General Troubleshooting of space used on managed instance

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Issue

You might get support cases where customers complain about storage used space and/or error messages pointing to Managed instance storage reached his limit.

The following TSG is to provide you some tools and queries to guide you when little information is available from customer side.

Investigation/Analysis

to start a proper investigation, start by asking your self some questions:

- the used space consumption knew a exponential growth?
- is there a database that stands out in terms of space used?
- for the database that stands out, what is contributing the most? The datafiles or transaction log?

First of all get an idea of the growth of the used storage vs reserved storage by running the query below:

```
MonManagedInstanceResourceStats
| where TIMESTAMP > ago(3d)
| where LogicalServerName == 'azuresqlmi2'
| project TIMESTAMP, storage_space_used_mb, reserved_storage_mb
| render timechart
```

This can give you an idea of if you need to start looking at a specific period where an exponential growth is observed.

Moving to second question - what is the size of each database. Maybe we have a database that is occupying most of the space (look the the column size_on_disk_GB).

```
MonDmIoVirtualFileStats
| where LogicalServerName =~'azuresqlmi2'
| where (type_desc == 'ROWS' or type_desc == 'LOG')
| where TIMESTAMP > ago(1d)
| extend size_on_disk_GB= size_on_disk_bytes/1024.0/1024/1024, spaceused_GB = spaceused_mb / 1024.0, max_size_
| summarize max(spaceused_GB), max(max_size_GB), max(size_on_disk_GB) by bin(TIMESTAMP, 1h), db_name
| render timechart
```

Note: to get the database name by is physical database name (given by db_name column), you can run the query below:

```
MonDmRealTimeResourceStats
| where LogicalServerName == 'azuresqlmi2' and physical_database_guid == "ec779bbe-6722-4056-bf63-d272b908d48e
| project TIMESTAMP, database_name
| take 1
```

After getting the specific database that you want to check, get the allocate size for that database for Log (type_desc = LOG) and Data (type_desc=ROWS). This way you will know on what you need to focus on.

```
MonDmIoVirtualFileStats
| where LogicalServerName =~ "azuresqlmi2"
| where db_name =~ "ec779bbe-6722-4056-bf63-d272b908d48e"
| where is_primary_replica == 1
| project TIMESTAMP, type_desc,spaceused_mb, max_size_mb, size_on_disk_mb =(size_on_disk_bytes/1024/1024), fil
```

Mitigation

The mitigation is largely dependent on the database on where is seen and what type of file is consuming the space.

Check the TSG Workflow for managing database space for the different possibilities.

How good have you found this content?