Experience up to 2.72x the Data Analytics Performance by Choosing Microsoft® Azure® Lsv3 Virtual Machines Over Lsv1 Virtual Machines

VMs Featuring 3rd Gen Intel® Xeon® Scalable Processors Completed Microsoft SQL Server Data Analytics Queries Faster Than VMs with Older Processors

Organizations selecting a public cloud solution to host their data analytics workloads care about performance. They should keep in mind the fact that performance from one virtual machine (VM) to another—even from the same cloud service provider—varies considerably. One reason for differing performance levels is the different processors behind each VM. For example, the Microsoft Azure Lsv3-series VMs enabled by 3rd Gen Intel Xeon Scalable processors delivered greater data analytics performance in independent testing than Lsv1 VMs enabled by older processors.

The Azure Lsv3 VMs completed Microsoft SQL Server data analytics queries much faster by achieving up to 2.72x the speed of the VMs with older processors. This speed could put important data into the hands of decision-makers earlier and even reduce cloud spending.

Better Performance on Small Instances

Testing used TPROC-H, an open-source online analytics processing (OLAP) workload that is part of the HammerDB benchmarking tool. As Figure 1 shows, by choosing 8vCPU Lsv3 VMs enabled by 3rd Gen Intel Xeon Scalable processors, an organization could see up to 2.72x the OLAP performance they would get with the same size Lsv1 VMs enabled by 2nd Gen Intel Xeon Scalable processors.

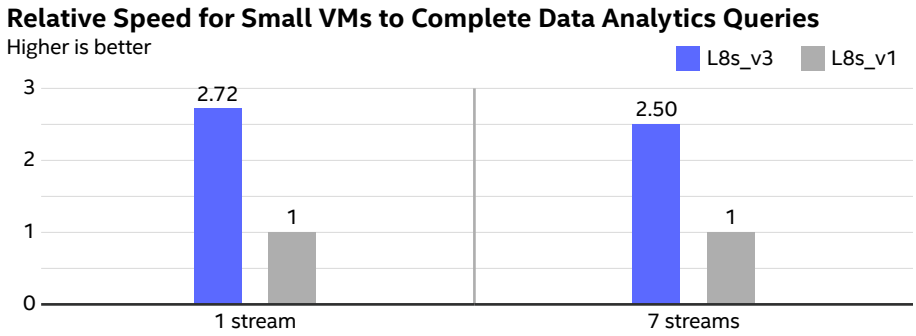

Figure 1. Relative speed of the 8vCPU Azure Lsv3 and Lsv1 virtual machines to complete OLAP queries. Higher is better.

Microsoft SQL Server

Get up to 2.72x the Data Analytics Performance with 8vCPU Lsv3 VMs

vs. Lsv1 VMs

Get up to 2.61x the Data Analytics Performance with 16vCPU Lsv3 VMs

vs. Lsv1 VMs

Get up to 2.09x the Data Analytics Performance with 32vCPU Lsv3 VMs

vs. Lsv1 VMs

Intel Workload Proof Series: Data Analytics on Azure Lsv3 vs Lsv1 VMs

See backup for workloads and configurations. Results may vary.

Better Performance on Medium and Large Instances

As Figure 2 shows, by choosing 16vCPU Lsv3 VMs enabled by 3rd Gen Intel® Xeon® Scalable processors, you could see up to 2.61x the OLAP performance of 16vCPU Lsv1 VMs with older processors.

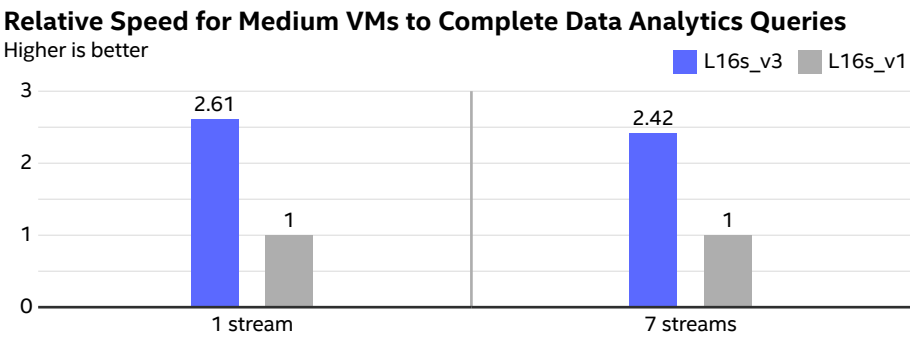

Figure 2. Relative speed of the 16vCPU Azure Lsv3 and Lsv1 virtual machines to complete OLAP queries. Higher is better.

As Figure 3 shows, choosing 32vCPU Lsv3 VMs enabled by 3rd Gen Intel Xeon Scalable processors provides a gain of up to 2.09x the OLAP performance of 32vCPU Lsv1 VMs with older processors.

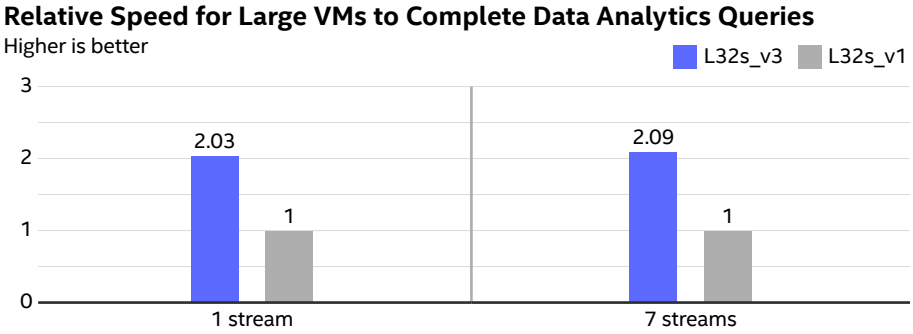

Figure 3. Relative speed of the 32vCPU Azure Lsv3 and Lsv1 virtual machines to complete OLAP queries. Higher is better.

Conclusion

Choosing cloud instances that run your data analytics applications quickly can improve your decisions and lead to savings by reducing costly VM uptime. Testing revealed that Azure Lsv3 instances with 3rd Gen Intel Xeon Scalable processors can enable your applications to execute queries at a speed up to 2.72x that of Lsv1 instances with 2nd Gen Intel Xeon Scalable processors.

Learn More

To begin running your data analytic workloads on Microsoft Azure Lsv3 virtual machines with 3rd Gen Intel Xeon Scalable processors, visit https://docs.microsoft.com/en-us/azure/virtual-machines/lsv3-series.

For complete test details and results, read the report at https://facts.pt/bG3rLqj.

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