

Google Cloud™ C2 VM Instances Achieved 1.21x the Total Memory Bandwidth of N1 VM Instances

STREAM



Achieve 1.21x the Total Memory Bandwidth with 60-vCPU C2 VM Instances

vs. 96-vCPU N1 VM Instances



Achieve 1.94x the Memory Bandwidth per vCPU with C2 VM Instances

vs. N1 VM Instances

Get more from your Google Cloud investment by selecting newer C2 VM instances Featuring 2nd Gen Intel® Xeon® Scalable Processors

If your company is using the cloud to run applications where speed is of paramount importance, you benefit by selecting a cloud solution enabled by processors with high memory bandwidth. This metric represents the rate at which a processor can read data from and store data to memory; a higher value translates to better performance. To gain this performance advantage, select a newer Google Cloud C2 VM instance type enabled by 2nd Gen Intel® Xeon® Scalable processors.

In tests using the STREAM benchmark to measure the memory bandwidth of Google Cloud VM instances, new 60-vCPU C2 VM instances enabled by 2nd Gen Intel Xeon Scalable processors achieved 1.21x the total memory bandwidth of older 96-vCPU N1 VM instances. On a per-vCPU basis, that translates to almost twice the memory bandwidth—1.94x. For your applications that need high performance, choose a newer C2 VM instance enabled by 2nd Gen Intel Xeon Scalable processors.

Total Memory Bandwidth

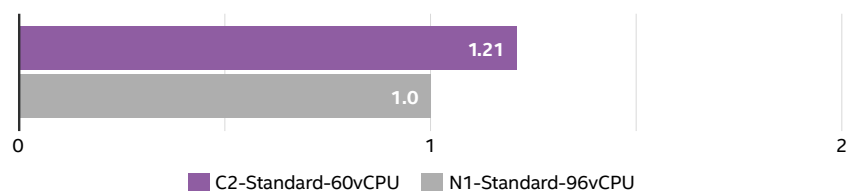


Figure 1. Relative STREAM benchmark results comparing the total memory bandwidth of the 60-vCPU C2 Standard VM instance type to that of the 96-vCPU N1 Standard VM instance type.



Greater memory bandwidth can let you do more fewer vCPUs per instance

As Figure 1 on the previous page shows, the C2 VM instance enabled by 2nd Gen Intel® Xeon® Scalable processors achieved greater total memory bandwidth with only 60 vCPUs, one-third fewer than the 96 vCPUs the older N1 VM instance had.

Taking the total memory bandwidth each VM instance achieved and dividing it by the number of vCPUs in that instance yields a per-vCPU metric for each instance. As Figure 2 shows, the newer C2 VM instance enabled by 2nd Gen Intel Xeon Scalable processors achieved almost twice the memory bandwidth per vCPU of the older N1 VM instance.

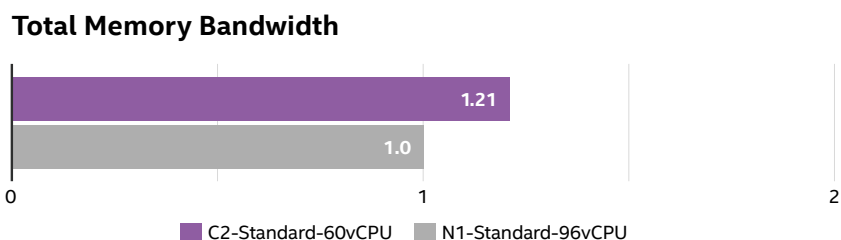


Figure 2. Figure 2. Relative STREAM benchmark results comparing the per-vCPU memory bandwidth of the 60-vCPU C2 Standard VM instance type to that of the 96-vCPU N1 Standard VM instance type.

When speed is of the essence, newer C2 VM instances enabled by Intel Xeon Scalable processors make good business sense, supporting strong application performance to keep business running at a fast clip.

Learn More

To begin running your websites on Google Cloud Platform C2 VM instances with 2nd Gen Intel Xeon Scalable processors, visit intel.com/googlecloud.



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