knowledge15
April 19–24, 2015 • Mandalay Bay • Las Vegas, NV

# Lab Guide

## Import Sets:

## How to get data into ServiceNow

Martin Wood & Ben Hollifield

Default Login / Password:

admin / Knowledge15

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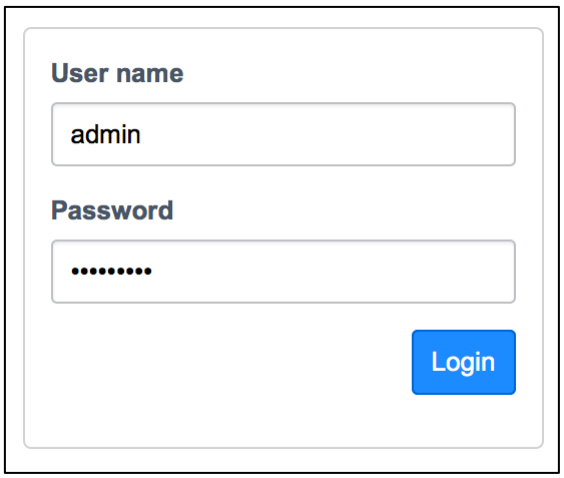
# Lab Goal

The company has just opened a few new office locations nationally. These need to be added to ServiceNow as soon as possible. This lab explains how to use the Easy Import functionality, which allows you to import data quickly without the need to create an import set or transform map.

**Lab 1**
**Easy Import**

## Log on to Your Instance

1. Navigate to the unique instance URL provided to you.
2. Login using the **admin** credentials provided.




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3. In the **Left Navigation Pane**, click **Lab Resources** to expand the Lab Resources application.

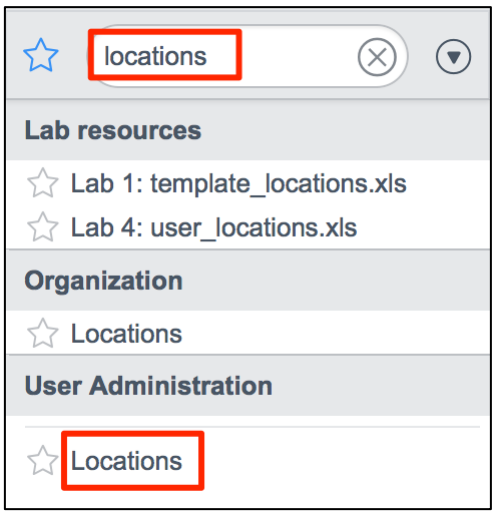



**Lab Resources** contains modules with the files required to complete all the labs. Download them all now, or do so at the appropriate time.

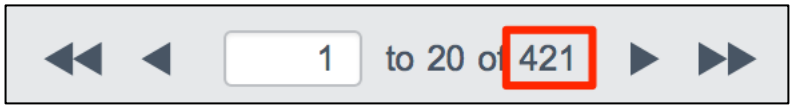
## Easy Import

1. Confirm that you downloaded **template_locations.xls**. Navigate to **Lab Resources > Lab 1: template_locations.xls**. Save the file if it was not downloaded.

2. Navigate to **User Administration > Locations**.

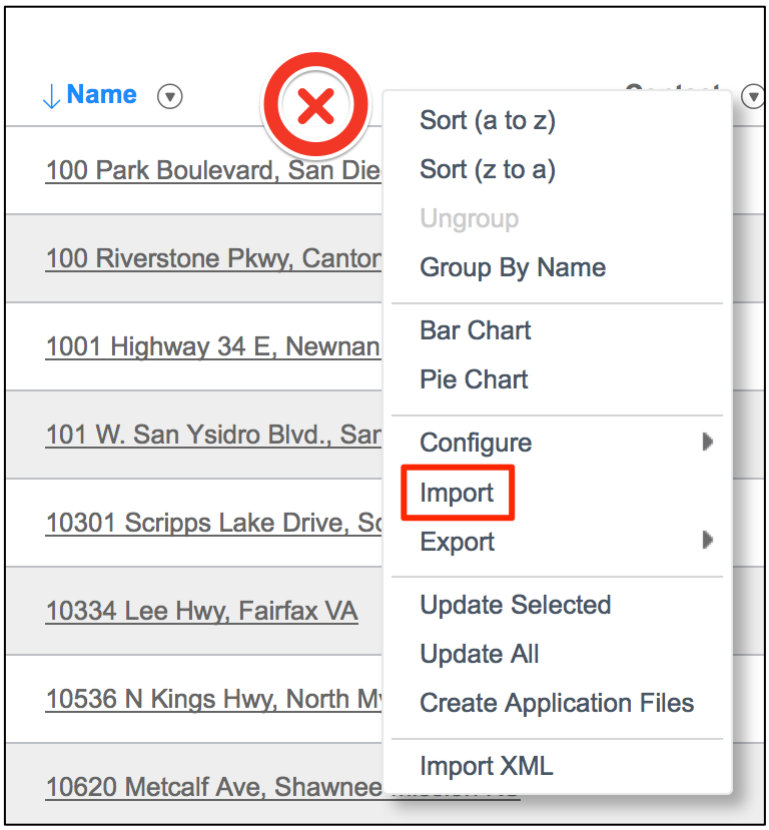



3. Review the list of locations. There should be 421 locations.




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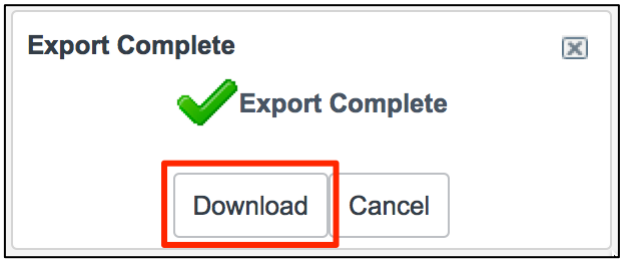
4. Right click the column headings, then select **Import**.




5. Select **Insert** from the drop-down list and click **Create Excel Template.**




6. Wait for the export to complete. Click **Download**.



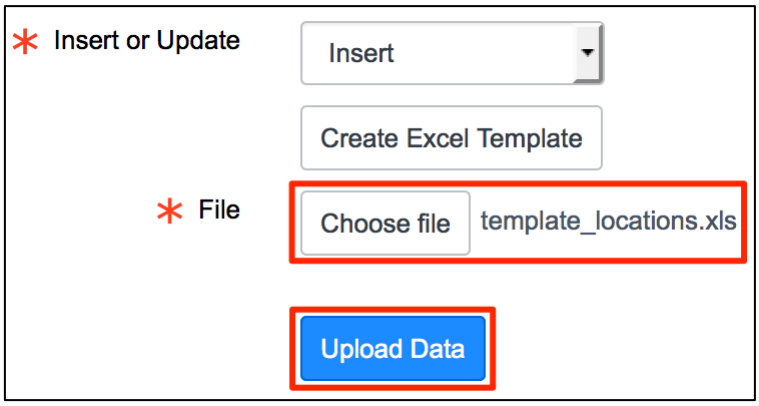

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7. Open the file and examine its contents.

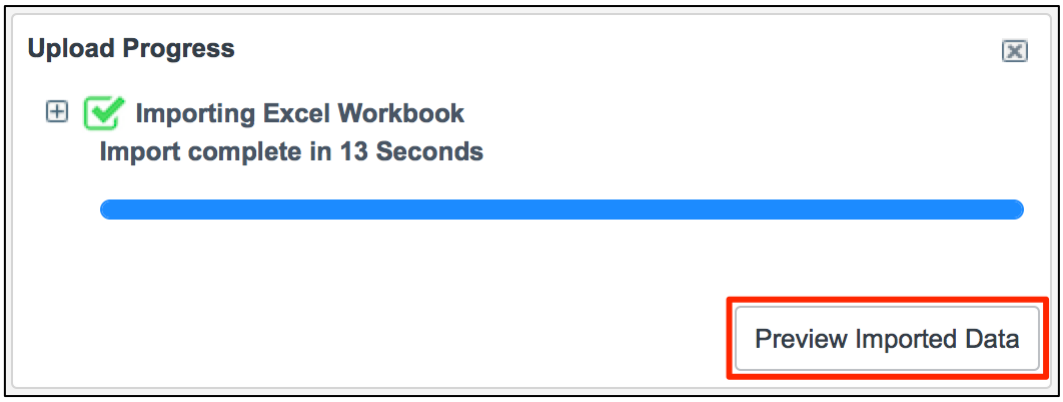
   **Note**: The first worksheet of the spreadsheet contains directions on how to populate the template; the second worksheet contains the column names from the location records list view. If you personalize the list view before creating the template, the columns on the second worksheet will be different.

   For this lab, use a prepopulated template.

8. Click **Choose File**. Find the **template_locations.xls** file in the dialog and click **Upload Data**.




9. Wait while the data uploads and processes; then click **Preview Imported Data**.



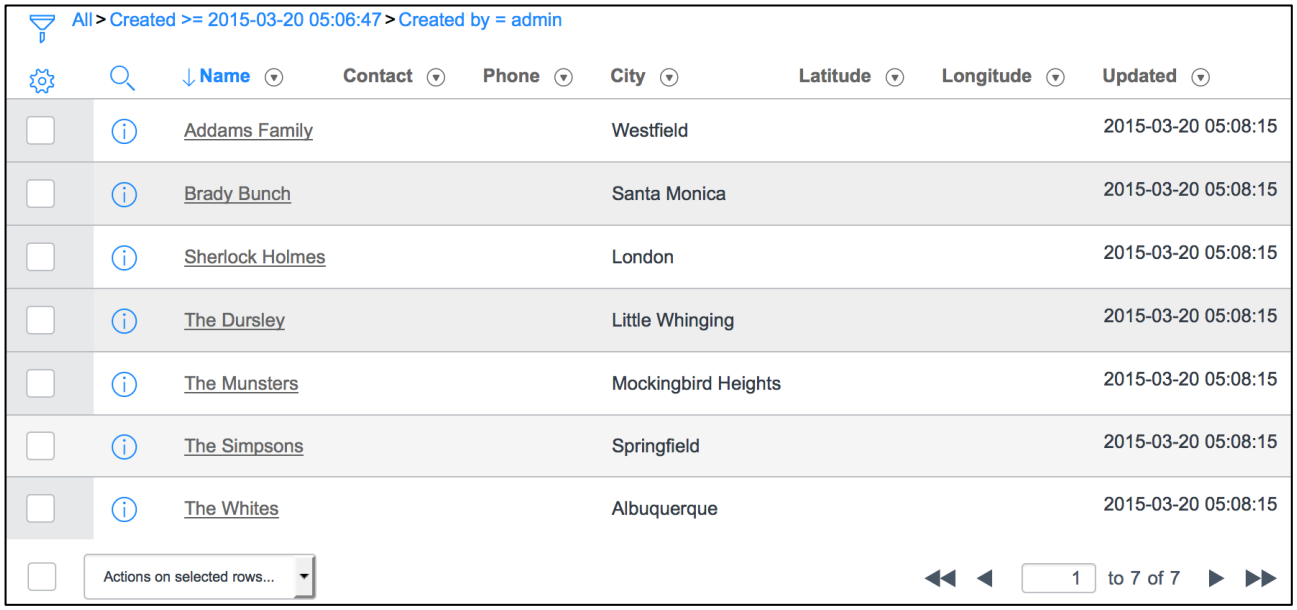

10. Confirm that the data displays in the preview.

11. Click **Complete Import**.

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## Lab Success Verification

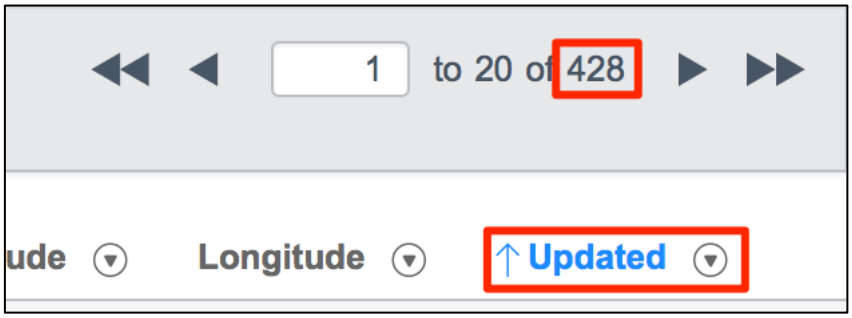
1. You are redirected to a list of locations set with a predefined filter. The list displays the seven new locations just imported.




2. Navigate to **User Administration > Locations**.

3. Click the **Updated** column heading to change the sorting. Review the list of locations.

4. There should now be 428 locations, and the new ones should appear on the top.




## Things to Think About

- What would have happened if the column names on the spreadsheet template did not match the list view?

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# Lab Goal

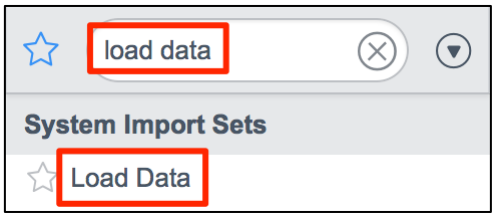
The company has just hired a few more employees, and their user information needs to be added to ServiceNow. To get this done in just a few minutes, import the data directly into your ServiceNow instance. Since you now have more time up your sleeve, you feel like exploring import sets for the first time.

**Lab 2**
**Importing Users**

## Load Data from a Spreadsheet

1. Confirm that you downloaded **users.xls**. Navigate to **Lab Resources > Lab 2: users.xls** and save the file if it was not downloaded.

2. Navigate to **System Import Sets > Load Data**.

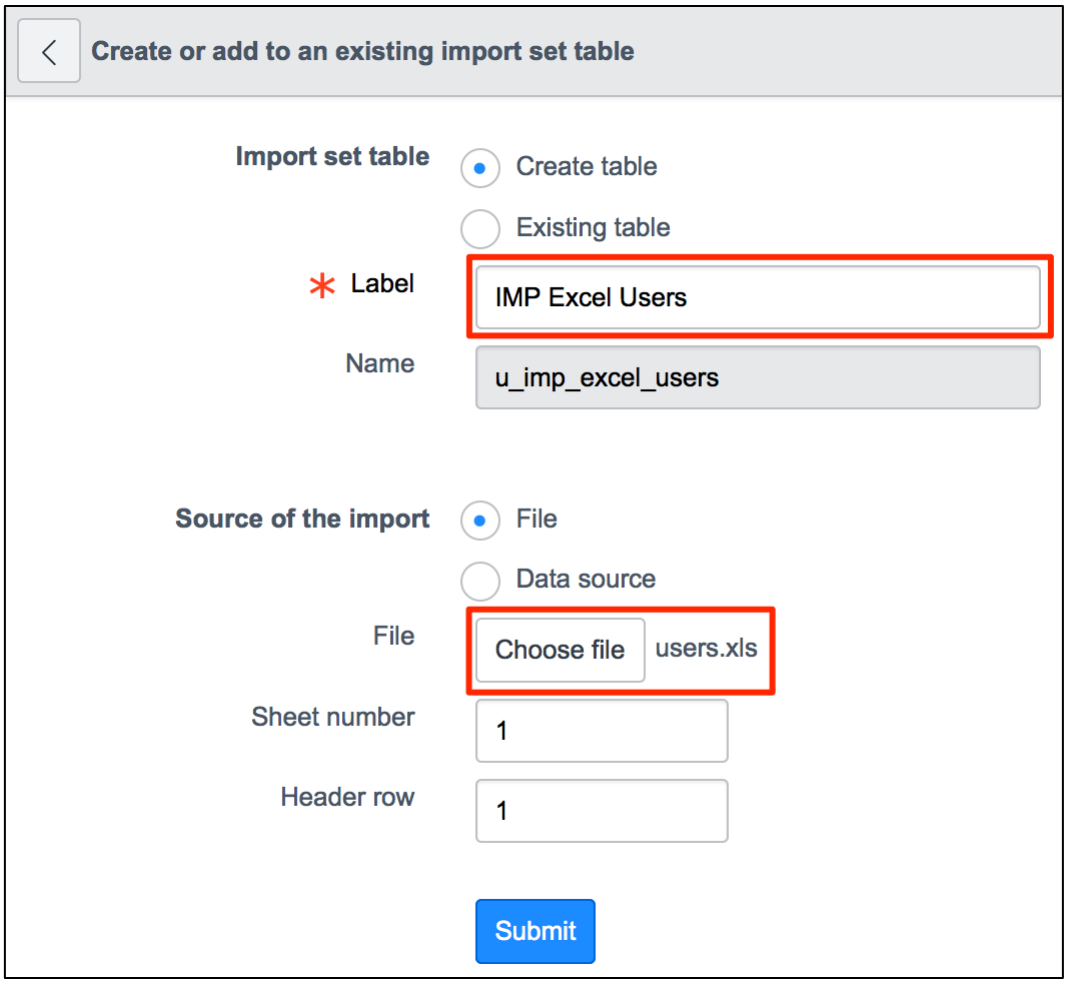



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3. Fill out the form as follows:

   Import set table: **Create table**
   Label: **IMP Excel Users**

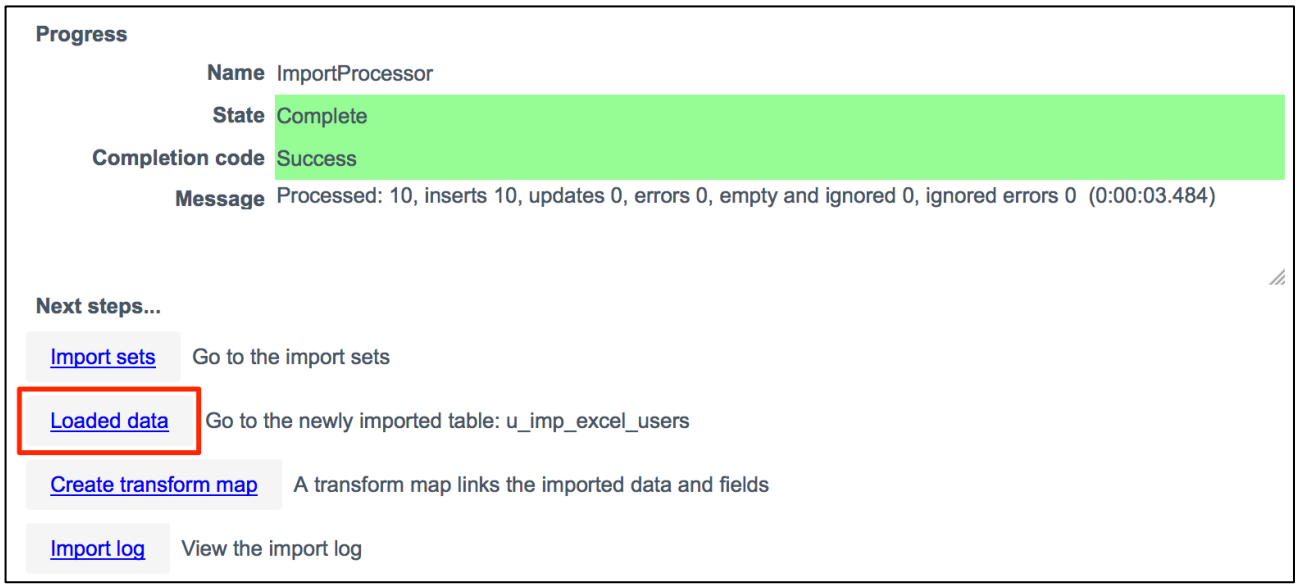
   Source of the import: **File**
   File: **users.xls**




4. Click **Submit**. Wait while the data processes.

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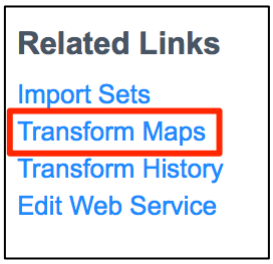
5. Check the **State**, **Completion Code**, and **Message** fields on the import progress screen; then click the **Loaded data** link.




6. Review the data imported. It should be identical to the Excel spreadsheet file.

## Transform the Data

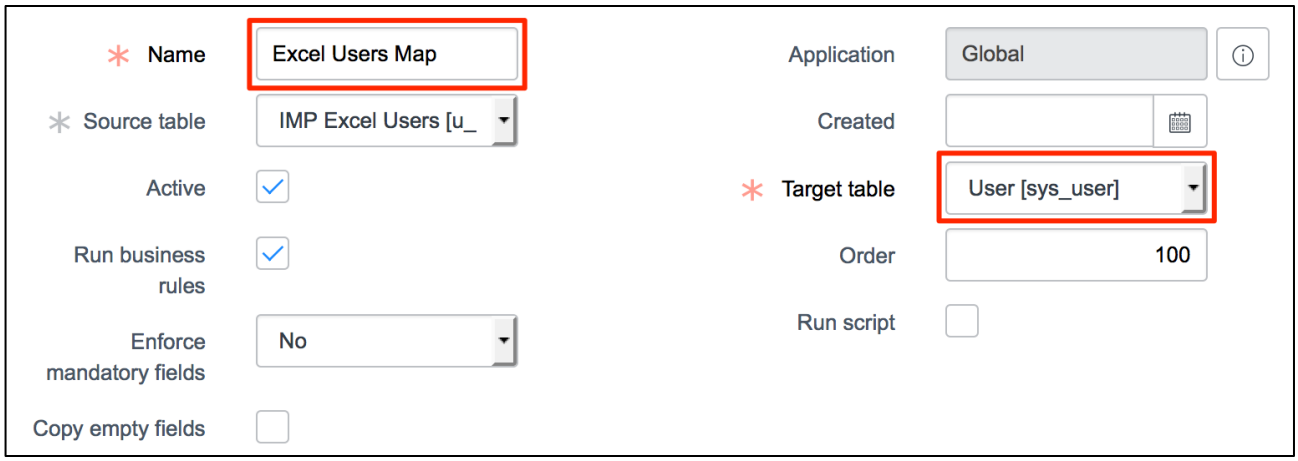
1. Click **Transform Maps** under Related Links.



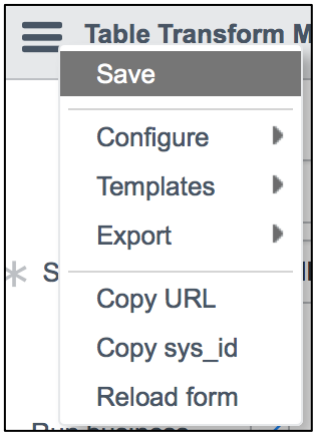

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2. Click New, and enter the following information:

   Name: **Excel Users Map**
   Target Table: **User [sys_user]** (be sure to pick the right one!)




3. Click the menu icon and choose **Save**.

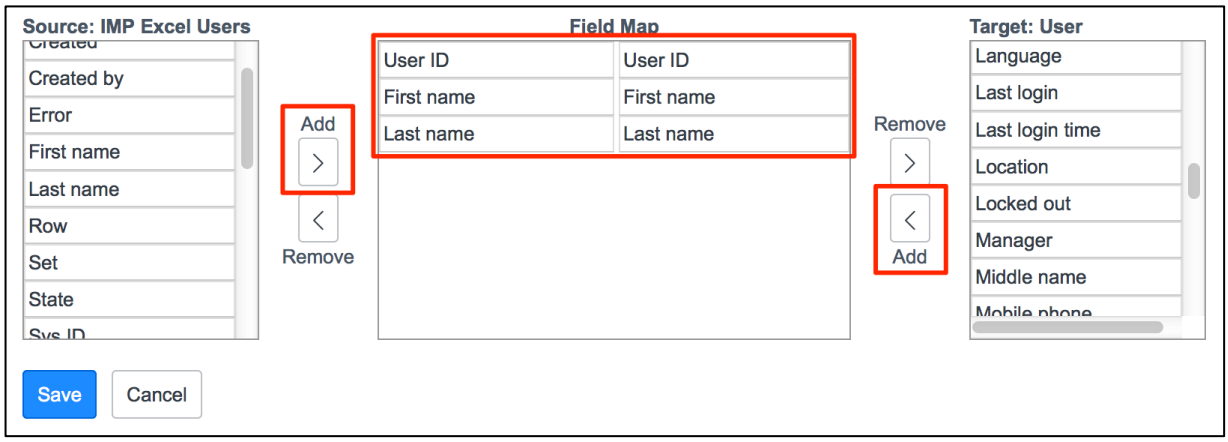



4. Click **Mapping Assist**.




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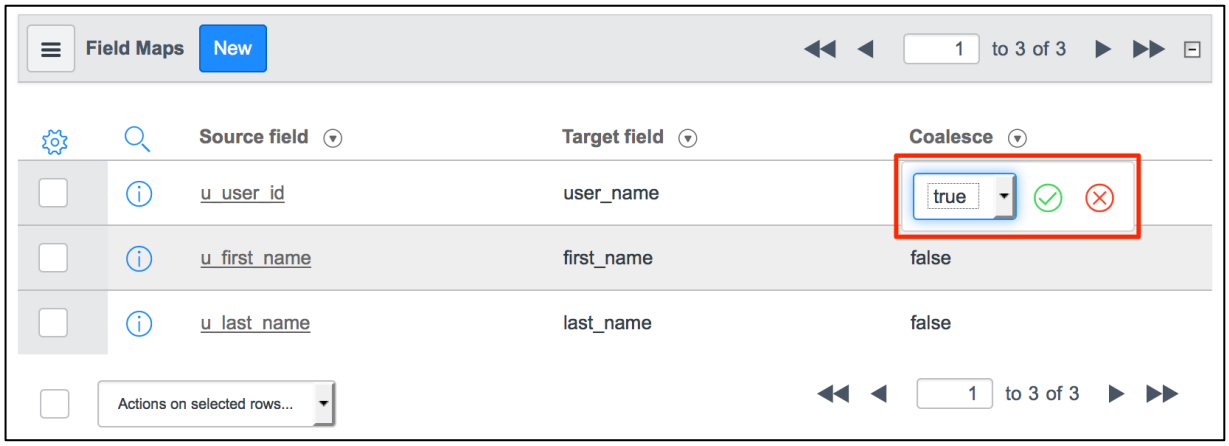
5. Drag the **User ID, First Name**, and **Last Name** fields from the left source column and the right target column into the **Field Map** (or select each field and click the **Add** arrow).




6. Click **Save** to return to the Transform Map form.

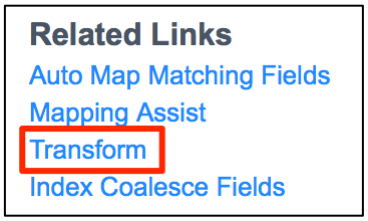
7. List edit the **Coalesce** field on the **user_name** row, and select **true**. Click the **green** check mark to save.

   To perform a list edit, double click the right side of the relevant Coalesce field. Be sure that you are clicking the correct **user_id/user_name** Coalesce field row (e.g., user_id/user_name).



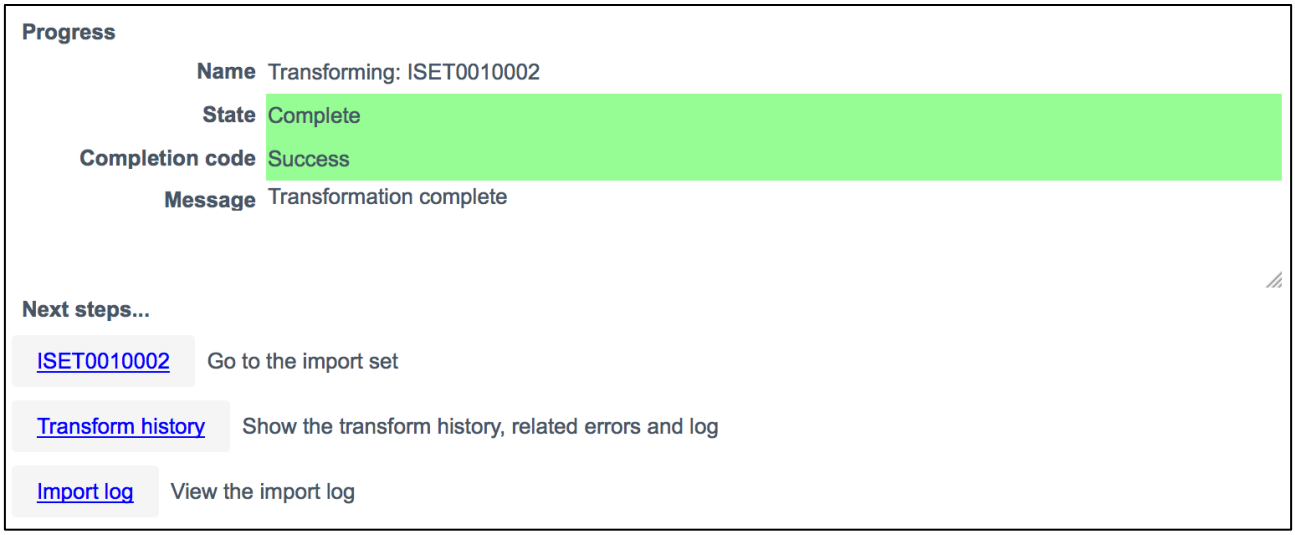

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8. Click **Transform**.




9. On the **Specify Import Set and Map** window, click **Transform**.

10. Note the **State** and **Completion Code** on the **Progress** screen.




11. Click **Transform history** link on the Progress screen to see any messages.




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## Lab Success Verification

1. Navigate to **User Administration > Users** to see the newly created records. Click the **Created** or **Updated** column view the new records.

| User ID | Name |
|---|---|
| abraham.lincoln | Abraham Lincoln |
| bill.gates | Bill Gates |
| charles.darwin | Charles Darwin |
| nelson.mandela | Nelson Mandela |

## Things to Think About

- What shortcut could have been made?
- What is the impact of leaving the Run Business Rules check box ticked?
- What happens if you skip the Coalesce step?
- What is the impact of not clicking the Index Coalesce Fields link?
- How could you generate the username automatically?
- What problems might that cause?

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# Lab Goal

**Lab 3 Automation Is Easy**

This lab explains how to automate an information export from a database to ServiceNow. In the example, an HR department uses this method to automate the import of new hires. The HR system runs off a MySQL database. ServiceNow supports this technology. This automated process eliminates the need to export information to an Excel spreadsheet.

This lab also explains how to add last-minute information to the output using a script. In this example, the HR department needs to add the email addresses for employees into the database. Using a script eliminates the need for manual input of the information.

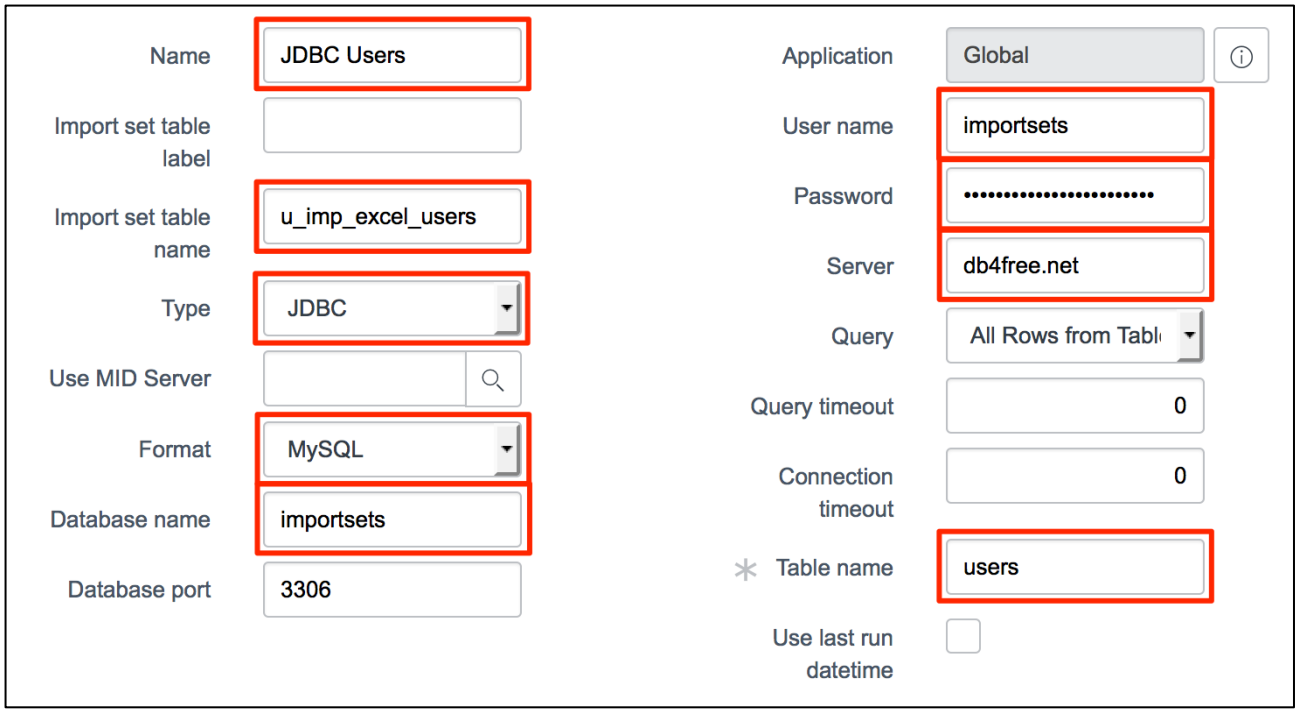
## Load Data from MySQL Database

1. Navigate to **System Import Sets > Administration > Data Sources**. Click **New**.

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2. Enter the following information into the fields.

   Name: **JDBC Users**
   Import set table name: **u_imp_excel_users**
   (Important! Ensure it is exactly correct, with no spaces)
   Type: **JDBC**
   Format: **MySQL**
   Database name: **importsets**
   Database port: **3306**
   User name: **importsets**
   Password: **importsets**
   Server: **db4free.net**
   Table name: **users**

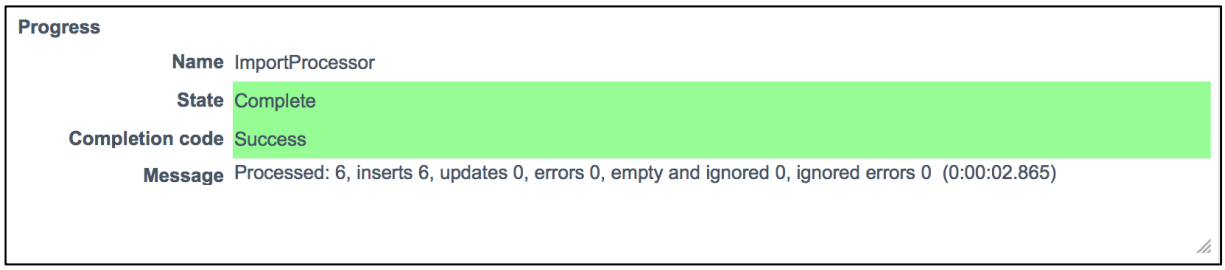



**Note**: Selecting the existing import set table name of **u_imp_excel_users** associates the Transform Map created in lab 2.

3. Click the **menu** icon and select **Save**.

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4. Click **Test Load 20 Records** to verify the connection.Check the **State**, **Completion Code**, and **Message** fields on the import progress screen.




## Update the Transform Map

Update the transform map to dynamically generate the email address of the users.

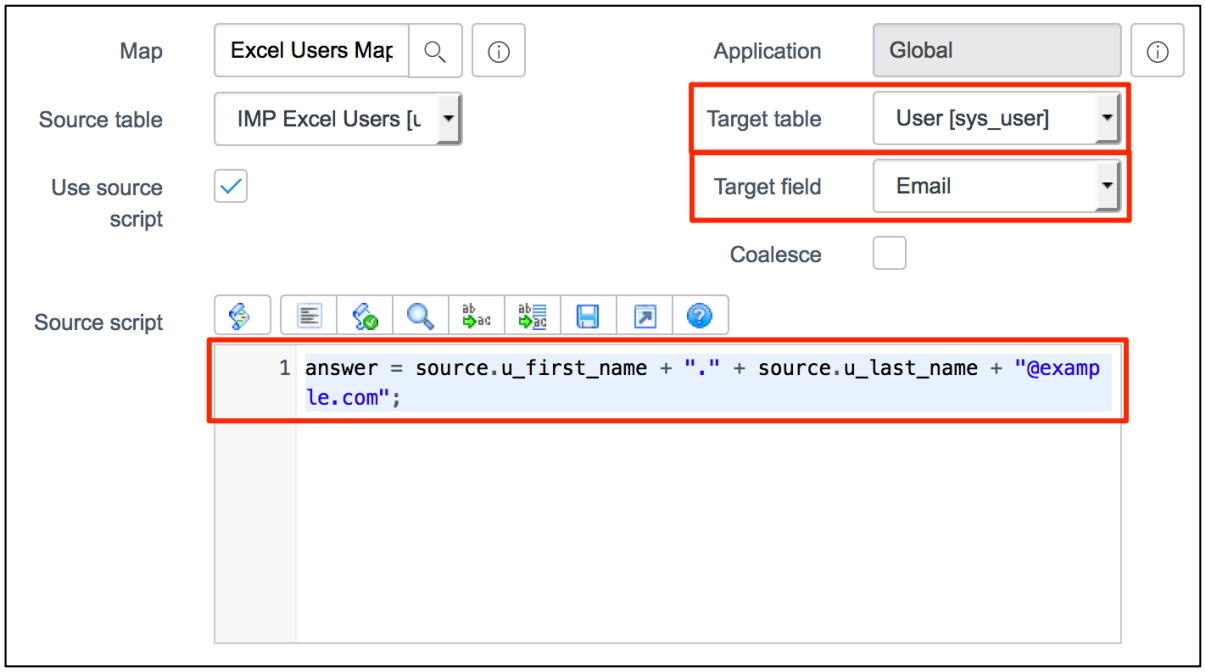
1. Navigate to **System Import Sets > Transform Maps**.
2. Find the **Excel Users Map** entry, and click it.
3. In the **Field Maps** related list, click **New**.

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4. Fill out the following information.

   Use Source Script: **<checked>**
   Target Field: **Email**
   Source script:

```
answer = source.u_first_name + "." + source.u_last_name + "@example.com";
```



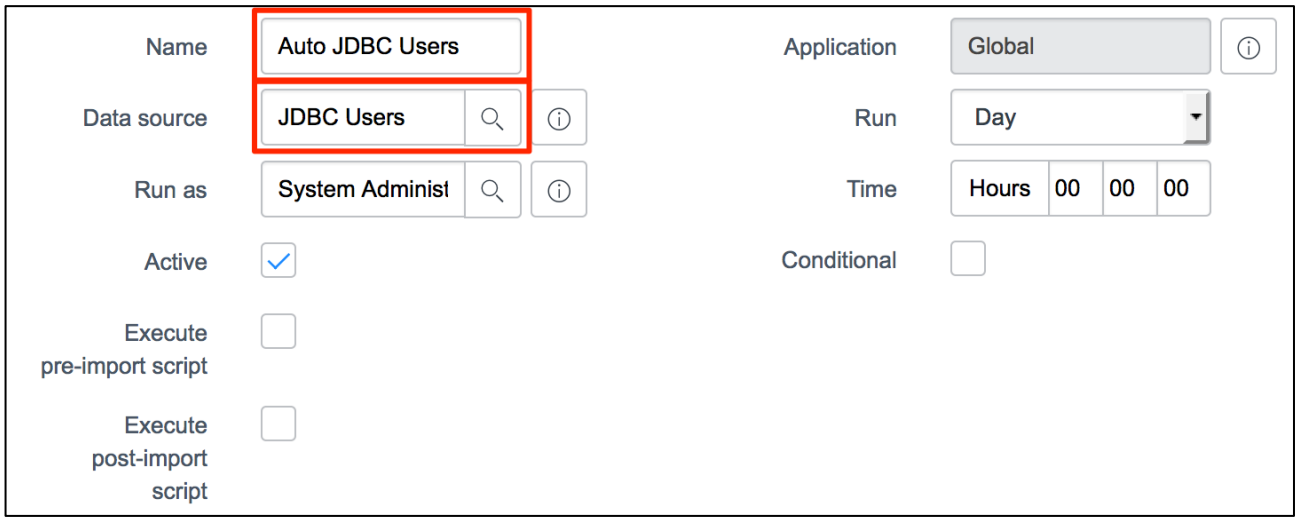

5. Click **Submit**.

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## Schedule the Import of the Data Source

1. Navigate to **System Import Sets > Administration > Scheduled Imports**.
2. Click **New**, and fill out the following information.

   Name: **Auto JDBC Users**
   Data source: **JDBC Users**




3. Click the **menu** icon and select **Save**.
4. Click **Execute Now**.




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## Lab Success Verification

1. Navigate to **User Administration > Users** to see the newly created and updated records. Note how the **Email** field is populated based on the script you created.

| User ID | Name | Email |
|---|---|---|
| ron.weasley | Ron Weasley | Ron.Weasley@example.com |
| severus.snape | Severus Snape | Severus.Snape@example.com |
| minerva.mcgonagall | Minerva McGonagall | Minerva.McGonagall@example.com |
| albus.dumbledore | Albus Dumbledore | Albus.Dumbledore@example.com |
| harry.potter | Harry Potter | Harry.Potter@example.com |
| hermione.granger | Hermione Granger | Hermione.Granger@example.com |

**Note**: You may need to refresh the user list a few times while you wait for the system to complete the import. If you want to watch it, navigate to **System Diagnostics > Progress Workers**.

## Things to Think About

- Examine the conditional, prescript, and postscript fields on the scheduled data import form. What could you use these for?

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# Lab Goal

This lab explains how to import a single set of data into two destinations. It uses a reference field to link the two destinations together. In the example, the HR department has employed a few rock stars, and has included location data that should be kept separate.

**Lab 4**
**Multiple Imports**

## Load the Data

1. Confirm that you have downloaded **users_locations.xls**. Navigate to **Lab Resources > Lab 4: users_locations.xls**. Save the file if it was not downloaded.

2. Import the data by following steps 2-6 in Lab 2, but choose the **user_locations.xls** file, and call the Import Set table name label **IMP User Location** (instead of Excel Users).

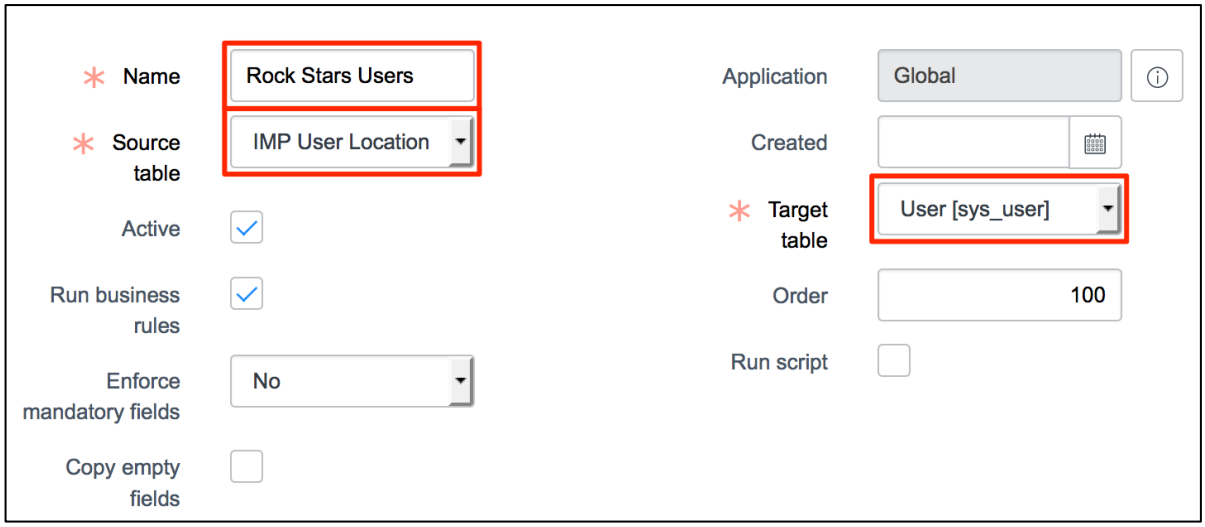
## Create the Transform Map

1. Navigate to **System Import Sets > Create Transform Map**.

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2. Fill out the following fields:

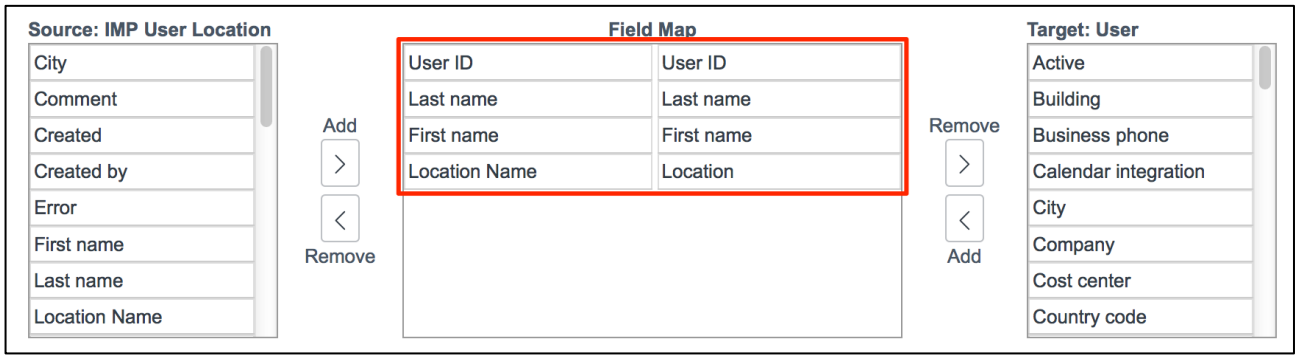
   Name: **Rock Star Users**
   Source table: **IMP User Location [u_imp_user_location]**
   Target Table: **User [sys_user]**




3. Click the menu icon and choose **Save**.

4. Select **Mapping Assist**.

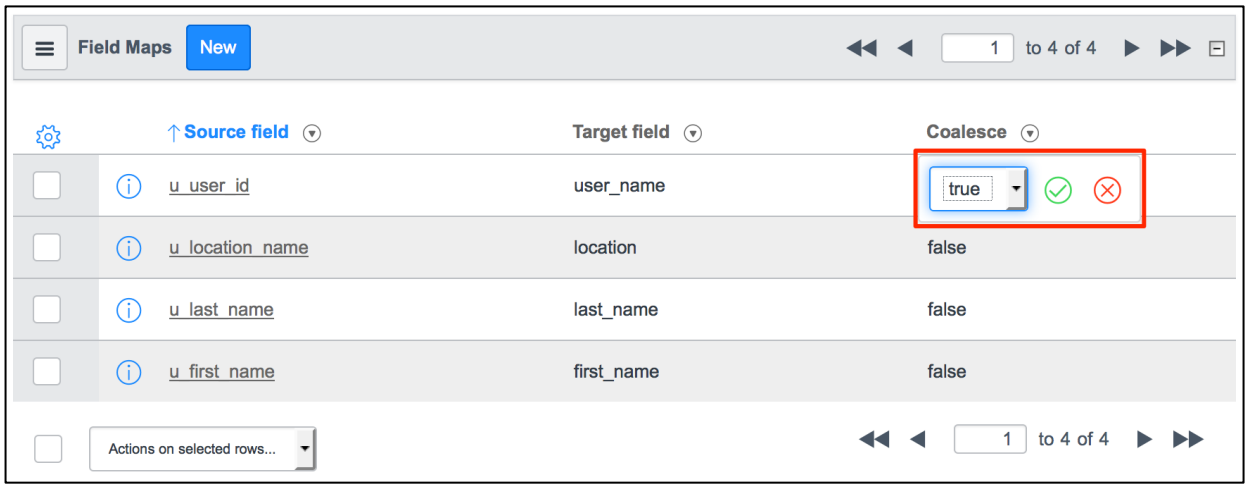
5. Drag the **User ID, First name, Last name,** and **Location Name** fields from the source table to the **Field Map**. Associate those fields with the target table fields **User ID, First name, Last name,** and **Location** by dragging these to the Field Map from the target.




6. Click **Save**.

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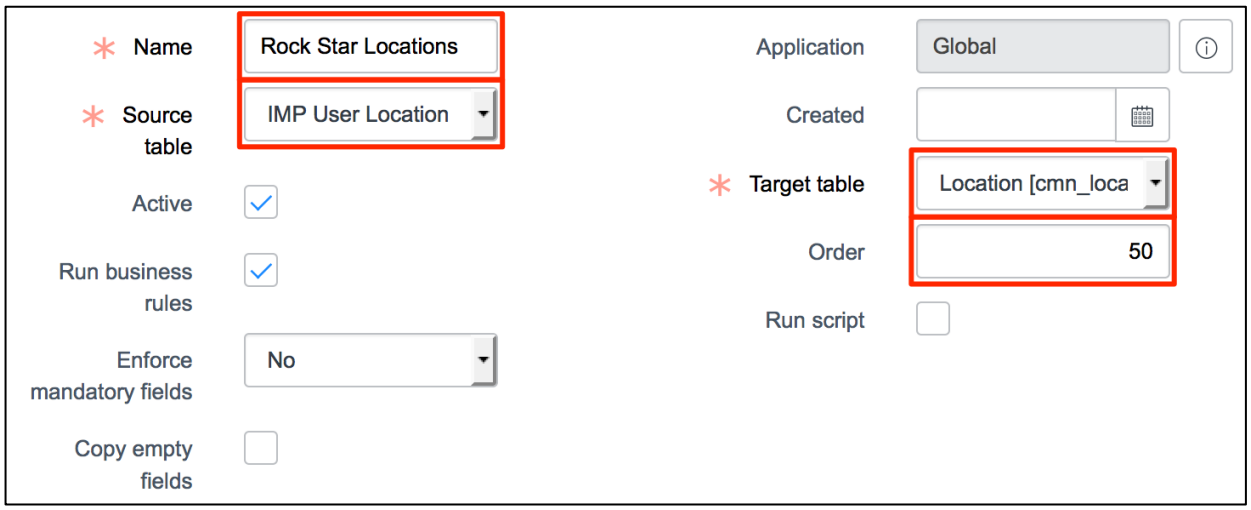
7. Set the **u_user_id / user_name** field to have the **Coalesce** flag set to **true**. (Remember to list edit!)




8. Navigate to **System Import Set > Create Transform Map** to create another Transform Map.

9. Fill in the following information:

   Name: **Rock Star Locations**
   Source Table: **IMP User Location [u_imp_user_location]**
   Target Table: **Location [cmn_location]**
   Order: **50**

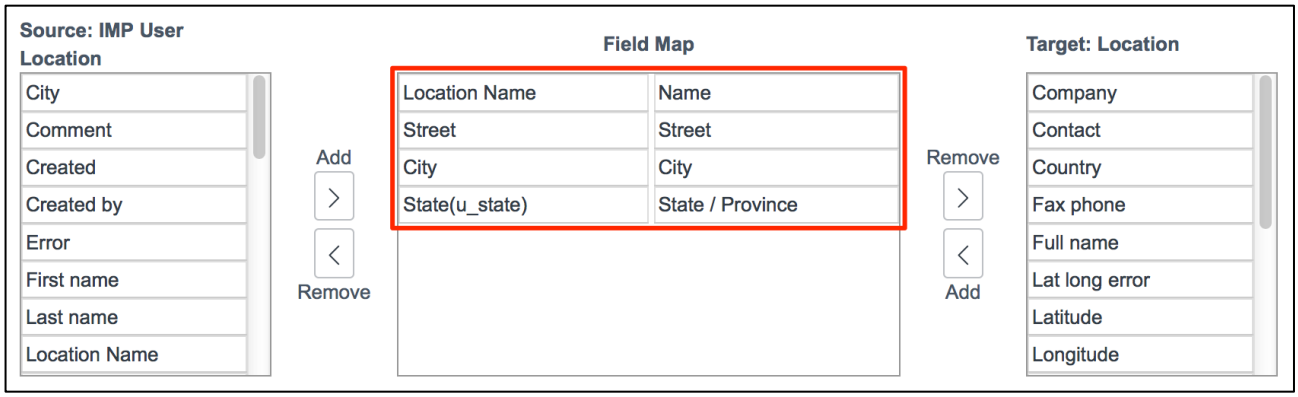



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10. Click the **menu** icon and select **Save**.

11. Select **Mapping Assist**.

12. Drag the **Location Name, Street, City,** and **State (u_state)** fields from the source table to the Field Map. (It is important to pick the right State field!) Associate those fields with the target table fields **Name, Street, City,** and **State / Province** by dragging these to the **Field Map** from the target.




13. Click **Save**.

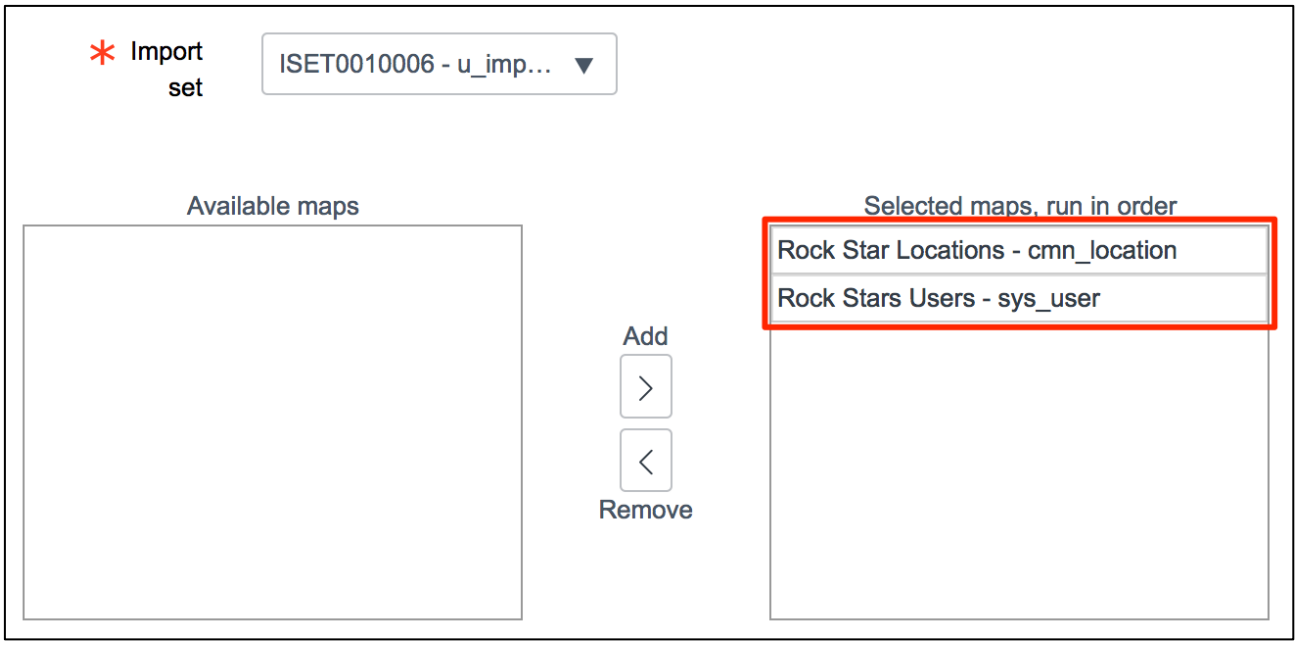
14. Set the **u_location_name / name** field to have the Coalesce flag set to **true**.




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## Run the transform

1. Click **Transform**.
2. Be sure both the **Rock Star Locations** and **Rock Stars** transform maps are selected, with the **Rock Star Locations** on top so it runs first.




3. Click **Transform**, and check the status.

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## Lab Success Verification

1. Check under **User Administration > Users** and **User Administration > Locations** to see the newly imported records: 17 new users and 6 new locations. Remember to sort by **Updated** or **Created**!

| User ID | Name | Location |
|---|---|---|
| elvis.presley | Elvis Presley | San Francisco Office |
| ivan.orsolini | Ivan Orsolini | Chicago Office |
| zakk.wylde | Zakk Wylde | Knots Landing Office |
| eddie.vedder | Eddie Vedder | San Diego Office |
| gene.summers | Gene Summers | South Fork Office |

| Name | City |
|---|---|
| San Francisco Office | San Francisco |
| South Fork Office | Dallas |
| San Diego Office | San Diego |
| Chicago Office | Downers Grove |
| Seattle Office | Kirkland |

## Things to Think About

- Why was the Rock Stars Location Map already selected? What made it the first?

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# Lab Goal

**Lab 5**
**Advanced Maps**

This lab explains how to find an Incident caller from the email address.

If there is a **Number** field in the data without an **INC** prefix, it is best practice to have ServiceNow generate its own number and to store the original number elsewhere, for reference.

The instructions are brief in this lab. Use the skills learned in the previous labs to complete it, but please ask for help if you need it.

## Instructions

1. Navigate to **Lab Resources > Lab 5: incidents.xls** and save the file.
2. Create a new string field on the incident table. Name it **Import Set**.

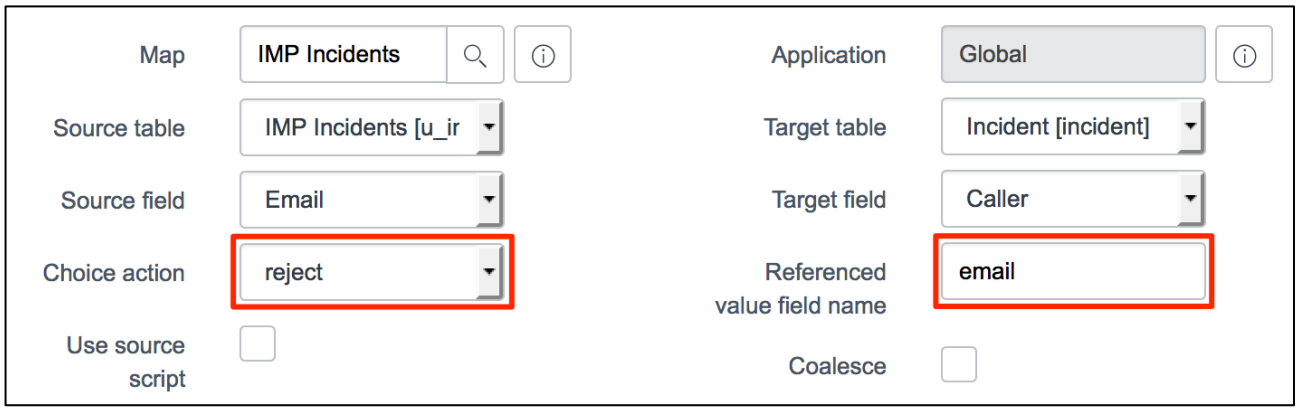
   **Hint**: Try using **System Definition > Dictionary**, and create a new record.
3. Load the **incidents.xls** file into a new Import Set; then create a **Transform Map**.
4. Map the **Short Description** and **Opened** fields on the source to **Short Description** and **Opened** on the target.

   **HINT**: If you use the **Auto map matching fields** related link, be sure to remove the **number** field map.
5. Map the **number** field to **correlation_id** and set as **Coalesce** value.

   **Note**: **Correlation ID** is a built-in field typically used for storing numbers generated by other systems. Be sure to set the Field Map as the Coalesce value, to save duplication if you reimport.
6. Map Email to **Caller**.

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7. Edit the Field Map for Caller, and set the **Referenced value** field name to **email**. Set the **Choice action** dropdown to **reject**.




**Note**: Setting the Choice action to **reject** skips the entire row (record) transformation if the Import Set contains a reference or choice value other than those available.

8. Confirm that the Coalesce fields are indexed on the target table. You should be prompted to confirm this.

9. Map the **Set** field to **Import Set**.

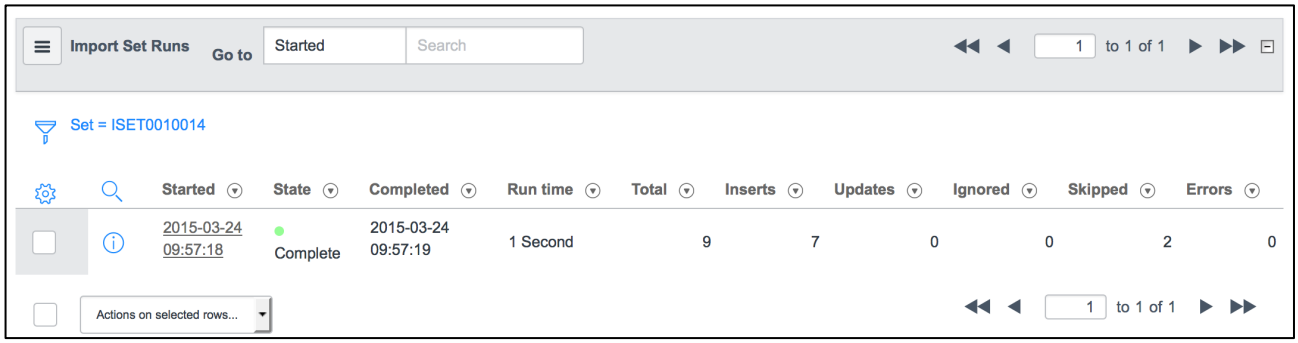
10. Transform the data.

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## Lab Success Verification

1. Take a look at the incidents and check the callers. Have the correct incidents been picked up? Were there any incidents rejected? By creating the import set field, you can see where the data has come from.

| | | |
|---|---|---|
| INC0010007 | Jake Throgmorton | What is the meaning of life? |
| INC0010006 | Renae Eldrige | What time is lunch? |
| INC0010005 | Harry Potter | Where are the horcruxes? |




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# Lab Goal

This lab explains how to filter unwanted Incident records using an example script for **source**, **status message**, and **short description**. The instructions are brief in this lab. Use the skills learned in the previous labs to complete it, but please ask for help if you need it.

**Bonus Lab!**
**Import Validation**

## Instructions

1. Delete all **Incidents**. You can use any of the following methods:
   - Select all **Incidents** in the list view, and choose **Delete** from the actions menu. You may have to do this several times; or
   - Navigate to **System Definition > Tables and Columns**; select Incident in the Table Names list; and click **Delete all Records**.
2. Reload the **incidents.xls** data source.
3. Find the **Incidents** transform map, ready to edit it.
4. Under the **Transform Scripts** related list, click **New**, and fill out the following information:

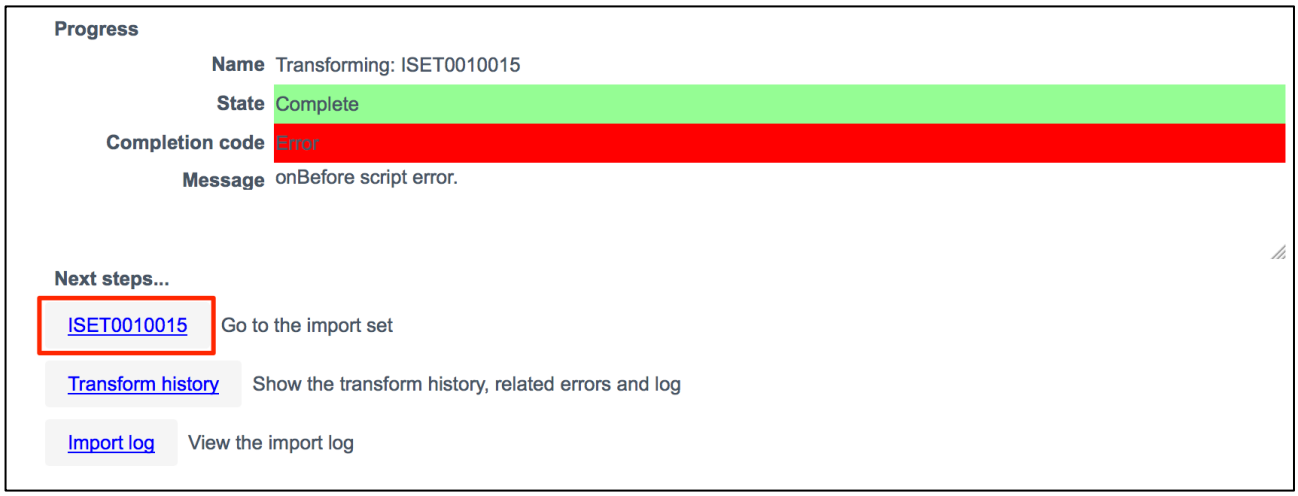
   When: **onBefore**
   Script:

```
if (source.u_email == "Ron.Weasley@example.com") {
    ignore = true;
    status_message = "Not accepting incidents from Ron Weasley";
}
if (source.u_short_description.indexOf("horcruxes") > 0) {
    error = true;
    status_message = "Not accepting incidents related to the horcruxes";
}
```

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5. Click **Transform** on the Transform Map, and look at the progress screen.

6. Under **Next Steps**, click the import set link (for example, **ISET00100*xx***).




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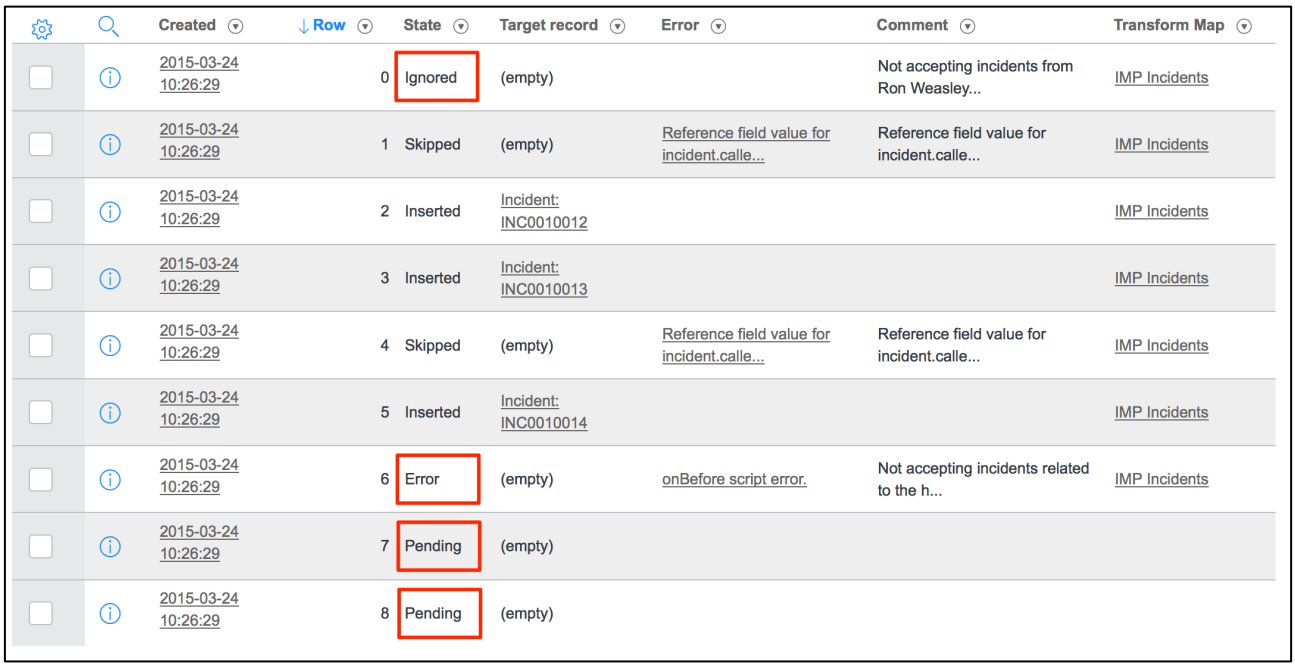
## Lab Success Verification

1. Under the **Import Set Rows** related list (bottom of the screen):

   Notice the **1 ignored record** and the **comment**.

   Notice the **1 error record** and the **comment**.

   Notice the **2 pending records**. This is because the import was stopped with *error=true* in the script.



| Created | Row | State | Target record | Error | Comment | Transform Map |
|---|---|---|---|---|---|---|
| 2015-03-24 10:26:29 | 0 | Ignored | (empty) | | Not accepting incidents from Ron Weasley... | IMP Incidents |
| 2015-03-24 10:26:29 | 1 | Skipped | (empty) | Reference field value for incident.calle... | Reference field value for incident.calle... | IMP Incidents |
| 2015-03-24 10:26:29 | 2 | Inserted | Incident: INC0010012 | | | IMP Incidents |
| 2015-03-24 10:26:29 | 3 | Inserted | Incident: INC0010013 | | | IMP Incidents |
| 2015-03-24 10:26:29 | 4 | Skipped | (empty) | Reference field value for incident.calle... | Reference field value for incident.calle... | IMP Incidents |
| 2015-03-24 10:26:29 | 5 | Inserted | Incident: INC0010014 | | | IMP Incidents |
| 2015-03-24 10:26:29 | 6 | Error | (empty) | onBefore script error. | Not accepting incidents related to the h... | IMP Incidents |
| 2015-03-24 10:26:29 | 7 | Pending | (empty) | | | |
| 2015-03-24 10:26:29 | 8 | Pending | (empty) | | | |

## Things to Think About

- If you need to use scripts, be sure to add status messages. They are invaluable for debugging.
- Sometimes scripts and data manipulations are unavoidable. But it is good practice to minimize their use. They can get complicated quickly! It is better to have clean data from the start.

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