

Hyperscale - Best Practices

Last updated by | Vitor Tomaz | Feb 24, 2023 at 3:28 AM PST

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Hyperscale - Best Practices

This is a "How To" TSG about Limitations and Best Practices in Azure SQL Database Hyperscale.

(based on a presentation from Denzil Ribeiro, PM for Hyperscale)

Performance and scale best practices



- Hyperscale has the normal SQL Server database engine, so common SQL Server best practices apply.
- The maximum transaction log generation rate is fixed at 100 MB/s irrespective of the configured compute size. Though you may have to deploy sufficient compute capacity on the primary node to actually reach these 100 MB/s.
- The latency to scale up, scale down, and to add replicas is 60~90 seconds irrespective of the data size.
- Tempdb and RBPEX are finite resources hosted on a local SSD. Their size is proportional to the compute size (number of vCores).
- Use resumable index operations to create or rebuild indexes on very large tables.
- Use the MAXDOP hint if you create or rebuild indexes offline. The database-scoped MAXDOP that is used for the default workloads may or may not be optimal for the index operations. Use up to MAXDOP 16 for index operations.
- For all index rebuild operations in Hyperscale, SORT_IN_TEMPDB is always ON, regardless of the option specified, unless resumable index rebuild is used.
- Use memory-optimized table variables to alleviate tempdb contention.
- Secondary replicas are asynchronous.
 - If your workload cannot tolerate any data latency, you have to read on the Primary.
 - Multiple readable replicas could be at different points Of redo, thus could have varying data latency.
- Some operations are size-of-data (e.g. cross-region copy, geo-restore)

Internal Doc Reference

- Video [Performance Training Series - Hyperscale - Oct 2022 | Microsoft Stream \(Classic\)](#) 

Public Doc Reference

- Video [Azure SQL Hyperscale Deep Dive with Denzil Ribeiro - SQLBits](#) 

- [SQL Hyperscale performance troubleshooting diagnostics](#) 
- [Hyperscale service tier Overview](#) 

How good have you found this content?

