

Extended Event session memory exceeds allowed limits Error 25746 25747

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Issue

When creating Extended Events (XEEvents) the session memory limit is exceeded and either of the following error messages (Errors: 25746/25747) is returned:

"An exception occurred while executing a Transact-SQL statement or batch (Microsoft.SqlServer.ConnectionInfo). Error: Operation failed. Operation will cause database event session memory to exceed allowed limit. Event session memory may be released by stopping active sessions or altering session memory options. Check sys.dm_xe_database_sessions for active sessions that can be stopped or altered. (Microsoft SQL Server, Error: 25746)"

"Error: Operation failed. Operation failed. Operation will cause database event session memory to exceed allowed limit. Event session memory may be released by stopping active sessions or altering session memory options. Check sys.dm_xe_database_sessions for active sessions that can be stopped or altered. If no sessions are active on this database, please check sessions running on other databases under the same logical server. (Microsoft SQL Server, Error: 25747)"

Investigation/Analysis

This results from the extended xevent session buffer memory. There is a [cap on memory available](#)  to XEvent sessions in Azure SQL Database:

- In single Azure SQL Database in the DTU purchasing model, each database can use up to 128 MB. This is raised to 256 MB only in the Premium tier.
- In single Azure SQL Database in the vCore purchasing model, each database can use up to 128 MB.
- In an elastic pool, individual databases are limited by the single database limits, and in total they cannot exceed 512 MB.

The memory is shared on a logical server level between all databases (for an elastic pool, the default limit of 512MB is shared between all databases in the elastic pool). When the buffer limit is reached, the error occurs, and it's not possible to create new extended event sessions.

If there are no sessions active on a particular single database (or database in an elastic pool), check sessions running on other databases under the same logical server using this T-SQL command: `SELECT * FROM sys.dm_xe_database_sessions`

Mitigation

1. Confirm active Xevent sessions and alter existing sessions to reduce the memory limit for them (or even stopping them if not needed) to free up space for new sessions. This example sets the max memory to 1024 KB on the target ring buffer by including (**SET max_memory = 1024**)

```
CREATE EVENT SESSION [CaptureSlowQueries] ON DATABASE
ADD EVENT sqlserver.rpc_completed(
    ACTION(sqlserver.client_app_name,sqlserver.client_hostname,sqlserver.database_id,sqlserver.session_id,sqls
    WHERE ([duration]>(1000000) AND ([sqlserver].[client_app_name]<>'app_name' AND [object_name]<>'sp_readre
ADD EVENT sqlserver.sql_batch_completed(
    ACTION(sqlserver.client_app_name,sqlserver.client_hostname,sqlserver.database_id,sqlserver.session_id,sqls
    WHERE ([duration]>(1000000) AND [sqlserver].[client_app_name]<>'app_name'))
ADD TARGET package0.ring_buffer (SET max_memory = 1024 /* Units of KB.*/)
WITH (MAX_MEMORY=192 KB,EVENT_RETENTION_MODE=ALLOW_MULTIPLE_EVENT_LOSS,MAX_DISPATCH_LATENCY=2 SECONDS,
MAX_EVENT_SIZE=0 KB,MEMORY_PARTITION_MODE=NONE,TRACK_CAUSALITY=OFF,STARTUP_STATE=OFF)
```

2. The Product Group can increase this memory limit from the backend. However this is not a recommended option as it's an override and only a temporary measure.

Public Doc Reference

[Extended events in SQL Server](#) 

[Create Event Session](#) 

Internal Reference

IcM 219846428: [Customer facing issue while executing extended events](#) 

IcM 214606047: [Customer facing issue while executing extended events](#) 

IcM 314305206: [Extended Events exceeding allowed memory limit with 31 databases](#) 

Root Cause Classification

Cases resolved by this TSG should be coded to the following root cause:

SQL Database/Performance and Query Execution/Other errors and exceptions

How good have you found this content?

