ML_concurrent_python_script_execution_takes_more_time_than_expected

Last updated by | Vitor Tomaz | Feb 24, 2023 at 3:31 AM PST

Issue

CX complained about having more execution time when having concurrent python external script executed on his Azure SQL managed instance.

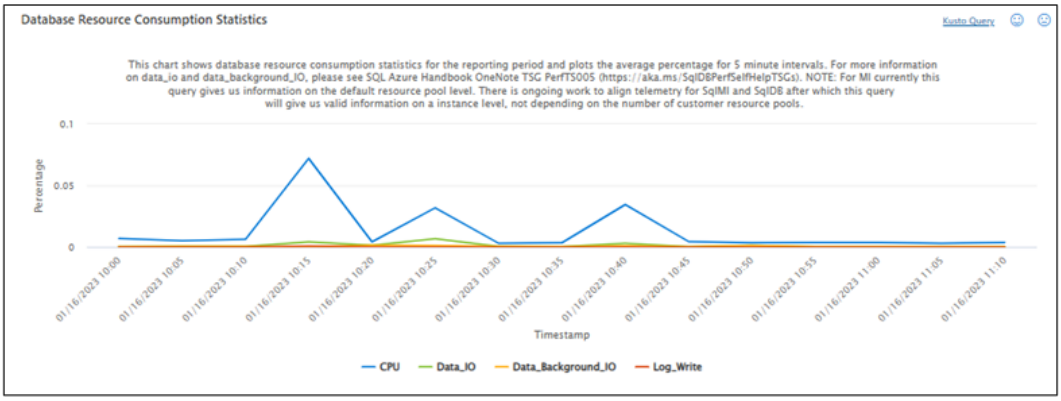
Customer executed one python external script and took 1 seconds, while if we run 4 concurrent sessions at the same time it take up to 1 minute.

Customer as well noticed the **SATELLITE_SERVICE_SETUP** waits.

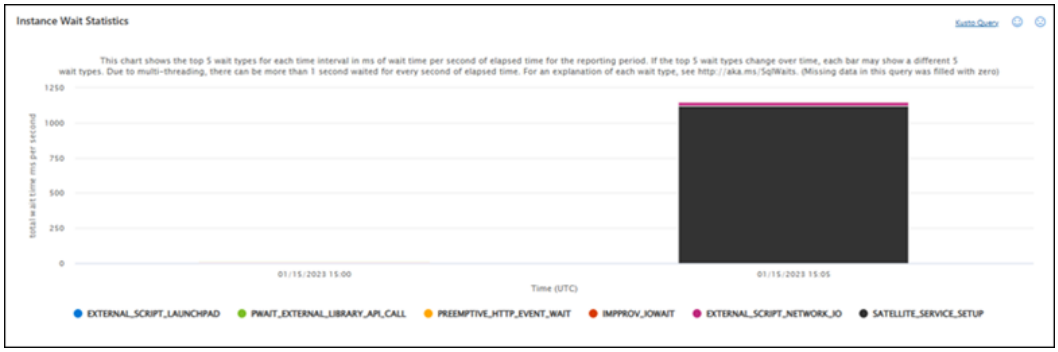
Investigation/Analysis

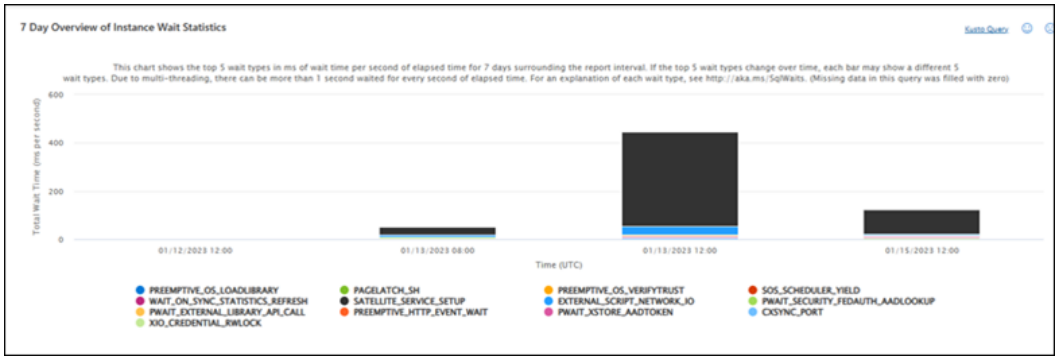
Checking the provided timestamps for the executions on ASC, run troubleshooting report to get the performance and machine learning telemetries.

Checking the database performance, it was normal during the reported timestamp and the customer had enough resources available.

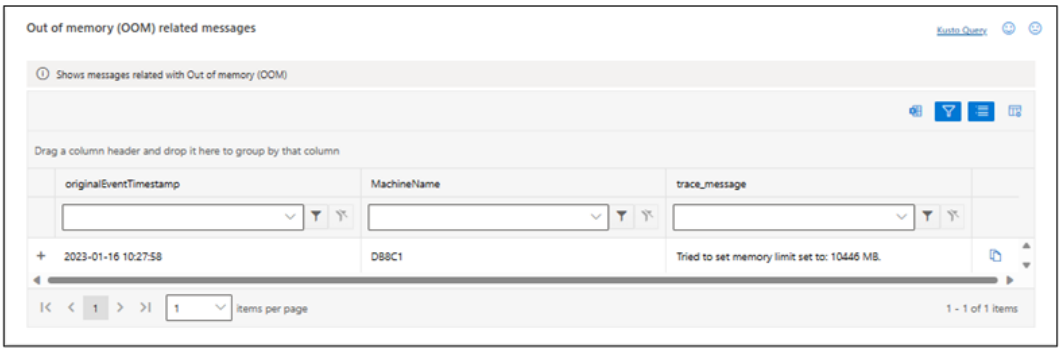


We can see **SATELLITE_SERVICE_SETUP** wait under instance wait statistics which is the same as noticed by customer.





Checking the Machine learning tab (ML services) -> **Out of memory (OOM) related messages** section, we noticed the error "**Tried to set memory limit set to: 10446 MB.**" That matches exactly with the customer reported timestamp.



By checking the **Latest MonExtensibilityTrace logs (top 1000)** section as well, we can notice within the traces we have the below message:

```
Setting job objects memory limit of 10446 MB and cpu rate limit to 20 percent in start message.
```

Which also matches with the error time we noticed before.

Mitigation

This is an expected behavior as by default, resources are set to a maximum of 20% of the available SQL Managed Instance resources when extensibility is enabled. It's simply to make sure any user python script doesn't unnecessarily compete with SQL resources.

You can share this document with the customer and if the customer wants to adjust this value, we can engage the product group team to increase the percentage limit.

Public Doc Reference

- Key differences for Machine Learning Services - Azure SQL Managed Instance | Microsoft Learn
- Lesson Learned 297: High SATELLITE_SERVICE_SETUP waits stats in Azure SQL Managed Instance - Microsoft Community Hub

Internal Reference

- Wait type - Overview (visualstudio.com)
- Incident-361010580 Details - IcM (microsofticm.com)

Root Cause Classification

/Root Cause: Azure SQL v3/Surface Area/Machine Learning Services

How good have you found this content?