40613 with "HaDrDbMgr::AcquireXDbLockWithKill" as Outage Reason

Last updated by | Tayyab Mohd Sayyed | Nov 16, 2022 at 1:54 PM PST

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Issue

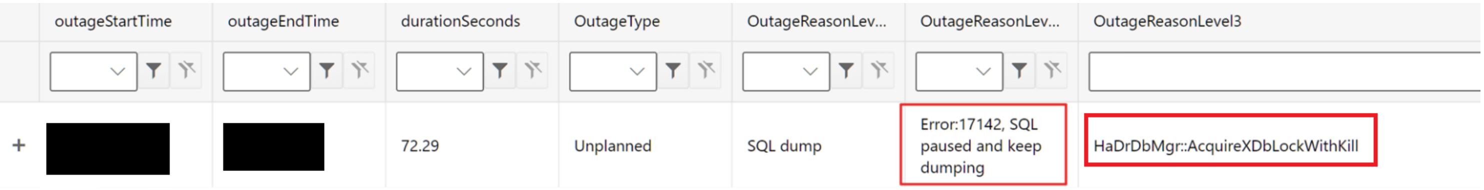
This error will be encountered when there is a SLO update and the database or elastic pool will incur a short unavailability. You would possibly see 40613 state 13 or state 14 and SQL dump will be triggered.

Troubleshoot

Using Azure Support Center

ASC Troubleshooter

We detect this issue in Azure Support center via troubleshooter. Under 'Downtime Reasons' tab , navigate to 'All Login Outages' and look for OutageReason 'HaDrDbMgr::AcquireXDbLockWithKill'.



	outageStartTime	outageEndTime	durationSeconds	OutageType	OutageReasonLev...	OutageReasonLev...	OutageReasonLevel3
+	[redacted]	[redacted]	72.29	Unplanned	SQL dump	Error:17142, SQL paused and keep dumping	HaDrDbMgr::AcquireXDbLockWithKill

Using Kusto

Kusto
Check the loginoutages table and verify the outage reason and it should mention 'HaDrDbMgr::AcquireXDbLockWithKill'.

```
let TimeCheckStart = datetime('{StartDate}');
let TimeCheckEnd = datetime('{EndDate}');
let ServerName = ('{Server_Name}');
let DatabaseName = ('{Database_Name}');
LoginOutages
| where outageStartTime >= TimeCheckStart and outageEndTime <= TimeCheckEnd
| where logical_server_name =~ ServerName
| where database_name =~ DatabaseName
| where OutageType == 'Unplanned'
| project outageStartTime, outageEndTime, durationSeconds, database_name, OutageType, OutageReasonLevel1, Outa
| order by outageStartTime asc
```

Mitigation

The reconfiguration should last for less than 2 mins and the login outage should be for few secs and databases should be back online.

RCA Template

Summary of Impact - Between <Starttime> and <EndTime> Database <Database Name> on Server <Server name> was unavailable for short time due to update SLO.

Your database hit a brief outage due to a mitigation assert being hit. During updateslo, there are specific locks that the updateslo thread needs to acquire. However, occasionally the updateslo thread will be unable to acquire the needed lock due to a transaction holding on to the lock it needs. Due to this, there is a mitigation assert such that if the updateslo thread is unable to acquire the lock it needs after a short period of wait, we will restart the sql instance in order to force the transaction to release the lock that the updateslo thread needs. This will allow the updateslo to make progress instead of being stuck for longer periods of timing waiting for the lock. This will cause a brief outage, like the one you experienced, so we suggest you to implement retry logic to prevent this from impacting your application.

If your databases are in a pool, they will all experience a brief outage due to the assert being hit. We apologize for the inconvenience experienced.

Root Cause -

Classification

Root Cause: Azure SQL v3/Availability/Planned Failovers/Update SLO

How good have you found this content?