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AMD Ryzen 7 PRO 5850U testing with a HP 8A78 (F.04 BIOS) and AMD Cezanne 512MB on Pop 22.04 via the Phoronix Test Suite.

Automated Executive Summary

2 had the most wins, coming in first place for 42% of the tests.

Based on the geometric mean of all complete results, the fastest (1) was 1x the speed of the slowest (1). 2 was 1x the speed of 3 and 1 was 1x the speed of 2.

Test Systems:

1

2

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3

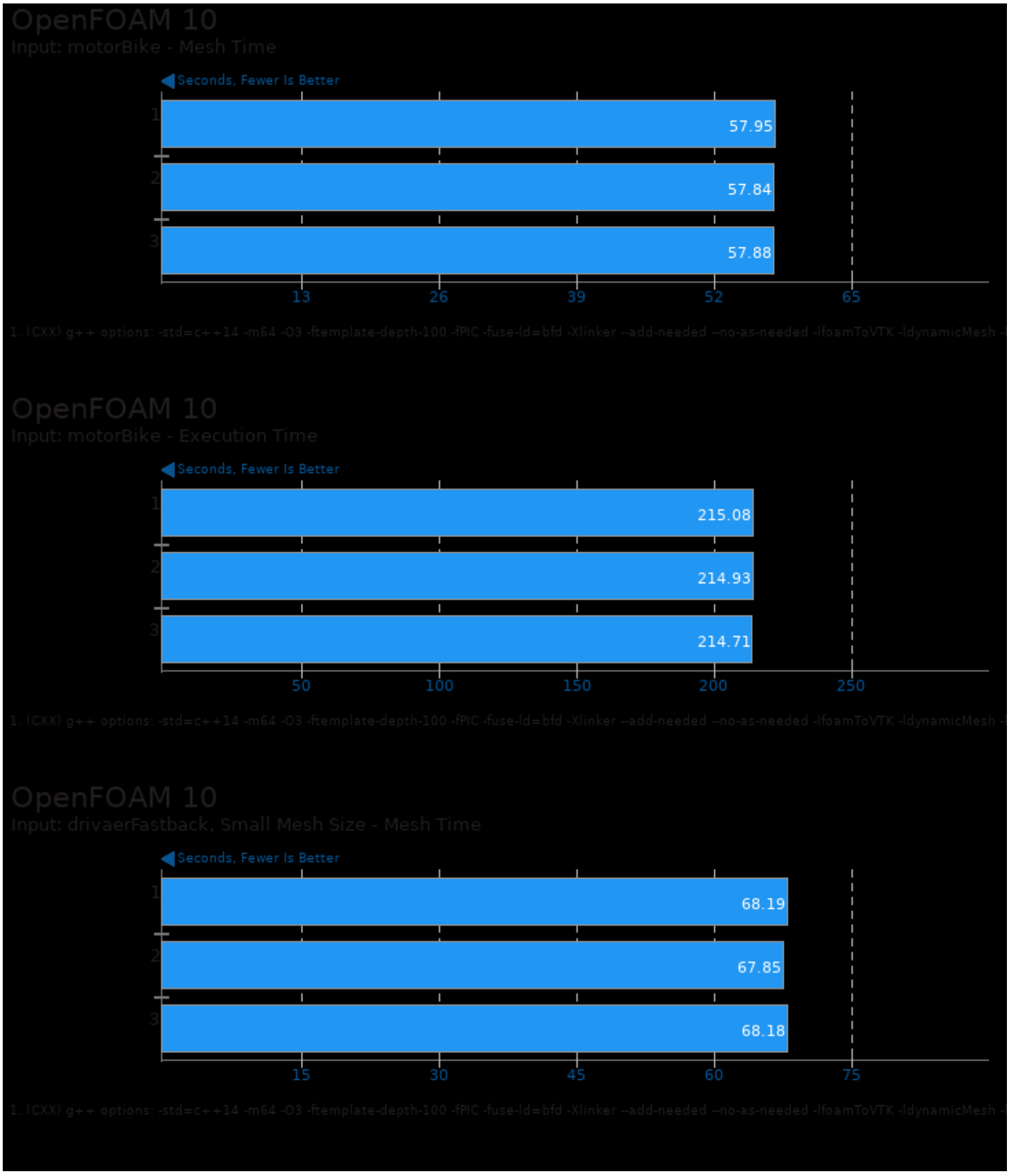
Processor: AMD Ryzen 7 PRO 5850U @ 4.51GHz (8 Cores / 16 Threads), Motherboard: HP 8A78 (F.04 BIOS), Chipset: AMD Renoir/Cezanne, Memory: 16GB, Disk: 1024GB SK hynix PC711 HFS001TDE9X073N, Graphics: AMD Cezanne 512MB (2000/400MHz), Audio: AMD Renoir Radeon HD Audio, Network: Realtek RTL8822CE 802.11ac PCIe

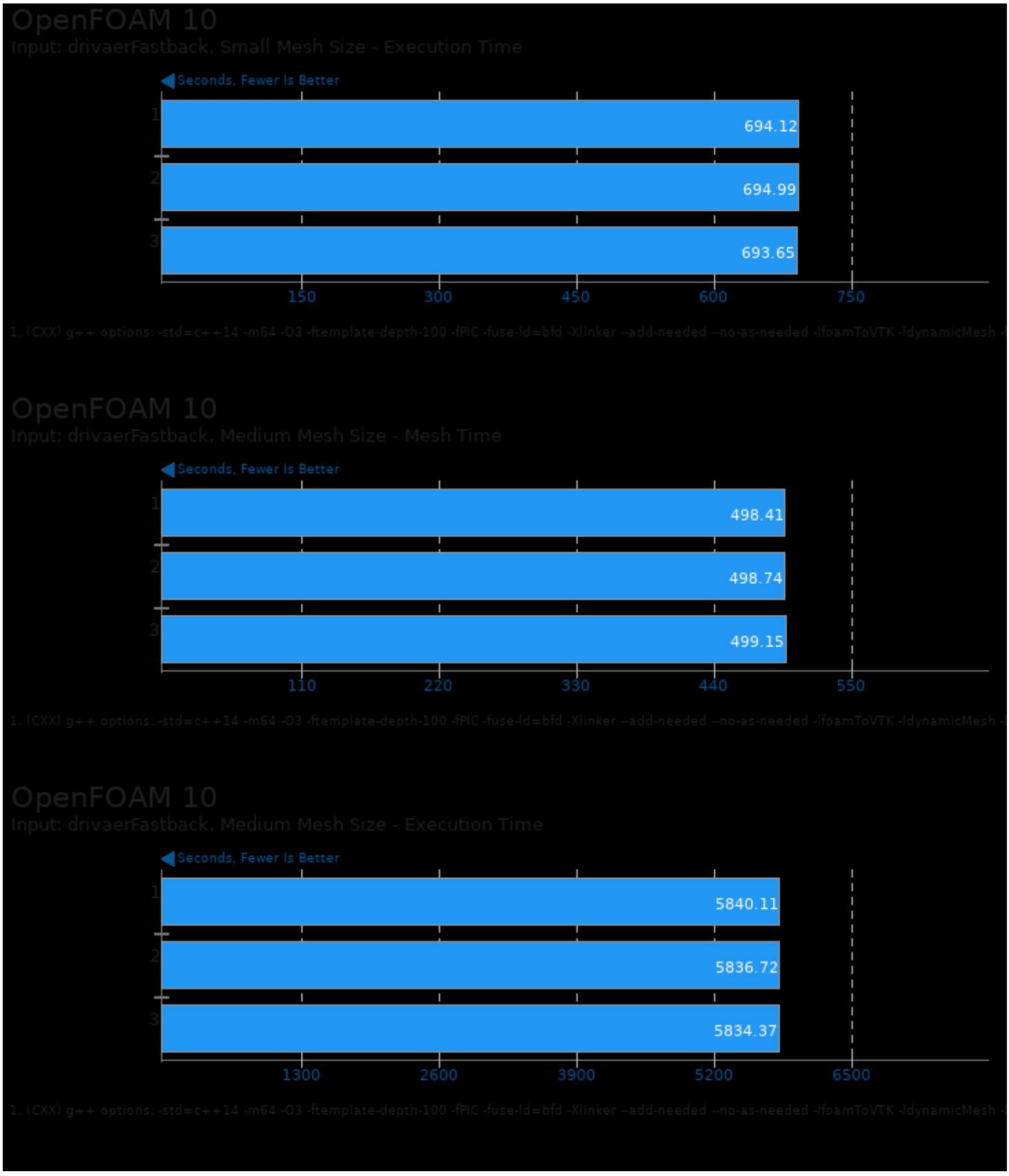
OS: Pop 22.04, Kernel: 5.19.0-76051900-generic (x86_64), Desktop: GNOME Shell 42.3.1, Display Server: X Server 1.21.1.3, OpenGL: 4.6 Mesa 22.0.5 (LLVM 13.0.1 DRM 3.47), Vulkan: 1.3.204, Compiler: GCC 11.2.0, File-System: ext4, Screen Resolution: 1920x1080

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,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: Scaling Governor: amd-pstate schedutil (Boost: Enabled) - CPU Microcode: 0xa50000c
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + mmio_stale_data: Not affected + retbleed: Not affected + spec_store_bypass: Mitigation of SSB disabled via prctl + spectre_v1: Mitigation of usercopy/swapgs barriers and __user pointer sanitization + spectre_v2: Mitigation of Retpolines IBPB: conditional IBRS_FW STIBP: always-on RSB filling + srbds: Not affected + tsx_async_abort: Not affected

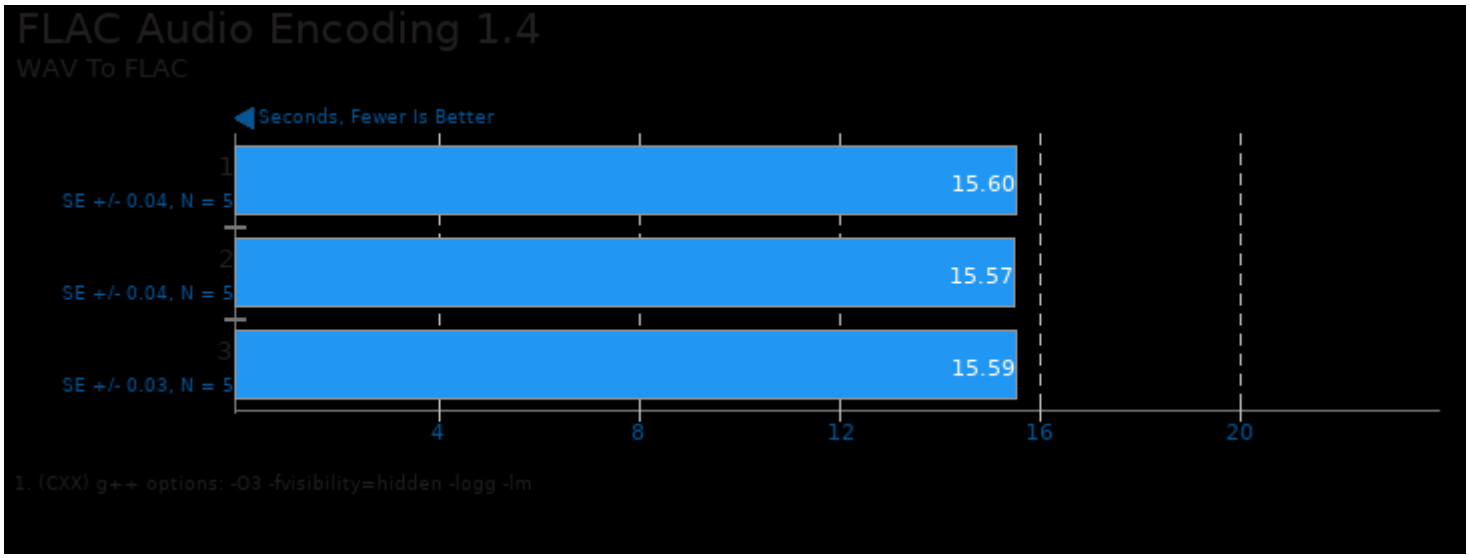
	1	2	3
OpenFOAM - motorBike - Mesh Time (sec)	**57.947**	**57.8363**	57.8846
Normalized	99.81%	100%	99.92%
OpenFOAM - motorBike - Execution Time	**215.084**	214.932	**214.709**
Normalized	99.83%	99.9%	100%
OpenFOAM - d.S.M.S - Mesh Time (sec)	**68.186755**	**67.853837**	68.182966
Normalized	99.51%	100%	99.52%
OpenFOAM - d.S.M.S - Execution Time (sec)	694.11686	**694.99102**	**693.64857**
Normalized	99.93%	99.81%	100%
OpenFOAM - d.M.M.S - Mesh Time (sec)	**498.40767**	498.74253	**499.1497**
Normalized	100%	99.93%	99.85%
OpenFOAM - d.M.M.S - Execution Time (sec)	**5840**	5837	**5834**
Normalized	99.9%	99.96%	100%
FLAC Audio Encoding - WAV To FLAC (sec)	**15.601**	**15.572**	15.594
Normalized	99.81%	100%	99.86%
Standard Deviation	0.5%	0.5%	0.4%

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OpenFOAM 10
Input: motorBike - Mesh Time
Seconds, Fewer Is Better
1
2
3
57.95
57.84
57.88
13
26
39
52
65
1. (CXX) g++ options: -std=c++14 -m64 -O3 -ftemplate-depth-100 -fPIC -fuse-ld=bfd -Xlinker --add-needed --no-as-needed -lfoamToVTK -ldynamicMesh
OpenFOAM 10
Input: motorBike - Execution Time
Seconds, Fewer Is Better
1
2
3
215.08
214.93
214.71
50
100
150
200
250
1. (CXX) g++ options: -std=c++14 -m64 -O3 -ftemplate-depth-100 -fPIC -fuse-ld=bfd -Xlinker --add-needed --no-as-needed -lfoamToVTK -ldynamicMesh
OpenFOAM 10
Input: drivaerFastback, Small Mesh Size - Mesh Time
Seconds, Fewer Is Better
1
2
3
68.19
67.85
68.18
15
30
45
60
75
1. (CXX) g++ options: -std=c++14 -m64 -O3 -ftemplate-depth-100 -fPIC -fuse-ld=bfd -Xlinker --add-needed --no-as-needed -lfoamToVTK -ldynamicMesh


OpenFOAM 10
Input: drivaerFastback, Small Mesh Size - Execution Time
Seconds, Fewer Is Better
1
694.12
2
694.99
3
693.65
150
300
450
600
750
1. (CXX) g++ options: -std=c++14 -m64 -O3 -ftemplate-depth-100 -fPIC -fuse-ld=bfd -Xlinker --add-needed --no-as-needed -lfoamToVTK -ldynamicMesh
OpenFOAM 10
Input: drivaerFastback, Medium Mesh Size - Mesh Time
Seconds, Fewer Is Better
1
498.41
2
498.74
3
499.15
110
220
330
440
550
1. (CXX) g++ options: -std=c++14 -m64 -O3 -ftemplate-depth-100 -fPIC -fuse-ld=bfd -Xlinker --add-needed --no-as-needed -lfoamToVTK -ldynamicMesh
OpenFOAM 10
Input: drivaerFastback, Medium Mesh Size - Execution Time
Seconds, Fewer Is Better
1
5840.11
2
5836.72
3
5834.37
1300
2600
3900
5200
6500
1. (CXX) g++ options: -std=c++14 -m64 -O3 -ftemplate-depth-100 -fPIC -fuse-ld=bfd -Xlinker --add-needed --no-as-needed -lfoamToVTK -ldynamicMesh

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This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 09:10.