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os_bench

ARMv8 Cortex-A72 testing on Ubuntu 20.10 via the Phoronix Test Suite.

Test Systems:

test

Processor: Intel Core i5-6200U @ 2.80GHz (2 Cores / 4 Threads), Motherboard: HP 820C v82.39 (F.55 BIOS), Chipset: Intel Xeon E3-1200 v5/E3-1500, Memory: 16GB, Disk: 1000GB HGST HTS541010A9, Graphics: Intel Skylake GT2 [HD 520] 2GB, Audio: Realtek ALC295, Network: Realtek RTL810xE PCI + Intel 3165

OS: Pop 20.04, Kernel: 5.8.0-7630-generic (x86_64), Desktop: GNOME Shell 3.36.4, Display Server: X Server 1.20.9, Display Driver: NVIDIA, Vulkan: 1.2.145, Compiler: GCC 9.3.0, File-System: ext4, Screen Resolution: 1366x768

Kernel Notes: Transparent Huge Pages: madvise
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-nls --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: 0xe2 - Thermald 1.9.1

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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: Mitigation of Microcode + tsx_async_abort: Not affected

pi

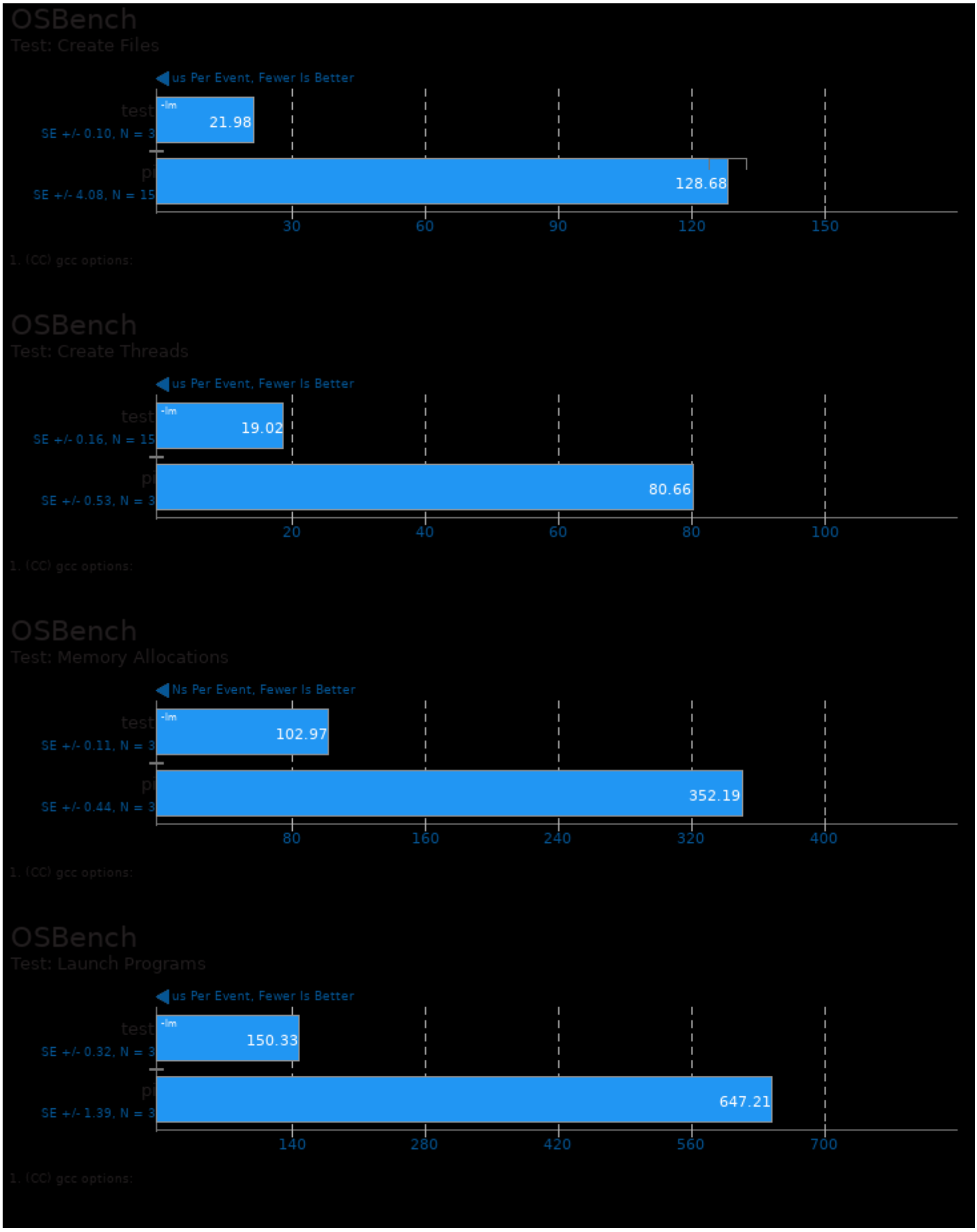
Processor: ARMv8 Cortex-A72 @ 2.00GHz (4 Cores), Motherboard: BCM2835 Raspberry Pi 4 Model B Rev 1.4, Memory: 8GB, Disk: 31GB x740w + 32GB SC32G

OS: Ubuntu 20.10, Kernel: 5.8.0-1013-raspi (aarch64), Display Server: X Server 1.20.9, Compiler: GCC 10.2.0, File-System: ext4

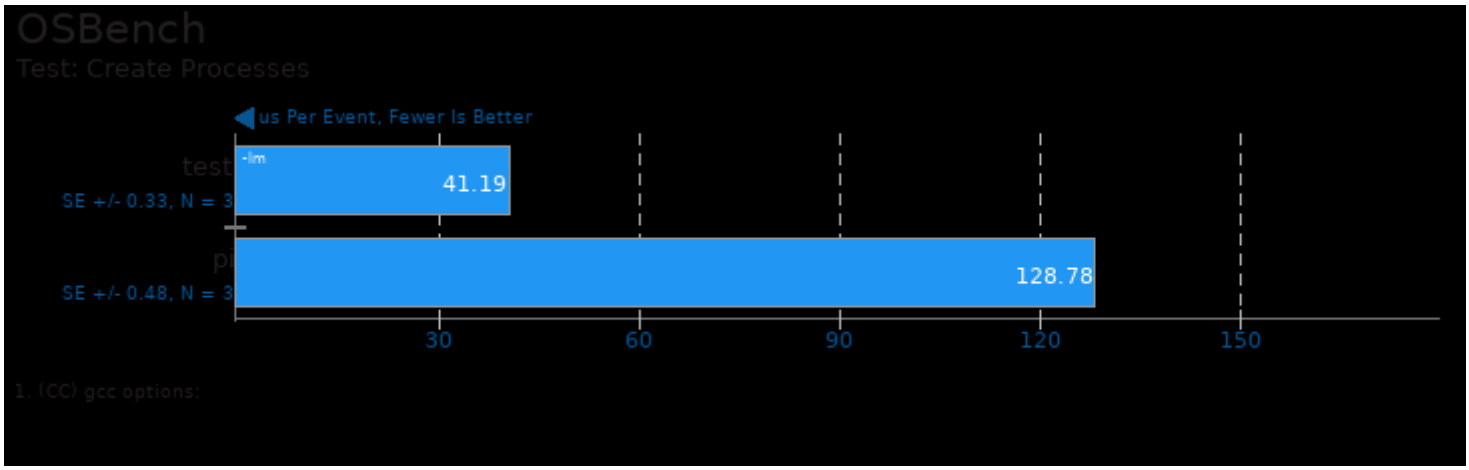
Kernel Notes: snd_bcm2835.enable_compat_alsa=0 snd_bcm2835.enable_hdmi=1 snd_bcm2835.enable_headphones=1
Compiler Notes: --build=aarch64-linux-gnu --disable-libquadmath --disable-libquadmath-support --disable-werror --enable-checking=release --enable-clocale=gnu --enable-default-pie --enable-fix-cortex-a53-843419 --enable-gnu-unique-object --enable-languages=c,ada,c++,go,d,fortran,objc,obj-c++,m2 --enable-libphobos-checking=release --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-nls --enable-objc-gc=auto --enable-plugin --enable-shared --enable-threads=posix --host=aarch64-linux-gnu --program-prefix=aarch64-linux-gnu- --target=aarch64-linux-gnu --with-default-libstdcxx-abi=new --with-gcc-major-version-only --with-target-system-zlib=auto -v
Processor Notes: Scaling Governor: cpufreq-dt ondemand
Security Notes: itlb_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec_store_bypass: Vulnerable + spectre_v1: Mitigation of __user pointer sanitization + spectre_v2: Vulnerable + srbds: Not affected + tsx_async_abort: Not affected

	test	pi
OSBench - Create Files (us/Event)	**21.976603**	**128.679674**
Normalized	100%	17.08%
Standard Deviation	0.8%	12.3%
OSBench - Create Threads (us/Event)	**19.019763**	**80.659390**
Normalized	100%	23.58%
Standard Deviation	3.2%	1.1%
OSBench - Memory Allocations (Ns/Event)	**102.965593**	**352.185249**
Normalized	100%	29.24%
Standard Deviation	0.2%	0.2%
OSBench - Launch Programs (us/Event)	**150.330067**	**647.214254**
Normalized	100%	23.23%
Standard Deviation	0.4%	0.4%
OSBench - Create Processes (us/Event)	**41.190783**	**128.782590**
Normalized	100%	31.98%
Standard Deviation	1.4%	0.6%

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OSBench
Test: Create Files
us Per Event, Fewer Is Better
test
-lm
21.98
SE +/- 0.10, N = 3
pi
128.68
SE +/- 4.08, N = 15
30
60
90
120
150
1. (CC) gcc options:
OSBench
Test: Create Threads
us Per Event, Fewer Is Better
test
-lm
19.02
SE +/- 0.16, N = 15
pi
80.66
SE +/- 0.53, N = 3
20
40
60
80
100
1. (CC) gcc options:
OSBench
Test: Memory Allocations
Ns Per Event, Fewer Is Better
test
-lm
102.97
SE +/- 0.11, N = 3
pi
352.19
SE +/- 0.44, N = 3
80
160
240
320
400
1. (CC) gcc options:
OSBench
Test: Launch Programs
us Per Event, Fewer Is Better
test
-lm
150.33
SE +/- 0.32, N = 3
pi
647.21
SE +/- 1.39, N = 3
140
280
420
560
700
1. (CC) gcc options:

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This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 20:39.