

DSS040 - sync group was out-of-date

Last updated by | Keith Elmore | Apr 5, 2021 at 7:57 AM PDT

Contents

- [Issue](#)
- [Investigation/Analysis](#)
- [Mitigation](#)
- [RCA](#)
- [Root Cause Classification](#)

Issue

Sync failed with the exception "We have encountered an issue in syncing your data, the sync group was out-of-date. Suggest to delete the sync group and recreate it. For more information, provide tracing ID 'x' to customer support."

Investigation/Analysis

The **SyncGroupMemberState** will be 10 that means DisabledTombstoneCleanup. In ASC you can see this state and you can also see **LastSyncZeroFailuresMember** and **LastSyncZeroFailuresHub** that will help identify if this was caused by the 45 days without successful sync or other reason.

Sync Member(s)

[Kusto Query](#)

Shows the sync members for this sync group

MemberState	HubStateLastUpdate	MemberStateLastUpdate	LastSyncTime	LastSyncZeroFailuresHub	LastSyncZeroFailuresMember
DisabledTombstoneCleanup	2020-08-03 19:08:43	2020-08-03 19:08:45	2020-08-01 13:02:00	2020-08-01 13:02:00	2020-08-01 13:02:00

Please check **RCA** and **Mitigation** sections for more details.


Mitigation

Being able to identify if invalid tracking records are in the root cause or not, customer should rebuild the sync member to mitigate the issue.

Please note that the following action plan is only viable if member database is not used in any other sync groups, even from other regions or subscriptions.

In order to restart this sync member from scratch we need to:

1. Delete the sync member and wait for the deprovision task to complete

2. Make sure all the data sync metadata objects are removed on the member database using the script you can get from https://raw.githubusercontent.com/vitomaz-msft/DataSyncMetadataCleanup/master/DataSync_cleanup_hub_or_member.sql  This script will remove the objects immediately.
3. (optional but desirable) Truncate all the tables in the destination, this will speed up the initial sync a lot, if you have data on both sides during initial sync, it can take hours, days or weeks to complete. For bi-directional syncs please evaluate if you can remove the data on one side to avoid long running initial sync.
 - In case you wish to drop and recreate the database, please extract the schema from the source and create it on the destination to avoid any limitation/issue that can come from Data Sync auto-provisioning.
4. Re-create the sync member
5. Run sync

In case the member database is part of other sync groups you can:

1. Delete the sync member and wait for the deprovision task to complete
2. If possible, like when the tables are not used in any other sync group, you can consider truncate all the tables in the destination that fit this scenario. Not having data in the destination will speed up the initial sync a lot. If you have data on both sides during initial sync, it can take hours, days or weeks to complete. For bi-directional syncs please evaluate if you can remove the data on one side to avoid long running initial sync.
3. Re-create the sync member
4. Run sync

RCA

Data Sync has a tombstone cleanup job that removes tracking records for rows deleted more than 45 days ago. If no sync happened or there are no sync tasks completing without errors in the last 45 days, the sync group is considered as out of date because some records needed for sync do not exist anymore.

Although this is the most common reason, there are some other scenarios that can lead to this issue:

- Customer updated PK values (instead of deleting the row and adding it with the new PK).
- Customer performed bulk operations without firing triggers, which will not record the changes.
- Customer may have manually updated the tracking table (direct update, database restores, etc.).

Unfortunately, it is not possible to identify the root cause for this issue under these other scenarios.

Customer may try to identify if PK values were updated (causing invalid tracking records with it).

The easiest alternative is to run Data Sync Health Checker with Extended Validations enabled. This is actually on by default at the moment, if not, you can add/change the following parameters:

```
## Tracking Record Validations
ExtendedValidationsTableFilter = @('All')
ExtendedValidationsEnabledForHub = $true
ExtendedValidationsEnabledForMember = $true
ExtendedValidationsCommandTimeout = 900 #seconds (default)
```

You can also go manually, table by table, using the following query.

Please note that *[table_name]*, *[primary_key1]*, etc. needs to be properly replaced for each table.

```
SELECT COUNT(*)  
FROM DataSync.[table_name]_dss_tracking t  
WHERE sync_row_is_tombstone=0  
AND NOT EXISTS (  
SELECT *  
FROM [table_name] s  
WHERE t.[primary_key1] = s.[primary_key1] and t.[primary_key2] = s.[primary_key2])
```

Root Cause Classification

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

DataSync/User issue/error/SyncFail

How good have you found this content?

