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2 x Intel Xeon E5-2643 v3 Benchmarks

211018-nhn-c8m16-result

Automated Executive Summary

2 x Intel Xeon E5-2643 v3 had the most wins, coming in first place for 60% of the tests.

Based on the geometric mean of all complete results, the fastest (2 x Intel Xeon E5-2643 v3) was 1.504x the speed of the slowest (1 x 8192 MB RAM - 4 x ToastCloud Virtual Gen.2). 1 x 16384 MB RAM - 8 x ToastCloud Virtual Gen.2 was 0.864x the speed of 2 x Intel Xeon E5-2643 v3 and 1 x 8192 MB RAM - 4 x ToastCloud Virtual Gen.2 was 0.77x the speed of 1 x 16384 MB RAM - 8 x ToastCloud Virtual Gen.2.

Test Systems:

2 x Intel Xeon E5-2643 v3

Processor: 2 x Intel Xeon E5-2643 v3 @ 3.70GHz (12 Cores / 24 Threads), Motherboard: ASRockRack EP2C612D16C-4L (P2.50 BIOS), Chipset: Intel Xeon E7 v3/Xeon, Memory: 504GB, Disk: 1000GB SHGP31-1000GM-2

+ 1920GB MZ7LM1T9HCJM00D3, Graphics: eVGA NVIDIA GeForce GTX 1050 Ti 4GB, Audio: NVIDIA GP107GL HD Audio, Monitor: PHL 326E8F, Network: 4 x Intel I210

OS: Ubuntu 21.10, Kernel: 5.13.0-19-generic (x86_64), Desktop: KDE Plasma 5.22.5, Display Server: X Server 1.20.13, Display Driver: NVIDIA 470.74, Compiler: GCC 11.2.0, File-System: ext4, Screen Resolution: 5361x1440

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-ZPT0kp/gcc-11-11.2.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-11-ZPT0kp/gcc-11-11.2.0/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
Disk Notes: NONE / errors=remount-ro,relatime,rw / Block Size: 4096
Processor Notes: Scaling Governor: intel_cpufreq schedutil - CPU Microcode: 0x46
Security Notes: itlb_multihit: KVM: Mitigation of VMX disabled + l1tf: Mitigation of PTE Inversion; VMX: conditional cache flushes SMT vulnerable + mds: Mitigation of Clear buffers; SMT vulnerable + meltdown: Mitigation of PTI + 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 Full generic retpoline IBPB: conditional IBRS_FW STIBP: conditional RSB filling + srbds: Not affected + tsx_async_abort: Not affected

1 x 8192 MB RAM - 4 x ToastCloud Virtual Gen.2

Processor: 4 x ToastCloud Virtual Gen.2 (4 Cores), Motherboard: Fedora OpenStack Nova (0.5.1 BIOS), Chipset: Intel 440FX 82441FX PMC, Memory: 1 x 8192 MB RAM, Disk: 20GB, Graphics: Cirrus Logic GD 5446, Network: Red Hat Virtio device

OS: CentOS Linux 7, Kernel: 3.10.0-1127.19.1.el7.x86_64 (x86_64), Compiler: GCC 4.8.5 20150623, File-System: xfs, Screen Resolution: 1024x768, System Layer: KVM

Kernel Notes: Transparent Huge Pages: always
Compiler Notes: --build=x86_64-redhat-linux --disable-libgcj --disable-libunwind-exceptions --enable-__cxa_atexit --enable-bootstrap --enable-checking=release --enable-gnu-indirect-function --enable-gnu-unique-object --enable-initfini-array --enable-languages=c,c++,objc,obj-c++,java,fortran,ada,go,lto --enable-plugin --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-arch_32=x86-64 --with-linker-hash-style=gnu --with-tune=generic
Disk Notes: MQ-DEADLINE / attr2,inode64,noquota,relatime,rw / Block Size: 4096
Processor Notes: CPU Microcode: 0x1
Security Notes: itlb_multihit: vulnerable + l1tf: Mitigation of PTE Inversion + mds: Vulnerable: Clear buffers attempted no microcode; SMT Host state unknown + meltdown: Mitigation of PTI + spec_store_bypass: Vulnerable + spectre_v1: Mitigation of Load fences usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of IBRS (kernel) IBPB + srbds: Unknown: Dependent on hypervisor status + tsx_async_abort: Vulnerable: Clear buffers attempted no microcode; SMT Host state unknown

1 x 16384 MB RAM - 8 x ToastCloud Virtual Gen.2

Processor: 8 x ToastCloud Virtual Gen.2 (8 Cores), Motherboard: Fedora OpenStack Nova (0.5.1 BIOS), Chipset: Intel 440FX 82441FX PMC, Memory: 1 x 16384 MB RAM, Disk: 80GB, Graphics: Cirrus Logic GD 5446, Network: Red Hat Virtio device

OS: CentOS Linux 7, Kernel: 3.10.0-1127.19.1.el7.x86_64 (x86_64), Compiler: GCC 4.8.5 20150623, File-System: xfs, Screen Resolution: 1024x768, System Layer: KVM

Kernel Notes: Transparent Huge Pages: always
Compiler Notes: --build=x86_64-redhat-linux --disable-libgcj --disable-libunwind-exceptions --enable-__cxa_atexit --enable-bootstrap --enable-checking=release --enable-gnu-indirect-function --enable-gnu-unique-object --enable-initfini-array --enable-languages=c,c++,objc,obj-c++,java,fortran,ada,go,lto --enable-plugin --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-arch_32=x86-64 --with-linker-hash-style=gnu --with-tune=generic
Disk Notes: MQ-DEADLINE / attr2,inode64,noquota,relatime,rw / Block Size: 4096
Processor Notes: CPU Microcode: 0x1
Security Notes: itlb_multihit: vulnerable + l1tf: Mitigation of PTE Inversion + mds: Vulnerable: Clear buffers attempted no microcode; SMT Host state unknown + meltdown: Mitigation of PTI + spec_store_bypass: Vulnerable + spectre_v1: Mitigation of Load fences usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of IBRS (kernel) IBPB + srbds: Unknown: Dependent on hypervisor status + tsx_async_abort: Vulnerable: Clear buffers attempted no microcode; SMT Host state unknown

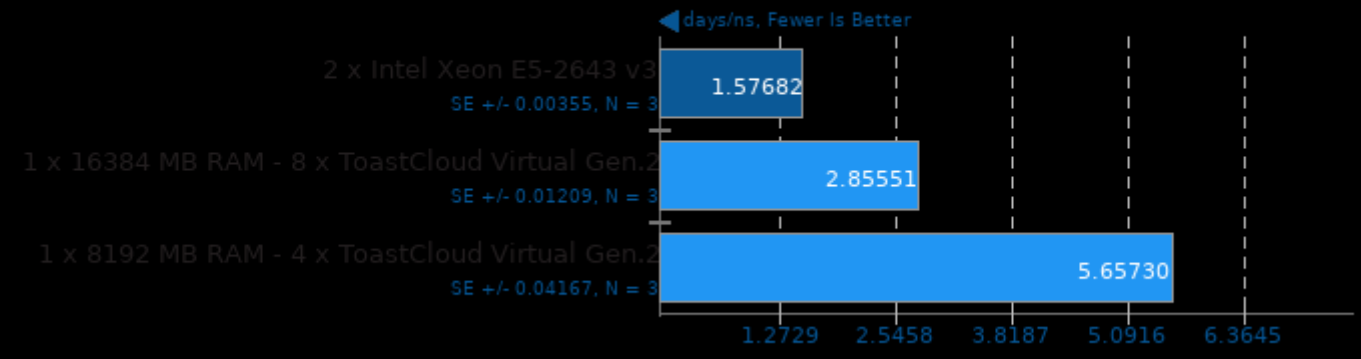
2 x Intel Xeon E5-2643 v3 Benchmarks

	2 x Intel Xeon E5-2643 v3	1 x 8192 MB RAM - 4 x ToastCloud Virtual Gen.2	1 x 16384 MB RAM - 8 x ToastCloud Virtual Gen.2
NAMD - ATPase Simulation - 327,506 Atoms (days/ns)	**1.57682**	**5.65730**	2.85551
Normalized	100%	27.87%	55.22%
Standard Deviation	0.4%	1.3%	0.7%
t-test1 - 2 (sec)	**10.865**	10.366	**9.896**
Normalized	91.08%	95.47%	100%
Standard Deviation	1.9%	2.2%	3.8%
Botan - AES-256 - Decrypt (MiB/s)	3329		
Standard Deviation	0.1%		
Botan - AES-256 (MiB/s)	3320		
Standard Deviation	0.1%		
t-test1 - 1 (sec)	**29.850**	29.639	**28.040**
Normalized	93.94%	94.61%	100%
Standard Deviation	7%	1%	2.3%

2 x Intel Xeon E5-2643 v3 Benchmarks

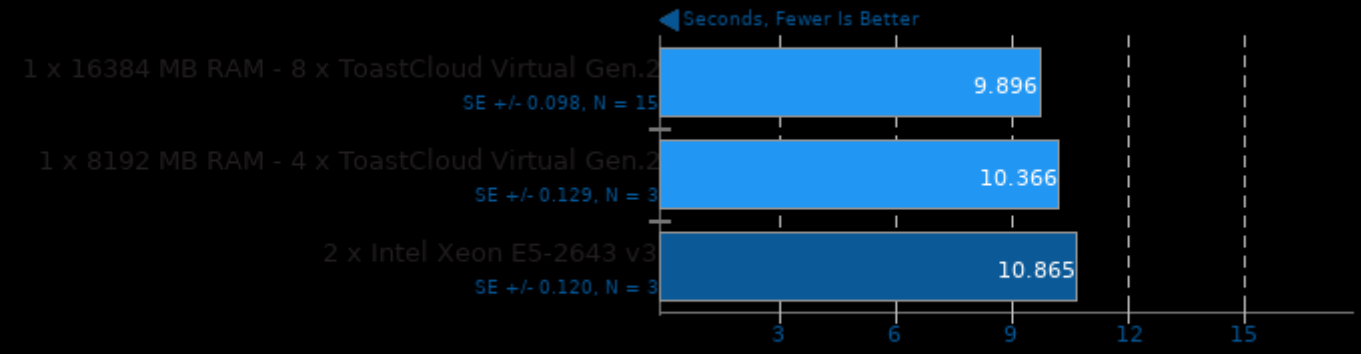
NAMD 2.14

ATPase Simulation - 327,506 Atoms



t-test1 2017-01-13

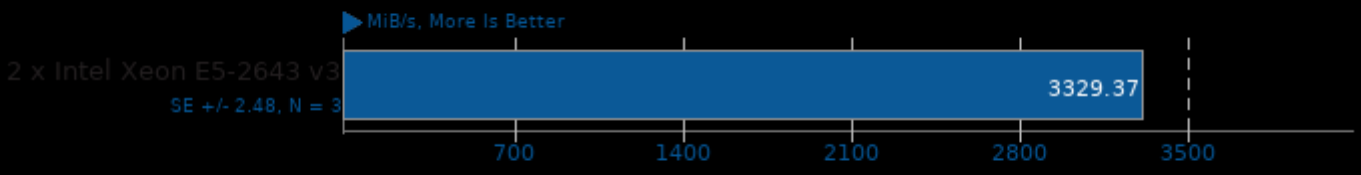
Threads: 2



1. (CC) gcc options: -pthread

Botan 2.17.3

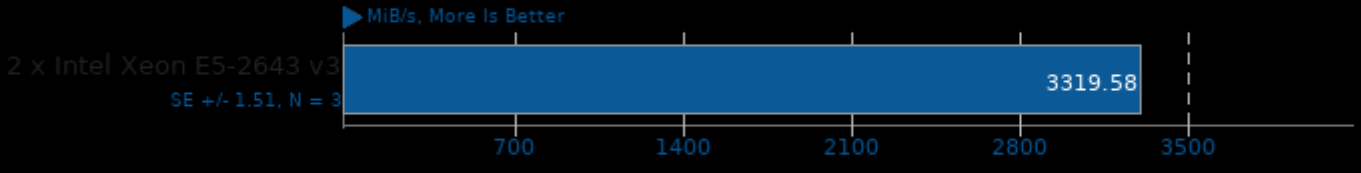
Test: AES-256 - Decrypt



1. (CXX) g++ options: -fstack-protector -m64 -pthread -lbotan-2 -ldl -lrt

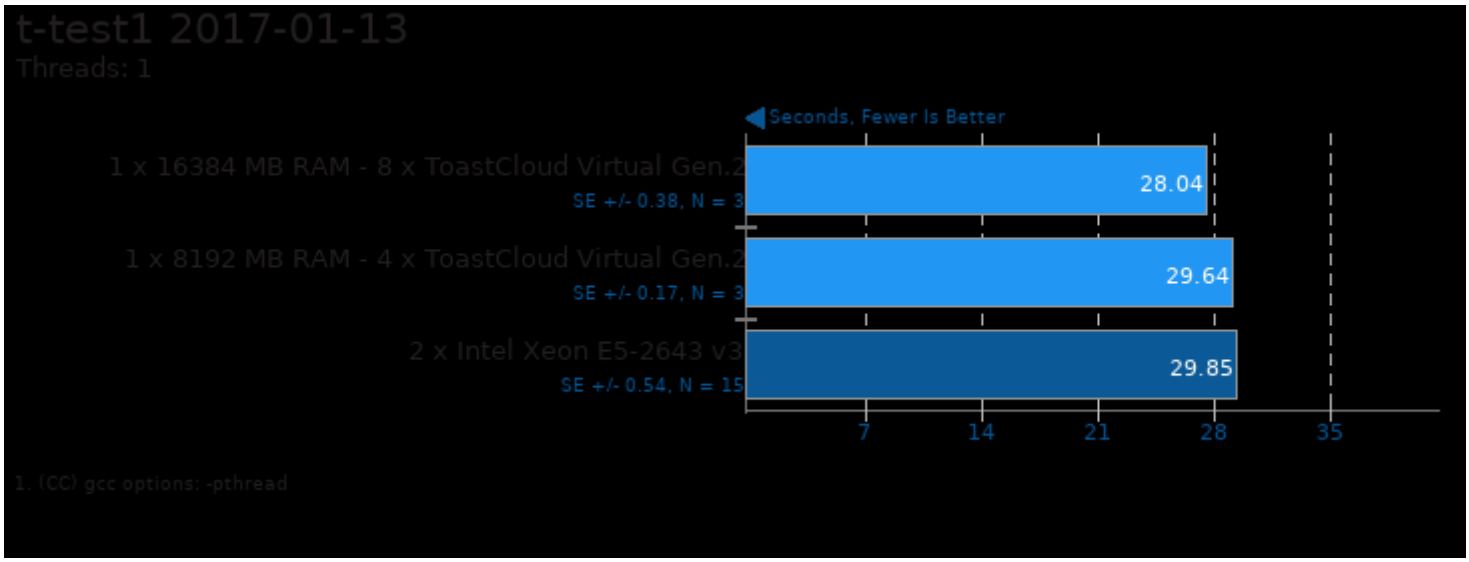
Botan 2.17.3

Test: AES-256



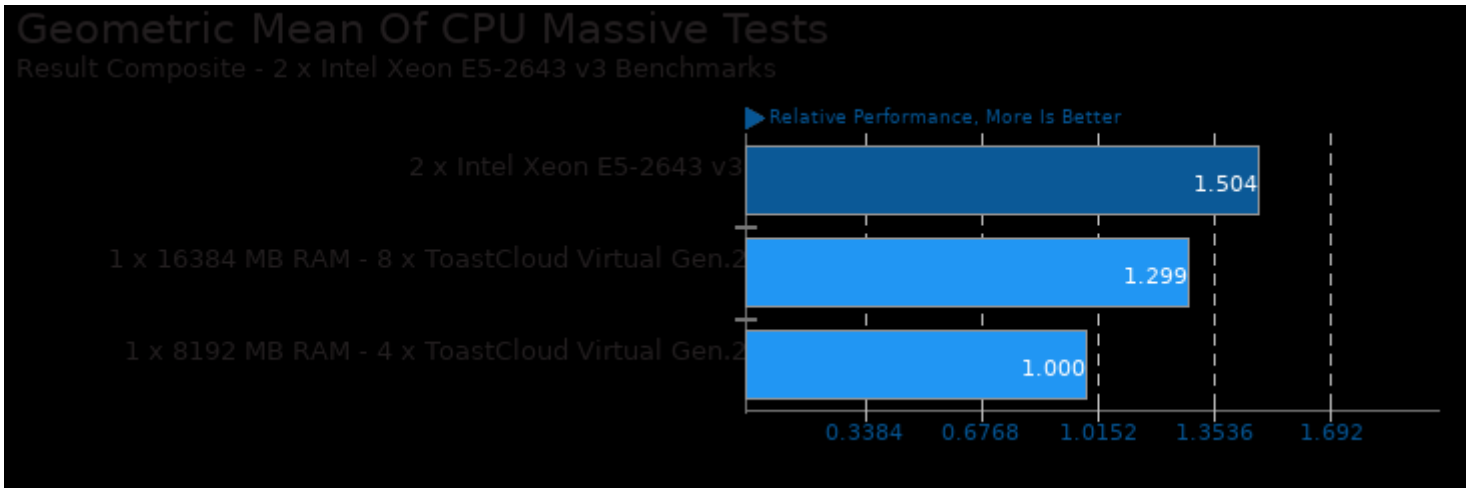
1. (CXX) g++ options: -fstack-protector -m64 -pthread -lbotan-2 -ldl -lrt

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



Geometric mean based upon tests: pts/namd, pts/t-test1 and pts/botan

This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 19:09.