Replication agent failing with WinIOError

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

Contents

Issue

The replication agent job (Snapshot, Log Reader, or Distribution Agent job) is failing with the following symptoms:

- The replication agent job does not start and fails again after restarting the job
- The replication agent history in the Distribution database does not show any details, meaning that the job failed to start the agent itself
- The replication agent's job history log in SQL Server Agent is marked with the red "X" for failures
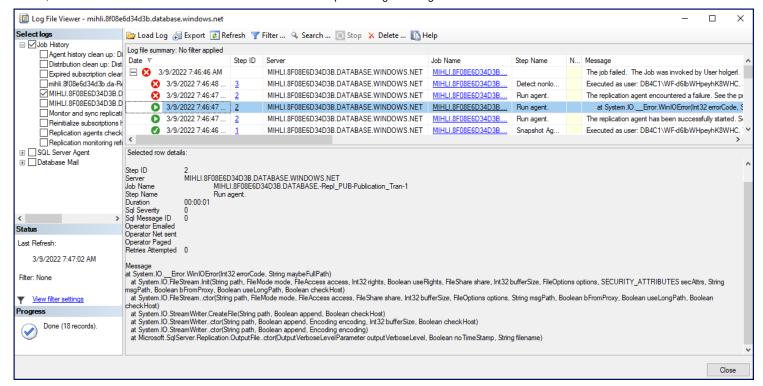
The error details on the job history log consist of this stack trace:

```
Message
at System.IO.__Error.WinIOError(Int32 errorCode, String maybeFullPath)
    at System.IO.FileStream.Init(String path, FileMode mode, FileAccess access, Int32 rights, Boolean useRights
    at System.IO.FileStream..ctor(String path, FileMode mode, FileAccess access, FileShare share, Int32 bufferS
    at System.IO.StreamWriter.CreateFile(String path, Boolean append, Boolean checkHost)
    at System.IO.StreamWriter..ctor(String path, Boolean append, Encoding encoding, Int32 bufferSize, Boolean c
    at System.IO.StreamWriter..ctor(String path, Boolean append, Encoding encoding)
    at Microsoft.SqlServer.Replication.OutputFile..ctor(OutputVerboseLevelParameter outputVerboseLevel, Boolean
```

Investigation

To see the error details, perform the following steps:

1. Open SQL Server Management Studio (SSMS), connect to the Distributor MI, and expand the `SQL Server Agent` node
2. Double-click on `Job Activity Monitor` and identify the failing replication job
3. Right-click on the failing job and select `Job History`. This will open the Log File Viewer for the job and will show you the history of the recent start attempts.
4. To see the error details, click on the last green entry below the entries that have the red "X":

Analysis

The error message has important pointers to the cause of the failure:

- `Microsoft.SqlServer.Replication.OutputFile` indicates that it is trying to write to a verbose output filename
- `System.IO.FileStream.Init` shows that it cannot open the destination log file
- `System.IO.__Error.WinIOError` indicates a low-level system I/O error

The customer has very likely configured the replication agent with an output file. The agent is now failing because it cannot open this file.

Mitigation

Remove the output file configuration from the replication agent job.

The priority should be to get the replication agent running again, in order to avoid expiration of the subscriptions. Writing to the output file is only secondary and can be addressed later.

Please follow these steps to resolve the issue:

1. Open the Job Activity Monitor and identify the agent job for which you want to disable the log file.
2. Right-click the job, and select Properties. Click on Steps. In the Job Steps List, select the step named `Run agent.` and click on Edit.
3. At the string under Command, likely at the end, you should see a parameter `-Output` followed by a storage path, and possibly a parameter `OutputVerboseLevel` followed by an integer value. Here is an example for Distribution Agent: `-Output \\<STORAGE_ACCOUNT>.file.core.windows.net\<SHARE>\distrib.log -OutputVerboseLevel 4`
4. Remove both the `-Output` and `-outputVerboseLevel` parameters and there values. Make 100% sure that you do not remove anything else.

5. Click OK on all dialogs to save the changes.

6. Start the replication agent and verify that it is starting successfully.

More Information

I was able to reproduce the issue by configuring the replication agent with an output file and providing an incorrect value for OutputVerboseLevel (provided a value higher than the maximum value). It failed the job with the corresponding error `'3' is not a valid argument for the 'OutputVerboseLevel' agent parameter, reason: The value of an 'OutputVerboseLevel' parameter must be one of 0, 1, or 2.` (maximum value for a snapshot job is 2). After correcting the error, the next executions all failed with the error reported in the Issue section above.

There are two options to resolve the issue:

- remove the -Output parameter with its value (you may actually keep the -OutputVerboseLevel, but it is useless without the -Output parameter)
- restart the Managed Instance, e.g. by scaling it to a different service tier (which has a higher customer impact than simply removing the parameter)

Internal reference

Link to internal Wiki article on configuring output files:

[Add verbose logging to Replication Agents in MI](#)

How good have you found this content?