

#FABCONSQLCON2026

FABCON

Microsoft Fabric
COMMUNITY CONFERENCE

SQLCON

Microsoft SQL
COMMUNITY CONFERENCE

ATLANTA MARCH 16 - 20, 2026



SQL in the Fabric Era

Practical Techniques for Modern Data Integration

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Solutions Architect - SHI

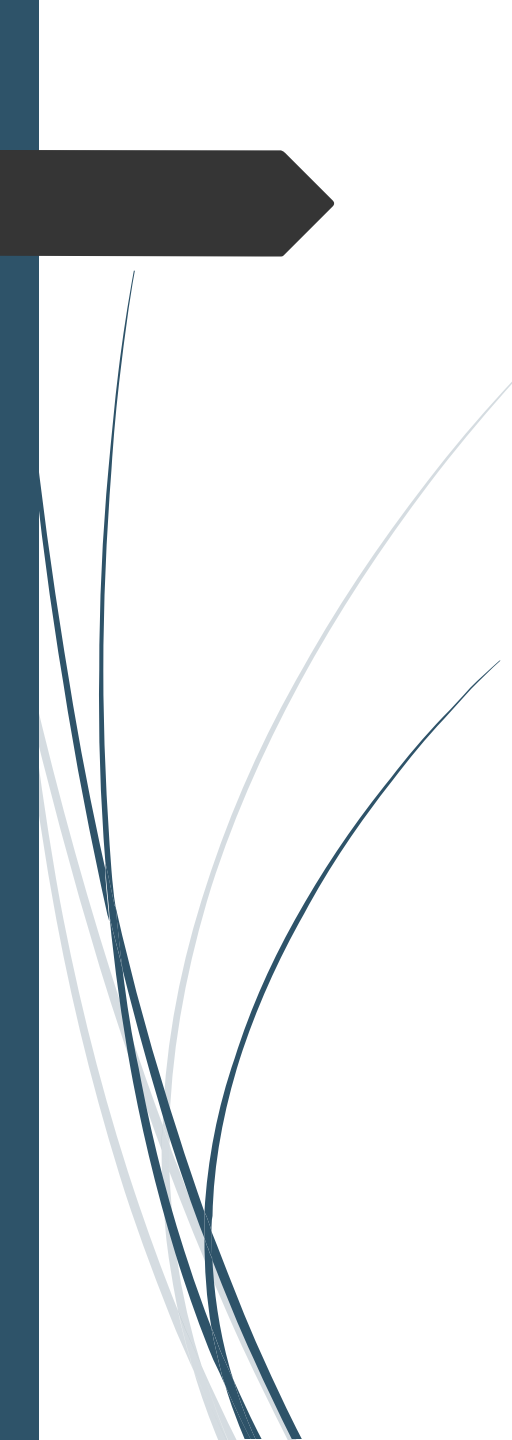


About Me



- Two decades of experience working with SQL
- Fifteen years of ETL and Data Engineering experience
- Have poken at multiple SQL Saturday Events
- Spoke at FabCon and FabConEU in 2025
- Co-leader of the DFW Power BI & Fabric User Group



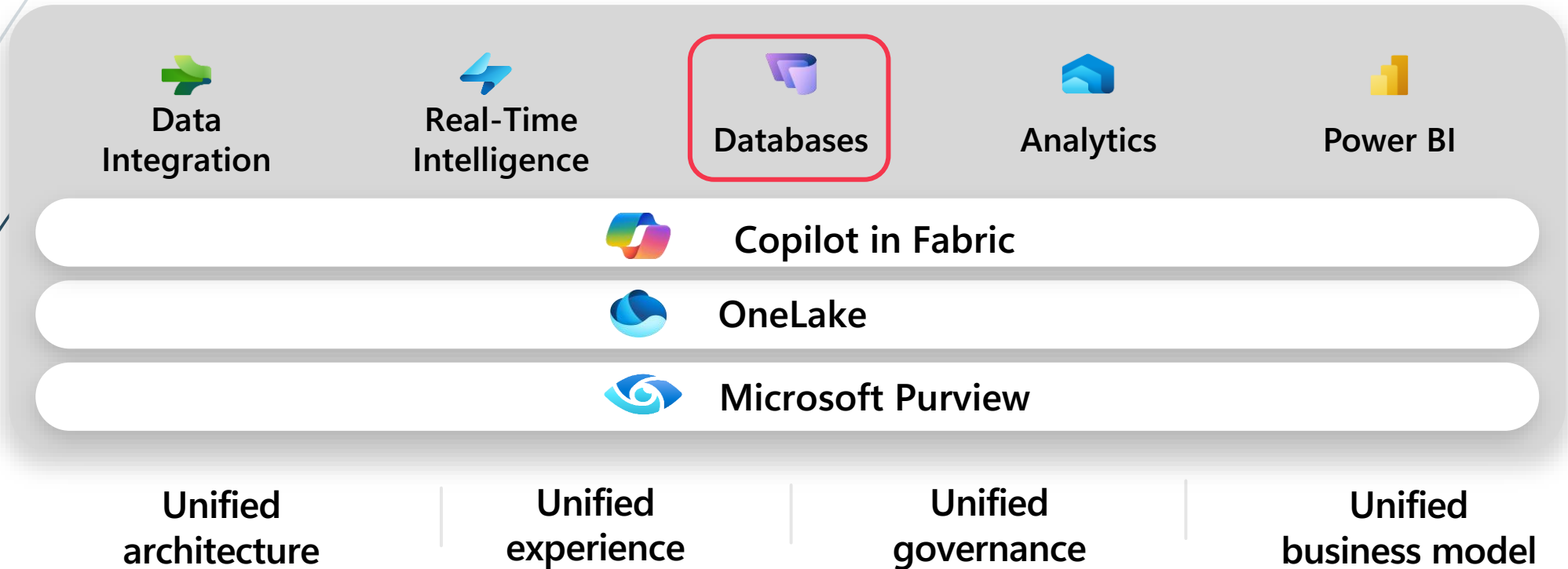


Agenda

- SQL DB in Fabric overview
- Mirroring/Replication in SQL DB in Fabric
- SQL Analytics Endpoint overview
- Querying across endpoints (SQLDB, Warehouse, Lakehouse)
- Fabric Lineage View and Impact Analysis
- SQL-based data protection across DB and Endpoints
 - Dynamic Data Masking
 - RLS, CLS, and OLS
 - How these impact downstream objects

What is SQL DB in Fabric?

It is a *developer-friendly* transactional database that allows you to create operational databases in Fabric and uses the *same* Database Engine as Azure SQL Database.



SQL DB in Fabric Architecture



Microsoft Fabric

Live database



Fabric SQL DB

Near real-time

Incremental replication
inserts/updates/deletes



SQL analytics
endpoint



Delta Parquet in OneLake

Data
Warehouse

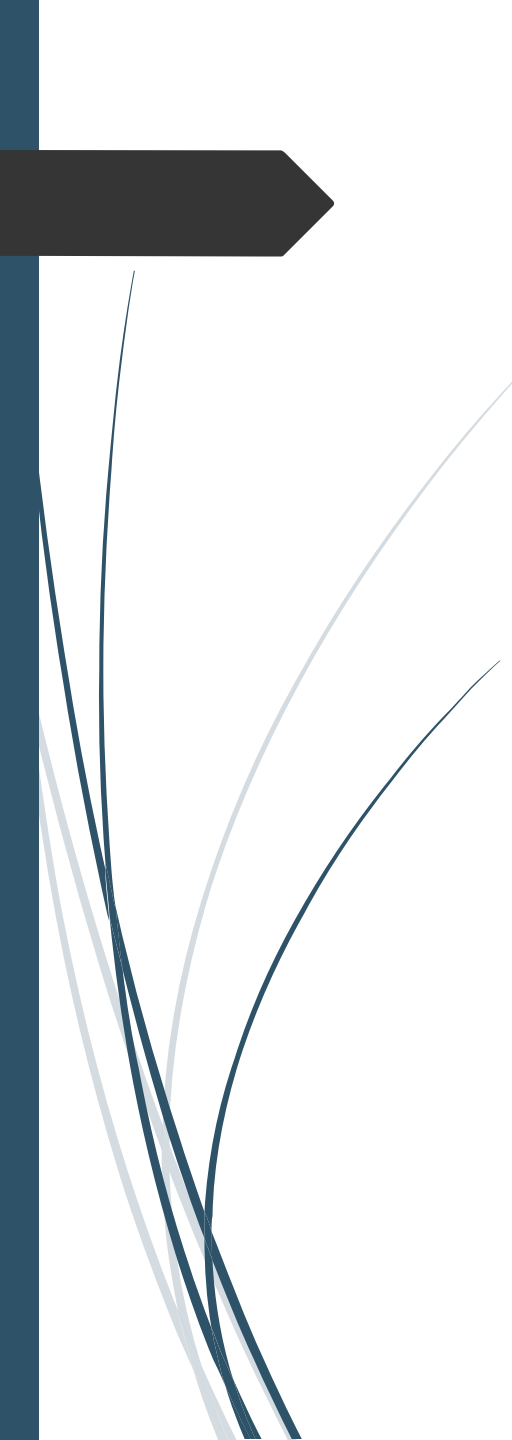
Fabric
Lakehouse

Power BI

Fabric Spark



OneLake



Mirroring/Replication

- Replicates transactional data into OneLake in near real-time
- Data is stored in delta parquet files (ACID compliant)
- Compute to replicate is free
- Storage in OneLake is free (1TB/CU limit)
- Enabled by default and cannot be disabled
- Tables cannot be added/removed as desired
- Some data types are not compatible

Monitor Replication

The screenshot shows the Microsoft Fabric portal interface. The top navigation bar includes 'Home', 'Replication', 'Security', and 'Help'. The 'Replication' tab is selected, and the 'Monitor replication' link is highlighted with a red arrow. The left sidebar shows the 'InvestmentTracker' database structure, including 'dbo', 'Tables', and 'Views'. The main content area displays the 'Monitor replication' page for the 'InvestmentTracker' database. The page shows the status of replication for various tables, all of which are 'Running'.

Database name
InvestmentTracker

Status
✓ Running

Database ID
[Redacted]

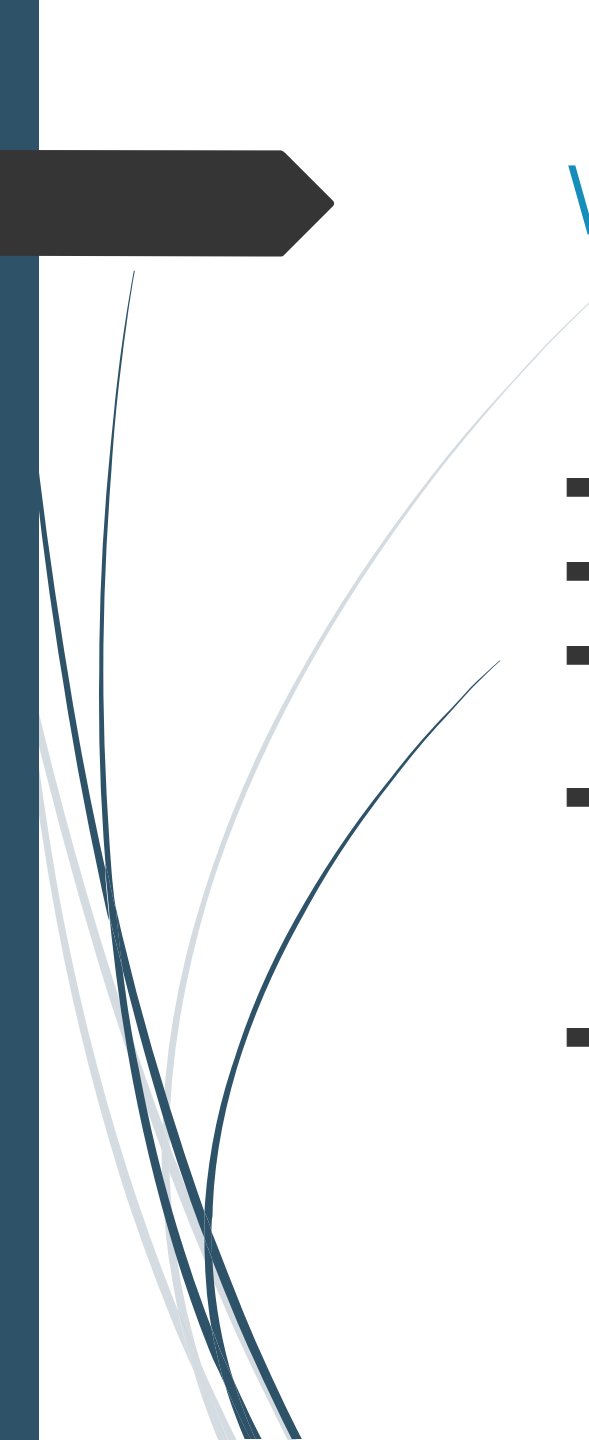
Table list
Filter by keyword [Filter]

Name	Status	Rows replicated	Last completed
[dbo].[Fund]	✓ Running	51	1/27/26, 10:26:48 AM CST
[dbo].[DailyBalance]	✓ Running	500,360	1/27/26, 3:35:40 PM CST
[dbo].[NetAssetValue]	✓ Running	14,280	1/27/26, 11:51:53 AM CST
[dbo].[PersonAccount]	✓ Running	508	1/27/26, 2:29:29 PM CST
[dbo].[TransactionType]	✓ Running	6	1/27/26, 10:21:03 AM CST
[dbo].[Person]	✓ Running	1,750	1/27/26, 2:12:29 PM CST
[dbo].[Transaction]	✓ Running	46,117	1/29/26, 4:59:51 PM CST



Demo time!

Explore Fabric SQL DB



What is the SQL Analytics Endpoint?

- A read-only T-SQL compatible interface automatically created for SQL DB
- Provides T-SQL access to query the Delta tables in OneLake
- Allows the definition of objects (views, functions, procedures) and SQL Security
- Uses a different connection string than the SQL DB
 - SQL Endpoint - `<workspace>.datawarehouse.fabric.microsoft.com`
 - SQL DB - `<workspace>.database.fabric.microsoft.com`
- Provides ability to perform cross-database queries within the workspace

Access the SQL Analytics Endpoint

The screenshot displays the Microsoft Fabric web interface. At the top, the header includes the 'Fabric' logo, a workspace named 'InvestmentTracker', and a search bar. On the right side of the header, it indicates 'Trials activated: 18 days left' and provides icons for notifications, settings, download, help, and user profile. Below the header, a navigation bar contains links for 'Home', 'Replication', 'Security', and 'Help'. A secondary toolbar offers options like 'Get data', 'New Query', 'Templates', 'Open in', 'New API for GraphQL', 'Performance summary', and 'Copilot'. The left sidebar, titled 'Explorer', features a search bar and a tree view with 'InvestmentTracker' and 'Queries' (subdivided into 'My queries' and 'Shared queries'). The main content area is currently empty, showing a large circular icon with two overlapping squares. At the bottom of this area, the text 'Query, preview, or connect your data' is displayed, followed by a descriptive paragraph and a '+ New' button. A red arrow points from the top right towards a dropdown menu labeled 'SQL database'. This menu is open, showing two options: 'SQL database' (checked) and 'SQL analytics endpoint' (highlighted with a red border). The 'SQL analytics endpoint' option includes the description 'Query data for analytics using T-SQL'.

Fabric InvestmentTracker No label Search

Trials activated: 18 days left

Home Replication Security Help

Get data New Query Templates Open in New API for GraphQL Performance summary Copilot

Explorer

Search

- InvestmentTracker
- Queries
 - My queries
 - Shared queries

Query, preview, or connect your data

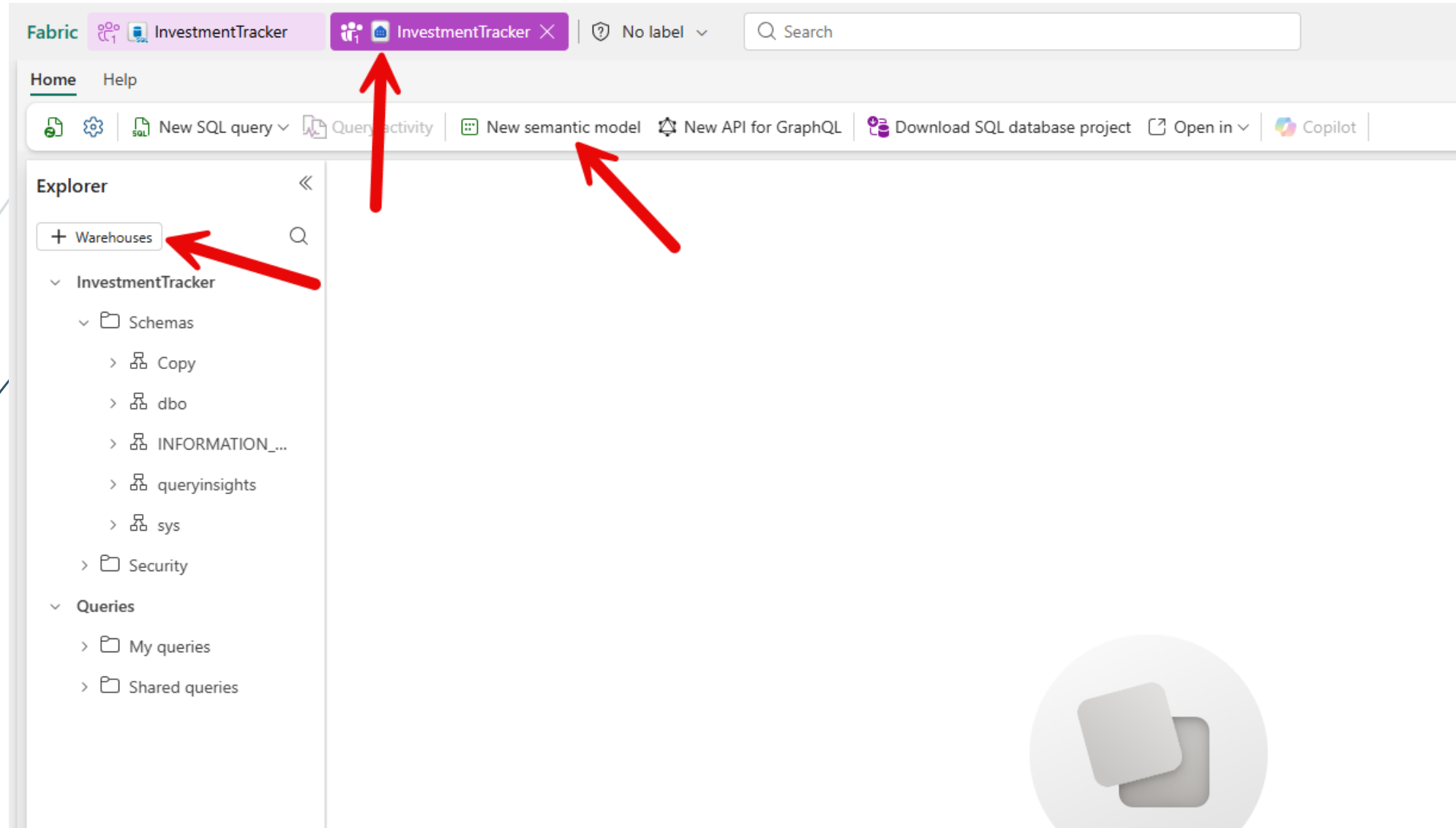
Interact with your data by starting a query, creating database objects with a template, or connecting the database to your app with a GraphQL API. You can also preview your data by opening a table or view.

+ New

SQL database

- SQL database
Define, query, and update data
- SQL analytics endpoint
Query data for analytics using T-SQL

Recognize the SQL Analytics Endpoint



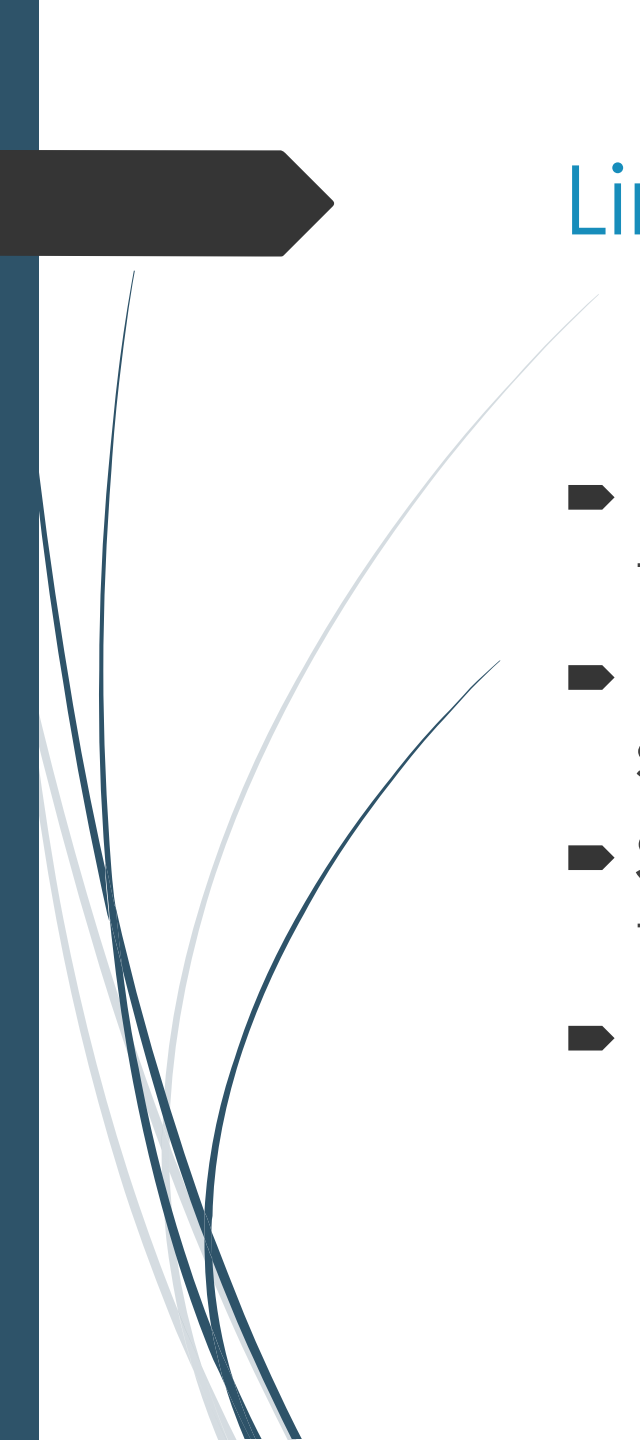


Demo time!

Let's explore the SQL Endpoint in SQL, DW, and LH and how they interact together



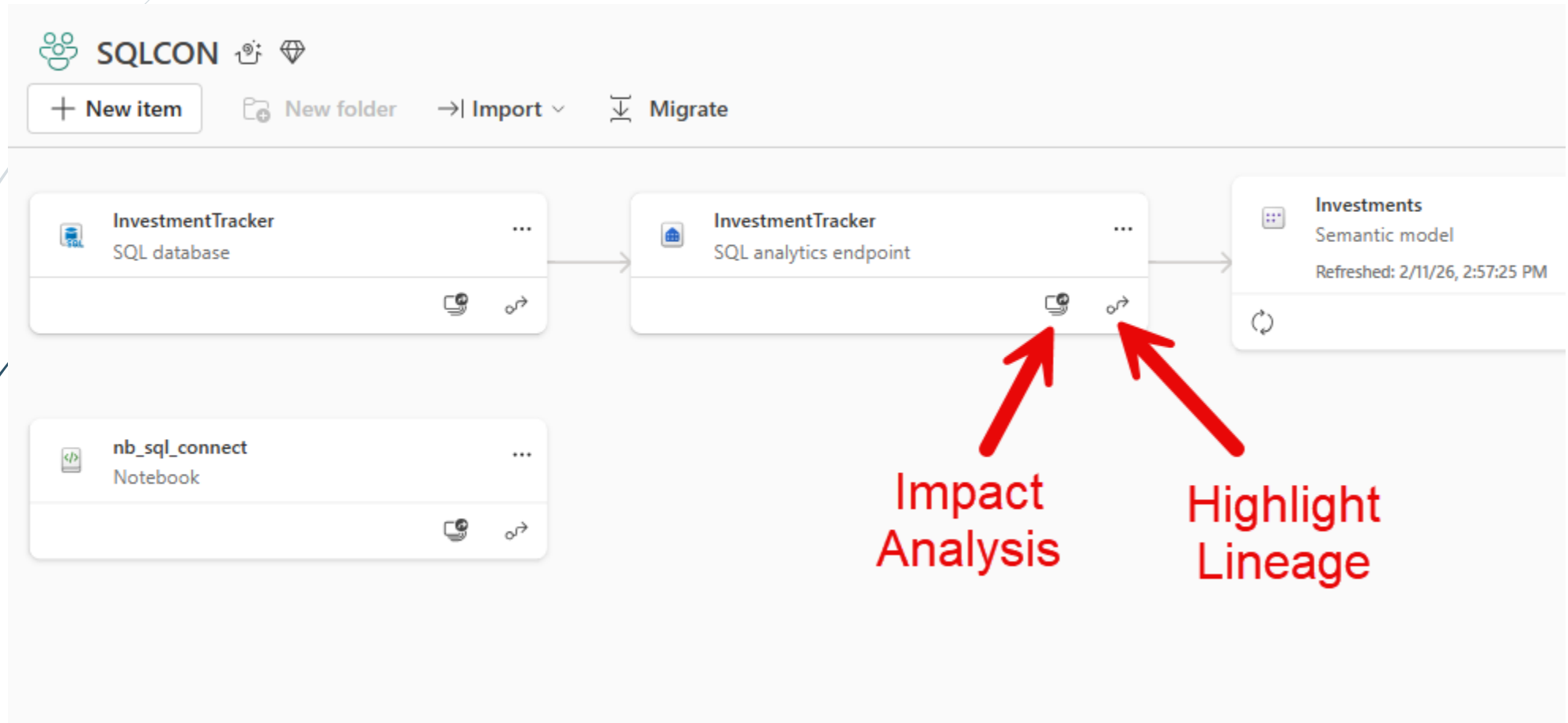
Governance



Lineage View

- Intended to display the lineage relationships between all the items in a workspace
- Displays data sources external to the workspace one-step upstream
- Shows downstream items that depend on an item via the “Impact Analysis” pane
- Does NOT identify SQL 3-part-notation dependencies

Lineage View



Impact Analysis View

Impacted by this Dataset

Marketing Model

Child Items

All downstream items

34

Impacted child items

2

Workspaces

Browse by item type

Report 5

Marketing Model

Sales Report 3

Sales Leads

Sales Report 2

Marketing Promotions

Dashboard 3

Marketing Dashboard

Sales Dashboard

Sales Team Dashboard

Making changes? Notify the contact lists of impacted items of Marketing Model

Notify contacts

Impacted by this Dataset

Marketing Model

Child Items

All downstream items

34

Impacted child items

2

Workspaces

Browse by workspace

Sales and Marketing Group

Marketing Model

Sales Team Dashboard

Finance Corporate

Sales Report 3

Sales Leads

Sales Report 2

Marketing Promotions

Marketing Dashboard

Sales Dashboard

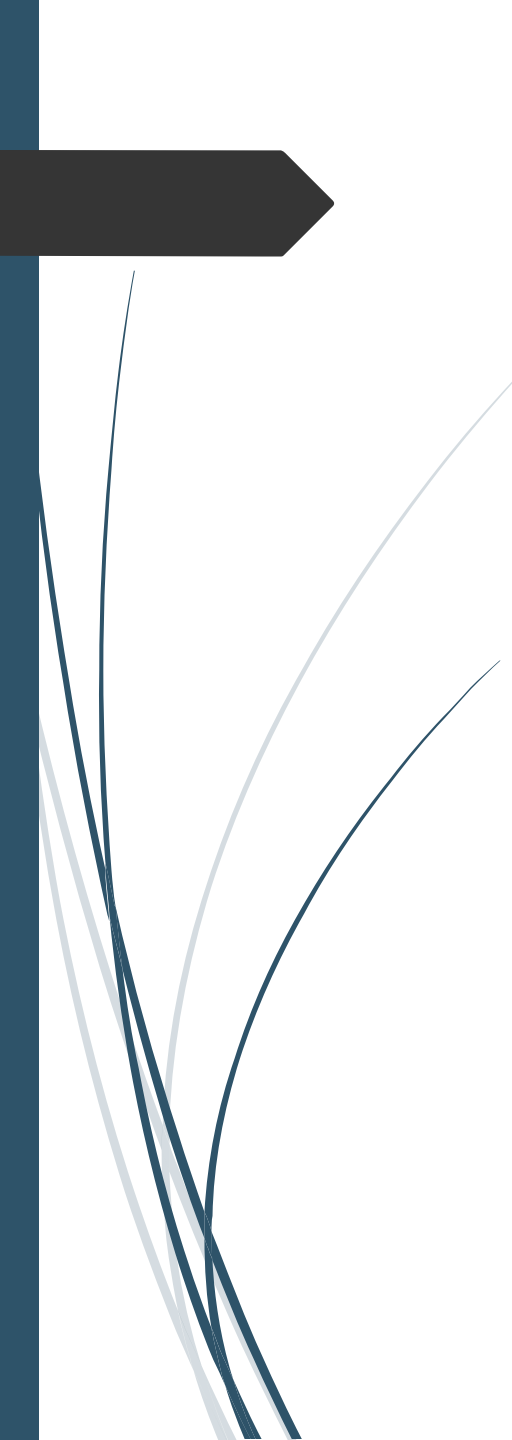
Making changes? Notify the contact lists of impacted items of Marketing Model

Notify contacts



Demo Time!

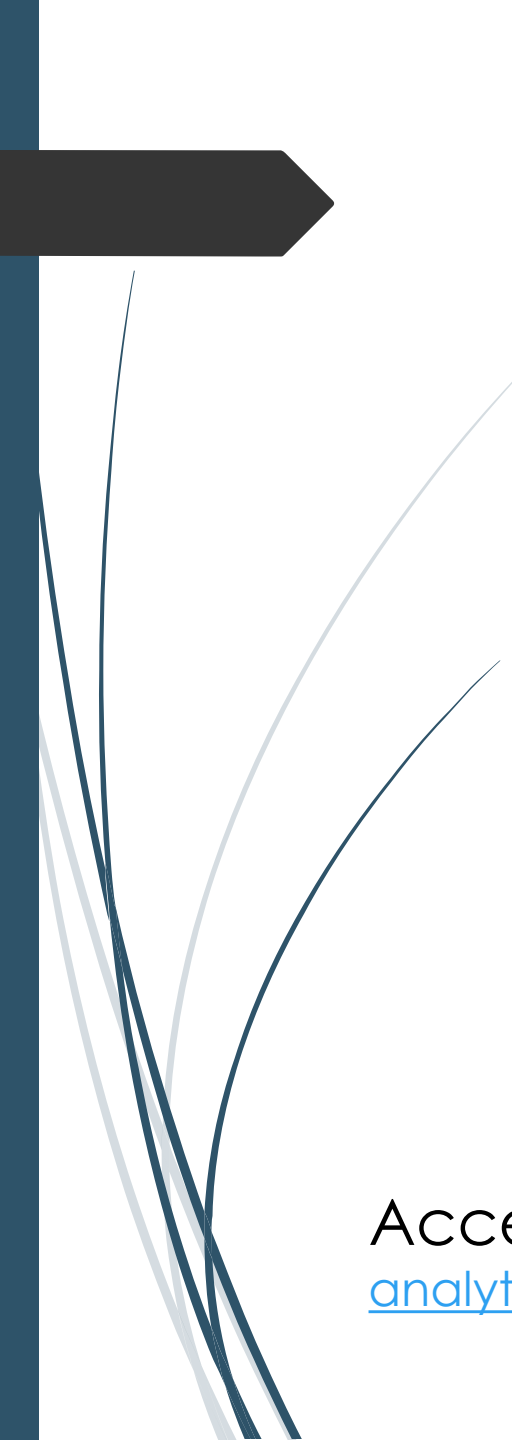
Let's explore the Lineage and Impact Analysis views!



SQL Dynamic Data Masking

- Can be applied at table definition in the SQL Database
- Can only be applied with an ALTER statement in the SQL Analytics Endpoint
- Does NOT automatically propagate from the Database to the Analytics Endpoint
- Column-level granularity is available in both
- Honored in Power BI reports in *DirectLake on SQL**

DirectLake on SQL – <https://learn.microsoft.com/en-us/fabric/fundamentals/direct-lake-overview#comparison-of-storage-modes>



SQL-Based CLS, OLS, and RLS

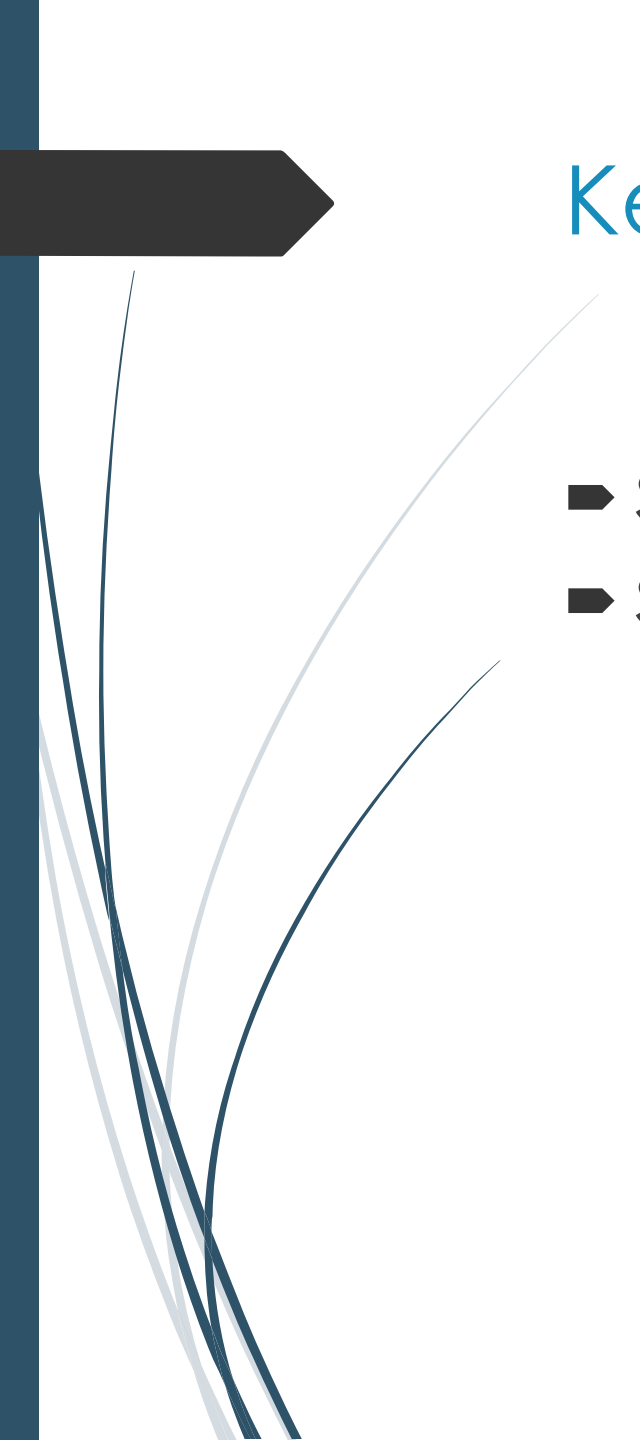
- Can be applied to the Database as well as the SQL Analytics Endpoint
- Does not automatically propagate from one to the other
- Must be applied at the consumption layer. Be mindful!
- Honored in Power BI reports in *DirectLake on SQL**
- It only works in *Delegated Identity Mode* (SQL Analytics Endpoint)

Access modes - <https://learn.microsoft.com/en-us/fabric/onelake/security/sql-analytics-endpoint-onelake-security#access-modes-in-sql-analytics-endpoint>



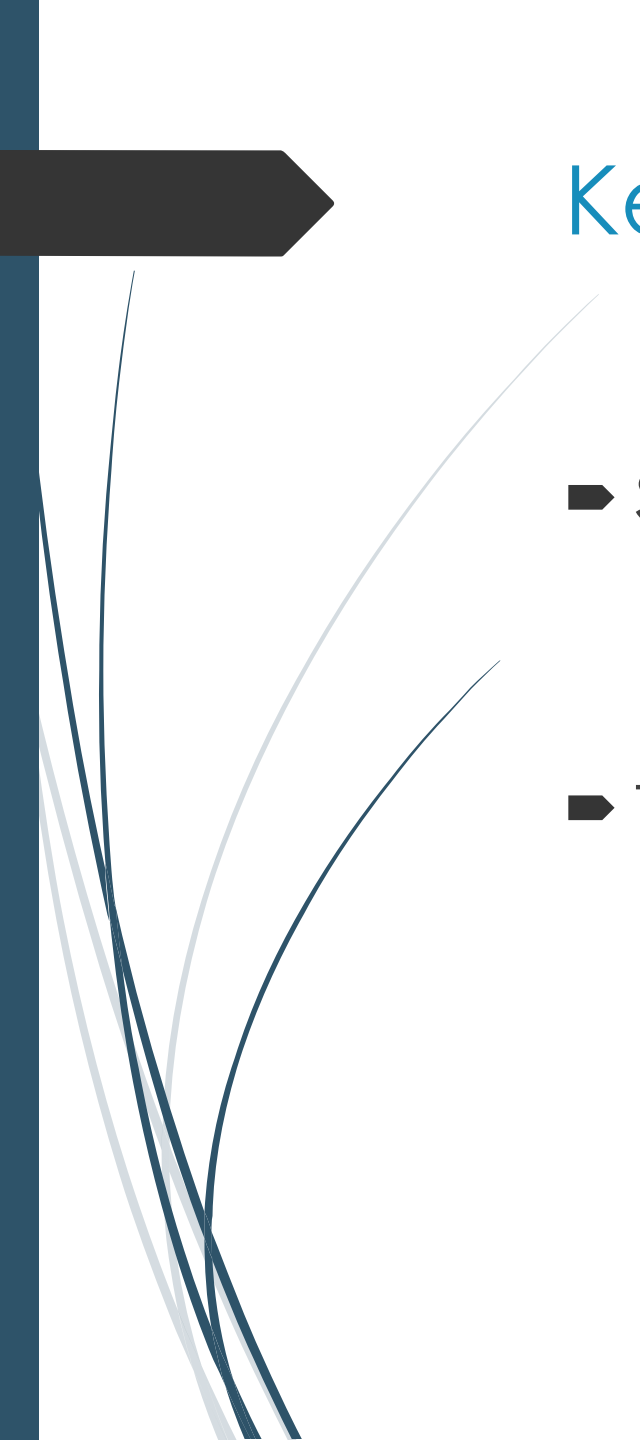
Demo Time!

- Let's explore DDM, RLS, and CLS in the DB and the Endpoint
- Let's see the downstream impact of each!



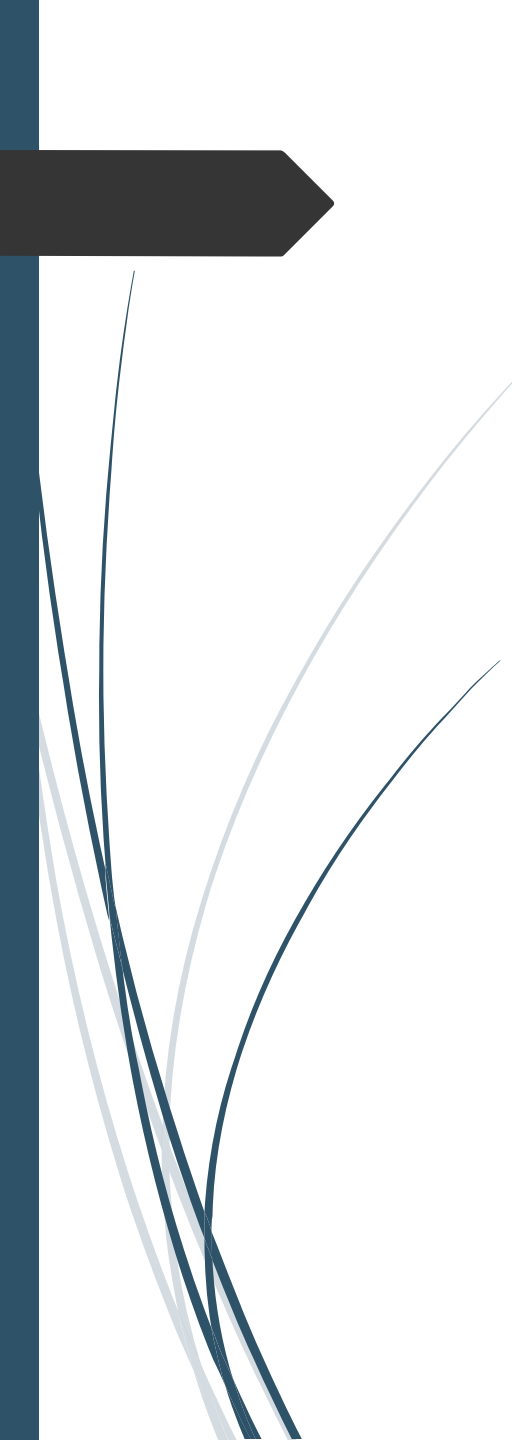
Key Takeaways

- SQL skills are **valuable** in multiple areas of Fabric on Day 1!!!
- SQL DB in Fabric is one more option in the SQL family
 - Great for *citizen dev* apps
 - Great for metadata-driven ETL pipelines and centralized logging
 - A great option for “Reverse ETL” patterns



Key Takeaways

- SQL DB has the following limitations
 - 4 TB size limit
 - 1000 tables replication limit
- The SQL Endpoint is the secret sauce for Data Integration
 - Allows to query across DB, Warehouse, and Lakehouse
 - Difficult to source control



What we covered today

- Quick overview of SQL Database in Fabric
- Zero ETL replication with Mirroring
- SQL Analytics Endpoint is the superpower for the SQL Pro
- Lineage View and Impact Analysis view in Fabric
- Dynamic Data Masking support in SQL DB and SQL Endpoint
- SQL-Based OLS and RLS in SQL DB and SQL Endpoint

Sound off.
The mic is all yours.
Influence the product roadmap.

Join the Fabric User Panel



Share your feedback directly with our
Fabric product group and researchers.

<https://aka.ms/JoinFabricUserPanel>

Join the SQL User Panel



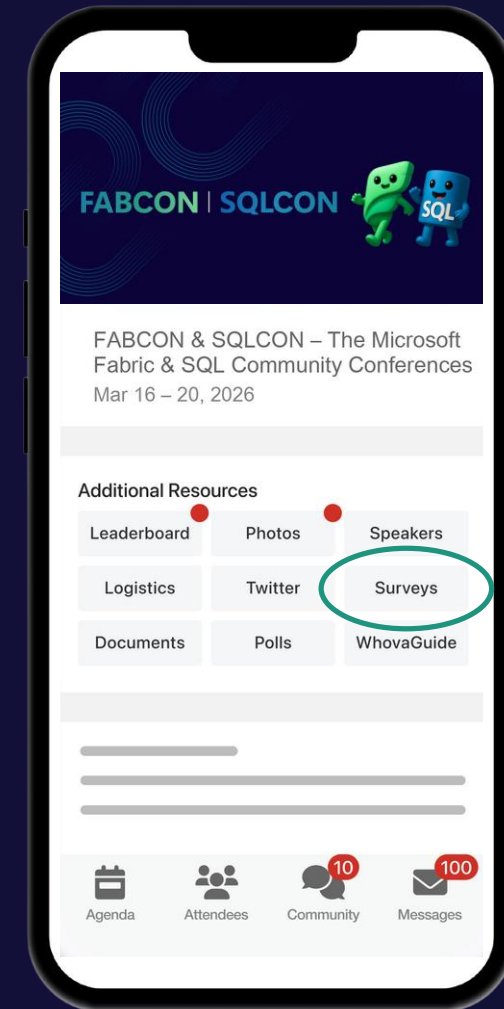
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it meets your real-life needs

<https://aka.ms/JoinSQLUserPanel>

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Thank you for Attending!

Do you have any questions?