

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 'Favorites and Links.xts', 'GlobalDeactivationOverview.xts', 'Global Adhoc CMS Query.xts', 'Sterling Servers and Databases.xts', 'DB Perf.xts', 'DeactivationStatus.xts', and 'DbSearch.xts'. Below the tabs is a 'Manual' section with instructions: '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.'

Below the instructions is an 'Input query' section with three input fields: 'Logical Server Name' (diaguide2server), 'Logical Database Name' (diaguidedemonstrator), and 'Application Name / SQL instance name' (empty). A 'Search' button is located below these fields.

The search results are displayed in a table titled 'Search results (Limited to 10 rows per cluster)'. The table has columns: Type, Cluster, Logical Server Name, database_name, App Name, last_seen, and Subscription Id. The results show one row: 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 tree view has a root node 'LSI' with several sub-nodes: 'Database Availability', 'Database Replicas', 'DB Perf', and 'TroubleshootingActivation'. The 'TroubleshootingActivation' node is highlighted with a red circle. Below the tree view is a 'Workload Insight' section with sub-nodes: 'Workload experience KPI' and 'DB Index recommendations'. At the bottom of the sidebar is a 'More info from Kusto' section with a table showing two columns: '0' and '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?

