Error 40613, State 22 on SQL MI

Last updated by | Vitor Tomaz | Jun 8, 2022 at 5:36 AM PDT

Issue

Customer face error 40613:
Database 'X' on server 'Y' is not currently available. Please retry the connection later.

MonLogin records show state 22 with description *DueToProxyConnextThrottle* like:

package	error	state	state_desc
xdbgateway	40613	22	DueToProxyConnextThrottle

Investigation/Analysis

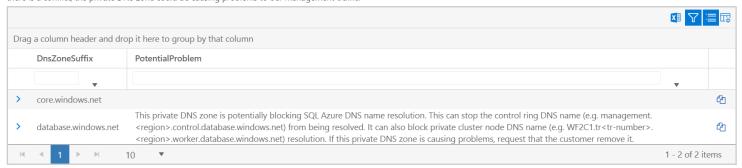### Custom DNS or private DNS zones for Azure DNS

Error description may be misleading, customers can break connectivity between gateways and SQL Server nodes using custom DNS or private DNS zones for Azure DNS, which prevents the node names to be resolved and ultimately blocked intra-node communication. The customer should confirm that this is not the case.

Check Networking tab on ASC, there's important information there like:

Private DNS Zones in the VNET

Below are the private DNS zones linked to the VNET where the Managed Instance is located. The column 'PossibleConflicts' will have the DNS suffix that the DNS zone might be in conflict with. If there is a conflict, the private DNS zone could be causing problems to our management traffic.

Drag a column header and drop it here to group by that column

DnsZoneSuffix	PotentialProblem	
> core.windows.net		
> database.windows.net	This private DNS zone is potentially blocking SQL Azure DNS name resolution. This can stop the control ring DNS name (e.g. management.<region>.control.database.windows.net) from being resolved. It can also block private cluster node DNS name (e.g. WF2C1.tr<tr-number>.<region>.worker.database.windows.net) resolution. If this private DNS zone is causing problems, request that the customer remove it.	

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Real proxy connection throttle

- Check Gateway Analytics under Connectivity tab in ASC

- MonLogin has records regarding the number of proxy connections, high numbers would be sign of a problem

```
MonLogin
| where TIMESTAMP >= ago(1h)
| where ClusterName == 'tr480.francecentral1-a.worker.database.windows.net'
| where AppTypeName == 'Gateway.PDC'
| where event == 'report_login_proxyconn_throttling'
| where action == 'Finish'
| project originalEventTimestamp, package, error, ['state'], state_desc, tdsproxycontainer_count, tdssess
```

Mitigation

Custom DNS or private DNS zones for Azure DNS

Associating Azure DNS private zone with reserved name with a virtual network containing Managed Instance, would render SQL Managed Instance unavailable.

List of reserved names: windows.net ⧉, database.windows.net ⧉, core.windows.net ⧉, blob.core.windows.net ⧉, table.core.windows.net ⧉, management.core.windows.net ⧉, monitoring.core.windows.net ⧉, queue.core.windows.net ⧉, graph.windows.net ⧉, login.microsoftonline.com ⧉, login.windows.net ⧉, servicebus.windows.net ⧉, vault.azure.net ⧉.

Deploying SQL Managed Instance to a virtual network with associated Azure DNS private zone with a name reserved for Microsoft services would fail. Please follow Azure Private Endpoint DNS configuration for the proper Private Link configuration.

https://docs.microsoft.com/en-us/azure/azure-sql/managed-instance/connectivity-architecture-overview#networking-constraints ⧉

Real proxy connection throttle

Customer should consider switching to redirect instead of proxy mode (while additionally adding NSG rule on MI subnet to open ports 11000-12000)

Root Cause Classification

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

How good have you found this content?