

Error 40613, State 84

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Issue

Customer experiences below connection error with Azure SQL DB:

```
Cannot connect to sqlservergtonline.database.windows.net.  
Database 'master' on server '' is not currently available. Please retry the connection later. If the problem p
```

For help, click: <http://go.microsoft.com/fwlink?ProdName=Microsoft SQL Server&EvtSrc=MSSQLServer&EvtID=40613&LinkId=20476> 

Our backend telemetry shows error 40613, state 84. This error is raised when logins fail due to a failure to connect to the logical master. This often indicates that the logical master database is unhealthy.

Troubleshooting

Using Azure Support Center

Follow the instructions to generate and navigate to troubleshooter results in ASC tool.
[How to generate and use SQL troubleshooter results](#)

Using Kusto

Use following Kusto query to check login error and state during issue timeframe:

```

let servername = '{ServerName}';
let databasename = '{DatabaseName}';
MonLogin
| where logical_server_name == servername and database_name == databasename
| where originalEventTimestamp >= datetime('{StartTime}') and originalEventTimestamp <= datetime('{EndTime}')
| where event == "process_login_finish" and NodeRole contains "DB" and error == 40613 and state == 84
| project originalEventTimestamp, NodeName, NodeRole, instance_name, error, ['state'], logical_server_name, d

```

If impacted, you will see results for the customer's resource as below

originalEventTimestamp	NodeName	NodeRole	instance_name	error	state	logical_server_name	database_name
2021-09-23 04:36:19.3510558	DB.3	DB	f32b777fbb9c.tr10126.eastus2-a.worker.database.windows.net	40613	84	testservername	Userdatabasename
2021-09-23 04:36:19.3582836	DB.3	DB	f32b777fbb9c.tr10126.eastus2-a.worker.database.windows.net	40613	84	testservername	Userdatabasename
2021-09-23 04:36:19.3776452	DB.3	DB	f32b777fbb9c.tr10126.eastus2-a.worker.database.windows.net	40613	84	testservername	Userdatabasename
2021-09-23 04:36:31.5824129	DB.3	DB	f32b777fbb9c.tr10126.eastus2-a.worker.database.windows.net	40613	84	testservername	Userdatabasename

Using Login Outage event

Login outage table provides additional insights to the Outage reasons, this should help us with both escalating to engineering if issue persisten and/or to Root cause.

```

let servername = '{ServerName}';
let databasename = '{DatabaseName}';
LoginOutages
| where logical_server_name == servername and database_name == databasename
| where outageStartTime>= datetime('{StartTime}') and outageEndTime<= datetime('{EndTime}')
| project sql_instance_name,logical_server_name,database_name, outageStartTime, outageEndTime, OutageReasonLev

```

Additional details and Impact

- You will also see login failures with error 18456, possibly state 126. These are the logins to non-existent databases that are causing the problem.
- If the server has multiple databases, you should see login failures with error 40613 state 84 on them.
- Attempt to connect to logical master using sqlcmd, you will get a timeout.

Mitigation

- If issue is active, please engage engineering to bring the logical master back online to mitigate the issue.

After the logical master comes back up with the feature enabled, it should be able to handle a high volume of bad logins much better.

RCA Template

Summary of Impact : Bewteen <StartTime> and <EndTime>, Database <DatabaseName> on Server <ServerName> was unavailable due to logical master database issue.

Cause: The login requests to the SQL database first reaches the logical master db (except for contained user access) for both SQL Server and Windows authentication to confirm the credentials are valid to connect to user

database. The connection to the user database has a dependency upon the login in the master database and when connection to the master database is not available (for example, a failover is in progress or master db in bad node), the overall connection time will be increased, or connection might time out.

In this case, your database <DatabaseName> was not reachable because of the logical master database not reachable and was placed on bad node. Once it was moved from that node, the database became healthy, and logins started succeeding. We will continue to investigate and improve our automation to identify such node issues more quickly, so any such outages are even smaller. We sincerely apologize for the inconvenience caused.

Mitigation: Restoring logical master database by moving to healthy node, logins started succeeding.

Next Steps: We will continue to investigate and improve our automation to identify such node issues more quickly, so any such outages are even smaller. We sincerely apologize for the inconvenience caused.

Classification

State 84 is specific to issue accessing logical master in the login process, which should start with Gateway engineering if the issue is active. However, if GW finds the issue is related to Master DB node was unhealthy then it should be handled by HA (Availability).

Root Cause tree : Azure SQL DB v2\Connectivity>LoginErrors\Others

How good have you found this content?

