Enforce Row-Level Security

Lab story

In this lab, you'll enforce row-level security to ensure that a salesperson can only analyze sales data for their assigned region(s).

In this lab you learn how to:

- Enforce row-level security
- Choose between dynamic and static methods

This lab should take approximately 20 minutes.

Get started

In this task, you'll set up the environment for the lab.

Important: If you're continuing on from the previous lab (and you completed that lab successfully), don't complete this task; instead, continue from the next task.

1. Open Power BI Desktop.

   *Tip: By default, the Getting Started dialog box opens in front of Power BI Desktop. **Sign-in** and then close the pop-up.*

2. To open the starter Power BI Desktop file, select the **File > Open Report > Browse Reports**.

3. In the **Open** window, navigate to the **D:\PL300\Labs\10-row-level-security\Starter** folder, and open the **Sales Analysis** file.

4. Close any informational windows that may open.

5. Notice the yellow warning message beneath the ribbon. *This message alerts you to the fact that the queries haven't been applied to load as model tables. You'll apply the queries later in this lab.*

   *To dismiss the warning message, at the right of the yellow warning message, select **X**.*

6. To create a copy of the file, go to **File > Save As** and save to **D:\PL300\MySolution** folder.

7. If prompted to apply changes, select **Apply Later**.

Enforce row-level security

In this task, you'll enforce row-level security to ensure a salesperson can only see sales made in their assigned region(s).

1. Switch to Data view.

2. In the **Data** pane, select the **Salesperson (Performance)** table.

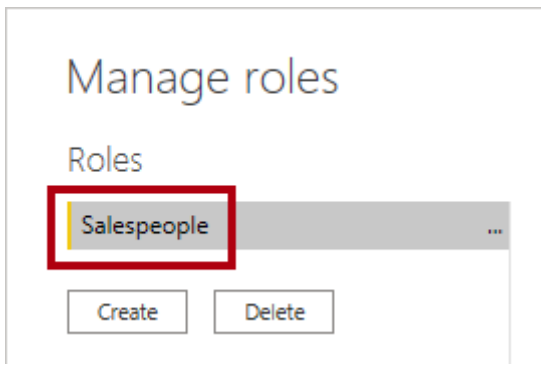
3. Review the data, noticing that Michael Blythe (EmployeeKey 281) has a UPN value of: **michael-blythe@adventureworks.com**

   You may recall that Michael Blythe is assigned to three sales regions: US Northeast, US Central, and US Southeast.

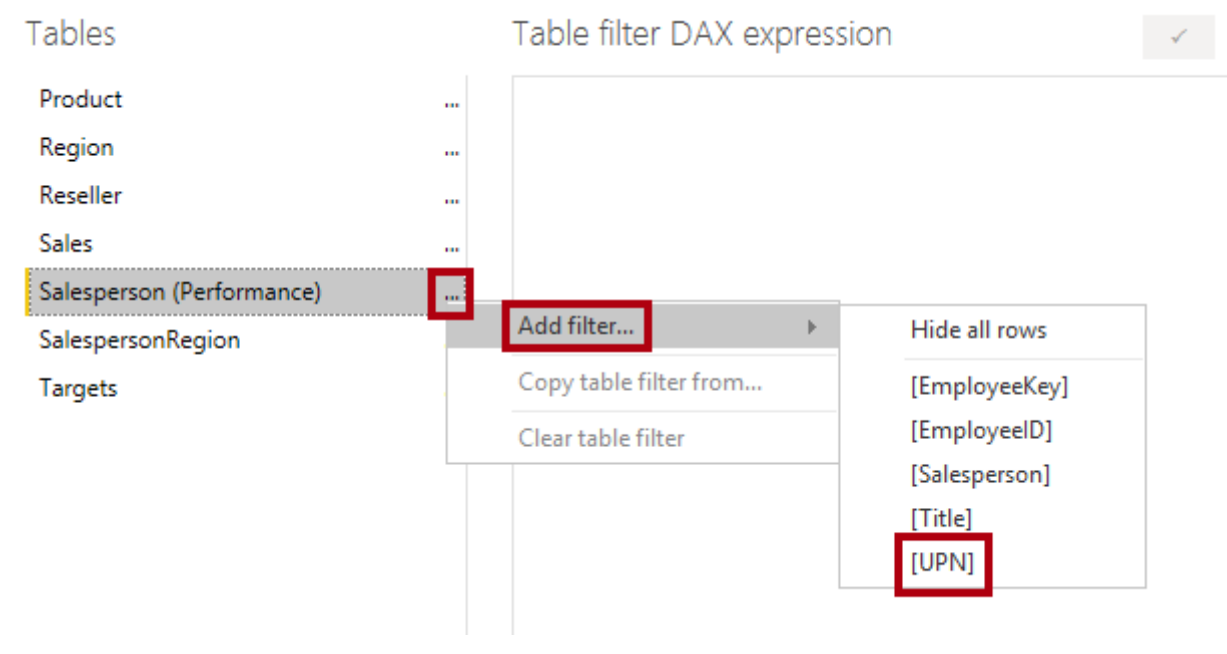
4. On the **Modeling** ribbon tab, from inside the **Security** group, select **Manage Roles**.

5. In the **Manage Roles** window, select **Create**.

6. In the box, replace the selected text with the name of the role: **Salespeople**, and then press **Enter**.

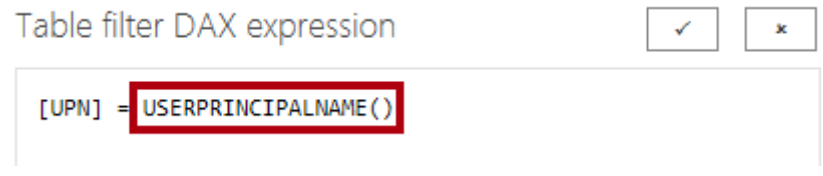


7. To assign a filter, for the **Salesperson (Performance)** table, select the ellipsis (…) character, and then select **Add Filter | [UPN]**.

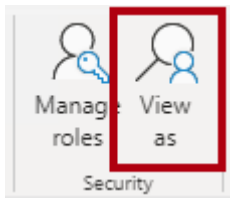


8. In the **Table Filter DAX Expression** box, modify the expression by replacing **"Value"** with **USERPRINCIPALNAME()**, and then **Save**.

   *USERPRINCIPALNAME() is a Data Analysis Expressions (DAX) function that returns the name of the authenticated user. It means that the **Salesperson (Performance)** table will filter by the User Principal Name (UPN) of the user querying the model.*



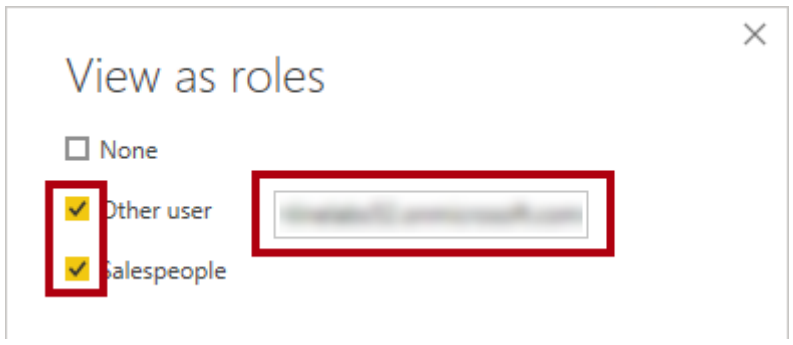
9. To test the security role, on the **Modeling** ribbon tab, from inside the **Security** group, select **View As**.



10. In the **View as Roles** window, check the **Other User** item, and then in the corresponding box, enter: **michael-blythe@adventureworks.com**

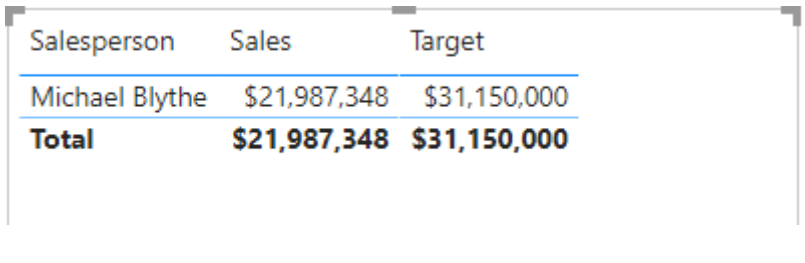
11. Check the **Salespeople** role, and then **OK**.

*This configuration results in using the **Salespeople** role and impersonating the user with your Michael Blythe's name.*



12. Notice the yellow banner above the report page, describing the test security context.

13. In the table visual, notice that only the salesperson **Michael Blythe** is listed.

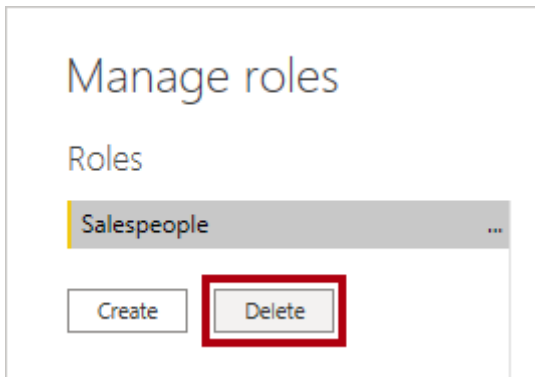


Salesperson	Sales	Target
Michael Blythe	$21,987,348	$31,150,000
Total	**$21,987,348**	**$31,150,000**

14. To stop testing, at the right side of the yellow banner, select **Stop Viewing**.

15. To delete the **Salespeople** role, on the **Modeling** ribbon tab, from inside the **Security** group, select **Manage Roles**.

16. In the **Manage Roles** window, select **Delete**. When prompted to confirm the deletion, select **Yes, Delete**.



Finish up

In this task, you'll complete the lab.

1. Select **Save**, then save the Power BI Desktop file to end the lab.

*Note: When the Power BI Desktop file is published to the Power BI service, you'll need to complete a post-publication task to map security principals to the **Salespeople** role. You won't do that in this lab.*