## aws re: Invent

#### WIN319-R1

# Best practices for advanced SQL Server storage architectures

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Specialist Solutions Architect Amazon Web Services

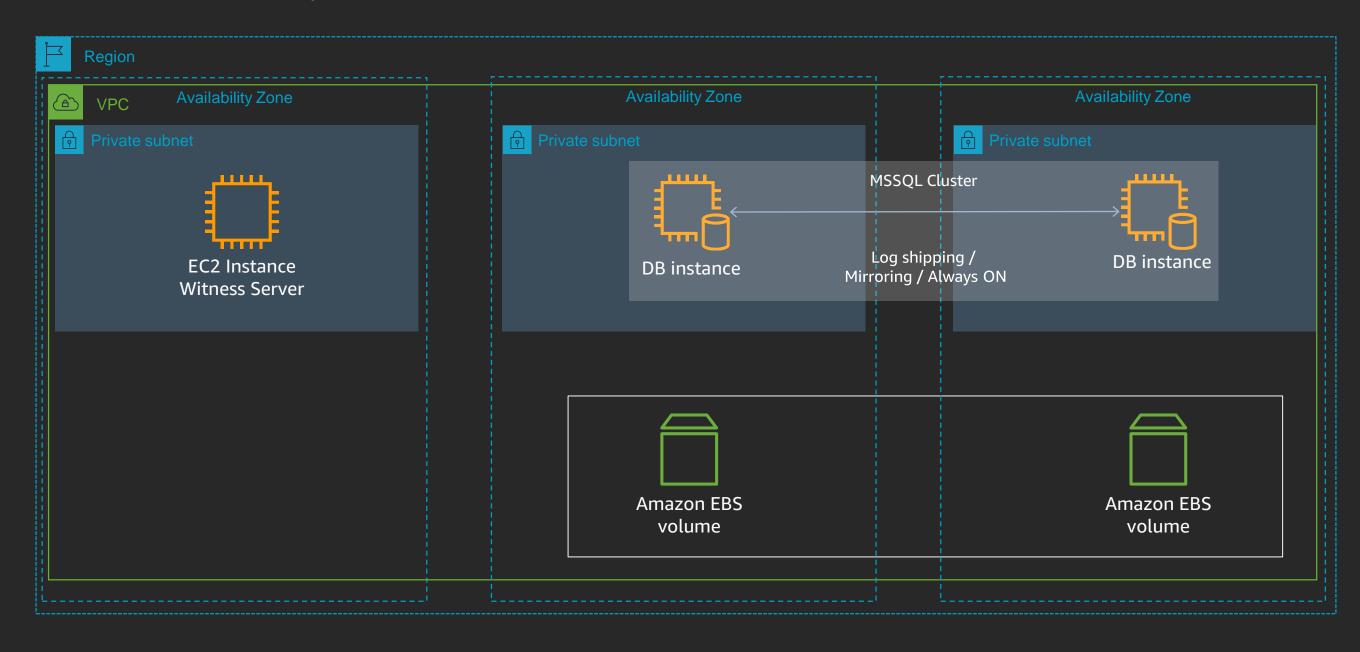
#### Siavash Irani

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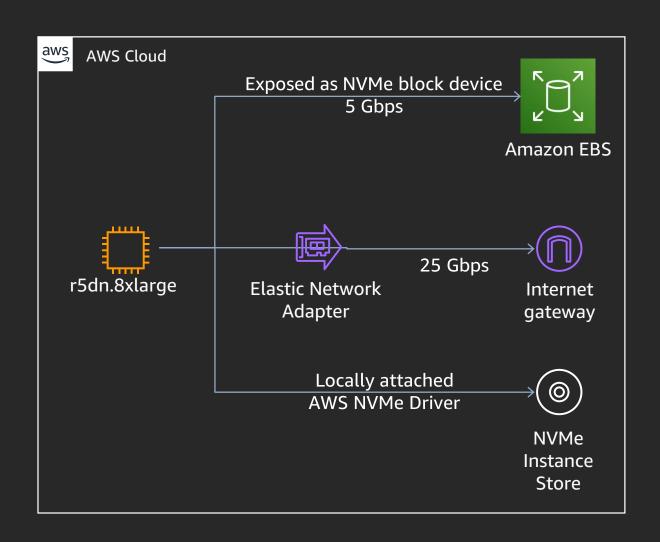


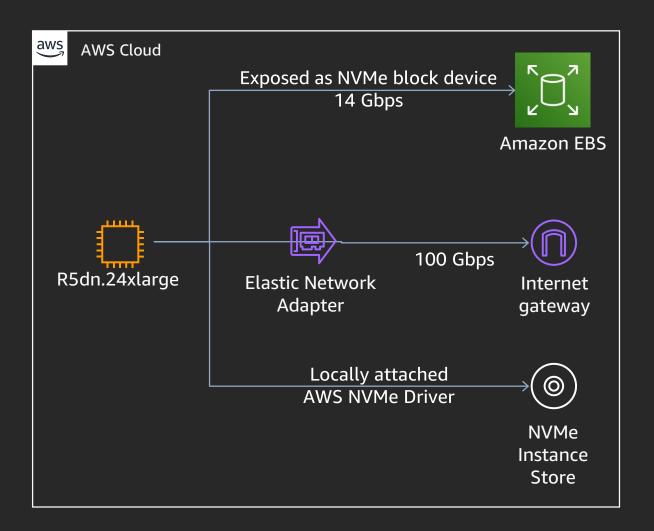


### Microsoft SQL Server Architecture in AWS



#### Instance storage and Amazon EBS





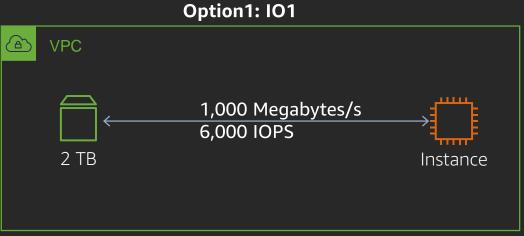
## EBS Types

	General Purpose SSD (gp2)	Provisioned IOPS SSD (io1)	Throughput Optimized HDD (st1)	Cold HDD (sc1)
Max IOPS per Volume	16,000	64,000	500	250
Max Throughput per Volume	250 Megabytes / Second	1,000 Megabytes / Second	500 Megabytes / Second	250 Megabytes / Second
Max IOPS per Instance	80,000			
Max Throughput per Instance	1,750 Megabytes / Second			

### GP2 Striping?

#### **Requirements:**

- 2 TB Data volume
- 6,000 IOPS

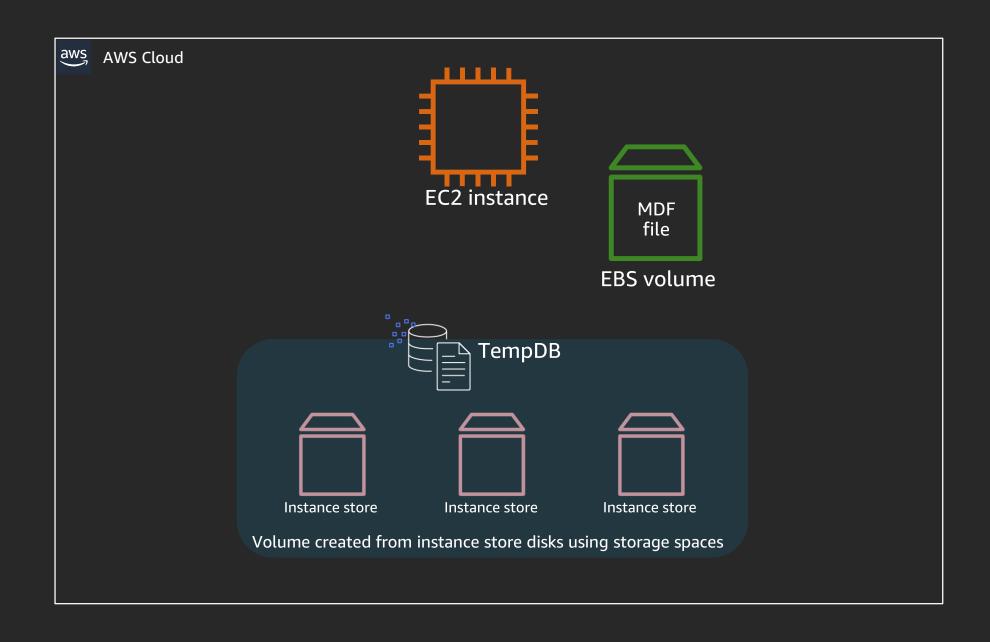


EBS Cost: \$640 (N.Virginia)

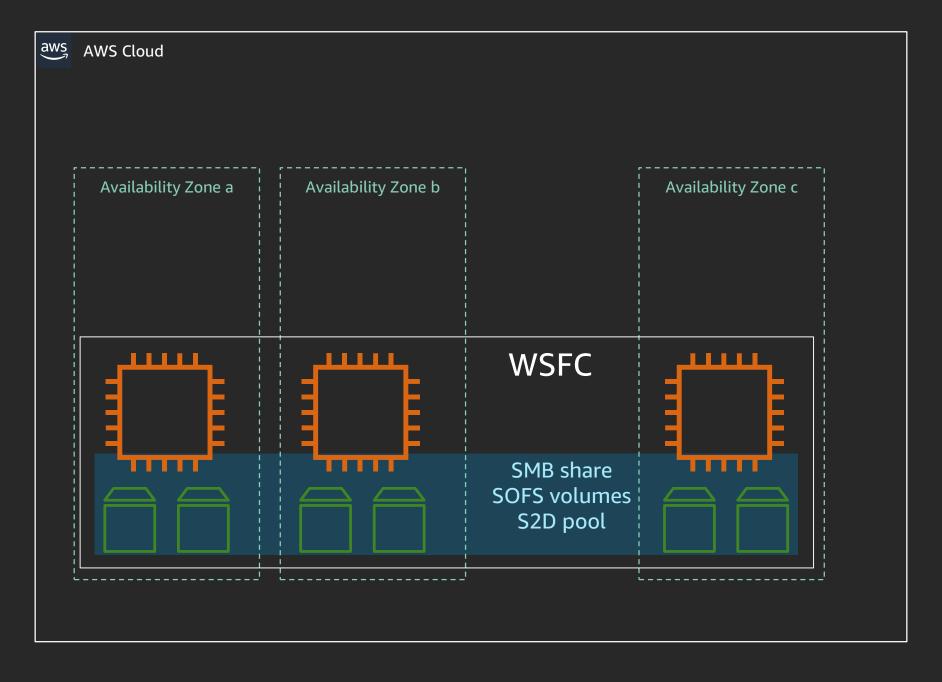
Option2: GP2 VPC 250 Megabytes/s 1,500 IOPS 500 GB 250 Megabytes/s 1,500 IOPS 1,000 Megabytes/s 500 GB 6,000 IOPS Instance 250 Megabytes/s 1,500 IOPS 500 GB 250 Megabytes/s 1,500 IOPS 500 GB

EBS Cost: \$200 (N.Virginia)

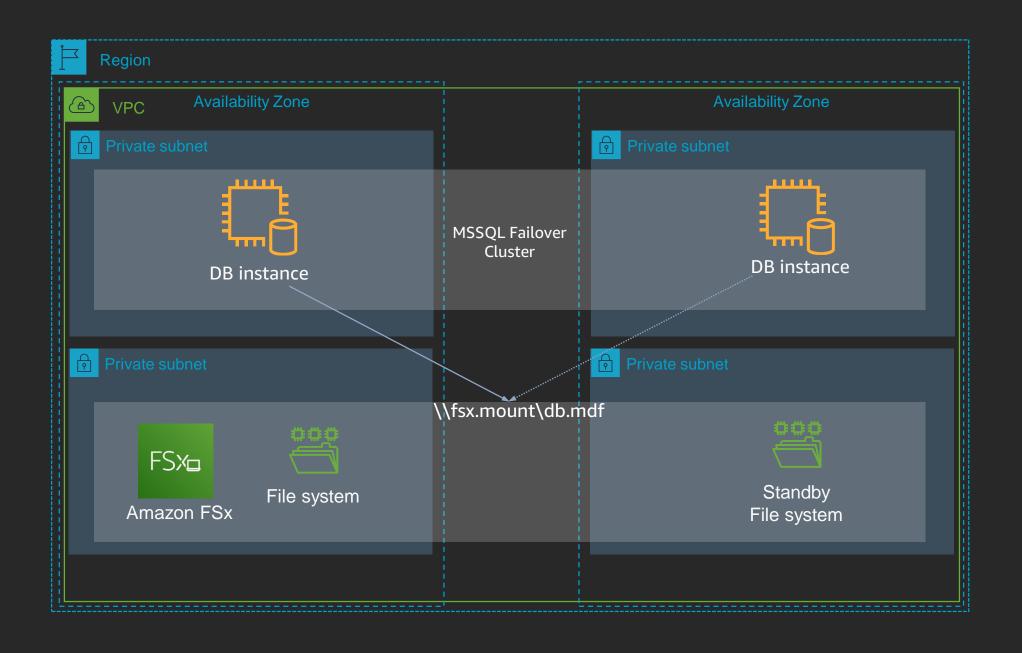
### Storage space (not direct) for the TempDB



## Storage Spaces Direct (S2D)



### Amazon FSx as Shared Storage for MSSQL



# Thank you!

**David Twizer** 

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