How to check shrink progress

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Issue

When customer are using techniques to shrink like incremental shrink we might want to monitor the progress from our side and from customer side.

Check on Telemetry

From telemetry side we have two ways of checking:

- by looking at the file sizes
- by looking at shrink telemetry

To check file size progress you can use the Kusto query below. Look at file id and make sure that it corresponds to the datafile (or log file) that the customer is shrinking

```
let MIName = 'azuresqlmi2';
let dbname = 'archetype_rimarqu';
let startdate = datetime(2022-11-16 20:46:00);
let enddate = datetime(2022-11-18 15:46:00);
MonDmIoVirtualFileStats
| where  (originalEventTimestamp between (startdate..enddate))
| where LogicalServerName == MIName
| extend file_size_mb = size_on_disk_bytes / 1024. / 1024
| extend file_size_gb = size_on_disk_bytes / 1024. / 1024 / 1024, spaceused_gb = spaceused_mb / 1024.
| extend file_tier =
  case(file_size_gb <= 128, 'P10',
    file_size_gb <= 512, 'P20',
    file_size_gb <= 1024, 'P30',
    file_size_gb <= 2048, 'P40',
    file_size_gb <= 4096, 'P50',
    file_size_gb <= 8192, 'P60',
    'UNKNOWN')
| project logical_database_id, type_desc, file_id, file_tier, spaceused_gb, file_size_gb, file_size_mb, origin
| join kind=inner (
  MonAnalyticsDBSnapshot
  | where  (PreciseTimeStamp between (startdate..enddate))
  | where logical_server_name == MIName
  | summarize arg_max(PreciseTimeStamp, logical_database_name) by logical_database_id
  ) on logical_database_id
| where logical_database_name =~ dbname
| project logical_database_name, logical_database_id, type_desc, file_id, file_tier, spaceused_gb, file_size_g
| order by file_id asc , originalEventTimestamp desc
```

From telemetry we can also check the shrink progress and possible excpetions, if they occur:

```
MonSqlShrinkInfo
| where TIMESTAMP >= ago(3d)
| where LogicalServerName contains {MIName}
| where isnotempty(failure_reason) or status  == "shrink_fail"
| project TIMESTAMP, LogicalServerName, AppName, database_id, file_id, shrink_id, tag, status, target_mb = (to
| order by TIMESTAMP asc
```

Check from customer side

From customer side, besides of looking into the output of the shrink query, we can also check the datafiles allocated space (Currently allocated space column):

```
SELECT
distinct
sf.groupname as Filegroup,
a.name,
case maxsize when 268435456 then -1 else maxsize*8 /1024 end as MaxSize ,
CONVERT(Decimal(15,2),ROUND(a.Size/128.000,2)) [Currently Allocated Space (MB)],
CONVERT(Decimal(15,2),ROUND(FILEPROPERTY(a.Name,'SpaceUsed')/128.000,2)) AS [Space Used (MB)],
CONVERT(Decimal(15,2),ROUND((a.Size-FILEPROPERTY(a.Name,'SpaceUsed'))/128.000,2)) AS [Available Space (MB)],
a.filename
FROM sys.sysfiles AS a with (nolock)
left join sysfilegroups sf with (nolock) on a.groupid = sf.groupid
order by 2 asc
```

While the shrink is running, you can also check the wait type associated and the exact shrinkfile that is being executed inside the loop.

Look at the Wait_type column and individual query column. Change <shrink session id> with the spid where shrink is running.

```
SET NOCOUNT ON ;

SELECT      @@SERVERNAME Server,
                    [SPID] = SESSION_ID ,
            percent_complete [%] ,
            [DATABASE] = DB_NAME(SP.DBID) ,
            [STATUS] = ER.STATUS ,
            [WAIT] = WAIT_TYPE ,
            wait_resource ,
            reads ,
            writes ,
            logical_reads ,
            command ,
            [INDIVIDUAL QUERY] = SUBSTRING(QT.TEXT,
                                           ER.STATEMENT_START_OFFSET
                                           / 2,
                                           ( CASE WHEN ER.STATEMENT_END_OFFSET = -1
                                                  THEN LEN(CONVERT(NVARCHAR(MAX), QT.TEXT))
                                                  * 2
                                                  ELSE ER.STATEMENT_END_OFFSET
                                             END
                                             - ER.STATEMENT_START_OFFSET )
                                           / 2) ,
            [QUERY] = QT.TEXT ,
            PROGRAM = PROGRAM_NAME ,
            [USER] = NT_USERNAME ,
            HOSTNAME ,
            NT_DOMAIN ,
            START_TIME
FROM        sys.dm_exec_requests ER WITH (NOLOCK)
            INNER JOIN sys.sysprocesses SP WITH (NOLOCK) ON ER.SESSION_ID = SP.SPID
            CROSS APPLY sys.dm_exec_sql_text(ER.SQL_HANDLE) AS QT
WHERE       SESSION_ID = <shrink session id>
ORDER BY    1 ,
            2
```

How good have you found this content?