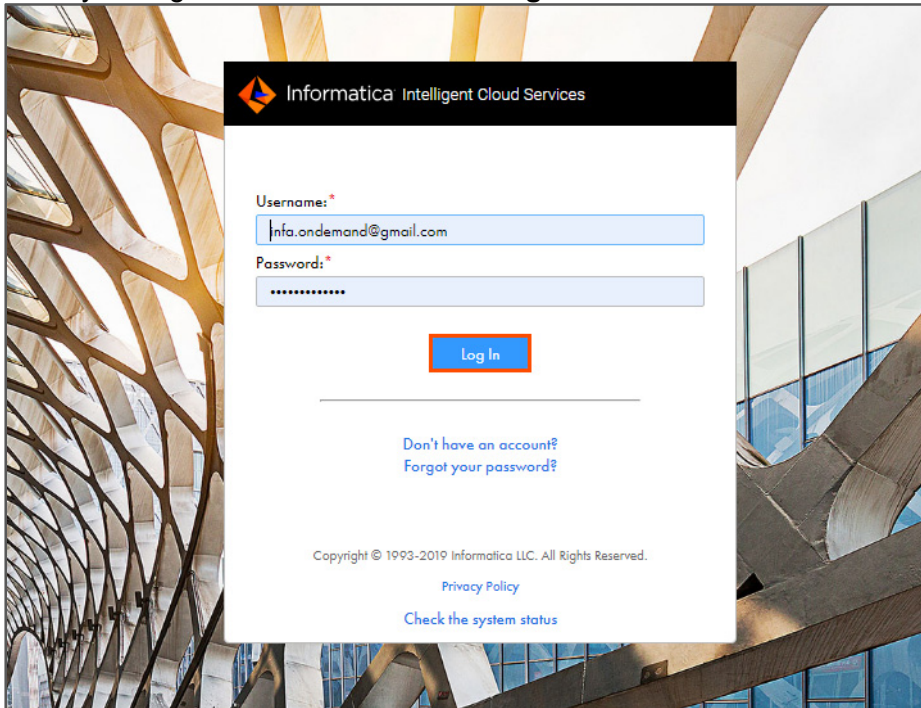
##### Create Replication Task:

1. Access your cloud trial account by clicking **Launch** in your option Menu. If the option menu is labeled anything other than **Launch**, click the down arrow to the right and click **Launch**.



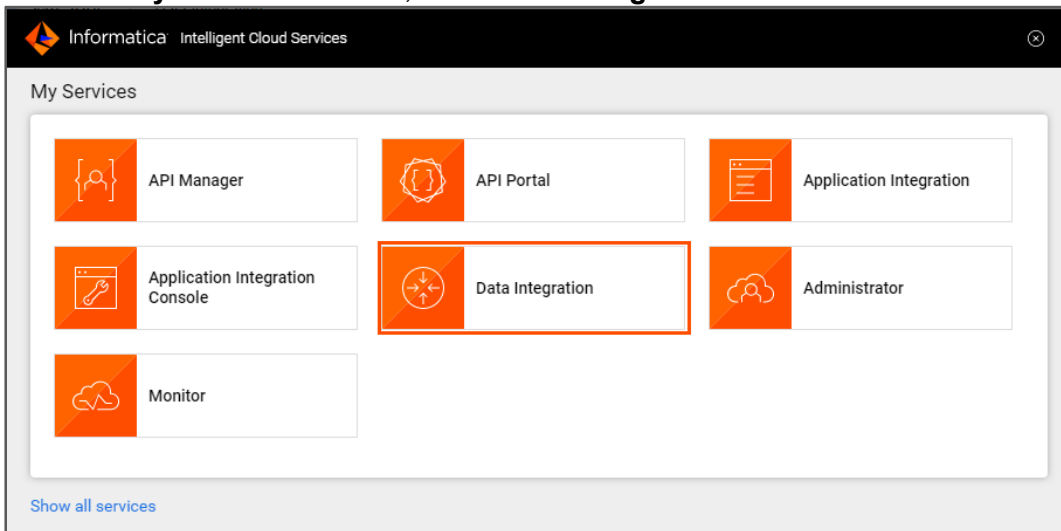
**Note:** Follow this step, if you have navigated away from the login page.

2. Enter your login credentials and click **Log In**.

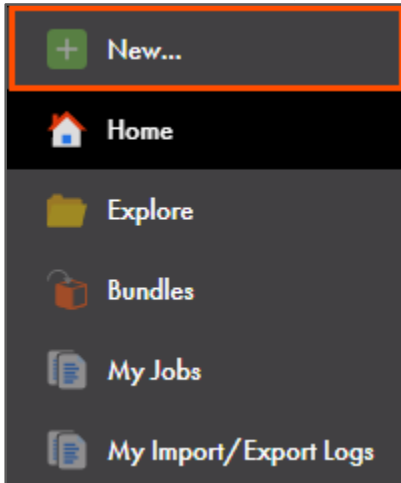


The image shows the login page for Informatica Intelligent Cloud Services. The page has a black header with the Informatica logo and the text "Informatica Intelligent Cloud Services". Below the header, there is a white login form. The form contains two input fields: "Username:" with the value "info.ondemand@gmail.com" and "Password:" with a masked password "\*\*\*\*\*". Below the password field is a blue "Log In" button. Under the button, there are two links: "Don't have an account?" and "Forgot your password?". At the bottom of the form, there is a copyright notice "Copyright © 1993-2019 Informatica LLC. All Rights Reserved." and two links: "Privacy Policy" and "Check the system status". The background of the page is a large, abstract image of a modern building's interior structure.

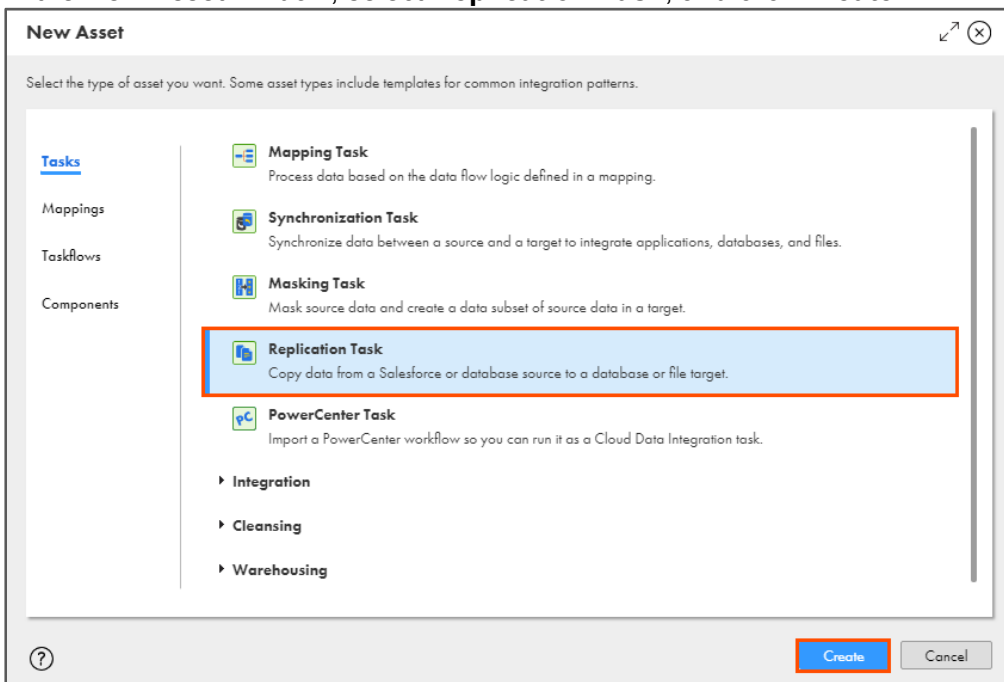
3. From the **My Services** window, select **Data Integration**.



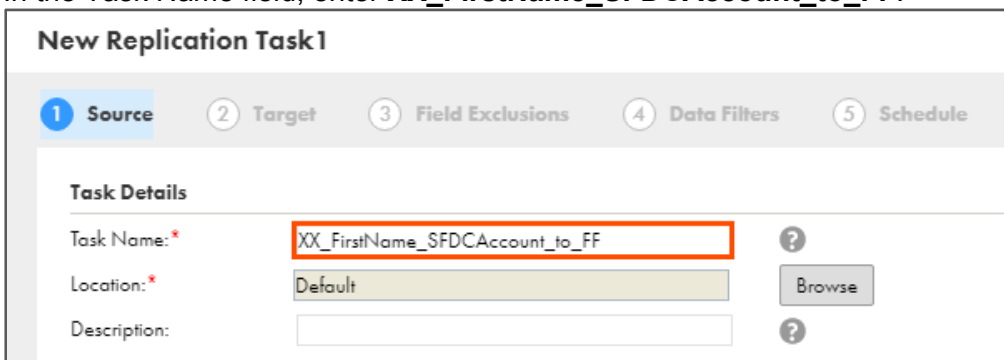
4. To create a new asset, from the Navigation pane, select **New**.



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

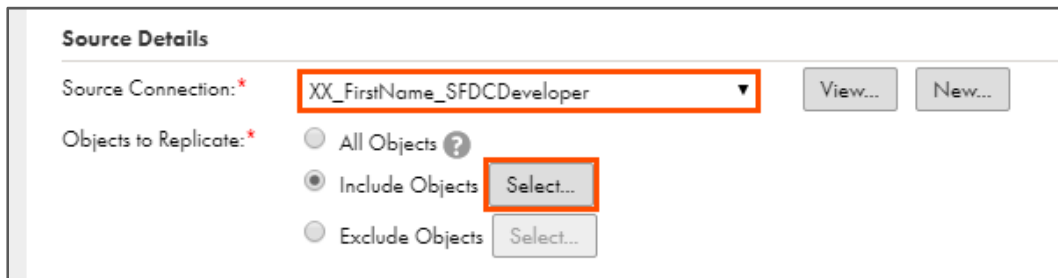


6. In the Task Name field, enter **XX\_FirstName\_SFDCAccount\_to\_FF**.



7. From Source Connection drop-down, select **XX\_FirstName\_SFDCDeveloper**.

8. From Objects to Replicate field, select **Include Objects**.
9. Click **Select**.



**Source Details**

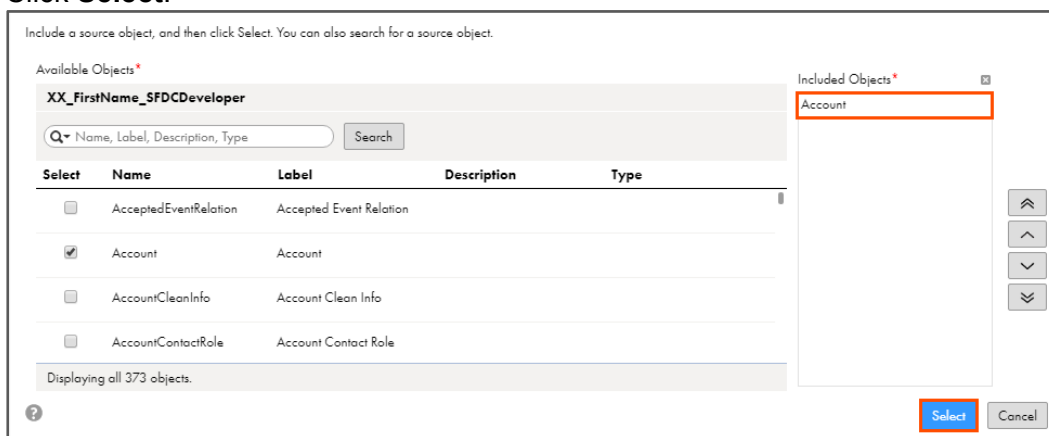
Source Connection: \* XX\_FirstName\_SFDCDeveloper View... New...

Objects to Replicate: \*

- ☐ All Objects ?
- ☒ Include Objects Select...
- ☐ Exclude Objects Select...

**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

Q Name, Label, Description, Type Search

| 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    |             |      |

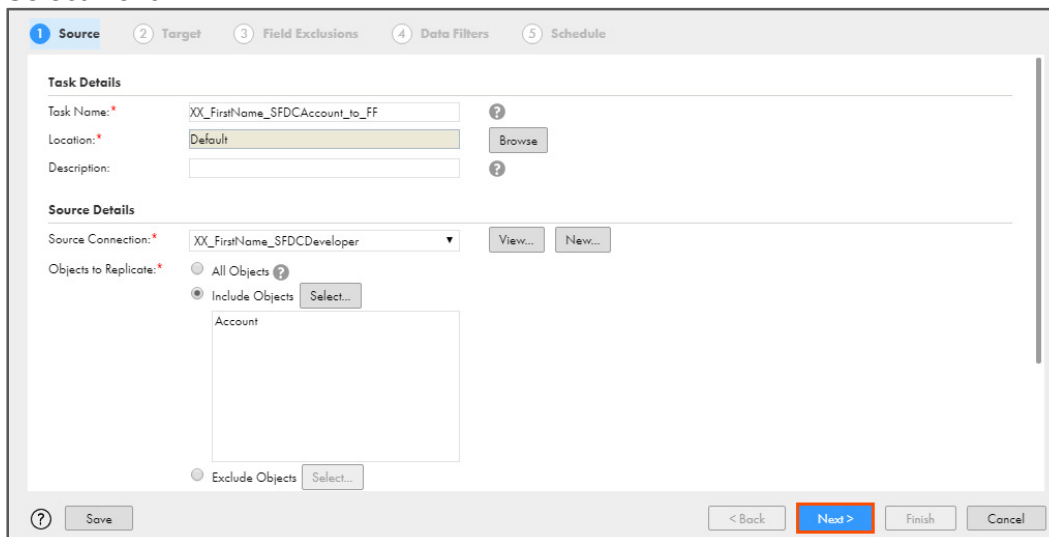
Displaying all 373 objects.

Included Objects \*

Account

Select Cancel

12. Select **Next**.



**Task Details**

Task Name: \* XX\_FirstName\_SFDCAccount\_to\_FF ?

Location: \* Default Browse

Description: ?

**Source Details**

Source Connection: \* XX\_FirstName\_SFDCDeveloper View... New...

Objects to Replicate: \*

- ☐ All Objects ?
- ☒ Include Objects Select...
- ☐ Exclude Objects Select...

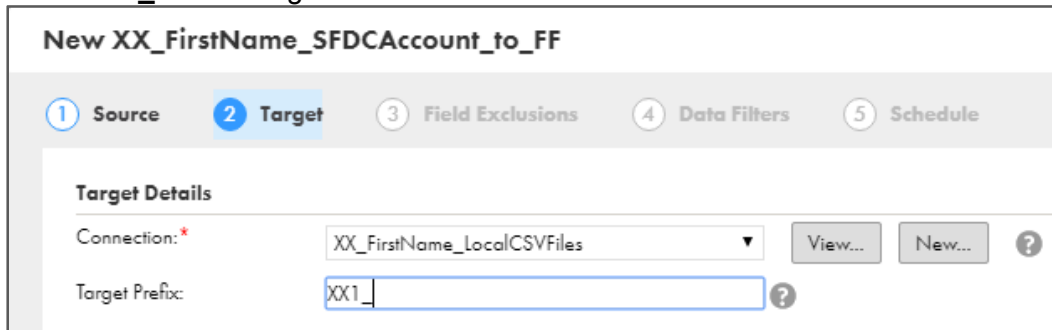
Account

? Save < Back Next > Finish Cancel

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

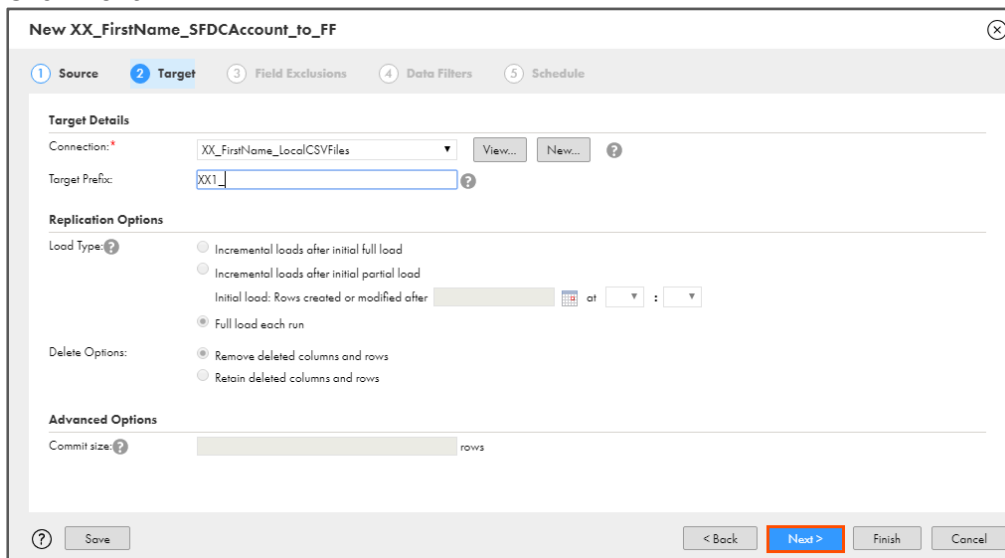
**Target Details**

Connection: \* XX\_FirstName\_LocalCSVFiles View... New... ?

Target Prefix: XX1\_ ?

**Note:** Here, XX are your name 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 [ ] at [ ] : [ ]
- ☒ Full load each run

Delete Options:

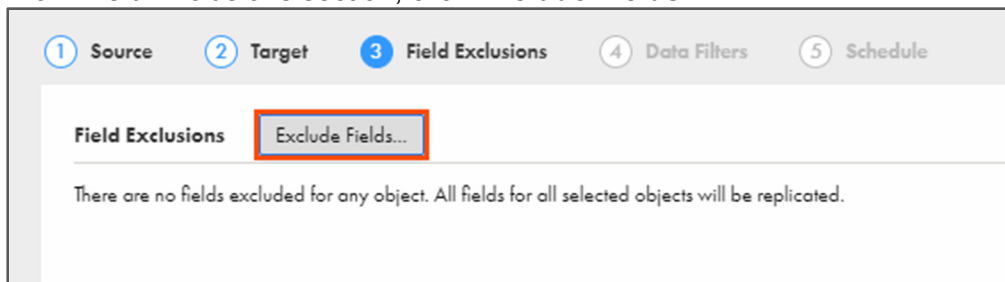
- ☒ Remove deleted columns and rows
- ☐ Retain deleted columns and rows

**Advanced Options**

Commit size: ? [ ] rows

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

16. From Field Exclusions section, click **Exclude Fields**.



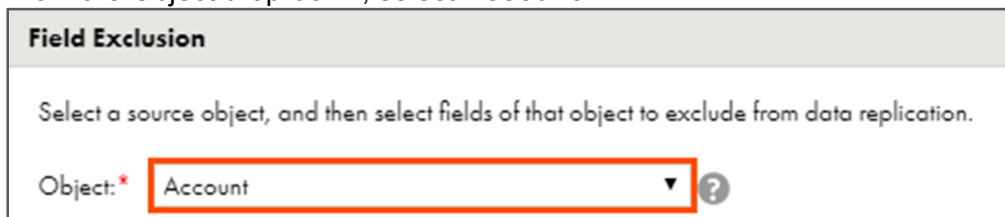
1 Source 2 Target 3 **Field Exclusions** 4 Data Filters 5 Schedule

**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**

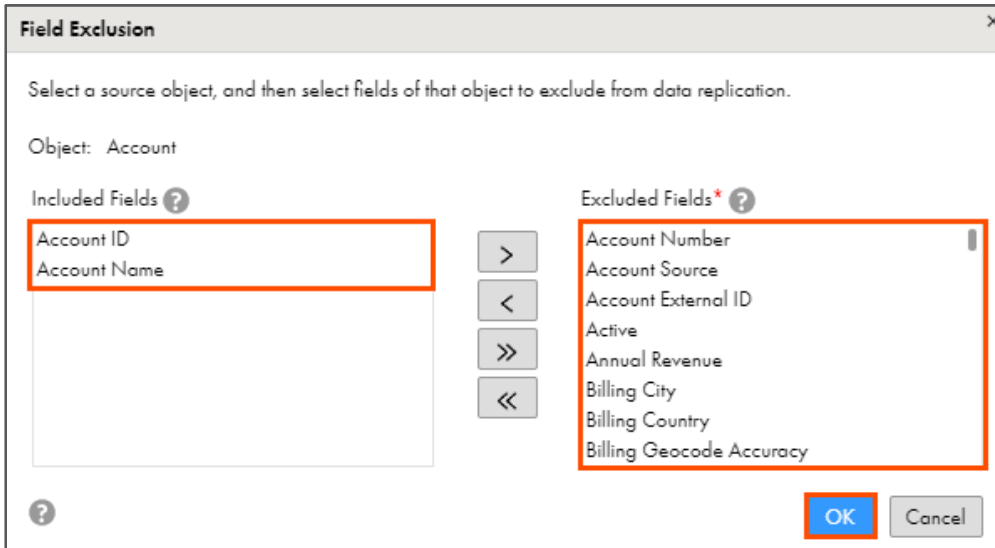
Select a source object, and then select fields of that object to exclude from data replication.

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**.



**Field Exclusion**

Select a source object, and then select fields of that object to exclude from data replication.

Object: Account

Included Fields ?

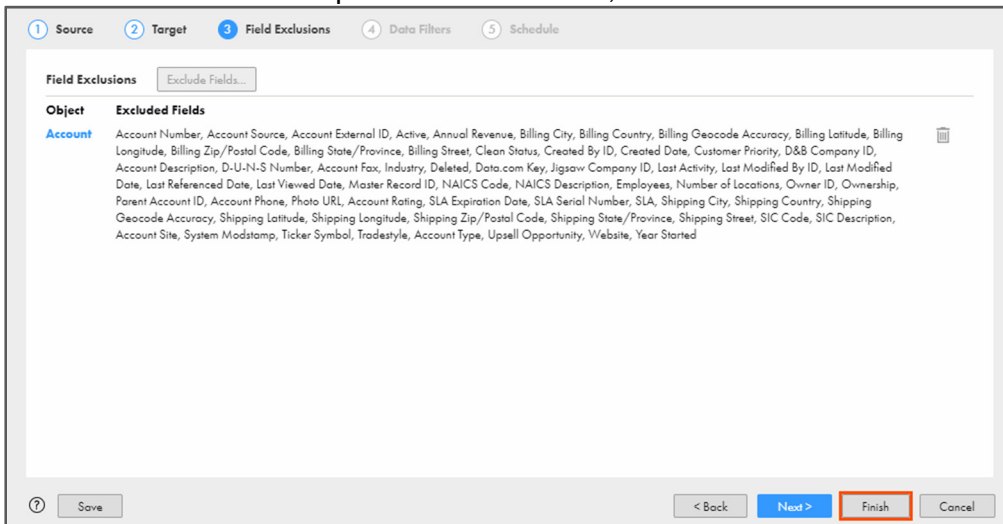
- Account ID
- Account Name

Excluded Fields\* ?

- Account Number
- Account Source
- Account External ID
- Active
- Annual Revenue
- Billing City
- Billing Country
- Billing Geocode Accuracy

Buttons: >, <, >>, <<, OK, Cancel

20. To save and close the Replication Task wizard, click **Finish**.



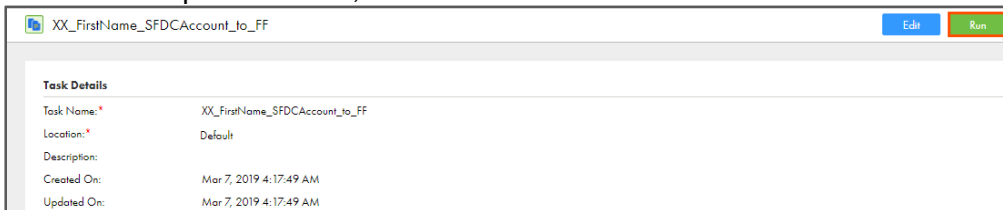
1 Source 2 Target 3 Field Exclusions 4 Data Filters 5 Schedule

Field Exclusions Exclude Fields...

| Object  | Excluded Fields                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Account | Account Number, Account Source, Account External ID, Active, Annual Revenue, Billing City, Billing Country, Billing Geocode Accuracy, Billing Latitude, Billing Longitude, Billing Zip/Postal Code, Billing State/Province, Billing Street, Clean Status, Created By ID, Created Date, Customer Priority, D&B Company ID, Account Description, D-U-N-S Number, Account Fax, Industry, Deleted, Data.com Key, Jigsaw Company ID, Last Activity, Last Modified By ID, Last Modified Date, Last Referenced Date, Last Viewed Date, Master Record ID, NAICS Code, NAICS Description, Employees, Number of Locations, Owner ID, Ownership, Parent Account ID, Account Phone, Photo URL, Account Rating, SLA Expiration Date, SLA Serial Number, SLA, Shipping City, Shipping Country, Shipping Geocode Accuracy, Shipping Latitude, Shipping Longitude, Shipping Zip/Postal Code, Shipping State/Province, Shipping Street, SIC Code, SIC Description, Account Site, System Modstamp, Ticker Symbol, Tradestyle, Account Type, Upsell Opportunity, Website, Year Started |

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

21. To run the Replication task, click **Run**.



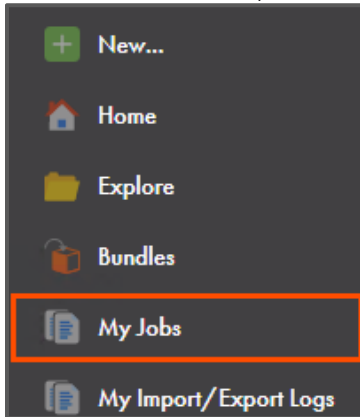
XX\_FirstName\_SFDCAccount\_to\_FF Edit Run

**Task Details**

|              |                                |
|--------------|--------------------------------|
| Task Name:   | XX_FirstName_SFDCAccount_to_FF |
| Location:    | Default                        |
| Description: |                                |
| Created On:  | Mar 7, 2019 4:17:49 AM         |
| Updated On:  | Mar 7, 2019 4:17:49 AM         |

## Monitor the Synchronization Task:

22. To monitor the task, from the Navigation pane, click **My Jobs**.



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

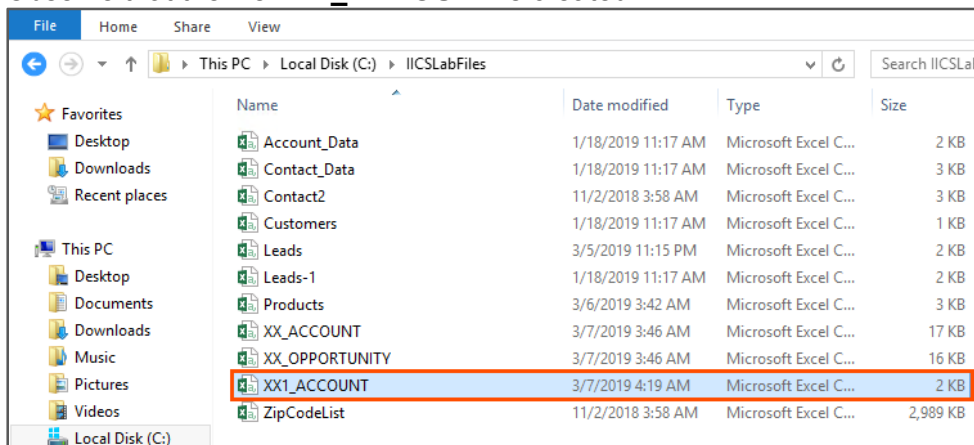
| Jobs (1 of 27) <span>Up to date</span>                         |          | Updated 4:46:38 AM PDT |              |                |         |
|----------------------------------------------------------------|----------|------------------------|--------------|----------------|---------|
| Asset Name: XX_FirstName_SFDCAccount... <span>Add Field</span> |          |                        |              |                |         |
| Instance Name                                                  | Subtasks | Start Time             | End Time     | Rows Processed | State   |
| XX_FirstName_SFDCAccount_to_FF-1                               | 1 Tasks  | 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:

24. To locate the created files, go to **C:\IICSLabFiles**.

25. Observe that the file **XX1\_ACCOUNT** is created.



| Name           | Date modified      | Type                 | Size     |
|----------------|--------------------|----------------------|----------|
| Account_Data   | 1/18/2019 11:17 AM | Microsoft Excel C... | 2 KB     |
| Contact_Data   | 1/18/2019 11:17 AM | Microsoft Excel C... | 3 KB     |
| Contact2       | 11/2/2018 3:58 AM  | Microsoft Excel C... | 3 KB     |
| Customers      | 1/18/2019 11:17 AM | Microsoft Excel C... | 1 KB     |
| Leads          | 3/5/2019 11:15 PM  | Microsoft Excel C... | 2 KB     |
| Leads-1        | 1/18/2019 11:17 AM | Microsoft Excel C... | 2 KB     |
| Products       | 3/6/2019 3:42 AM   | Microsoft Excel C... | 3 KB     |
| XX_ACCOUNT     | 3/7/2019 3:46 AM   | Microsoft Excel C... | 17 KB    |
| XX OPPORTUNITY | 3/7/2019 3:46 AM   | Microsoft Excel C... | 16 KB    |
| XX1_ACCOUNT    | 3/7/2019 4:19 AM   | Microsoft Excel C... | 2 KB     |
| ZipCodeList    | 11/2/2018 3:58 AM  | Microsoft Excel C... | 2,989 KB |

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                 |
| 0012v00002NcBgjAAF | Burlington Textiles Corp of America |
| 0012v00002NcBgkAAF | Pyramid Construction Inc.           |
| 0012v00002NcBglAAF | Dickenson plc                       |
| 0012v00002NcBgmAAF | Grand Hotels & Resorts Ltd          |
| 0012v00002NcBgoAAF | Express Logistics and Transport     |
| 0012v00002NcBgpAAF | 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 create a data subset of source data in 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:

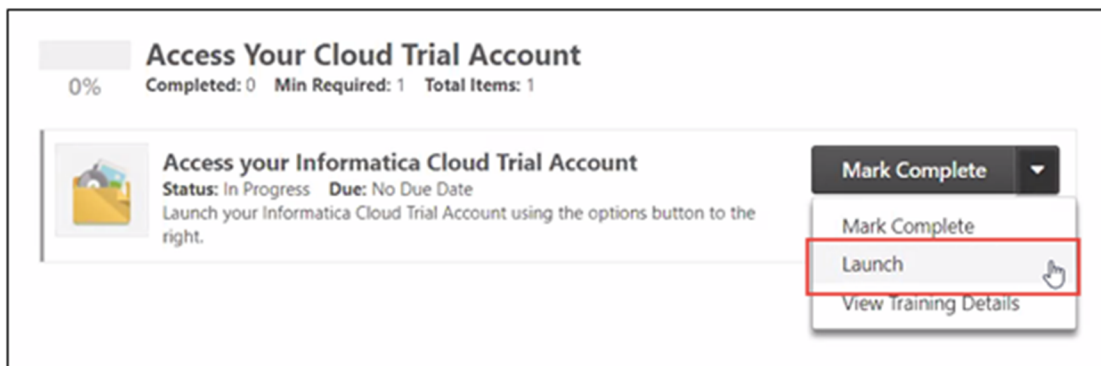
10 minutes

---

#### Tasks:

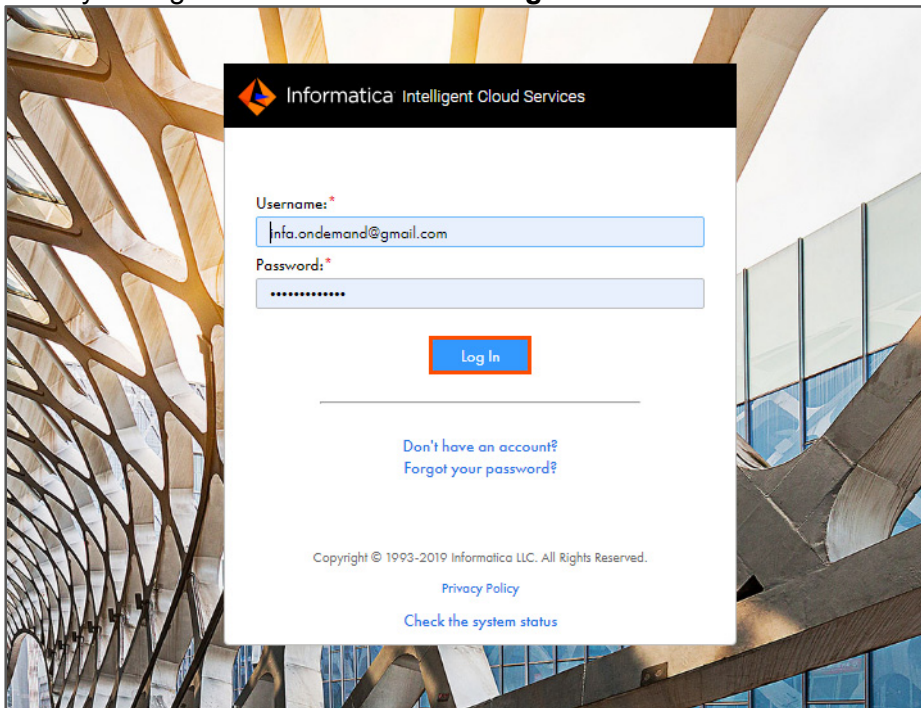
##### Create Masking Task:

1. Open the **Outlets.csv** file (used in Lab 3-1) and note the phone numbers for some of the accounts.
2. Access your cloud trial account by clicking **Launch** in your option Menu. If the option menu is labeled anything other than **Launch**, click the down arrow to the right and click **Launch**.



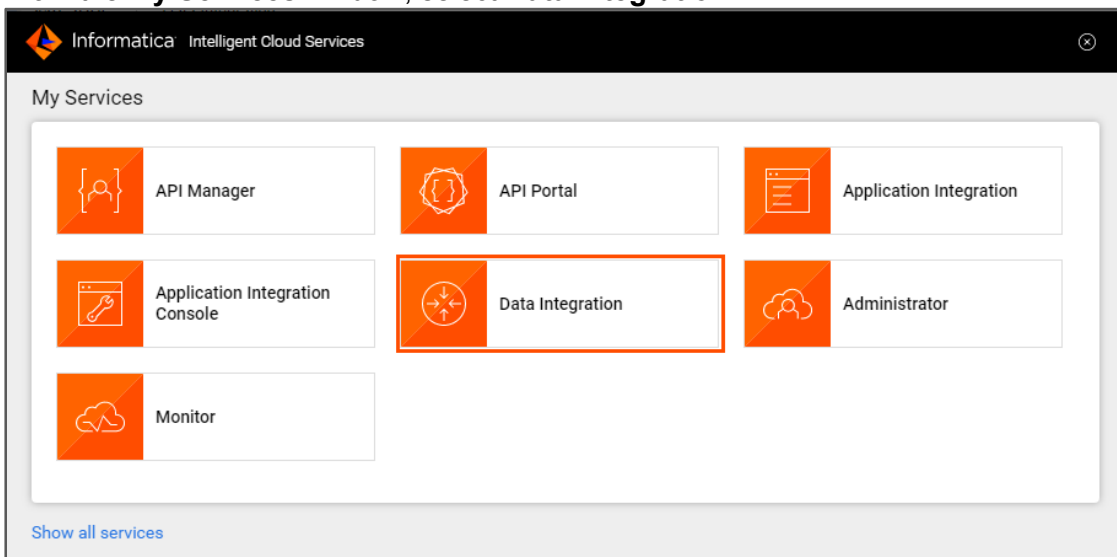
**Note:** Follow this step, if you have navigated away from the login page.

3. Enter your login credentials and click **Log In**.

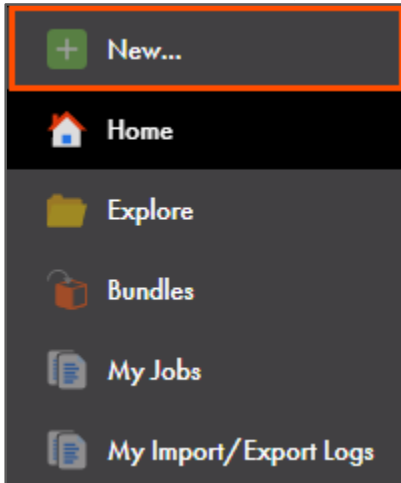


The login screen for Informatica Intelligent Cloud Services is displayed. It features a white login box centered on a background image of a modern building's interior with a complex, branching structural design. The login box has a black header with the Informatica logo and the text "Informatica Intelligent Cloud Services". Below the header, there are two input fields: "Username:" with the email "info.ondemand@gmail.com" and "Password:" with masked characters. A blue "Log In" button is positioned below the password field. Underneath the button, there are links for "Don't have an account?" and "Forgot your password?". At the bottom of the login box, there is a copyright notice "Copyright © 1993-2019 Informatica LLC. All Rights Reserved." and two more links: "Privacy Policy" and "Check the system status".

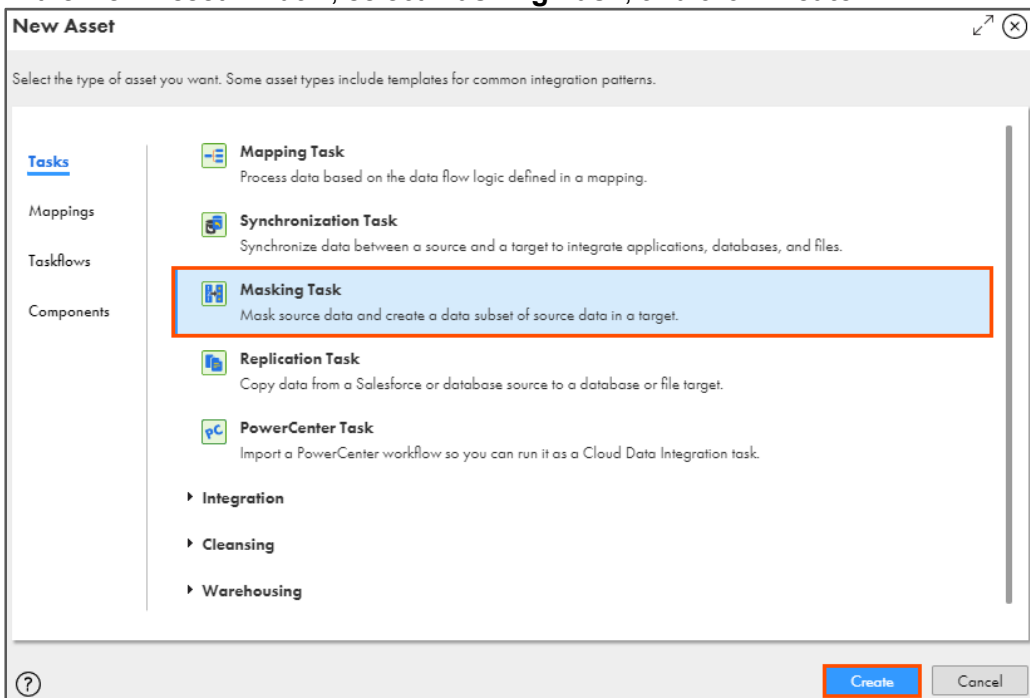
4. From the **My Services** window, select **Data Integration**.



5. To create a new asset, from the Navigation pane, select **New**.

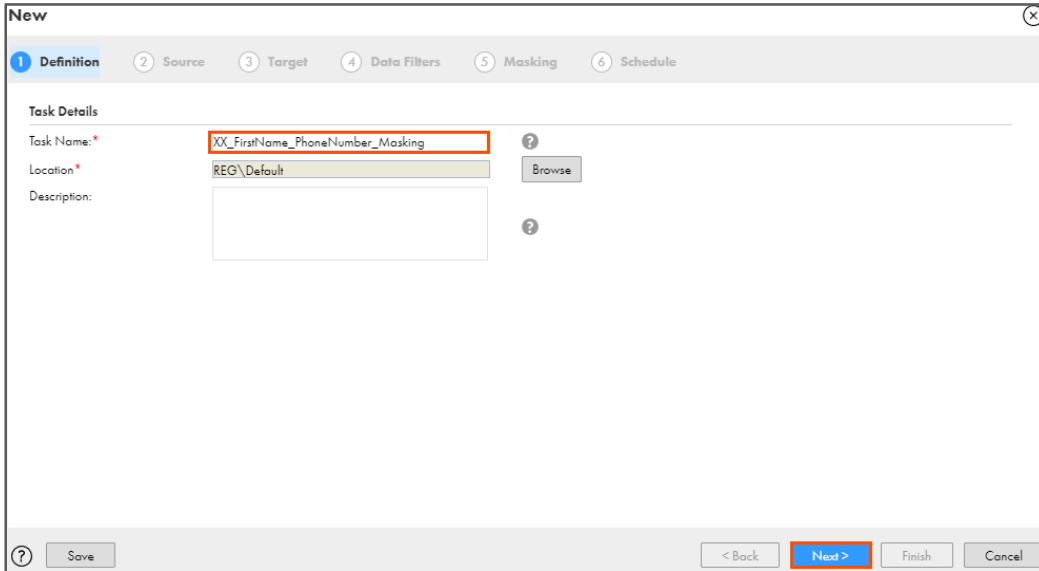


6. In the New Asset window, select **Masking Task**, and click **Create**.



7. In the Task Name field, enter **XX\_FirstName\_PhoneNumber\_Masking**.

8. Click **Next**.



**New**

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

**Task Details**

Task Name: \* XX\_FirstName\_PhoneNumber\_Masking ?

Location: \* REG\Default Browse ?

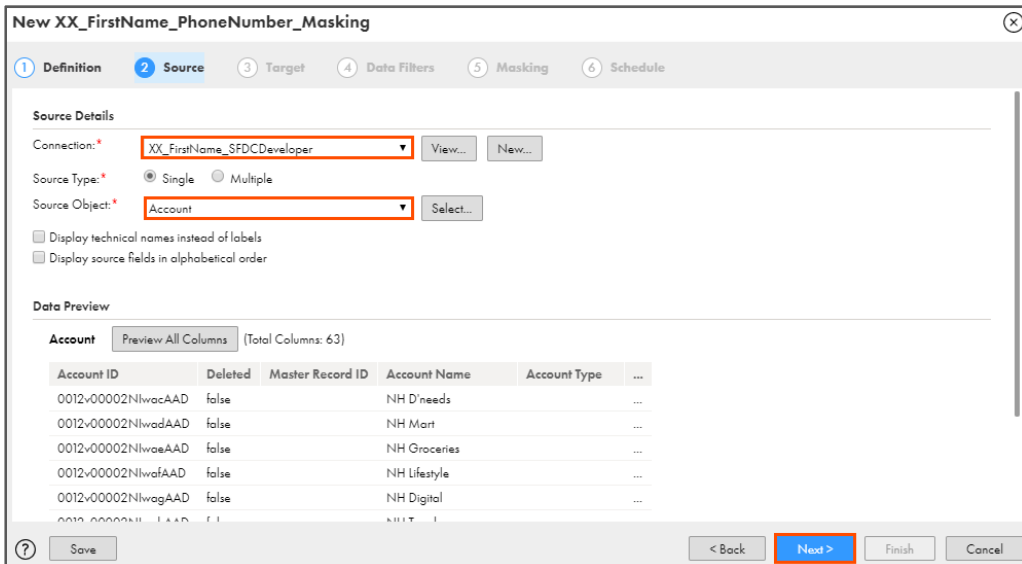
Description:

Save < Back **Next >** Finish Cancel

9. From Source Connection drop-down, select **XX\_FirstName\_SFDCDeveloper**.

10. From the Source Object drop-down, select **Account**.

11. Click **Next**.



**New XX\_FirstName\_PhoneNumber\_Masking**

1 Definition 2 **Source** 3 Target 4 Data Filters 5 Masking 6 Schedule

**Source Details**

Connection: \* XX\_FirstName\_SFDCDeveloper View... New...

Source Type: \* ☒ Single ☐ Multiple

Source Object: \* Account Select...

☐ Display technical names instead of labels

☐ Display source fields in alphabetical order

**Data Preview**

**Account** Preview All Columns (Total Columns: 63)

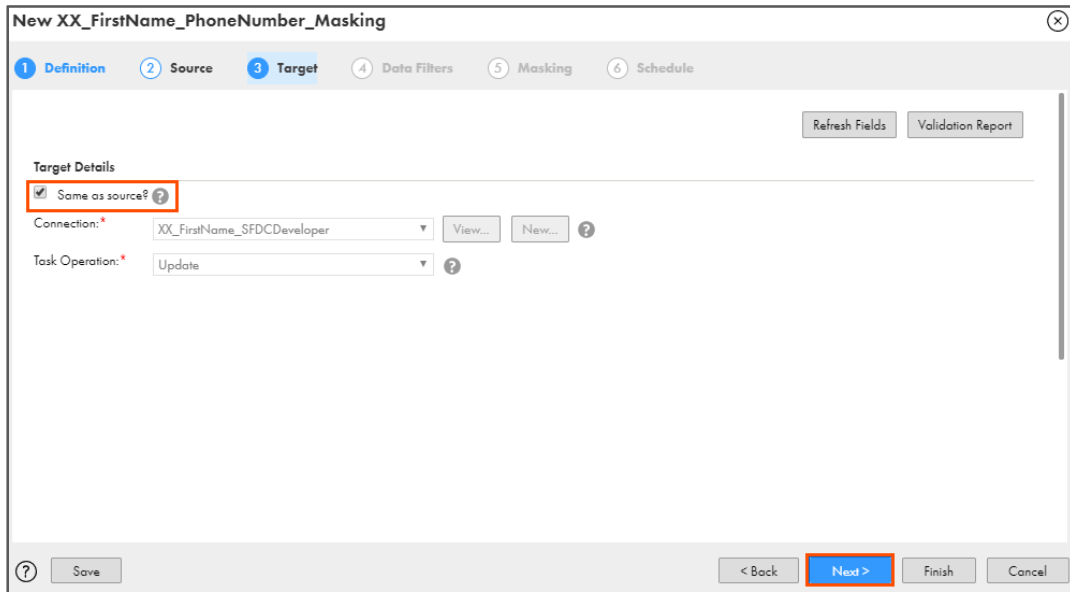
| Account ID          | Deleted | Master Record ID | Account Name | Account Type | ... |
|---------------------|---------|------------------|--------------|--------------|-----|
| 0012v00002NlwacAAD  | false   |                  | NH D'needs   |              | ... |
| 0012v00002NlwadAAD  | false   |                  | NH Mart      |              | ... |
| 0012v00002NlwaeAAD  | false   |                  | NH Groceries |              | ... |
| 0012v00002NlwafaAAD | false   |                  | NH Lifestyle |              | ... |
| 0012v00002NlwagAAD  | false   |                  | NH Digital   |              | ... |

Save < Back **Next >** Finish Cancel

12. Verify that the **Same as source?** field is selected.



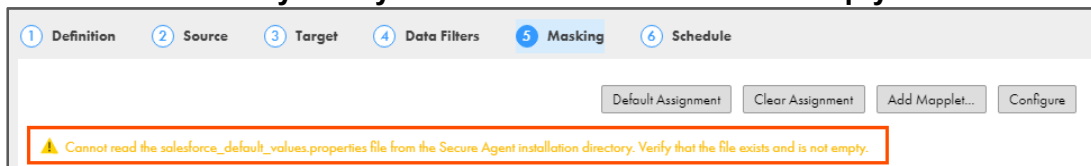
13. Click **Next**.



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

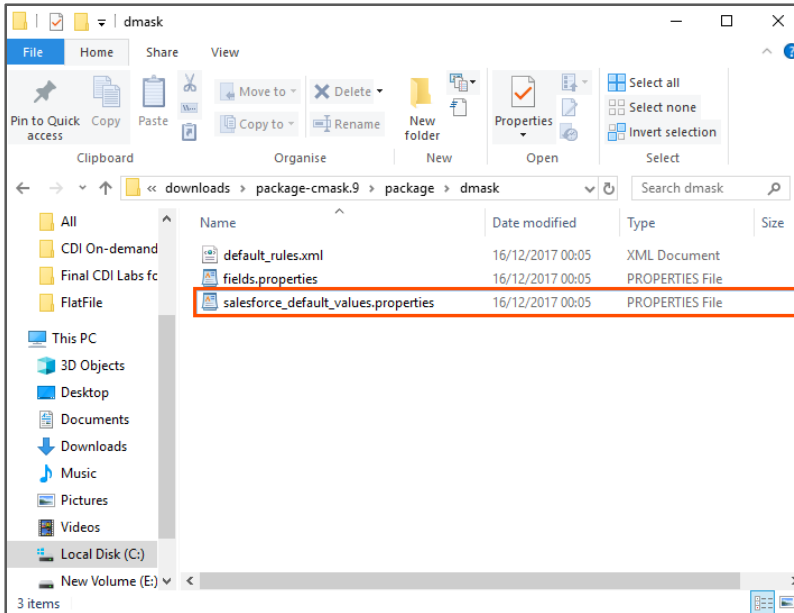
15. If you see the following warning message in Masking step:

**Cannot read the salesforce\_default\_values.properties file from the Secure Agent installation directory. Verify that the file exists and is not empty.**



then,

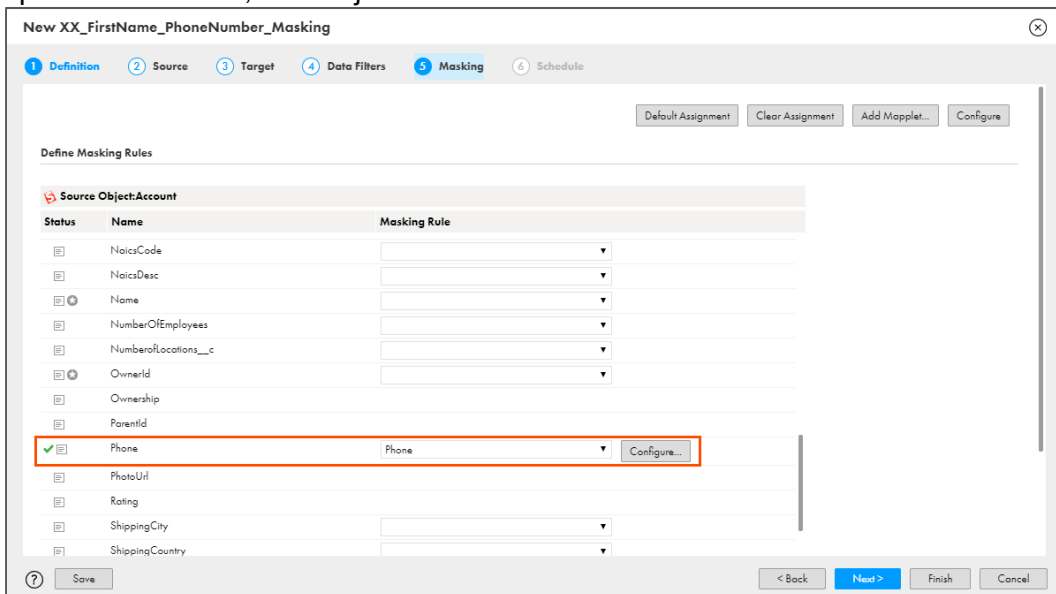
browse to the **C:\Program Files\Informatica Cloud Secure Agent\downloads\package-cmask.9\package\dmask** on your local machine and verify that the **salesforce\_default\_values.properties** file is present.



**Note:** You can skip step 15, if you do not see the mentioned warning message.

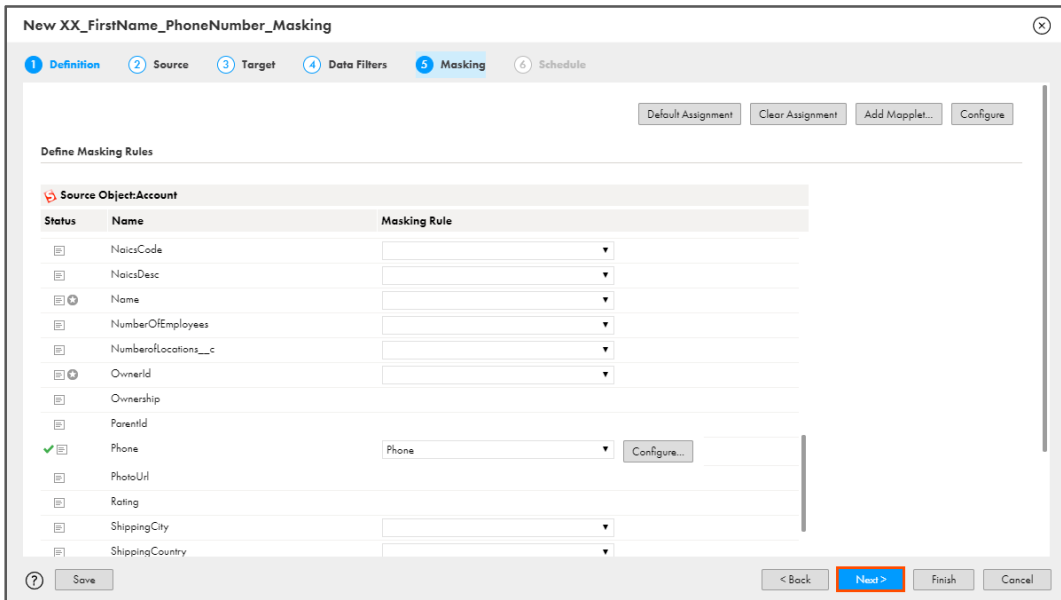
16. In the Define Masking Rules section, from the Phone field drop-down, select **Phone**.

**Note:** To mask all the fields of Account object, you can use the Default Assignment option. For this lab, we will just mask the Phone field.



**Note:** Phone Masking masks a phone number with random numbers in the same format as the original number.

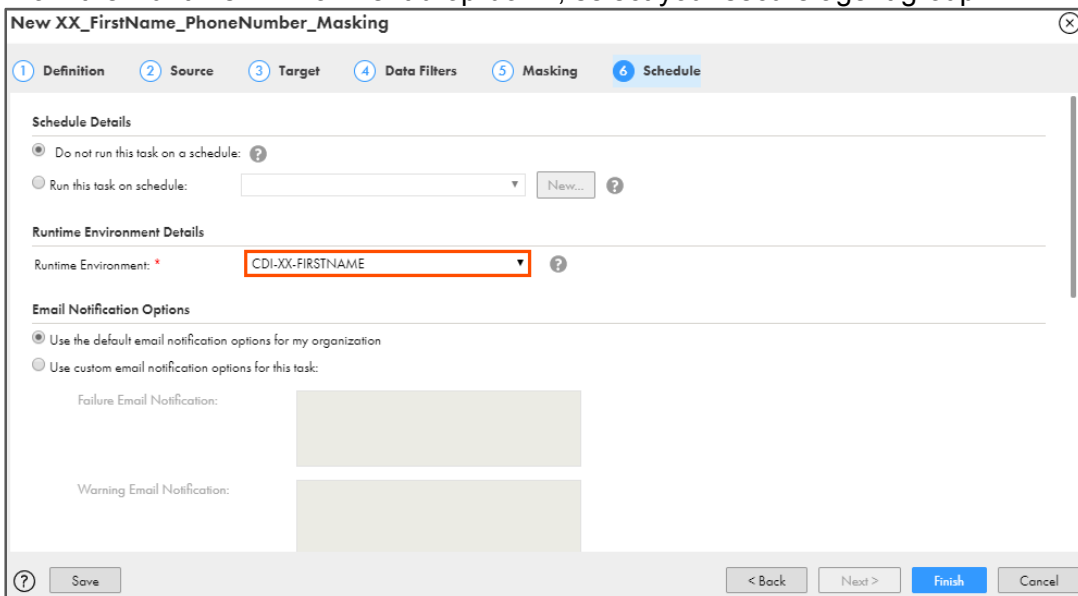
17. Click **Next**.



The screenshot shows the 'Masking' tab of the 'New XX\_FirstName\_PhoneNumber\_Masking' dialog. The 'Define Masking Rules' section lists various source objects with their names and assigned masking rules. The 'Phone' field is highlighted with a green checkmark and a 'Configure...' button next to it. The 'Next >' button at the bottom is highlighted in red.

| Status                              | Name                 | Masking Rule                    |
|-------------------------------------|----------------------|---------------------------------|
| <input type="checkbox"/>            | NaicsCode            |                                 |
| <input type="checkbox"/>            | NaicsDesc            |                                 |
| <input type="checkbox"/>            | Name                 |                                 |
| <input type="checkbox"/>            | NumberOfEmployees    |                                 |
| <input type="checkbox"/>            | NumberOfLocations__c |                                 |
| <input type="checkbox"/>            | OwnerId              |                                 |
| <input type="checkbox"/>            | Ownership            |                                 |
| <input type="checkbox"/>            | ParentId             |                                 |
| <input checked="" type="checkbox"/> | Phone                | Phone <span>Configure...</span> |
| <input type="checkbox"/>            | PhotoUrl             |                                 |
| <input type="checkbox"/>            | Rating               |                                 |
| <input type="checkbox"/>            | ShippingCity         |                                 |
| <input type="checkbox"/>            | ShippingCountry      |                                 |

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



The screenshot shows the 'Schedule' tab of the 'New XX\_FirstName\_PhoneNumber\_Masking' dialog. The 'Runtime Environment Details' section has a 'Runtime Environment' dropdown menu with 'CDI-XX-FIRSTNAME' selected and highlighted with a red box. The 'Finish' button at the bottom is highlighted in blue.

**Schedule Details**

☒ Do not run this task on a schedule: ?

☐ Run this task on schedule:  New... ?

**Runtime Environment Details**

Runtime Environment: \* CDI-XX-FIRSTNAME ?

**Email Notification Options**

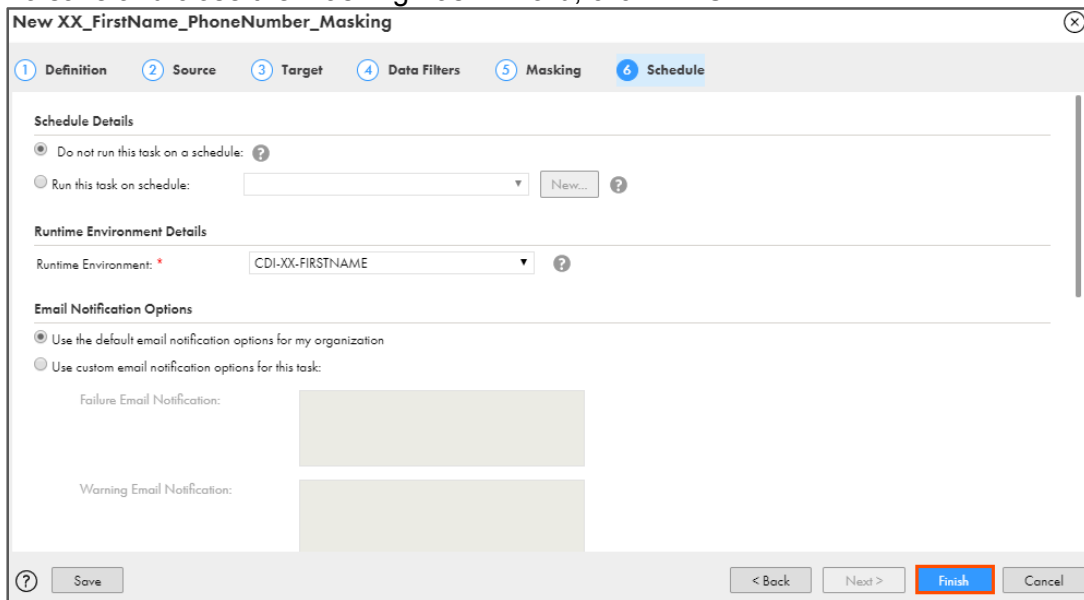
☒ Use the default email notification options for my organization

☐ Use custom email notification options for this task:

Failure Email Notification:

Warning Email Notification:

19. 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: [Dropdown] [New...] ?

**Runtime Environment Details**

Runtime Environment: \* [CDI-XX-FIRSTNAME] ?

**Email Notification Options**

☒ Use the default email notification options for my organization

☐ Use custom email notification options for this task:

Failure Email Notification: [Text Area]

Warning Email Notification: [Text Area]

[?] [Save] < Back Next > **Finish** Cancel

20. To run the Masking task, click **Run**.



**XX\_FirstName\_PhoneNumber\_Masking** [Edit] **Run**

**Task Details**

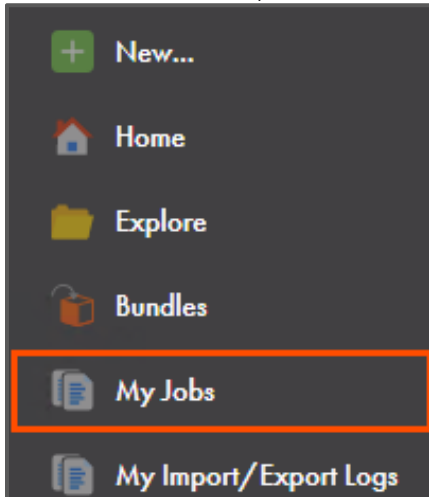
Task Name: \* XX\_FirstName\_PhoneNumber\_Masking

Location: \* Default

Description:

## Monitor the Status:



21. To monitor the task, from the Navigation pane, click **My Jobs**.



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

Jobs (1 of 27) Up to date Updated 12:21:54 AM PDT ↺ ↻ 🔍 Find

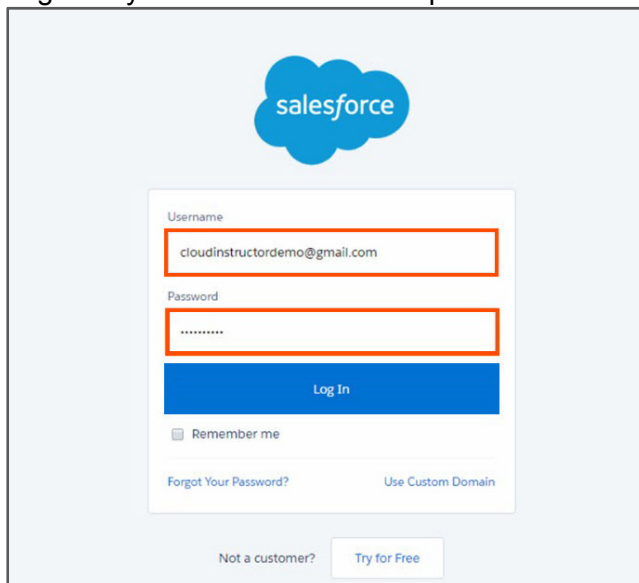
Asset Name: XX\_FirstName\_PhoneN... ⌵ ⌵ Add Field ⌵

| Instance Name                                                                                                        | Subtasks | Start Time       | End Time     | Rows Processed | 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:

23. Log in to your Salesforce Developer account using your credentials.



**Note:** You can use the below mentioned link to log in to Salesforce:

<https://login.salesforce.com/>

24. On the Salesforce homepage, from the available tabs, select **Accounts**.



25. Observe the phone number for accounts noted in step 1.

26. Verify that the phone numbers have been masked with random phone numbers.

Accounts Home

View:   [Edit](#) | [Create New View](#)

**Recent Accounts**

| Account Name                | Billing City | Phone    |
|-----------------------------|--------------|----------|
| <a href="#">NH Mart</a>     | Rampart      | 796-5888 |
| <a href="#">NH Everyday</a> | Bloomington  | 343-0816 |
| <a href="#">NH Trends</a>   | Miami        | 197-2888 |
| <a href="#">NH Digital</a>  | Milford      | 063-0588 |

*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:

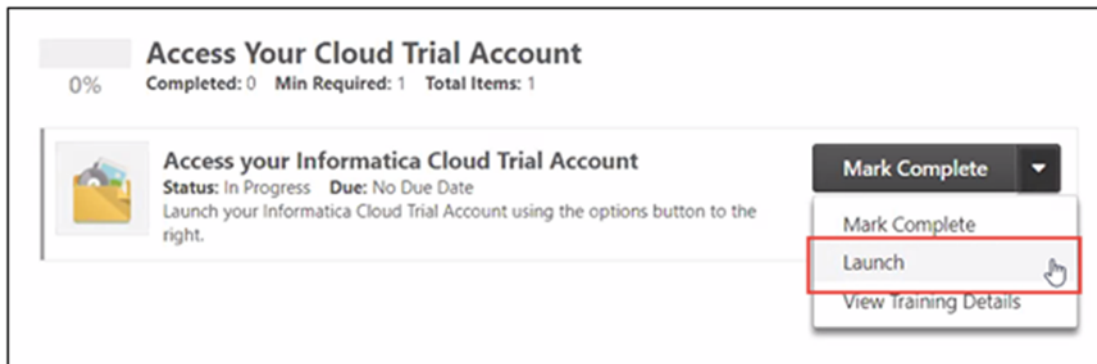
10 minutes

---

#### Tasks:

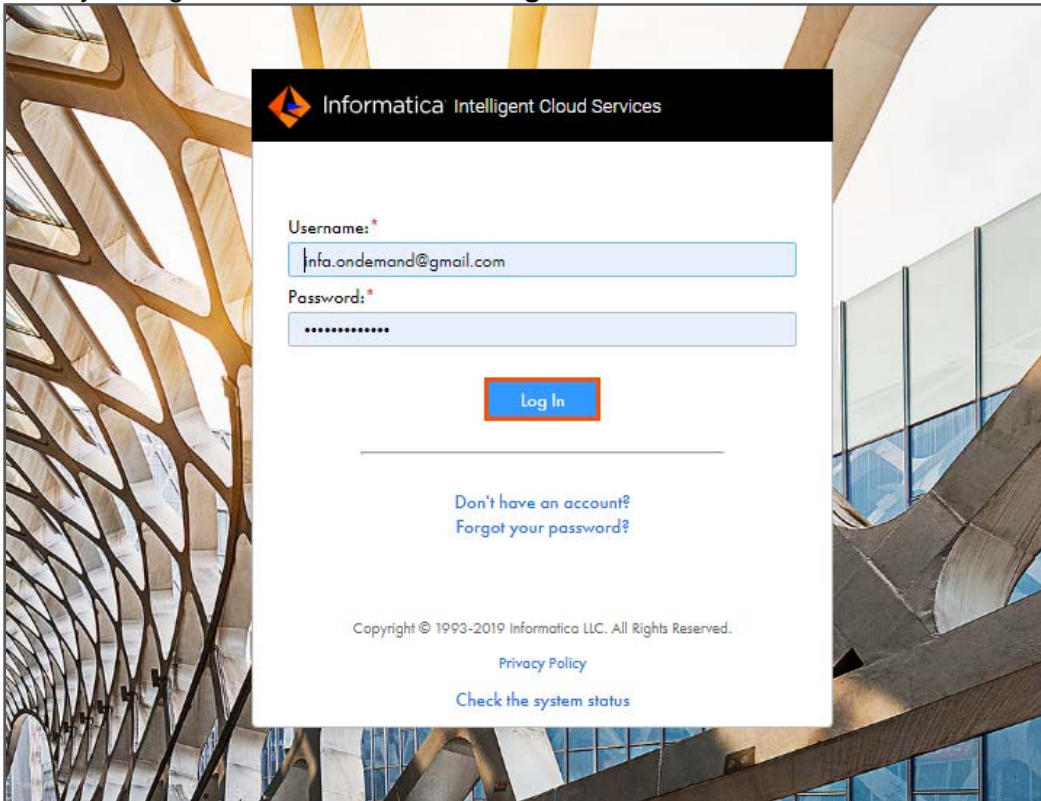
##### Create Parallel Taskflow:

1. Access your cloud trial account by clicking **Launch** in your option Menu. If the option menu is labeled anything other than **Launch**, click the down arrow to the right and click **Launch**.

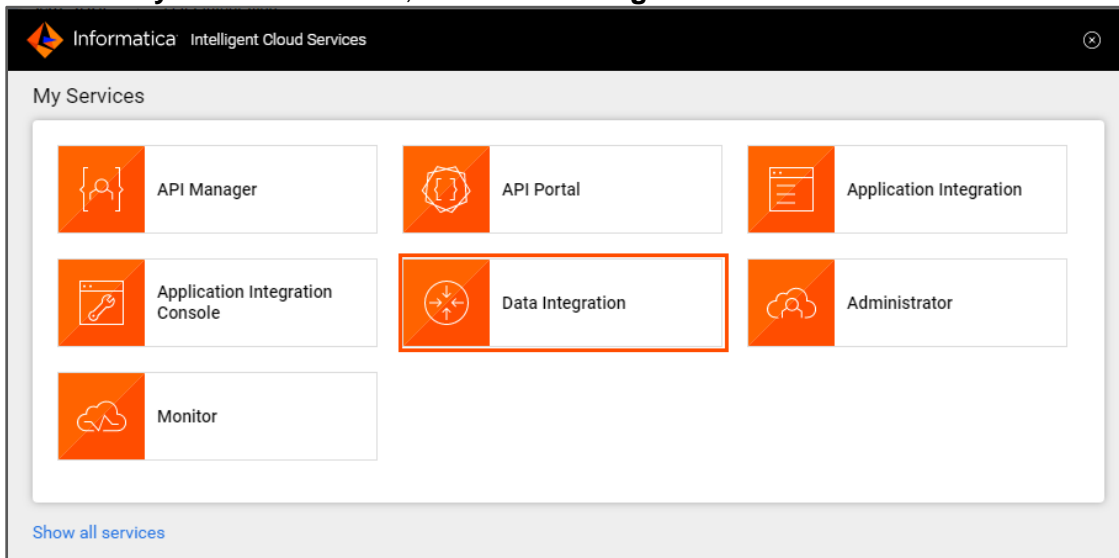


**Note:** Follow this step, if you have navigated away from the login page.

2. Enter your login credentials and click **Log In**.

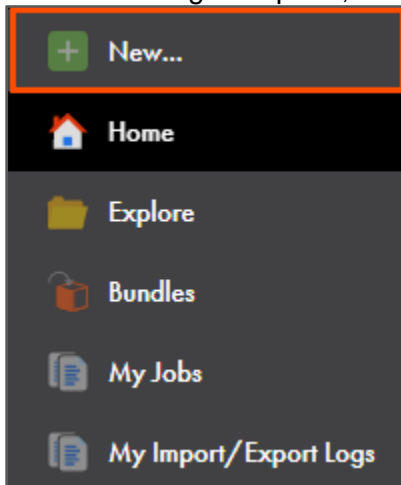
The image shows the login page for Informatica Intelligent Cloud Services. The page has a white background with a black header bar at the top containing the Informatica logo and the text "Informatica Intelligent Cloud Services". Below the header, there are two input fields: "Username:" and "Password:". The username field contains the text "info.ondemand@gmail.com". The password field is masked with dots. Below the password field is a blue "Log In" button. Underneath the button, there are two links: "Don't have an account?" and "Forgot your password?". At the bottom of the page, there is a copyright notice: "Copyright © 1993-2019 Informatica LLC. All Rights Reserved." and two more links: "Privacy Policy" and "Check the system status". The background of the page is a large, abstract image of a modern building's interior structure with a complex, branching, tree-like pattern.

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

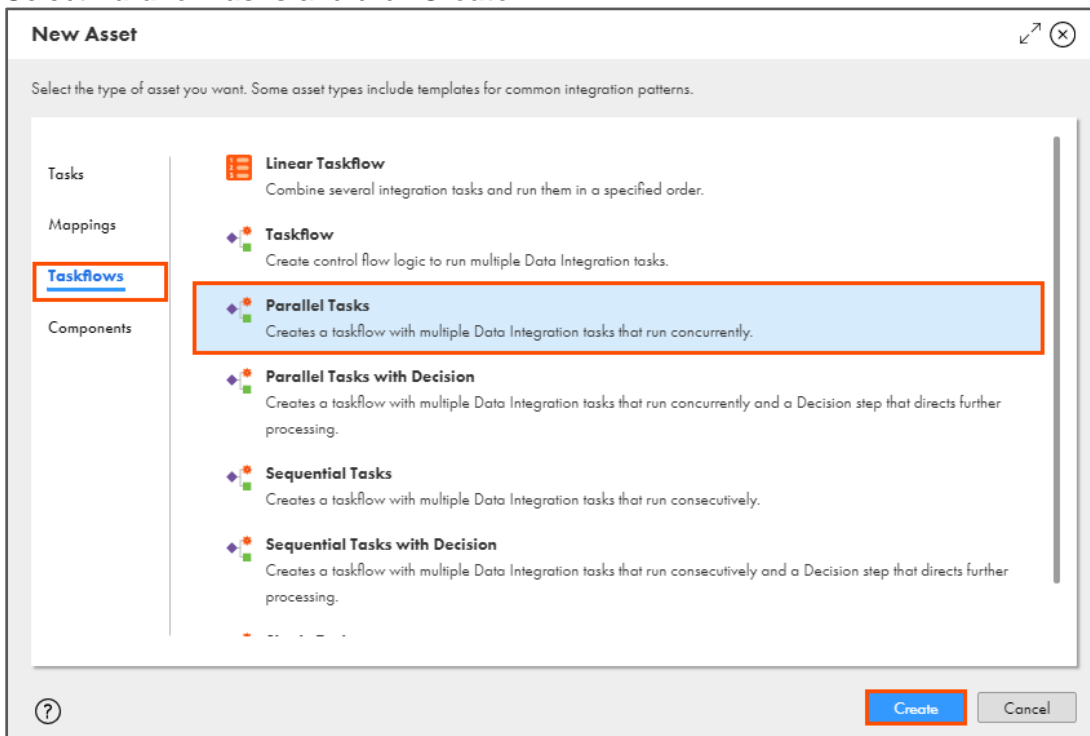




4. From the Navigation pane, select **New**.



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 Taskflow properties, enter Name as **XX\_FirstName\_ParallelTaskflow**.

XX\_FirstName\_ParallelTaskflow Properties

**General**

Step Type: Start

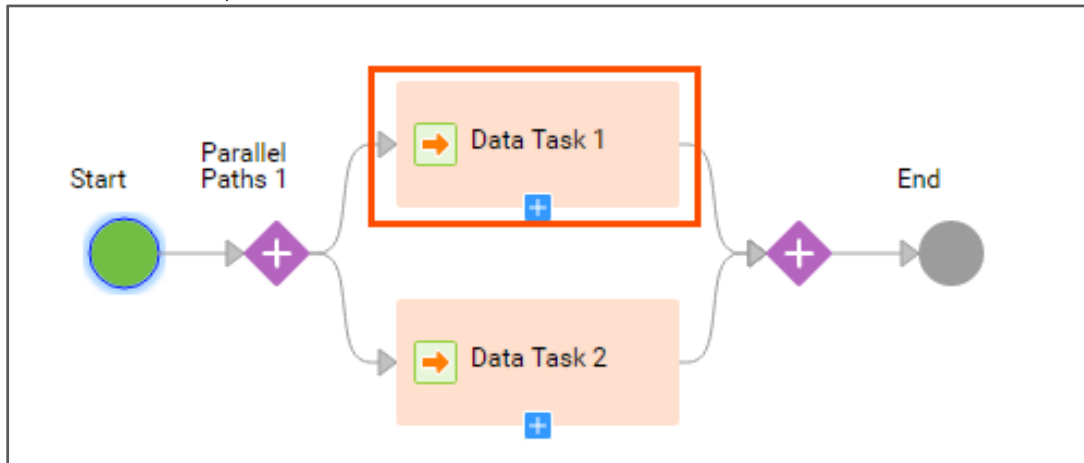
Name: \*

Location:


Start

Input Fields

8. From the canvas, select **Data Task 1**.



9. In the General section of Data Task 1 properties, enter Name as **Multi Object**.

 Data Task 1 Properties


**General**

Step Type: Data Task

Name:

Data Task

10. From the properties pane, click **Data Task**.
11. To select the data task, from the Data Task field, click **Select**.

 Multi Object Properties

General

Data Task: \*

Type:

Location:

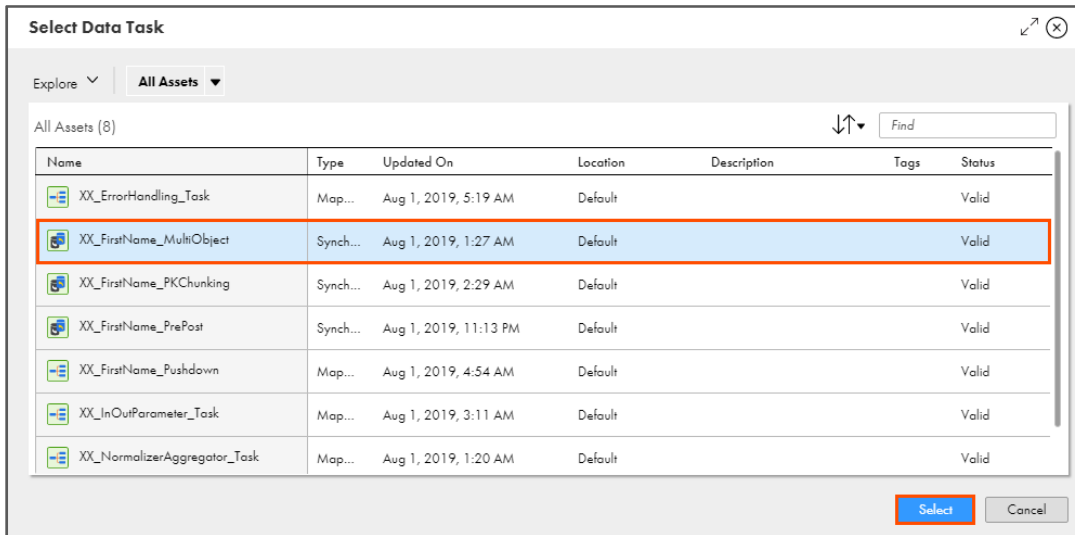
**Data Task**

Input Fields

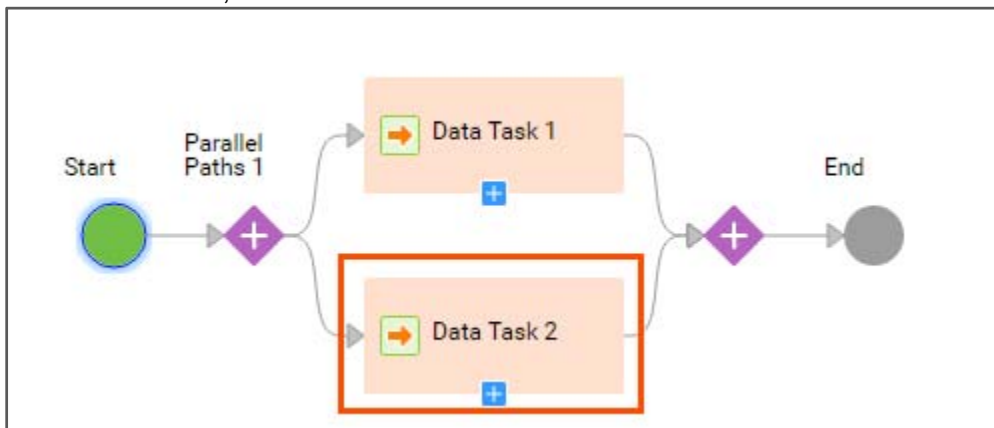
**Note:** The Select Data Task window appears.

12. From the list, select **XX\_FirstName\_MultiObject**.

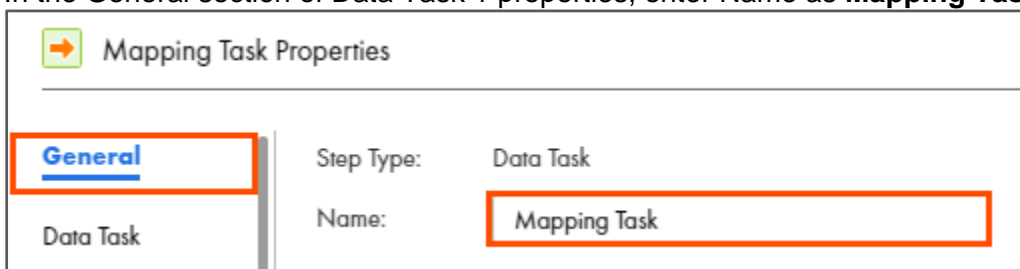
13. Click **Select**.



14. From the canvas, select **Data Task 2**.



15. In the General section of Data Task 1 properties, enter Name as **Mapping Task**.



16. From the properties pane, click **Data Task**.

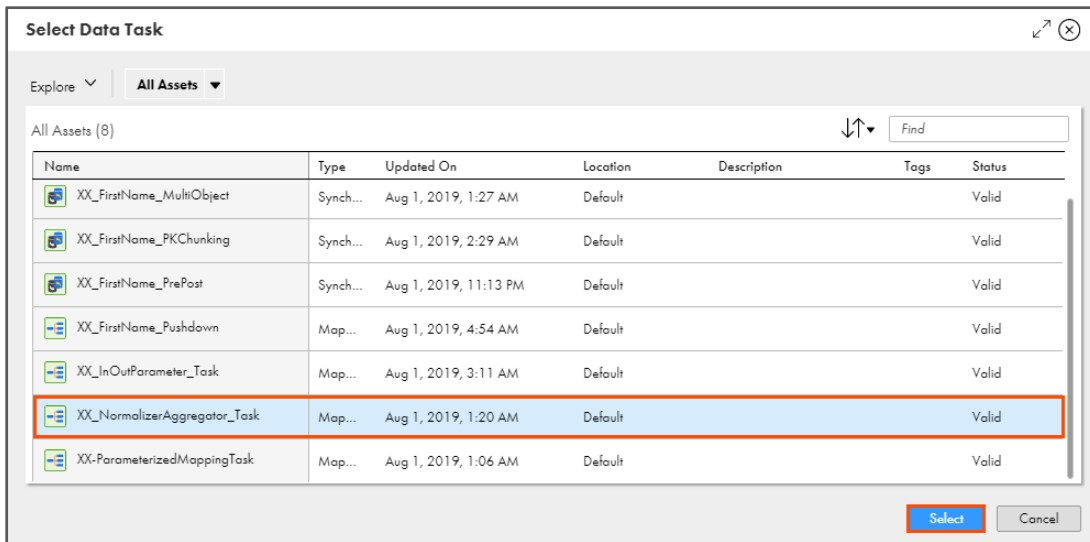
17. To select the data task, from the Data Task field, click **Select**.




**Note:** The Select Data Task window appears.

18. From the list, select **XX\_NormalizerAggregator\_Task**.

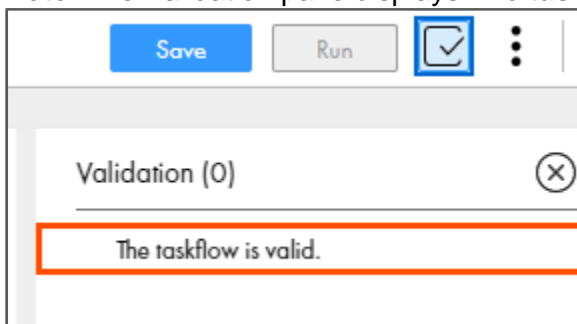
19. Click **Select**.



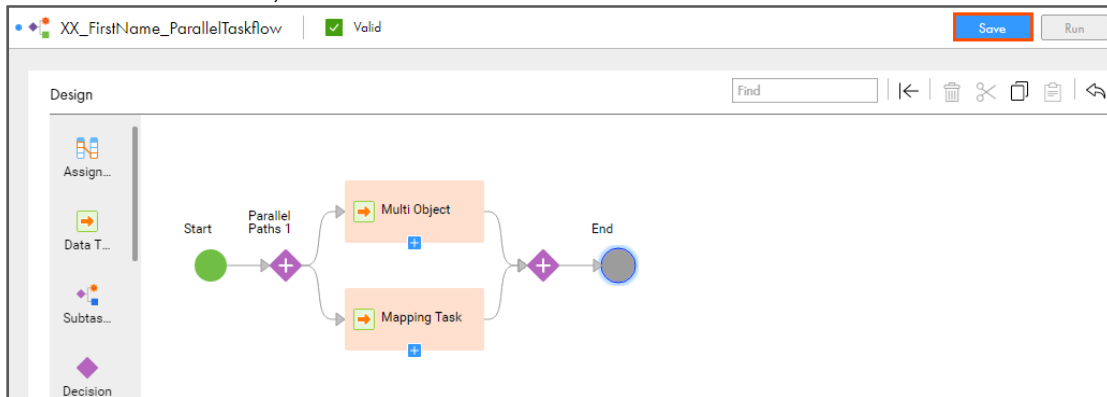
| Name                         | Type     | Updated On            | Location | Description | Tags | Status |
|------------------------------|----------|-----------------------|----------|-------------|------|--------|
| XX_FirstName_MultiObject     | Synch... | Aug 1, 2019, 1:27 AM  | Default  |             |      | 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  |
| XX-ParameterizedMappingTask  | Map...   | Aug 1, 2019, 1:06 AM  | Default  |             |      | Valid  |

20. To validate the taskflow configuration, click .

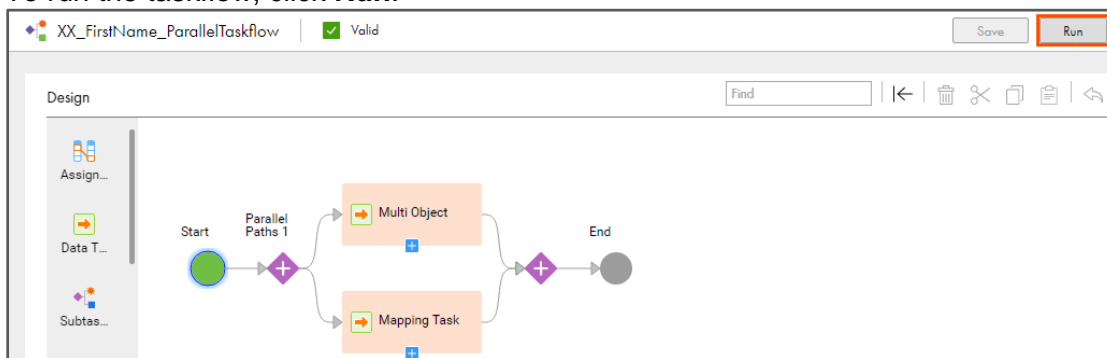
**Note:** The Validation pane displays **The taskflow is valid** message.



21. To save the taskflow, click **Save**.

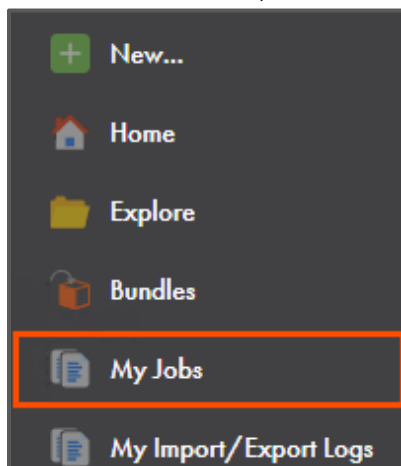


22. To run the taskflow, click **Run**.



### 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) Up to date Updated 12:47:16 AM PDT Refresh Sort Filter Find

Asset Name: XX\_FirstName\_ParallelT... Add Field

| Instance Name                                    | Subtasks | Start Time       | End Time     | Rows Processed                | State   |
|--------------------------------------------------|----------|------------------|--------------|-------------------------------|---------|
| XX_FirstName_ParallelTaskflow-341497629691449344 | 2 Tasks  | Aug 1, 2019, ... | Aug 1, 20... | <a href="#">View Subtasks</a> | 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) Up to date

Updated 12:47:16 AM PDT Refresh Sort Filter Find

Asset Name: XX\_FirstName\_ParallelT... Add Field

| Instance Name                                                                                                                      | Subtasks | Start Time       | End Time     | Rows Processed                | State                                                                                       |
|------------------------------------------------------------------------------------------------------------------------------------|----------|------------------|--------------|-------------------------------|---------------------------------------------------------------------------------------------|
|  XX_FirstName_ParallelTaskflow-341497629691449344 | 2 Tasks  | Aug 1, 2019, ... | Aug 1, 20... | <a href="#">View Subtasks</a> |  Success |

26. Verify that both the tasks are executed successfully.

| Jobs (2) <span>Up to date</span> |          | Updated 12:48:34 AM PDT <span>Refresh</span> <span>Sort</span> <span>Filter</span> <span>Find</span> |              |                |                      |
|----------------------------------|----------|------------------------------------------------------------------------------------------------------|--------------|----------------|----------------------|
| Instance Name                    | Subtasks | Start Time                                                                                           | End Time     | Rows Processed | State                |
| XX_FirstName_MultiObject-2       |          | Aug 1, 2019, ...                                                                                     | Aug 1, 20... | 34             | <span>Success</span> |
| XX_NormalizerAggregator_Task-1   |          | Aug 1, 2019, ...                                                                                     | Aug 1, 20... | 180            | <span>Success</span> |

---

*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:

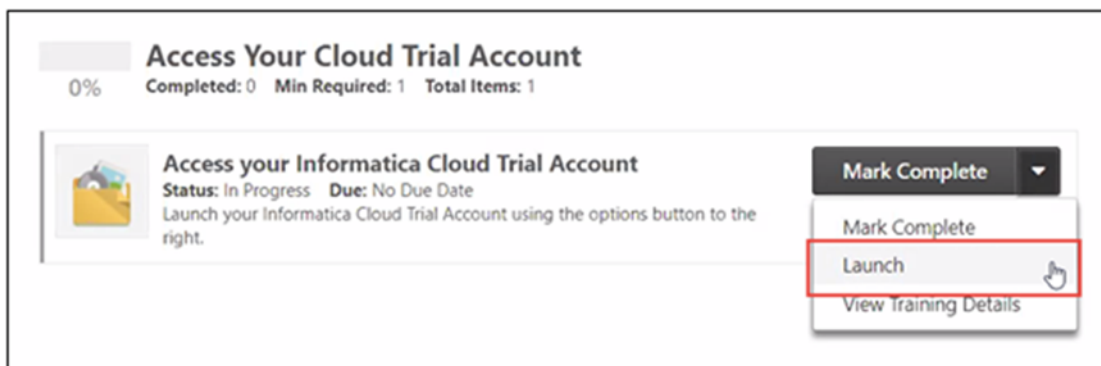
15 minutes

---

#### Tasks:

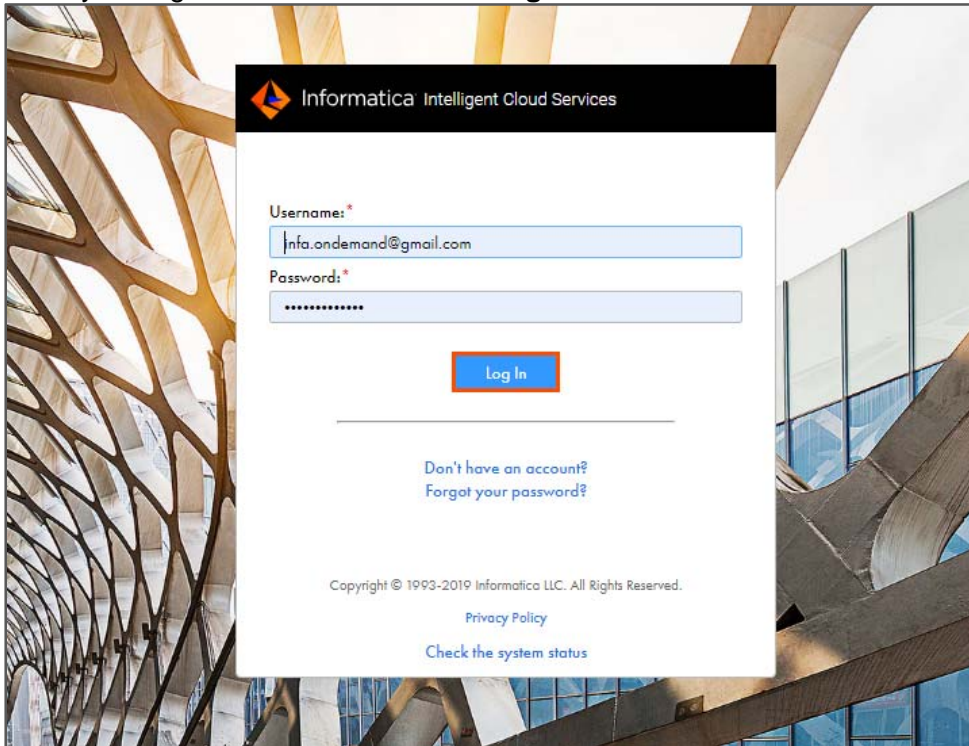
##### Create Mapping Task:

1. Access your cloud trial account by clicking **Launch** in your option Menu. If the option menu is labeled anything other than **Launch**, click the down arrow to the right and click **Launch**.



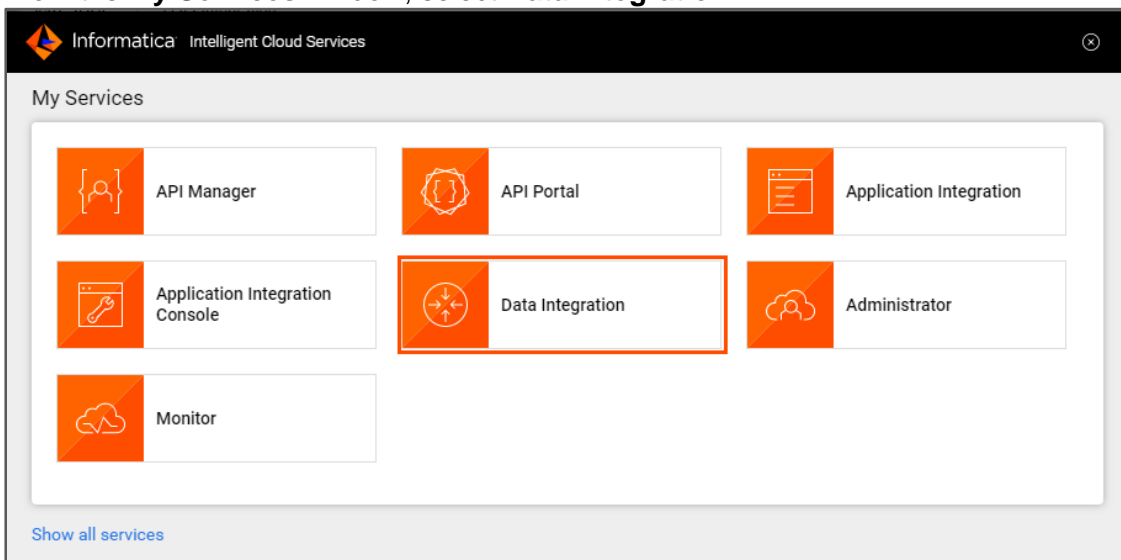
**Note:** Follow this step, if you have navigated away from the login page.

2. Enter your login credentials and click **Log In**.



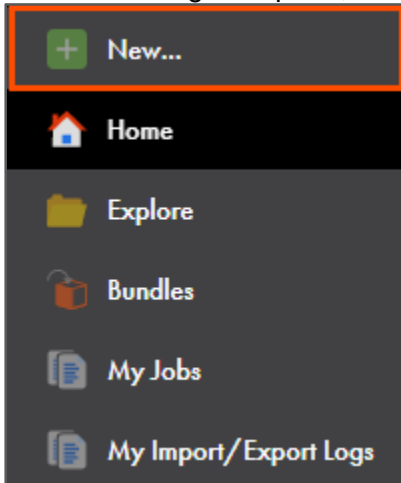
The login screen for Informatica Intelligent Cloud Services is displayed over a background image of a modern building's interior with a complex, branching structural design. The login form is a white rectangular box with a black header bar containing the Informatica logo and the text "Informatica Intelligent Cloud Services". Inside the form, there are two input fields: "Username:" with the email "info.ondemand@gmail.com" and "Password:" with masked characters. Below these fields is a blue "Log In" button. Underneath the button, there are two links: "Don't have an account?" and "Forgot your password?". At the bottom of the form, there is a copyright notice "Copyright © 1993-2019 Informatica LLC. All Rights Reserved.", a "Privacy Policy" link, and a "Check the system status" link.

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

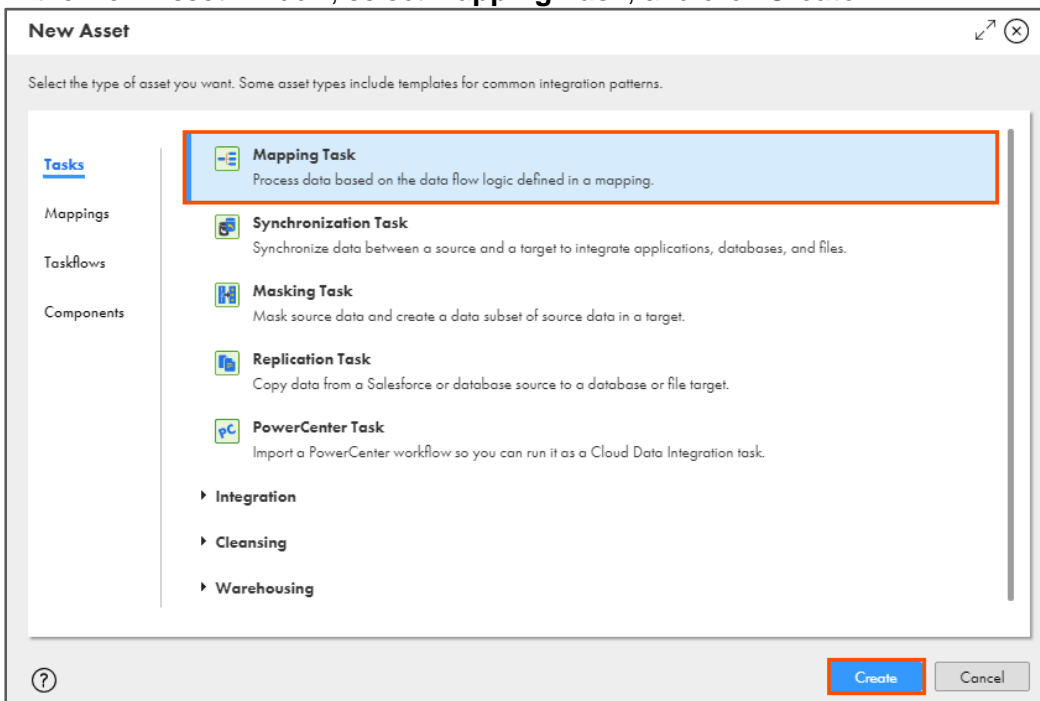




- From the Navigation pane, select **New**.

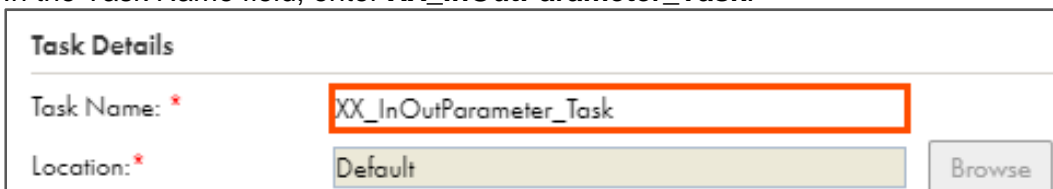


- In the New Asset window, select **Mapping Task**, and click **Create**.



**Note:** The New Mapping Task window appears.

- In the Task Name field, enter **XX\_InOutParameter\_Task**.

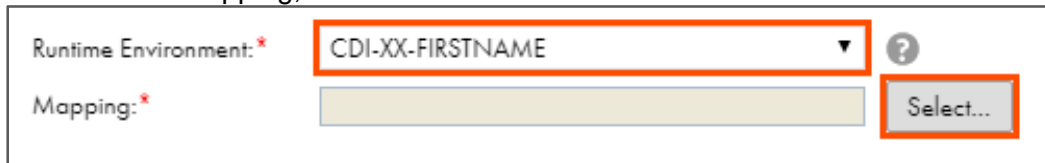


The image shows a 'Task Details' form. It has two main fields: 'Task Name' and 'Location'. The 'Task Name' field is filled with the text 'XX\_InOutParameter\_Task' and is highlighted with a red rectangle. The 'Location' field is filled with the text 'Default'. There is a 'Browse' button next to the 'Location' field.

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

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

8. To select the mapping, click **Select**.

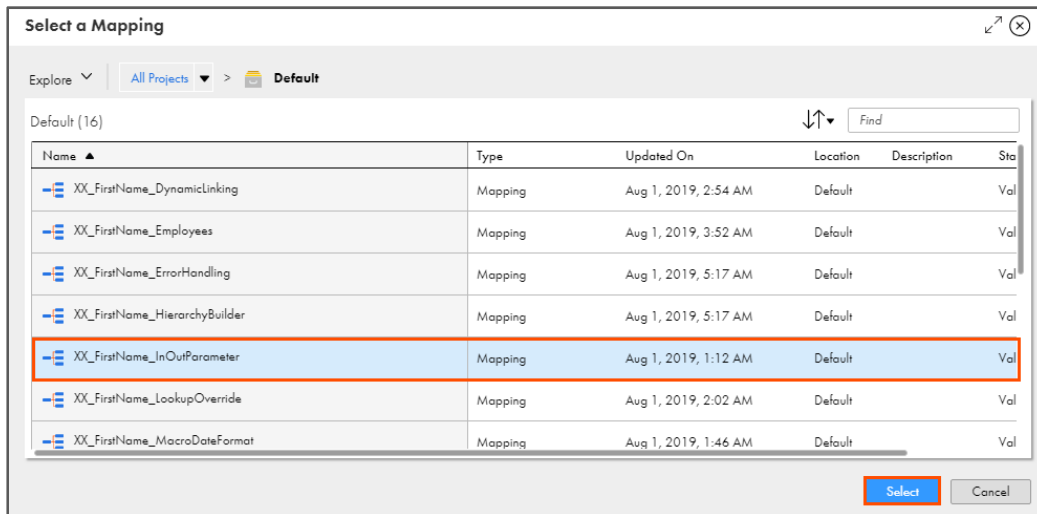


Runtime Environment: \* CDI-XX-FIRSTNAME ?

Mapping: \*  **Select...**

**Note:** The Select a Mapping window appears.

9. From the list, select **XX\_FirstName\_InOutParameter**.
10. Click **Select**.



**Select a Mapping**

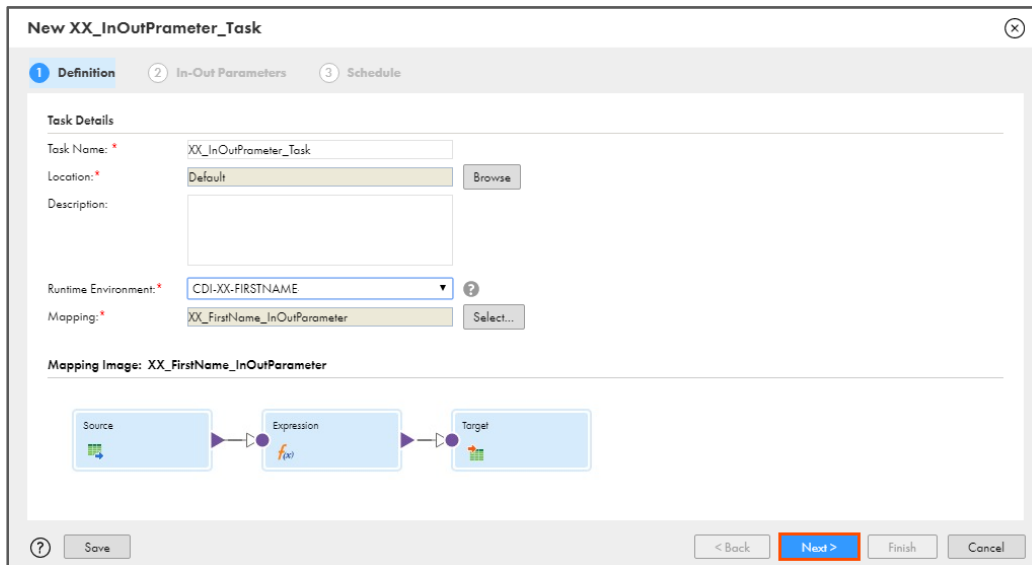
Explore ▾ All Projects ▾ > Default

Default (16)

| 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    |
| <b>XX_FirstName_InOutParameter</b> | 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: \* Default Browse

Description:

Runtime Environment: \* CDI-XX-FIRSTNAME ?

Mapping: \* XX\_FirstName\_InOutParameter Select...

Mapping Image: XX\_FirstName\_InOutParameter

Source → Expression → 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

In-Out Parameters

| 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**.

**New XX\_InOutParameter\_Task**

1 Definition 2 In-Out Parameters 3 **Schedule**

Schedule Details

☒ Do not run this task on a schedule ?

☐ Run this task on schedule:  New... ?

☐ 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:

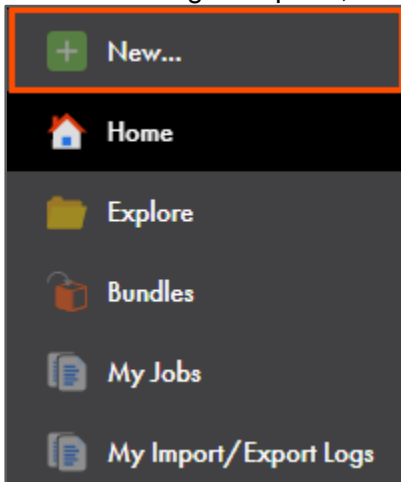
Warning Email Notification:

Success Email Notification:

Save < Back Next > **Finish** Cancel

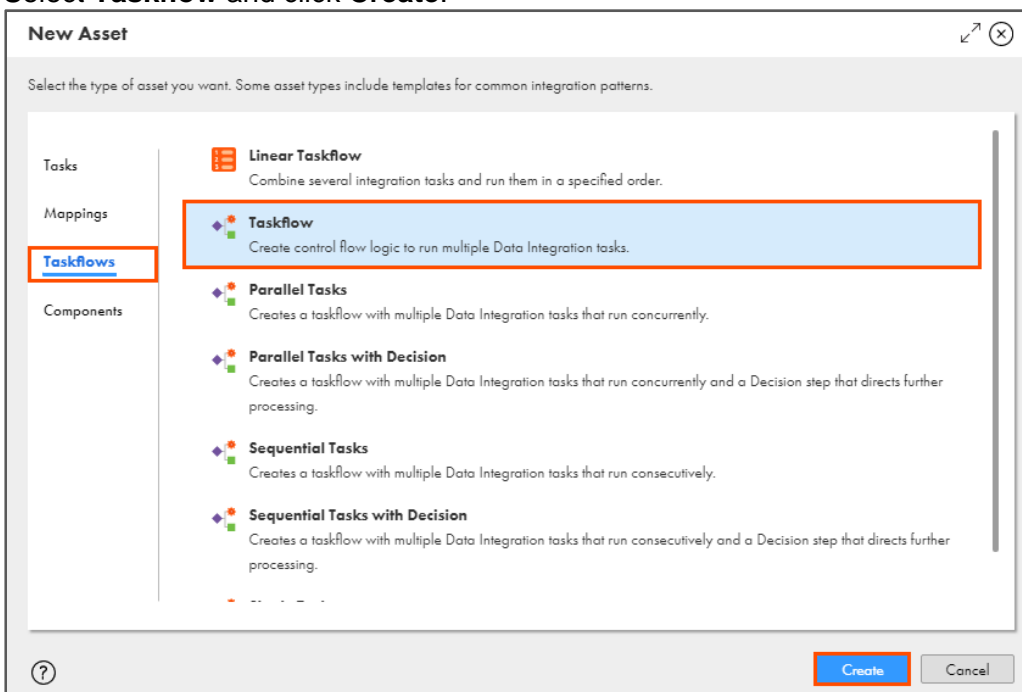
## Create Taskflow:

14. From the Navigation pane, select **New**.



15. From the New Asset window, click the **Taskflows** tab.

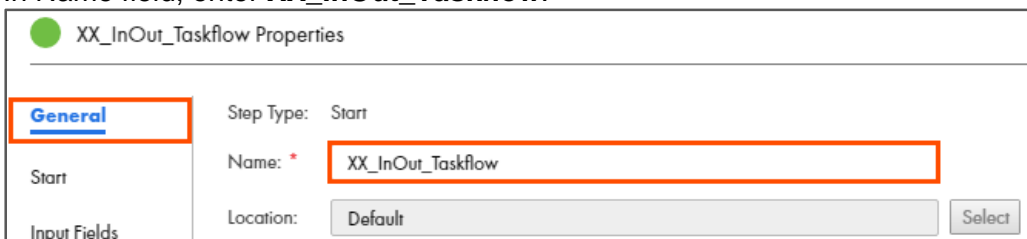
16. Select **Taskflow** and click **Create**.



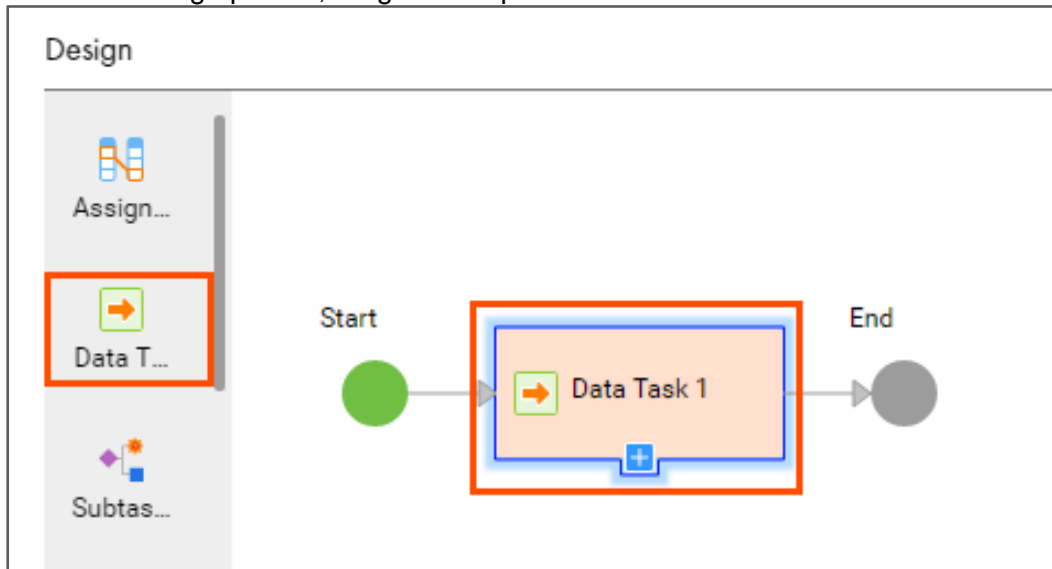
**Note:** The New Taskflow window appears.

17. From the Taskflow properties pane, select **General**.

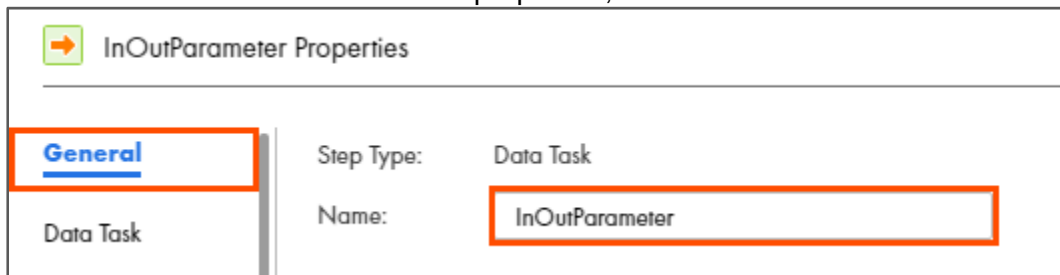
18. In Name field, enter **XX\_InOut\_Taskflow**.



19. From the Design palette, drag and drop **Data Task** on the link between Start and End.



20. In the General section of Data Task properties, enter Name as **InOutParameter**.



The screenshot shows the 'InOutParameter Properties' dialog box. The 'General' tab is selected and highlighted with a red box. The 'Step Type' is set to 'Data Task'. The 'Name' field is highlighted with a red box and contains the text 'InOutParameter'.

21. From the properties pane, click **Data Task**.

22. To select a Data Task, click **Select**.

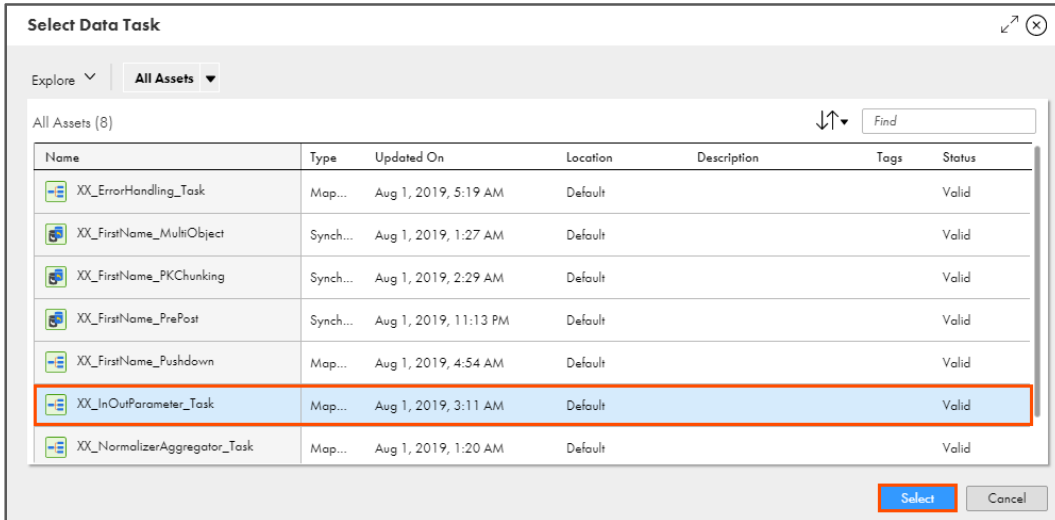


The screenshot shows the 'Data Task' properties pane. The 'Data Task' tab is selected and highlighted with a red box. The 'Data Task' field is highlighted with a red box and contains a 'Select...' button.

**Note:** The Select Data Task window appears.

23. From the list, select **XX\_InOutParameter\_Task**.

## 24. Click **Select**.



**Select Data Task**

Explore ▾ | All Assets ▾

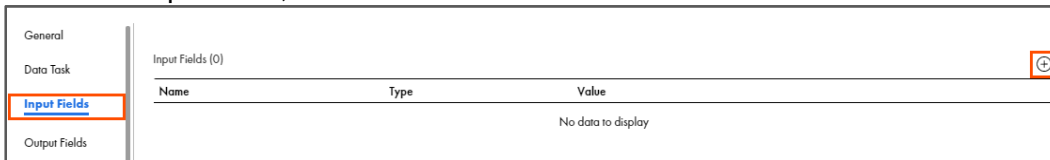
All Assets (8)

| 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 .



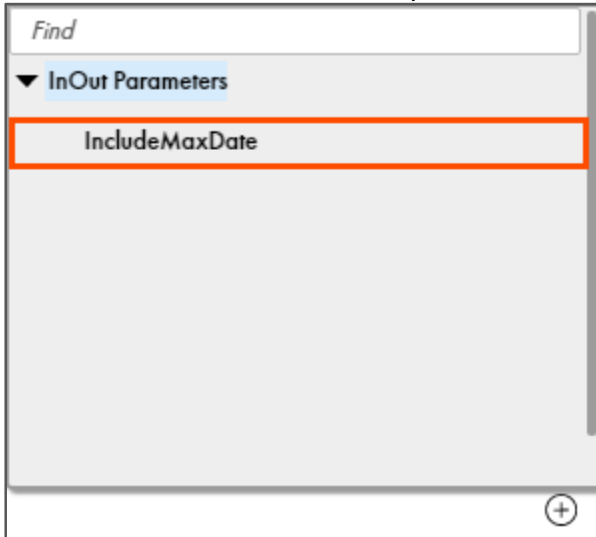
General | Data Task | **Input Fields** | Output Fields

Input Fields (0)

| Name               | Type | Value |
|--------------------|------|-------|
| No data to display |      |       |




## 27. From the InOut Parameters drop-down, select **IncludeMaxDate**.



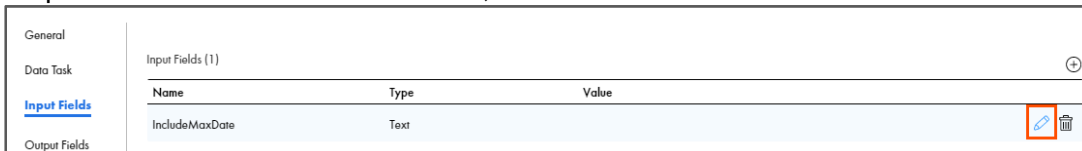
Find

▼ InOut Parameters

**IncludeMaxDate**





## 28. To provide value for IncludeMaxDate, select the field and click .



General | Data Task | **Input Fields** | Output Fields

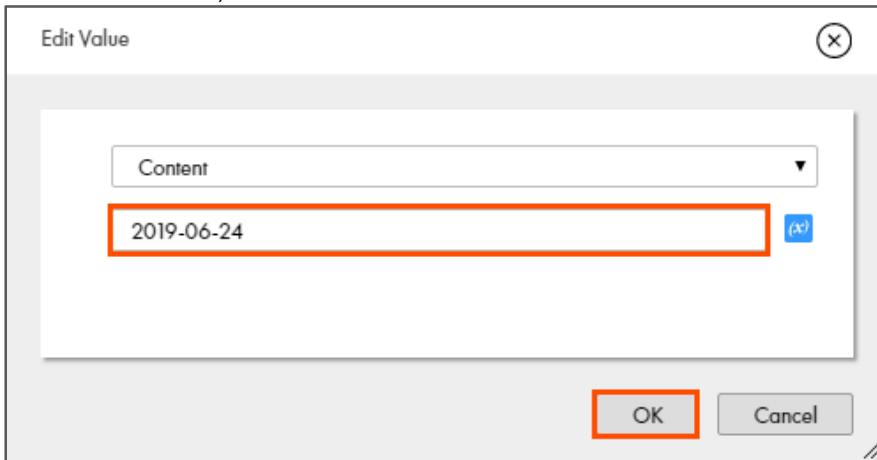
Input Fields (1)

| Name           | Type | Value |
|----------------|------|-------|
| IncludeMaxDate | Text |       |

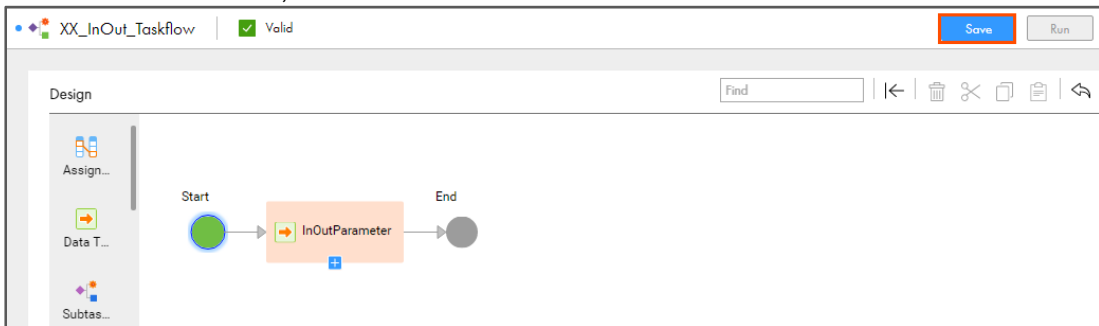
**Note:** The Edit Value window appears.

29. In the blank field, enter **2019-06-24** and click **OK**.



The 'Edit Value' dialog box is shown. It has a title bar with a close button. Inside, there is a 'Content' dropdown menu. Below it, a text field contains the date '2019-06-24', which is highlighted with a red rectangle. To the right of the text field is a small blue icon with '(x)'. At the bottom right, there are 'OK' and 'Cancel' buttons, with the 'OK' button highlighted by a red rectangle.

30. To save the Taskflow, click **Save**.

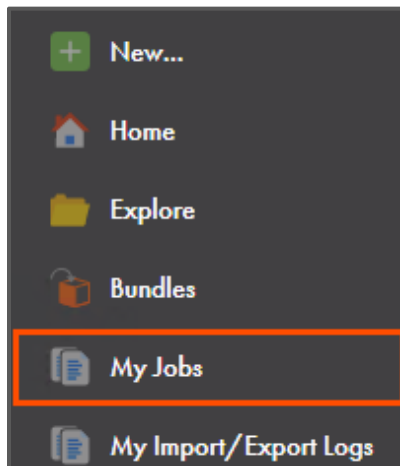


31. To run the Taskflow, click **Run**.



### 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) Up to date Updated 11:23:00 AM PDT ↺ ↻ ⌵ Find

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... | <a href="#">View Subtasks</a> |  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) Up to date Updated 11:23:00 AM PDT ↺ ↻ 🔍 Find

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... | <a href="#">View Subtasks</a> |  Success |

35. Verify that 7 rows are processed by the task and the task executed successfully.

| Jobs (1)                 |          | Updated 11:24:18 AM PDT <span>↺</span> <span>↻</span> <span>⌵</span> <span>Find</span> |              |                |                        |
|--------------------------|----------|----------------------------------------------------------------------------------------|--------------|----------------|------------------------|
| Instance Name            | Subtasks | Start Time                                                                             | End Time     | Rows Processed | State                  |
| XX_InOutParameter_Task-1 |          | Aug 1, 2019, ...                                                                       | Aug 1, 20... | 7              | <span>✓ Success</span> |

*This concludes the lab.*



## Module 11: Taskflows

### Lab 11-3: Invoking a Taskflow through a File Listener

#### Overview:

A file listener listens to files on a defined location. Taskflow use file listener to monitor specific folders and receive notification 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:

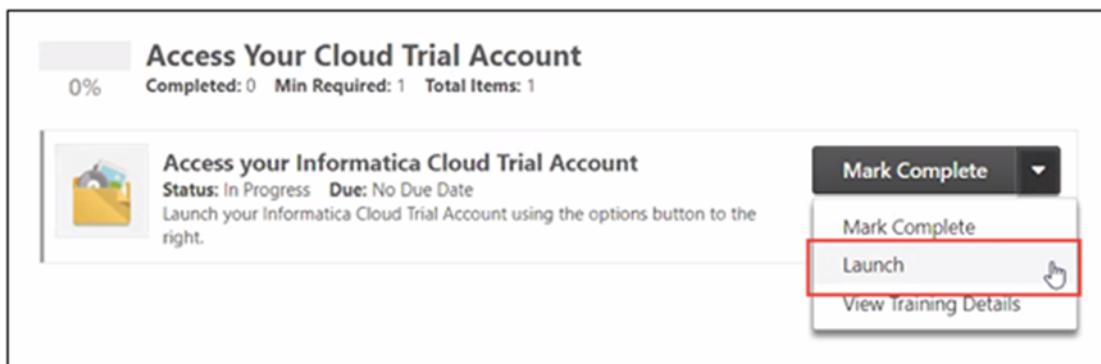
15 minutes

---

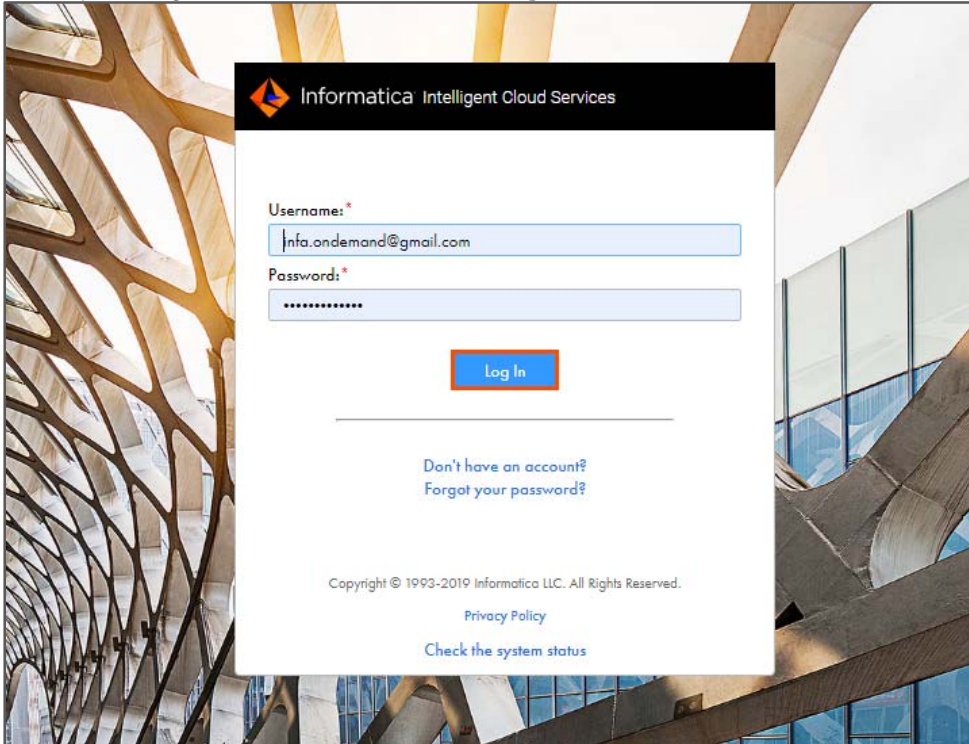
#### Tasks:

##### Create Synchronization Task:

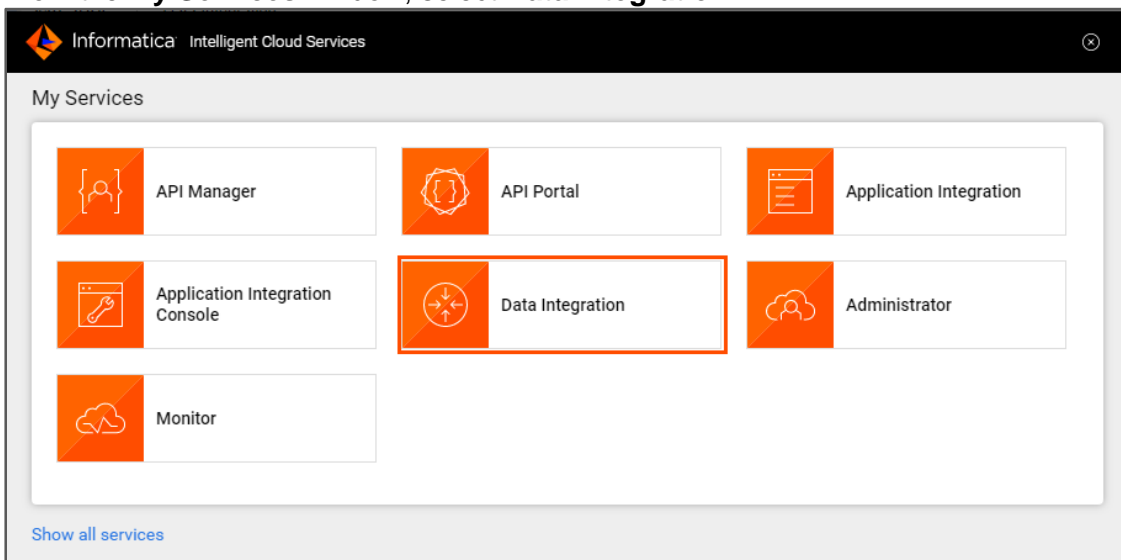
1. Access your cloud trial account by clicking **Launch** in your option Menu. If the option menu is labeled anything other than **Launch**, click the down arrow to the right and click **Launch**.



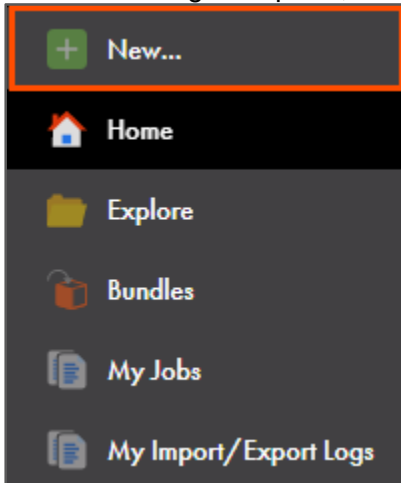
2. Enter your login credentials and click **Log In**.

The image shows the login page for Informatica Intelligent Cloud Services. The page has a white background with a black header bar at the top containing the Informatica logo and the text "Informatica Intelligent Cloud Services". Below the header, there are two input fields: "Username:" and "Password:". The username field contains the text "info.ondemand@gmail.com". Below the password field is a blue "Log In" button. Underneath the button, there are two links: "Don't have an account?" and "Forgot your password?". At the bottom of the page, there is a copyright notice: "Copyright © 1993-2019 Informatica LLC. All Rights Reserved." and two more links: "Privacy Policy" and "Check the system status". The background of the page is a large, abstract image of a modern building's interior structure with a complex, branching, tree-like pattern.

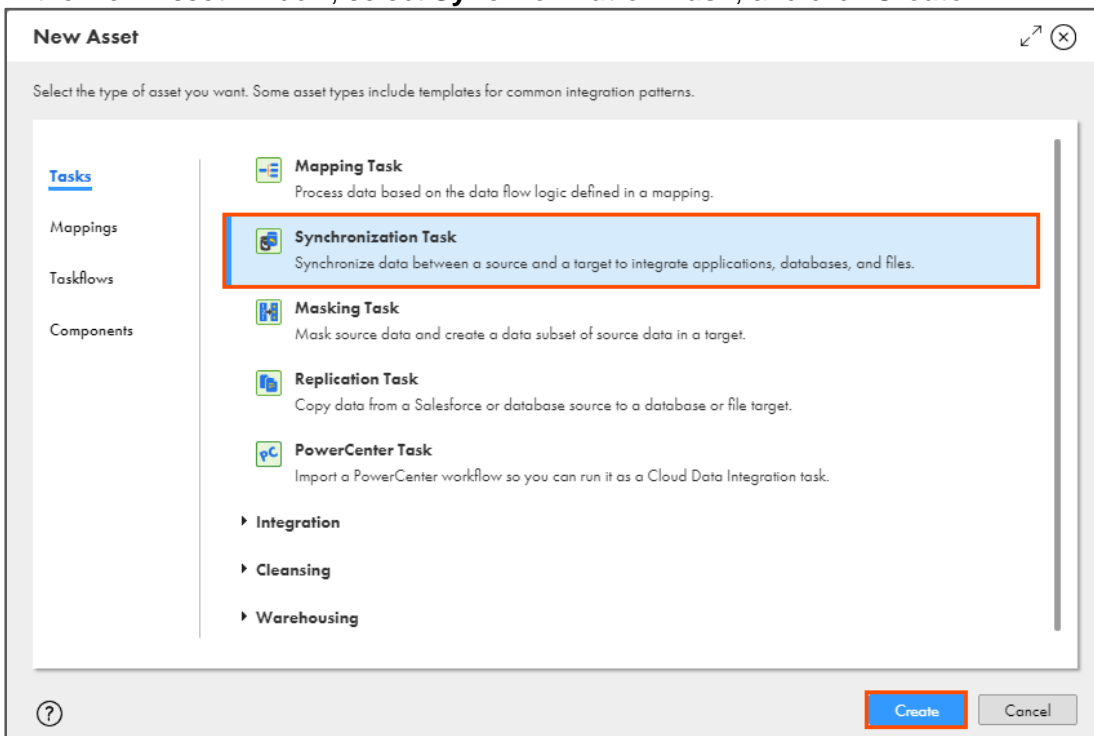
3. From the **My Services** window, select **Data Integration**.



- From the Navigation pane, select **New**.



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



**Note:** The New Synchronization Task window appears.

- In the Task Name field, enter **File\_Listener\_Task**.

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

**New Synchronization Task1**

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

**Task Details**

Task Name: \* File\_Listener\_Task ?

Location \* Default Browse

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: \* File\_Listener\_Task ?

Location \* Default Browse

Description: ?

Task Operation: \* Insert ?

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

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 View... New... Sample... ?

Source Type: \* ☒ Single ☐ Multiple ☐ Saved Query

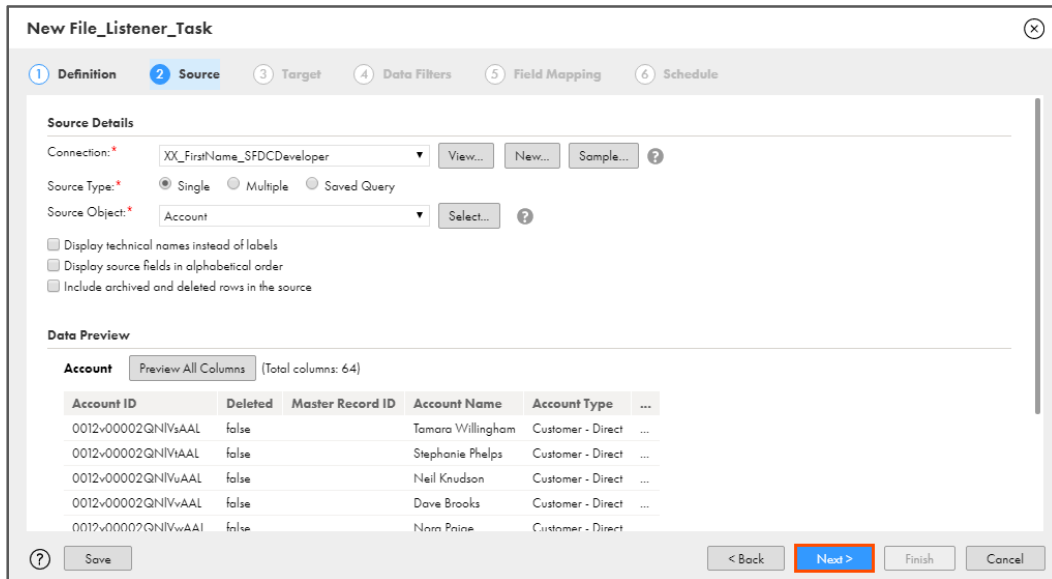
Source Object: \* Account Select... ?

☐ Display technical names instead of labels

☐ Display source fields in alphabetical order

☐ Include archived and deleted rows in the source

11. Click **Next**.



**New File\_Listener\_Task**

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 Object: \* Account Select... ?

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

**Data Preview**

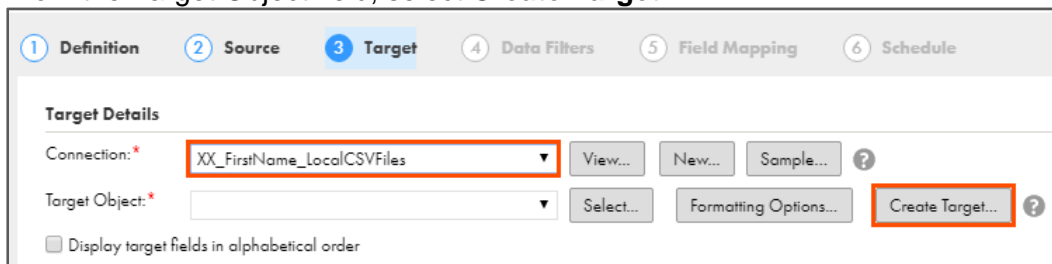
**Account** Preview All Columns (Total columns: 64)

| Account ID         | Deleted | Master Record ID | Account Name      | Account Type      | ... |
|--------------------|---------|------------------|-------------------|-------------------|-----|
| 0012v00002QNIVsAAL | false   |                  | Tamara Willingham | Customer - Direct | ... |
| 0012v00002QNIVsAAL | false   |                  | Stephanie Phelps  | Customer - Direct | ... |
| 0012v00002QNIVsAAL | false   |                  | Neil Knudson      | Customer - Direct | ... |
| 0012v00002QNIVsAAL | false   |                  | Dave Brooks       | Customer - Direct | ... |
| 0012v00002QNIVwAAL | false   |                  | Nom Prine         | Customer - Direct | ... |

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

12. From the Connection drop-down, select **XX\_FirstName\_LocalCSVFiles**.

13. From the Target Object field, select **Create Target**.



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

**Target Details**

Connection: \* XX\_FirstName\_LocalCSVFiles View... New... Sample... ?

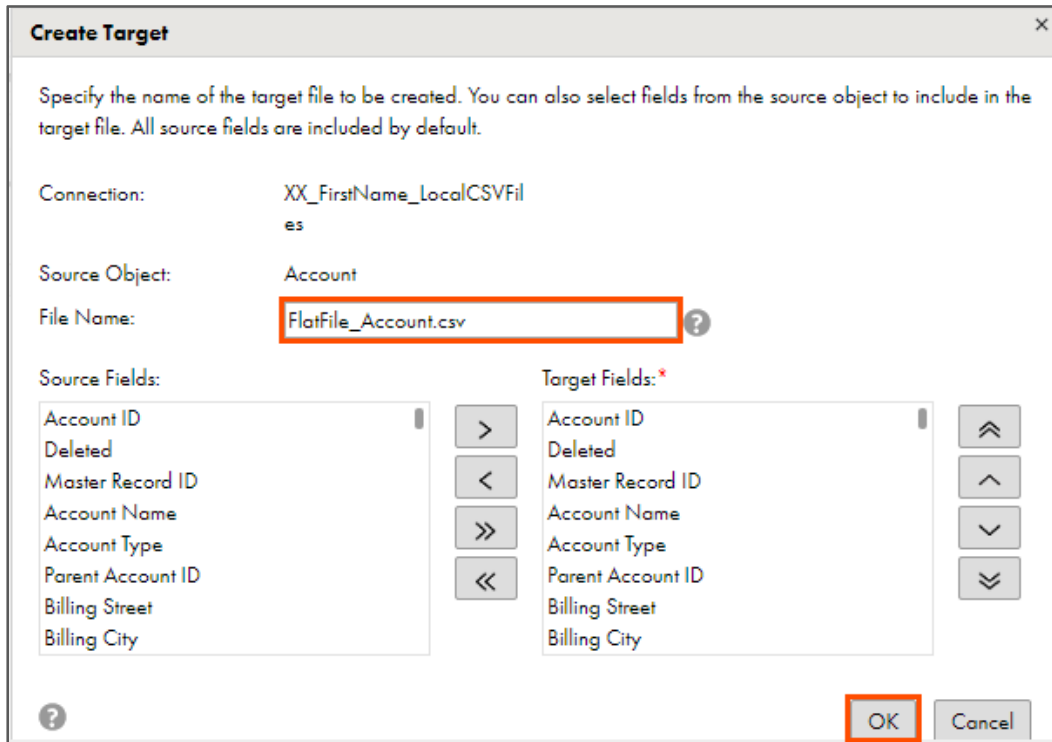
Target Object: \* Select... Formatting Options... **Create Target...** ?

☐ Display target fields in alphabetical order

**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\_LocalCSVFiles

Source Object: Account

File Name: FlatFile\_Account.csv

Source Fields:

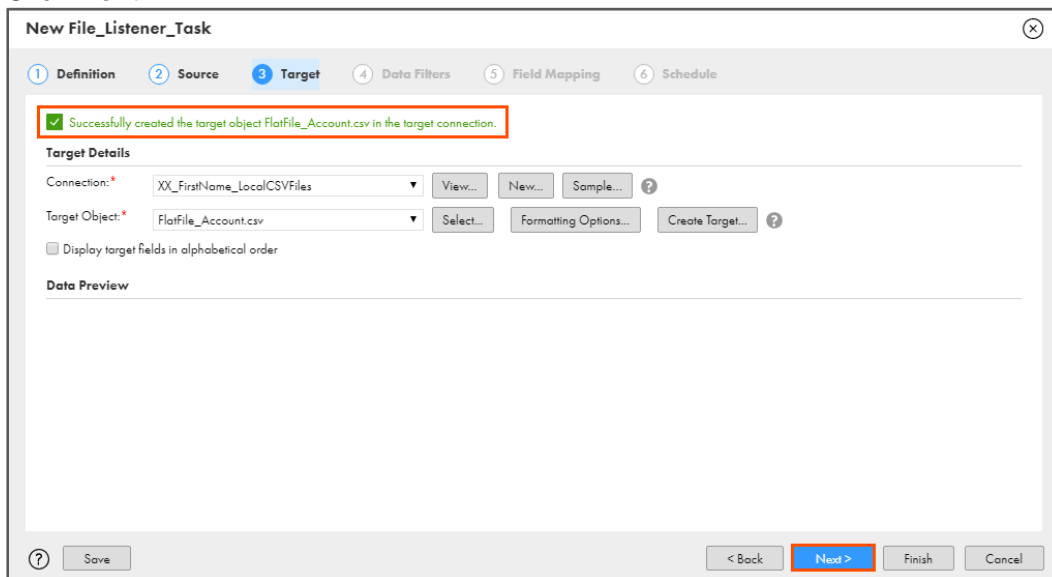
- Account ID
- Deleted
- Master Record ID
- Account Name
- Account Type
- Parent Account ID
- Billing Street
- Billing City

Target Fields:

- Account ID
- Deleted
- Master Record ID
- Account Name
- Account Type
- Parent Account ID
- Billing Street
- Billing City

Buttons: ? OK Cancel

16. Click **Next**.



**New File\_Listener\_Task**

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

✓ Successfully created the target object FlatFile\_Account.csv in the target connection.

**Target Details**

Connection: XX\_FirstName\_LocalCSVFiles View... New... Sample... ?

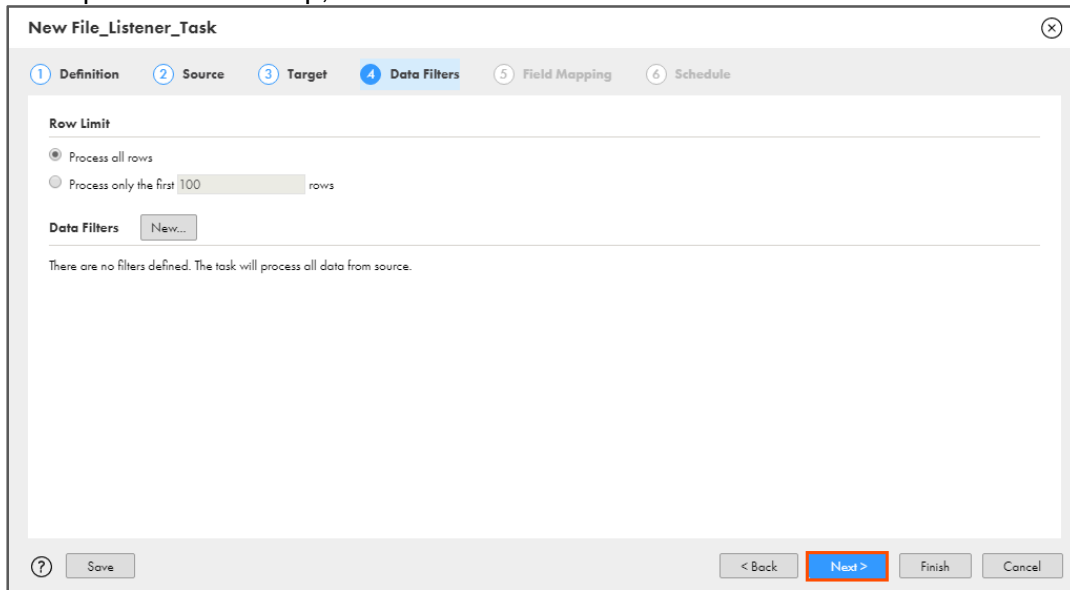
Target Object: FlatFile\_Account.csv Select... Formatting Options... Create Target... ?

☐ Display target fields in alphabetical order

**Data Preview**

Buttons: ? Save < Back Next > Finish Cancel

17. To skip Data Filters step, click **Next**.

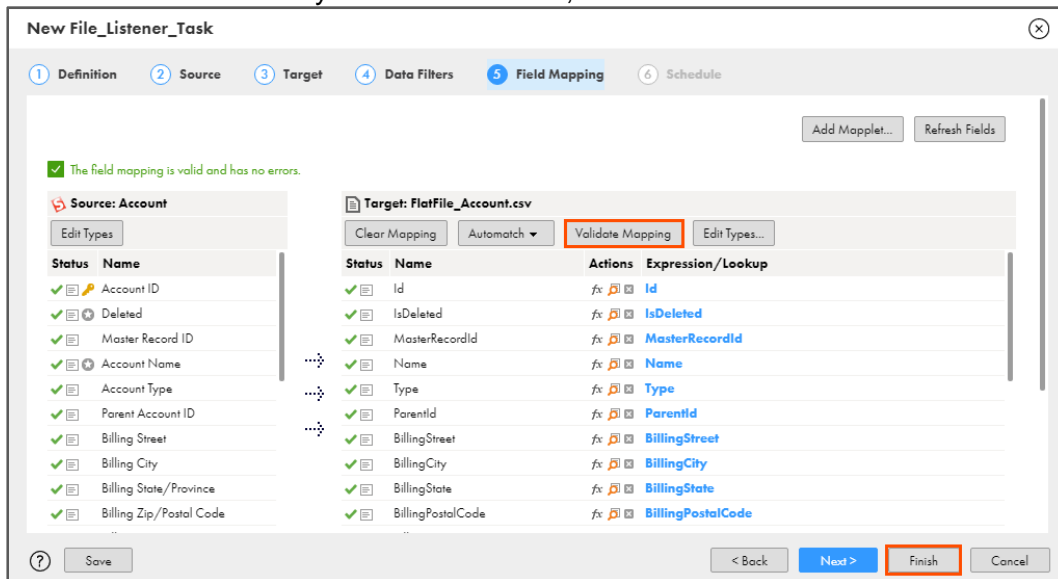


The dialog box shows the 'Data Filters' step. The 'Row Limit' section has 'Process all rows' selected. The 'Data Filters' section has a 'New...' button and a message: 'There are no filters defined. The task will process all data from source.' The 'Next >' button is highlighted with a red box.

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**.

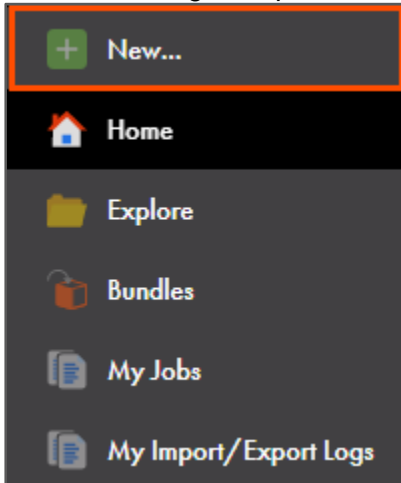


The dialog box shows the 'Field Mapping' step. A green checkmark indicates 'The field mapping is valid and has no errors.' The 'Source: Account' and 'Target: FlatFile\_Account.csv' sections show a list of fields. The 'Validate Mapping' button is highlighted with a red box.

| Status | Name              | Actions | Expression/Lookup |
|--------|-------------------|---------|-------------------|
| ✓      | Id                | fx      | Id                |
| ✓      | IsDeleted         | fx      | IsDeleted         |
| ✓      | MasterRecordId    | fx      | MasterRecordId    |
| ✓      | Name              | fx      | Name              |
| ✓      | Type              | fx      | Type              |
| ✓      | ParentId          | fx      | ParentId          |
| ✓      | BillingStreet     | fx      | BillingStreet     |
| ✓      | BillingCity       | fx      | BillingCity       |
| ✓      | BillingState      | fx      | BillingState      |
| ✓      | BillingPostalCode | fx      | BillingPostalCode |

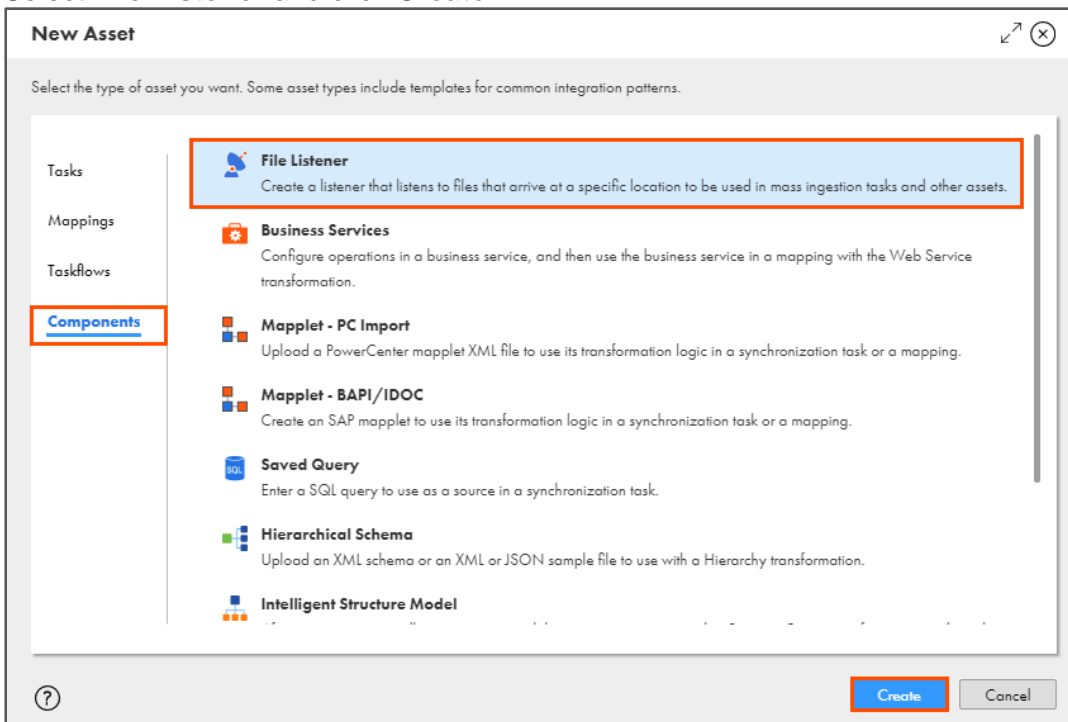
## Create File Listener:

21. From the Navigation pane, select **New**.

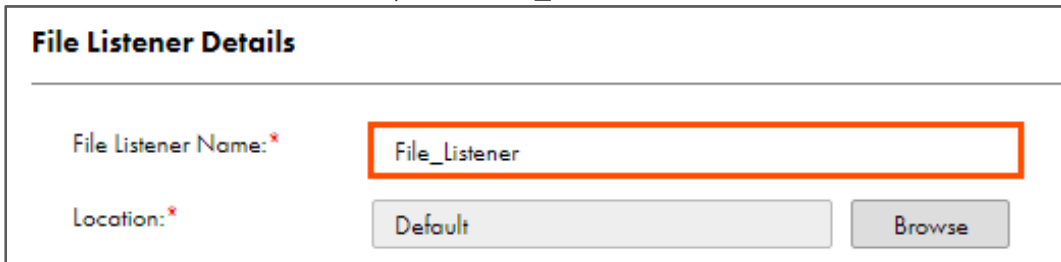


22. From the New Asset window, click the **Components** tab.

23. Select **File Listener** and click **Create**.



24. In the File Listener Name field, enter **File\_Listener**.



The image shows a 'File Listener Details' form. It has two main fields: 'File Listener Name:' and 'Location:'. The 'File Listener Name:' field is highlighted with a red box and contains the text 'File\_Listener'. The 'Location:' field has a 'Default' button and a 'Browse' button.



25. Retain the Status as **Enabled**.

### File Listener Details

File Listener Name: \*

Location: \*

Description:

Status: \*

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

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

27. From the Connection Type drop-down, select **Local Folder**.

Status: \*

Runtime Environment: \*

Connection Type: \*

28. In the Listener Rules section, enter the details as shown in table below:

| Folder Path     | Pattern Type | File Pattern |
|-----------------|--------------|--------------|
| C:\IICSLabFiles | Wildcard     | *.csv        |

### Listener Rules \*

| Folder Path     | Pattern Type | File Pattern |
|-----------------|--------------|--------------|
| C:\IICSLabFiles | Wildcard     | *.csv        |

29. In the Notify when file field, select **Arrives** and **Is updated**.

Notify when file: \*
☒ Arrives
☒ Is updated
☐ Is deleted

☐ Stop checking if rules are met

☒ Check file stability

☐ Notify if files exist on first run

30. To stop listening to the configured folder, if the rules are met, select **Stop checking if rules are met**.

Notify when file: \* ☒ Arrives ☒ Is updated ☐ Is deleted

☒ Stop checking if rules are met

☒ Check file stability

☐ Notify if files exist on first run

31. To save the file listener, click **Save**.

New File Listener Save Start

**File Listener Details**

File Listener Name: \* File\_Listener

Location: \* Default Browse

Description:

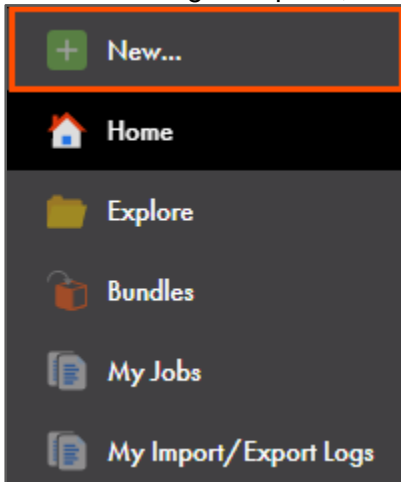
Status: \* Enabled

Runtime Environment: \* CDI-XX-FIRSTNAME

Connection Type: \* Local Folder

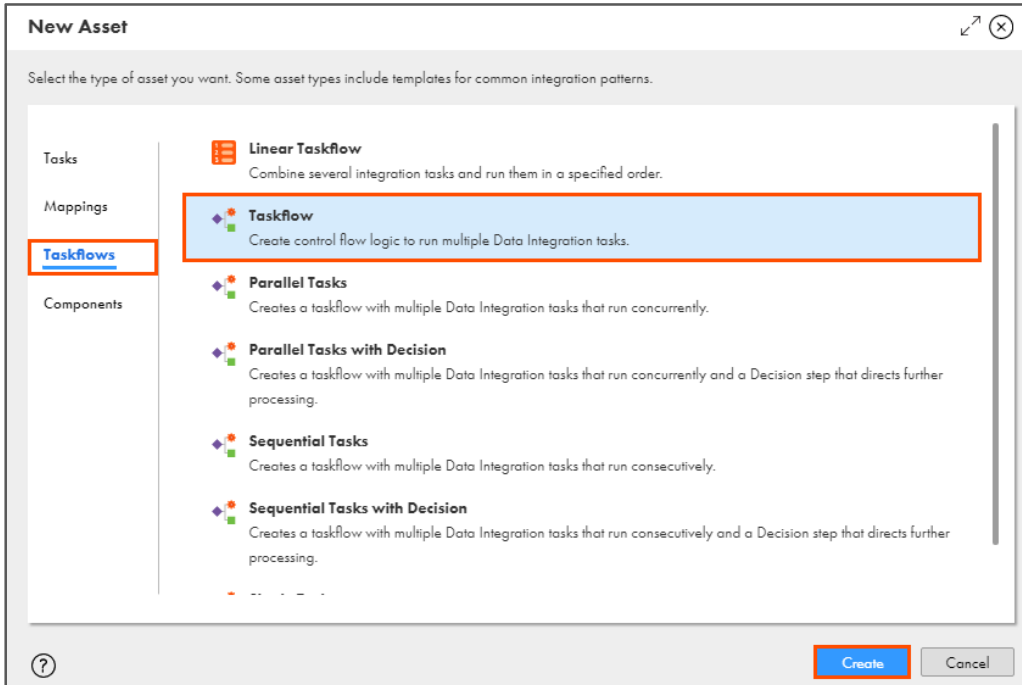
### Create Taskflow:

32. From the Navigation pane, select **New**.



33. From the New Asset window, click the **Taskflows** tab.

34. Select **Taskflow** and click **Create**.



**New Asset**

Select the type of asset you want. Some asset types include templates for common integration patterns.

**Tasks**

**Taskflow**

Create control flow logic to run multiple Data Integration tasks.

**Parallel Tasks**

Creates a taskflow with multiple Data Integration tasks that run concurrently.

**Parallel Tasks with Decision**

Creates a taskflow with multiple Data Integration tasks that run concurrently and a Decision step that directs further processing.

**Sequential Tasks**

Creates a taskflow with multiple Data Integration tasks that run consecutively.

**Sequential Tasks with Decision**

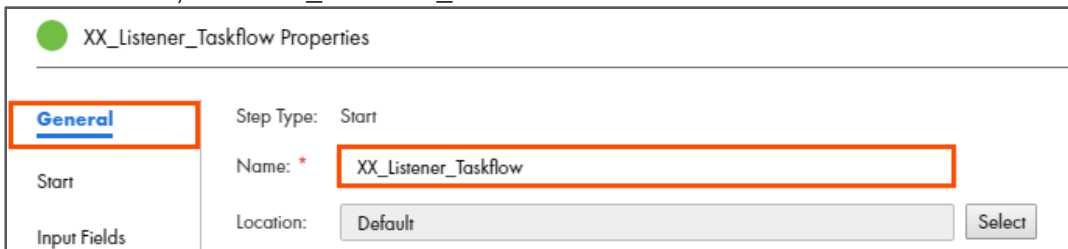
Creates a taskflow with multiple Data Integration tasks that run consecutively and a Decision step that directs further processing.

**Create** **Cancel**

**Note:** The New Taskflow window appears.

35. From the Taskflow properties pane, select **General**.

36. In Name field, enter **XX\_Listener\_Taskflow**.



**XX\_Listener\_Taskflow Properties**

**General**

Step Type: Start

Name: \* **XX\_Listener\_Taskflow**

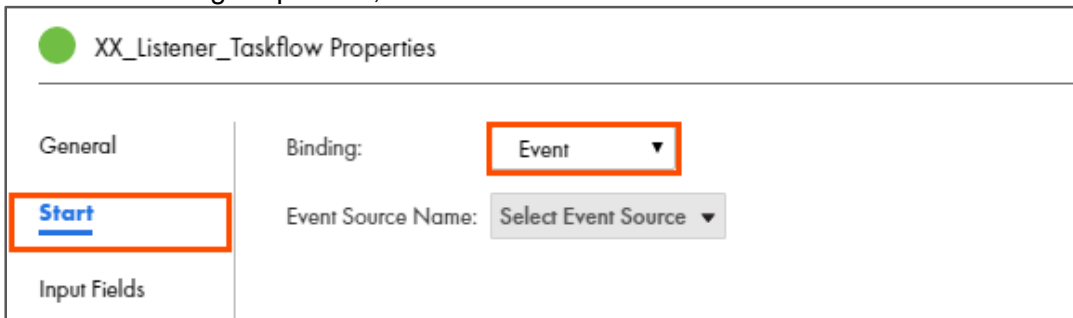
Location: Default **Select**

**Start**

**Input Fields**

37. From the Taskflow properties pane, select **Start**.

38. From the Binding drop-down, select **Event**.



**XX\_Listener\_Taskflow Properties**

**General**

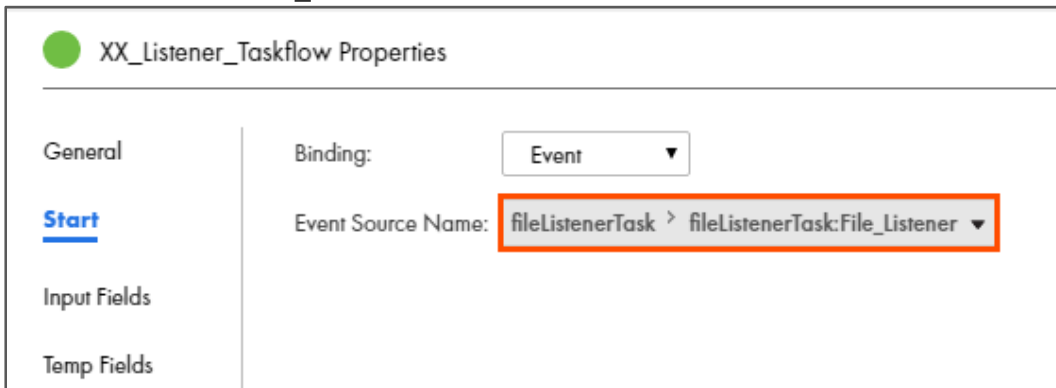
Binding: **Event**

Event Source Name: Select Event Source

**Start**

**Input Fields**

39. From the Event Source Name field drop-down, select **fileListenerTask > fileListenerTask: File\_Listener**.



XX\_Listener\_Taskflow Properties

General

Binding: Event

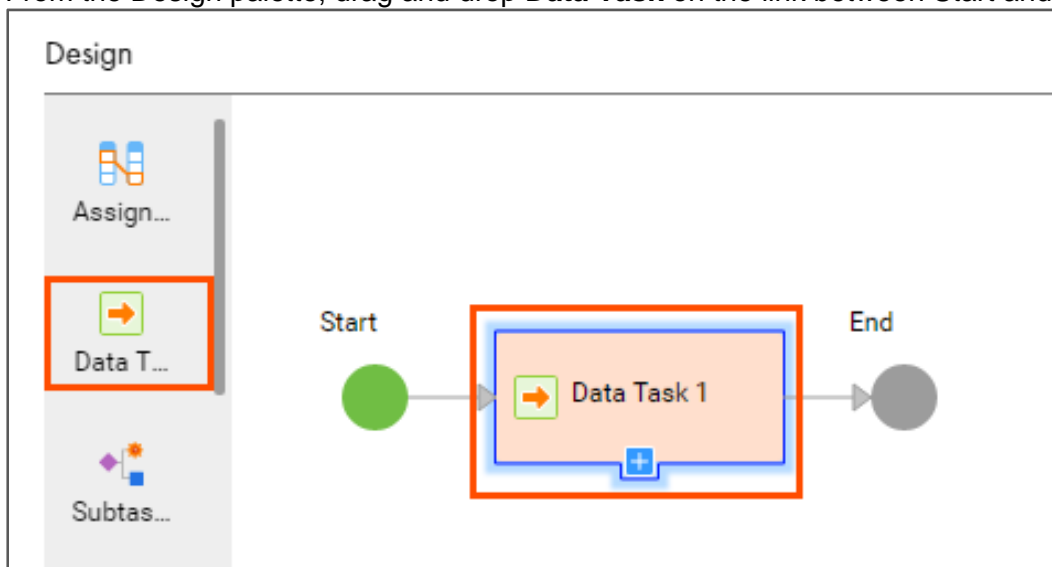
Event Source Name: fileListenerTask > fileListenerTask:File\_Listener

Start

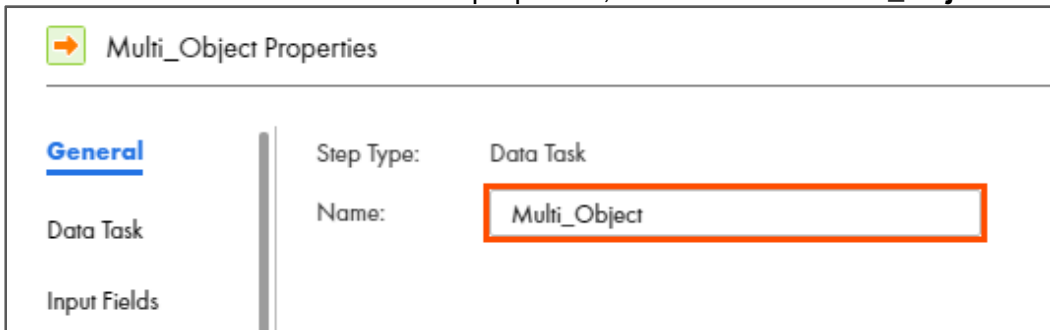
Input Fields

Temp Fields

40. From the Design palette, drag and drop **Data Task** on the link between Start and End.



41. In the General section of Data Task properties, enter Name as **Multi\_Object**.



Multi\_Object Properties

General

Data Task

Input Fields

Step Type: Data Task

Name: Multi\_Object

42. From the properties pane, click **Data Task**.

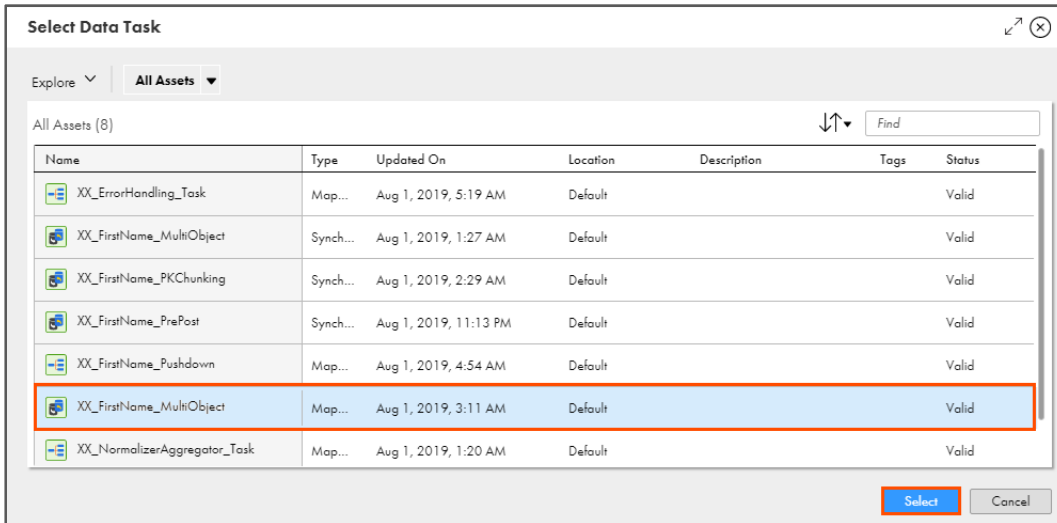
43. To select a Data Task, click **Select**.



**Note:** The Select Data Task window appears.

44. From the list, select **XX\_FirstName\_MultiObject**.

45. Click **Select**.

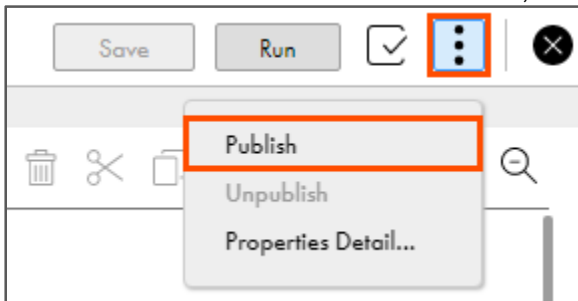


| Name                         | Type     | Updated On            | Location | Description | Tags | Status |
|------------------------------|----------|-----------------------|----------|-------------|------|--------|
| XX_ErrorHandling_Task        | Map...   | Aug 1, 2019, 5:19 AM  | Default  |             |      | 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_FirstName_MultiObject     | Map...   | Aug 1, 2019, 3:11 AM  | Default  |             |      | Valid  |
| XX_NormalizerAggregator_Task | Map...   | Aug 1, 2019, 1:20 AM  | Default  |             |      | Valid  |

46. To save the Taskflow, click **Save**.

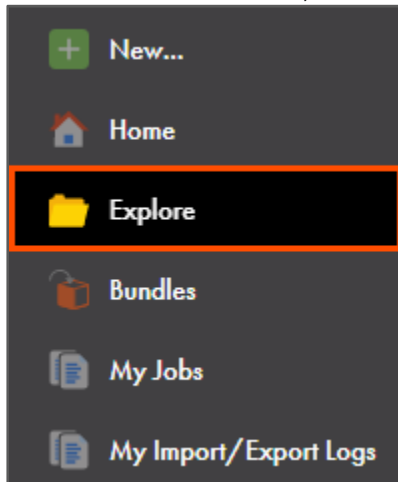


47. To bind the file listener with the taskflow, click  and select **Publish**.



### Start the File Listener:

48. To start the file listener, from the Navigation pane, click **Explore**.



49. Navigate to Default, from the list, select **File\_Listener**.



50. To start the file listener, click and select **Start**.

| <input type="checkbox"/>            | Name                               | Type                 | Status | Updated On ▼           | Description                                           |
|-------------------------------------|------------------------------------|----------------------|--------|------------------------|-------------------------------------------------------|
| <input type="checkbox"/>            | XX_Listener_Taskflow               | Taskflow             | Valid  | Aug 19, 2019, 12:36 PM |                                                       |
| <input checked="" type="checkbox"/> | File_Listener                      | File Listener        | Valid  | Aug 19, 2019, 12:14 PM |                                                       |
| <input type="checkbox"/>            | File_Listener_Task                 | Synchronization Task | Valid  | Aug 16, 2019, 4:45 PM  | Properties...<br>View<br>Edit<br><b>Start</b><br>Stop |
| <input type="checkbox"/>            | XX_FirstName_MultiObject           | Synchronization Task | Valid  | Aug 16, 2019, 4:00 PM  | Rename...<br>Copy To...                               |
| <input type="checkbox"/>            | Taskflow File Listener Test        | Taskflow             | Valid  | Aug 16, 2019, 2:04 PM  |                                                       |
| <input type="checkbox"/>            | Linear Taskflow Test File Listener | Linear Taskflow      | Valid  | Aug 16, 2019, 1:57 PM  |                                                       |
| <input type="checkbox"/>            | test File Listener                 | File Listener        | Valid  | Aug 16, 2019, 1:51 PM  |                                                       |

**Note:** A message **Started File\_Listener** appears.

### Run Synchronization Task:

51. To run the synchronization task, from the Default folder, select **File\_Listener\_Task**.

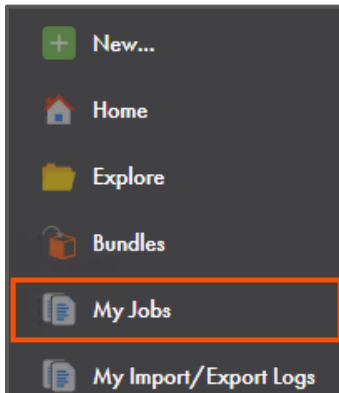


52. Click and select **Run**.

| <input type="checkbox"/>            | Name                               | Type                 | Status | Updated On ▼           | Description                                                    |
|-------------------------------------|------------------------------------|----------------------|--------|------------------------|----------------------------------------------------------------|
| <input type="checkbox"/>            | XX_Listener_Taskflow               | Taskflow             | Valid  | Aug 19, 2019, 12:36 PM |                                                                |
| <input type="checkbox"/>            | File_Listener                      | File Listener        | Valid  | Aug 19, 2019, 12:14 PM |                                                                |
| <input checked="" type="checkbox"/> | File_Listener_Task                 | Synchronization Task | Valid  | Aug 16, 2019, 4:45 PM  | Properties...<br>View<br>Edit<br><b>Run</b><br>Download XML... |
| <input type="checkbox"/>            | XX_FirstName_MultiObject           | Synchronization Task | Valid  | Aug 16, 2019, 4:00 PM  | Rename...                                                      |
| <input type="checkbox"/>            | Taskflow File Listener Test        | Taskflow             | Valid  | Aug 16, 2019, 2:04 PM  |                                                                |
| <input type="checkbox"/>            | Linear Taskflow Test File Listener | Linear Taskflow      | Valid  | Aug 16, 2019, 1:57 PM  |                                                                |
| <input type="checkbox"/>            | test File Listener                 | File Listener        | Valid  | Aug 16, 2019, 1:51 PM  |                                                                |

### Monitor status:

53. To monitor the task, from the Navigation pane, click **My Jobs**.





54. When the synchronization task (File\_Listener\_Task) completes, the status changes to **Success**.

55. The file listener automatically starts the taskflow (XX\_Listener\_Taskflow).

Jobs (503) Up to date

Updated 1:03:30 PM GMT+5:30 Refresh Sort Filter

Add Field





| 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... | <a href="#">View Subtasks</a> | <span>Success</span> |
|  File_Listener_Task-2                    | Synchronizatio... |          | Aug 19, 2019, 1:01 PM | Aug 19, 2... | 48                            | <span>Success</span> |

56. To verify that the taskflow is started by file listener, click on **XX\_Listener\_Taskflow**.

Jobs (503) Up to date

Updated 1:03:30 PM GMT+5:30 Refresh Sort Filter

Add Field ▼

| 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... | <a href="#">View Subtasks</a> |  Success |
|  File_Listener_Task-2                    | Synchronizatio... |          | Aug 19, 2019, 1:01 PM | Aug 19, 2... | 48                            |  Success |

57. From the XX\_Listener\_Taskflow (Start) Properties section, select **Input Fields**.

58. Verify that the input for taskflow is **File\_Listener**.

| XX_Listener_Taskflow(Start) Properties |                                                                                                                                                                     |      |       |               |                                                             |
|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|-------|---------------|-------------------------------------------------------------|
| Current Run                            | Input Fields                                                                                                                                                        |      |       |               |                                                             |
| <b>Input Fields</b>                    | <table> <tr> <th>Name</th><th>Value</th></tr> <tr> <td>File_Listener</td><td> C:\FlatFile\Items.csv<br/> Items.csv<br/> 2362<br/> 1566199646405 </td></tr> </table> | Name | Value | File_Listener | C:\FlatFile\Items.csv<br>Items.csv<br>2362<br>1566199646405 |
| Name                                   | Value                                                                                                                                                               |      |       |               |                                                             |
| File_Listener                          | C:\FlatFile\Items.csv<br>Items.csv<br>2362<br>1566199646405                                                                                                         |      |       |               |                                                             |

*This concludes the lab.*





## Module 12: Advanced Options

### Lab 12-1: Configuring SQL Override Setting in Lookup Transformation

#### Overview:

A Lookup transformation queries the lookup object based on the fields and properties configured in the Lookup transformation.

In this lab, you will create a mapping using the Lookup Transformation and set a Lookup SQL override command for that transformation.

#### Objective:

- Create a mapping using Lookup transformation
- Configure SQL override setting in Lookup transformation

#### Duration:

15 minutes

---

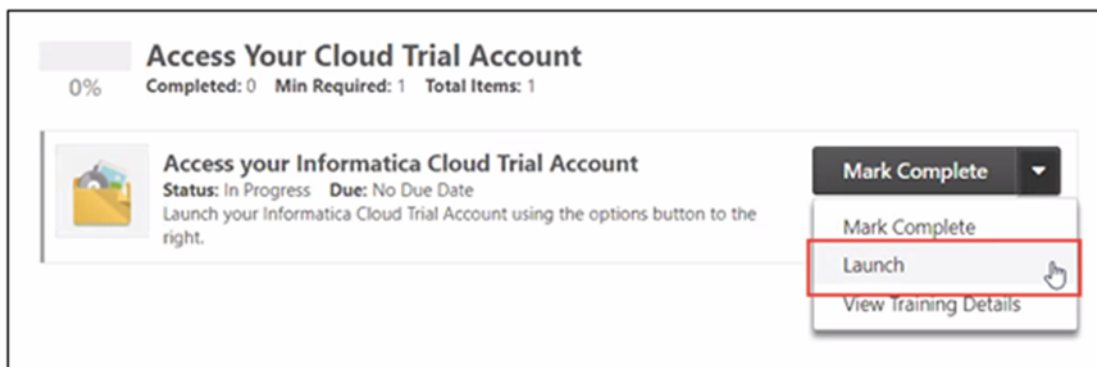
#### Tasks:

##### Copy Source Files:

1. Copy **Source\_LKP\_SQL.csv** file provided with this lab and place the file in your flat file directory (**C:\IICS LabFiles**).

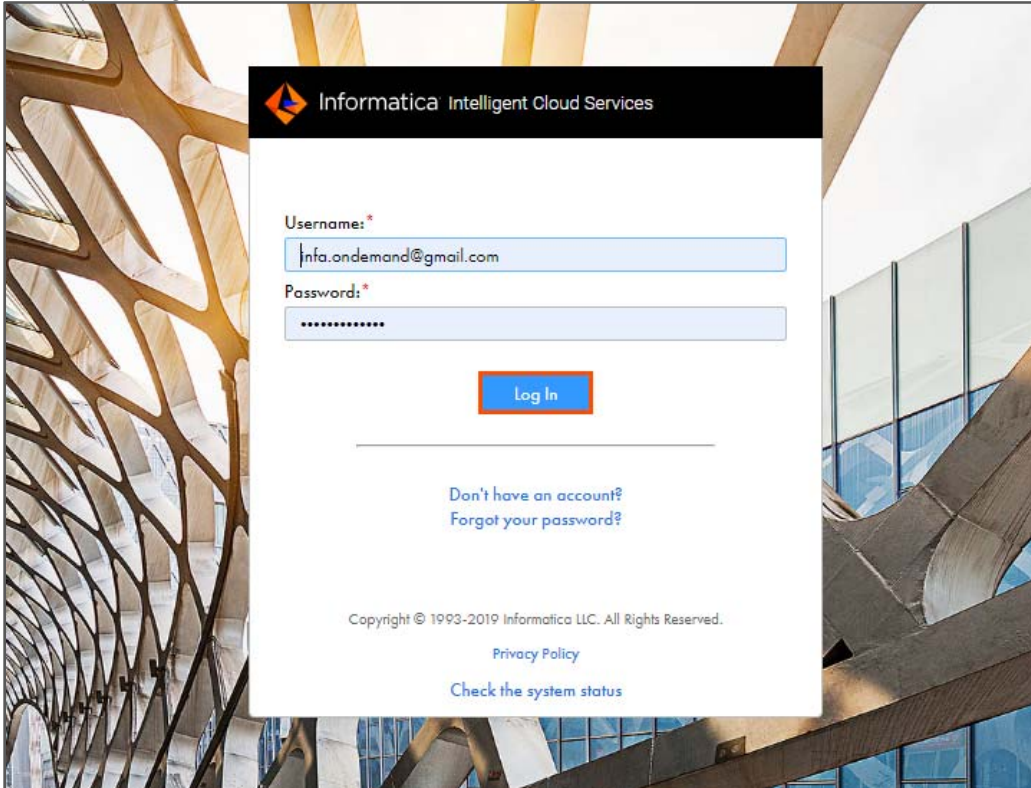
##### Create Mapping:

2. Access your cloud trial account by clicking **Launch** in your option Menu. If the option menu is labeled anything other than **Launch**, click the down arrow to the right and click **Launch**.



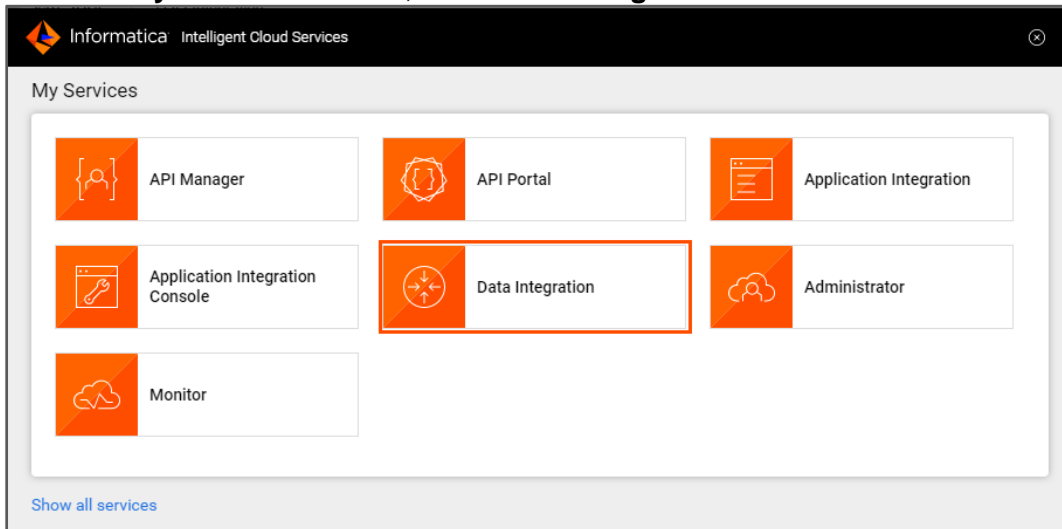
**Note:** Follow this step, if you have navigated away from the login page.

3. Enter your login credentials and click **Log In**.

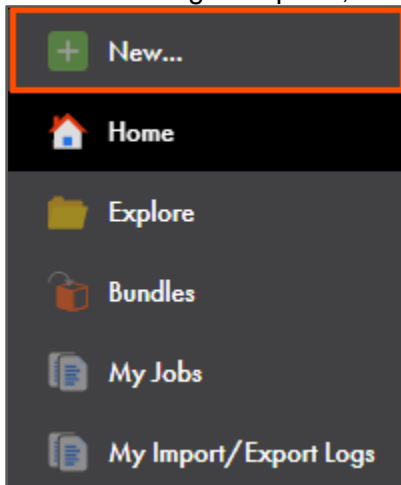


The login screen for Informatica Intelligent Cloud Services is displayed. It features a white login box centered on a background image of a modern building's interior with a complex, branching structural design. The login box has a black header with the Informatica logo and the text "Informatica Intelligent Cloud Services". Below the header, there are two input fields: "Username:" with the email "info.ondemand@gmail.com" and "Password:" with masked characters. A blue "Log In" button is positioned below the password field. Underneath the button, there are two links: "Don't have an account?" and "Forgot your password?". At the bottom of the login box, there is a copyright notice "Copyright © 1993-2019 Informatica LLC. All Rights Reserved." and two more links: "Privacy Policy" and "Check the system status".

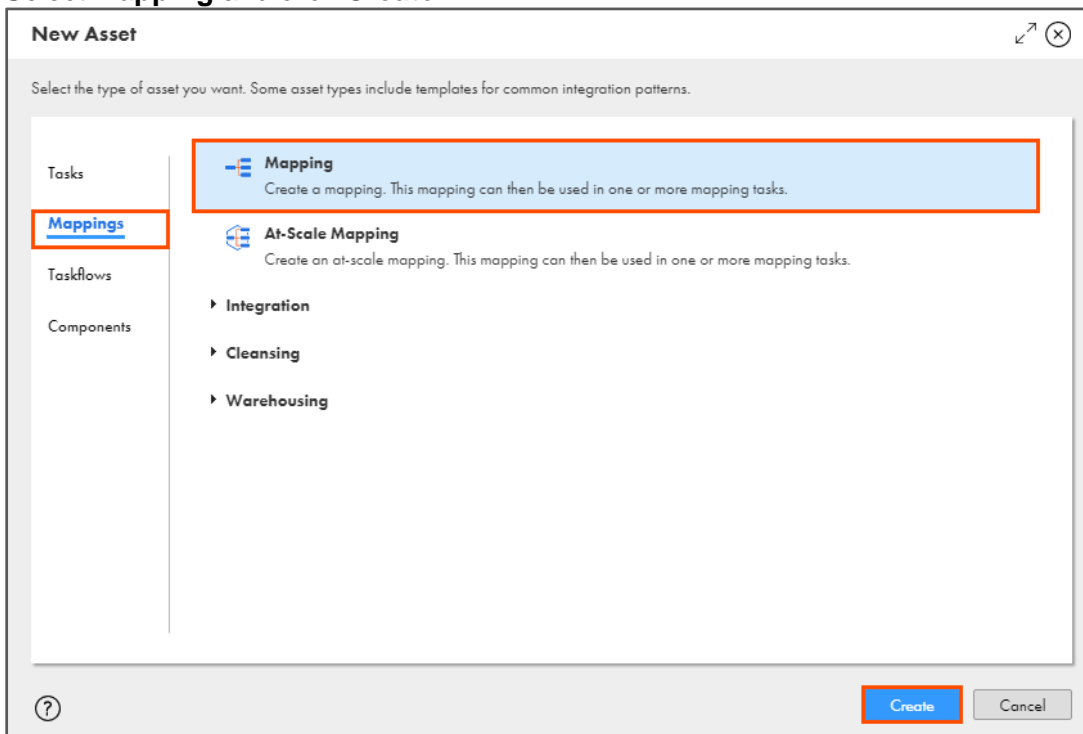
4. From the **My Services** window, select **Data Integration**.



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

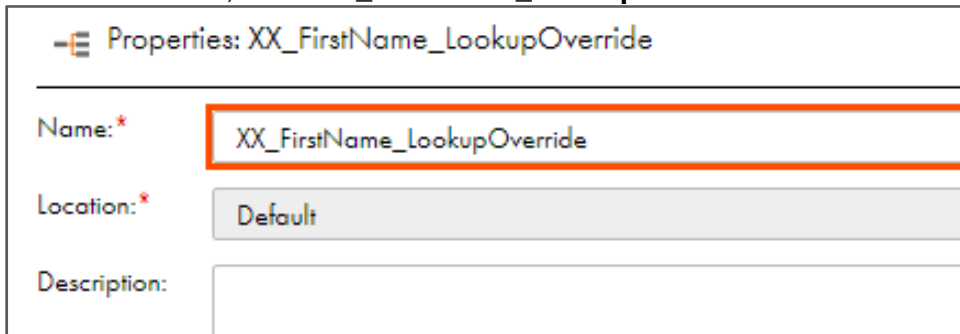


6. From the New Asset window, click the **Mappings** tab.
7. Select **Mapping** and click **Create**.



**Note:** The Mapping page appears.

8. In the Name field, enter **XX\_FirstName\_LookupOverride**.



Properties: XX\_FirstName\_LookupOverride

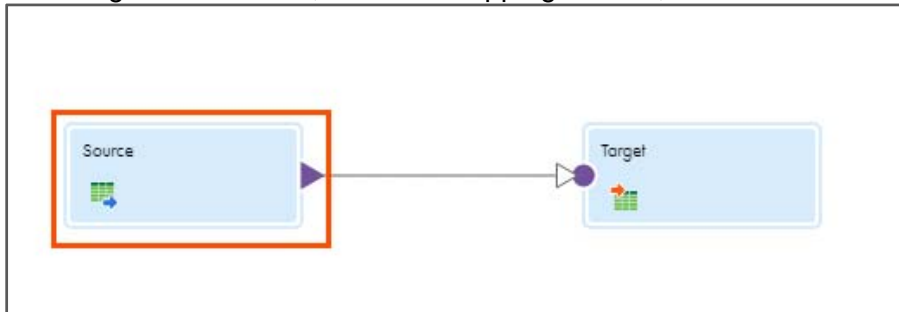
Name: \* XX\_FirstName\_LookupOverride

Location: \* Default

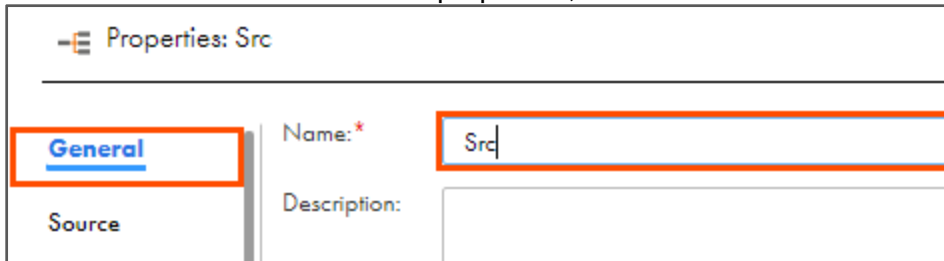
Description:

**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**.



Properties: Src

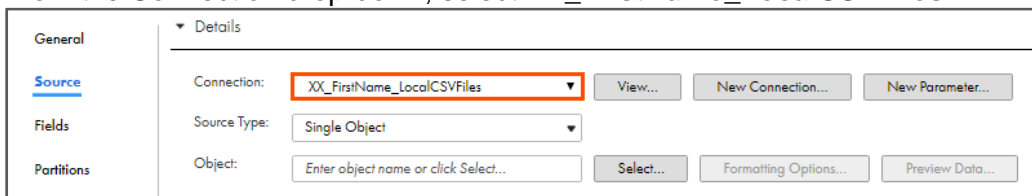
General

Name: \* Src

Description:

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

12. From the Connection drop-down, select **XX\_FirstName\_LocalCSVFiles**.



General

Source

Fields

Partitions

Details

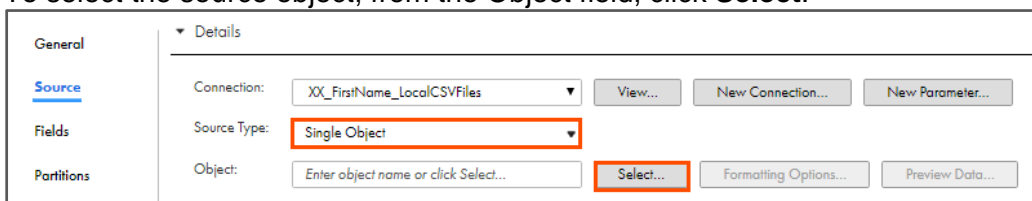
Connection: XX\_FirstName\_LocalCSVFiles View... New Connection... New Parameter...

Source Type: Single Object

Object: Enter object name or click Select... Select... Formatting Options... Preview Data...

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

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



General

Source

Fields

Partitions

Details

Connection: XX\_FirstName\_LocalCSVFiles View... New Connection... New Parameter...

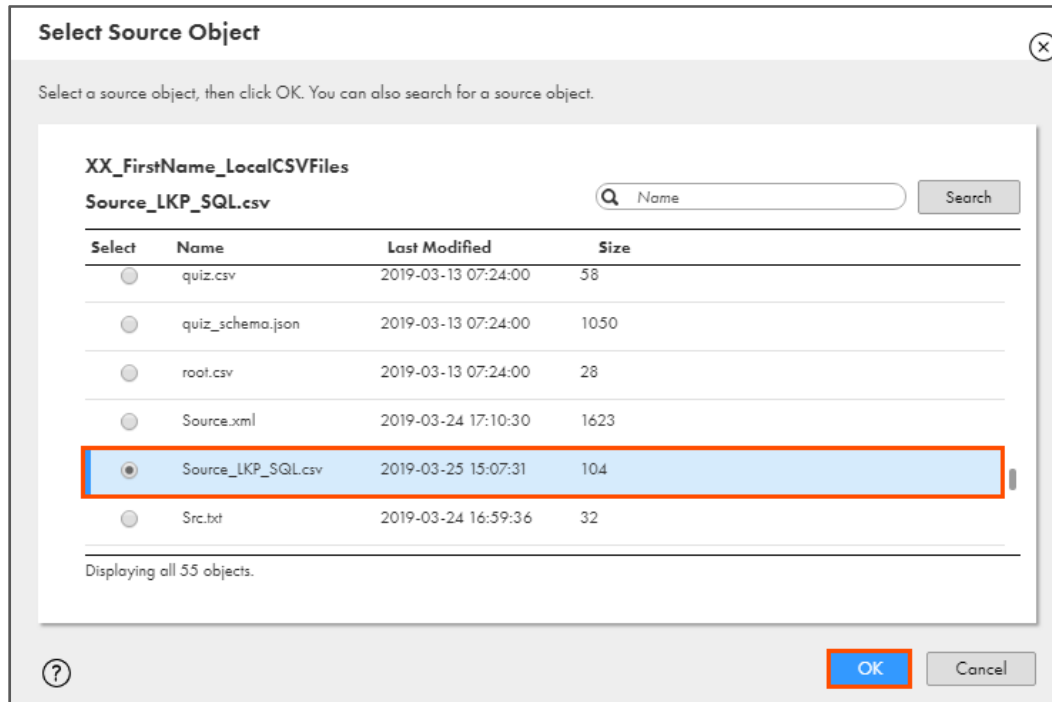
Source Type: Single Object

Object: Enter object name or click Select... Select... Formatting Options... Preview Data...

**Note:** The Select Source Object window appears.

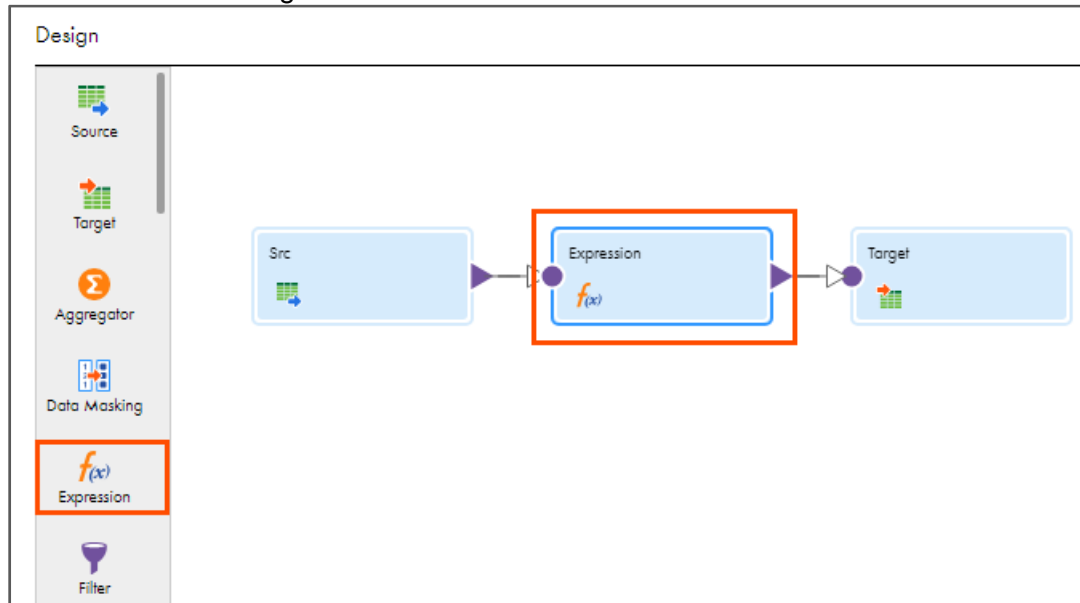
15. Select **Source\_LKP\_SQL.csv** from the list.

16. Click **OK**.



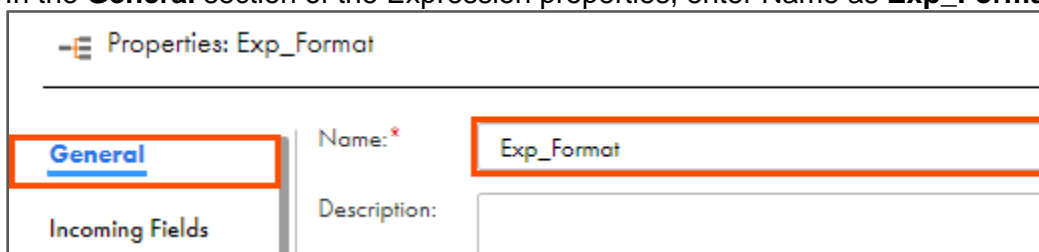
**Add an Expression Transformation:**

17. From the list of available transformations, drag and drop the **Expression** transformation between Src and Target.



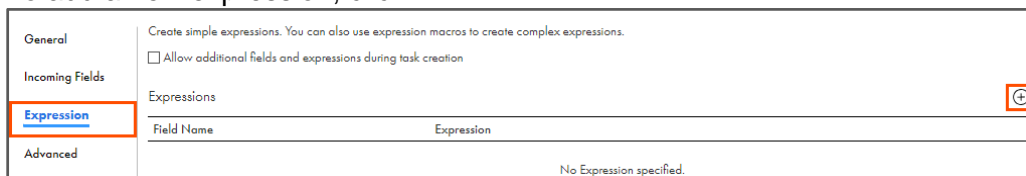
18. Select the **Expression** transformation from the mapping canvas.

19. In the **General** section of the Expression properties, enter Name as **Exp\_Format**.



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

21. To add a new expression, click .

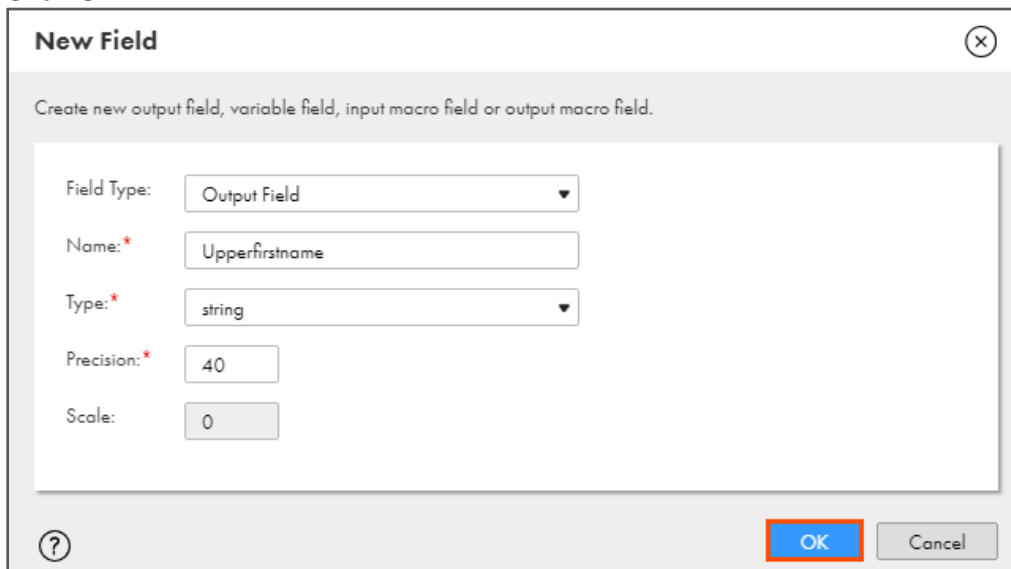


**Note:** The New Field window appears.

22. Enter the details as shown in table below:

| Field Type   | Name           | Type   | Precision | Scale |
|--------------|----------------|--------|-----------|-------|
| Output Field | Upperfirstname | string | 40        | 0     |

23. Click **OK**.



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

| <b>General</b>         | Create simple expressions. You can also use expression macros to create complex expressions.<br><input type="checkbox"/> Allow additional fields and expressions during task creation     |            |            |                |                              |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|------------|----------------|------------------------------|
| <b>Incoming Fields</b> | Expressions                                                                                                                                                                               |            |            |                |                              |
| <b>Expression</b>      | <table border="1"> <thead> <tr> <th>Field Name</th> <th>Expression</th> </tr> </thead> <tbody> <tr> <td>Upperfirstname</td> <td><a href="#">Configure...</a></td> </tr> </tbody> </table> | Field Name | Expression | Upperfirstname | <a href="#">Configure...</a> |
| Field Name             | Expression                                                                                                                                                                                |            |            |                |                              |
| Upperfirstname         | <a href="#">Configure...</a>                                                                                                                                                              |            |            |                |                              |
| <b>Advanced</b>        |                                                                                                                                                                                           |            |            |                |                              |

**Note:** The Field Expression window appears.

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

**UPPER(FIRSTNAME)**

OR

Open the file named **23\_LabGuide\_ConfiguringSQLOverrideSettingInLookup\_12-1** provided with this lab. Copy the command mentioned under **Step 25** and paste it in the Expression field.

26. Click **Validate**.

**Field Expression: Upperfirstname( string, 40, 0 )**

Configure expression by adding fields and functions.

Expression: Not Parameterized

☒ The expression is Valid.

| Fields          | Parameters | Functions | Expression       | Validate |
|-----------------|------------|-----------|------------------|----------|
| ID<br>FIRSTNAME |            |           | UPPER(FIRSTNAME) |          |

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

Origin: Source\_LKP\_SQL.csv      Precision: 255  
Name: FIRSTNAME      Scale: 0

? OK Cancel

**Note:** The expression is Valid message appears.

27. Click **OK**.

**Field Expression: Upperfirstname( string, 40, 0 )**

Configure expression by adding fields and functions.

Expression: Not Parameterized

☒ The expression is Valid.

**Fields**   Parameters   Functions

Fields: ID, FIRSTNAME

Expression: UPPER(FIRSTNAME)

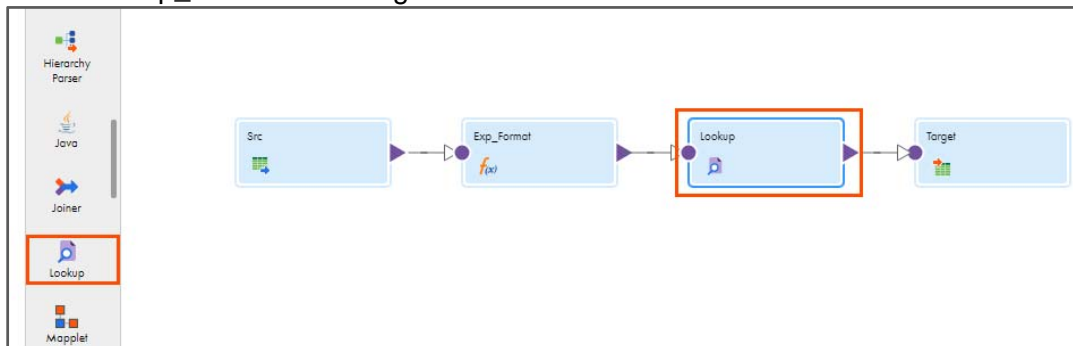
Operators: AND, OR, NOT, (, ), =, !=, <, >, <=, >=

Origin: Source\_LKP\_SQL.csv   Precision: 255  
Name: FIRSTNAME   Scale: 0

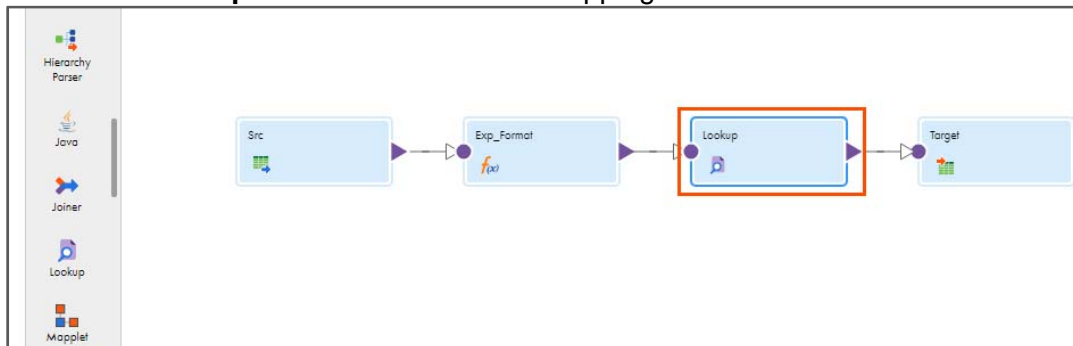
**OK**   Cancel

**Add Lookup Transformation:**

28. From the list of available transformations, drag and drop the **Lookup** transformation between Exp\_Format and Target.



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





30. In the **General** section of the Lookup properties, enter Name as **Lkp\_Override**.



Properties: Lkp\_Override

**General**

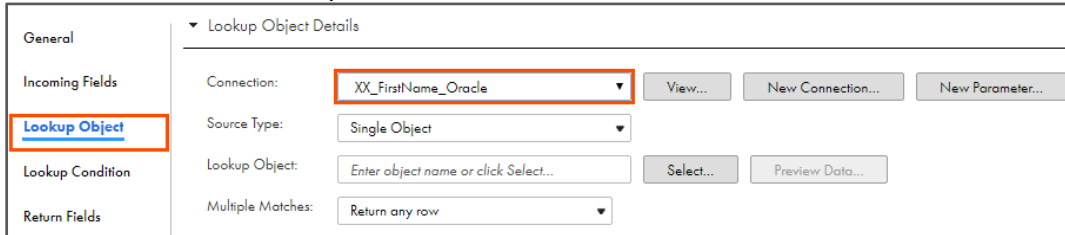
Name: \* Lkp\_Override

Description:

Incoming Fields

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

32. From the Connection drop-down, select **XX\_FirstName\_Oracle**.



General

Incoming Fields

**Lookup Object**

Lookup Condition

Return Fields

Lookup Object Details

Connection: XX\_FirstName\_Oracle View... New Connection... New Parameter...

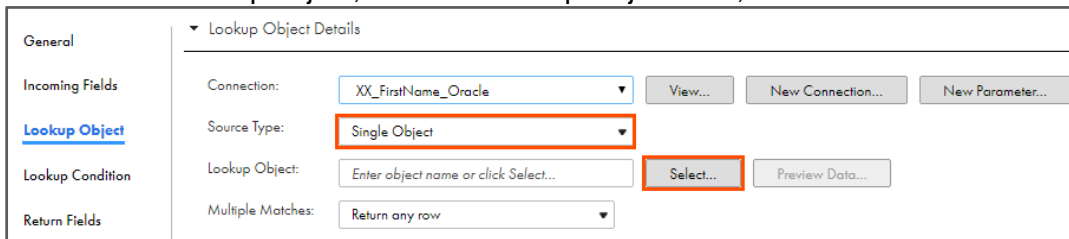
Source Type: Single Object

Lookup Object: Enter object name or click Select... Select... Preview Data...

Multiple Matches: Return any row

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

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



General

Incoming Fields

**Lookup Object**

Lookup Condition

Return Fields

Lookup Object Details

Connection: XX\_FirstName\_Oracle View... New Connection... New Parameter...

Source Type: Single Object

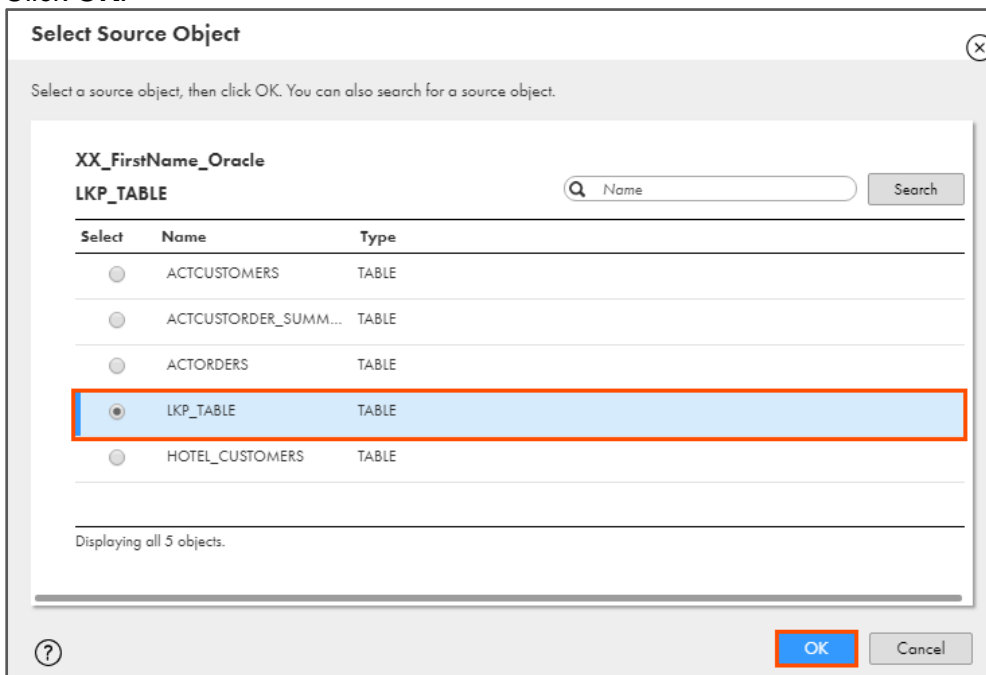
Lookup Object: Enter object name or click Select... Select... Preview Data...

Multiple Matches: Return any row

**Note:** The Select Source Object window appears.

35. Select **LKP\_TABLE** from the list.

36. Click **OK**.



Select Source Object

Select a source object, then click OK. You can also search for a source object.

XX\_FirstName\_Oracle

LKP\_TABLE

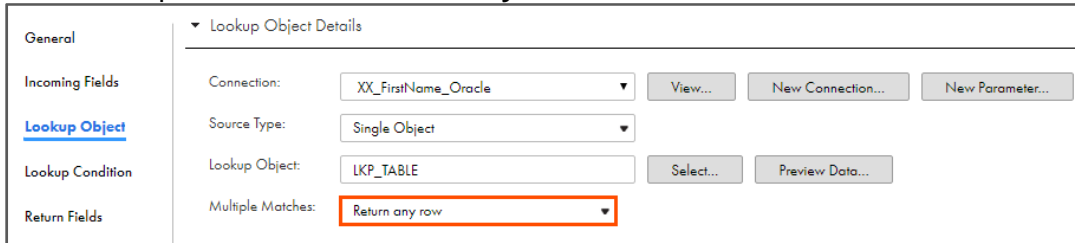
Q Name Search

| Select                           | Name                 | Type  |
|----------------------------------|----------------------|-------|
| <input type="radio"/>            | ACTCUSTOMERS         | TABLE |
| <input type="radio"/>            | ACTCUSTORDER_SUMM... | TABLE |
| <input type="radio"/>            | ACTORDERS            | TABLE |
| <input checked="" type="radio"/> | LKP_TABLE            | TABLE |
| <input type="radio"/>            | HOTEL_CUSTOMERS      | TABLE |

Displaying all 5 objects.

OK Cancel

### 37. Retain Multiple Matches as **Return any row**.



General

Lookup Object Details

Connection: XX\_FirstName\_Oracle View... New Connection... New Parameter...

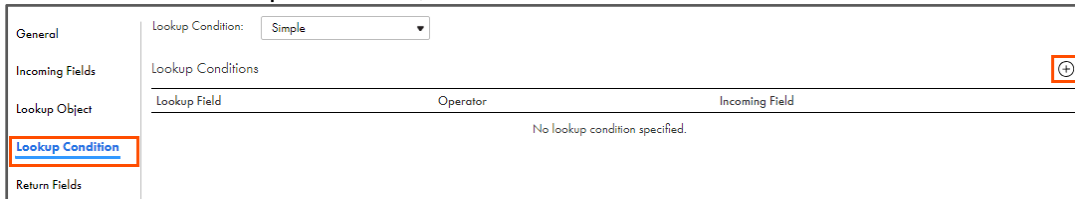
Source Type: Single Object

Lookup Object: LKP\_TABLE Select... Preview Data...

Multiple Matches: Return any row

### 38. From the properties pane, click **Lookup Condition**.

### 39. To add a new Lookup Condition, click .



General

Lookup Condition: Simple

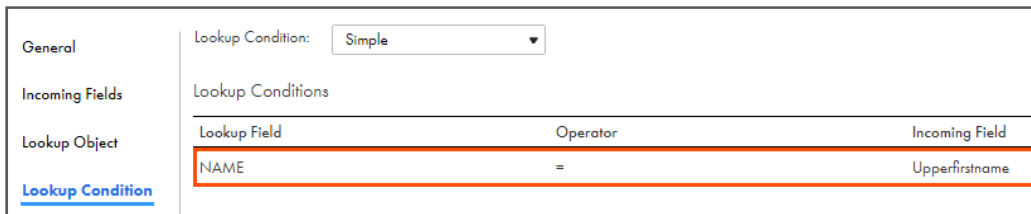
Lookup Conditions

| Lookup Field                   | Operator | Incoming Field |
|--------------------------------|----------|----------------|
| No lookup condition specified. |          |                |

Lookup Condition

### 40. Enter the lookup condition, as shown in the table below.

| Lookup Field | Operator | Incoming Field |
|--------------|----------|----------------|
| NAME         | =        | Upperfirstname |



General

Lookup Condition: Simple

Lookup Conditions

| Lookup Field | Operator | Incoming Field |
|--------------|----------|----------------|
| NAME         | =        | Upperfirstname |

Lookup Condition

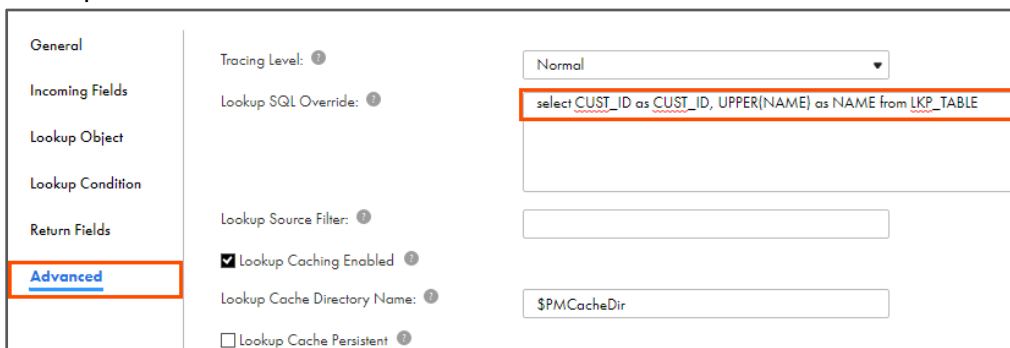
### 41. From the properties pane, click **Advanced**.

### 42. In the Lookup SQL Override field, enter the following query:

**select CUST\_ID as CUST\_ID, UPPER(NAME) as NAME from LKP\_TABLE**

OR

Open the file named **23\_LabGuide\_ConfiguringSQLOverrideSettingInLookup\_12-1** provided with this lab. Copy the command mentioned under **Step 42** and paste it in the Lookup SQL Override field.



General

Tracing Level: Normal

Lookup SQL Override: select CUST\_ID as CUST\_ID, UPPER(NAME) as NAME from LKP\_TABLE

Lookup Source Filter:

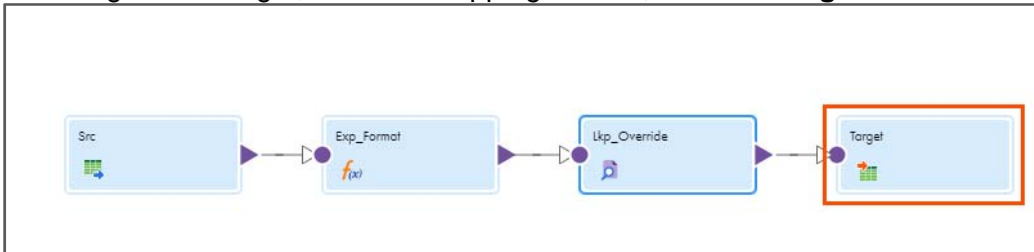
☒ Lookup Caching Enabled

Lookup Cache Directory Name: \$PMCacheDir

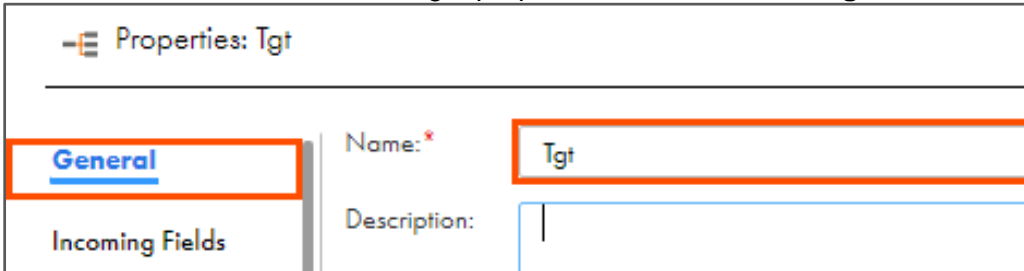
☐ Lookup Cache Persistent

Advanced

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

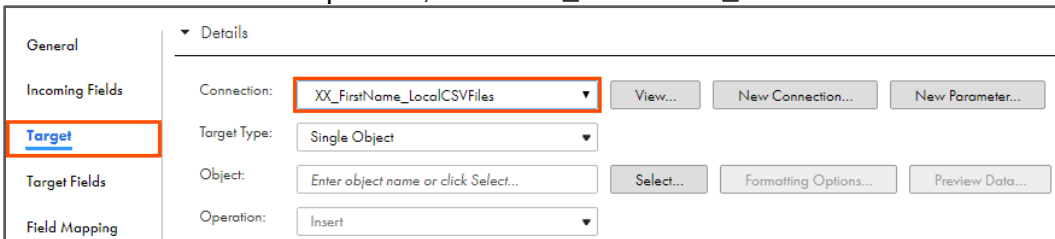


44. In the **General** section of the Target properties, enter Name as **Tgt**.



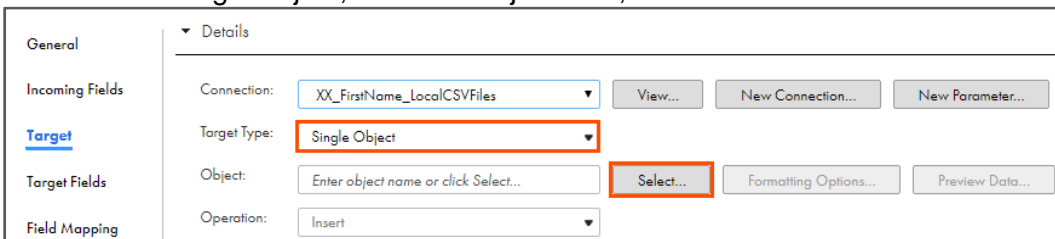
45. From the properties pane, click **Target**.

46. From the Connection drop-down, select **XX\_FirstName\_LocalCSVFiles**.



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

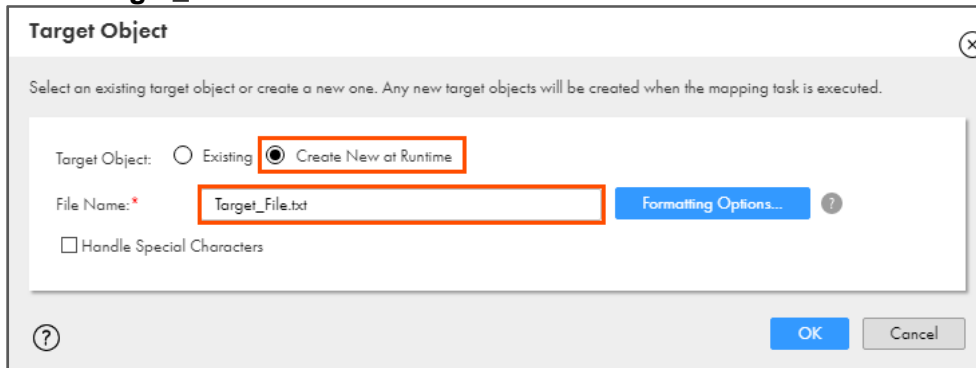
48. To select the target object, from the Object field, click **Select**.



**Note:** The Target Object window appears.

49. In the Target Object window, select **Create New at Runtime**.

50. Enter **Target\_File.txt** as File Name.



**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.

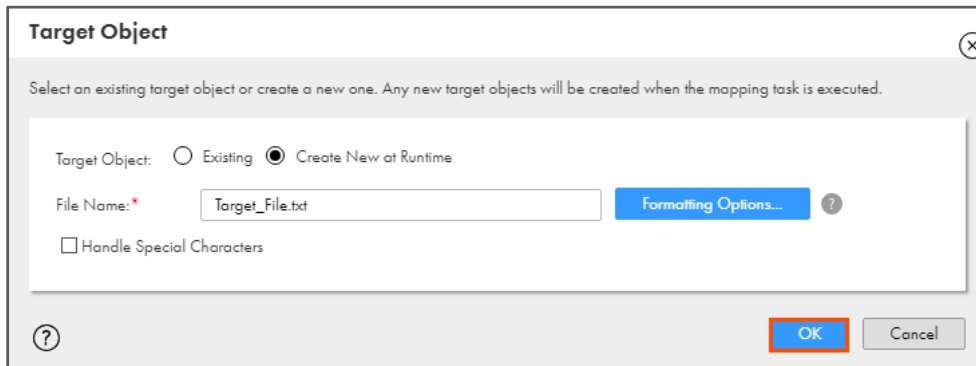
Target Object: ☐ Existing ☒ Create New at Runtime

File Name: \*  [Formatting Options...](#) [?](#)

☐ Handle Special Characters

[?](#) [OK](#) [Cancel](#)

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.

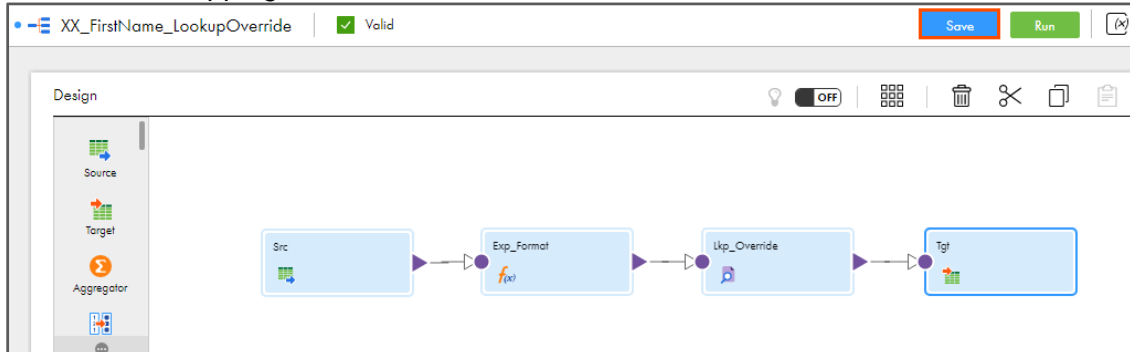
Target Object: ☐ Existing ☒ Create New at Runtime

File Name: \*  [Formatting Options...](#) [?](#)

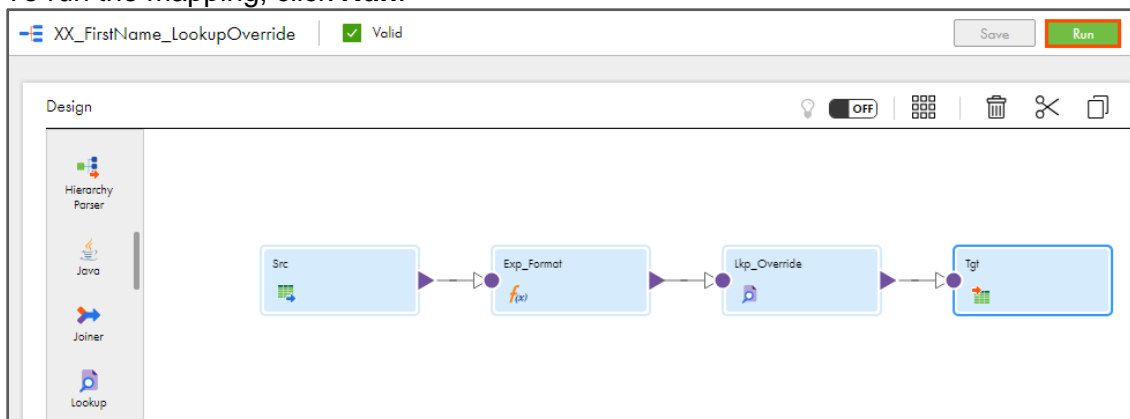
☐ Handle Special Characters

[?](#) [OK](#) [Cancel](#)

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

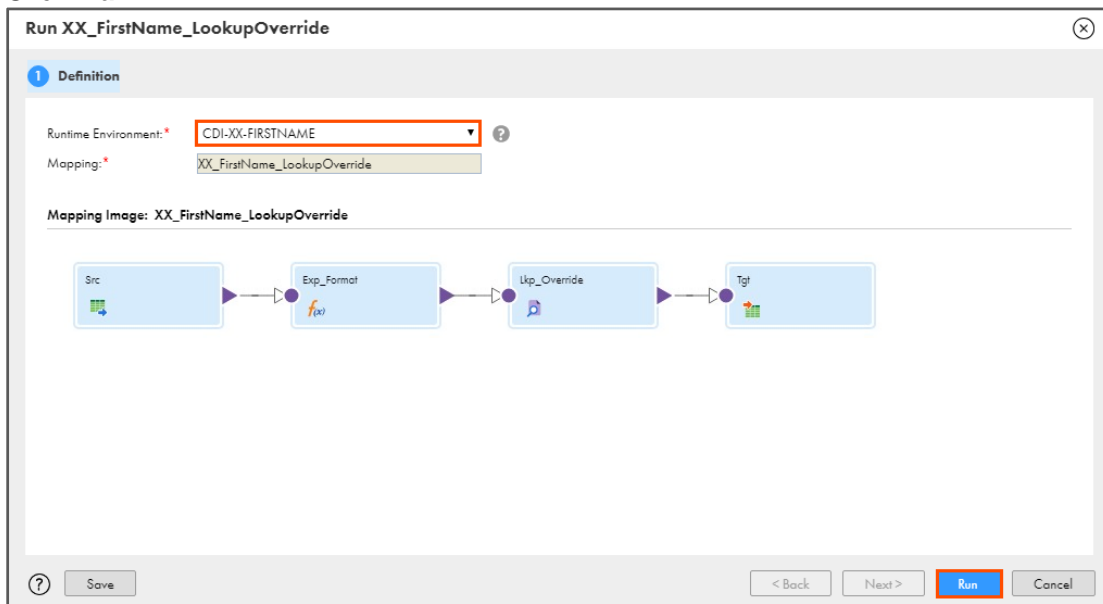


53. To run the mapping, click **Run**.



**Note:** The Run mapping window appears.

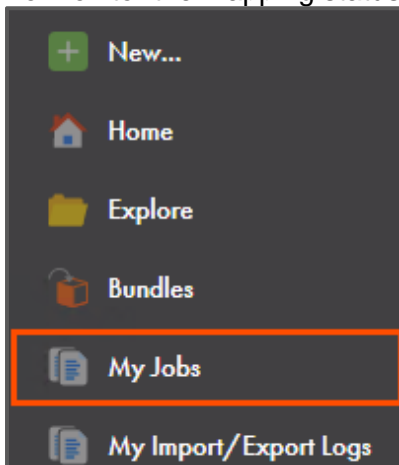
54. From the Runtime Environment drop-down, select your secure agent group.  
**Note:** The Runtime Environment name will be in CDI-XX-FIRSTNAME format.
55. Click **Run**.



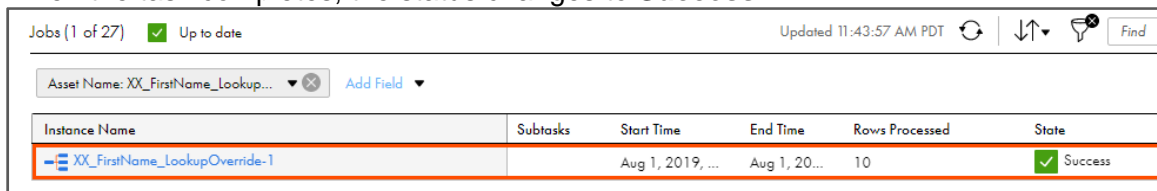
The dialog box titled "Run XX\_FirstName\_LookupOverride" shows the "Definition" tab. It includes a "Runtime Environment" dropdown menu with "CDI-XX-FIRSTNAME" selected, a "Mapping" field with "XX\_FirstName\_LookupOverride", and a "Mapping Image" field with "XX\_FirstName\_LookupOverride". Below these fields is a workflow diagram showing a sequence of four tasks: "Src", "Exp\_Format", "Lkp\_Override", and "Tgt". At the bottom of the dialog are buttons for "?", "Save", "< Back", "Next >", "Run" (highlighted with a red box), and "Cancel".

### 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**.



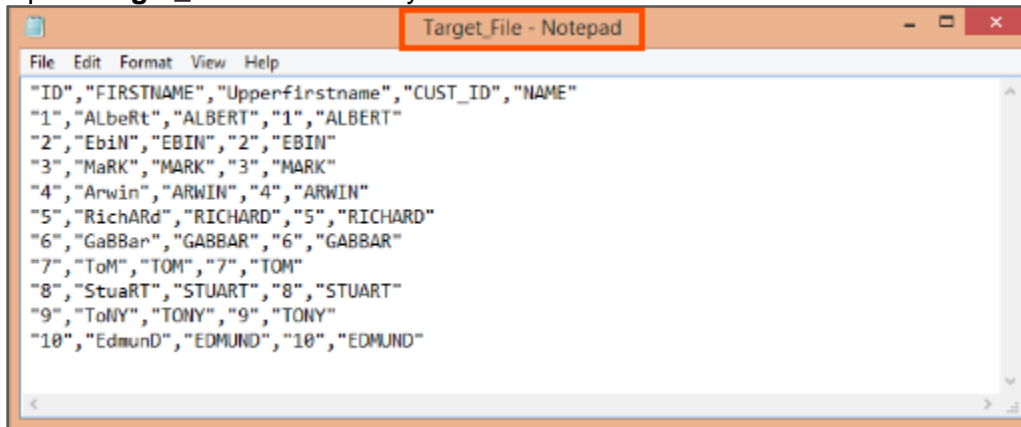
The "Jobs" table shows a single job with the status "Success". The table has columns for Instance Name, Subtasks, Start Time, End Time, Rows Processed, and State. The job "XX\_FirstName\_LookupOverride-1" is highlighted with a red box.

| Instance Name                 | Subtasks | Start Time       | End Time     | Rows Processed | State   |
|-------------------------------|----------|------------------|--------------|----------------|---------|
| XX_FirstName_LookupOverride-1 |          | Aug 1, 2019, ... | Aug 1, 20... | 10             | Success |

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

58. On your local machine, navigate to **C:\NCSLabFiles**.

59. Open **Target\_File.txt** and verify the contents.



```
File Edit Format View Help
"ID","FIRSTNAME","Upperfirstname","CUST_ID","NAME"
"1","ALbeRt","ALBERT","1","ALBERT"
"2","EbIn","EBIN","2","EBIN"
"3","MaRK","MARK","3","MARK"
"4","Arwin","ARWIN","4","ARWIN"
"5","RichARd","RICHARD","5","RICHARD"
"6","GaBBaR","GABBAR","6","GABBAR"
"7","ToM","TOM","7","TOM"
"8","StuaRT","STUART","8","STUART"
"9","ToNY","TONY","9","TONY"
"10","EdmunD","EDMUND","10","EDMUND"
```

---

*This concludes the lab.*

## Module 12: Advanced Options

### Lab 12-2: Using Primary Key Chunking in a Synchronization Task

#### Overview:

Primary key chunking or PK chunking optimizes performance when you extract data from large data sets.

In this lab, you will create a synchronization task and configure PK Chunking.

#### Objective:

- Enable PK chunking for a Synchronization task
- View queries and chunking lines in session log

#### Duration:

20 minutes

---

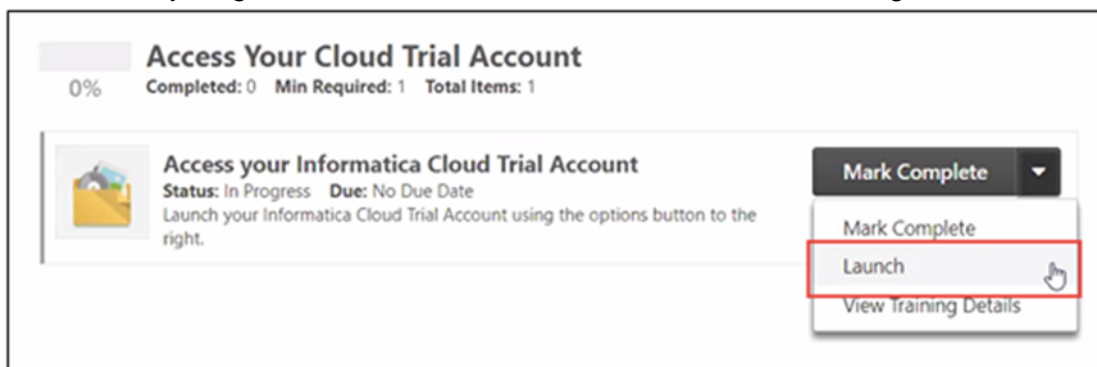
#### Tasks:

##### Copy Source Files:

1. Copy **Users.csv** file provided with this lab and paste it in your flat file directory (C:\IICSLabFiles).

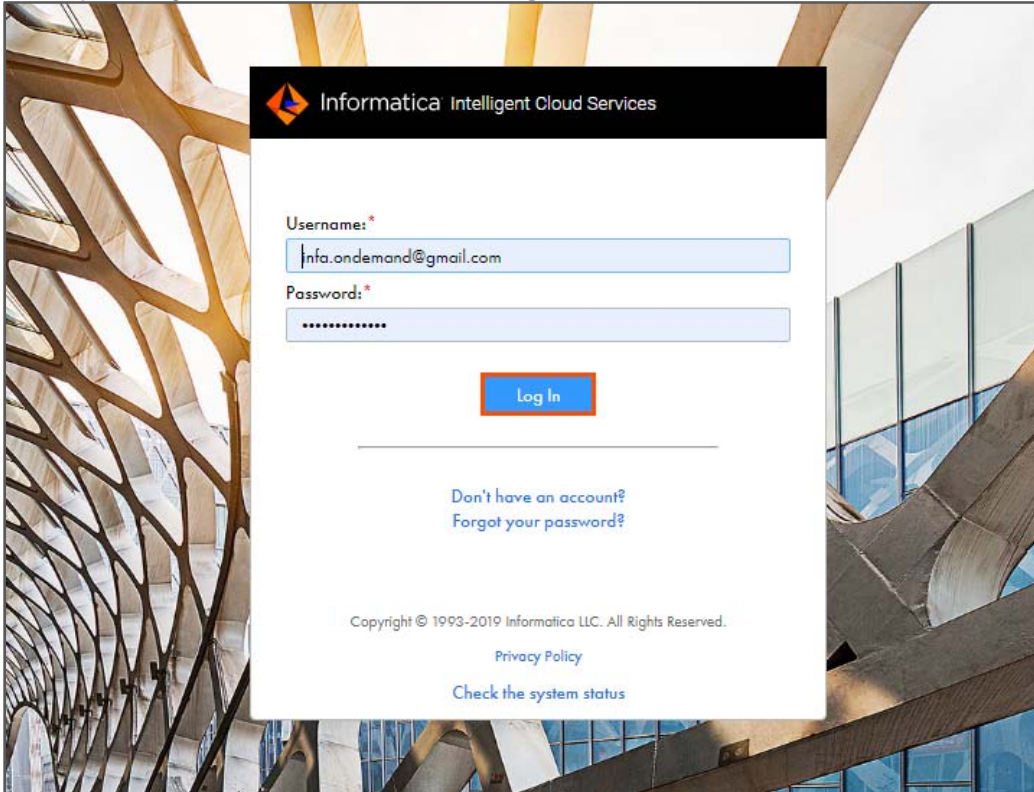
##### Create Synchronization Task:

2. Access your cloud trial account by clicking **Launch** in your option Menu. If the option menu is labeled anything other than **Launch**, click the down arrow to the right and click **Launch**.



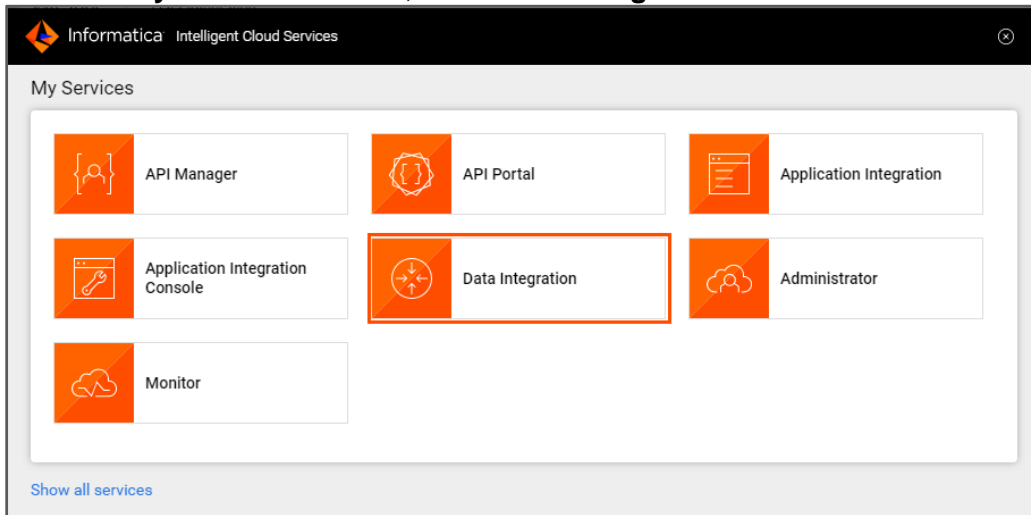
**Note:** Follow this step, if you have navigated away from login page.

3. Enter your login credentials and click **Log In**.



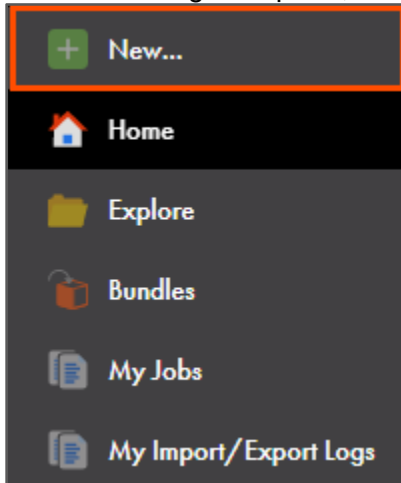
The login page for Informatica Intelligent Cloud Services is displayed. It features a white login box centered on a background image of a modern building's interior with a complex, branching structural design. The login box has a black header with the Informatica logo and the text "Informatica Intelligent Cloud Services". Below the header, there are two input fields: "Username:" with the email "info.ondemand@gmail.com" and "Password:" with masked characters. A blue "Log In" button is positioned below the password field. Underneath the button, there are two links: "Don't have an account?" and "Forgot your password?". At the bottom of the login box, there is a copyright notice "Copyright © 1993-2019 Informatica LLC. All Rights Reserved." and two more links: "Privacy Policy" and "Check the system status".

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

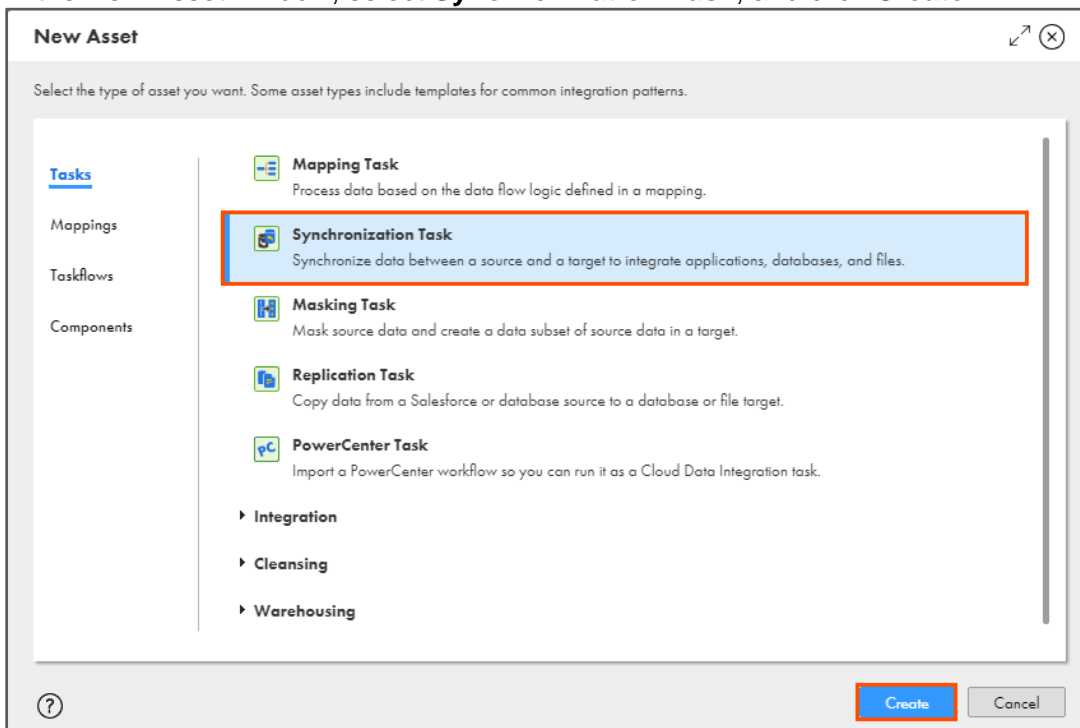




5. From the Navigation pane, select **New**.

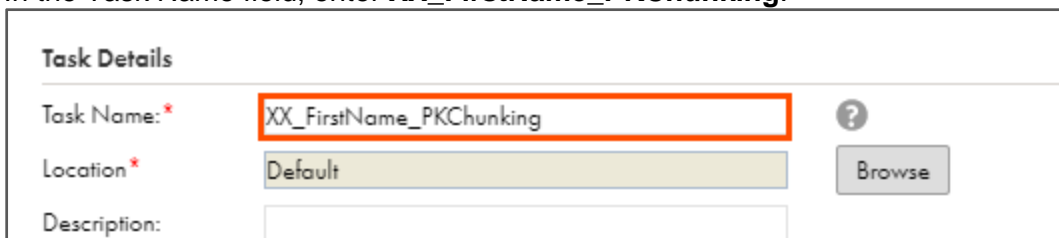


6. In the New Asset window, select **Synchronization Task**, and click **Create**.



**Note:** A six-step Synchronization Task wizard appears.

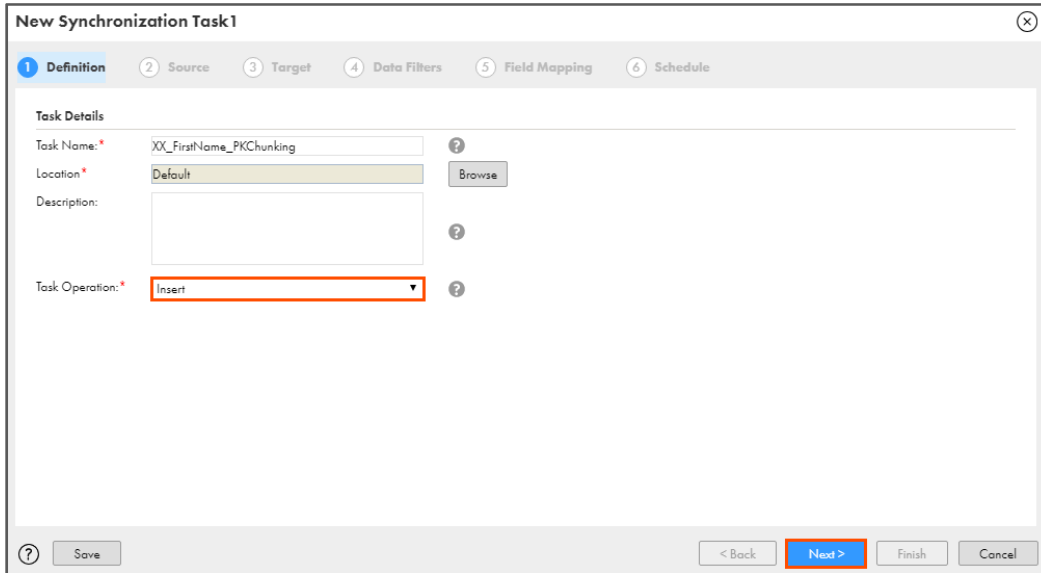
7. In the Task Name field, enter **XX\_FirstName\_PKChunking**.



The image shows a 'Task Details' form. The 'Task Name' field is highlighted with a red box and contains the text 'XX\_FirstName\_PKChunking'. Below it is the 'Location' field with a dropdown menu showing 'Default' and a 'Browse' button. The 'Description' field is empty.

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

9. 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\_PKChunking ?

Location: \* Default Browse ?

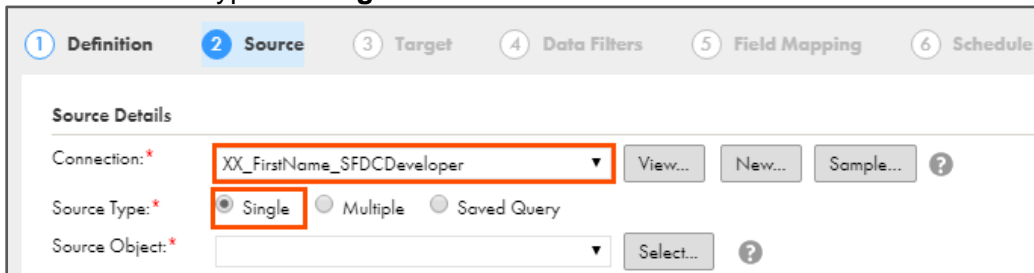
Description: ?

Task Operation: \* Insert ?

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

10. From the Connection drop-down, select **XX\_FirstName\_SFDCDeveloper**.

11. Retain Source Type as **Single**.



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

**Source Details**

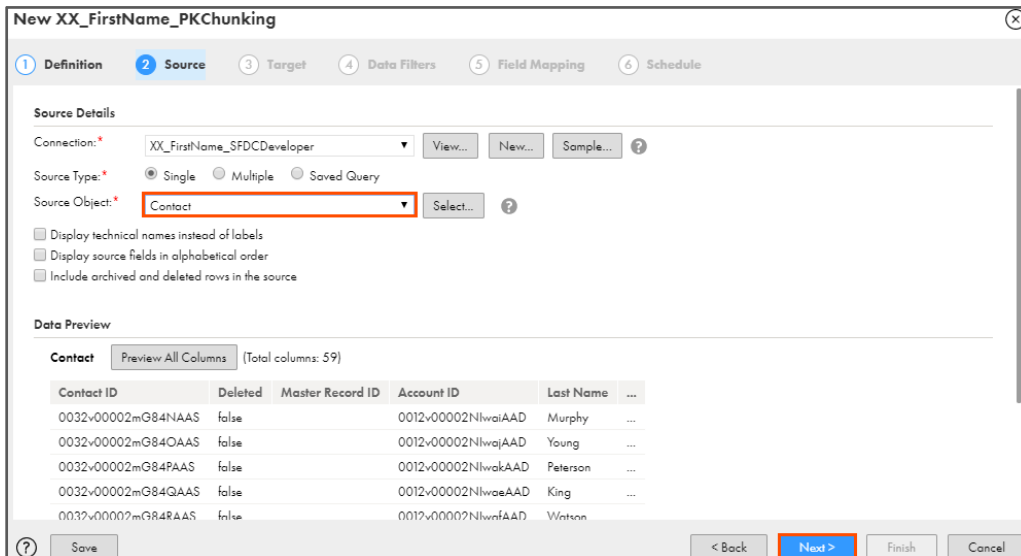
Connection: \* XX\_FirstName\_SFDCDeveloper View... New... Sample... ?

Source Type: \* ☒ Single ☐ Multiple ☐ Saved Query

Source Object: \* Select... ?

12. From the Source Object drop-down, select **Contact**.

13. Click **Next**.



**New XX\_FirstName\_PKChunking**

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 Object: \* Contact Select... ?

☐ Display technical names instead of labels

☐ Display source fields in alphabetical order

☐ Include archived and deleted rows in the source

**Data Preview**

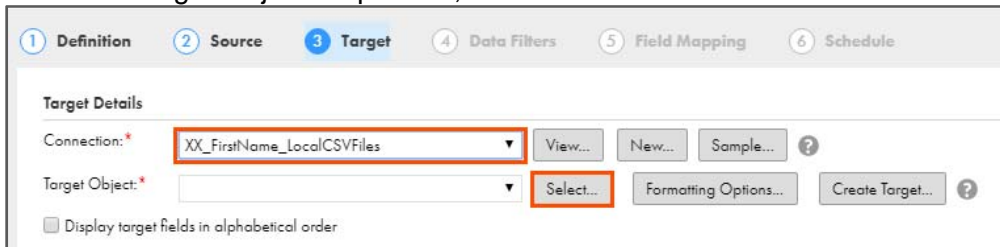
Contact Preview All Columns (Total columns: 59)

| Contact ID         | Deleted | Master Record ID | Account ID         | Last Name | ... |
|--------------------|---------|------------------|--------------------|-----------|-----|
| 0032v00002mG84NAAS | false   |                  | 0012v00002NhwaiAAD | Murphy    | ... |
| 0032v00002mG84OAAS | false   |                  | 0012v00002NhwajAAD | Young     | ... |
| 0032v00002mG84PAAS | false   |                  | 0012v00002NhwakAAD | Peterson  | ... |
| 0032v00002mG84QAAS | false   |                  | 0012v00002NhwaeAAD | King      | ... |
| 0032v00002mG84RAAS | false   |                  | 0012v00002NhwafAAD | Watson    | ... |

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

14. From the Connection drop-down, select **XX\_FirstName\_LocalCSVFiles**.

15. From the Target Object drop-down, click **Select**.



Target Details

Connection: \* **XX\_FirstName\_LocalCSVFiles** View... New... Sample... ?

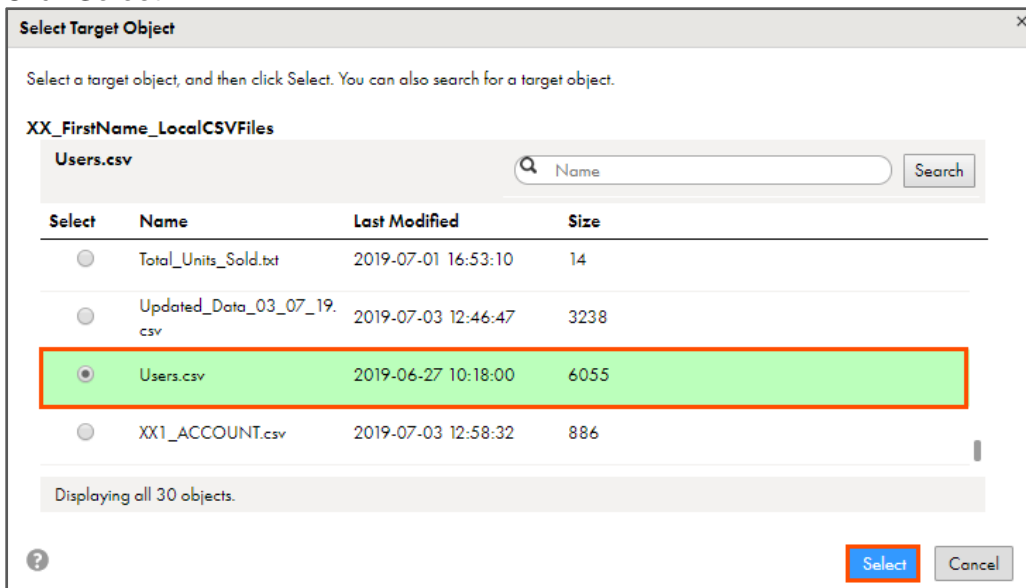
Target Object: \* **Select...** Formatting Options... Create Target... ?

☐ Display target fields in alphabetical order

**Note:** The Select Target Object window appears.

16. From the list, select **Users.csv**.

17. Click **Select**.



Select a target object, and then click Select. You can also search for a target object.

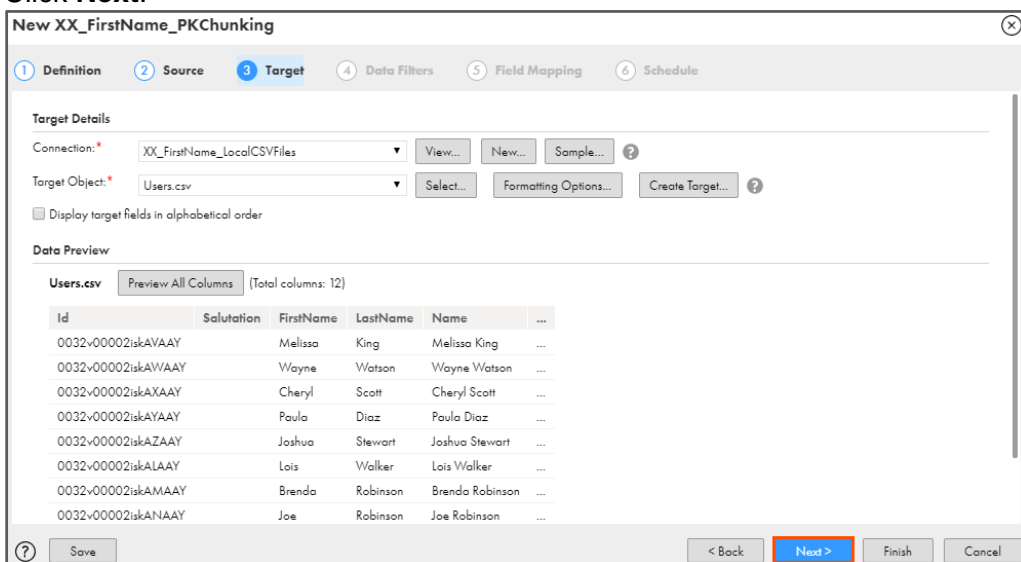
**XX\_FirstName\_LocalCSVFiles**

**Users.csv**

| Select                           | Name                      | Last Modified       | Size |
|----------------------------------|---------------------------|---------------------|------|
| <input type="radio"/>            | Total_Units_Sold.txt      | 2019-07-01 16:53:10 | 14   |
| <input type="radio"/>            | Updated_Data_03_07_19.csv | 2019-07-03 12:46:47 | 3238 |
| <input checked="" type="radio"/> | <b>Users.csv</b>          | 2019-06-27 10:18:00 | 6055 |
| <input type="radio"/>            | XX1_ACCOUNT.csv           | 2019-07-03 12:58:32 | 886  |

Displaying all 30 objects.

18. Click **Next**.



**New XX\_FirstName\_PKChunking**

Target Details

Connection: \* **XX\_FirstName\_LocalCSVFiles** View... New... Sample... ?

Target Object: \* **Users.csv** Select... Formatting Options... Create Target... ?

☐ Display target fields in alphabetical order

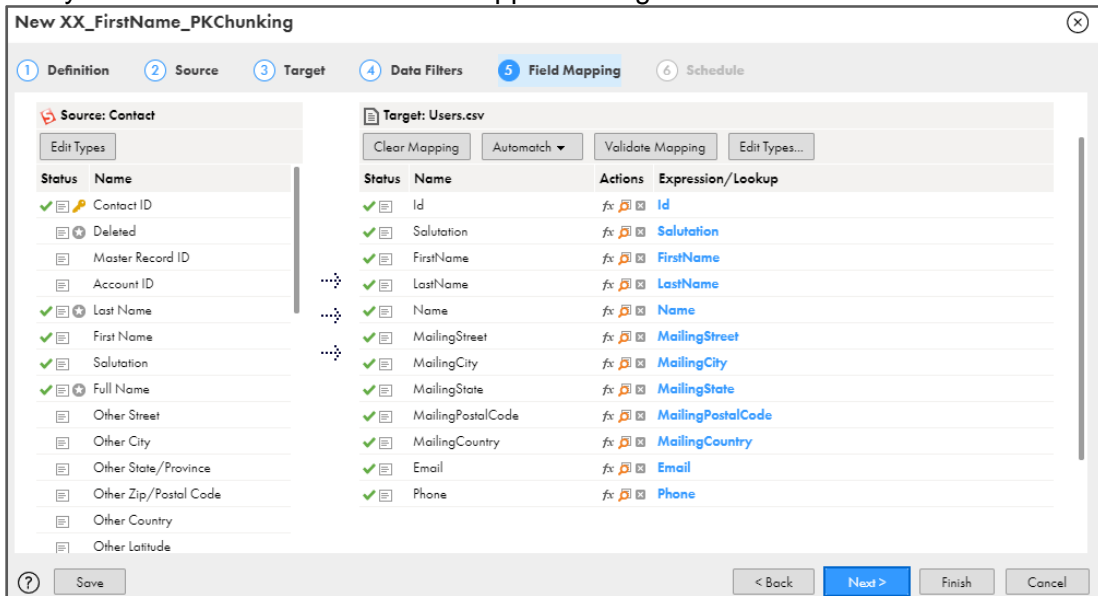
Data Preview

**Users.csv**  (Total columns: 12)

| Id                 | Salutation | FirstName | LastName | Name            | ... |
|--------------------|------------|-----------|----------|-----------------|-----|
| 0032v00002iskAVAAY |            | Melissa   | King     | Melissa King    | ... |
| 0032v00002iskAWAAY |            | Wayne     | Watson   | Wayne Watson    | ... |
| 0032v00002iskAXAAY |            | Cheryl    | Scott    | Cheryl Scott    | ... |
| 0032v00002iskAYAAY |            | Paula     | Diaz     | Paula Diaz      | ... |
| 0032v00002iskAZAAY |            | Joshua    | Stewart  | Joshua Stewart  | ... |
| 0032v00002iskALAAY |            | Lois      | Walker   | Lois Walker     | ... |
| 0032v00002iskAMAAY |            | Brenda    | Robinson | Brenda Robinson | ... |
| 0032v00002iskANAAY |            | Joe       | Robinson | Joe Robinson    | ... |

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

20. Verify that all the source fields are mapped to target fields.



**New XX\_FirstName\_PKChunking**

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

**Source: Contact**

Edit Types

| Status | Name                  |
|--------|-----------------------|
| ✓      | Contact ID            |
| ✗      | Deleted               |
| ✗      | Master Record ID      |
| ✗      | Account ID            |
| ✓      | Last Name             |
| ✓      | First Name            |
| ✓      | Salutation            |
| ✓      | Full Name             |
| ✗      | Other Street          |
| ✗      | Other City            |
| ✗      | Other State/Province  |
| ✗      | Other Zip/Postal Code |
| ✗      | Other Country         |
| ✗      | Other Latitude        |

... ⇄ ...

**Target: Users.csv**

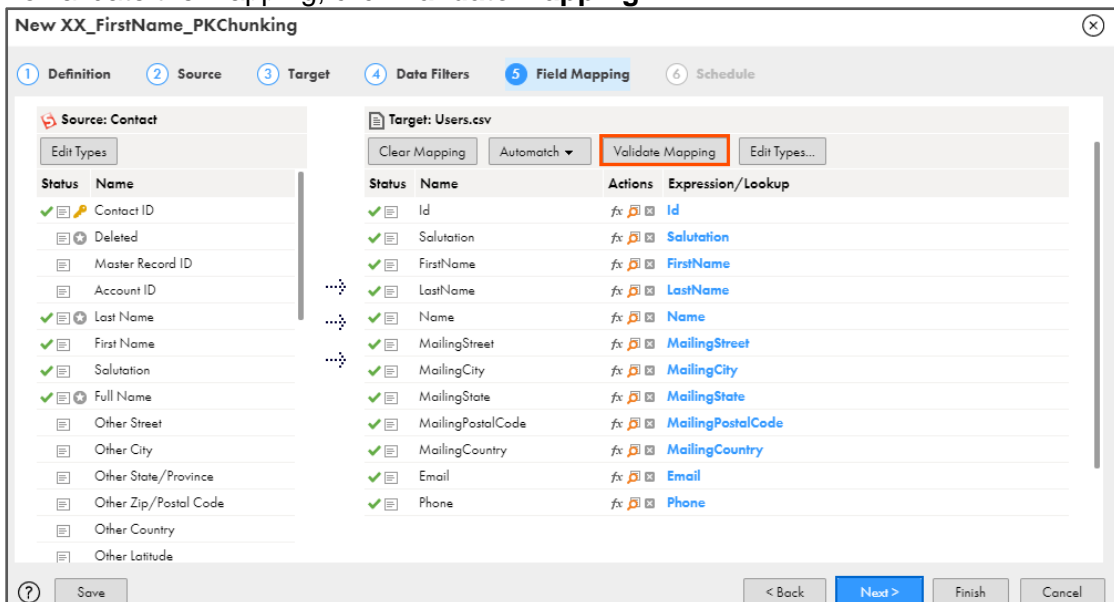
Clear Mapping Automatch Validate Mapping Edit Types...

| Status | Name              | Actions | Expression/Lookup |
|--------|-------------------|---------|-------------------|
| ✓      | Id                | fx [X]  | Id                |
| ✓      | Salutation        | fx [X]  | Salutation        |
| ✓      | FirstName         | fx [X]  | FirstName         |
| ✓      | LastName          | fx [X]  | LastName          |
| ✓      | Name              | fx [X]  | Name              |
| ✓      | MailingStreet     | fx [X]  | MailingStreet     |
| ✓      | MailingCity       | fx [X]  | MailingCity       |
| ✓      | MailingState      | fx [X]  | MailingState      |
| ✓      | MailingPostalCode | fx [X]  | MailingPostalCode |
| ✓      | MailingCountry    | fx [X]  | MailingCountry    |
| ✓      | Email             | fx [X]  | Email             |
| ✓      | Phone             | fx [X]  | Phone             |

Save < Back Next > Finish Cancel

**Note:** If the fields are not mapped, from Automatch drop-down, select **Exact Field Name**. If the fields are already mapped, do not re-map the fields.

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



**New XX\_FirstName\_PKChunking**

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

**Source: Contact**

Edit Types

| Status | Name                  |
|--------|-----------------------|
| ✓      | Contact ID            |
| ✗      | Deleted               |
| ✗      | Master Record ID      |
| ✗      | Account ID            |
| ✓      | Last Name             |
| ✓      | First Name            |
| ✓      | Salutation            |
| ✓      | Full Name             |
| ✗      | Other Street          |
| ✗      | Other City            |
| ✗      | Other State/Province  |
| ✗      | Other Zip/Postal Code |
| ✗      | Other Country         |
| ✗      | Other Latitude        |

... ⇄ ...

**Target: Users.csv**

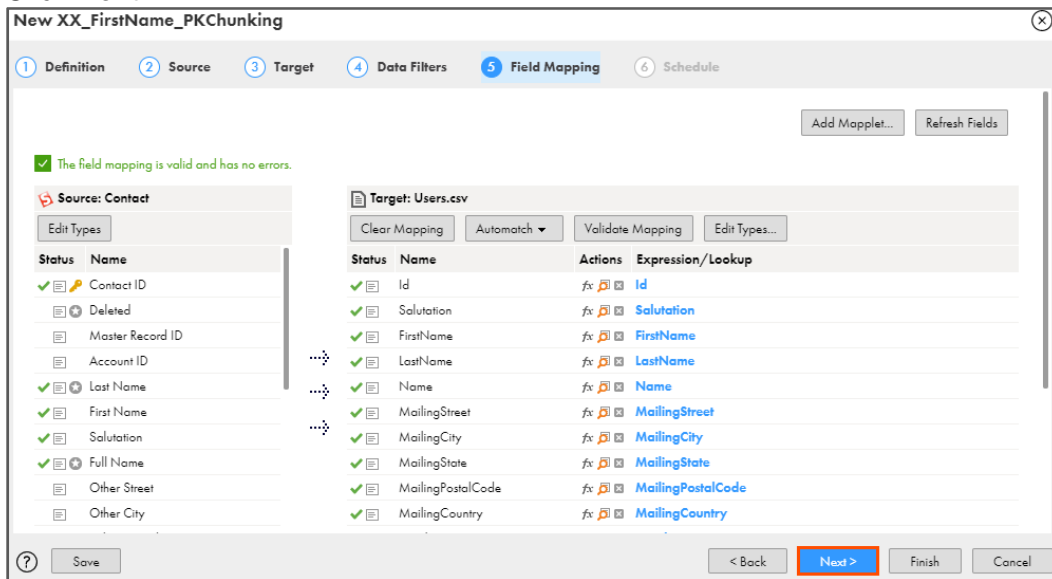
Clear Mapping Automatch **Validate Mapping** Edit Types...

| Status | Name              | Actions | Expression/Lookup |
|--------|-------------------|---------|-------------------|
| ✓      | Id                | fx [X]  | Id                |
| ✓      | Salutation        | fx [X]  | Salutation        |
| ✓      | FirstName         | fx [X]  | FirstName         |
| ✓      | LastName          | fx [X]  | LastName          |
| ✓      | Name              | fx [X]  | Name              |
| ✓      | MailingStreet     | fx [X]  | MailingStreet     |
| ✓      | MailingCity       | fx [X]  | MailingCity       |
| ✓      | MailingState      | fx [X]  | MailingState      |
| ✓      | MailingPostalCode | fx [X]  | MailingPostalCode |
| ✓      | MailingCountry    | fx [X]  | MailingCountry    |
| ✓      | Email             | fx [X]  | Email             |
| ✓      | Phone             | fx [X]  | Phone             |

Save < Back Next > Finish Cancel

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

22. Click **Next**.



The field mapping is valid and has no errors.

**Source: Contact**

| Status | Name             |
|--------|------------------|
| ✓      | Contact ID       |
| ✗      | Deleted          |
| ✗      | Master Record ID |
| ✗      | Account ID       |
| ✓      | Last Name        |
| ✓      | First Name       |
| ✓      | Salutation       |
| ✓      | Full Name        |
| ✗      | Other Street     |
| ✗      | Other City       |

**Target: Users.csv**

| Status | Name              | Actions | Expression/Lookup |
|--------|-------------------|---------|-------------------|
| ✓      | Id                | fx      | Id                |
| ✓      | Salutation        | fx      | Salutation        |
| ✓      | FirstName         | fx      | FirstName         |
| ✓      | LastName          | fx      | LastName          |
| ✓      | Name              | fx      | Name              |
| ✓      | MailingStreet     | fx      | MailingStreet     |
| ✓      | MailingCity       | fx      | MailingCity       |
| ✓      | MailingState      | fx      | MailingState      |
| ✓      | MailingPostalCode | fx      | MailingPostalCode |
| ✓      | MailingCountry    | fx      | MailingCountry    |

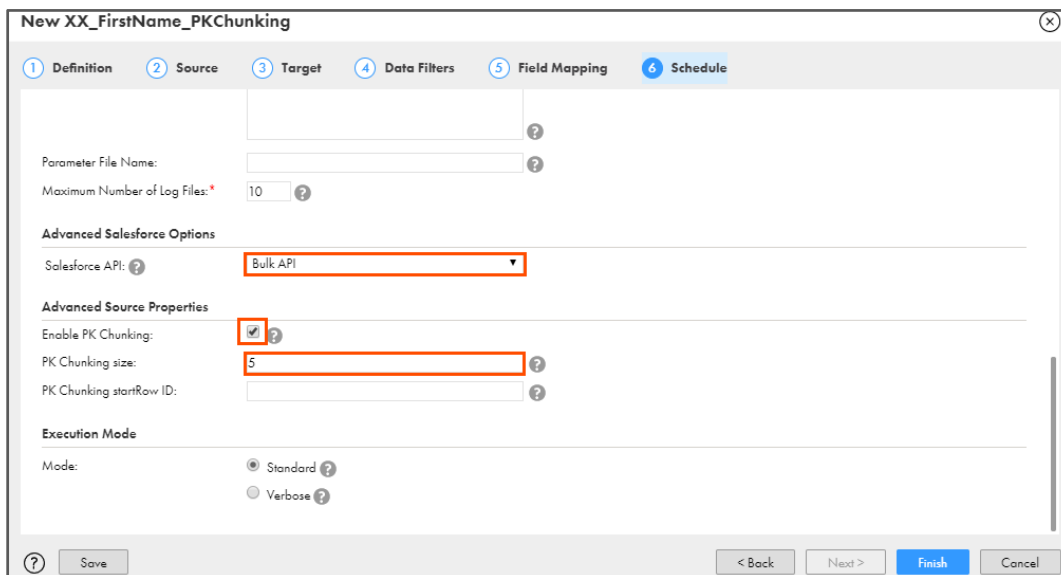
Buttons: Add Mapplet..., Refresh Fields, Save, < Back, **Next >**, Finish, Cancel

23. Scroll down to **Advanced Salesforce Options**.

24. From the Salesforce API drop-down, select **Bulk API**.

25. Select **Enable PK Chunking**.

26. In the PK Chunking size field, enter **5**.



**Advanced Salesforce Options**

Salesforce API: **Bulk API**

**Advanced Source Properties**

Enable PK Chunking: ☒

PK Chunking size: **5**

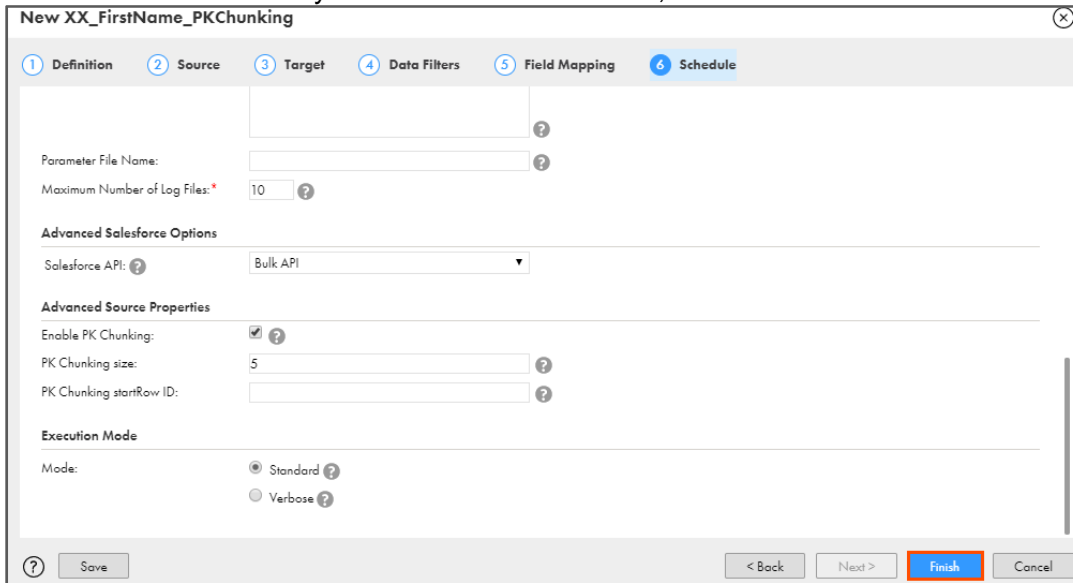
PK Chunking startRow ID:

**Execution Mode**

Mode: ☒ Standard ☐ Verbose

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

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



New XX\_FirstName\_PKChunking

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

Parameter File Name:

Maximum Number of Log Files: 10

**Advanced Salesforce Options**

Salesforce API: Bulk API

**Advanced Source Properties**

Enable PK Chunking: ☒

PK Chunking size: 5


PK Chunking startRow ID:

**Execution Mode**

Mode: ☒ Standard ☐ Verbose

Save < Back Next > **Finish** Cancel

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



XX\_FirstName\_PKChunking Edit Run

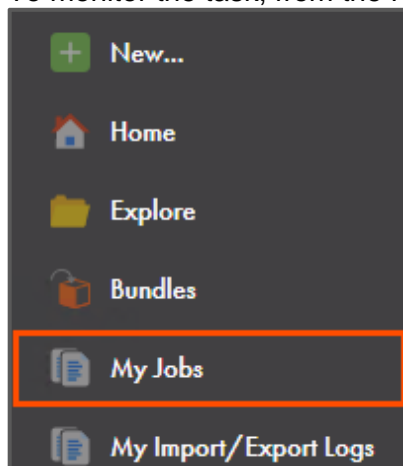
**Task Details**

Task Name: XX\_FirstName\_PKChunking

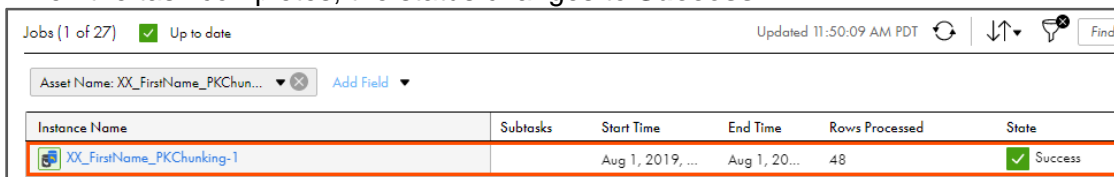
Location: Default

### Monitor the Synchronization Task:

29. To monitor the task, from the Navigation pane, click **My Jobs**.




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



Jobs (1 of 27) ☒ Up to date Updated 11:50:09 AM PDT


Asset Name: XX\_FirstName\_PKChun... Add Field

| Instance Name             | Subtasks | Start Time       | End Time     | Rows Processed | State                                       |
|---------------------------|----------|------------------|--------------|----------------|---------------------------------------------|
| XX_FirstName_PKChunking-1 |          | Aug 1, 2019, ... | Aug 1, 20... | 48             | <input checked="" type="checkbox"/> Success |


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

refresh the task status — the number of success rows changes according to data in Salesforce.

31. To view the job details, click on the Instance Name (**XX\_FirstName\_PKChunking-1**).

| Jobs (1 of 27) <span>✓ Up to date</span>                                                                    |          | Updated 11:50:09 AM PDT <span>↺</span> <span>↻</span> <span>🔍</span> <span>Find</span> |              |                |                        |
|-------------------------------------------------------------------------------------------------------------|----------|----------------------------------------------------------------------------------------|--------------|----------------|------------------------|
| Asset Name: XX_FirstName_PKChun... <span>✕</span> <span>Add Field</span>                                    |          |                                                                                        |              |                |                        |
| Instance Name                                                                                               | Subtasks | Start Time                                                                             | End Time     | Rows Processed | State                  |
|  XX_FirstName_PKChunking-1 |          | Aug 1, 2019, ...                                                                       | Aug 1, 20... | 48             | <span>✓ Success</span> |

32. Click **Download Session Log**. The file is available on your local machine.

| Job Properties |                                                                                                        | Results       |                                                                                                                 |
|----------------|--------------------------------------------------------------------------------------------------------|---------------|-----------------------------------------------------------------------------------------------------------------|
| Task Name:     | XX_FirstName_PKChunking                                                                                | State:        | <span>✓ Success</span>                                                                                          |
| Instance ID:   | 1                                                                                                      | Success Rows: | 48                                                                                                              |
| Task Type:     |  Synchronization Task | Error Rows:   | 0                                                                                                               |
| Started By:    |                                                                                                        | Session Log:  |  <b>Download Session Log</b> |
| Start Time:    |                                                                                                        |               |                                                                                                                 |

33. Open the session log file and observe the chunk size of 5.

```
log (8).txt - Notepad
File Edit Format View Help

Load Start Time: Sun Jun 02 21:08:56 2019

Target tables:

    Users_csv

READER_1_1_1> SalesforceReader_10045 [2019-06-02 21:08:57.856] [INFO] SOQL is [SELECT Id ,LastName ,FirstName ,Salutation ,Name ,MailingStreet ,MailingCity ,MailingState ,MailingPostalCode ,MailingCountry ,Phone ,Email FROM Contact].
READER_1_1_1> SalesforceConnection_10131 [2019-06-02 21:08:58.444] [INFO] Salesforce Bulk API PK Chunking Header :: Sforce-Enable-PKChunking: TRUE; chunkSize=5
READER_1_1_1> SalesforceReader_10093 [2019-06-02 21:09:00.684] [INFO] Status of batch [7512v00000JPuSmAAL] of job Id [7502v00000DeLkRAAV]: [Completed].
READER_1_1_1> SalesforceReader_10093 [2019-06-02 21:09:00.684] [INFO] Status of batch [7512v00000JPuTpAAL] of job Id [7502v00000DeLkRAAV]: [Completed].
READER_1_1_1> SalesforceReader_10093 [2019-06-02 21:09:00.684] [INFO] Status of batch [7512v00000JPuTtAAL] of job Id [7502v00000DeLkRAAV]: [Completed].
READER_1_1_1> SalesforceReader_10093 [2019-06-02 21:09:00.684] [INFO] Status of batch [7512v00000JPuTuAAL] of job Id [7502v00000DeLkRAAV]: [Completed].
```

*This concludes the lab.*





## Module 13: Hierarchical Connectivity

### Lab 13-1: Creating a Mapping using a REST V2 Connector

#### Overview:

REST is 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:

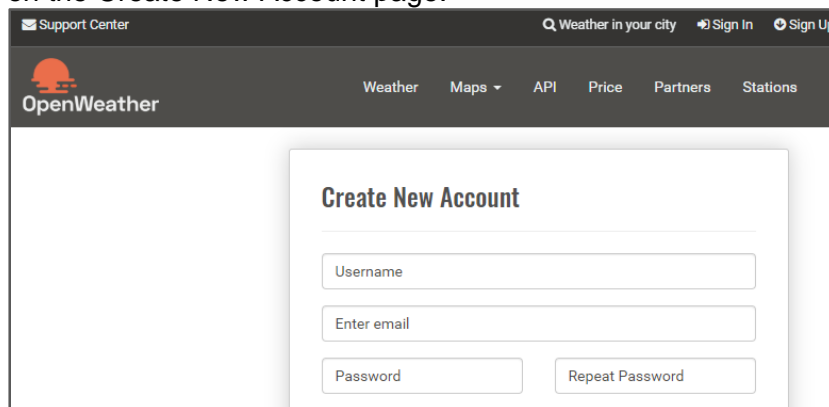
1. Copy the **Swagger\_api\_openweathermap\_org\_072248.json** file provided with this lab and place the file in your flat file directory (**C:\ICS LabFiles**).

##### Signup to Access OpenWeatherAPI:

2. Open a web browser and enter the following URL.  
[https://home.openweathermap.org/users/sign\\_up](https://home.openweathermap.org/users/sign_up)

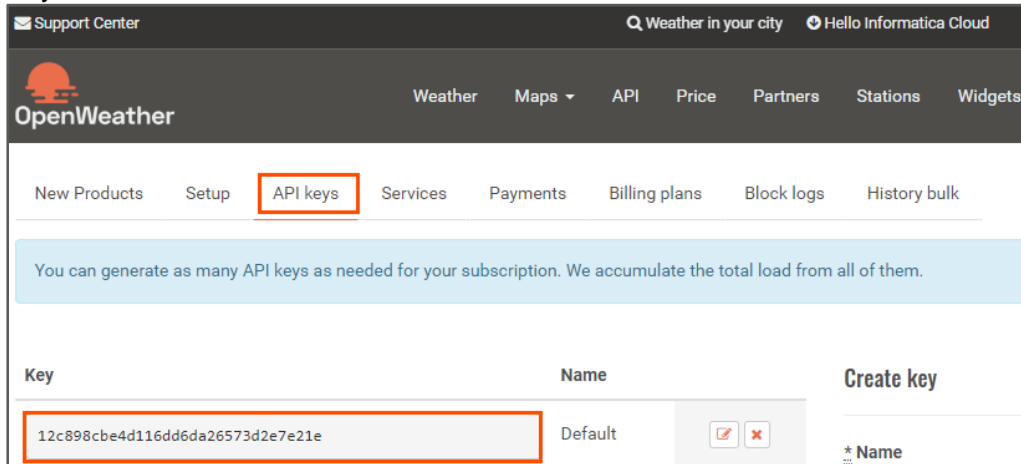
**Note:** You can bookmark this link for future use.

3. To create a new account in OpenWeather, enter your username, e-mail, and password on the Create New Account page.

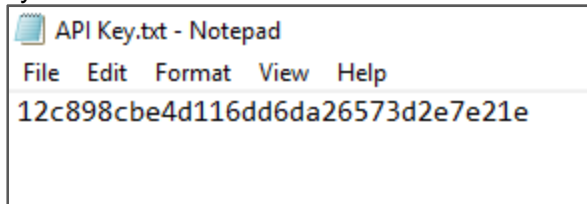


**Note:** After you create an account, you can access your unique API key.

- To access your unique API Key, select **API Keys** tab, and copy the API key from the Key field.

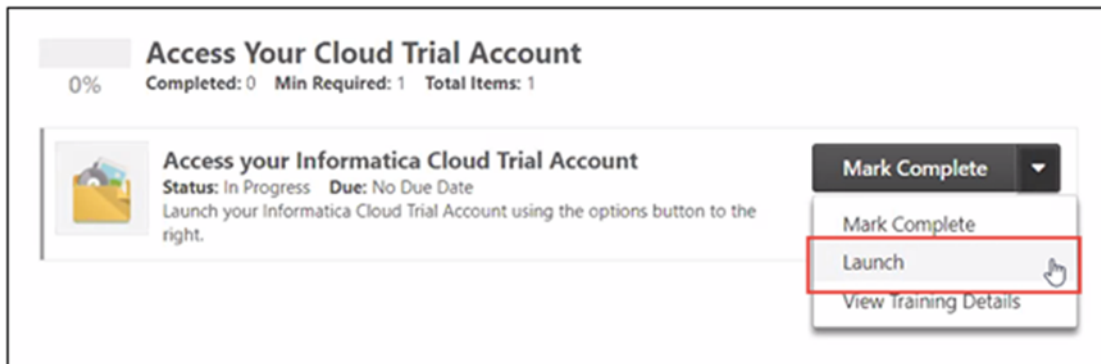


- Paste the API key in a notepad and save the notepad file to a suitable location on your system.



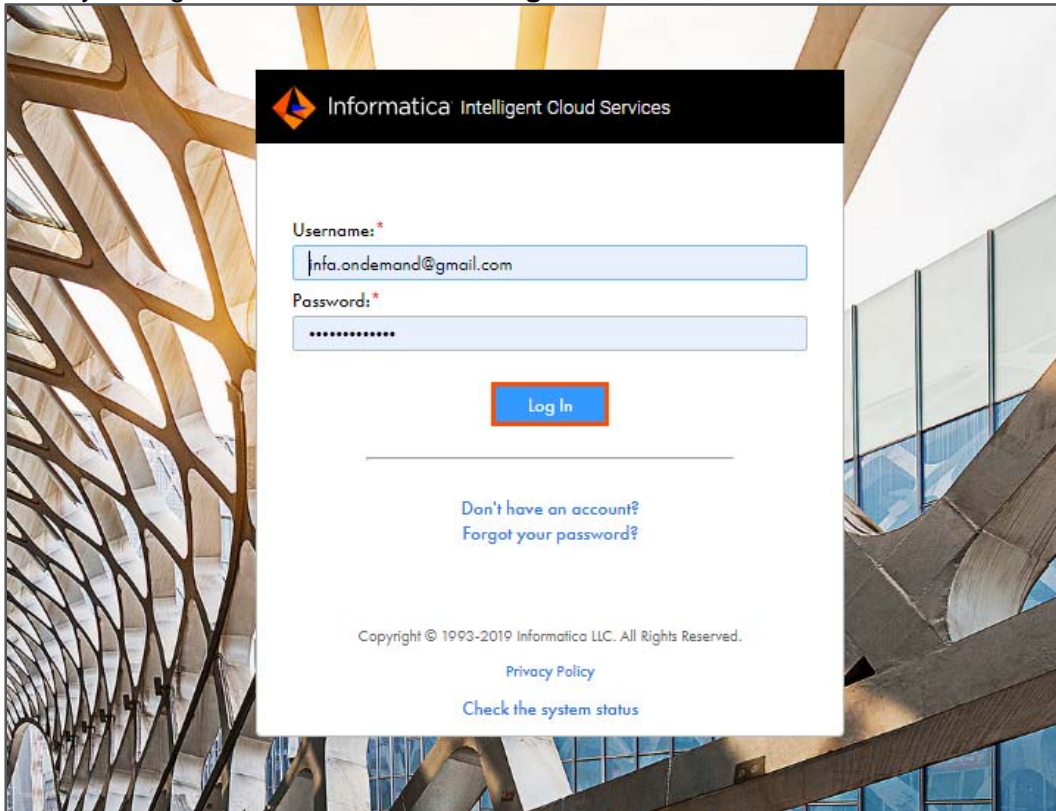
### Enable REST V2 Connector:

- Access your cloud trial account by clicking **Launch** in your option Menu. If the option menu is labeled anything other than **Launch**, click the down arrow to the right and click **Launch**.



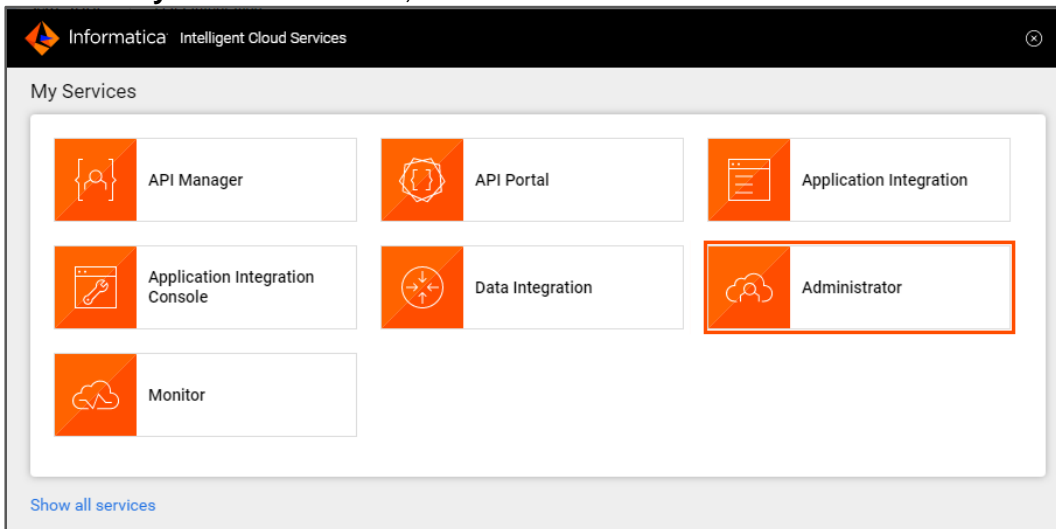
**Note:** Follow this step, if you have navigated away from the login page.

7. Enter your login credentials and click **Log In**.

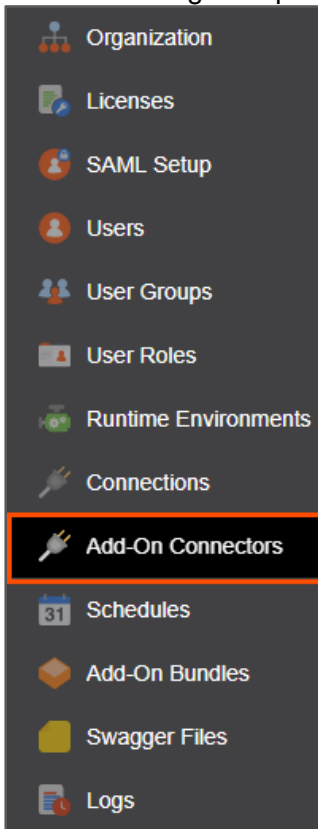


The login page features a white central panel with a black header bar containing the Informatica logo and the text "Informatica Intelligent Cloud Services". Below the header, there are two input fields: "Username:" with the value "info.ondemand@gmail.com" and "Password:" with masked characters. A blue "Log In" button is positioned below the password field. Underneath the button, there are two links: "Don't have an account?" and "Forgot your password?". At the bottom of the panel, there is a copyright notice "Copyright © 1993-2019 Informatica LLC. All Rights Reserved.", a "Privacy Policy" link, and a "Check the system status" link. The background of the page shows a modern building with a complex, organic structural design.

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

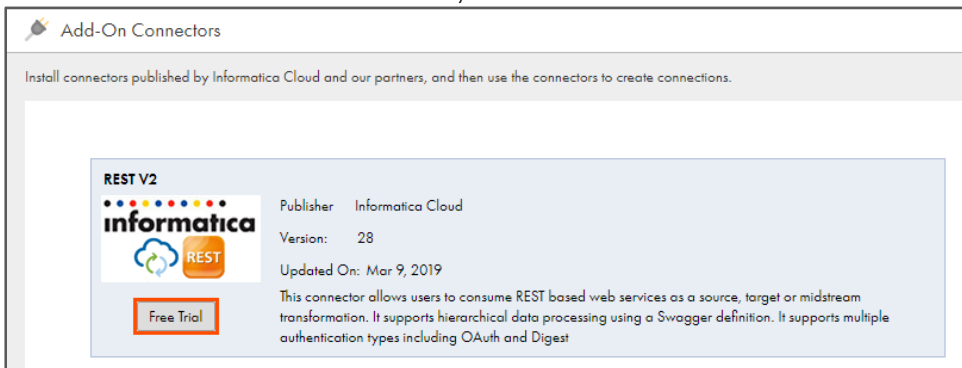


9. From the Navigation pane, select **Add-On Connectors**.



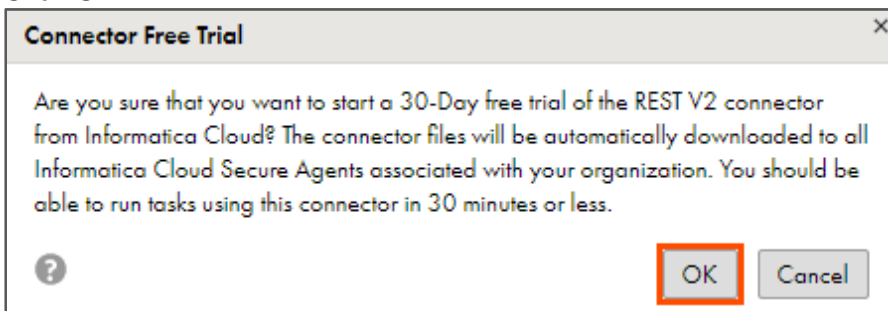
10. Scroll-down and locate REST V2 Connector.

11. To enable the REST V2 Connector, click **Free Trial**.



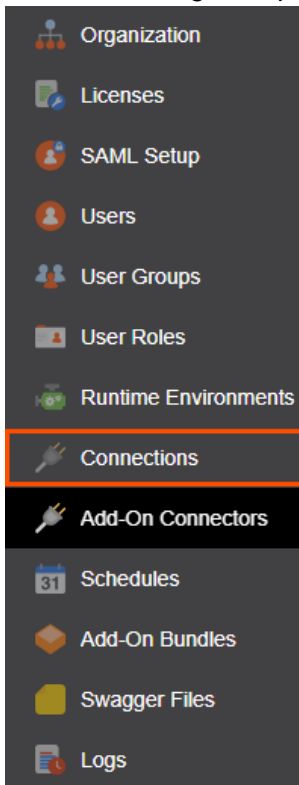
**Note:** The Connector Free Trial window appears.

12. Click **OK**.

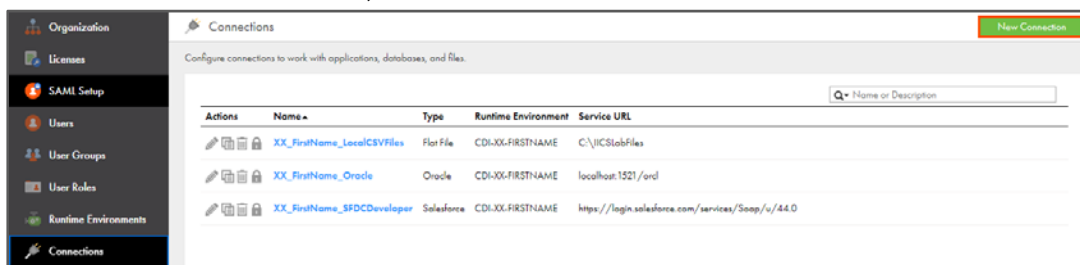


## Create REST Connection:

13. From the Navigation pane, select **Connections**.



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



15. In the Name field, enter **XX\_FirstName\_OpenWeather\_RESTv2**.

16. From the Type drop-down, select **REST V2 (Informatica Cloud)**.

### Connection Details

Connection Name: \*

XX\_FirstName\_OpenWeather\_RESTv2

Description:

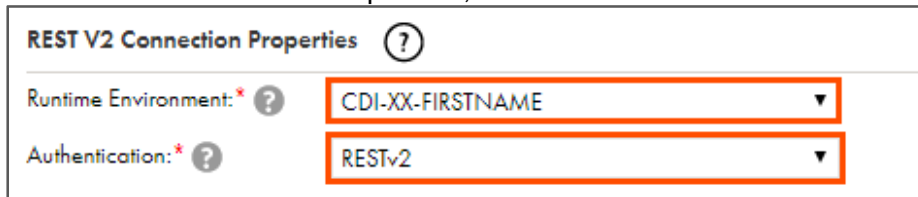
Type: \* ?

REST V2 (Informatica Cloud) ▼

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

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

18. From the Authentication drop-down, select **RESTv2**.



**REST V2 Connection Properties** ?

Runtime Environment: \* ? CDI-XX-FIRSTNAME ▼

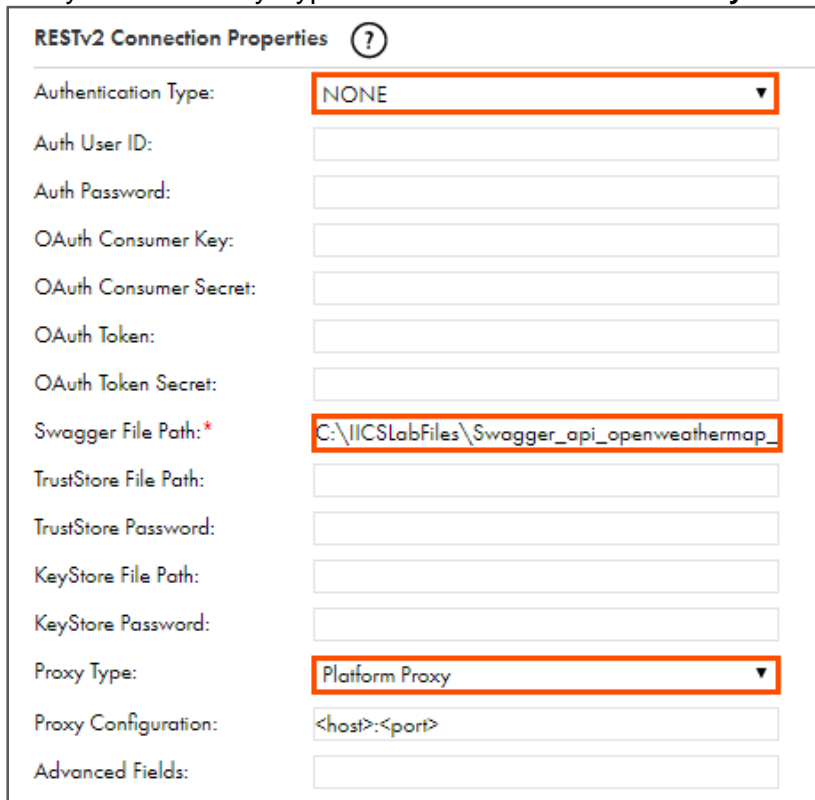
Authentication: \* ? RESTv2 ▼

**Note:** The RESTv2 Connection Properties section appears.

19. Verify that the Authentication Type is set to **NONE**.

20. In the Swagger File Path field, enter the following path of the json file (**C:\IICSLabFiles\Swagger\_api\_openweathermap\_org\_072248.json**).

21. Verify that the Proxy Type is selected as **Platform Proxy**.



**RESTv2 Connection Properties** ?

Authentication Type: NONE ▼

Auth User ID:

Auth Password:

OAuth Consumer Key:

OAuth Consumer Secret:

OAuth Token:

OAuth Token Secret:

Swagger File Path: \* C:\IICSLabFiles\Swagger\_api\_openweathermap\_org\_072248.json

TrustStore File Path:

TrustStore Password:

KeyStore File Path:

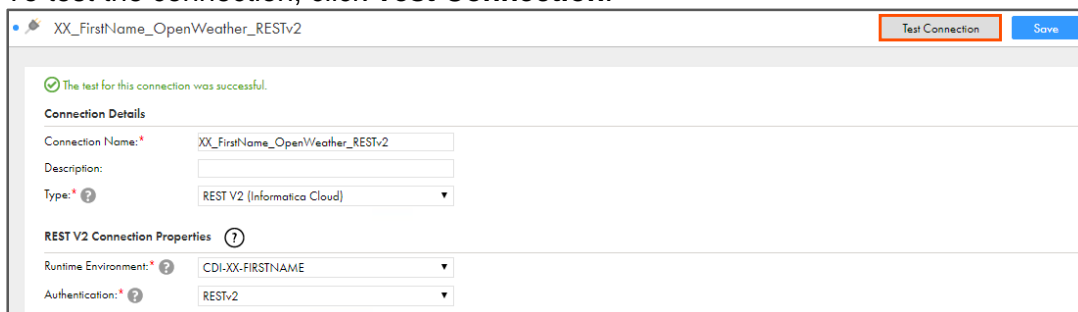
KeyStore Password:

Proxy Type: Platform Proxy ▼

Proxy Configuration: <host>:<port>

Advanced Fields:

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



XX\_FirstName\_OpenWeather\_RESTv2 Test Connection Save

✓ The test for this connection was successful.

**Connection Details**

Connection Name: \* XX\_FirstName\_OpenWeather\_RESTv2

Description:

Type: ? REST V2 (Informatica Cloud) ▼

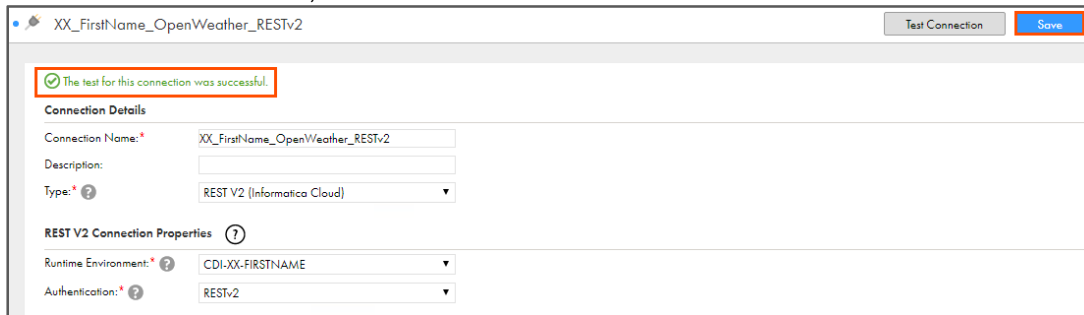
**REST V2 Connection Properties** ?

Runtime Environment: \* ? CDI-XX-FIRSTNAME ▼

Authentication: \* ? RESTv2 ▼

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

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



XX\_FirstName\_OpenWeather\_RESTv2

Test Connection Save

✓ The test for this connection was successful.

**Connection Details**

Connection Name: \* XX\_FirstName\_OpenWeather\_RESTv2

Description:

Type: ? REST V2 (Informatica Cloud)

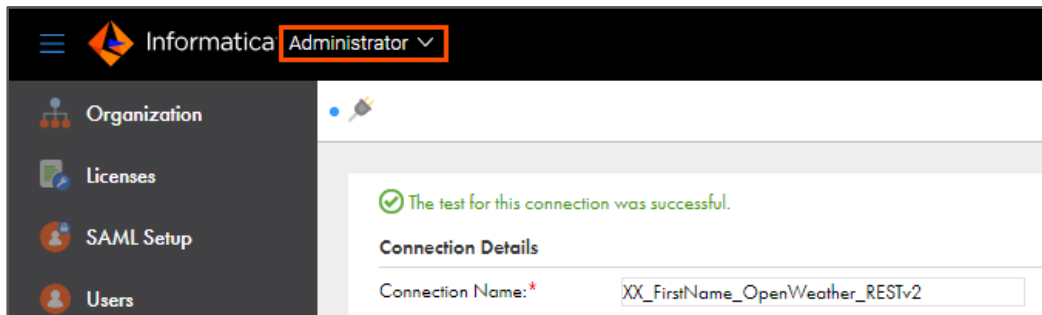
**REST V2 Connection Properties** ?

Runtime Environment: \* ? CDI-XX-FIRSTNAME

Authentication: \* ? RESTv2

### Create Mapping:

24. To switch between the available services, from the toolbar, select the current service **Administration**.



Informatica Administrator

Organization

Licenses

SAML Setup

Users

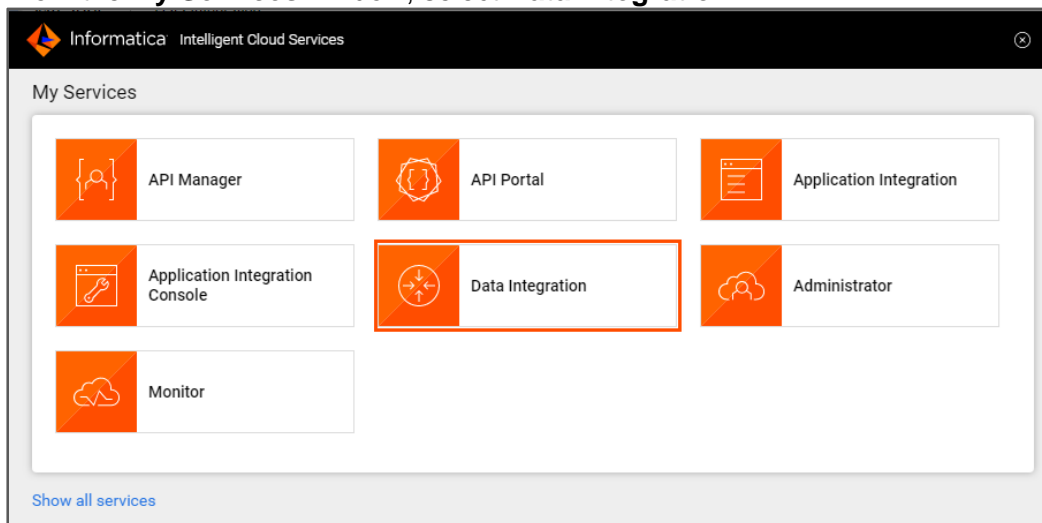
✓ The test for this connection was successful.

**Connection Details**

Connection Name: \* XX\_FirstName\_OpenWeather\_RESTv2

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

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



Informatica Intelligent Cloud Services

My Services

API Manager

API Portal

Application Integration

Application Integration Console

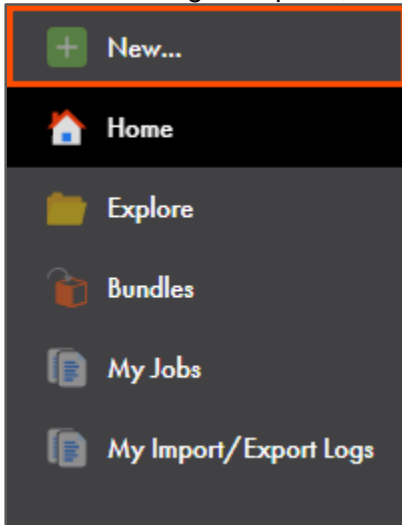
Data Integration

Administrator

Monitor

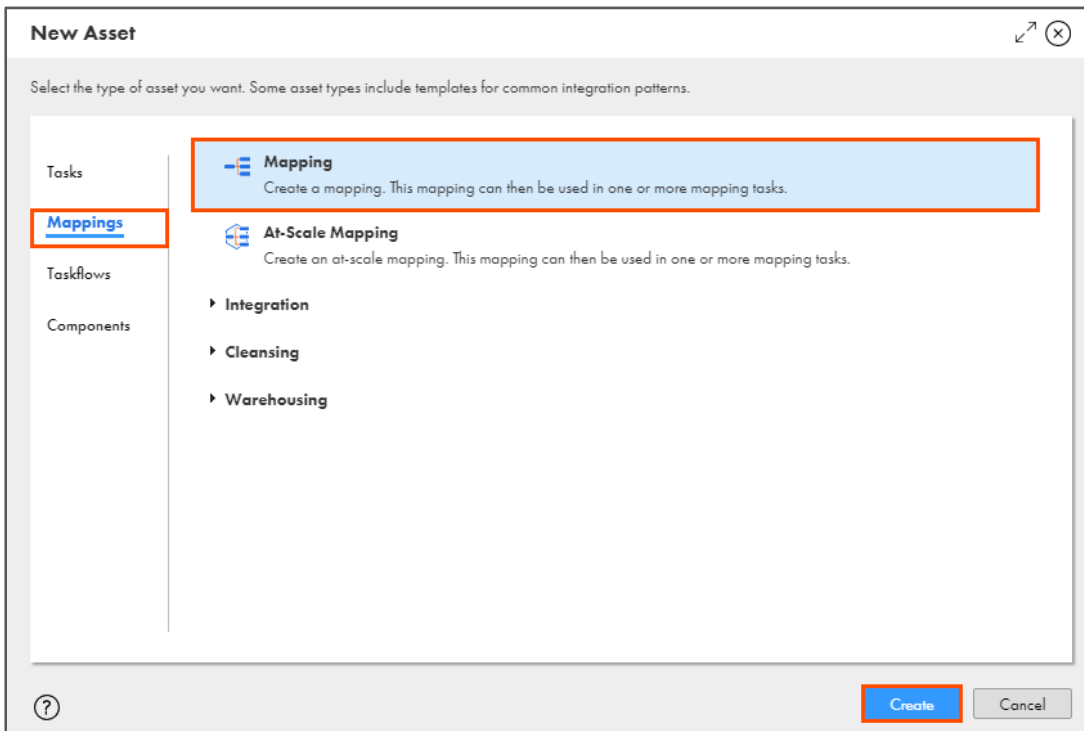
Show all services

26. From the Navigation pane, select **New**.



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

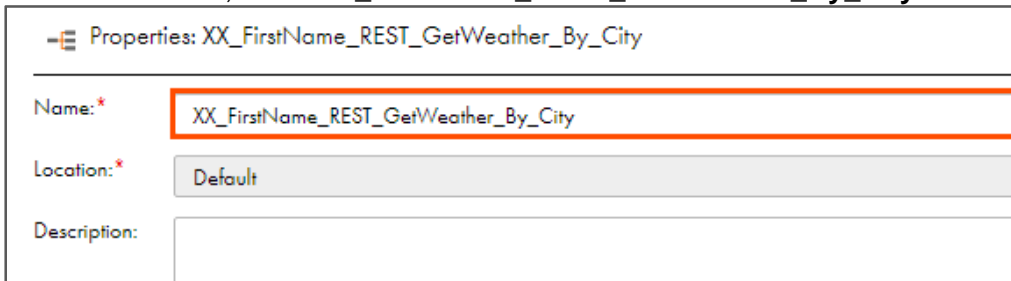
28. Click **Create**.



**Note:** The Mapping page appears.



29. In the Name field, enter **XX\_FirstName\_REST\_GetWeather\_By\_City**.



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

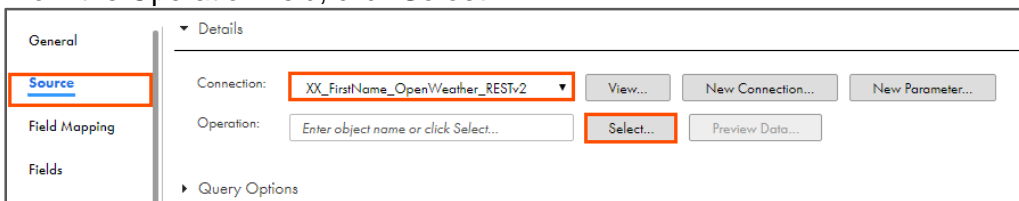
31. In the **General** section of Source properties, retain the Name as **Source**.



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

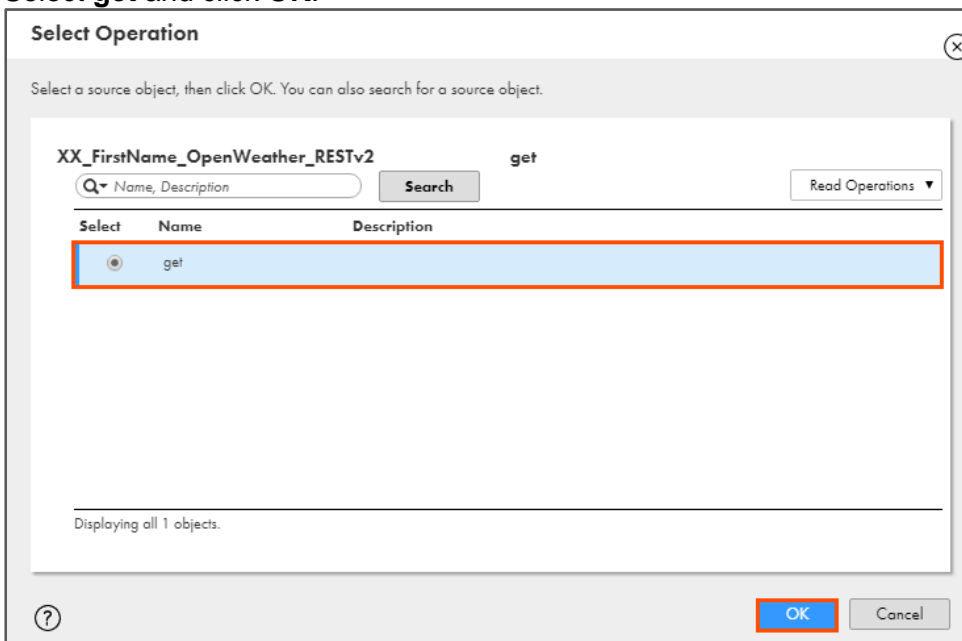
33. From the Connection drop-down, select **XX\_FirstName\_OpenWeather\_RESTv2**.

34. From the Operation field, click **Select**.

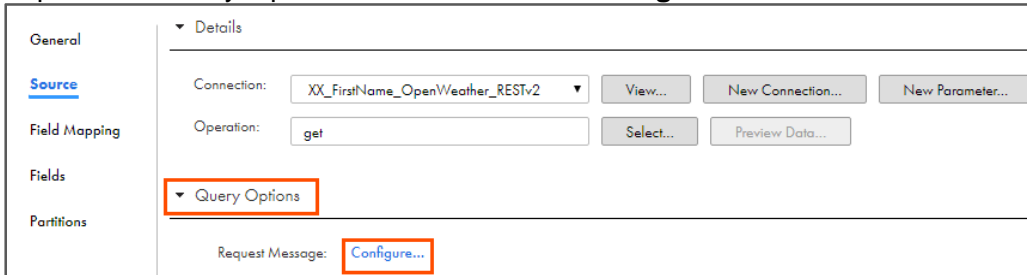


**Note:** The Select Operation window appears.

35. Select **get** and click **OK**.



36. Expand the Query Options section and click **Configure**.

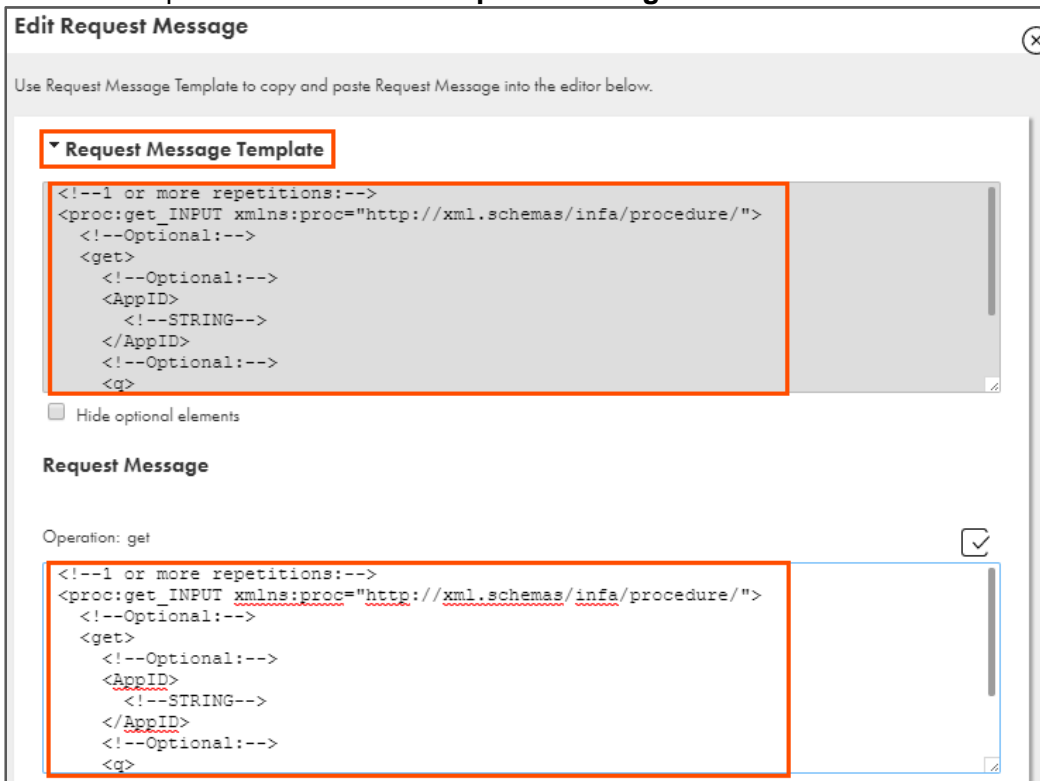


The screenshot shows a configuration window with a sidebar on the left containing 'General', 'Source', 'Field Mapping', 'Fields', and 'Partitions'. The 'Details' section on the right has a 'Query Options' dropdown menu highlighted with a red box. Below it, the 'Request Message' field has a 'Configure...' button also highlighted with a red box.

**Note:** The Edit Request Message window appears.

37. Expand the **Request Message Template** section and copy all the contents from the field.

38. Paste the copied contents in the **Request Message** field.



The screenshot shows the 'Edit Request Message' window. The 'Request Message Template' section is expanded, and its contents are copied to the 'Request Message' field. The 'Request Message' field is also expanded, and its contents are pasted from the template. The 'Request Message' field is highlighted with a red box.

39. In the Request Message field, in between **<AppID> </AppID>**, enter the unique API Key that you saved in the notepad file in step 5.

40. 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>

```

41. To validate the message, click .
- Note:** A message appears that the Request is valid.
42. Click **OK**.

**Edit Request Message**

Use Request Message Template to copy and paste Request Message into the editor below.

 **Request is valid**

▼ **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

```

<!--Optional:-->
<AppID>
12c898cbe4d116dd6da26573d2e7e21e
</AppID>
<!--Optional:-->
<q>
London
</q>
</get>
</proc:get_INPUT>

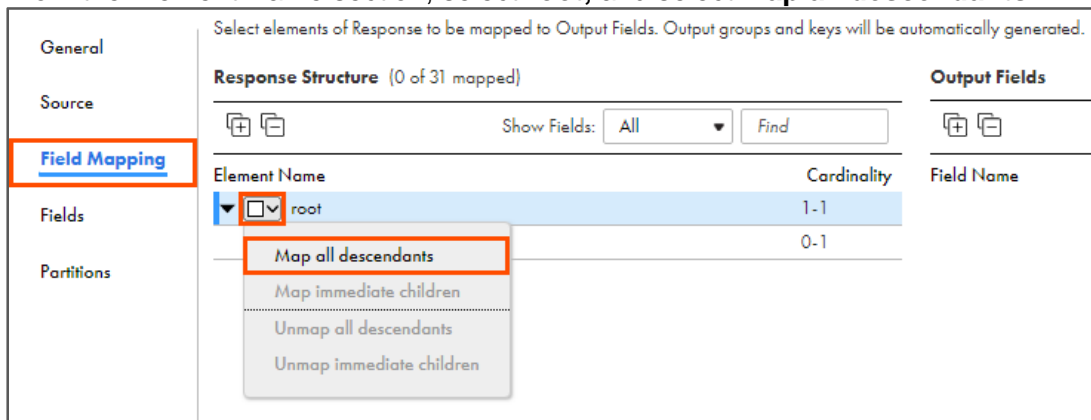
```



 **OK** Cancel

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

44. From the Element Name section, select **root**, and select **Map all descendants**.



Select elements of Response to be mapped to Output Fields. Output groups and keys will be automatically generated.

**Response Structure** (0 of 31 mapped)

Show Fields: All Find

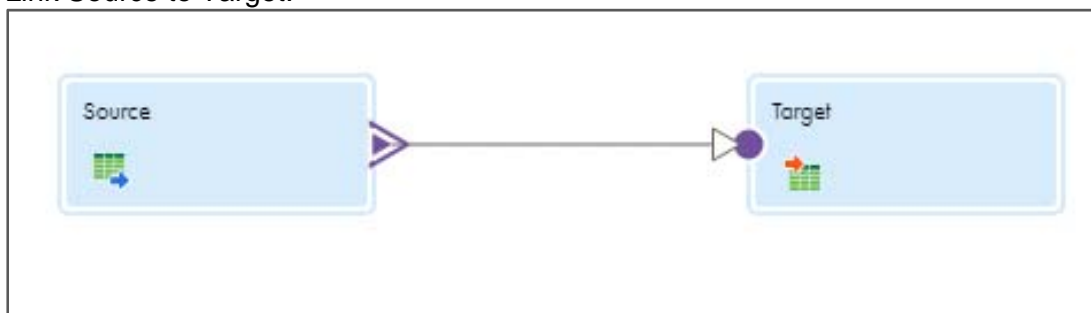
| Element Name                             | Cardinality |
|------------------------------------------|-------------|
| <input checked="" type="checkbox"/> root | 1-1         |
|                                          | 0-1         |

Map all descendants  
Map immediate children  
Unmap all descendants  
Unmap immediate children

**Output Fields**

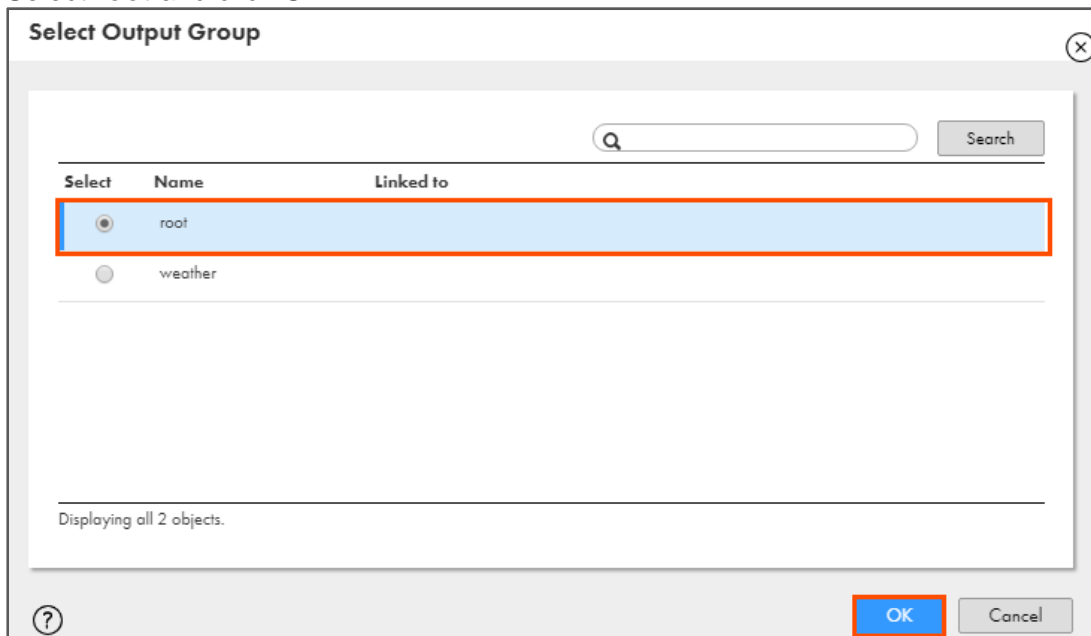
| Field Name |
|------------|
|------------|

45. Link Source to Target.



**Note:** A Select Output Group window appears.

46. Select **root** and click **OK**.



Select Output Group

Search

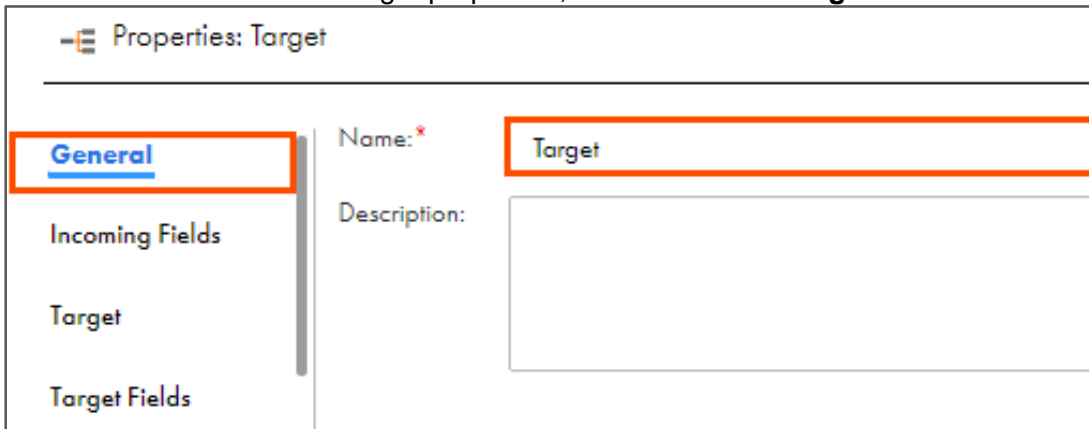
| Select                           | Name    | Linked to |
|----------------------------------|---------|-----------|
| <input checked="" type="radio"/> | root    |           |
| <input type="radio"/>            | weather |           |

Displaying all 2 objects.

OK Cancel

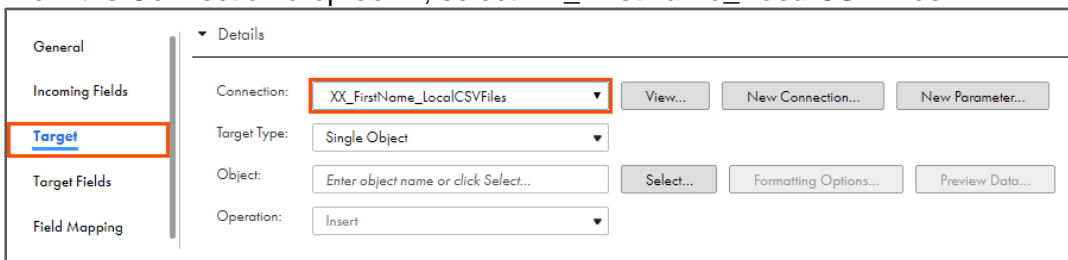
47. To configure the target, from the mapping canvas, click the **Target** transformation.

48. In the **General** section of Target properties, retain Name as **Target**.



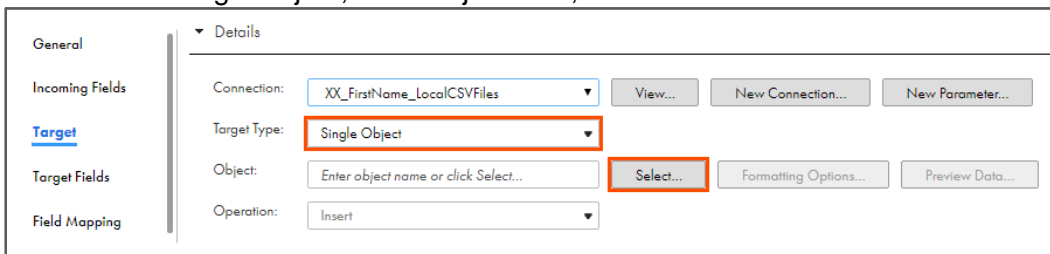
49. From the properties pane, click **Target**.

50. From the Connection drop-down, select **XX\_FirstName\_LocalCSVFiles**.



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

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

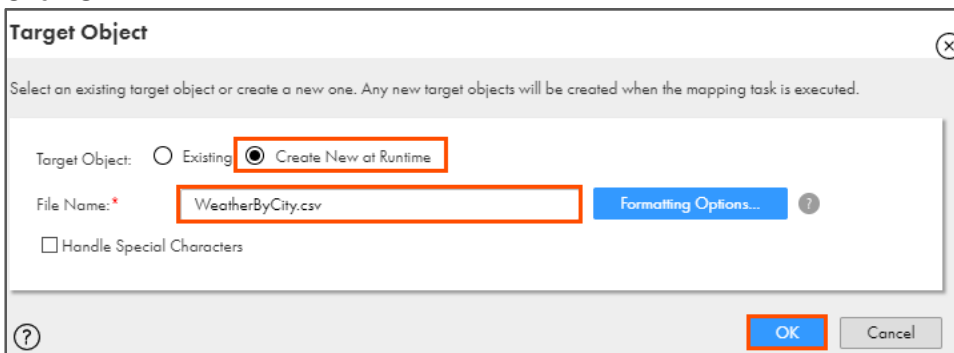


**Note:** The Target Object window appears.

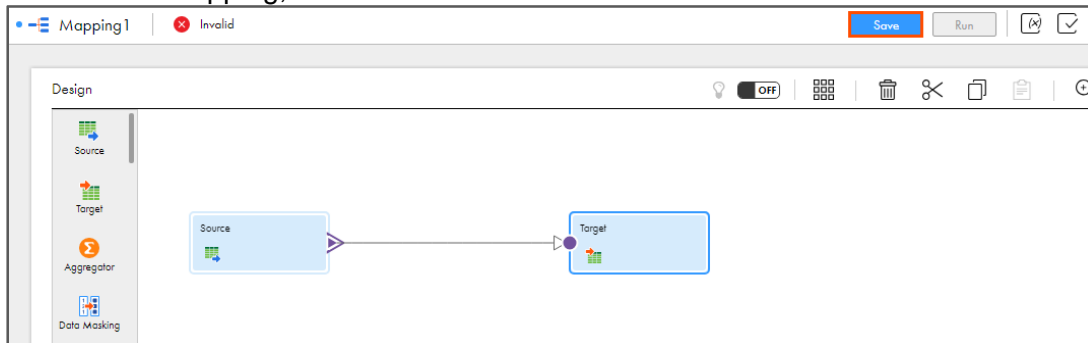
53. In the Target Object window, select **Create New at Runtime**.

54. Enter **WeatherByCity.csv** as File Name.

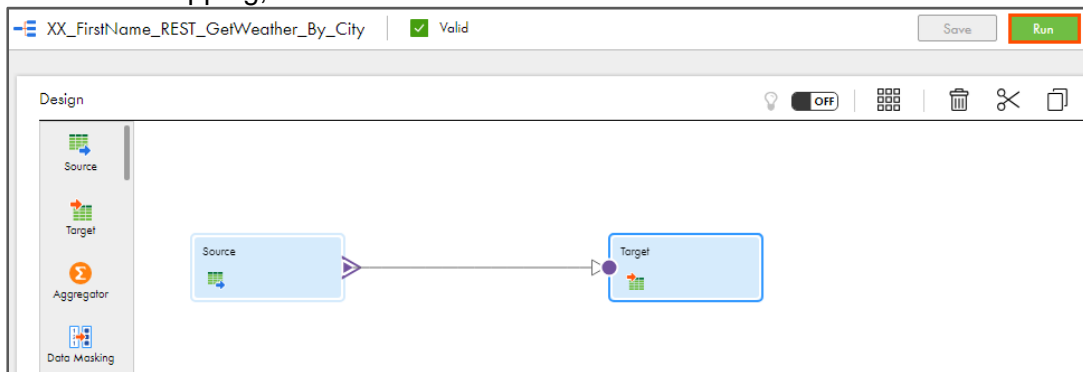
55. Click **OK**.



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



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

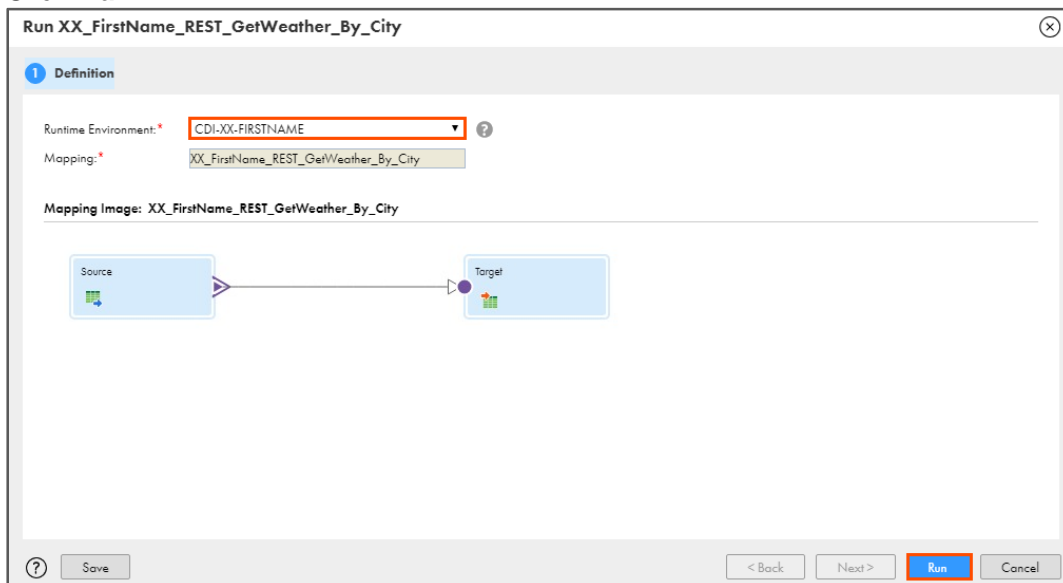


**Note:** The Run mapping window appears.

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

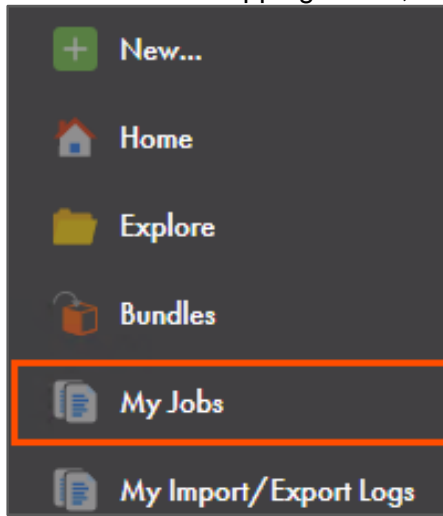
**Note:** The Runtime Environment name will be in format CDI-XX-FIRSTNAME.

59. Click **Run**.



### Monitor Status:

60. To monitor the mapping status, from the Navigation pane, click **My Jobs**.



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

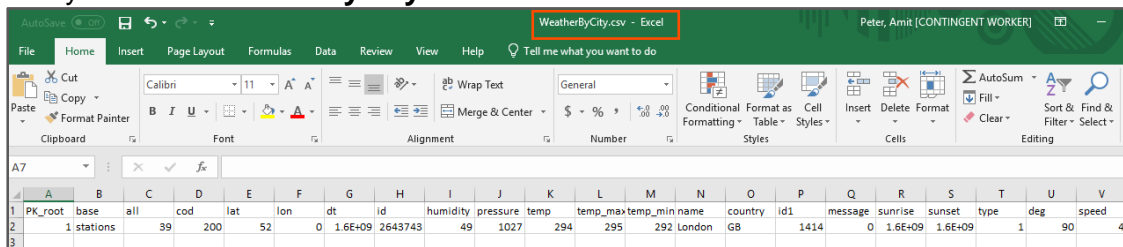
Jobs (1 of 28) ✓ Up to date Updated 12:21:23 PM PDT ↺ ↻ 🔔 Find

Asset Name: XX\_FirstName\_REST\_G... ✕ Add Field ▼

| Instance Name                                           | Subtasks | Start Time       | End Time     | Rows Processed | State                  |
|---------------------------------------------------------|----------|------------------|--------------|----------------|------------------------|
| <span>[-]</span> XX_FirstName_REST_GetWeather_By_City-2 |          | Aug 4, 2019, ... | Aug 4, 20... | 1              | <span>✓</span> Success |

62. On your local machine, go to **C:\NICS LabFiles**.

63. Verify that the **WeatherByCity.csv** file contains 1 row and weather details of London.



|   | A       | B        | C   | D   | E   | F   | G       | H       | I        | J        | K    | L        | M        | N      | O       | P    | Q       | R       | S       | T    | U   | V     |
|---|---------|----------|-----|-----|-----|-----|---------|---------|----------|----------|------|----------|----------|--------|---------|------|---------|---------|---------|------|-----|-------|
| 1 | PK_root | base     | all | cod | lat | lon | dt      | id      | humidity | pressure | temp | temp_max | temp_min | name   | country | id1  | message | sunrise | sunset  | type | deg | speed |
| 2 | 1       | stations | 39  | 200 | 52  | 0   | 1.6E+09 | 2643743 | 49       | 1027     | 294  | 295      | 292      | London | GB      | 1414 | 0       | 1.6E+09 | 1.6E+09 | 1    | 90  | 4     |

*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

---

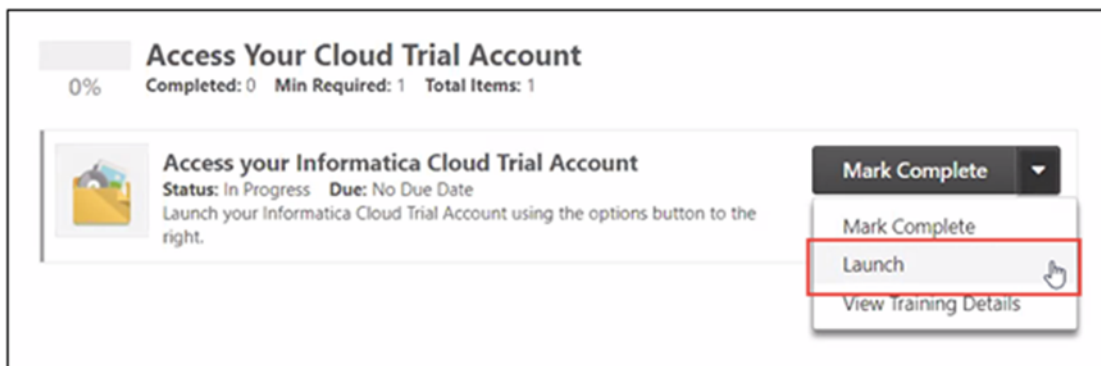
#### Tasks:

##### Copy Source File:

1. Copy the **Input.txt** file provided with this lab and place the file in your flat file directory (**C:\IICSLabFiles**).

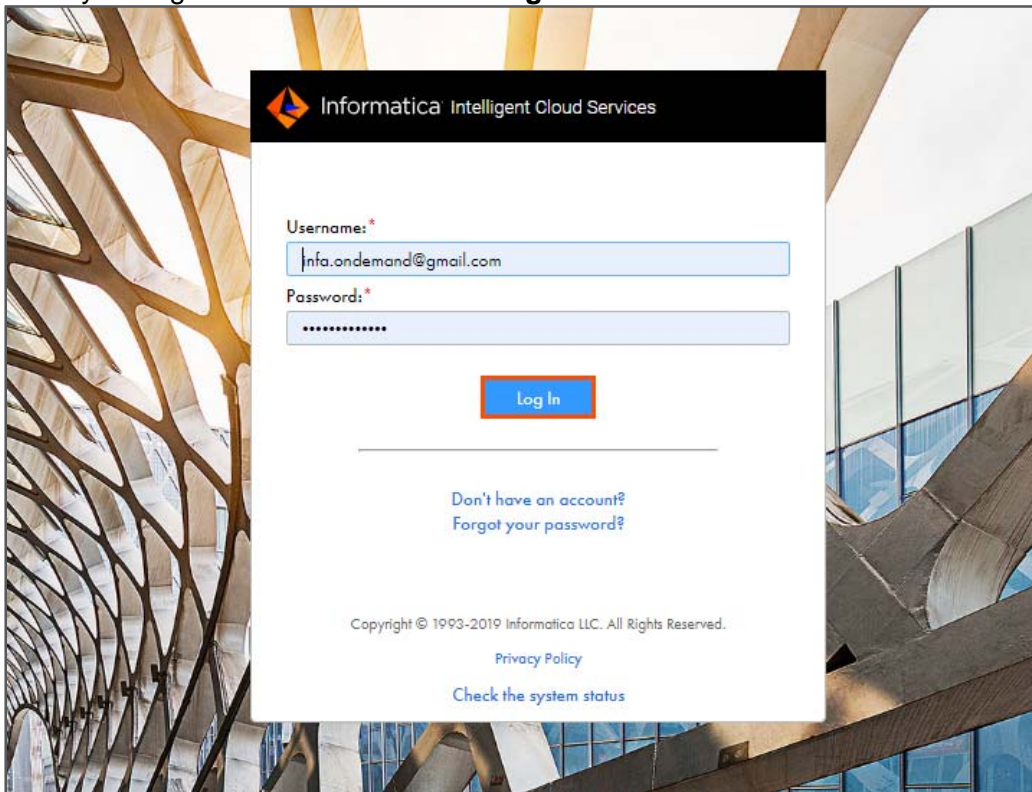
##### Create Business Service:

2. Access your cloud trial account by clicking **Launch** in your option Menu. If the option menu is labeled anything other than **Launch**, click the down arrow to the right and click **Launch**.



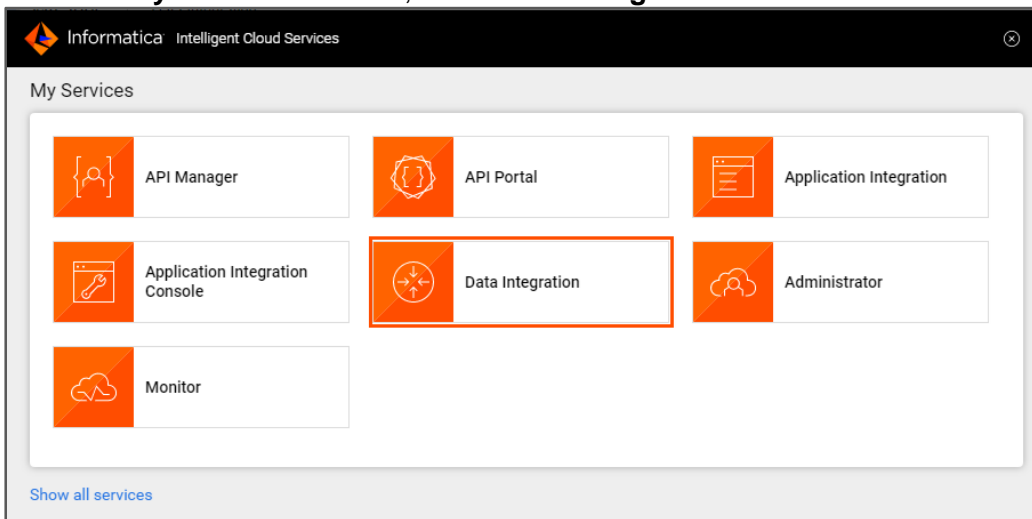
**Note:** Follow this step, if you have navigated away from the login page.

3. Enter your login credentials and click **Log In**.

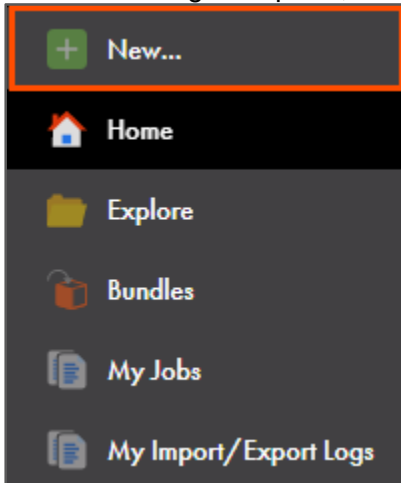


The login page for Informatica Intelligent Cloud Services is displayed. It features a white login box centered on a background image of a modern building's interior with a complex, branching structural design. The login box has a black header with the Informatica logo and the text "Informatica Intelligent Cloud Services". Below the header, there are two input fields: "Username:" with the email "info.ondemand@gmail.com" and "Password:" with masked characters. A blue "Log In" button is positioned below the password field. Underneath the button, there are two links: "Don't have an account?" and "Forgot your password?". At the bottom of the login box, there is a copyright notice "Copyright © 1993-2019 Informatica LLC. All Rights Reserved.", a link to "Privacy Policy", and a link to "Check the system status".

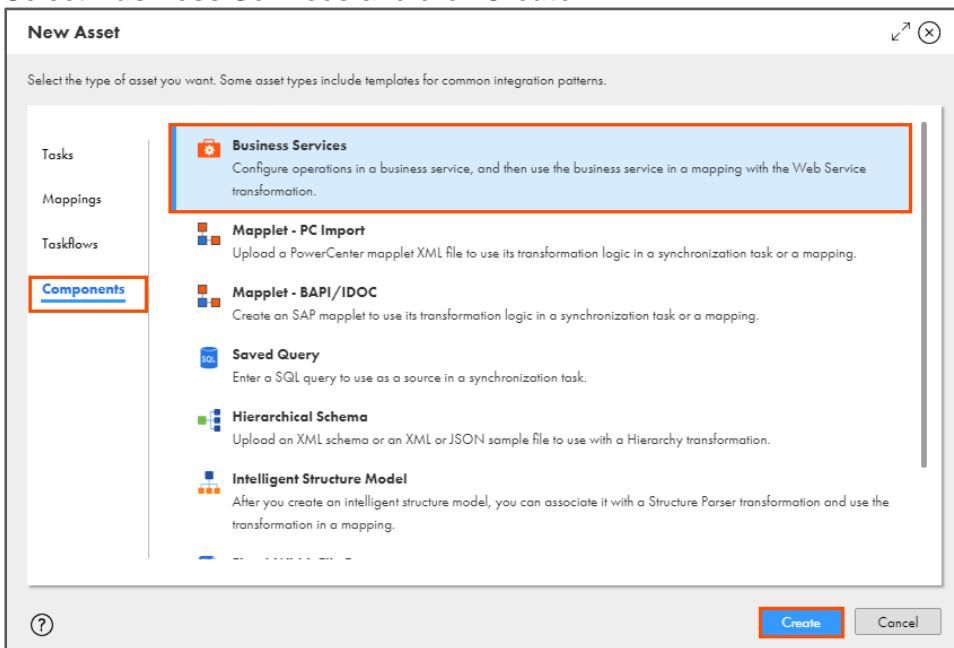
4. From the **My Services** window, select **Data Integration**.



- From the Navigation pane, select **New**.

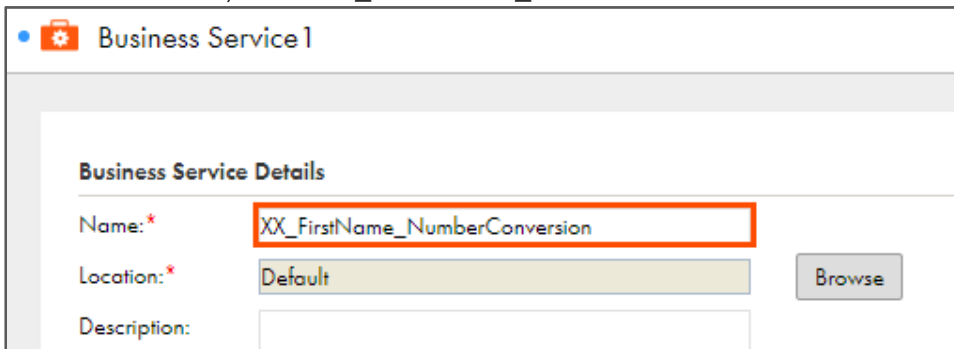


- From the New Asset window, click the **Components** tab.
- Select **Business Services** and click **Create**.



**Note:** The Business Service page appears.

- In the Name field, enter **XX\_FirstName\_NumberConversion**.



9. To create a new connection, click **New**.



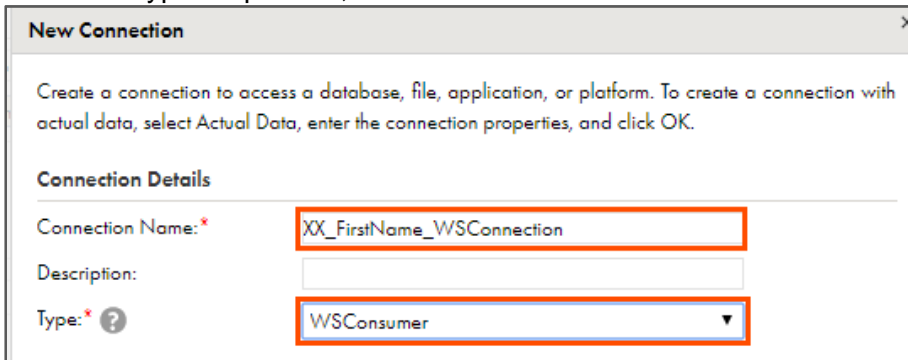
Connection: \*  View... **New...** ?

**Note:** The New Connection window appears.

10. In the Name field, enter **XX\_FirstName\_WSConnection**.

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

11. From the Type drop-down, select **WSConsumer**.



**New Connection** [X]

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: \*

Description:

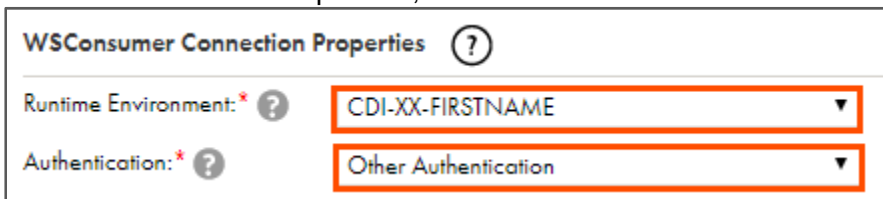
Type: \* ?

**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 Authentication drop-down, select **Other Authentication**.



**WSConsumer Connection Properties** ?

Runtime Environment: \* ?

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

Open the file named **26\_LabGuide\_UsingWebServicesTransformation\_13-2** provided with this lab. 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

Open the file named **26\_LabGuide\_UsingWebServicesTransformation\_13-2** provided with this lab. 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: \*

Description:

Type: \* ?

**WSCconsumer Connection Properties** ?

Runtime Environment: \* ?

Authentication: \* ?

**Other Authentication Connection Properties** ?

WSDL URL: \*

Endpoint URL: \*

HTTP Username:

HTTP Password:

**Note:** This action redirects you to Business Service page.

17. From the Connection drop-down, select **XX\_FirstName\_WSCconnection**.

**Note:** Skip this step if the created connection is already selected.

18. To add an operation, click **Select Operation**.

**Business Service Details**

Name: \*

Location: \*

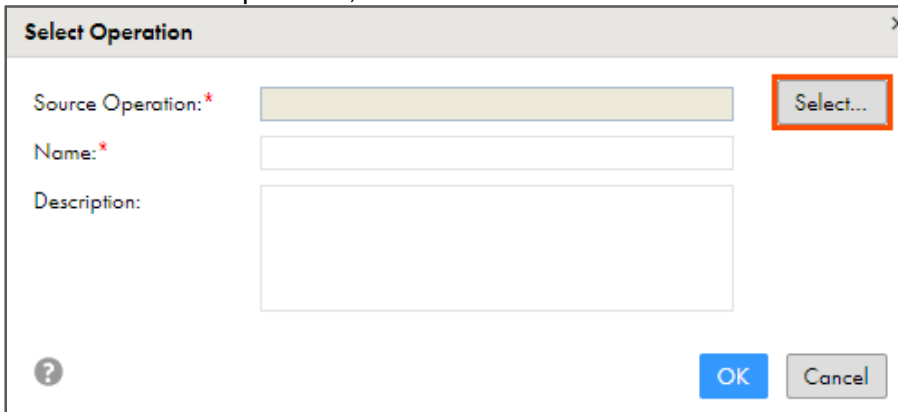
Description:

Connection: \*    ?

**Operations**

**Note:** The Select Operation window appears.

19. To select source operation, click **Select**.

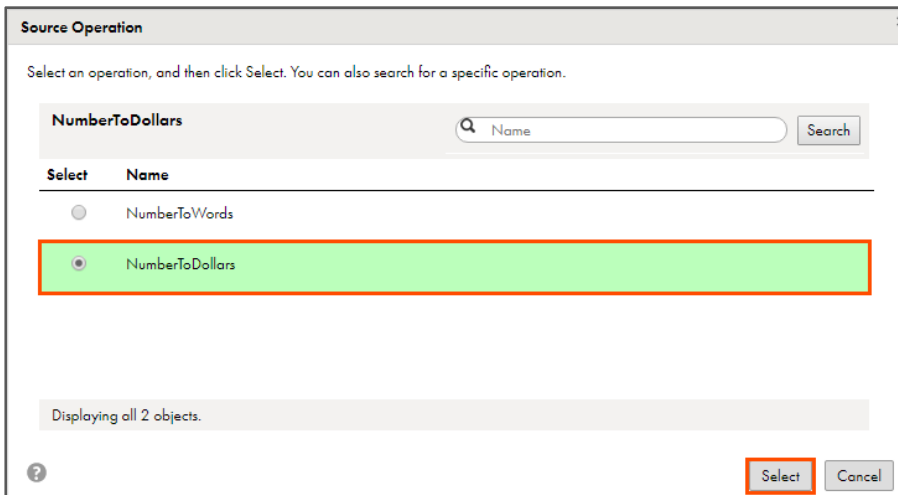


The 'Select Operation' dialog box is shown. It has a title bar with a close button (X). Inside, there are three input fields: 'Source Operation:\*' (highlighted in yellow), 'Name:\*' (empty), and 'Description:' (empty). To the right of the 'Source Operation' field is a 'Select...' button, which is highlighted with a red rectangle. At the bottom right, there are 'OK' and 'Cancel' buttons. A help icon (?) is at the bottom left.

**Note:** The Source Operation window appears.

20. From the list, select **NumberToDollars**.

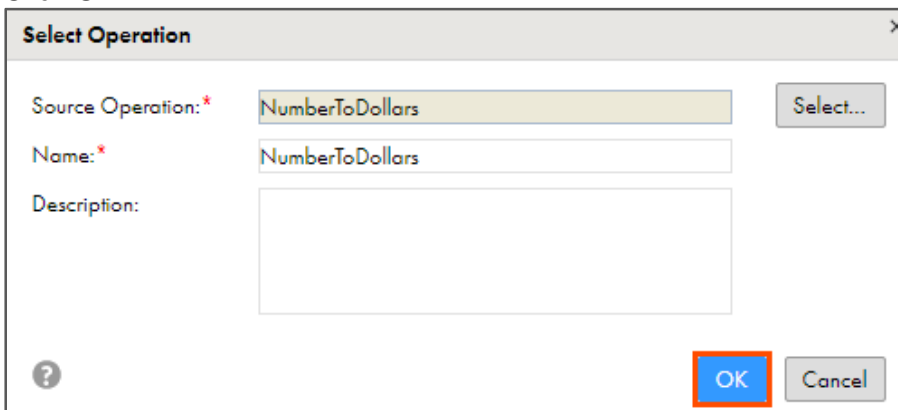
21. Click **Select**.



The 'Source Operation' dialog box is shown. It has a title bar with a close button (X). Inside, there is a search bar with the text 'NumberToDollars' and a 'Search' button. Below the search bar is a table with two columns: 'Select' and 'Name'. The table contains two rows: 'NumberToWords' and 'NumberToDollars'. The 'NumberToDollars' row is highlighted with a green background and a red border. At the bottom right, there are 'Select' and 'Cancel' buttons, with the 'Select' button highlighted by a red rectangle. A status bar at the bottom says 'Displaying all 2 objects.' and a help icon (?) is at the bottom left.

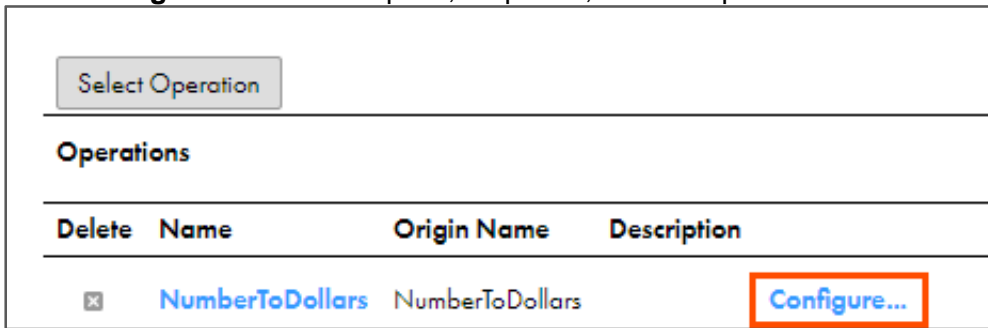
**Note:** This action redirects you to Select Operation window.


22. Click **OK**.



The 'Select Operation' dialog box is shown again. The 'Source Operation:\*' field now contains the text 'NumberToDollars'. The 'Name:\*' field also contains 'NumberToDollars'. The 'Select...' button is still present. At the bottom right, the 'OK' button is highlighted with a red rectangle. The 'Cancel' button is also visible. A help icon (?) is at the bottom left.

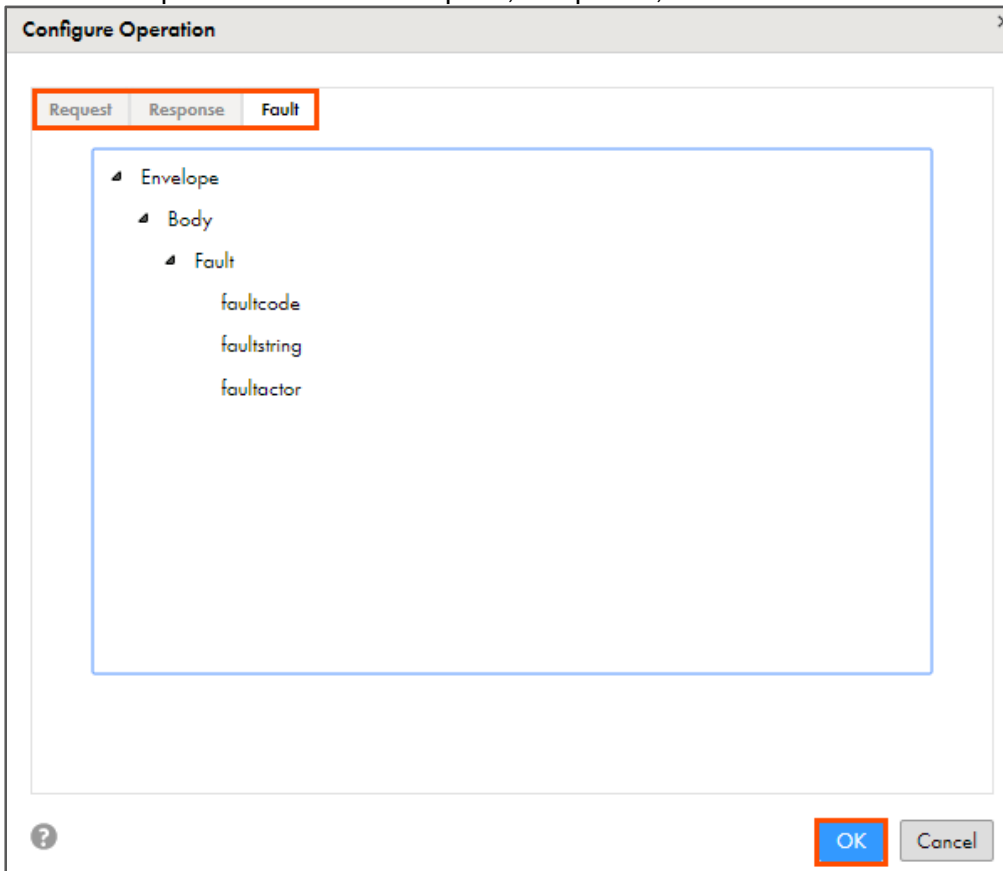
23. Click **Configure** to set the request, response, and fault parameters.



| Delete                                                                            | Name            | Origin Name     | Description         |
|-----------------------------------------------------------------------------------|-----------------|-----------------|---------------------|
|  | NumberToDollars | NumberToDollars | <b>Configure...</b> |

**Note:** The Configure Operation window appears.

24. View all the parameters in the Request, Response, and Fault tabs and click **OK**.



**Configure Operation**

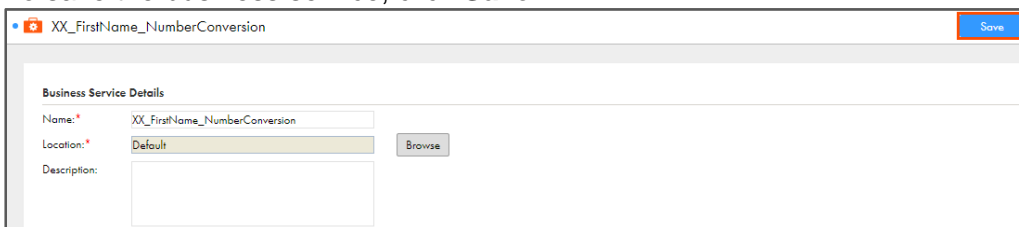
Request | Response | Fault

- Envelope
  - Body
    - Fault
      - faultcode
      - faultstring
      - faultfactor

**OK** Cancel

**Note:** This action redirects you to Business Service page.

25. To save the business service, click **Save**.



XX\_FirstName\_NumberConversion **Save**

**Business Service Details**

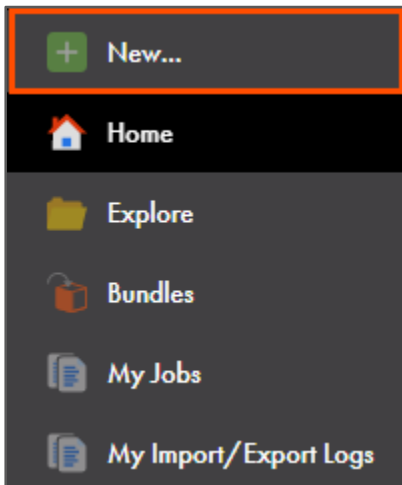
Name: \* XX\_FirstName\_NumberConversion

Location: \* Default

Description:

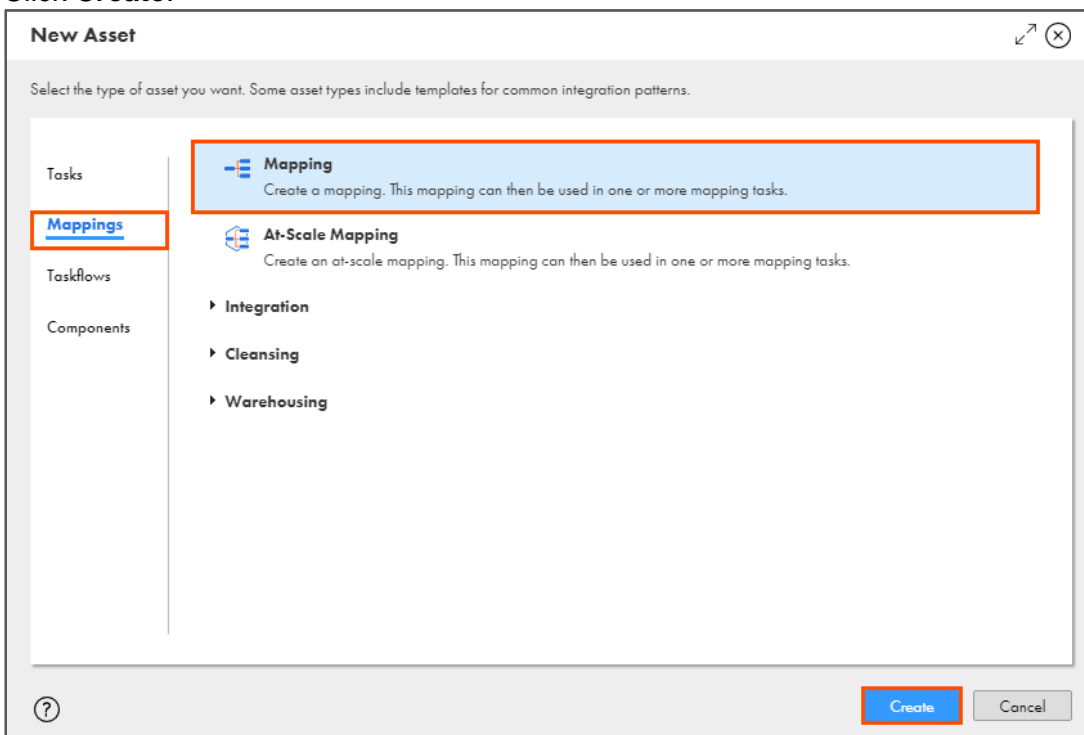
**Create Mapping:**

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**.



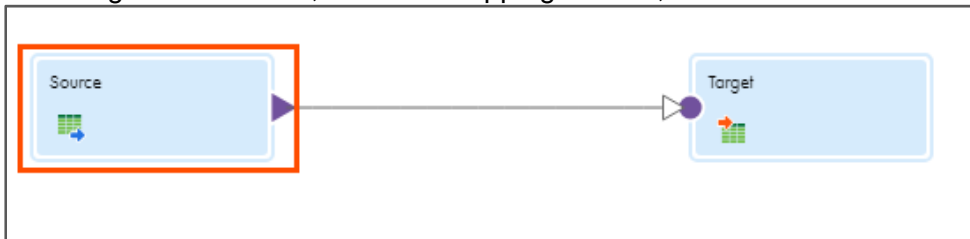
Properties: XX\_FirstName\_WebServices

Name: \* **XX\_FirstName\_WebServices**

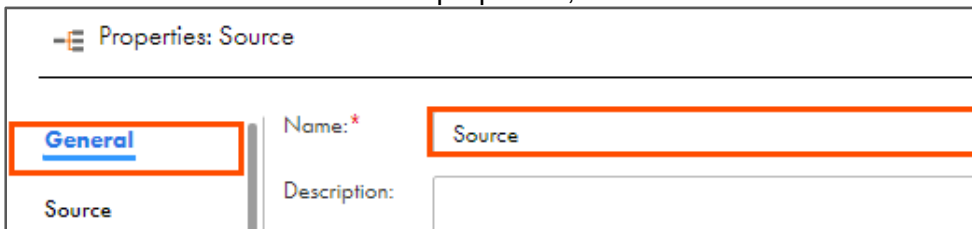
Location: \* Default

Description:

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



31. In the **General** section of Source properties, retain the Name as **Source**.



Properties: Source

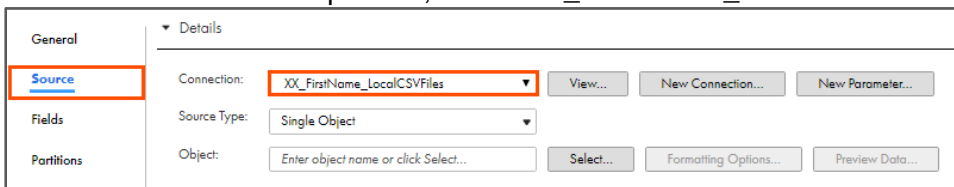
**General**

Name: \* **Source**

Description:

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

33. From the Connection drop-down, select **XX\_FirstName\_LocalCSVFiles**.



General

**Source**

Fields

Partitions

Details

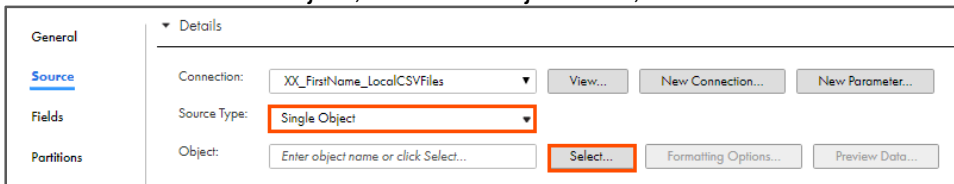
Connection: **XX\_FirstName\_LocalCSVFiles** View... New Connection... New Parameter...

Source Type: Single Object

Object: Enter object name or click Select... Select... Formatting Options... Preview Data...

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

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



General

**Source**

Fields

Partitions

Details

Connection: XX\_FirstName\_LocalCSVFiles View... New Connection... New Parameter...

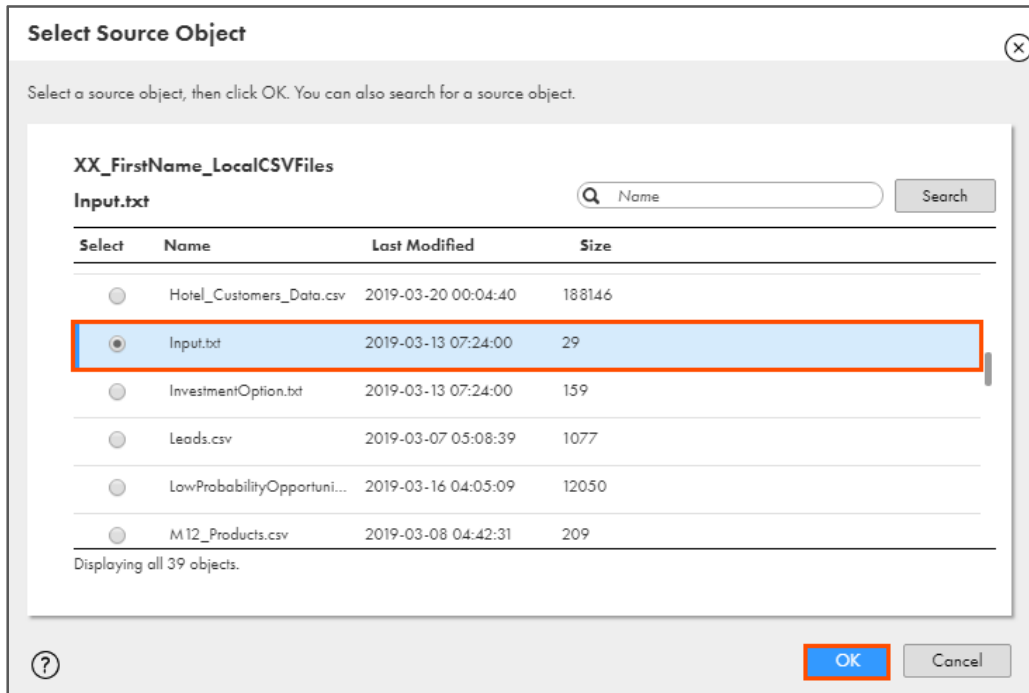
Source Type: **Single Object**

Object: Enter object name or click Select... **Select...** Formatting Options... Preview Data...

**Note:** The Select Source Object window appears.

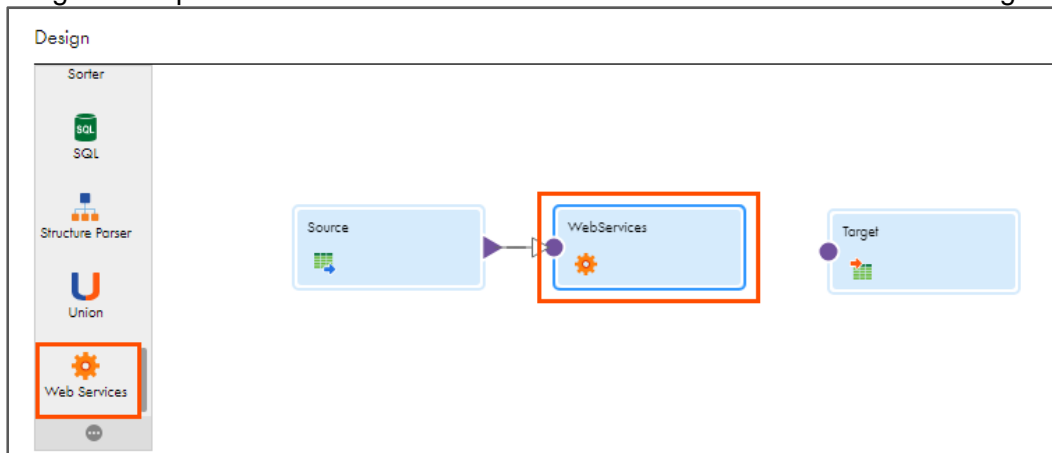
36. From the list, select **Input.txt**.

37. Click **OK**.



**Add Web Services Transformation:**

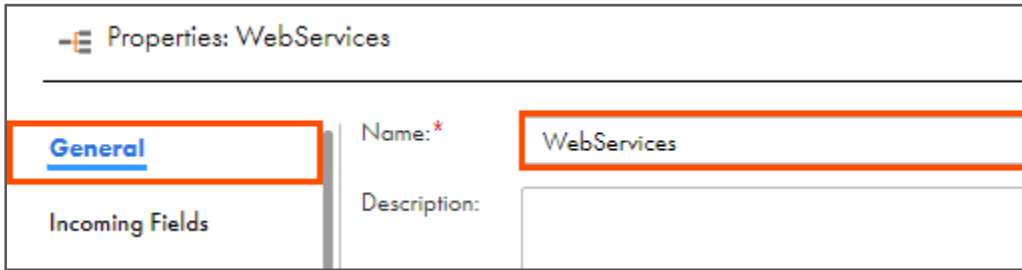
38. Drag and drop the **Web Services** transformation between the source and target.



**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**.



Properties: WebServices

**General**

Name: \* WebServices

Description:

Incoming Fields

41. From the properties pane, click **Web Service**.

42. To select the business service, click **Select**.



General

Incoming Fields

**Web Service**

Request Mapping

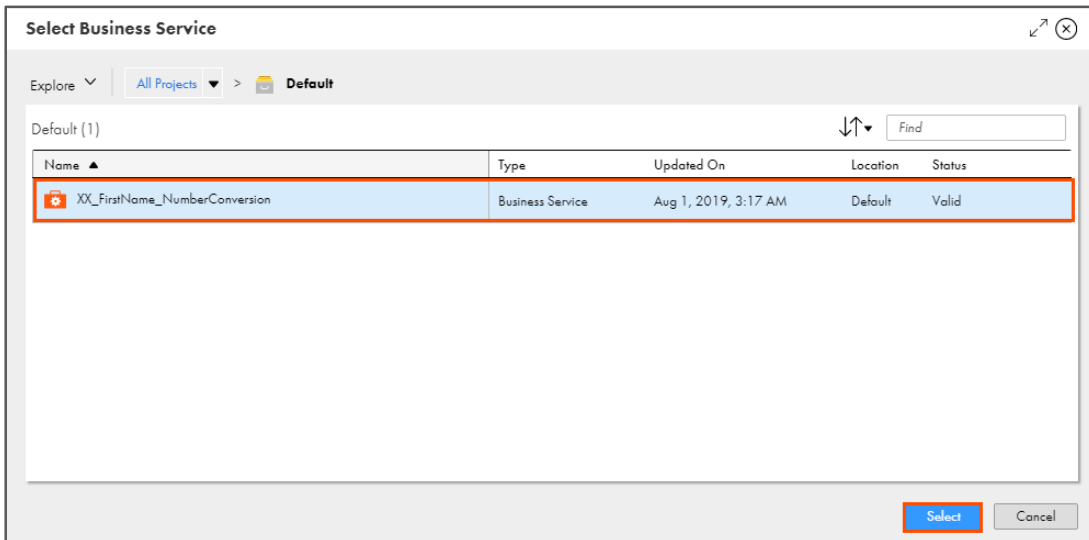
Response Mapping

Business Service: [Empty Field] **Select...**

**Note:** The Select Business Service window appears.

43. Navigate to **Default** and select **XX\_FirstName\_NumberConversion**.

44. Click **Select**.



Select Business Service

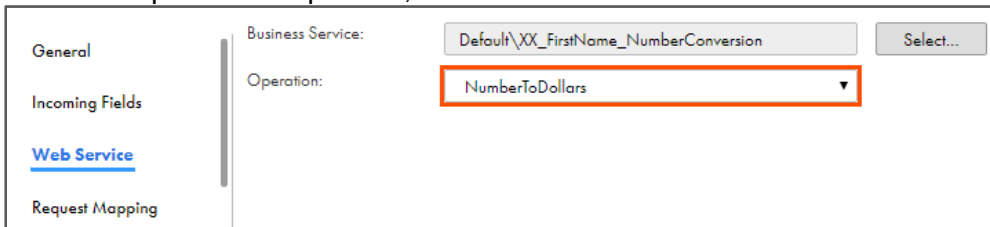
Explore ▾ All Projects ▾ > Default

Default (1)

| Name ▲                        | Type             | Updated On           | Location | Status |
|-------------------------------|------------------|----------------------|----------|--------|
| XX_FirstName_NumberConversion | Business Service | Aug 1, 2019, 3:17 AM | Default  | Valid  |

**Select** Cancel

45. From the Operation drop-down, select **NumberToDollars**.



General

Incoming Fields

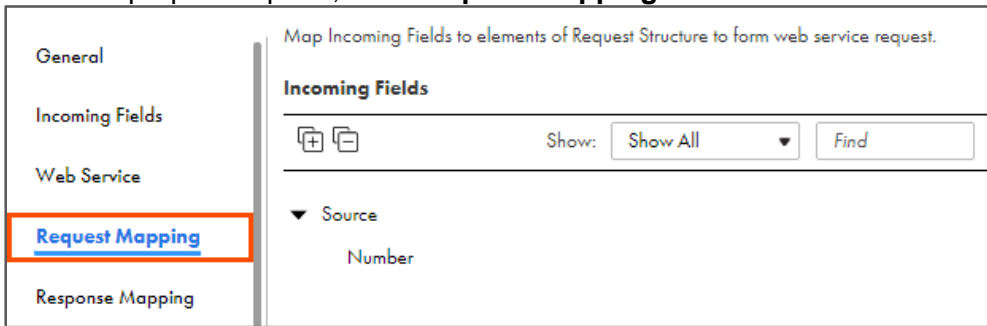
**Web Service**

Request Mapping

Business Service: Default\XX\_FirstName\_NumberConversion **Select...**

Operation: NumberToDollars

46. From the properties pane, click **Request Mapping**.



Map Incoming Fields to elements of Request Structure to form web service request.

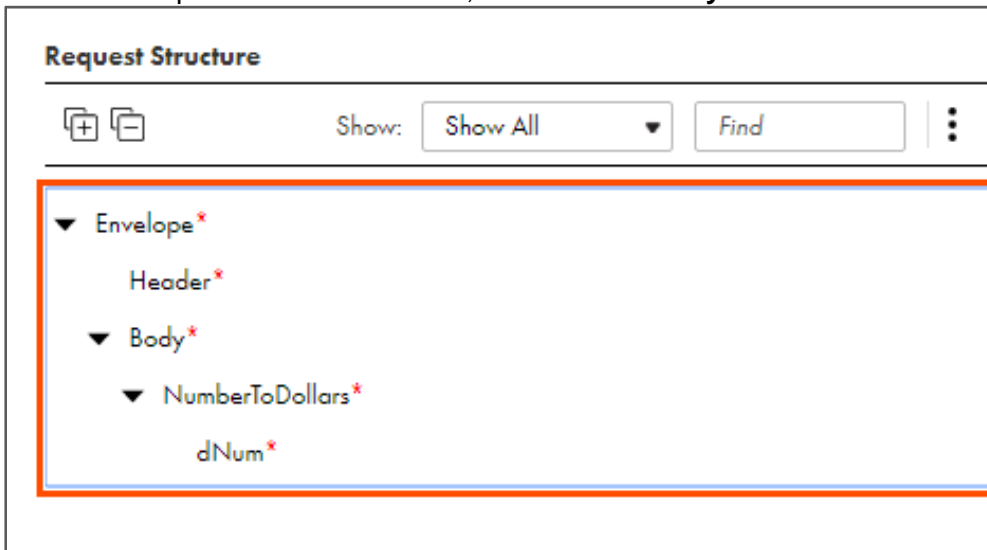
**Incoming Fields**

Show: Show All Find

▼ Source

Number

47. From the Request Structure section, drill-down to **Body** > **NumberToDollars** > **dNum**.



**Request Structure**

Show: Show All Find ⋮

▼ Envelope\*

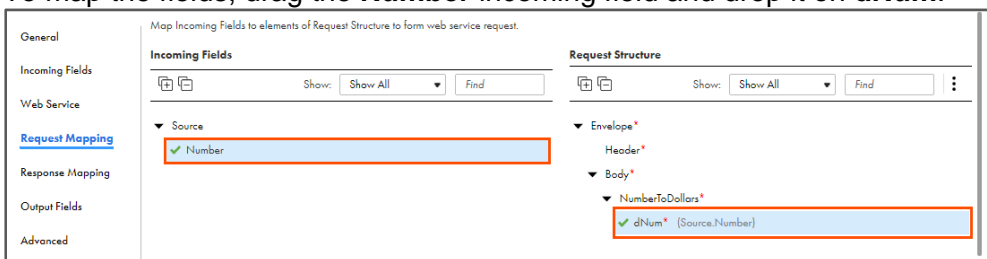
Header\*

▼ Body\*

▼ NumberToDollars\*

dNum\*

48. To map the fields, drag the **Number** incoming field and drop it on **dNum**.



Map Incoming Fields to elements of Request Structure to form web service request.

**Incoming Fields**

Show: Show All Find

▼ Source

✓ Number

**Request Structure**

Show: Show All Find ⋮

▼ Envelope\*

Header\*

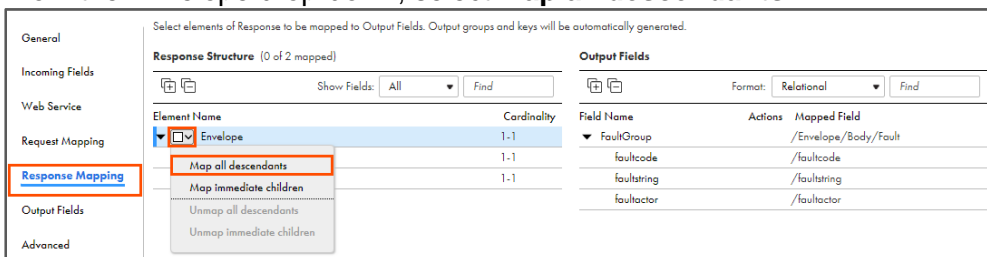
▼ Body\*

▼ NumberToDollars\*

✓ dNum\* (Source.Number)

49. From the properties pane, click **Response Mapping**.

50. From the Envelope drop-down, select **Map all descendants**.



Select elements of Response to be mapped to Output Fields. Output groups and keys will be automatically generated.

**Response Structure** (0 of 2 mapped)

Show Fields: All Find

| Element Name | Cardinality |
|--------------|-------------|
| Envelope     | 1-1         |
| faultcode    | 1-1         |
| faultstring  | 1-1         |

Map all descendants  
Map immediate children  
Unmap all descendants  
Unmap immediate children

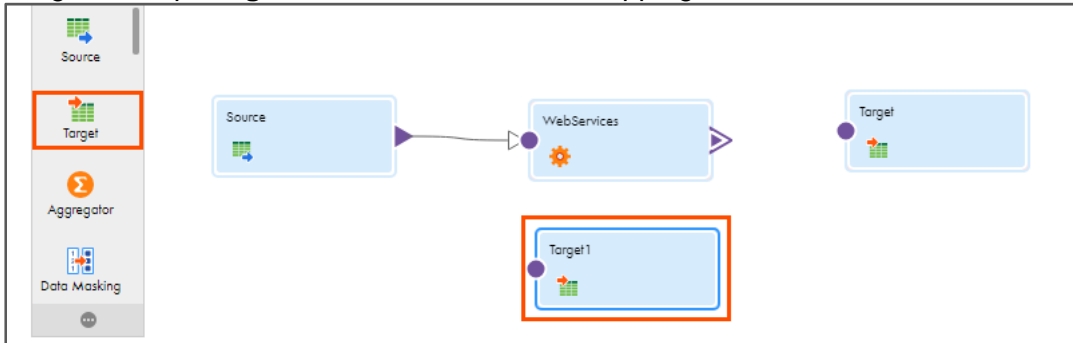
**Output Fields**

Format: Relational Find

| Field Name  | Actions | Mapped Field         |
|-------------|---------|----------------------|
| faultGroup  |         | /Envelope/Body/Fault |
| faultcode   |         | /faultcode           |
| faultstring |         | /faultstring         |
| faultactor  |         | /faultactor          |

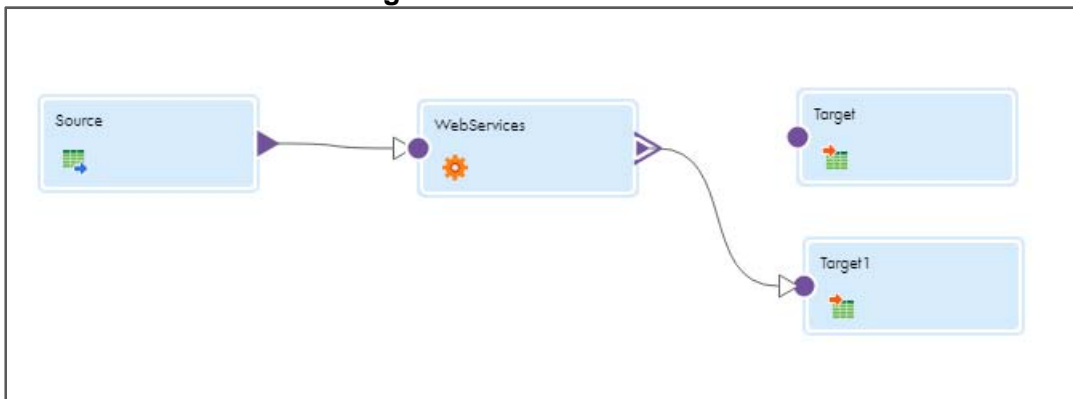
### Add a Target Transformation:

51. Drag and drop **Target** transformation on the mapping canvas.



52. Select the added Target transformation (**Target 1**) on the mapping canvas.

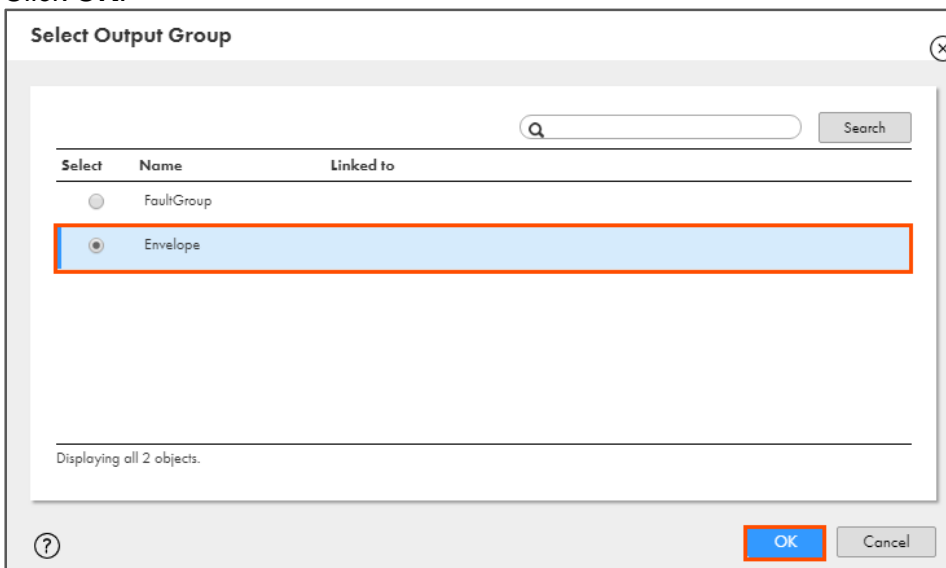
53. Link the **WebServices** to **Target1**.



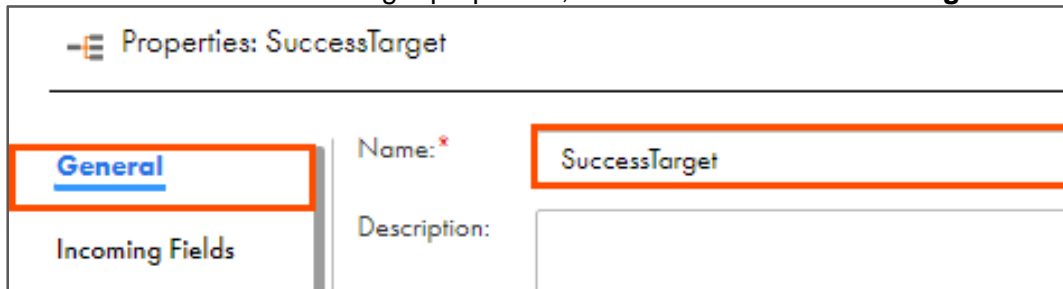
**Note:** The Select Output Group window appears.

54. From the list, select **Envelope**.

55. Click **OK**.



56. In the **General** section of Target properties, enter Name as **SuccessTarget**.



Properties: SuccessTarget

**General**

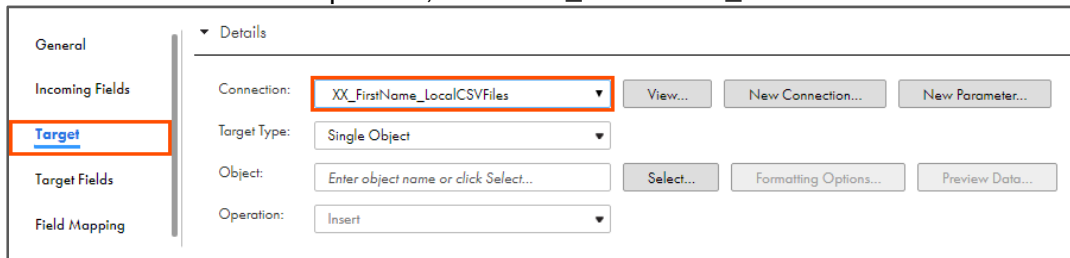
Name: \* SuccessTarget

Description:

Incoming Fields

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

58. From the Connection drop-down, select **XX\_FirstName\_LocalCSVFiles**.



General

Incoming Fields

**Target**

Target Fields

Field Mapping

Details

Connection: XX\_FirstName\_LocalCSVFiles View... New Connection... New Parameter...

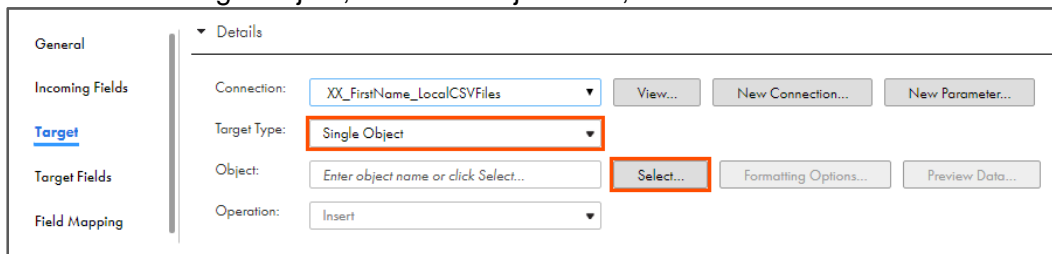
Target Type: Single Object

Object: Enter object name or click Select... Select... Formatting Options... Preview Data...

Operation: Insert

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

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



General

Incoming Fields

**Target**

Target Fields

Field Mapping

Details

Connection: XX\_FirstName\_LocalCSVFiles View... New Connection... New Parameter...

Target Type: Single Object

Object: Enter object name or click Select... Select... Formatting Options... Preview Data...

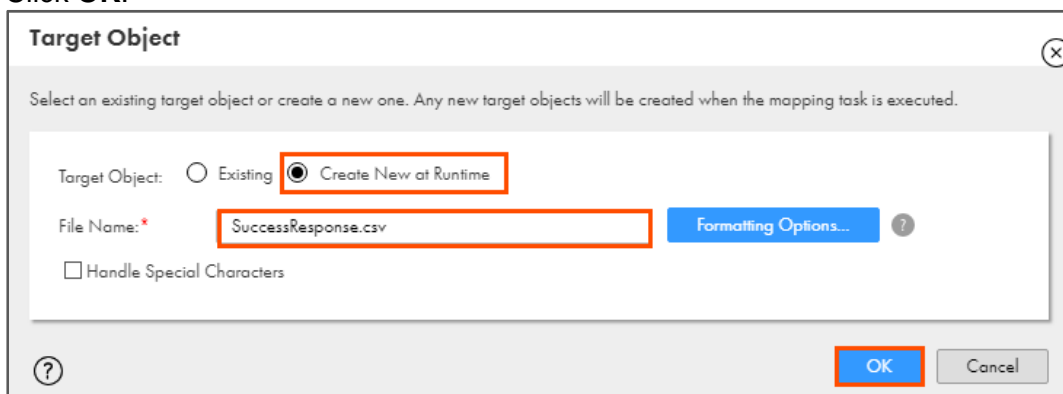
Operation: Insert

**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**.



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.

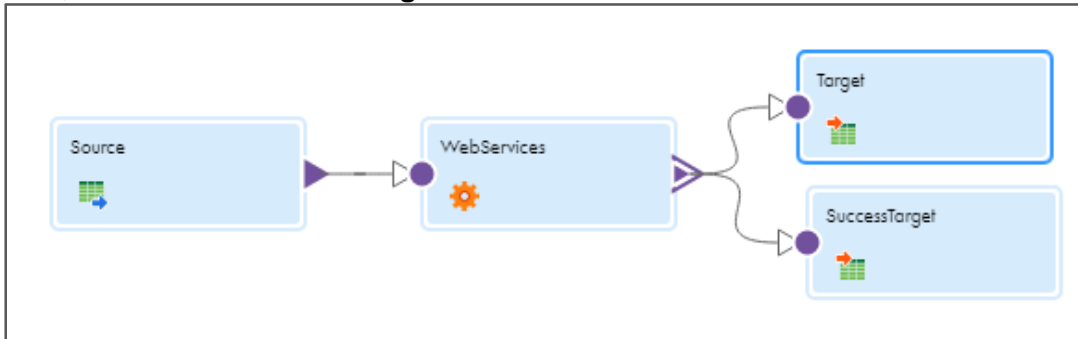
Target Object: ☐ Existing ☒ Create New at Runtime

File Name: \* SuccessResponse.csv Formatting Options... ?

☐ Handle Special Characters

? OK Cancel

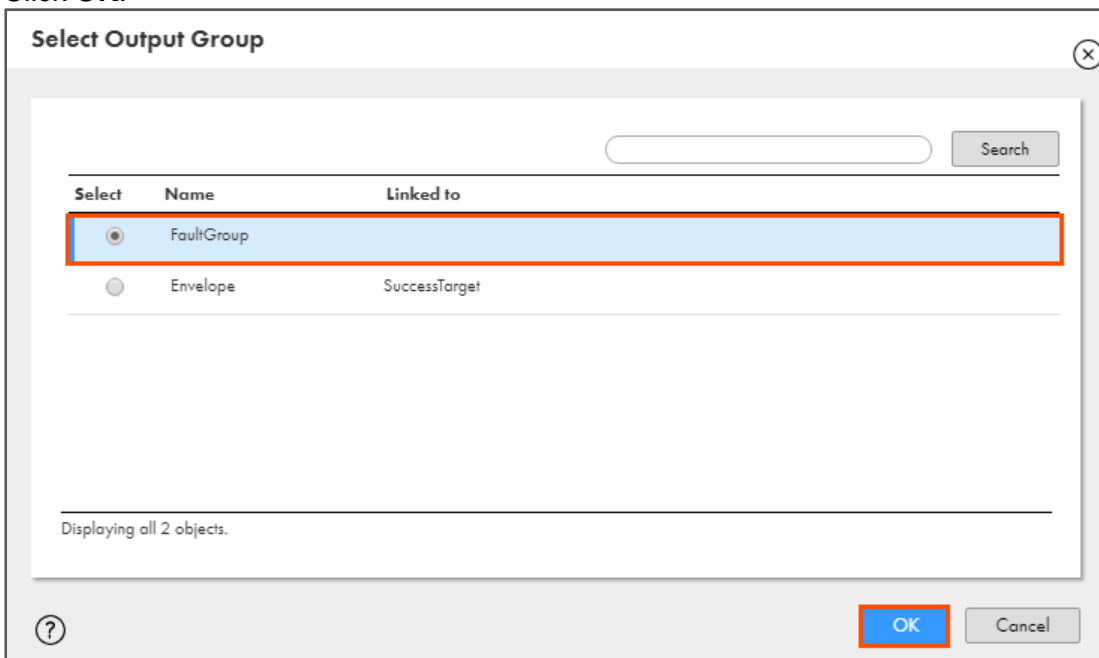
64. Now, link **WebServices** to **Target**.



**Note:** The Select Output Group window appears.

65. From the list, select **FaultGroup**.

66. Click **OK**.



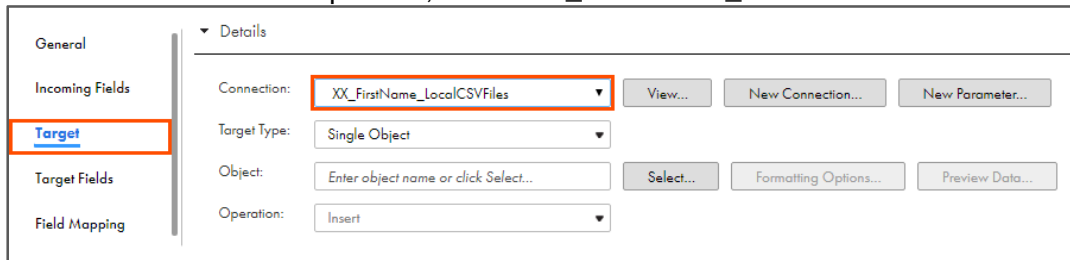
67. Select Target transformation on the mapping canvas.

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



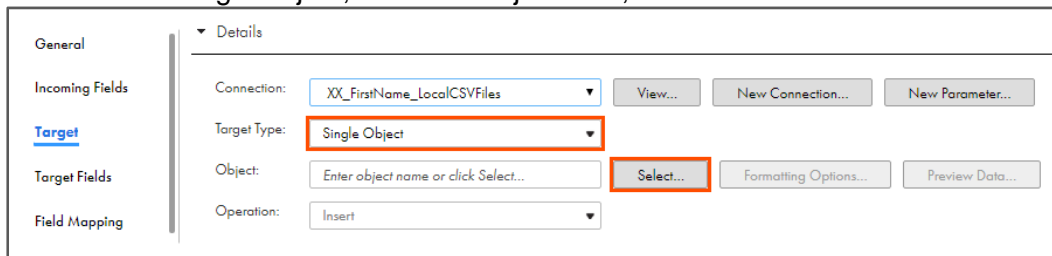
69. From the properties pane, click **Target**.

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**.

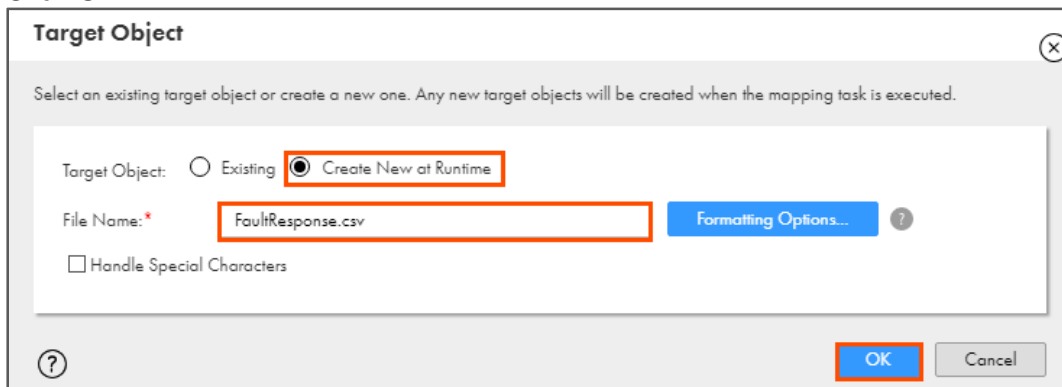


**Note:** The Target Object window appears.

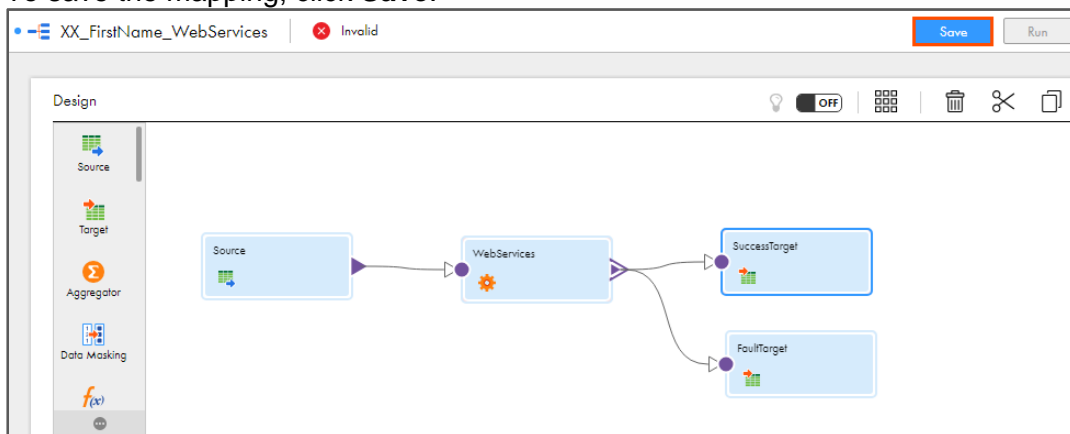
73. In the Target Object window, select **Create New at Runtime**.

74. Enter **FaultResponse.csv** as File Name.

75. Click **OK**.

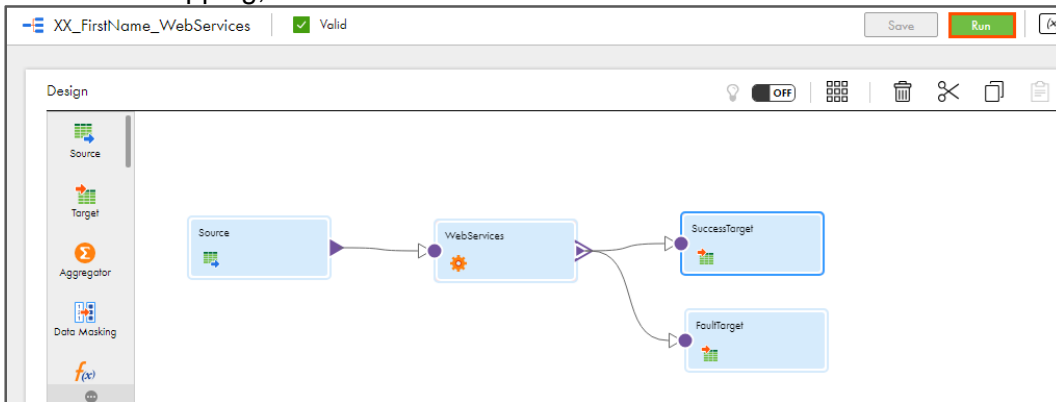


76. To save the mapping, click **Save**.





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

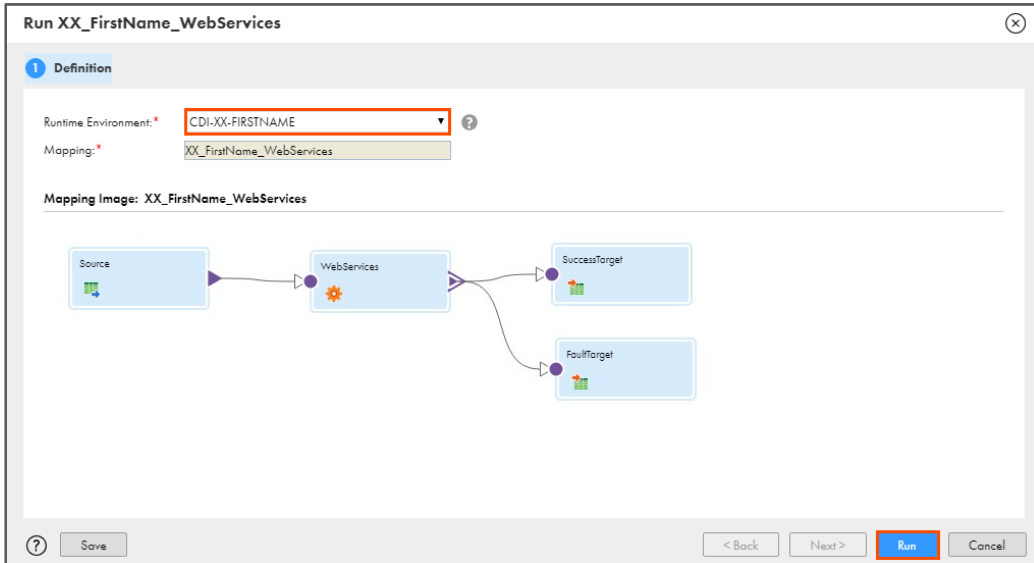


**Note:** The Run mapping window appears.

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

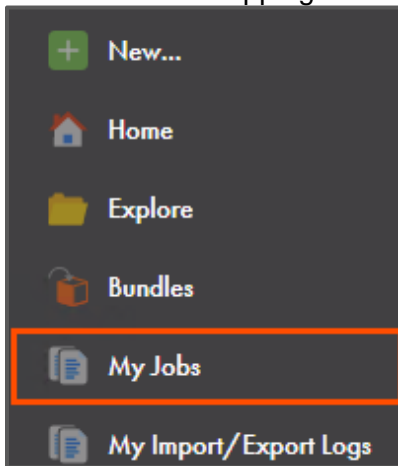
**Note:** The Runtime Environment name will be in CDI-XX-FIRSTNAME format.

79. Click **Run**.



### Monitor Status:

80. To monitor the mapping status, from the Navigation pane, click **My Jobs**.

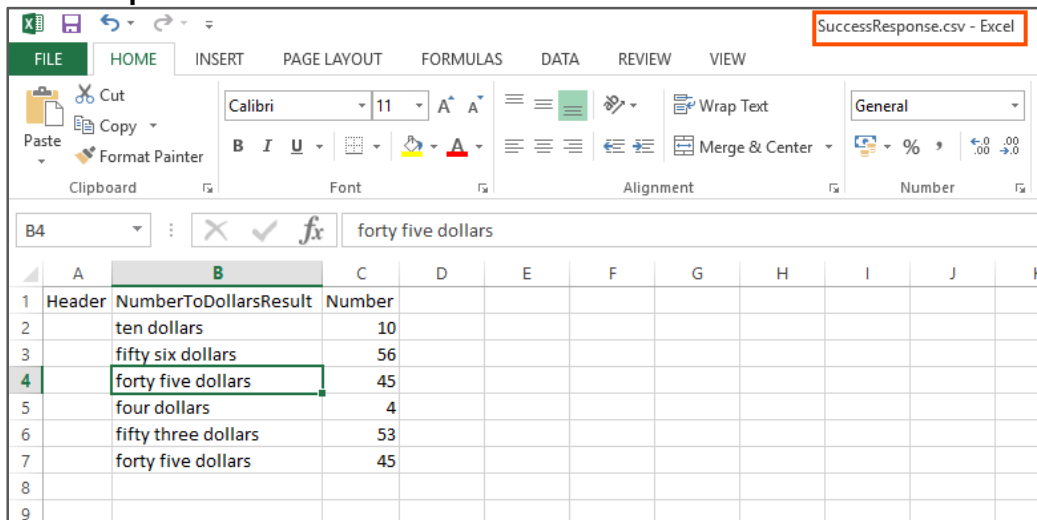


81. When the task completes, the status changes to **Success**.

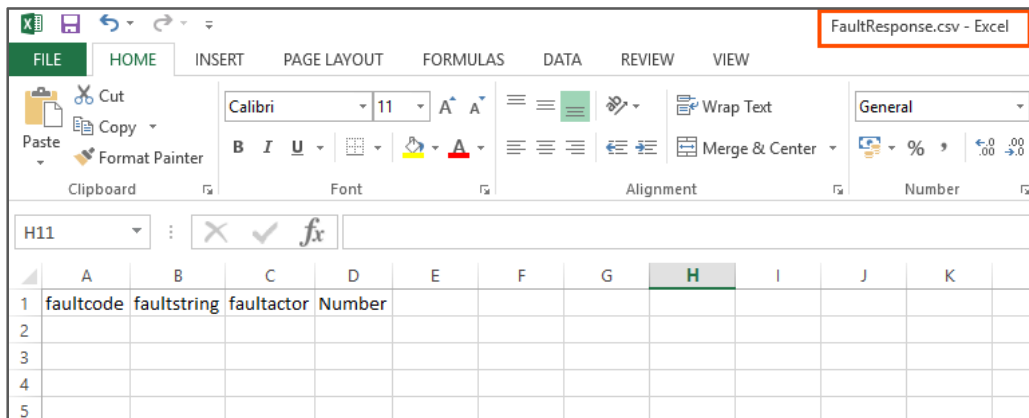
| Jobs (1 of 28) <span>Up to date</span> |          | Updated 1:13:46 PM PDT |              |                |         |
|----------------------------------------|----------|------------------------|--------------|----------------|---------|
| Asset Name: XX_FirstName_WebSer...     |          | Add Field              |              |                |         |
| Instance Name                          | Subtasks | Start Time             | End Time     | Rows Processed | State   |
| XX_FirstName_WebServices-1             |          | Aug 1, 2019, ...       | Aug 1, 20... | 6              | Success |

82. On your local machine, go to **C:\IICS LabFiles**.

83. Verify that 6 rows are written to the **SuccessResponse.csv**, and that the **FaultResponse.csv** file contains 0 rows.



| Header              | NumberToDollarsResult | Number |
|---------------------|-----------------------|--------|
| ten dollars         | 10                    |        |
| fifty six dollars   | 56                    |        |
| forty five dollars  | 45                    |        |
| four dollars        | 4                     |        |
| fifty three dollars | 53                    |        |
| forty five dollars  | 45                    |        |



*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

---

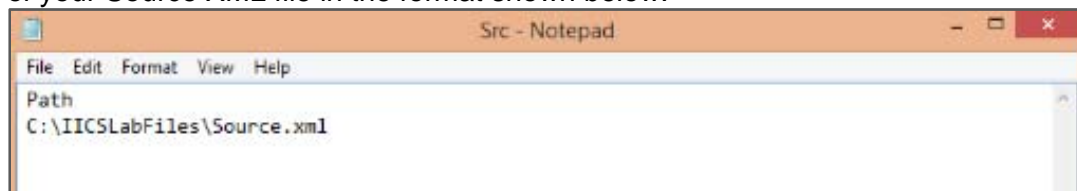
#### Tasks:

##### Copy Source Files:

1. Copy **emp.xsd** and **Source.xml** files provided with this lab and place the files in your flat file directory (**C:\IICSLabFiles**).

##### Create File:

2. Create a text file (**Src.txt**) in your flat file directory, and in that text file, type the location of your Source XML file in the format shown below.




##### Create Hierarchical Schema:

3. Access your cloud trial account by clicking **Launch** in your option Menu. If the option menu is labeled anything other than **Launch**, click the down arrow to the right and click **Launch**.

Access Your Cloud Trial Account

0% Completed: 0 Min Required: 1 Total Items: 1



Access your Informatica Cloud Trial Account

Status: In Progress Due: No Due Date

Launch your Informatica Cloud Trial Account using the options button to the right.

Mark Complete

Mark Complete

Launch

View Training Details

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

- Enter your login credentials and click **Log In**.

Informatica Intelligent Cloud Services

Username: \*

Password: \*

Log In

Don't have an account?

Forgot your password?


Copyright © 1993-2019 Informatica LLC. All Rights Reserved.

[Privacy Policy](#)
[Check the system status](#)


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

Informatica Intelligent Cloud Services


My Services




API Manager




API Portal




Application Integration




Application Integration Console



Data Integration



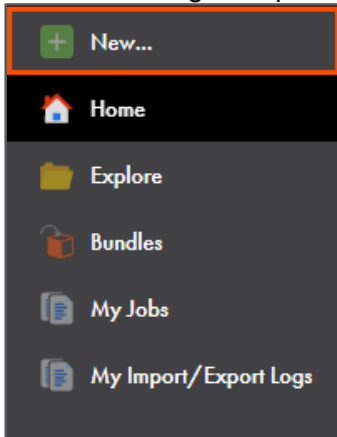
Administrator



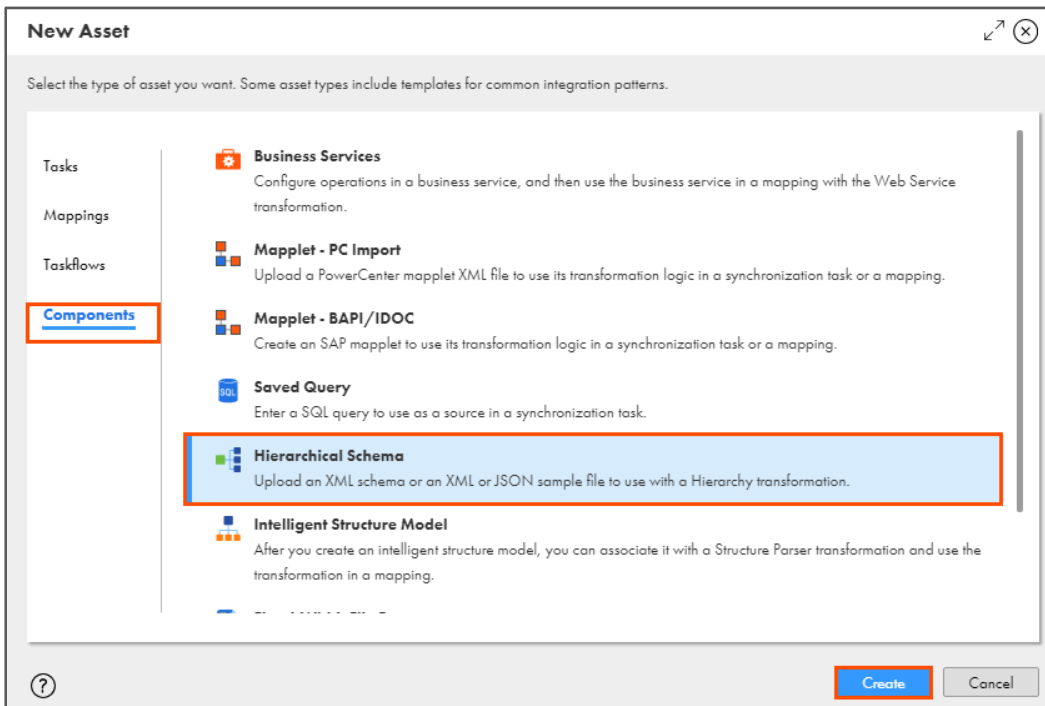
Monitor

[Show all services](#)

6. From the Navigation pane, select **New**.



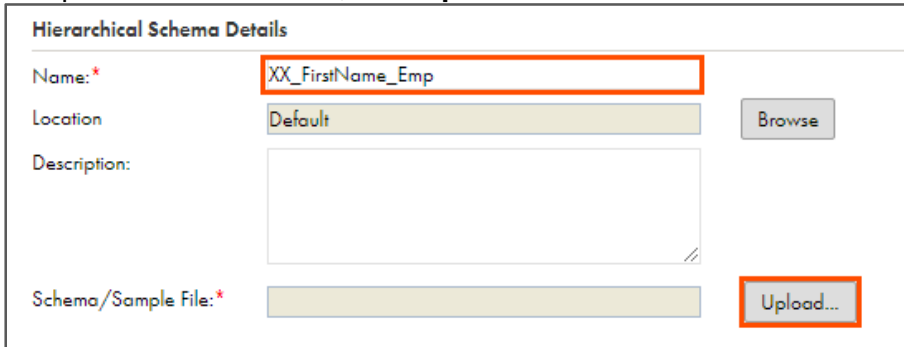
7. From the New Asset window, click the **Components** tab.
8. Select **Hierarchical Schema** and click **Create**.



**Note:** The Hierarchical Schema page appears.

9. In the Name field, enter **XX\_FirstName\_Emp**.

10. To upload the schema file, click **Upload**.



**Hierarchical Schema Details**

Name: \*

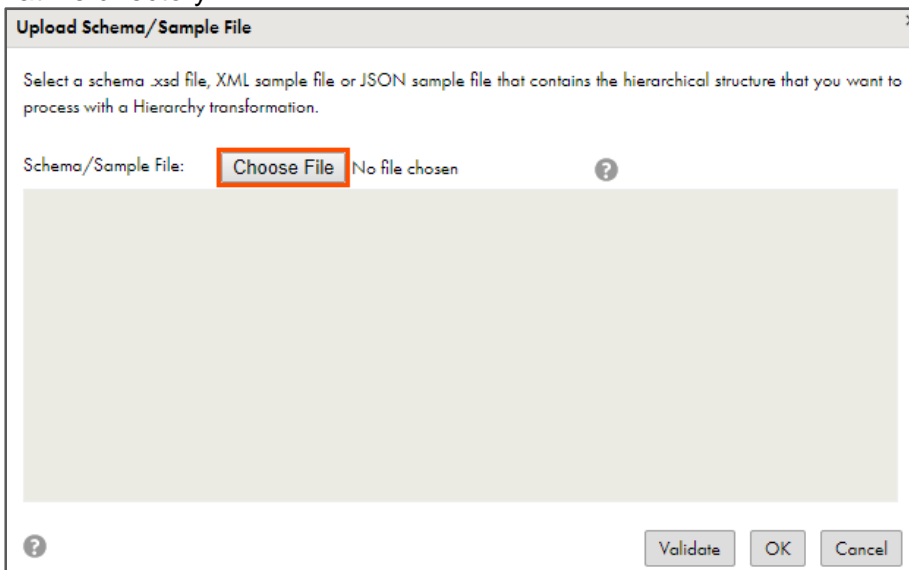
Location:

Description:

Schema/Sample File: \*

**Note:** The Upload Schema/Sample File window appears.

11. To navigate to xsd file, click **Choose File**, and select **emp.xsd** that you copied in your flat file directory.



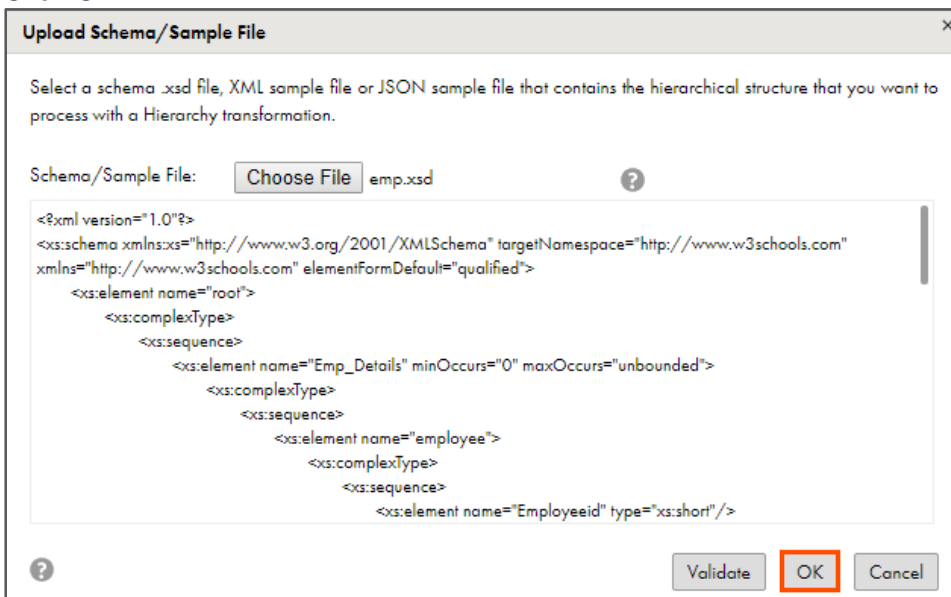
**Upload Schema/Sample File**

Select a schema .xsd file, XML sample file or JSON sample file that contains the hierarchical structure that you want to process with a Hierarchy transformation.

Schema/Sample File:  No file chosen ?

?

12. Click **OK**.



**Upload Schema/Sample File**

Select a schema .xsd file, XML sample file or JSON sample file that contains the hierarchical structure that you want to process with a Hierarchy transformation.

Schema/Sample File:  emp.xsd ?

```
<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema" targetNamespace="http://www.w3schools.com"
xmlns="http://www.w3schools.com" elementFormDefault="qualified">
  <xs:element name="root">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="Emp_Details" minOccurs="0" maxOccurs="unbounded">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="employee">
                <xs:complexType>
                  <xs:sequence>
                    <xs:element name="Employeeid" type="xs:short"/>

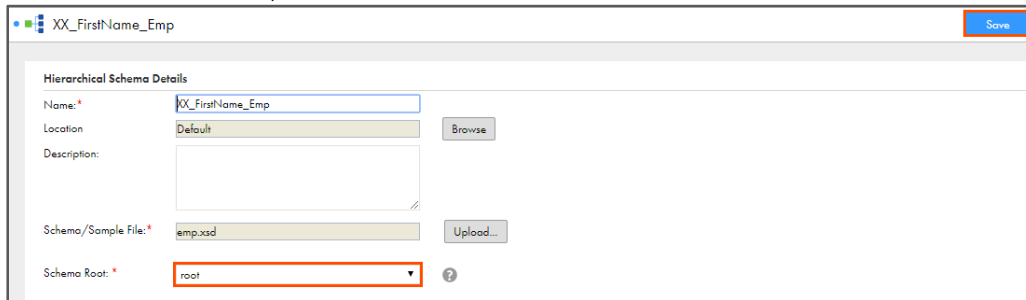
```

?



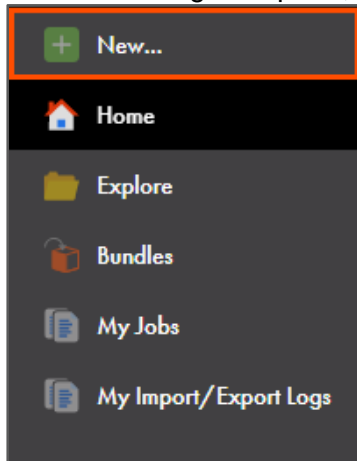
13. In the Schema Root drop-down, retain **root**.

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



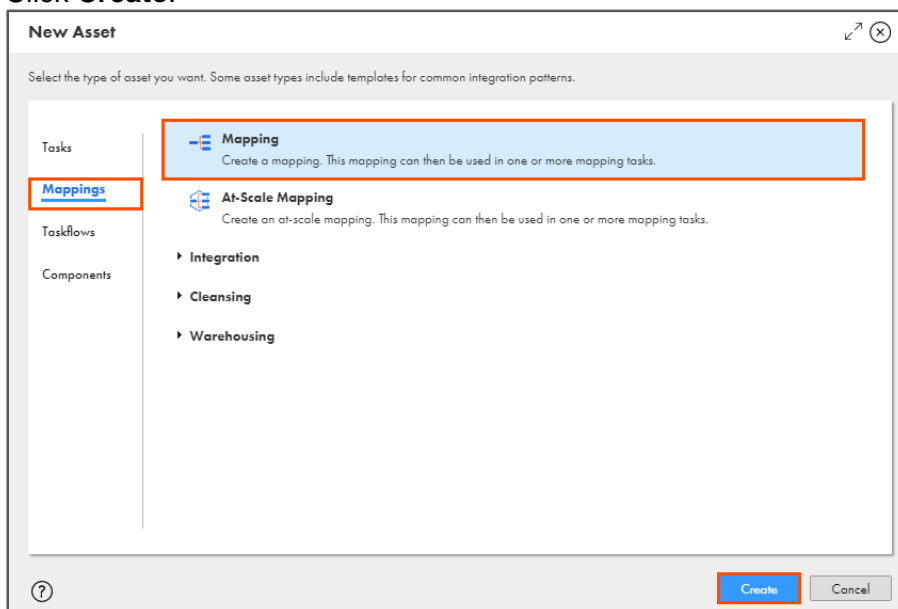
### Create a Mapping:

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



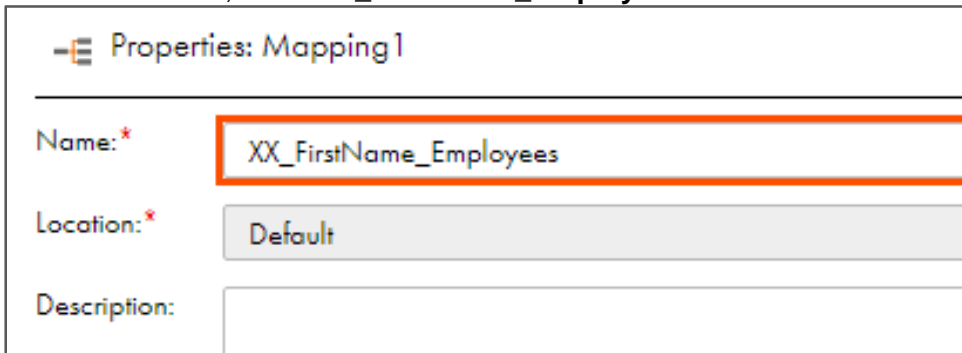
16. From the New Asset window, click the **Mappings** tab, and select **Mapping**.

17. Click **Create**.



**Note:** The Mapping page appears.

18. In the Name field, enter **XX\_FirstName\_Employees**.



Properties: Mapping 1

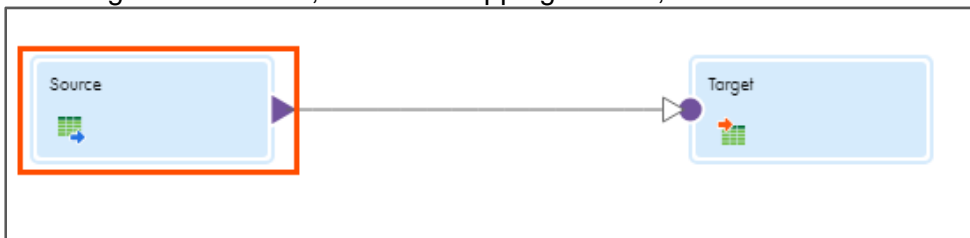
Name: \* **XX\_FirstName\_Employees**

Location: \* Default

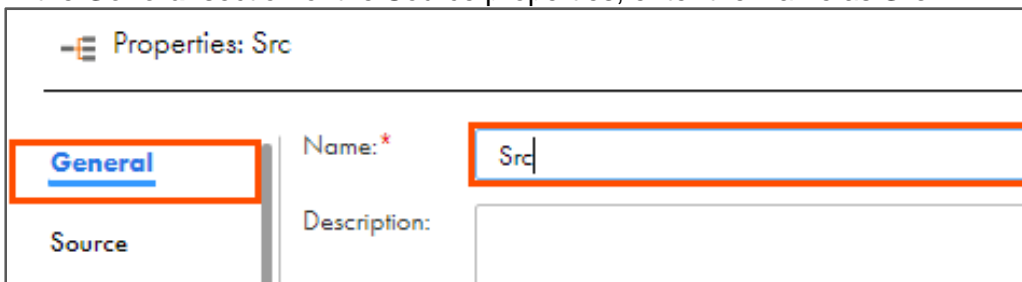
Description:

**Note:** 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 Source properties, enter the Name as **Src**.



Properties: Src

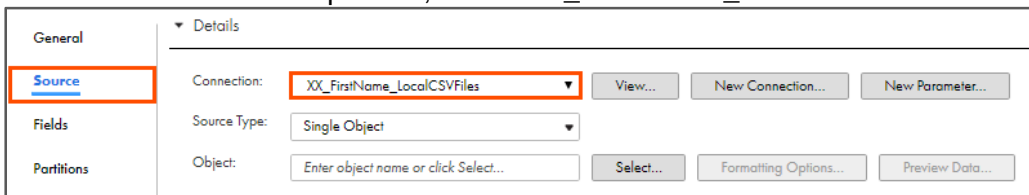
**General**

Name: \* **Src**

Description:

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

22. From the Connection drop-down, select **XX\_FirstName\_LocalCSVFiles**.



General

**Source**

Fields

Partitions

Details

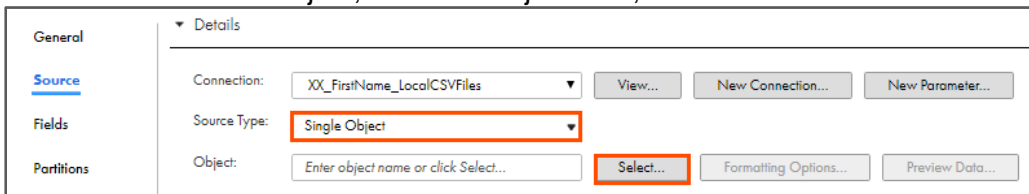
Connection: **XX\_FirstName\_LocalCSVFiles** View... New Connection... New Parameter...

Source Type: Single Object

Object: Enter object name or click Select... Select... Formatting Options... Preview Data...

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

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



General

**Source**

Fields

Partitions

Details

Connection: XX\_FirstName\_LocalCSVFiles View... New Connection... New Parameter...

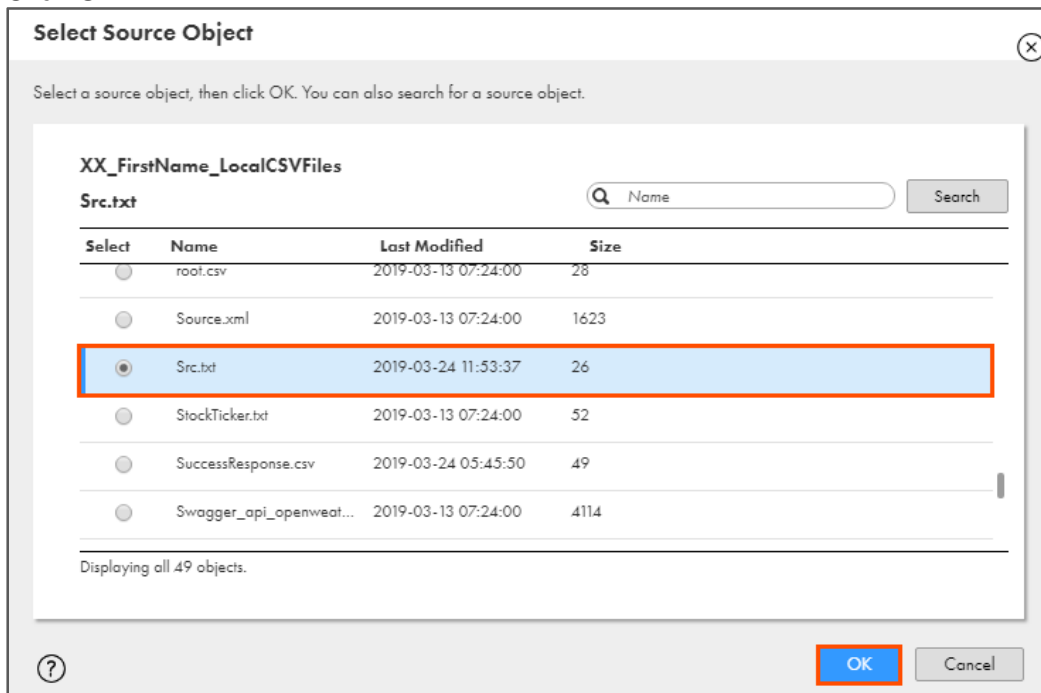
Source Type: **Single Object**

Object: Enter object name or click Select... **Select...** Formatting Options... Preview Data...

**Note:** The Select Source Object window appears.

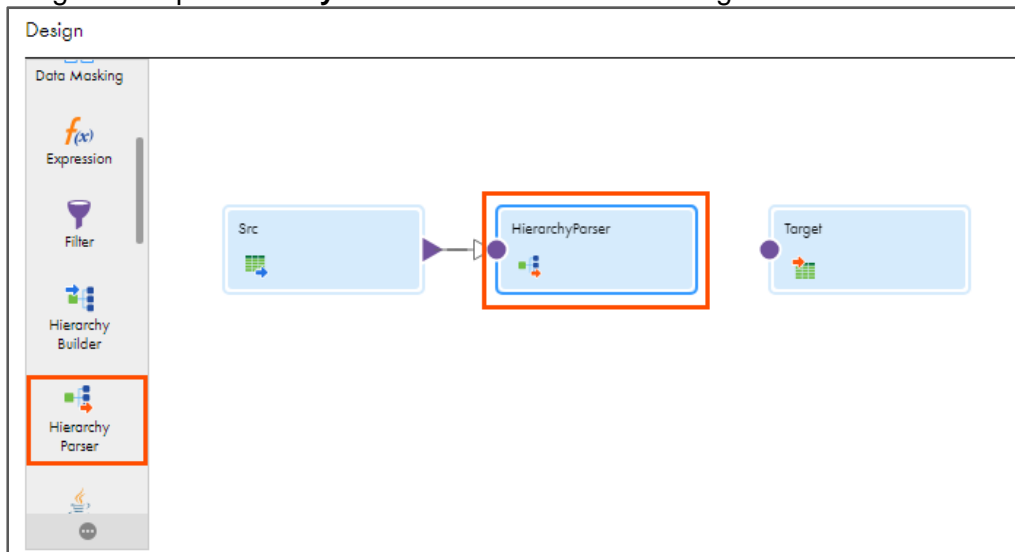
25. From the list, select **Src.txt**.

26. Click **OK**.



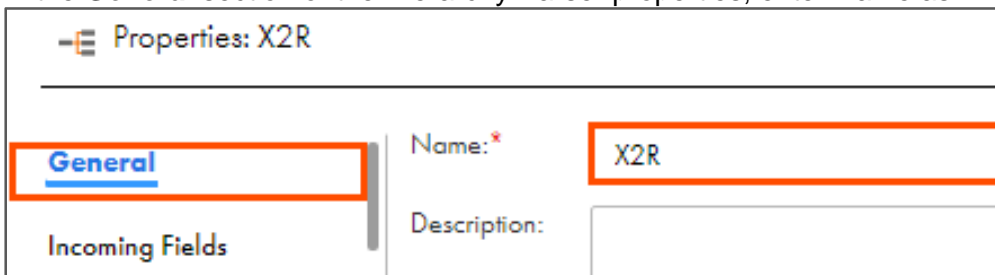
**Add a Hierarchy Parser Transformation:**

27. Drag and drop **Hierarchy Parser** between Src and Target transformations.



28. Select **Hierarchy Parser** transformation on the mapping canvas.

29. In the **General** section of the Hierarchy Parser properties, enter Name as **X2R**.



Properties: X2R

**General**

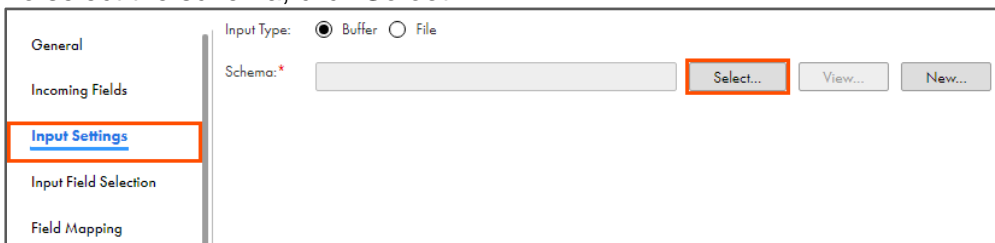
Name: X2R

Description:

Incoming Fields

30. From the properties pane, click **Input Settings**.

31. To select the schema, click **Select**.



General

Incoming Fields

**Input Settings**

Input Field Selection

Field Mapping

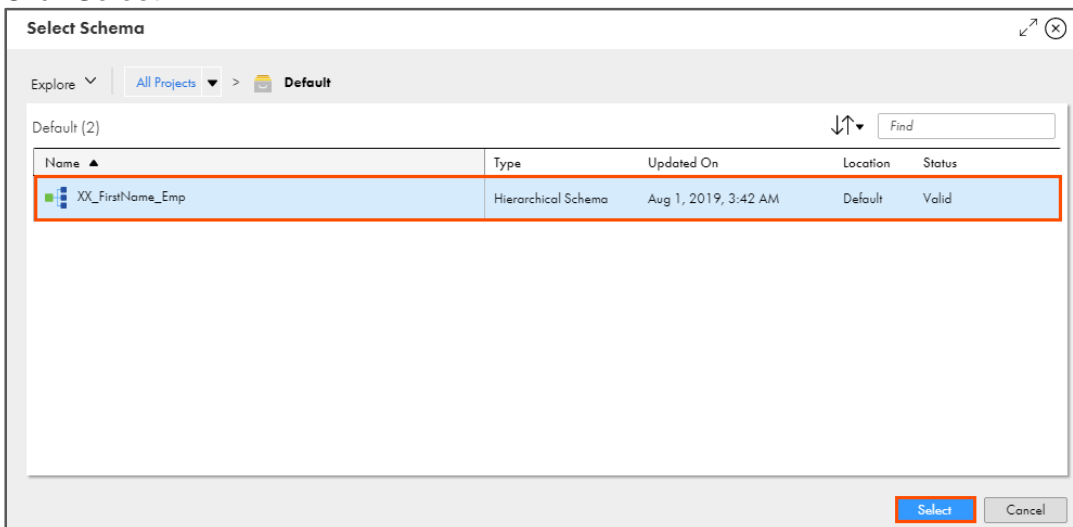
Input Type: ☒ Buffer ☐ File

Schema:  **Select...** View... New...

**Note:** The Select Schema window appears.

32. Navigate to **Default** and select **XX\_FirstName\_Emp**.

33. Click **Select**.



Select Schema

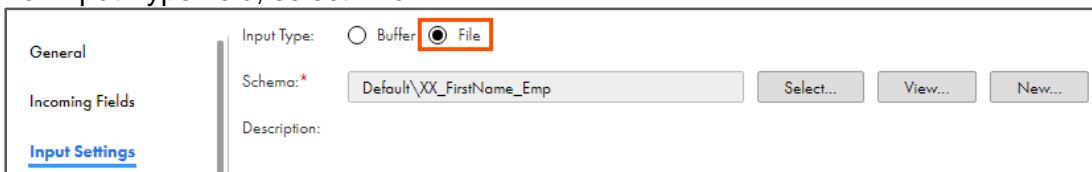
Explore ▾ All Projects ▾ > Default

Default (2)

| Name             | Type                | Updated On           | Location | Status |
|------------------|---------------------|----------------------|----------|--------|
| XX_FirstName_Emp | Hierarchical Schema | Aug 1, 2019, 3:42 AM | Default  | Valid  |

**Select** Cancel

34. For Input Type field, select **File**.



General

Incoming Fields

**Input Settings**

Input Field Selection

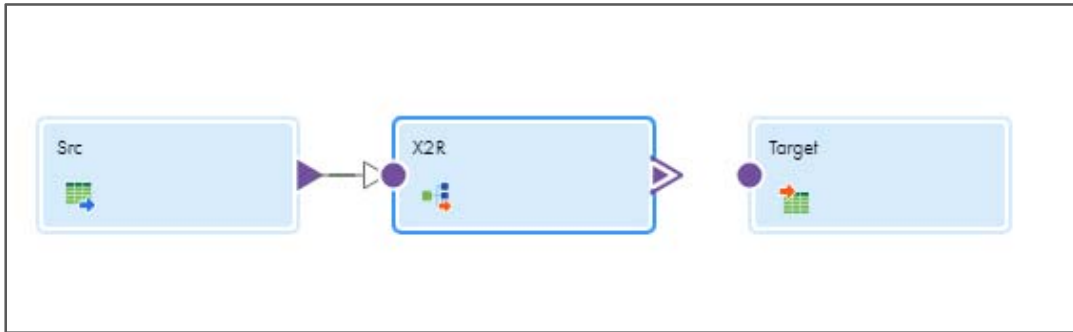
Field Mapping

Input Type: ☐ Buffer ☒ **File**

Schema: Default\XX\_FirstName\_Emp **Select...** View... New...

Description:

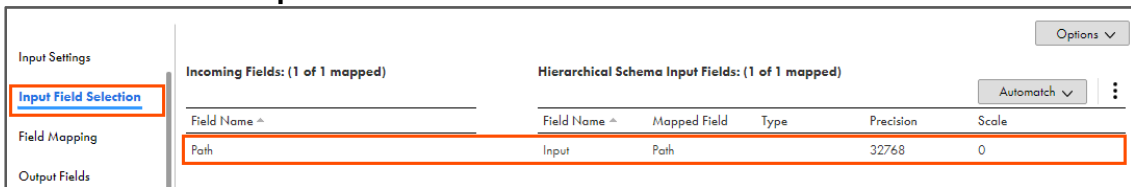
35. Link **Src** to **X2R**.



36. Select **X2R** on the mapping canvas.

37. From the properties pane, click **Input Field Selection**.

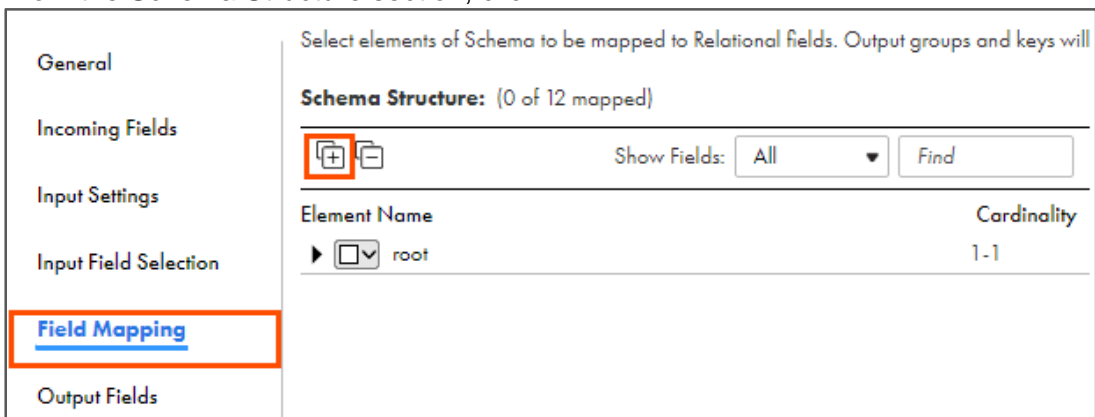
38. To map the Incoming field with the Hierarchical Schema Input field, drag and drop the **Path** field onto the **Input** field.



| Field Name ^ | Mapped Field | Type | Precision | Scale |
|--------------|--------------|------|-----------|-------|
| Path         | Input        | Path | 32768     | 0     |

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

40. From the Schema Structure section, click .



| Element Name | Cardinality |
|--------------|-------------|
| root         | 1-1         |

41. From the Element Name list, select **Employeeid**, **Firstname**, and **Lastname**.

**Schema Structure:** (3 of 12 mapped)

Show Fields:

| Element Name                                      | Cardinality |
|---------------------------------------------------|-------------|
| ▼ <input checked="" type="checkbox"/> root        | 1-1         |
| ▼ <input checked="" type="checkbox"/> Emp_Details | 0-many      |
| <input type="checkbox"/> @EmpAttribute            | 0-1         |
| ▼ <input checked="" type="checkbox"/> employee    | 1-1         |
| <input checked="" type="checkbox"/> Employeeid    | 1-1         |
| ▼ <input checked="" type="checkbox"/> Name        | 1-1         |
| <input checked="" type="checkbox"/> Firstname     | 1-1         |
| <input checked="" type="checkbox"/> Lastname      | 1-1         |
| <input type="checkbox"/> Dependents               | 1-many      |
| ▼ <input type="checkbox"/> address                | 0-1         |
| <input type="checkbox"/> Addressid                | 1-1         |
| <input type="checkbox"/> Employeeid               | 1-1         |
| <input type="checkbox"/> Line1                    | 1-1         |
| <input type="checkbox"/> Line2                    | 1-1         |

42. From the address drop-down, select **Map immediate children**.

| Element Name                                      | Cardinality |
|---------------------------------------------------|-------------|
| ▼ <input checked="" type="checkbox"/> root        | 1-1         |
| ▼ <input checked="" type="checkbox"/> Emp_Details | 0-many      |
| <input type="checkbox"/> @EmpAttribute            | 0-1         |
| ▼ <input checked="" type="checkbox"/> employee    | 1-1         |
| <input checked="" type="checkbox"/> Employeeid    | 1-1         |
| ▼ <input checked="" type="checkbox"/> Name        | 1-1         |
| <input checked="" type="checkbox"/> Firstname     | 1-1         |
| <input checked="" type="checkbox"/> Lastname      | 1-1         |
| <input type="checkbox"/> Dependents               | 1-many      |
| ▼ <input checked="" type="checkbox"/> 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.

General

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)**

Incoming Fields

Input Settings

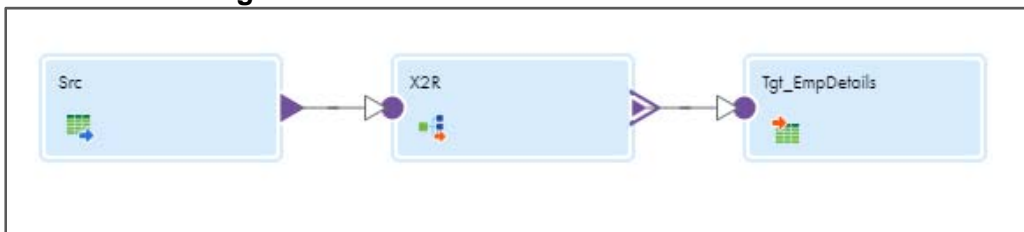
Input Field Selection

Field Mapping

**Output Fields**

|               | 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**.

Select Output Group

Search

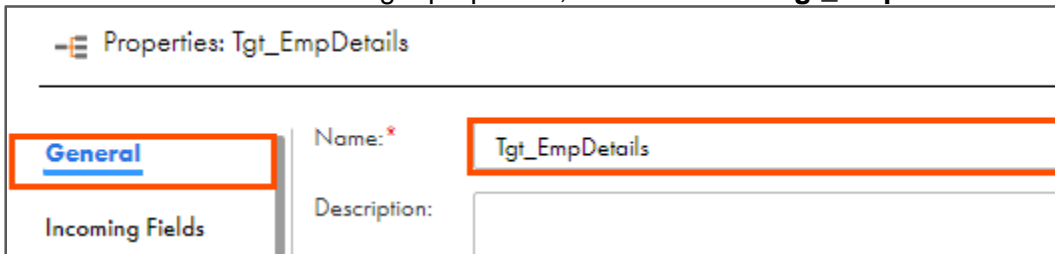
| Select                           | Name        | Linked to |
|----------------------------------|-------------|-----------|
| <input checked="" type="radio"/> | Emp_Details |           |

Displaying all 1 objects.

OK Cancel

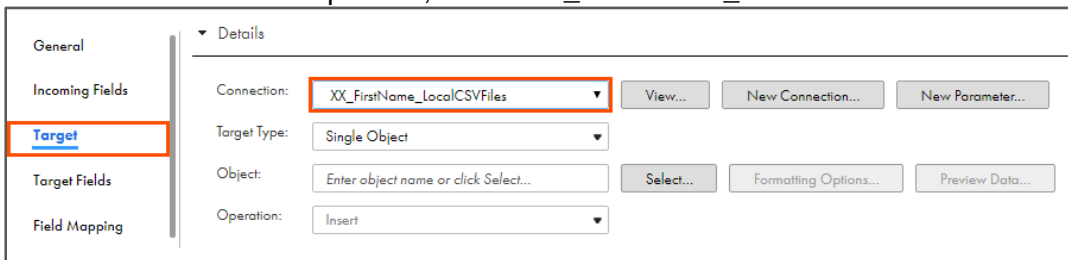
48. To configure the target, from the mapping canvas, click the **Target** transformation.

49. In the **General** section of Target properties, enter Name as **Tgt\_EmpDetails**.



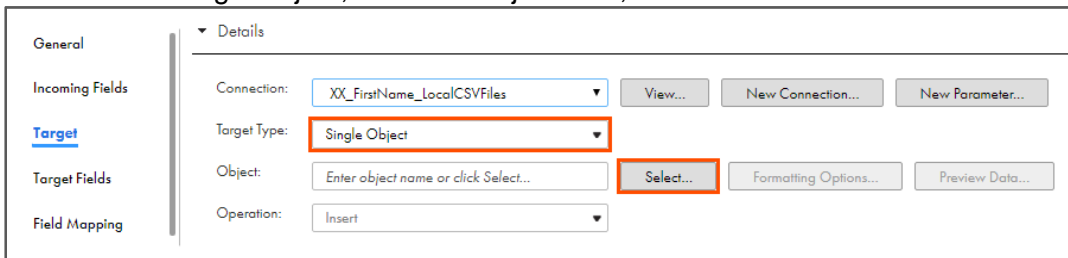
50. From the properties pane, click **Target**.

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**.

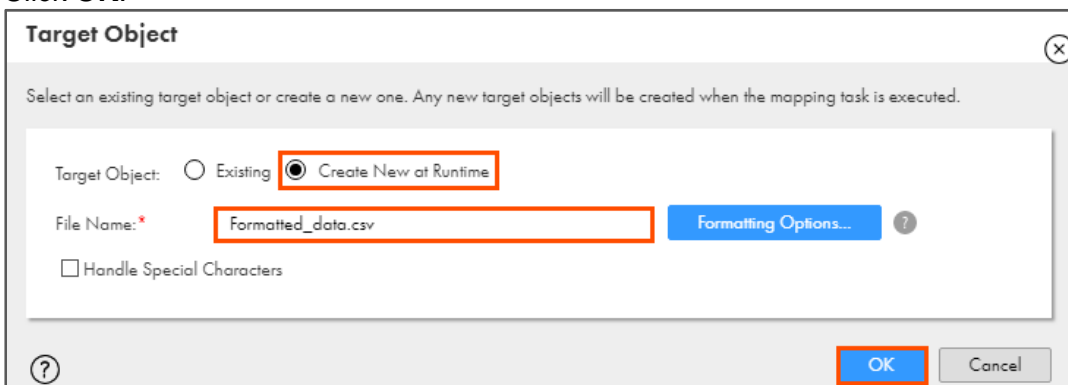


**Note:** The Target Object window appears.

54. On the Target Object window, select **Create New at Runtime**.

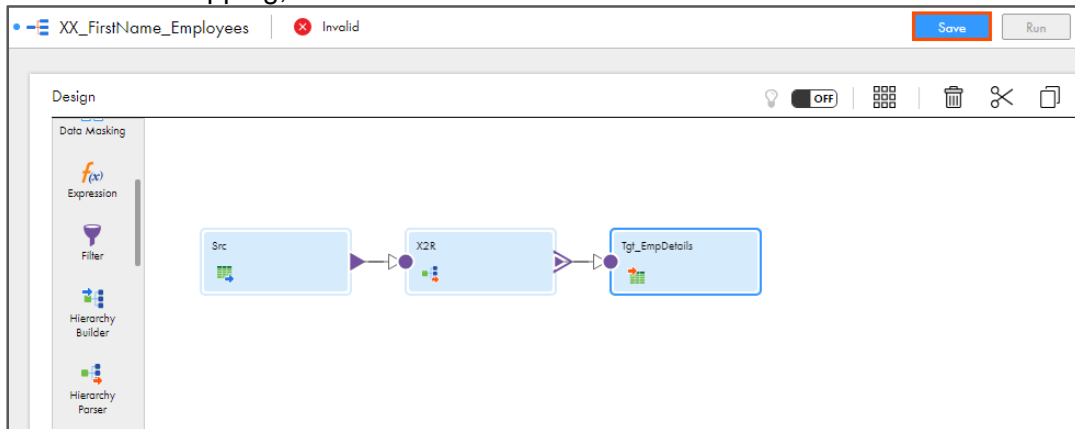
55. Enter **Formatted\_data.csv** as File Name.

56. Click **OK**.

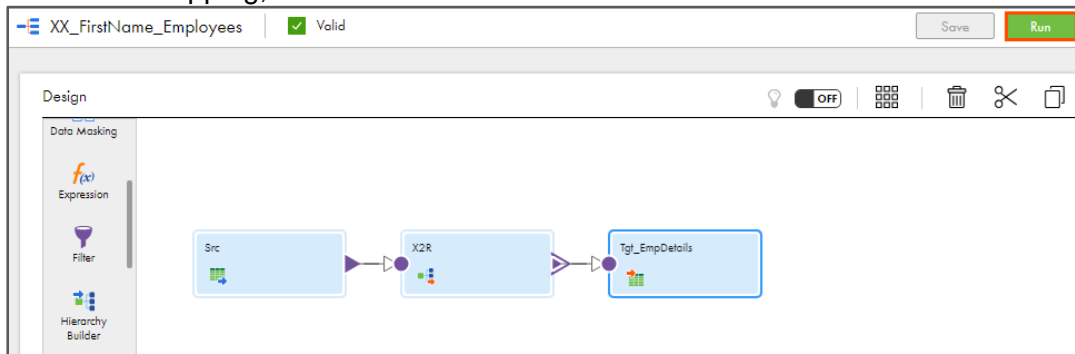




57. To save the mapping, click **Save**.



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

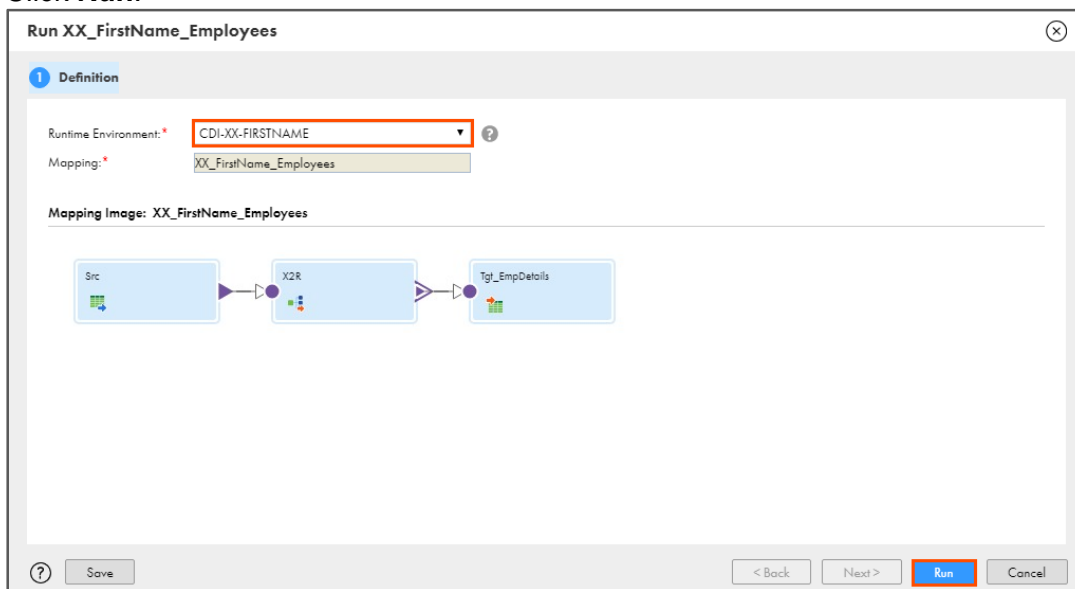


**Note:** The Run mapping window appears.

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

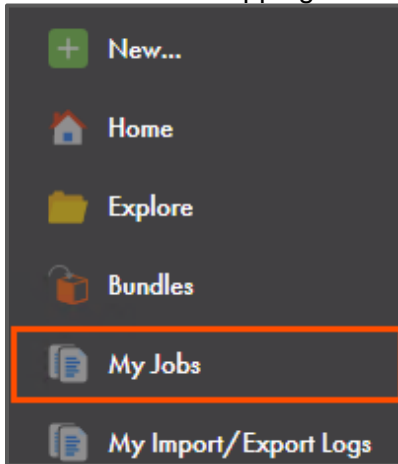
**Note:** The Runtime Environment name will be in CDI-XX-FIRSTNAME format.

60. Click **Run**.



### Monitor Status:

61. To monitor the mapping status, from the Navigation pane, click **My Jobs**.

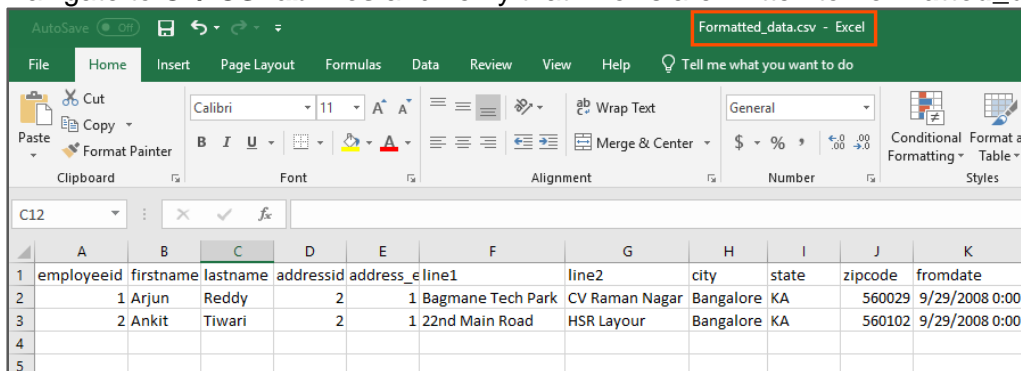


62. When the task completes, the status changes to **Success**.

| Jobs (1 of 28) <span>Up to date</span> |          | Updated 1:28:39 PM PDT |              |                |         |
|----------------------------------------|----------|------------------------|--------------|----------------|---------|
| 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, 20... | 2              | Success |

### Verify Results:

63. Navigate to **C:\IICS LabFiles** and verify that 2 rows are written to **Formatted\_data.csv**.



| employeeid | firstname | lastname | addressid | address_e | line1             | line2          | city      | state | zipcode | fromdate       |
|------------|-----------|----------|-----------|-----------|-------------------|----------------|-----------|-------|---------|----------------|
| 1          | Arjun     | Reddy    | 2         | 1         | Bagmane Tech Park | CV Raman Nagar | Bangalore | KA    | 560029  | 9/29/2008 0:00 |
| 2          | Ankit     | Tiwari   | 2         | 1         | 22nd Main Road    | HSR Layout     | Bangalore | KA    | 560102  | 9/29/2008 0:00 |

*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

---

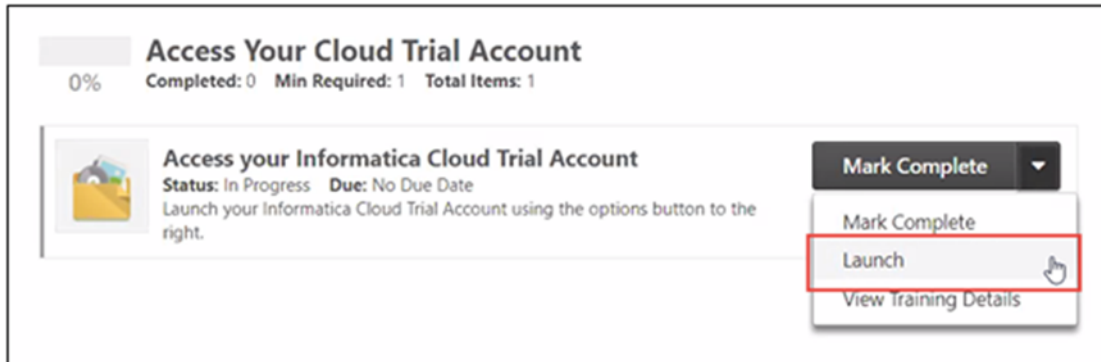
**Tasks:****Copy Source Files:**

1. Copy the following files provided with this lab and place the file in your flat file directory (**C:\IICS LabFiles**).

| Files                |
|----------------------|
| root.csv             |
| quiz.csv             |
| question_options.csv |
| questions.csv        |
| quiz_schema.json     |

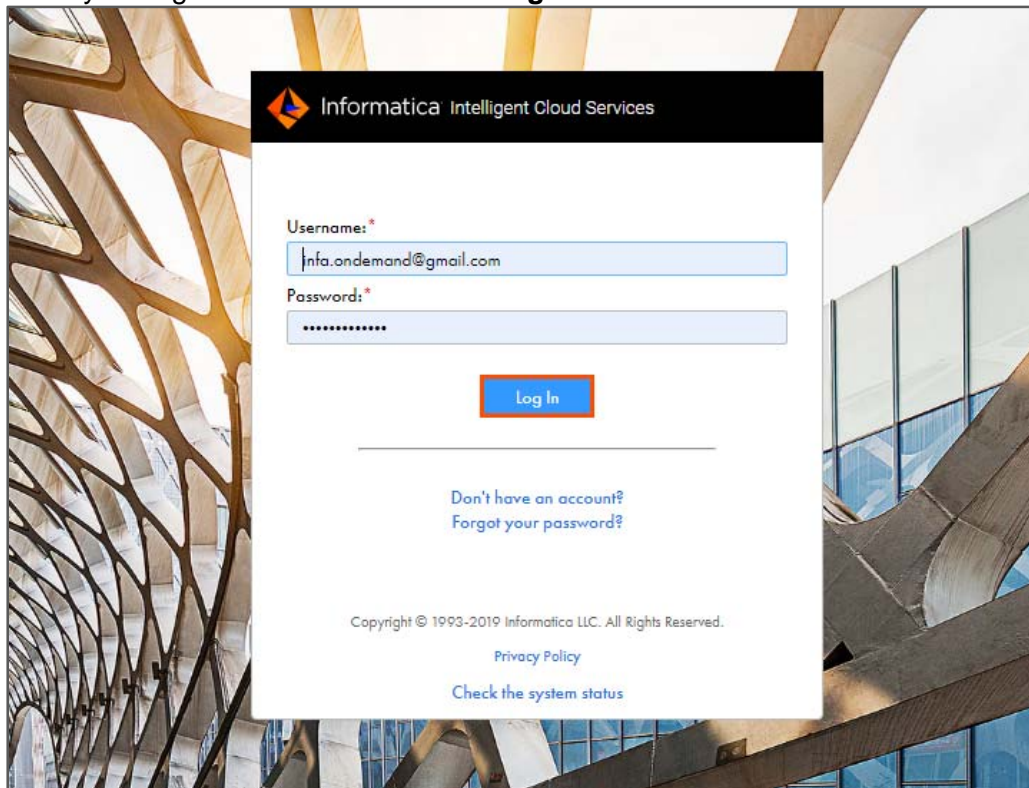
### Create Hierarchical Schema:

2. Access your cloud trial account by clicking **Launch** in your option Menu. If the option menu is labeled anything other than **Launch**, click the down arrow to the right and click **Launch**.

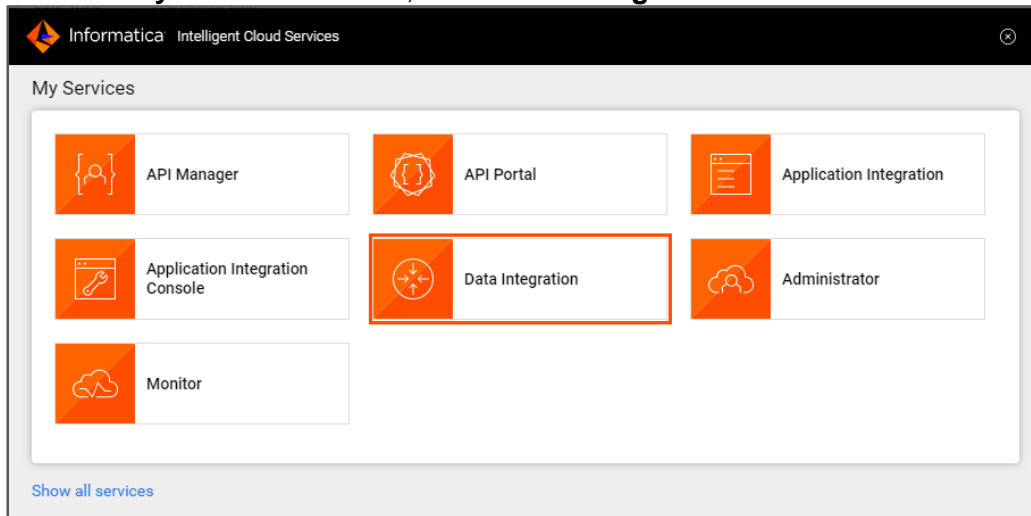


**Note:** Follow this step, if you have navigated away from the login page.

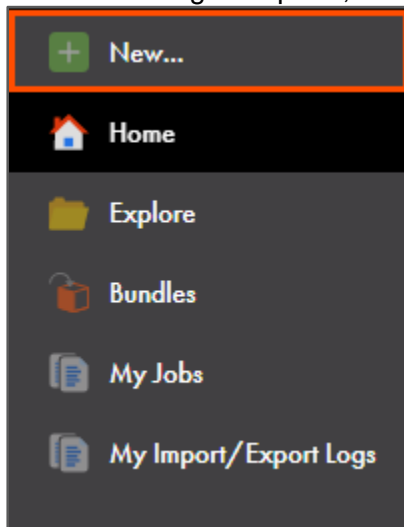
3. Enter your login credentials and click **Log In**.



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

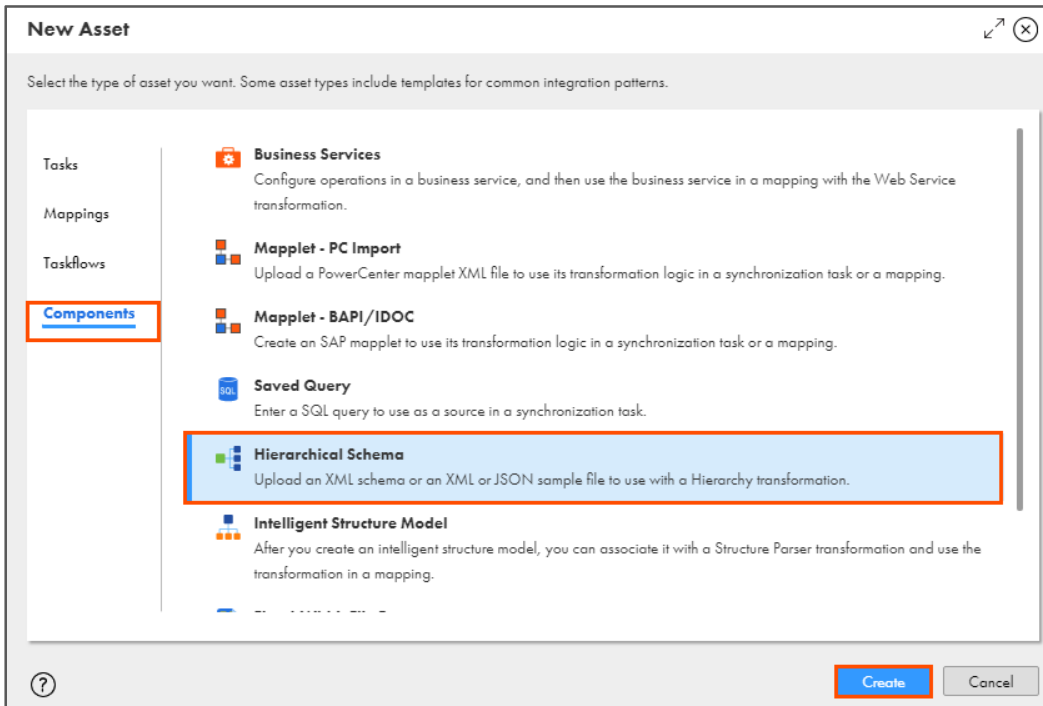


5. From the Navigation pane, select **New**.



6. From the New Asset window, click the **Components** tab.

7. Select **Hierarchical Schema** and click **Create**.



**New Asset**

Select the type of asset you want. Some asset types include templates for common integration patterns.

Tasks

Mappings

Taskflows

**Components**

**Business Services**  
Configure operations in a business service, and then use the business service in a mapping with the Web Service transformation.

**Mapplet - PC Import**  
Upload a PowerCenter mapplet XML file to use its transformation logic in a synchronization task or a mapping.

**Mapplet - BAPI/IDOC**  
Create an SAP mapplet to use its transformation logic in a synchronization task or a mapping.

**Saved Query**  
Enter a SQL query to use as a source in a synchronization task.

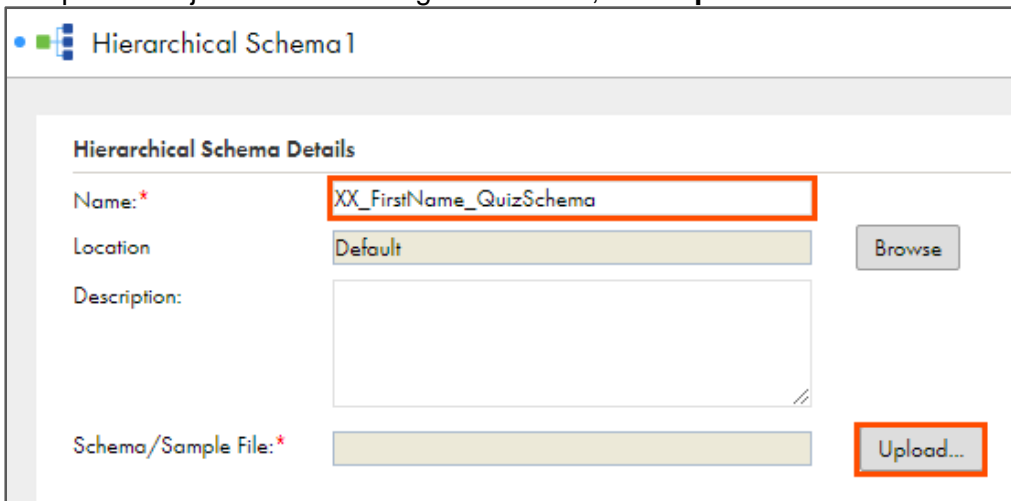
**Hierarchical Schema**  
Upload an XML schema or an XML or JSON sample file to use with a Hierarchy transformation.

**Intelligent Structure Model**  
After you create an intelligent structure model, you can associate it with a Structure Parser transformation and use the transformation in a mapping.

**Create** **Cancel**

**Note:** The Hierarchical Schema page appears.

8. In the Name field, enter **XX\_FirstName\_QuizSchema**.
9. To upload the json file containing the schema, click **Upload**.



**Hierarchical Schema 1**

**Hierarchical Schema Details**

Name: \*

Location  **Browse**

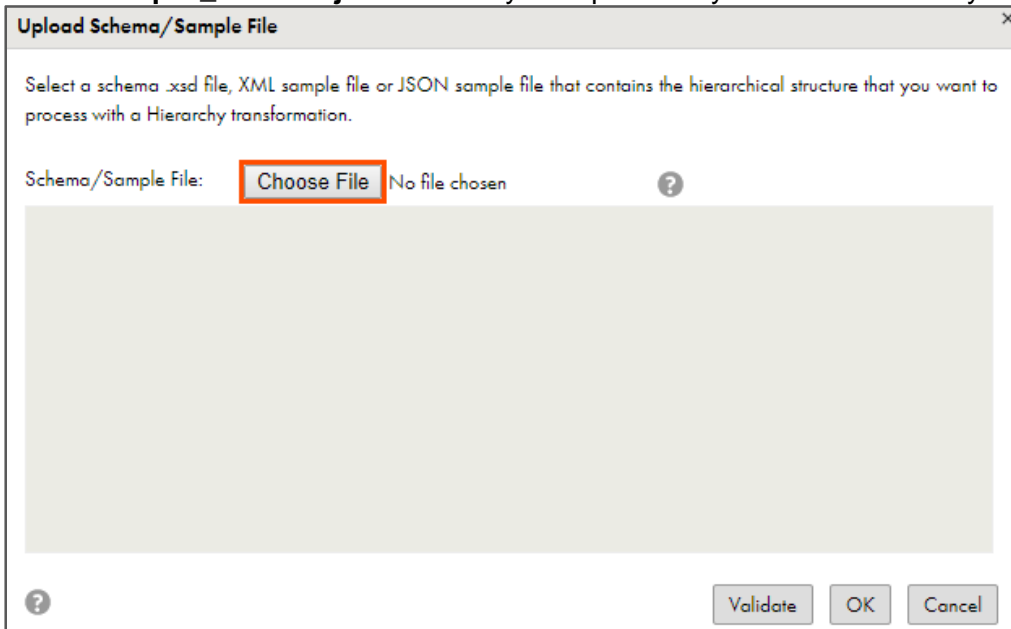
Description:

Schema/Sample File: \*  **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.



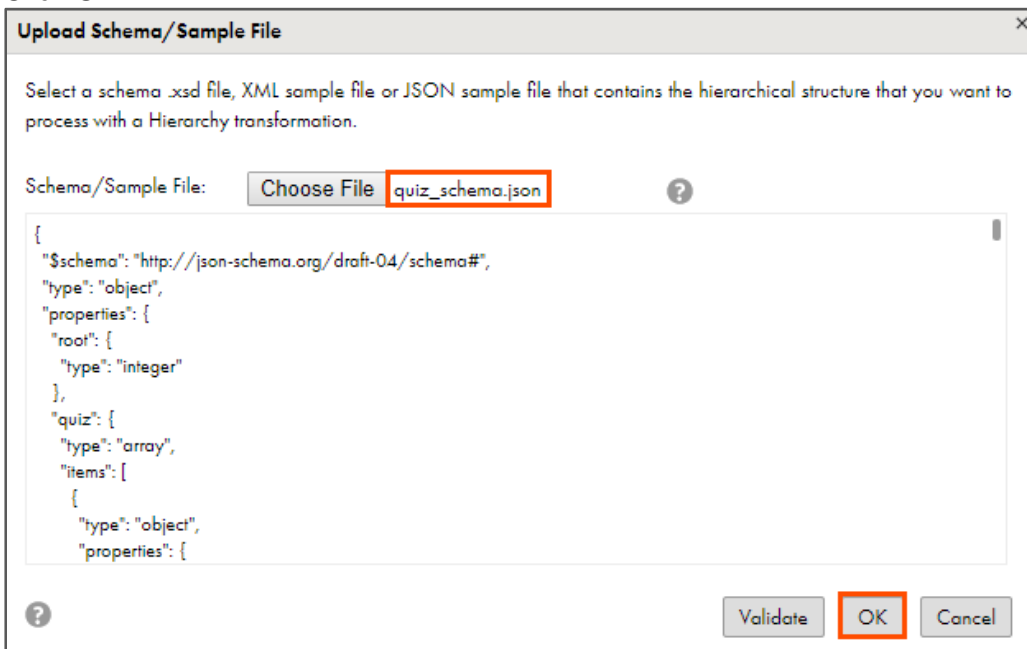
**Upload Schema/Sample File**

Select a schema .xsd file, XML sample file or JSON sample file that contains the hierarchical structure that you want to process with a Hierarchy transformation.

Schema/Sample File: **Choose File** No file chosen ?

Validate OK Cancel

12. Click **OK**.



**Upload Schema/Sample File**

Select a schema .xsd file, XML sample file or JSON sample file that contains the hierarchical structure that you want to process with a Hierarchy transformation.

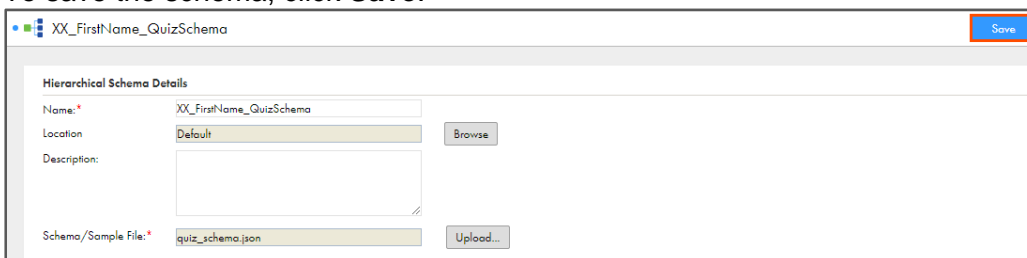
Schema/Sample File: **Choose File** **quiz\_schema.json** ?

```
{
  "$schema": "http://json-schema.org/draft-04/schema#",
  "type": "object",
  "properties": {
    "root": {
      "type": "integer"
    },
    "quiz": {
      "type": "array",
      "items": [
        {
          "type": "object",
          "properties": {

```

Validate **OK** Cancel

13. To save the schema, click **Save**.



**XX\_FirstName\_QuizSchema** Save

**Hierarchical Schema Details**

Name:

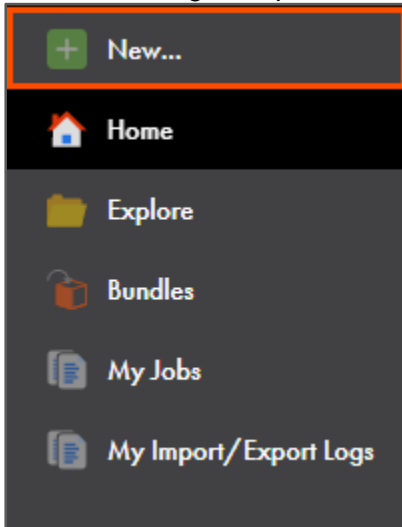
Location:  Browse

Description:

Schema/Sample File:  Upload...

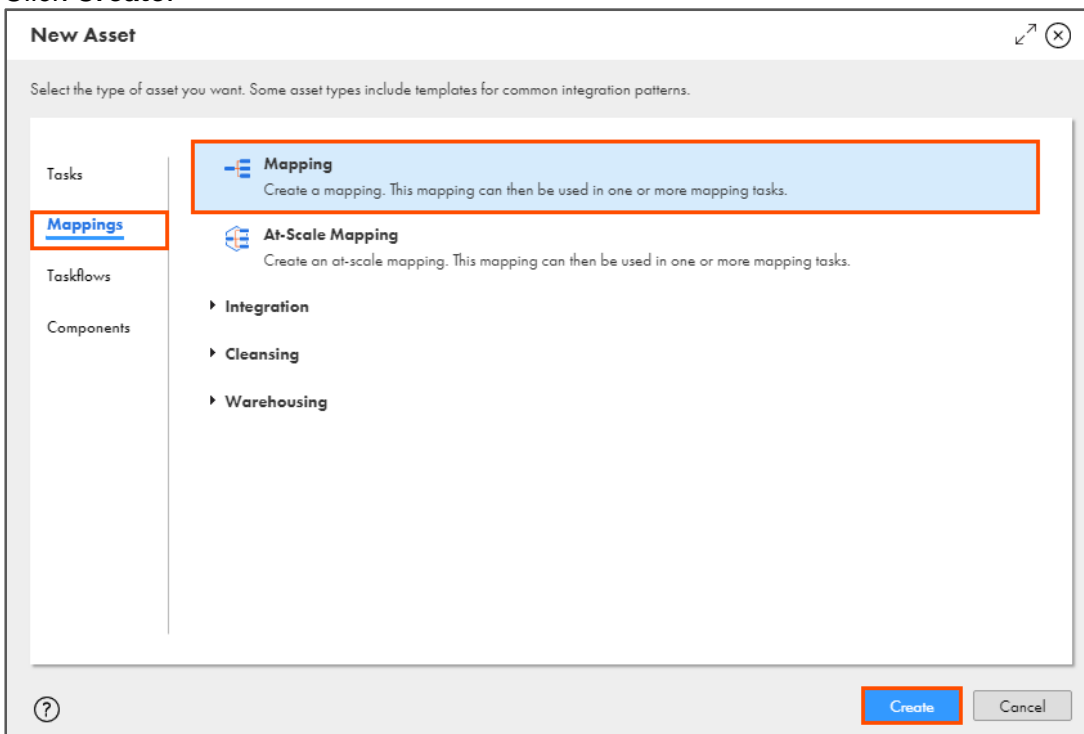
**Create Mapping:**

14. From the Navigation pane, select **New**.



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

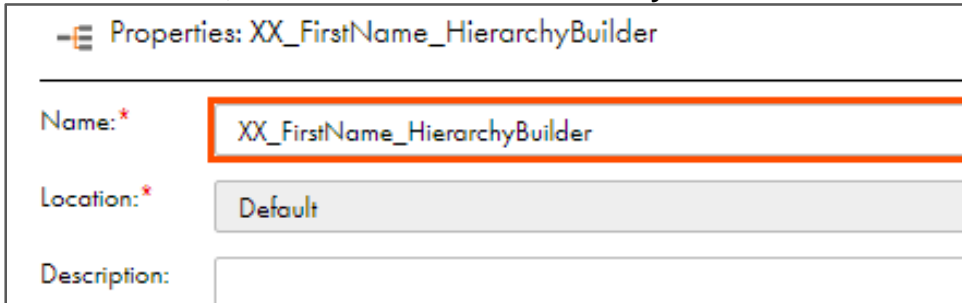
16. Click **Create**.



**Note:** The Mapping page appears.



17. In the Name field, enter **XX\_FirstName\_HierarchyBuilder**.



Properties: XX\_FirstName\_HierarchyBuilder

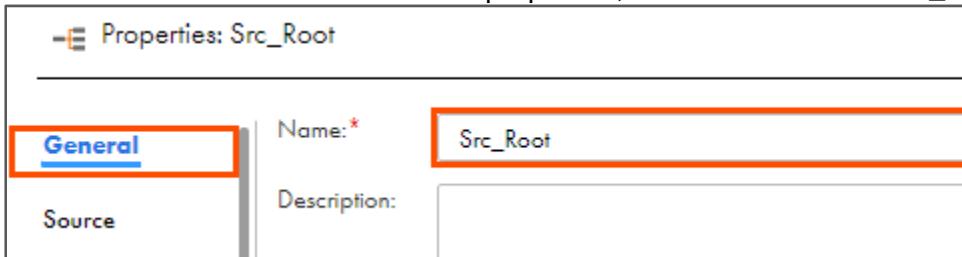
Name: \* XX\_FirstName\_HierarchyBuilder

Location: \* Default

Description:

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: Src\_Root

General

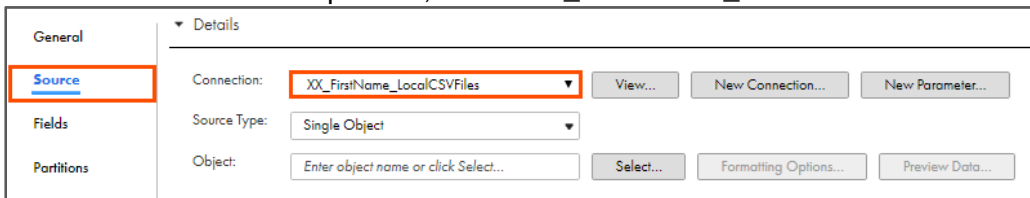
Name: \* Src\_Root

Description:

Source

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

21. From the Connection drop-down, select **XX\_FirstName\_LocalCSVFiles**.



General

Source

Fields

Partitions

Details

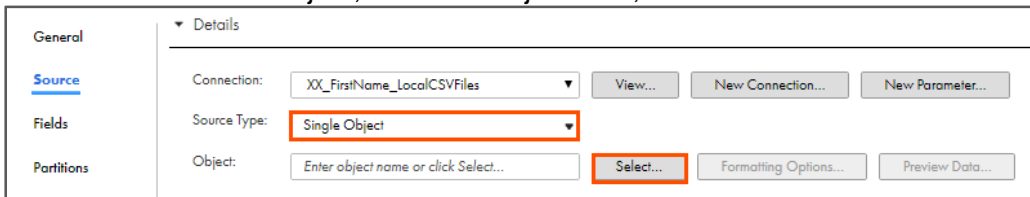
Connection: XX\_FirstName\_LocalCSVFiles View... New Connection... New Parameter...

Source Type: Single Object

Object: Enter object name or click Select... Select... Formatting Options... Preview Data...

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

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



General

Source

Fields

Partitions

Details

Connection: XX\_FirstName\_LocalCSVFiles View... New Connection... New Parameter...

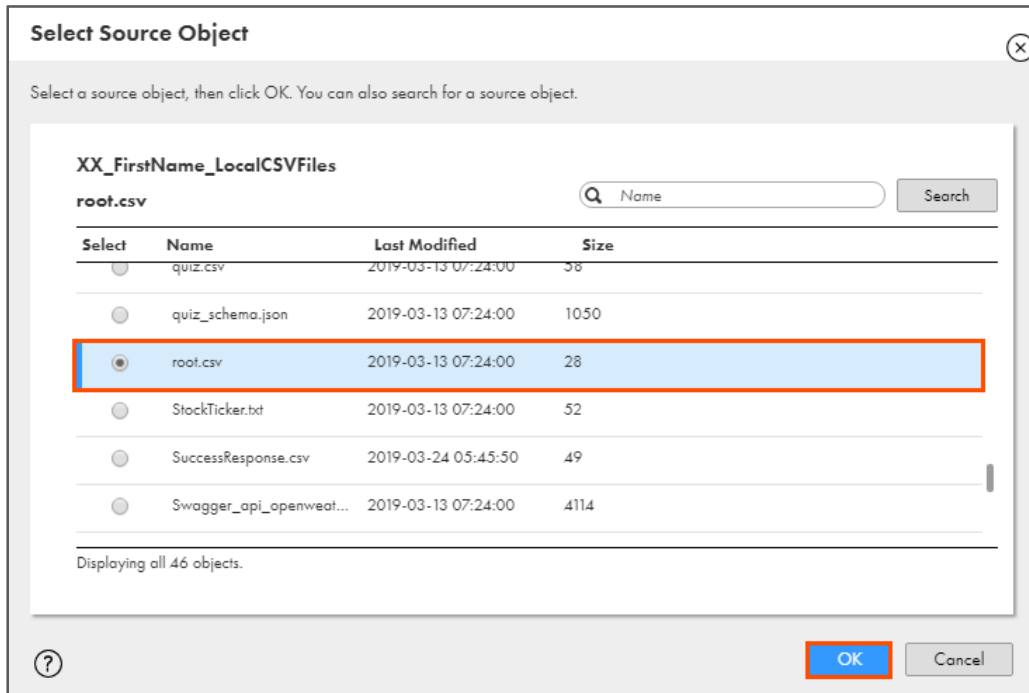
Source Type: Single Object

Object: Enter object name or click Select... Select... Formatting Options... Preview Data...

**Note:** The Select Source Object window appears.

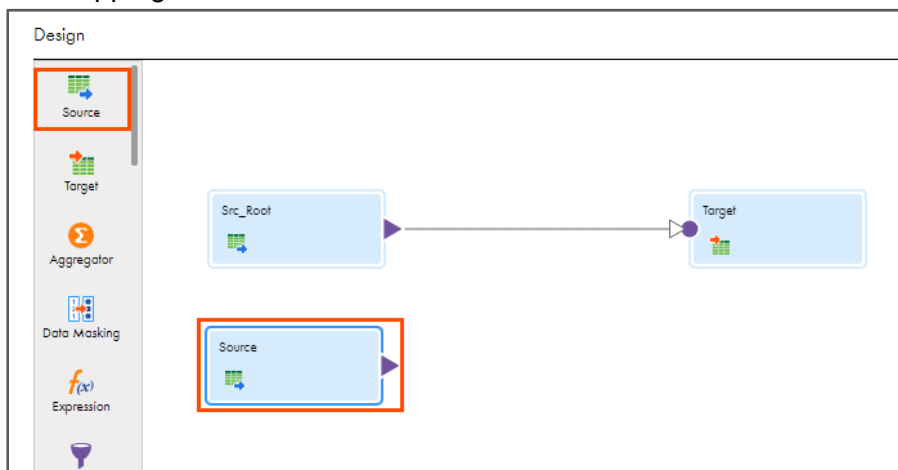
24. From the list, select **root.csv**.

25. Click **OK**.



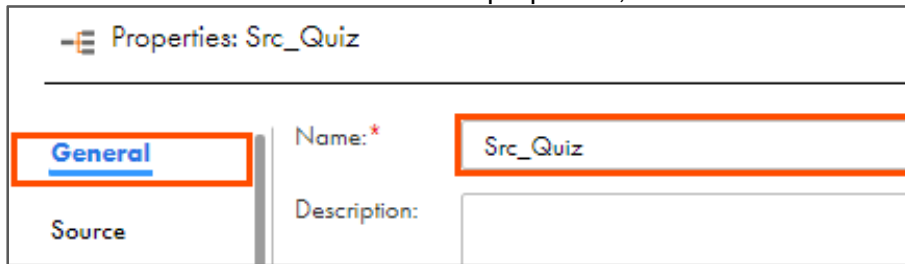
### Add Source Transformation:

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**.



Properties: Src\_Quiz

**General**

Name: \* Src\_Quiz

Description:

Source

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

30. From the Connection drop-down, select **XX\_FirstName\_LocalCSVFiles**.



General

**Source**

Fields

Partitions

Details

Connection: XX\_FirstName\_LocalCSVFiles View... New Connection... New Parameter...

Source Type: Single Object

Object: Enter object name or click Select... Select... Formatting Options... Preview Data...

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

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



General

**Source**

Fields

Partitions

Details

Connection: XX\_FirstName\_LocalCSVFiles View... New Connection... New Parameter...

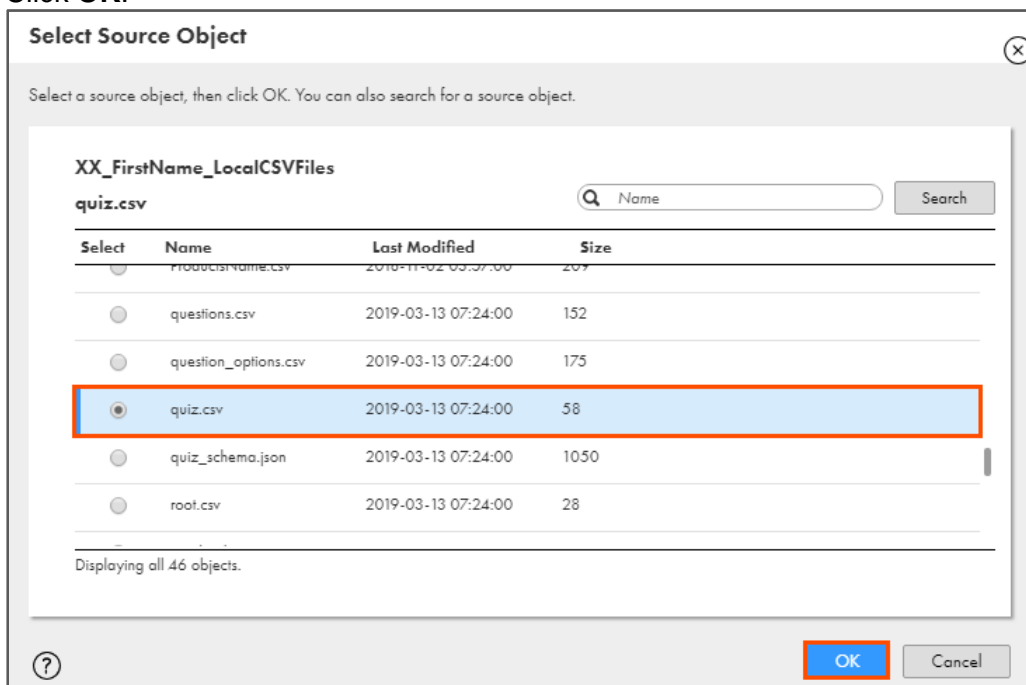
Source Type: Single Object

Object: Enter object name or click Select... Select... Formatting Options... Preview Data...

**Note:** The Select Source Object window appears.

33. From the list, select **quiz.csv**.

34. Click **OK**.



Select Source Object

Select a source object, then click OK. You can also search for a source object.

XX\_FirstName\_LocalCSVFiles

quiz.csv

Search

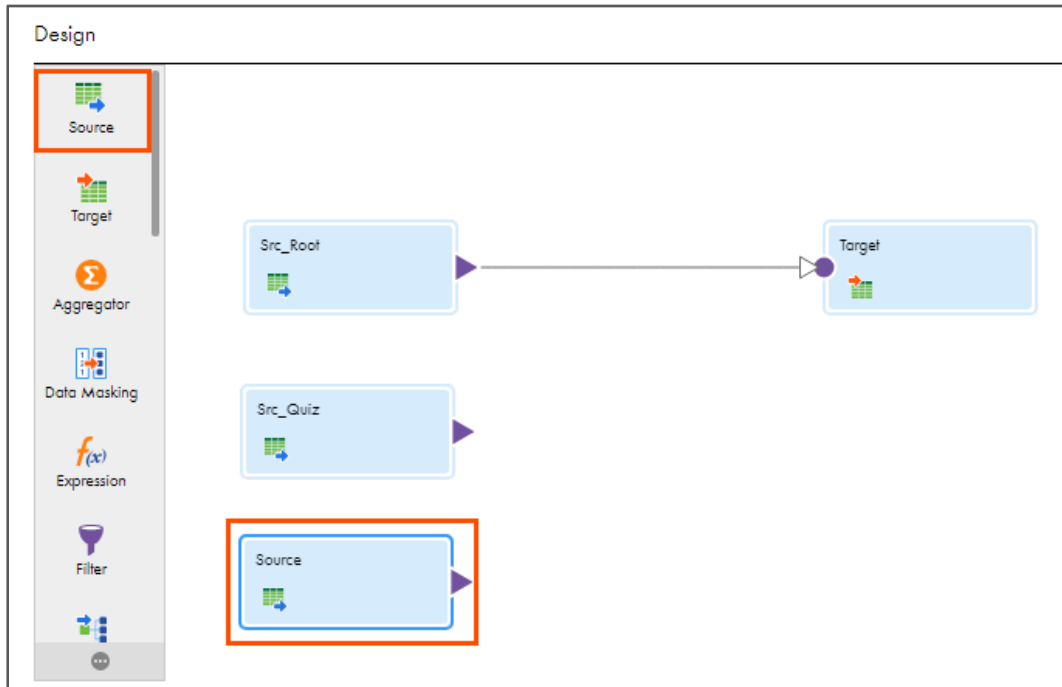
| Select                           | Name                 | Last Modified       | Size |
|----------------------------------|----------------------|---------------------|------|
| <input type="radio"/>            | ProductsName.csv     | 2018-11-02 03:37:00 | 209  |
| <input type="radio"/>            | questions.csv        | 2019-03-13 07:24:00 | 152  |
| <input type="radio"/>            | question_options.csv | 2019-03-13 07:24:00 | 175  |
| <input checked="" 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

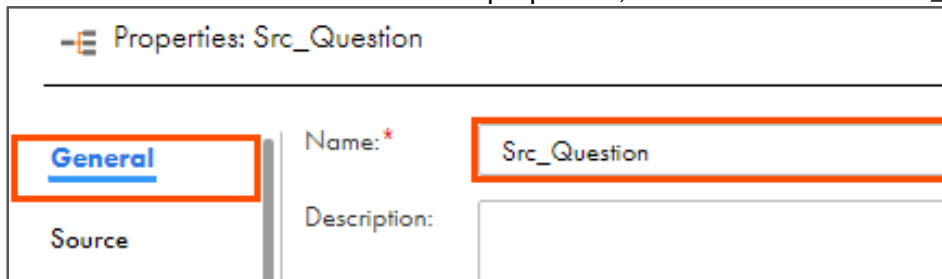
### Add Source Transformation:

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



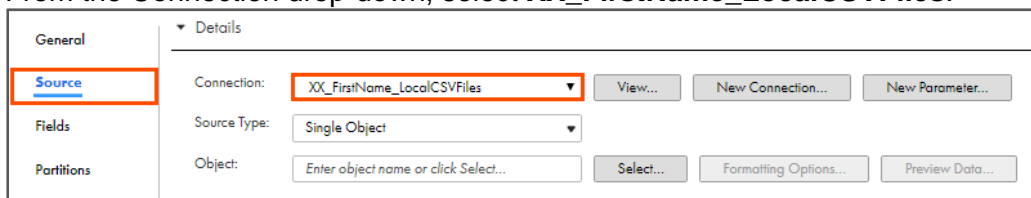
36. To configure the source, from the mapping canvas, click the newly added **Source** transformation.

37. In the **General** section of the Source properties, enter the Name as **Src\_Question**.



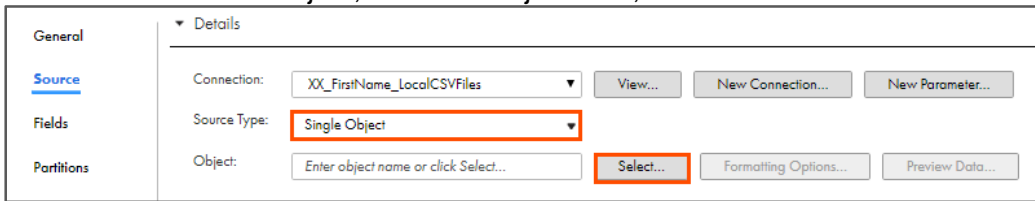
38. From the properties pane, click **Source**.

39. From the Connection drop-down, select **XX\_FirstName\_LocalCSVFiles**.



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

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



General

Source

Fields

Partitions

Details

Connection: XX\_FirstName\_LocalCSVFiles View... New Connection... New Parameter...

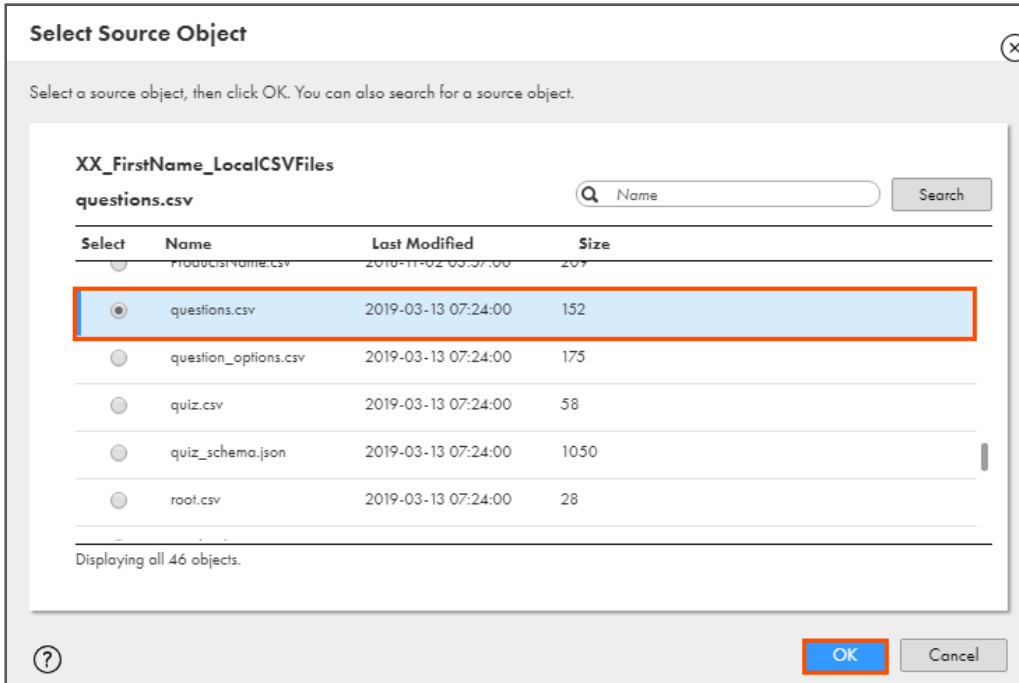
Source Type: Single Object

Object: Enter object name or click Select... **Select...** Formatting Options... Preview Data...

**Note:** The Select Source Object window appears.

42. From the list, select **questions.csv**.

43. Click **OK**.



**Select Source Object**

Select a source object, then click OK. You can also search for a source object.

XX\_FirstName\_LocalCSVFiles

questions.csv

Search

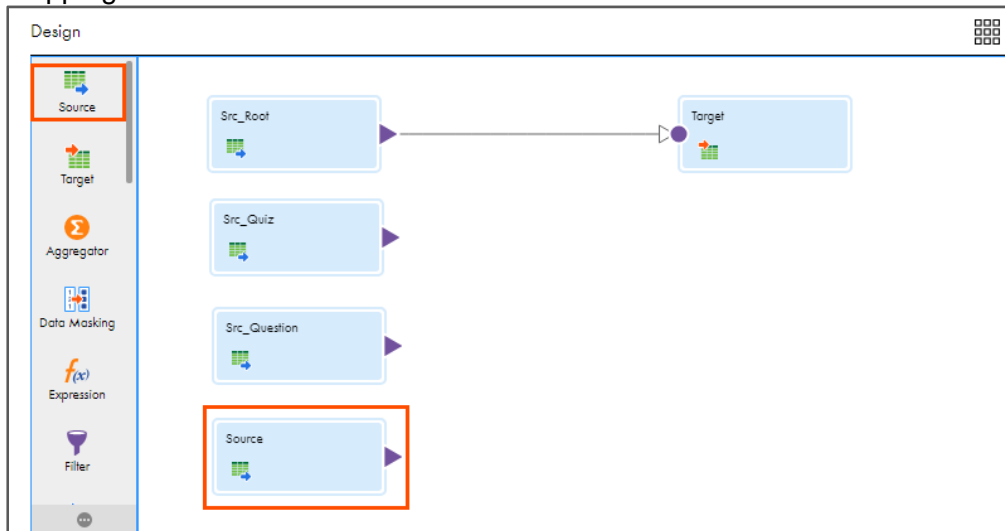
| Select                           | Name                 | Last Modified       | Size |
|----------------------------------|----------------------|---------------------|------|
| <input type="radio"/>            | ProductName.csv      | 2019-03-13 07:24:00 | 207  |
| <input checked="" type="radio"/> | 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

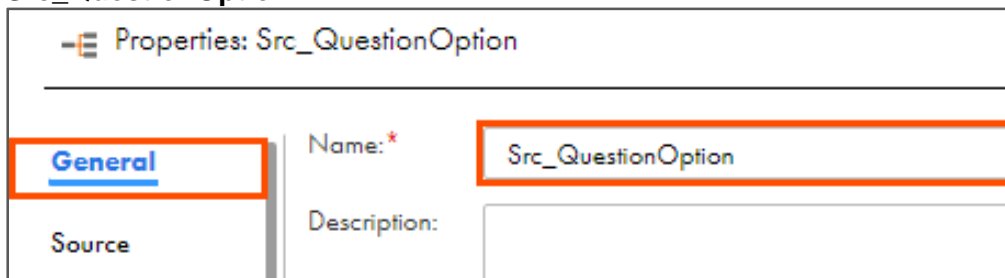
### Add Source Transformation:

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



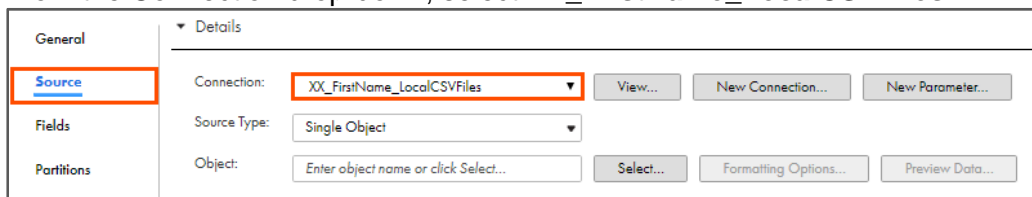
45. To configure the source, from the mapping canvas, click the newly added **Source** transformation.

46. In the **General** section of the Source properties, enter the Name as **Src\_QuestionOption**.



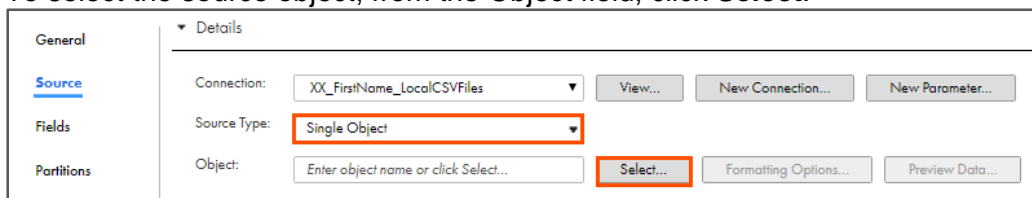
47. From the properties pane, click **Source**.

48. From the Connection drop-down, select **XX\_FirstName\_LocalCSVFiles**.



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

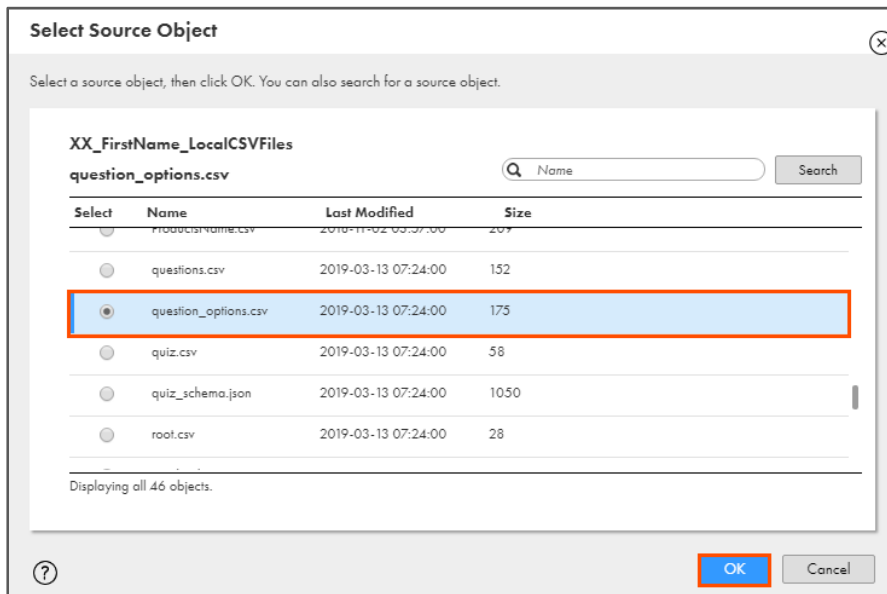
50. To select the source object, from the Object field, click **Select**.



**Note:** The Select Source Object window appears.

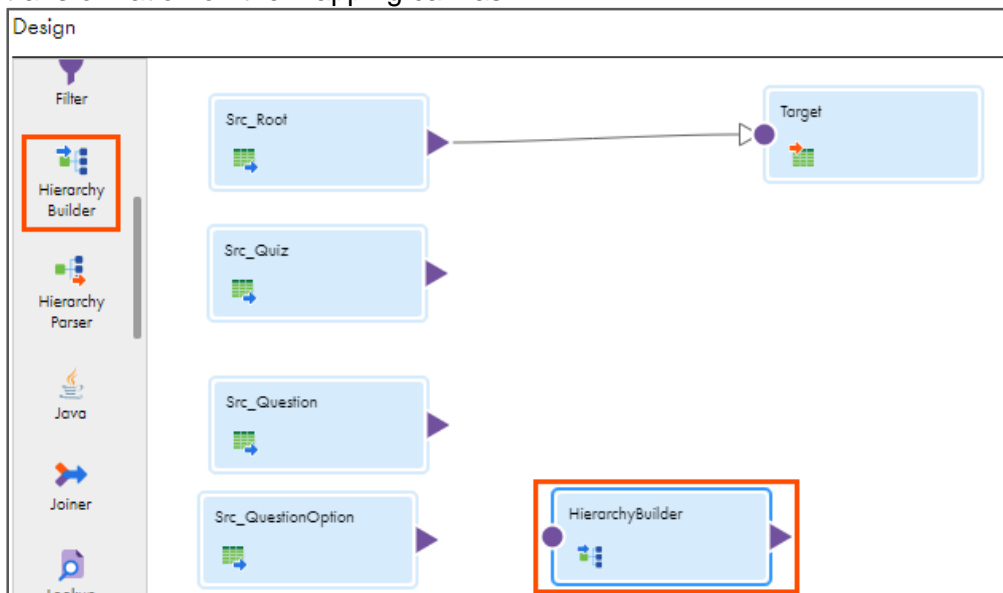
51. From the list, select **question\_options.csv**.

52. Click **OK**.



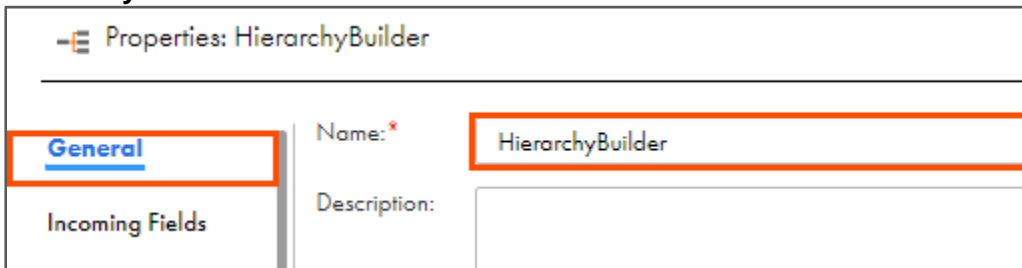
**Add Hierarchy Builder Transformation:**

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**.



Properties: HierarchyBuilder

**General**

Name: \* HierarchyBuilder

Description:

Incoming Fields

56. From the properties pane, click **Output Settings**.

57. To select the Schema, click **Select**.



General

Incoming Fields

Input Settings

**Output Settings**

Field Mapping

Schema: \*

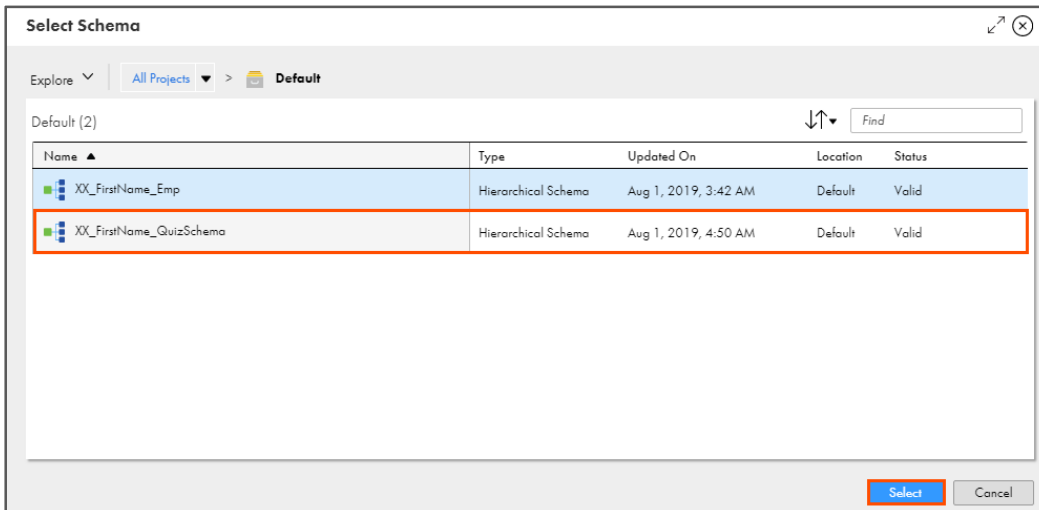
Precision: 1048576

Select... View... New...

**Note:** The Select Schema window appears.

58. Navigate to **Default** and select **XX\_FirstName\_QuizSchema**.

59. Click **Select**.



Select Schema

Explore ▾ All Projects ▾ > Default

Default (2)

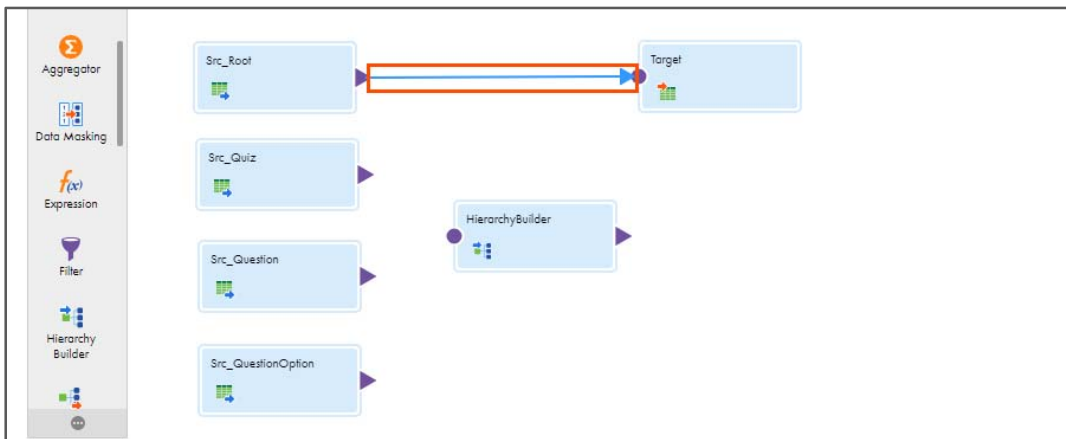
| Name ▲                  | Type                | Updated On           | Location | Status |
|-------------------------|---------------------|----------------------|----------|--------|
| XX_FirstName_Emp        | Hierarchical Schema | Aug 1, 2019, 3:42 AM | Default  | Valid  |
| XX_FirstName_QuizSchema | Hierarchical Schema | Aug 1, 2019, 4:50 AM | Default  | Valid  |

Select Cancel

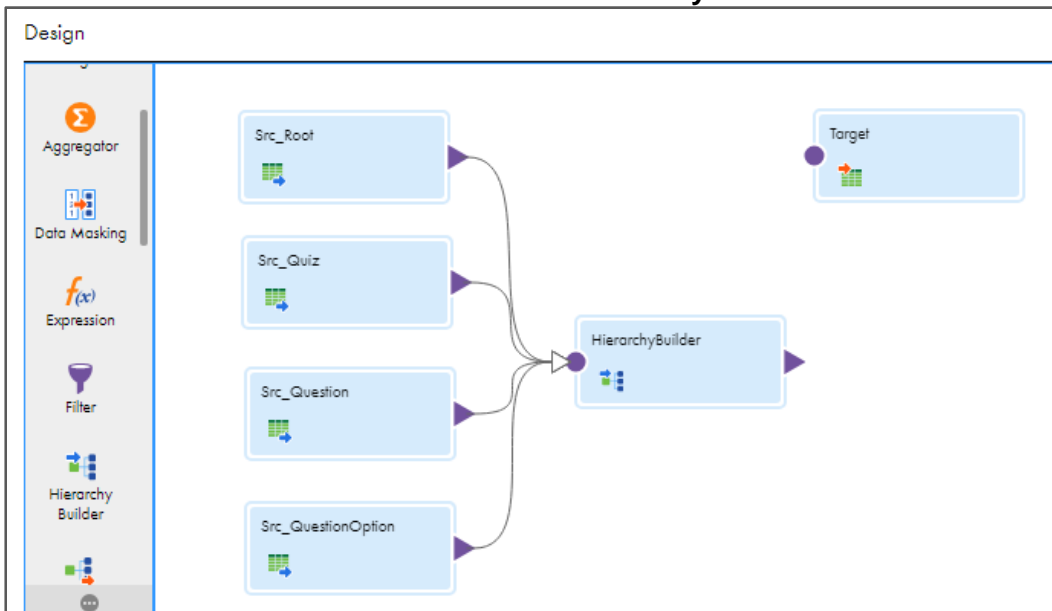
60. To delete the link between **Src\_Root** and **Target**, click on the link.



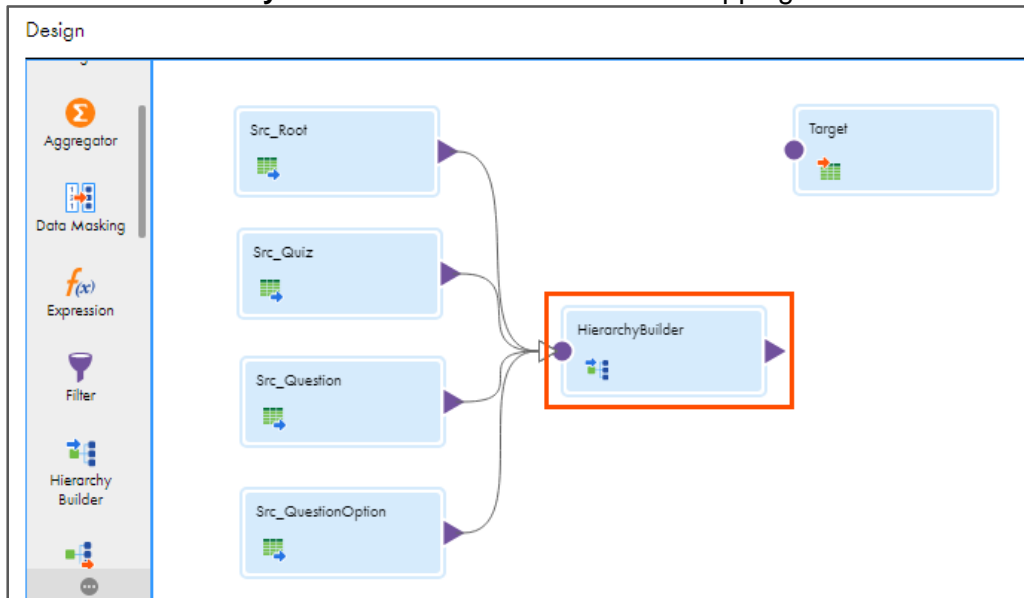
61. Click .




62. Link all the Source transformations with the **Hierarchy Builder** transformation.

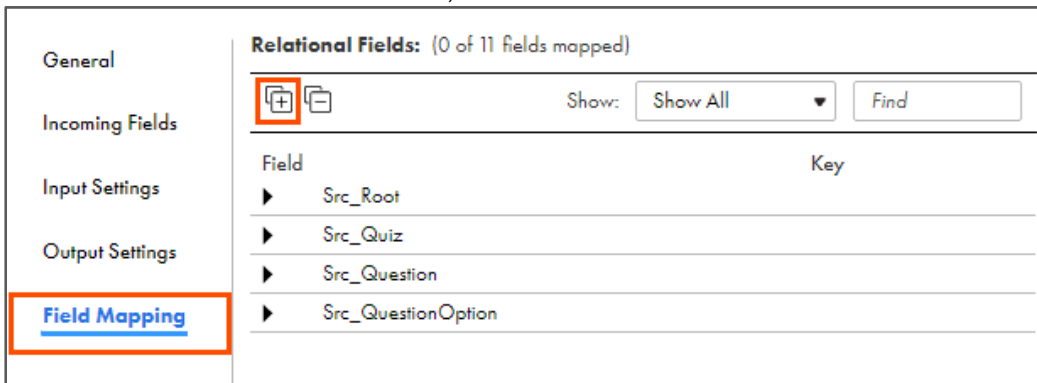


63. Select the **Hierarchy Builder** transformation on the mapping canvas.



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 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.

General  
Incoming Fields  
Input Settings  
Output Settings  
**Field Mapping**

**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)

+

−

Show: Show All Find

**Hierarchy Fields:** (2 of 15 fields mapped)

+

−

Show: Show

69. Drag and drop Relational fields in 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)

+

−

Show: Show All Find

**Hierarchy Fields:** (1 of 15 fields mapped)

+

−

Show: Show All Find

| Field        | Key |
|--------------|-----|
| ▼ ✓ Src_Root |     |
| PK_root      | 🔑   |
| ✓ root       |     |
| ▼ Src_Quiz   |     |
| PK_quiz      | 🔑   |
| FK_root      | 🔗   |
| category     |     |

| Element Name | Action | Mapped Field  |
|--------------|--------|---------------|
| ▼ ✓ root*    |        | Src_Root      |
| _schema      |        |               |
| type         |        |               |
| ▼ properties |        |               |
| ▼ root*      |        |               |
| ✓ type       |        | Src_Root.root |
| ▼ quiz       |        |               |

### 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)

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              |     |

**Hierarchy Fields:** (2 of 15 fields mapped)

Show: Show All Find

| Element Name | Action | Mapped Field      |
|--------------|--------|-------------------|
| ▼ ✓ root*    |        | Src_Root          |
| _schema      |        |                   |
| type         |        |                   |
| ▼ properties |        |                   |
| ▼ root*      |        |                   |
| ✓ type       |        | Src_Root.root     |
| ▼ quiz       |        |                   |
| type         |        |                   |
| ▼ itemsArray |        |                   |
| ▼ ✓ items    |        | Src_Quiz          |
| type         |        |                   |
| ▼ properties |        |                   |
| ▼ category   |        |                   |
| ✓ type       |        | Src_Quiz.category |

### 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)

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 |     |
| options              |     |

**Hierarchy Fields:** (3 of 15 fields mapped)

Show: Show All Find

| Element Name    | Action | Mapped Field          |
|-----------------|--------|-----------------------|
| ▼ itemsArray    |        |                       |
| ▼ ✓ items       |        | Src_Question          |
| type            |        |                       |
| ▼ properties    |        |                       |
| ▼ question      |        |                       |
| ✓ type          |        | Src_Question.question |
| ▼ options       |        |                       |
| type            |        |                       |
| ▼ itemsArray    |        |                       |
| ▼ items         |        |                       |
| type            |        |                       |
| ▼ answer        |        |                       |
| type            |        |                       |
| ▼ 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 |

**Relational Fields:** (4 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              |     |

**Hierarchy Fields:** (4 of 15 fields mapped)

Show: Show All Find

|                 |                            |
|-----------------|----------------------------|
| type            |                            |
| ▼ itemsArray    |                            |
| ▼ ✓ items       | Src_QuestionOption         |
| ✓ type          | Src_QuestionOption.options |
| ▼ answer        |                            |
| type            |                            |
| ▼ requiredArray |                            |
| ▼ required      |                            |
| required        |                            |
| ▼ requiredArray |                            |
| ▼ required      |                            |
| required        |                            |
| requiredArray   |                            |
| ▼ required      |                            |
| required        |                            |

### 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 |

**Relational Fields:** (5 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              |     |

**Hierarchy Fields:** (5 of 15 fields mapped)

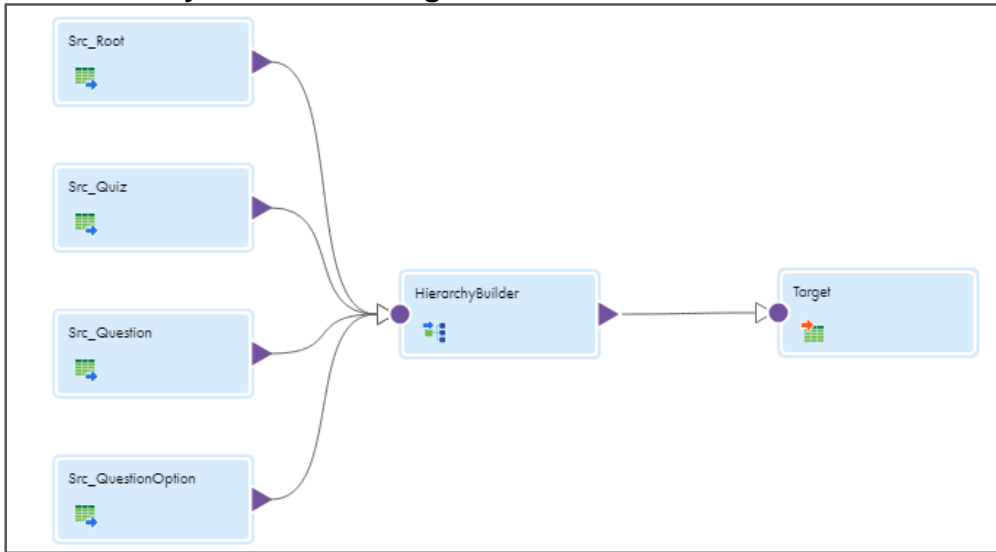
Show: Show All Find

|                 |                            |
|-----------------|----------------------------|
| type            |                            |
| ▼ itemsArray    |                            |
| ▼ ✓ items       | Src_QuestionOption         |
| ✓ type          | Src_QuestionOption.options |
| ▼ answer        |                            |
| ✓ type          | Src_Question.answer        |
| ▼ requiredArray |                            |
| ▼ required      |                            |
| required        |                            |
| ▼ requiredArray |                            |
| ▼ required      |                            |
| required        |                            |
| requiredArray   |                            |
| ▼ required      |                            |
| required        |                            |

Module 13: Hierarchical Connectivity

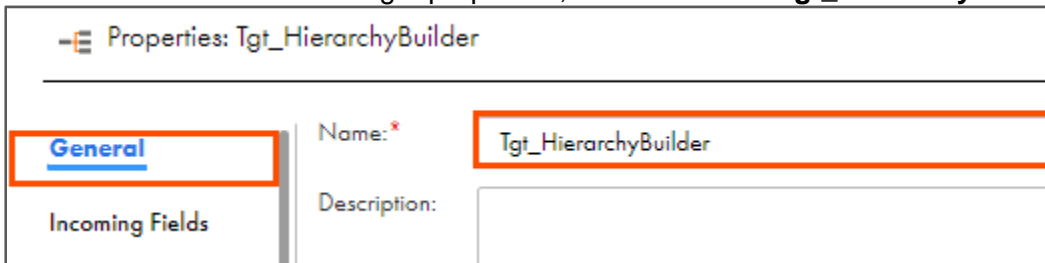
425

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 Target properties, enter Name as **Tgt\_HierarchyBuilder**.



Properties: Tgt\_HierarchyBuilder

**General**

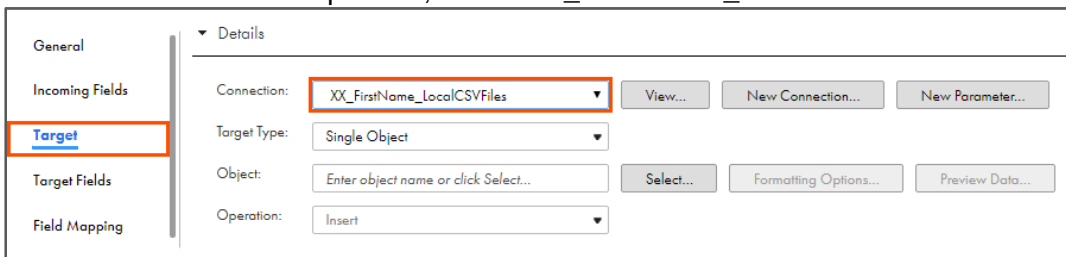
Name: \* Tgt\_HierarchyBuilder

Description:

Incoming Fields

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

74. From the Connection drop-down, select **XX\_FirstName\_LocalCSVFiles**.



General

Incoming Fields

**Target**

Target Fields

Field Mapping

Details

Connection: XX\_FirstName\_LocalCSVFiles View... New Connection... New Parameter...

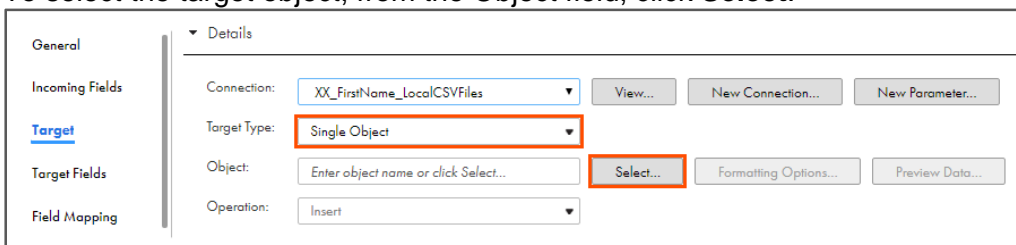
Target Type: Single Object

Object: Enter object name or click Select... Select... Formatting Options... Preview Data...

Operation: Insert

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

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



General

Incoming Fields

**Target**

Target Fields

Field Mapping

Details

Connection: XX\_FirstName\_LocalCSVFiles View... New Connection... New Parameter...

Target Type: Single Object

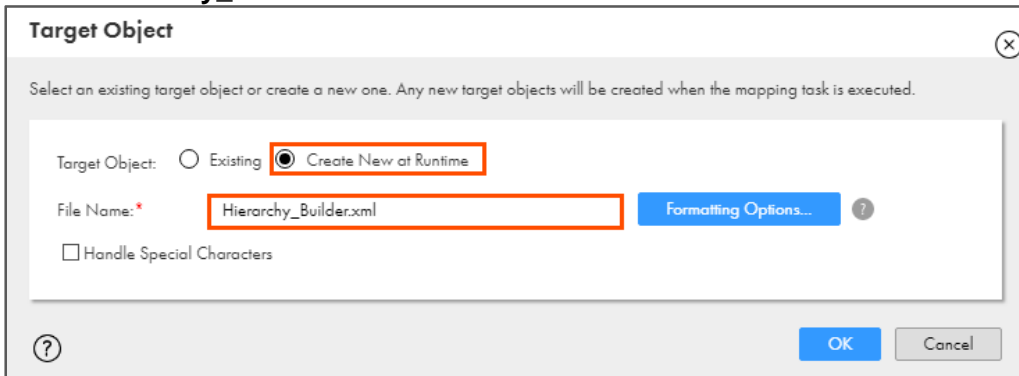
Object: Enter object name or click Select... Select... Formatting Options... Preview Data...

Operation: Insert

**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.



**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.

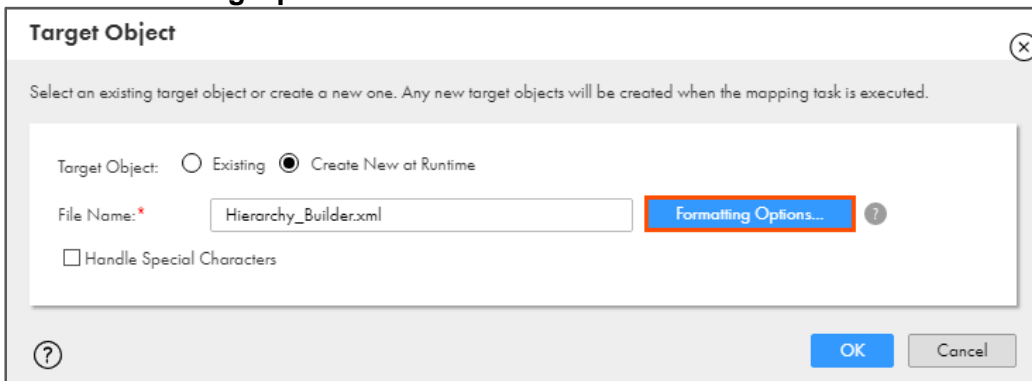
Target Object: ☐ Existing ☒ Create New at Runtime

File Name: \*  [Formatting Options...](#) ?

☐ Handle Special Characters

? OK Cancel

79. Select **Formatting Options**.



**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: ☐ Existing ☒ Create New at Runtime

File Name: \*  [Formatting Options...](#) ?

☐ Handle Special Characters

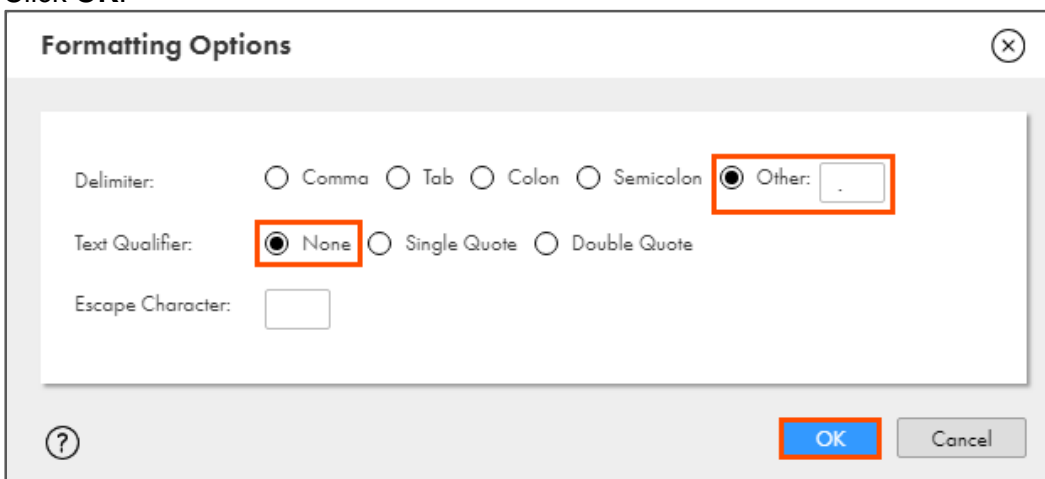
? OK Cancel

**Note:** The Formatting Options window appears.

80. For Delimiter field, select **other**, and enter a period (.).

81. Select Text Qualifier as **None**.

82. Click **OK**.



**Formatting Options** [X]

Delimiter: ☐ Comma ☐ Tab ☐ Colon ☐ Semicolon ☒ Other:

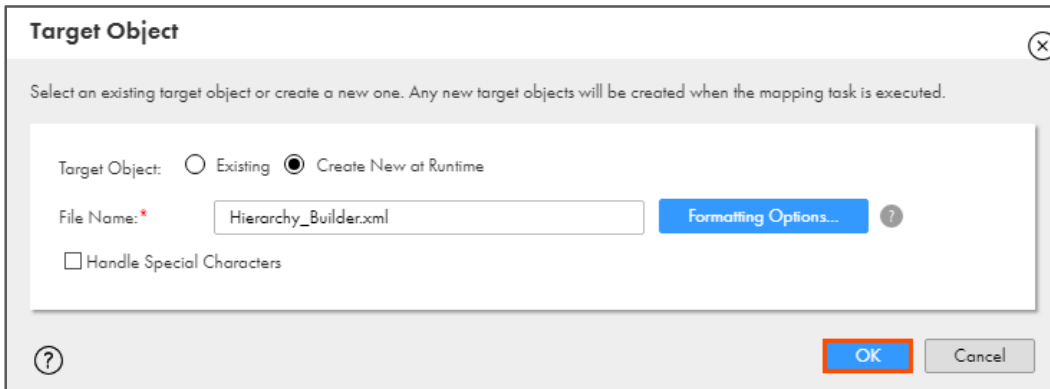
Text Qualifier: ☒ None ☐ Single Quote ☐ Double Quote

Escape Character:

? OK Cancel

**Note:** This action redirects you to Target Object window.

83. 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.

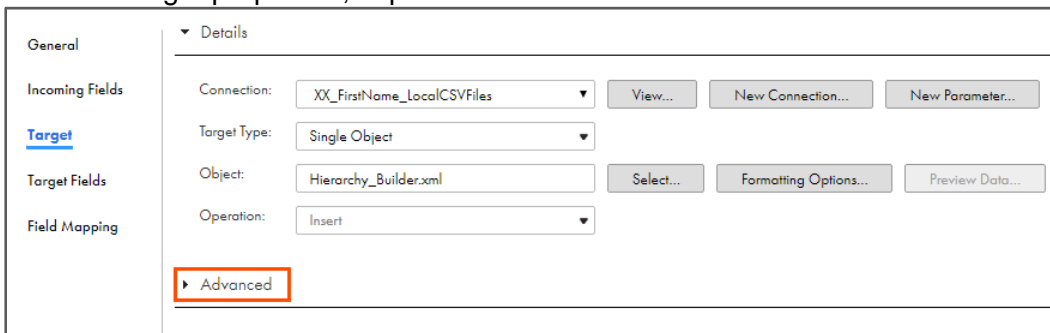
Target Object: ☐ Existing ☒ Create New at Runtime

File Name: \*  [Formatting Options...](#) ?

☐ Handle Special Characters

? [OK](#) [Cancel](#)

84. From the target properties, expand **Advanced** section.



**General**

**Incoming Fields**

**Target**

**Target Fields**

**Field Mapping**

**Details**

Connection:  [View...](#) [New Connection...](#) [New Parameter...](#)

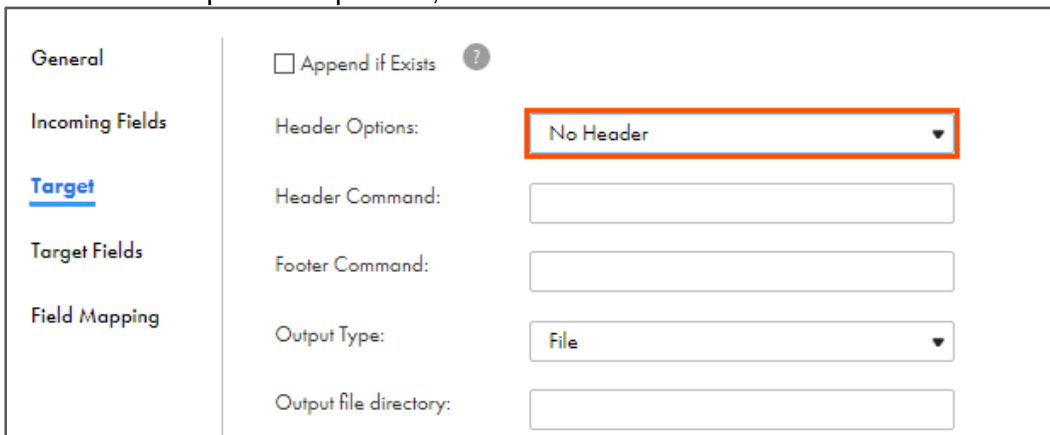
Target Type:

Object:  [Select...](#) [Formatting Options...](#) [Preview Data...](#)

Operation:

[Advanced](#)

85. From Header Options drop-down, select **No Header**.



**General**

**Incoming Fields**

**Target**

**Target Fields**

**Field Mapping**

☐ Append if Exists ?

Header Options:

Header Command:

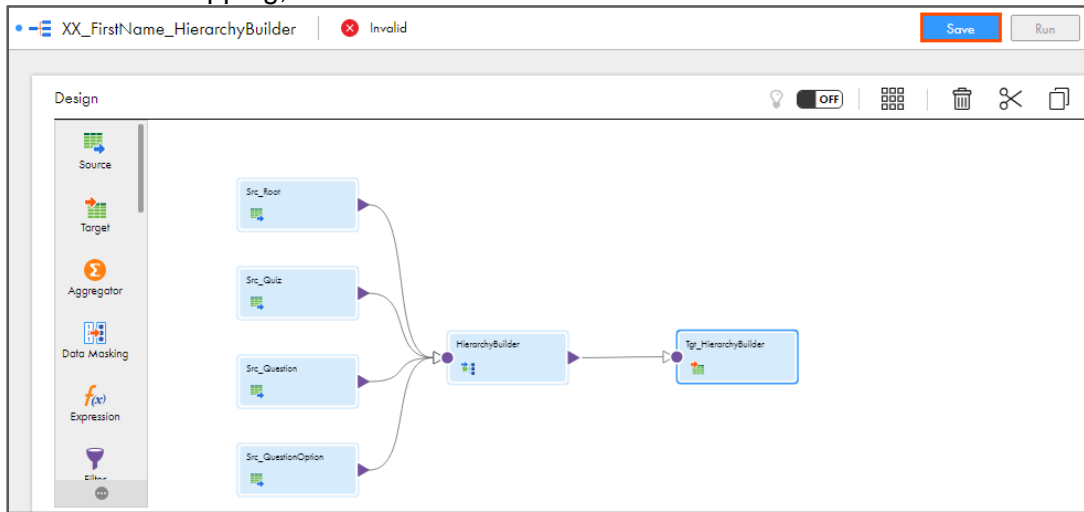
Footer Command:

Output Type:

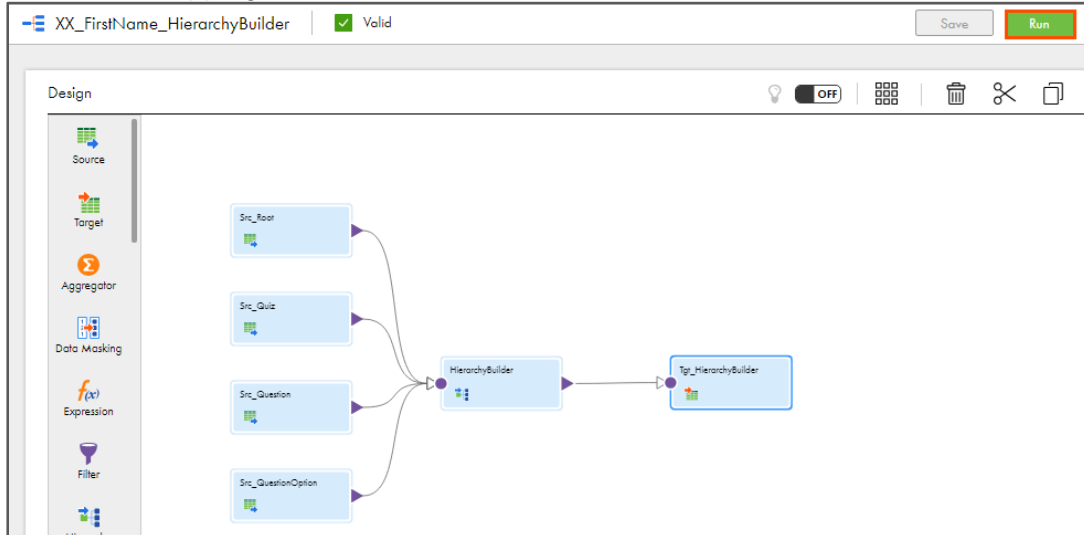
Output file directory:



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



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

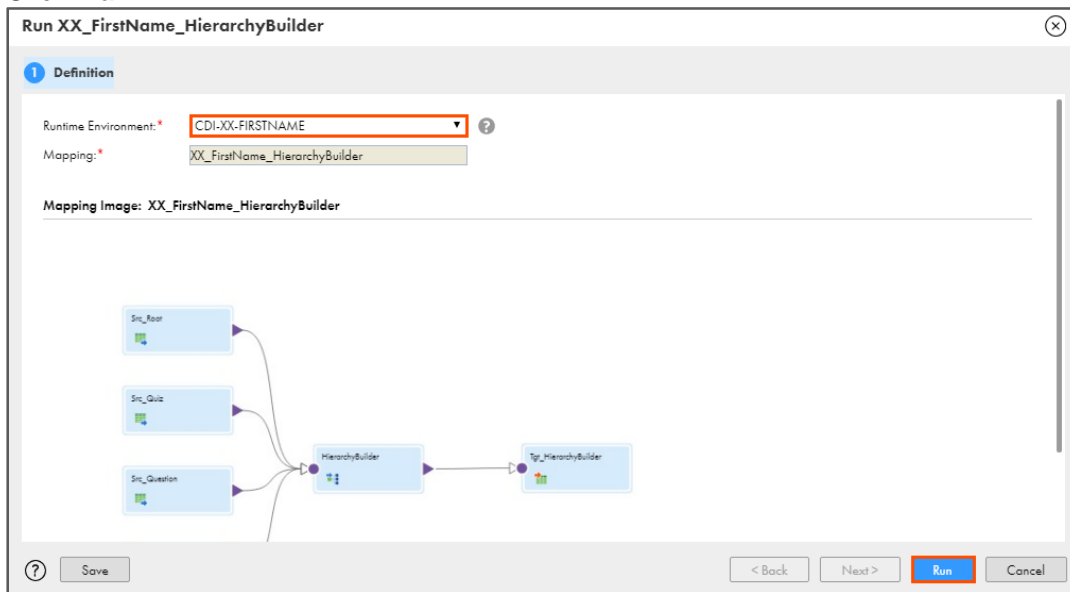


**Note:** The Run mapping window appears.

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

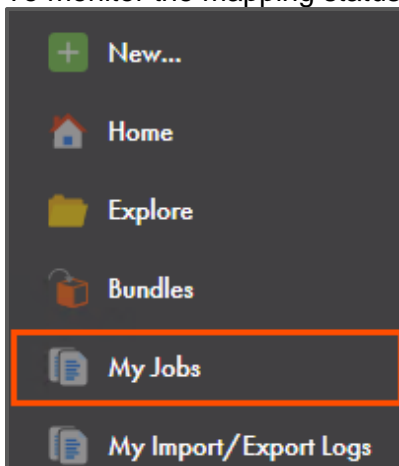
**Note:** The Runtime Environment name will be in CDI-XX-FIRSTNAME format.

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) Up to date Updated 10:38:11 PM PDT Refresh Sort Filter Find

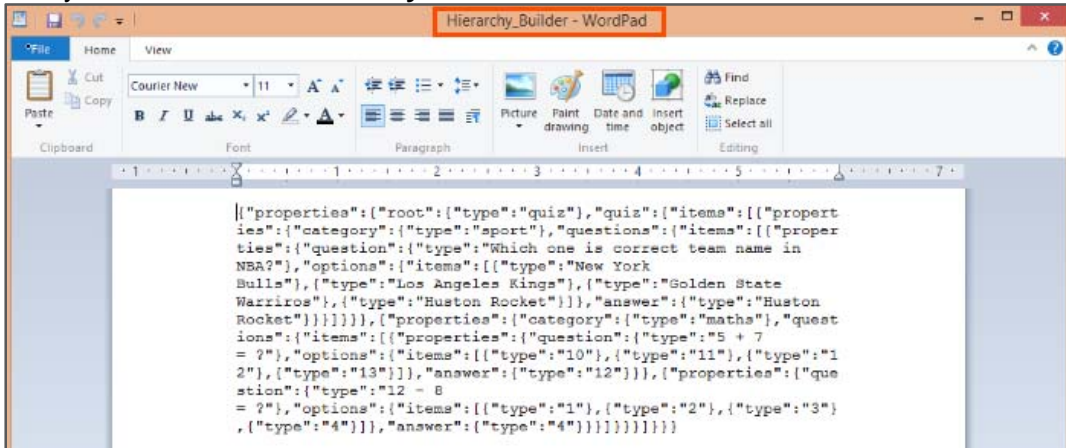
Asset Name: XX\_FirstName\_Hierarc... ▼ × Add Field ▼

| Instance Name                                                                                                       | Subtasks | Start Time       | End Time     | Rows Processed | State                                                                                         |
|---------------------------------------------------------------------------------------------------------------------|----------|------------------|--------------|----------------|-----------------------------------------------------------------------------------------------|
|  XX_FirstName_HierarchyBuilder-1 |          | Aug 1, 2019, ... | Aug 1, 20... | 1              |  Success |

**Note:** Observe that 1 success row is processed.

92. On your local machine, go to **C:\NICSLabFiles**.

93. Verify the contents of **Hierarchy\_Builder.xml** file.



```

[{"properties":{"root":{"type":"quiz"},"quiz":{"items":[{"propert
ies":{"category":{"type":"sport"},"questions":{"items":[{"proper
ties":{"question":{"type":"Which one is correct team name in
NBA?"},"options":{"items":[{"type":"New York
Bulls"}, {"type":"Los Angeles Kings"}, {"type":"Golden State
Warriors"}, {"type":"Huston Rocket"}]},"answer":{"type":"Huston
Rocket"}]}]}]}], [{"properties":{"category":{"type":"maths"},"quest
ions":{"items":[{"properties":{"question":{"type":"5 + 7
= ?"},"options":{"items":[{"type":"10"}, {"type":"11"}, {"type":"1
2"}, {"type":"13"}]},"answer":{"type":"12"}]}], [{"properties":{"que
stion":{"type":"12 - 8
= ?"},"options":{"items":[{"type":"1"}, {"type":"2"}, {"type":"3"}
, {"type":"4"}]},"answer":{"type":"4"}]}]}]}]}]}]}]}]}]}]}]}]}]}]}

```

---

*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:

10 minutes

---

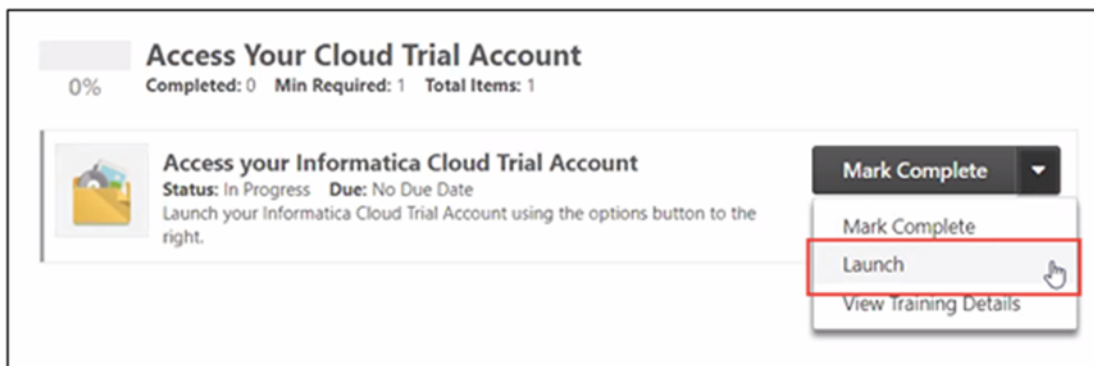
#### Tasks:

##### Copy Source Files:

1. Copy the **StructureModel.txt** file provided with this lab and place the file in your flat file directory (**C:\ICS LabFiles**).

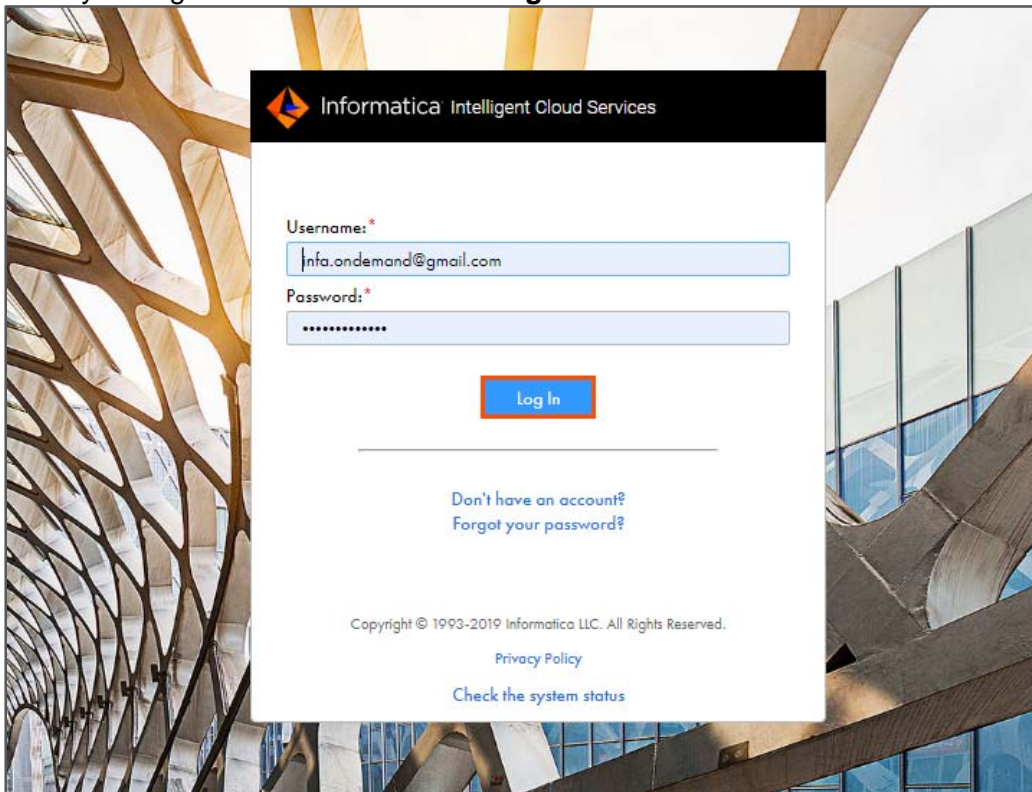
##### Create Intelligent Structure Model:

2. Access your cloud trial account by clicking **Launch** in your option Menu. If the option menu is labeled anything other than **Launch**, click the down arrow to the right and click **Launch**.



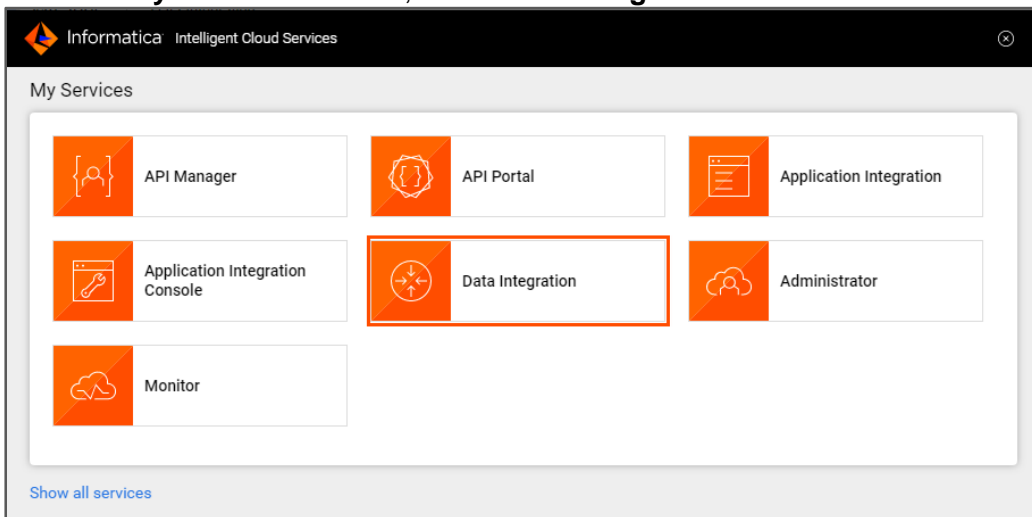
**Note:** Follow this step, if you have navigated away from the login page.

3. Enter your login credentials and click **Log In**.

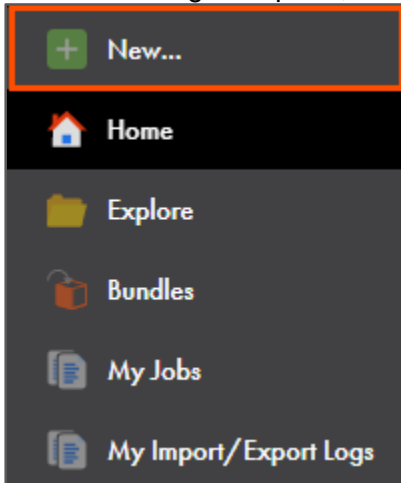


The login page for Informatica Intelligent Cloud Services is displayed. It features a white login box centered on a background image of a modern building's interior with a complex, branching structural design. The login box has a black header with the Informatica logo and the text "Informatica Intelligent Cloud Services". Below the header, there are two input fields: "Username:" with the email "info.ondemand@gmail.com" and "Password:" with masked characters. A blue "Log In" button is positioned below the password field. Underneath the button, there are two links: "Don't have an account?" and "Forgot your password?". At the bottom of the login box, there is a copyright notice "Copyright © 1993-2019 Informatica LLC. All Rights Reserved." and two more links: "Privacy Policy" and "Check the system status".

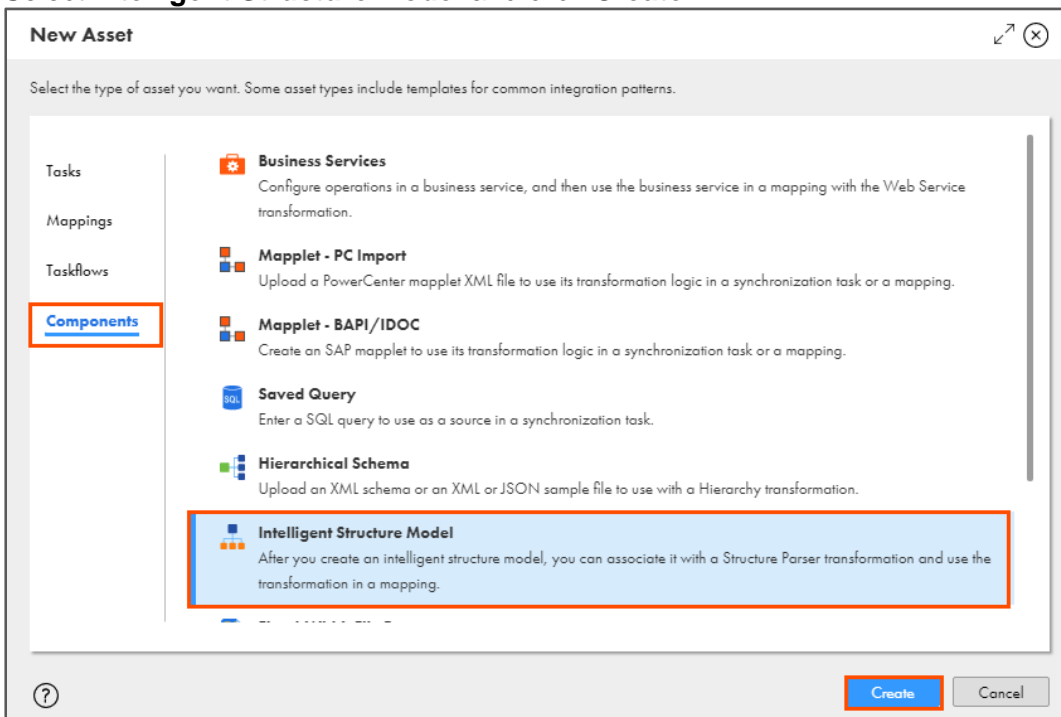
4. From the **My Services** window, select **Data Integration**.



- From the Navigation pane, select **New**.

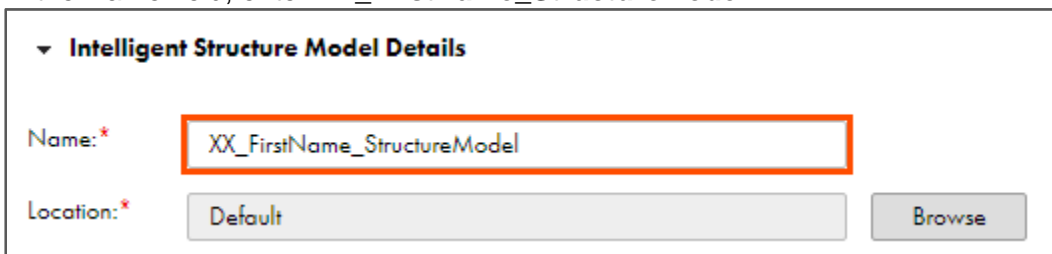


- From the New Asset window, click the **Components** tab.
- Select **Intelligent Structure Model** and click **Create**.




**Note:** The Intelligent Structure Model page appears.

- In the Name field, enter **XX\_FirstName\_StructureModel**.



The image shows a form titled 'Intelligent Structure Model Details'. It has two main fields: 'Name:' and 'Location:'. The 'Name:' field is a text input box containing the text 'XX\_FirstName\_StructureModel' and is highlighted with a red rectangle. The 'Location:' field is a dropdown menu with 'Default' selected. To the right of the 'Location:' field is a 'Browse' button.

9. To upload a sample file, from the Sample File section, click .

Intelligent Structure Model Details

Name:\*

XX\_FirstName\_StructureModel

Location:\*


Default

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:\*


Default

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:\*


Default

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.

Visual Model
XML Data
Find

| 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   |   |

Visual Model
Table
Find

```

<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>
    </FullName>
    <Company>
      <value/>
      <state>NH</state>
      <token>Trends</token>
    </Company>
    <Department>Logistics</Department>
  </element>
  <element>
    <FullName>
      <firstName>Lillian</firstName>
      <lastName>Brown</lastName>
    </FullName>
    <Company>
      <value/>
      <state>NH</state>
      <token>Everyday</token>
    </Company>
    <Department>Inventory</Department>
  </element>
  <element>
    <FullName>
      <firstName>Carl</firstName>
      <lastName>Collins</lastName>
    </FullName>
    <Company>
      <value/>
      <state>NH</state>
      <token>Digiworld</token>
    </Company>
    <Department>Marketing</Department>
  </element>
  <element>
    <FullName>
      <firstName>Roger</firstName>
      <lastName>Roberts</lastName>
    </FullName>
    <Company>
      <value/>
      <state>NH</state>
      <token>Everyday</token>
    </Company>
    <Department>Finance</Department>
  </element>
</table>
</document>

```

13. To save the Intelligent Structure Model, click **Save**.

Intelligent Structure Model1
Save

Intelligent Structure Model Details

Name: \*

Location: \*
Browse

Description:

*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:

25 minutes

---

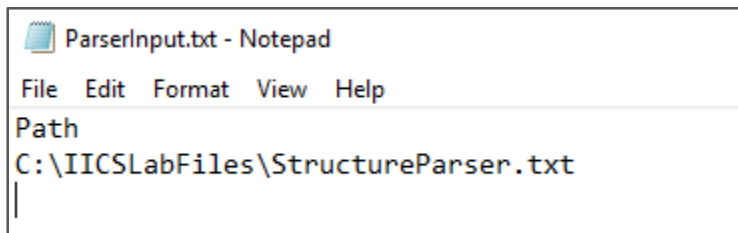
#### Tasks:

##### Copy Source Files:

1. Copy **StructureParser.txt** file provided with this lab and place the files in your flat file directory (**C:\IICSLabFiles**).

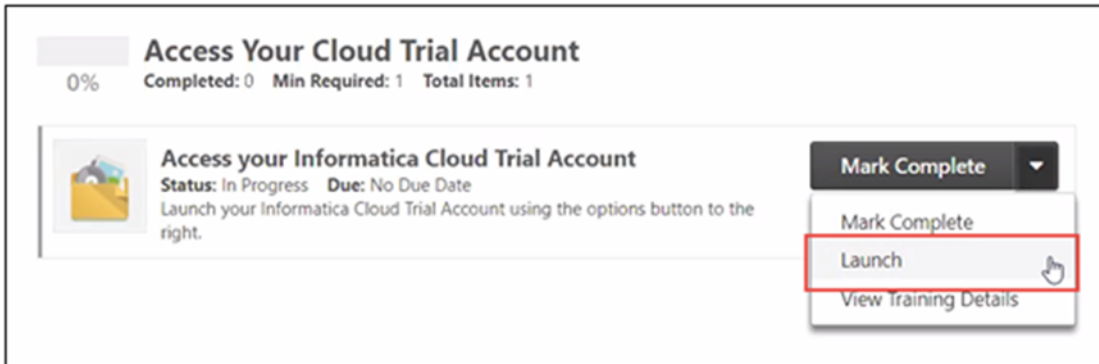
##### Create File:

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.



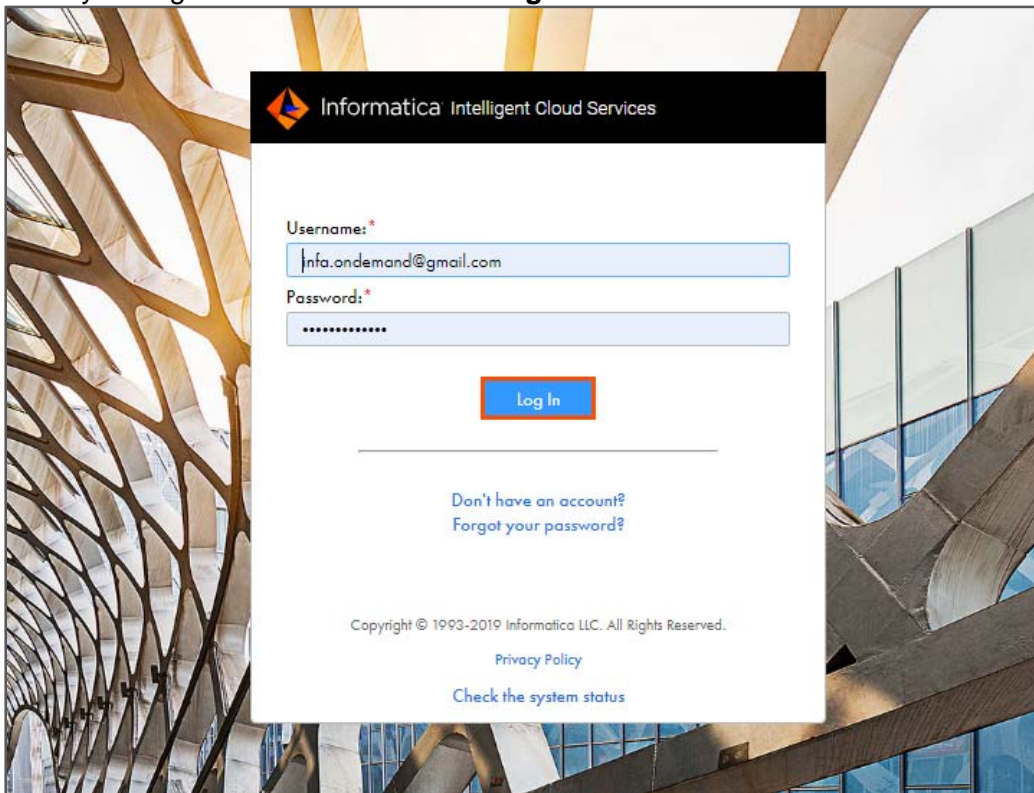
### Create Mapping:

3. Access your cloud trial account by clicking **Launch** in your option Menu. If the option menu is labeled anything other than **Launch**, click the down arrow to the right and click **Launch**.

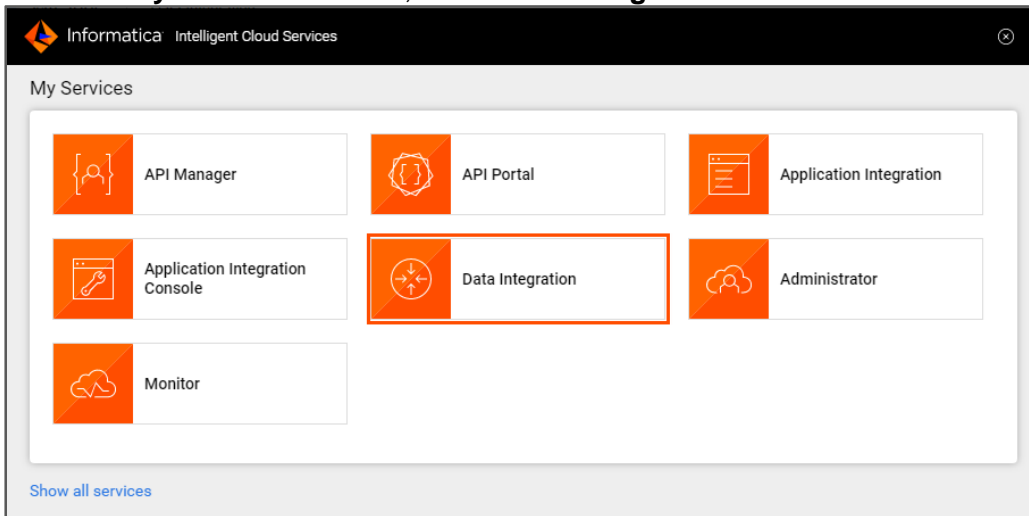


**Note:** Follow this step, if you have navigated away from the login page.

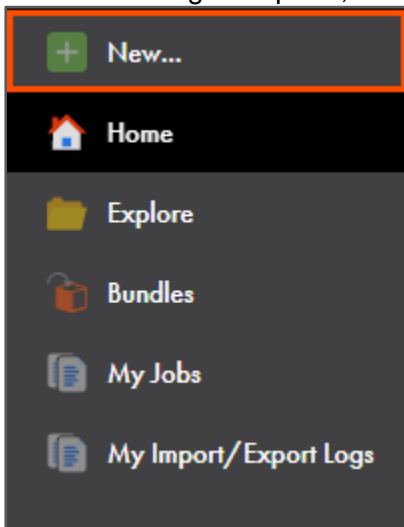
4. Enter your login credentials and click **Log In**.



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

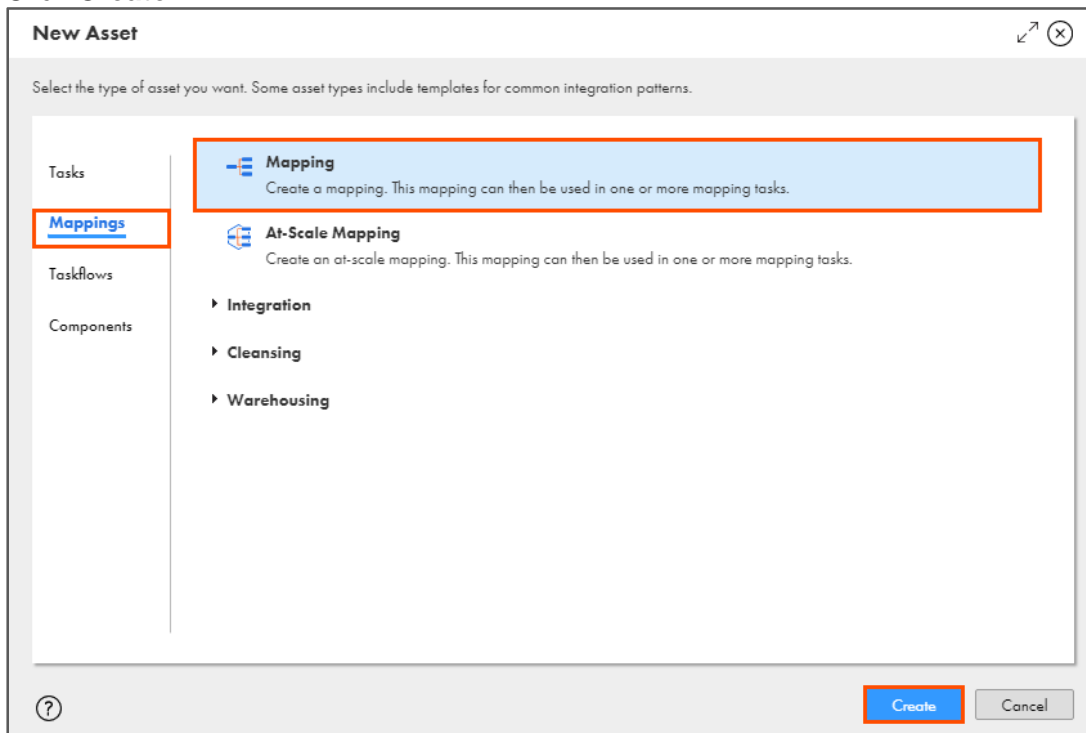


6. From the Navigation pane, select **New**.



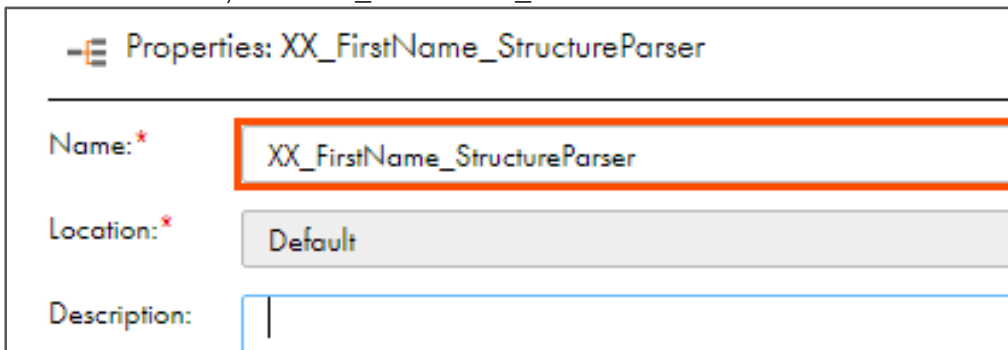
7. From the New Asset window, click the **Mappings** tab, and select **Mapping**.

8. Click **Create**.



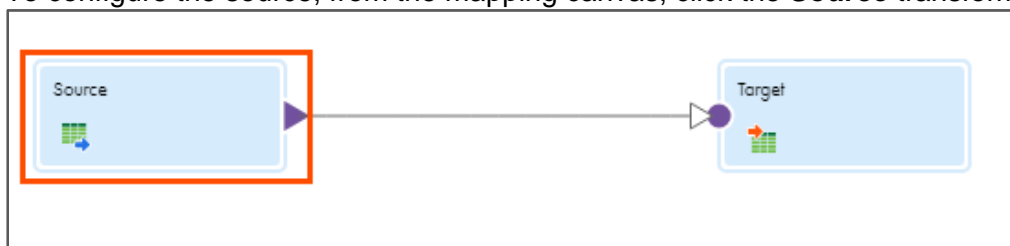
**Note:** The Mapping page appears.

9. In the Name field, enter **XX\_FirstName\_StructureParser**.

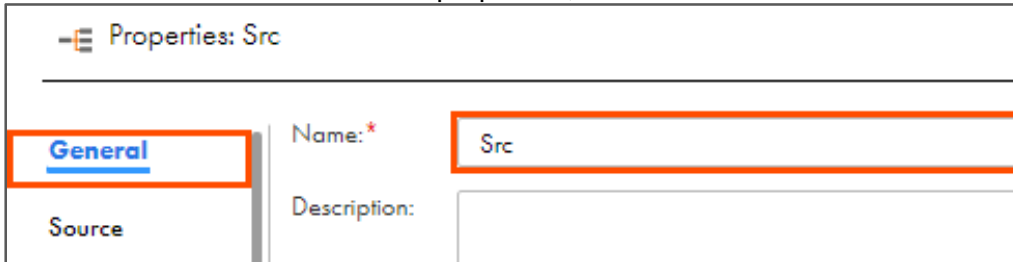


**Note:** XX refers to your initials, and FirstName refers to your First Name.

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**

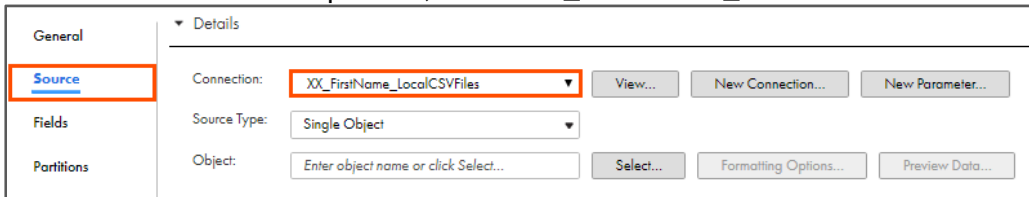
Name: \* Src

Description:

Source

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

13. From the Connection drop-down, select **XX\_FirstName\_LocalCSVFiles**.



General

**Source**

Fields

Partitions

Details


Connection: XX\_FirstName\_LocalCSVFiles View... New Connection... New Parameter...

Source Type: Single Object

Object: Enter object name or click Select... Select... Formatting Options... Preview Data...

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

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



General

**Source**

Fields

Partitions

Details

Connection: XX\_FirstName\_LocalCSVFiles View... New Connection... New Parameter...

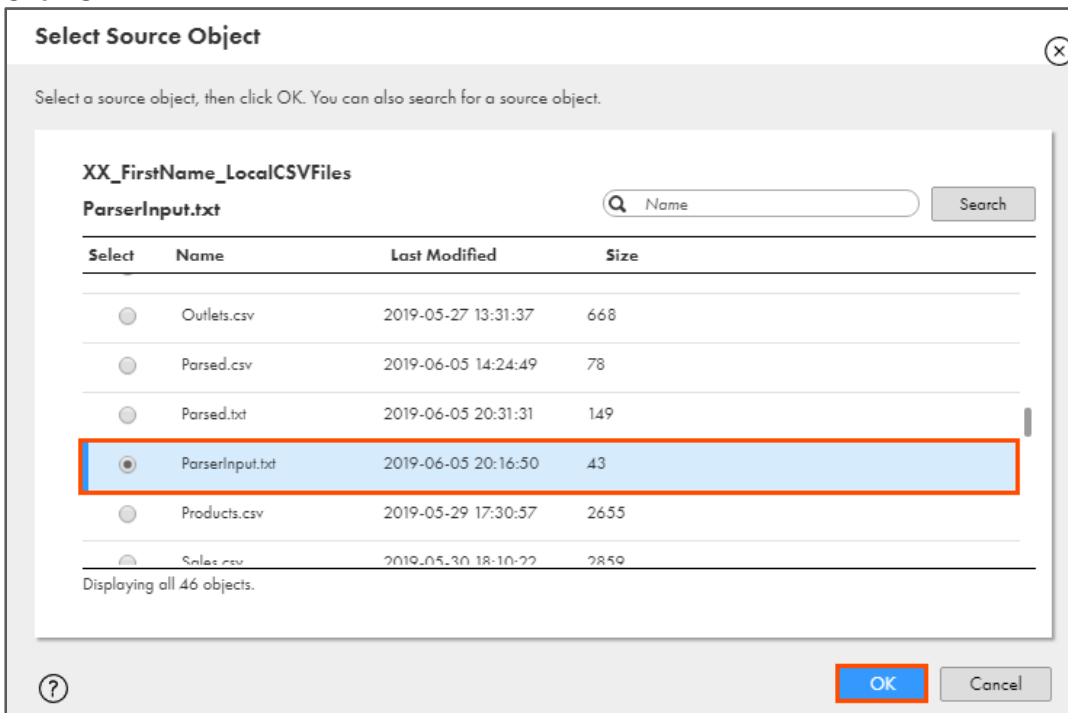
Source Type: Single Object

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**.



Select Source Object

Select a source object, then click OK. You can also search for a source object.

XX\_FirstName\_LocalCSVFiles

ParserInput.txt

Search Name Search

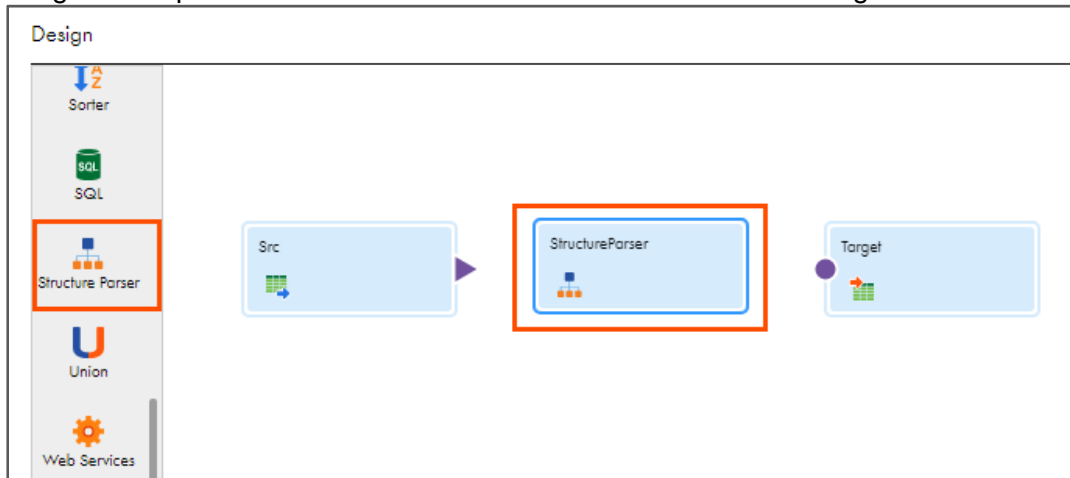
| Select                           | Name            | Last Modified       | Size |
|----------------------------------|-----------------|---------------------|------|
| <input type="radio"/>            | Outlets.csv     | 2019-05-27 13:31:37 | 668  |
| <input type="radio"/>            | Parsed.csv      | 2019-06-05 14:24:49 | 78   |
| <input type="radio"/>            | Parsed.txt      | 2019-06-05 20:31:31 | 149  |
| <input checked="" type="radio"/> | ParserInput.txt | 2019-06-05 20:16:50 | 43   |
| <input type="radio"/>            | Products.csv    | 2019-05-29 17:30:57 | 2655 |
| <input type="radio"/>            | Sales.csv       | 2019-05-30 18:10:22 | 2859 |

Displaying all 46 objects.

OK Cancel

### 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 **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**.

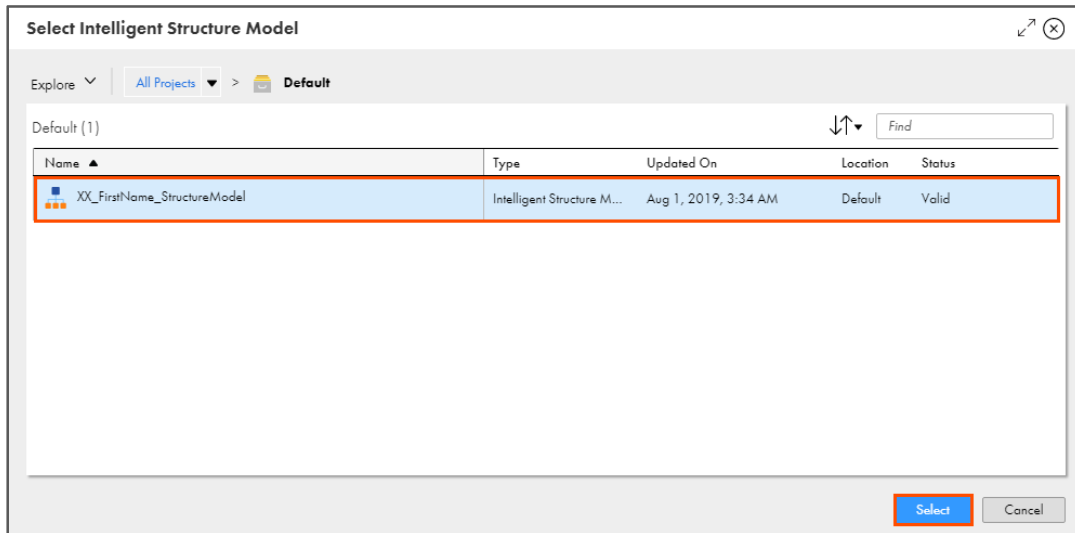


**Note:** The Select Intelligent Structure Model window appears.

23. Navigate to **Default** and select **XX\_FirstName\_StructureModel**.

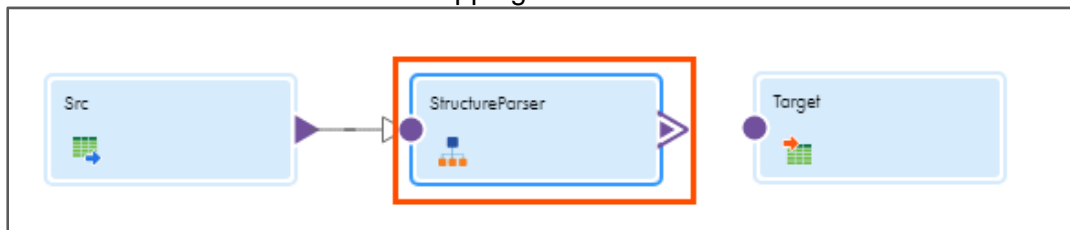


24. Click **Select**.



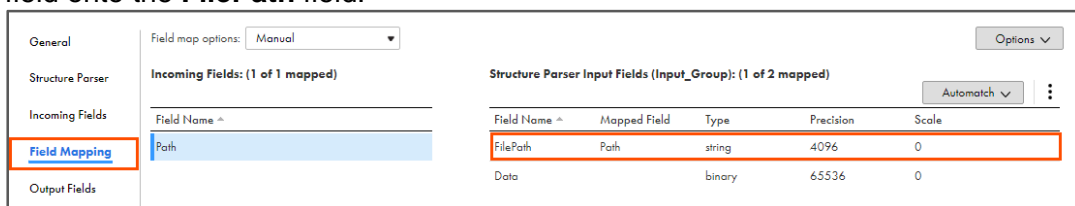
25. Link **Src** to **StructureParser**.

26. Select **StructureParser** 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.

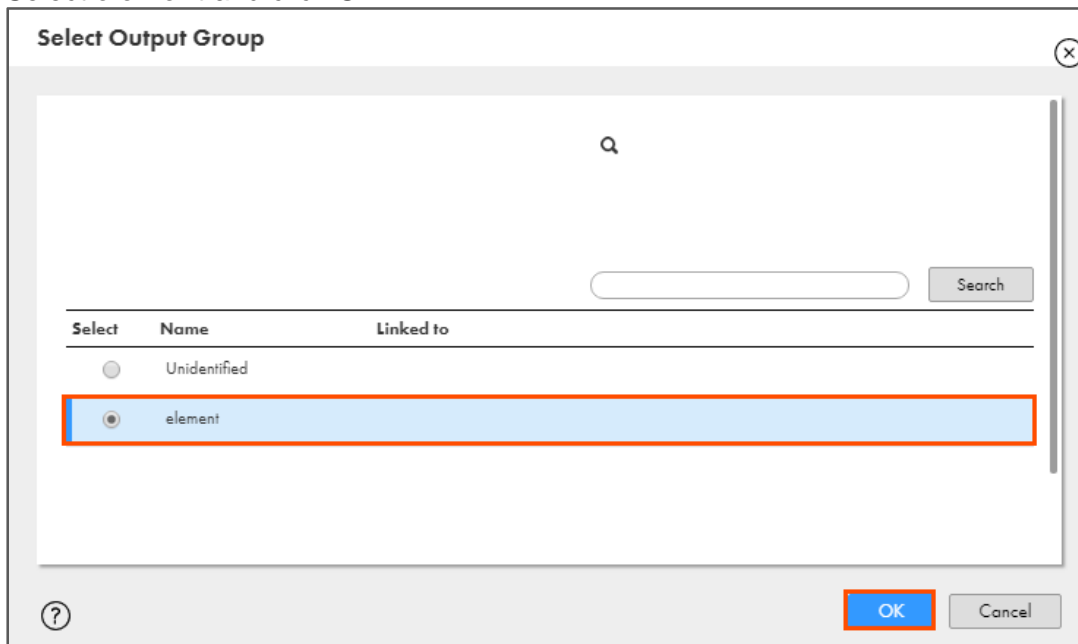


**Note:** Skip this step if the field is already mapped.

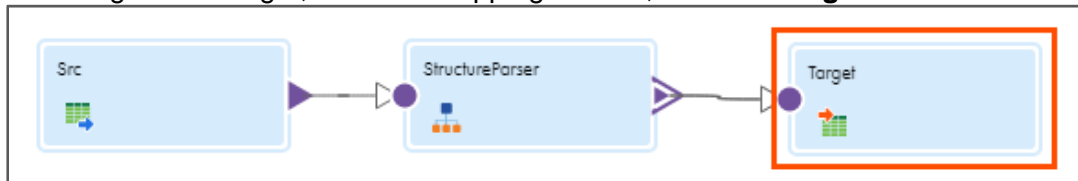
29. Link **StructureParser** with **Target**.

**Note:** The Select Output Group window appears.

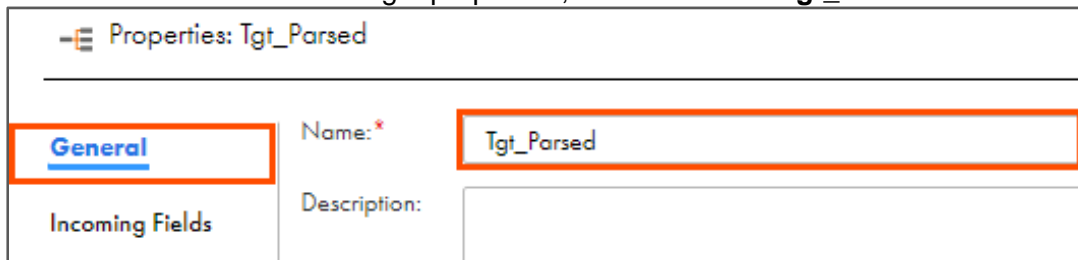
30. Select **element** and click **OK**.



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

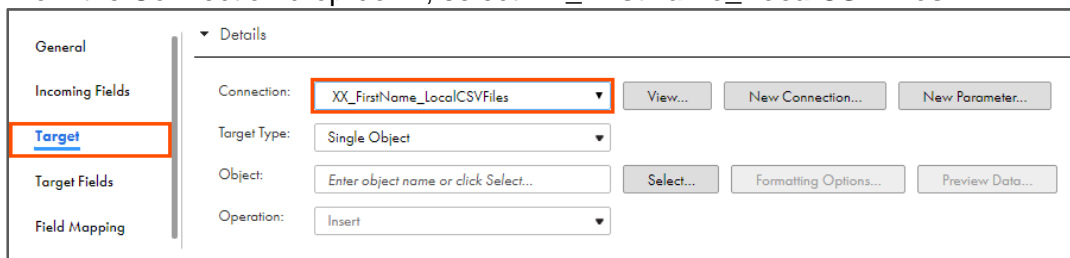


32. In the **General** section of Target properties, enter Name as **Tgt\_Parsed**.



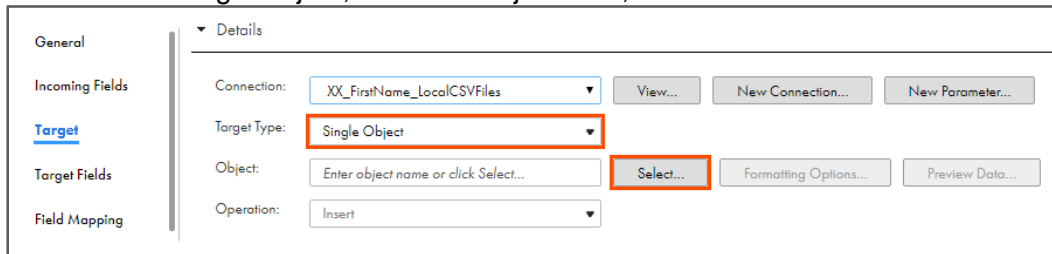
33. From the properties pane, click **Target**.

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**.

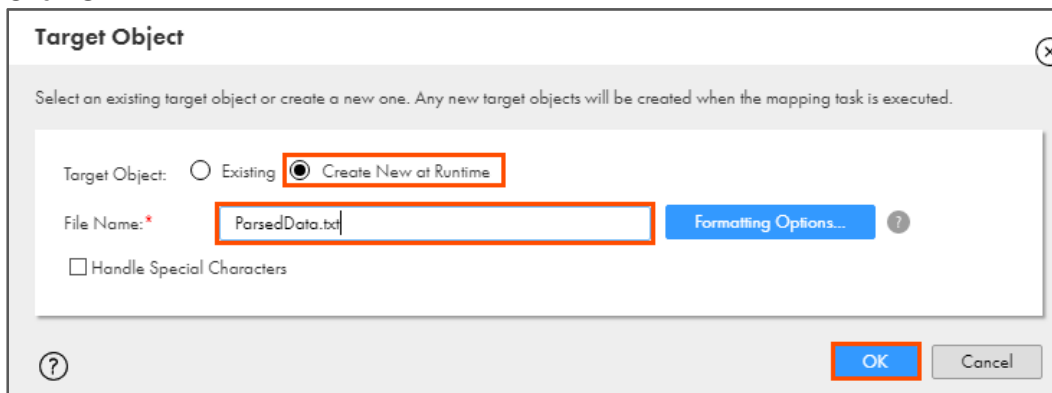


**Note:** The Target Object window appears.

37. On the Target Object window, select **Create New at Runtime**.

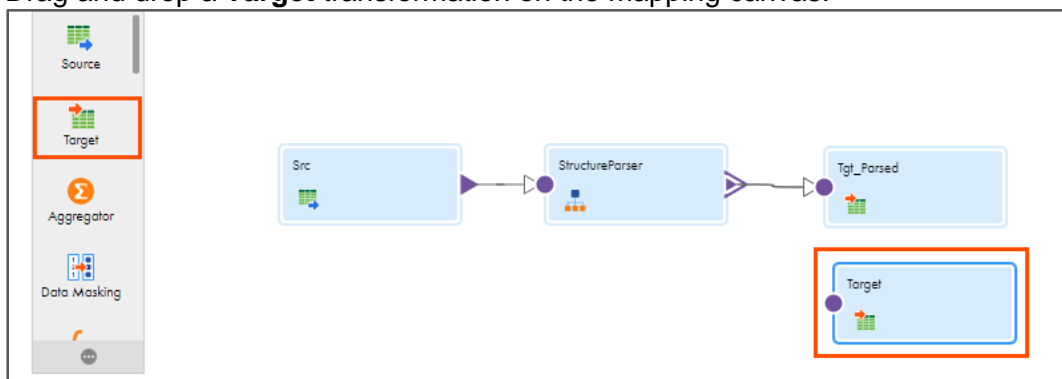
38. Enter **ParsedData.txt** as File Name.

39. Click **OK**.



**Add Target Transformation:**

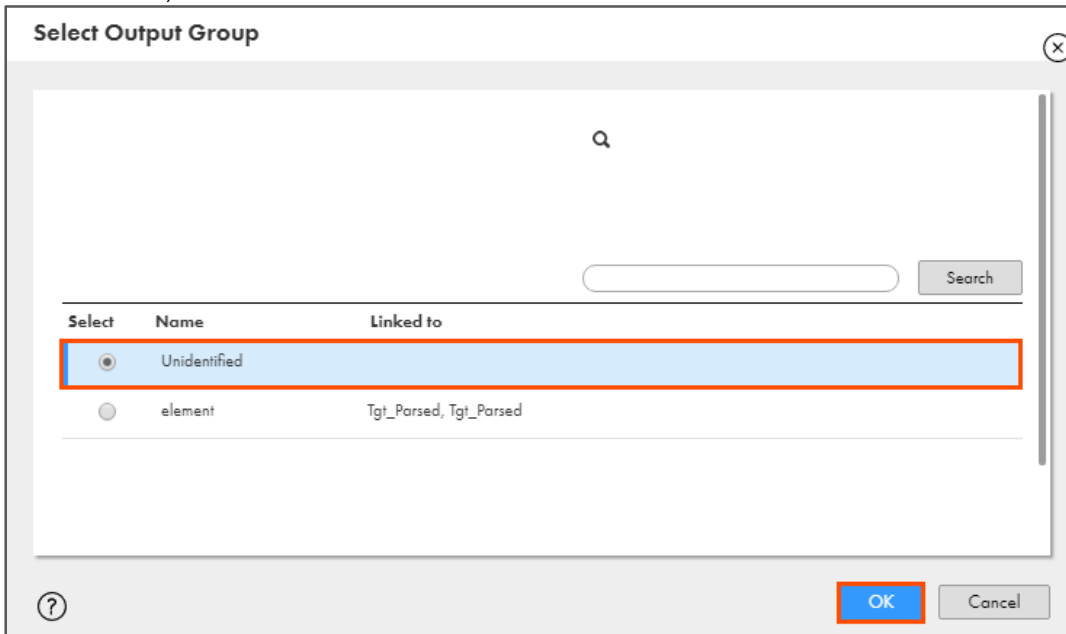
40. Drag and drop a **Target** transformation on the mapping canvas.



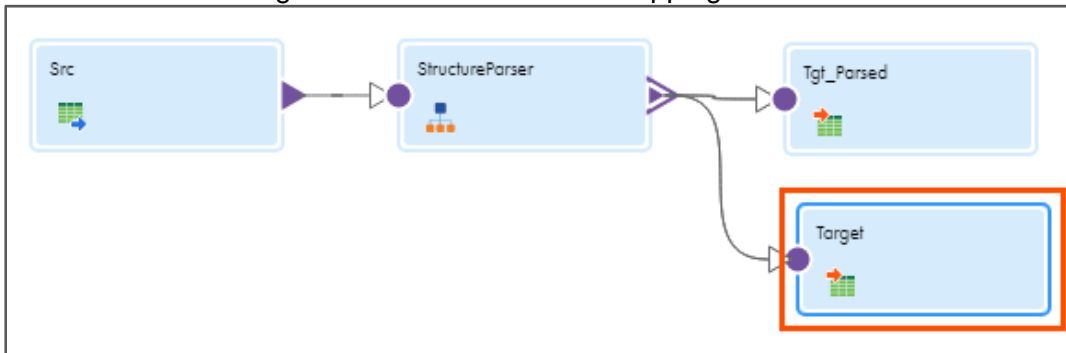
41. Link the **StructureParser** to **Target**.

**Note:** The Select Output Group window appears.

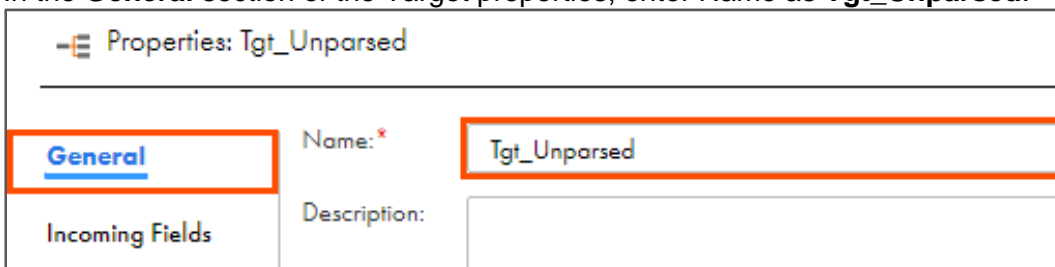
42. From the list, select **Unidentified** and click **OK**.



43. Select the added Target transformation on the mapping canvas.

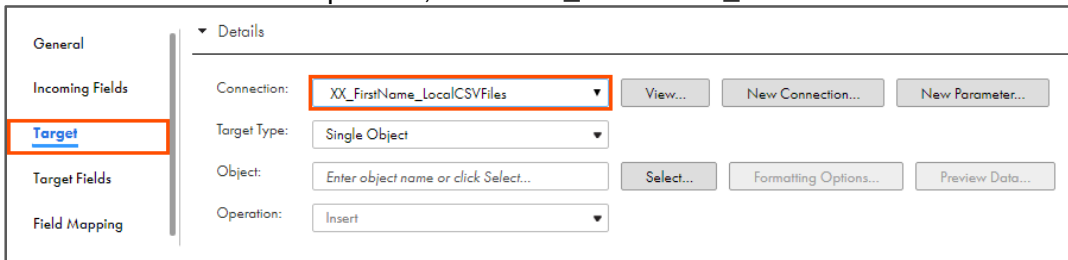


44. In the **General** section of the Target properties, enter Name as **Tgt\_Unparsed**.



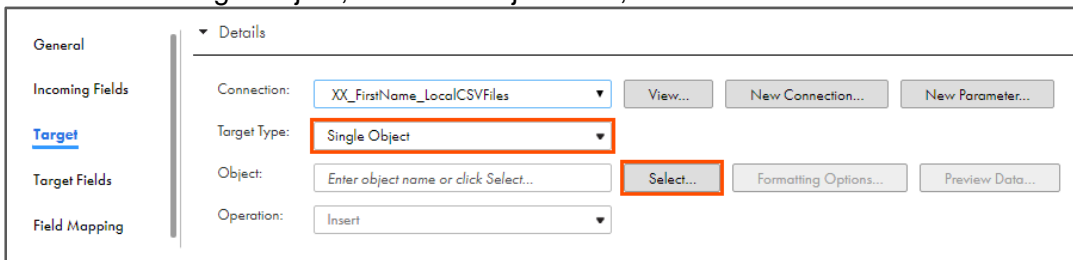
45. From the properties pane, click **Target**.

46. From the Connection drop-down, select **XX\_FirstName\_LocalCSVFiles**.



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

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

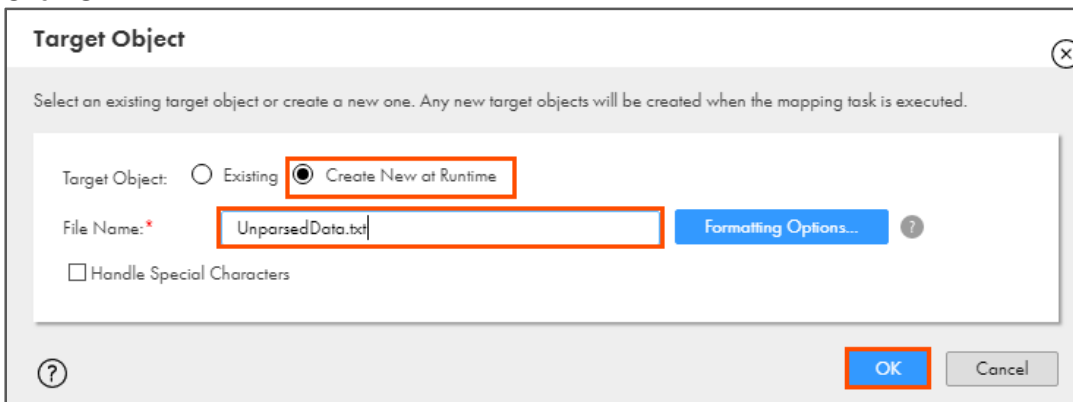


**Note:** The Target Object window appears.

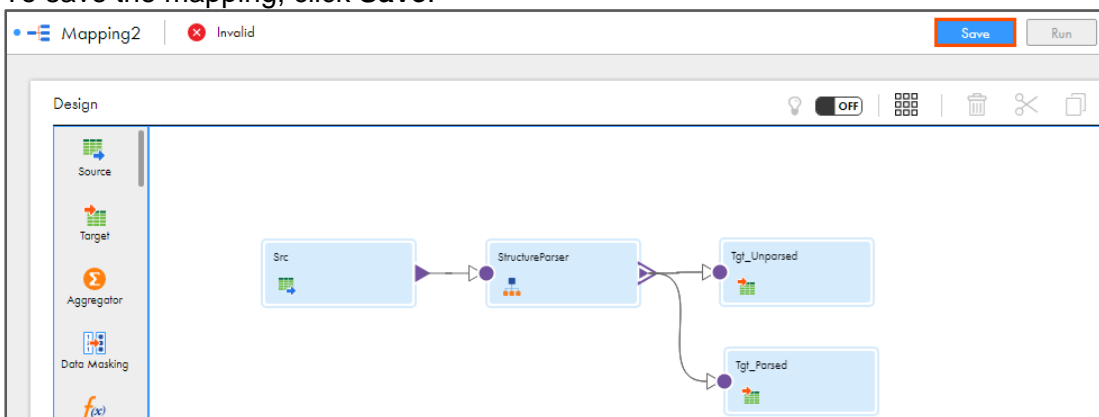
49. In the Target Object window, select **Create New at Runtime**.

50. Enter the file name as **UnparsedData.txt**.

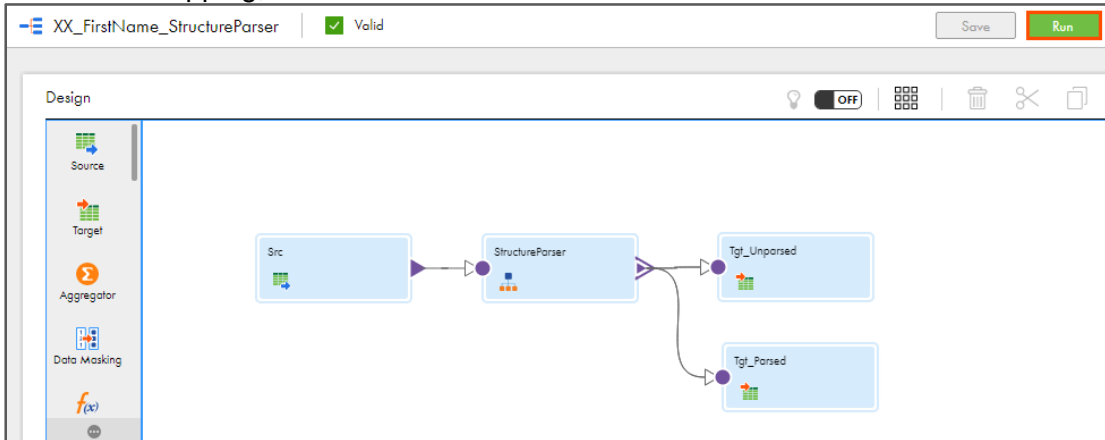
51. Click **OK**.



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

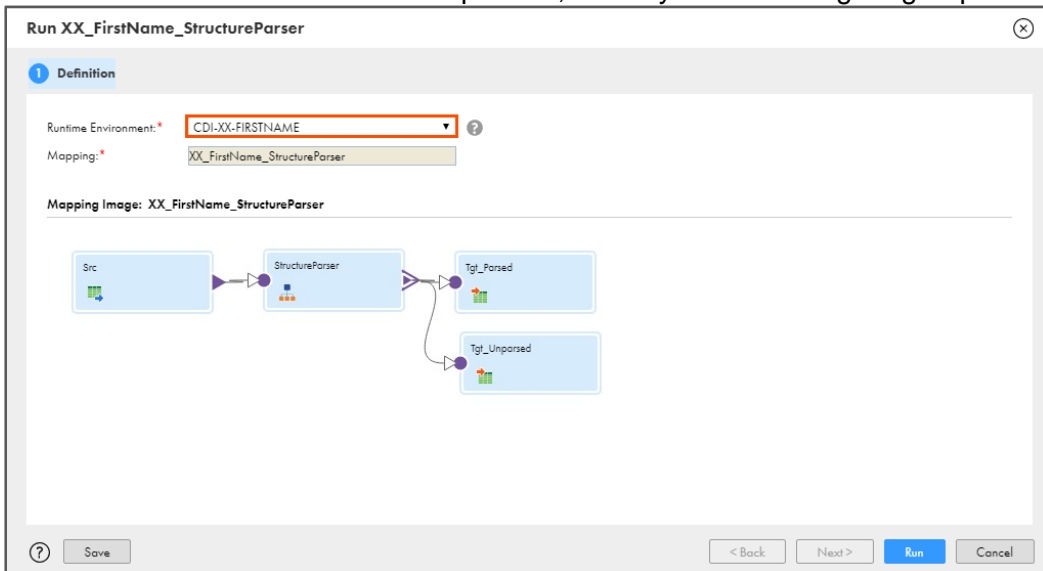


53. To run the mapping, click **Run**.



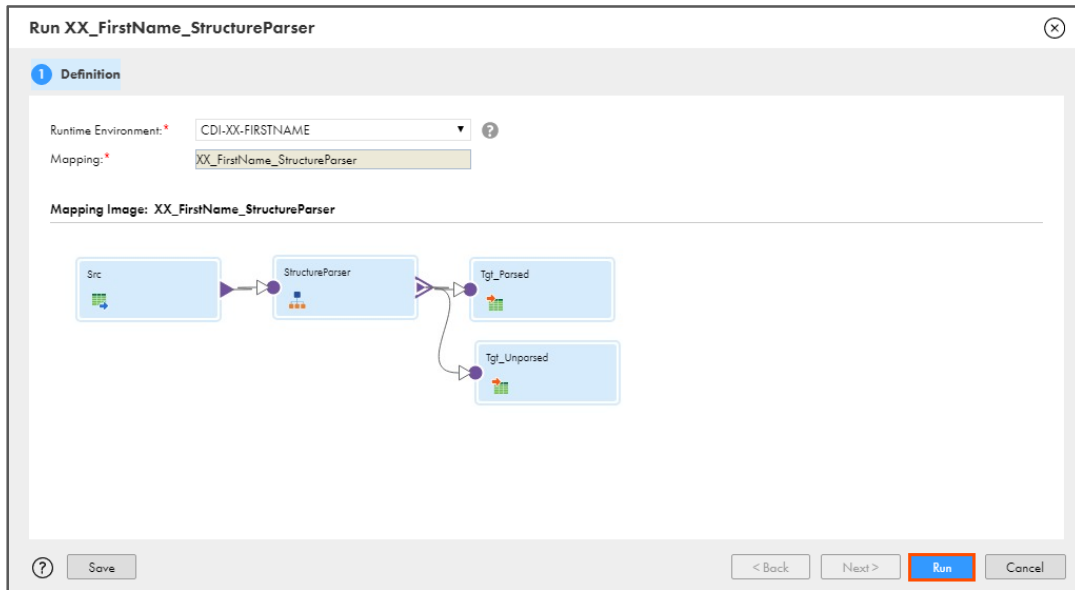
**Note:** The Run mapping window appears.

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



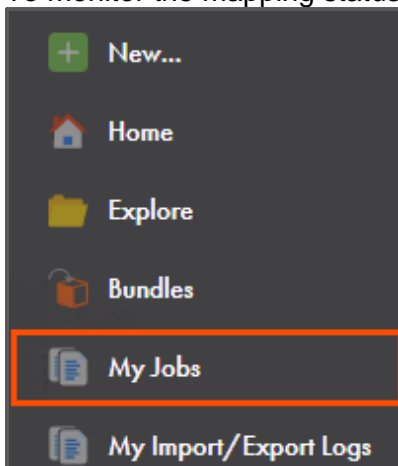
**Note:** The Runtime Environment name will be in CDI-XX-FIRSTNAME format.

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 Refresh Sort Filter 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, 20... | 7              | <span>Success</span> |

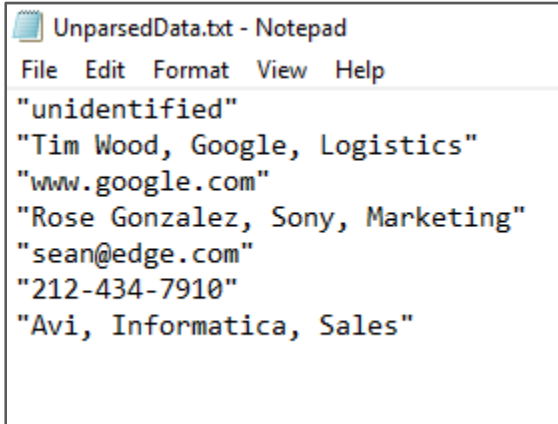
**Verify Results:**

58. Go to **C:\ICSLabFiles**.

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 also to perform various tasks.

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:

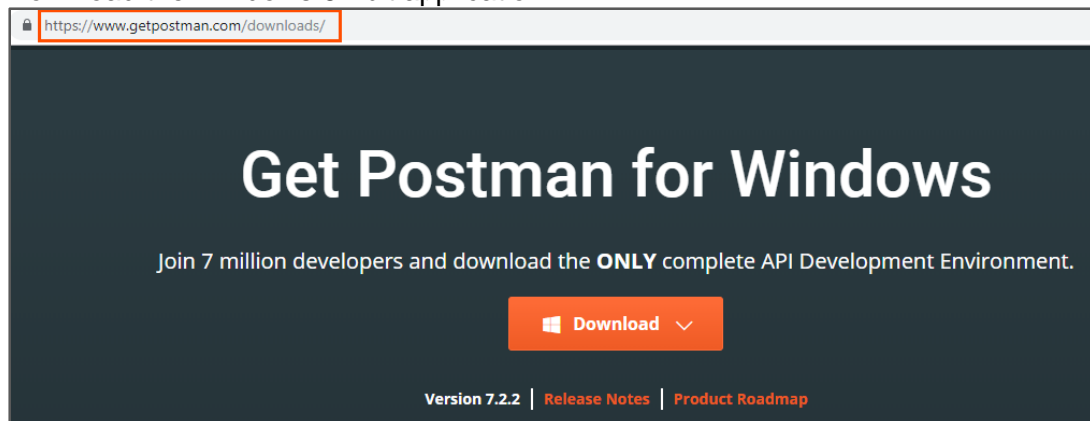
30 minutes

---

#### Tasks:

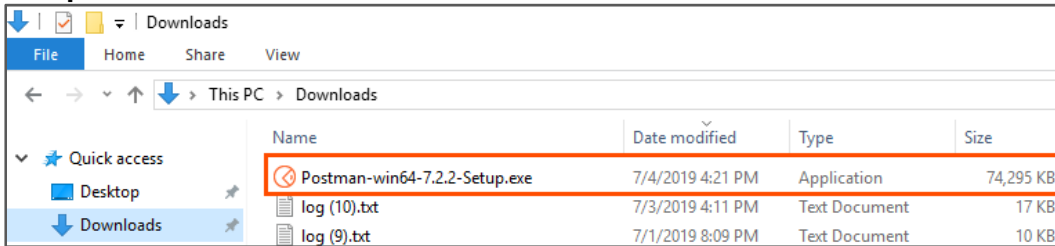
##### Install Postman:

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.

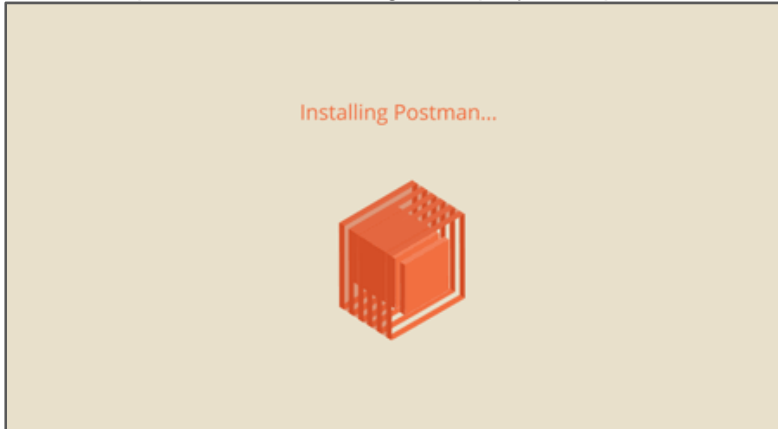


3. Go to the Downloads directory on your local machine and locate the installation file.

- To install Postman, double-click the downloaded executable file **Postman-win64-7.2.2-Setup.exe**.

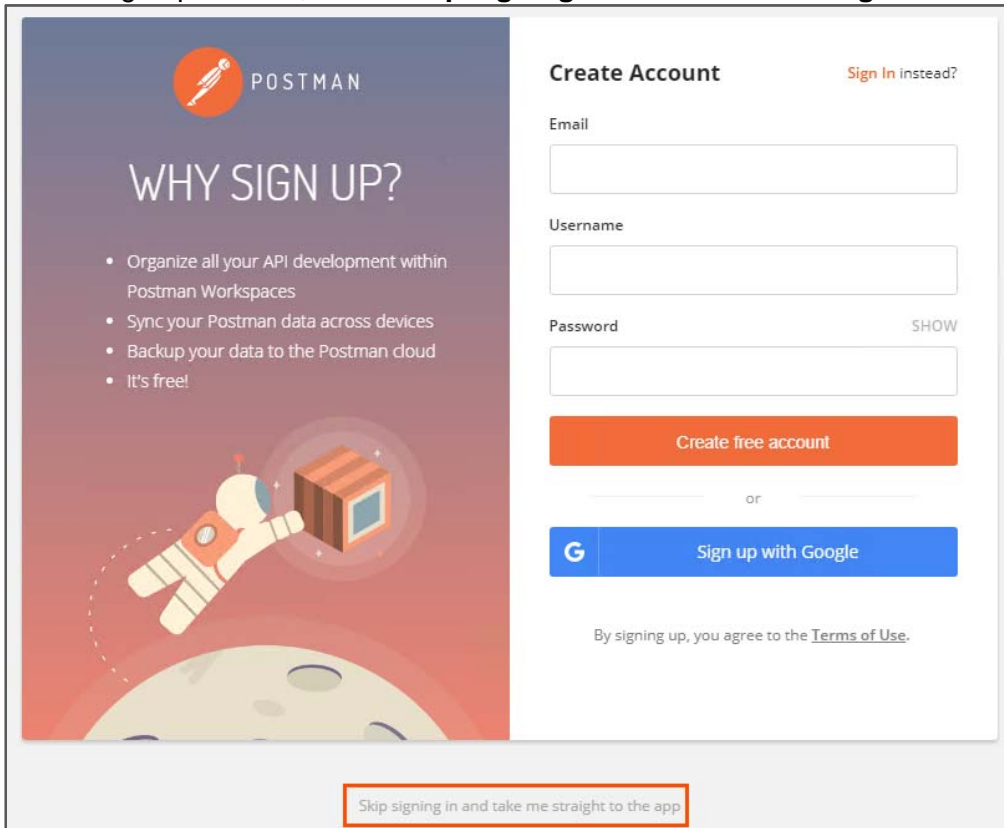


- When the postman is installing, it displays the postman window.

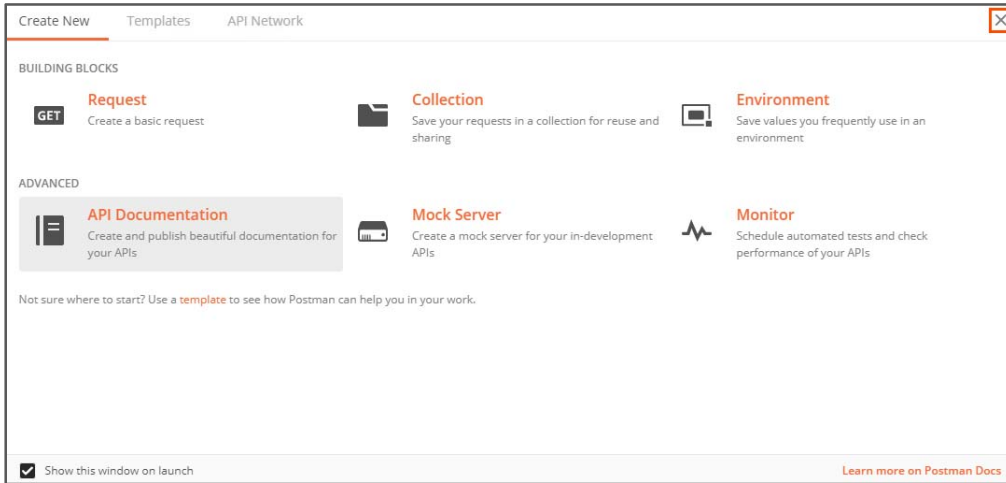


**Note:** After the installation is complete, the Postman application window appears.

- On the sign up window, select **Skip signing in and take me straight to the app**.



## 7. Close the launch window.



## Send Login Request:

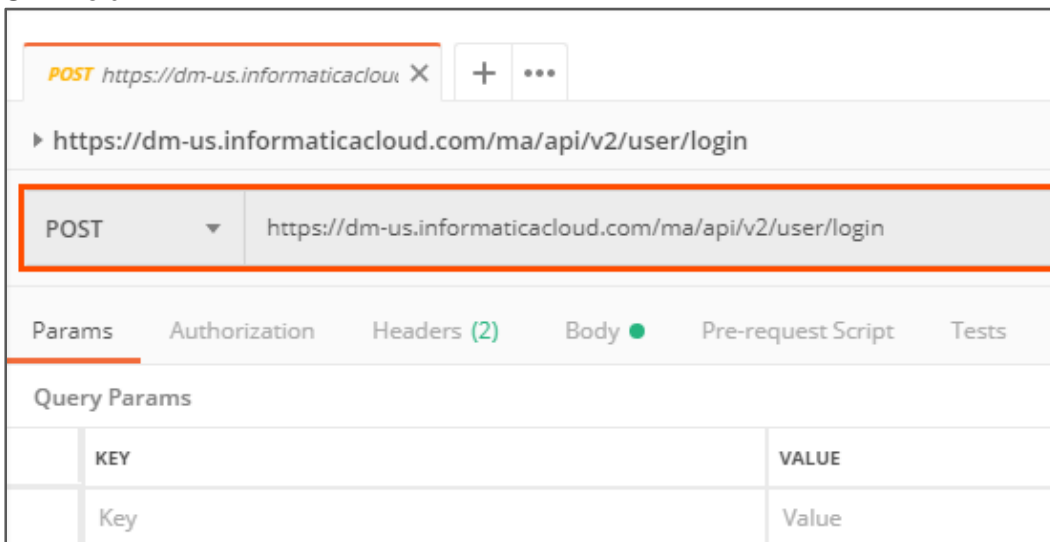
8. From the drop-down, select **POST**.

9. Enter the following URL in the request URL field:

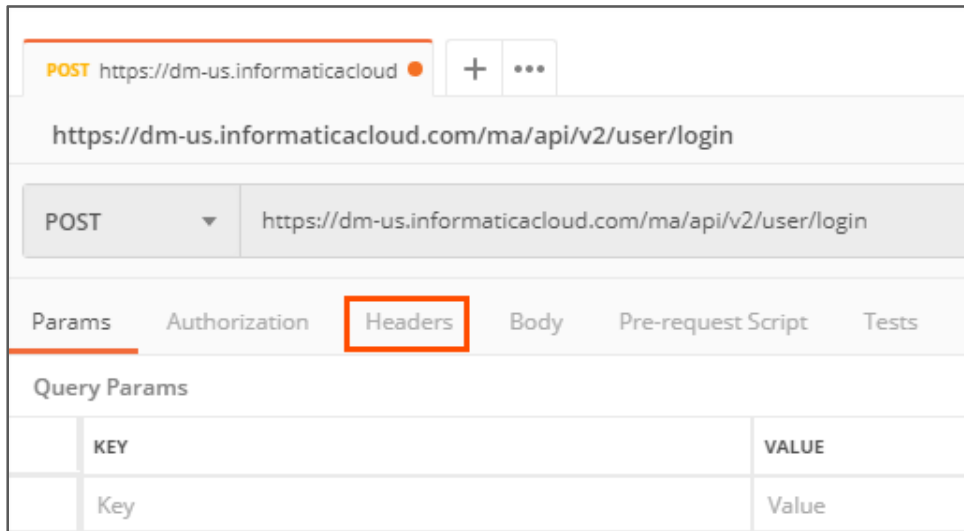
**`https://dm-us.informaticacloud.com/ma/api/v2/user/login`**

OR

Open the file named **31\_LabGuide\_RunningMappingTaskUsingRESTAPI\_15** provided with this lab. Copy the URL mentioned under **Step 9** and paste it in the request URL field.



10. Select the **Headers** tab.

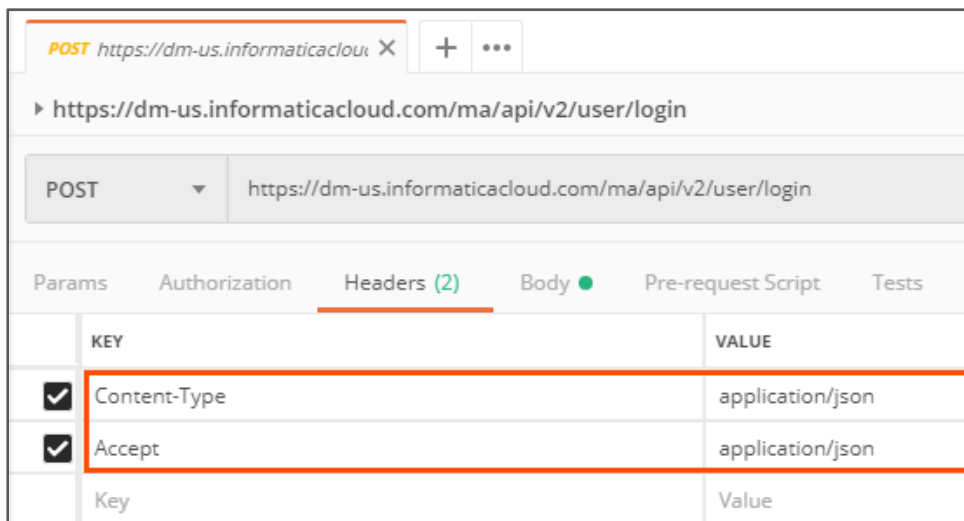


The screenshot shows the REST client interface with the URL `https://dm-us.informaticacloud.com/ma/api/v2/user/login` and the method `POST`. The **Headers** tab is selected and highlighted with a red box. Below the tabs, there is a table for headers with columns **KEY** and **VALUE**. The table currently contains one row with the key `Key` and value `Value`.

| KEY | VALUE |
|-----|-------|
| Key | Value |

11. Enter Key and Value, as shown in the table below:

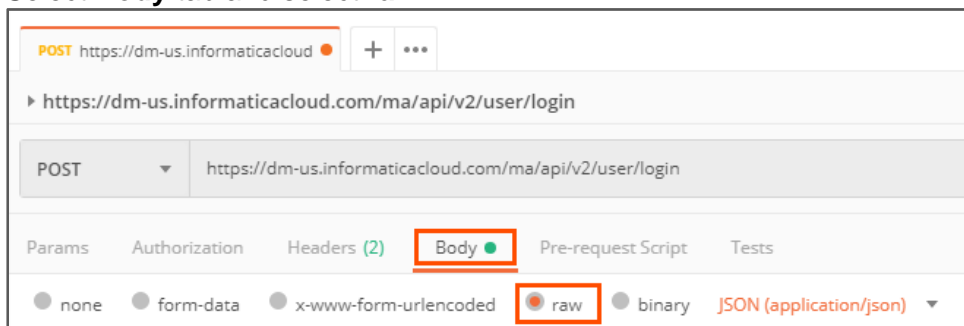
| Key          | Value            |
|--------------|------------------|
| Content-Type | application/json |
| Accept       | application/json |



The screenshot shows the REST client interface with the URL `https://dm-us.informaticacloud.com/ma/api/v2/user/login` and the method `POST`. The **Headers** tab is selected and highlighted with a red box. Below the tabs, there is a table for headers with columns **KEY** and **VALUE**. The table contains two rows, both with checkboxes in the first column, indicating they are selected. The headers are `Content-Type` with value `application/json` and `Accept` with value `application/json`.

|                                     | KEY          | VALUE            |
|-------------------------------------|--------------|------------------|
| <input checked="" type="checkbox"/> | Content-Type | application/json |
| <input checked="" type="checkbox"/> | Accept       | application/json |
|                                     | Key          | Value            |

12. Select **Body** tab and select **raw**.



The screenshot shows the REST client interface with the URL `https://dm-us.informaticacloud.com/ma/api/v2/user/login` and the method `POST`. The **Body** tab is selected and highlighted with a red box. Below the tabs, there is a row of radio buttons for selecting the body type: `none`, `form-data`, `x-www-form-urlencoded`, `raw`, and `binary`. The `raw` radio button is selected and highlighted with a red box. To the right of the radio buttons, the text `JSON (application/json)` is displayed.

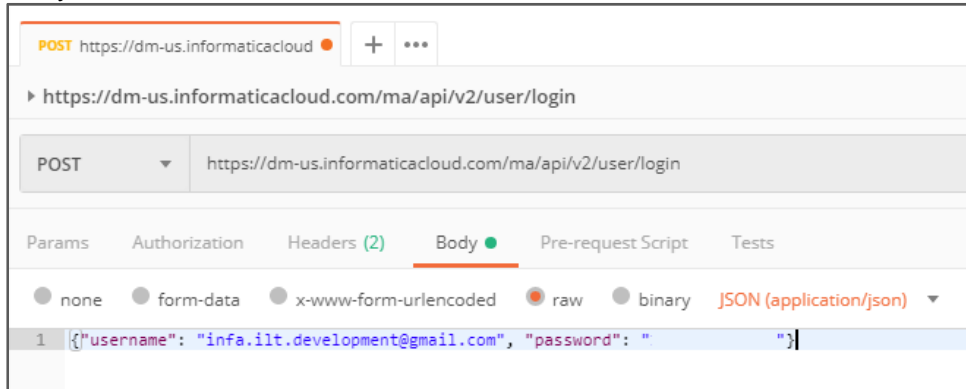
13. Enter the syntax mentioned below.

**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>" }**

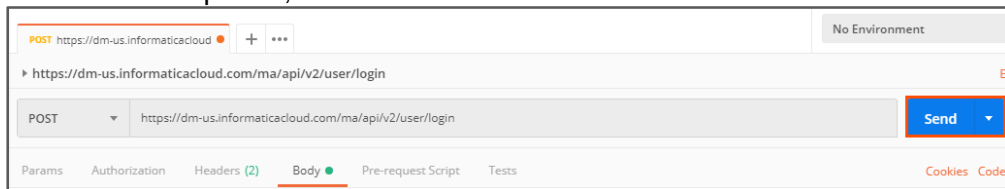
OR

Open the file named **31\_LabGuide\_RunningMappingTaskUsingRESTAPI\_15** provided with this lab. Copy the syntax mentioned under **Step 13** and paste it in the Body field.



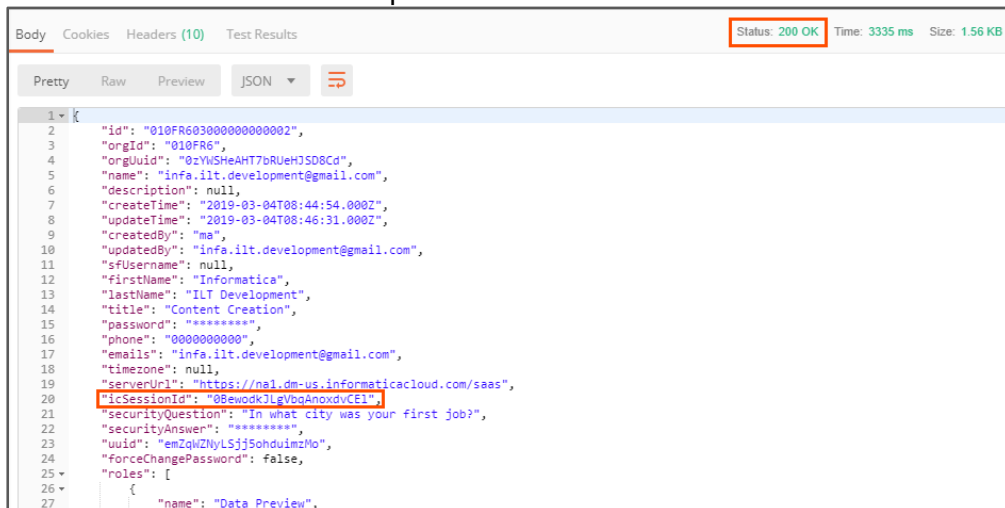
**Note:** The username and password will vary from user to user. For this lab, we have hidden the password.

14. To view the response, click **Send**.



15. The status of the response is **200 OK**.

16. Examine the details in the response.



**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 .

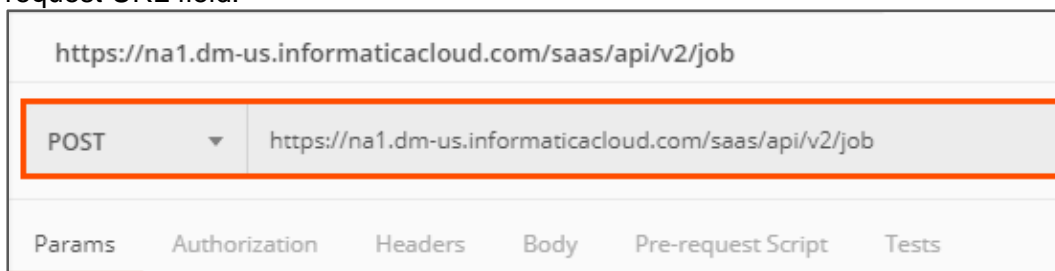
18. From the drop-down, select **POST**.

19. Enter the following URL in the request URL field:

**https://na1.dm-us.informaticacloud.com/saas/api/v2/job**

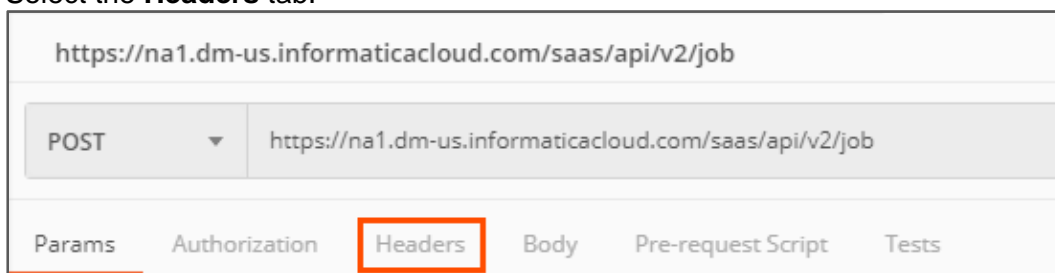
OR

Open the file named **31\_LabGuide\_RunningMappingTaskUsingRESTAPI\_15** provided with this lab. Copy the URL mentioned under **Step 19** and paste it in the request URL field.



The screenshot shows the REST client interface with the URL `https://na1.dm-us.informaticacloud.com/saas/api/v2/job` entered in the top field. Below the URL, a dropdown menu is set to **POST**, and the same URL is repeated in the adjacent text field. The bottom tabs include Params, Authorization, Headers, Body, Pre-request Script, and Tests.

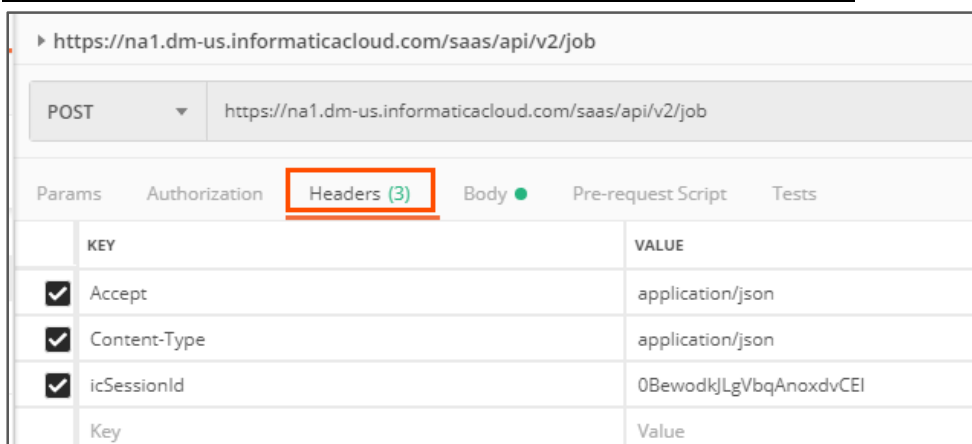
20. Select the **Headers** tab.



The screenshot shows the REST client interface with the **Headers** tab selected. The URL and method (POST) 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 in step 16 |



The screenshot shows the REST client interface with the **Headers (3)** tab selected. The URL and method (POST) remain the same. The headers table is populated with the following data:

| 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                  |

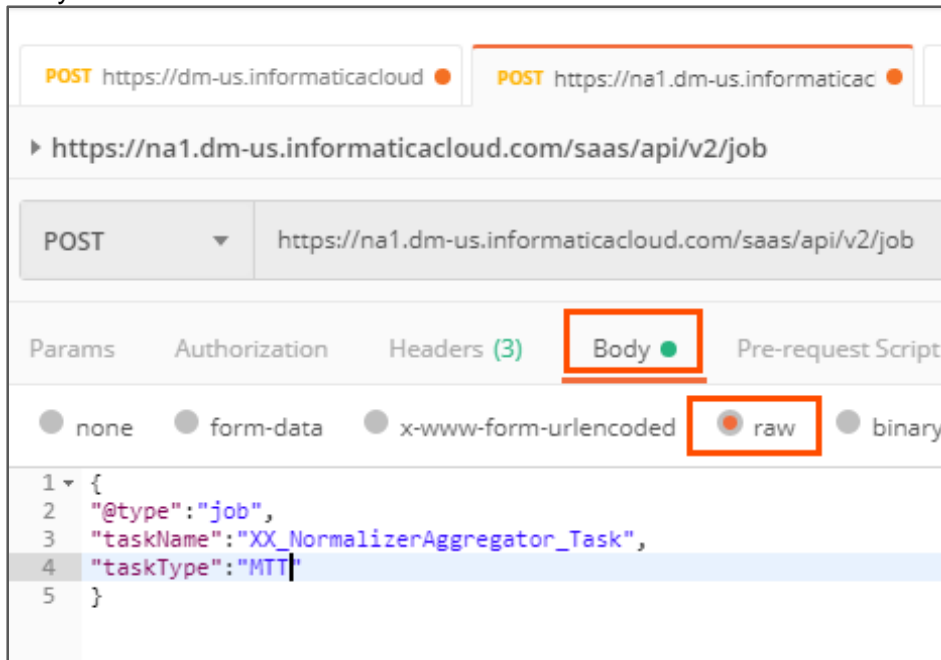
22. Select **Body** tab and select **raw**.

23. Enter the following syntax:

```
{
  "@type":"job",
  "taskName":"XX_NormalizerAggregator_Task",
  "taskType":"MTT"
}
```

OR

Open the file named **31\_LabGuide\_RunningMappingTaskUsingRESTAPI\_15** provided with this lab. Copy the syntax mentioned under **Step 23** and paste it in the Body field.



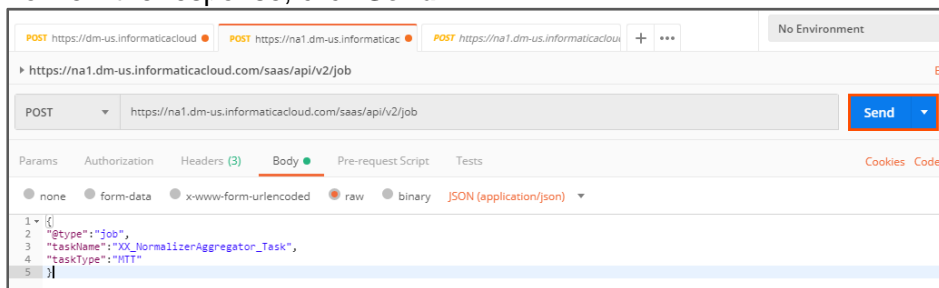
The screenshot shows a REST client interface with the following details:

- Method: POST
- URL: https://na1.dm-us.informaticacloud.com/saas/api/v2/job
- Body tab is selected and highlighted with a red box.
- Content type is set to raw, also highlighted with a red box.
- The JSON payload is entered in the body field:
 

```
{
  "@type":"job",
  "taskName":"XX_NormalizerAggregator_Task",
  "taskType":"MTT"
}
```

**Note:** The taskname should be exactly same as the taskname in IICS.

24. To view the response, click **Send**.

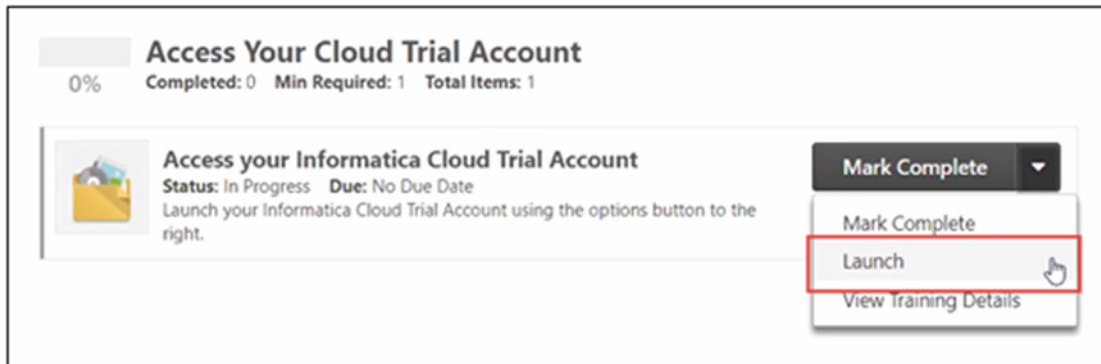


The screenshot shows the same REST client interface as before, but with the **Send** button highlighted with a red box. The JSON payload remains the same.

25. The status of the response is **200 OK**.

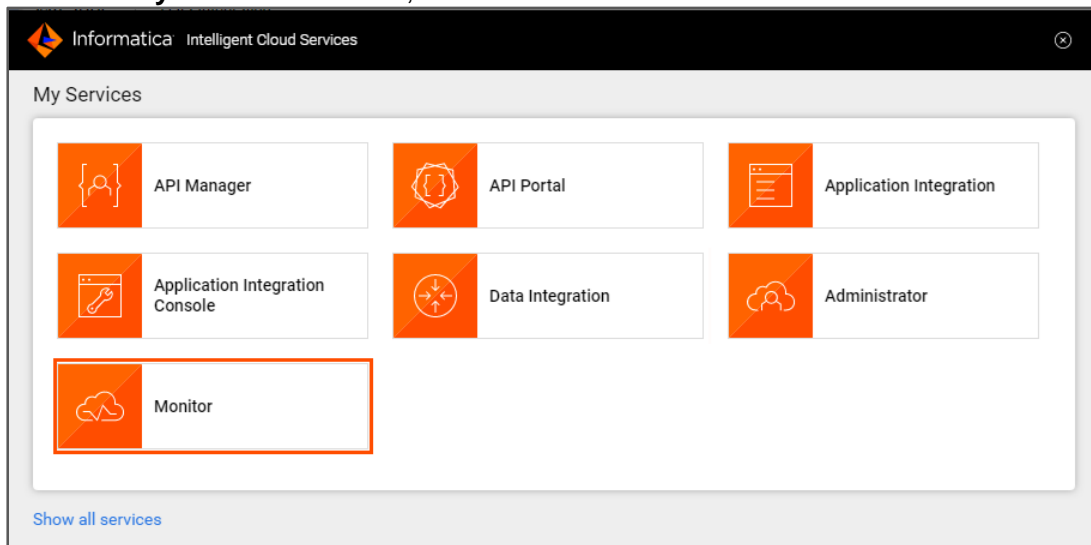


26. Access your cloud trial account by clicking **Launch** in your option Menu. If the option menu is labeled anything other than **Launch**, click the down arrow to the right and click **Launch**.



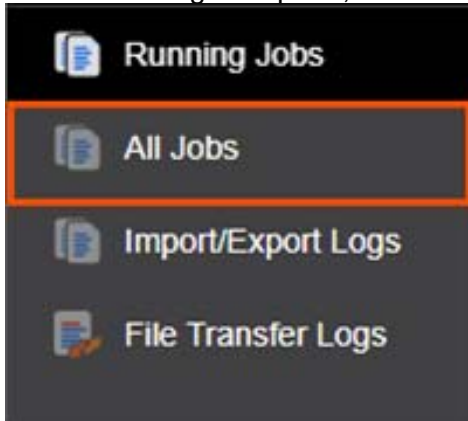
27. Enter your login credentials to login to your Informatica Cloud Org.

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.

| Instance Name                       | Location | Subtasks | Start Time           | End Time             | Rows Processed | State   |
|-------------------------------------|----------|----------|----------------------|----------------------|----------------|---------|
| XX_FirstName_NormalizerAggregator-1 | Default  |          | Aug 1, 2019, 1:19... | Aug 1, 2019, 1:19... | 180            | Success |

| 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:  | <a href="#">Download Session Log</a> |
| 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 new tab, click .

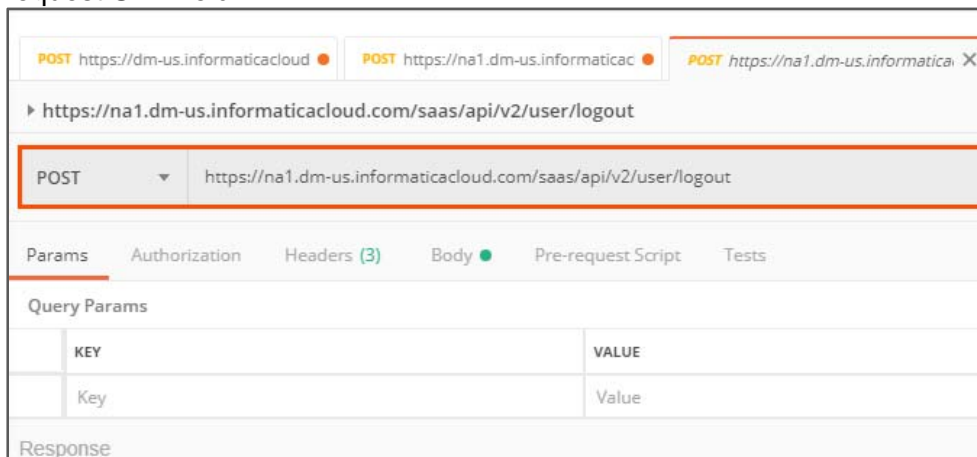
32. From the drop-down, select **POST**.

33. Enter the following URL in the request URL field:

**https://na1.dm-us.informaticacloud.com/saas/api/v2/user/logout**

OR

Open the file named **31\_LabGuide\_RunningMappingTaskUsingRESTAPI\_15** provided with this lab. Copy the URL mentioned under **Step 33** and paste it in the request URL field.



POST https://na1.dm-us.informaticacloud.com/saas/api/v2/user/logout

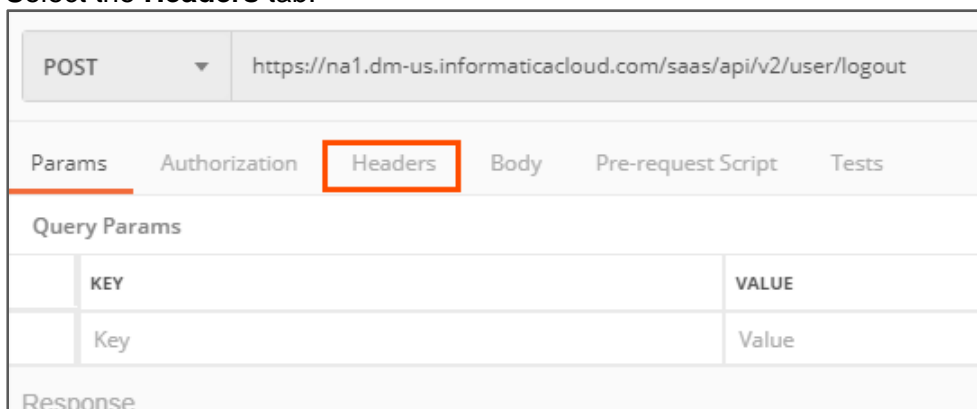
Params Authorization Headers (3) Body Pre-request Script Tests

Query Params

| KEY | VALUE |
|-----|-------|
| Key | Value |

Response

34. Select the **Headers** tab.



POST https://na1.dm-us.informaticacloud.com/saas/api/v2/user/logout

Params Authorization Headers Body Pre-request Script Tests

Query Params

| KEY | VALUE |
|-----|-------|
| Key | Value |

Response

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 in step 16 |

▶ <https://na1.dm-us.informaticacloud.com/saas/api/v2/job>

POST <https://na1.dm-us.informaticacloud.com/saas/api/v2/job>

Params Authorization **Headers (3)** Body ● Pre-request Script Tests

| 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 **Body** tab and select **raw**.

37. Enter the following syntax:

```
{"@type":"logout"}
```

OR

Open the file named **31\_LabGuide\_RunningMappingTaskUsingRESTAPI\_15** provided with this lab. Copy the syntax mentioned under **Step 37** and paste it in the **Body** field.

▶ <https://na1.dm-us.informaticacloud.com/saas/api/v2/user/logout>

POST <https://na1.dm-us.informaticacloud.com/saas/api/v2/user/logout>

Params Authorization Headers (3) **Body ●** Pre-request Script Tests

● none ● form-data ● x-www-form-urlencoded **● raw** ● binary JSON (application/json) ▼

```
1 {"@type":"logout"}
```

38. To view the response, click **Send**.

POST <https://dm-us.informaticacloud.com/saas/api/v2/user/logout> POST <https://na1.dm-us.informaticacloud.com/saas/api/v2/user/logout> POST <https://na1.dm-us.informaticacloud.com/saas/api/v2/user/logout> + ... No Environment

▶ <https://na1.dm-us.informaticacloud.com/saas/api/v2/user/logout>

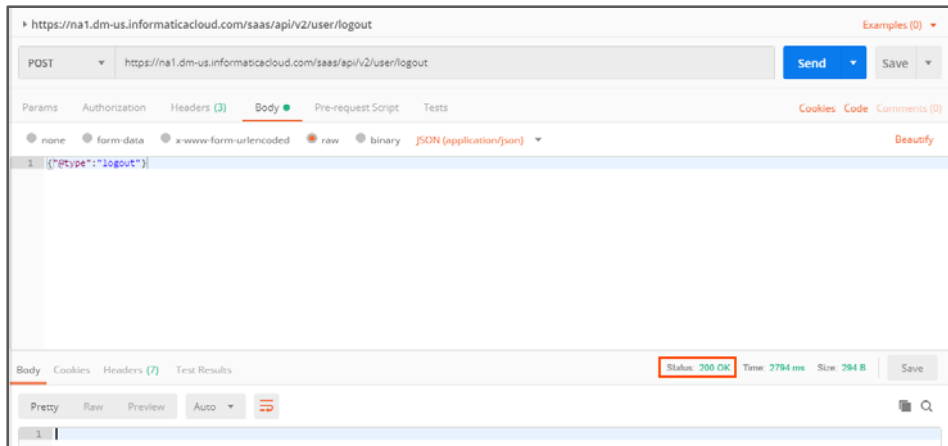
POST <https://na1.dm-us.informaticacloud.com/saas/api/v2/user/logout> **Send**

Params Authorization Headers (3) **Body ●** Pre-request Script Tests Cookies Code

● none ● form-data ● x-www-form-urlencoded ● raw ● binary JSON (application/json) ▼

```
1 {"@type":"logout"}
```

39. The status of the response is **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:

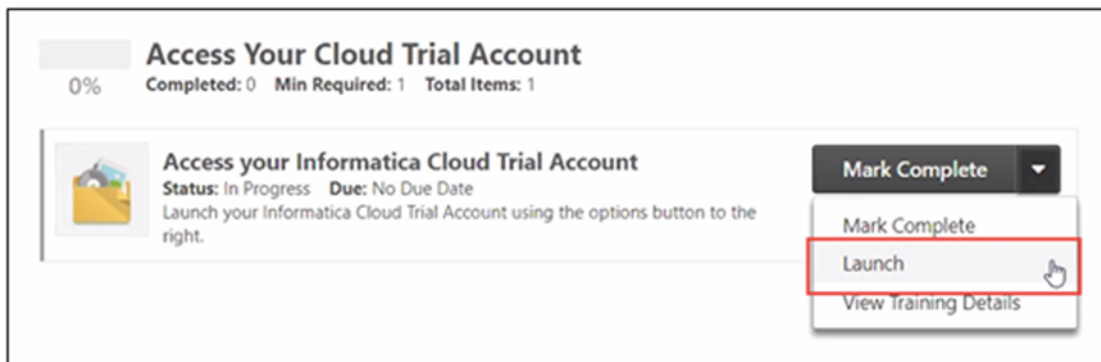
##### Copy Source Files:

1. Copy the following files provided with this lab and place the file in your flat file directory (C:\IICSLabFiles).

| Files              |
|--------------------|
| Error Handling.csv |
| Valid_Data.csv     |
| Invalid_Data.csv   |

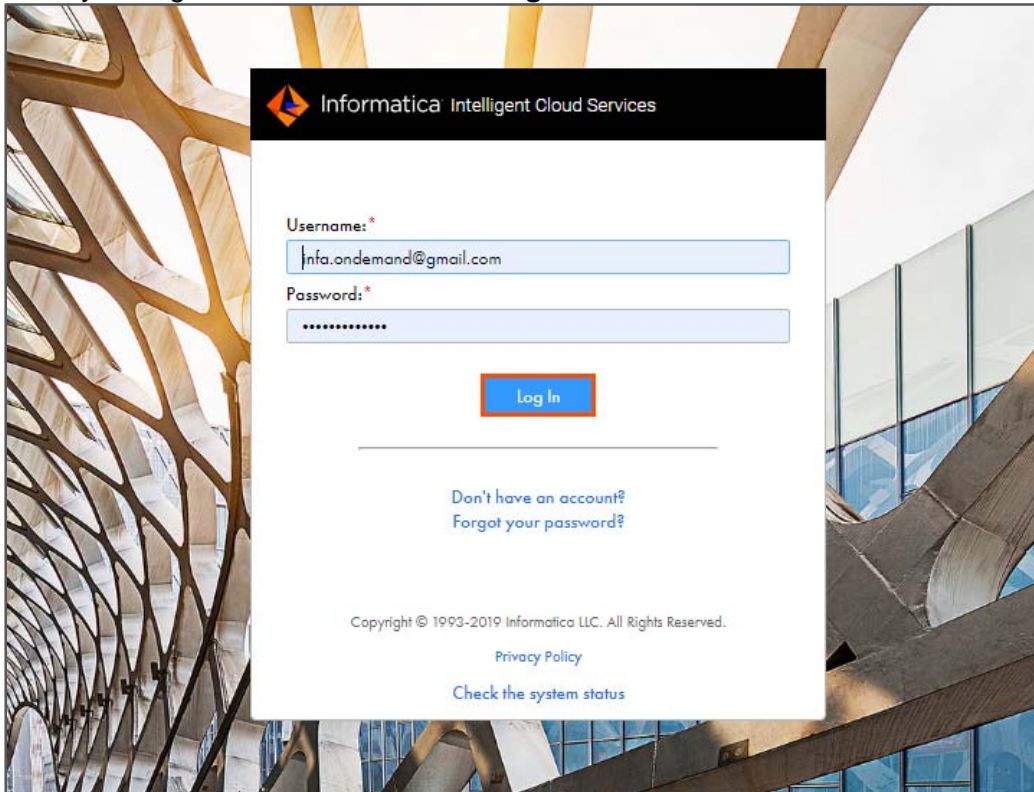
##### Create Mapping:

2. Access your cloud trial account by clicking **Launch** in your option Menu. If the option menu is labeled anything other than **Launch**, click the down arrow to the right and click **Launch**.



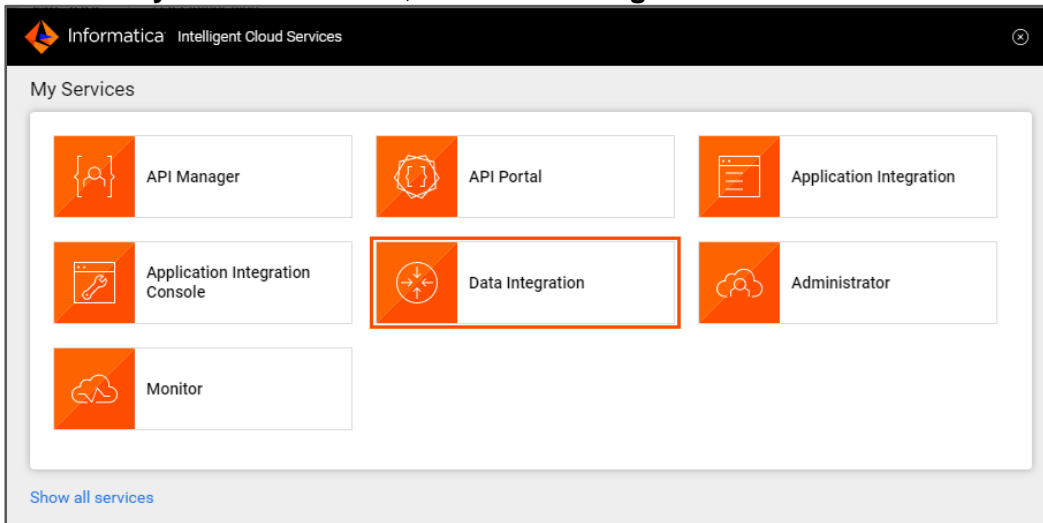
**Note:** Follow this step, if you have navigated away from the login page.

3. Enter your login credentials and click **Log In**.

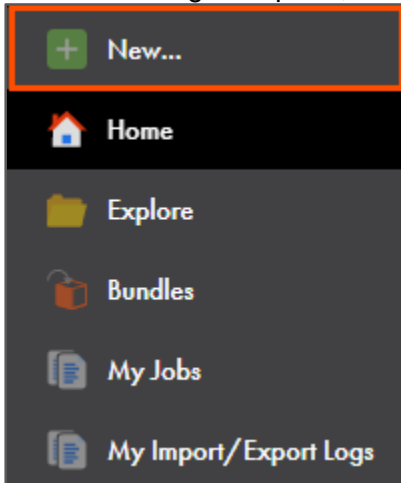


The login page for Informatica Intelligent Cloud Services is displayed. It features a white login box centered on a background image of a modern building's interior with a complex, branching structural design. The login box has a black header with the Informatica logo and the text "Informatica Intelligent Cloud Services". Below the header, there are two input fields: "Username:" with the email "info.ondemand@gmail.com" and "Password:" with masked characters. A blue "Log In" button is positioned below the password field. Underneath the button, there are links for "Don't have an account?" and "Forgot your password?". At the bottom of the login box, there is a copyright notice "Copyright © 1993-2019 Informatica LLC. All Rights Reserved.", a link for "Privacy Policy", and a link for "Check the system status".

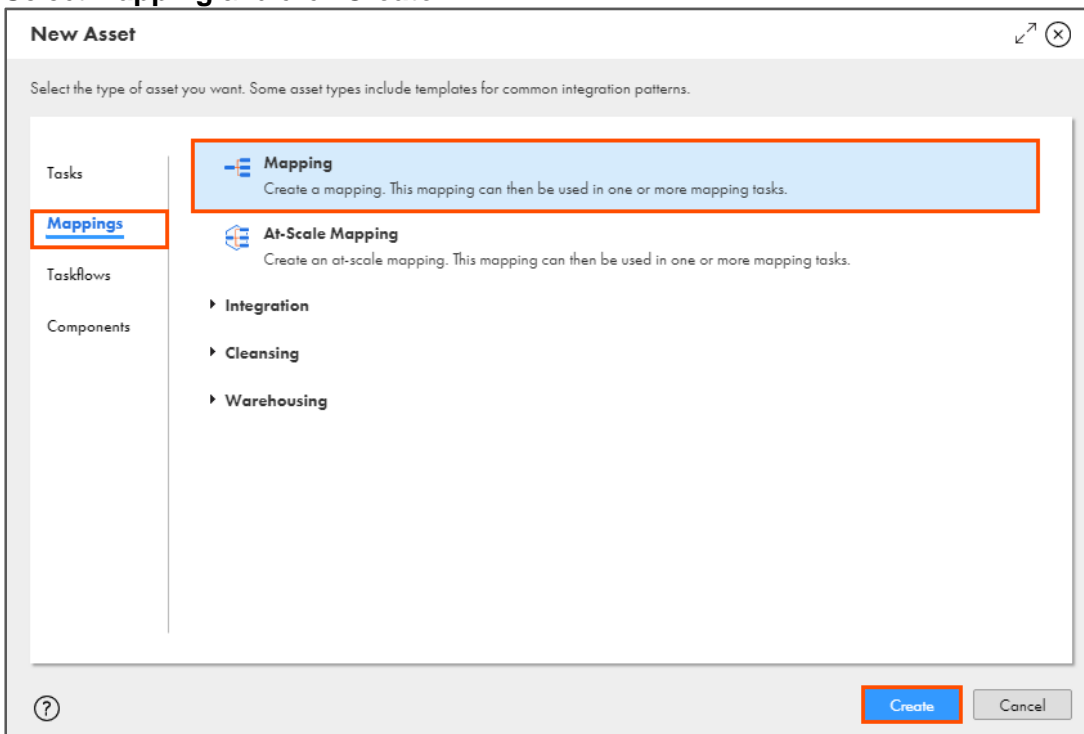
4. From the **My Services** window, select **Data Integration**.



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

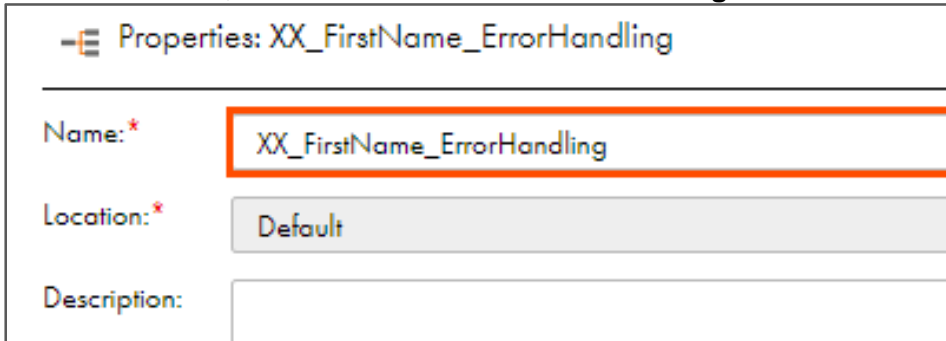


6. From the New Asset window, click the **Mappings** tab.
7. Select **Mapping** and click **Create**.



**Note:** The Mapping page appears.

8. In the Name field, enter **XX\_FirstName\_ErrorHandling**.



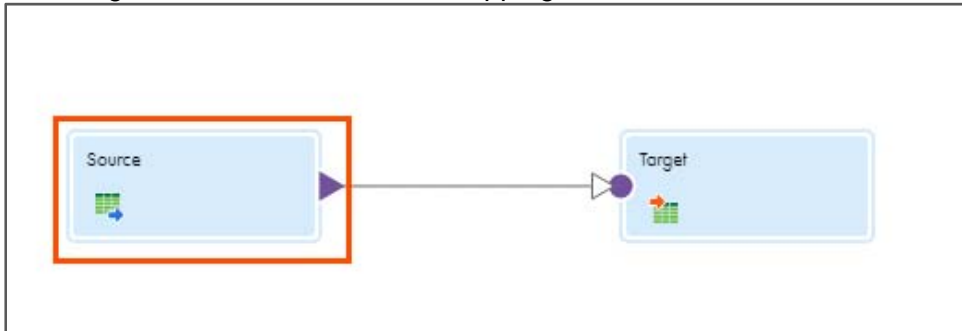
Properties: XX\_FirstName\_ErrorHandling

Name: \* XX\_FirstName\_ErrorHandling

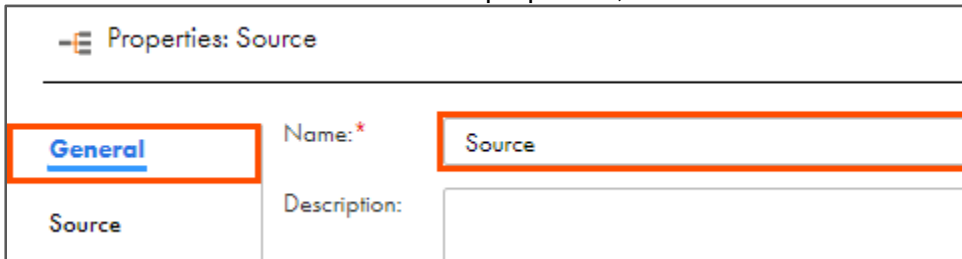
Location: \* Default

Description:

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**.



Properties: Source

General

Name: \* Source

Description:

Source

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

12. To create a new connection parameter, click **New Parameter**.



Properties: Source

General

Source

Fields

Details

Connection: View... New Connection... New Parameter...

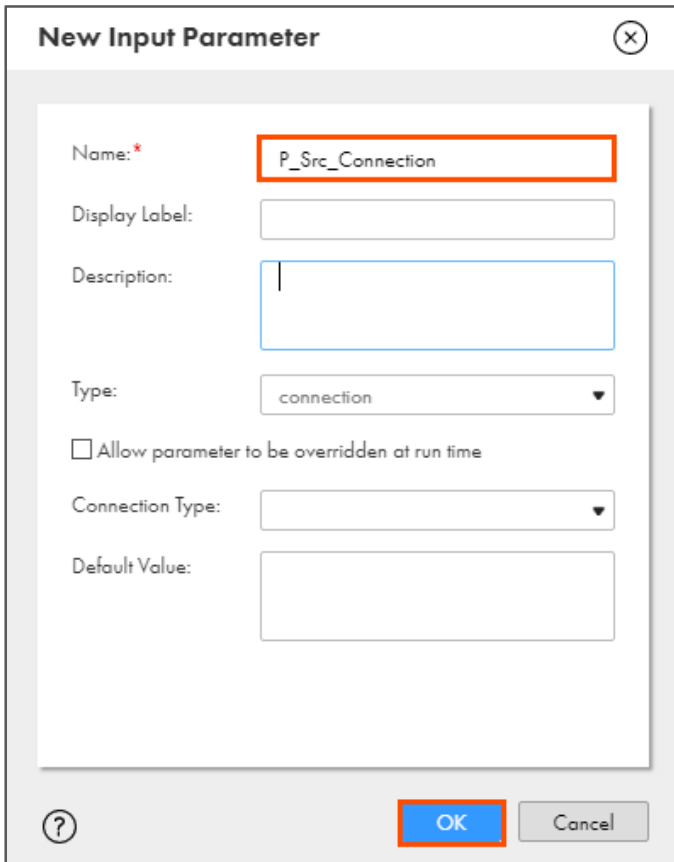
Source Type:

**Note:** The New Parameter window appears.

13. Enter Name as **P\_Src\_Connection**.



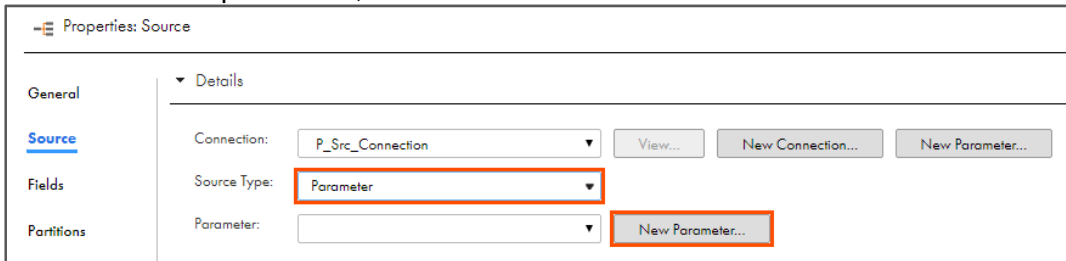
14. Click **OK**.



The 'New Input Parameter' dialog box is shown. The 'Name' field is highlighted with a red box and contains the text 'P\_Src\_Connection'. The 'Type' dropdown menu is set to 'connection'. The 'OK' button is highlighted with a red box.

15. From the Source Type drop-down, select **Parameter**.

16. To create a new parameter, click **New Parameter**.

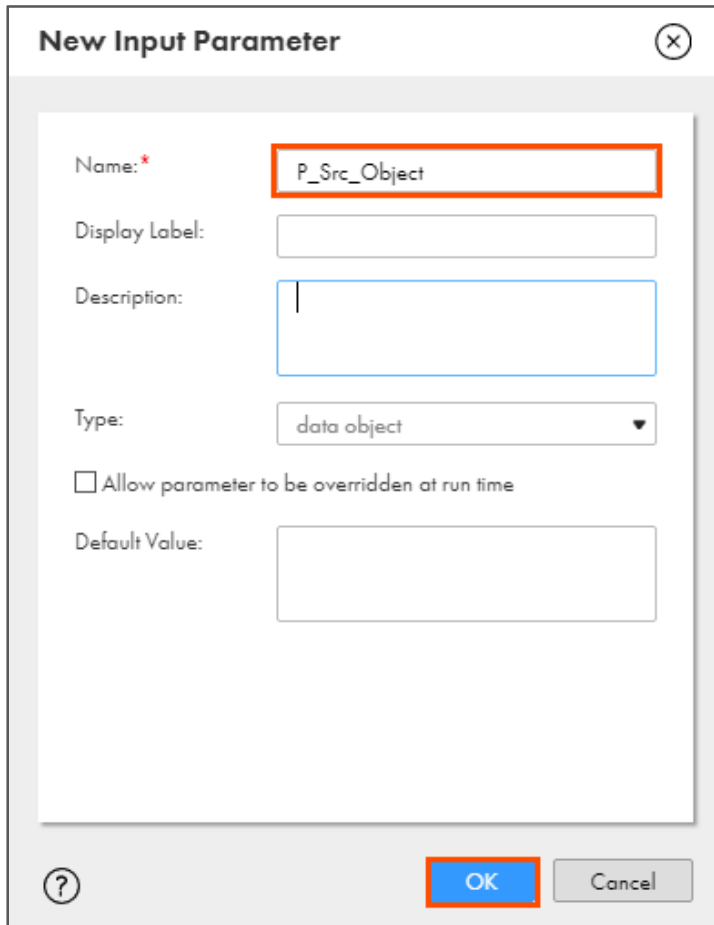


The 'Properties: Source' dialog box is shown. The 'Source Type' dropdown menu is highlighted with a red box and set to 'Parameter'. The 'New Parameter...' button is highlighted with a red box.

**Note:** The New Input Parameter window appears.

17. Enter Name as **P\_Src\_Object**.

18. Click **OK**.



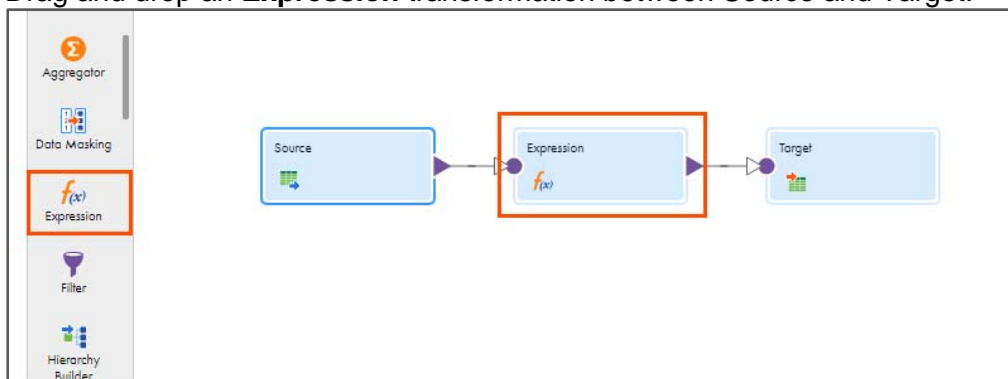
The dialog box is titled "New Input Parameter" and contains the following fields:

- Name:** P\_Src\_Object (highlighted with a red box)
- Display Label:** (empty text box)
- Description:** (empty text box)
- Type:** data object (dropdown menu)
- ☐ Allow parameter to be overridden at run time
- Default Value:** (empty text box)

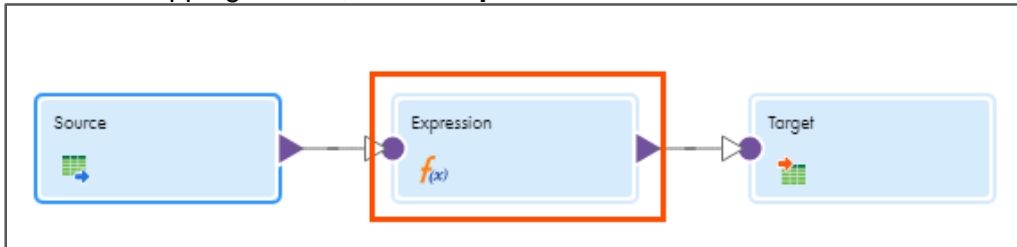
At the bottom, there is a question mark icon, an **OK** button (highlighted with a red box), and a **Cancel** button.

### Add Expression Transformation:

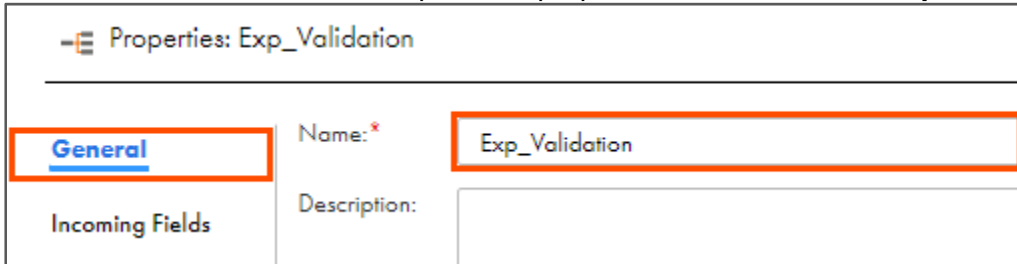
19. Drag and drop an **Expression** transformation between Source and Target.



20. From the mapping canvas, select **Expression**.



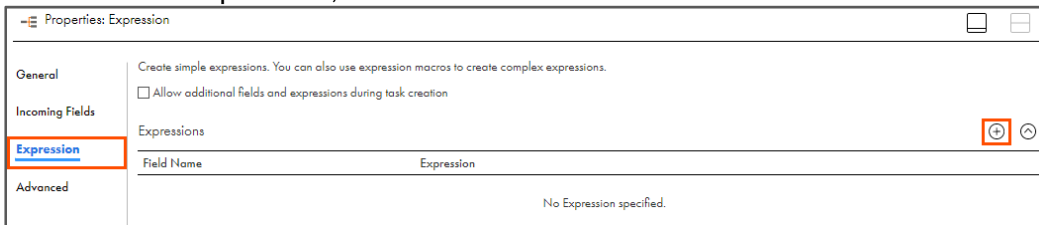
21. In the **General** section of the Expression properties, enter Name as **Exp\_Validation**.



The screenshot shows the 'Properties: Exp\_Validation' dialog box. The 'General' tab is selected. The 'Name' field is set to 'Exp\_Validation'. The 'Description' field is empty. The 'Incoming Fields' tab is also visible.

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

23. To add a new expression, click .



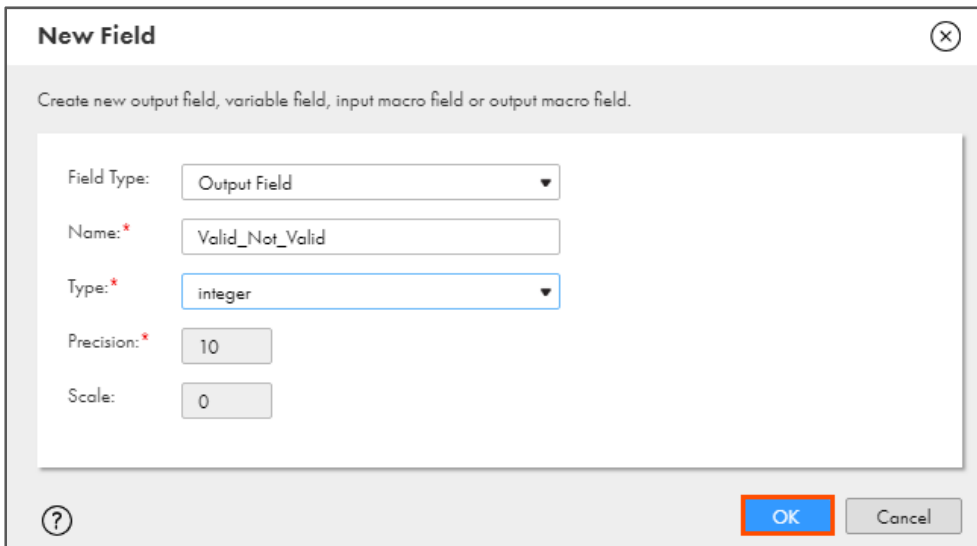
The screenshot shows the 'Properties: Expression' dialog box. The 'Expression' tab is selected. The 'Add' button (a circle with a plus sign) is highlighted with a red box. The 'Field Name' and 'Expression' columns are visible.

**Note:** The New Field window appears.

24. Enter the details as shown in table below:

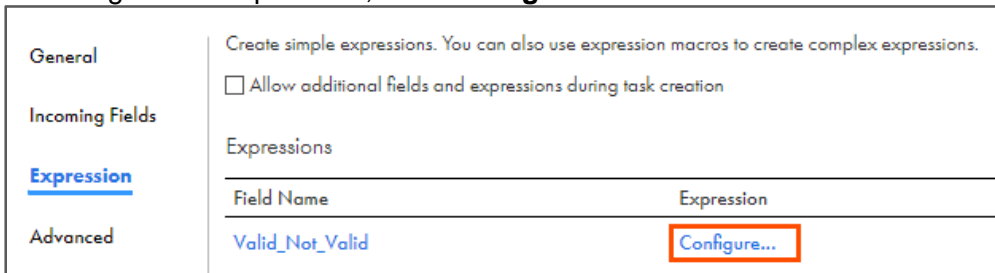
| Field Type   | Name            | Type    | Precision | Scale |
|--------------|-----------------|---------|-----------|-------|
| Output Field | Valid_Not_Valid | integer | 10        | 0     |

25. Click **OK**.



The screenshot shows the 'New Field' dialog box. The 'Field Type' is set to 'Output Field', 'Name' is 'Valid\_Not\_Valid', 'Type' is 'integer', 'Precision' is '10', and 'Scale' is '0'. The 'OK' button is highlighted with a red box.

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



General: Create simple expressions. You can also use expression macros to create complex expressions.  
☐ Allow additional fields and expressions during task creation

Incoming Fields

**Expression**

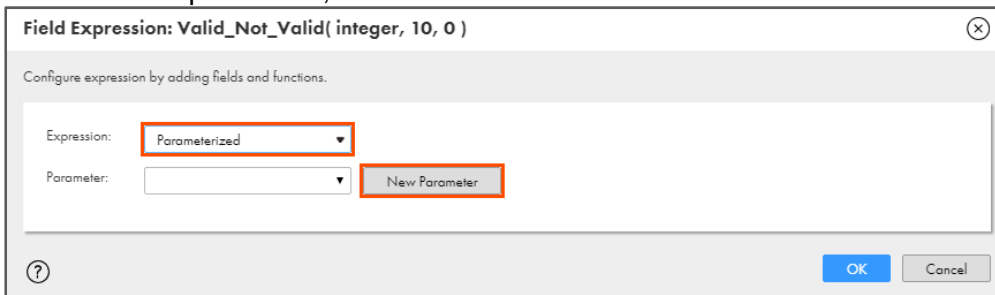
Advanced

| Field Name      | Expression                   |
|-----------------|------------------------------|
| Valid_Not_Valid | <a href="#">Configure...</a> |

**Note:** The Field Expression window appears.

27. From the Expression drop-down, select **Parameterized**.

28. To add a new parameter, click **New Parameter**.



Field Expression: Valid\_Not\_Valid( integer, 10, 0 )

Configure expression by adding fields and functions.

Expression: **Parameterized**

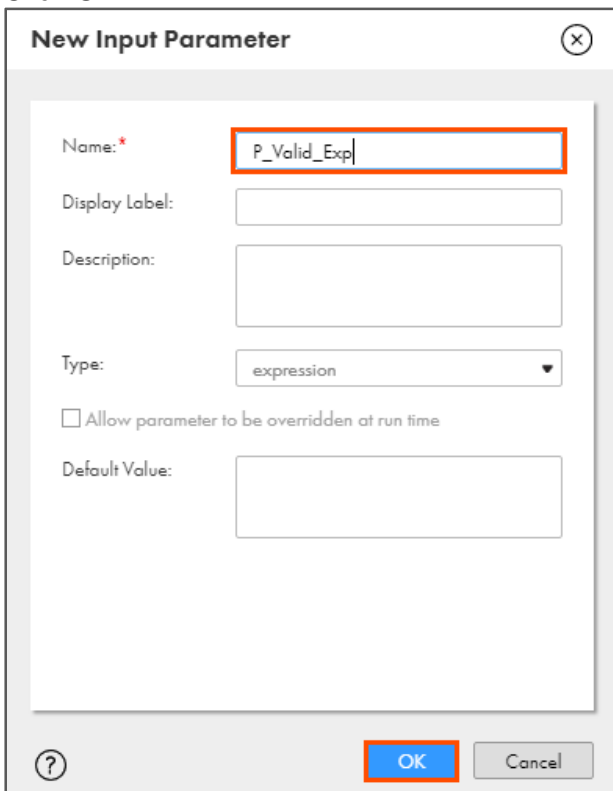
Parameter: [New Parameter](#)

OK Cancel

**Note:** The New Input Parameter window appears.

29. Enter Name as **P\_Valid\_Exp**.

30. Click **OK**.



**New Input Parameter**

Name: **P\_Valid\_Exp**

Display Label:

Description:

Type: **expression**

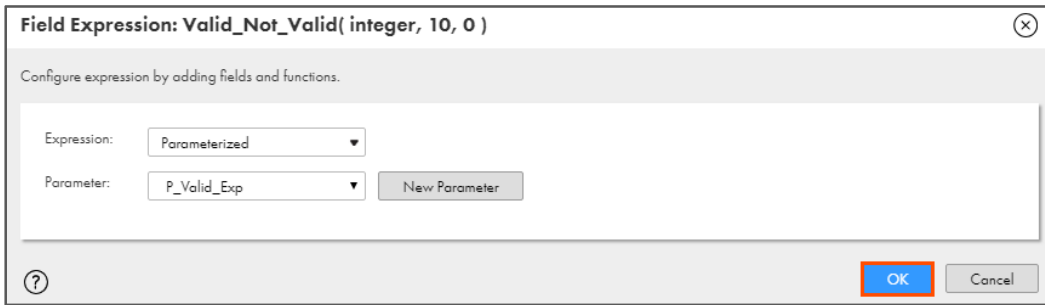
☐ Allow parameter to be overridden at run time

Default Value:

OK Cancel

**Note:** This action redirects you to the Field Expression window.

31. Click **OK**.



**Field Expression: Valid\_Not\_Valid( integer, 10, 0 )**

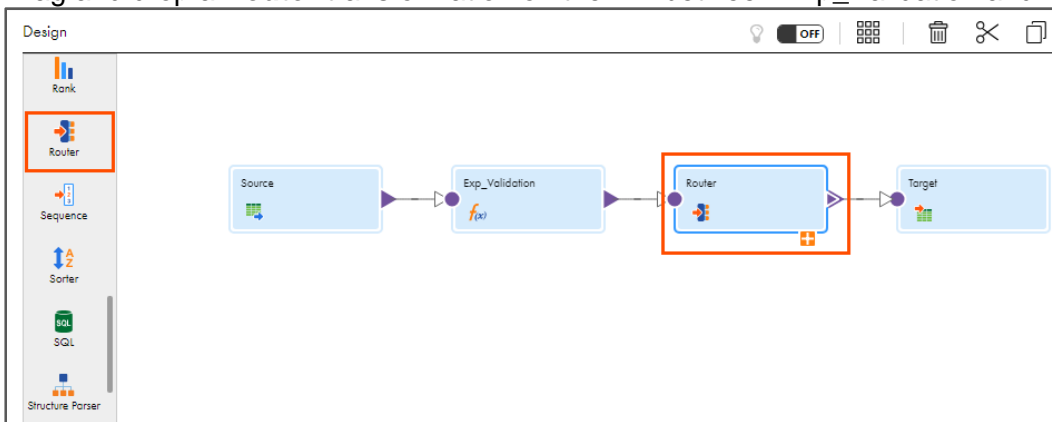
Configure expression by adding fields and functions.

Expression:

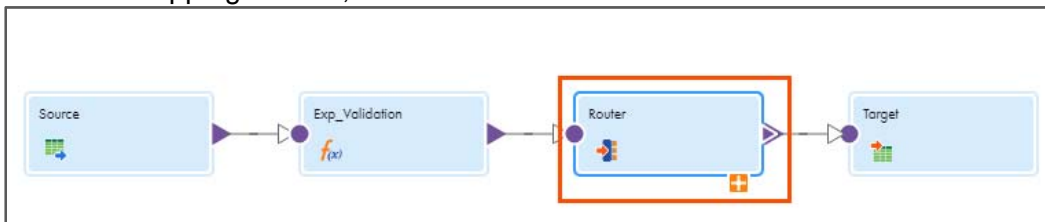
Parameter:

**Add 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 Name as **Valid\_Invalid**.



**Properties: Valid\_Invalid**

**General**

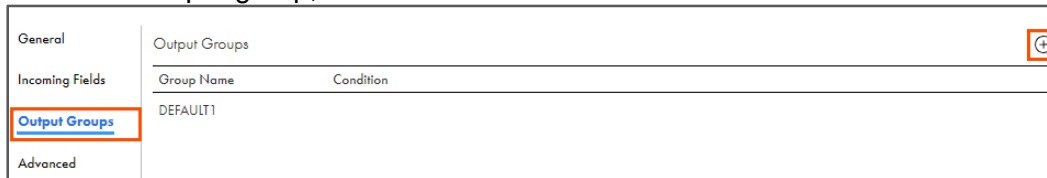
Name:

Description:

Incoming Fields

35. From the properties pane, click **Output Groups**.

36. To add an output group, click .

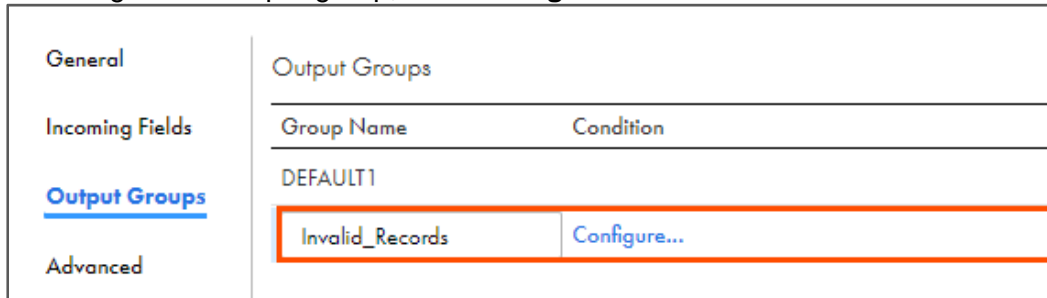


| Group Name | Condition |
|------------|-----------|
| DEFAULT1   |           |

**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**.

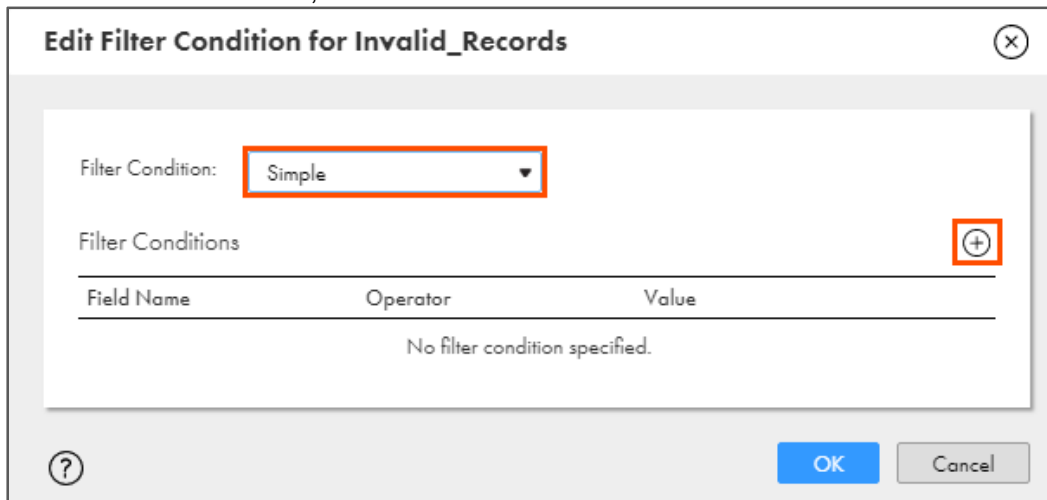


| Group Name      | Condition    |
|-----------------|--------------|
| DEFAULT1        |              |
| Invalid_Records | Configure... |

**Note:** The Edit Filter Condition for Invalid\_Records appears.

39. Retain Filter Condition as **Simple**.

40. To add a filter condition, click .



**Edit Filter Condition for Invalid\_Records**

Filter Condition: Simple

Filter Conditions

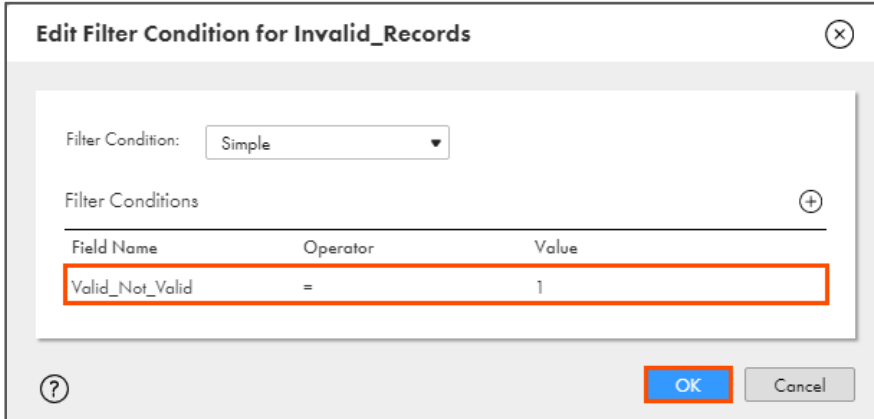
| Field Name                     | Operator | Value |
|--------------------------------|----------|-------|
| No filter condition specified. |          |       |

OK Cancel

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**

Filter Condition: Simple

Filter Conditions

| Field Name      | Operator | Value |
|-----------------|----------|-------|
| Valid_Not_Valid | =        | 1     |

OK Cancel

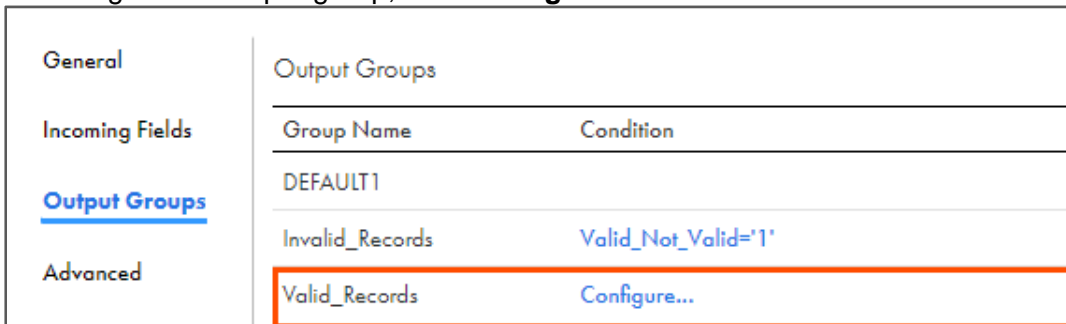
43. To add an output group, click .



| Group Name      | Condition           |
|-----------------|---------------------|
| DEFAULT1        |                     |
| 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**.

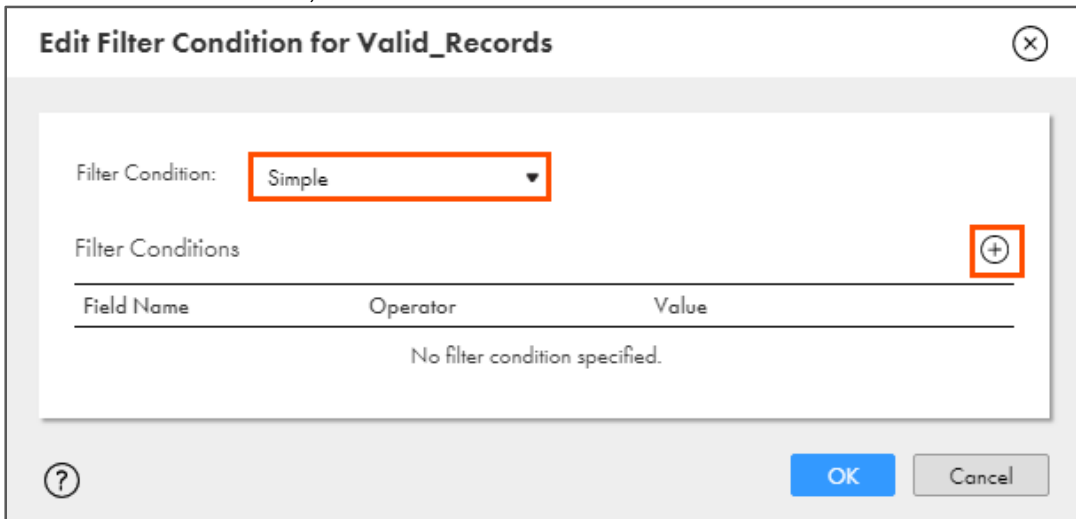


| Group Name      | Condition           |
|-----------------|---------------------|
| DEFAULT1        |                     |
| Invalid_Records | Valid_Not_Valid='1' |
| Valid_Records   | Configure...        |

**Note:** The Edit Filter Condition for Valid\_Records appears.

46. Retain Filter Condition as **Simple**.

47. To add a filter condition, click .



**Edit Filter Condition for Valid\_Records**

Filter Condition: Simple

Filter Conditions +

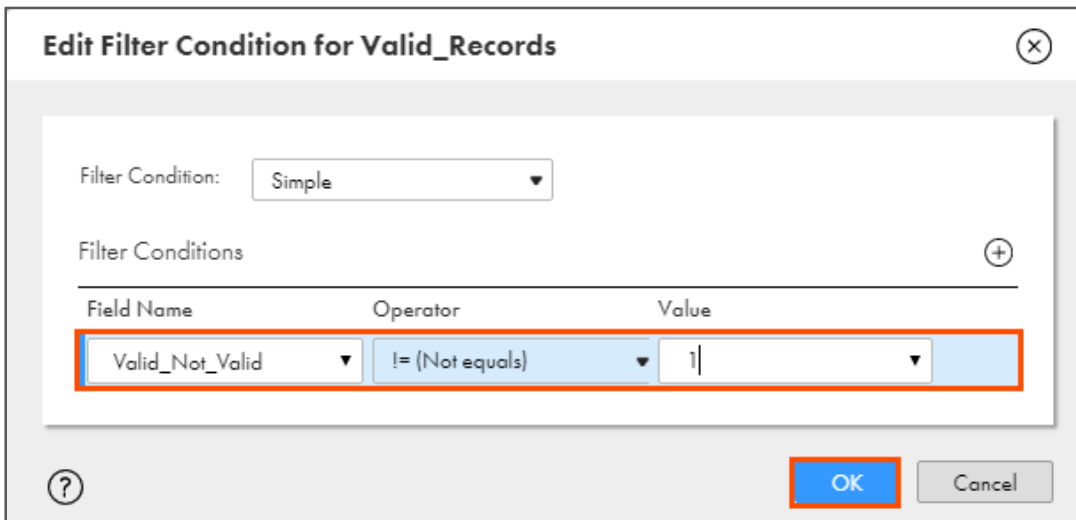
| Field Name                     | Operator | Value |
|--------------------------------|----------|-------|
| No filter condition specified. |          |       |

? OK Cancel

48. Enter the filter condition, as shown in the table below.

| Field Name      | Operator | Value |
|-----------------|----------|-------|
| Valid_Not_Valid | !=       | 1     |

49. Click **OK**.




**Edit Filter Condition for Valid\_Records**

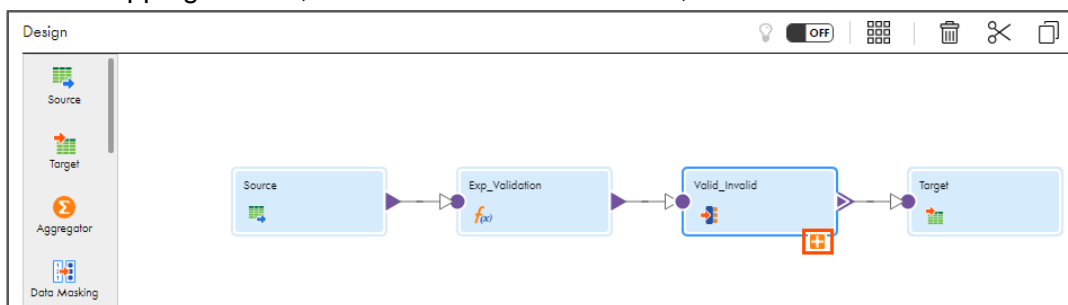
Filter Condition: Simple

Filter Conditions +


| Field Name      | Operator        | Value |
|-----------------|-----------------|-------|
| Valid_Not_Valid | != (Not equals) | 1     |

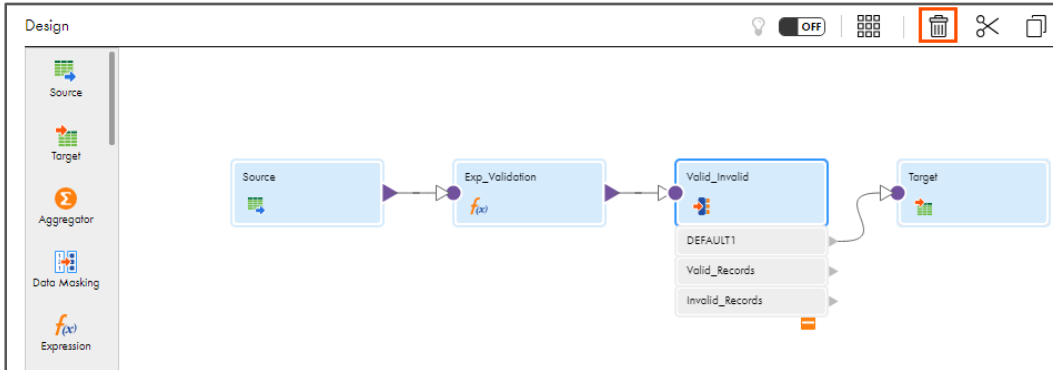
? OK Cancel

50. In the mapping canvas, for the router transformation, click .

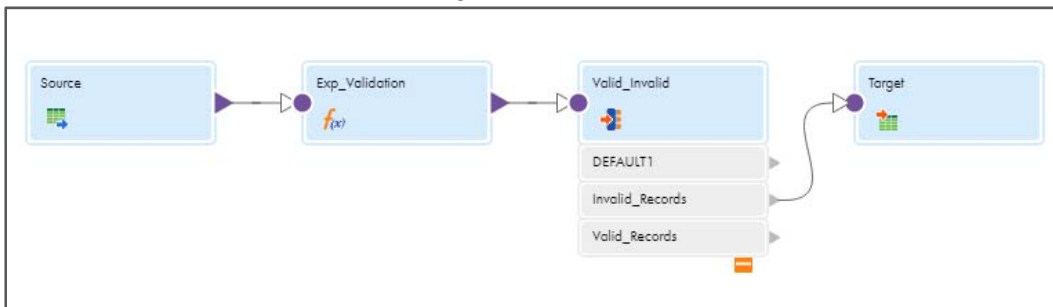




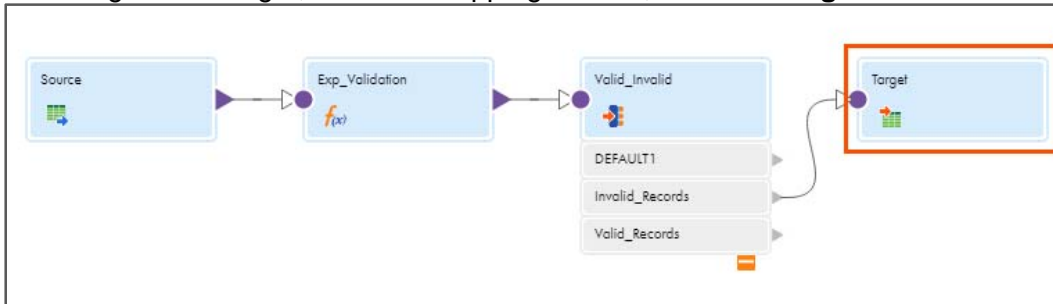
51. To delete the link between DEFAULT1 and Target, click on the link, and click .




52. Link **Invalid\_Records** with the Target transformation.



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



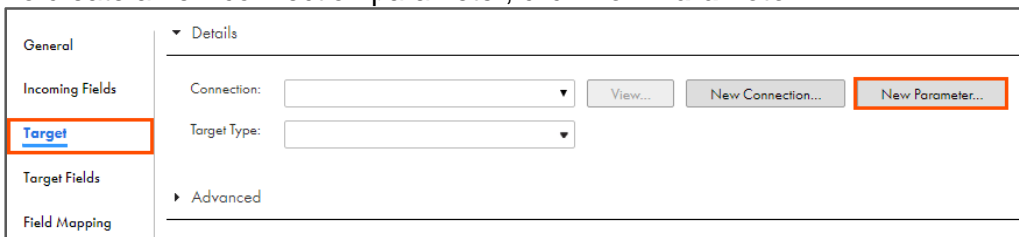
54. In the General section of the Target properties, enter Name as **Tgt\_Invalid**.

 Properties: Tgt\_Invalid

|                 |              |             |
|-----------------|--------------|-------------|
| <b>General</b>  | Name: *      | Tgt_Invalid |
| Incoming Fields | Description: |             |

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

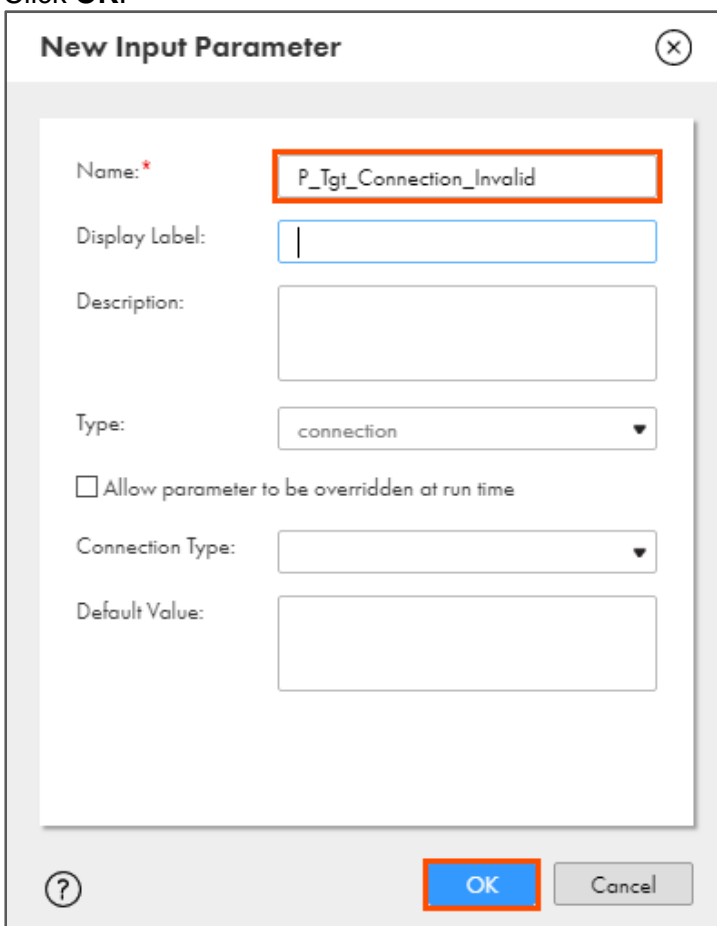
56. To create a new connection parameter, click **New Parameter**.



**Note:** The New Parameter window appears.

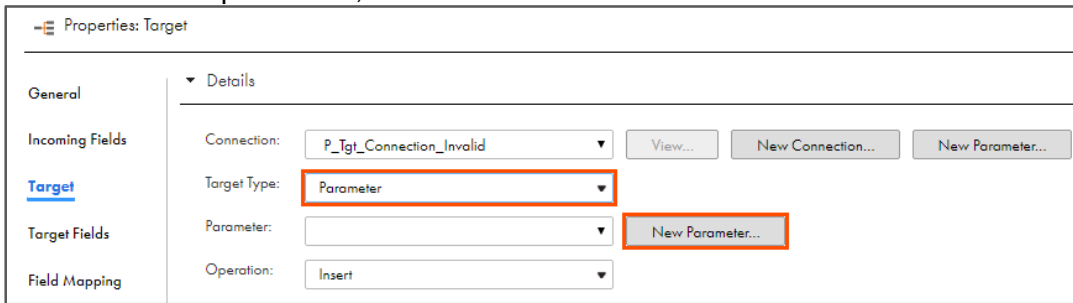
57. Enter Name as **P\_Tgt\_Connection\_Invalid**.

58. Click **OK**.



59. From the Target Type drop-down, select **Parameter**.

60. To create a new parameter, click **New Parameter**.



Properties: Target

General

Incoming Fields

**Target**

Target Fields

Field Mapping

Details

Connection: P\_Tgt\_Connection\_Invalid View... New Connection... New Parameter...

Target Type: Parameter

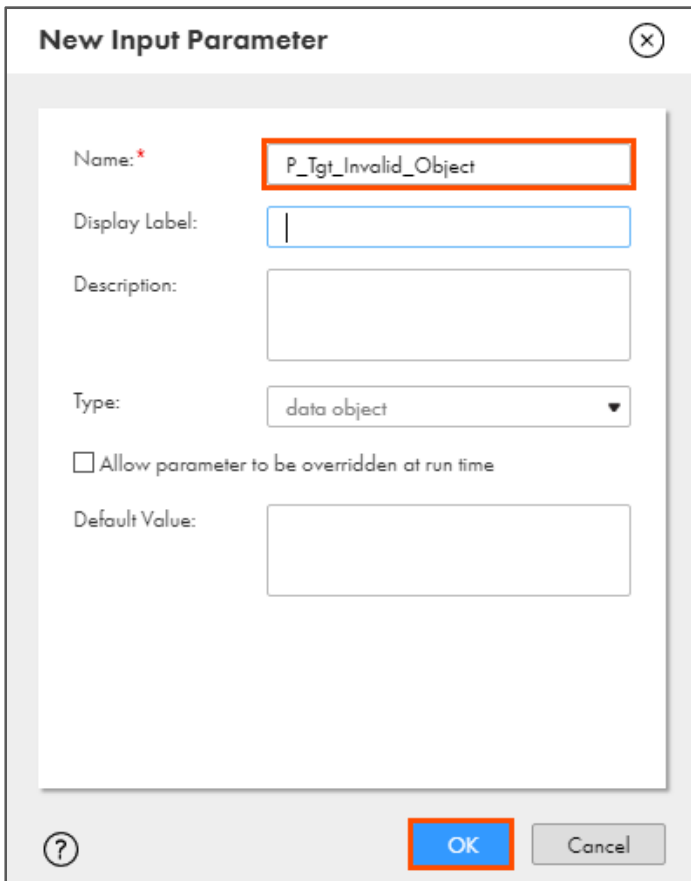
Parameter: New Parameter...

Operation: Insert

**Note:** The New Input Parameter window appears.

61. Enter Name as **P\_Tgt\_Invalid\_Object**.

62. Click **OK**.



New Input Parameter

Name: P\_Tgt\_Invalid\_Object

Display Label:

Description:

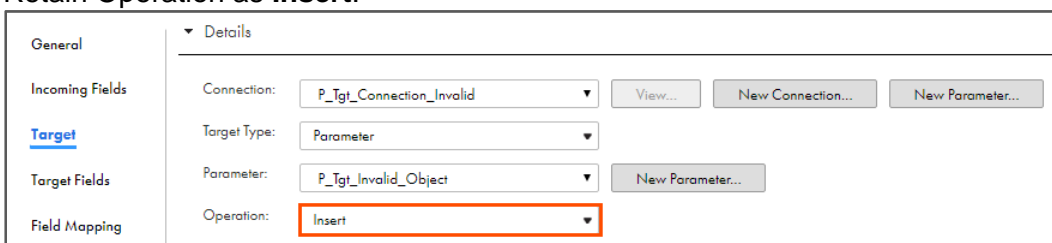
Type: data object

☐ Allow parameter to be overridden at run time

Default Value:

OK Cancel

63. Retain Operation as **Insert**.



Properties: Target

General

Incoming Fields

**Target**

Target Fields

Field Mapping

Details

Connection: P\_Tgt\_Connection\_Invalid View... New Connection... New Parameter...

Target Type: Parameter

Parameter: P\_Tgt\_Invalid\_Object New Parameter...

Operation: Insert

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

65. From the Field map options drop-down, select **Completely Parameterized**.



General | Field map options: **Completely Parameterized** | Parameter: | New Parameter...

Incoming Fields

Target

Target Fields

**Field Mapping**

66. To create a new parameter, click **New Parameter**.



General | Field map options: Completely Parameterized | Parameter: | **New Parameter...**

Incoming Fields

Target

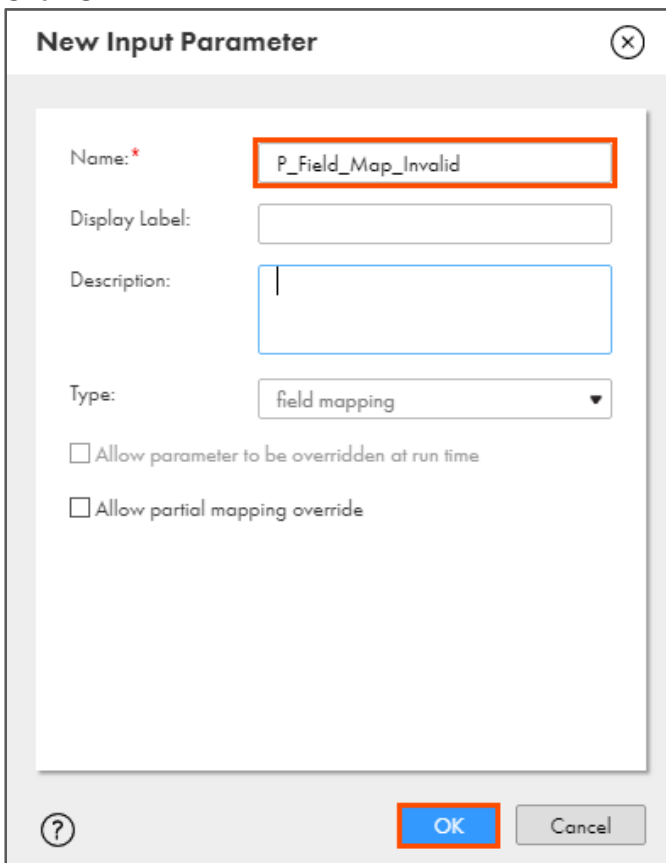
Target Fields

Field Mapping

**Note:** The New Input Parameter window appears.

67. Enter Name as **P\_Field\_Map\_Invalid**.

68. Click **OK**.



**New Input Parameter** (X)

Name: \* **P\_Field\_Map\_Invalid**

Display Label:

Description:

Type: field mapping

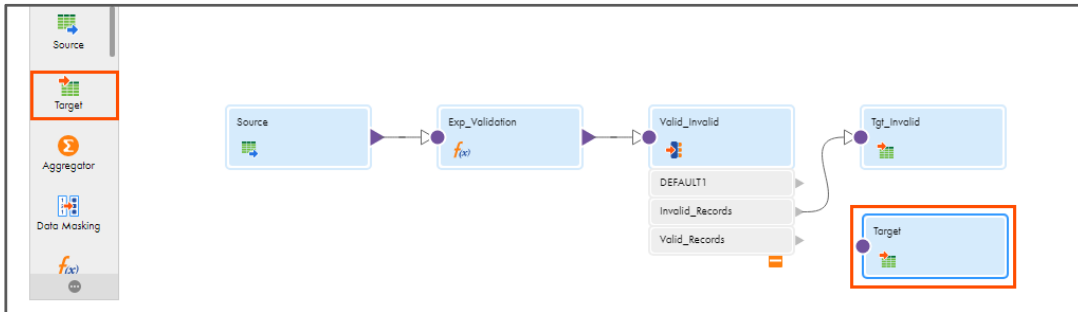
☐ Allow parameter to be overridden at run time

☐ Allow partial mapping override

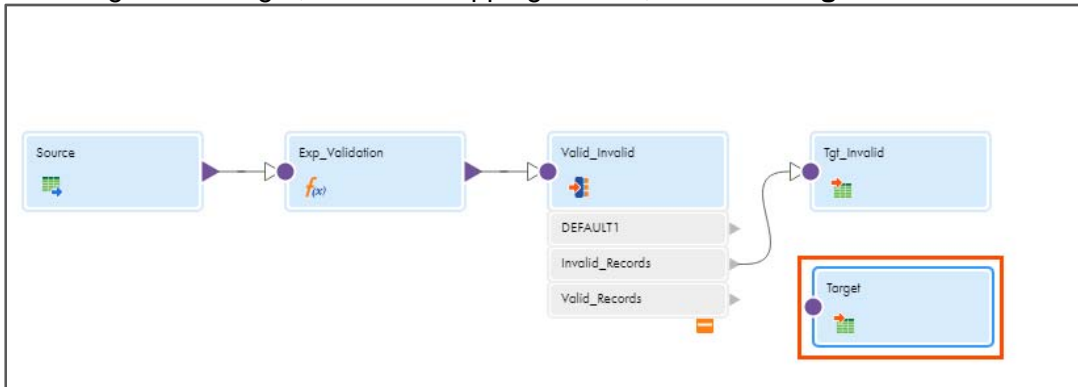
(?) **OK** Cancel

### Add Target Transformation:

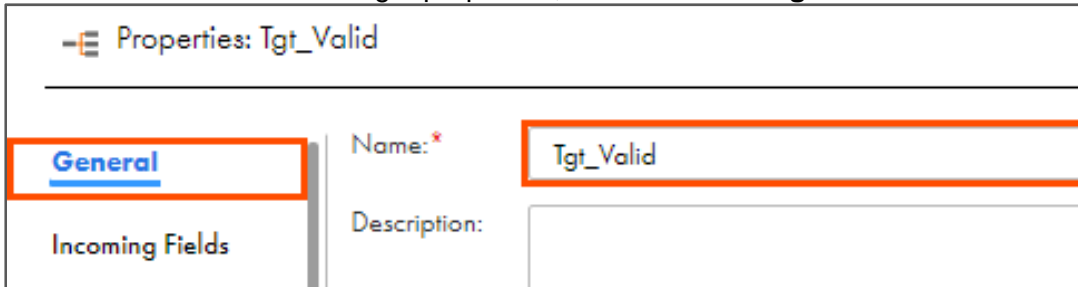
69. Drag and drop the **Target** transformation on to the mapping canvas.



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

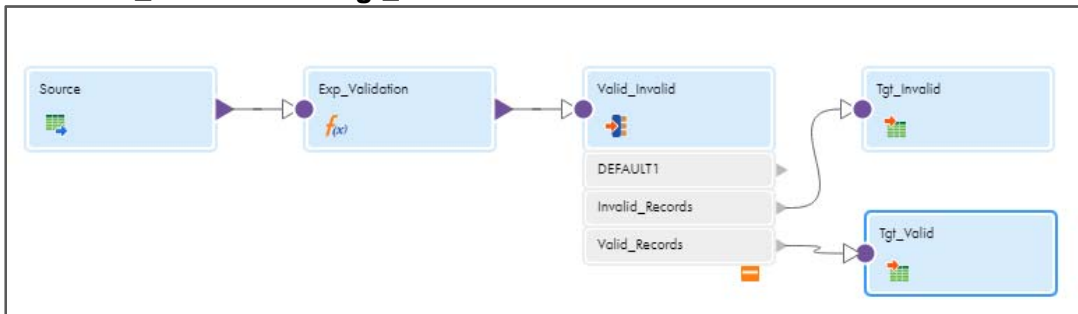


71. In the General section of Target properties, enter Name as **Tgt\_Valid**.

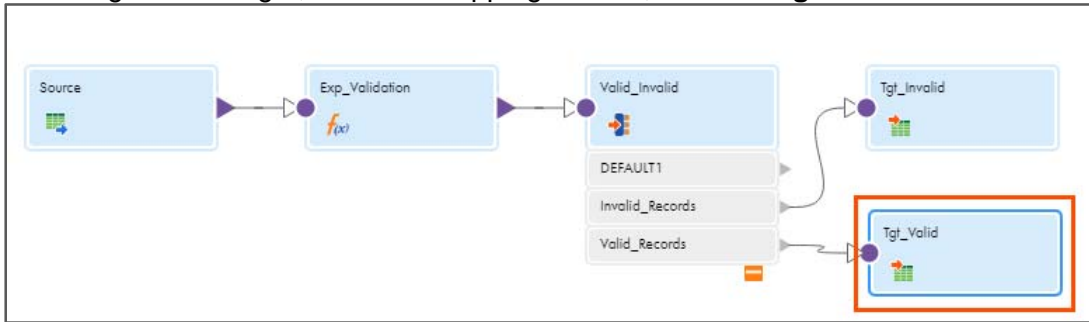


The image shows the 'Properties: Tgt\_Valid' dialog box. The 'General' tab is selected and highlighted with a red box. The 'Name' field is also highlighted with a red box and contains the text 'Tgt\_Valid'. The 'Description' field is empty. Below the 'General' tab, the 'Incoming Fields' section is visible.

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**.

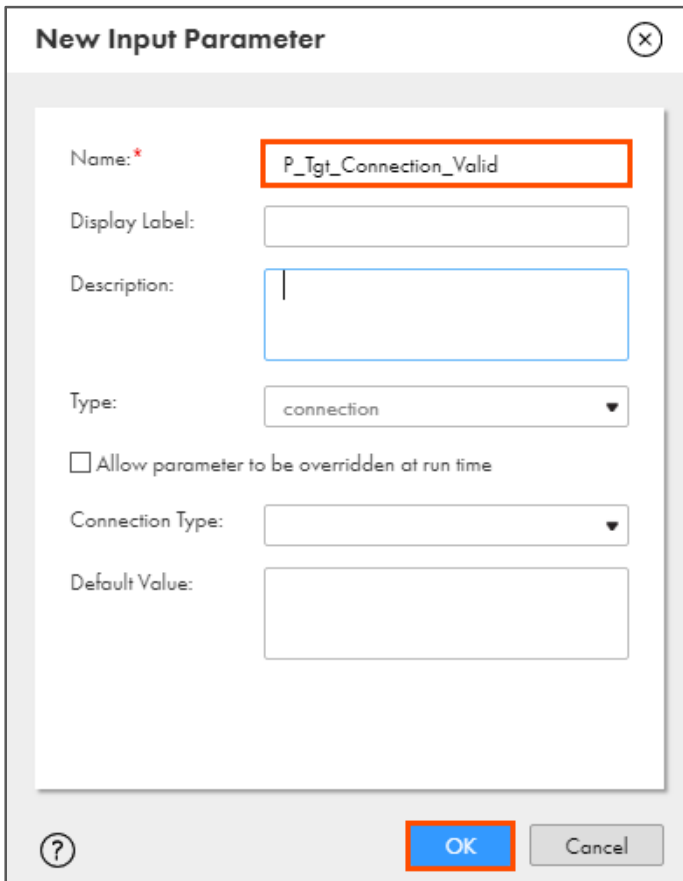


The screenshot shows the 'Properties' pane for a transformation. The 'General' tab is active, and the 'Target' sub-tab is selected and highlighted with a red box. In the 'Details' section, there are buttons for 'View...', 'New Connection...', and 'New Parameter...'. The 'New Parameter...' button is highlighted with a red box.

**Note:** The New Parameter window appears.

76. Enter Name as **P\_Tgt\_Connection\_Valid**.

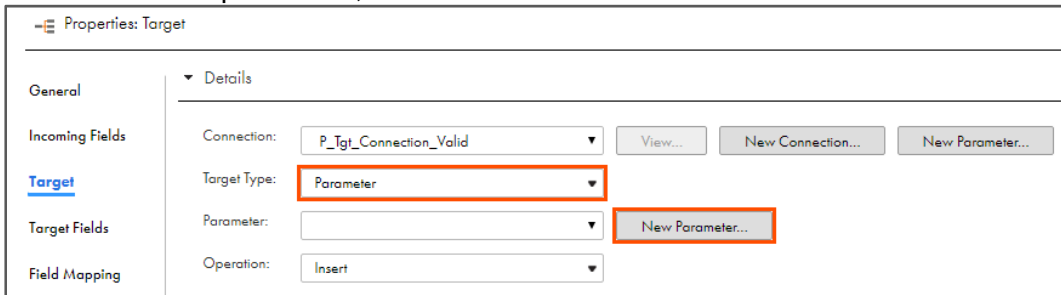
77. Click **OK**.



The screenshot shows the 'New Input Parameter' dialog box. The 'Name' field is populated with 'P\_Tgt\_Connection\_Valid' and is highlighted with a red box. Other fields include 'Display Label', 'Description', 'Type' (set to 'connection'), 'Allow parameter to be overridden at run time' (unchecked), 'Connection Type', and 'Default Value'. At the bottom, the 'OK' button is highlighted with a red box.

78. From the Target Type drop-down, select **Parameter**.

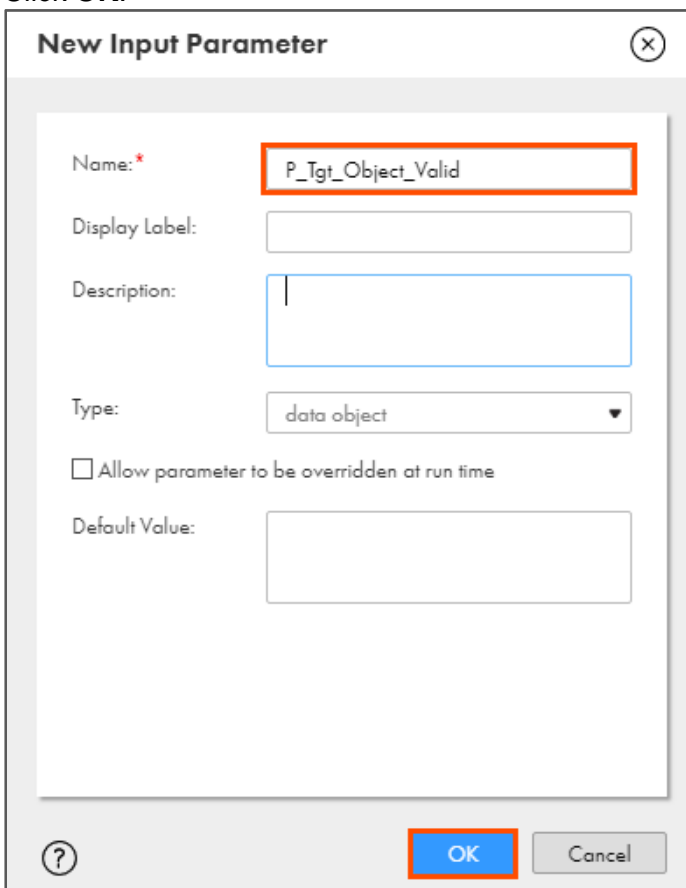
79. To create a new parameter, click **New Parameter**.



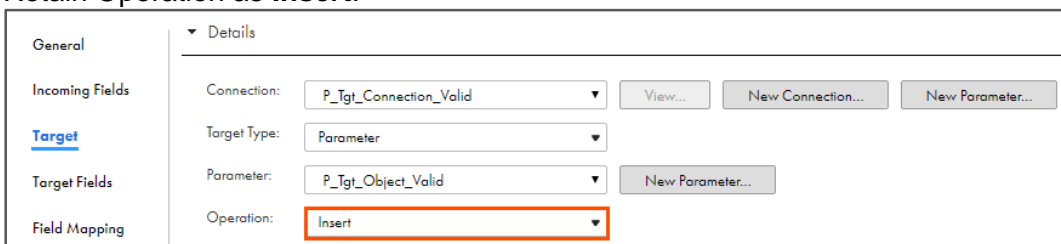
**Note:** The New Input Parameter window appears.

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**.



General | Field map options: **Completely Parameterized** | Parameter: | New Parameter...


Incoming Fields

Target

Target Fields

**Field Mapping**

85. To create a new parameter, click **New Parameter**.



General | Field map options: Completely Parameterized | Parameter: | **New Parameter...**

Incoming Fields

Target

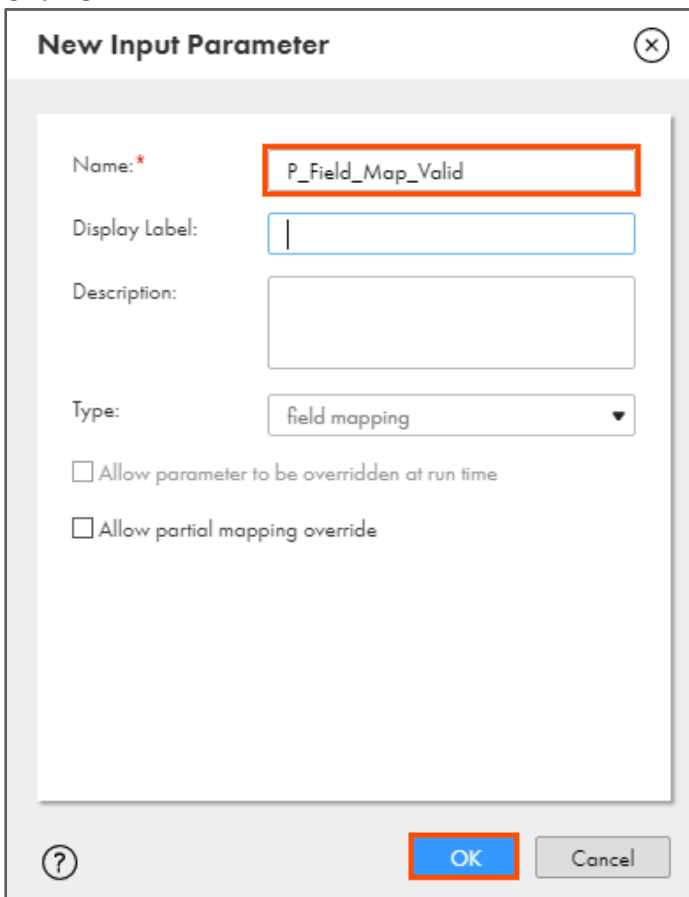
Target Fields

Field Mapping

**Note:** The New Input Parameter window appears.

86. Enter Name as **P\_Field\_Map\_Valid**.

87. Click **OK**.



**New Input Parameter** (X)

Name: \* **P\_Field\_Map\_Valid**

Display Label: |

Description:

Type: field mapping

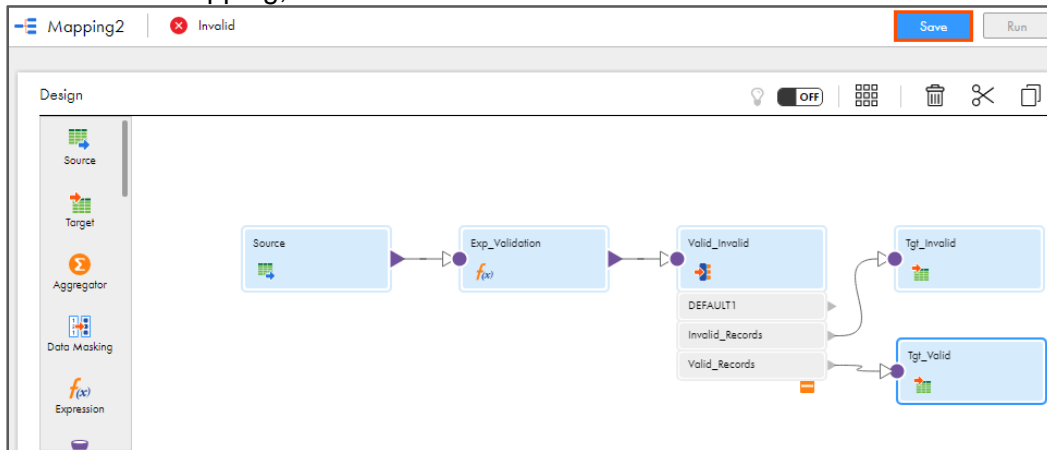
☐ Allow parameter to be overridden at run time

☐ Allow partial mapping override

(?) **OK** Cancel

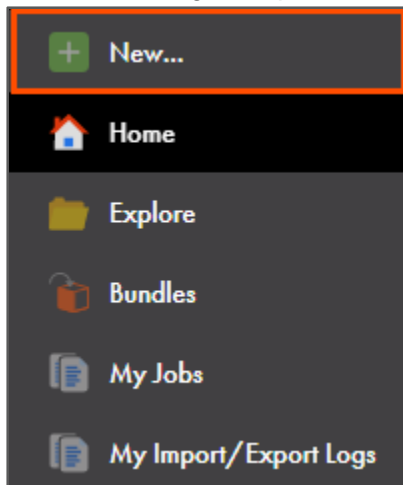


88. To save the mapping, click **Save**.

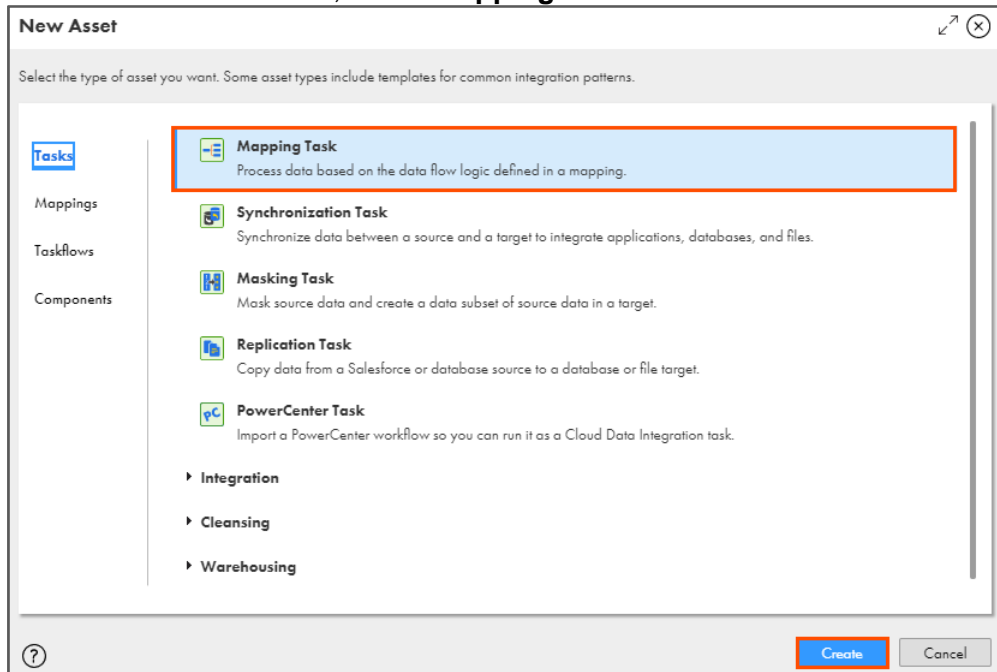


### Create Mapping Task:

89. From the Navigation pane, select **New**.



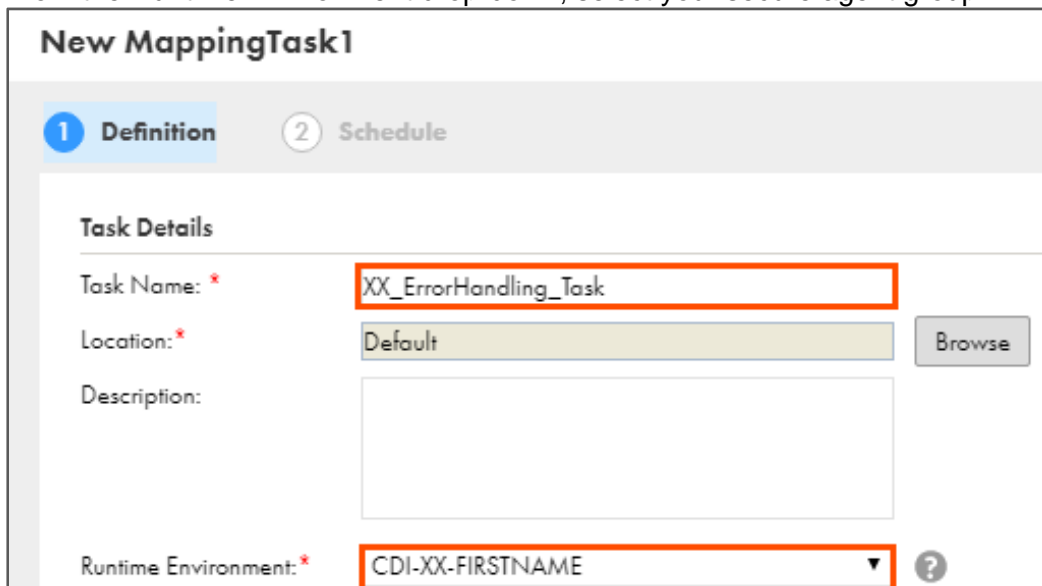
90. In the New Asset window, select **Mapping Task** and click **Create**.



The 'New Asset' window displays a list of asset types. The 'Mapping Task' is highlighted with a red box. Below it are 'Synchronization Task', 'Masking Task', 'Replication Task', and 'PowerCenter Task'. On the left, there are tabs for 'Tasks', 'Mappings', 'Taskflows', and 'Components'. At the bottom right, there are 'Create' and 'Cancel' buttons.

91. In the Task Name field, enter **XX\_ErrorHandling\_Task**.

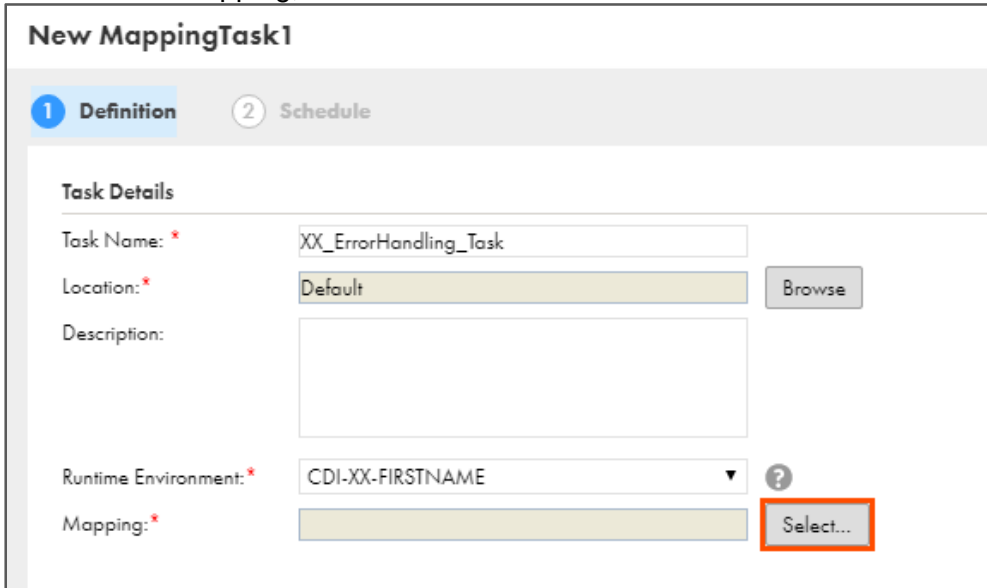
92. From the Runtime Environment drop-down, select your secure agent group.



The 'New MappingTask1' window has two tabs: 'Definition' and 'Schedule'. Under 'Task Details', the 'Task Name' field is set to 'XX\_ErrorHandling\_Task', the 'Location' is 'Default', and the 'Runtime Environment' is 'CDI-XX-FIRSTNAME'. A red box highlights the 'Task Name' and 'Runtime Environment' fields. There is a 'Browse' button next to the 'Location' field and a help icon next to the 'Runtime Environment' dropdown.

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

93. To select the mapping, click **Select**.



**New MappingTask1**

1 Definition 2 Schedule

**Task Details**

Task Name: \* XX\_ErrorHandling\_Task

Location: \* Default Browse

Description:

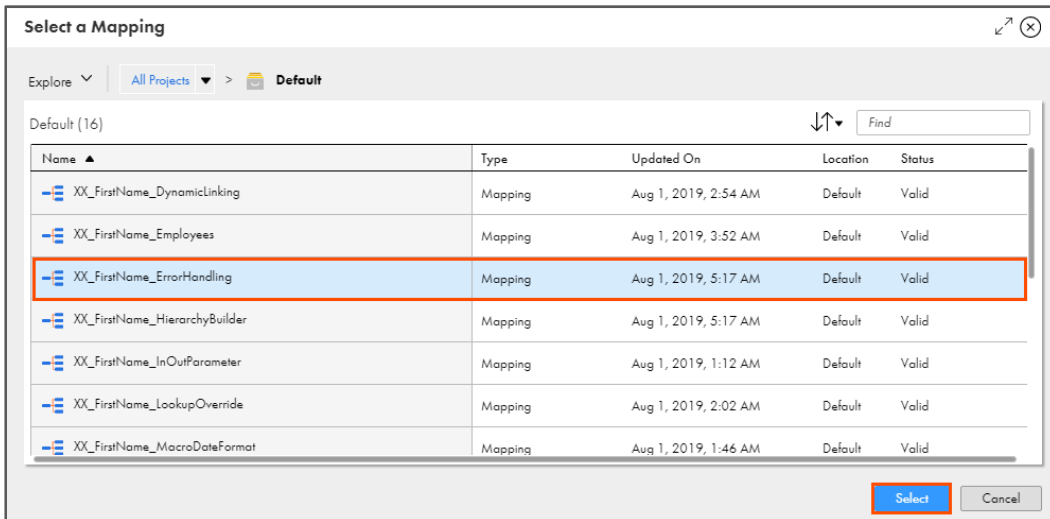
Runtime Environment: \* CDI-XX-FIRSTNAME ?

Mapping: \* Select...

**Note:** The Select a Mapping window appears.

94. From the list, select **XX\_FirstName\_ErrorHandling**.

95. Click **Select**.



**Select a Mapping**

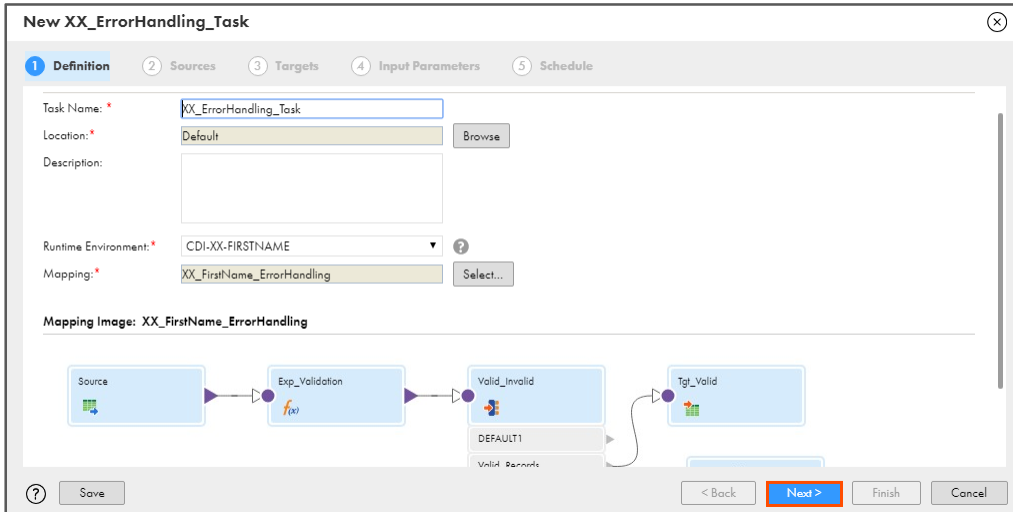
Explore All Projects Default

Default (16) Find

| 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  |

Select Cancel

96. Click **Next**.



**New XX\_ErrorHandling\_Task**

1 Definition 2 Sources 3 Targets 4 Input Parameters 5 Schedule

Task Name: \*

Location: \*

Description:

Runtime Environment: \*  ?

Mapping: \*  


Mapping Image: XX\_FirstName\_ErrorHandling

Diagram: Source → Exp\_Validation → Valid\_Invalid → Tgt\_Valid

Valid Reports

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**.



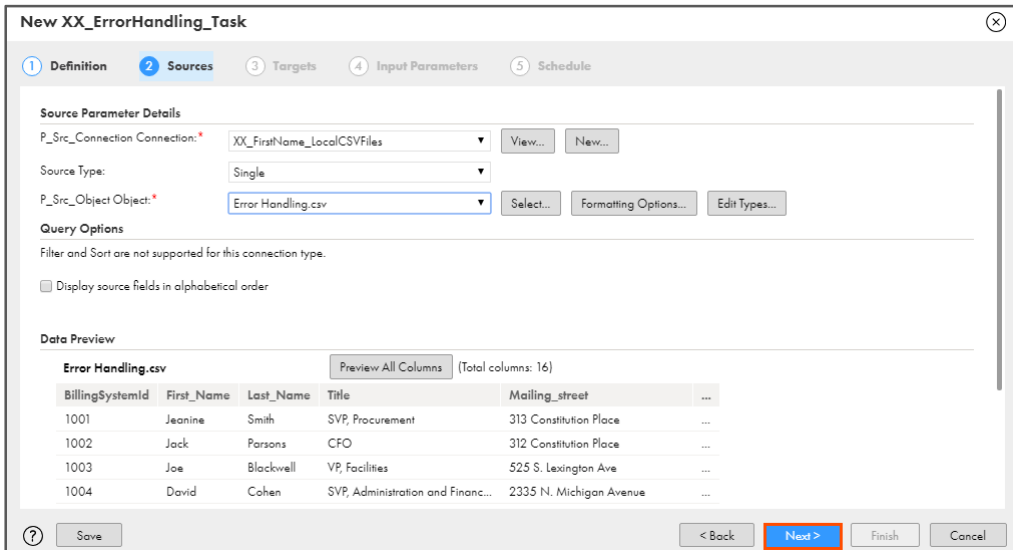
**Source Parameter Details**

P\_Src\_Connection Connection: \*   

Source Type:

P\_Src\_Object Object: \*

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: \*   

Source Type:

P\_Src\_Object Object: \*    

**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 <span>View...</span> <span>New...</span>        |
| P_Tgt_Invalid_Object Object: *         | Invalid_Data.csv <span>Select...</span> <span>Formatting Options...</span> |
| Operation: *                           | Insert                                                                     |

102. From the P\_Tgt\_Connection\_Valid Connection drop-down, select **XX\_FirstName\_LocalCSVFiles**.

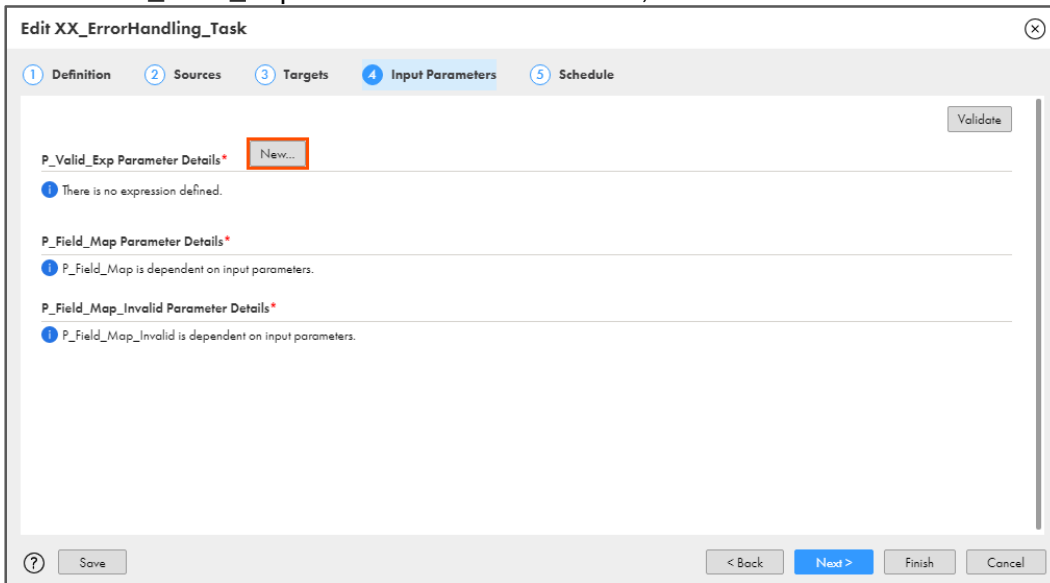
103. From the P\_Tgt\_Object\_Valid Object drop-down, select **Valid\_Data.csv**.

|                                      |                                                                          |
|--------------------------------------|--------------------------------------------------------------------------|
| P_Tgt_Connection_Valid Connection: * | XX_FirstName_LocalCSVFiles <span>View...</span> <span>New...</span>      |
| P_Tgt_Object_Valid Object: *         | Valid_Data.csv <span>Select...</span> <span>Formatting Options...</span> |
| Operation: *                         | Insert                                                                   |

104. Click **Next**.

| 1 Definition                                                         | 2 Sources | 3 Targets                                                                             | 4 Input Parameters | 5 Schedule |
|----------------------------------------------------------------------|-----------|---------------------------------------------------------------------------------------|--------------------|------------|
| <b>Target Parameter Details</b>                                      |           |                                                                                       |                    |            |
| P_Tgt_Connection_Invalid Connection: *                               |           | XX_FirstName_LocalCSVFiles <span>View...</span> <span>New...</span>                   |                    |            |
| P_Tgt_Invalid_Object Object: *                                       |           | Invalid_Data.csv <span>Select...</span> <span>Formatting Options...</span>            |                    |            |
| Operation: *                                                         |           | Insert                                                                                |                    |            |
| <input type="checkbox"/> Display target fields in alphabetical order |           |                                                                                       |                    |            |
| P_Tgt_Connection_Valid Connection: *                                 |           | XX_FirstName_LocalCSVFiles <span>View...</span> <span>New...</span>                   |                    |            |
| P_Tgt_Object_Valid Object: *                                         |           | Valid_Data.csv <span>Select...</span> <span>Formatting Options...</span>              |                    |            |
| Operation: *                                                         |           | Insert                                                                                |                    |            |
| <input type="checkbox"/> Display target fields in alphabetical order |           |                                                                                       |                    |            |
| <b>Data Preview</b>                                                  |           |                                                                                       |                    |            |
| <input checked="" type="radio"/> Invalid_Data.csv                    |           | <span>Preview All Columns</span> (Total columns: 15)                                  |                    |            |
| <input type="radio"/> Valid_Data.csv                                 |           |                                                                                       |                    |            |
| <span>?</span> <span>Save</span>                                     |           | <span>&lt; Back</span> <span>Next &gt;</span> <span>Finish</span> <span>Cancel</span> |                    |            |

105. From the P\_Valid\_Exp Parameter Details section, click **New**.



**Note:** The Field Expression window appears.

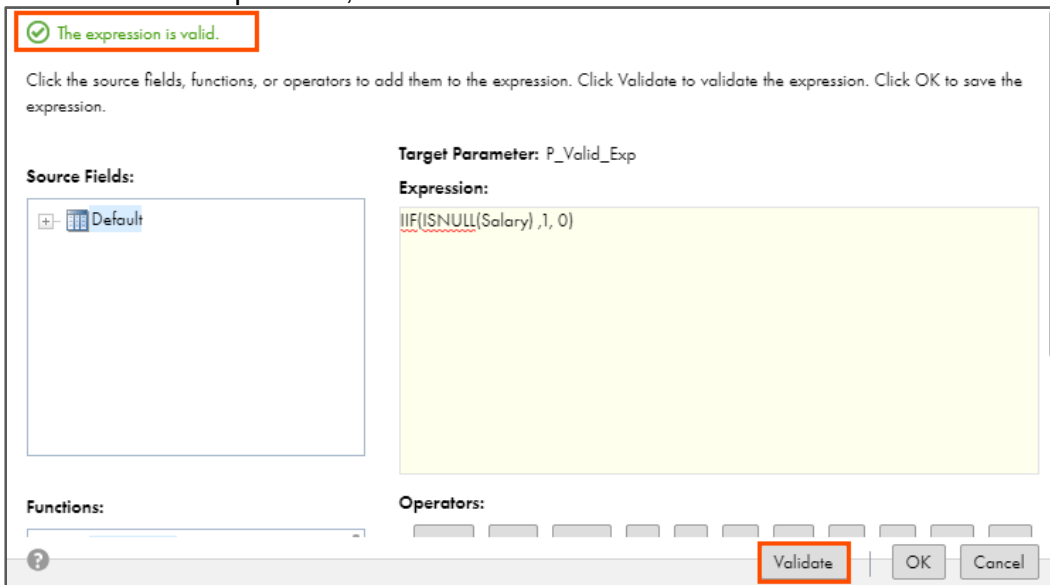
106. In the expression field, enter the following expression:

**IIF(ISNULL(Salary) ,1, 0)**

OR

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**.

✓ The expression is valid.

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.

**Source Fields:**

Default

**Target Parameter:** P\_Valid\_Exp

**Expression:**

```
IIF(ISNULL(Salary),1,0)
```

**Functions:**

**Operators:**

Validate OK Cancel

109. To validate the mapping, click **Validate**.

1 Definition 2 Sources 3 Targets 4 Input Parameters 5 Schedule

✓ The template and parameters are valid.

Validate

P\_Valid\_Exp Parameter Details \* New...

**Expression**

IIF(ISNULL(Salary),1,0)

Delete

P\_Field\_Map\_Invalid Parameter Details \*

**Incoming Fields**

Object: Default Find

| Status | Name            |
|--------|-----------------|
| ✓      | BillingSystemId |
| ✓      | First_Name      |
| ✓      | Last_Name       |
| ✓      | Title           |
| ✓      | Mailing_street  |

**Target Fields**

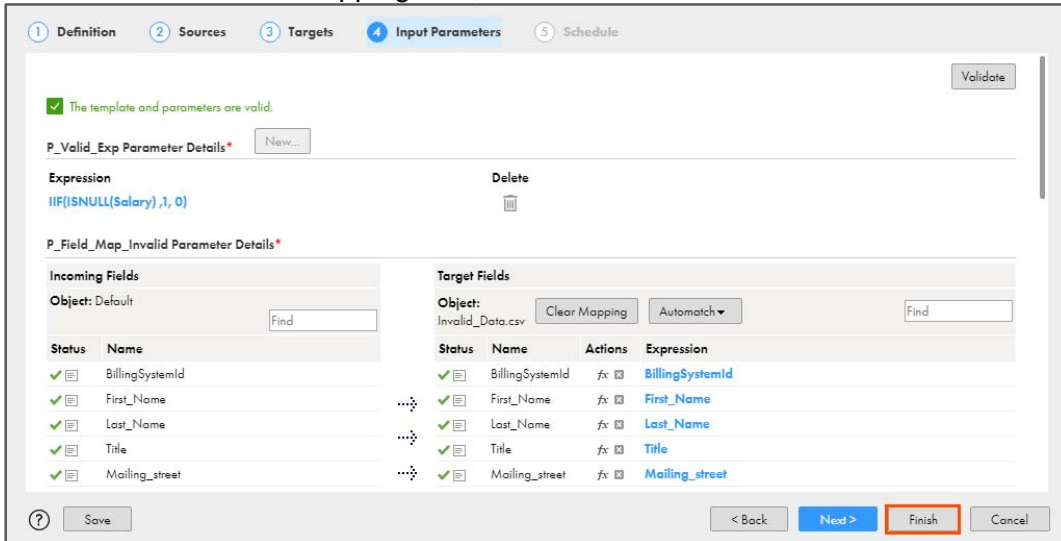
Object: Invalid\_Data.csv Clear Mapping Automatch Find

| 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  |

Save < Back Next > Finish Cancel

**Note:** The template and parameters are valid message appears.

110.To save and close the mapping task, click **Finish**.



1 Definition 2 Sources 3 Targets 4 **Input Parameters** 5 Schedule

Validate

✓ The template and parameters are valid.

P\_Valid\_Exp Parameter Details\* New...

Expression: IIF(ISNULL(Salary),1,0) Delete

P\_Field\_Map\_Invalid Parameter Details\*

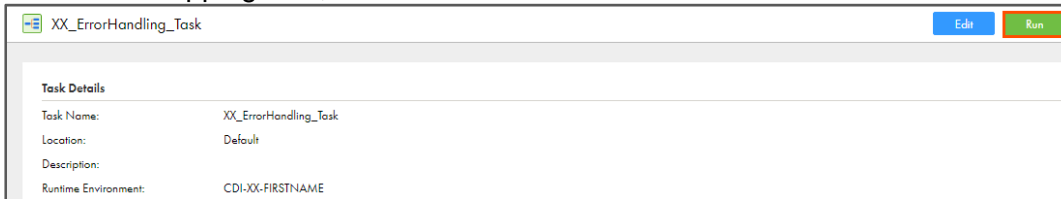
Incoming Fields: Object: Default Find

Target Fields: Object: Invalid\_Data.csv Clear Mapping Automatch Find

| 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  |

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

111.To run the mapping task, click **Run**.



XX\_ErrorHandling\_Task Edit Run

Task Details

Task Name: XX\_ErrorHandling\_Task

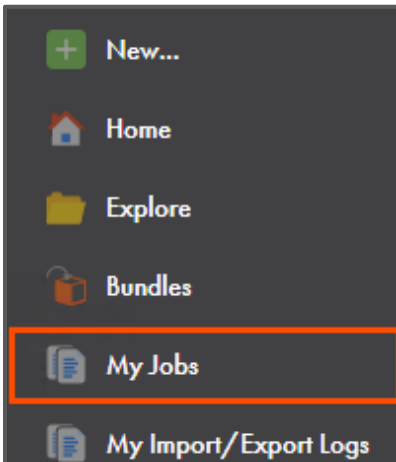
Location: Default

Description:

Runtime Environment: CDI-XX-FIRSTNAME

## Monitor Status:

112.To monitor the mapping status, from the Navigation pane, click **My Jobs**.



+ New...

Home

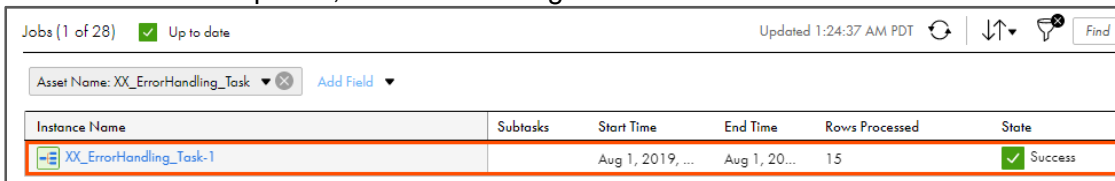
Explore

Bundles

**My Jobs**

My Import/Export Logs

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




Jobs (1 of 28) ✓ Up to date Updated 1:24:37 AM PDT

Asset Name: XX\_ErrorHandling\_Task Add Field

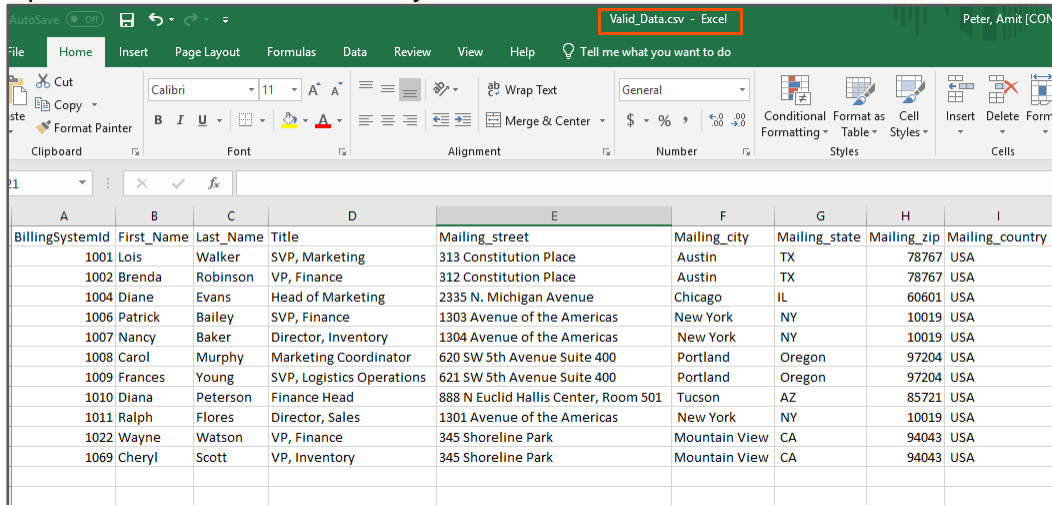
| Instance Name           | Subtasks | Start Time       | End Time     | Rows Processed | State     |
|-------------------------|----------|------------------|--------------|----------------|-----------|
| XX_ErrorHandling_Task-1 |          | Aug 1, 2019, ... | Aug 1, 20... | 15             | ✓ Success |



**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:\IICS LabFiles**.

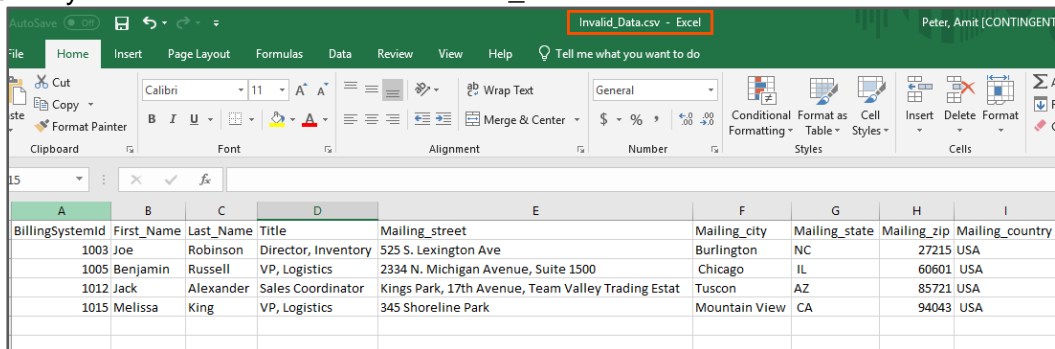
115. Open **Valid\_Data.csv** and verify that 11 rows are written in the file.



Valid\_Data.csv - Excel

| 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**.



Invalid\_Data.csv - Excel

| 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                               | Burlington    | NC            | 27215       | USA             |
| 1005            | Benjamin   | Russell   | VP, Logistics       | 2334 N. Michigan Avenue, Suite 1500                | Chicago       | IL            | 60601       | USA             |
| 1012            | Jack       | Alexander | Sales Coordinator   | Kings Park, 17th Avenue, Team Valley Trading Estat | Tuscon        | AZ            | 85721       | USA             |
| 1015            | Melissa    | King      | VP, Logistics       | 345 Shoreline Park                                 | Mountain View | CA            | 94043       | USA             |

*This concludes the lab.*



## Module 17: Performance Tuning

### Lab 17-1: Using Partitions in a Mapping

#### Overview:

In IICS, partitions divide data into multiple partitions and process those partitions concurrently.

In this lab, you will use partitions in a mapping.

#### Objective:

- Create multiple partitions to process data concurrently

#### Duration:

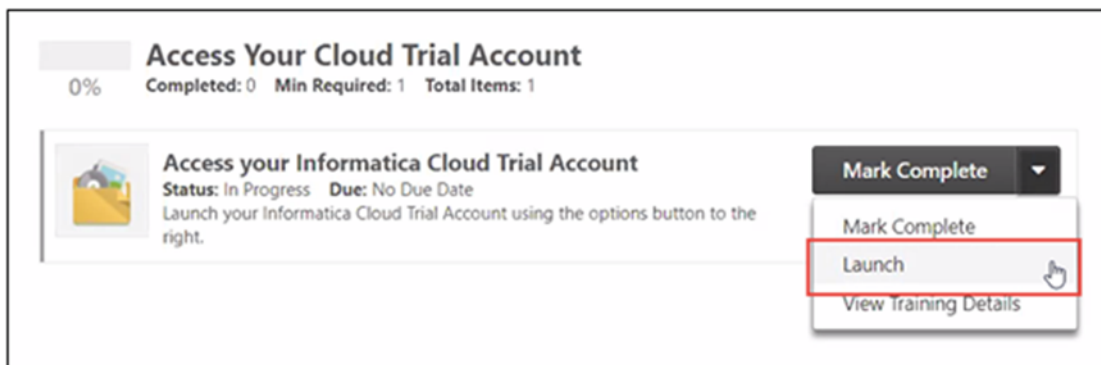
15 minutes

---

#### Tasks:

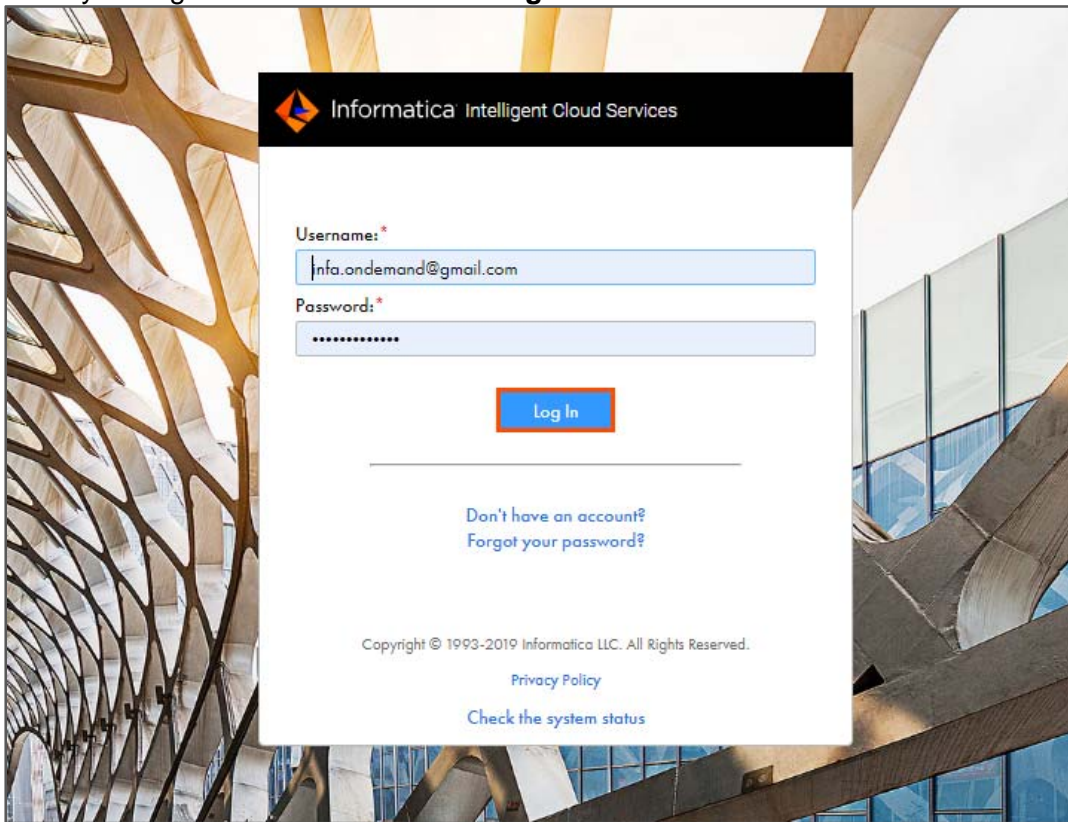
##### Create Mapping:

1. Access your cloud trial account by clicking **Launch** in your option Menu. If the option menu is labeled anything other than **Launch**, click the down arrow to the right and click **Launch**.



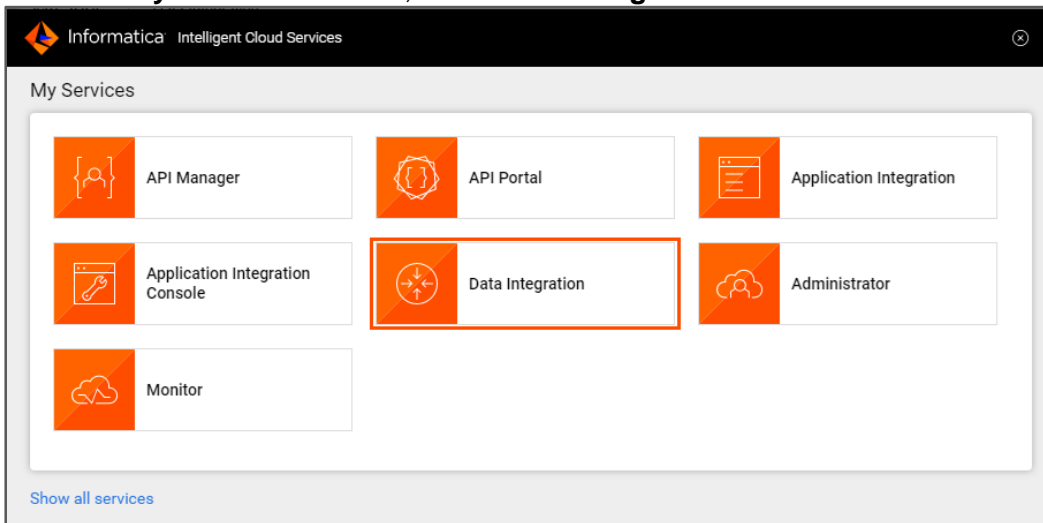
**Note:** Follow this step, if you have navigated away from the login page.

2. Enter your login credentials and click **Log In**.

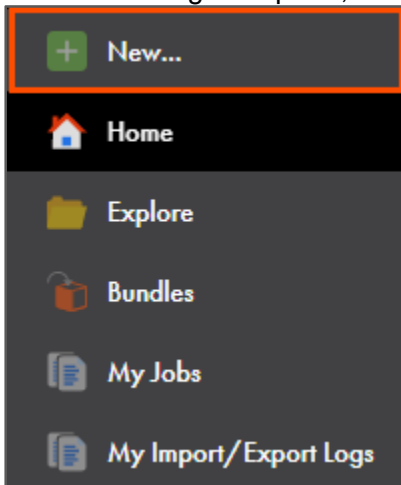


The login page for Informatica Intelligent Cloud Services is displayed. It features a black header with the Informatica logo and the text "Informatica Intelligent Cloud Services". Below the header, there are two input fields: "Username:" with the value "info.ondemand@gmail.com" and "Password:" with a masked password "\*\*\*\*\*". A blue "Log In" button is positioned below the password field. Below the button, there are two links: "Don't have an account?" and "Forgot your password?". At the bottom, there is a copyright notice "Copyright © 1993-2019 Informatica LLC. All Rights Reserved." and two links: "Privacy Policy" and "Check the system status".

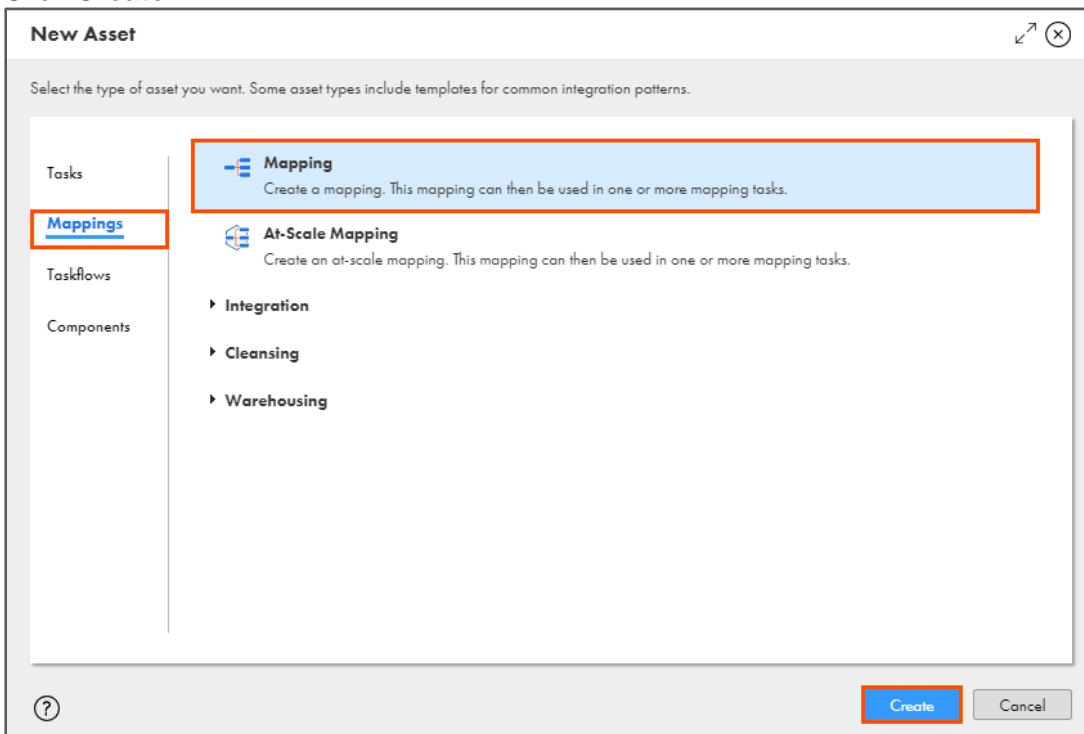
3. From the **My Services** window, select **Data Integration**.



4. From the Navigation pane, select **New**.

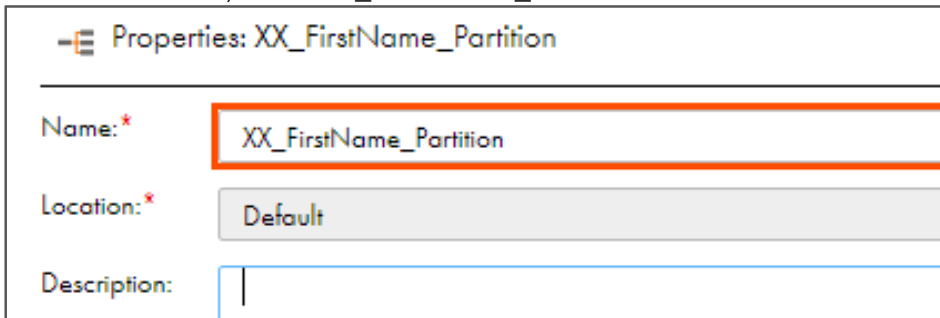


5. From the New Asset window, click the **Mappings** tab, and select **Mapping**.
6. Click **Create**.



**Note:** The Mapping page appears.

7. In the Name field, enter **XX\_FirstName\_Partition**.



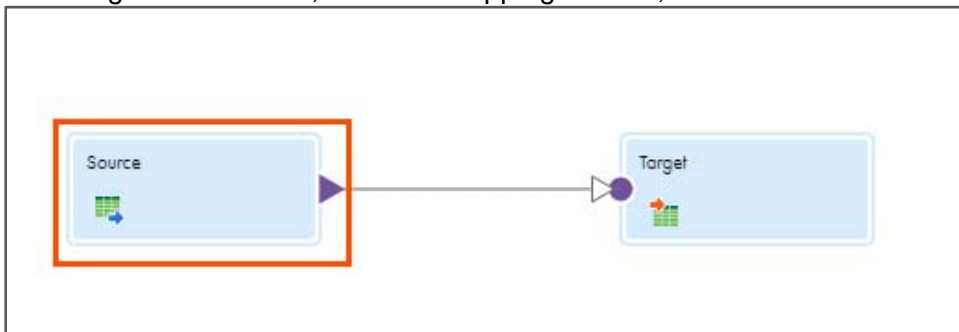
Properties: XX\_FirstName\_Partition

Name: \* XX\_FirstName\_Partition

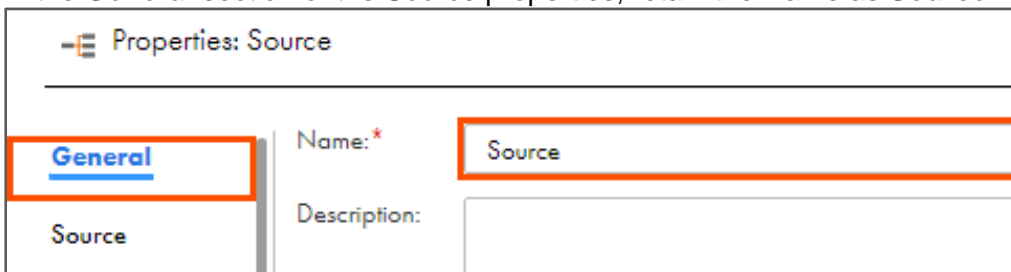
Location: \* Default

Description:

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**.



Properties: Source

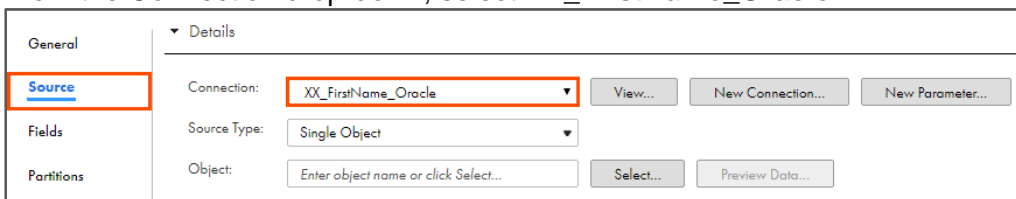
General

Name: \* Source

Description:

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

11. From the Connection drop-down, select **XX\_FirstName\_Oracle**.



General

Source

Fields

Partitions

Details

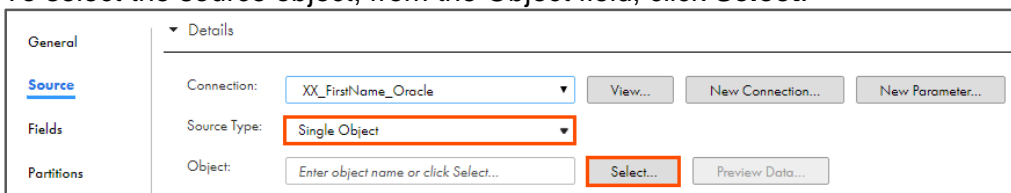
Connection: XX\_FirstName\_Oracle View... New Connection... New Parameter...

Source Type: Single Object

Object: Enter object name or click Select... Select... Preview Data...

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

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



General

Source

Fields

Partitions

Details

Connection: XX\_FirstName\_Oracle View... New Connection... New Parameter...

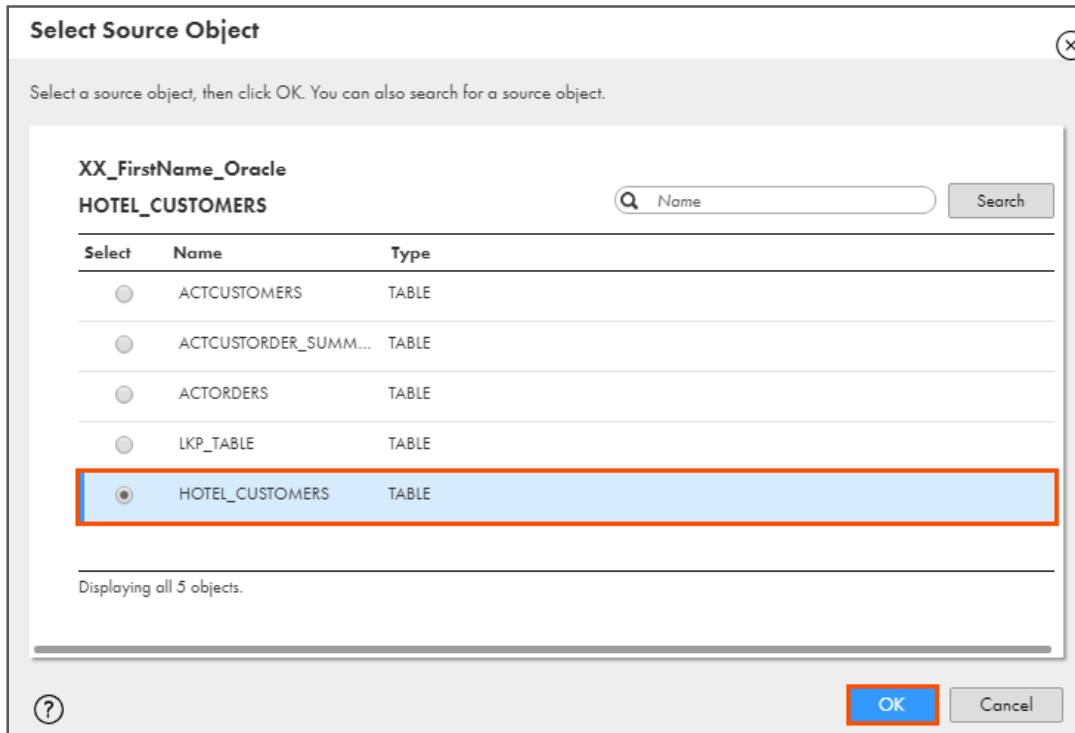
Source Type: Single Object

Object: Enter object name or click Select... Select... Preview Data...

**Note:** The Select Source Object window appears.

14. From the list, select **HOTEL\_CUSTOMERS**.

15. Click **OK**.



**Select Source Object**

Select a source object, then click OK. You can also search for a source object.

**XX\_FirstName\_Oracle**

**HOTEL\_CUSTOMERS**

Q Name Search


| Select                           | Name                 | Type  |
|----------------------------------|----------------------|-------|
| <input type="radio"/>            | ACTCUSTOMERS         | TABLE |
| <input type="radio"/>            | ACTCUSTORDER_SUMM... | TABLE |
| <input type="radio"/>            | ACTORDERS            | TABLE |
| <input type="radio"/>            | LKP_TABLE            | TABLE |
| <input checked="" type="radio"/> | HOTEL_CUSTOMERS      | TABLE |

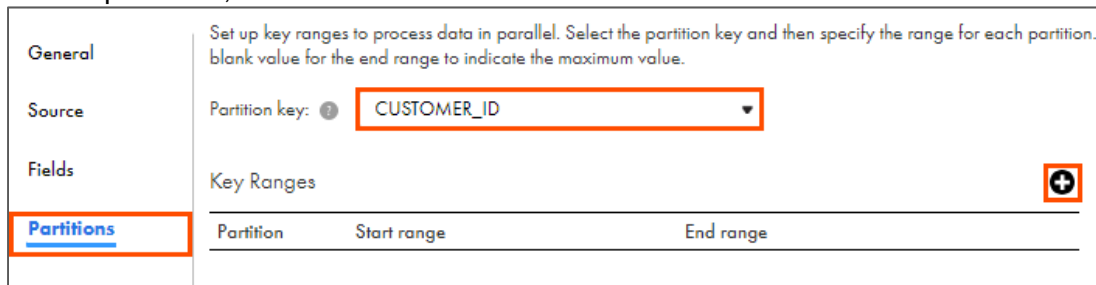
Displaying all 5 objects.

OK Cancel

16. From the properties pane, click **Partitions**.

17. From the Partition Key drop-down, select **CUSTOMER\_ID**.


18. To add partitions, click .




**General**

Set up key ranges to process data in parallel. Select the partition key and then specify the range for each partition. blank value for the end range to indicate the maximum value.

**Source**

Partition key:  CUSTOMER\_ID

**Fields**

Key Ranges 

**Partitions**

| Partition | Start range | End range |
|-----------|-------------|-----------|
|           |             |           |

19. Add Partitions, as shown in the table below:

| Partition | Start Range | End Range |
|-----------|-------------|-----------|
| #1        | 1           | 300       |
| #2        | 301         | 600       |
| #3        | 601         |           |

**Note:** For the last partition, you must leave the end value blank for the maximum value.

**General**

Set up key ranges to process data in parallel. Select the partition key and then specify the range for each partition. a blank value for the end range to indicate the maximum value.

Source Partition key:

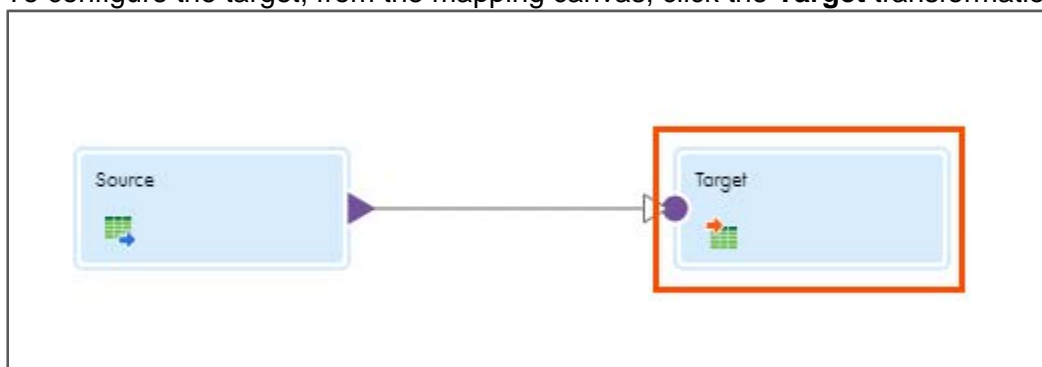
Fields

**Partitions**

Key Ranges +

| Partition | Start range | End range |
|-----------|-------------|-----------|
| #1        | 1           | 300       |
| #2        | 301         | 600       |
| #3        | 601         |           |

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



21. In the **General** section of Target properties, retain the Name as **Target**.

**Properties: Target**

**General**

Name:

Description:

Incoming Fields

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

23. From the Connection drop-down, select **XX\_FirstName\_LocalCSVFiles**.

**General**

Incoming Fields

**Target**

Target Fields

Field Mapping

**Details**

Connection:  View... New Connection... New Parameter...

Target Type:

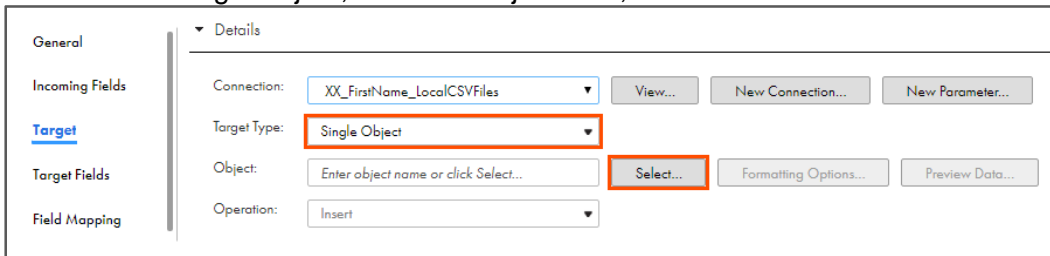
Object:  Select... Formatting Options... Preview Data...

Operation:

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



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

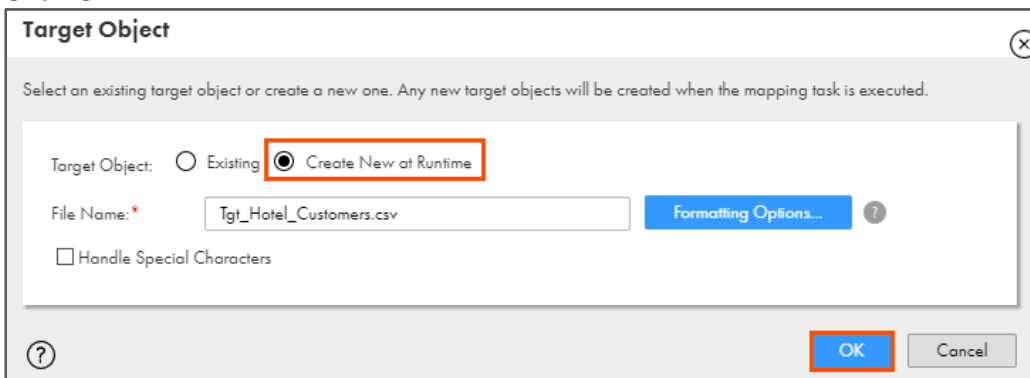


**Note:** The Target Object window appears.

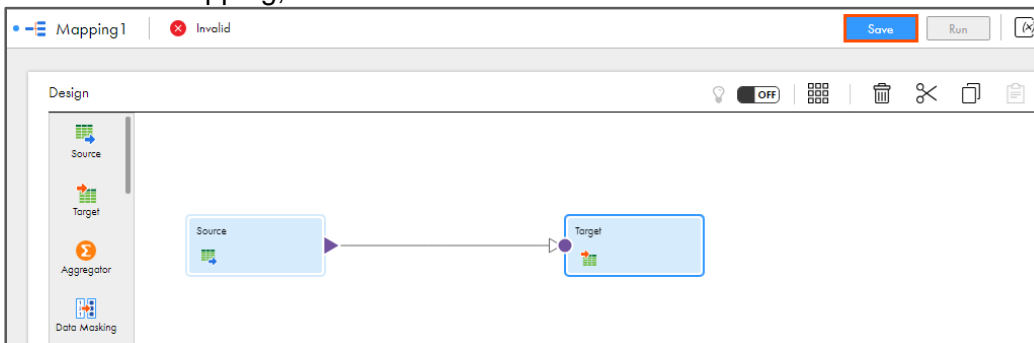
26. On the Target Object window, select **Create New at Runtime**.

27. Enter **Tgt\_Hotel\_Customers.csv** as File Name.

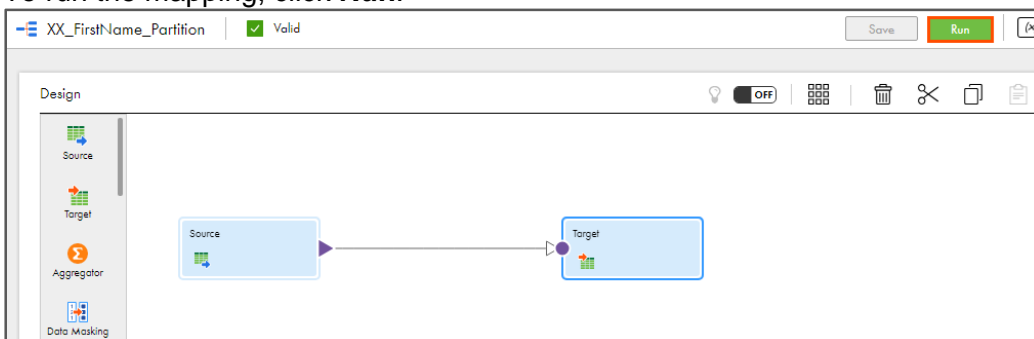
28. Click **OK**.



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



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

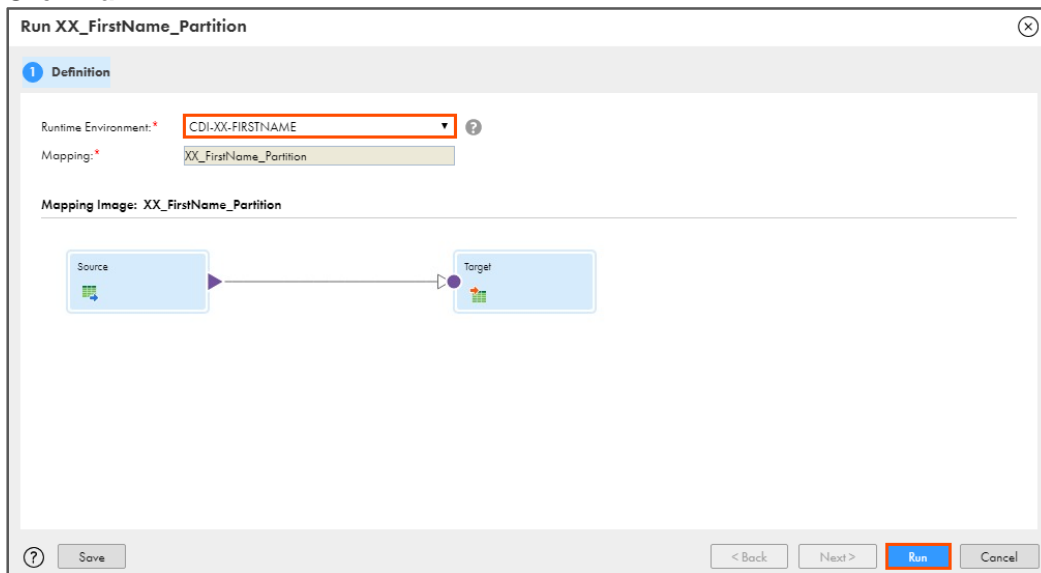


**Note:** The Run mapping window appears.

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

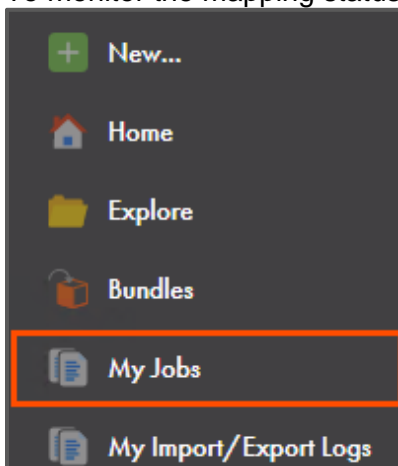
**Note:** The Runtime Environment name will be in CDI-XX-FIRSTNAME format.

### 32. Click **Run**.







### Monitor Status:

### 33. To monitor the mapping status, from the Navigation pane, click **My Jobs**.



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

| Jobs (1 of 28)                     |          |                  |              |                |         | Updated 1:47:51 AM PDT |  |  |  | Find |
|------------------------------------|----------|------------------|--------------|----------------|---------|------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|------|
| Asset Name: XX_FirstName_Partition |          |                  |              |                |         | Add Field              |                                                                                       |                                                                                       |                                                                                       |      |
| Instance Name                      | Subtasks | Start Time       | End Time     | Rows Processed | State   |                        |                                                                                       |                                                                                       |                                                                                       |      |
| XX_FirstName_Partition-1           |          | Aug 1, 2019, ... | Aug 1, 20... | 964            | Success |                        |                                                                                       |                                                                                       |                                                                                       |      |

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

### 35. To view job details, click on the Instance Name (**XX\_FirstName\_Partition-1**).

36. Verify the number of success and error rows processed in each partition.









XX\_FirstName\_Partition-1

Duration:29 seconds

Runtime Environment:CDI-XX-FIRSTNAME

Secure Agent:CDI-XX-FIRSTNAME

Individual Source/Target Results

| Name                                                                                                        | Success Rows | Error Rows |
|-------------------------------------------------------------------------------------------------------------|--------------|------------|
|  Source                    | 964          | 0          |
|  Partition #1              | 299          | 0          |
|  Partition #2              | 299          | 0          |
|  Partition #3              | 366          | 0          |
|  Tgt_Hotel_Customers_csv | 964          | 0          |
|  Partition #1            | 299          | 0          |
|  Partition #2            | 299          | 0          |
|  Partition #3            | 366          | 0          |

---

*This concludes the lab.*



## Module 17: Performance Tuning

### Lab 17-2: Using Pushdown Optimization in a Mapping Task

#### Overview:

In IICS, you can configure pushdown optimization to push the transformation logic to the source or target database system. Pushdown optimization improves mapping performance.

In this lab, you will create a mapping configuration task with full pushdown optimization enabled.

#### Objective:

- Create a mapping with same source and target connections
- Create a mapping task with full pushdown optimization enabled
- Use a database query to verify that the target is populated

#### Duration:

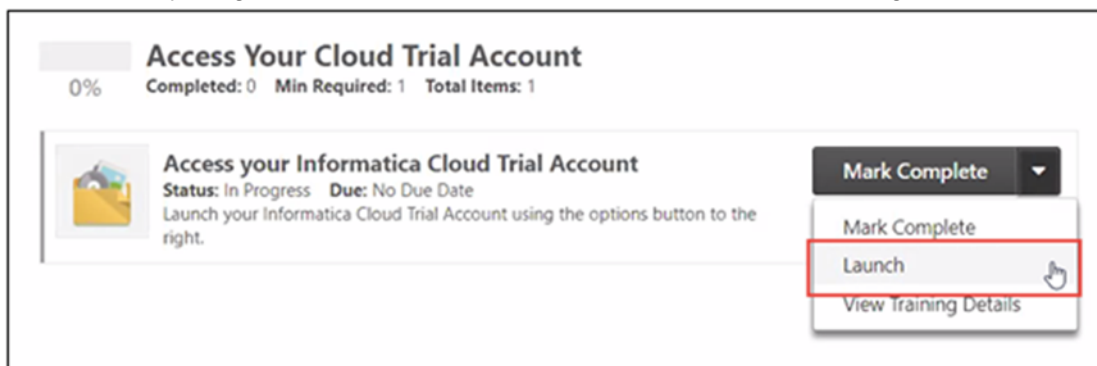
30 minutes

---

#### Tasks:

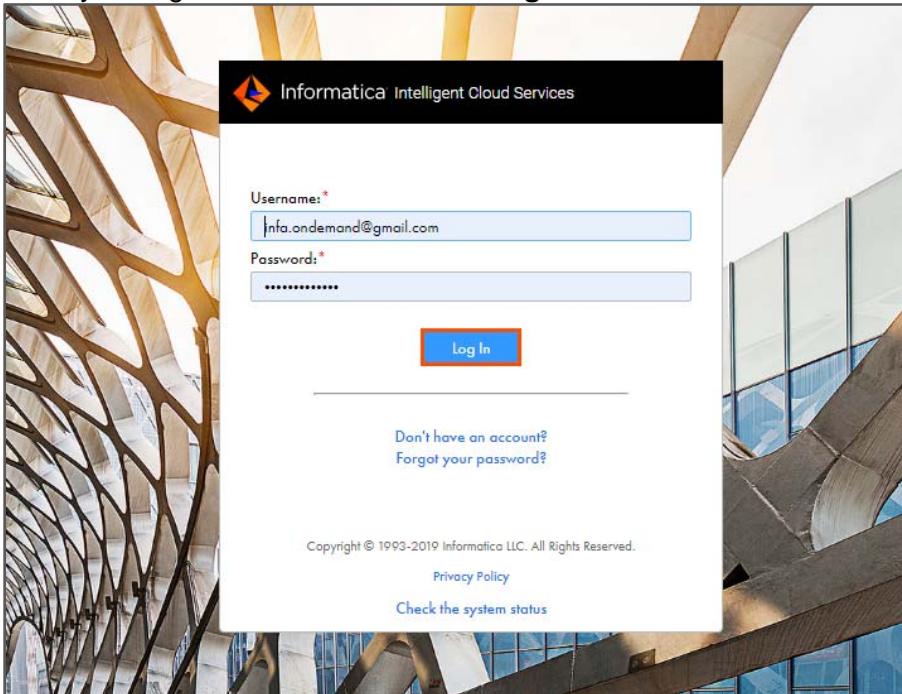
##### Create Mapping:

1. Access your cloud trial account by clicking **Launch** in your option Menu. If the option menu is labeled anything other than **Launch**, click the down arrow to the right and click **Launch**.

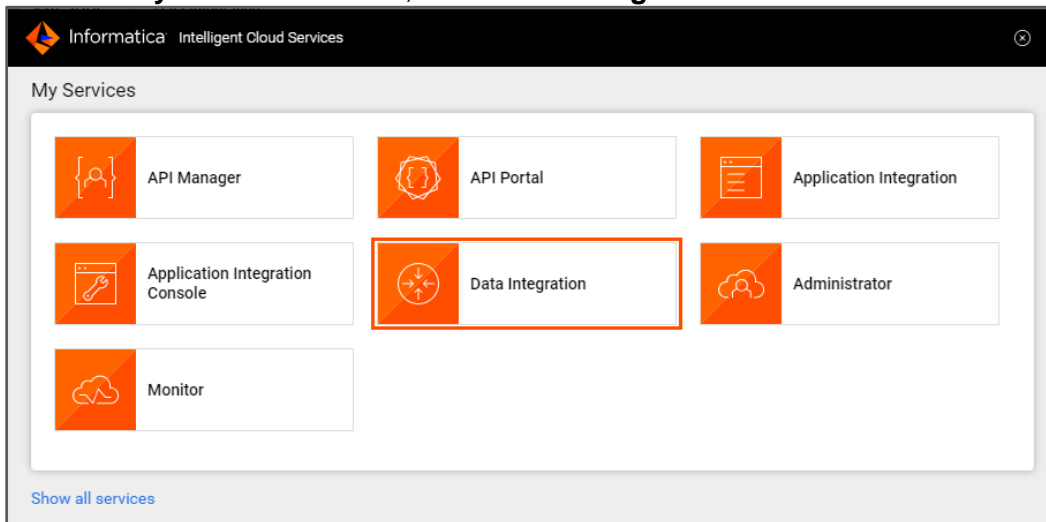


**Note:** Follow this step, if you have navigated away from the login page.

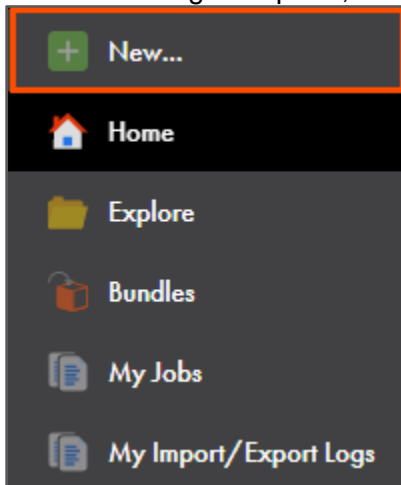
2. Enter your login credentials and click **Log In**.

The image shows the login page for Informatica Intelligent Cloud Services. The page has a black header with the Informatica logo and the text "Informatica Intelligent Cloud Services". Below the header is a white login form. The form contains two input fields: "Username:" with the value "info.ondemand@gmail.com" and "Password:" with a masked password "\*\*\*\*\*". Below the password field is a blue "Log In" button. Underneath the button are two links: "Don't have an account?" and "Forgot your password?". At the bottom of the form, there is a copyright notice "Copyright © 1993-2019 Informatica LLC. All Rights Reserved.", a link to "Privacy Policy", and a link to "Check the system status". The background of the page is a large, abstract image of a modern building's interior structure with a complex, branching, tree-like pattern.

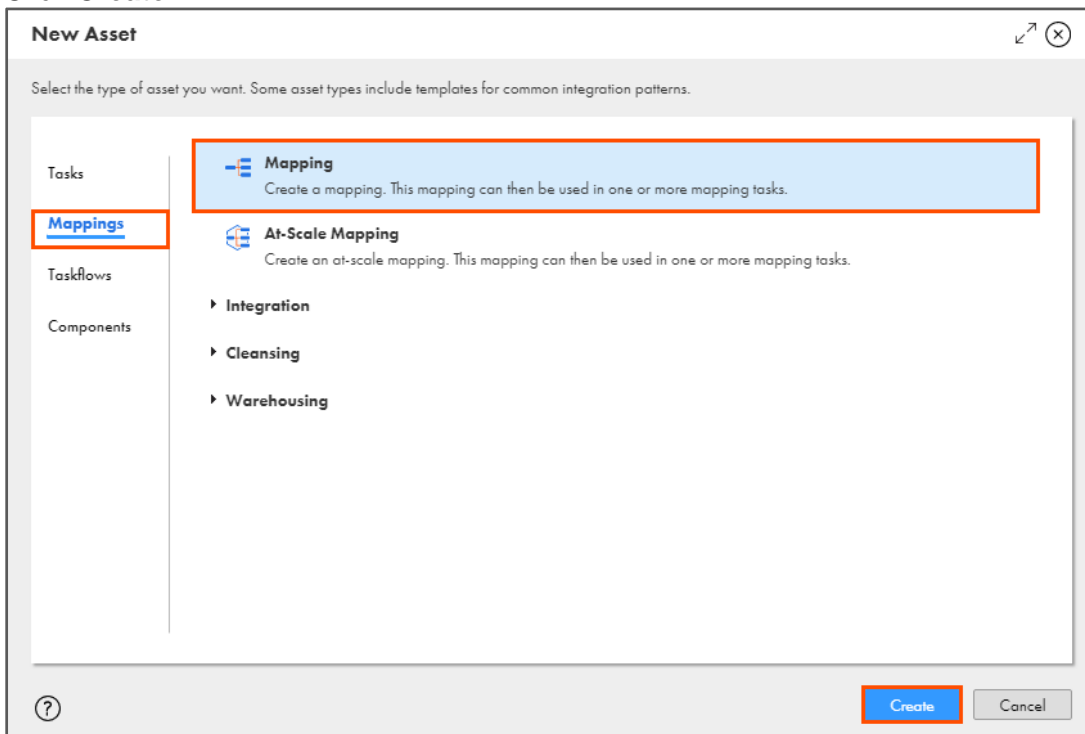
3. From the **My Services** window, select **Data Integration**.



4. From the Navigation pane, select **New**.

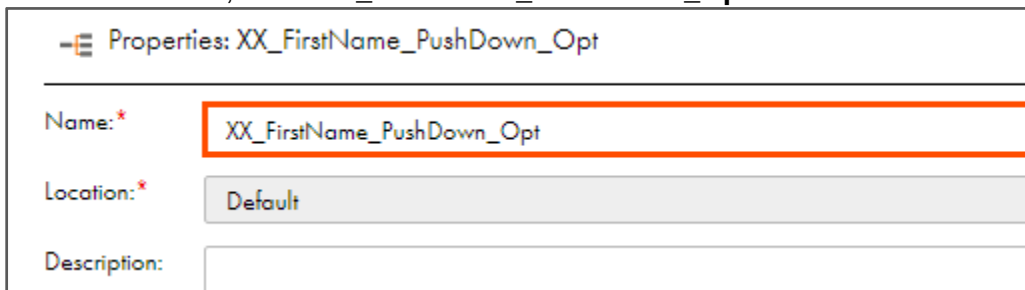


5. From the New Asset window, click the **Mappings** tab, and select **Mapping**.
6. Click **Create**.



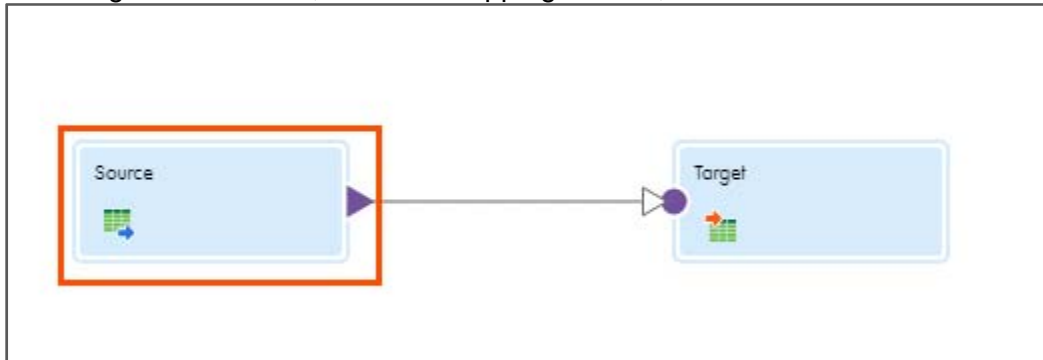
**Note:** The Mapping page appears.

7. In the Name field, enter **XX\_FirstName\_PushDown\_Opt**.

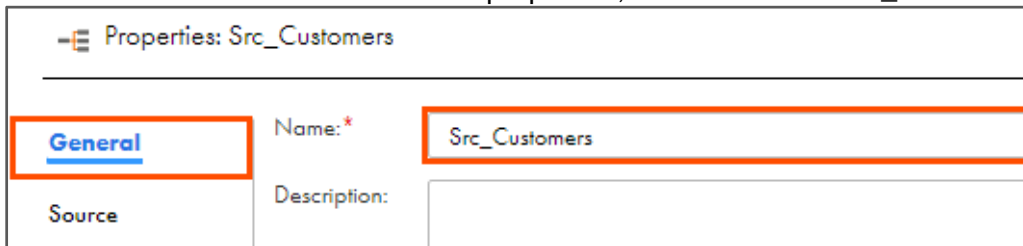


The image shows a form titled 'Properties: XX\_FirstName\_PushDown\_Opt'. It has three fields: 'Name:' with a red asterisk, 'Location:' with a red asterisk, and 'Description:'. The 'Name' field is filled with 'XX\_FirstName\_PushDown\_Opt' and is highlighted with a red border. The 'Location' field is set to 'Default'. The 'Description' field is empty.

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



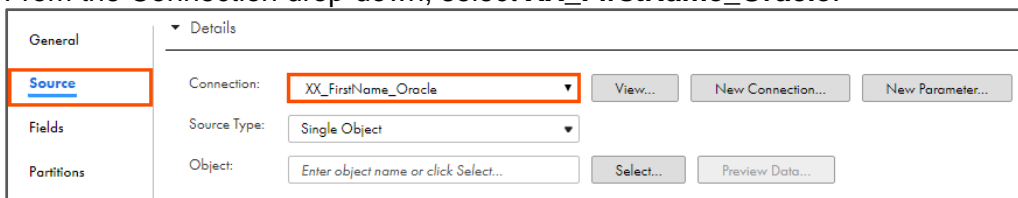
9. In the **General** section of the Source properties, enter Name as **Src\_Customers**.



The screenshot shows the 'Properties: Src\_Customers' dialog box. The 'General' tab is selected and highlighted with a red box. The 'Name' field is set to 'Src\_Customers' and is also highlighted with a red box. The 'Description' field is empty.

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

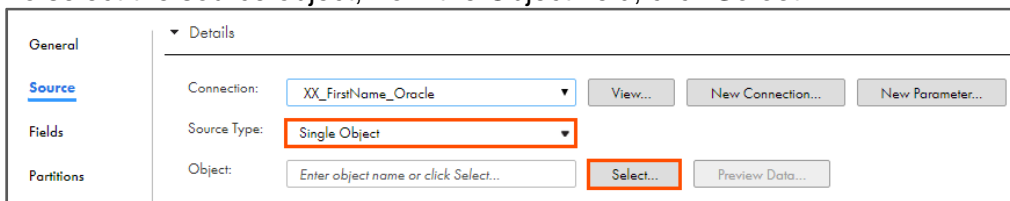
11. From the Connection drop-down, select **XX\_FirstName\_Oracle**.



The screenshot shows the 'Properties: Src\_Customers' dialog box with the 'Source' tab selected and highlighted with a red box. In the 'Details' section, the 'Connection' field is set to 'XX\_FirstName\_Oracle' and is highlighted with a red box. The 'Source Type' is set to 'Single Object'.

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

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



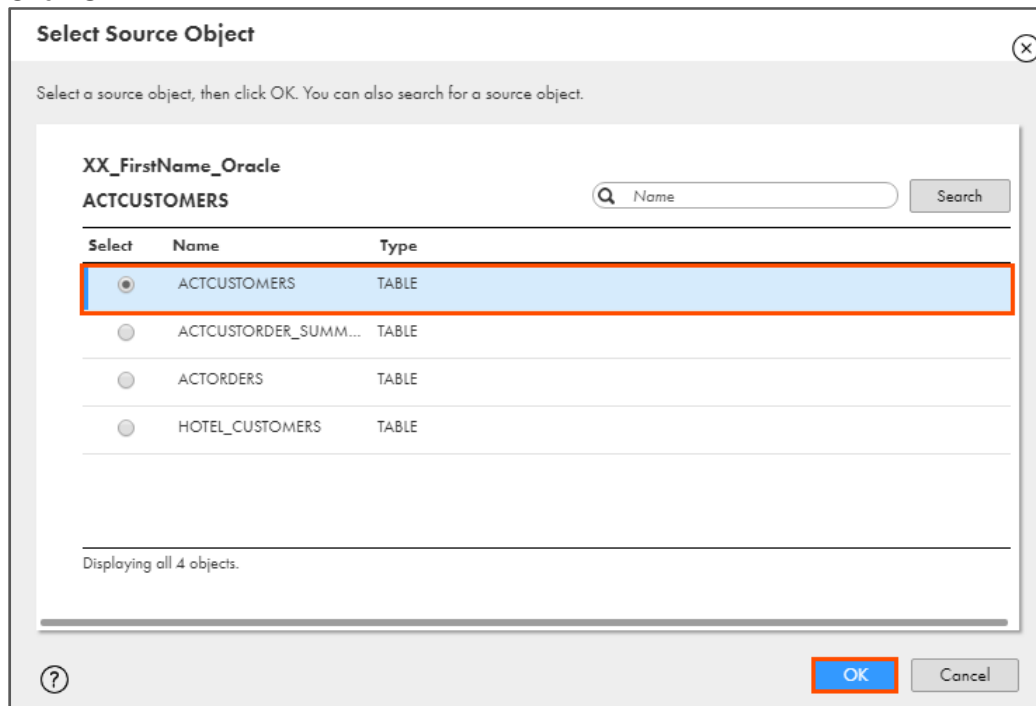
The screenshot shows the 'Properties: Src\_Customers' dialog box with the 'Source' tab selected and highlighted with a red box. In the 'Details' section, the 'Object' field is set to 'Enter object name or click Select...' and the 'Select...' button is highlighted with a red box.

**Note:** The Select Source Object window appears.

14. From the list, select **ACTCUSTOMERS**.

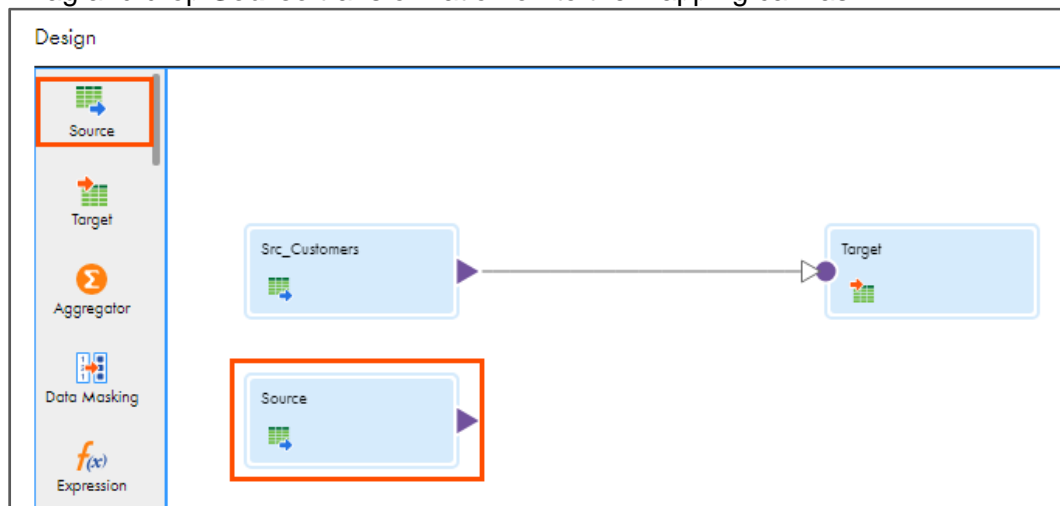


15. Click **OK**.



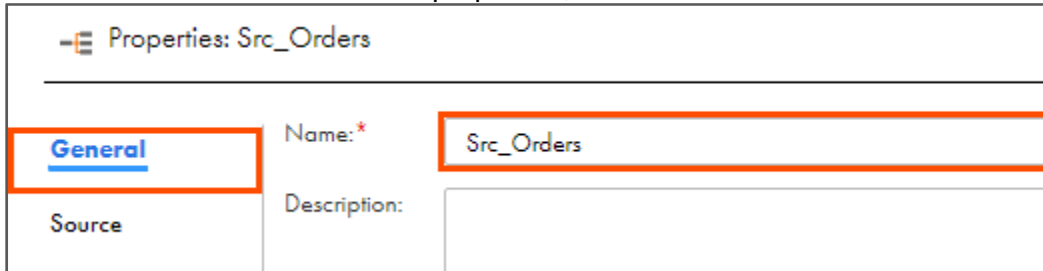
### Add Source Transformation:

16. Drag and drop **Source** transformation on to the mapping canvas.



17. Select the **Source** transformation on the mapping canvas.

18. In the General section of Source properties, enter Name as **Src\_Orders**.



Properties: Src\_Orders

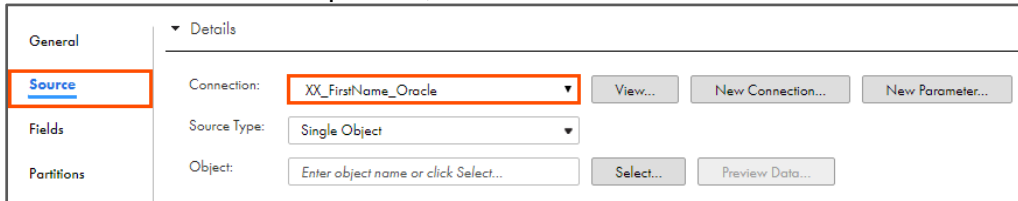
**General**

Name: \* Src\_Orders

Source

Description:

19. From the properties pane, click **Source**.
20. From the Connection drop-down, select **XX\_FirstName\_Oracle**.



General

**Source**

Fields

Partitions

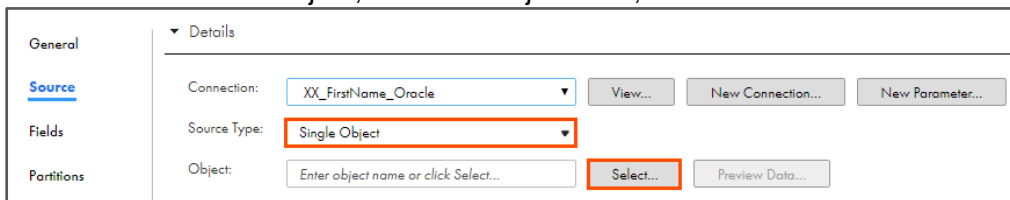
Details

Connection: XX\_FirstName\_Oracle View... New Connection... New Parameter...

Source Type: Single Object

Object: Enter object name or click Select... Select... Preview Data...

21. Retain Source Type as **Single Object**.
22. To select the source object, from the Object field, click **Select**.



General

**Source**

Fields

Partitions

Details

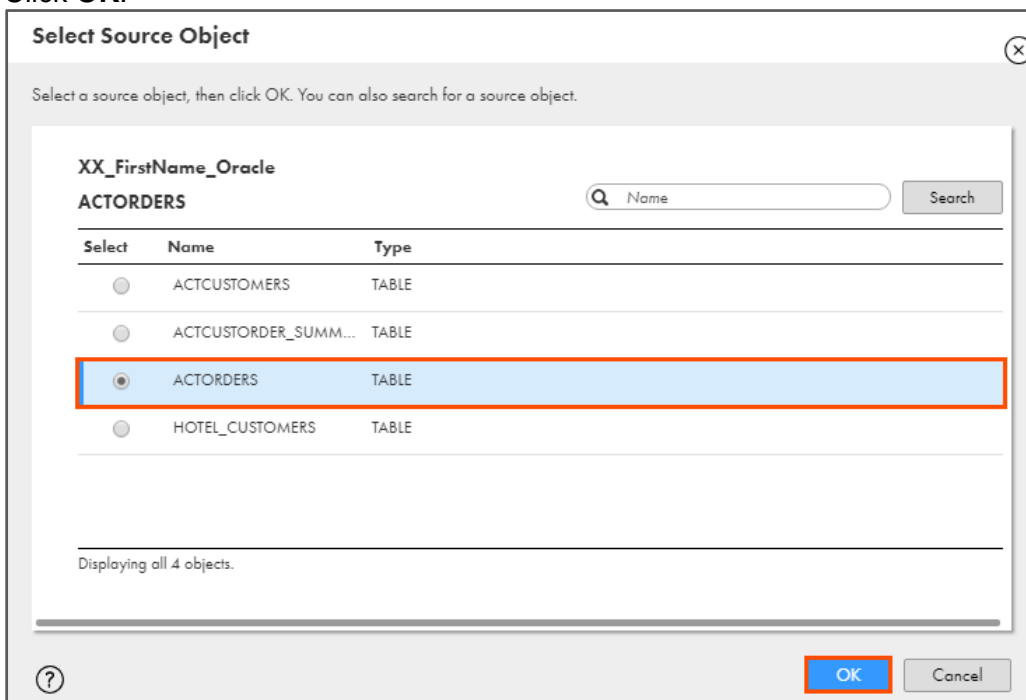
Connection: XX\_FirstName\_Oracle View... New Connection... New Parameter...

Source Type: Single Object

Object: Enter object name or click Select... Select... Preview Data...

**Note:** The Select Source Object window appears.

23. From the list, select **ACTORDERS**.
24. Click **OK**.



Select Source Object

Select a source object, then click OK. You can also search for a source object.

XX\_FirstName\_Oracle

ACTORDERS

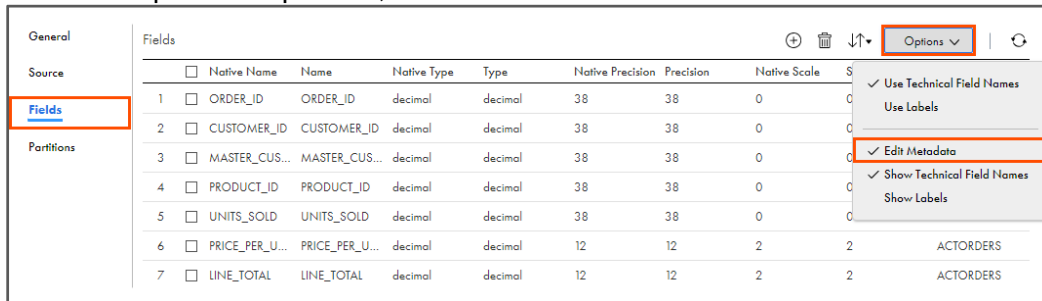
Q Name Search

| Select                           | Name                 | Type  |
|----------------------------------|----------------------|-------|
| <input type="radio"/>            | ACTCUSTOMERS         | TABLE |
| <input type="radio"/>            | ACTCUSTORDER_SUMM... | TABLE |
| <input checked="" type="radio"/> | ACTORDERS            | TABLE |
| <input type="radio"/>            | HOTEL_CUSTOMERS      | TABLE |

Displaying all 4 objects.

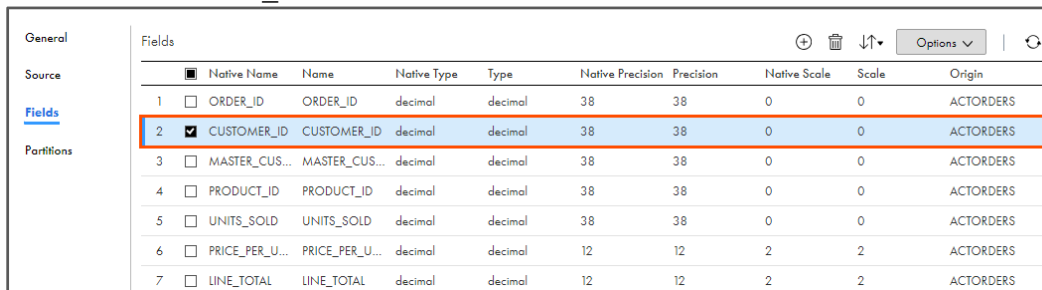
OK Cancel

25. From the properties pane, click **Fields**.
26. From the Options drop-down, select **Edit Metadata**.



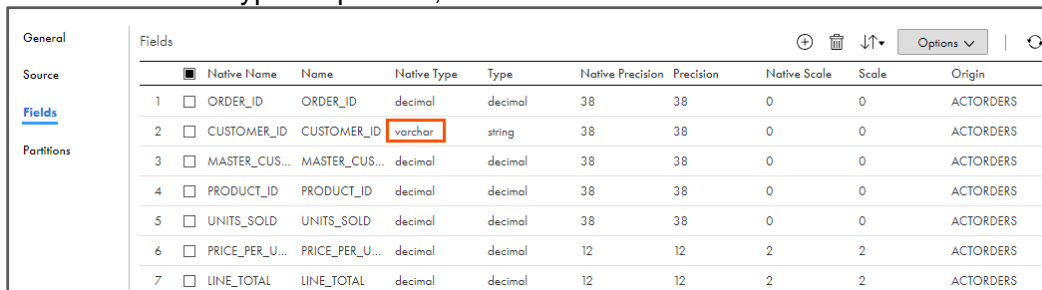
| Native Name              | Name           | Native Type    | Type    | Native Precision | Precision | Native Scale | Scale | Origin |
|--------------------------|----------------|----------------|---------|------------------|-----------|--------------|-------|--------|
| <input type="checkbox"/> | ORDER_ID       | ORDER_ID       | decimal | decimal          | 38        | 38           | 0     | 0      |
| <input type="checkbox"/> | CUSTOMER_ID    | CUSTOMER_ID    | decimal | decimal          | 38        | 38           | 0     | 0      |
| <input type="checkbox"/> | MASTER_CUS...  | MASTER_CUS...  | decimal | decimal          | 38        | 38           | 0     | 0      |
| <input type="checkbox"/> | PRODUCT_ID     | PRODUCT_ID     | decimal | decimal          | 38        | 38           | 0     | 0      |
| <input type="checkbox"/> | UNITS_SOLD     | UNITS_SOLD     | decimal | decimal          | 38        | 38           | 0     | 0      |
| <input type="checkbox"/> | PRICE_PER_U... | PRICE_PER_U... | decimal | decimal          | 12        | 12           | 2     | 2      |
| <input type="checkbox"/> | LINE_TOTAL     | LINE_TOTAL     | decimal | decimal          | 12        | 12           | 2     | 2      |

27. Select **CUSTOMER\_ID** field.



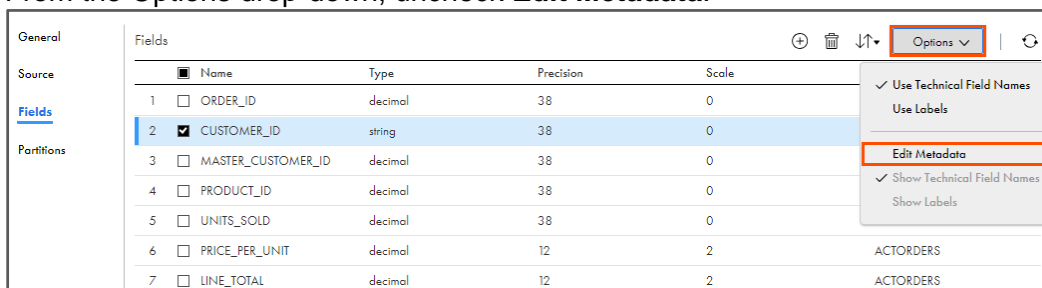
| Native Name                         | Name           | Native Type    | Type    | Native Precision | Precision | Native Scale | Scale | Origin |
|-------------------------------------|----------------|----------------|---------|------------------|-----------|--------------|-------|--------|
| <input type="checkbox"/>            | ORDER_ID       | ORDER_ID       | decimal | decimal          | 38        | 38           | 0     | 0      |
| <input checked="" type="checkbox"/> | CUSTOMER_ID    | CUSTOMER_ID    | decimal | decimal          | 38        | 38           | 0     | 0      |
| <input type="checkbox"/>            | MASTER_CUS...  | MASTER_CUS...  | decimal | decimal          | 38        | 38           | 0     | 0      |
| <input type="checkbox"/>            | PRODUCT_ID     | PRODUCT_ID     | decimal | decimal          | 38        | 38           | 0     | 0      |
| <input type="checkbox"/>            | UNITS_SOLD     | UNITS_SOLD     | decimal | decimal          | 38        | 38           | 0     | 0      |
| <input type="checkbox"/>            | PRICE_PER_U... | PRICE_PER_U... | decimal | decimal          | 12        | 12           | 2     | 2      |
| <input type="checkbox"/>            | LINE_TOTAL     | LINE_TOTAL     | decimal | decimal          | 12        | 12           | 2     | 2      |

28. From the Native Type drop-down, select **varchar**.



| Native Name                         | Name           | Native Type    | Type    | Native Precision | Precision | Native Scale | Scale | Origin |
|-------------------------------------|----------------|----------------|---------|------------------|-----------|--------------|-------|--------|
| <input type="checkbox"/>            | ORDER_ID       | ORDER_ID       | decimal | decimal          | 38        | 38           | 0     | 0      |
| <input checked="" type="checkbox"/> | CUSTOMER_ID    | CUSTOMER_ID    | varchar | string           | 38        | 38           | 0     | 0      |
| <input type="checkbox"/>            | MASTER_CUS...  | MASTER_CUS...  | decimal | decimal          | 38        | 38           | 0     | 0      |
| <input type="checkbox"/>            | PRODUCT_ID     | PRODUCT_ID     | decimal | decimal          | 38        | 38           | 0     | 0      |
| <input type="checkbox"/>            | UNITS_SOLD     | UNITS_SOLD     | decimal | decimal          | 38        | 38           | 0     | 0      |
| <input type="checkbox"/>            | PRICE_PER_U... | PRICE_PER_U... | decimal | decimal          | 12        | 12           | 2     | 2      |
| <input type="checkbox"/>            | LINE_TOTAL     | LINE_TOTAL     | decimal | decimal          | 12        | 12           | 2     | 2      |

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

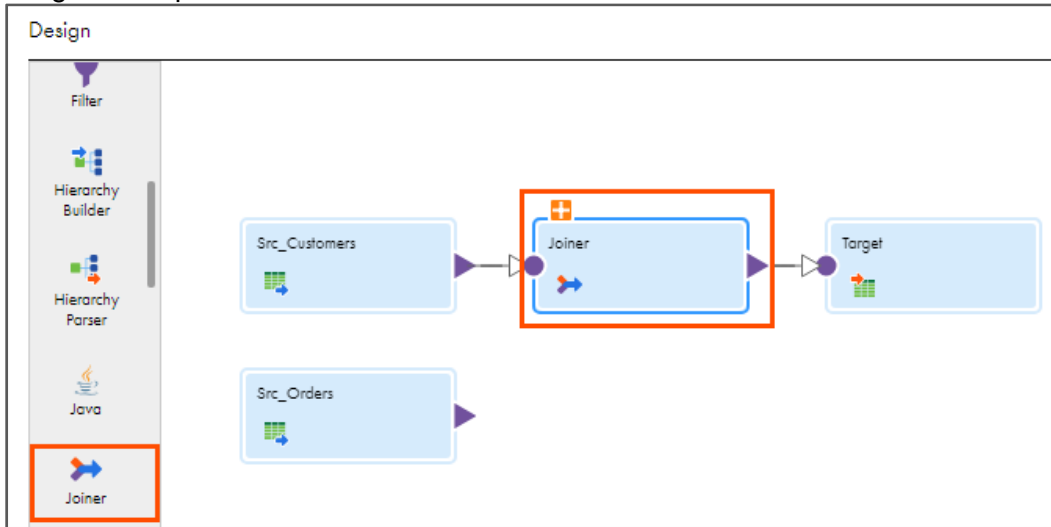



| Native Name                         | Name               | Type    | Precision | Scale |
|-------------------------------------|--------------------|---------|-----------|-------|
| <input type="checkbox"/>            | ORDER_ID           | decimal | 38        | 0     |
| <input checked="" type="checkbox"/> | CUSTOMER_ID        | string  | 38        | 0     |
| <input type="checkbox"/>            | MASTER_CUSTOMER_ID | decimal | 38        | 0     |
| <input type="checkbox"/>            | PRODUCT_ID         | decimal | 38        | 0     |
| <input type="checkbox"/>            | UNITS_SOLD         | decimal | 38        | 0     |
| <input type="checkbox"/>            | PRICE_PER_UNIT     | decimal | 12        | 2     |
| <input type="checkbox"/>            | LINE_TOTAL         | decimal | 12        | 2     |

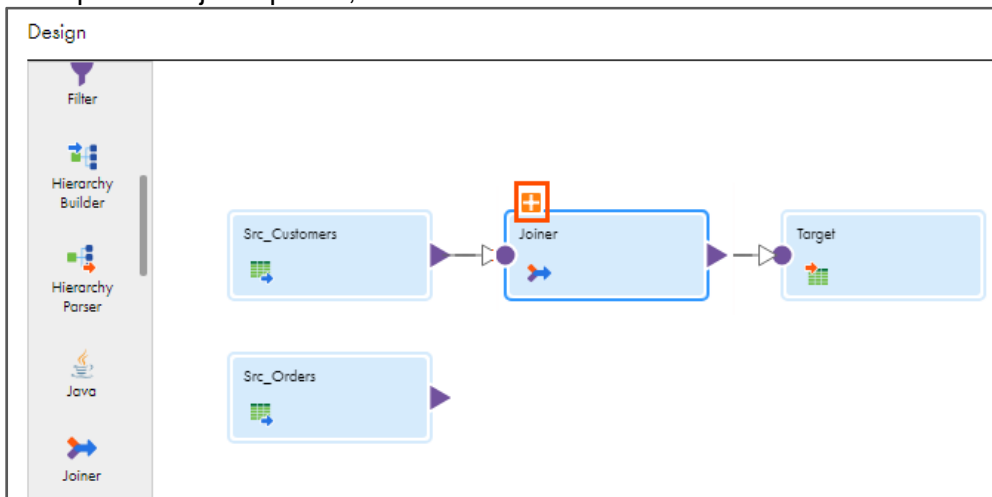
**Note:** The Native Type of CUSTOMER\_ID is of type string. As you need to specify a join condition based on CUSTOMER\_ID of CUSTOMERS table and ORDERS table, you must ensure that their data types are same.

### Add Joiner Transformation:

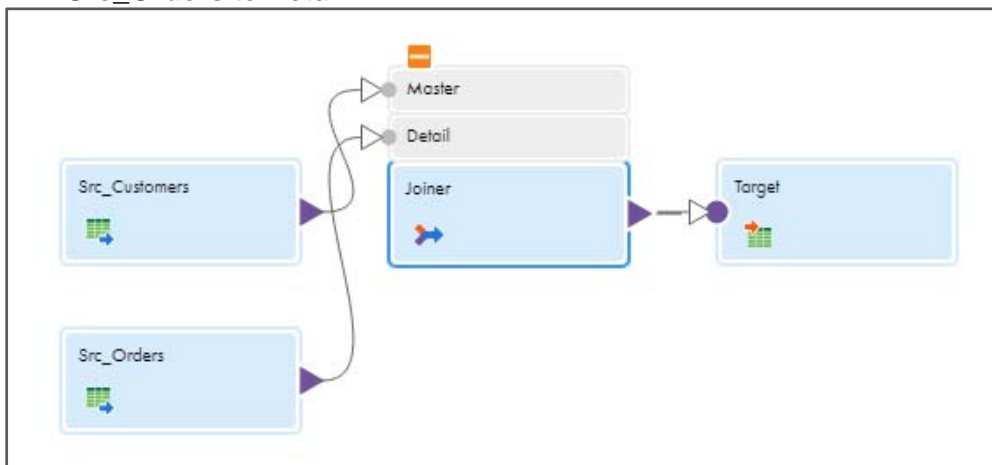
30. Drag and drop the **Joiner** transformation on the link between Src\_Customers and Target.



31. To expand the join options, click .

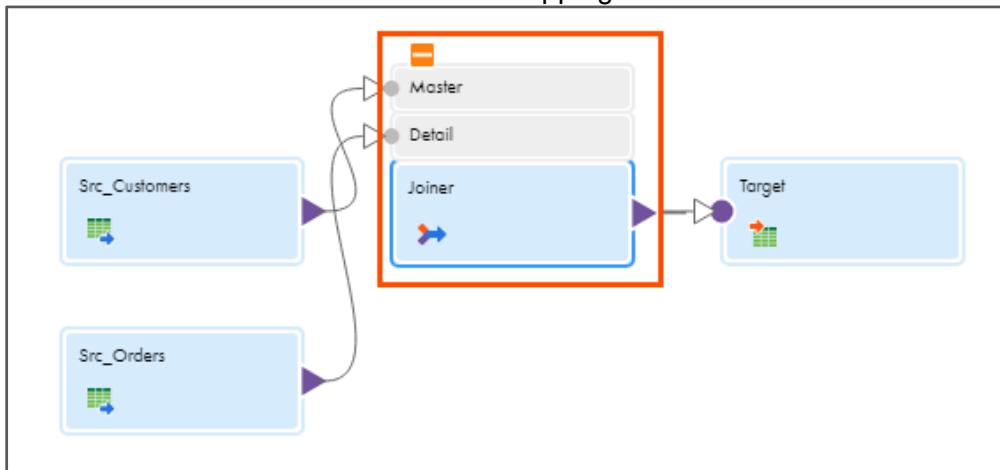


32. Link **Src\_Orders** to **Detail**.



**Note:** Verify that Src\_Customers is linked to Master. If it is not linked, link Src\_Customers to Master.

33. Select **Joiner** transformation from the mapping canvas.



34. In the **General** section of Joiner properties, enter Name as **JNR\_Customer**.

Properties: JNR\_Customer

**General** Name: **JNR\_Customer**

Incoming Fields Description:

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

Properties: JNR\_Customer

**Incoming Fields**

Field name conflicts detected. To make field names unique, rename fields in the previous transformation, change the renaming options in this transformation field rules, or click [Resolve Field Name Conflicts](#).

| Operator | Field Selection Criteria | Detail | Actions |
|----------|--------------------------|--------|---------|
| ▼ Master |                          |        |         |

**Note:** You can see a warning message in this field.

36. To resolve the conflict, under the Field Rules section for Master, from Field Selection Criteria drop-down, select **Named Fields**.

37. Click **Configure**.

General

**Incoming Fields**

Join Condition

Advanced

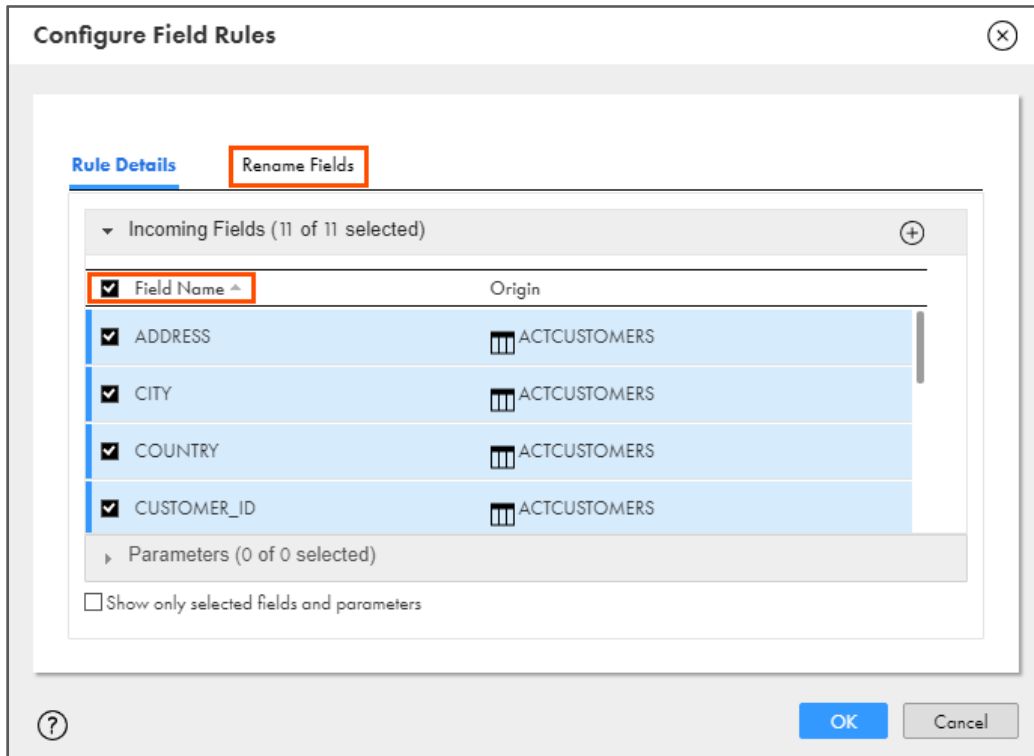
All incoming fields are included by default. You can configure field rules to exclude incoming fields. You can also rename incoming fields table lists all included and excluded fields.

| Operator | Field Selection Criteria | Detail                                 |
|----------|--------------------------|----------------------------------------|
| ▼ Master |                          |                                        |
| Include  | Named Fields             | <a href="#">Configure...</a>           |
| ▼ Detail |                          |                                        |
| Include  | All Fields               | All Fields   <a href="#">Rename...</a> |

**Note:** The Configure Field Rule window appears.

38. To select all the fields, click **Field Name**.

39. Select **Rename Fields** tab.



**Configure Field Rules**

Rule Details **Rename Fields**

▼ Incoming Fields (11 of 11 selected) +

| <input checked="" type="checkbox"/> Field Name ▲ | Origin       |
|--------------------------------------------------|--------------|
| <input checked="" type="checkbox"/> ADDRESS      | ACTCUSTOMERS |
| <input checked="" type="checkbox"/> CITY         | ACTCUSTOMERS |
| <input checked="" type="checkbox"/> COUNTRY      | ACTCUSTOMERS |
| <input checked="" type="checkbox"/> CUSTOMER_ID  | ACTCUSTOMERS |

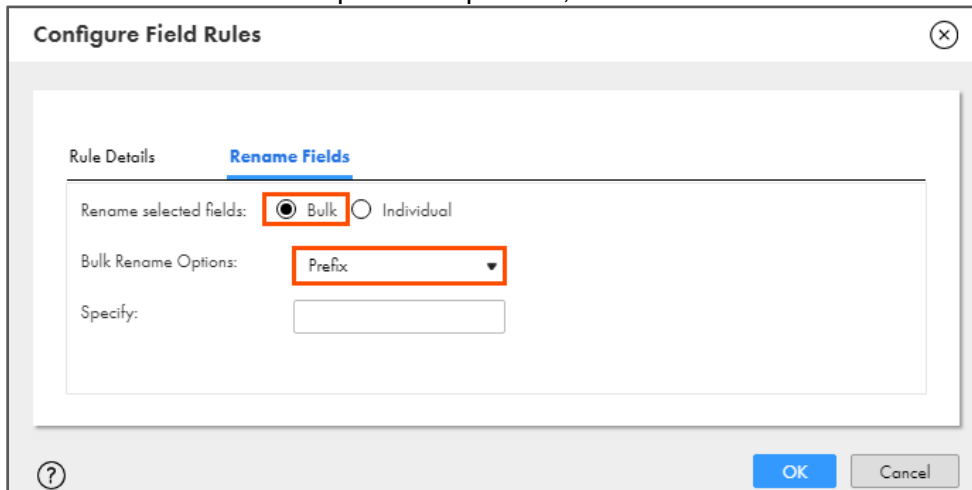
► Parameters (0 of 0 selected)

☐ Show only selected fields and parameters

? OK Cancel

40. From Rename selected fields, click **Bulk**.

41. From the Bulk Rename Options drop-down, select **Prefix**.



**Configure Field Rules**

Rule Details **Rename Fields**

Rename selected fields: ☒ Bulk ☐ Individual

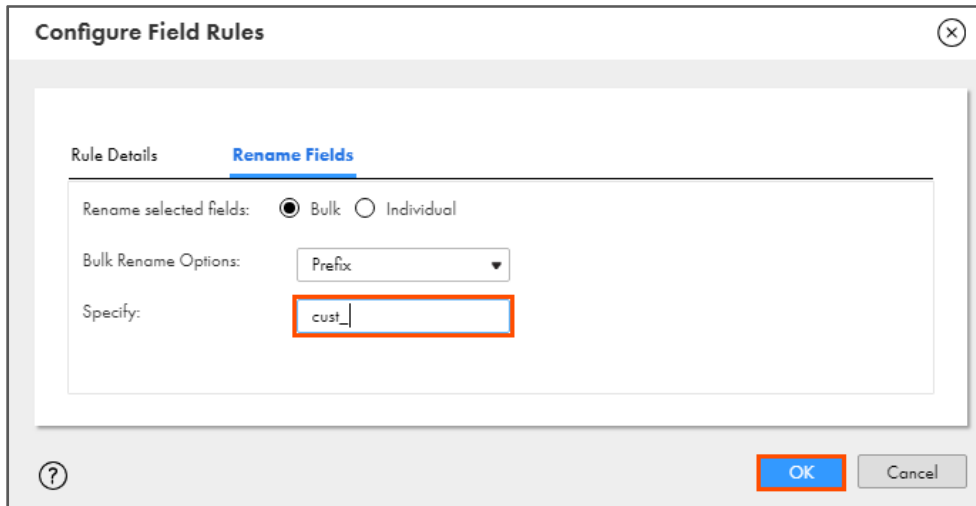
Bulk Rename Options: Prefix ▼

Specify:

? OK Cancel

42. Enter **cust\_** in the Specify field.

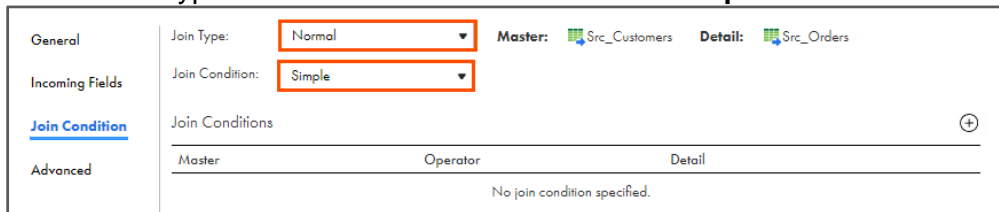
43. Click **OK**.



The 'Configure Field Rules' dialog box is shown with the 'Rename Fields' tab selected. Under 'Rule Details', 'Rename selected fields:' has 'Bulk' selected. 'Bulk Rename Options:' is set to 'Prefix'. The 'Specify:' field contains 'cust\_'. The 'OK' button is highlighted with a red box.

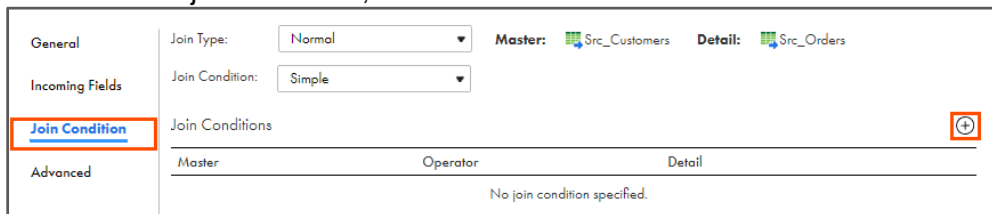
44. From the properties pane, click **Join Condition**.

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



The properties pane shows 'Join Type' set to 'Normal' and 'Join Condition' set to 'Simple'. The 'Join Conditions' table is empty, showing columns 'Master', 'Operator', and 'Detail'.

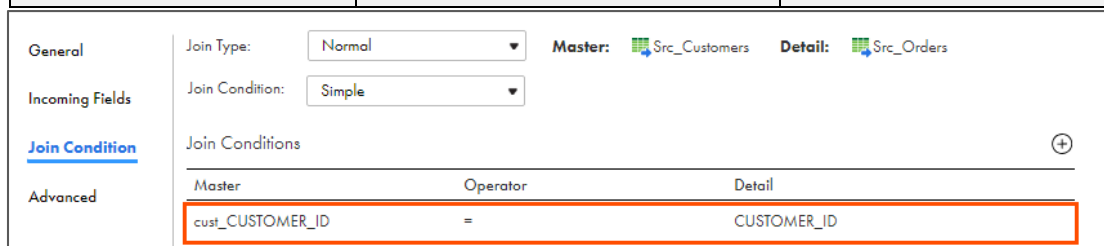
46. To add a new join condition, click .



The properties pane is shown with the 'Join Condition' tab selected. The 'Add' button (a square with a plus sign) in the top right corner of the 'Join Conditions' table is highlighted with a red box.

47. Enter join condition as shown in the table below.

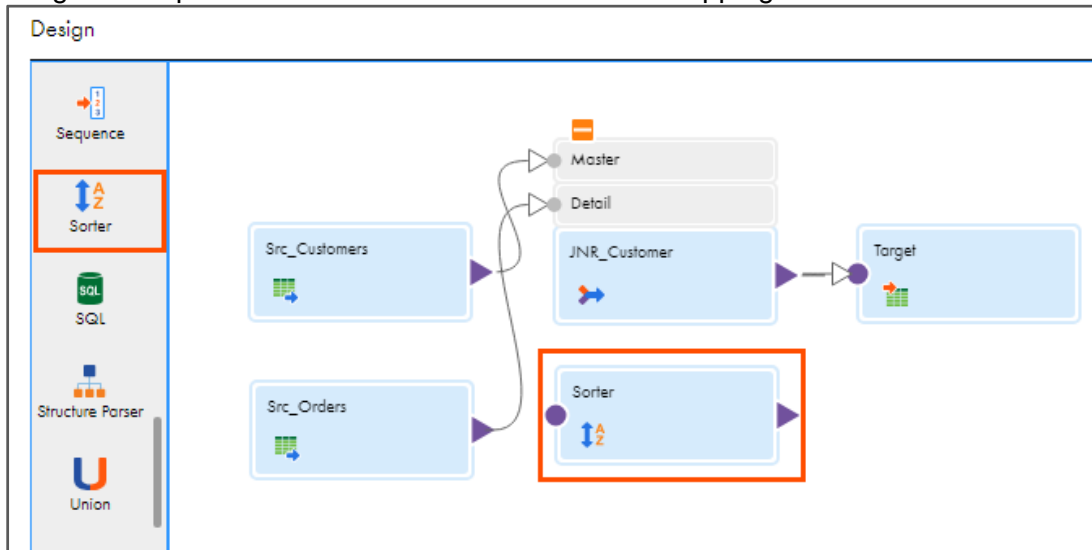
| Master           | Operator | Detail      |
|------------------|----------|-------------|
| cust_CUSTOMER_ID | =        | CUSTOMER_ID |

The properties pane shows the 'Join Conditions' table with one row: 'cust\_CUSTOMER\_ID' in the 'Master' column, '=' in the 'Operator' column, and 'CUSTOMER\_ID' in the 'Detail' column. The row is highlighted with a red box.

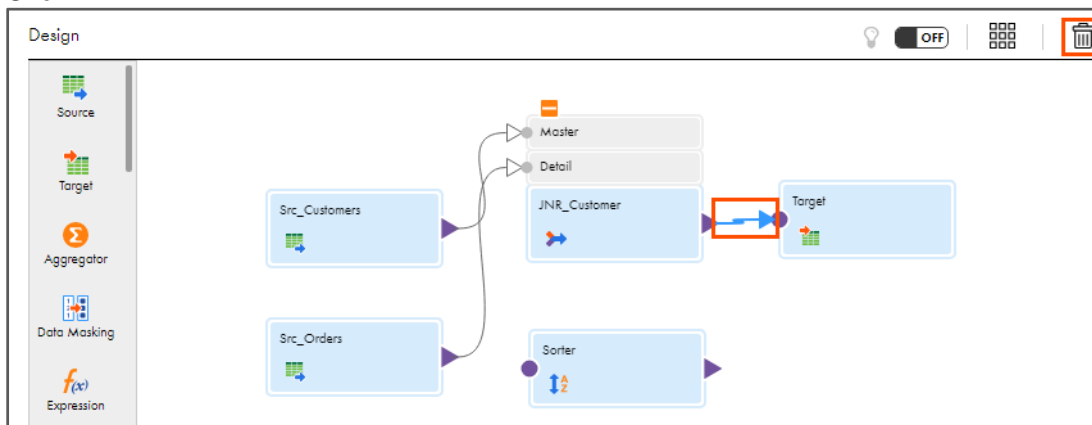
### Add Sorter Transformation:

48. Drag and drop the **Sorter** transformation on to the mapping canvas.

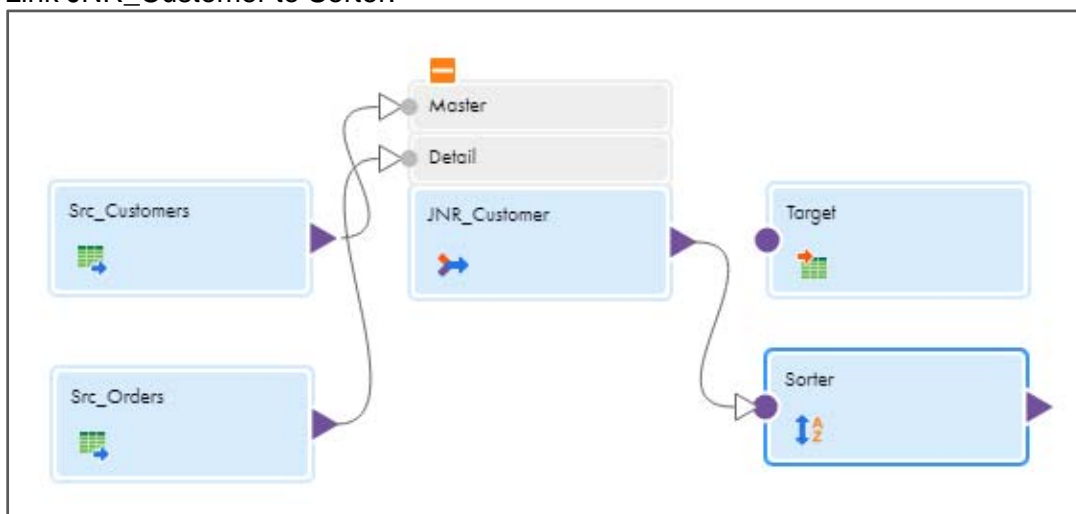


49. To delete the link between JNR\_Customer and Target, click on the link.

50. Click .

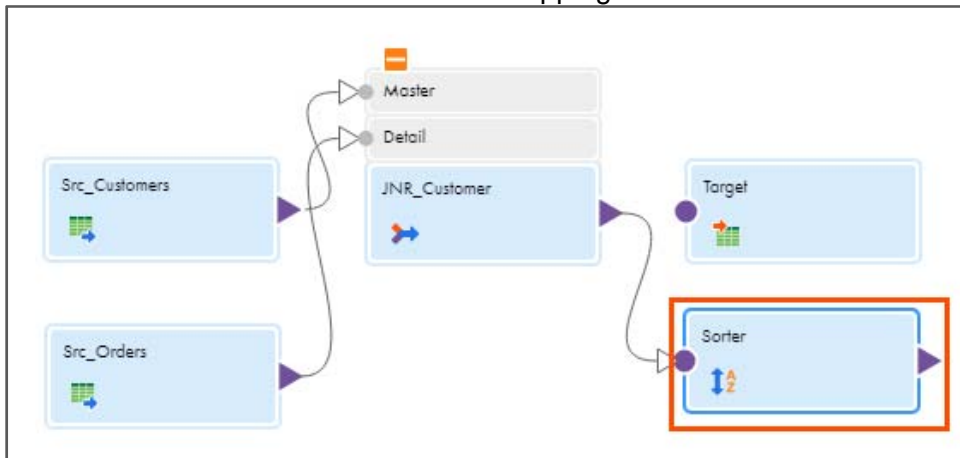


51. Link JNR\_Customer to Sorter.





52. Select **Sorter** transformation from the mapping canvas.



53. In the **General** section of the Sorter properties, enter Name as **Srt\_Customer**.

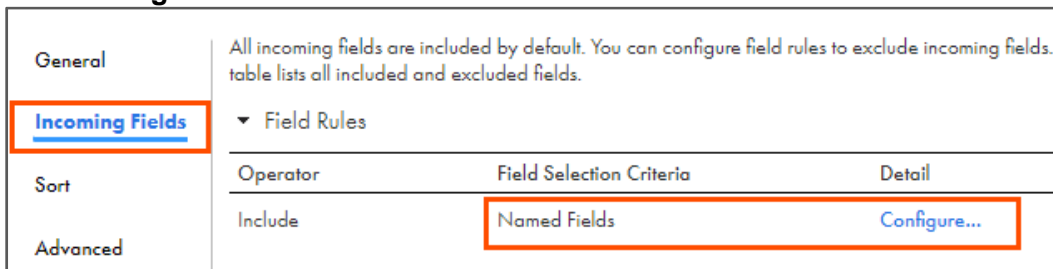


The screenshot shows the 'Properties: Srt\_Customer' dialog box. The 'General' tab is selected and highlighted with a red box. The 'Name' field is set to 'Srt\_Customer' and is also highlighted with a red box. The 'Description' field is empty. The 'Incoming Fields' section is visible at the bottom.

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

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

56. Click **Configure**.



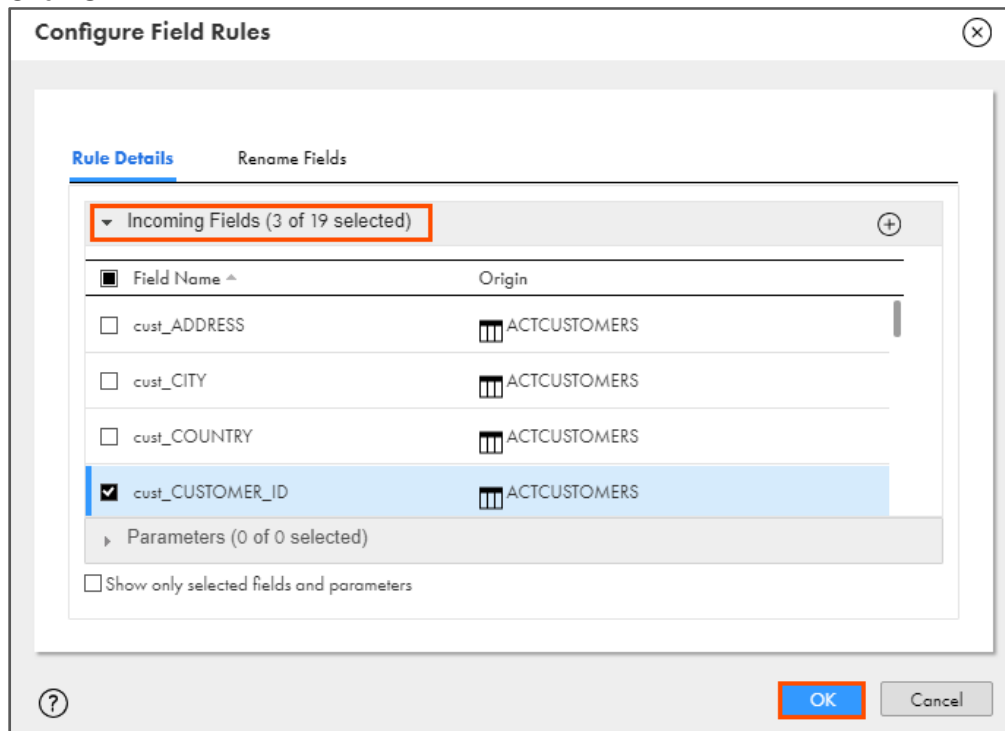
The screenshot shows the 'Incoming Fields' section of the Sorter properties. The 'Field Selection Criteria' drop-down menu is set to 'Named Fields' and is highlighted with a red box. The 'Configure...' button is also highlighted with a red box. The 'Operator' is set to 'Include'.

| Operator | Field Selection Criteria | Detail       |
|----------|--------------------------|--------------|
| Include  | Named Fields             | Configure... |


**Note:** The Configure Field Rules window appears.

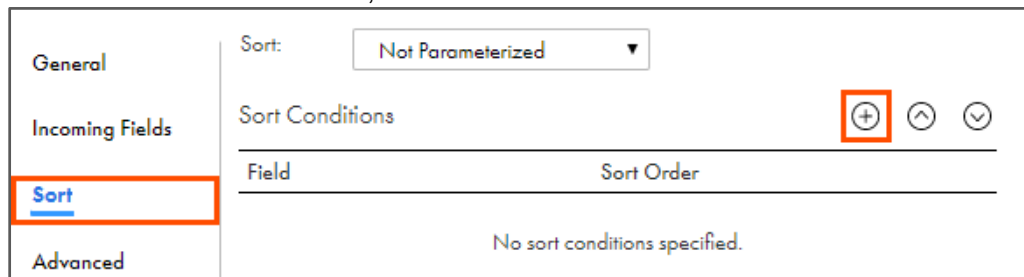
57. From the list, select cust\_CUSTOMER\_ID, LINE\_TOTAL, and UNITS\_SOLD.

58. Click **OK**.

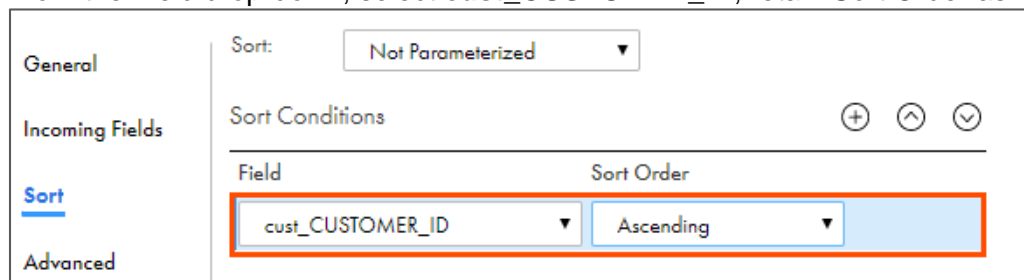


59. From the properties pane, click **Sort**.

60. To add a new sort condition, click .

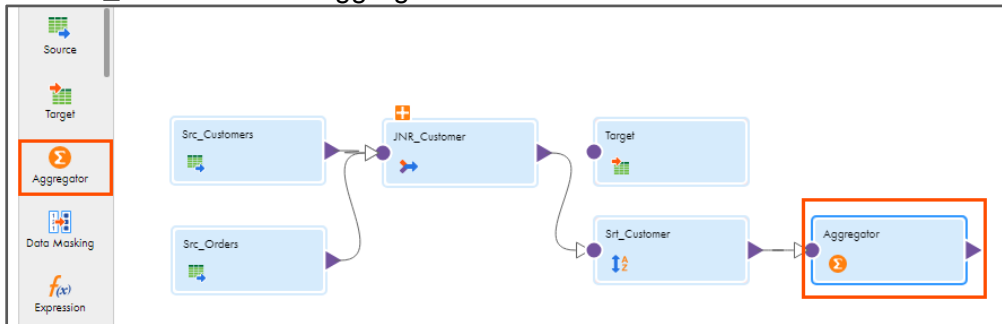


61. From the Field drop-down, select **cust\_CUSTOMER\_ID**, retain Sort Order as **Ascending**.



### Add Aggregator Transformation:

62. Drag and drop **Aggregator** transformation on to the mapping canvas.
63. Link Srt\_Customer with Aggregator.



64. In the **General** section of the Aggregator properties, enter Name as **Agg\_ByCustomer**.



The screenshot shows the 'Properties: Agg\_ByCustomer' pane. The 'General' tab is selected and highlighted with a red box. The 'Name' field is set to 'Agg\_ByCustomer' and is also highlighted with a red box. The 'Description' field is empty. The 'Incoming Fields' section is visible at the bottom.

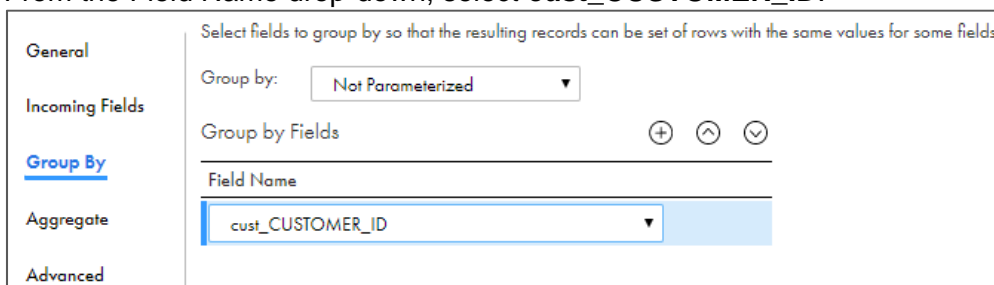
65. From the properties pane, click **Group By**.

66. To add a new group by condition, click .



The screenshot shows the 'Group By' tab selected and highlighted with a red box. The 'Group by' dropdown is set to 'Not Parameterized'. The 'Group by Fields' section has an 'Add' button (+) highlighted with a red box. The 'Field Name' section is empty, displaying 'No fields to display'.

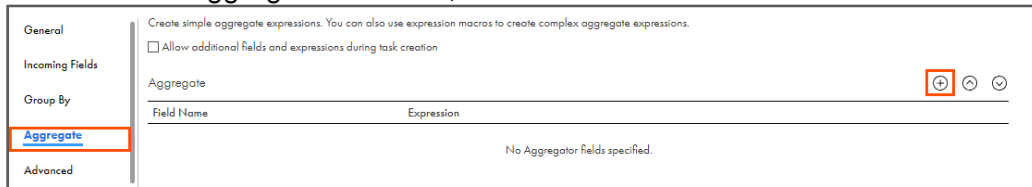
67. From the Field Name drop-down, select **cust\_CUSTOMER\_ID**.



The screenshot shows the 'Group By' tab selected and highlighted with a red box. The 'Field Name' dropdown is now set to 'cust\_CUSTOMER\_ID' and is highlighted with a blue box. The 'Add' button (+) is no longer highlighted.

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

69. To add a new aggregate condition, click .

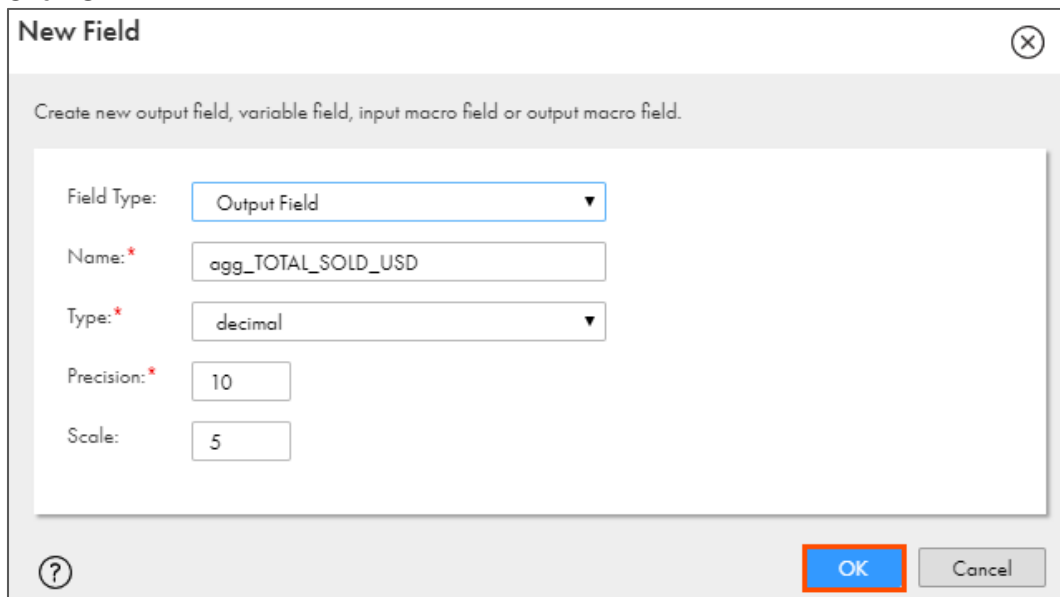


**Note:** The New Field window appears.

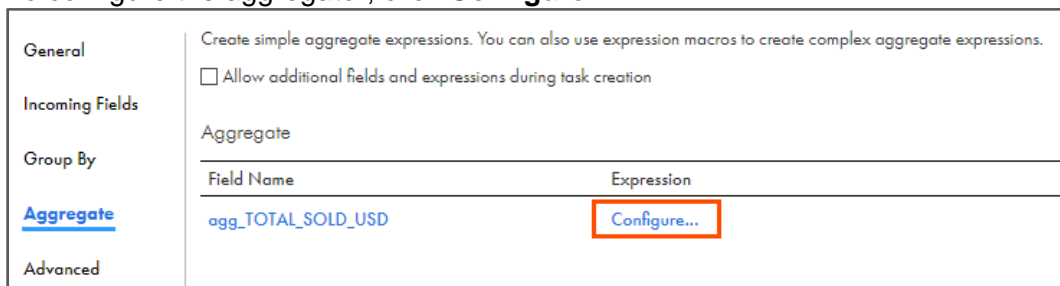
70. Enter the details as shown in table below:

| Field Type   | Name               | Type    | Precision | Scale |
|--------------|--------------------|---------|-----------|-------|
| Output Field | agg_TOTAL_SOLD_USD | decimal | 10        | 5     |

71. Click **OK**.



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



**Note:** The Field Expression window appears.

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

SUM(LINE\_TOTAL)

OR

Open the file named **34\_LabGuide\_UsingPushdownOptimization\_17-2** provided with this lab. Copy the command mentioned under **Step 73** and paste it in the Expression field.

74. Click **Validate**.

**Field Expression: agg\_TOTAL\_SOLD\_USD( decimal, 10, 5 )** [X]

Configure expression by adding fields and functions.

Expression: Not Parameterized

☒ The expression is Valid.

**Fields** Parameters Functions Expression **Validate**

cust\_CUSTOMER\_ID  
UNITS\_SOLD  
LINE\_TOTAL

SUM(LINE\_TOTAL)

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

[?] [OK] [Cancel]

75. Click **OK**.

**Field Expression: agg\_TOTAL\_SOLD\_USD( decimal, 10, 5 )** [X]

Configure expression by adding fields and functions.

Expression: Not Parameterized

☒ The expression is Valid.

**Fields** Parameters Functions Expression **Validate**

cust\_CUSTOMER\_ID  
UNITS\_SOLD  
LINE\_TOTAL

SUM(LINE\_TOTAL)

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



[?] **OK** [Cancel]

76. To add a new aggregate condition, click .

**General** Create simple aggregate expressions. You can also use expression macros to create complex aggregate expressions.  
☐ Allow additional fields and expressions during task creation

**Incoming Fields**

**Group By**

**Aggregate**  

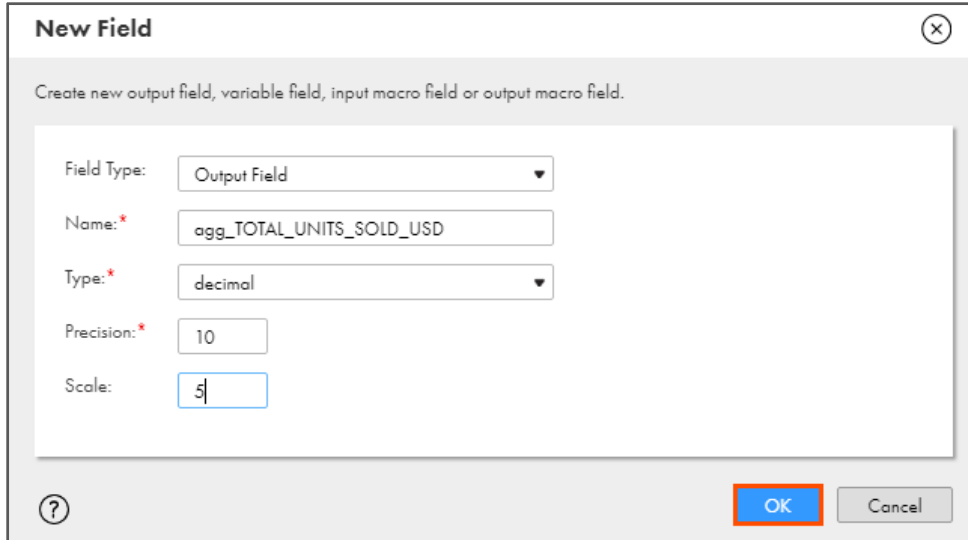
| Field Name         | Expression      |
|--------------------|-----------------|
| agg_TOTAL_SOLD_USD | SUM(LINE_TOTAL) |

**Note:** The New Field window appears.

77. Enter the details as shown in table below:

| Field Type   | Name                     | Type    | Precision | Scale |
|--------------|--------------------------|---------|-----------|-------|
| Output Field | agg_TOTAL_UNITS_SOLD_USD | decimal | 10        | 5     |

78. Click **OK**.



**New Field** (Close button)

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

Field Type: Output Field (dropdown)

Name: \* agg\_TOTAL\_UNITS\_SOLD\_USD

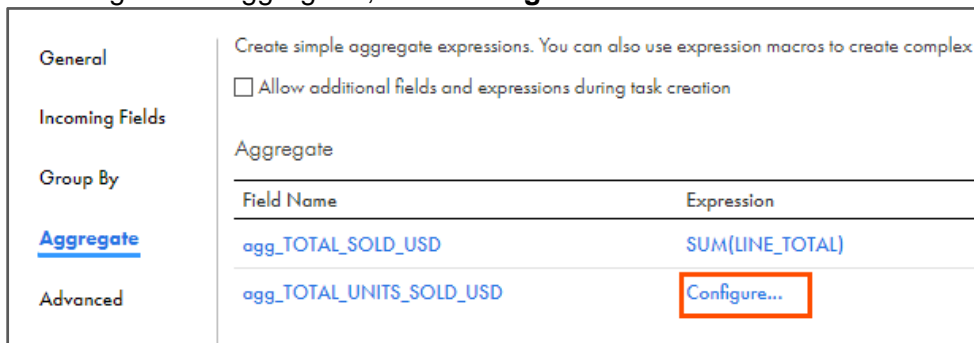
Type: \* decimal (dropdown)

Precision: \* 10

Scale: \$

(Help icon) **OK** Cancel

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



**General** Create simple aggregate expressions. You can also use expression macros to create complex

☐ Allow additional fields and expressions during task creation

**Incoming Fields**

**Group By**

**Aggregate**

**Advanced**

| Field Name               | Expression          |
|--------------------------|---------------------|
| agg_TOTAL_SOLD_USD       | SUM(LINE_TOTAL)     |
| agg_TOTAL_UNITS_SOLD_USD | <b>Configure...</b> |

**Note:** The Field Expression window appears.

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

SUM (UNITS\_SOLD)

OR

Open the file named **34\_LabGuide\_UsingPushdownOptimization\_17-2** provided with this lab. Copy the command mentioned under **Step 80** and paste it in the Expression field.

81. Click **Validate**.

Field Expression: `agg_TOTAL_UNITS_SOLD_USD( decimal, 10, 5 )`

Configure expression by adding fields and functions.

Expression: Not Parameterized

☒ The expression is Valid.

**Fields** Parameters Functions Expression Validate

cust\_CUSTOMER\_ID  
UNITS\_SOLD  
LINE\_TOTAL

SUM (UNITS\_SOLD)

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

OK Cancel

82. Click **OK**.

Field Expression: `agg_TOTAL_UNITS_SOLD_USD( decimal, 10, 5 )`

Configure expression by adding fields and functions.

Expression: Not Parameterized

☒ The expression is Valid.

**Fields** Parameters Functions Expression Validate

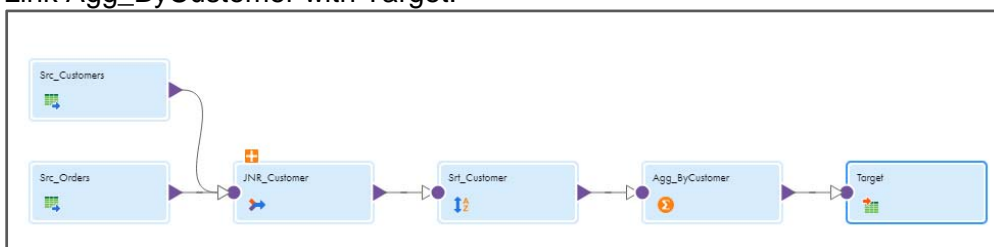
cust\_CUSTOMER\_ID  
UNITS\_SOLD  
LINE\_TOTAL

SUM (UNITS\_SOLD)

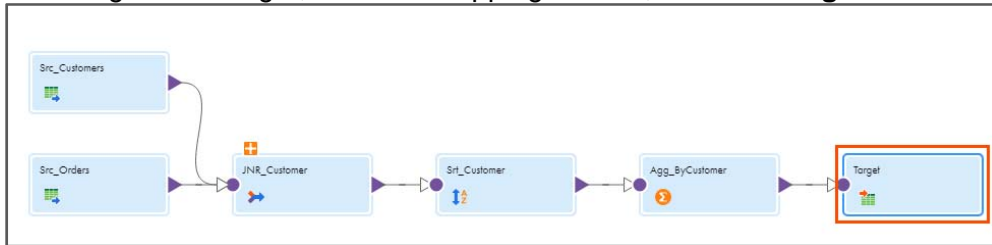
Operators  
AND OR NOT ( ) = != < > <= >=

OK Cancel

83. Link **Agg\_ByCustomer** with Target.



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



85. In the **General** section of Target properties, enter Name as **Tgt\_Cust\_Ord**.

Properties: Tgt\_Cust\_Ord

|                 |              |              |
|-----------------|--------------|--------------|
| <b>General</b>  | Name: *      | Tgt_Cust_Ord |
| Incoming Fields | Description: |              |

86. From the properties pane, click **Incoming Fields**.
87. In the Field Rules section, from the Field Selection Criteria drop-down, select **Named Fields**.
88. Click **Configure**.

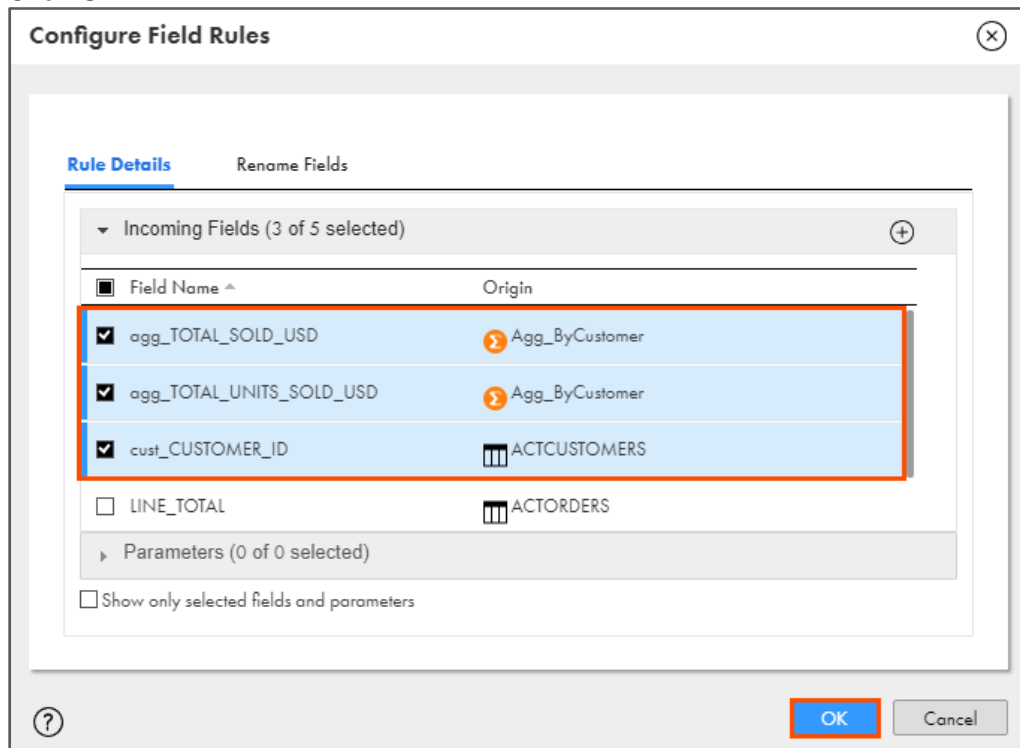
|                        |                                                                                                                                                      |                          |              |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------|
| General                | All incoming fields are included by default. You can configure field rules to exclude incoming fields. table lists all included and excluded fields. |                          |              |
| <b>Incoming Fields</b> | Field Rules                                                                                                                                          |                          |              |
| Target                 | Operator                                                                                                                                             | Field Selection Criteria | Detail       |
| Target Fields          | Include                                                                                                                                              | Named Fields             | Configure... |


**Note:** The Configure Field Rules window appears.

89. From the list, select **cust\_CUSTOMER\_ID**, **agg\_TOTAL\_SOLD\_USD**, and **agg\_TOTAL\_UNITS\_SOLD\_USD**.



90. Click **OK**.



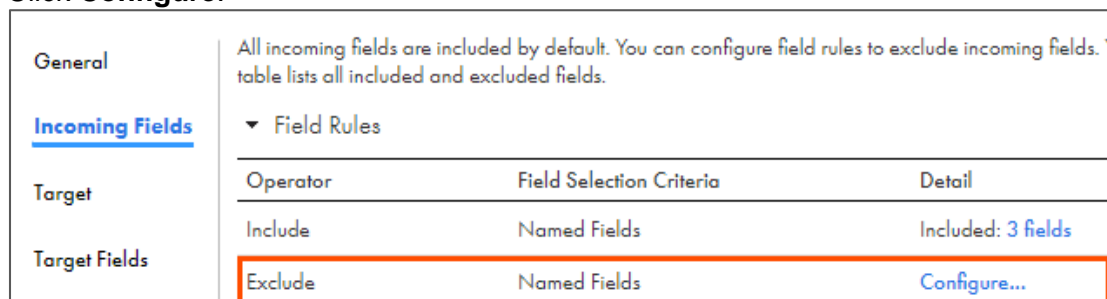
91. From the Incoming Fields tab, to add a new Field Rule, click .



92. From the Operator drop-down, select **Exclude**.

93. From Field Selection Criteria, select **Named Fields**.

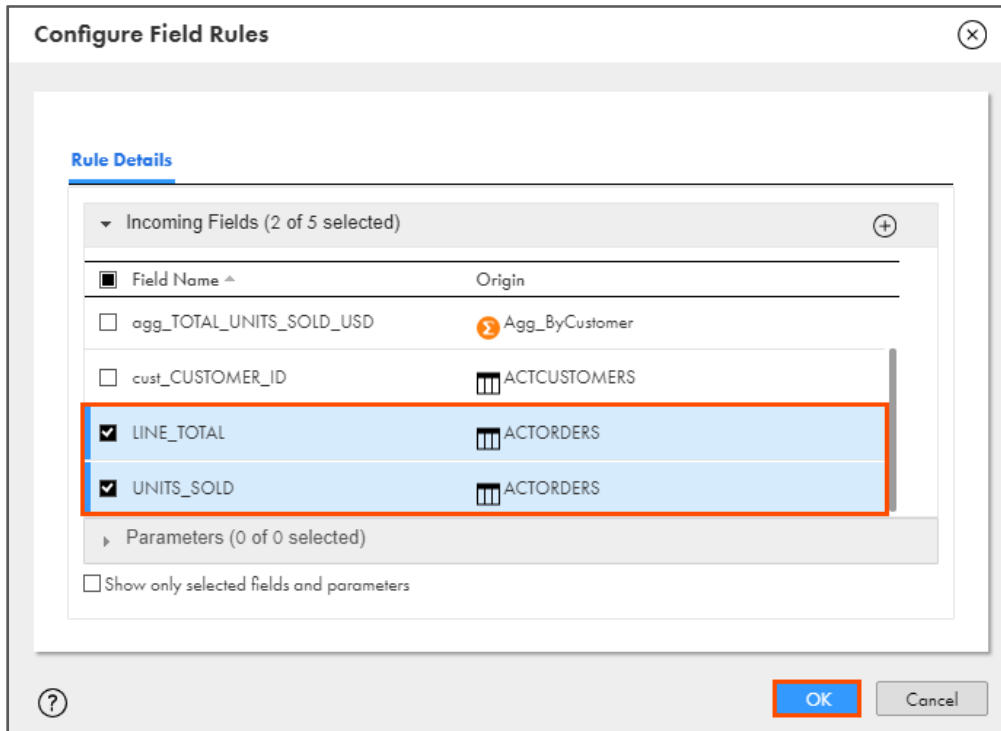
94. Click **Configure**.



**Note:** The Configure Field Rules window appears.

95. From the list, select **LINE\_TOTAL** and **UNITS\_SOLD**.

96. Click **OK**.



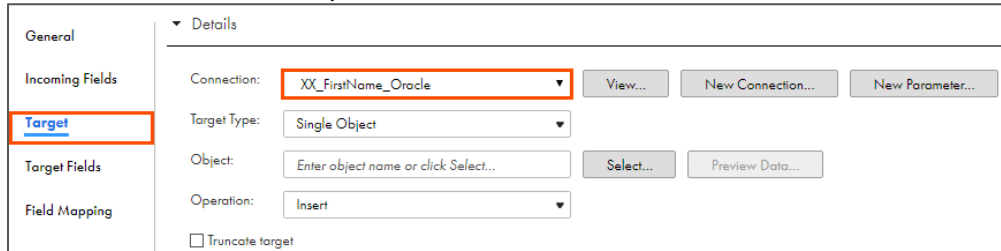
The **Configure Field Rules** dialog box is shown. The **Rule Details** tab is active. Under **Incoming Fields (2 of 5 selected)**, the following fields are listed:

| Field Name                                        | Origin         |
|---------------------------------------------------|----------------|
| <input type="checkbox"/> agg_TOTAL_UNITS_SOLD_USD | Agg_ByCustomer |
| <input type="checkbox"/> cust_CUSTOMER_ID         | ACTCUSTOMERS   |
| <input checked="" type="checkbox"/> LINE_TOTAL    | ACTORDERS      |
| <input checked="" type="checkbox"/> UNITS_SOLD    | ACTORDERS      |

Below the fields, there is a section for **Parameters (0 of 0 selected)** and a checkbox for **Show only selected fields and parameters**. The **OK** button is highlighted with a red box.

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

98. From the Connection drop-down, select **XX\_FirstName\_Oracle**.



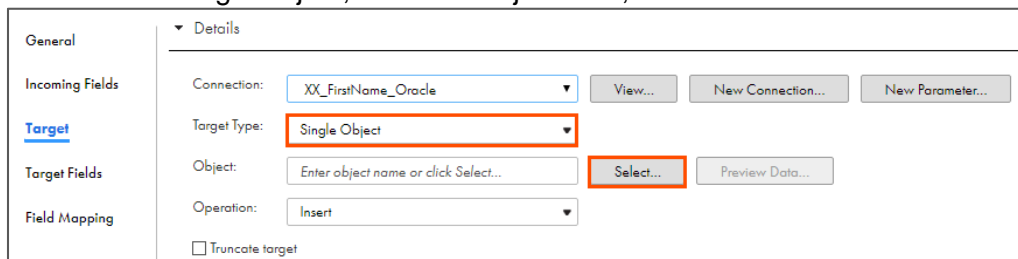
The **Properties** pane is shown with the **Target** tab selected. The **Details** section contains the following fields:

- Connection:** A drop-down menu showing **XX\_FirstName\_Oracle** (highlighted with a red box).
- Target Type:** A drop-down menu showing **Single Object**.
- Object:** A text field with the placeholder "Enter object name or click Select..." and a **Select...** button.
- Operation:** A drop-down menu showing **Insert**.

There are also buttons for **View...**, **New Connection...**, and **New Parameter...**. A checkbox for **Truncate target** is at the bottom.

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

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



The **Properties** pane is shown with the **Target** tab selected. The **Details** section contains the following fields:

- Connection:** A drop-down menu showing **XX\_FirstName\_Oracle**.
- Target Type:** A drop-down menu showing **Single Object** (highlighted with a red box).
- Object:** A text field with the placeholder "Enter object name or click Select..." and a **Select...** button (highlighted with a red box).
- Operation:** A drop-down menu showing **Insert**.

There are also buttons for **View...**, **New Connection...**, and **New Parameter...**. A checkbox for **Truncate target** is at the bottom.

**Note:** The Target Object window appears.

101. From the list, select **ACTCUSTORDER\_SUMMARY**.

102. 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

**XX\_FirstName\_Oracle**  
**ACTCUSTORDER\_SUMMARY**

| Select                           | Name                 | Type  |
|----------------------------------|----------------------|-------|
| <input type="radio"/>            | ACTCUSTOMERS         | TABLE |
| <input checked="" type="radio"/> | ACTCUSTORDER_SUMM... | TABLE |
| <input type="radio"/>            | ACTORDERS            | TABLE |
| <input type="radio"/>            | HOTEL_CUSTOMERS      | TABLE |

Displaying all 4 objects.

103. Scroll down and select **Truncate target** checkbox.

**General**

**Incoming Fields**

**Target**

**Target Fields**

**Field Mapping**

**Details**

Connection:

Target Type:

Object:

Operation:

☒ **Truncate target**

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

105. From the Automatch drop-down, select **Smart Match**.

**General**

Field map options:

**Incoming Fields**

**Target**

**Target Fields**

**Field Mapping**

**Incoming Fields: (0 of 3 mapped)**

Field Name

agg\_TOTAL\_SOLD\_USD

agg\_TOTAL\_UNITS\_SOLD\_USD

cust\_CUSTOMER\_ID

**Target Fields: (0 of 3 mapped)**

Field Name

CUSTOMER\_ID

TOTAL\_SOLD\_USD

TOTAL\_UNITS\_SOLD

Exact Field Name

**Smart Match**

Undo Automatch

106. After Automatch the field mapping looks as shown below:

**General**

Field map options:

**Incoming Fields**

**Target**

**Target Fields**

**Field Mapping**

**Incoming Fields: (3 of 3 mapped)**

Field Name

agg\_TOTAL\_SOLD\_USD

agg\_TOTAL\_UNITS\_SOLD\_USD

cust\_CUSTOMER\_ID

**Target Fields: (3 of 3 mapped)**

Field Name

CUSTOMER\_ID

TOTAL\_SOLD\_USD

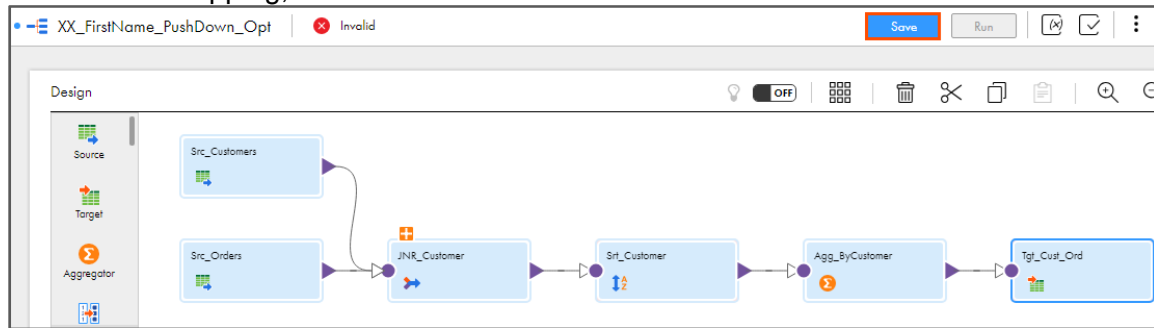
TOTAL\_UNITS\_SOLD

cust\_CUSTOMER\_ID

agg\_TOTAL\_SOLD\_USD

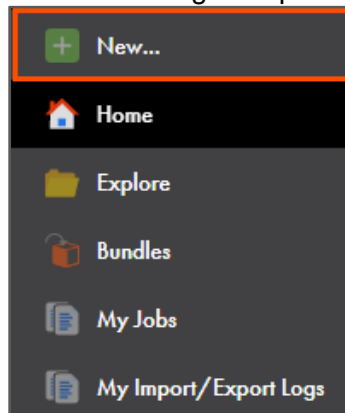
agg\_TOTAL\_UNITS\_SOLD\_USD

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

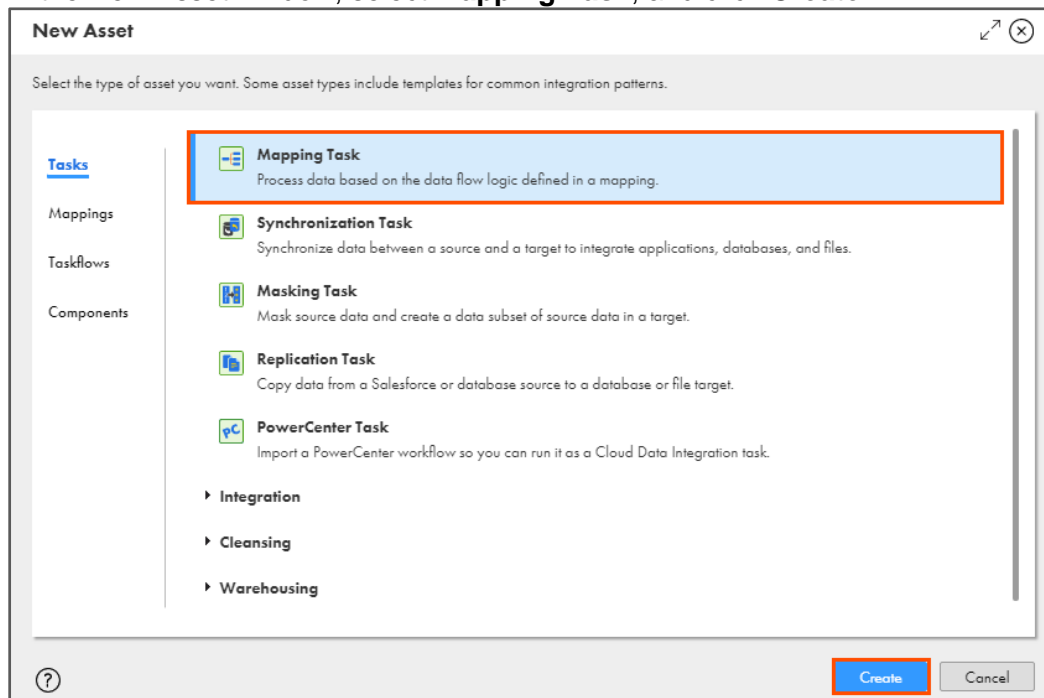


### Create Mapping Task:

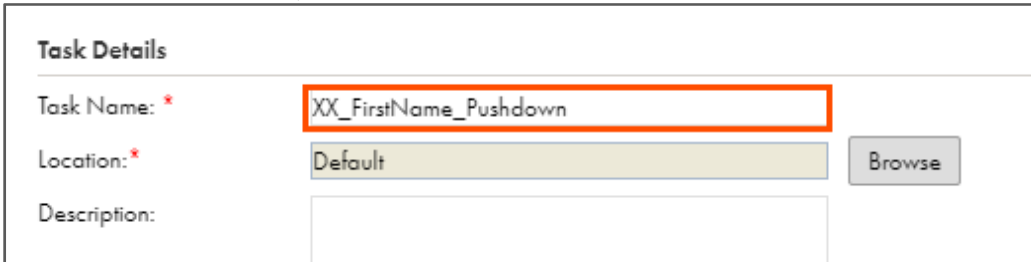
108. From the Navigation pane, select **New**.



109. In the New Asset window, select **Mapping Task**, and click **Create**.



110. In the Task Name field, enter **XX\_FirstName\_Pushdown**.



**Task Details**

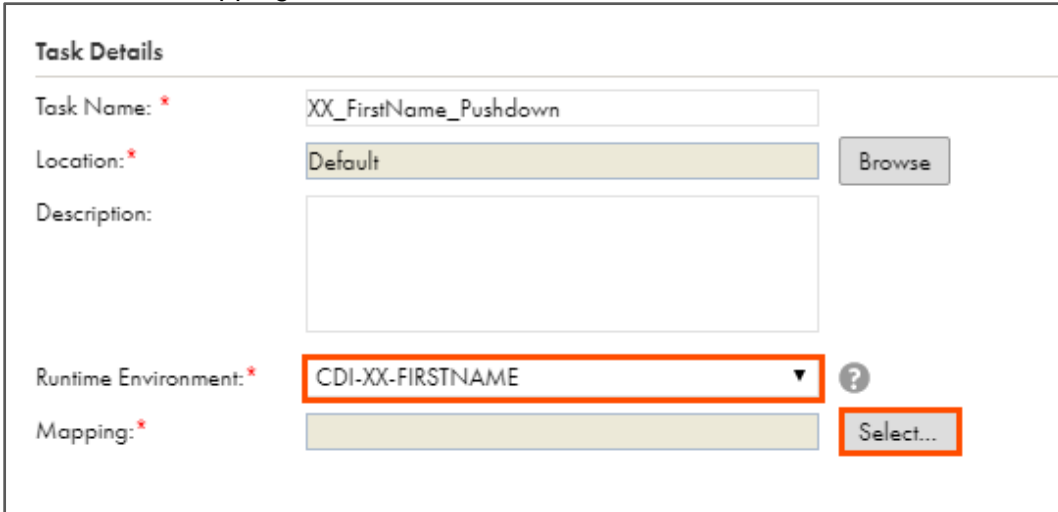
Task Name: \*

Location: \*

Description:

111. From the Runtime Environment drop-down, select your secure agent group.  
**Note:** The Runtime Environment name will be in CDI-XX-FIRSTNAME format.

112. To select the Mapping, click **Select**.



**Task Details**

Task Name: \*

Location: \*

Description:

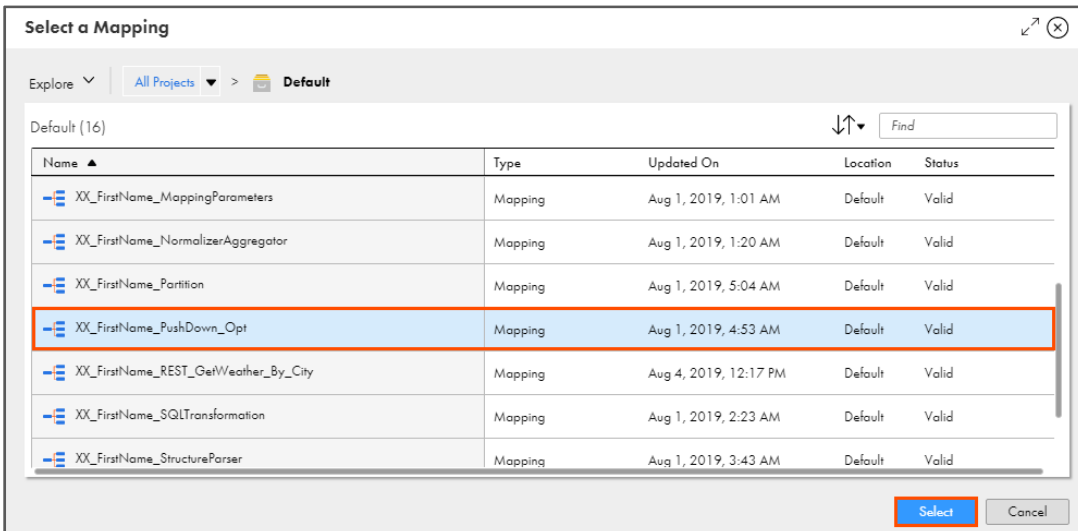
Runtime Environment: \*  ?

Mapping: \*

**Note:** The Select a Mapping window appears.

113. From the list, select **XX\_FirstName\_PushDown\_Opt**.

114. Click **Select**.



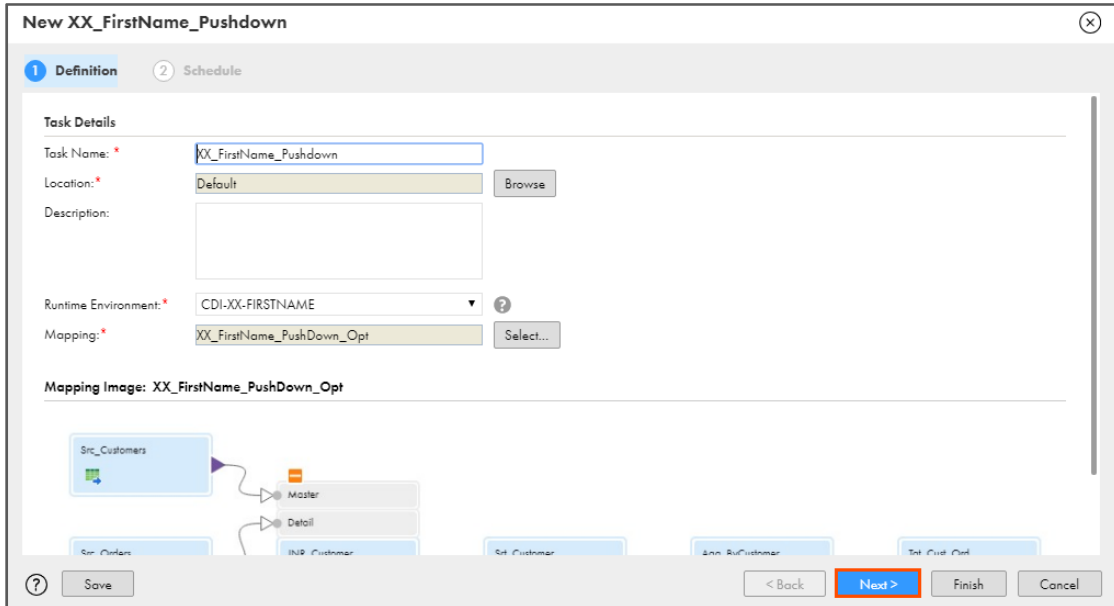
**Select a Mapping**

Explore ▾ All Projects ▾ > Default

Default (16)

| Name ▲                                                        | Type    | Updated On            | Location | Status |
|---------------------------------------------------------------|---------|-----------------------|----------|--------|
| <input type="checkbox"/> XX_FirstName_MappingParameters       | Mapping | Aug 1, 2019, 1:01 AM  | Default  | Valid  |
| <input type="checkbox"/> XX_FirstName_NormalizerAggregator    | Mapping | Aug 1, 2019, 1:20 AM  | Default  | Valid  |
| <input type="checkbox"/> XX_FirstName_Partition               | Mapping | Aug 1, 2019, 5:04 AM  | Default  | Valid  |
| <input checked="" type="checkbox"/> XX_FirstName_PushDown_Opt | Mapping | Aug 1, 2019, 4:53 AM  | Default  | Valid  |
| <input type="checkbox"/> XX_FirstName_REST_GeWWeather_By_City | Mapping | Aug 4, 2019, 12:17 PM | Default  | Valid  |
| <input type="checkbox"/> XX_FirstName_SQLTransformation       | Mapping | Aug 1, 2019, 2:23 AM  | Default  | Valid  |
| <input type="checkbox"/> XX_FirstName_StructureParser         | Mapping | Aug 1, 2019, 3:43 AM  | Default  | Valid  |

115. Click **Next**.



**New XX\_FirstName\_Pushdown**

1 Definition 2 Schedule

**Task Details**

Task Name: \* XX\_FirstName\_Pushdown

Location: \* Default

Description:

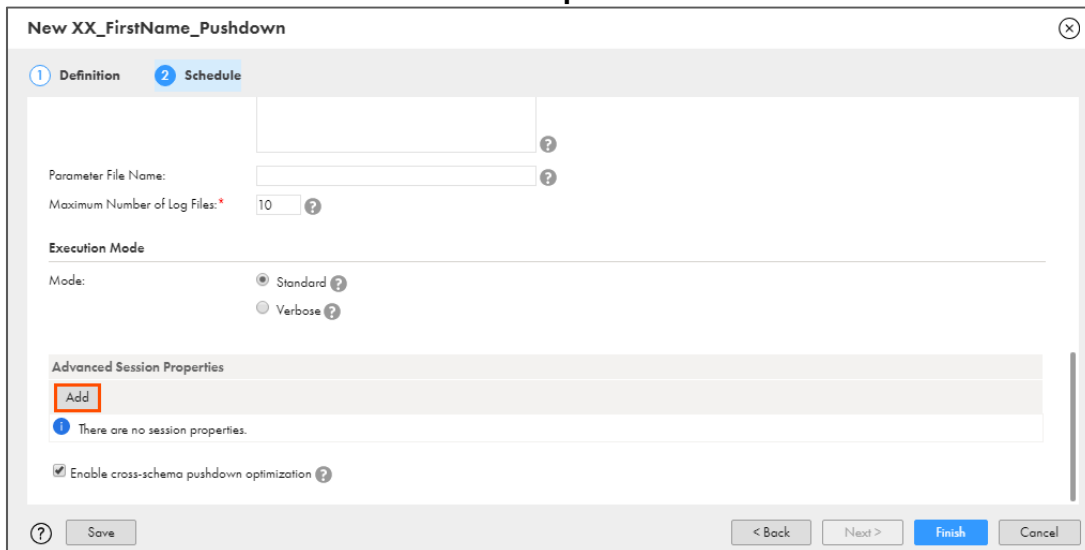
Runtime Environment: \* CDI-XX-FIRSTNAME ?

Mapping: \* XX\_FirstName\_PushDown\_Opt

Mapping Image: XX\_FirstName\_PushDown\_Opt

Diagram: Src\_Customers (blue box) connects to Master (orange box) and Detail (orange box). Below are other tables: Src\_Products, INR\_Customer, Src\_Customer, Src\_BuCustomer, Src\_Cust\_Cat.

116. Scroll down to the **Advanced Session Properties** section and click **Add**.



**New XX\_FirstName\_Pushdown**

1 Definition 2 Schedule

Parameter File Name: ?

Maximum Number of Log Files: \* 10 ?

**Execution Mode**

Mode: ☒ Standard ? ☐ Verbose ?

**Advanced Session Properties**

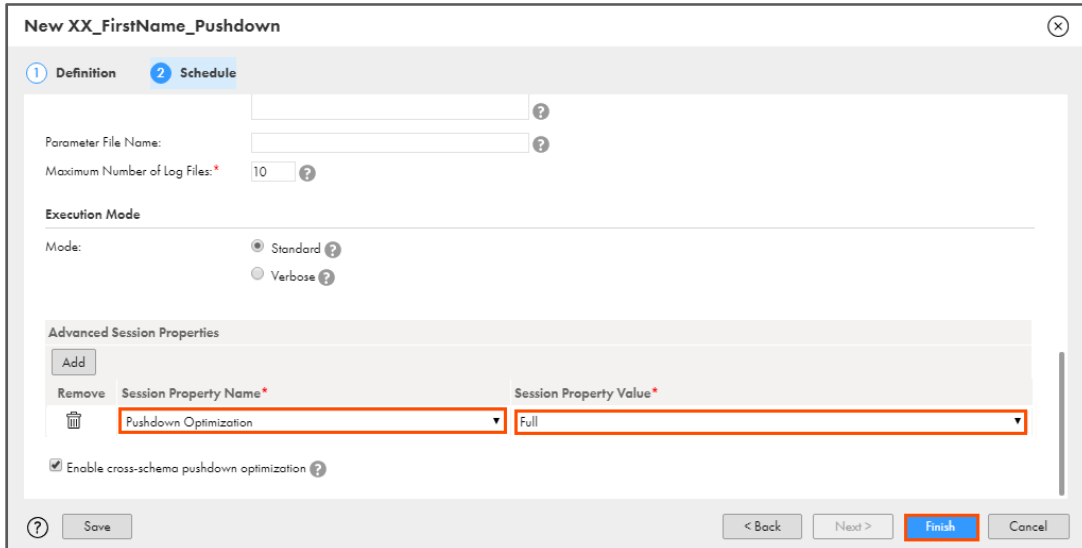
There are no session properties.

☒ Enable cross-schema pushdown optimization ?

117. From the Session Property Name drop-down, select **Pushdown Optimization**.

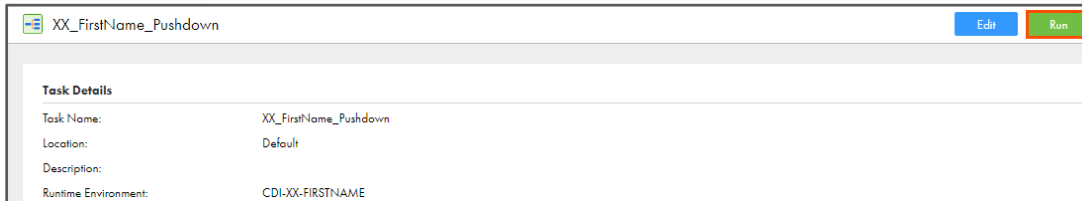
118. From the Session Property Value drop-down, select **Full**.

119. Click **Finish**.



The dialog box titled "New XX\_FirstName\_Pushdown" has two tabs: "Definition" and "Schedule". The "Definition" tab is active. It contains fields for "Parameter File Name", "Maximum Number of Log Files" (set to 10), and "Execution Mode" (with radio buttons for "Standard" and "Verbose"). Below these is the "Advanced Session Properties" section, which includes an "Add" button and a table with "Session Property Name" and "Session Property Value". The table has one row with "Pushdown Optimization" and "Full". There is also a checkbox for "Enable cross-schema pushdown optimization". At the bottom are "Save", "< Back", "Next >", "Finish" (highlighted with a red box), and "Cancel" buttons.

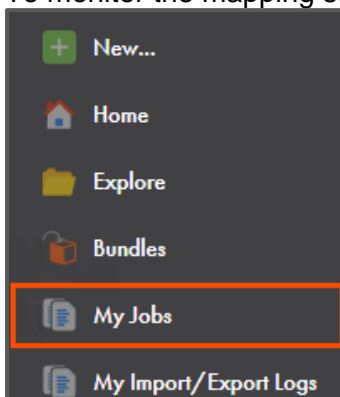
120. To run the task, click **Run**.



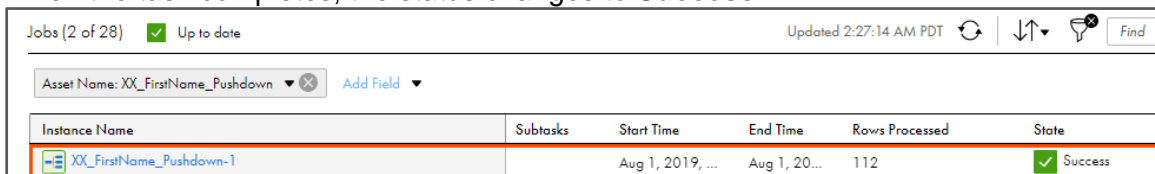
The "Task Details" window for "XX\_FirstName\_Pushdown" shows the task name, location (Default), description, and runtime environment (CDI-XX-FIRSTNAME). At the top right are "Edit" and "Run" buttons, with "Run" highlighted by a red box.

## Monitor Status:

121. To monitor the mapping status, from the Navigation pane, click **My Jobs**.



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




The "Jobs (2 of 28)" table shows the status of the task. The first row is highlighted with a red box and shows a "Success" status.

| Instance Name           | Subtasks | Start Time       | End Time     | Rows Processed | State   |
|-------------------------|----------|------------------|--------------|----------------|---------|
| XX_FirstName_Pushdown-1 |          | Aug 1, 2019, ... | Aug 1, 20... | 112            | Success |

123. To view job details, click on the Instance Name **XX\_FirstName\_Pushdown-1**.

124. Click **Download Session Log**. The file is available on your local machine.

| Job Properties       |                       | Results       |                                                                                                                          |
|----------------------|-----------------------|---------------|--------------------------------------------------------------------------------------------------------------------------|
| Task Name:           | XX_FirstName_Pushdown | State:        | ✓ Success                                                                                                                |
| Instance ID:         | 2                     | Success Rows: | 112                                                                                                                      |
| Task Type:           | Mapping Task          | Error Rows:   | 0                                                                                                                        |
| Started By:          |                       | Session Log:  |  <a href="#">Download Session Log</a> |
| Start Time:          |                       |               |                                                                                                                          |
| End Time:            |                       |               |                                                                                                                          |
| Duration:            | 23 seconds            |               |                                                                                                                          |
| Runtime Environment: | CDI-XX-FIRSTNAME      |               |                                                                                                                          |
| Secure Agent:        | CDI-XX-FIRSTNAME      |               |                                                                                                                          |

125. Open the session log file, scroll down to view the SQL execution summary.

```
SQL execution summary:
=====

Target: CDI.ACTCUSTORDER_SUMMARY (Instance Name [ACTCUSTORDER_SUMMARY])
Inserted rows - Affected: 112

SQL_1_1_1> OPT_63060 [2019-07-01 20:07:40.553] *****END SQL EXECUTION*****
SQL_1_1_1> OPT_63054 [2019-07-01 20:07:40.553] SQL run completed.
MANAGER> PETL_24031 [2019-07-01 20:07:40.555]
***** RUN INFO FOR TGT LOAD ORDER GROUP [1], CONCURRENT SET [1] *****
Thread [SQL_1_1_1] created for [the SQL execution] of partition point [CDI.ACTCUSTORDER_SUMMARY] has completed.
```

---

*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:

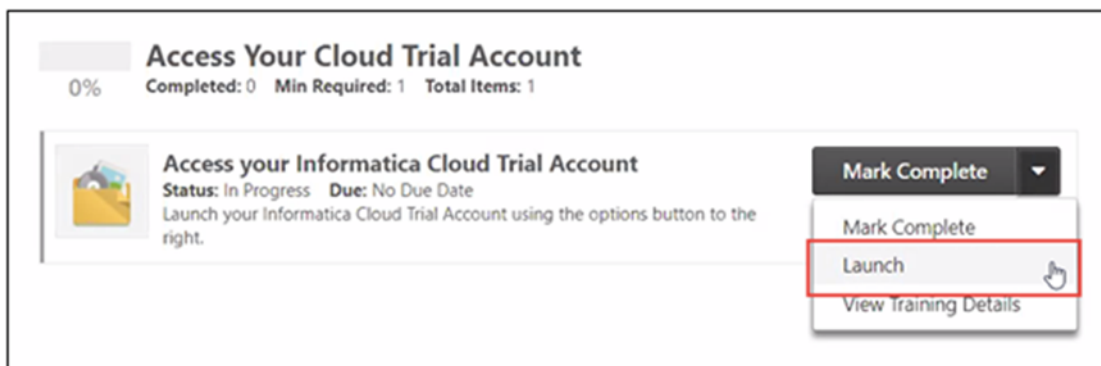
5 minutes

---

### Tasks:

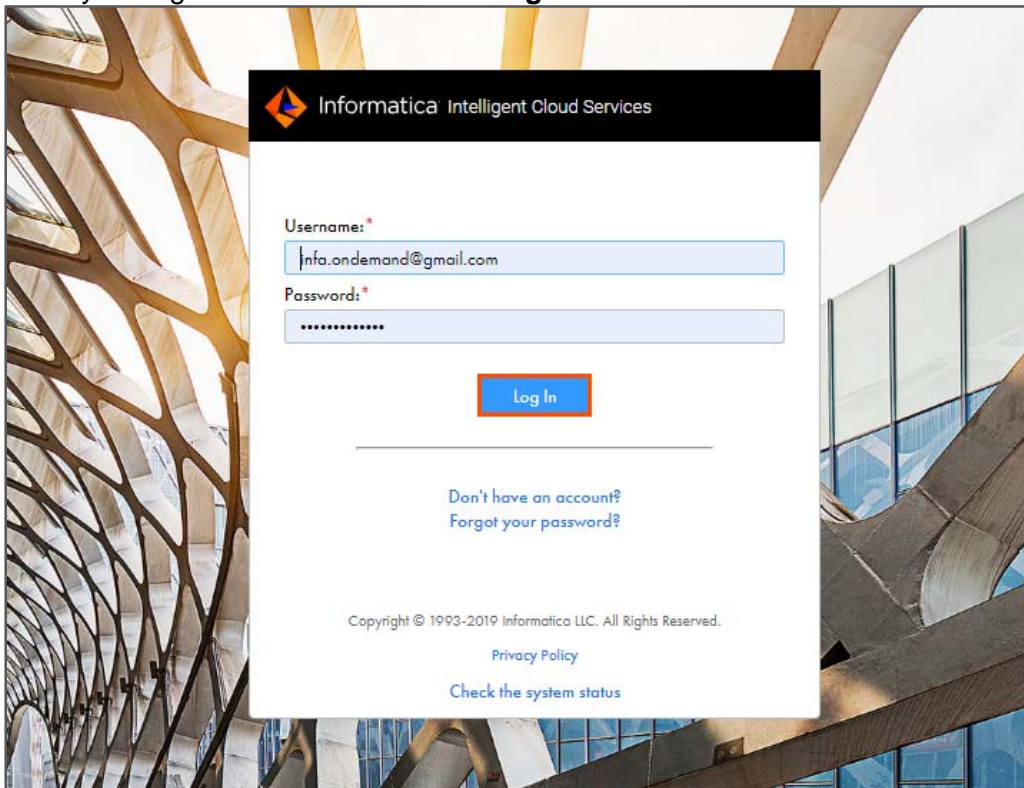
#### Create Schedule:

1. Access your cloud trial account by clicking **Launch** in your option Menu. If the option menu is labeled anything other than **Launch**, click the down arrow to the right and click **Launch**.



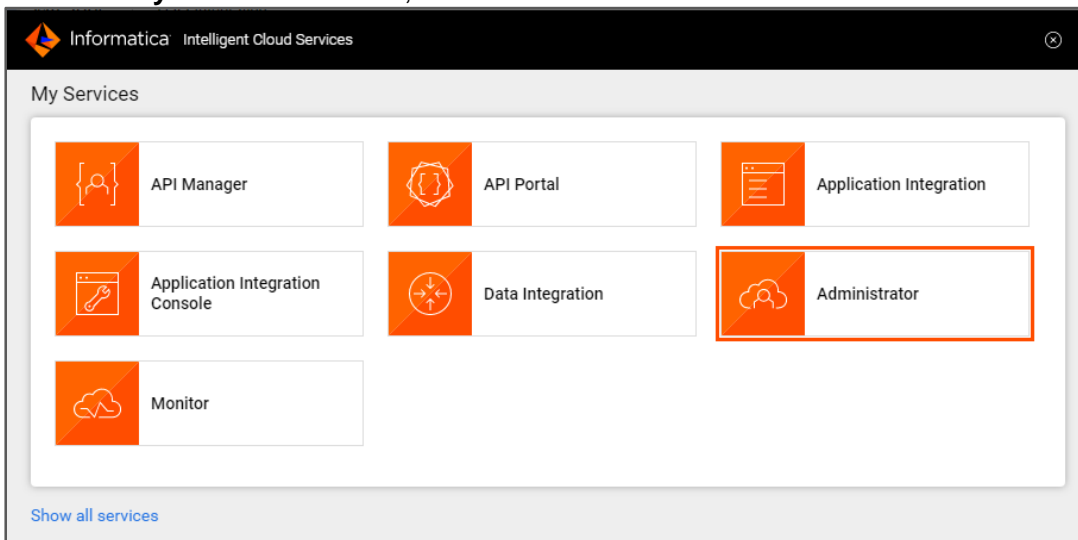
**Note:** Follow this step, if you have navigated away from the login page.

2. Enter your login credentials and click **Log In**.

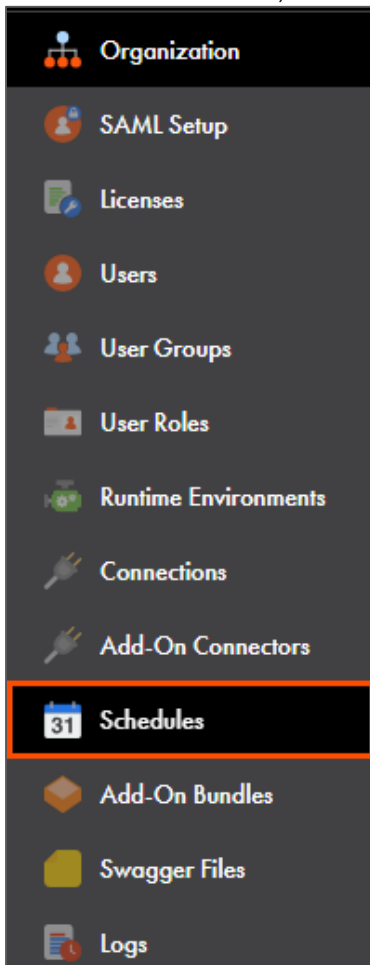


The image shows the login page for Informatica Intelligent Cloud Services. The page has a black header with the Informatica logo and the text "Informatica Intelligent Cloud Services". Below the header, there are two input fields: "Username:" and "Password:". The username field contains the text "info.ondemand@gmail.com". The password field is masked with dots. Below the input fields is a blue "Log In" button. Underneath the button, there are two links: "Don't have an account?" and "Forgot your password?". At the bottom of the page, there is a copyright notice: "Copyright © 1993-2019 Informatica LLC. All Rights Reserved." and two more links: "Privacy Policy" and "Check the system status".

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



- To create a schedule, from the Navigation pane, select **Schedules**.



- To create a new schedule, click **New Schedule**.



**Note:** The New Schedule page appears.

- In the Schedule Name field, enter **XX\_FirstName\_Daily**.

**Schedule Details**

Schedule Name:

Description:

- 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 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 **Repeats until**, and select the date that is three days after the current date.

11. To save the schedule, click **Save**.

New Schedule

Save

**Schedule Details**

Schedule Name: \* XX\_FirstName\_Daily

Description:

**Schedule Options**

Starts: \* 03/07/2019 at 10 : 30 + 30 seconds

Time Zone: ? Indian Standard Time, Bombay, Delhi

Repeats: Daily

**Repeat Frequency Options: Daily**

Run the task:

☐ Every day

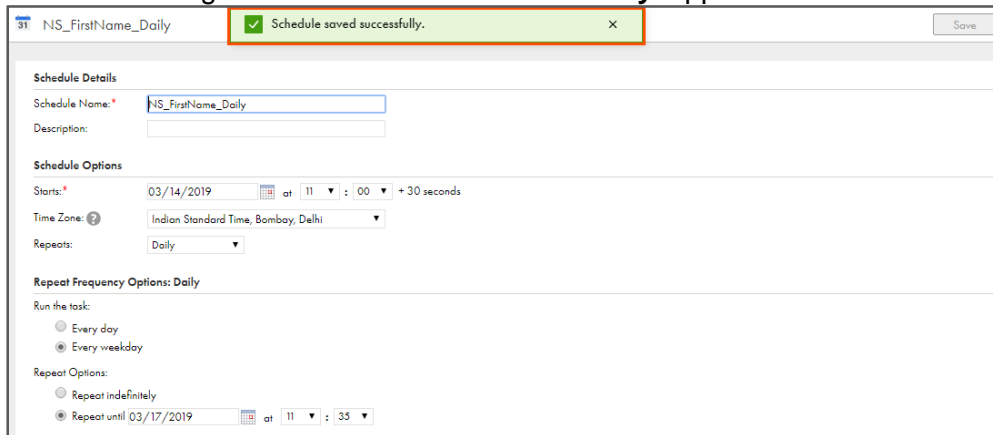
☒ Every weekday

**Repeat Options:**

☐ Repeat indefinitely

☒ Repeat until 03/10/2019 at 11 : 00

**Note:** A message 'Schedule saved successfully' appears.



31 NS\_FirstName\_Daily ✓ Schedule saved successfully. × Save

**Schedule Details**

Schedule Name:

Description:

**Schedule Options**

Starts:  at  :  +30 seconds

Time Zone:

Repeats:

**Repeat Frequency Options: Daily**

Run the task:

☐ Every day

☒ Every weekday

Repeat Options:

☐ Repeat indefinitely

☒ Repeat until  at  :

---

*This concludes the lab.*



## Module 19: Administration

### Lab 19-1: Configure Administrative Settings for your Informatica Cloud Org

#### Overview:

An Organization is a secure area within the Informatica Intelligent Cloud Services 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 might 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

#### Scenario:

After creating various connections, Joseph 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:

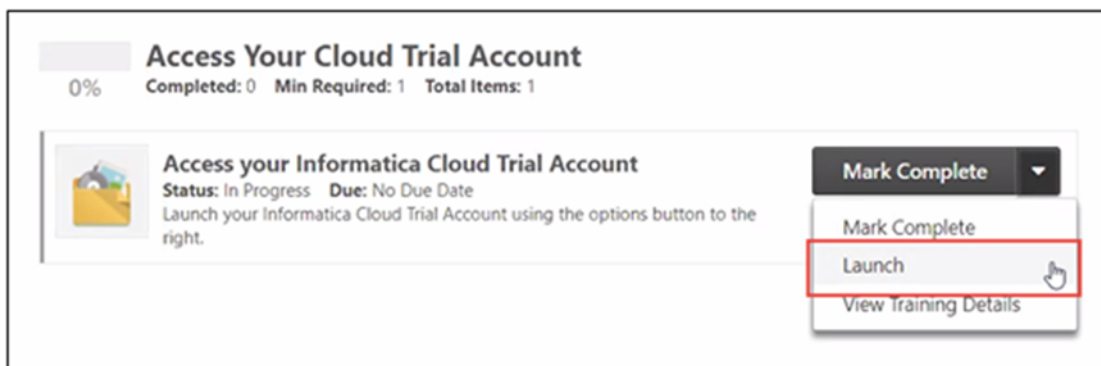
15 Minutes

---

#### Tasks:

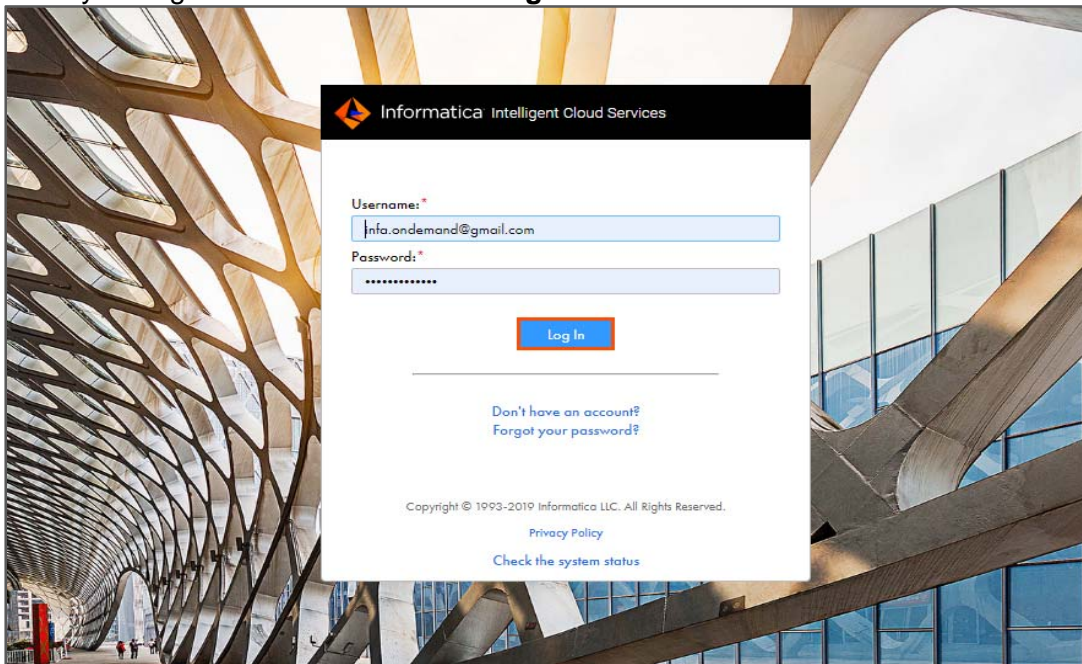
##### Create a new user:

1. Access your cloud trial account by clicking **Launch** in your option Menu. If the option menu is labeled anything other than **Launch**, click the down arrow to the right and click **Launch**.

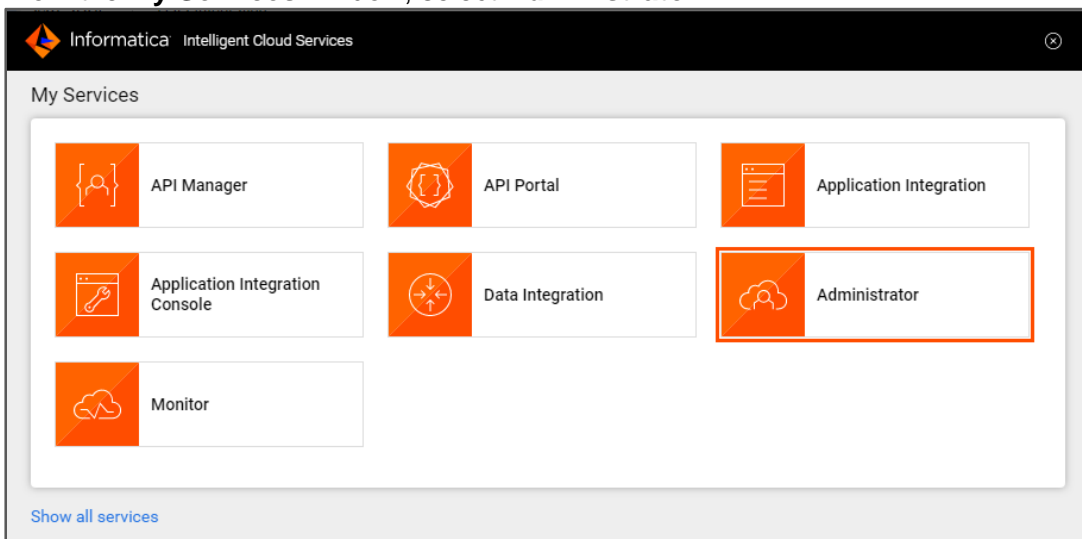


**Note:** Follow this step, if you have navigated away from the login page.

2. Enter your login credentials and click **Log In**.

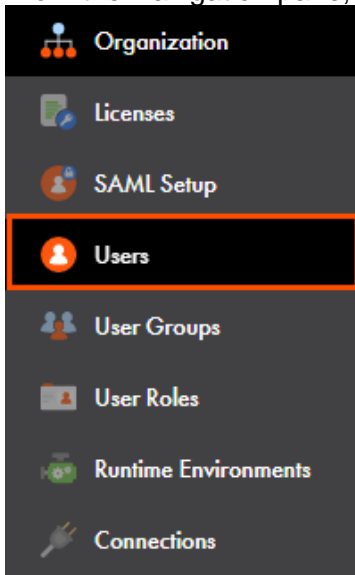


3. From the **My Services** window, select **Administrator**.

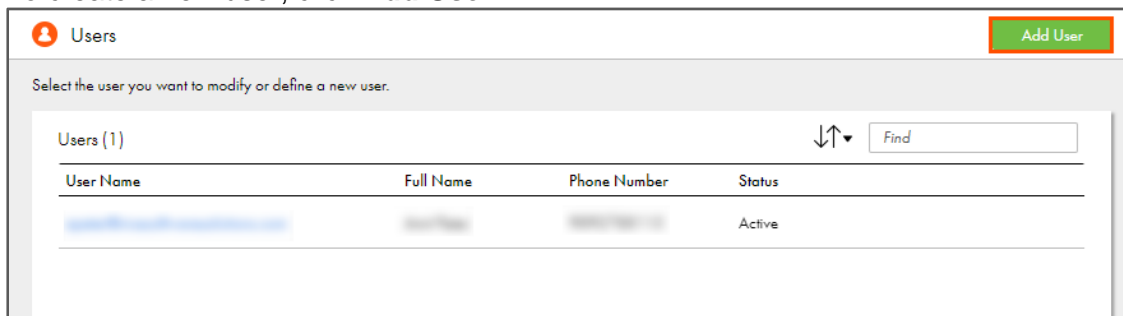




4. From the Navigation pane, select **Users**.



5. To create a new user, click **Add User**.



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: *    | <input type="text" value="John"/>                          | Authentication: *   | <input type="text" value="Native"/>                          |
| Last Name: *     | <input type="text" value="Smith"/>                         | User Name: *        | <input type="text" value="instructor@informaticacloud.com"/> |
| Job Title: *     | <input type="text" value="Instructor"/>                    | Max Login Attempts: | <input type="text" value="10"/>                              |
| Phone Number: *  | <input type="text" value="3120347120"/>                    |                     |                                                              |
| Email: *         | <input type="text" value="cloudinstructordemo@gmail.com"/> |                     |                                                              |
| Description:     | <input type="text"/>                                       |                     |                                                              |

**Note:** For this lab, we will create a user with User Name as instructor@informaticacloud.com.

7. Assign the **Admin** role to the user.

Assigned User Groups and Roles

| Enabled                             | Group Name | Description | Enabled                             | Role Name                             | Description                                     |
|-------------------------------------|------------|-------------|-------------------------------------|---------------------------------------|-------------------------------------------------|
| <input checked="" type="checkbox"/> |            |             | <input checked="" type="checkbox"/> | Admin                                 | Role for performing administrative tasks for... |
| <input type="checkbox"/>            |            |             | <input type="checkbox"/>            | Application Integration Business M... | Role used for business managers                 |
| <input type="checkbox"/>            |            |             | <input type="checkbox"/>            | Application Integration Data Viewer   | Role used for granting access for data          |
| <input type="checkbox"/>            |            |             | <input type="checkbox"/>            | Data Integration Data Previewer       | Role to preview data                            |
| <input type="checkbox"/>            |            |             | <input type="checkbox"/>            | Data Integration Task Executor        | Role to run Data Integration tasks              |
| <input type="checkbox"/>            |            |             | <input type="checkbox"/>            | Deployer                              | Role used by deployer                           |
| <input type="checkbox"/>            |            |             | <input type="checkbox"/>            | Designer                              | Role for creating assets, tasks, and process... |
| <input type="checkbox"/>            |            |             | <input type="checkbox"/>            | Monitor                               | Role used for application monitor               |
| <input type="checkbox"/>            |            |             | <input type="checkbox"/>            | Operator                              | Role used for monitoring execution environ...   |
| <input type="checkbox"/>            |            |             | <input type="checkbox"/>            | Service Consumer                      | Role for running tasks, taskflows, and proc...  |

**Note:** You can assign other roles to a user as per your requirement.

8. Click **Save**.

New User

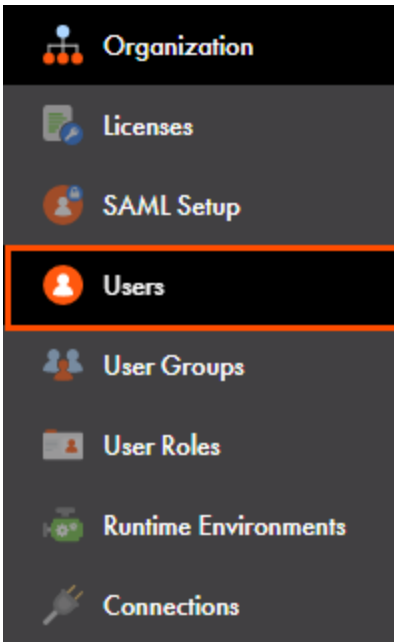
Define the user account settings, including group and role assignments.

Email: \*

Description:

**Save**

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**

Users

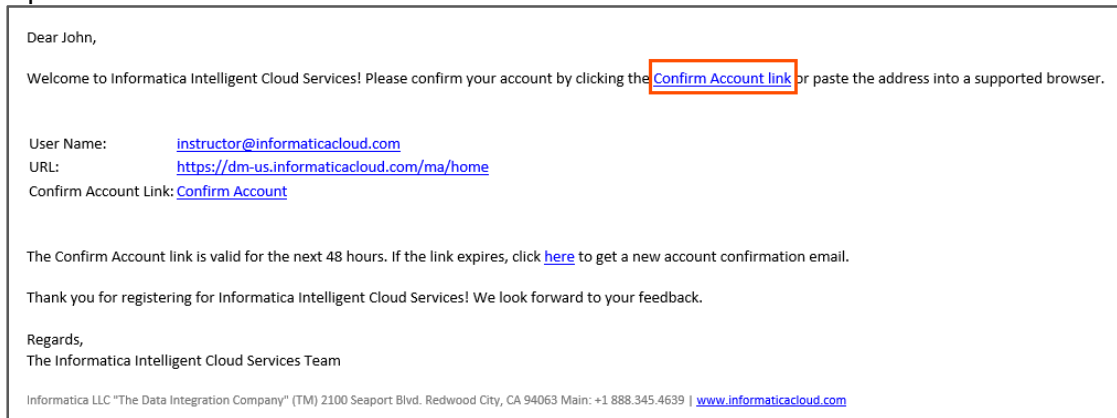
Select the user you want to modify or define a new user.

Users (2) Find

| User Name                       | Full Name  | Phone Number | Status             |
|---------------------------------|------------|--------------|--------------------|
| instructor@informaticacloud.com | John Smith | 3120347120   | Pending Activation |

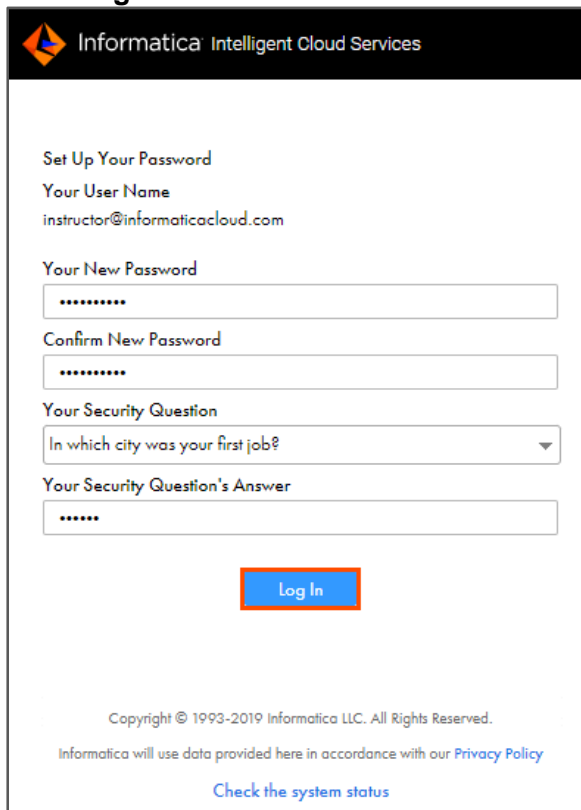
11. Login to the email account that you specified in the email field for the new user.

12. Open the email from [admin@informaticacloud.com](mailto:admin@informaticacloud.com) and click **Confirm Account**.



13. Set the password and other security configuration.

14. Click **Login**.



**Informatica Intelligent Cloud Services**

Set Up Your Password

Your User Name  
 instructor@informaticacloud.com

Your New Password

Confirm New Password

Your Security Question

Your Security Question's Answer

**Login**

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. A message “The service may collect information about the operation, organization, and use of the service, possibly including your user ID, password, and IP address.” is displayed on the screen.

16. Click **Continue**.



The service may collect information about the operation, organization, and use of the service, possibly including your user ID, password, and IP address.

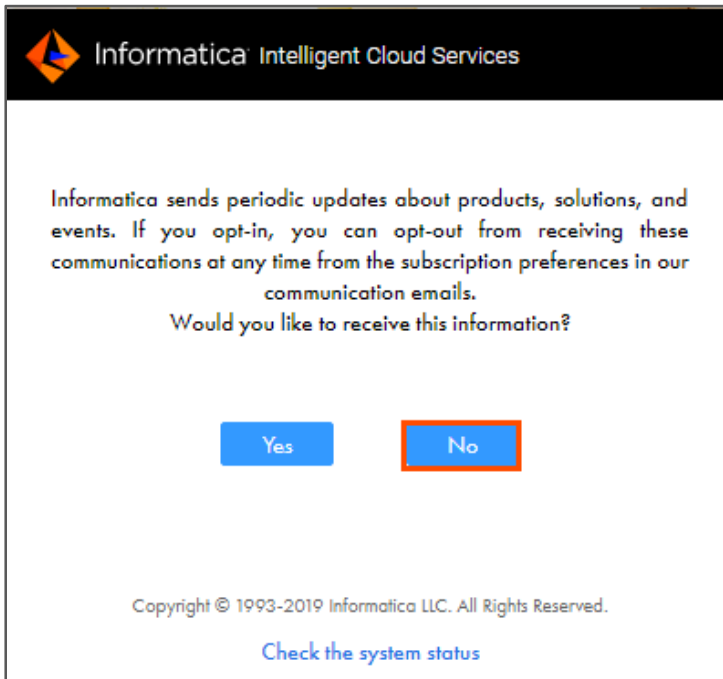
See the Informatica [privacy policy](#).

**Continue**

Copyright © 1993-2019 Informatica LLC. All Rights Reserved.

[Check the system status](#)

17. Click **No**.



Informatica sends periodic updates about products, solutions, and events. If you opt-in, you can opt-out from receiving these communications at any time from the subscription preferences in our communication emails.

Would you like to receive this information?

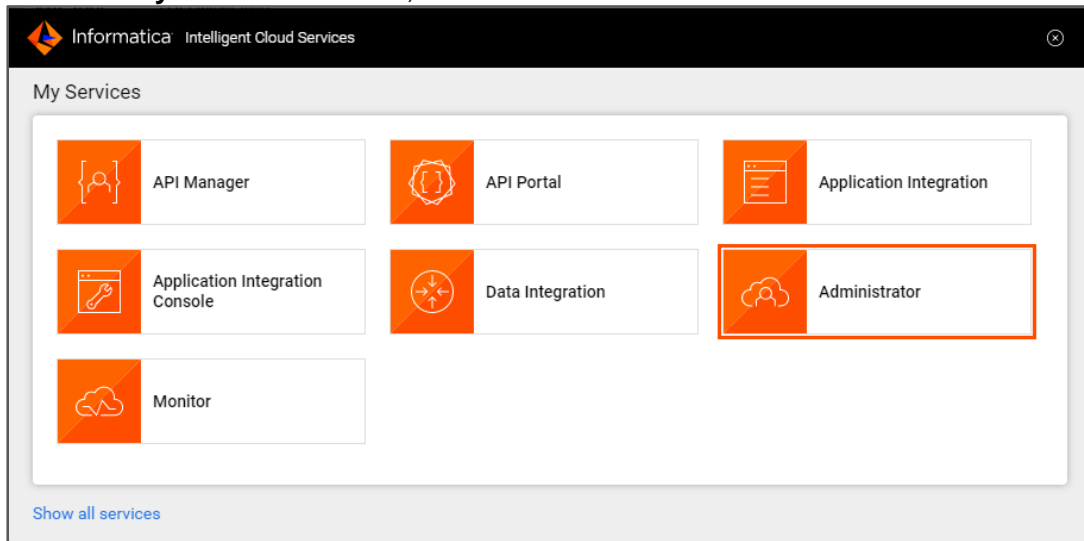
**Yes** **No**

Copyright © 1993-2019 Informatica LLC. All Rights Reserved.

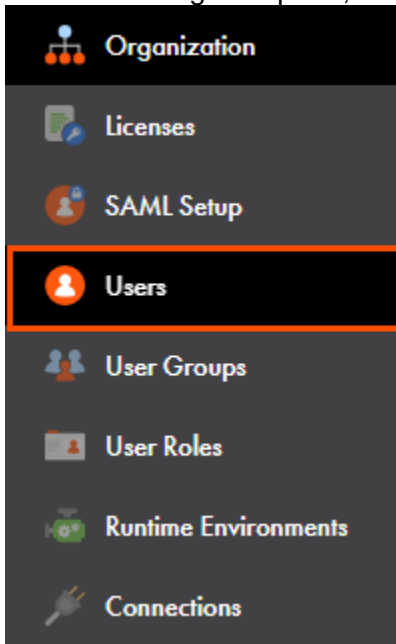
[Check the system status](#)

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

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



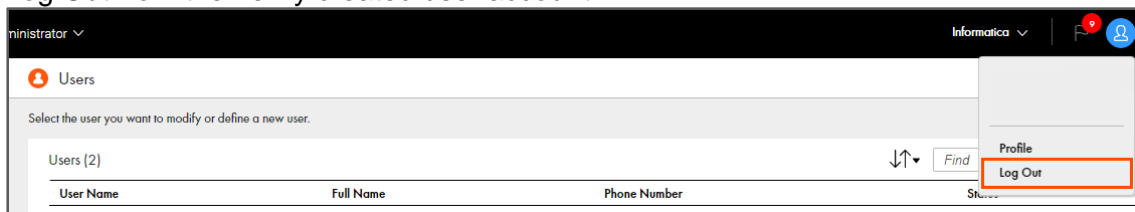
19. From the Navigation pane, select **Users**.



20. Observe that status of the new user has changed to Active.

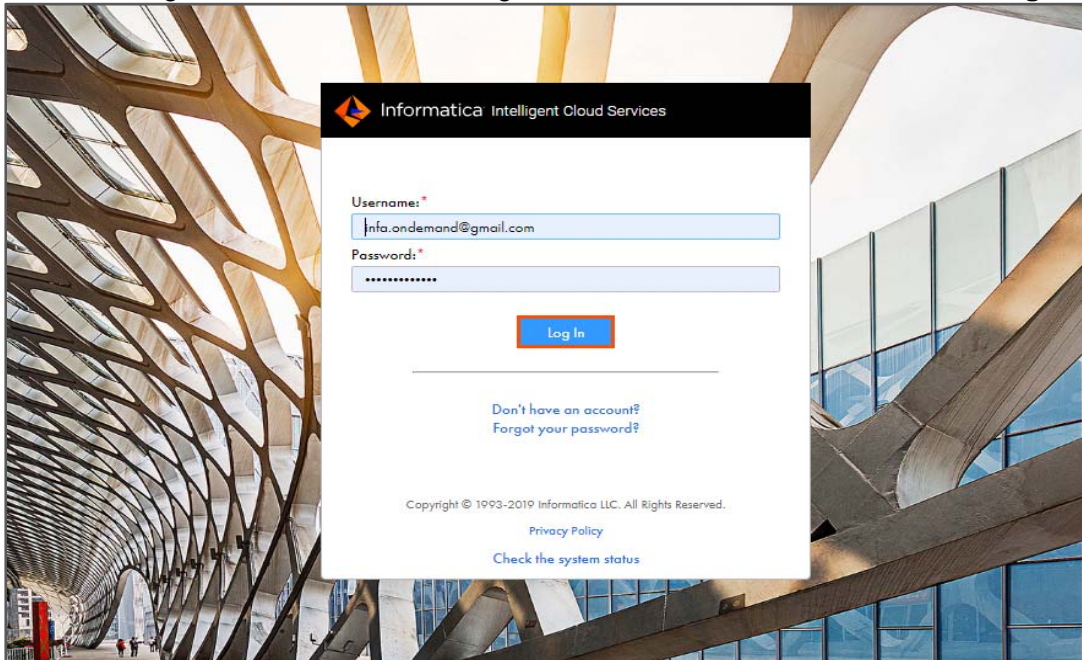
| Users (2)                       |            |              |        |
|---------------------------------|------------|--------------|--------|
| User Name                       | Full Name  | Phone Number | Status |
| instructor@informaticacloud.com | John Smith | 3120347120   | Active |


21. Log Out from the newly created user account.

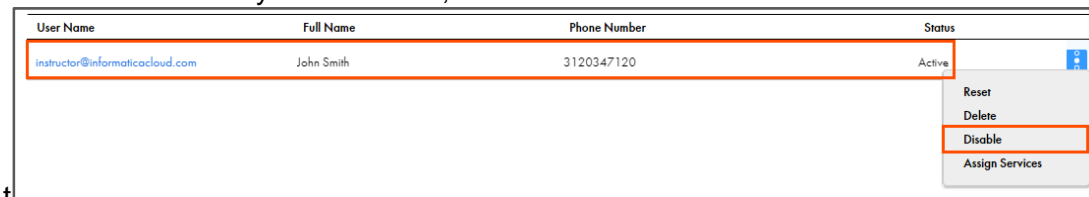


### Disable and Reset a User:

22. Enter the Login credentials used during IICS trail account creation and click **Log In**.

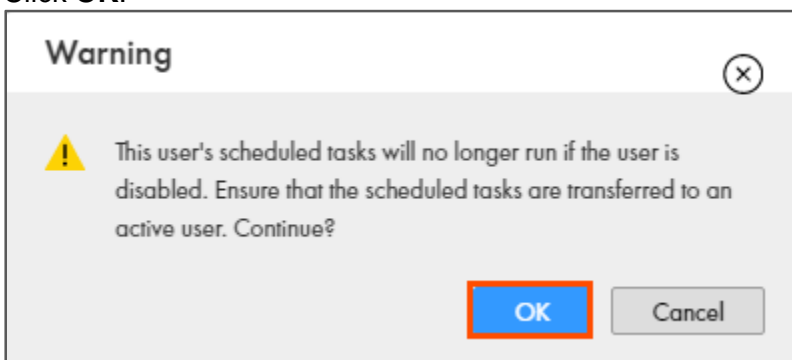


23. To disable the newly created user, click  and select **Disable**.



**Note:** A Warning window appears.

24. Click **OK**.



**Note:** A message User disabled successfully appears.

25. 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:

26. 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.

27. 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.

28. To save the changes, click **Save**.

Select services to assign to user

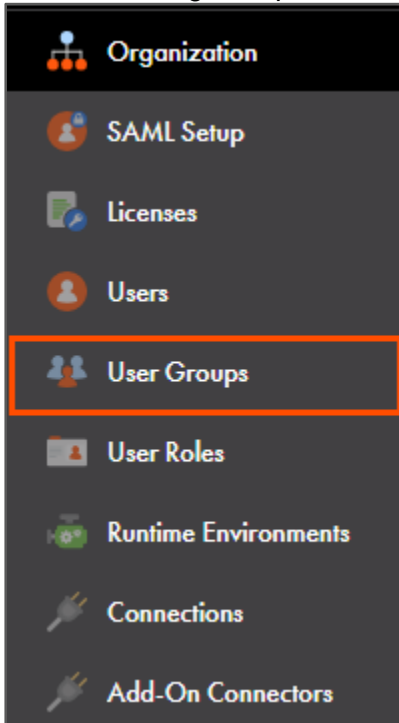
Available Services (10)

| <input checked="" type="checkbox"/> | 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"/> | Master Data Management          | Analyzes state of orchestration and deployment activities across all cloud services and provides in-depth                                                                                                             |

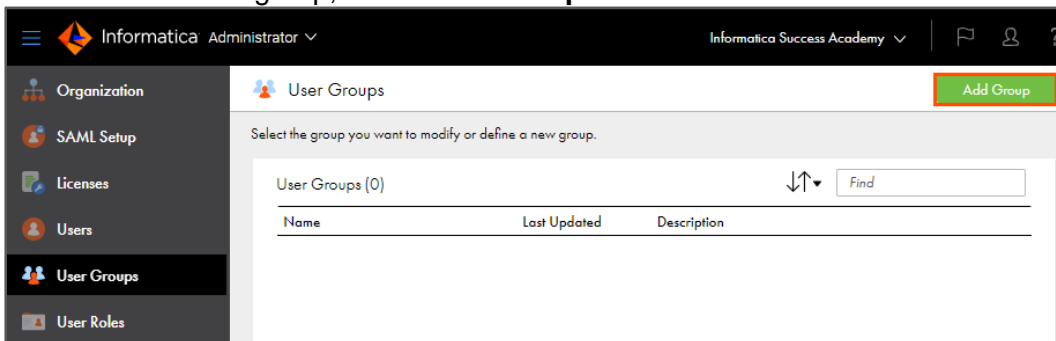


**Create a new User Group:**

29. From the Navigation pane, select **User Groups**.



30. To add a new user group, select **Add Group**.



31. In the Name field, enter **Lab Group**.



32. Assign **Admin** role to the group.

Group Information

Name: \*

Lab Group

Description:

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.

33. 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 in **step 6**.

Group Members

Available Users

CAI\_Anonymous\_13Asy5feWcvlDm3...

instructor@informaticacloud.com

instructordemo@informatica.com

>

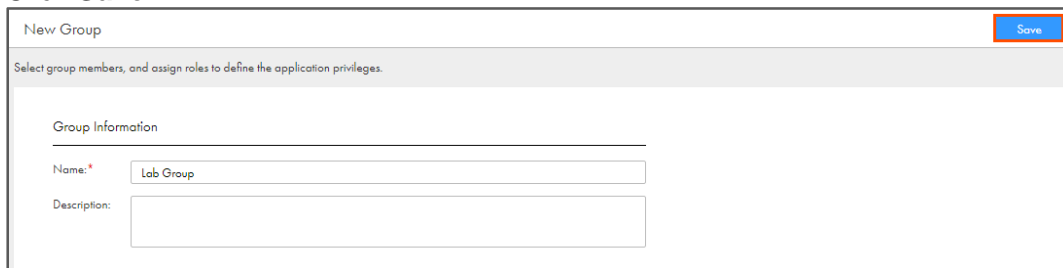
<

>>

<<

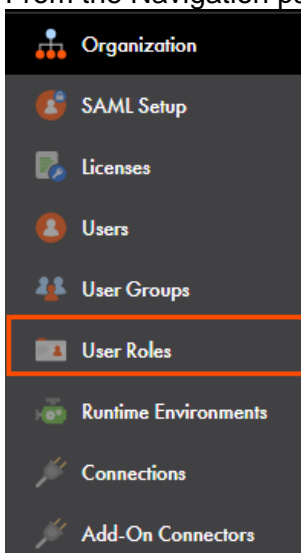
Assigned Users

34. Click **Save**.







**Change the configuration of a role:**

35. From the Navigation pane, select **User Roles**.



36. To modify the admin user role, click **Admin**.

| User Roles (10)                                                                                                           |                       |         |                                                                                              |
|---------------------------------------------------------------------------------------------------------------------------|-----------------------|---------|----------------------------------------------------------------------------------------------|
| 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                                                                         |

37. From the Services drop-down, select the services for which you want to configure the privileges.

**Note:** For this lab, select **Administrator**.

38. 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.

39. 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

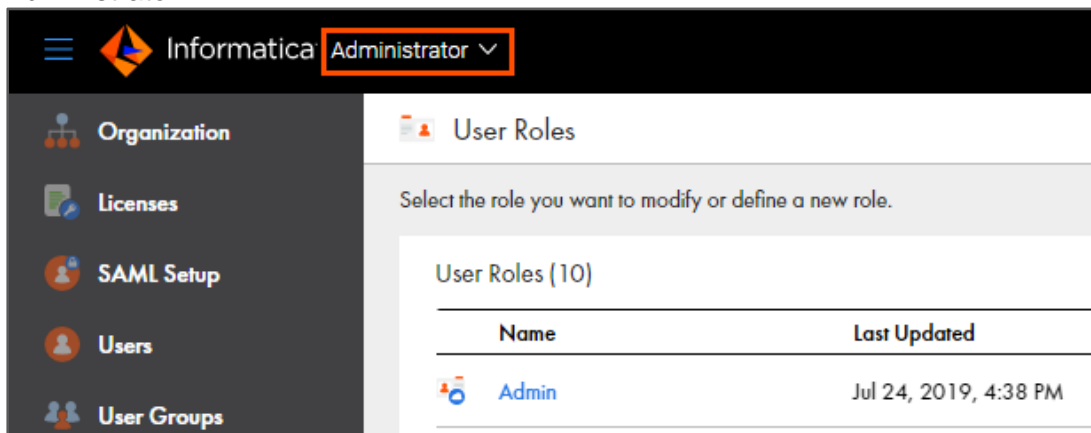
Role Name: Admin

Description: Role for performing administrative tasks for an organization. Has full access to all licensed services.

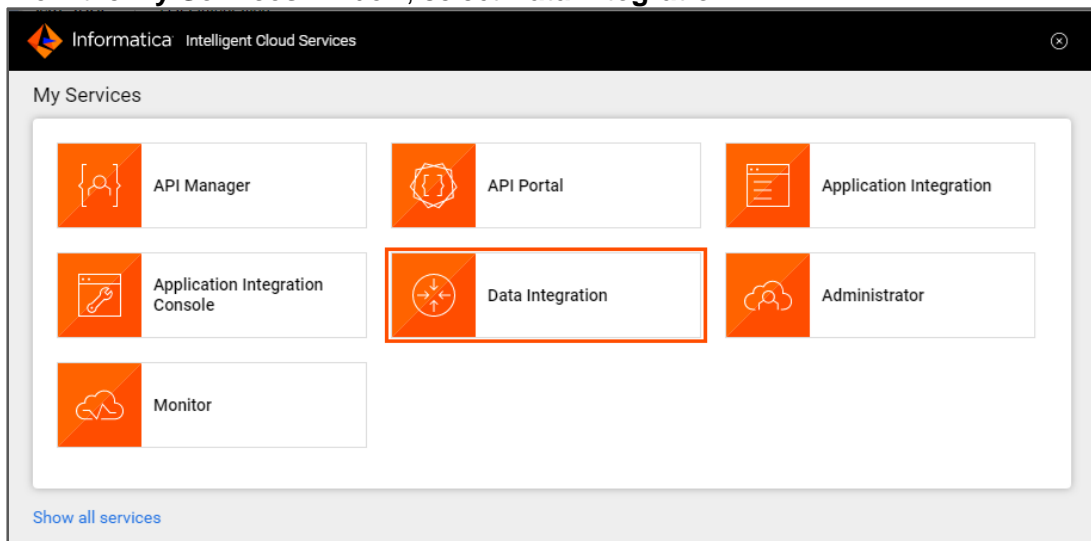
Services: Administrator

### Set up permissions at the asset level:

40. To switch between the available services, from the toolbar, select the drop-down next to Administrator.

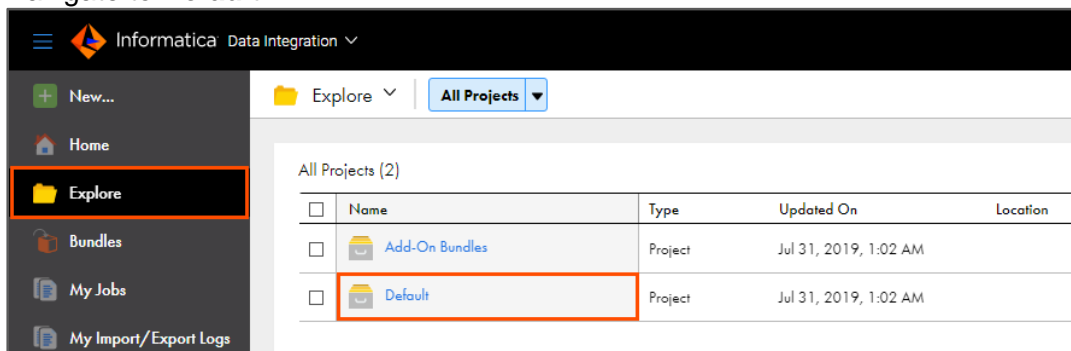



41. From the **My Services** window, select **Data Integration**.



42. From the Navigation pane, select **Explore**.

43. Navigate to **Default**.



44. To set the permission for an asset, select any asset and click .

#### 45. Select **Permissions**.

Default (32) 1 selected ▼ ↕

| <input type="checkbox"/>            | Name ▲                         | Type                | Updated On           | Location | Status |
|-------------------------------------|--------------------------------|---------------------|----------------------|----------|--------|
| <input type="checkbox"/>            | XX_ErrorHandling_Task          | Mapping Task        | Aug 1, 2019, 5:19 AM | Default  | Valid  |
| <input type="checkbox"/>            | XX_FirstName_DynamicLinking    | Mapping             | Aug 1, 2019, 2:54 AM | Default  | Valid  |
| <input type="checkbox"/>            | XX_FirstName_Emp               | Hierarchical Schema | Aug 1, 2019, 3:42 AM | Default  | Valid  |
| <input checked="" type="checkbox"/> | XX_FirstName_Employees         | Mapping             | Aug 1, 2019, 3:52 AM | Default  |        |
| <input type="checkbox"/>            | XX_FirstName_ErrorHandling     | Mapping             | Aug 1, 2019, 5:17 AM | Default  |        |
| <input type="checkbox"/>            | XX_FirstName_HierarchyBuilder  | Mapping             | Aug 1, 2019, 5:17 AM | Default  |        |
| <input type="checkbox"/>            | XX_FirstName_InOutParameter    | Mapping             | Aug 1, 2019, 1:12 AM | Default  |        |
| <input type="checkbox"/>            | XX_FirstName_LookupOverride    | Mapping             | Aug 1, 2019, 2:02 AM | Default  |        |
| <input type="checkbox"/>            | XX_FirstName_MacroDateFormat   | Mapping             | Aug 1, 2019, 1:46 AM | Default  |        |
| <input type="checkbox"/>            | XX_FirstName_MappingParameters | Mapping             | Aug 1, 2019, 1:01 AM | Default  |        |

1 - 25 of 32 < 1 of 2 >

Properties...  
 View  
 Edit  
 Run  
 New Mapping Task...  
 Rename...  
 Copy To...  
 Move To...  
 Export...  
 Show Dependencies  
Permissions...

#### 46. 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.

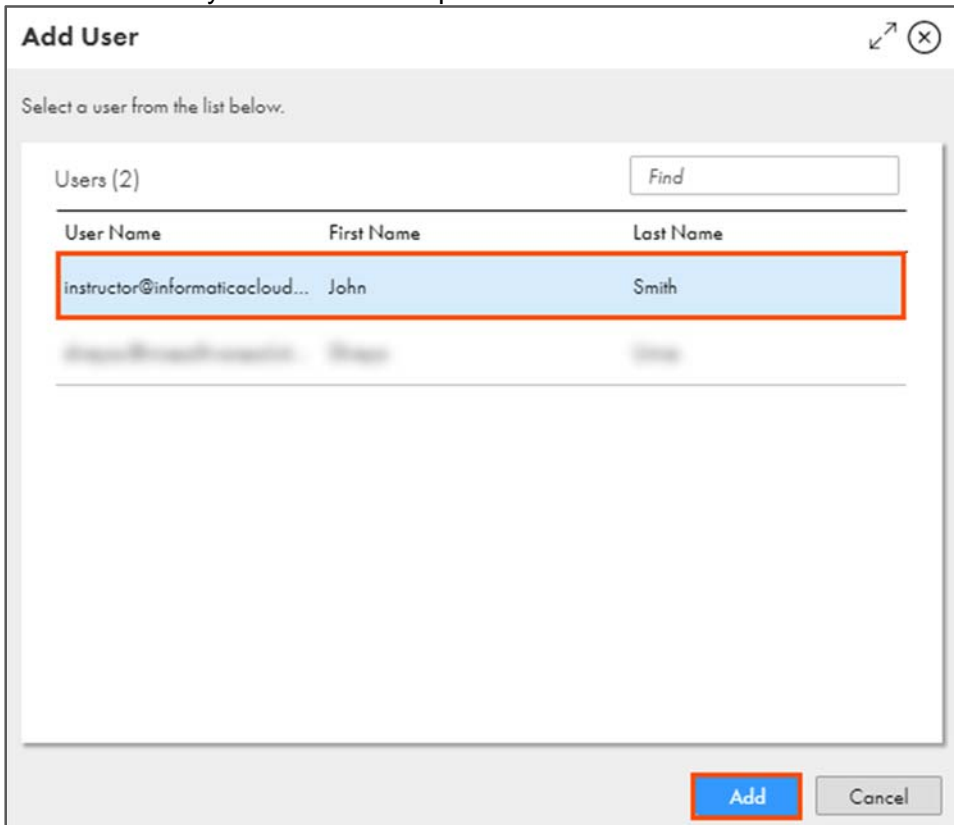
**Users**    Groups

| <input type="checkbox"/> | User Name | First Name | Last Name | Read | Update | Delete | Execute | Change Permissions |
|--------------------------|-----------|------------|-----------|------|--------|--------|---------|--------------------|
| No data to display       |           |            |           |      |        |        |         |                    |

Add
Remove

? Save Cancel

47. Select the user you created in step 6 and click **Add**.



**Add User**

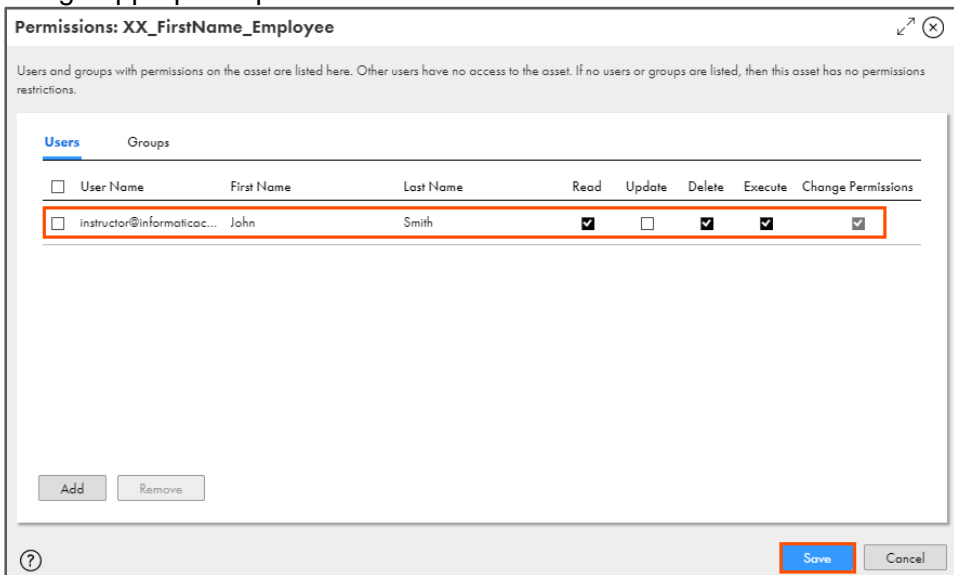
Select a user from the list below.

Users (2)

| User Name                      | First Name | Last Name |
|--------------------------------|------------|-----------|
| instructor@informaticacloud... | John       | Smith     |
| ...                            | ...        | ...       |

**Add** **Cancel**

48. Assign appropriate permissions to the user and click **Save**.



**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.

**Users** **Groups**

| <input type="checkbox"/> | User Name                  | First Name | Last Name | Read                                | Update                   | Delete                              | Execute                             | Change Permissions                  |
|--------------------------|----------------------------|------------|-----------|-------------------------------------|--------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| <input type="checkbox"/> | instructor@informaticac... | John       | Smith     | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

**Add** **Remove**

**Save** **Cancel**

---

*This concludes the lab.*

## Module 19: Administration

### Lab 19-2: 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 might 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:

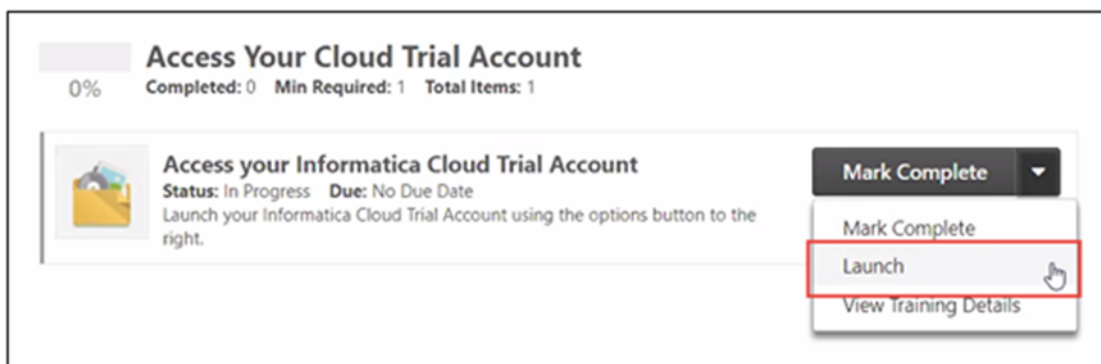
30 minutes

---

#### Tasks:

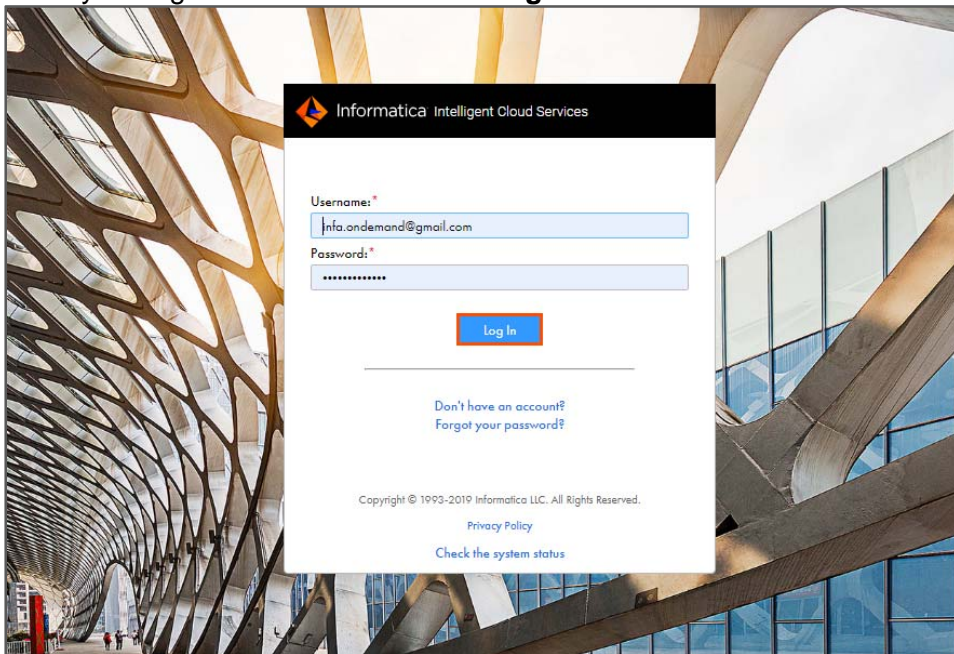
##### Create a sub org for testing environment:

1. Access your cloud trial account by clicking **Launch** in your option Menu. If the option menu is labeled anything other than **Launch**, click the down arrow to the right and click **Launch**.

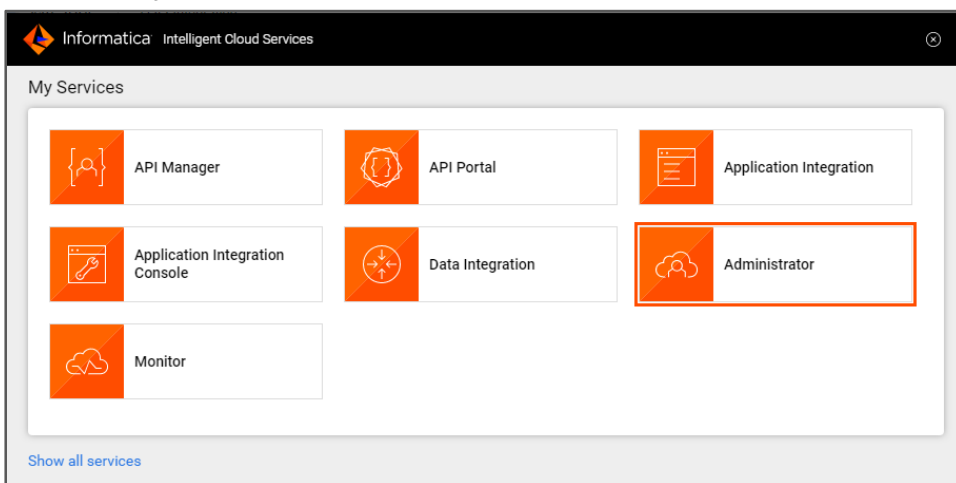


**Note:** Follow this step, if you have navigated away from the login page.

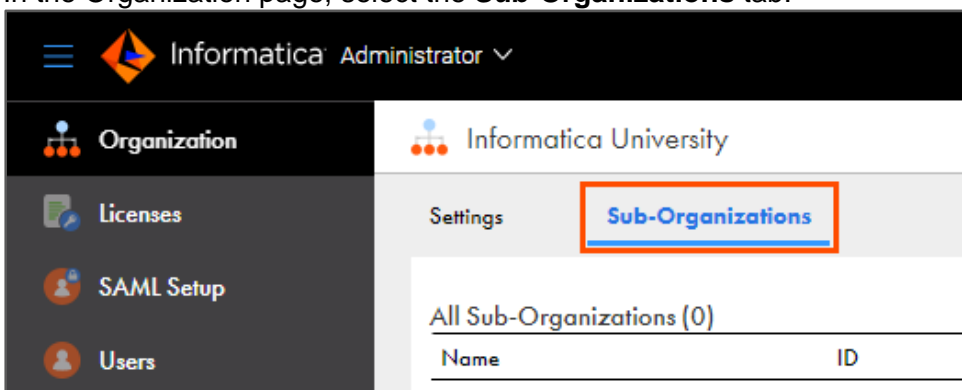
2. Enter your login credentials and click **Log In**.



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

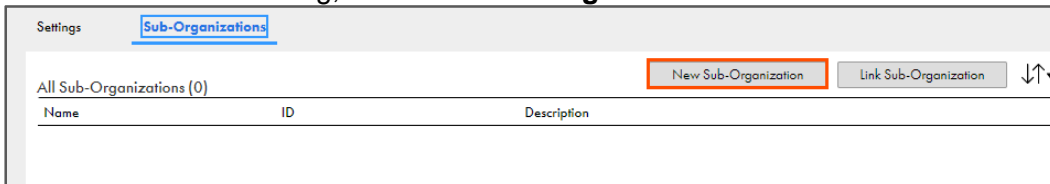


4. In the Organization page, select the **Sub-Organizations** tab.





5. To create a new Sub-Org, click **New Sub-Organization**.



Settings **Sub-Organizations**

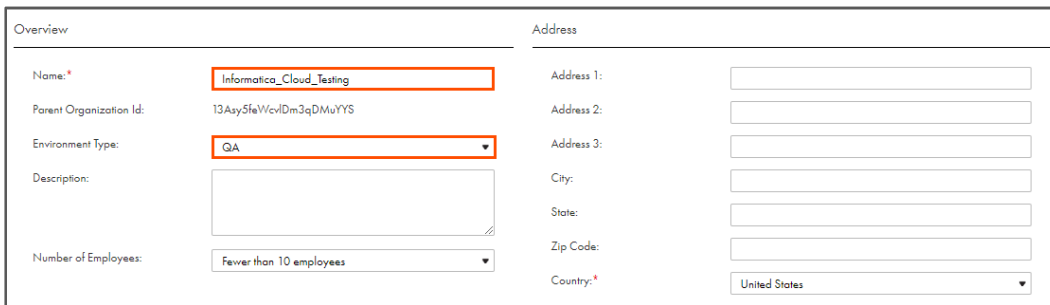
All Sub-Organizations (0)

**New Sub-Organization** Link Sub-Organization ↕

| Name | ID | Description |
|------|----|-------------|
|------|----|-------------|

6. In the Name field, enter **Informatica\_Cloud\_Testing**.

7. In Environment type field, enter **QA**.



Overview Address

Name: \* **Informatica\_Cloud\_Testing** Address 1:

Parent Organization Id: 13Axy5feWcvlDm3qDMuYYS Address 2:

Environment Type: **QA** Address 3:

Description:

City:

State:

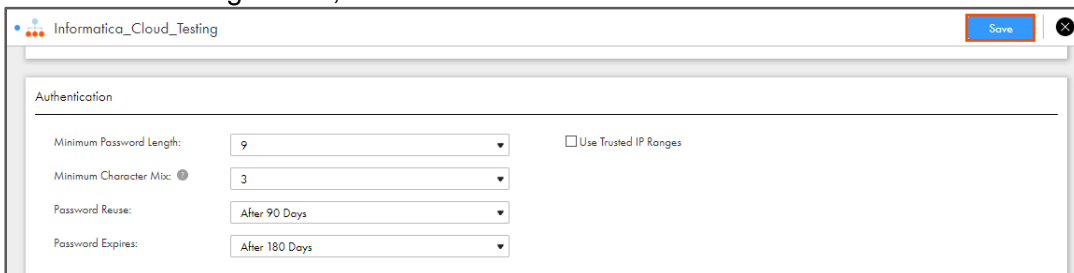
Zip Code:

Country: \* United States

Number of Employees: Fewer than 10 employees

8. Retain the default values in the Authentication section and the Data Integration Service section.

9. To save the configuration, click **Save**.



Informatica\_Cloud\_Testing **Save**

Authentication

Minimum Password Length: 9  ☐ Use Trusted IP Ranges

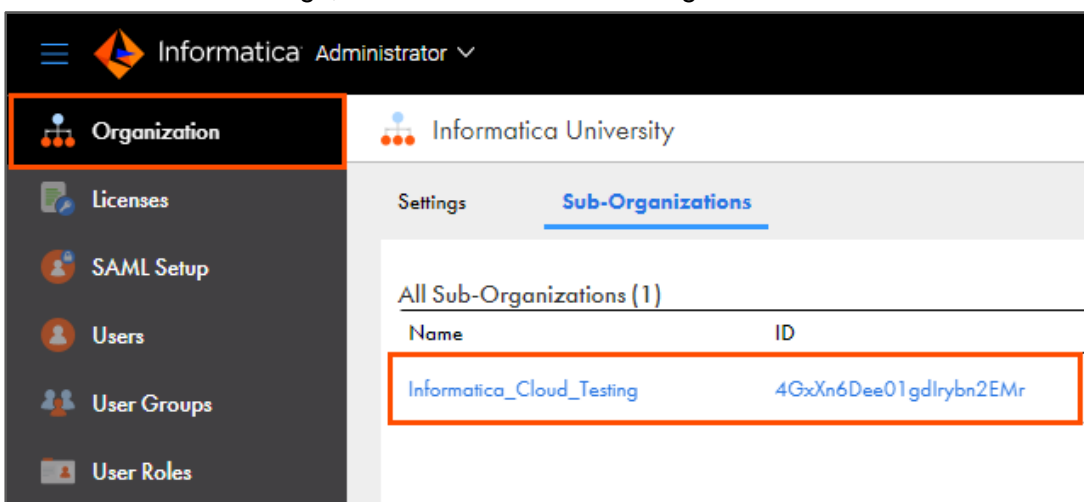
Minimum Character Mix: 3

Password Reuse: After 90 Days

Password Expires: After 180 Days

10. From the Navigation pane, select **Organization**.

11. From the list of Sub-Orgs, select the created Sub-Org.



Informatica Administrator

**Organization**

Licenses

SAML Setup

Users

User Groups

User Roles

Informatica University

Settings **Sub-Organizations**

All Sub-Organizations (1)

| Name                      | ID                     |
|---------------------------|------------------------|
| Informatica_Cloud_Testing | 4GxXn6Dee01gdIrybn2EMr |

12. To view the Connectors and Custom Licenses that are available for the sub-org, click **Licenses**.

Informatica\_Cloud\_Testing

Settings **Licenses**

**Licensing** Metering


Connectors (9)

| <input type="checkbox"/> Connector Name           | Enabled | License | Expiration Date |
|---------------------------------------------------|---------|---------|-----------------|
| <input type="checkbox"/> AS2                      | Yes     | Trial   | 07/27/2019      |
| <input type="checkbox"/> B2B EDI Gateway          | Yes     | Trial   | 07/27/2019      |
| <input type="checkbox"/> B2B EDI Gateway Endpoint | Yes     | Trial   | 07/27/2019      |
| <input type="checkbox"/> Cloud Integration Hub    | Yes     | Trial   | 07/27/2019      |
| <input type="checkbox"/> JDBC_IC                  | Yes     | Trial   | 07/27/2019      |
| <input type="checkbox"/> MockConnector            | Yes     | Trial   | 07/27/2019      |
| <input type="checkbox"/> REST V2                  | Yes     | Trial   | 08/02/2019      |
| <input type="checkbox"/> Salesforce               | Yes     | Trial   | 07/27/2019      |
| <input type="checkbox"/> WSCConsumer              | Yes     | Trial   | 07/27/2019      |

Custom Licenses (74)

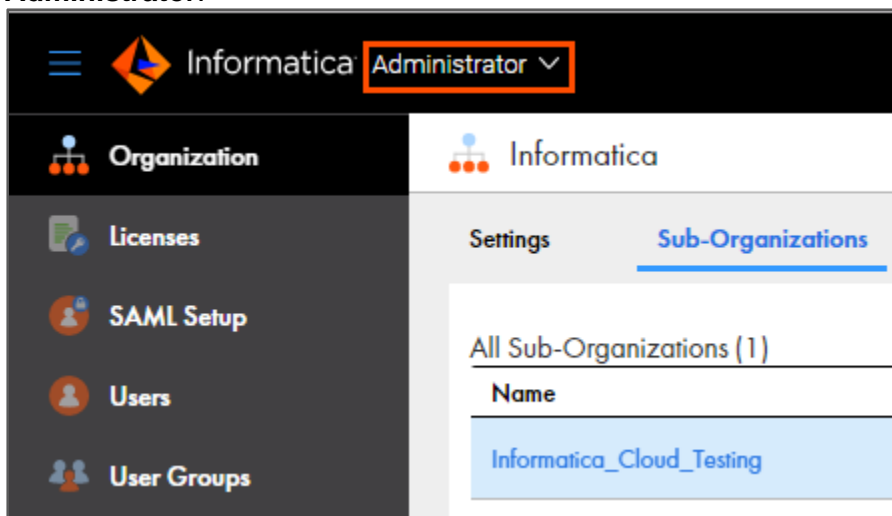
| <input type="checkbox"/> Custom License Name | Service Name     | Category | Enabled | License | Expiration Date |
|----------------------------------------------|------------------|----------|---------|---------|-----------------|
| <input type="checkbox"/> API Manager         | API Manager      |          | Yes     | Trial   | 07/27/2019      |
| <input type="checkbox"/> API Portal          | API Portal       |          | Yes     | Trial   | 07/27/2019      |
| <input type="checkbox"/> 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 .

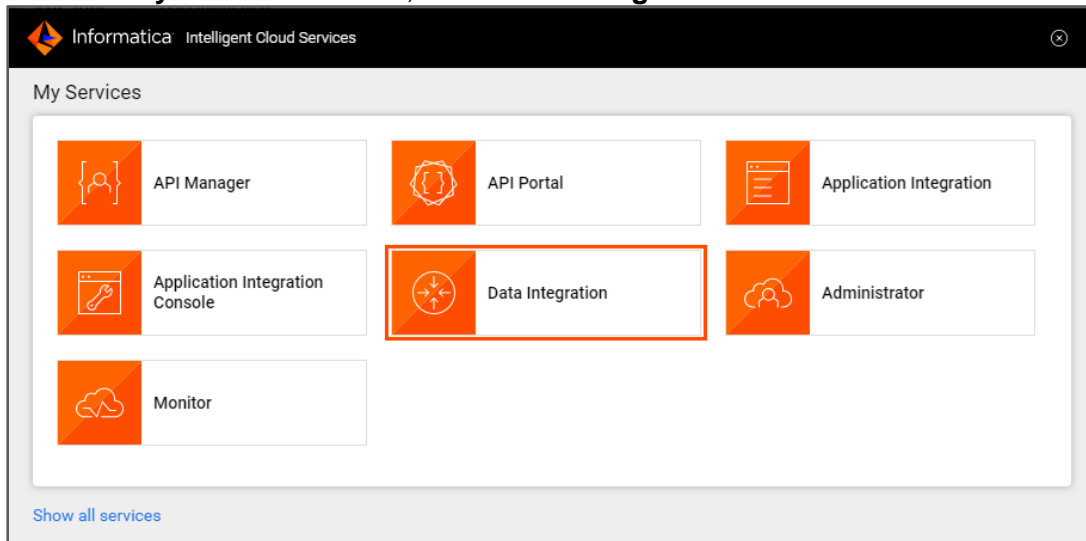
### Export asset from the Main Org:

14. To switch between the available services, from the toolbar, select the drop-down next to **Administrator**.



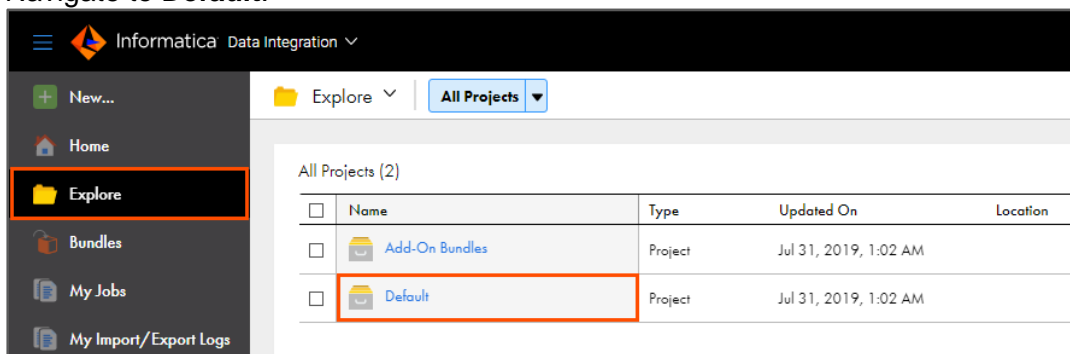
The screenshot shows the Informatica Administrator interface. At the top, the 'Administrator' dropdown menu is highlighted with a red box. Below it, the 'Sub-Organizations' tab is selected. The main content area displays 'All Sub-Organizations (1)' with a table listing the sub-organization 'Informatica\_Cloud\_Testing'.


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



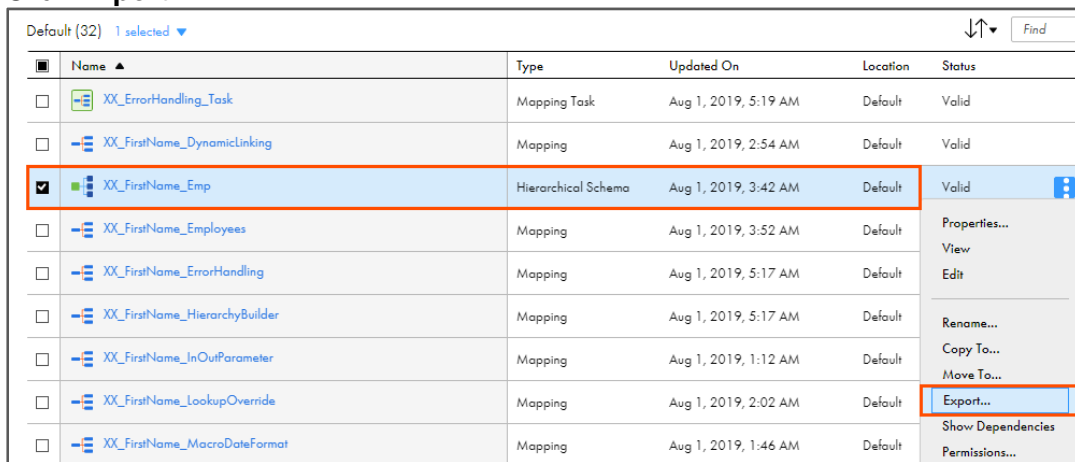
16. From the Navigation pane, select **Explore**.

17. Navigate to **Default**.



18. Locate **XX\_FirstName\_Emp** asset and click .

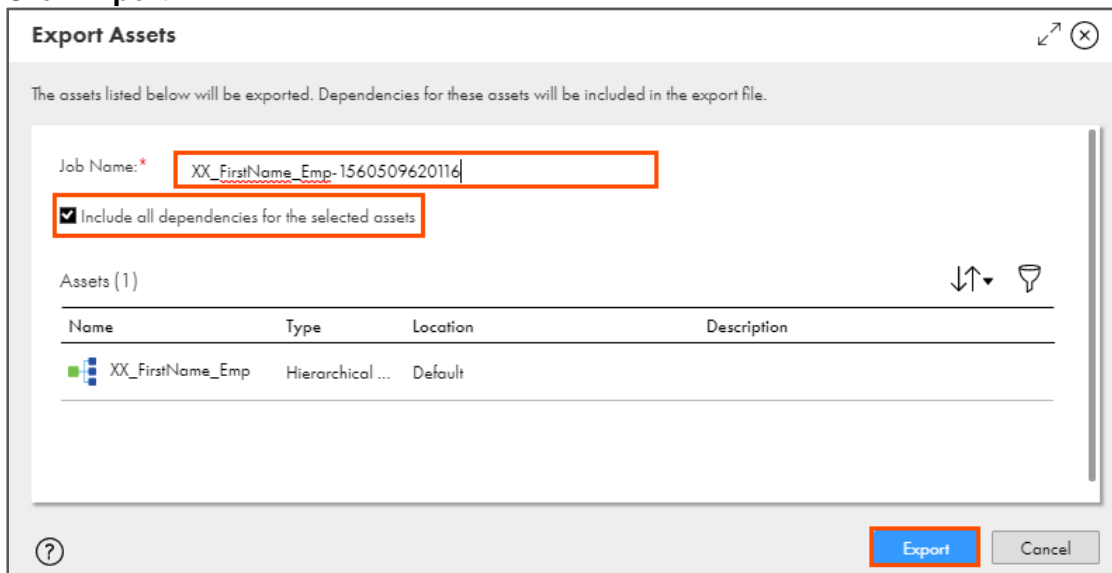
19. Click **Export**.



**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**.



**Export Assets**

The assets listed below will be exported. Dependencies for these assets will be included in the export file.

Job Name: \*

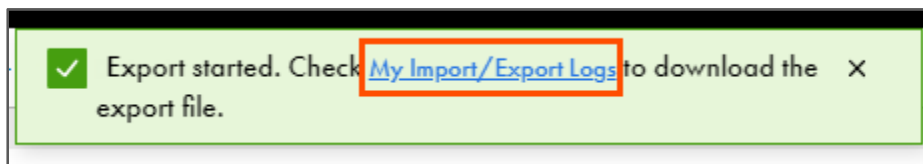
☒ Include all dependencies for the selected assets

Assets (1)

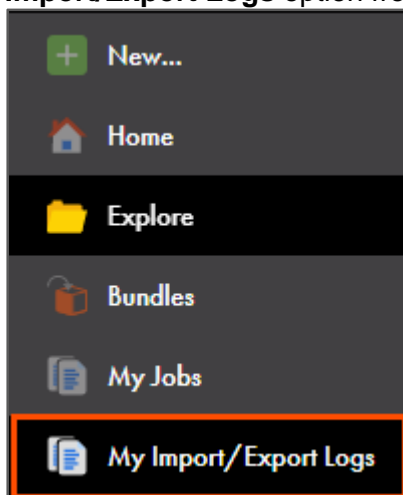
| Name             | Type             | Location | Description |
|------------------|------------------|----------|-------------|
| XX_FirstName_Emp | Hierarchical ... | Default  |             |

**Export** **Cancel**

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.

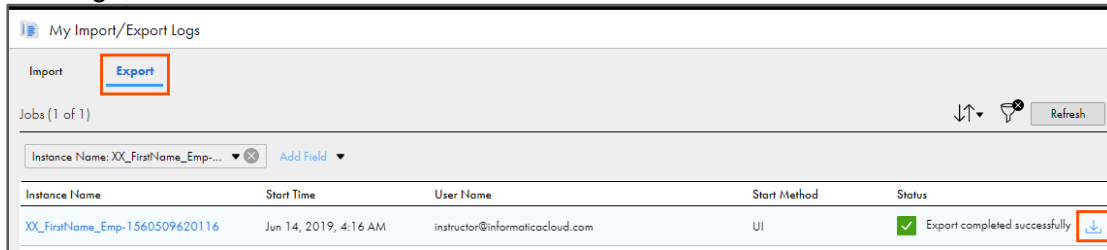


**Note:** You can also navigate to the My Import/Export Logs page by selecting the **My Import/Export Logs** option from the Navigation pane.



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.



**Note:** When you export the asset, it is downloaded to your system’s Downloads directory.

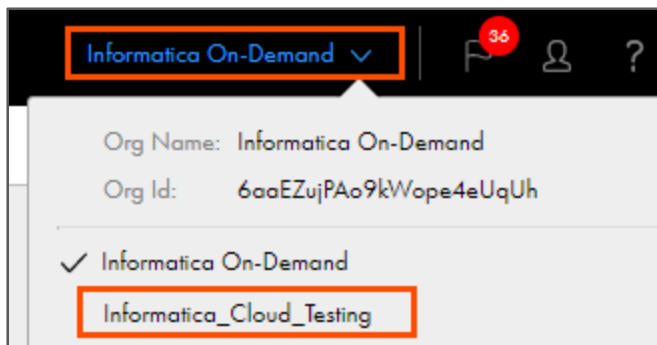
### Import it to the other Sub-Org:

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 left corner of the screen.

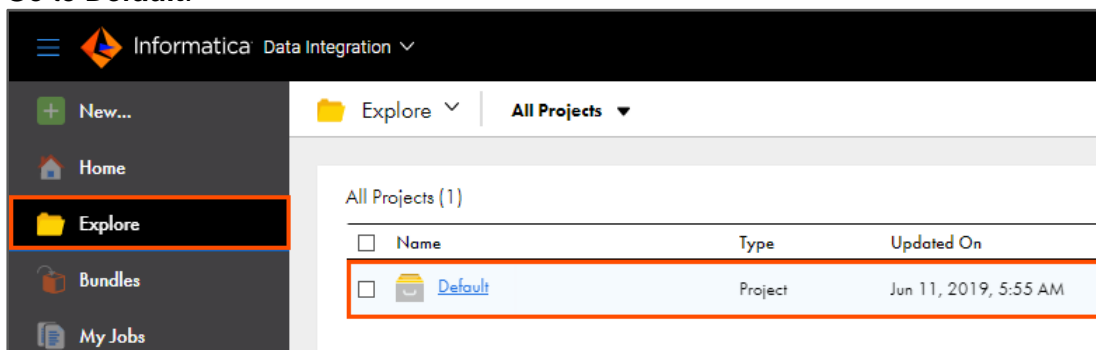
**Note:** An info window appears.

28. Select **Informatica\_Cloud\_Testing**.

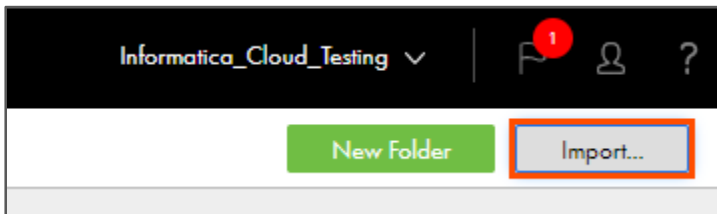


29. From the Navigation pane, click **Explore**.

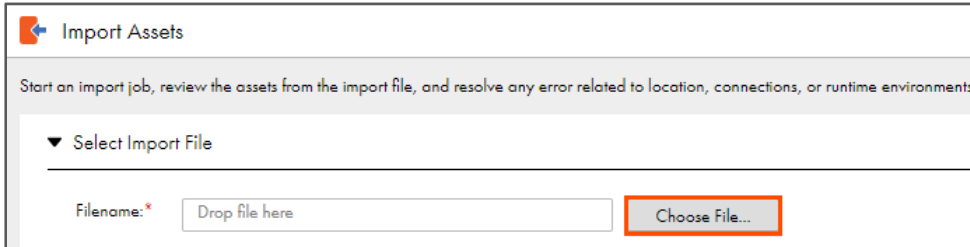
30. Go to **Default**.



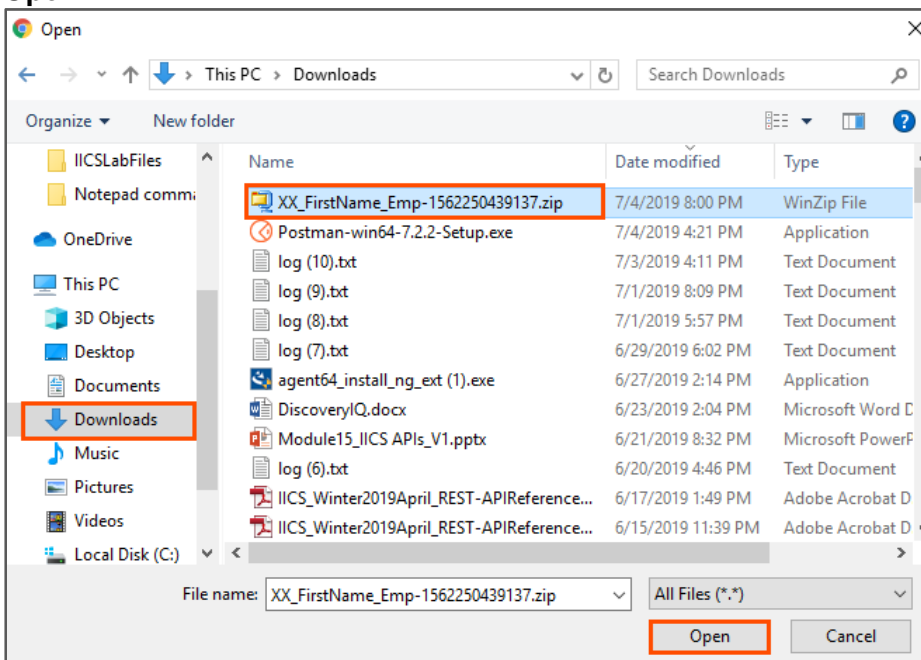
31. Click the **Import** button available below the Sub-Org name on the right side of your screen.



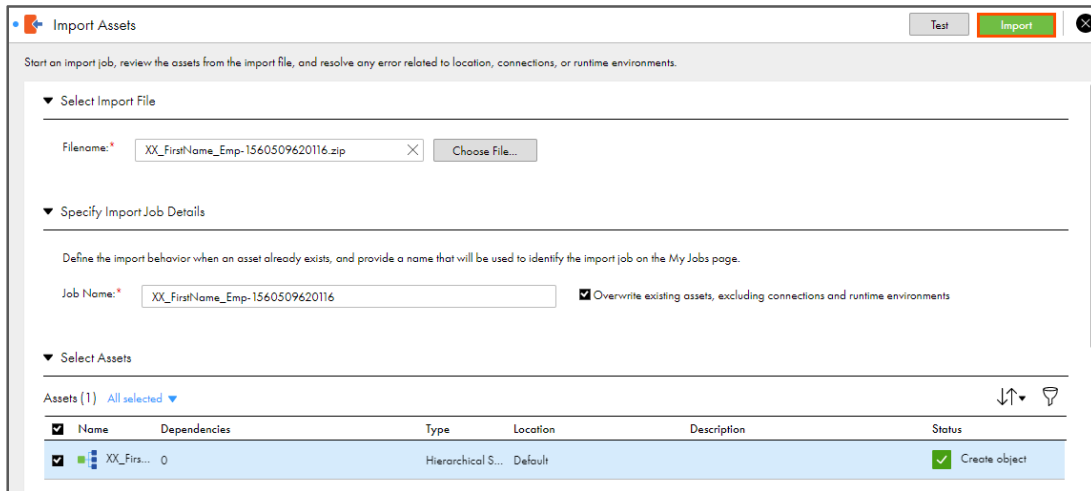
32. Click **Choose File**.



33. Navigate to your system's Downloads directory, select the asset you exported and click **Open**.



34. To import the asset, click **Import**.



Start an import job, review the assets from the import file, and resolve any error related to location, connections, or runtime environments.

**Select Import File**

Filename:

**Specify Import Job Details**

Define the import behavior when an asset already exists, and provide a name that will be used to identify the import job on the My Jobs page.

Job Name:  ☒ Overwrite existing assets, excluding connections and runtime environments

**Select Assets**

Assets (1) All selected

| Name       | Dependencies | Type              | Location | Description | Status                                            |
|------------|--------------|-------------------|----------|-------------|---------------------------------------------------|
| XX_Firs... | 0            | Hierarchical S... | Default  |             | <input checked="" type="checkbox"/> Create object |

35. To view the status of the job, from the Navigation pane, click the **My Import/Export Logs**.



My Import/Export Logs

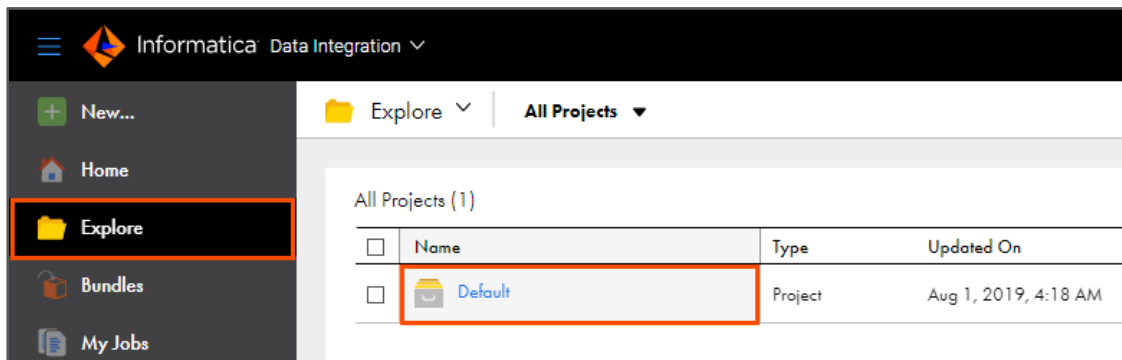
Import Export

Jobs (1)

| Instance Name                  | Start Time           | User Name              | Start Meth... | Status                                                            |
|--------------------------------|----------------------|------------------------|---------------|-------------------------------------------------------------------|
| XX_FirstName_Emp-1564658402113 | Aug 1, 2019, 4:21 AM | pkhare@informatica.com | UI            | <input checked="" type="checkbox"/> Import completed successfully |

36. From the Navigation pane, click **Explore**.

37. Go to **Default**.



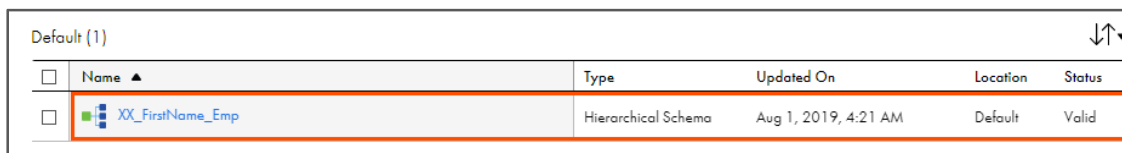
Informatica Data Integration

Explore All Projects

All Projects (1)

| Name    | Type    | Updated On           |
|---------|---------|----------------------|
| Default | Project | Aug 1, 2019, 4:18 AM |

38. In the Default project, you can view the newly imported asset.



Default (1)

| Name             | Type                | Updated On           | Location | Status |
|------------------|---------------------|----------------------|----------|--------|
| XX_FirstName_Emp | Hierarchical Schema | Aug 1, 2019, 4:21 AM | Default  | Valid  |

*This concludes the lab.*