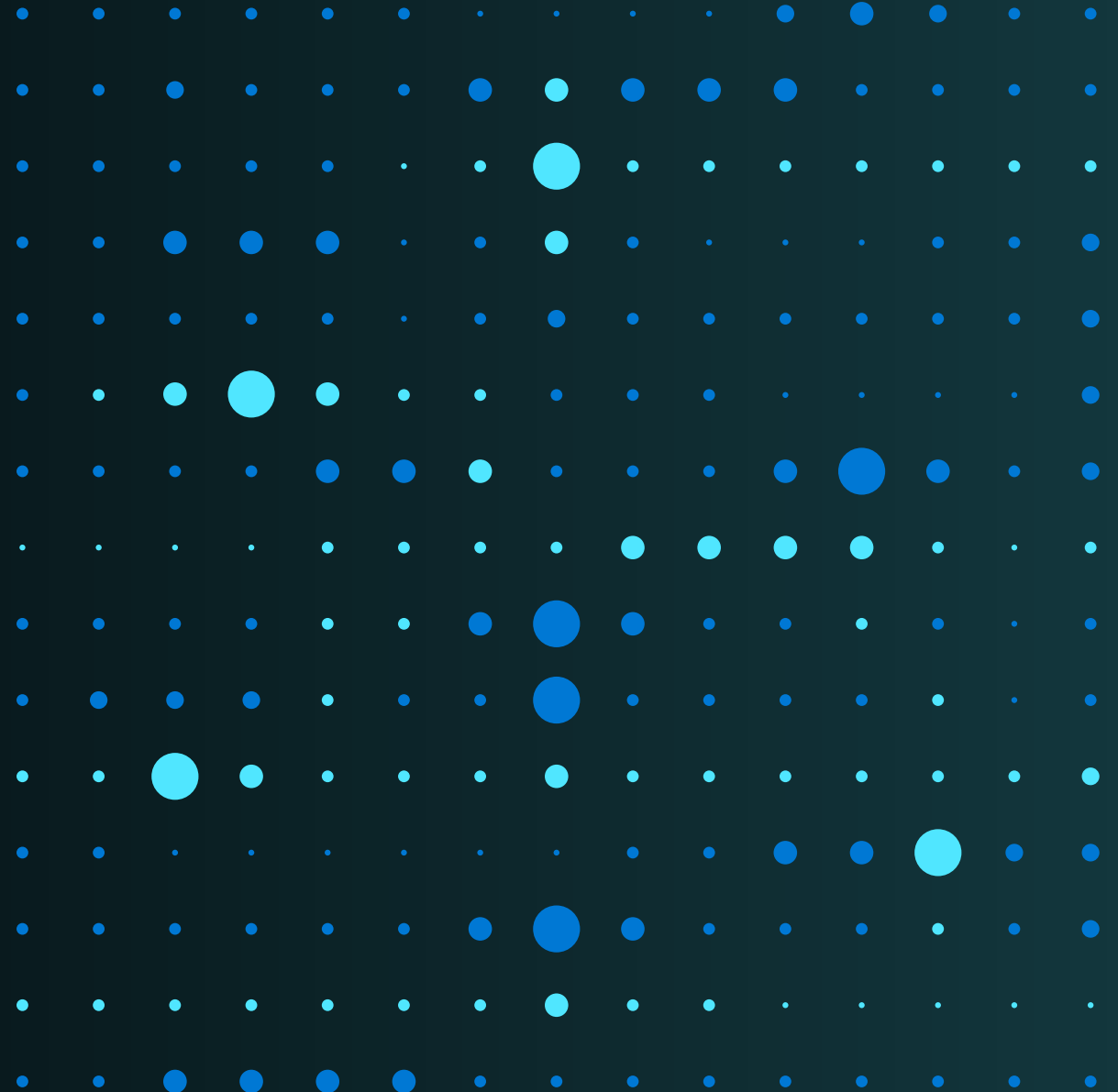Microsoft

Row Level Security
and
Dynamic Data Masking

What does this session cover?

What is Row-Level Security?

Demo: Implementing Row-Level Security

What is Dynamic Data Masking?

Demo: Implementing Dynamic Data Masking

What is Row-Level Security?

A security feature available in SQL Server 2016 or later that will restrict access to specific rows in a table based on values in a column.

Row-Level Security scenarios

A hospital can restrict doctors and nurses to only view data about their specific patients.
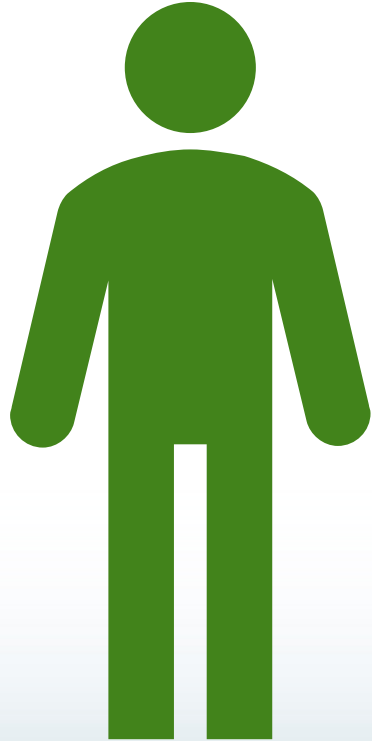
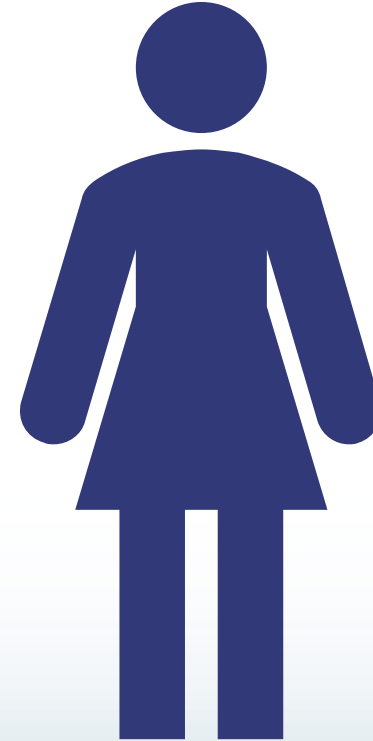A bank can restrict access to data based on the location of their branch offices.

A bicycle company can restrict sales leads to only specific salespeople.

Salespeople for the Adventure Works Bicycle Company

Jack

Diane

Salespeople for the Adventure Works Bicycle Company

CustomerName	CustomerEmail	SalesPersonName
Stephen Jiang	Stephen.Jiang@adworks.com	Jack
Michael Blythe	Michael@contoso.com	Jack
Linda Mitchell	Linda@VolcanoCoffee.org	Jack
Jilian Carson	JilianC@Northwind.net	Jack
Garret Vargas	Garret@WorldWideImporters.com	Diane
Shu Ito	Shu@BlueYonder.com	Diane
Sahana Reiter	Sahana@CohoVines.com	Diane
Syed Abbas	Syed@AlpineSki.com	Diane

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Demonstration

What is Dynamic Data Masking?

A security feature available in SQL Server 2016 or later that will restrict unauthorized users from viewing sensitive data.

Dynamic Data Masking scenarios
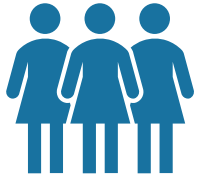
Developers can troubleshoot production data without viewing sensitive information.

Customer Service representatives can view parts of sensitive data like credit card information.

Reports can be distributed with sensitive data obfuscated at the data layer.

Dynamic Data Masking Functions

Default

Random

Custom

Email

Default Data Masking Function

Default

The default function of Dynamic Data Masking masks data based on the column's data type.

Data and Time – 1900-01-01 00:00:00.000

Numeric – 0

String – Adds maximum of 4 X's

Random Data Masking Function

Random

The Random Data Masking function is only applied on numeric data types. It displays a random value for the specified range.

Custom Data Masking Function

Custom

The Custom masking function allows the ability to create a custom mask using the Partial function.

Syntax : Partial(prefix,[padding],suffix)

Prefix – Starting characters to display.
Padding –Custom string for masking.
Suffix – Last characters to be displayed.

Email Data Masking Function

Email

The email masking function will display the first character of an email address and will then mask the rest of the address with XXX@XXXX and will include the .com email suffix.

Example: JXXX@XXXX.com

Dynamic Data Masking Functions

Default

Random

Custom

Email

Demonstration

What does this session cover?

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Demo: Implementing Dynamic Data Masking

Questions?