Slow performance after moving to azure due to network latency

Last updated by | Vitor Tomaz | Aug 5, 2020 at 12:43 PM PDT

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- Classification

1. First of all, we want to ensure the update statistics with fullscan is done anyway and the query plan used in onpremise and Azure SQL are the same.
2. Use the select wait_type, * from sys.dm_exec_requests to double check what resource the query is waiting for. You should be able to see ASYNC_NETWORK_IO wait if the slow performance is caused by network latency.
3. Ensure DTU is not max out.
4. Use BCP to test if it is pure network issue or some other application issue.

Sample syntax is: bcp "select top 10000000 * from dbo.[tablename]" queryout C:\BCP\selecttest.bcp -d dbname -U username@ dwsql01eastus2-n -S tcp: dwsql01eastus2.database.windows.net -P password -a 32768 -o D:\BCP\Output.log

I had a case that the slow transfer rate is due to application code although it does not have problem when using on-premise database. The application made several unnecessary connections to the database in order to record errors that occurred. However, it made those connections even if there was nothing to record. The time it took to create a connection from on-prem to the AzureDB and then essentially close the connection was long enough to have an impact on the performance.

In the session the application would attempt to execute a stored procedure that logged error messages in the progress database several times per second. The stored procedure in turn had code that returned success without inserting a value in the database if the parameter passed was an empty string. By adding a condition in the application's code to only attempt to log an error message if the length of the error message was greater than 0, the overhead is addressed and the problem is resolved.

5. Change the packet size if possible to see if you can benefit from it.

In bcp, it is parameter -a.

6. Check if it is possible to send concurrent requests in the same time to increase the throughput.
7. Test and try to move to different data center if possible
8. Test and try to move the application server to azure if possible.

Classification

Root cause path -

How good have you found this content?