



Efficient migration of Oracle database to Azure with NVMesh

NVMesh technology enables the most demanding Oracle workloads to run on Azure cloud

With the accelerated growth of cloud computing, enterprises are looking to move more and more workloads to the cloud. They are facing the challenge that cloud infrastructure does not have the performance and resilience to migrate their business and mission-critical Oracle workloads to the public cloud. Excelero's NVMesh technology removes the bottleneck - cloud storage - allowing you to move your core databases to Azure. NVMesh technology is a low-latency, distributed storage software that is deployed across Azure virtual machines and local drives enabling high speed and high throughput data far exceeding anything achievable with other storage alternatives in the cloud - And at a significantly lower overall cost.

There are three deployment architectures for ultimate performance, large capacity and the best price performance to match your database infrastructure needs.

Ultimate Performance - Unmatched 100+ GB/s throughput

This high bandwidth architecture combines a low-latency Infiniband RDMA network together with Azure HBv3 virtual machines and local NVMe drives for the absolute fastest performance for mission-critical Oracle databases.

This architecture delivers:

- 100+ GB/s throughput (20 GB/s per instance)
- Sub-100 microsecond latency
- 17 million Oracle requests per second (1 million per instance)

Large Capacity - Lowest cost for 100's of TBs

This architecture over TCP/IP networking and utilizing Azure Lsv2 virtual machines provides large capacities, offering multi-node data reliability and cost-efficiency.

The following cost-optimized performance envelope is made available for a single Oracle instance:

- 250-microsecond latencies
- 4 GB/s throughput
- 400K Oracle IO requests per second

Best Price/Performance - 10+ GB/s throughput for larger capacities

This hybrid architecture combines the networking performance of HBv3 virtual machines and the high capacity of Lsv2 virtual machines to provide high performance at the best possible price for larger databases in Azure.

This architecture delivers single instance performance of:

- 250-microsecond latencies
- 4 GB/s throughput
- 400K Oracle IO requests per second



Performance

Excelero NVMesh software provides access to high performance, local NVMe drives on Azure virtual machines and then scales that performance across the network on multiple machines. You are no longer limited to the performance of a single virtual machine.



High Availability

Enterprise-grade data reliability is achieved by distributing data across Azure virtual machines, protecting against any single point of failure for drives or machines. The Oracle database can be distributed within the availability zone or across AZs.



Cost

By removing the storage bottleneck, NVMesh technology maximizes the CPUs within the Azure virtual machine running Oracle database, optimizing licensing costs. Using Oracle DataGuard for log shipping further reduces overall license costs.