Changes are not getting reflected in the CDC table

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Issue

Changes are not being reflected on CDC change tables. When querying the change table, an old date is shown under EntryDate column:

```
select * from <table_name>_CT
order by EntryDate desc
```

The database seems to be under heavy use.

## Investigation/Analysis

Verify the correlation between the workload and CDC latency

```
MonCDCTraces
| where LogicalServerName =~ "<server_name>"
| where logical_database_name =~ "<database_name>"
| where originalEventTimestamp > datetime(2022-08-19 5:46AM) - 1d
| summarize cdc_latency = max(latency)//, max(duration), sum(log_record_count)
    by bin(originalEventTimestamp, 1h)
| join kind=fullouter (
    MonSQLXStoreIOStats
    | where originalEventTimestamp > datetime(2022-08-19 5:46AM) - 1d
    | where file_path endswith "<log_file_name>.ldf"
    | project originalEventTimestamp, total_write_bytes
    | summarize total_log_writes_gb = sum(total_write_bytes / 1024.0 / 1024.0 / 1024.0)
        by bin(originalEventTimestamp, 1h)
) on originalEventTimestamp | project-away originalEventTimestamp1
| render timechart
```

If there is a relation between CDC latency and workload, it means that CDC is not able to compete with the workload.

Mitigation

Improve CDC performance by:

- Increase the maximum number of transactions to process in each cycle (max_trans). The default value is 500, we recommend trying with a few thousand. [Documentation](#) ↗
- Keep the number of Virtual log files (VLFs) as small as possible. About [VLFs Transaction Log Architecture and Management Guide](#) ↗
- Try to persist more data together so you would have less transactions.
- Reduce the number of objects tracked by a CDC, if possible.
- Pause the CDC jobs during peak demand time, as we recommend is general CDC documentation https://docs.microsoft.com/en-us/sql/relational-databases/track-changes/about-change-data-capture-sql-server?view=sql-server-ver16#agent-jobs ↗ Customers are also advised to test the system for the high load, and monitor the latency and the log usage, as advised in the documentation: https://learn.microsoft.com/en-us/sql/relational-databases/track-changes/administer-and-monitor-change-data-capture-sql-server?view=sql-server-ver16#Monitor= ↗

Internal reference

[328956354](#) ↗

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