

# Lab 10- Enforce Row-Level Security

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**The estimated time to complete the lab is 45 minutes**

In this lab you will create a many-to-many relationship between the **Salesperson** table and the **Sales** table. You will also 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:

- Configure many-to-many relationships
- Enforce row-level security

## Task 1: Get started

In this task you will setup the environment for the lab.

*Important: If you are continuing on from the previous lab (and you completed that lab successfully), do not complete this task; instead, continue from the next task.*

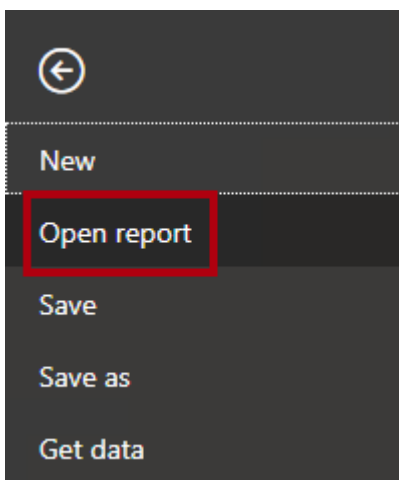
1. To open the Power BI Desktop, on the taskbar, click the Microsoft Power BI Desktop shortcut.



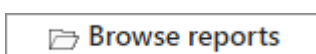
2. To close the getting started window, at the top-left of the window, click **X**.



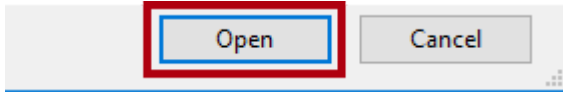
3. To open the starter Power BI Desktop file, click the **File** ribbon tab to open the backstage view.
4. Select **Open Report**.



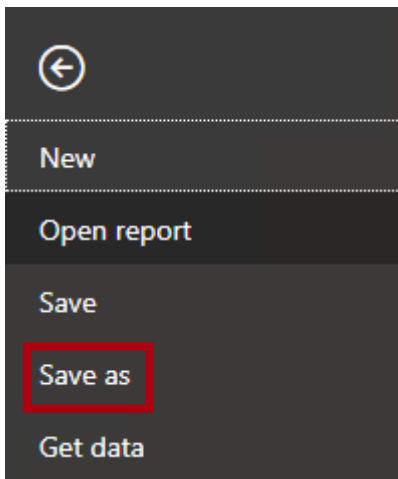
5. Click **Browse Reports**.



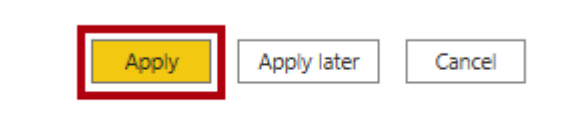
6. In the **Open** window, navigate to the **C:\PowerBI\Labs\10-row-level-security\Starter** folder.
7. Select the **Sales Analysis** file.
8. Click **Open**.



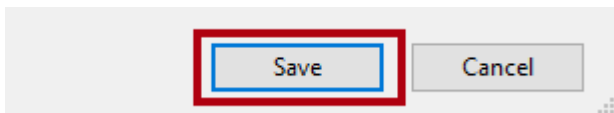
9. Close any informational windows that may open.
10. To create a copy of the file, click the **File** ribbon tab to open the backstage view.
11. Select **Save As**.



12. If prompted to apply changes, click **Apply**.



13. In the **Save As** window, navigate to the **C:\PowerBI\MySolution** folder, and save it as **10.Sales Analysis.pbix**.
14. Click **Save**.



## Task 2: Enforce row-level security

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

1. Switch to Data view.



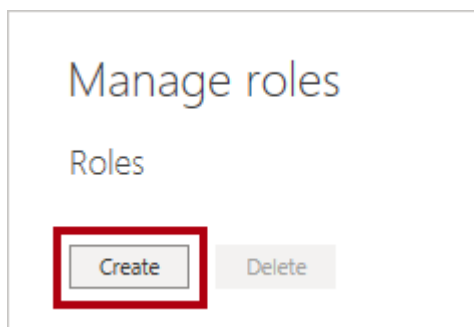
2. In the **Fields** pane, select the **Salesperson (Performance)** table.
3. Review the data, noticing that Michael Blythe (EmployeeKey 281) has a UPN value of:  
[michael-blythe@adventureworks.com](mailto:michael-blythe@adventureworks.com)

*Recall that Michael Blythe is assigned to three sales regions: US Northeast, US Central, and US Southeast.*

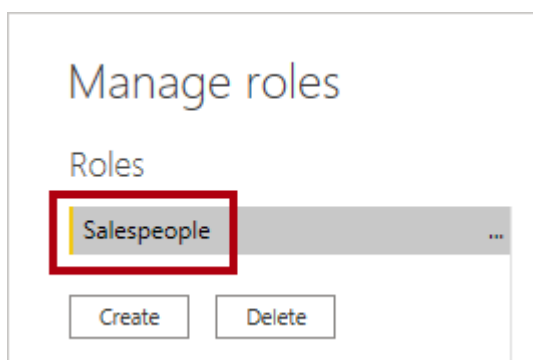
4. Switch to Report view.
5. On the **Modeling** ribbon tab, from inside the **Security** group, click **Manage Roles**.



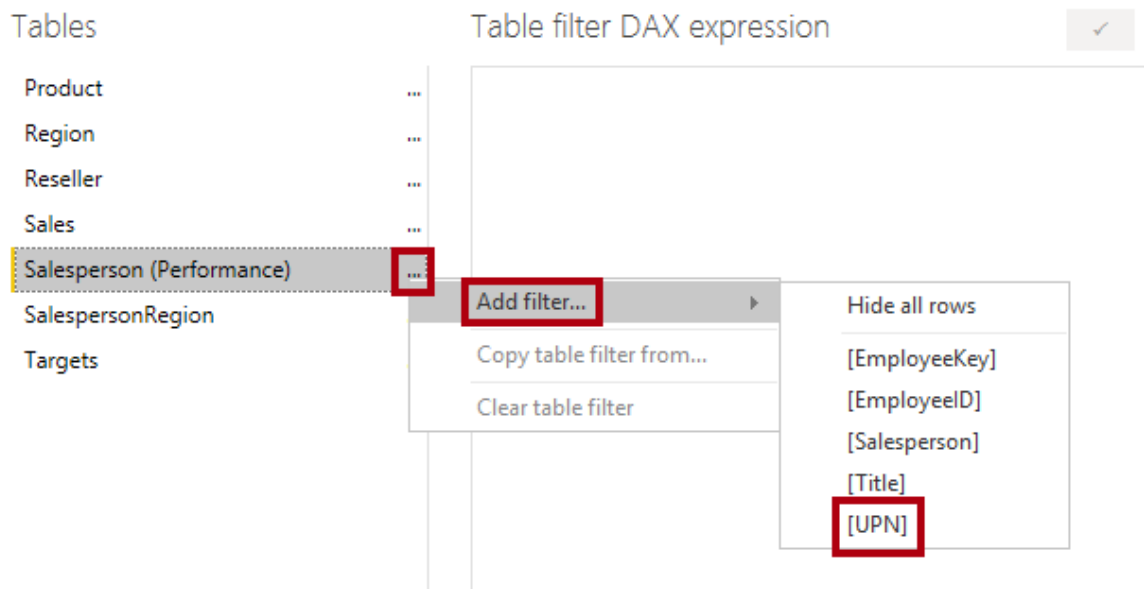
6. In the **Manage Roles** window, click **Create**.



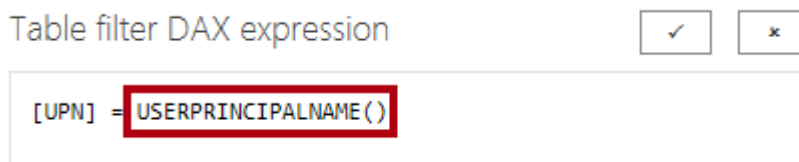
7. In the box, replace the selected text with the name of the role: **Salespeople**, and then press **Enter**.



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



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

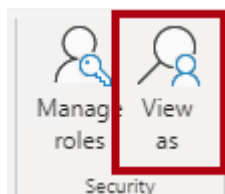


*USERPRINCIPALNAME() is a Data Analysis Expressions (DAX) function that returns the name of the authenticated user. It means that the **Salesperson (Performance)** table will filter by the User Principal Name (UPN) of the user querying the model.*

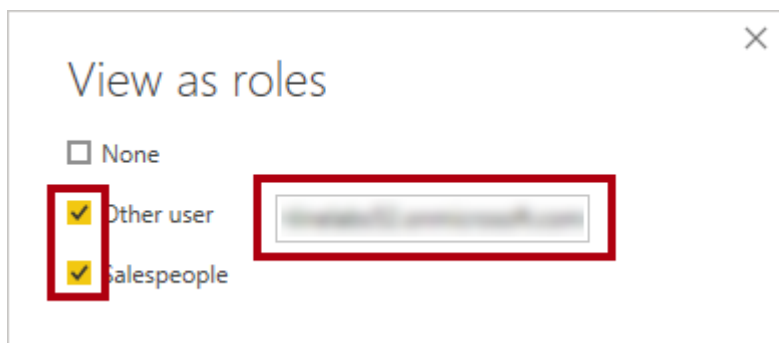
10. Click **Save**.



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



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

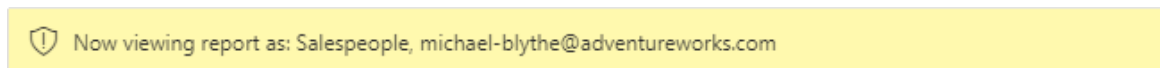


This configuration results in using the **Salespeople** role and impersonating the user with your Michael Blythe's name.

14. Click **OK**.



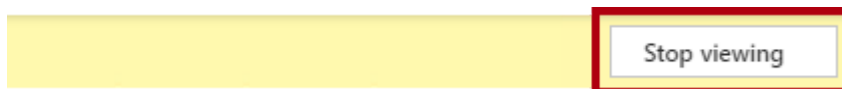
15. Notice the yellow banner above the report page, describing the test security context.



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

Salesperson	Sales	Target
Michael Blythe	\$21,987,348	\$31,150,000
<b>Total</b>	<b>\$21,987,348</b>	<b>\$31,150,000</b>

17. To stop testing, at the right side of the yellow banner, click **Stop Viewing**.

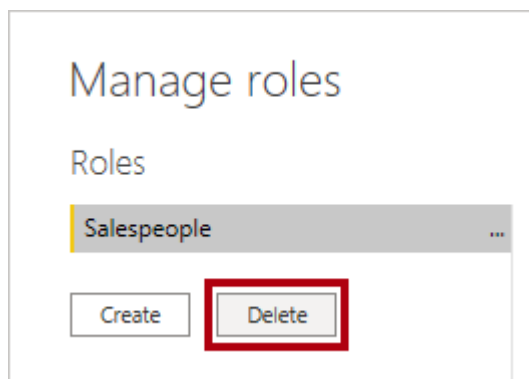


When the Power BI Desktop file is published to the Power BI service, you'll need to complete a post-publication task to map security principals to the **Salespeople** role. You won't do that in this lab.

18. To delete the role, on the **Modeling** ribbon tab, from inside the **Security** group, click **Manage Roles**.



19. In the **Manage Roles** window, click **Delete**.



20. When prompted to confirm the deletion, click **Yes, Delete**.

21. Click **Save**.



## Task 2: Finish up

In this task you will complete the lab.

1. Save the Power BI Desktop file.