Comparing instance settings on SQL Server and MI

Last updated by | Radhika Shah | May 31, 2022 at 7:00 AM PDT

Contents

Issue

One of the reasons why the customers can get different performance between SQL Server and MI is the fact that SQL Server and Managed Instance databases are not configured same way (different recovery model, compatibility level, legacy cardinality estimator, trace flags, encryption, tempdb settings, etc.) There are a lot of settings that might impact performance and it is hard to identify them.

More Information

Jovan Popovic wrote a SQL script that reads database/instance settings on the source and destination instance databases, compares them, and shows the differences. Here I have explained how to use the script: https://medium.com/azure-sqldb-managed-instance/compare-environment-settings-on-sql-server-and-azure-sql-that-may-impact-performance-e90c21fa9b08

When you migrate your databases from one SQL Server instance to another or from SQL Server to cloud (for example Azure SQL Managed Instance), one of the first things you would like to do is to compare the workload performance between source and target environment. Sometime you might be surprised by the results because you are getting different performance although you believe that source and target environment are the same.

There are several factors that might cause different performance on source and target instances, such as:

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

If you see that a customer is complaining about the performance, please send them this link first and ask them to compare settings between the SQL Server and Managed Instance where they are running performance tests. SQL scripts are here https://github.com/microsoft/sql-server-samples/tree/master/samples/manage/azure-sql-db-managed-instance/compare-environment-settings

Classification

Root cause tree:

How good have you found this content?