Snapshot Agent failing with Object reference not set

Last updated by | Vitor Tomaz | Jun 8, 2022 at 5:37 AM PDT

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Issue

The Snapshot Agent is failing with exception `Object reference not set to an instance of an object` after configuring Transactional Replication on a Managed Instance Publisher. It fails while scripting the articles, as you can see in the error details below.

Error message as seen on replication agent job history

```
2022-03-13 14:15:10.12 [70%] Generating schema scripts for article '<short_article_name>'
2022-03-13 14:15:12.12 [72%] Generating schema scripts for article '<long_article_name>'
2022-03-13 14:15:15.89 [72%] Disconnected from Azure Storage '\\storageaccountname.file.core.windows.net\snaps
2022-03-13 14:15:16.12 [72%] The replication agent has encountered an exception.
2022-03-13 14:15:16.23 Source: Replication
2022-03-13 14:15:16.23 Exception Type: Microsoft.SqlServer.Replication.ReplicationAgentSqlException
2022-03-13 14:15:16.23 Exception Message: Object reference not set to an instance of an object.
2022-03-13 14:15:16.23 Message Code: 52006
2022-03-13 14:15:16.23
```

of which "<short_article_name>" was something like "tbl_Employee" or "tbl_Address", and "<long_article_name>" a complex name that exceeded 125 characters.

Error message as seen on replication agent history

```
Message: Object reference not set to an instance of an object.
Command Text:
select 'number' = convert(int, 0), 'definition' = definition
  from sys.sql_modules
where object_id = object_id(@qualified_object_name)
union all
select 'number' = convert(int, procedure_number), 'definition' = definition
   from sys.numbered_procedures
where object_id = object_id(@qualified_object_name)
Parameters:              @qualified_object_name = [dbo].[aa_bbbb_ccccc_ddddd_eeeeeeee_ffffffffff_gggggggg_hhh
Stack:    at Microsoft.SqlServer.Replication.AgentCore.ExecuteWithOptionalResults(CommandSetupDelegate command
   at Microsoft.SqlServer.Replication.AgentCore.ExecuteWithOptionalResults(CommandSetupDelegate commandSetupDe
   at Microsoft.SqlServer.Replication.Snapshot.SmoScriptingManager.TextModeOnObjectScripter.Script()
   at Microsoft.SqlServer.Replication.Snapshot.SmoScriptingManager.GenerateNonTableArticleSchScript(Scripter s
   at Microsoft.SqlServer.Replication.Snapshot.SmoScriptingManager.GenerateStoredProcedureArticleScripts(Artic
   at Microsoft.SqlServer.Replication.Snapshot.TransSmoScriptingManager.GenerateArticleScripts(ArticleScriptin
   at Microsoft.SqlServer.Replication.Snapshot.SmoScriptingManager.DoScripting()
   at Microsoft.SqlServer.Replication.Snapshot.SqlServerSnapshotProvider.DoScripting()
   at Microsoft.SqlServer.Replication.Snapshot.SqlServerSnapshotProvider.GenerateSnapshot()
   at Microsoft.SqlServer.Replication.SnapshotGenerationAgent.InternalRun()
   at Microsoft.SqlServer.Replication.AgentCore.Run() (Source: MSSQLServer, Error number: 52006)
Get help: http://help/52006
Source: Microsoft.SqlServer.Replication
Target Site: Void ProcessGetObjectScriptResult(System.Data.SqlClient.SqlDataReader)
Message: Object reference not set to an instance of an object.
Stack:      at Microsoft.SqlServer.Replication.Snapshot.SmoScriptingManager.TextModeOnObjectScripter.ProcessGetO
   at Microsoft.SqlServer.Replication.AgentCore.ExecuteWithOptionalResults(CommandSetupDelegate commandSetupDe
Get help: http://help/0
```

Investigation

Searching for the error detail "Object reference not set to an instance of an object" pointed to this forum article: [Problems with Snapshot Agent](link) ⧉

The failing article name had a total of 126 characters. After shortening the article name to 121 characters or shorter, the Snapshot Agent succeeded and created a full snapshot for the publication.

As an example, this is a representation of the failing and successful article names:

```
12345678901234567890123456789012345678901234567890123456789012345678901234567890123456789012345678901234567890
        1         2         3         4         5         6         7         8         9        10        11
aa_bbbb_ccccc_ddddd_eeeeeeee_ffffffffff_gggggggg_hhhhh_iiiii_jjjjj_kkkkkkkk_llllllllll_mmmmmmmm_nnnnnnnnnnnnnnnn
aa_ccccc_ddddd_eeeeeeee_ffffffffff_gggggggg_hhhhh_iiiii_jjjjj_kkkkkkkk_llllllllll_mmmmmmmm_nnnnnnnnnnnnnnnnnnnnn
aa_bbbb_ccccc_ddddd_eeeeeeee_ffffffffff_gggggggg_hhhhh_iiiii_jjjjj_kkkkkkkk_llllllllll_mmmmmmmm_nnnnnnnnnnnnnnnn
```

Mitigation

After shortening the article name to have more than 126 characters, the Snapshot Agent succeeded and created a full snapshot for the publication.

To shorten the article name, you need to remove the article from the publication and re-add it again. This is usually not a problem because the Snapshot Agent is failing directly after the publication had been created, or after the article had been added to an existing publication. If this is a new publication, then the easiest and safest way is to drop the publication and create it again with the shortened article name.

If you you are adding the article through a script (which is strongly recommended), you need to shorten the value of the `@article` parameter of the `sp_addarticle` stored procedure:

```
-- example for table article
sp_addarticle @publication = 'publication_name'
    , @article = 'aa_bbbb_ccccc_ddddd_eeeeeeee_ffffffffff'
    , @source_object = 'aa_bbbb_ccccc_ddddd_eeeeeeee_ffffffffff_gggggggg_hhhhh_iiiii_jjjjj_kkkkkkkk_llllllllll
    , @destination_table = 'aa_bbbb_ccccc_ddddd_eeeeeeee_ffffffffff_gggggggg_hhhhh_iiiii_jjjjj_kkkkkkkk_llllll
    , @source_owner = 'dbo'
    , @destination_owner = 'dbo'
    , [ ...further parameters... ]
```

More Information

This is a limitation of Transactional Replication and the Snapshot scripting engine.

The IcM for this issue provided the following details regarding RCA and future steps:

> [IcM 296990630](#) ↗
> **Cause**
> There is an internal limitation on the number of characters that the square bracket quoted, fully qualified name of the stored procedure can have. That limitation is 128 characters. The full string consisting of square brackets, schema, and stored procedure name must be less than 128 characters in length.
> **Next steps**
> We will work on clarifying this limitation in our public documentation.

External reference

[sp_addarticle](#) ↗
[IcM 296990630](#) ↗
[Problems with Snapshot Agent](#) ↗

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