



Next Level
Access Control
Power BI

POWER





**NOT LAZY
-EFFICIENT**



**SOLID
DYNAMIC
ONE TIME SET-UP**



DATAmasterminds

**LINDA
TORRÅNG**

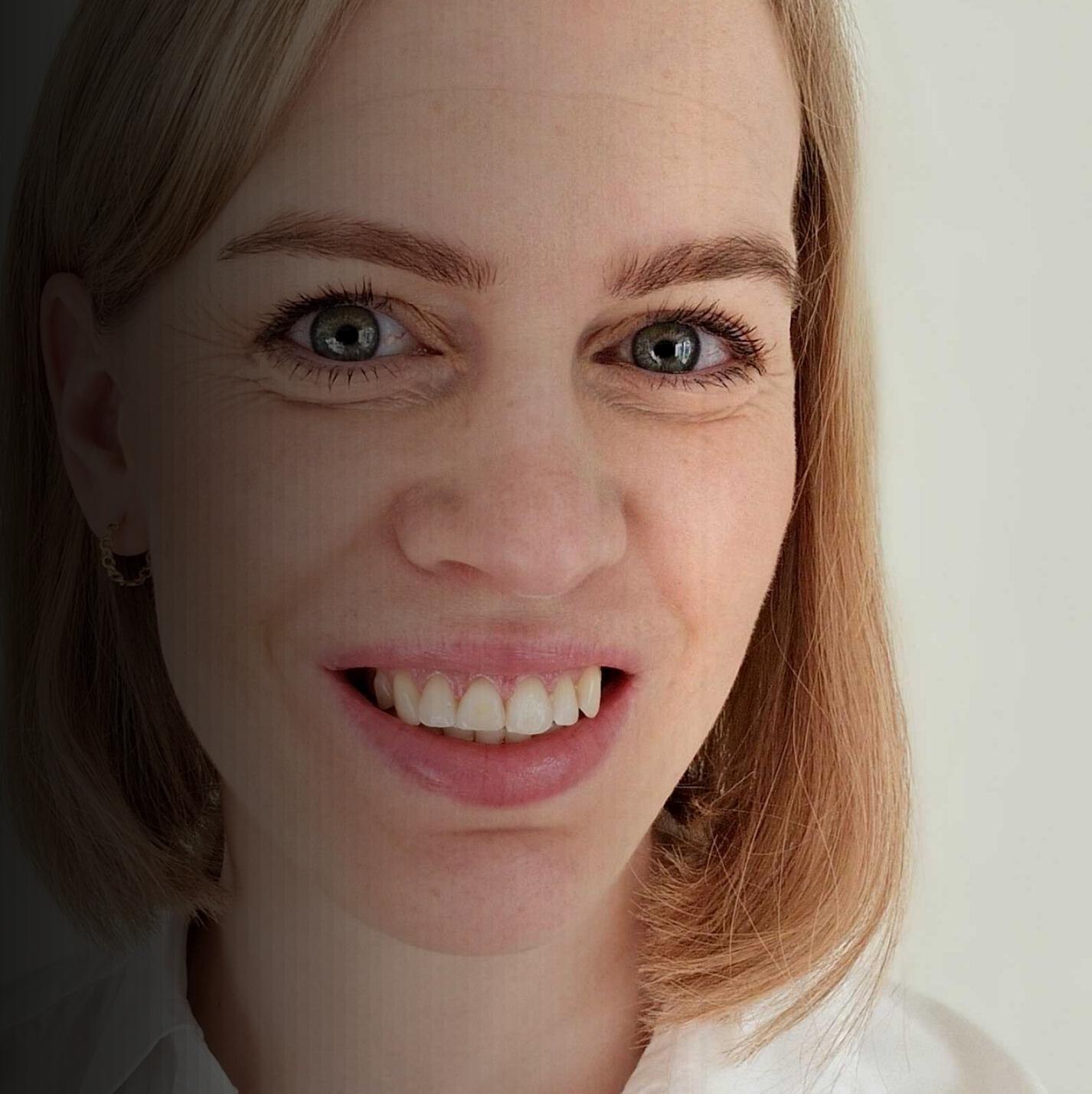
(she/her)

DATA PLATFORM ENGINEER

RETAIL/ JOURNALIST

MOTHER

RUBBERDUCK



**Swedish Power BI
User Group**

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A|S

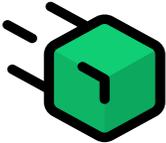
enversion



Raffle prizes from the sponsors



TABULAR
EDITOR 3



DAX
Optimizer



Power BI
Next Step



**DEVELOPERS
OR
END-USERS**



DEVELOPERS



END-USERS



METHODS OF SHARING

~~WORKSPACE~~

EMBED IN SECURE PORTAL

~~PUBLISH TO WEB~~

APP

APP

**PRO, PPU OR
PREMIUM CAPACITY**

**SHARE THE APP
VIA LINK IN EMAIL OR
BY INSTALLING IT FOR THEM**

PRINCIPLE OF LEAST PRIVILEGE



ACCESS TO WORKSPACE



SHARE THE DATASET

BUILD CONTENT

PRINCIPLE OF LEAST PRIVILEGE



WHY ACCESS CONTROL?



SECURITY LEVELS

ROW
COLUMN
OBJECT
PAGE



ROW LEVEL SECURITY

DYNAMIC
OR
STATIC



ROW LEVEL SECURITY DYNAMIC

Manage security roles

Create new security roles and use filters to define row-level data restrictions.

Roles

- + New
- Manager

Select tables

- Accounts
- Campaigns
- Contacts
- Industries

Filter data

[Manager] == Userprincipalname()

Switch to default editor

USERPRINCIPALNAME ()
~~USERNAME ()~~

**ROW
LEVEL
SECURITY
DYNAMIC**



ROW LEVEL SECURITY STATIC

The screenshot shows the 'Manage roles' dialog box with three main sections:

- Roles:** A list containing 'Eastern US' with a dropdown arrow. Below the list are 'Create' and 'Delete' buttons.
- Tables:** A list of tables including 'Date', 'Geo', 'Manufacturer', 'Product', 'SalesFact', and 'Sentiment'. The 'Geo' table is selected and highlighted with a dropdown arrow.
- Table filter DAX expression:** A text area containing the DAX expression `[Region] = "East"`, which is enclosed in a red rectangular box. To the right of the text area are '✓' and '✕' buttons.

**ROW
LEVEL
SECURITY
STATIC**



DYNAMIC OR STATIC

1. **CREATE THE ROLE IN
POWER BI DESKTOP**
2. **CREATE A SECURITY
GROUP FOR THAT ROLE**
3. **PLACE USERS IN GROUP**
4. **ADD GROUP TO ROLE
IN POWER BI SERVICE**

ROW LEVEL SECURITY



**DYNAMIC
OR STATIC**



DYNAMIC OR STATIC

DISTRIBUTION GROUP
MAIL-ENABLED GROUP
SECURITY GROUP
SINGLE USER'S EMAIL
NOT M365 GROUPS



MULTIPLE AUDIENCE

Audience

Sales

Audience

Manager

Audience**Audience**

Sales + North

Manager

Sales + South

Sales + East

Sales + West

| Sales | Manager |
|---------------|-----------------|
| Sales + North | Manager + North |
| Sales + South | Manager + South |
| Sales + East | Manager + East |
| Sales + West | Manager + West |

| Sales | Manager | Finance |
|---------------|-----------------|-----------------|
| Sales + North | Manager + North | Finance + North |
| Sales + South | Manager + South | Finance + South |
| Sales + East | Manager + East | Finance + East |
| Sales + West | Manager + West | Finance + West |

| Sales | Manager | Finance |
|-------------------------|---------------------------|---------------------------|
| Sales + North | Manager + North | Finance + North |
| Sales + South | Manager + South | Finance + South |
| Sales + East | Manager + East | Finance + East |
| Sales + West | Manager + West | Finance + West |
| Sales + North + Sweden | Manager + North + Sweden | Finance+ North + Sweden |
| Sales + North + Norway | Manager + North + Norway | Finance + North + Norway |
| Sales + North + Finland | Manager + North + Finland | Finance + North + Finland |
| Sales + South + Denmark | Manager + South + Denmark | Finance + South + Denmark |
| Sales + South + Holland | Manager + South + Holland | Finance + South + Holland |
| Sales + South + Germany | Manager + South + Germany | Finance + South + Germany |



RLS + MULTIPLE AUDIENCE

AUDIENCE : SALES

MODEL : NORTH

MODEL : SOUTH

- ① Setup
- ② Content
- ③ Audience

Audience

Manage your audiences and their permissions. Select what content each audience can see by toggling the eye icon.

RLS Test

Manager

Sales

+ New Audience



RLS Test

Regional Sales Sample



Contoso

REGIONAL SALES

Sales Overview

Revenue won

Qualified Pipeline

Revenue Open by Sales Stage

Revenue Won and R

Audience

Manage your audiences and their permissions. Select what content each audience can see by toggling the eye

RLS Test

Manager

Sales

+ New Audience



RLS Test

Regional Sales Sample

Financials



HR



Contoso

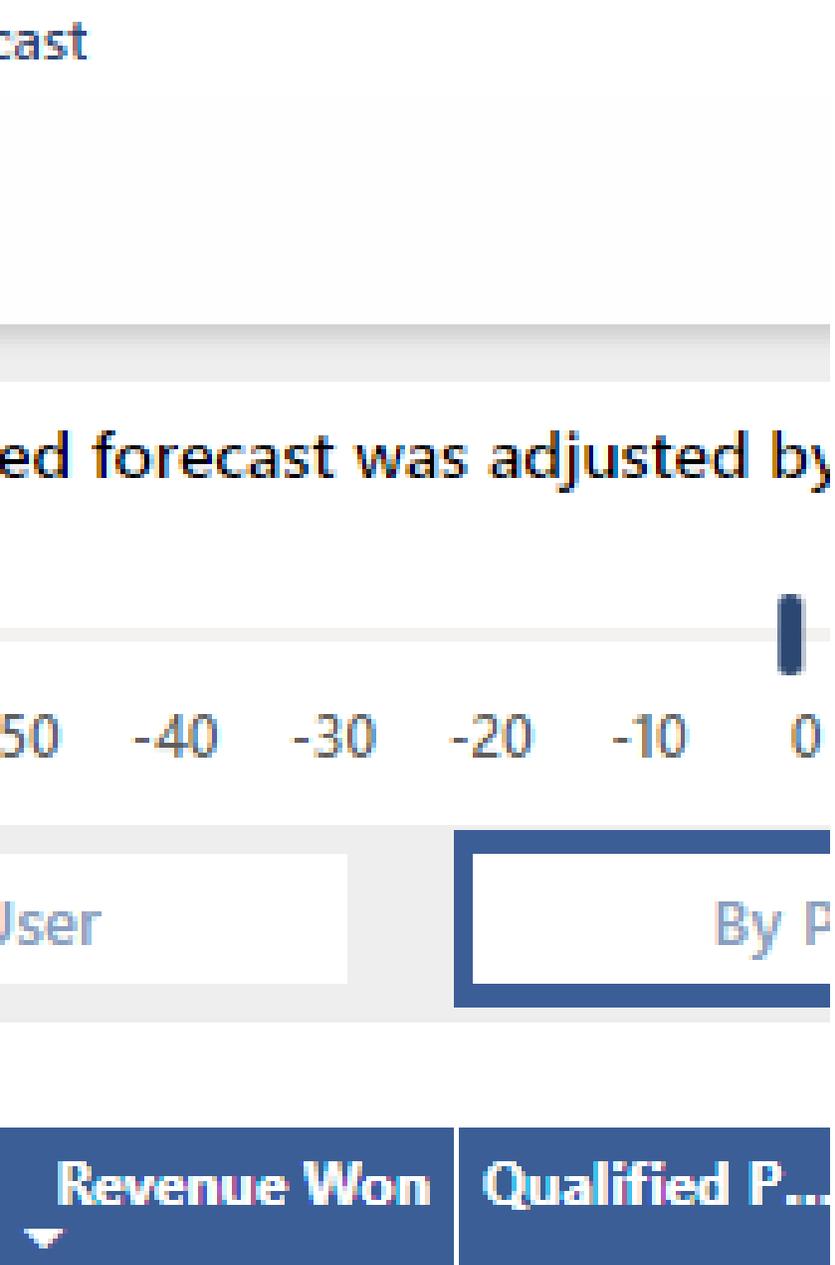
REGIONAL SALES

Sales Overview

Revenue won

Qualified Pipeline

Revenue Open by Sales Stage



Grant access to

Entire organization [Learn more](#)

Specific users or groups

Enter a name or email address

Advanced

Allow people to share the datasets in this app audience.

Allow people to build content with the datasets in this app audience.



Home



Create



Browse



OneLake
data hub



Apps



Metrics

Row-Level Security

North (0)

South (0)

Members (0)

People or groups who belong to this role

Add



Home



Create



Browse



OneLake
data hub



Apps



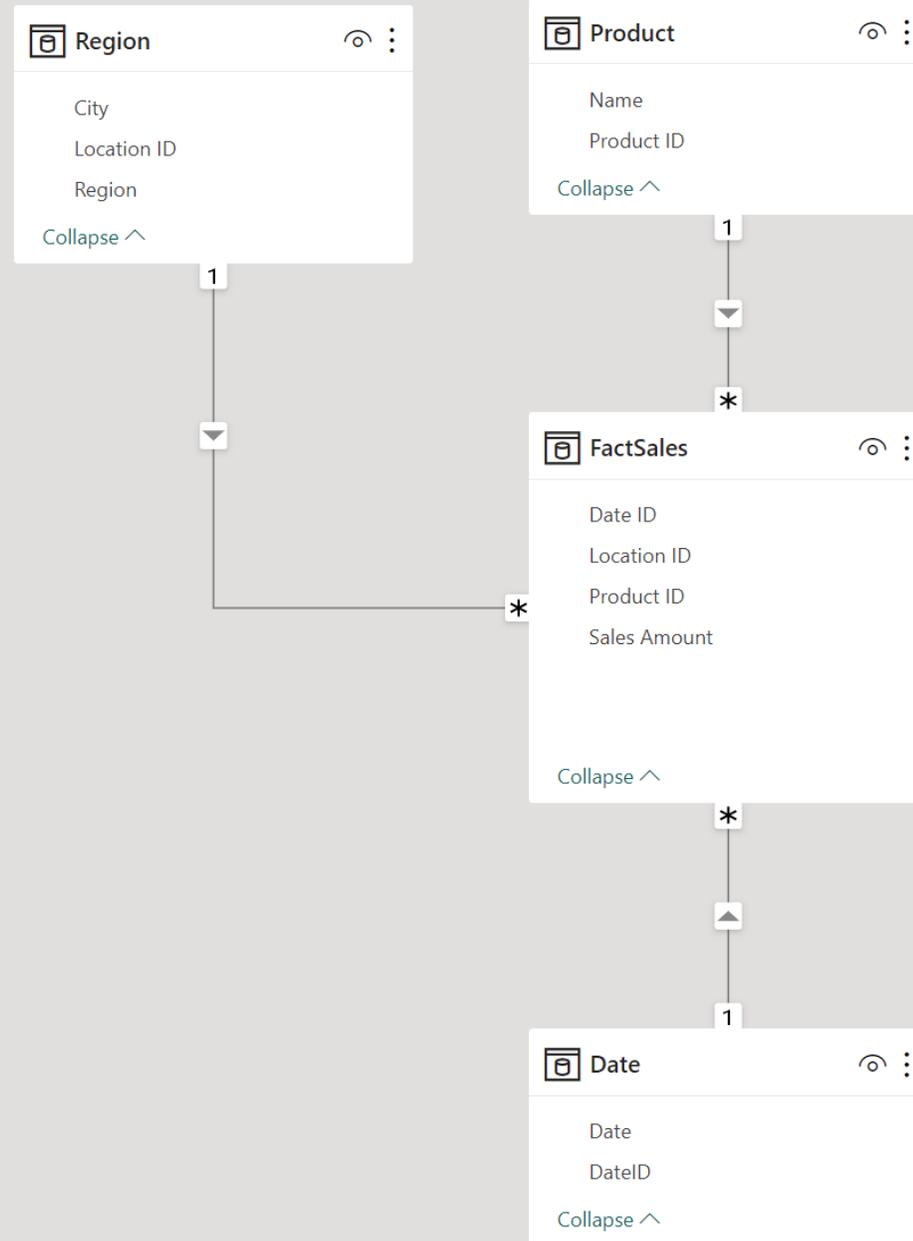
Metrics

Row-Level Security

| | Sales | Manager |
|-----------|---------------|-----------------|
| North (0) | | |
| | Sales + North | Manager + North |
| South (0) | | |
| | Sales + South | Manager + South |
| | Sales + East | Manager + East |
| | Sales + West | Manager + West |

| Role | Region |
|-------------|---------------|
| Sales | North |
| Manager | South |
| Finance | East |
| | West |

| Role | Region | Country |
|-------------|---------------|----------------|
| Sales | North | Sweden |
| Manager | South | Finland |
| Finance | East | Norway |
| | West | Denmark |
| | | Holland |
| | | Germany |



User

- Email
- Name
- UserID

Collapse ^

Region

- Location ID
- Region
- User ID

Collapse ^

Product

- Name
- Product ID

Collapse ^

FactSales

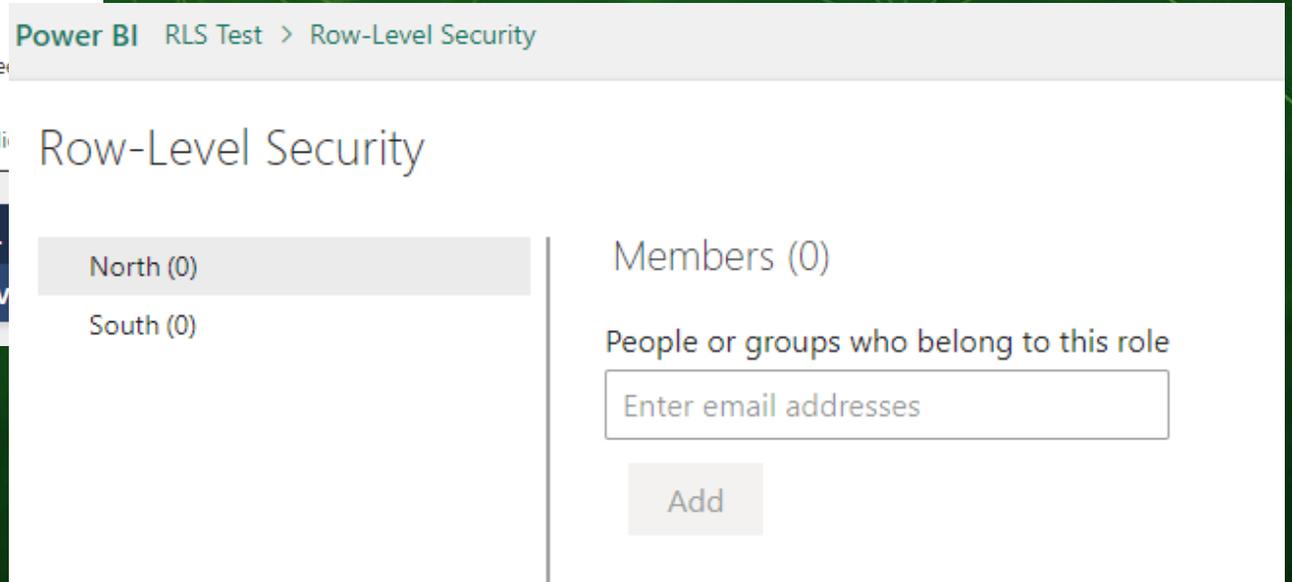
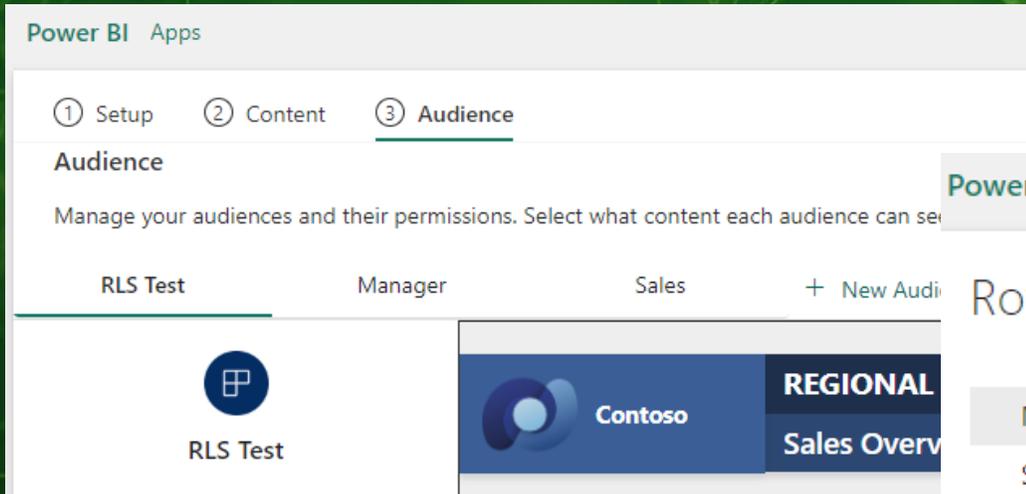
- Date ID
- Location ID
- Product ID
- Sales Amount

Collapse ^





OBJECT & COLUMN LEVEL SECURITY



SECURITY GROUP LEVEL 1: COMPANY ROLE

MANAGER

MID LEVEL MANAGER

SALES

HR

CEO

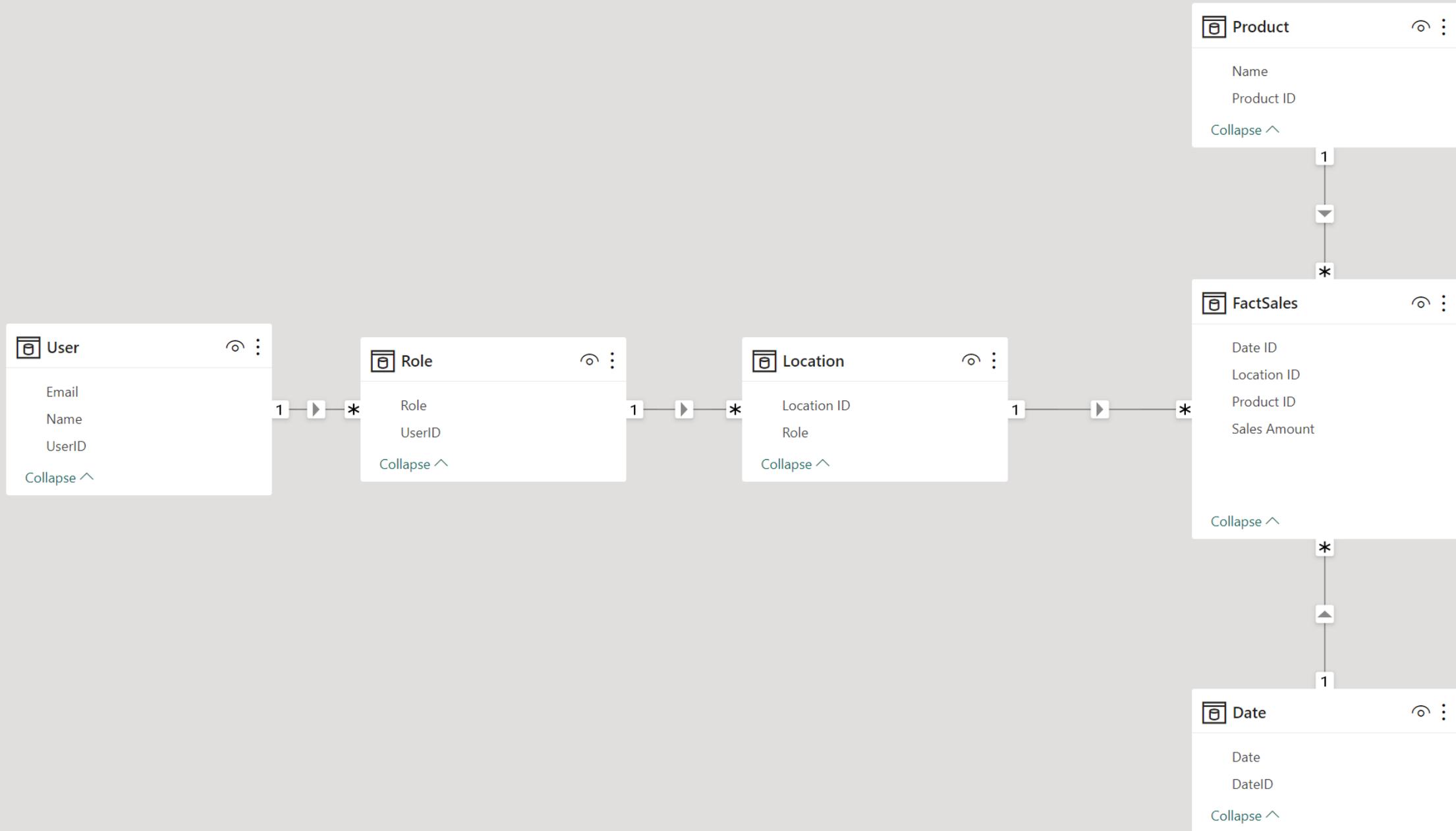
SECURITY GROUP LEVEL 2: SPECIFIC FILTRATION

NORTH

SOUTH

STOCKHOLM

COPENHAGEN OFFICE



ACTIVE DIRECTORY MODULE FOR POWERSHELL



Windows PowerShell

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Install the latest PowerShell for new features and improvements! <https://aka.ms/PSWindows>

PS C:\Users\LindaTorrång> **install-module** AZ.Resources

```
PS C:\Windows\system32> Get-AzADUser
```

| DisplayName | Id | Mail | UserPrincipalName |
|----------------------------|--------------------------------------|---------------------------------------|--|
| ----- | -- | ---- | ----- |
| Admin | cca84f66-7789-4dd5-bfe2-b7001d6e1a25 | | Admin@datamasterminds.onmicrosoft.com |
| Alexander Arvidsson | 3b92e4ce-6626-46b0-a91f-2a9e817f65a8 | alexanderarvidsson@datamasterminds.io | alexanderarvidsson@datamasterminds.io |
| assessment_amadeus-fire | 5f6eeee1-eec8-4669-9a81-259c99613adf | | assessment_amadeus-fire@datamasterminds.onmicrosoft.com |
| assessment_augprien | 3ddde729-de85-40d4-900d-7a8168dd60d5 | | assessment_augprien@datamasterminds.onmicrosoft.com |
| assessment_axtron | 8431a739-f48b-42d2-b415-c75ff7e84539 | | assessment_axtron@datamasterminds.onmicrosoft.com |
| assessment_bb-verpackungen | 1ae21ba5-b9fa-4ef2-b707-7cc49e6d7bff | | assessment_bb-verpackungen@datamasterminds.onmicrosoft.com |
| assessment_borrmann | 27ef9888-9ec7-498c-a19f-8f935c62bae0 | | assessment_borrmann@datamasterminds.onmicrosoft.com |
| assessment_bueltel | ef8b8db8-4263-4352-9eda-cb45582a8725 | | assessment_bueltel@datamasterminds.onmicrosoft.com |
| assessment_coeoinkasso | 1918ad96-d084-4b68-be0a-4ad89fe92a20 | | assessment_coeoinkasso@datamasterminds.onmicrosoft.com |
| assessment_comcave | c2dd3df3-c1ac-4e7a-9c5b-35223ce4c80a | | assessment_comcave@datamasterminds.onmicrosoft.com |
| assessment_daimler-trucks | 6a2c51d5-5a5d-4707-a209-34b7b7aab0ae | | assessment_daimler-trucks@datamasterminds.onmicrosoft.com |
| eelcotest | 32dfec32-d20a-400c-8dc6-13786fa71720 | | assessment_eelcotest@datamasterminds.onmicrosoft.com |
| assessment_elpress | b3d28112-2f7e-407b-9fcf-e1170a03167c | | assessment_elpress@datamasterminds.onmicrosoft.com |
| assessment_emp | 59fdec9a-3238-4932-a3bf-60cba2b0df85 | | assessment_emp@datamasterminds.onmicrosoft.com |
| assessment_feadship | 8d6c888e-90c8-4d9f-a312-f3063e74de72 | | assessment_feadship@datamasterminds.onmicrosoft.com |
| assessment_flexit | 1fa67f1f-f938-4225-82e1-5e1a5011f5bb | | assessment_flexit@datamasterminds.onmicrosoft.com |
| assessment_haensch | 8f06e3e2-ffb6-4ab9-a58d-063679bdd510 | | assessment_haensch@datamasterminds.onmicrosoft.com |
| assessment_heutink | 3dfec20d-9a38-4eba-aeb0-b343b71dbcb0 | | assessment_heutink@datamasterminds.onmicrosoft.com |
| assessment_hofmann | 0c8d8453-080d-40be-9479-d08fecb2c0b2 | | assessment_hofmann@datamasterminds.onmicrosoft.com |
| assessment_hofschroer | 09f22c95-6c6f-47e5-8270-a01b5c753013 | | assessment_hofschroer@datamasterminds.onmicrosoft.com |
| assessment_hottgenroth | 914ae4ca-8272-4d2f-8d49-e16ca16e54ce | | assessment_hottgenroth@datamasterminds.onmicrosoft.com |

```
PS C:\Windows\system32> Get-AzADUser | ConvertTo-CSV | Out-File C:\ADUsers.csv  
PS C:\Windows\system32>
```

ACTIVE DIRECTORY MODULE FOR POWERSHELL



ACTIVE DIRECTORY MODULE FOR POWERSHELL

New-ADUser

```
[-Name] <String> ]  
[-MobilePhone <String>]  
[-Office <String>]  
[-City <String>]  
[-Company <String>]  
[-Country <String>]
```

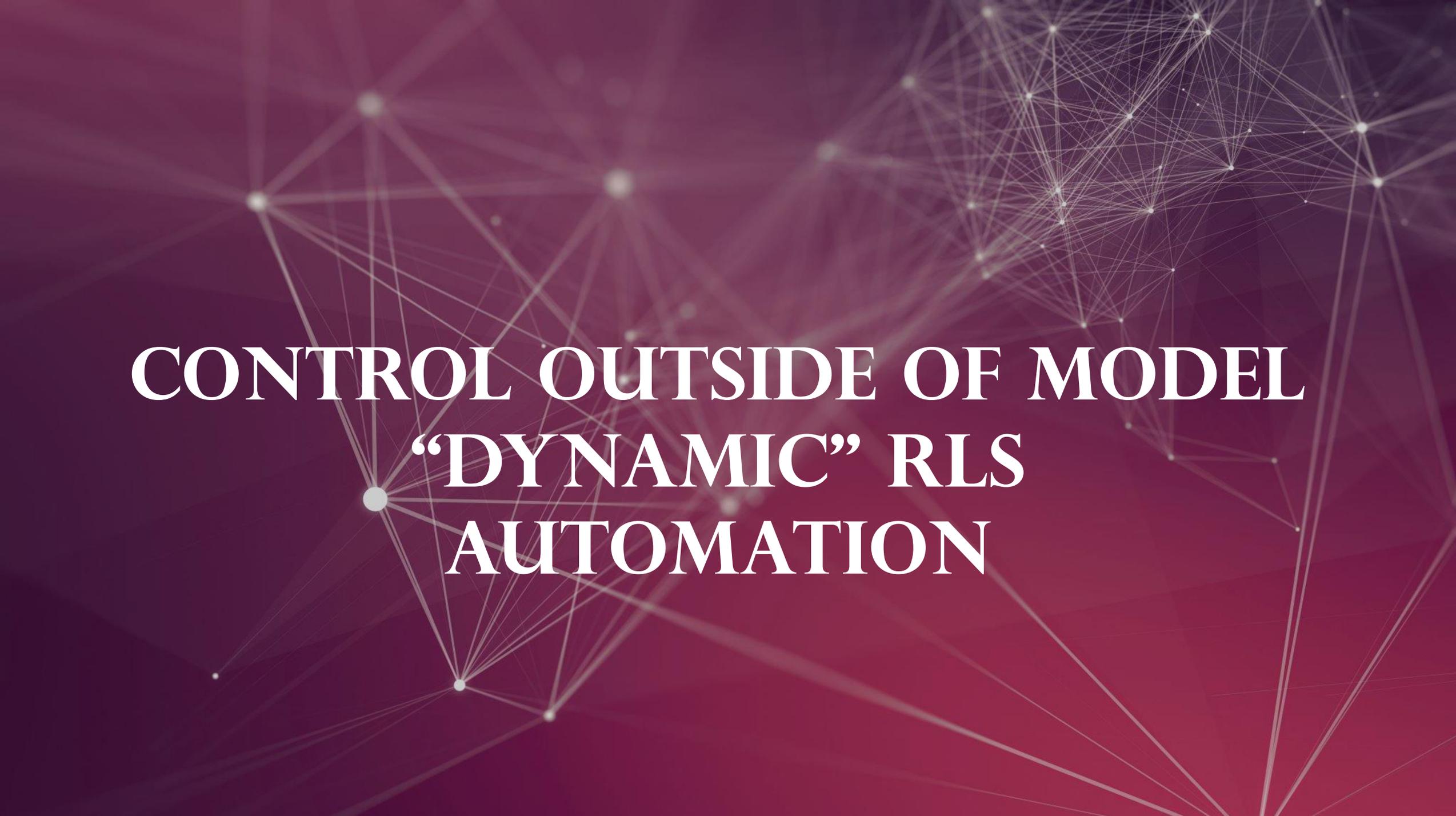
ACTIVE DIRECTORY MODULE FOR POWERSHELL

New-ADUser

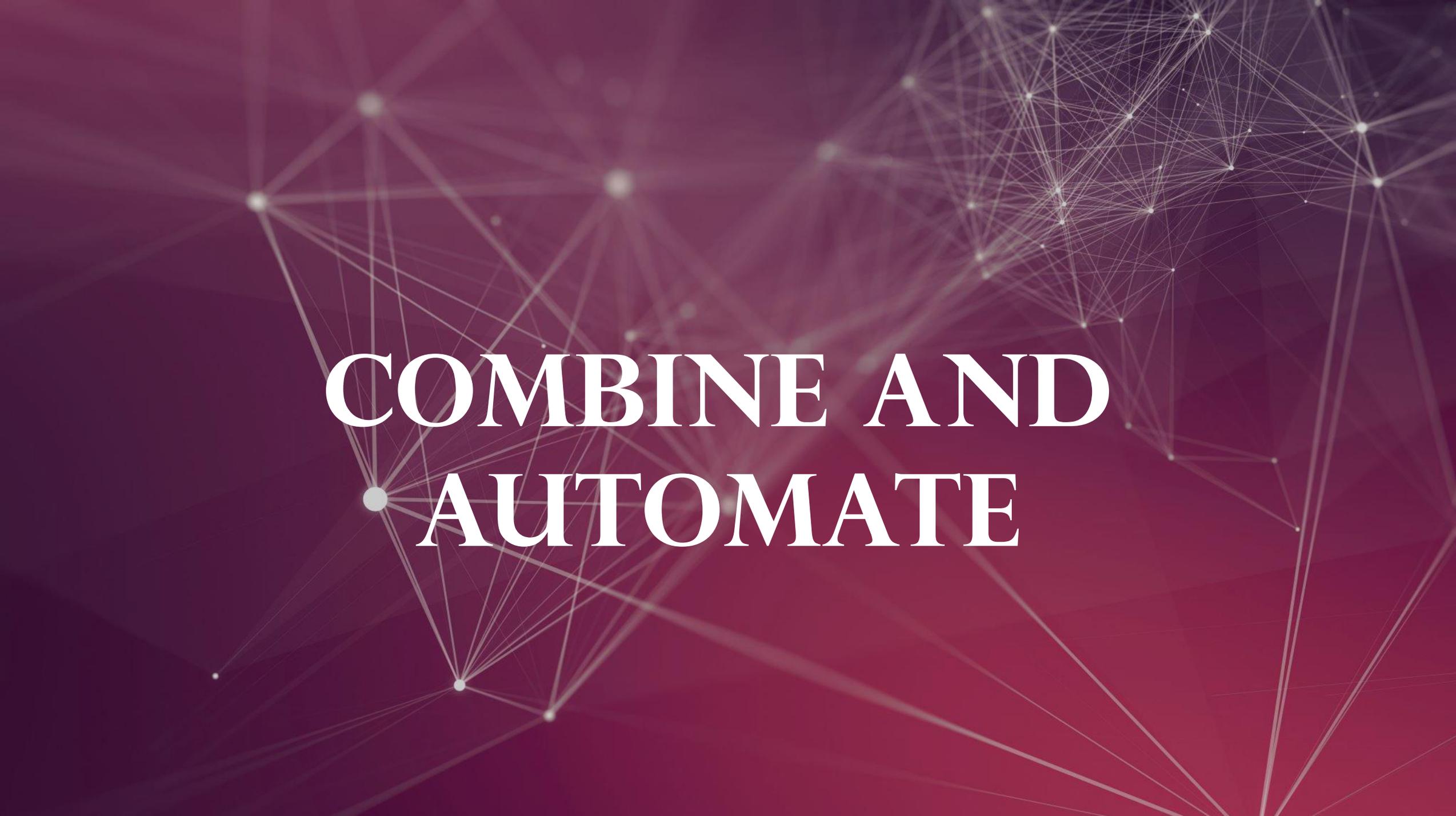
```
[-Name] <String> ]  
[-MobilePhone <String>]  
[-Office <String>]  
[-City <String>]  
[-Company <String>]  
[-Country <String>]  
[-OtherAttributes <Hashtable>]  
@{'REGION'='SWEDEN','NORWAY'}
```

ACTIVE DIRECTORY MODULE FOR POWERSHELL



The background features a complex network of white nodes and connecting lines, resembling a neural network or a data graph, set against a dark red gradient. The nodes are of varying sizes and are interconnected by thin white lines, creating a dense web of connections that fills the entire frame.

CONTROL OUTSIDE OF MODEL “DYNAMIC” RLS AUTOMATION



**COMBINE AND
AUTOMATE**



DATAmasterminds

Linda Torrång (she/her)

Thank you!

/in/linda-torrång

 **@Ltorrang**

 **LindaTorrang@datamasterminds.io**

 **Swedish Power BI
User Group**

