

# Exercise - Optimize a delete operation

3 minutes

## Optimize delete operations

1. Check the number of transaction items for customers with IDs lower than 900000 using the following query:

SQL

```
SELECT
    COUNT_BIG(*) as TransactionItemsCount
FROM
    [wwi_perf].[Sale_Hash]
WHERE
    CustomerId < 900000
```

2. DELETE is a fully logged operation. If you need to delete a large amount of data in a table or a partition, it often makes more sense to SELECT the data you wish to keep, which can be run as a minimally logged operation. To select the data, create a new table with CTAS. Once created, use RENAME to swap out your old table with the newly created table. Use the following CTAS query to isolate the transaction items that should be kept:

SQL

```
CREATE TABLE [wwi_perf].[Sale_Hash_v2]
WITH
(
    DISTRIBUTION = ROUND_ROBIN,
    HEAP
)
AS
SELECT
    *
FROM
    [wwi_perf].[Sale_Hash]
WHERE
    CustomerId >= 900000
```

The query should execute within about a minute. All that would remain to complete the process would be to delete the Sale\_Heap table and rename Sale\_Heap\_v2 to

Sale\_Heap.

3. Compare the previous operation with a classical delete:

SQL

```
DELETE
  [wwi_perf].[Sale_Hash]
WHERE
  CustomerId < 900000
```

ⓘ **Note**

The query will run for a potentially long time. Once the time exceeds significantly the time to run the previous CTAS query, you can cancel it (as you can already see the benefit of the CTAS-based approach).