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## **bioinfo-HDS-Inserm-ubuntu-28**

VMware testing on Ubuntu 22.04 via the Phoronix Test Suite.

### **Test Systems:**

#### **HDS-Inserm-ubuntu-28-32GB**

Processor: 28 x Intel Xeon Gold 6348 (55 Cores), Motherboard: Intel 440BX (6.00 BIOS), Chipset: Intel 440BX/ZX/DX, Memory: 32GB, Disk: 215GB Virtual disk, Graphics: VMware SVGA II, Network: VMware VMXNET3

OS: Ubuntu 22.04, Kernel: 5.15.0-48-generic (x86\_64), Vulkan: 1.2.204, Compiler: GCC 11.2.0, File-System: ext4, Screen Resolution: 800x600, System Layer: VMware

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-multilib --enable-nls --enable-objc-gc-auto  
--enable-offload-targets=nvptx-none=/build/gcc-11-gBFGDP/gcc-11-11.2.0/debian/tmp-nvptx/usr,amdgcn-amdhsa=/build/gcc-11-gBFGDP/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

Processor Notes: CPU Microcode: 0xd0002b1

Python Notes: Python 3.10.6

Security Notes: itlb\_multihit: KVM: Mitigation of VMX unsupported + l1tf: Mitigation of PTE Inversion + mds: Mitigation of Clear buffers; SMT Host state unknown + meltdown: Mitigation of PTI + mmio\_stale\_data: Mitigation of Clear buffers; SMT Host state unknown + rebleed: Mitigation of IBRS + 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 IBRS IBPB: conditional RSB filling + srbs: Not affected + tsx\_async\_abort: Not affected

## HDS-Inserm-ubuntu-28-64GB

Processor: 28 x Intel Xeon Gold 6348 (55 Cores), Motherboard: Intel 440BX (6.00 BIOS), Chipset: Intel 440BX/ZX/DX, Memory: 64GB, Disk: 215GB Virtual disk, Graphics: VMware SVGA II, Network: VMware VMXNET3

OS: Ubuntu 22.04, Kernel: 5.15.0-48-generic (x86\_64), Vulkan: 1.2.204, Compiler: GCC 11.2.0, File-System: ext4, Screen Resolution: 800x600, System Layer: VMware

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-gBFGDP/gcc-11-11.2.0/debian/tmp-nvptx/usr,amdgn-amdhsa=/build/gcc-11-gBFGDP/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

Processor Notes: CPU Microcode: 0xd0002b1

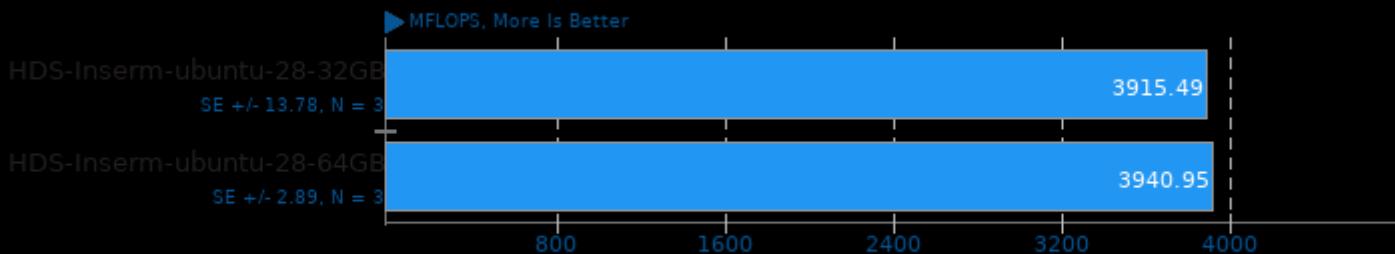
Python Notes: Python 3.10.6

Security Notes: itlb\_multihit: KVM: Mitigation of VMX unsupported + l1tf: Mitigation of PTE Inversion + mds: Mitigation of Clear buffers; SMT Host state unknown + meltdown: Mitigation of PTI + mmio\_stale\_data: Mitigation of Clear buffers; SMT Host state unknown + rebleed: Mitigation of IBRS + 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 IBRS IBPB: conditional RSB filling + srbs: Not affected + tsx\_async\_abort: Not affected

	HDS-Inserm-ubuntu-28-32	HDS-Inserm-ubuntu-28-64
	GB	GB
<b>Himeno Benchmark - P.P.S (MFLOPS)</b>	<b>3915</b>	<b>3941</b>
Normalized	99.35%	100%
Standard Deviation	0.6%	0.1%
<b>Timed MrBayes Analysis - P.P.A (sec)</b>	<b>134.701</b>	<b>135.413</b>
Normalized	100%	99.47%
Standard Deviation	0%	0.7%
<b>Timed HMMer Search - P.D.S (sec)</b>	<b>140.741</b>	<b>141.829</b>
Normalized	100%	99.23%
Standard Deviation	0.4%	0.6%
<b>Timed MAFFT Alignment - M.S.A - LSU RNA (sec)</b>	<b>10.244</b>	<b>10.089</b>
Normalized	98.49%	100%
Standard Deviation	1.9%	2.5%
<b>QMCPACK - simple-H2O (Execution Time - sec)</b>	<b>34.368</b>	<b>34.680</b>
Normalized	100%	99.1%
Standard Deviation	0.9%	0.6%

## Himeno Benchmark 3.0

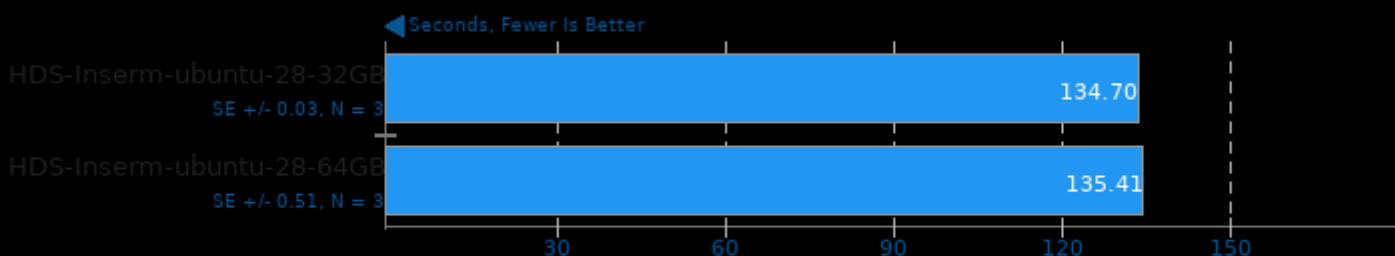
Poisson Pressure Solver



1. (CC) gcc options: -O3 -mavx2

## Timed MrBayes Analysis 3.2.7

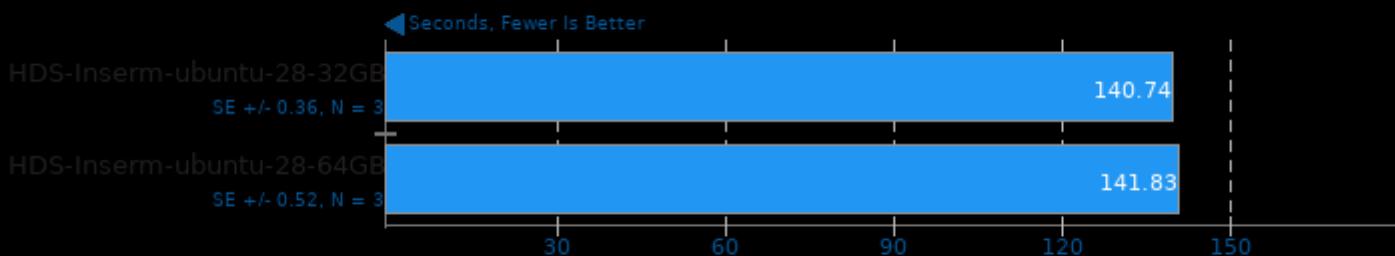
Primate Phylogeny Analysis



1. (CC) gcc options: -mmmx -msse -msse2 -msse3 -mssse3 -msse4.1 -msse4.2 -maes -mavx -mfma -mavx2 -mrdrnd -mbmi -mbmi2 -mabm -O3 -std=c99 -fPIC

## Timed HMMer Search 3.3.2

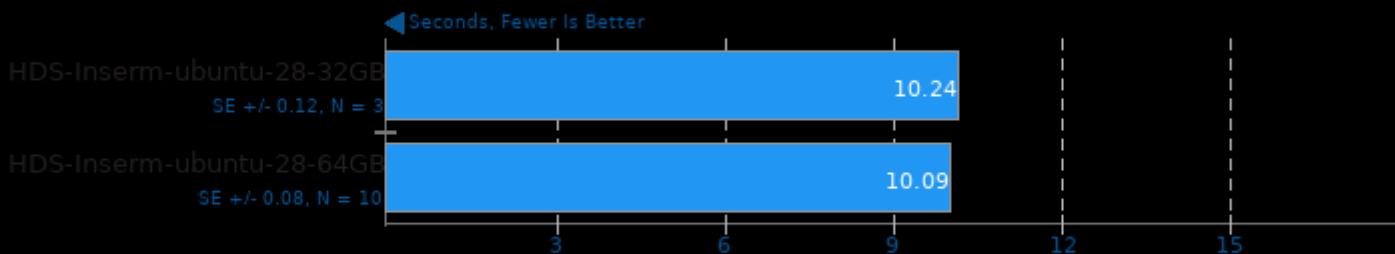
Pfam Database Search



1. (CC) gcc options: -O3 -pthread -lhmmer -leasel -lm -lmpi

## Timed MAFFT Alignment 7.471

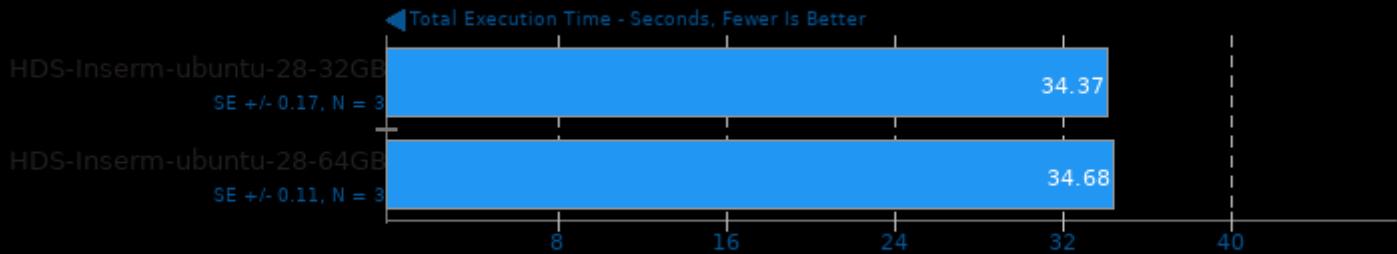
Multiple Sequence Alignment - LSU RNA



1. (CC) gcc options: -std=c99 -O3 -lm -lpthread

## QMCPACK 3.13

Input: simple-H2O

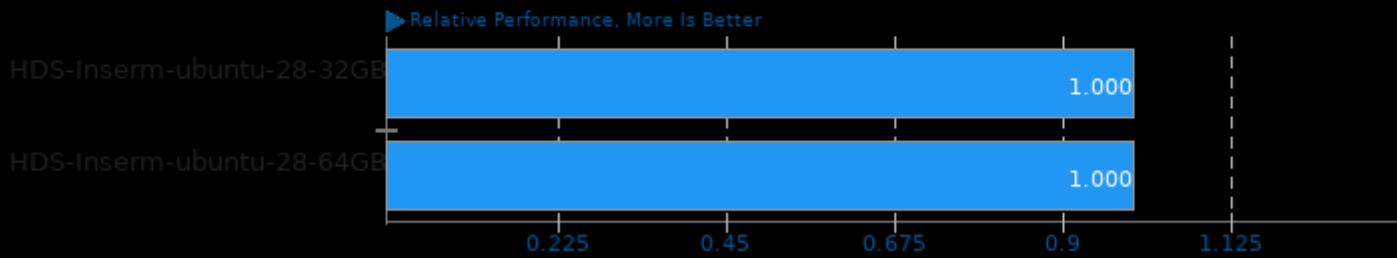


1. (CXX) g++ options: -finline-limit=1000 -fstrict-aliasing -funroll-all-loops -ffast-math -march=native -O3 -lm -ldl

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

### Geometric Mean Of Bioinformatics Tests

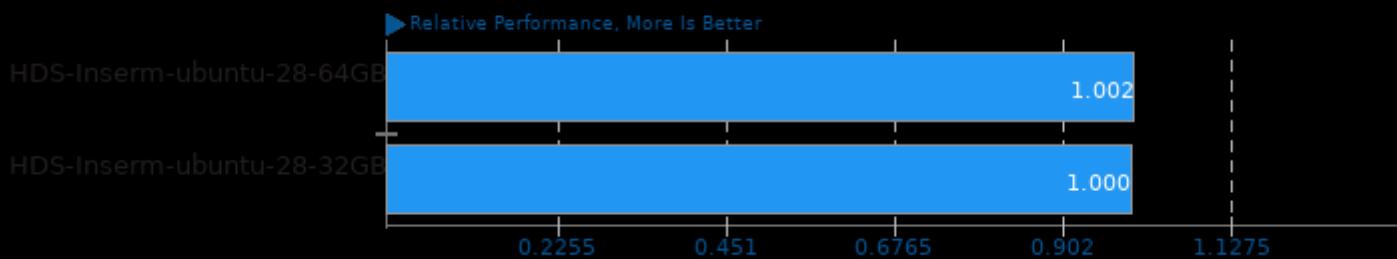
Result Composite - bioinfo-HDS-Inserm-ubuntu-28



Geometric mean based upon tests: pts/himeno, pts/mrbayes, pts/hmmer, pts/mafft and pts/qmcpack

### Geometric Mean Of C/C++ Compiler Tests

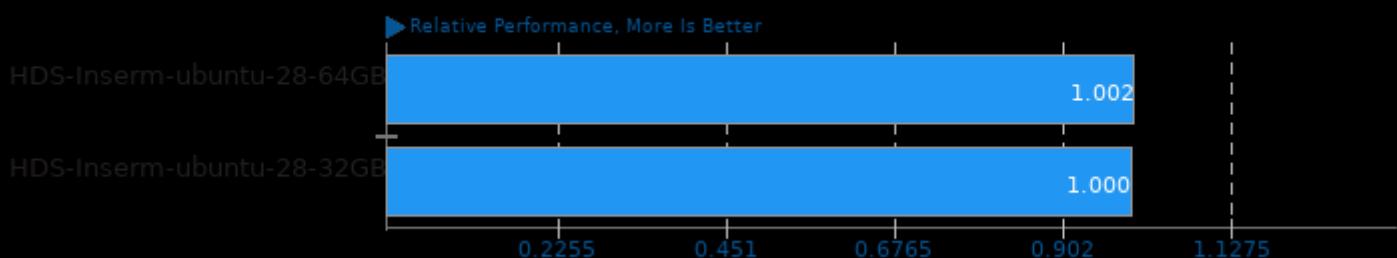
Result Composite - bioinfo-HDS-Inserm-ubuntu-28



Geometric mean based upon tests: pts/mafft, pts/himeno, pts/hmmer and pts/mrbayes

### Geometric Mean Of CPU Massive Tests

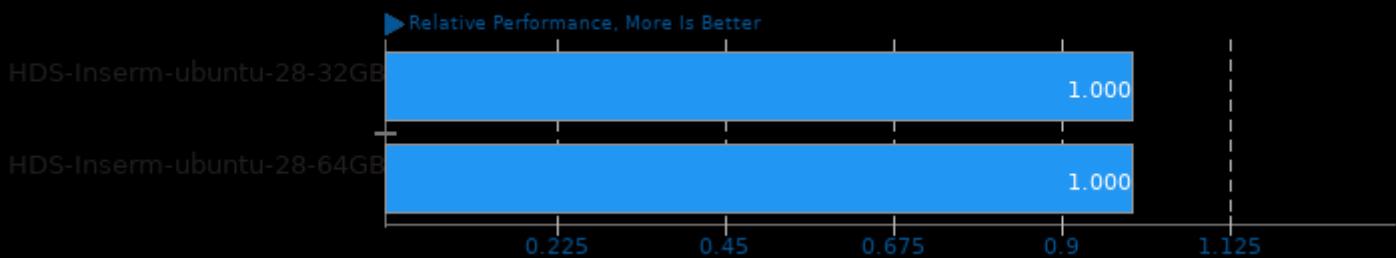
Result Composite - bioinfo-HDS-Inserm-ubuntu-28



Geometric mean based upon tests: pts/himeno, pts/hmmer, pts/mafft and pts/mrbayes

### Geometric Mean Of HPC - High Performance Computing Tests

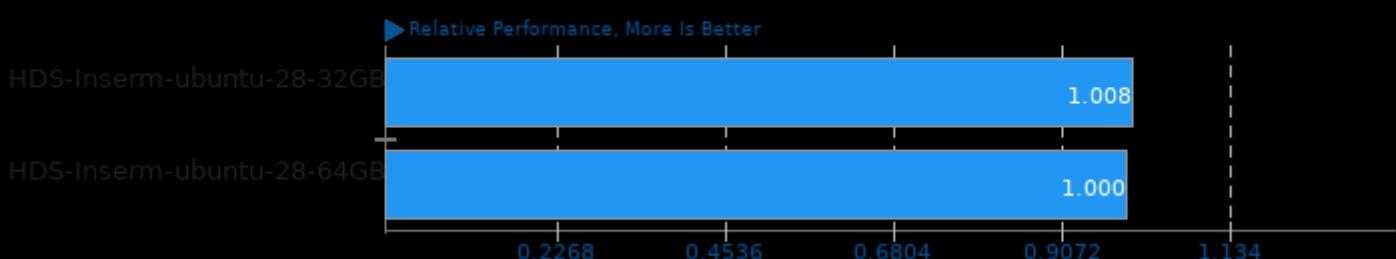
Result Composite - bioinfo-HDS-Inserm-ubuntu-28



Geometric mean based upon tests: pts/himeno, pts/mrbayes, pts/hmmer, pts/mafft and pts/qmcpack

### Geometric Mean Of MPI Benchmarks Tests

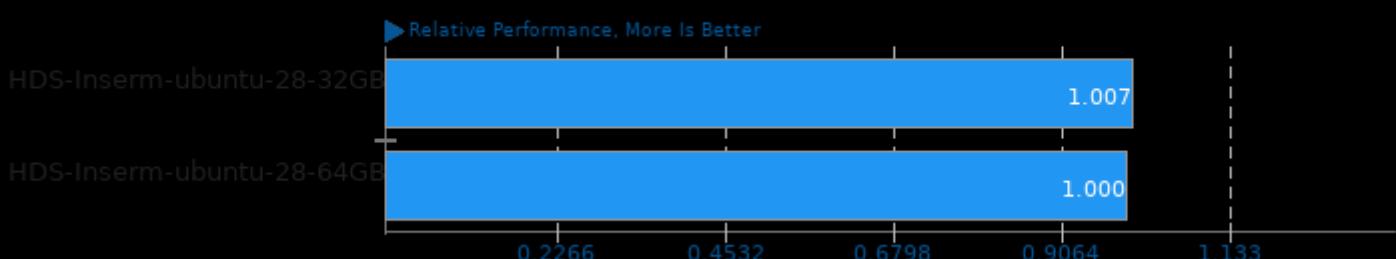
Result Composite - bioinfo-HDS-Inserm-ubuntu-28



Geometric mean based upon tests: pts/qmcpack and pts/mrbayes

### Geometric Mean Of OpenMPI Tests

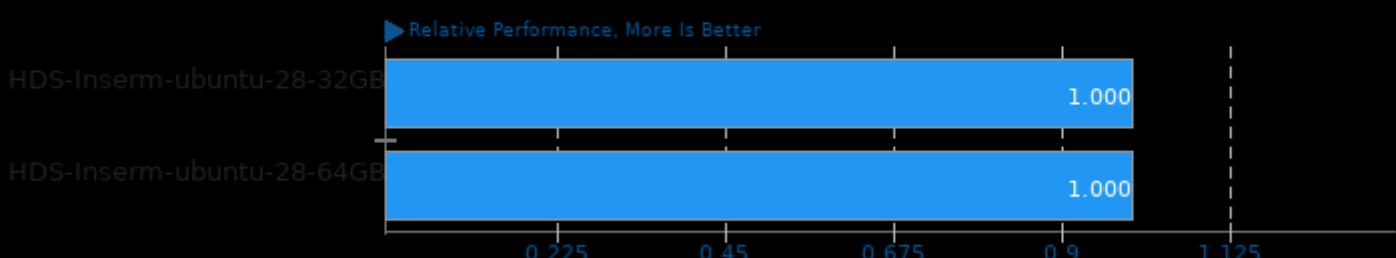
Result Composite - bioinfo-HDS-Inserm-ubuntu-28



Geometric mean based upon tests: pts/mrbayes, pts/hmmer and pts/qmcpack

### Geometric Mean Of Scientific Computing Tests

Result Composite - bioinfo-HDS-Inserm-ubuntu-28



Geometric mean based upon tests: pts/himeno, pts/mrbayes, pts/hmmer, pts/mafft and pts/qmcpack

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*This file was automatically generated via the Phoronix Test Suite benchmarking software on Friday, 29 March 2024 10:50.*