

Support up to 1.42x More Customers Accessing PostgreSQL databases on Microsoft® Azure® Edsv4 Virtual Machines vs. Esv3 VMs

Improve Database Performance on New Edsv4 VMs Featuring 2nd Gen Intel® Xeon® Scalable Processors

Mission-critical relational databases in the cloud benefit from underlying hardware that features low-latency, high-speed storage to accelerate customer response times. To accelerate performance and support users accessing your databases at peak times, choose Microsoft Azure Edsv4 virtual machines enabled by 2nd Gen Intel Xeon Scalable processors to host your PostgreSQL database workloads.

Memory-optimized Microsoft Azure Edsv4-series VMs running on 2nd Gen Intel Xeon Scalable processors are ideal for memory-intensive enterprise apps including relational databases because they offer larger and faster local storage than previous VM series and support up to 504 GB of RAM. In PostgreSQL testing running a HammerDB TPC-C-like workload against three sizes of Azure VMs, new Edsv4 VMs enabled by 2nd Gen Intel Xeon Scalable processors delivered up to 1.42x the number of new orders per minute (NOPM) of Esv3 VMs with previous-generation Intel Xeon processors.

By handling more PostgreSQL database work per VM, your organization can support more customers, accelerate user response times, and support fewer VMs in the cloud to reduce overall operating expenses.

Support up to 1.40x More Customers on Small Edsv4 VMs

By selecting new memory-optimized Microsoft Azure Edsv4 VMs to host your mission-critical PostgreSQL databases, you can improve performance per VM over selecting older Esv3 VMs. As Figure 1 shows, an Azure Edsv4 VM enabled by 2nd Gen Intel Xeon Scalable processors handled 1.40x the NOPM an Esv3 VM handled.

Relative PostgreSQL/HammerDB performance with 4-vCPU VMs

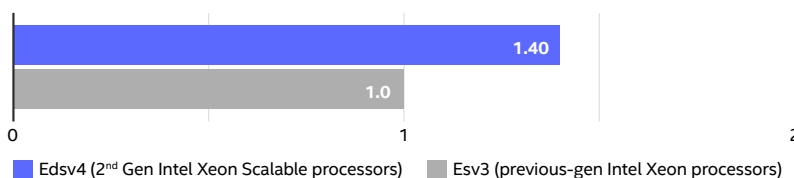


Figure 1. Normalized HammerDB test results comparing performance (in new orders per minute) achieved by the Edsv4 VM to Esv3 VM with 4 vCPUs.



PostgreSQL



1.40x more customers accessing PostgreSQL databases with 4-vCPU Azure Edsv4 VMs
than Esv3 VMs



1.42x more customers accessing PostgreSQL databases with 16-vCPU Azure Edsv4 VMs
than Esv3 VMs



1.29x more customers accessing PostgreSQL databases with 64-vCPU Azure Edsv4 VMs
than Esv3 VMs

Support up to 1.42x More Customers on Medium Edsv4 VMs

Tests also showed similar performance improvements for medium-sized Edsv4 VMs over their Esv3 counterparts. As Figure 2 shows, with 16 vCPUs per VM, a Microsoft Azure Edsv4 VM enabled by 2nd Gen Intel® Xeon® Scalable processors handled 1.42x more PostgreSQL transactions than a Esv3 VM with older processors.

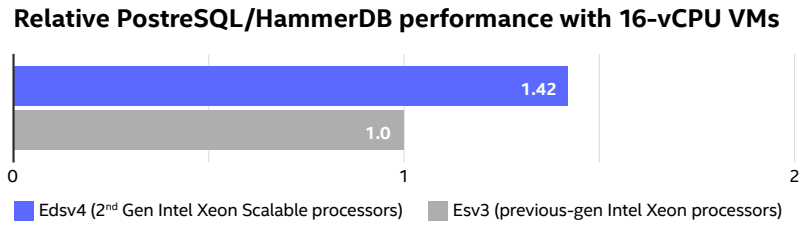


Figure 2. Normalized HammerDB test results comparing performance (in new orders per minute) achieved by the Edsv4 VM to Esv3 VM with 16 vCPUs.

Support up to 1.29x More Customers on Large Edsv4 VMs

Organizations with larger memory-intensive databases can also boost performance by selecting Azure Edsv4 VMs. As Figure 3 shows, a 64-vCPU Microsoft Azure Edsv4 VM enabled by 2nd Gen Intel Xeon Scalable processors completed 1.29x as many PostgreSQL NOPM as an older Esv3 VM.

These tests show that your memory-intensive PostgreSQL workloads can benefit from Microsoft Azure Edsv4 VMs enabled by 2nd Gen Intel Xeon Scalable processors at multiple database and VM sizes. With new Edsv4 VMs, you can support more users accessing your databases and accelerate response times to improve user experience and make the most efficient use of your investment in the cloud.

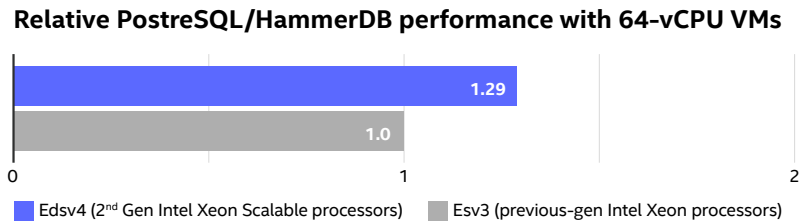


Figure 3. Figure 3 caption: Normalized HammerDB test results comparing performance (in new orders per minute) achieved by the Edsv4 VM to Esv3 VM with 64 vCPUs.

Learn More

To begin your PostgreSQL database deployments on Microsoft Azure Edsv4 virtual machines with 2nd Gen Intel Xeon Scalable processors, visit <http://intel.com/microsoftazure>.



Performance varies by use, configuration and other factors. Learn more at <https://intel.com/benchmarks>.

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