

Replication lag despite azure_standby slot indicating no lag

Last updated by | Pedro Acevedo | Mar 9, 2023 at 9:39 AM PST

Issue

The customer complains that there is replication lag; however, when you run the following query:

```
| where LogicalServerName == 'SERVER_NAME'
| where TIMESTAMP >= START_TIME and TIMESTAMP <= END_TIME
| project TIMESTAMP, Slot_name, Slot_type, Active, Replay_lag
```

The azure_standby slot shows replication lag is zero:

TIMESTAMP	Slot_name	Slot_type	Active	Replay_lag
2023-03-06 20:43	azure_standby_b79c438435b7	physical	TRUE	00:00.0

Investigation/Analysis

Ask cx what value they have for max_standby_archive_delay and/or max_standby_streaming_delay. You can also get the value from XTS following this TSG:

https://supportability.visualstudio.com/AzureDBPostgreSQL/_wiki/wikis/AzureDBPostgreSQL/289290/CAS-command-to-collect-server-parameters

These parameters determine how long the standby server should wait before canceling standby queries that conflict with about-to-be-applied WAL entries. If the cx has selected -1, then application will be held until all conflicts are resolved, resulting in replication lag.

Mitigation

Change the parameter max_standby_archive_delay and/or max_standby_streaming_delay to its default value (30 seconds). If the replication lag continues high, then cx might need to restart the replica server.

Public Doc Reference

<https://www.postgresql.org/docs/13/runtime-config-replication.html> 

Root Cause Classification

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

/Root Cause: PostgreSQL Flexible Server/Replication/Replication/Service Issue/Replication Lag/Replication Broken/Other