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CC23Assignment2

amazon testing on Ubuntu 22.04 via the Phoronix Test Suite.

Automated Executive Summary

c6a.large had the most wins, coming in first place for 53% of the tests.

Based on the geometric mean of all complete results, the fastest (m6a.large) was 1.733x the speed of the slowest (t2.medium). c6a.large was 0.997x the speed of m6a.large and t2.medium was 0.578x the speed of c6a.large.

Test Systems:

c6a.large

Processor: AMD EPYC 7R13 (1 Core / 2 Threads), Motherboard: Amazon EC2 c6a.large (1.0 BIOS), Chipset: Intel 440FX 82441FX PMC, Memory: 1 x 4 GB DDR4-2933MT/s, Disk: 10GB Amazon Elastic Block Store, Network: Amazon Elastic

OS: Ubuntu 22.04, Kernel: 5.15.0-1028-aws (x86_64), Vulkan: 1.2.204, Compiler: GCC 11.3.0, File-System: ext4, System Layer: amazon

Kernel Notes: Transparent Huge Pages: madvise
 Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-bootstrap --enable-cet --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++,m2 --enable-libphobos-checking=release --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-link-serialization=2 --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-11-xKiWfi/gcc-11-11.3.0/debian/tmp-nvptx/usr,amdgn-amdhsa=/build/gcc-11-xKiWfi/gcc-11-11.3.0/debian/tmp-gcn/usr --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-build-config=bootstrap-lto-lean --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
 Processor Notes: CPU Microcode: 0xa001173

Security Notes: itlb_multihit: Not affected + I1tf: Not affected + mds: Not affected + meltdown: Not affected + mmio_stale_data: Not affected + rebleed: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swaps barriers and __user pointer sanitization + spectre_v2: Mitigation of Retpolines IBPB: conditional IBRS_FW STIBP: conditional RSB filling PBRSB-eIBRS: Not affected + srbs: Not affected + tsx_async_abort: Not affected

m6a.large

Processor: AMD EPYC 7R13 (1 Core / 2 Threads), Motherboard: Amazon EC2 m6a.large (1.0 BIOS), Chipset: Intel 440FX 82441FX PMC, Memory: 1 x 8 GB DDR4-3200MT/s, Disk: 10GB Amazon Elastic Block Store, Network: Amazon Elastic

OS: Ubuntu 22.04, Kernel: 5.15.0-1028-aws (x86_64), Vulkan: 1.2.204, Compiler: GCC 11.3.0, File-System: ext4, System Layer: amazon

Kernel Notes: Transparent Huge Pages: madvise
 Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-bootstrap --enable-cet --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++,m2 --enable-libphobos-checking=release --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-link-serialization=2 --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-11-xKiWfi/gcc-11-11.3.0/debian/tmp-nvptx/usr,amdgn-amdhsa=/build/gcc-11-xKiWfi/gcc-11-11.3.0/debian/tmp-gcn/usr --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-build-config=bootstrap-lto-lean --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
 Processor Notes: CPU Microcode: 0xa001173

Security Notes: itlb_multihit: Not affected + I1tf: Not affected + mds: Not affected + meltdown: Not affected + mmio_stale_data: Not affected + rebleed: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl and seccomp + spectre_v1: Mitigation of usercopy/swaps barriers and __user pointer sanitization + spectre_v2: Mitigation of Retpolines IBPB: conditional IBRS_FW STIBP: conditional RSB filling PBRSB-eIBRS: Not affected + srbs: Not affected + tsx_async_abort: Not affected

t2.medium

Processor: Intel Xeon E5-2686 v4 (2 Cores), Motherboard: Xen HVM domU (4.2.amazon BIOS), Chipset: Intel 440FX 82441FX PMC, Memory: 1 x 4 GB RAM, Disk: 9GB, Graphics: Cirrus Logic GD 5446

OS: Ubuntu 22.04, Kernel: 5.15.0-1028-aws (x86_64), Vulkan: 1.2.204, Compiler: GCC 11.3.0, File-System: ext4, System Layer: Xen HVM domU 4.2.amazon

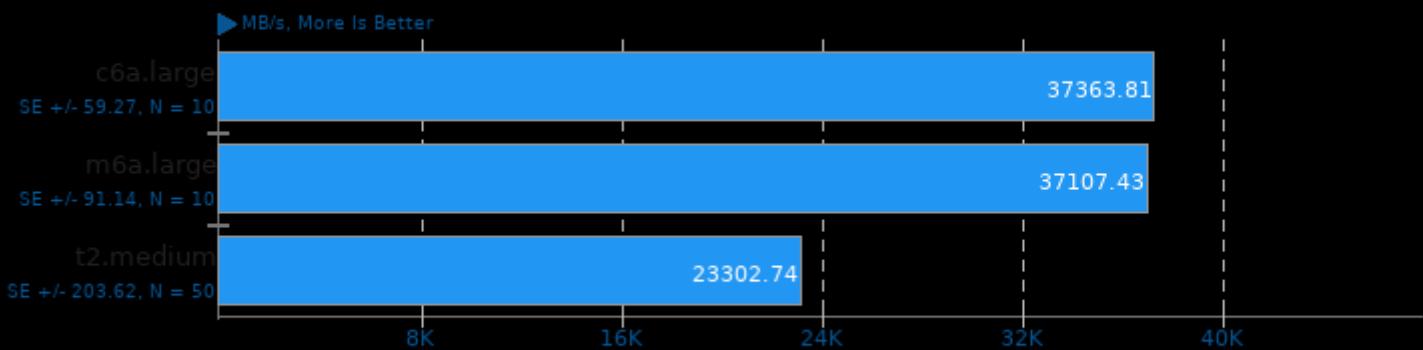
Kernel Notes: Transparent Huge Pages: madvise
 Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-bootstrap --enable-cet --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,m2 --enable-libphobos-checking=release --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-link-serialization=2 --enable-multiarch --enable-multilib --enable-nls --enable-objc-gc=auto --enable-offload-targets=nvptx-none=/build/gcc-11-xKiWfi/gcc-11-11.3.0/debian/tmp-nvptx/usr,amdgn-amdhsa=/build/gcc-11-xKiWfi/gcc-11-11.3.0/debian/tmp-gcn/usr --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-build-config=bootstrap-lto-lean --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
 Processor Notes: CPU Microcode: 0xb000040

Security Notes: itlb_multihit: KVM: Mitigation of VMX unsupported + I1tf: Mitigation of PTE Inversion + mds: Vulnerable: Clear buffers attempted no microcode; SMT Host state unknown + meltdown: Mitigation of PTI + mmio_stale_data: Vulnerable: Clear buffers attempted no microcode; SMT Host state unknown + rebleed: Not affected + spec_store_bypass: Vulnerable + spectre_v1: Mitigation of usercopy/swaps barriers and __user pointer sanitization + spectre_v2: Mitigation of Retpolines STIBP: disabled RSB filling PBRSB-eIBRS: Not affected + srbs: Not affected + tsx_async_abort: Not affected

	c6a.large	m6a.large	t2.medium
Stream - Add (MB/s)	37364	37107	23303
Normalized	100%	99.31%	62.37%
Standard Deviation	0.5%	0.8%	6.2%
Loopback TCP Network Performance - T.T.T.1.V.L (sec)	13.783	13.534	19.842
Normalized	98.19%	100%	68.21%
Standard Deviation	1%	0.6%	0.6%
John The Ripper - Blowfish (Real C/S)	1828	1828	1553
Normalized	100%	100%	84.96%
Standard Deviation	0%	0%	0.1%
LAME MP3 Encoding - WAV To MP3 (sec)	7.647	7.634	13.942
Normalized	99.83%	100%	54.76%
Standard Deviation	0.2%	0.1%	0.2%
OpenSSL - SHA256 (byte/s)	1461853647	1461396013	442842987
Normalized	100%	99.97%	30.29%
Standard Deviation	0.1%	0.2%	0.1%
OpenSSL - RSA4096 (sign/s)	262.6	262.1	247.8
Normalized	100%	99.81%	94.36%
Standard Deviation	0.1%	0.3%	0.2%
OpenSSL - RSA4096 (verify/s)	17161	17158	15955
Normalized	100%	99.98%	92.98%
Standard Deviation	0%	0%	0.3%
Apache HTTP Server - 1 (Req/s/sec)	7943	7979	4270
Normalized	99.56%	100%	53.52%
Standard Deviation	0.2%	0.3%	0.6%
Apache HTTP Server - 20 (Req/s/sec)	15019	15196	8535
Normalized	98.83%	100%	56.17%
Standard Deviation	0.8%	0.4%	0.3%
Apache HTTP Server - 100 (Req/s/sec)	14849	14812	8450
Normalized	100%	99.75%	56.9%
Standard Deviation	0.2%	2%	0.3%
Apache HTTP Server - 200 (Req/s/sec)	14345	14208	8360
Normalized	100%	99.04%	58.28%
Standard Deviation	0.3%	0.2%	0.6%
Apache HTTP Server - 500 (Req/s/sec)	13845	14071	8107
Normalized	98.39%	100%	57.62%
Standard Deviation	0.9%	0.4%	0.8%
Apache HTTP Server - 1000 (Req/s/sec)	13621	13645	3466
Normalized	99.82%	100%	25.4%
Standard Deviation	1.4%	1.1%	62.9%

Stream 2009-04-11

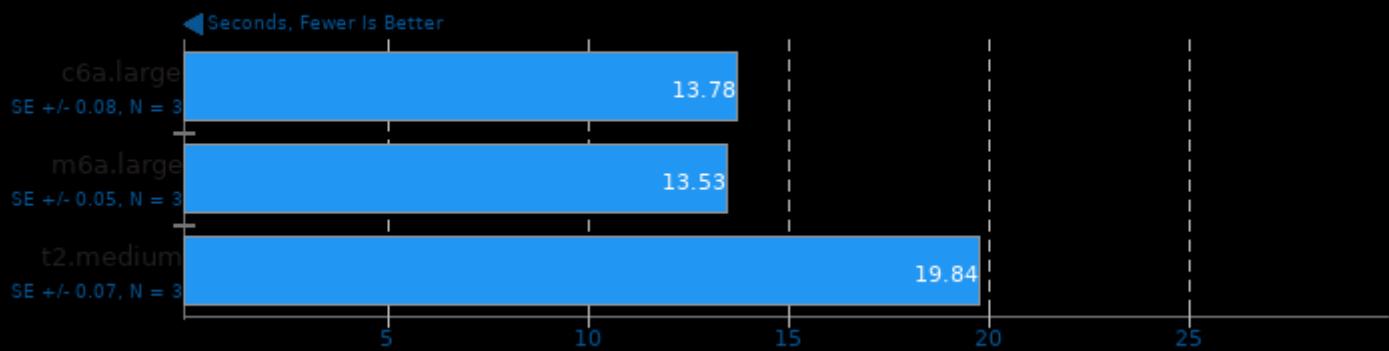
Type: Add



1. (CC) gcc options: -O2 -fopenmp

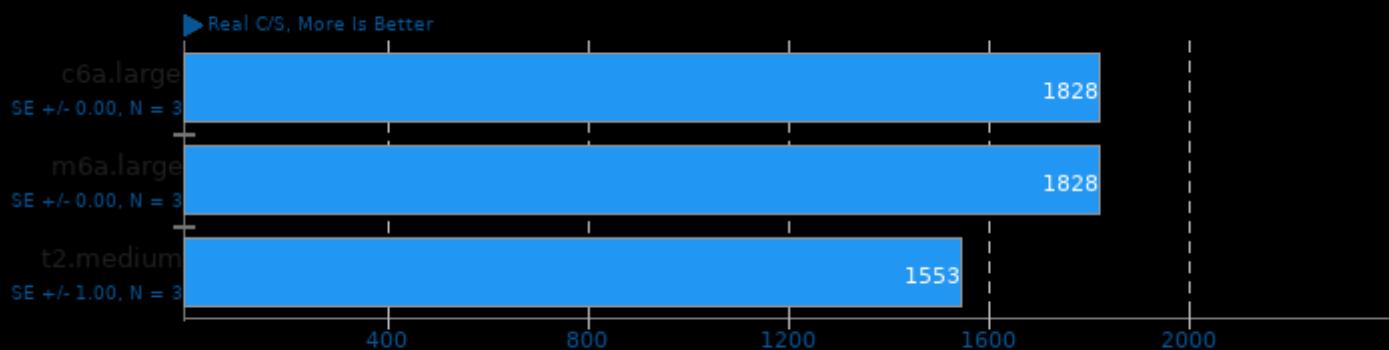
Loopback TCP Network Performance

Time To Transfer 10GB Via Loopback



John The Ripper 1.8.0

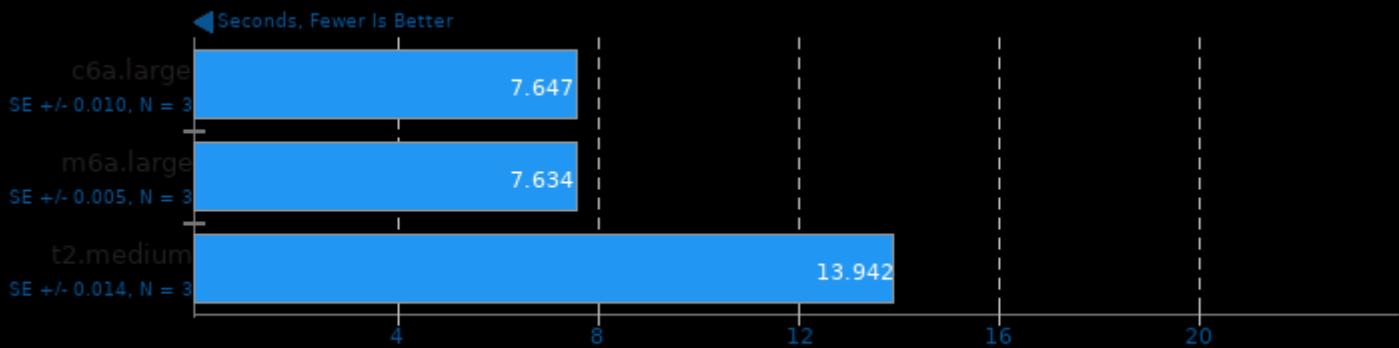
Test: Blowfish



1. (CC) gcc options: -fopenmp -lcrypt

LAME MP3 Encoding 3.100

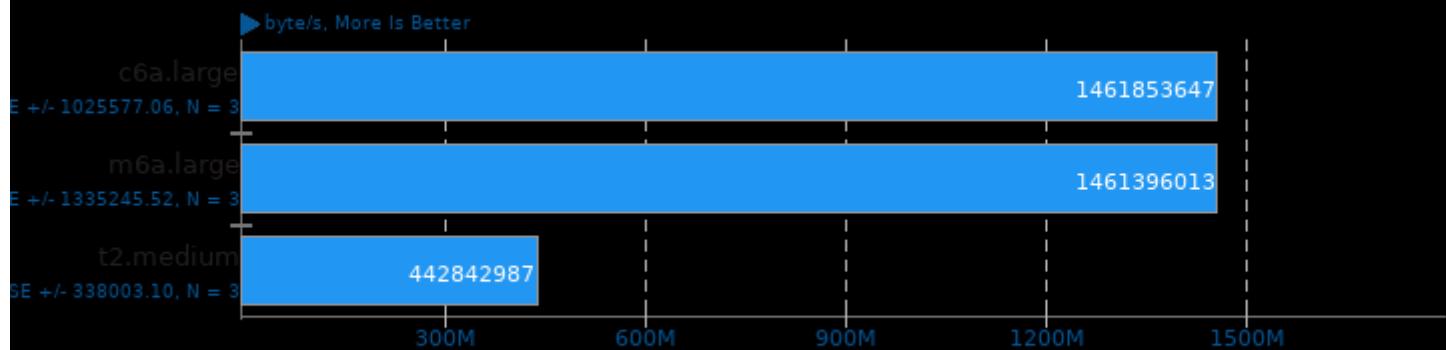
WAV To MP3



1. (CC) gcc options: -O3 -ffast-math -funroll-loops -fschedule-insns2 -fbranch-count-reg -fforce-addr -pipe -lm

OpenSSL 3.0

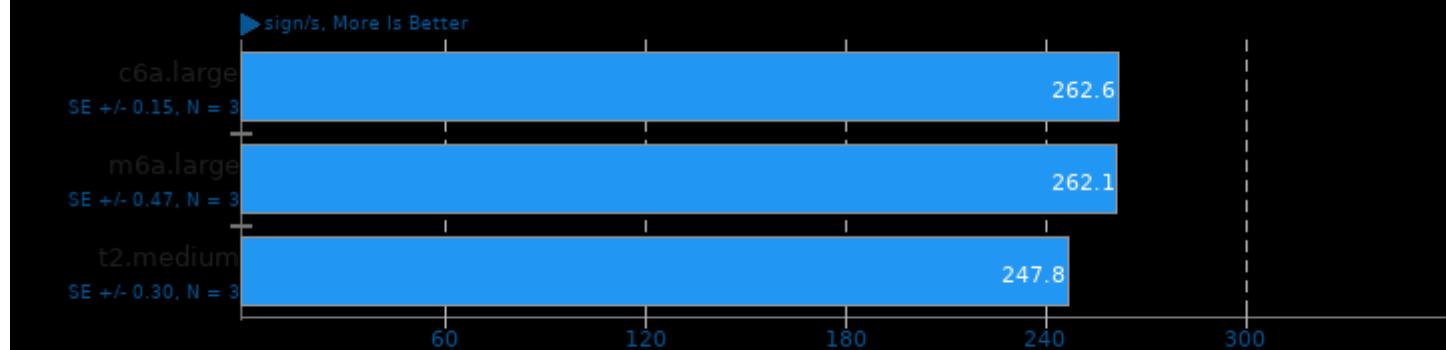
Algorithm: SHA256



1. (CC) gcc options: -pthread -m64 -O3 -lssl -lcrypto -ldl

OpenSSL 3.0

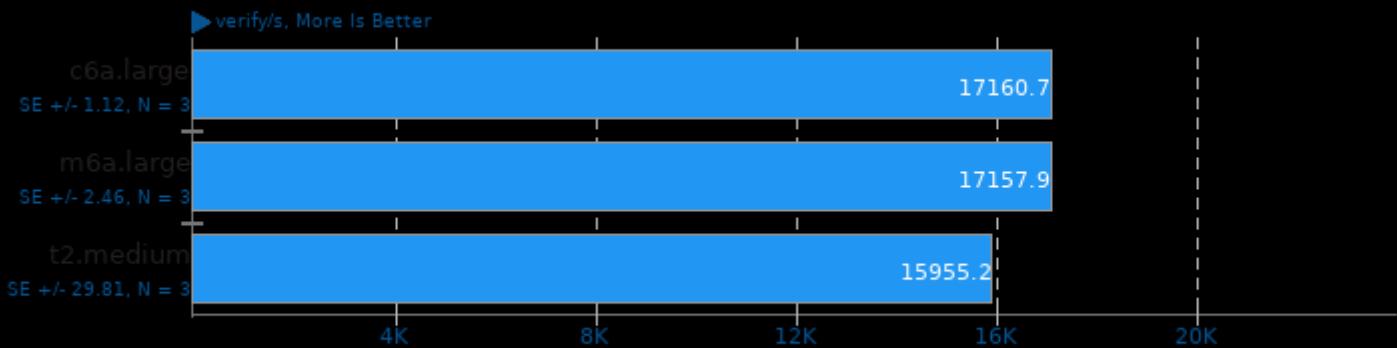
Algorithm: RSA4096



1. (CC) gcc options: -pthread -m64 -O3 -lssl -lcrypto -ldl

OpenSSL 3.0

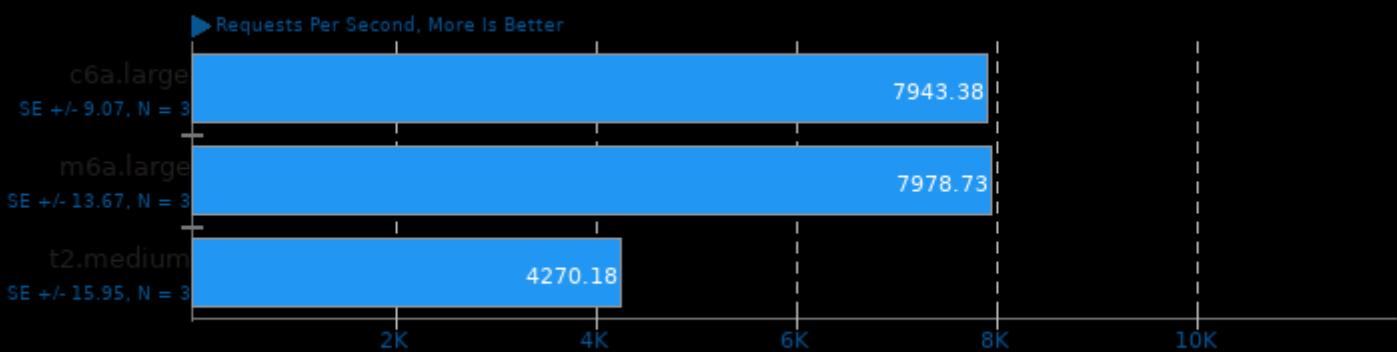
Algorithm: RSA4096



1. (CC) gcc options: -pthread -m64 -O3 -lssl -lcrypto -ldl

Apache HTTP Server 2.4.48

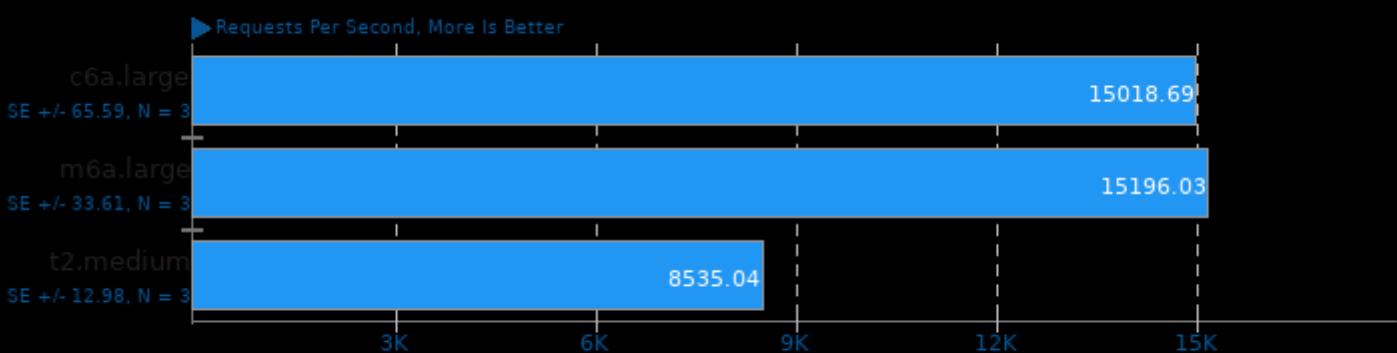
Concurrent Requests: 1



1. (CC) gcc options: -shared -fPIC -O2

Apache HTTP Server 2.4.48

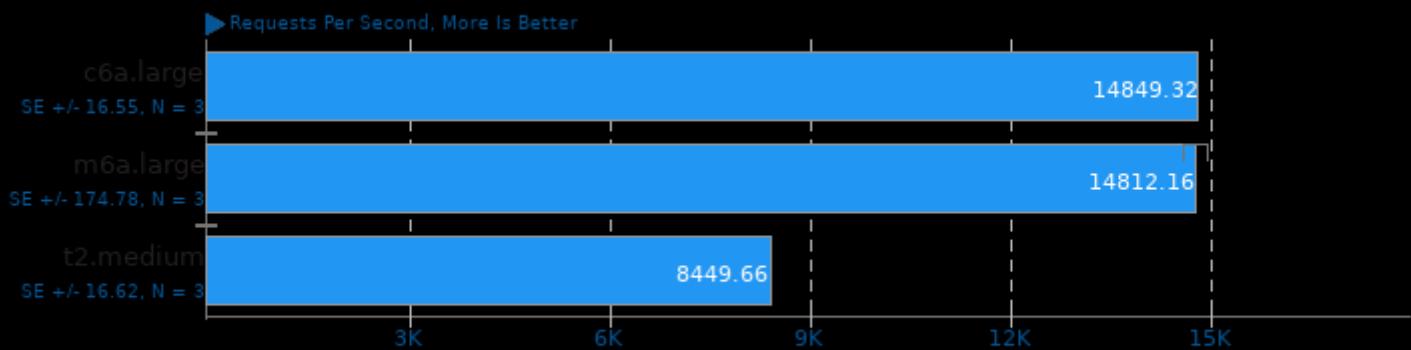
Concurrent Requests: 20



1. (CC) gcc options: -shared -fPIC -O2

Apache HTTP Server 2.4.48

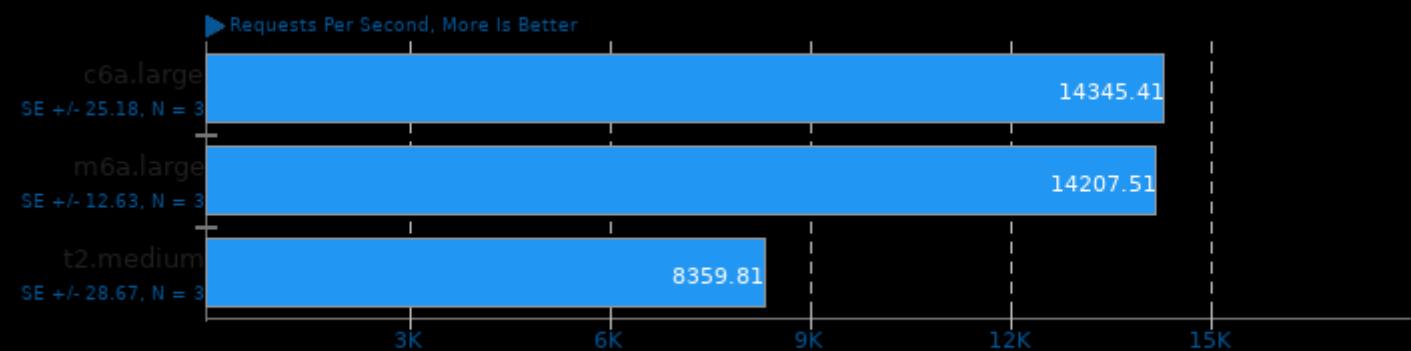
Concurrent Requests: 100



1. (CC) gcc options: -shared -fPIC -O2

Apache HTTP Server 2.4.48

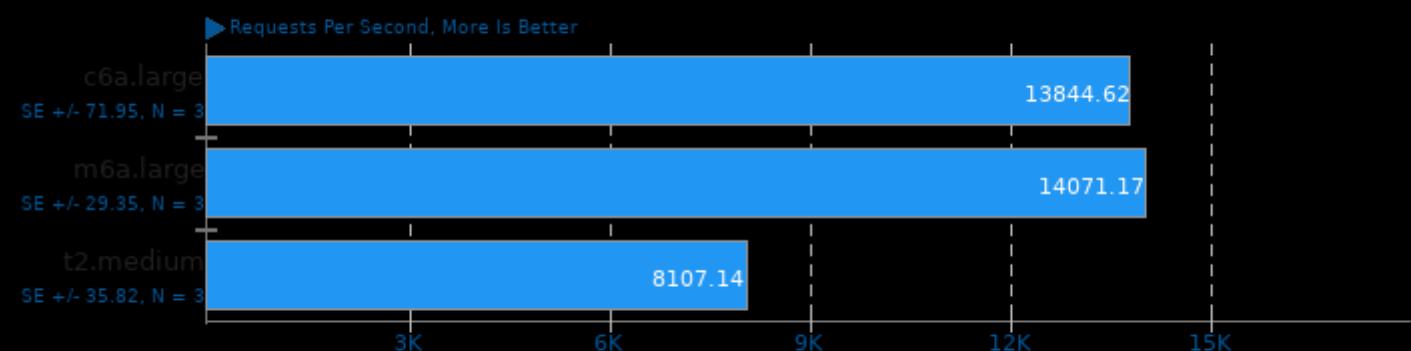
Concurrent Requests: 200



1. (CC) gcc options: -shared -fPIC -O2

Apache HTTP Server 2.4.48

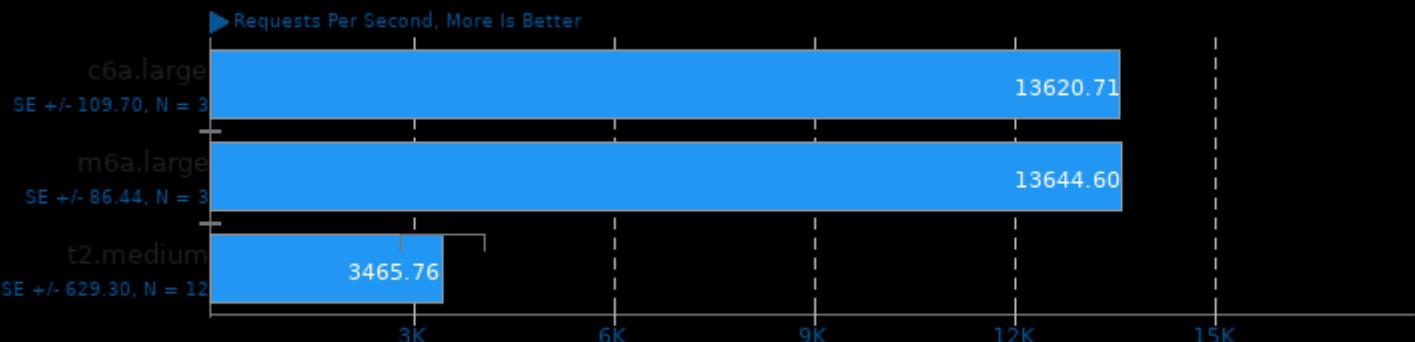
Concurrent Requests: 500



1. (CC) gcc options: -shared -fPIC -O2

Apache HTTP Server 2.4.48

Concurrent Requests: 1000

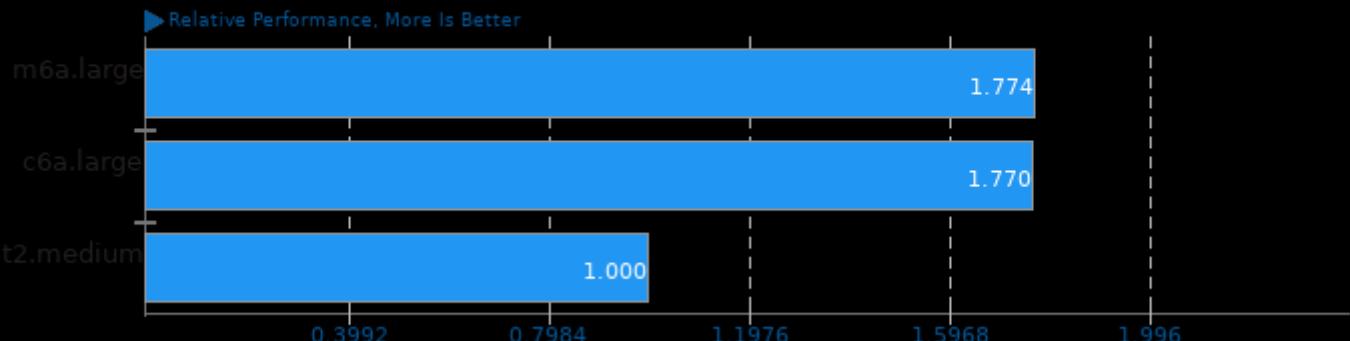


1. (CC) gcc options: -shared -fPIC -O2

These geometric means are based upon test groupings / test suites for this result file.

Geometric Mean Of C/C++ Compiler Tests

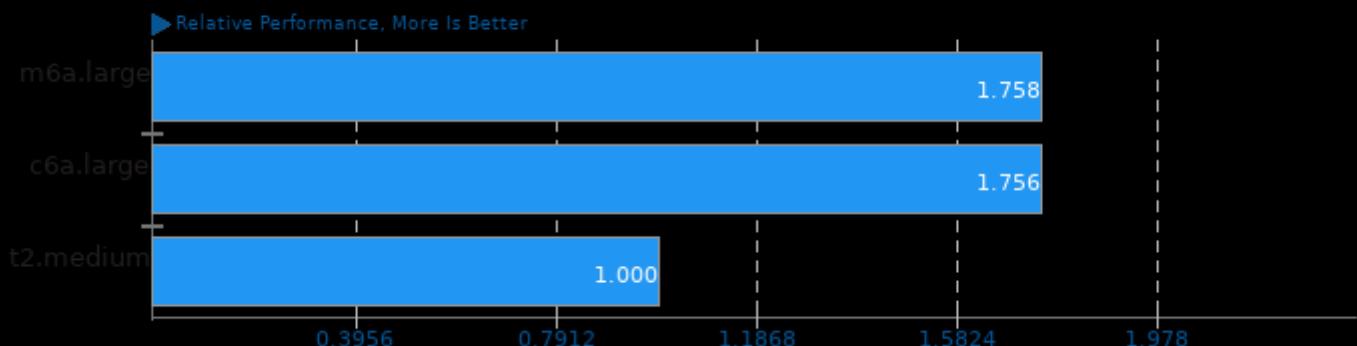
Result Composite - CC23Assignment2



Geometric mean based upon tests: pts/encode-mp3, pts/apache, pts/john-the-ripper and pts/openssl

Geometric Mean Of CPU Massive Tests

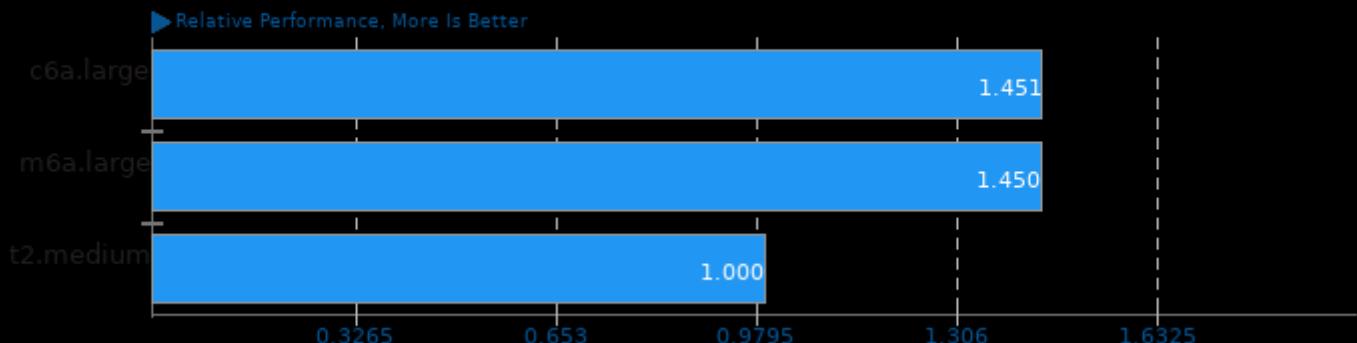
Result Composite - CC23Assignment2



Geometric mean based upon tests: pts/apache, pts/encode-mp3, pts/john-the-ripper, pts/openssl and pts/stream

Geometric Mean Of Cryptography Tests

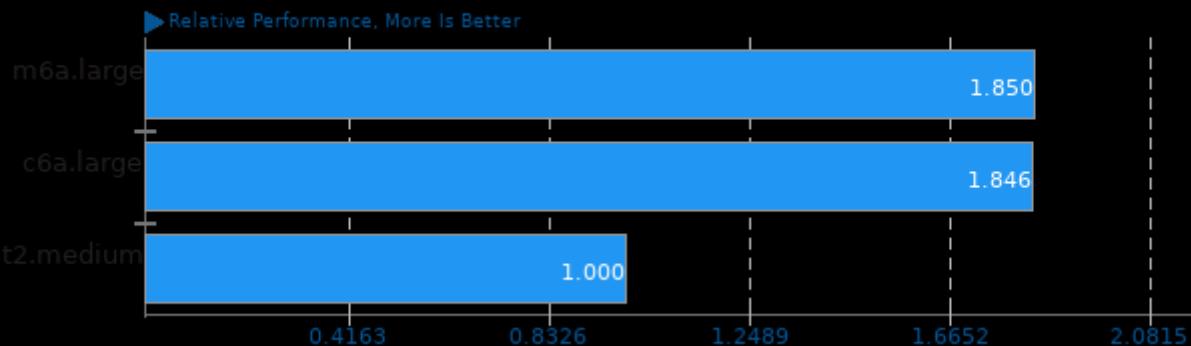
Result Composite - CC23Assignment2



Geometric mean based upon tests: pts/openssl and pts/john-the-ripper

Geometric Mean Of Common Kernel Benchmarks Tests

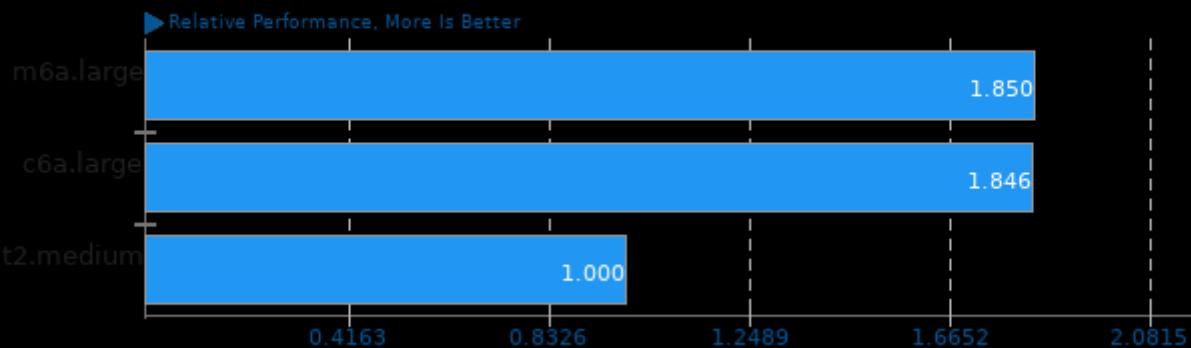
Result Composite - CC23Assignment2



Geometric mean based upon tests: pts/apache and pts/openssl

Geometric Mean Of Server Tests

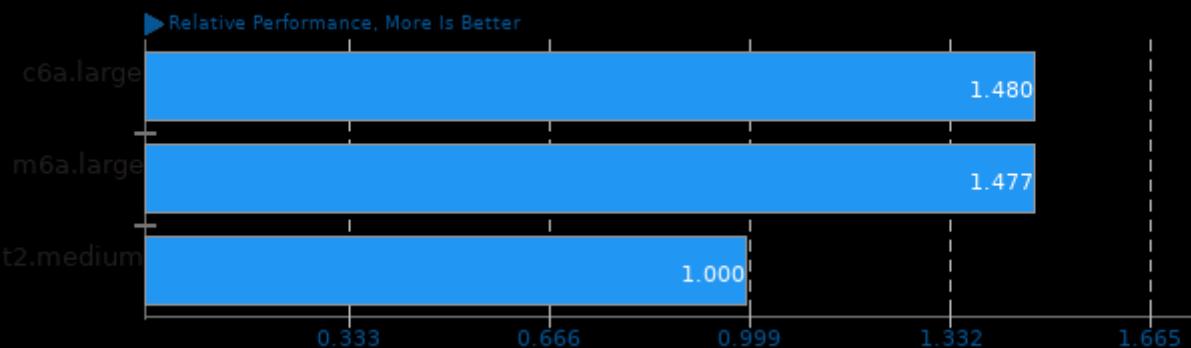
Result Composite - CC23Assignment2



Geometric mean based upon tests: pts/apache and pts/openssl

Geometric Mean Of Server CPU Tests

Result Composite - CC23Assignment2



Geometric mean based upon tests: pts/john-the-ripper, pts/openssl and pts/stream

This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 06:24.