

Distribution Agent Error 3941 Cannot modify object

Last updated by | Vitor Tomaz | Feb 24, 2023 at 3:30 AM PST

Contents

- [Issue](#)
- [Investigation / Analysis](#)
- [Mitigation](#)
- [Internal reference](#)

Issue

The customer has an existing Transactional Replication environment that is hosted either on-premise or in Azure VMs. They are now creating a subscription from the on-premise publication into a Managed Instance Subscriber database. The subscription had been created using the "initialize with backup" feature, as it is described in [Initialize Subscription from a Backup \(avoid using Snapshot\)](#).

The initial configuration steps were successful, but when they execute the Distribution Agent to initialize the new subscription, the agent is failing with SQL error 3941:

The transaction cannot modify an object that is published for replication or has Change Data Capture enabled because the transaction started before replication or Change Data Capture was enabled on the database. Retry the transaction.

Re-running the Distribution Agent however does not resolve the issue; the agent will continue failing within seconds of each retry.

Investigation / Analysis

The Distribution Agent history provided the following details (output file created on the on-premise Distributor):

```

2022-11-02 16:02:04.613 Microsoft SQL Server Distribution Agent 13.0.5426.0
2022-11-02 16:02:04.629 Copyright (c) 2016 Microsoft Corporation
2022-11-02 16:02:04.629 Microsoft SQL Server Replication Agent: distrib
2022-11-02 16:02:04.645
2022-11-02 16:02:04.645 The timestamps prepended to the output lines are expressed in terms of UTC time.
2022-11-02 16:02:04.645 User-specified agent parameter values:
(...)
-Continuous
-Output X:\dist_out.txt
(...)
2022-11-02 16:02:04.676 Startup Delay: 5319 (msecs)
2022-11-02 16:02:10.020 Connecting to Distributor 'onpremdistributor'
2022-11-02 16:02:10.020 Connecting to OLE DB Distributor at datasource: 'onpremdistributor', location: '', cat
2022-11-02 16:02:10.113 OLE DB Distributor: onpremdistributor
DBMS: Microsoft SQL Server
Version: 13.00.5426
(...)
2022-11-02 16:02:10.129 OLE DB Distributor 'onpremdistributor': exec sp_helpdistpublisher N'onpremdistributor'
2022-11-02 16:02:10.129 OLE DB Distributor 'onpremdistributor': select @@SERVERNAME
2022-11-02 16:02:10.160 OLE DB Distributor: onpremdistributor
DBMS: Microsoft SQL Server
Version: 13.00.5426
catalog name: distribution
user name: dbo
(...)
2022-11-02 16:02:10.160 OLE DB Distributor 'onpremdistributor': execute sp_server_info 18
2022-11-02 16:02:10.160 ANSI codepage: 1
OLE DB Distributor 'onpremdistributor': select datasource, srvid from master..sys.servers where upper(srvname)
2022-11-02 16:02:10.176 OLE DB Distributor 'onpremdistributor': select datasource, srvid from master..sys.servers
2022-11-02 16:02:10.191 Subscriber security mode: 0, login name: dbadmin.
2022-11-02 16:02:10.191 OLE DB Distributor 'onpremdistributor': SELECT count(*) FROM msdb.sys.columns WHERE ob
2022-11-02 16:02:10.191 OLE DB Distributor 'onpremdistributor': exec sp_MSghelp_distribution_agentid 0, N'Beaco
2022-11-02 16:02:10.207 OLE DB Distributor 'onpremdistributor': execute sp_MSghelp_profile 62, 3, N'Default age
2022-11-02 16:02:10.207 Parameter values obtained from agent profile:
(...)
2022-11-02 16:02:10.223 Connecting to Subscriber 'FQDNofMI.C5AC83F42C04.DATABASE.WINDOWS.NET'
2022-11-02 16:02:10.770 Initializing
2022-11-02 16:02:11.395
42000 The transaction cannot modify an object that is published for replication or has Change Data Capture ena
2022-11-02 16:02:11.488 Disconnecting from Subscriber 'FQDNofMI.C5AC83F42C04.DATABASE.WINDOWS.NET'
2022-11-02 16:02:11.488 Connecting to Subscriber 'FQDNofMI.C5AC83F42C04.DATABASE.WINDOWS.NET'
2022-11-02 16:02:11.660 Error executing a batch of commands. Retrying individual commands.

```

Creating a more details output file using `OutputVerboseLevel 4` and capturing the MI activity with Extended Events both provided the additional detail that the agent failed while executing the command `exec sys.replposteor 0x2000530051005500....`.

Scripting out the publication returned the following parameters for `sp_addpublication`:

```

exec sp_addpublication @publication = N'publicationname', @description = N'',
    @sync_method = N'native', @allow_push = N'true', ...
    @repl_freq = N'continuous', @status = N'active', ...
    @immediate_sync = N'true', @allow_initialize_from_backup = N'true',
    @enabled_for_p2p = N'true', @enabled_for_het_sub = N'false'

```

Note that it has the Peer-to-Peer flag enabled through `@enabled_for_p2p = N'true'`. In addition, the call to `sys.replposteor` is only related to P2P publications.

Peer-to-peer however is not supported on MI, and this is publicly documented in [Types of replication](#).

Mitigation

While the Subscriber on Managed Instance is a read-only Subscriber and not a Peer-to-Peer Subscriber, it is still consuming a Peer-to-Peer publication and therefore falls into the "not supported" category.

For mitigation, use a plain transactional publication with `exec sp_addpublication ... @enabled_for_p2p = N'false'` instead of the Peer-to-Peer publication.

Internal reference

[lcM 347172766](#) 

How good have you found this content?

