Analyze Data up to 1.25x Faster with Google Cloud Platform N2 Standard VM Instances Featuring 3rd Gen Intel® Xeon® Scalable Processors

Get Insights from Data Faster by Selecting N2 Standard VM Instances with 3rd Gen Intel Xeon Scalable Processors Over VM Instances with Previous-Generation Processors

Shrinking the amount of time it takes to analyze your databases can help your decision makers get the facts they need to act in a manner befitting agile modern businesses. To speed up database analysis and other workloads, Google Cloud Platform now offers 3rd Gen Intel Xeon Scalable processors in its N2 standard VM instances. These new processors speed up SQL Server database analysis over 2nd Gen Intel Xeon Scalable processors to reduce analytics windows to potentially accelerate decision making.

Testing shows,organizations running online analytics processing (OLAP) workloads for SQL Server 2019 databases on Google Cloud Platform can speed analysis by choosing N2 standard VM instances with 3rd Gen Intel Xeon processors. Across multiple VM instance sizes with varying vCPU and memory configurations (8 vCPU/ 32GB RAM, 16 vCPU/ 64GB RAM, and 64 vCPU/ 256GB RAM), Google Cloud Platform N2 standard VM instances with the latest in processor technology improved performance by up to 1.25x compared to the same instances running on previous-generation processors.

Analyze Data Streams Faster on Small VM Instances

The following OLAP results are from testing conducted by third-party Principled Technologies using the TPROC-H workload from the HammerDB benchmark suite. As Figure 1 shows, small Google Cloud Platform N2 standard VM instances (8 vCPU and 32 GB of memory) with 3rd Gen Intel Xeon Scalable processors completed data analysis up to 1.25x faster as the same VM instances with previous-generation processors.

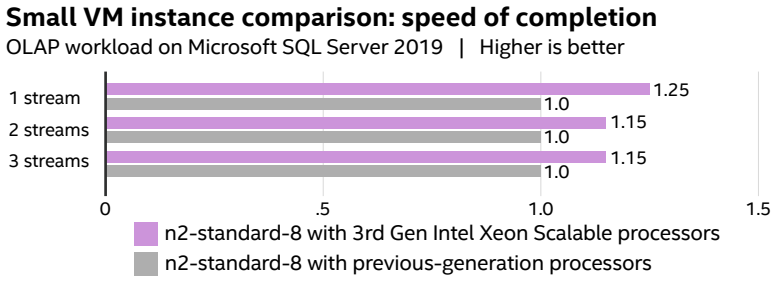

Figure 1. Comparison of SQL Server data analysis speeds for small (8 vCPU) Google Cloud Platform N2 standard VM instances with 3rd Gen Intel Xeon Scalable processors and N2 instances with previous-gen processors, normalized to the performance of the previous-gen VM.

OLAP

Analyze data up to 1.25x faster on small N2 standard VM instances with 3rd Gen Intel Xeon Scalable processors

vs. N2 VM instances with previous-gen processors

Analyze data up to 1.23x faster on medium N2 standard VM instances with 3rd Gen Intel Xeon Scalable processors

vs. N2 VM instances with previous-gen processors

Analyze data up to 1.20x faster on large N2 standard VM instances with 3rd Gen Intel Xeon Scalable processors

vs. N2 VM instances with previous-gen processors

Improve OLAP Performance for Medium-Size VM Instances

The time to complete analysis of database query streams shows similar improvement for medium-sized instances with 16 vCPU and 32 GB of memory. As Figure 2 shows, Google Cloud Platform N2 standard instances with 3rd Gen Intel® Xeon® Scalable processors sped up SQL Server database analysis times over previous-gen instances by as much as 1.23x.

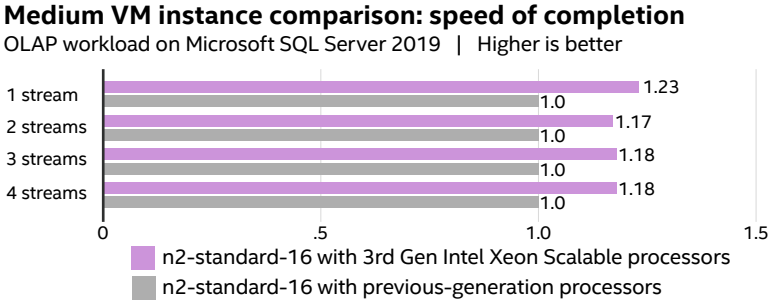

Figure 2. Comparison of SQL Server data analysis speeds for medium (16 vCPU) Google Cloud Platform N2 standard VM instances with 3rd Gen Intel Xeon Scalable processors and N2 instances with previous-gen processors, normalized to the performance of the previous-gen VM.

Speed up Data Analysis on Large VM Instances, Too

Across stream counts, large instance sizes showed similar improvement in data analysis times with the newer processors. With 64 vCPU and 256 GB of memory, Google Cloud Platform N2 standard VM instances sped up data analysis completion speeds by up to 1.20x compared to the same VM instances with 2nd Gen Intel Xeon Scalable processors (see Figure 3).

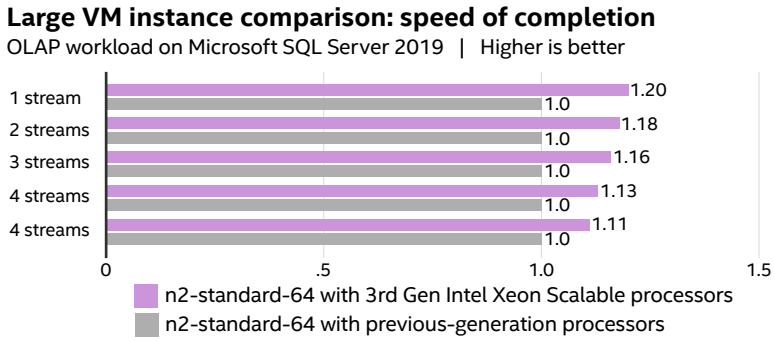

Figure 3. Comparison of SQL Server data analysis speeds for large (64 vCPU) Google Cloud Platform N2 standard VM instances with 3rd Gen Intel Xeon Scalable processors and N2 instances with previous-gen processors, normalized to the performance of the previous-gen VM.

Conclusion

If you're planning to analyze databases in the cloud for the first time or looking to speed up analysis of your SQL Server 2019 workloads, upgrading to Google Cloud Platform N2 standard VM instances with the latest 3rd Gen Intel Xeon Scalable processors can help you make sense of data faster. By speeding up data analysis, your organization can turn data into actionable insights faster to drive your business forward.

Learn More

To begin running your SQL Server data analysis workloads on Google Cloud Platform N2 standard VM instances with 3rd Gen Intel Xeon Scalable processors, visit https://cloud.google.com/compute/docs/general-purpose-machines#n2_machines.

For complete test details and results, read the report at https://facts.pt/5qbfLud.

Printed in USA 0122/JO/PT/PDF US001 ♻ Please Recycle