



Power BI Row Level Security

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About Devin

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Microsoft Data Platform MVP

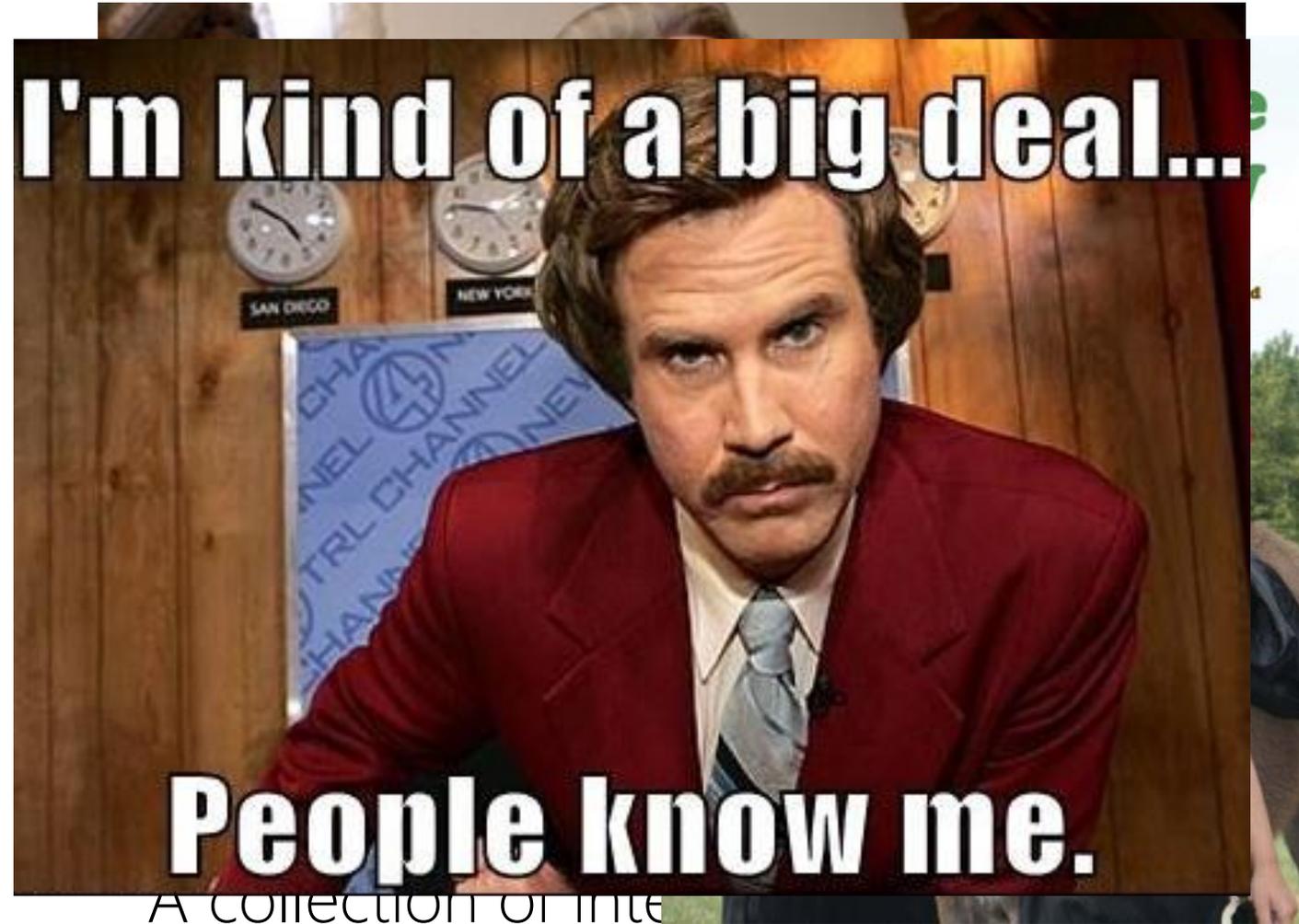
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A collection of inte

Agenda

What is Row Level Security

Setting up Basic Row Level Security

Making Security Dynamic



What is Power BI Row Level Security?

What does it do?

Gives the ability to restrict specific rows of data from being viewed by your report users

What is it not?

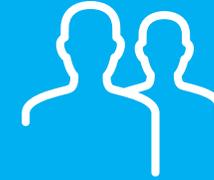
Not the same as Report, Dashboard, Workspace or Power BI App sharing

How Does it Work?



Create Role

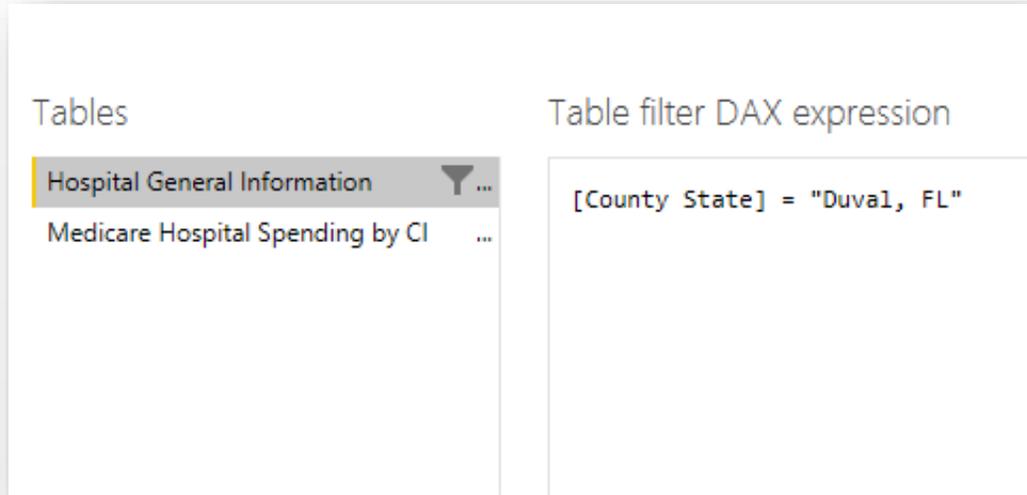
In the Power BI Desktop define what the Role can do.



Assign Users or Groups

In the Power BI Service assign Users to the Role you created.

Basic Row Level Security



Configuration

Setup a hard-coded role definition

Downside



Demo

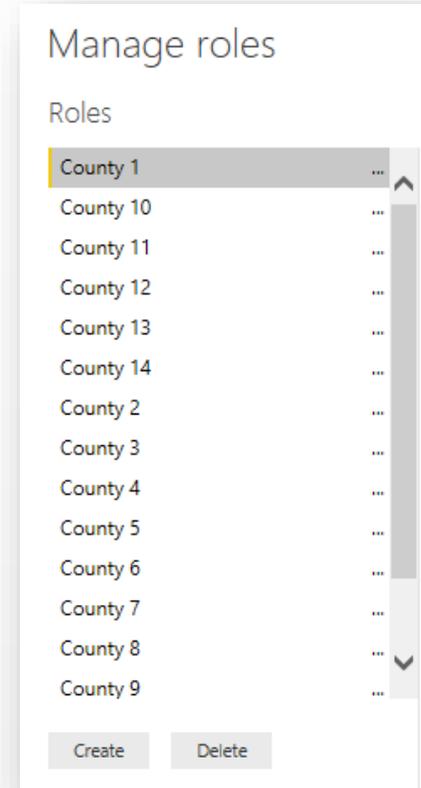
Basic Row Level Security Setup

Problem with Basic Row Level Security

Issues to deal with

Requires a new role for every different security scenario

Could require continuous maintenance



Dynamic Row Level Security

How it Works

Captures the user logged into the Power BI Report

Checks permissions against a table in the data model

Matches the user's login to acceptable rows based on relationships in the data model

DAX

UserPrincipalName()

UserName()



Demo

Dynamic Row Level Security Setup

Dynamic Row Level Security (Many to Many)

User		
UserID	Name	Email
1	Devin	dknight@pragmatic...
2	Mitchell	mpearson@pragma...
3	Manuel	mquintanta@prag...

UserStateBridge	
UserID	StateID
1	1
1	3
2	3
2	4
3	2

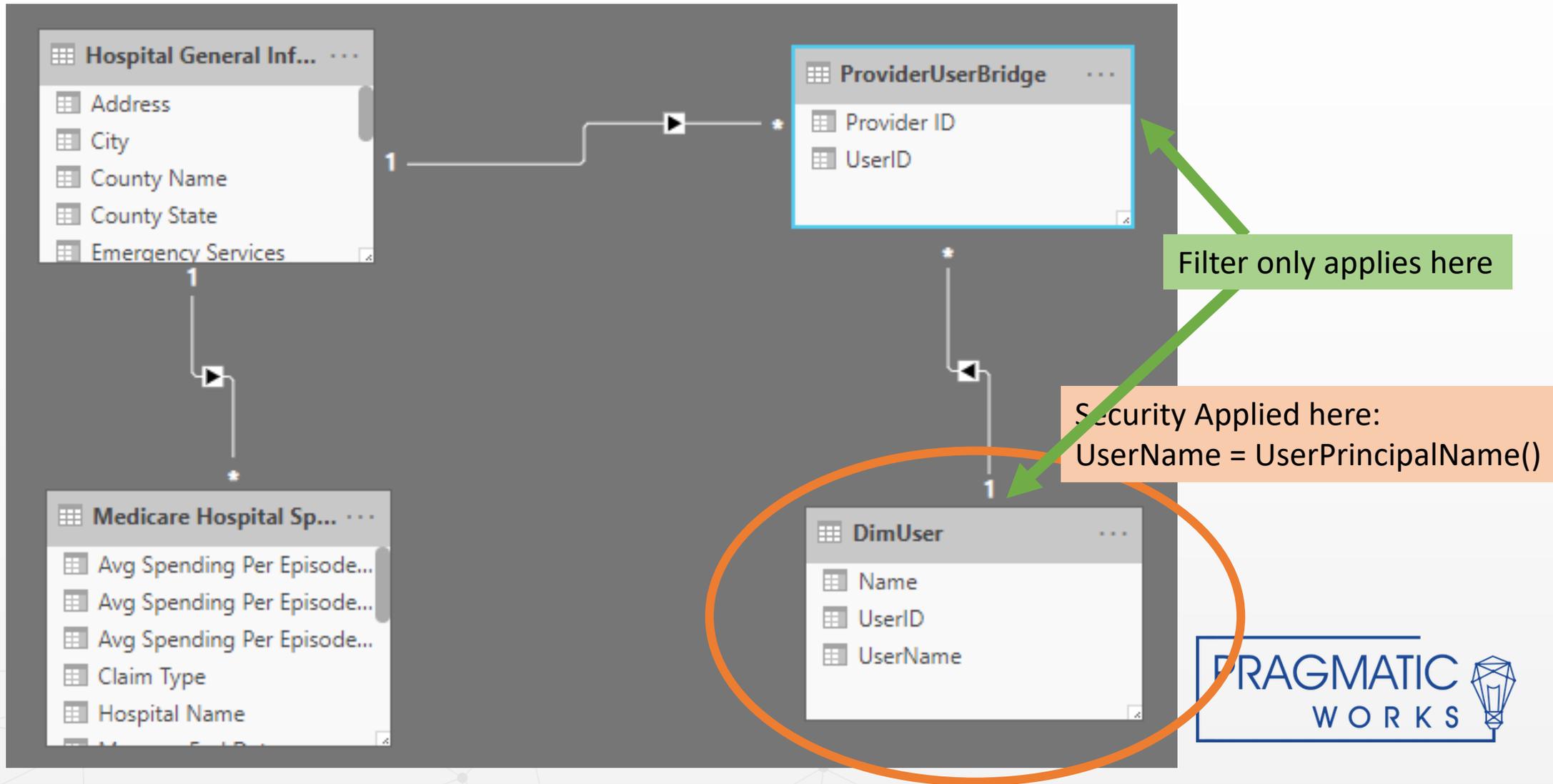
Sales		
StateID	ProductID	Amount
1	346	\$2566
2	856	\$6723
4	489	\$822
4	849	\$2262

State	
StateID	Name
1	Florida
2	California
3	Georgia
4	South Carolina

Demo

Dynamic Row Level Security Setup
With Many to Many

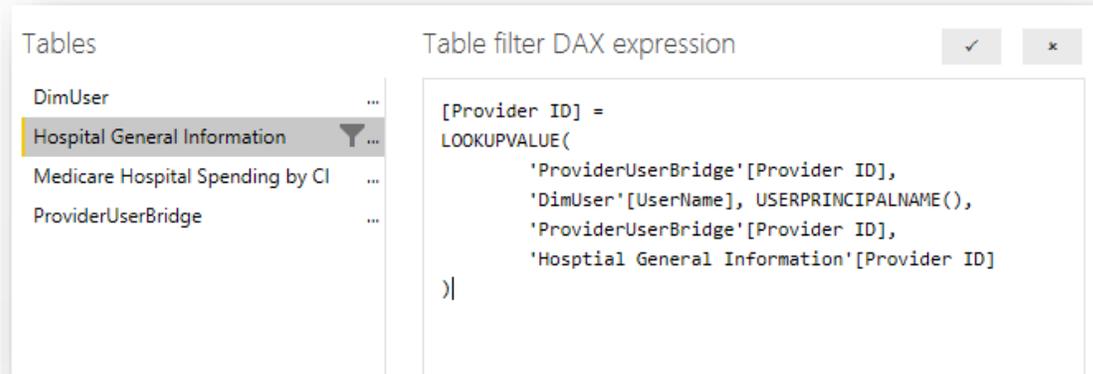
Why didn't this work



Demo

Dynamic Row Level Security Setup
With Many to Many... Continued

Dynamic Row Level Security with DAX



Why you should consider this way

Applying 'Both' to Cross Filter Direction can hurt performance

DAX Method

Filter the Hospital table to only return values associated with the user logged in

FILTER

LOOKUPVALUE



Demo

Dynamic Row Level Security Setup With DAX

Dynamic Row Level Security with Parent Child Hierarchy

UserID	Name	UserName	ManagerID
1	Devin Knight	dknight@pragmaticworks.com	
2	Manuel Quintana	mquintana@pragmaticworks.com	1
3	Mitchell Pearson	mpearson@pragmaticworks.com	2
4	Daniel Straitiff	dstraitiff@pragmaticworks.com	2
5	Erin Ostrowsky	eostrowsky@pragmaticworks.com	3

How to solve

Flatten hierarchy with PATH function

DAX

PATH and OR operator (||) for each flattened level of the hierarchy

Demo

Dealing with Self Referencing Tables

Commonly asked Questions

- What happens when I republish?

Have Any Questions?



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