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## gce-vm-comparison

KVM testing on Ubuntu 20.04 via the Phoronix Test Suite.

### Automated Executive Summary

*c2-standard-16 2 had the most wins, coming in first place for 50% of the tests.*

*The results with the greatest spread from best to worst included:*

*Apache CouchDB (Bulk Size: 100 - Inserts: 1000 - Rounds: 24) at 1.258x*

*LevelDB (Benchmark: Fill Sync) at 1.143x*

*MariaDB (Clients: 512) at 1.051x*

*LevelDB (Benchmark: Hot Read) at 1.049x*

*MariaDB (Clients: 256) at 1.045x*

*PostgreSQL pgbench (Scaling Factor: 1000 - Clients: 1 - Mode: Read Write - Average Latency) at 1.037x*

*PostgreSQL pgbench (Scaling Factor: 1000 - Clients: 1 - Mode: Read Write) at 1.037x*

*MariaDB (Clients: 64) at 1.036x*

*LevelDB (Benchmark: Random Read) at 1.035x*

*MariaDB (Clients: 16) at 1.034x.*

## Test Systems:

### GCE VM comparison

#### PersistentDisk

#### c2-standard-16

Processor: Intel Xeon (8 Cores / 16 Threads), Motherboard: Google Compute Engine c2-standard-16, Chipset: Intel 440FX 82441FX PMC, Memory: 64GB, Disk: 161GB PersistentDisk, Network: Red Hat Virtio device

OS: Ubuntu 20.04, Kernel: 5.4.0-1040-gcp (x86\_64), Compiler: GCC 9.3.0, File-System: ext4, System Layer: KVM

Kernel Notes: Transparent Huge Pages: madvise  
 Compiler Notes: --build=x86\_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale-gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-9-HskZEA/gcc-9-9.3.0/debian/tmp-nvptx/usr,hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86\_64-linux-gnu --program-prefix=x86\_64-linux-gnu- --target=x86\_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v  
 Disk Notes: NONE / relatime,rw / Block Size: 4096  
 Processor Notes: CPU Microcode: 0x1  
 Security Notes: itlb\_multihit: Not affected + l1tf: Not affected + mds: Mitigation of Clear buffers; SMT Host state unknown + meltdown: Not affected + spec\_store\_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre\_v1: Mitigation of usercopy/swapgs barriers and \_\_user pointer sanitization + spectre\_v2: Mitigation of Enhanced IBRS IBPB: conditional RSB filling + srbds: Not affected + tsx\_async\_abort: Mitigation of Clear buffers; SMT Host state unknown

#### c2-standard-16 2

Processor: Intel Xeon (8 Cores / 16 Threads), Motherboard: Google Compute Engine c2-standard-16, Chipset: Intel 440FX 82441FX PMC, Memory: 64GB, Disk: 161GB PersistentDisk, Network: Red Hat Virtio device

OS: Ubuntu 20.04, Kernel: 5.4.0-1040-gcp (x86\_64), Display Server: X Server 1.20.9, Compiler: GCC 9.3.0, File-System: ext4, System Layer: KVM

Kernel Notes: Transparent Huge Pages: madvise  
 Compiler Notes: --build=x86\_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale-gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-9-HskZEA/gcc-9-9.3.0/debian/tmp-nvptx/usr,hsa --enable-plugin --enable-shared --enable-threads=posix --host=x86\_64-linux-gnu --program-prefix=x86\_64-linux-gnu- --target=x86\_64-linux-gnu --with-abi=m64 --with-arch-32=i686 --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-multilib-list=m32,m64,mx32 --with-target-system-zlib=auto --with-tune=generic --without-cuda-driver -v  
 Disk Notes: NONE / relatime,rw / Block Size: 4096  
 Processor Notes: CPU Microcode: 0x1  
 Security Notes: itlb\_multihit: Not affected + l1tf: Not affected + mds: Mitigation of Clear buffers; SMT Host state unknown + meltdown: Not affected + spec\_store\_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre\_v1: Mitigation of usercopy/swapgs barriers and \_\_user pointer sanitization + spectre\_v2: Mitigation of Enhanced IBRS IBPB: conditional RSB filling + srbds: Not affected + tsx\_async\_abort: Mitigation of Clear buffers; SMT Host state unknown

	GCE VM comparison	PersistentDisk	c2-standard-16	c2-standard-16 2
<b>LevelDB - Hot Read (us/Op)</b>	15.083		<b>14.449</b>	<b>15.159</b>
Normalized	95.8%		100%	95.32%
Standard Deviation	2.8%		1.3%	2.2%
<b>LevelDB - Fill Sync (MB/s)</b>	<b>0.7</b>		<b>0.8</b>	<b>0.8</b>
Normalized	87.5%		100%	100%
Standard Deviation	3.9%		3.6%	0%
<b>LevelDB - Fill Sync (us/Op)</b>	<b>2385</b>		<b>2318</b>	2319

	Normalized Standard Deviation	97.19% 1.4%	100% 1.1%	99.94% 1%
<b>LevelDB - Overwrite (MB/s)</b>	<b>15.8</b>		<b>15.9</b>	<b>15.8</b>
	Normalized Standard Deviation	99.37% 0%	100% 0.7%	99.37% 0.4%
<b>LevelDB - Overwrite (us/Op)</b>	<b>112.041</b>		<b>111.548</b>	<b>111.944</b>
	Normalized Standard Deviation	99.56% 0.1%	100% 0.6%	99.65% 0.4%
<b>LevelDB - Rand Fill (MB/s)</b>	<b>15.8</b>		<b>15.8</b>	<b>15.7</b>
	Normalized Standard Deviation	100% 0%	100% 0.4%	99.37% 0.4%
<b>LevelDB - Rand Fill (us/Op)</b>	<b>111.921</b>		<b>111.626</b>	<b>112.126</b>
	Normalized Standard Deviation	99.74% 0.2%	100% 0.3%	99.55% 0.3%
<b>LevelDB - Rand Read (us/Op)</b>	<b>15.450</b>		<b>15.108</b>	<b>15.637</b>
	Normalized Standard Deviation	97.79% 1.5%	100% 1.7%	96.62% 0.1%
<b>LevelDB - Seek Rand (us/Op)</b>	<b>19.103</b>		<b>18.792</b>	<b>19.220</b>
	Normalized Standard Deviation	98.37% 0.9%	100% 1.6%	97.77% 0.3%
<b>LevelDB - Rand Delete (us/Op)</b>	<b>110.879</b>		<b>111.059</b>	<b>110.998</b>
	Normalized Standard Deviation	100% 0.3%	99.84% 0.1%	99.89% 0.1%
<b>LevelDB - Seq Fill (MB/s)</b>	<b>15.8</b>		<b>15.8</b>	<b>15.8</b>
	Normalized Standard Deviation	0% 0%	0.4% 0.4%	0.4% 0.4%
<b>LevelDB - Seq Fill (us/Op)</b>	<b>111.946</b>		<b>112.159</b>	<b>111.593</b>
	Normalized Standard Deviation	99.68% 0.1%	99.5% 0.5%	100% 0.2%
<b>SQLite - 1 (sec)</b>	<b>16.724</b>		<b>16.925</b>	<b>16.906</b>
	Normalized Standard Deviation	100% 0.9%	98.81% 2.3%	98.92% 0.8%
<b>Apache CouchDB - 100 - 1000 - 24</b>	<b>97.714</b>		<b>122.960</b>	<b>119.776</b>
	Normalized Standard Deviation	100% 0.4%	79.47% 0.9%	81.58% 0.3%
<b>MariaDB - 1 (Queries/sec)</b>	<b>2982</b>		<b>3049</b>	<b>2988</b>
	Normalized Standard Deviation	97.8% 0.5%	100% 0.9%	98% 1.1%
<b>MariaDB - 4 (Queries/sec)</b>	<b>1934</b>		<b>1922</b>	<b>1867</b>
	Normalized Standard Deviation	100% 5.5%	99.38% 0.6%	96.54% 8.9%
<b>MariaDB - 8 (Queries/sec)</b>	<b>1814</b>		<b>1796</b>	<b>1811</b>
	Normalized Standard Deviation	100% 0.8%	99.01% 0.5%	99.83% 2.1%
<b>MariaDB - 16 (Queries/sec)</b>	<b>1675</b>		<b>1620</b>	<b>1672</b>
	Normalized Standard Deviation	100% 0.6%	96.72% 0.1%	99.82% 0.7%
<b>MariaDB - 32 (Queries/sec)</b>	<b>1347</b>		<b>1334</b>	<b>1364</b>
	Normalized Standard Deviation	98.75% 0.4%	97.8% 0.6%	100% 0.2%
<b>MariaDB - 64 (Queries/sec)</b>	<b>972</b>		<b>1005</b>	<b>1007</b>
	Normalized Standard Deviation	96.52% 2%	99.8% 0.2%	100% 0.4%
<b>MariaDB - 128 (Queries/sec)</b>	<b>352</b>		<b>358</b>	<b>358</b>
	Normalized Standard Deviation	98.32% 2.2%	100% 1%	100% 2.3%

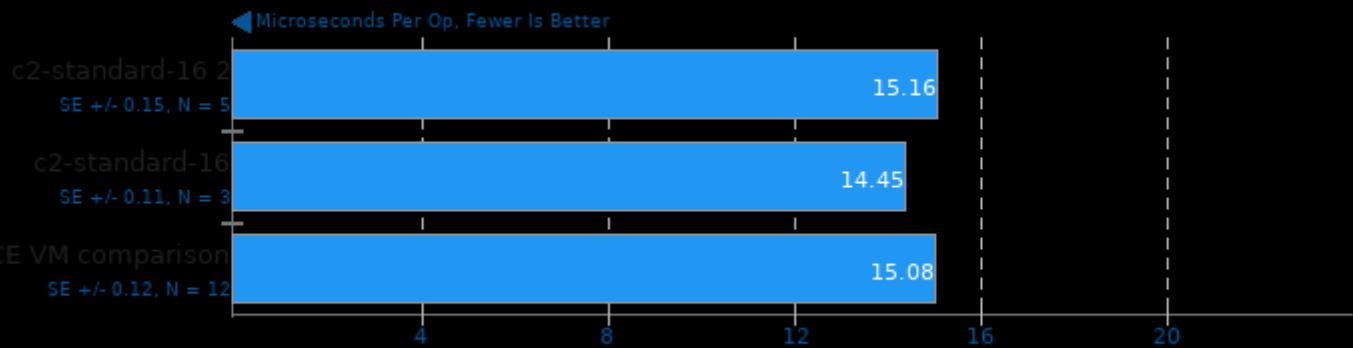
<b>MariaDB - 256 (Queries/sec)</b>	295	<b>290</b>	<b>303</b>
Normalized	97.36%	95.71%	100%
Standard Deviation	2.1%	0.7%	0.9%
<b>MariaDB - 512 (Queries/sec)</b>	261	<b>254</b>	<b>267</b>
Normalized	97.75%	95.13%	100%
Standard Deviation	1.5%	1.4%	0.5%
<b>PostgreSQL pgbench - 1 - 1 - Read</b>	<b>22019</b>		<b>22156</b>
Only (TPS)			
Normalized	99.38%	100%	
Standard Deviation	0.8%	1.1%	
<b>PostgreSQL pgbench - 1 - 1 - Read</b>	0.045		0.045
Only - Average Latency (ms)			
Standard Deviation	1.3%	1.3%	
<b>PostgreSQL pgbench - 1 - 1 - Read</b>	<b>1225</b>		<b>1248</b>
Write (TPS)			
Normalized	98.16%	100%	
Standard Deviation	0.8%	0.7%	
<b>PostgreSQL pgbench - 1 - 1 - Read</b>	<b>0.816</b>		<b>0.802</b>
Write - Average Latency (ms)			
Normalized	98.28%	100%	
Standard Deviation	0.7%	0.7%	
<b>PostgreSQL pgbench - 1 - 50 - Read</b>	<b>214289</b>		<b>221423</b>
Only (TPS)			
Normalized	96.78%	100%	
Standard Deviation	0.1%	0.5%	
<b>PostgreSQL pgbench - 1 - 50 - Read</b>	<b>0.233</b>		<b>0.226</b>
Only - Average Latency (ms)			
Normalized	97%	100%	
Standard Deviation	0.2%	0.4%	
<b>PostgreSQL pgbench - 1 - 100 - Read</b>	<b>226079</b>		<b>232921</b>
Only (TPS)			
Normalized	97.06%	100%	
Standard Deviation	0.9%	0.4%	
<b>PostgreSQL pgbench - 1 - 100 - Read</b>	<b>0.443</b>		<b>0.430</b>
Only - Average Latency (ms)			
Normalized	97.07%	100%	
Standard Deviation	0.9%	0.5%	
<b>PostgreSQL pgbench - 1 - 250 - Read</b>	<b>215591</b>		<b>215242</b>
Only (TPS)			
Normalized	100%	99.84%	
Standard Deviation	0.3%	1.8%	
<b>PostgreSQL pgbench - 1 - 250 - Read</b>	<b>1.160</b>		<b>1.162</b>
Only - Average Latency (ms)			
Normalized	100%	99.83%	
Standard Deviation	0.2%	1.8%	
<b>PostgreSQL pgbench - 1 - 50 - Read</b>	<b>1514</b>		<b>1515</b>
Write (TPS)			
Normalized	99.93%	100%	
Standard Deviation	1.8%	2.2%	
<b>PostgreSQL pgbench - 1 - 50 - Read</b>	<b>33.040</b>		<b>33.017</b>
Write - Average Latency (ms)			
Normalized	99.93%	100%	
Standard Deviation	1.8%	2.3%	

PostgreSQL pgbench - 100 - 1 - Read	<b>18754</b>		<b>18650</b>
Only (TPS)			
Normalized	100%		99.45%
Standard Deviation	0.6%		1.2%
PostgreSQL pgbench - 100 - 1 - Read	0.053		0.053
Only - Average Latency (ms)			
Standard Deviation	1.1%		1.1%
PostgreSQL pgbench - 1 - 100 - Read	<b>1431</b>		<b>1399</b>
Write (TPS)			
Normalized	100%		97.76%
Standard Deviation	1.1%		2.1%
PostgreSQL pgbench - 1 - 100 - Read	<b>69.899</b>		<b>71.555</b>
Write - Average Latency (ms)			
Normalized	100%		97.69%
Standard Deviation	1.1%		2.2%
PostgreSQL pgbench - 1 - 250 - Read	<b>1229</b>		<b>1230</b>
Write (TPS)			
Normalized	99.92%		100%
Standard Deviation	1.1%		3%
PostgreSQL pgbench - 1 - 250 - Read	<b>203.469</b>		<b>203.552</b>
Write - Average Latency (ms)			
Normalized	100%		99.96%
Standard Deviation	1.1%		3%
PostgreSQL pgbench - 100 - 1 - Read	<b>878</b>		<b>971</b>
Write (TPS)			
Normalized	90.42%		100%
Standard Deviation	16.9%		11.3%
PostgreSQL pgbench - 100 - 1 - Read	<b>1.170</b>		<b>1.046</b>
Write - Average Latency (ms)			
Normalized	89.4%		100%
Standard Deviation	17.4%		14.1%
PostgreSQL pgbench - 100 - 50 - Read	<b>173439</b>		<b>177464</b>
Only (TPS)			
Normalized	97.73%		100%
Standard Deviation	0.4%		0.4%
PostgreSQL pgbench - 100 - 50 - Read	<b>0.288</b>		<b>0.282</b>
Only - Average Latency (ms)			
Normalized	97.92%		100%
Standard Deviation	0.4%		0.4%
PostgreSQL pgbench - 1000 - 1 - Read	<b>17252</b>		<b>17542</b>
Only (TPS)			
Normalized	98.35%		100%
Standard Deviation	2.4%		1%
PostgreSQL pgbench - 1000 - 1 - Read	<b>0.058</b>		<b>0.057</b>
Only - Average Latency (ms)			
Normalized	98.28%		100%
Standard Deviation	1.7%		1%
PostgreSQL pgbench - 100 - 100 -	<b>182659</b>		<b>184986</b>
Read Only (TPS)			
Normalized	98.74%		100%
Standard Deviation	0.2%		0.1%

<b>PostgreSQL pgbench - 100 - 100 - <span style="color: red;">0.548</span></b>	<b>Read Only - Average Latency (ms)</b>	<b>0.541</b>
Normalized 98.72%		100%
Standard Deviation 0.2%		0.1%
<b>PostgreSQL pgbench - 100 - 250 - <span style="color: red;">166151</span></b>	<b>Read Only (TPS)</b>	<b>167859</b>
Normalized 98.98%		100%
Standard Deviation 0.5%		0.3%
<b>PostgreSQL pgbench - 100 - 250 - <span style="color: red;">1.505</span></b>	<b>Read Only - Average Latency (ms)</b>	<b>1.490</b>
Normalized 99%		100%
Standard Deviation 0.5%		0.3%
<b>PostgreSQL pgbench - 100 - 50 - Read <span style="color: red;">3356</span></b>	<b>Write (TPS)</b>	<b>3440</b>
Normalized 97.56%		100%
Standard Deviation 2.4%		3.1%
<b>PostgreSQL pgbench - 100 - 50 - Read <span style="color: red;">14.905</span></b>	<b>Write - Average Latency (ms)</b>	<b>14.549</b>
Normalized 97.61%		100%
Standard Deviation 2.4%		3.1%
<b>PostgreSQL pgbench - 1000 - 1 - Read <span style="color: green;">1168</span></b>	<b>Write (TPS)</b>	<b>1126</b>
Normalized 100%		96.4%
Standard Deviation 0.6%		0.5%
<b>PostgreSQL pgbench - 1000 - 1 - Read <span style="color: green;">0.856</span></b>	<b>Write - Average Latency (ms)</b>	<b>0.888</b>
Normalized 100%		96.4%
Standard Deviation 0.6%		0.5%
<b>PostgreSQL pgbench - 1000 - 50 - <span style="color: red;">165375</span></b>	<b>Read Only (TPS)</b>	<b>169437</b>
Normalized 97.6%		100%
Standard Deviation 1.1%		0.2%
<b>PostgreSQL pgbench - 1000 - 50 - <span style="color: red;">0.302</span></b>	<b>Read Only - Average Latency (ms)</b>	<b>0.295</b>
Normalized 97.68%		100%
Standard Deviation 1%		0.2%

## LevelDB 1.22

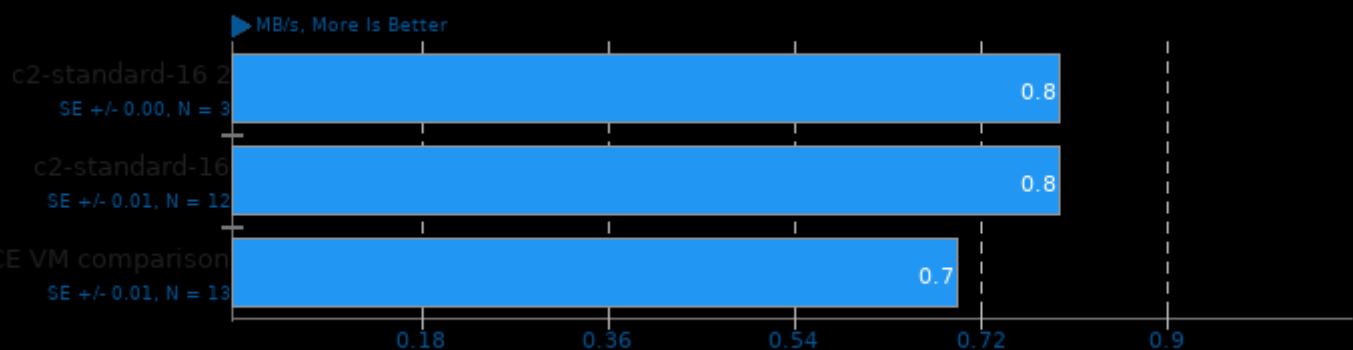
Benchmark: Hot Read



1. (CXX) g++ options: -O3 -lsnappy -lpthread

## LevelDB 1.22

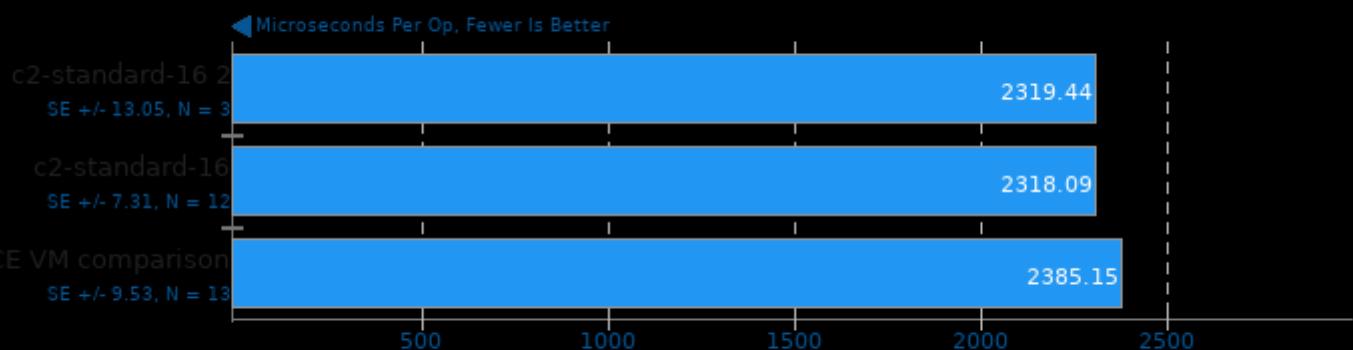
Benchmark: Fill Sync



1. (CXX) g++ options: -O3 -lsnappy -lpthread

## LevelDB 1.22

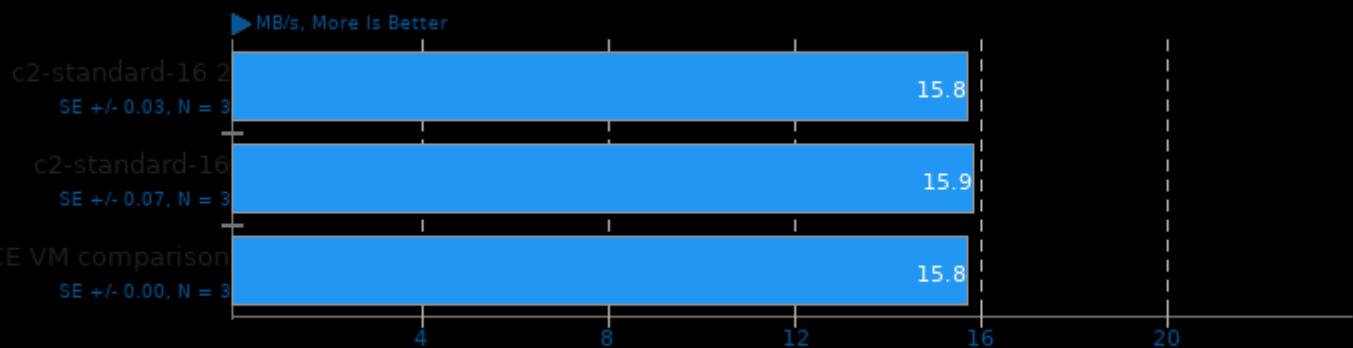
Benchmark: Fill Sync



1. (CXX) g++ options: -O3 -lsnappy -lpthread

## LevelDB 1.22

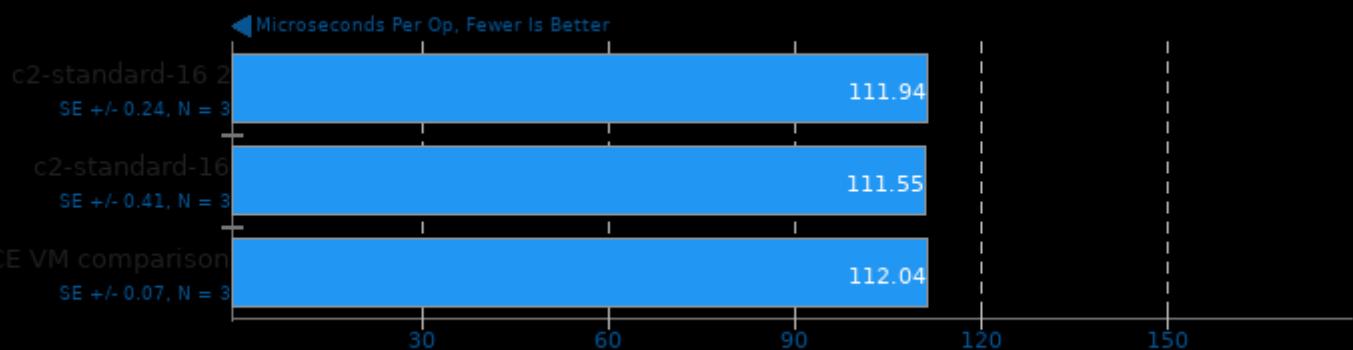
Benchmark: Overwrite



1. (CXX) g++ options: -O3 -lsnappy -lpthread

## LevelDB 1.22

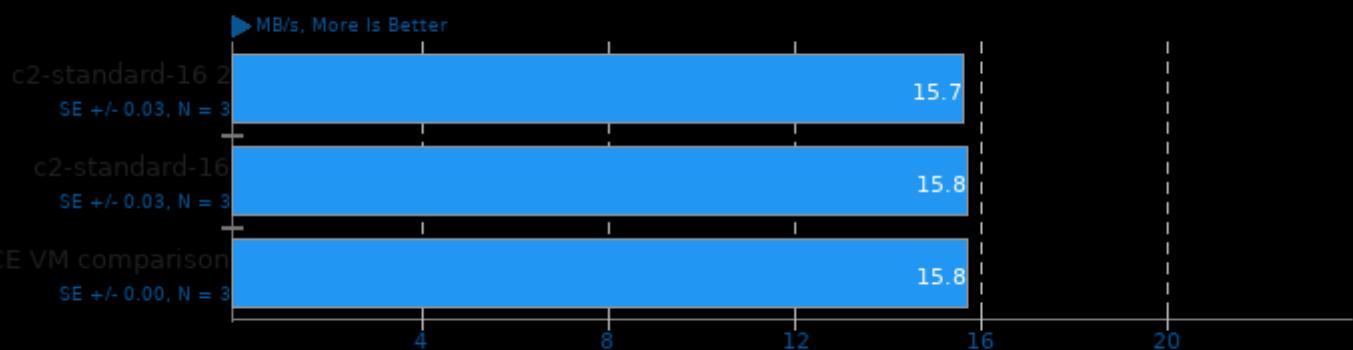
Benchmark: Overwrite



1. (CXX) g++ options: -O3 -lsnappy -lpthread

## LevelDB 1.22

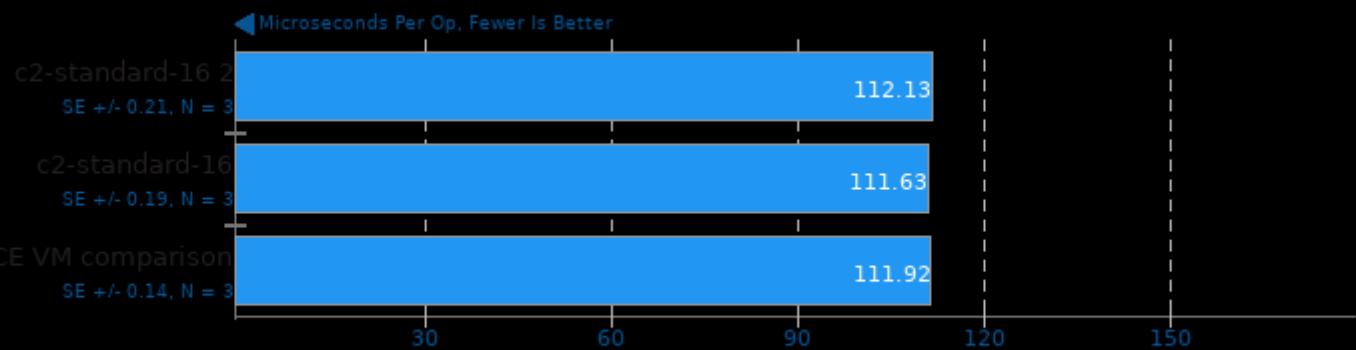
Benchmark: Random Fill



1. (CXX) g++ options: -O3 -lsnappy -lpthread

## LevelDB 1.22

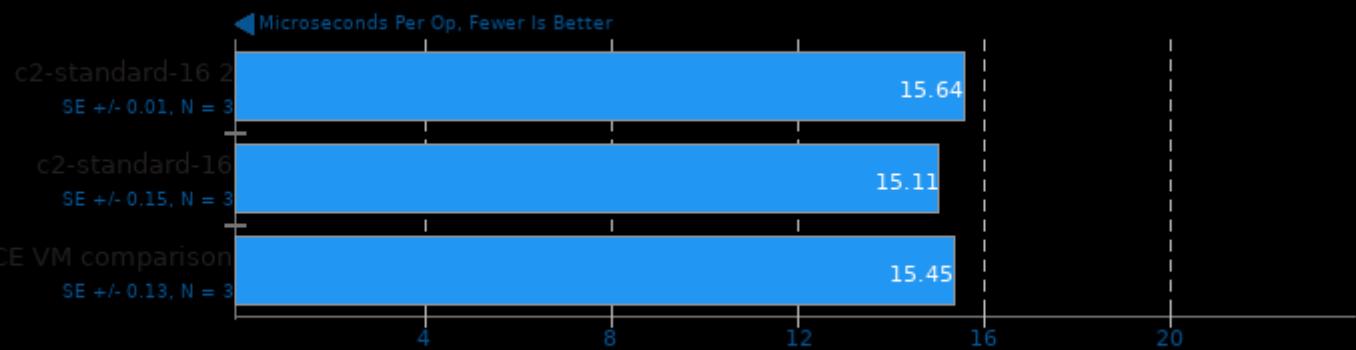
Benchmark: Random Fill



1. (CXX) g++ options: -O3 -lsnappy -lpthread

## LevelDB 1.22

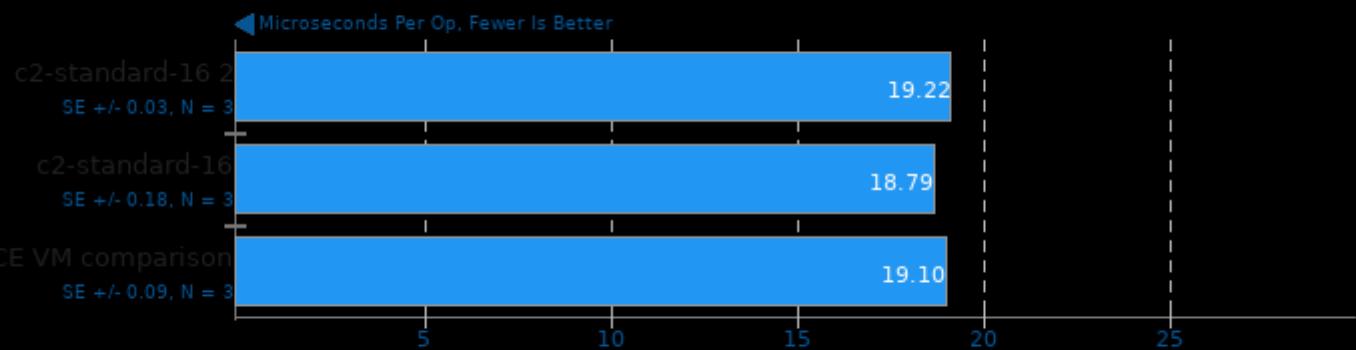
Benchmark: Random Read



1. (CXX) g++ options: -O3 -lsnappy -lpthread

## LevelDB 1.22

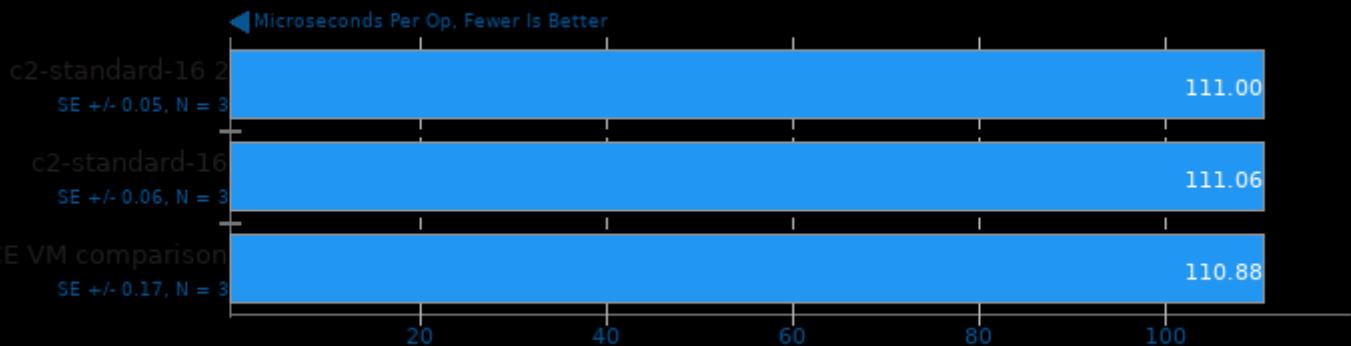
Benchmark: Seek Random



1. (CXX) g++ options: -O3 -lsnappy -lpthread

## LevelDB 1.22

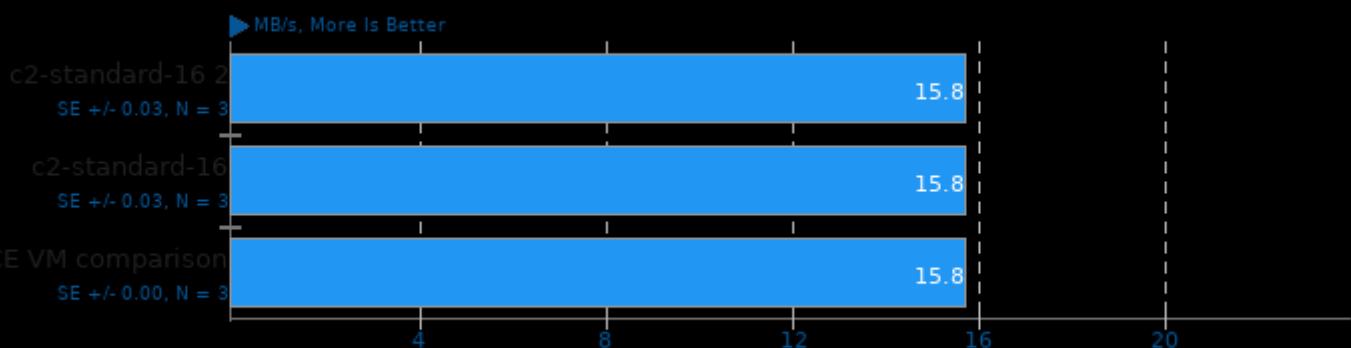
Benchmark: Random Delete



1. (CXX) g++ options: -O3 -lsnappy -lpthread

## LevelDB 1.22

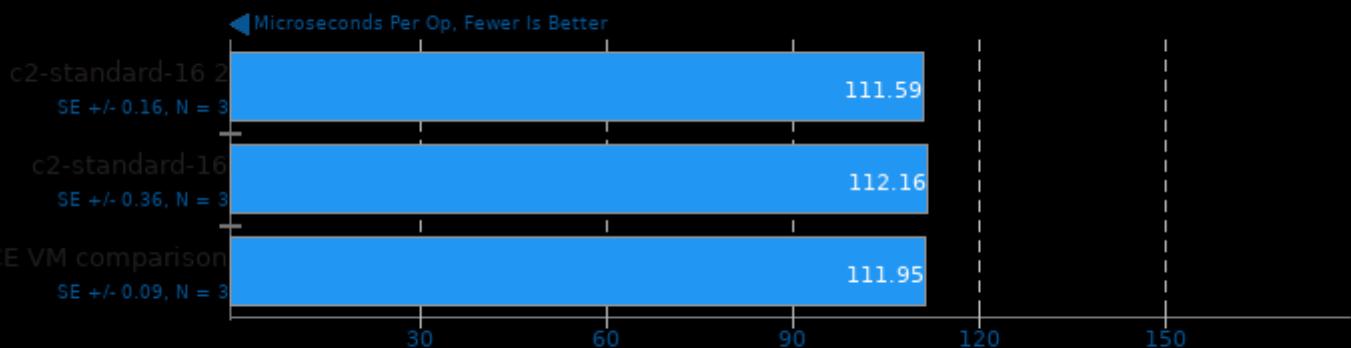
Benchmark: Sequential Fill



1. (CXX) g++ options: -O3 -lsnappy -lpthread

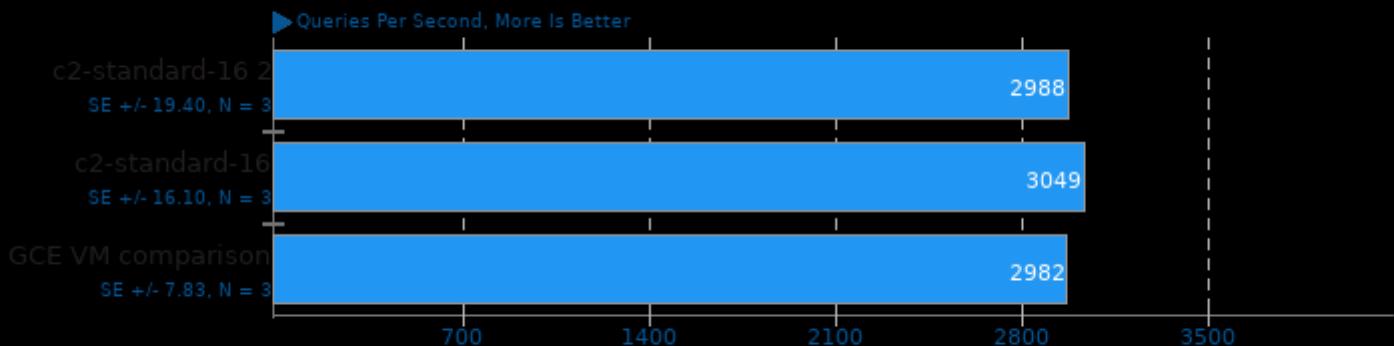
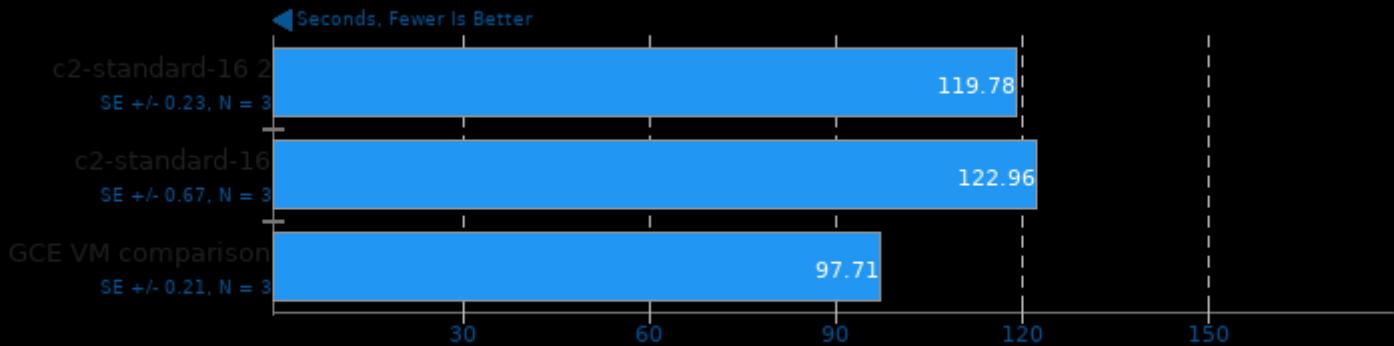
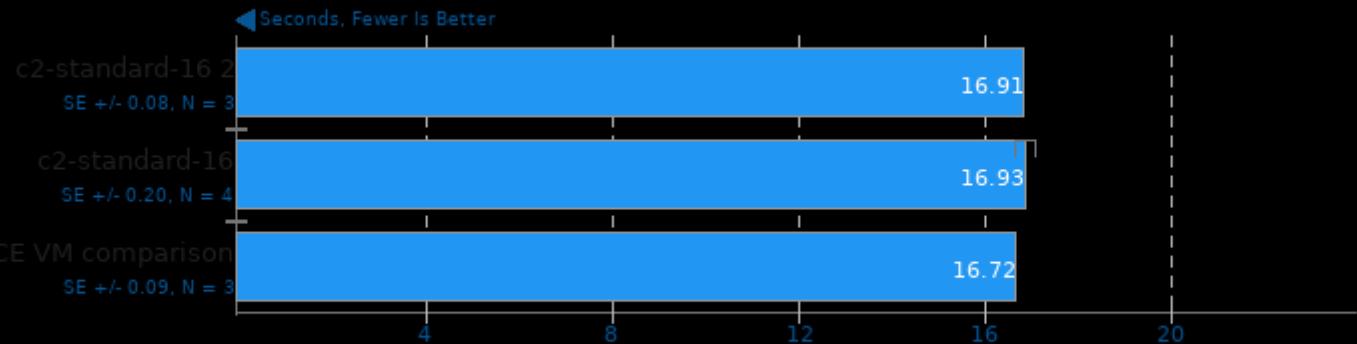
## LevelDB 1.22

Benchmark: Sequential Fill



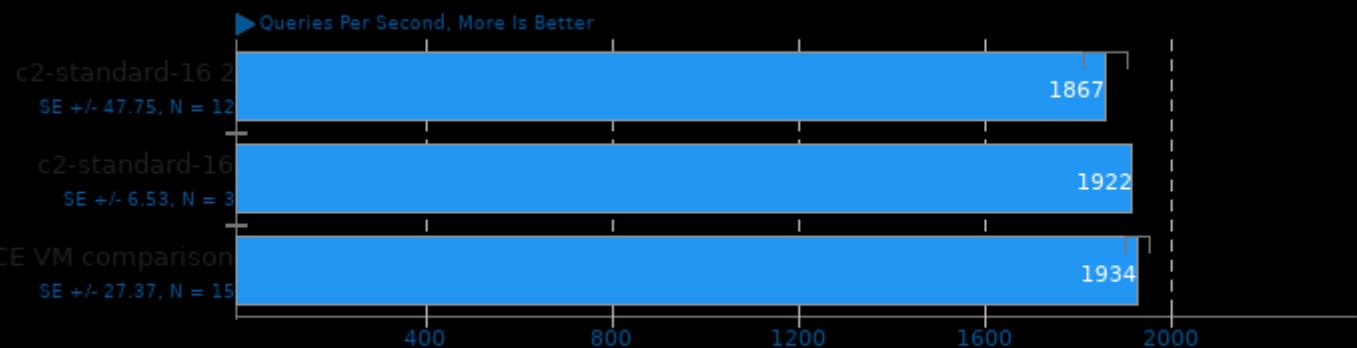
1. (CXX) g++ options: -O3 -lsnappy -lpthread

SQLite 3.30.1



## MariaDB 10.5.2

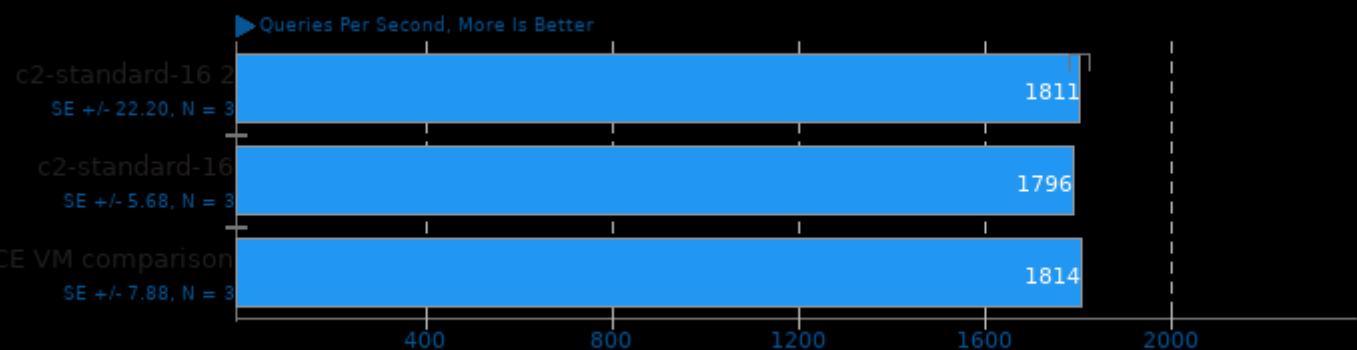
Clients: 4



1. (CXX) g++ options: -pie -fPIC -fstack-protector -O2 -lpthread -lsnappy -lcrypt -lz -lm -lssl -lcrypto -ldl

## MariaDB 10.5.2

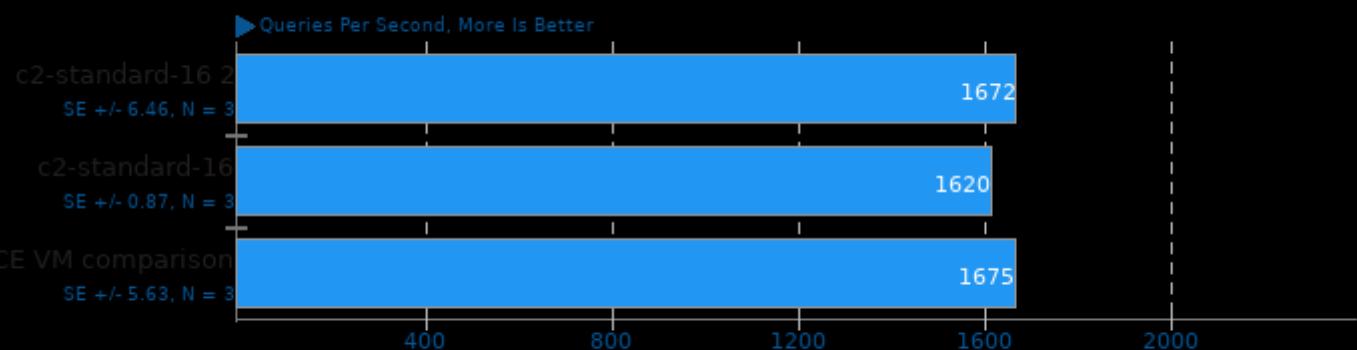
Clients: 8



1. (CXX) g++ options: -pie -fPIC -fstack-protector -O2 -lpthread -lsnappy -lcrypt -lz -lm -lssl -lcrypto -ldl

## MariaDB 10.5.2

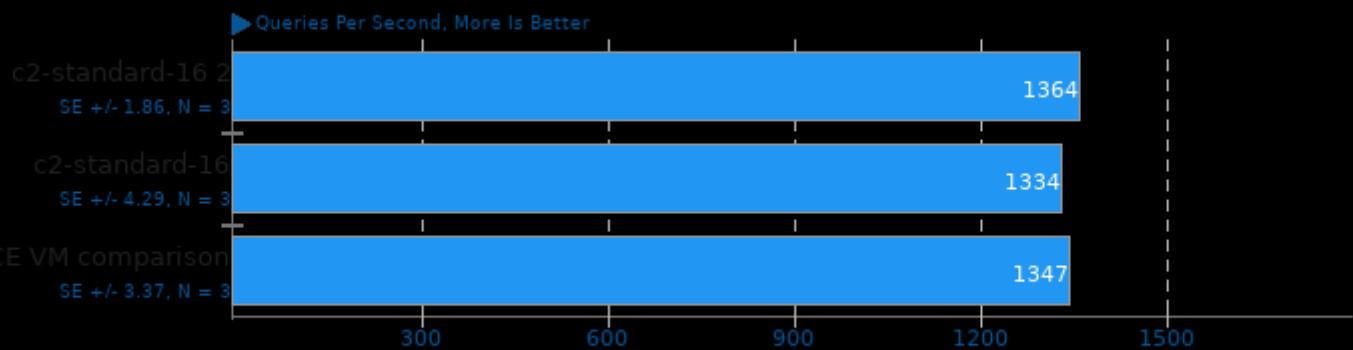
Clients: 16



1. (CXX) g++ options: -pie -fPIC -fstack-protector -O2 -lpthread -lsnappy -lcrypt -lz -lm -lssl -lcrypto -ldl

## MariaDB 10.5.2

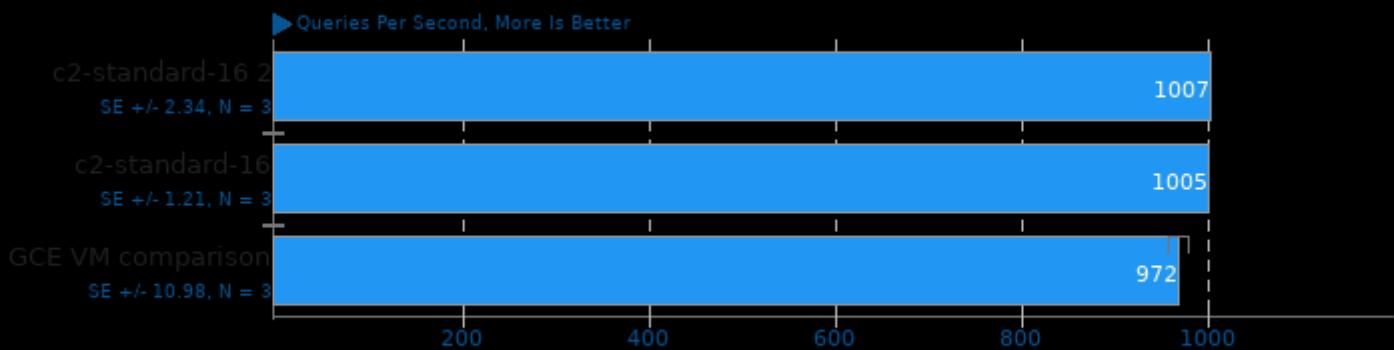
Clients: 32



1. (CXX) g++ options: -pie -fPIC -fstack-protector -O2 -lpthread -lsnappy -lcrypt -lz -lmem -lssl -lcrypto -ldl

## MariaDB 10.5.2

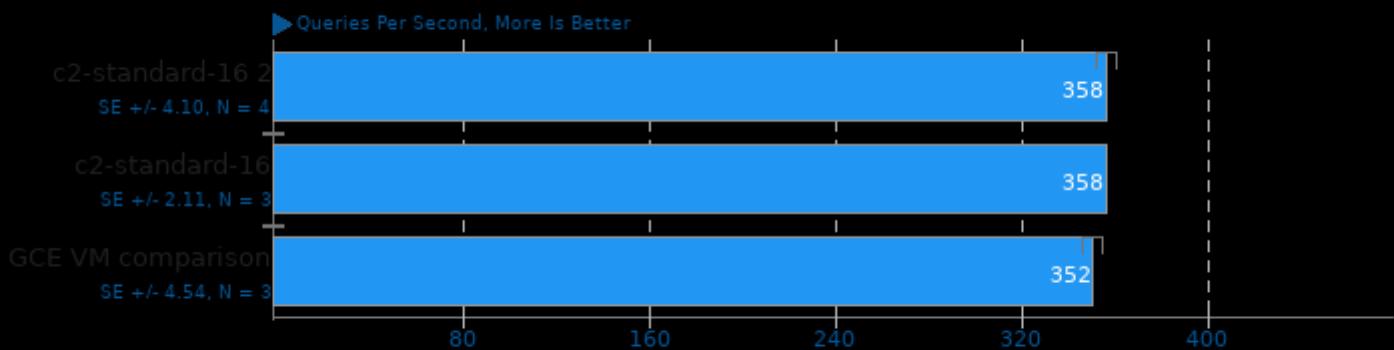
Clients: 64



1. (CXX) g++ options: -pie -fPIC -fstack-protector -O2 -lpthread -lsnappy -lcrypt -lz -lmem -lssl -lcrypto -ldl

## MariaDB 10.5.2

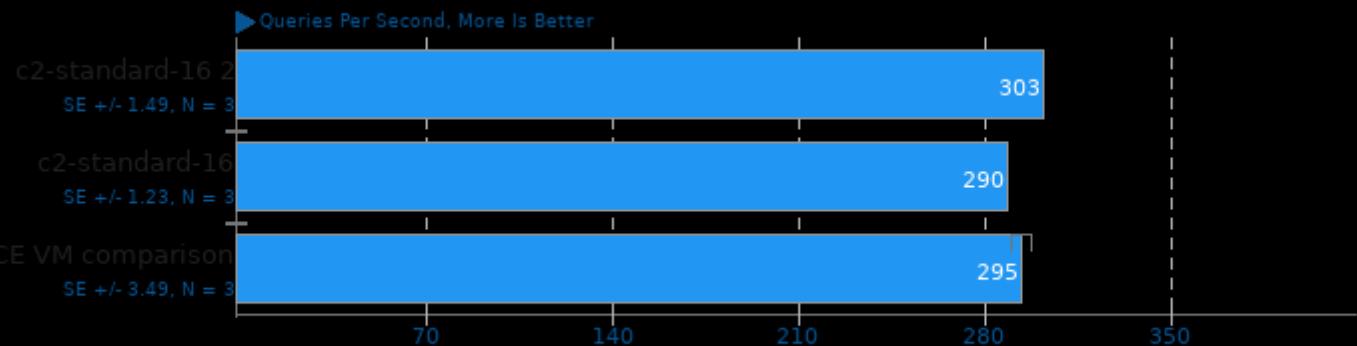
Clients: 128



1. (CXX) g++ options: -pie -fPIC -fstack-protector -O2 -lpthread -lsnappy -lcrypt -lz -lmem -lssl -lcrypto -ldl

## MariaDB 10.5.2

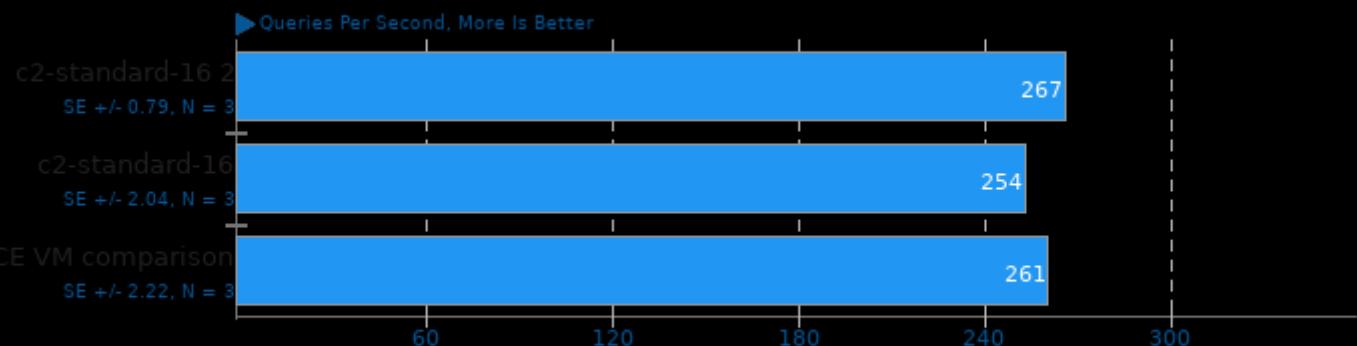
Clients: 256



1. (CXX) g++ options: -pie -fPIC -fstack-protector -O2 -lpthread -lsnappy -lcrypt -lz -lssl -lcrypto -ldl

## MariaDB 10.5.2

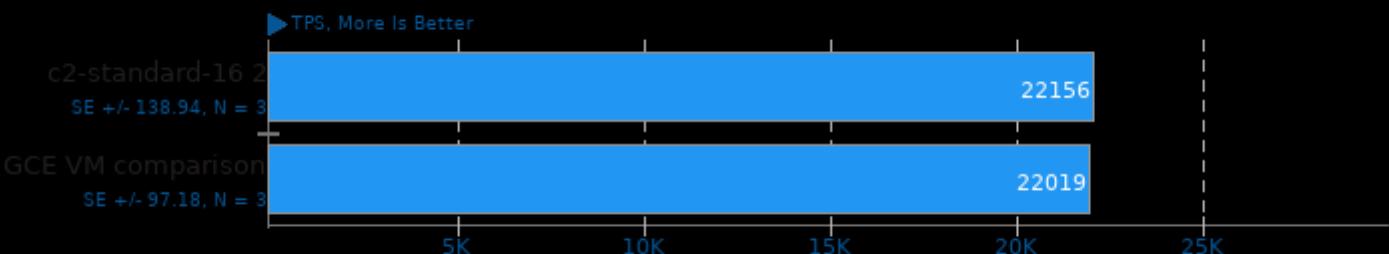
Clients: 512



1. (CXX) g++ options: -pie -fPIC -fstack-protector -O2 -lpthread -lsnappy -lcrypt -lz -lssl -lcrypto -ldl

## PostgreSQL pgbench 13.0

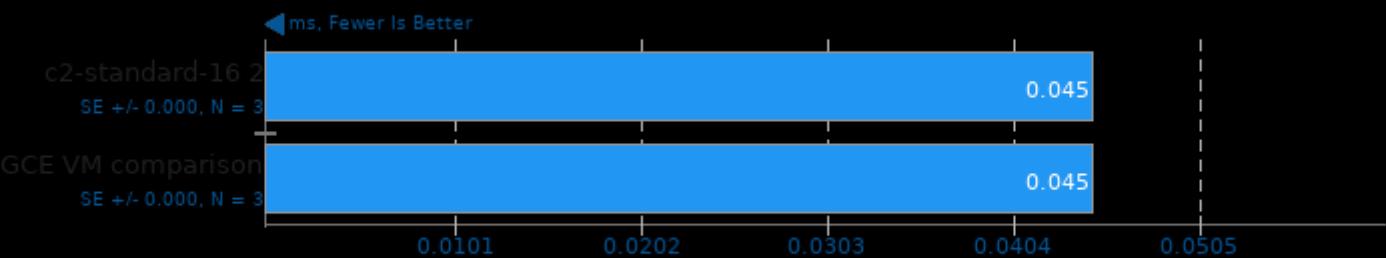
Scaling Factor: 1 - Clients: 1 - Mode: Read Only



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lgpgcommon -lgpgport -lpq -lpthread -lrt -ldl -lm

## PostgreSQL pgbench 13.0

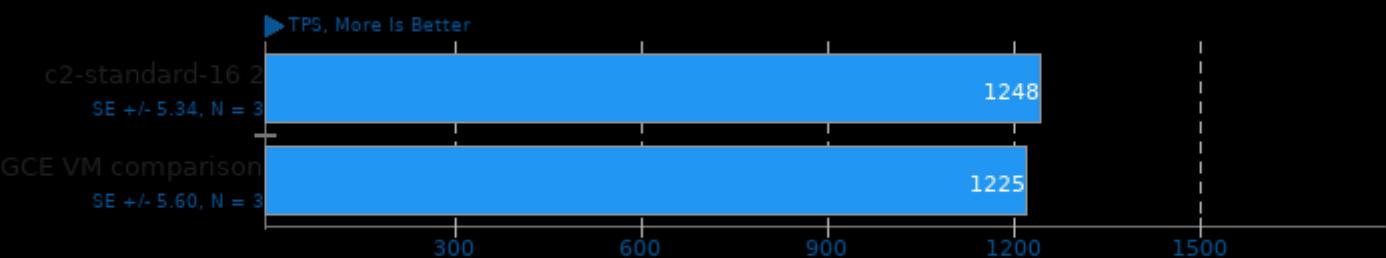
Scaling Factor: 1 - Clients: 1 - Mode: Read Only - Average Latency



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lpgcommon -lpgport -lpq -lpthread -lrt -ldl -lm

## PostgreSQL pgbench 13.0

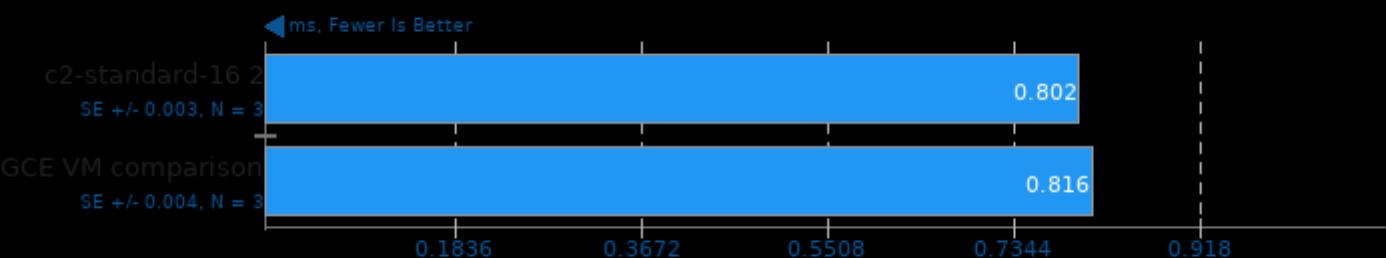
Scaling Factor: 1 - Clients: 1 - Mode: Read Write



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lpgcommon -lpgport -lpq -lpthread -lrt -ldl -lm

## PostgreSQL pgbench 13.0

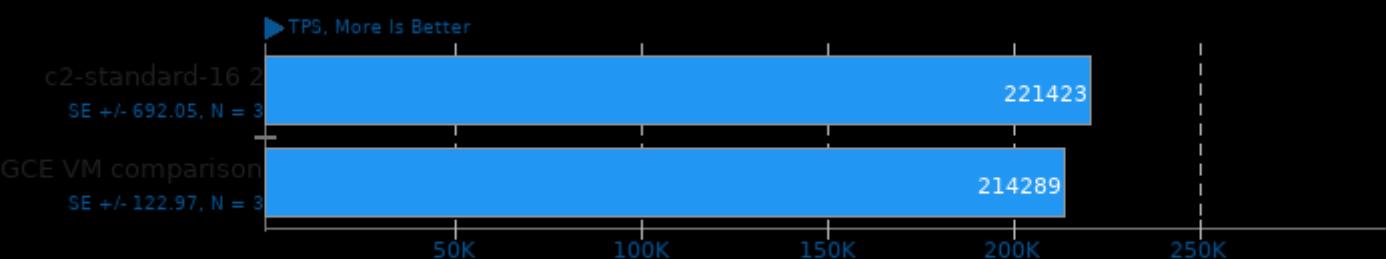
Scaling Factor: 1 - Clients: 1 - Mode: Read Write - Average Latency



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lpgcommon -lpgport -lpq -lpthread -lrt -ldl -lm

## PostgreSQL pgbench 13.0

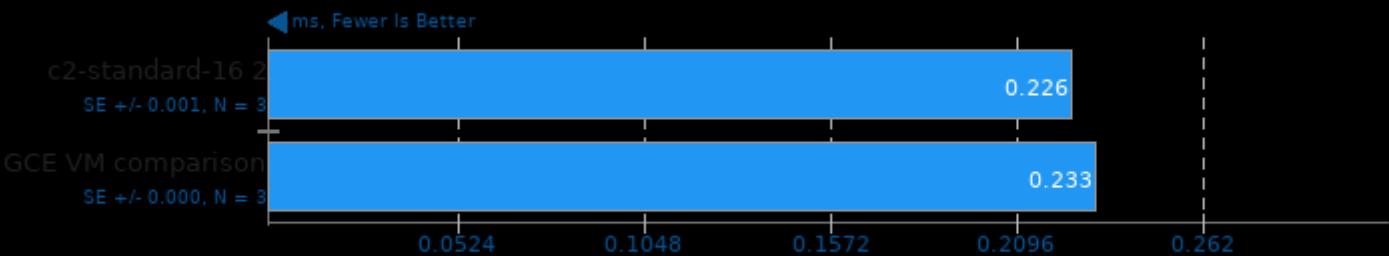
Scaling Factor: 1 - Clients: 50 - Mode: Read Only



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lpgcommon -lpgport -lpq -lpthread -lrt -ldl -lm

## PostgreSQL pgbench 13.0

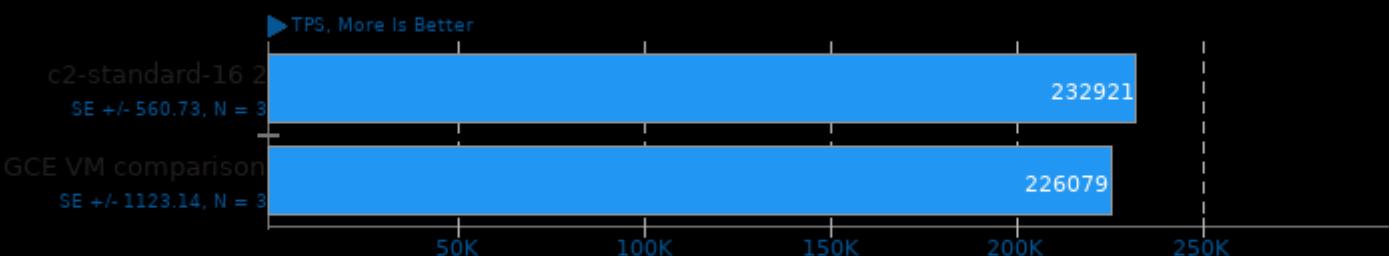
Scaling Factor: 1 - Clients: 50 - Mode: Read Only - Average Latency



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lgpgcommon -lgpgport -lpq -lpthread -lrt -ldl -lm

## PostgreSQL pgbench 13.0

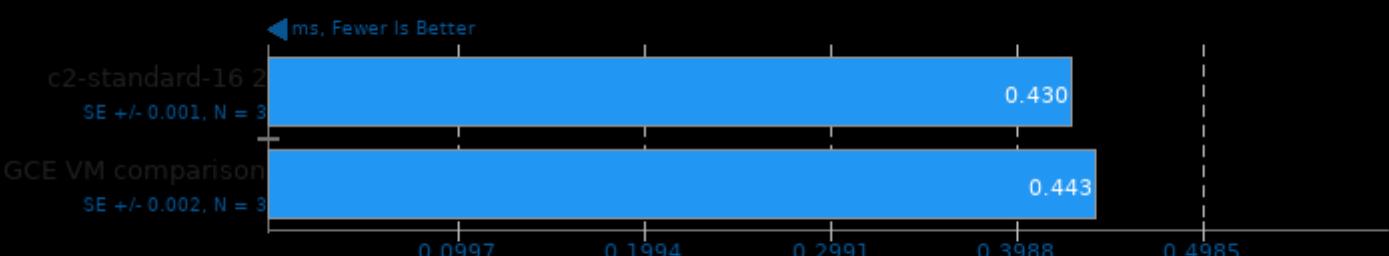
Scaling Factor: 1 - Clients: 100 - Mode: Read Only



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lgpgcommon -lgpgport -lpq -lpthread -lrt -ldl -lm

## PostgreSQL pgbench 13.0

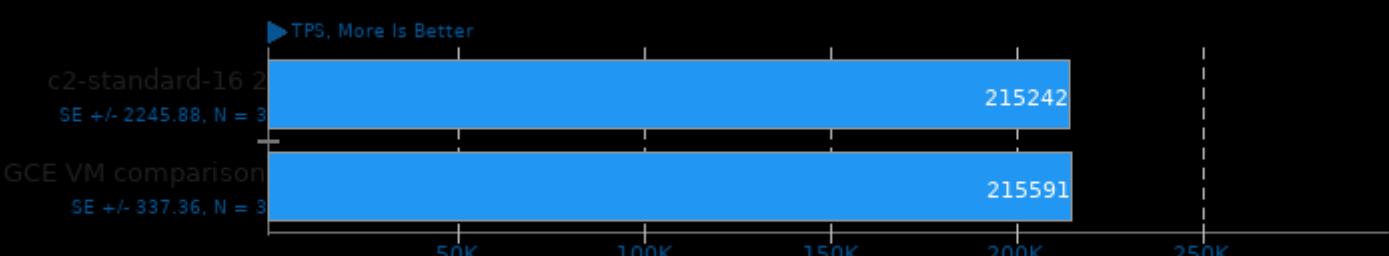
Scaling Factor: 1 - Clients: 100 - Mode: Read Only - Average Latency



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lgpgcommon -lgpgport -lpq -lpthread -lrt -ldl -lm

## PostgreSQL pgbench 13.0

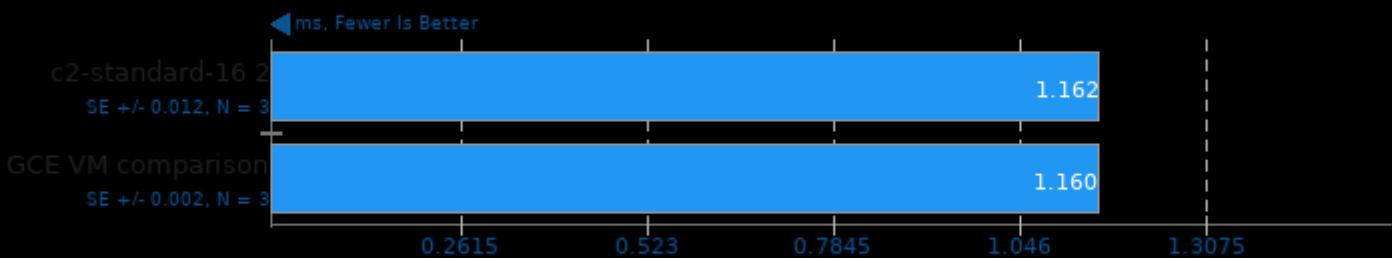
Scaling Factor: 1 - Clients: 250 - Mode: Read Only



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lgpgcommon -lgpgport -lpq -lpthread -lrt -ldl -lm

## PostgreSQL pgbench 13.0

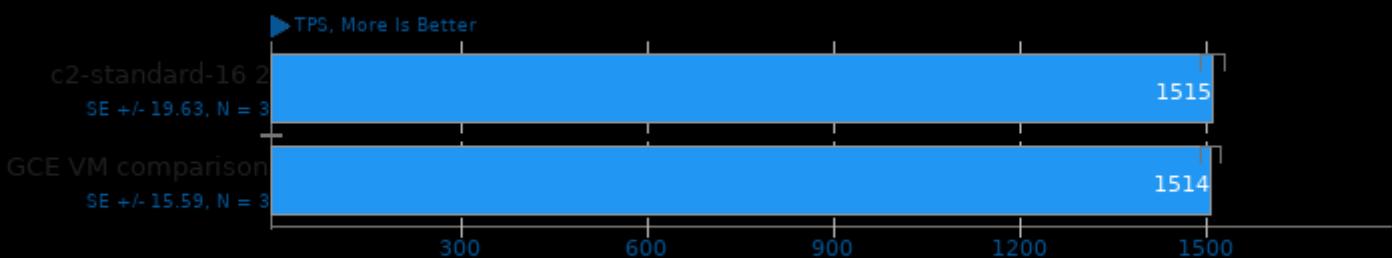
Scaling Factor: 1 - Clients: 250 - Mode: Read Only - Average Latency



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lgpgcommon -lgpgport -lpq -lpthread -lrt -ldl -lm

## PostgreSQL pgbench 13.0

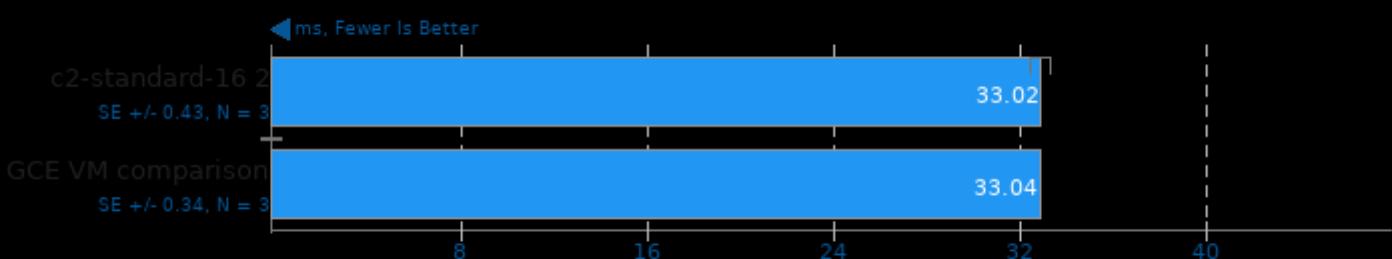
Scaling Factor: 1 - Clients: 50 - Mode: Read Write



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lgpgcommon -lgpgport -lpq -lpthread -lrt -ldl -lm

## PostgreSQL pgbench 13.0

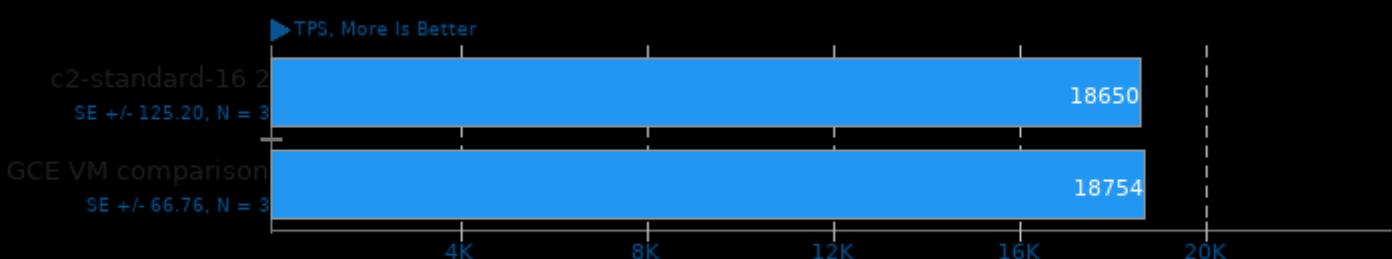
Scaling Factor: 1 - Clients: 50 - Mode: Read Write - Average Latency



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lgpgcommon -lgpgport -lpq -lpthread -lrt -ldl -lm

## PostgreSQL pgbench 13.0

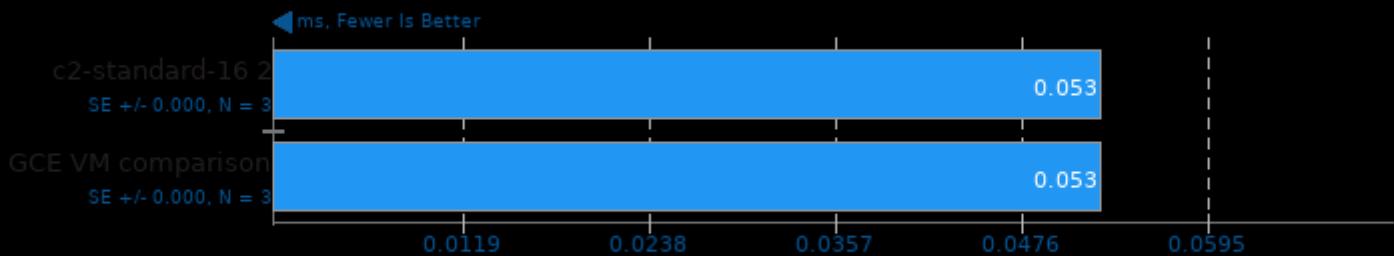
Scaling Factor: 100 - Clients: 1 - Mode: Read Only



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lgpgcommon -lgpgport -lpq -lpthread -lrt -ldl -lm

## PostgreSQL pgbench 13.0

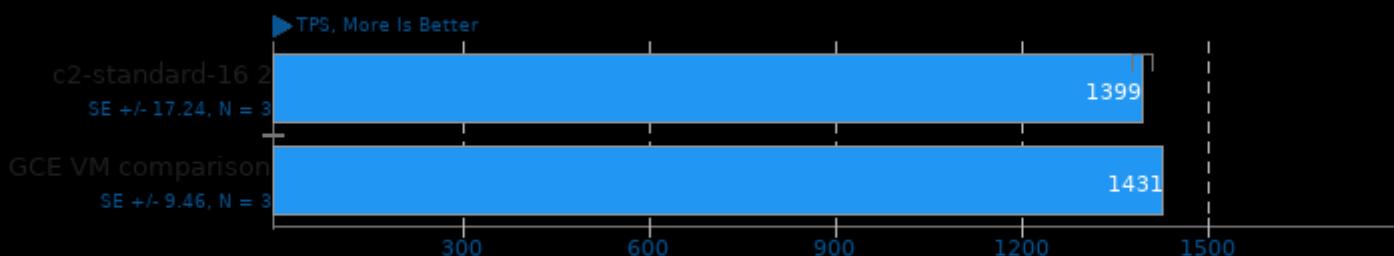
Scaling Factor: 100 - Clients: 1 - Mode: Read Only - Average Latency



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lgpgcommon -lgpgport -lpq -lpthread -lrt -ldl -lm

## PostgreSQL pgbench 13.0

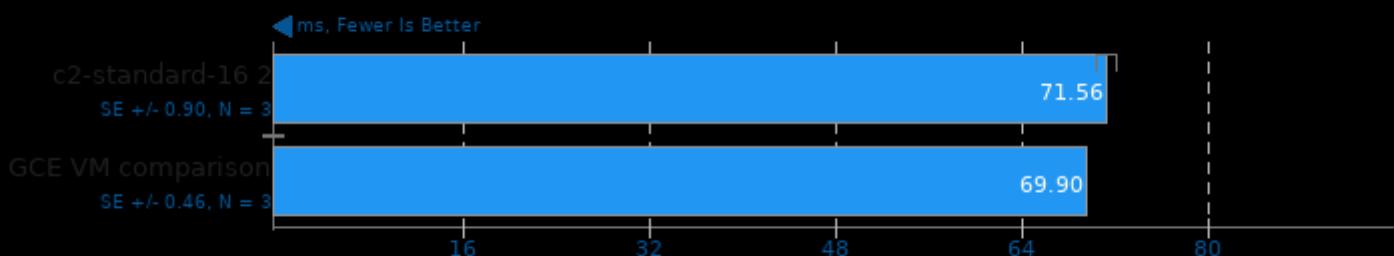
Scaling Factor: 1 - Clients: 100 - Mode: Read Write



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lgpgcommon -lgpgport -lpq -lpthread -lrt -ldl -lm

## PostgreSQL pgbench 13.0

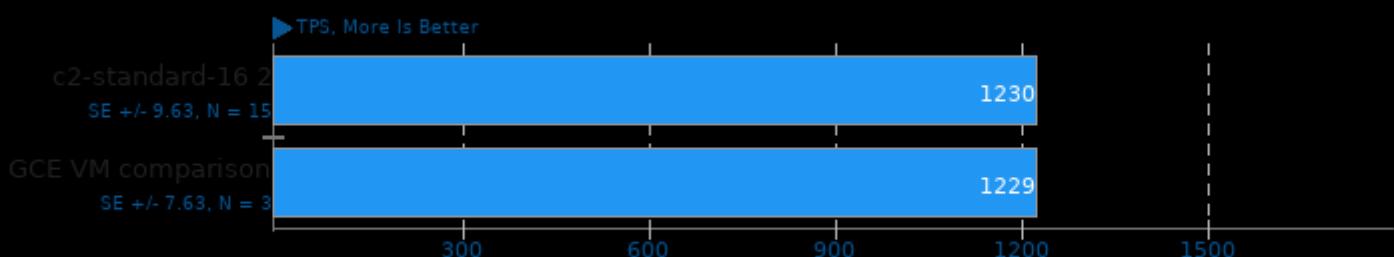
Scaling Factor: 1 - Clients: 100 - Mode: Read Write - Average Latency



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lgpgcommon -lgpgport -lpq -lpthread -lrt -ldl -lm

## PostgreSQL pgbench 13.0

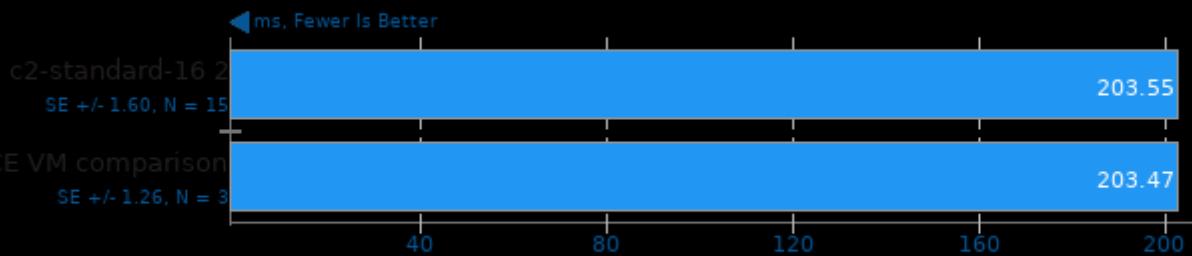
Scaling Factor: 1 - Clients: 250 - Mode: Read Write



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lgpgcommon -lgpgport -lpq -lpthread -lrt -ldl -lm

## PostgreSQL pgbench 13.0

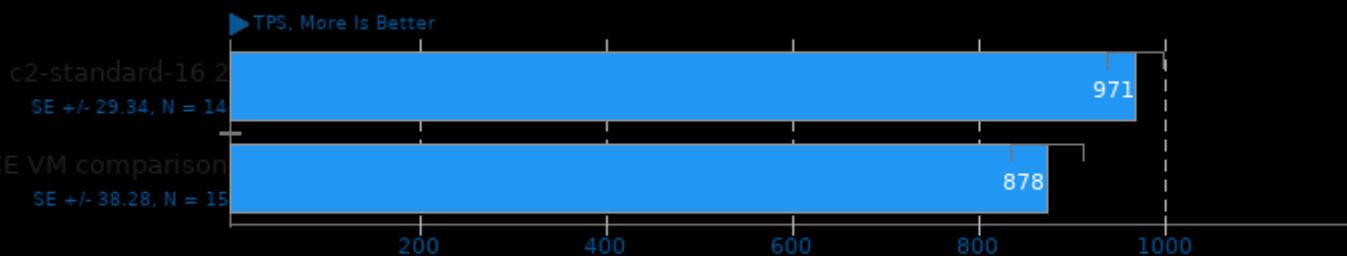
Scaling Factor: 1 - Clients: 250 - Mode: Read Write - Average Latency



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lgpgcommon -lgpgport -lpq -lpthread -lrt -ldl -lm

## PostgreSQL pgbench 13.0

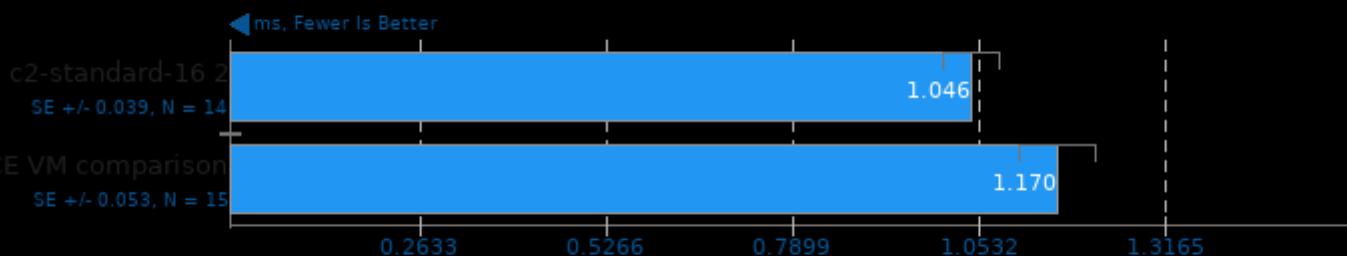
Scaling Factor: 100 - Clients: 1 - Mode: Read Write



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lgpgcommon -lgpgport -lpq -lpthread -lrt -ldl -lm

## PostgreSQL pgbench 13.0

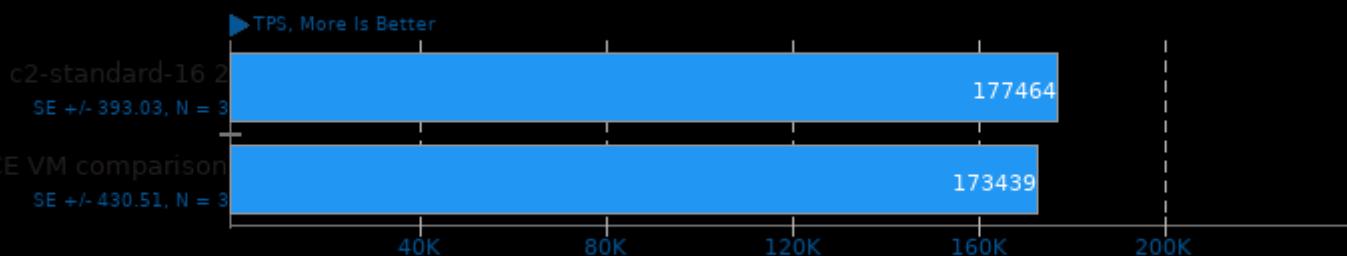
Scaling Factor: 100 - Clients: 1 - Mode: Read Write - Average Latency



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lgpgcommon -lgpgport -lpq -lpthread -lrt -ldl -lm

## PostgreSQL pgbench 13.0

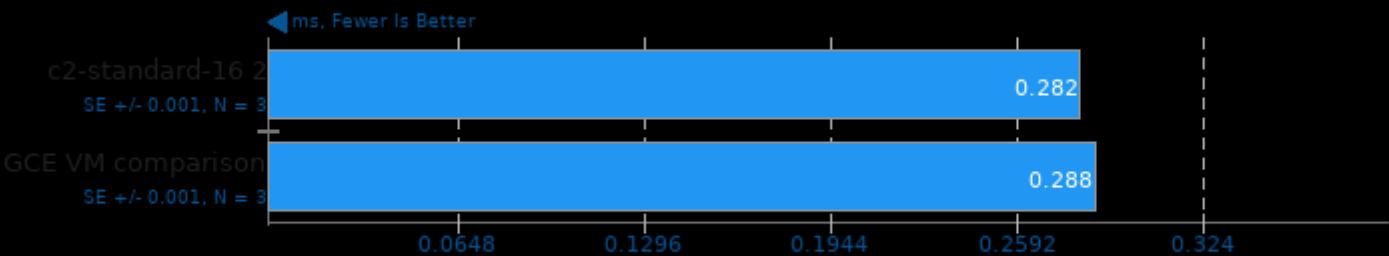
Scaling Factor: 100 - Clients: 50 - Mode: Read Only



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lgpgcommon -lgpgport -lpq -lpthread -lrt -ldl -lm

## PostgreSQL pgbench 13.0

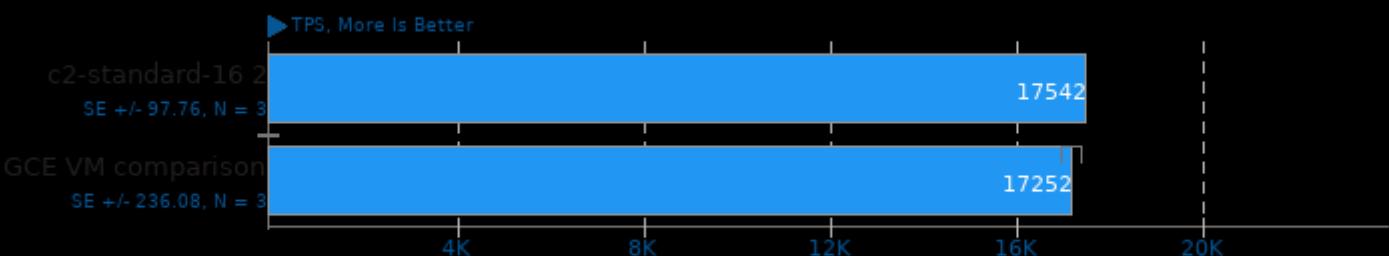
Scaling Factor: 100 - Clients: 50 - Mode: Read Only - Average Latency



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lgpgcommon -lgpgport -lpq -lpthread -lrt -ldl -lm

## PostgreSQL pgbench 13.0

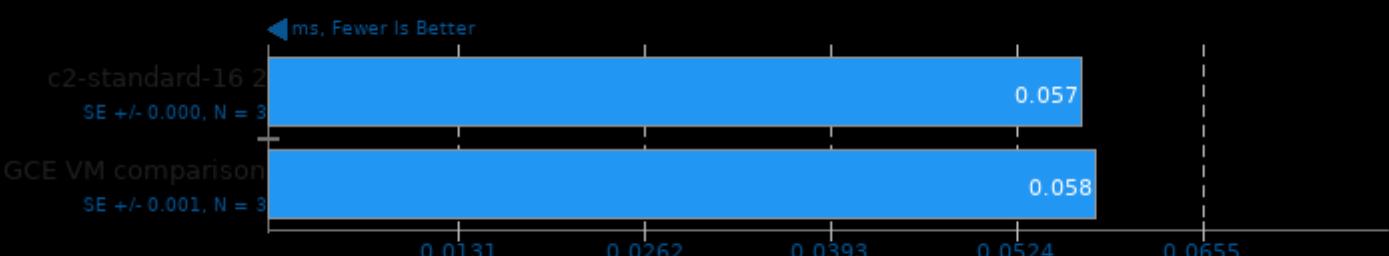
Scaling Factor: 1000 - Clients: 1 - Mode: Read Only



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lgpgcommon -lgpgport -lpq -lpthread -lrt -ldl -lm

## PostgreSQL pgbench 13.0

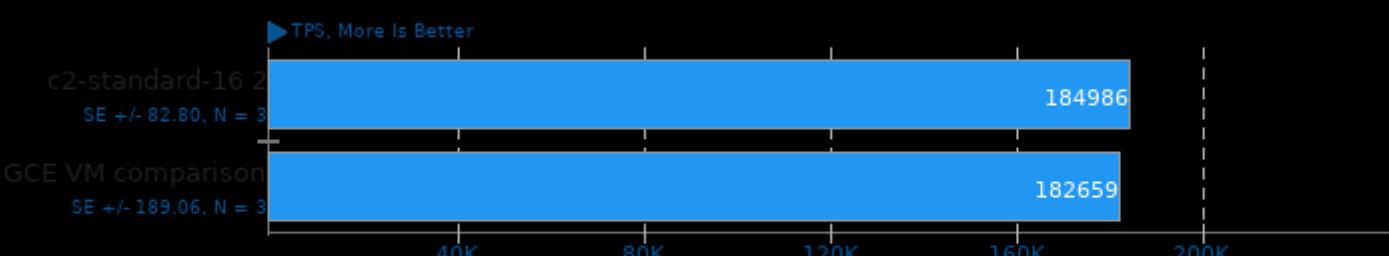
Scaling Factor: 1000 - Clients: 1 - Mode: Read Only - Average Latency



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lgpgcommon -lgpgport -lpq -lpthread -lrt -ldl -lm

## PostgreSQL pgbench 13.0

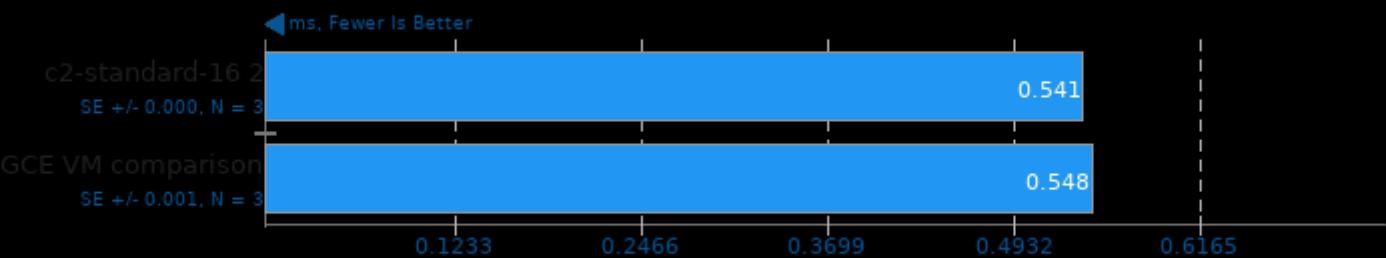
Scaling Factor: 100 - Clients: 100 - Mode: Read Only



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lgpgcommon -lgpgport -lpq -lpthread -lrt -ldl -lm

## PostgreSQL pgbench 13.0

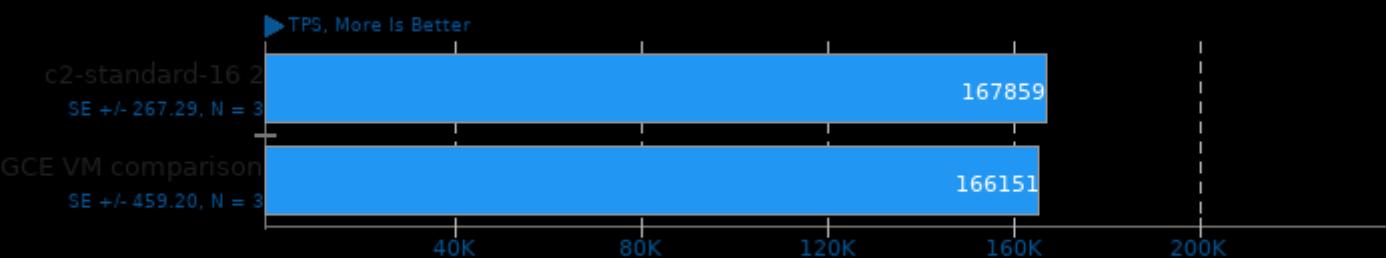
Scaling Factor: 100 - Clients: 100 - Mode: Read Only - Average Latency



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lgpgcommon -lgpgport -lpq -lpthread -lrt -ldl -lm

## PostgreSQL pgbench 13.0

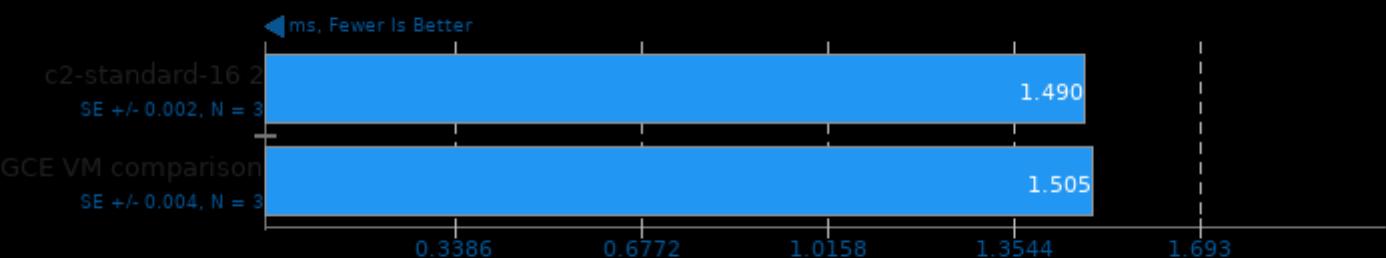
Scaling Factor: 100 - Clients: 250 - Mode: Read Only



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lgpgcommon -lgpgport -lpq -lpthread -lrt -ldl -lm

## PostgreSQL pgbench 13.0

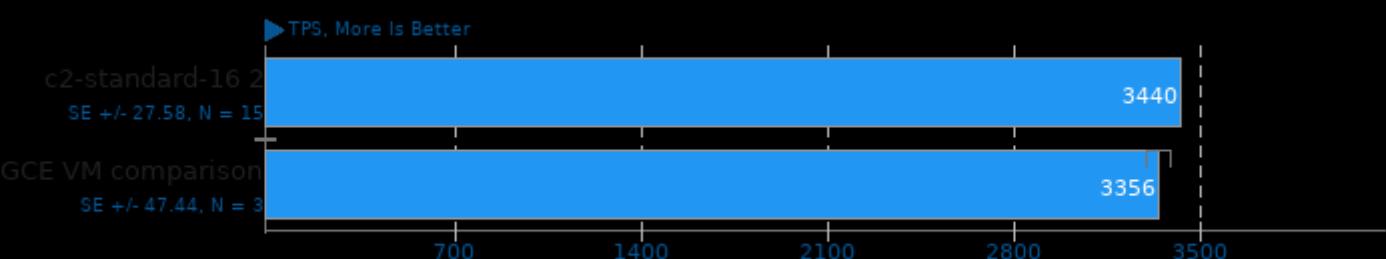
Scaling Factor: 100 - Clients: 250 - Mode: Read Only - Average Latency



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lgpgcommon -lgpgport -lpq -lpthread -lrt -ldl -lm

## PostgreSQL pgbench 13.0

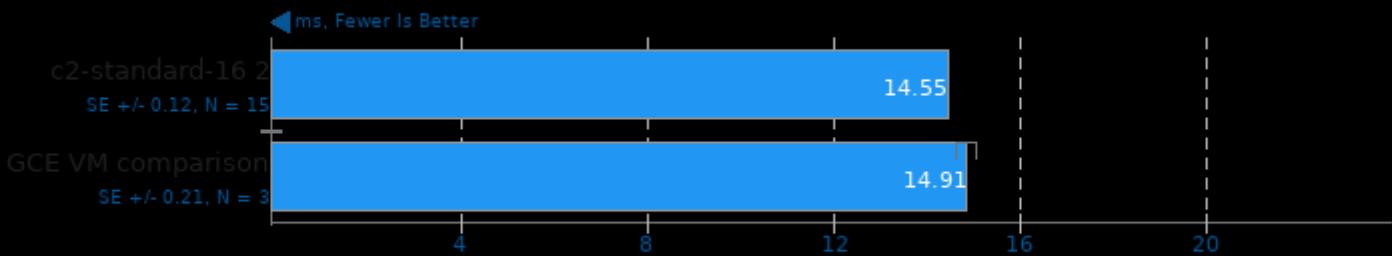
Scaling Factor: 100 - Clients: 50 - Mode: Read Write



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lgpgcommon -lgpgport -lpq -lpthread -lrt -ldl -lm

## PostgreSQL pgbench 13.0

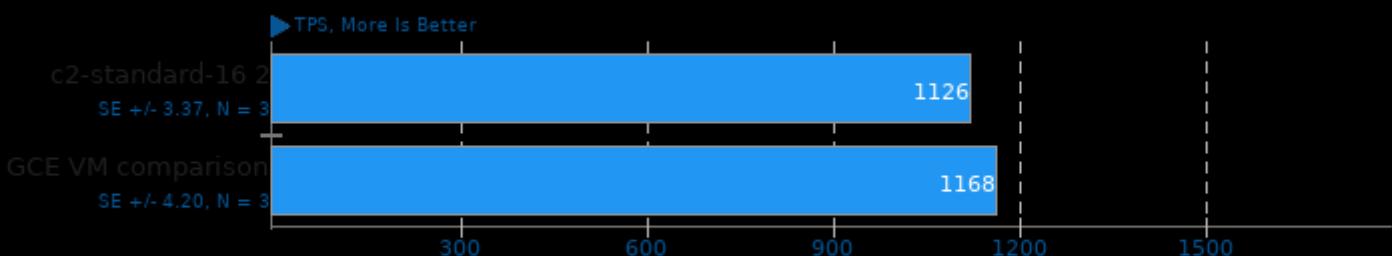
Scaling Factor: 100 - Clients: 50 - Mode: Read Write - Average Latency



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lgpgcommon -lgpgport -lpq -lpthread -lrt -ldl -lm

## PostgreSQL pgbench 13.0

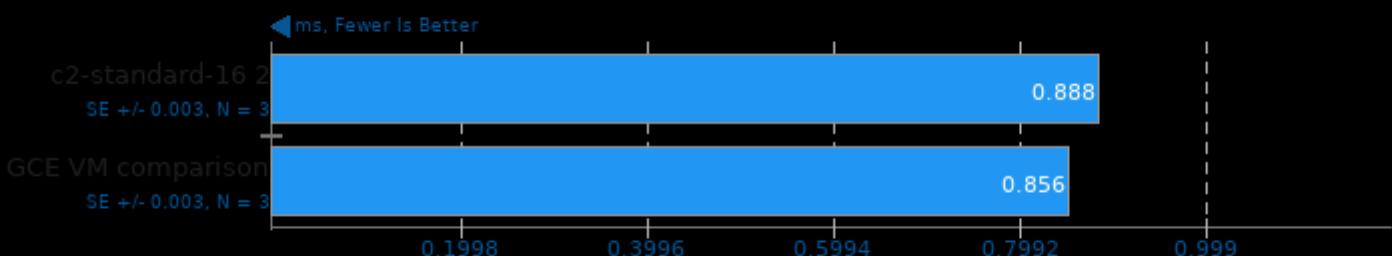
Scaling Factor: 1000 - Clients: 1 - Mode: Read Write



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lgpgcommon -lgpgport -lpq -lpthread -lrt -ldl -lm

## PostgreSQL pgbench 13.0

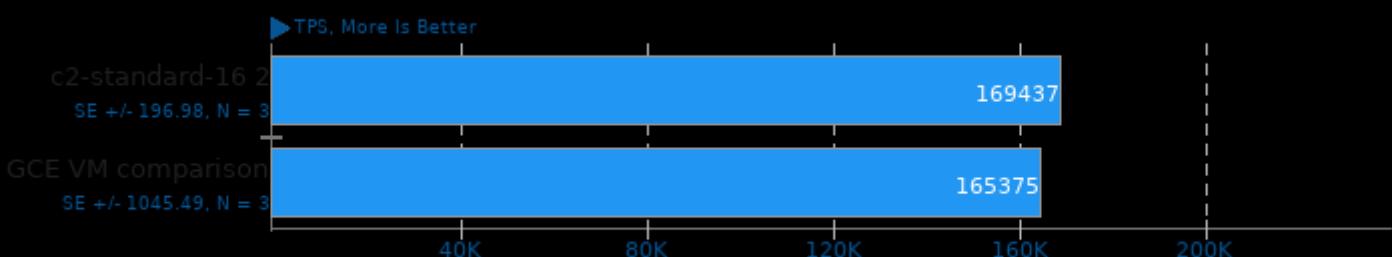
Scaling Factor: 1000 - Clients: 1 - Mode: Read Write - Average Latency



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lgpgcommon -lgpgport -lpq -lpthread -lrt -ldl -lm

## PostgreSQL pgbench 13.0

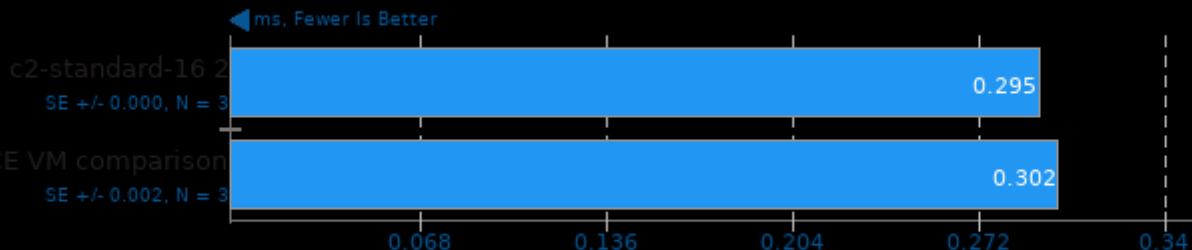
Scaling Factor: 1000 - Clients: 50 - Mode: Read Only



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -lgpgcommon -lgpgport -lpq -lpthread -lrt -ldl -lm

## PostgreSQL pgbench 13.0

Scaling Factor: 1000 - Clients: 50 - Mode: Read Only - Average Latency



1. (CC) gcc options: -fno-strict-aliasing -fwrapv -O2 -Ipgcommon -Ipgport -Ipq -Ipthread -Irt -Idl -Im

*This file was automatically generated via the Phoronix Test Suite benchmarking software on Friday, 29 March 2024 05:30.*