

Error 40613, State 4

Last updated by | Vitor Pombeiro | Feb 17, 2022 at 3:42 AM PST

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Issue

This indicates customer experiencing unavailability due to one or more reasons depending on the lookup state and lookup error code.

State 4 Lookup Code and States

| LookupError Code | Lookup State | Potential Cause and Next Steps |
|---|------------------|---|
| E_PATH_NOT_FOUND (2147942403) | SERVICE_ENDPOINT | - This error indicates that WinFab stopped advertising where the PRIMARY is to the CR. 1) Check state of the replica in the backend using [Database Replicas.xts] view. 2) If the view indicates that the database has issues, please engage SQL HA & Networking (High Pri) On-Call. 3) Look for additional Error Anomaly Detection alerts. 4) Potential causes of this issue are SQL Error 9004. 5) Provide the physical_database_id in the alert email |
| FABRIC_E_SERVICE_DOES_NOT_EXIST | INSTANCE_ALIAS | 1) This error indicates that the target database does not exist in this cluster, winfab does not have knowledge of this database. 2) This is not an availability issue - most likely indicates that the customer intentionally has dropped its database and kept login-in by mistake. Please wait until login stops and resolve this incident as No Repro. |
| FABRIC_E_TIMEOUT Or FABRIC_E_SERVICE_OFFLINE | DATABASE_ALIAS | This error usually comes accompanied with several: 1) 2147500036 (E_ABORT) - LOGICAL_MASTER_ALIAS 2) 2147500036 (E_ABORT) - DATABASE_ALIAS Update: <i>If SqlAliasCache improvement has been completed in the cluster, this might be an issue with the SqlAlias DB. Please check SqlAliasCache XTS.</i> Cause : This error indicates that potentially the Windows Fabric Naming Service is not resolving the requests timely. Please check the |

| LookupError Code | Lookup State | Potential Cause and Next Steps |
|--|-------------------|--|
| | | health of Naming Service on Winfab Explorer. If it is unhealthy, engage WinFab on-call to unblock it |
| E_ABORT (2147500036) | SERVICE_ENDPOINT | This is a transient error that may be getting cached unnecessarily. Commonly accompanied by flaky (but not completely failing) login telemetry since the cache gets filled with these transient errors. Recycling the gateway node should fix the caching issue. (fixed in changeset 663711) |
| FABRIC_E_SERVICE_OFFLINE Or FABRIC_E_REPLICA_DOES_NOT_EXIST | Instance Alias | This error indicates that there is no Primary endpoint for the given database in the BE. Check BE health, might be a LRR. Engage HA for further steps. |
| E_PATH_NOT_FOUND (E2147942413) | Activate Database | Database is in Disabled State Note : This is not Availability Issue |
| | | |

Using Kusto

```
MonLogin
| where logical_server_name =~ '{ServerName}'
| where event == 'process_login_finish'
| where error <> 0
| project originalEventTimestamp , database_name , AppName , MachineName , package , event, error , state, is_
```

Sample Result

| originalEventTimestamp | database_name | AppName | MachineName | package | event | error | state | is_user_error | peer_address | login_time_ms | connection_id | peer_activity_id | lookup_error_code | lookup_state |
|-----------------------------|---------------------------|---------|-------------|---------|----------------|-------|-------|---------------|--------------|---------------|---------------|------------------|--------------------------------------|--------------------------------------|
| 2016-01-20 13:56:39.6182013 | LearnStyle.MISA.granderie | Gateway | GW33 | | | | | | | | | | | |
| xdbgateway | process_login_finish | 40613 | 4 | 0 | 104.45.154.xxx | 0 | | | | | | | 046432B3-81C7-4FE2-868C-22EFBCDF7A5A | B2411386-73DA-456E-AF09-3469C31860EB |
| | | | | | | | | | | | | | 2147942413 | |
| | | | | | | | | | | | | | ACTIVATE_DATABASE | |

In this case, it was due to the performance team disabling databases (unmounting the mdf) that are idle and have no activity for 7 days. If the connection fails with this error, it is because the database is being activated after the first login attempt is made which fires up the instance of the database. This can take upwards of a minute at times and **should be treated as a standard reconfiguration** and thus retry logic is still applicable.

Another error code that was seen for this same state is 2147943860

How to look at details of activation

Start with **DbSearch.xts** and click on Troubleshooting Activation

The screenshot shows the DbSearch.xts tool interface. At the top, there are tabs for various tools, with 'DbSearch.xts' selected. Below the tabs is a 'Manual' section with instructions on how to use the tool. The 'Input query' section contains three text boxes: 'Logical Server Name' (diaguide2server), 'Logical Database Name' (diaguidedemonstrator), and 'Application Name / SQL instance name' (empty). A 'Search' button is located below these boxes. The search results are displayed in a table with columns: Type, Cluster, Logical Server Name, database_name, App Name, last_seen, and Subscription Id. The results are limited to 10 rows per cluster. The first row is highlighted with a red circle and contains the following data: Type: Production, Cluster: northeurope 1-a, Logical Server Name: diaguide2server, database_name: diaguidedemonstrator, App Name: ebb9ac3052a5, last_seen: 2/12/2016 1:35:04 PM, Subscription Id: 112ceb0d-1b8c-4b57-... On the left side of the interface, there is a sidebar with a tree view. The 'LSI' (Logical Server Instance) section is expanded, showing links for 'Database Availability', 'Database Replicas', 'DB Perf', and 'TroubleshootingActivation'. The 'TroubleshootingActivation' link is highlighted with a red circle. Below the LSI section is the 'Workload Insight' section, which contains links for 'Workload experience KPI' and 'DB Index recommendations'. At the bottom of the interface, there is a 'More info from Kusto' section with a table showing two columns: 0 and 1.

Enter data that you have: Logical server name, database name and/or application name. Search results will show rows matching your query, by running fanout clusters. If you are unsure for the full database name, you can use "Partial search results" which will search for database that contains your search criteria. If you know cluster where your database is located, you can use second search results tool ("Search results from current Environment") which will return results. Search results are limited by "Limit" variable. If you want to see more rows as result, change "Limit" variable in Properties of Search result tool. After getting your results, select row and click on the view link (on the left) you want to examine your database with.

Input query

Logical Server Name: diaguide2server

Logical Database Name: diaguidedemonstrator

Application Name / SQL instance name:

Search

Search results (Limited to 10 rows per cluster)

| Type | Cluster | Logical Server Name | database_name | App Name | last_seen | Subscription Id |
|------------|-----------------|---------------------|----------------------|--------------|----------------------|---------------------|
| Production | northeurope 1-a | diaguide2server | diaguidedemonstrator | ebb9ac3052a5 | 2/12/2016 1:35:04 PM | 112ceb0d-1b8c-4b57- |

LSI

- Database Availability
- Database Replicas
- DB Perf
- TroubleshootingActivation

Workload Insight

- Workload experience KPI
- DB Index recommendations

More info from Kusto

| 0 | 1 |
|---|---|
| | |

s and Links.xts GlobalDeactivationOverview.xts Global Adhoc CMS Query.xts Sterling Servers and Databases.xts DB Perf.xts DeactivationStatus.xts DBSearch.xts TroubleshootingActivation.xts TroubleshootingActivation.xts

MDS Date Time (UTC) Database CMS Info:

Enter value

Start Date Time

2/ 5/2016 10:24:52 PM

End Date Time

2/12/2016 10:24:52 PM

Previous 7 days

Auto refresh

Interval (sec): 30

OK

Database CMS Info:

| blocking_mode | logical_database_name | logical_server_name | logical_database_id | sql_instance_name | last_attempted_deactivation_time | edition | dropped_time | ld_state | pd_state | si_state | dd_state |
|---------------|-----------------------|---------------------|--------------------------------------|-------------------|----------------------------------|---------|--------------|----------|----------|----------|----------|
| None | bizint_lb | j5kr9g57no | 60cf518a-50b3-4a7d-a1ed-0eb638f23c62 | afc4f655f949 | 2/8/2016 9:41:40 PM | Basic | | Ready | Ready | Ready | |

BlockUserAccess setting (info only)

| fabric_cluster_name | fabric_name_uri | property_name | property_value | state | create_time | last_update_time | last_state |
|---|---|-----------------|----------------|-------|----------------------|----------------------|----------------------|
| tr17.northeurope1-a.worker.database.windows.net | fabric://Worker.ISO/afc4f655f949/SQL.UserDb/8c6646aa-9fac-408c-b899-37dc5604268 | BlockUserAccess | 0x00 | Ready | 2/12/2016 4:38:31 PM | 2/12/2016 4:38:31 PM | 2/12/2016 4:38:31 PM |

Deactivation Requests (select a row in Database CMS Info first)

| action | request_id | min_original Event Timestamp |
|--------------------------------------|--------------------------------------|------------------------------|
| TransitionDeactivatePhysicalDatabase | 80D1D89C-EA79-481D-89A6-212C384A35A9 | 2/8/2016 9:45:55 PM |
| EventDeactivate | 472925C9-6510-47D9-8A27-838BC5C20A5F | 2/8/2016 9:41:40 PM |

Activation Requests (select a row in Database CMS Info first)

| state_machine_type | request_id | min_original Event Timestamp | max_original Event Timestamp | count_ | duration |
|---------------------------------|--------------------------------------|------------------------------|------------------------------|--------|------------|
| LogicalDatabaseStateMachine | 386D0F24-F8F7-4D5A-8505-8F650A492B09 | 2/12/2016 4:37:56 PM | 2/12/2016 4:37:56 PM | 2 | 0.0102517 |
| DynamicDeactivationStateMachine | DD5D8361-A0F8-46D3-8451-DF164C71EF55 | 2/12/2016 4:37:56 PM | 2/12/2016 4:38:51 PM | 29 | 54.8396402 |

Login Requests (select a row in Database CMS Info first)

| package | logical_server_name | database_name | event | error | state | is_success | instance_name | lookup_state | fabric_node_name | count_ | min_original Event Timestamp | max_original Event Timestamp |
|------------|---------------------|---------------|----------------------|-------|-------|------------|--|-------------------|------------------|--------|------------------------------|------------------------------|
| xdbgateway | j5kr9g57no | bizint_lb | process_login_finish | 0 | 0 | 1 | afc4f655f949.tr17.northeurope1-a.worker.database.windows.net | SERVICE_ENDPOINT | DB11[DB.11 | 1 | 2/12/2016 4:58:33 PM | 2/12/2016 4:58:33 PM |
| xdbgateway | j5kr9g57no | bizint_lb | process_login_finish | 40613 | 4 | 0 | | ACTIVATE_DATABASE | | 1 | 2/12/2016 4:38:01 PM | 2/12/2016 4:38:01 PM |

Login Requests (select a row in Database CMS Info first) NodeAgentCalls

UserActivity

| original Event Timestamp | Ring Name | Node Name | event | outcome | active_login | active_request |
|--------------------------|-----------|-----------|---------------------------------|----------|--------------|----------------|
| 2/5/2016 10:29:33 PM | TR5 | DB.187 | deactivation_detection_outcome | INACTIVE | 0 | 0 |
| 2/5/2016 10:29:33 PM | TR5 | DB.187 | deactivation_detection_progress | | 0 | 0 |
| 2/5/2016 10:39:35 PM | TR5 | DB.187 | deactivation_detection_outcome | INACTIVE | 0 | 0 |
| 2/5/2016 10:39:35 PM | TR5 | DB.187 | deactivation_detection_progress | | 0 | 0 |
| 2/5/2016 10:49:37 PM | TR5 | DB.187 | deactivation_detection_outcome | INACTIVE | 0 | 0 |
| 2/5/2016 10:49:37 PM | TR5 | DB.187 | deactivation_detection_progress | | 0 | 0 |
| 2/5/2016 10:59:38 PM | TR5 | DB.187 | deactivation_detection_outcome | INACTIVE | 0 | 0 |
| 2/5/2016 10:59:38 PM | TR5 | DB.187 | deactivation_detection_progress | | 0 | 0 |
| 2/5/2016 11:09:39 PM | TR5 | DB.187 | deactivation_detection_outcome | INACTIVE | 0 | 0 |

Activation Duration Breakdown: afc4f655f949-2/12/2016 4:37:56 PM-2/12/2016 4:38:51 PM-DD5D8361-A0F8-46D3-8451-D...

| step | min_original Event Timestamp | max_original Event Timestamp | duration |
|--------------------------|------------------------------|------------------------------|------------|
| CreatingWinFabProperty | 2/12/2016 4:37:58 PM | 2/12/2016 4:38:31 PM | 0.5541813 |
| CreatingWinFabApp | 2/12/2016 4:37:58 PM | 2/12/2016 4:38:21 PM | 22.9673859 |
| CreatingWinFabService | 2/12/2016 4:38:22 PM | 2/12/2016 4:38:32 PM | 0.3765083 |
| Resolving | 2/12/2016 4:38:22 PM | 2/12/2016 4:38:50 PM | 28.5525662 |
| SQLServerStartupDuration | 2/12/2016 4:38:30 PM | 2/12/2016 4:38:46 PM | 16.5411287 |

Using CMS Query to confirm (requires XTS access)

From XTS, select customer server cluster and right click to access httpquery tool and change to CMS database and run below query to get physical_database_id,

```
select Id.logical_server_name, Id.logical_database_name, Id.logical_database_id, pd.physical_database_id,
pd.state from (select * from logical_databases where logical_server_name = 'b9s54mpx8b') Id inner join (select *
from sql_physical_databases where logical_server_name = 'b9s54mpx8b') pd on pd.logical_database_id =
Id.logical_database_id
```

| | logical_server_name | logical_database_name | logical_database_id | physical_database_id | state |
|---|---------------------|-----------------------|--------------------------------------|--------------------------------------|-------------|
| ▶ | b9s54mpx8b | CarDecisions_DB | bc3b732a-3b6d-4f2b-870f-e4a206873... | 9a972f8c-8bff-487b-b43d-319f7063a587 | Deactivated |
| | b9s54mpx8b | master | c52fc841-a832-4ace-bb5d-d794359ed... | 893c6ba6-9045-4bd2-a14b-fe00cfe05... | Ready |

Screen clipping taken: 5/31/2016 2:16 PM

Using physical_database_Id - 9a972f8c-8bff-487b-b43d-319f7063a587 with that ID you can check details on deactivation with below kusto query

MonDmUserActivityDetection | where physical_database_guid == "9a972f8c-8bff-487b-b43d-319f7063a587" | project originalEventTimestamp , event , duration_min , outcome

RCA Template

Summary of Impact - Between <Starttime> and <EndTime> Database <Database Name> on Server <Server name> was not reachable, and this unavailability errors (40613) you reported were caused by our load balancing mechanism.

Root cause - The load balancer tracks workload resource usage and optimizes for frequently accesses databases. As a result, less frequent access DBs (inactive database) are moved more often, which can result in occasional brief unavailability. It implies that gateway is trying to perform lookup as part of login process to a database that's being activated.

Mitigation And in general refreshing the database node in SSMS and [Retry Logic](#) ☑ in application will make this as transparent.

Recommendations While we work hard on reducing the unavailability, we recommend you implement [retry logic](#) ☑ in your application to resolve the issue

Classification

Root Cause tree : Azure SQL DB v2\Availability\Unplanned Failovers\Other
SAP ID - 278a9b19-4bb9-af84-f8b6-ec40601d9a5e

How good have you found this content?

