



# From SQL Server to Microsoft Fabric: How to and Strategies

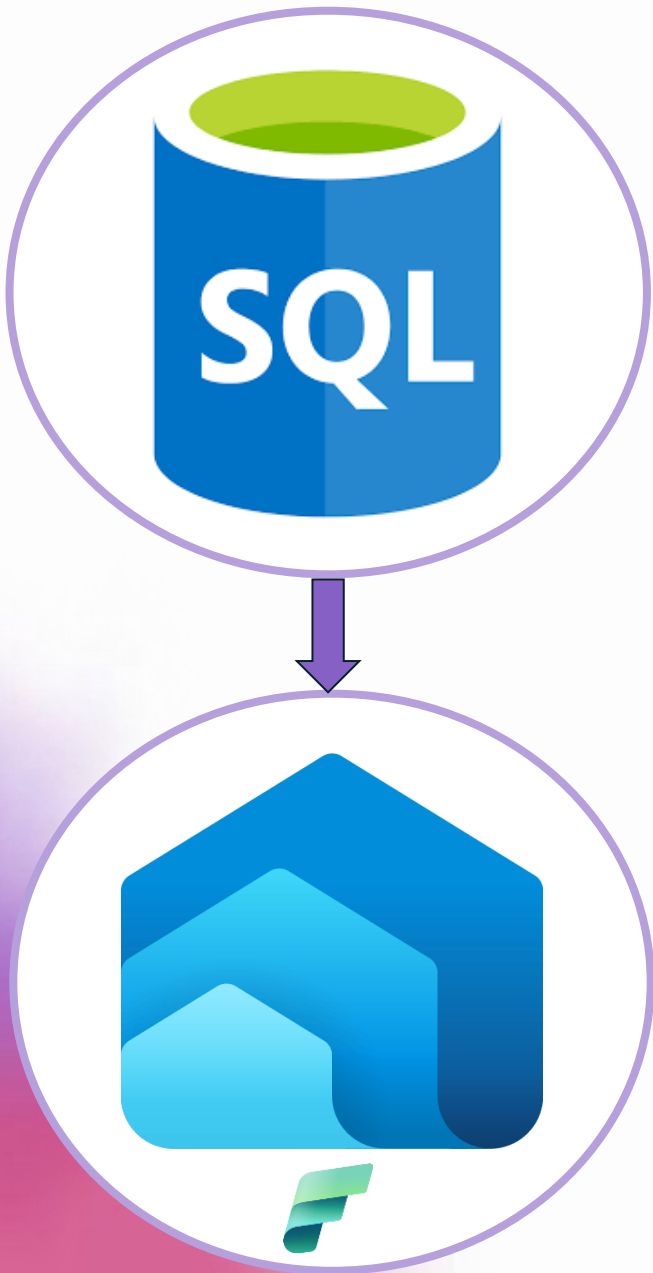
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SQL Friday

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# Agenda

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What's Microsoft Fabric?

02

SQL Server vs. Fabric  
SQL Data Warehouse

03

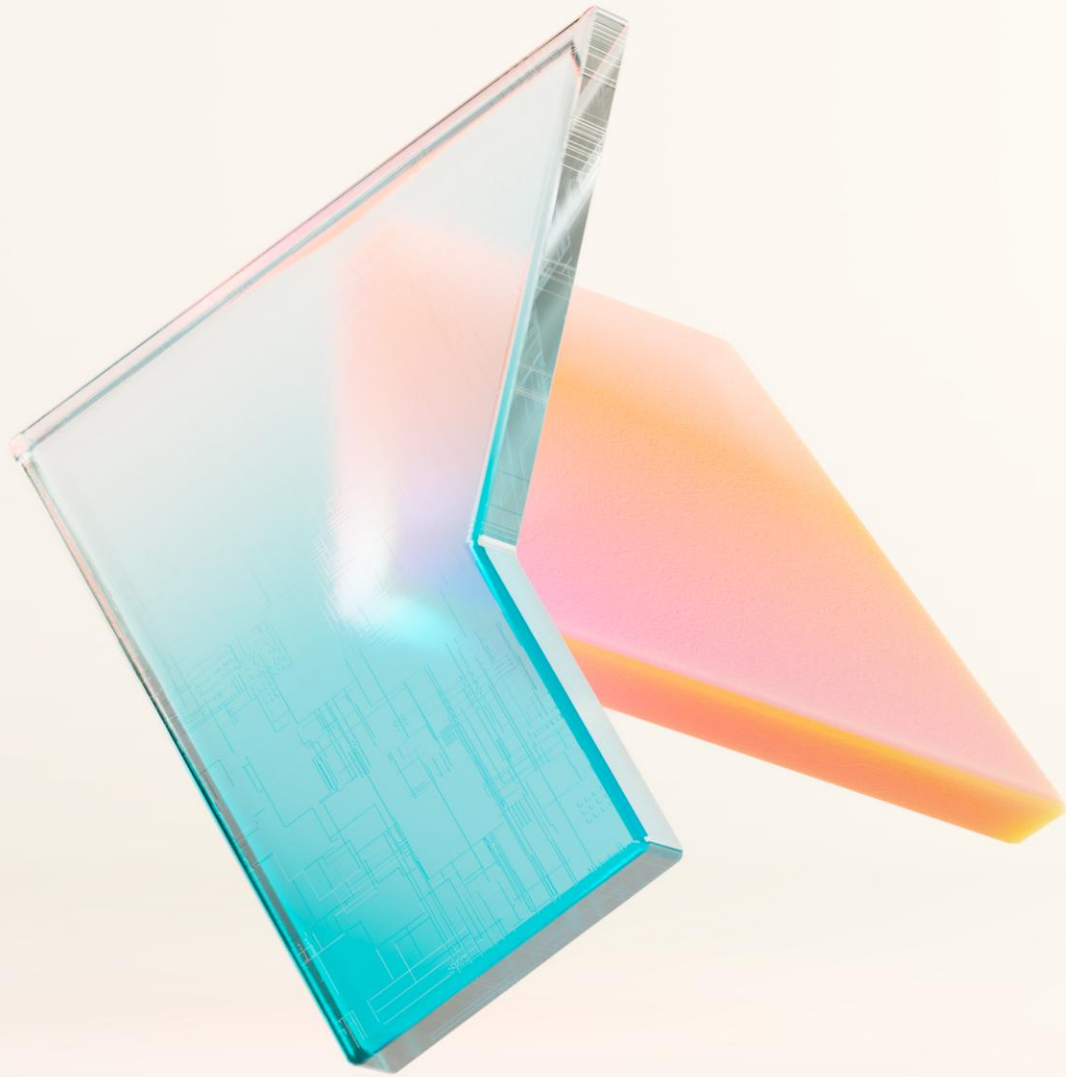
Migration Assistant for  
Fabric Data Warehouse

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Next steps



**What's Microsoft  
Fabric?**



# Microsoft Fabric



Data  
Factory



Real-Time  
Intelligence



Databases



Analytics



Industry  
Solutions



Power BI



Partner  
solutions



Copilot in Fabric



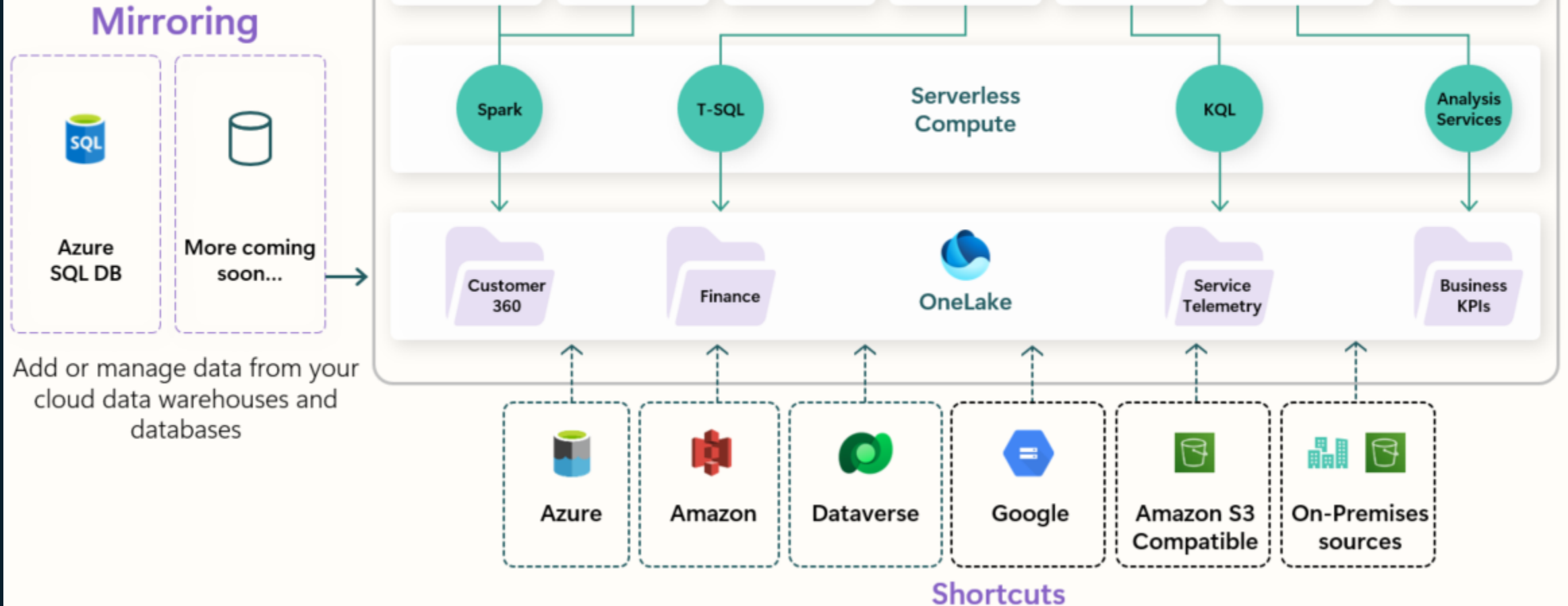
OneLake



Microsoft Purview

# Fabric compute engines

## Microsoft Fabric





Virtualize data in OneLake from Azure, Dataverse, Google, and Amazon S3 without moving or duplicating it





# Data Warehouse workload


Achieve data platform goals with ease and cost efficiency, while empowering your developers and engineers of any skill level with accelerated reporting and insights


  
Data Factory


  
Real-Time Intelligence


  
Databases


  
Data Engineering


  
Data Warehouse


  
Data Science

  
Industry Solutions

  
Power BI

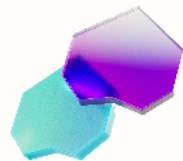
  
Partner Solutions

  
Copilot in Microsoft Fabric

  
OneLake

  
Security, Governance and Administration with Purview

- > Industry-leading SQL performance and scale
- > Fully separate compute storage that can independently scale
- > Natively store data in open Parquet/Delta Lake
- > TLS 1.2 encryption protects connections for granular security across data platform
- > Cross-database querying for fast insights and zero data duplication



# Data Warehousing in Microsoft Fabric

Multi-table transaction guarantees on open Delta format, industry-leading performance and granular security for easy analysis and reporting

## Built for any skill level SQL engineer

Unified SQL engine

Citizen dev and pro dev

Easy data recovery and management

## Lake centric database

Data in Delta format

Lakehouse integration

No knobs performance at any scale

## Easy for users to consume

Cross-database querying

Auto-generated dataset

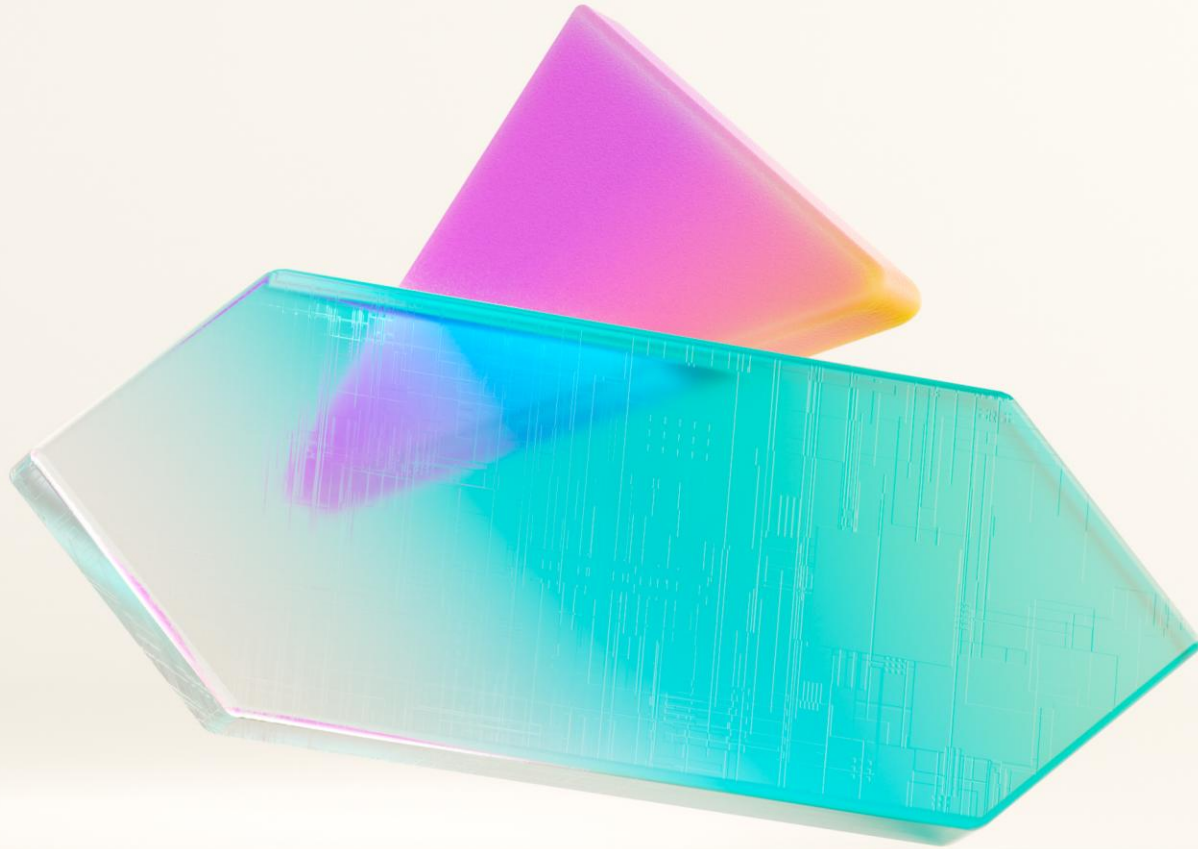
Easy sharing

## Enterprise-ready platform

End-to-end visibility

Always governed

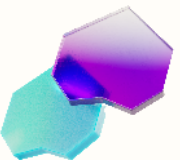
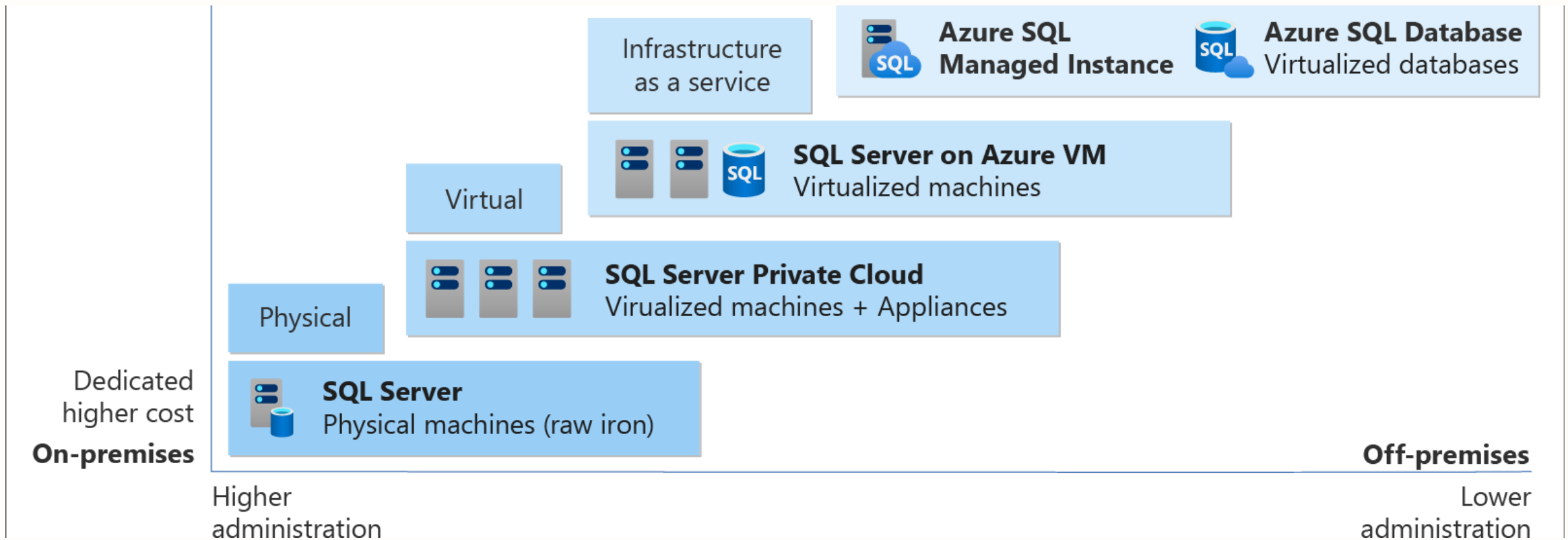
Secure by default



## SQL Server vs. Fabric SQL Data Warehouse



# SQL Server types



# SQL Server vs. SQL Data Warehouse on Fabric

## SQL Server

- Traditional relational database management system
- Optimized for OLTP (Online Transaction Processing)
- Strong support for stored procedures, triggers, and complex queries



## Fabric SQL Data Warehouse

- Cloud-based data warehousing solution
- Optimized for OLAP (Online Analytical Processing)
- Scalable architecture for handling large datasets
- Integration with other Microsoft Fabric services



# Common features in SQL Server & Fabric Data Warehouse

## Language Features

- **T-SQL Support** for querying and managing data, including the use of common table expressions (CTEs), stored procedures, views, and functions.
- **Data Types** including INT, VARCHAR, DATETIME, and FLOAT.
- **DML Statements** such as SELECT, INSERT, UPDATE, and DELETE.

## Database Features

- **Table Management**, create, alter, and drop tables.
- **Statistics**, user-defined using DDL or automatic by Fabric engine. **Indexing is not supported, neither partitioning.**
- **Data Compaction in Fabric** optimizes read operations by consolidating smaller Parquet files into fewer/larger files. **Data Compression in SQL Server** helps reduce the size of the database. Both save storage space and improve performance.

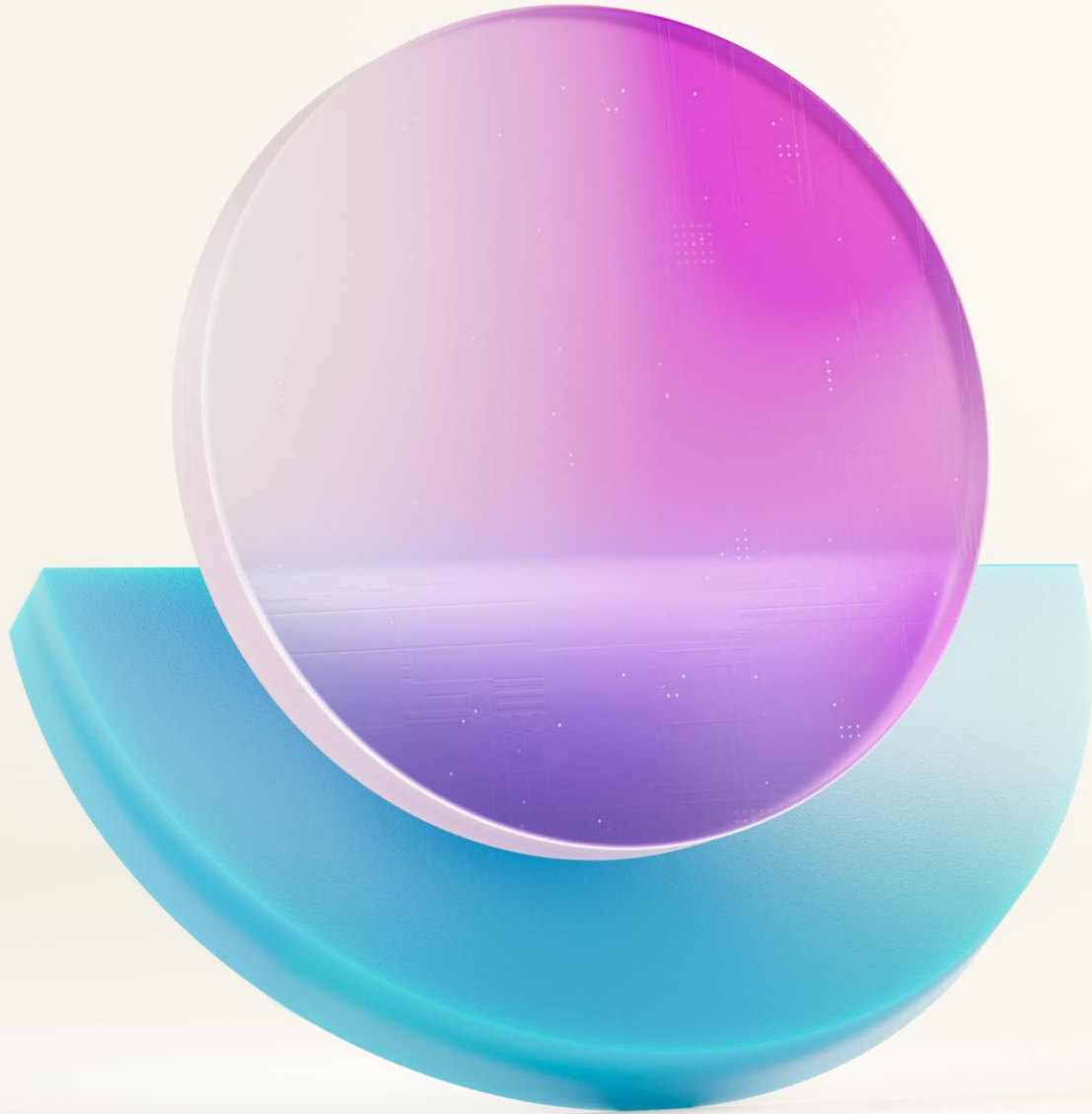
## Security Features

- **Object, Column and Row Level Security (OLS, CLS, RLS)** support to control access to rows in a table based on the user.
- **Dynamic Data Masking (DDM)** to mask sensitive data to non-privileged users.
- **Auditing** provides enhanced security and compliance capabilities by tracking and recording database events (in Preview in Fabric DW).

## Integration & Ecosystem

- Integration with **SQL tools** like SQL Server Management Studio, Visual Studio, Azure Data Studio, etc.
- Support **processing JSON data.**
- Access to **graph-based** data models and processing.





## Migration Assistant for Fabric Data Warehouse

# Migration challenges



Complex Legacy  
Systems



Data Compatibility and  
Transformation



Performance  
Optimization



Integration Issues



Scalability and  
Flexibility



Security and  
Compliance



# Previous migration approaches

1

**Notebooks and  
Pipelines – Azure SQL  
DB**

2

**CETAS – SQL MI,  
Synapse (Serverless &  
DW)**

3

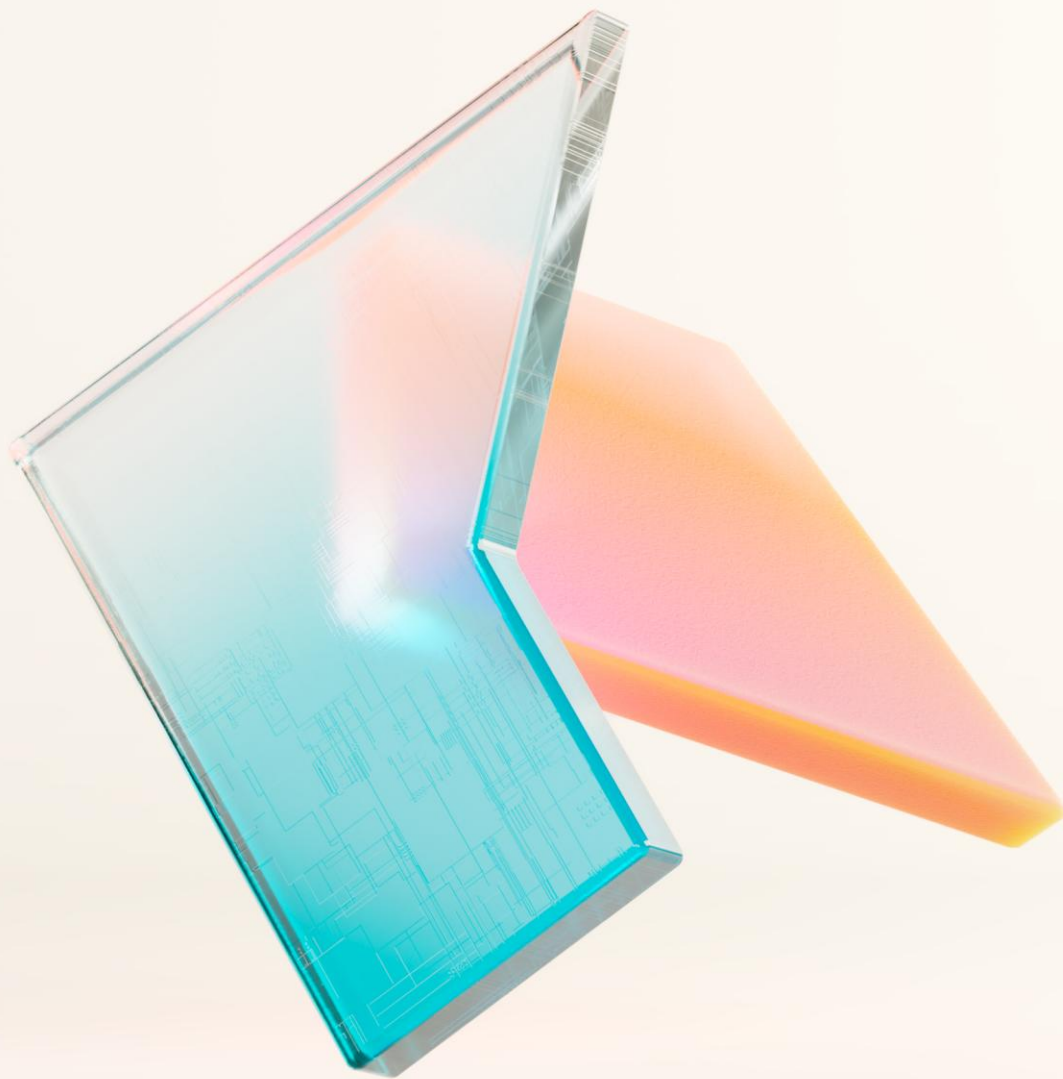
**Mirror Azure SQL DB**

4

**SQL Server Streaming**  
(Azure SQL Database,  
SQL VM, SQL MI and  
different options are  
supported)







**In the Roadmap**

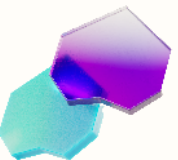
# In the Roadmap

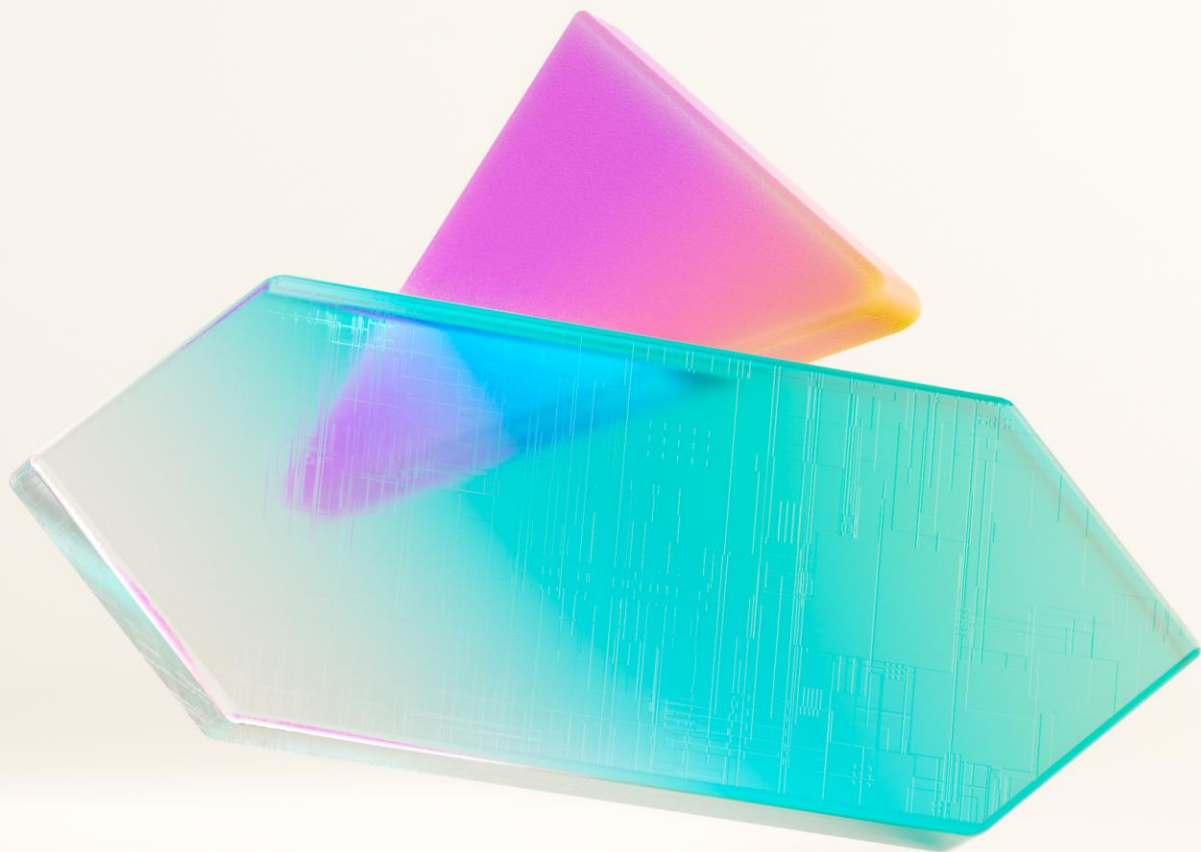
## Just Announced

- Result set caching (PuPr)
- Asynchronous Transcoding (GA)
- Proactive Stats Refresh (Soon)
- Incremental Stats Refresh (Soon)
- Custom SQL Pools (Soon PrPr):  
<https://aka.ms/CustomPools>
- Data clustering (Soon)
- Warehouse Snapshots (Soon)
- Warehouse Migration Assistant (Soon)
- Proactive and incremental stats will go to GA soon; no preview.

## March blog for Data Warehouse

- AI functions in Data Warehouse
- Fabric User Data Functions in Data Warehouse
- Scalar SQL User-defined Functions
- Developer Experiences in Fabric Warehouse
- JSON data in OPENROWSET
- SQL audit logs (Preview)
- Fabric Data Warehouse item permissions
- OneLake Security for Lakehouse Analytics SQL Endpoints Private Preview





**Next steps**

# Get started today!



## Set up your free Microsoft Fabric trial

[aka.ms/try-fabric](https://aka.ms/try-fabric)



## Explore Fabric Data Warehouse tutorials

<https://learn.microsoft.com/en-us/fabric/data-warehouse/tutorial-introduction>



## Migrate with the Fabric Migration Assistant for Data Warehouse

<https://learn.microsoft.com/en-us/fabric/data-warehouse/migrate-with-migration-assistant>



## What's new and planned for Synapse Data Warehouse in Microsoft Fabric

<https://learn.microsoft.com/en-us/fabric/release-plan/data-warehouse>



## Microsoft Fabric on Reddit

<https://www.reddit.com/r/MicrosoftFabric/>

Thank you!

