

[SQL] Copy performance degradation due to fault tolerance is enabled

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Issue symptom

Sometimes customer reported they are seeing copy performance degradation. After some initial troubleshooting, you narrowed down it's due to writing into SQL sink took longer.

Usually we need to collaborate with SQL team to understand why insertion into SQL is taking longer from SQL perspective. This TSG will provide one possibility due to a copy feature is enabled - **fault tolerance**, which will degrade copy performance and it's by design.

How to detect using Kusto

If customer has enabled fault tolerance and their data does have faulty row, it will cause the insert logic switch from bulk insert to **row by row insert**, which is much slower by design. You can use below kusto query to identify whether it's caused by this issue.

```
CustomLogEvent
| where ActivityId == "<activity_ID>"
| where TraceMessage == "SqlWriteDataErrorBulkInsertSingleBatchCore"
```

RCA

If you did see related log using above Kusto query, then it's caused by the mentioned issue - when fault tolerance is enabled, it will cause insertion fall back from bulk insert to single row insert which is by design much slower.