HEAP table size doesn`t change after row deletion

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Issue

When deleting from HEAP tables, the customer might notice that used space is not going down, or that the table size doesn`t change. Check https://supportability.visualstudio.com/AzureSQLDB/_wiki/wikis/AzureSQLDB.wiki/724458/Clustered-Non-Clustered-indexes-and-Heaps-General-guidelines to have an overview of what is a HEAP.

Investigation/Analysis

If the customer executes sp_spaceused 'schema.table_name' the customer might see a huge value for "Unused" space. When data is deleted from a Heap, the pages aren`t deallocated unless a table lock is held. We have this described on the following KB - https://learn.microsoft.com/en-us/troubleshoot/sql/admin/space-table-uses-not-released

Mitigation

To deallocate the unused apages

> ALTER TABLE [table_name] REBUILD

Note that running the command above, all non clustered indexes will be rebuilt.

To avoid reoccurances of the issue you can suggest:

- if the customer is deleting all rows from a table, use TRUNCATE instead
- run DELETE with the TABLOCK hint
- rebuild HEAPS on a regular basis (always bear in mind that non clustered indexes will also be rebuilt)

Root Cause Classification

How good have you found this content?