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EMPOWERING COMPANIES TO TRANSFORM

Azure Databases – What's new?

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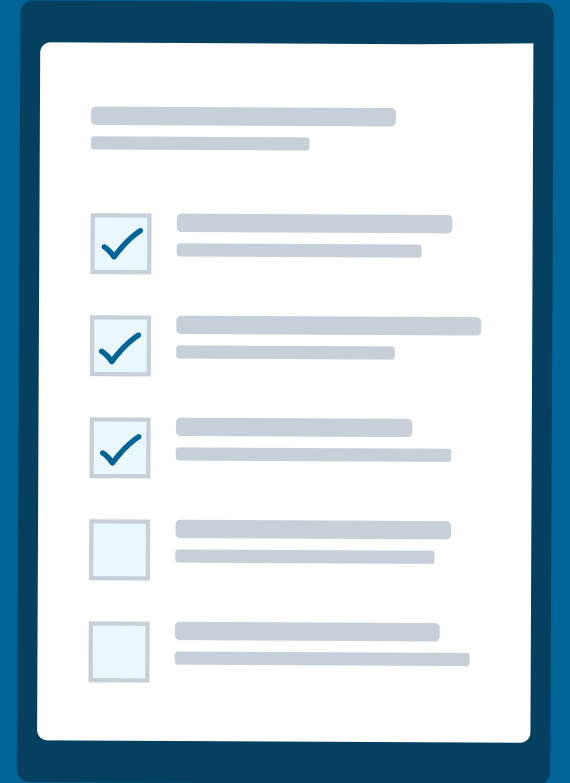
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AGENDA

- 01** Azure Database for Postgres
- 02** Azure Database for MySQL
- 03** Azure SQL Database / Managed Instance
- 04** Azure SQL Server VMs



01



Azure Database for Postgres

Azure Database for PostgreSQL

- New deployment model „Azure Database for PostgreSQL - Flexible Server “

Feature / Capability	Single Server	Flexible Server
Supported versions	10, 11	11, 12, 13, 14
Underlying O/S	Windows	Linux
AZ selection for application colocation	No	Yes
Compute & Storage		
Compute tiers	Basic, General Purpose, Memory Optimized	Burstable, General Purpose, Memory Optimized
Burstable SKUs	No	Yes
Stop/Start	No	Yes (for all compute SKUs). Only compute is stopped/started
Max. Storage size	1 TB (Basic), 4 TB or 16 TB (GP, MO). Note: Not all regions support 16 TB.	16 TB
Min storage size	5 GB (Basic), 100 GB (GP, MO)	32 GB
Storage auto-grow	Yes (1-GB increments)	No
Max IOPS	Basic - Variable. GP/MO: up to 20 K	Up to 20 K
Networking/Security		
Supported networking	Virtual network, private link, public access	Private access (VNET injection in a delegated subnet), public access)
Private link support	Yes	No
Private VNET injection support	No	Yes
Private DNS Zone support	No	Yes
Ability to move between private and public access	No	No
SCRAM authentication	No	Yes
High Availability		
Zone-redundant HA	No	Yes (a synchronous standby is established in another zone within a region)
Same-zone HA	No	Yes (a synchronous standby is established in the same zone as the primary)
HA Configuration	Built-in with storage pinned to a zone. Compute can float across regions.	Physically separate compute & storage provisioned

Azure Database for PostgreSQL

- Several new versions supported
 - Citus 11 for Azure Database for PostgreSQL - Hyperscale (Citus)
 - PostgreSQL 14 with Azure Database for PostgreSQL – Flexible Server
 - PostgreSQL minor versions 11.17, 12.12, 13.8, and 14.5 are now supported by Azure Database for PostgreSQL— Hyperscale (Citus)
- Basic Tier for Azure Database for PostgreSQL – Hyperscale (Citus) starting on lower core count now (min. 2 vCores instead of min. 16 vCores as before)
- New vCore compute options for Azure Database for PostgreSQL – Hyperscale (Citus) (96 und 104 vCores)

Azure Database for PostgreSQL

- Same-zone high availability for Azure Database for PostgreSQL – Flexible Server
 - allows standby server to get deployed to the same zone as primary server to reduce replication latency or to use regions without AZ
- Fast restore for Azure Database for PostgreSQL – Flexible Server
 - Recovery within seconds but not to the latest version (usefull für development, testing or data verification)
- Geo-redundant backup for Azure Database for PostgreSQL – Flexible Server
 - includes restore in the paired region
- Azure Database for PostgreSQL - Hyperscale (Citus) now FedRAMP High compliant

Azure Database for PostgreSQL

- Public Preview: Cross-region read replicas for Azure Database for PostgreSQL – Hyperscale (Citus)
 - Allows asynchronous replica to server groups in different regions (not just within Geo)
 - Useful to scale-out read-heavy workloads
- Public Preview: Migration tool feature with Azure Database for PostgreSQL – Flexible Server
 - Allows seamless online and offline migration from Single Server to Flexible Server
- Public Preview: Encryption at rest with customer-managed keys on Azure Database for PostgreSQL – Flexible Server
- Support for PostgreSQL version 11 in Azure Database PostgreSQL Single Server ends on 9 November 2024
- Support for PostgreSQL 11 in Azure Database PostgreSQL - Hyperscale (Citus) ends on 9 November 2023



02

Azure Database for MySQL

Azure Database for MySQL

- New deployment model

Attribute	Azure Database for MySQL Single Server	Azure Database for MySQL Flexible Server
General		
Underlying O/S	Windows	Linux
Availability zone selection for application colocation	No	Yes
Compute & Storage Scaling		
Compute tiers	Basic, General Purpose, Memory Optimized	Burstable, General Purpose, Memory Optimized
Compute scaling	Supported (Scaling from and to Basic tier is not supported)	Supported
Storage size	5 GiB to 16 TiB	20 GiB to 16 TiB
Cost Optimization		
Stop/Start Server for development	Server can be stopped up to 7 days	Server can be stopped up to 30 days
Low cost Burstable SKU	Not Supported	Supported
Networking/Security		
Network Connectivity	- Public endpoints with server firewall. - Private access with Private Link support.	- Public endpoints with server firewall. - Private access with Virtual Network integration.
Data Encryption at rest	Supported with customer managed keys (BYOK)	Supported with service managed keys
Azure AD Authentication	Supported	Not Supported
Microsoft Defender for Cloud support	Yes	No
High Availability		
High availability	Built-in HA (without hot standby)	Built-in HA (without hot standby), Same-zone and zone-redundant HA with hot standby
Zone redundancy	Not supported	Supported
Standby zone placement	Not supported	Supported
Automatic failover	Yes (spins another server)	Yes
User initiated Forced failover	No	Yes

Azure Database for MySQL

- Minor versions upgrade for Azure Database for MySQL – Flexible Server
 - MySQL minor versions 8.0.28 and 5.7.37
- Azure Database for MySQL – Flexible Server higher burstable compute
 - Bs-Series VMs with 4, 8, 12, 16 and. 20 vCores
- Azure Database for MySQL - Flexible Server Business Critical service tier
 - used to be "Azure Database for MySQL – Flexible Server Memory Optimized"
- Azure Database for MySQL – Flexible Server 80 vCore Business Critical (max. 80 vCores and 504GiB RAM)

Azure Database for MySQL

- Azure Advisor support for Azure Database for MySQL - Flexible Server
- Azure Database for MySQL - Flexible Server - On demand backups
- Server logs for Azure Database for MySQL - Flexible Server
 - Allows to download log as a file
- Read replica for Azure Database for MySQL - Flexible Server
 - Allows larger scale deployments where only / mostly reads are needed

Azure Database for MySQL

- Public preview: Azure AD authentication with Azure Database for MySQL – Flexible Server
- Public preview: Azure Database for MySQL - Flexible Server data encryption with CMK
 - You can now bring your own key for encryption at-rest
- Public preview: Azure Database for MySQL - Flexible Server major version upgrade
 - allows you to perform in-place upgrades of existing instances of Azure Database for MySQL - Flexible Server from MySQL 5.7 to MySQL 8.0 with the click of button
- Action required: Migrate to Azure Database for MySQL Flexible Server by 16 September 2024

03

Azure SQL Database / Managed Instance

Azure SQL Database / Managed Instance

- Ledger in Azure SQL Database
 - Allows to cryptographically proof that data was not illegally altered
- Premium-series hardware for Azure SQL Managed Instance
 - Based on Ice Lake Intel Ceon CPU, faster compute and memory performance
- Azure SQL Database storage limit increase for selected compute sizes
 - Up to 2TB with only 8 vCores
- Memory optimized premium-series SQL Managed Instance (2.5x so viel RAM per vCore wie standard-series,
- Up to 16TB storage in Azure SQL Managed Instance Business Critical tier

Azure SQL Database / Managed Instance

- Backups for Azure SQL Managed Instance offer GZRS storage
- Azure SQL DB Hyperscale short-term backup retention up to 35 days now in preview
- Active geo-replication & Auto-failover groups for Azure SQL Hyperscale
- Zone Redundancy for Azure SQL Database General Purpose and Hyperscale tier
- Azure SQL Database Hyperscale - Named Replica
- Read-access geo-zone redundant storage (RA-GZRS) now available for Azure SQL Hyperscale database backups
- Azure SQL Migration extension for Azure Data Studio
- Windows Authentication for Azure Active Directory principals on Azure SQL MI

Azure SQL Database / Managed Instance

- Public preview: Link feature in Azure SQL MI for SQL Server 2016 / SQL Server 2019 - erlaubt Replikation von SQL Server on-prem zu Azure SQL MI, dort read-only access
- Public preview: Azure SQL Database Hyperscale reverse migration to general purpose tier
- Long-term backup retention(LTR) on Azure SQL Hyperscale service tier is now in (limited) preview

A photograph of a server room with rows of server racks stretching into the distance. The racks are filled with various electronic components and cables. The ceiling has a complex network of pipes and structural beams. The lighting is somewhat dim, creating a professional and technical atmosphere.

04

Azure SQL Server VMs

Azure SQL Server VMs

- Zone redundant storage (ZRS) for Azure Disk Storage
- Storage optimized Azure VMs deliver higher performance for data analytics (Lsv3 and Lasv3)
- Public preview: Multiple backups per day for Azure Virtual Machines

Zeit für Fragen



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