Perf_impact_of_Logging

Last updated by | Shawn Xiao | Feb 1, 2021 at 8:07 PM PST

Issue description

Customer experiences significant performance impact of setting *log_statement = ALL* or turnning on *log_duration*

Background

Performance impact of setting *log_statement = ALL* or turnning on *log_duration* is a known issue in Azure Database for PostgreSQL. The default PostgreSQL logging mechanism on our architecture redirects log output to file share with not performant IO leading to memory buffers filling up quickly and resulting in queries being blocked on log IO.

As some customers require such logging level for auditing purposes but cannot accept the performance implications, we offer a workaround of disabling the native logging mechanism on non-Basic servers. The customers can still use Azure Monitor as alternative mean to accessing the server logs, which is covered in (also described below): https://docs.microsoft.com/en-us/azure/monitoring-and-diagnostics/monitoring-overview-of-diagnostic-logs

Caveats

- Following mitigation is not applicable on Basic servers
- After the mitigation logs will not be available in Server logs blade
- Customer will have to use Azure Monitor to collect logs

Mitigation steps

1. Customer sets up Azure Monitor: Logs - Azure Database for PostgreSQL - Single Server | Microsoft Docs
2. Go to Diagnostic settings in Azure Portal and enable i.e. archive to a storage account
3. Go to Storage Accounts -> Storage Explorer (preview) -> BLOB CONTAINERS -> insights-logs-postgresqllogs
4. In Server Parameter blade, please disable *logging_collector*: a restart will be needed to have the change taken in effect
5. Then customer can retrieve logs from Azure Storage and the Server Log blade will not be accessible any more (no log loss)

After above steps, the new generated logs will be uploaded to selected Azure Storage account. The log will not be saved in PostgreSQL fileshare and so no performance impact will be existed.