Microsoft Fabric COMMUNITY CONFERENCE

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Azure SQL Database vs SQL Database in Fabric – Key Differences for Developers & DBAs

John Morehouse - Principal Consultant Denny Cherry & Associates Consulting Fabcon Vegas 2025

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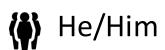
Event Invitation Code: FABCON2025



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Community Speaker

Blogger/Tweeter

Nerd

MVP – Data Platform

Microsoft Certified: Azure Solutions Architect Expert

Denny Cherry & Associates



Certified IT professionals to help achieve IT goals

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Why are you here?

Feature Comparison





Azure SQL Database



SQL Database in Fabric

Show of hands...



How many have seen/used Azure SQL Database?

How many have seen/used SQL in Fabric?

LDEMO

Agenda

Architecture

HA/DR

Costs & Pricing

Connectivity & Authentication

Q&A

Summary





Architecture

Control all the things... Control **Granularity** SaaS PaaS laaS

Azure SQL Database

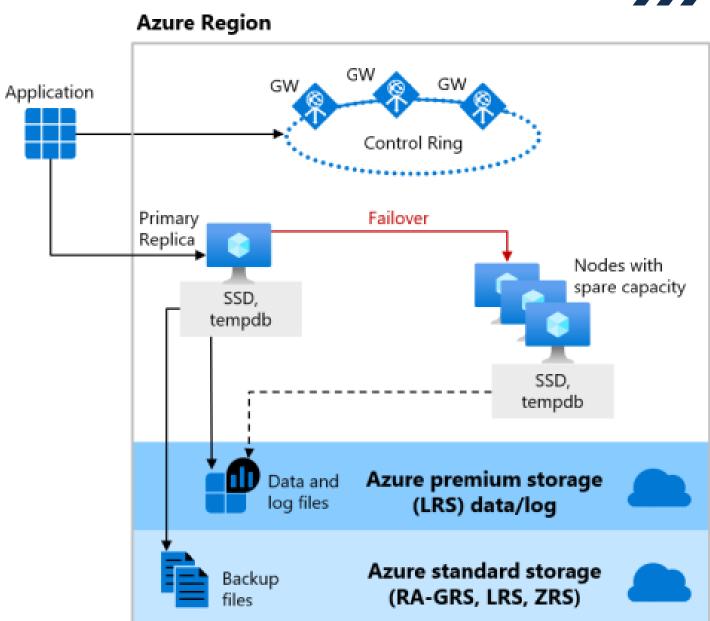


General purpose

Network attached storage

Locally attached SSD for tempdb

Provisioned or Serverless





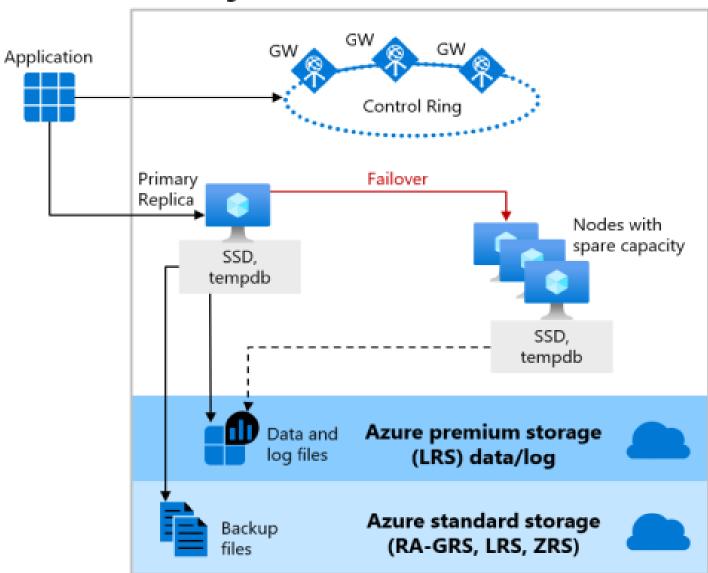
HA/DR





Stateless compute layer

Azure Region



Stateful data layer





Platform feature	Azure SQL Database	Fabric SQL database
Active geo-replication	Yes	No
Automatic backups	Yes	Yes
Availability zones	Yes	Yes, automatically configured
Failover groups	Yes	No
Geo-restore	Yes	No
Long-term retention (LTR)	Yes	No



Development Differences

Development Differences

Feature	Azure SQL Database	Fabric SQL database
Database compatibility	100 - 160	160
BULK INSERT statement	Yes, but just from Azure Blob storage as a source.	No
OPENROWSET	Yes, from blob storage	No
Collation - database collation	SQL_Latin1_General_CP 1_CI_AS.	SQL_Latin1_General_CP1 _CI_AS (not updateable)
Transparent Data Encryption	Yes	No
Always Encrypted	Yes	No
Columnstore indexes, clustered	Yes - For certain tiers	Yes, but the table cannot be mirrored to OneLake.



Pricing

Azure SQL DB Pricing



vCore - ~\$184 per provisioned core

vCore Serverless - \$.5218/vCore-hour or \$0.0001450/vCore-second

DTU - ~1.50 per DTU

Elastic pools are available for cost management

Reservations are available

Fabric Capacity



Defined as Capacity Units (CU)

Capacity units is a measurement of time for workloads

Capacity can service multiple workloads

F2 = 2 capacity units, 60 CUs in a 30 second block of time.

 $1CU = \sim 0.383 \text{ vCores}$. $F64 = \sim 24 \text{ vCores}$

Reservations are available, elastic pools are not

Capacity Units Pricing

SKU	Cores	Capacity unit (CU)	Pay-as-you-go
F2	0.766	2	\$262.80/month
F4	1.532	4	\$525.60/month
F8	3.064	8	\$1,051.20/month
F16	6.128	16	\$2,102.40/month
F32	12.256	32	\$4,204.80/month
F64	24.512	64	\$8,409.60/month
F128	49.024	128	\$16,819.20/month
F256	98.048	256	\$33,638.40/month
F512	196.096	512	\$67,276.80/month
F1024	392.192	1024	\$134,553.60/month
F2048	784.384	2048	\$269,107.20/month

Pausing Capacity





Fabric Capacity



Overview

- Activity log
- Access control (IAM)
- Tags
- X Diagnose and solve problems
- Resource visualizer
- ✓ Scale
 - Change size
- ✓ Settings
 - Quick Start



↑ Essentials

Resource group (move)

<u>FabricDemo</u>

Status

Active

Location

East US 2

Subscription (move)

<u>Microsoft Azure Sponsorship - Production</u>

Subscription ID

af11b486-3e53-4077-b62e-f08f0e83ff65

Tags (edit)

Add tags

Resource name fabricdemo1

SKU

F2

Fabric Capacity Planning



Primary Capacity— Day-to-day production workloads. Size appropriately to prevent EOM throttling

Monitoring Capacity—Smaller capacity like an F4, and should just have your monitoring workspace(s) for the Fabric Capacity Metrics app.

Development Capacity—Used for development efforts, minimizes risks of development efforts impacting production workloads.



Connectivity & Authentication

Connecitivity & Authentication



Azure SQL DB - SQL Authentication or Microsoft Entra

SQL Server Management Studio (SSMS), Azure Data Studio (ADS), VS Code, Query Editor (Portal)

Private endpoints

Connectivity & Authentication



SQL Endpoint

Microsoft Entra Authentication only

VS Code / SSMS

Graphical Query Editor

Managed Private Endpoints

Visual Studio Code ×			
Copy these strings and use them to connect externally to the SQL database server from client tools. Learn how to connect to VS Code \square			
Server Name			
w6o7roh6pxeeheab3j7nj6yml4-zrny2so5jcwuzk3apmxdx5isem			
Database Name			
DB1-d66fcd1d-d9ea-4fa6-a43e-8a008590eea6			
Open in VS Code Download VS Code			

Core Feature Comparison

Feature	Azure SQL Database	SQL database in Fabric (preview)
Purchasing models	vCore, DTU	Provisioned Fabric capacity SKU
Compute tiers	Provisioned or serverless	Serverless
Elastic pools	Yes	No
Secure	Azure RBAC, SQL permissions	Fabric workspace roles and sharing permissions, SQL permissions
Authentication	Microsoft Entra ID authentication, SQL authentication	Microsoft Entra ID authentication
Database mirroring to Fabric OneLake	Yes, manually enabled	Yes, automatically enabled for all eligible tables
Cross-platform queries in Fabric	Yes, via mirroring to Fabric	Yes, via Fabric OneLake automatically

Summary



Same basic architecture

SQL in Fabric cannot cross regional boundaries for DR

SaaS vs PaaS (less control)

Connectivity is different

In short...





References



Overview - https://learn.microsoft.com/en-us/fabric/database/sql/overview

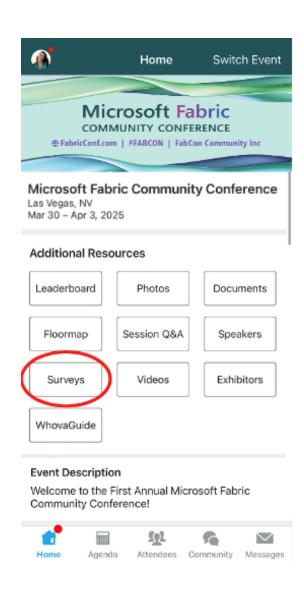
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Decision Guide - https://learn.microsoft.com/en-us/fabric/database/sql/decision-guide

Feature Comparison - https://learn.microsoft.com/en-us/fabric/database/sql/feature-comparison-sql-database-fabric



Questions? Answers!



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- Scroll down to find this session title.
- Complete the session feedback survey.
- Finally, click 'Submit'

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OCT 7-9, 2025 LOWES SAPPHIRE FALLS RESORT WORKSHOPS: OCT 5, 6 & 10 ORLANDO, FL

NextGenAlconf.com



OCT 28-30,2025 MGM GRAND LAS VEGAS, NV PowerPlatformConf.com

Got Questions?

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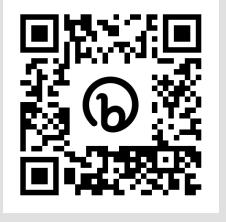
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Slides & Demos



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