

Protecting the Kingdom

An intro to permissions in SQL server

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Who am I

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- Principal Database Contractor for
Vanden Dutch LLC
- Database Architect
- Database Administrator
- Database Developer
- Natabase

What will we be covering

- Basics of permissions
- Basics of Roles
- How to convert a users permissions to a role
- How to use Roles to filter the data that a person can see

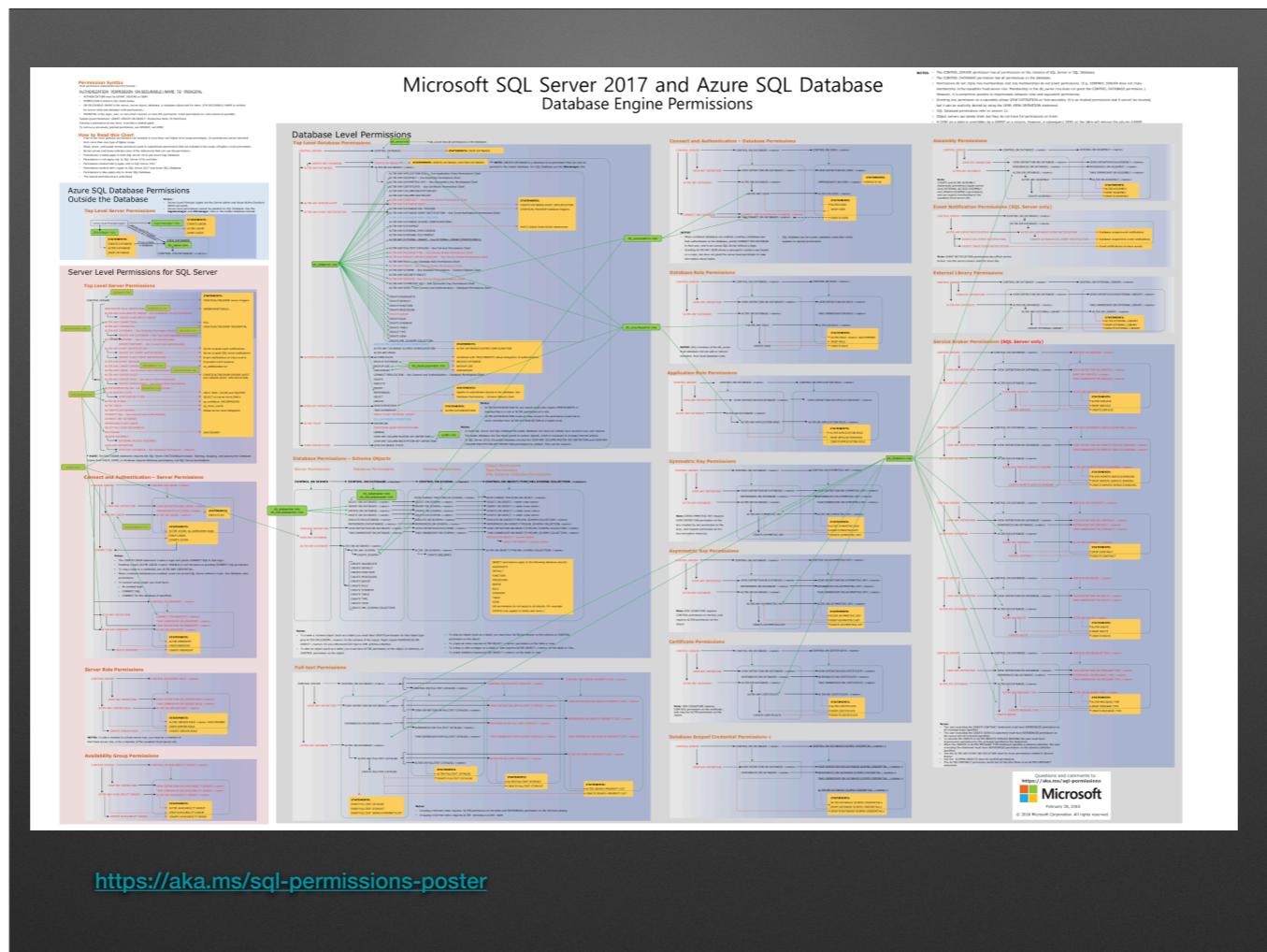
Basics of Permissions

What items can get permissions?

What permissions are out there?

What Items can get Permissions

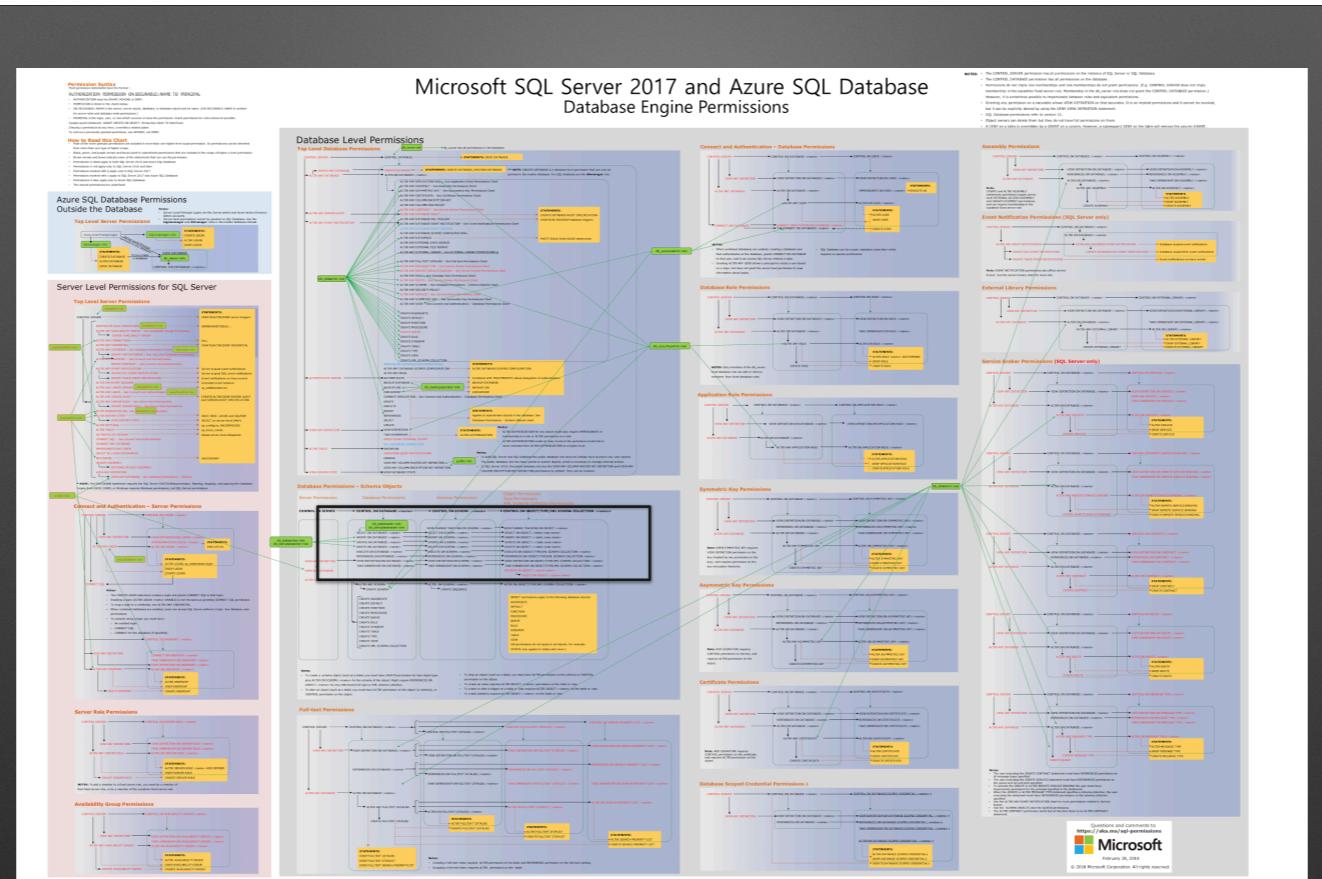
- Anything in the DB
- Tables/Views
- Schemas
- Full Text Catalogs
- Database itself
- Also there are a bunch of permissions at the sever level



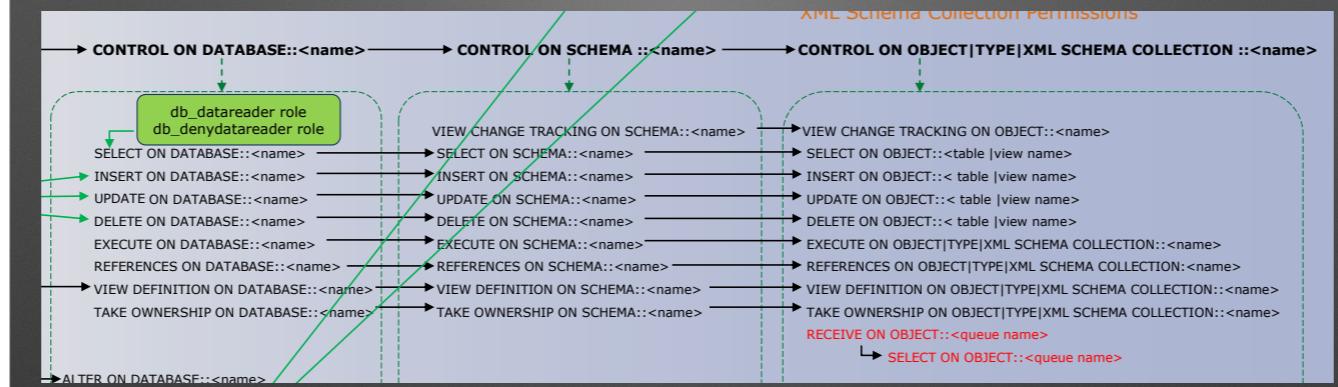
<https://aka.ms/sql-permissions-poster>

- Have actual file open so that you can zoom into a few things.





<https://aka.ms/sql-permissions-poster>



Basics of Permissions

What objects can get permissions?

What permissions are out there?

Grant and Deny

Revoke

How to test permissions

DEMO

Demo Notes:

- What the Setup is
 - World Wide Importers Database
 - Point out Setup/Teardown scripts are there for use
- Execute As
- Permission Format
 - AUTHORIZATION PERMISSION ON SECURABLE::NAME TO PRINCIPAL
- Current Permissions
 - Show Script
 - Show SSMS
 - Object Explorer -> Database -> Security -> Users/Roles
- Why do I prefer the script
 - Overview of everything
 - SSMS hides some permissions
- Column Permissions

Role Basics

What is a Role?

A role is a group of permissions that can have other users assigned to it.

Database even calls users and roles both principals it does not care if you are assigning permissions to a user or a role

A Role can even have another role inside of it

Why would I want to use a role?

- Give access by job function
- Maintain Permissions when someone leaves

Types of Roles

- Fixed Database Roles
- Application Role
- Database Role
 - User Role
 - Static Role

DEMO

How to convert a users permissions to a role

Demo

How to use Roles to filter the data that a person can see

Demo

What we covered

- Basics of permissions
 - Grant/Deny/Revoke
- Basics of Roles
 - How to convert a users permissions to a role
 - How to use Roles to filter the data that a person can see
 - IS_ROLEMEMBER
 - Security Policies

Questions?

**Thank you for
listening**

Sources from the Presentation

- <https://docs.microsoft.com/en-us/sql/relational-databases/security/permissions-database-engine>
- <https://aka.ms/sql-permissions-poster>
- <https://docs.microsoft.com/en-us/sql/t-sql/statements/execute-as-transact-sql>
- <https://docs.microsoft.com/en-us/sql/relational-databases/security/authentication-access/getting-started-with-database-engine-permissions?view=sql-server-ver15>
- <https://docs.microsoft.com/en-us/sql/relational-databases/security/authentication-access/database-level-roles>
- <https://docs.microsoft.com/en-us/sql/relational-databases/security/row-level-security>
- <https://docs.microsoft.com/en-us/sql/t-sql/functions/is-rolemember-transact-sql>

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