





How to questions


Last updated by | Radhika Shah | Jun 21, 2022 at 9:41 PM PDT

Below is the common solution customer was presented before creating a support request for this topic.

Monitoring and Performance tuning


SQL Server has its own monitoring and diagnostic capabilities that SQL Database and SQL Managed Instance leverage, such as [query store](#)  and [dynamic management views \(DMVs\)](#) . See [Monitoring using DMVs](#)  for scripts to monitor for a variety of performance issues.


Query Performance Insight doesn't support SQL Database Managed Instance, and we don't have an ETA for when it will. Instead, use [Azure SQL Analytics](#)  for monitoring Managed Instance performance, with automated troubleshooting based on AI.

Here is a [Short demo video](#)  that walks through Performance Monitoring for Azure SQL Managed Instance with Azure SQL Analytics.

In addition, [this library](#)  can be used to track performance of workloads in Managed Instance using TSQL.

Investigate Performance degradation on TempDB

One of the key challenges in TempDB is that it is a common resource for all applications running on an instance, and any misbehaving application or rogue user command can take up all the space in TempDB, bringing down other applications with it. For Managed Instance, the [TempDB limits](#)  are defined by what service tier the instance is deployed on. To increase the TempDB, consider scaling up the Managed Instance.

Additional information on troubleshooting TempDB performance issues can be found in [Azure SQL DB and Managed Instance tempdb](#) .


How to modify memory size on Managed Instance

Memory on Managed Instance is allocated by the number of vCores. To modify the max memory on Managed Instance, consider scaling up or down the number of vCores on the Managed Instance.

Check the [Resource Limits](#)  for Managed Instance.

Performance recommendations when migrating to Managed Instance

When you migrate your databases from SQL Server (on-premises or Azure VM) to Azure SQL Managed Instance, the first thing to do is to compare the performance of your database in the new environment with the performance of the original database on the source SQL Server. In some cases you might see that performance of the databases on Managed Instance are worse than performance of source SQL Server. This is sometimes expected because Managed Instance has some management overhead (automatic backups, resource limits required to guarantee 99.99% availability), while in other cases these are some settings that can be configured to improve performance of Managed Instance.



If you are experiencing performance differences between Managed Instance and SQL server, find hints and diagnostic checks that you can perform to identify the root causes of the performance issues [in this Medium.com article](#) .

Compare instance settings on SQL Server and Managed Instance for optimal performance


One reason why there is performance difference between SQL Server and Managed Instance is that their databases are not configured same way (such as different recovery model, compatibility level, legacy cardinality estimator, trace flags, encryption, tempdb settings). There are a lot of settings that might impact performance and it is hard to identify them.

When you migrate your databases from one SQL Server instance to another or from SQL Server to cloud (for example Azure SQL Managed Instance), the first thing to do is compare the workload performance between source and target environment. Sometimes, you will get different performance, although you believe that the source and target environment are the same. There are several factors that can cause different performance on source and target instances, such as:

- Different server/database properties on source and target instance (compatibility levels, cardinality estimator, encryption, etc.)
- Different trace flag settings
- Different tempdb settings (number of files, encryption)

If you experience performance difference, compare the settings between the SQL Server and Managed Instance where the performance tests are being conducted. SQL scripts are located [in GitHub](#) , and the instructions to use the scripts can be found [in this Medium.com article](#) .

Resources

- Poor performance in Azure SQL Managed Instance is most often either related to excessive CPU utilization or a query waiting on a resource. To resolve either of these issues, review [Monitoring and performance tuning](#) .

How good have you found this content?

