

[Azure Synapse Analytics] - Load small size data to DW without staging is very slow

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Issue

When customer load small size data to DataWarehouse without staging, it will take a long time. For example, data size 2MB, take more than 1 hour. It's by design.

Root Cause

It is not so much the size, but the **row count (few thousand)**. Each insert needs to be packaged into an independent request, go to control node, start new transaction, get locks, go to distribution node, repeat. Bulk load gets the lock once, and each distribution node performs the insert by batching into memory efficiently.

If 2 MB was being inserted as just a few records, it would be fast (e.g., if each record was 500 kb * 4 rows).

Related ICM: [Load small size data to DW without staging is very slow.](#) ☑

Resolution

Ask customer to enable staging to improve the perf.

Additional Information:

- Icm Reference: N/A
- Author: Zhuoyang Zhang
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- Keywords: Datawarehouse

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