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g3258-cpp

Intel Pentium G3258 testing with a ASUS Z97I-PLUS (2401 BIOS) and ASUS Intel Xeon E3-1200 v3/4th Gen Core IGP on Ubuntu 20.04 via the Phoronix Test Suite.

Automated Executive Summary

march=native had the most wins, coming in first place for 57% of the tests.

Based on the geometric mean of all complete results, the fastest (march=westmere) was 1.003x the speed of the slowest (march=native).

Test Systems:

march=native

march=westmere

Processor: Intel Pentium G3258 @ 4.00GHz (2 Cores), Motherboard: ASUS Z97I-PLUS (2401 BIOS), Chipset: Intel 4th

Gen Core DRAM, Memory: 8GB, Disk: 31GB Ultra, Graphics: ASUS Intel Xeon E3-1200 v3/4th Gen Core IGP (1100MHz), Audio: Intel Xeon E3-1200 v3/4th, Monitor: iScan Duo, Network: Intel I218-V

OS: Ubuntu 20.04, Kernel: 5.4.0-53-generic (x86_64), Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 1920x1080

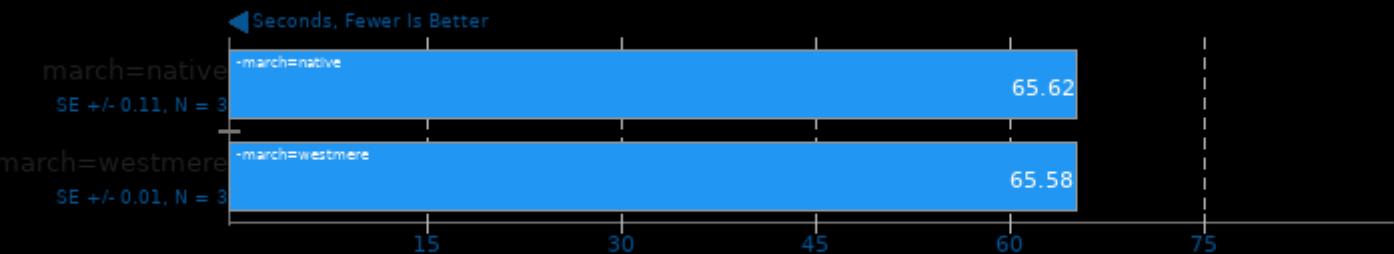
Environment Notes: CXXFLAGS=-march=westmere CFLAGS=-march=westmere
 Compiler Notes: --build=x86_64-linux-gnu --disable-vtable-verify --disable-werror --enable-checking=release --enable-clocale-gnu --enable-default-pie --enable-gnu-unique-object --enable-languages=c,ada,c++,go,brig,d,fortran,objc,obj-c++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-multilib --enable-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
 Processor Notes: Scaling Governor: intel_pstate performance - CPU Microcode: 0x28 - Thermal 1.9.1

Security Notes: itlb_multihit: KVM: Vulnerable + l1tf: Mitigation of PTE Inversion + mds: Mitigation of Clear buffers; SMT disabled + meltdown: Mitigation of PTI + 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 Full generic retrpoline IPBP: conditional IBRS_FW STIBP: disabled RSB filling + srbd: Mitigation of Microcode + tsx_async_abort: Not affected

	march=native	march=westmere
CppPerformanceBenchmarks - Atol (sec)	65.622	65.579
Normalized	99.93%	100%
Standard Deviation	0.3%	0%
CppPerformanceBenchmarks - Ctype (sec)	35.266	35.317
Normalized	100%	99.86%
Standard Deviation	0%	0%
CppPerformanceBenchmarks - Math Library (sec)	393.866	391.119
Normalized	99.3%	100%
Standard Deviation	1.6%	0.2%
CppPerformanceBenchmarks - Rand Numbers (sec)	1146	1147
Normalized	100%	99.87%
Standard Deviation	0%	0%
CppPerformanceBenchmarks - Stepanov Vector (sec)	78.400	78.929
Normalized	100%	99.33%
Standard Deviation	0.3%	0.6%
CppPerformanceBenchmarks - Function Objects (sec)	14.466	14.008
Normalized	96.83%	100%
Standard Deviation	0%	0%
CppPerformanceBenchmarks - S.A (sec)	29.206	29.376
Normalized	100%	99.42%
Standard Deviation	0%	0%

CppPerformanceBenchmarks 9

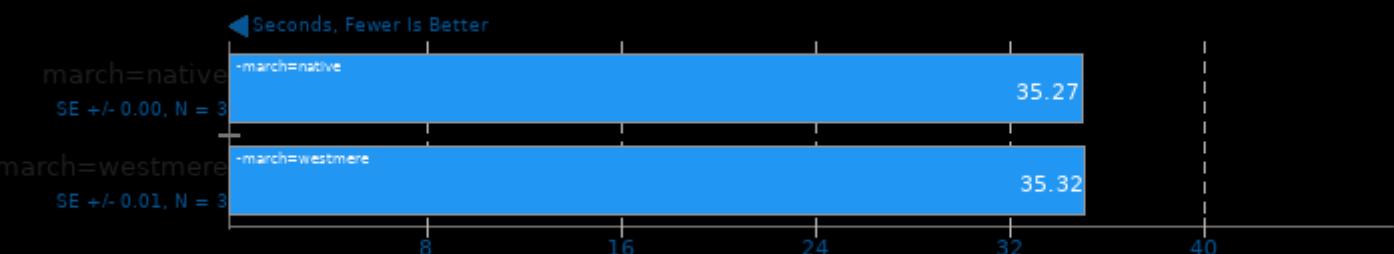
Test: Atol



1. (CXX) g++ options: -std=c++11 -O3

CppPerformanceBenchmarks 9

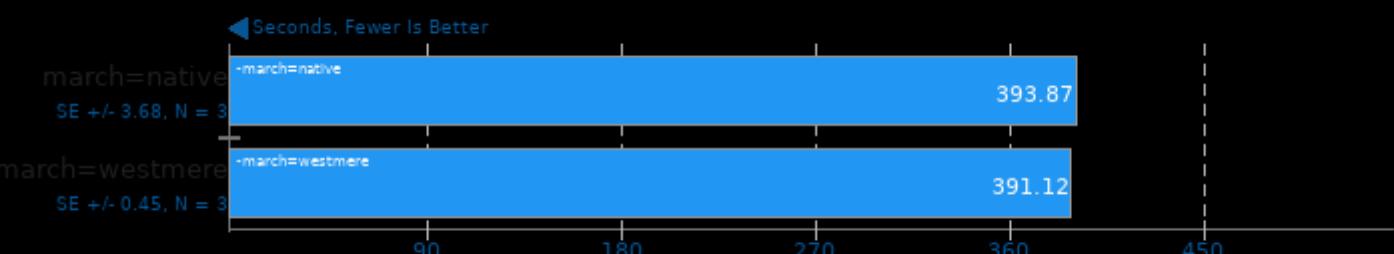
Test: Ctype



1. (CXX) g++ options: -std=c++11 -O3

CppPerformanceBenchmarks 9

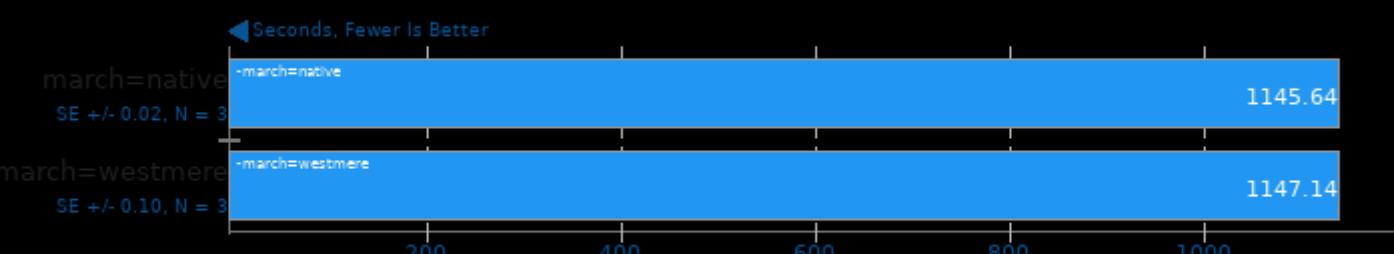
Test: Math Library



1. (CXX) g++ options: -std=c++11 -O3

CppPerformanceBenchmarks 9

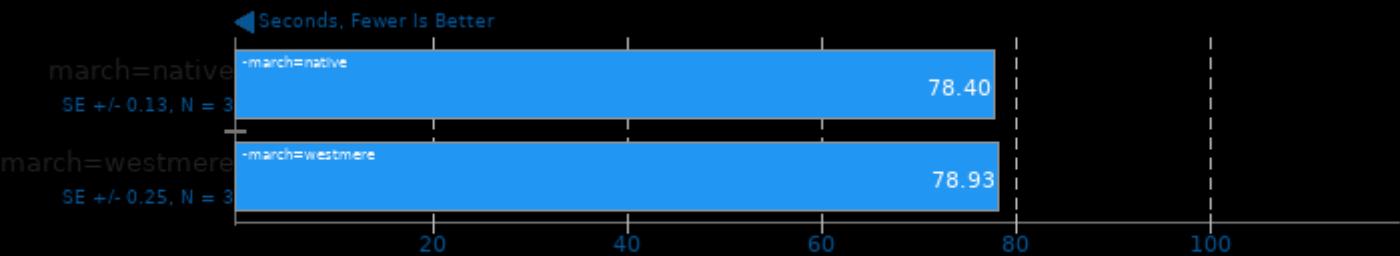
Test: Random Numbers



1. (CXX) g++ options: -std=c++11 -O3

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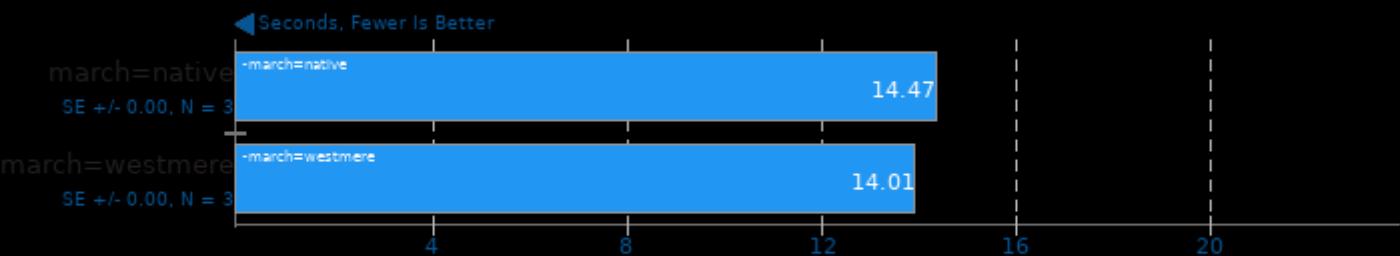
Test: Stepanov Vector



1. (CXX) g++ options: -std=c++11 -O3

CppPerformanceBenchmarks 9

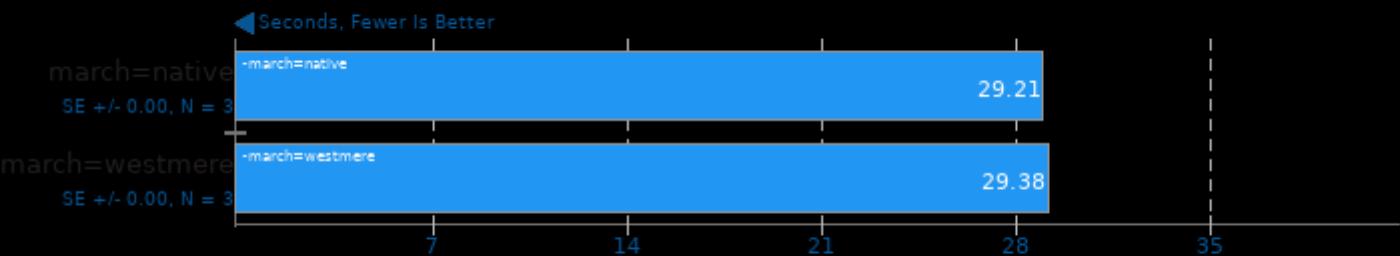
Test: Function Objects



1. (CXX) g++ options: -std=c++11 -O3

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Test: Stepanov Abstraction



1. (CXX) g++ options: -std=c++11 -O3

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