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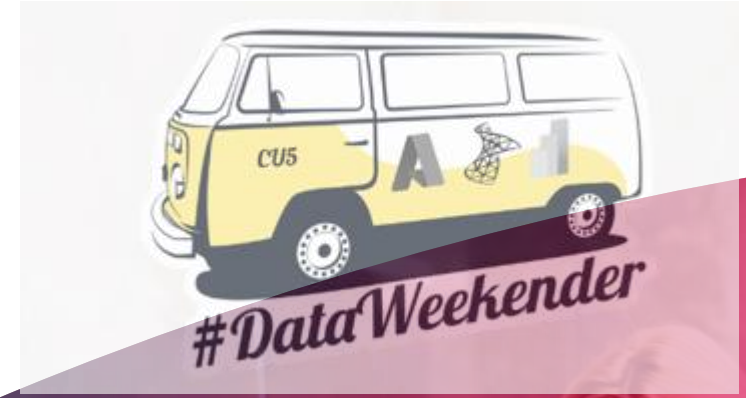

To Hyperscale or not to Hyperscale, that's the question

#DataWeekender CU5

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- Design
- Pros and cons
- Bugs?
- Would you use it?

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SQL: DBA, Performance tuning

Azure: architect, developer, admin

SQL Classes

Public speaker

Photography, running, cycling

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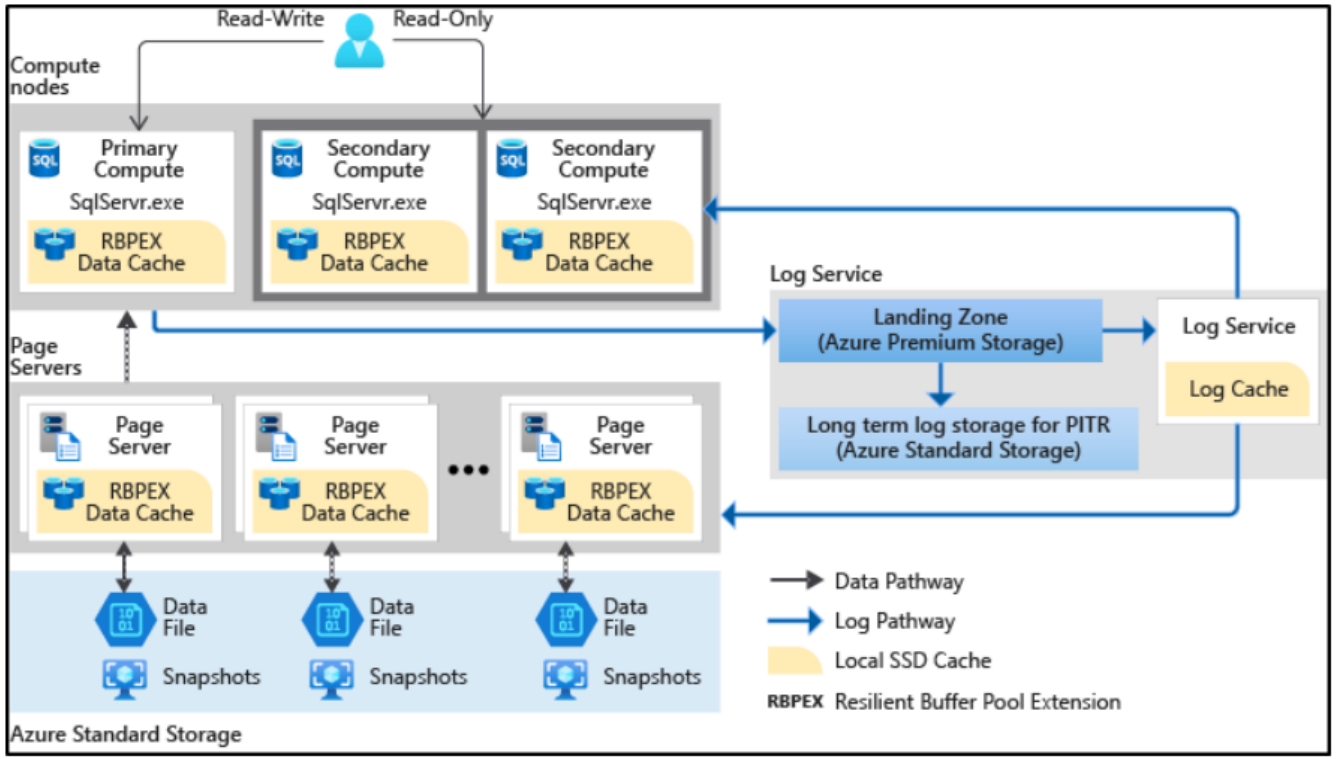
Hyperscale, general design



Hyperscale differences with other SKU's

- Stable log IO (100 mb/s)
- Multiple files by default
- Once you're hyperscaled, you can't upgrade or downgrade

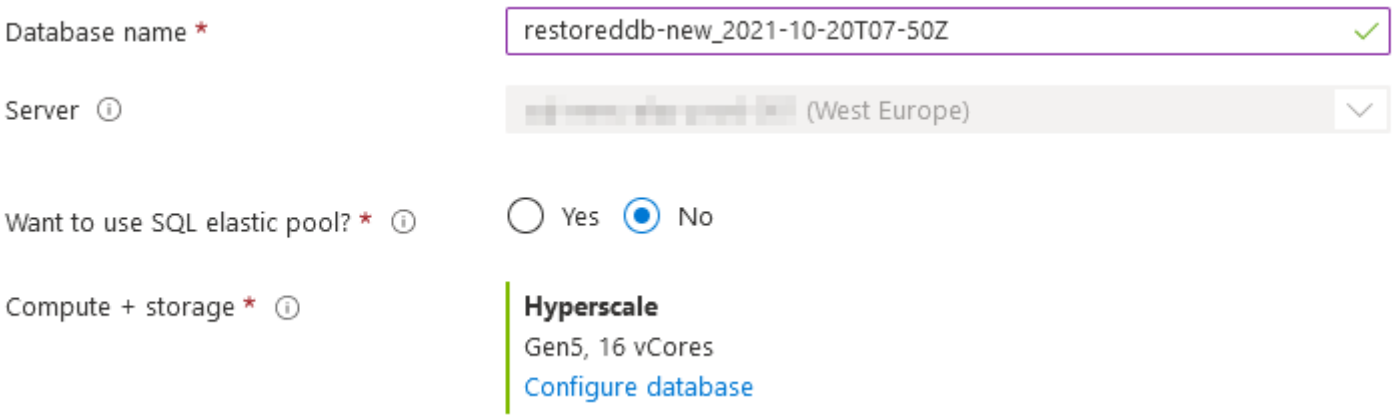
Hyperscale!

- It’s fast (less to no log waits)
- It scales in the background
- Scale it (up or down) when needed
- Costs are related to the running setting

Hyperscale?

- Scaling means you’re failing over
- Don’t forget to scale down
- Scaling means some DMV’s will reset to 0
- Querystore doesn’t seem to suffer

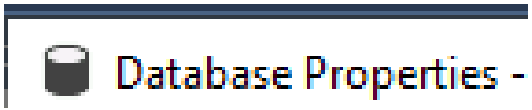
They can be expensive



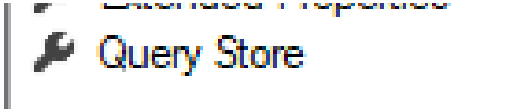
Hyperscale bug

- Do not upgrade a database to hyperscale
- The underlying design breaks
- RBIO_RG_STORAGE wait type
- Performance is out of the window

Hyperscale bug




```
SELECT d.name,
        vfs.file_id,
        fsu.total_page_count,
        ((fsu.total_page_count * 8)/1024)/1024 as file_gb
FROM sys.databases d
INNER JOIN sys.dm_io_virtual_file_stats(null,null) vfs on d.database_id=vfs.database_id
INNER JOIN sys.dm_db_file_space_usage fsu on d.database_id = fsu.database_id
        AND fsu.file_id = vfs.file_id
```



Hyperscale bug

Results | Messages

	name	file_id	total_page_count	file_gb
1	My Hyperscale DB	1	16777216	128
2	My Hyperscale DB	3	16777216	128
3	My Hyperscale DB	4	16777216	128
4	My Hyperscale DB	5	16777216	128
5	My Hyperscale DB	6	16777216	128
6	My Hyperscale DB	7	16777216	128
7	My Hyperscale DB	8	16777216	128
8	My Hyperscale DB	9	16777216	128

27	My Hyperscale DB	28	16777216	128
28	My Hyperscale DB	29	16777216	128
29	My Hyperscale DB	30	15728640	120
30	My Hyperscale DB	31	13107200	100
31	My Hyperscale DB	32	11796480	90
32	My Hyperscale DB	33	9175040	70
33	My Hyperscale DB	34	7864320	60
34	My Hyperscale DB	35	5242880	40
35	My Hyperscale DB	36	2621440	20

Every database has it’s use case

- It’s your use case that decides which one to choose
- It’s your budget

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Thank you!

To hyperscale or not To hyperscale

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