

16 APRILE 2021



VIRTUAL EVENT

(MASSIVE) SCALE-OUT SOLUTIONS WITH
AZURE SQL TO SUSTAIN ANY WORKLOAD



DAVIDE MAURI

@MAURIDB

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managed/designs

il partner tecnologico per chi ha idee ambiziose. Innovazione pratica da 15 anni.



empower every person and every organization on the planet to achieve more.

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Swag and more

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- 30 Days to learn it: aka.ms/global-azure/30D2L
- Virtual background and ANOTHER Badge: blog.globalazure.net/Swag



Davide Mauri

Azure SQL PM @ Microsoft

What a PM does exactly?

<https://www.youtube.com/watch?v=lgfEyE2VxzA>

Joined Azure SQL group on mid 2019

Still a developer at heart!

SQL Server / Azure Data MVP for 12 Years

Worked in consulting services for 20 years

Very active in the Community

Conference Speaker

Lots of Blog Posts/Articles: <https://medium.com/@mauridb>

GitHub Repo: <https://github.com/yorek/>

Twitter: <https://twitter.com/mauridb>

Website: <http://www.davidemauri.it/>



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SCALE-OUT A RELATIONAL DB

YES, YOU CAN!



- Azure SQL Hyperscale
- Complete rearchitecture & refactoring of Azure SQL / SQL Server engine
- Well, the query processor and optimizer and language are still the same
 - The storage engine and the write ahead log architecture are REALLY different
 - And modern
 - And distributed
 - And scalable

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SCALE-OUT A RELATIONAL DB

YES, YOU CAN!



Azure SQL
Hyperscale
Architecture
Unplugged!

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AZURE SQL HYPERSCALE

YES, YOU CAN!



- Multi-Tiered Distributed Cache
- Azure Storage rarely used (just for “seeding”)
- Compute and Storage (and Log) completely independent and separated
- Scale-Out is now quite easy
- No data movement involved (if in the same region)
- Secondary Replicas, here you go!

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SCALE-OUT A RELATIONAL DB

YES, YOU CAN!



Secondary
Replicas
Unplugged!

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AZURE SQL HYPERSCALE

OK, BUT....



- How much it can really scale?
- Show me some meat!
- Right! What about ingesting 10.000 rows/second
 - A mix of “relational” and JSON data
 - Typical Gaming, IoT, Mobile payload
- Of course, *while* also performing transactional and analytical queries
 - Without affecting ingestion performances

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SCALE-OUT A RELATIONAL DB

YES, YOU CAN!



Demo Time!

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AZURE SQL HYPERSCALE

SCALE OUT USE CASES

- Massive OLTP Scale Out
 - REST API
 - E-Commerce
 - Mobile Apps
 - Gaming
- Near-Realtime Analytics and HTAP
- Massive Ad-Hoc Reporting & Analytics on Near-Real Time Data



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RESOURCES



- [Autoscale Hyperscale With Azure Functions](#)
- [Streaming at Scale with Azure SQL](#)
- [10K Request per Second: REST API with Azure SQL, Dapper and JSON](#)

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THANKS!

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