

DB storage size for serverless database in the portal is smaller than expected when DB is paused

Last updated by | Peter Hewitt | Aug 9, 2022 at 3:13 AM PDT

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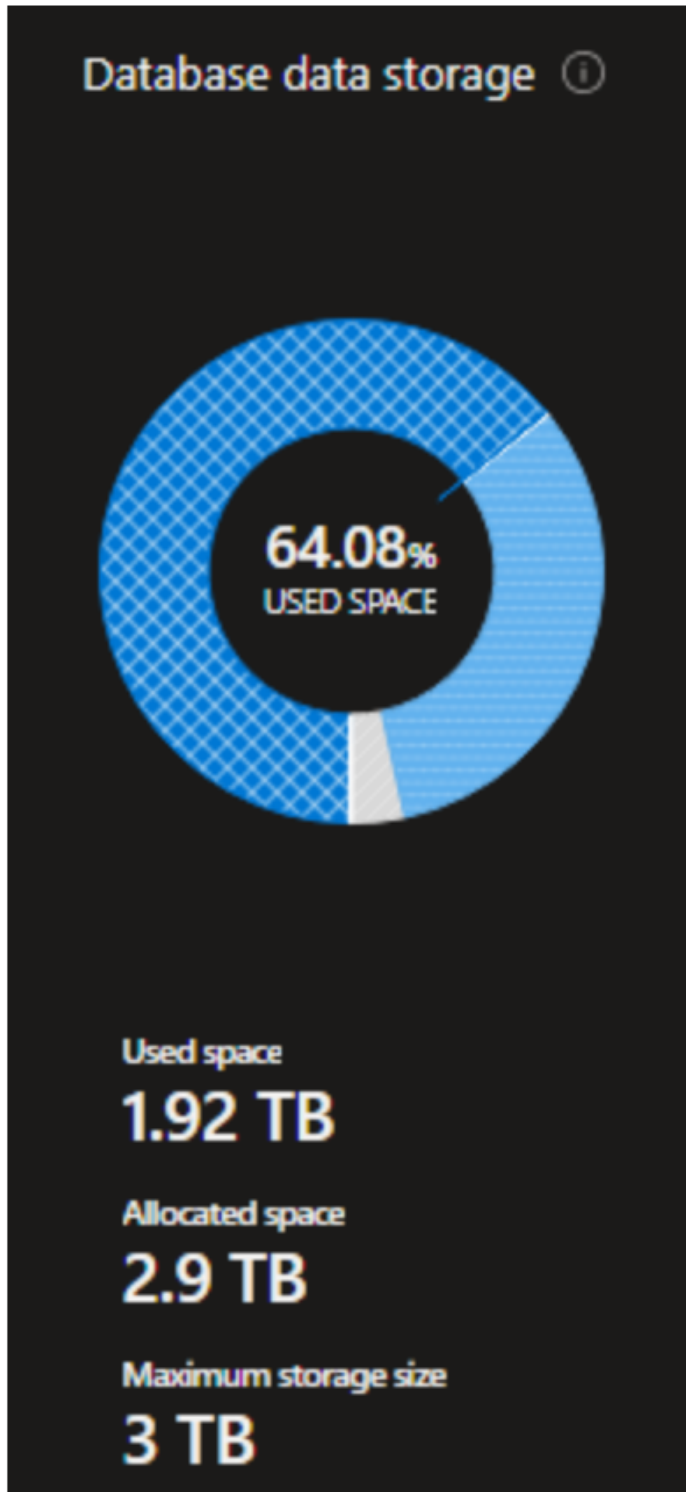
Issue

When a serverless database is paused the used space and allocated space display lower values in the portal than when the database is active.

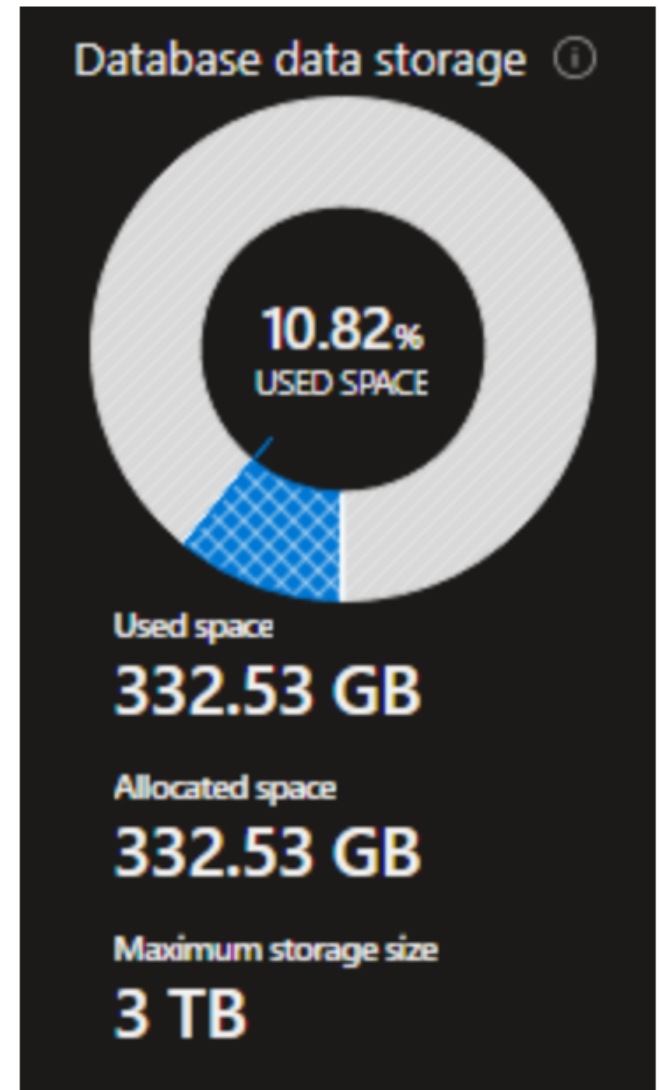
Investigation/Analysis

From the portal overview blade for the database, compare the database data storage values for used space and allocated space when the database is active and when it is paused. When the database is paused, it shows smaller values for the used space and allocated space. Example output:

DB active



DB paused



Mitigation

This is expected behavior at the moment. When a serverless database is deactivated, the portal metric will show only the allocated and used space locally stored and therefore won't count the data files stored in remote storage. Note there could be changes to this metric in the future.

For example, a serverless general purpose database uses remote storage and therefore the data files are not stored locally. The data files are stored using the Azure Storage service and their disks. In this case, when the database is paused it will only show the very small amount of space used by the system files stored locally. This behavior only affects the portal.

More Information

The actual storage space can be confirmed in SSMS and Kusto:

SSMS:

```
SELECT
    file_id,
    name,
    FILEPROPERTY (name, 'SpaceUsed')/128/1024.0 as [Used Space Size GB],
    size/128/1024.0 as [Physical Space Size GB],
    max_size/128/1024.0 as [Max Space Size GB]
FROM sys.database_files ;
```

Kusto:

```
MonDmIoVirtualFileStats
| where db_name == '<db_name>'
| project max_size_mb, size_on_disk_bytes, type_desc, db_name , spaceused_mb , TIMESTAMP, PreciseTimeStamp, st
| extend sizeondisk_mb = size_on_disk_bytes*1.0/(1024*1024)
| extend shrinkPotential_mb = sizeondisk_mb - spaceused_mb
| summarize by spaceused_mb, sizeondisk_mb, shrinkPotential_mb, db_name, type_desc, TIMESTAMP, PreciseTimeStam
| extend spaceused_gb = spaceused_mb/1024, sizeondisk_gb = sizeondisk_mb/1024, size_gb = max_size_mb/1024
| summarize min(spaceused_gb), max(spaceused_gb), avg(spaceused_gb), max(sizeondisk_gb), avg(sizeondisk_gb), m
| sort by db_name, type_desc, file_id
```

Internal Reference

ICM: [306048632 - Database storage size changing when it goes to paused state](#) 

ICM: [321777865 - Cx Database is server less database and when the DB goes to pause state](#) 

Root Cause Classification

Cases resolved by this TSG should be coded to the following root cause:

Azure SQL v3/Telemetry/Portal metrics missing

How good have you found this content?

