

# Connection failure - Global\_ServerDNSAlias\_SqlAliasResolutionBug

Last updated by | Subbu Kandhaswamy | Sep 13, 2021 at 5:01 PM PDT

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## Contents

- [Issue](#)
- [Error details](#)
- [ASC Insight](#)
- [Kusto to identify the issue](#)
- [Mitigation/Workaround :](#)
- [Root cause](#)
  - [Next Steps : Fix will be rolled by end of January 2021.](#)
- [Feedback](#)

## Issue

Product team discovered a race condition with the recent deployment (early dec 2020), that manifests and cause transient connection failures, when two or more logins attempts for the same server processed in parallel OR when a login is processed while gateway is performing internal metadata refresh. This issue has generated service requests over the month of December 2020, and multiple RCA requests to Product team. Engineering has identified the potential cause and ready to roll out the fix in the upcoming train (ETA Jan 2020) .

## Error details

A tiny fraction of logins may experience this issue for very short window (in seconds), when occurs we capture error : *40613 -State 4.* internally.

**Customer Side Error :** *(SQLException 40613 "Database '[DbName]' on server '[ServerName]' is not currently available. Please retry the connection later)*

## ASC Insight

An ASC insight will fire if experienced by customer during the impacted timeframe with recommendation and RCA to share with customer.

**SQLALIASCACHE RACE CONDITION**  
 Connection timeouts due to SQL Alias cache issue

**SQL SERVER DATABASE**  
 DB-26488DB4-61B1-41E5-95DF-48F0860119C0

Is this insight helpful?

**Description**

Database Db-264b8db4-61b1-41e5-95df-48f0860119c0 on Server sql-server-cac8deb39f9-prod experienced transient failure(s) due to a race condition in handling multiple logins, when SQL Alias cache is being refreshed.

**Impacted Resources**

[Db-264b8db4-61b1-41e5-95df-48f0860119c0](#)

**Recommended Action**

This is a known issue and Product team is actively working on applying a permanent fix for this issue. While engineering team work on applying fix at the highest priority, please advise customer to retry logins upon this failure to handle the issue and also share the below RCA as needed.

Note: Please do not escalate this to Product team.

**Root Cause Analysis**

With a recent deployment, we discovered a race condition that manifests when two or more logins for the same server are processed at the same time or when a login is processed while the Gateway is doing an internal metadata refresh. We have identified a fix to avoid the race condition, which would be rolled out with the next deployment, to avoid the transient connectivity failures this may cause. A tiny fraction of logins may experience this issue, for a few seconds. While we fix this issue at the highest priority (ETA - January 2021), we advise you to retry logins upon this failure to fix the issue and that should work around the issue (SQLException 40613 "Database 'Db-264b8db4-61b1-41e5-95df-48f0860119c0' on server 'sql-server-cac8deb39f9-prod' is not currently available. Please retry the connection later). We apologize deeply for the inconvenience.

**Links**

[Handling Transient failures](#)  
[Transient error codes](#)  
[Link to run the query that generated this insight](#)

**Generated On**

Jan 9, 2021 00:32:29 UTC

## Kusto to identify the issue

```

LoginOutages
| where logical_server_name =~ "{ServerName}" and database_name =~ "{DatabaseName}"
| where outageStartTime > datetime({StartTime}) - 1d
| where OutageReasonLevel1 == "Global_ServerDnsAlias_SqlAliasResolutionBug"
| project outageStartTime, outageEndTime, Region, logical_server_name, database_name, OutageType, OutageRe
  
```

## Sample result

outageStartTime	outageEndTime	Region	logical_server_name	database_name	OutageType	OutageReasonLevel1	OutageReasonLevel2	OutageReasonLevel3
2021-01-07 11:03:06.9766136	2021-01-07 11:03:06.9916136	prod-centralus1-a	asawork-██████████	sqlpool01	Unplanned	Global_ServerDnsAlias_SqlAliasResolutionBug	ICM: 213972594	

## Mitigation/Workaround :

Currently the workaround is to advise customer to apply retry logic to handle these transient connection failures.

## Root cause

With a recent deployment, we discovered a race condition that manifests when two or more logins for the same server are processed at the same time or when a login is processed while the Gateway is doing an internal metadata refresh. We have identified a fix to avoid the race condition, which would be rolled out with the next deployment, to avoid the transient connectivity failures this may cause. A tiny fraction of logins may experience this issue, for a few seconds. While we fix this issue at the highest priority (ETA - January 2021), we advise you to retry logins upon this failure to fix the issue and that should work around the issue (SQLException 40613 "Database 'Db-264b8db4-61b1-41e5-95df-48f0860119c0' on server 'sql-server-cac8deb39f9-prod' is not currently available. Please retry the connection later). We apologize deeply for the inconvenience.

## Next Steps : Fix will be rolled by end of January 2021.

## Feedback

**How good have you found this content?**

