Temp DB - Tempdb maximum sizes

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Temp DB - Tempdb sizes

Issue

This article documents the tempdb sizes in the various SQL Database SLOs for a quick reference. For an article about troubleshooting temp size issues, see Temp DB - Resolve tempdb related errors and exceptions instead.

Investigation / Analysis

The full documentation of tempdb sizes is covered in 4 public articles:

- vCore purchasing model: single databases - pooled databases
- DTU purchasing model: single databases - pooled databases

More information

Last Update: 2022-10-11

Tempdb sizes for vCore-based, single databases

- Service-level objective
- Maximum tempdb data size (GB)

Serverless

GP_S_Gen5_1	GP_S_Gen5_2	GP_S_Gen5_4	GP_S_Gen5_6	GP_S_Gen5_8
32	64	128	192	256
GP_S_Gen5_10	GP_S_Gen5_12	GP_S_Gen5_14	GP_S_Gen5_16	GP_S_Gen5_18
320	384	448	512	576
GP_S_Gen5_20	GP_S_Gen5_24	GP_S_Gen5_32	GP_S_Gen5_40	GP_S_Gen5_80
640	768	1024	1280	2560

Hyperscale

HS_Gen5_2	HS_Gen5_4	HS_Gen5_6	HS_Gen5_8	HS_Gen5_10	HS_Gen5_12	HS_Gen5_14
64	128	192	256	320	384	448
HS_Gen5_16	HS_Gen5_18	HS_Gen5_20	HS_Gen5_24	HS_Gen5_32	HS_Gen5_40	HS_Gen5_80
512	576	640	768	1024	1280	2560

Hyperscale - DC-series

HS_DC_2	HS_DC_4	HS_DC_6	HS_DC_8
64	128	192	256

General purpose

GP_Gen5_2	GP_Gen5_4	GP_Gen5_6	GP_Gen5_8	GP_Gen5_10	GP_Gen5_12	GP_Gen5_14
64	128	192	256	320	384	384
GP_Gen5_16	GP_Gen5_18	GP_Gen5_20	GP_Gen5_24	GP_Gen5_32	GP_Gen5_40	GP_Gen5_80
512	576	640	768	1024	1280	2560

General purpose - Fsv2-series

GP_Fsv2_8	GP_Fsv2_10	GP_Fsv2_12	GP_Fsv2_14	GP_Fsv2_16	
37	46	56	65	74	
GP_Fsv2_18	GP_Fsv2_20	GP_Fsv2_24	GP_Fsv2_32	GP_Fsv2_36	GP_Fsv2_72
83	93	111	148	167	333

General purpose - DC-series

GP_DC_2	GP_DC_4	GP_DC_6	GP_DC_8
64	128	192	256

Business critical

BC_Gen5_2	BC_Gen5_4	BC_Gen5_6	BC_Gen5_8	BC_Gen5_10	BC_Gen5_12	BC_Gen5_14
64	128	192	256	320	384	448

BC_Gen5_16	BC_Gen5_18	BC_Gen5_20	BC_Gen5_24	BC_Gen5_32	BC_Gen5_40	BC_Gen5_80
512	576	640	768	1024	1280	2560

Business critical - M-series

BC_M_8	BC_M_10	BC_M_12	BC_M_14	BC_M_16	BC_M_18
256	320	384	448	512	576

BC_M_20	BC_M_24	BC_M_32	BC_M_64	BC_M_128
640	768	1024	2048	4096

Business critical - DC-series

BC_DC_2	BC_DC_4	BC_DC_6	BC_DC_8
64	128	192	256

Tempdb sizes for DTU-based service objectives

Single databases

- Service-level objective	- Maximum tempdb data file size (GB)	- Number of tempdb data files	- Maximum tempdb data size (GB)
Basic	13.9	1	13.9
S0	13.9	1	13.9
S1	13.9	1	13.9
S2	13.9	1	13.9
S3	32	1	32
S4	32	2	64
S6	32	3	96
S7	32	6	192
S9	32	12	384
S12	32	12	384
P1	13.9	12	166.7
P2	13.9	12	166.7
P4	13.9	12	166.7
P6	13.9	12	166.7
P11	13.9	12	166.7
P15	13.9	12	166.7

Elastic pools

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- Service-level objective
- Maximum tempdb data file size (GB)
- Number of tempdb data files
- Maximum tempdb data size (GB)

Basic Elastic Pools (all DTU configurations)    13.9    12    166.7
Standard Elastic Pools (50 eDTU)                13.9    12    166.7
Standard Elastic Pools (100 eDTU)               32      1     32
Standard Elastic Pools (200 eDTU)               32      2     64
Standard Elastic Pools (300 eDTU)               32      3     96
Standard Elastic Pools (400 eDTU)               32      3     96
Standard Elastic Pools (800 eDTU)               32      6     192
Standard Elastic Pools (1200 eDTU)              32      10    320
Standard Elastic Pools (1600-3000 eDTU)         32      12    384
Premium Elastic Pools (all DTU configurations)  13.9    12    166.7
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Public Doc Reference

- vCore purchasing model:
  - single databases
  - pooled databases
- DTU purchasing model:
  ' single databases
  - pooled databases

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