Distribution database growing - msrepl_commands table

Last updated by | Vitor Tomaz | Feb 24, 2023 at 3:31 AM PST

Contents

- Issue
- Investigation/Analysis
- Mitigation
- Internal reference

Issue

Table msrepl_commands table growing in size. Distribution database out of space. Distribution database now with 3.5 TB of size.

Investigation/Analysis

Looking at the oldest record on MSrepl_commands, it was clear that the job wasn`t running successfully for almost a month. It is customer responsibility to maintain the distribution cleanup process, checking if it is running successfully and act on a timely manner.

This issue very likely is a variation of one of the following related issues:

- Distribution cleanup Performance issues
- Distribution cleanup deleting fewer rows than expected
- Distribution cleanup Deadlocks with replication agents
- Log Reader and Distribution Cleanup blocking each other

Please see these articles to get detailed steps for investigation and mitigation.

Mitigation

Several attempts of mitigation:

- manual execution of the cleanup process, but due to the large amount of historical data the transaction eventually might get blocked - see Log Reader and Distribution Cleanup blocking each other and blocking session ID -5

- manual cleanup but using a higher retention, in batches - if the log reader is not stopped, it may fall under a deadlock situation.

  Example:

```
use distribution
declare @i int = 432;
declare @final_retention int = 72;
declare @step int = 5;

while @i >= @final_retention
begin
    print @i;
    begin try
        exec distribution.dbo.sp_MSdistribution_cleanup @min_distretention = @i, @max_distretention = @i
        set @i -= @step;
    end try
    begin catch
        -- do nothing. This will skip decreasing the hours if a deadlock happens
        print N'Distribution cleanup encountered error ' + cast(ERROR_NUMBER() as varchar) + '. Iterator wi
    end catch
end
```

- recreate the replication completely

Customer is advised to consider the following:

- Strict monitoring of all replication processes must take place on a regular basis. Any issue detected needs to be reported as soon as it occurs.

- Transactional replication performance guidelines should be considered, as per:

    - Enhance General Replication Performance: https://docs.microsoft.com/en-us/sql/relational-databases/replication/administration/enhance-general-replication-performance?view=sql-server-ver15 ↗

    - Enhance Transactional Replication Performance: https://docs.microsoft.com/en-us/sql/relational-databases/replication/administration/enhance-transactional-replication-performance?view=sql-server-ver ↗

Internal reference

- Distribution cleanup Performance issues

- Distribution cleanup deleting fewer rows than expected

- Distribution cleanup Deadlocks with replication agents

- Log Reader and Distribution Cleanup blocking each other

- 299167849 ↗

How good have you found this content?