Google Cloud™ N2 VM Instances Featuring 2nd Gen Intel® Xeon® Scalable Processors Analyzed Microsoft SQL Server Databases up to 1.68x Faster than N1

Google Cloud N2 VM Instances Feature Intel Cascade Lake Processors

Complete SQL Server Online Analytics Processing (OLAP) Workloads Faster with Google Cloud N2 VM Instances

Smart companies base their business decisions on reports and other insights generated by robust data analytics applications. To complete analysis jobs faster and get a head start on the decision-making process that can be key to your organization's success, select a new Google Cloud N2 VM instance type that runs on powerful 2nd Generation Intel Xeon Scalable processors.

In Microsoft SQL Server database tests comparing Google Cloud VM instances, new N2 VM instances enabled by 2nd Generation Intel Xeon Scalable processors completed an OLAP workload faster than older N1 VM instances. Compared to similarly configured older VM instances, a large VM instance (with 64 vCPUs and 100GB database) was 1.68x faster.

Regardless of the size of your database and the VM instance that's appropriate for your OLAP workload, choose a new N2 VM instance enabled by 2nd Generation Intel Xeon Scalable processors to put critical analytics insights into the hands of decision-makers sooner.

How Faster Analytics Rates Can Improve Decision-Making

You've determined which public cloud provider you want to work with and identified the VM instance size that suits your requirements. But one more decision remains: Will you use an older VM instance with outdated hardware or will you choose a new, faster one enabled by 2nd Generation Intel Xeon Scalable processors?

Selecting a VM instance that processes analytics query streams at a faster rate can help your company multiple ways. If you rely on reports that your database generates throughout the day to make business decisions, a faster VM instance would make those reports available sooner. Less time would elapse between the time that an anomalous event occurred and the time that your business leaders learned about it, and they would be able to act upon the information earlier. Another situation when you would benefit from a faster analytics processing rate is when you run a set of queries during a fixed window of time each night. A faster VM instance could complete more queries during this window and provide decision-makers with a greater volume of data upon which to act.

MySQL Database

Complete a SQL Server analytics workload 1.68x faster
on large VM instances

Analyze 37% more data nightly
on large VM instances

Google Cloud

Intel Workload Proof Series: Microsoft SQL Server Data Analysis on Google Cloud N2 VM instances

Process Analytics Queries Faster with Large VM Instances

Figure 1 shows the results of HammerDB tests comparing with large VM instances. The N2 standard series VM instances had markedly better data analysis times than the older N1 series VM instances, completing the analysis from 1.48 to 1.68 times faster depending on the number of streams.

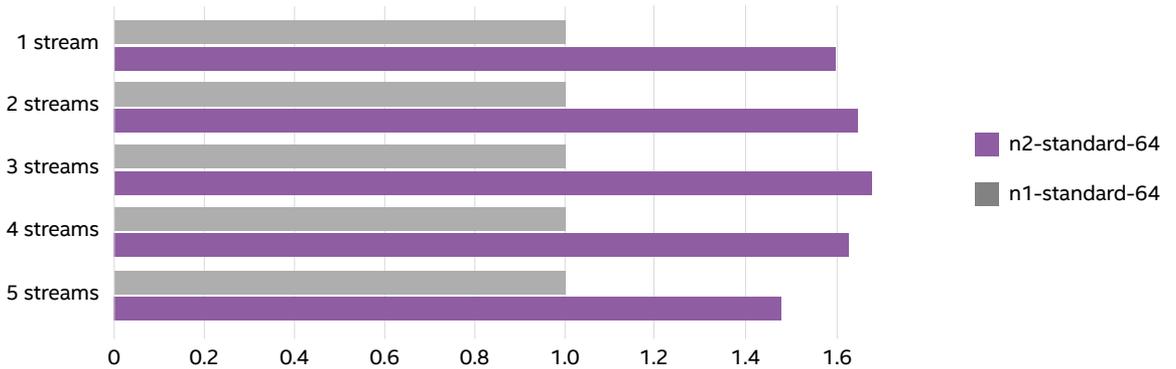### Large VM instance comparison: speed of completion (normalized)

Figure 1. HammerDB test results comparing performance of the N2 instance type to N1 instance type with 64 vCPUs and 100GB database size.

Say your company uses a four-hour window each night to analyze data on a 100GB database. Each day, executives base their business decisions on the results of the previous night's analysis. Based on the results of the single-stream OLAP tests, the large N2 VM instance could complete 580 query streams within your nightly analysis window, while the large N1 VM instance would have time for only 300 query streams. By choosing Google Cloud N2 VM instances with updated 2nd Generation Intel® Xeon® Scalable processors, each night you'd be able to analyze 37 percent more data, and a greater number of actionable insights would be available to decision-makers the following day.

Improve Your Data-Driven Decisions by Selecting Google Cloud N2 VM Instances Enabled by 2nd Generation Intel Xeon Scalable Processors

Regardless of the type of business you're in and the type of information on which you rely, one fact remains constant: data has more value when it is fresh. By running your analytics workloads on newer Google Cloud N2 VM instances enabled by 2nd Generation Intel Xeon Scalable processors, you can make actionable insights available sooner to those who need them.

Learn More

To begin your SQL Server database deployments on Google Cloud N2 VM instances with 2nd Generation Intel Xeon Scalable processors, visit http://intel.com/googlecloud.

For more test details, visit http://facts.pt/0u75KOz.