Complete Microsoft SQL Server Data Analysis Up to 1.27x Faster on Microsoft® Azure® Eds_v5 Virtual Machines vs. Eds_v4 VMs

Microsoft SQL Server

Analyze data up to 1.23x faster with 8-vCPU Eds_v5 VMs

vs. Eds_v4 VMs

Analyze data up to 1.27x faster with 16-vCPU Eds_v5 VMs

vs. Eds_v4 VMs

Analyze data up to 1.23x faster with 64-vCPU Eds_v5 VMs

vs. Eds_v4 VMs

Improve Data Warehouse Performance with New Eds_v5 VMs Featuring 3rd Gen Intel® Xeon® Scalable Processors

The mass proliferation of data means that businesses have the information they need to make smarter business decisions—if only they can analyze that data quickly and turn those insights into action. Whether your databases are small, large, or somewhere in the middle, the latest memory-optimized Microsoft Azure Eds_v5 series VMs enabled by 3rd Gen Intel® Xeon® Scalable processors can improve data warehouse performance over older Eds_v4 series VMs with older processors. Microsoft Azure Eds_v5 VMs use Intel Xeon Platinum 8370C processors in hyperthreaded configurations with up to 96 vCPUs and up to 394 GB of RAM and offer Intel Turbo Boost Technology 2.0, and Intel AVX-512, and include Intel Deep Learning Boost for faster data analysis.

We used three sets of HammerDB benchmark tests using a data warehouse (TPROC-H) workload to compare multiple sizes of databases. On the memory-optimized Microsoft Azure VMs, the new Eds_v5 VMs, enabled by 3rd Gen Intel Xeon Scalable processors, analyzed both single and multiple streams of data in up to 1.27x less time than Eds_v4 VMs with older processors.

When your organization selects Microsoft Azure Eds_v5 VMs over VMs with older processors, you can improve your business intelligence workloads and realize a faster time to insight from the data you collect.

Faster Time to Insight on Small VMs

Even small database sizes can require lengthy analysis windows to turn SQL Server data into insights businesses can use. Tests show that choosing Azure VMs with the latest processors can help ensure your daily reports are ready on time. In database testing, Azure Eds_v5 VMs enabled by 3rd Gen Intel Xeon Scalable processors with 8 vCPUs and a 30GB database completed a data warehouse workload 1.23x faster than a Eds_v4 VM did (see Figure 1).

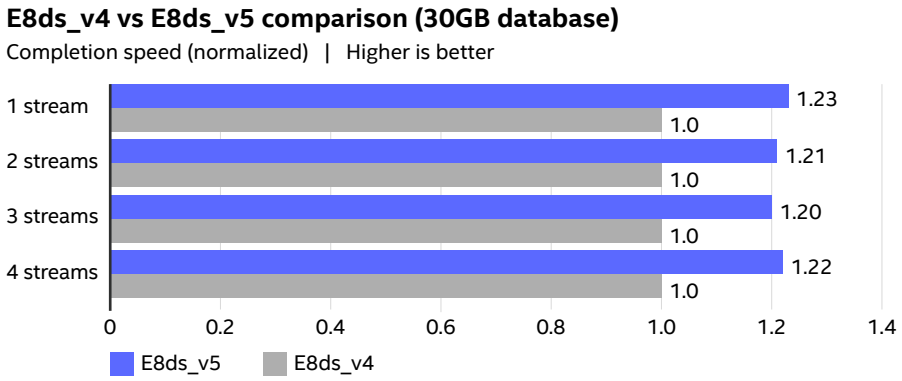

Figure 1. Relative SQL Server 2019 data warehouse completion speeds of the 8-vCPU Azure Eds_v5 VM and 8-vCPU Azure Eds_v4 VM types with a 30GB database.

Reduce Time to Insight for Databases on Medium VMs

The faster you can make sense of your collected data, the more agile your business becomes. On medium-sized database VMs, Azure Eds_v5 VMs offered similar improvements in data warehouse workloads times than VMs with previous-generation processors. As Figure 2 shows, with 16 vCPUs and a 100GB database size per VM, Microsoft Azure Eds_v5 VMs featuring 3rd Gen Intel® Xeon® Scalable processors completed analysis of multiple data streams as much as 1.27x faster than older Eds_v4 VMs.

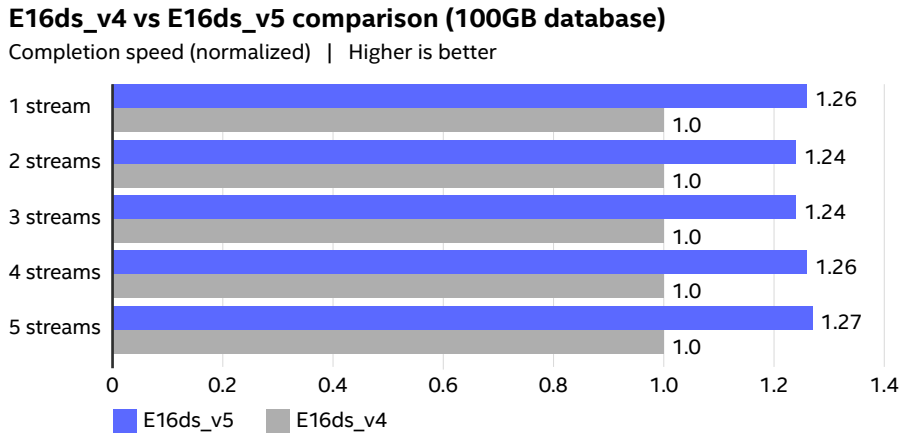

Figure 2. Relative SQL Server 2019 data warehouse completion speeds of the 16-vCPU Azure Eds_v5 VM and 16-vCPU Azure Eds_v4 VM types with a 100GB database.

Shrink Analysis Windows for Larger Databases on Large VMs

Data analysis needs to complete in ample time to allow your daily business workflows to continue unimpeded. Increasing the configuration to 64 vCPU per VM with a 300GB database size again provided similar reductions in the amount of time to complete a data warehouse workload. Figure 3 shows that Microsoft Azure Eds_v5 VMs enabled by 3rd Gen Intel Xeon Scalable processors completed a data warehouse workload in 1.23x less time than Eds_v4 VMs using older processors.

These tests show that at multiple database and VM sizes, selecting Microsoft Azure Eds_v5 VMs enabled by 3rd Gen Intel Xeon Scalable processors over older VMs can reduce the time to complete data analysis workloads and help your organization get actionable insights from data sooner.

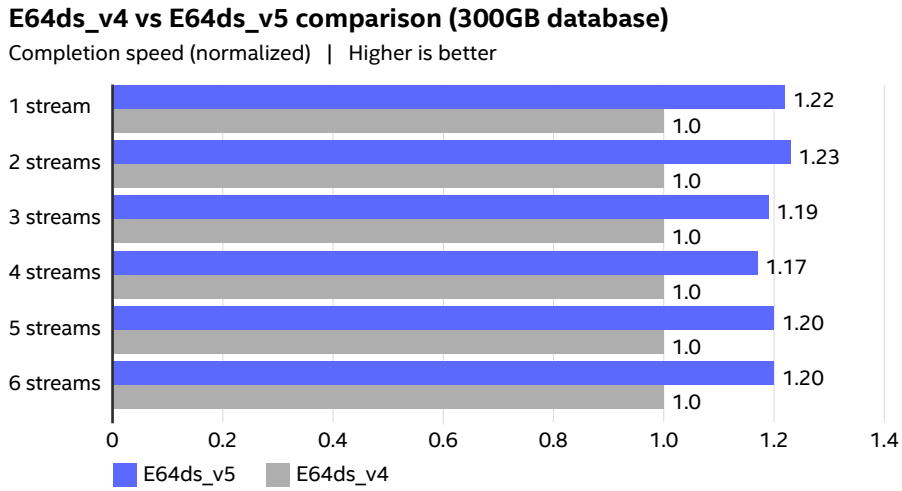

Figure 3. Relative SQL Server 2019 data warehouse completion speeds of the 64-vCPU Azure Eds_v5 VM and 64-vCPU Azure Eds_v4 VM types with a 300GB database.

Learn More

To begin running your websites on Microsoft Azure Eds_v5 virtual machines with 3rd Gen Intel Xeon Scalable processors, visit https://intel.com/microsoftazure.

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