**How to Apply Transaction Logs to Secondary When it is Far Behind**

MS Documentation

SQL Queries:

Click here to expand...

--Fix break AG without do a hole restore --Find LSN from all AG replicas select distinct ar.replica\_server\_name, ds.is\_primary\_replica, dcs.database\_name, ds.last\_hardened\_lsn from sys.dm\_hadr\_database\_replica\_states ds join sys.dm\_hadr\_database\_replica\_cluster\_states dcs on ds.group\_database\_id=dcs.group\_database\_id join sys.availability\_replicas ar on ds.replica\_id = ar.replica\_id where dcs.database\_name='Duvel' --old version select distinct dcs.database\_name, ds.last\_hardened\_lsn from sys.dm\_hadr\_database\_replica\_states ds join sys.dm\_hadr\_database\_replica\_cluster\_states dcs on ds.group\_database\_id=dcs.group\_database\_id where dcs.database\_name='Duvel' --Find first missing restore file select name, msdb..backupmediafamily.physical\_device\_name ,backup\_set\_id, backup\_start\_date, backup\_finish\_date, first\_lsn, last\_lsn from msdb..backupset inner join msdb..backupmediafamily on msdb..backupmediafamily.media\_set\_id = msdb..backupset.media\_set\_id where first\_lsn<'36000000098700001' and last\_lsn>'36000000098700001' --Find all missing files... use this one select name, msdb..backupmediafamily.physical\_device\_name ,backup\_set\_id, backup\_start\_date, backup\_finish\_date, first\_lsn, last\_lsn from msdb..backupset inner join msdb..backupmediafamily on msdb..backupmediafamily.media\_set\_id = msdb..backupset.media\_set\_id where last\_lsn>'36000000098700001' and msdb..backupset.database\_name = 'duvel'

**Troubleshooting - Scenario 01**

1 – Check what is the AG status, on SSMS or Failover Cluster Manager

After check that AG is with Resolving status, cjheck if the Windows Cluster Service is working fine

If the primary node is unavailable, the following stesps will help to failover to a online secondary node

1. Check how many time/data the secondary node will lose assim primary role

Inside AG Dashboard , if " Estimated Recovery Data Loss(time)" is zero, there will be no data loss. Even so, it is recommended to notify the app owner that there may be some loss

1. Force the second node do become primary

ALTER AVAILABILITY GROUP NOME\_AG FORCE\_FAILOVER\_ALLOW\_DATA\_LOSS;

The databases that have the “restoring” mode, SQL SERVER will force and make them available.

If there are other nodes, it is possible that they fail to synchronize, for this scenario there is a possible solution:

Connect to the node and run:

ALTER DATABASE [DBNAME] SET HADR SUSPEND; ALTER DATABASE [DBNAME] SET HADR RESUME;

After that check the status on AG Dashboard