



## waters\_hackbench

ARMv8 Cortex-A72 testing with a Waters IGX8QM Orion and imx-drmrmfb on waters-orion-xwayland 5.4-zeus via the Phoronix Test Suite.

### Automated Executive Summary

*hackbench\_suitcase had the most wins, coming in first place for 63% of the tests.*

*Based on the geometric mean of all complete results, the fastest (hackbench\_suitcase) was 1.045x the speed of the slowest (mek\_hack). ARMv8 Cortex-A72 was 0.972x the speed of hackbench\_suitcase and mek\_hack was 0.984x the speed of ARMv8 Cortex-A72.*

## Test Systems:

### ARMv8 Cortex-A72

Processor: ARMv8 Cortex-A72 @ 1.20GHz (6 Cores), Motherboard: Waters IGX8QM Orion, Memory: 6144MB, Disk: 32GB G1J37E + 2 x 31GB SD32G, Graphics: imx-drmrmfb

OS: waters-orion-xwayland 5.4-zeus, Kernel: 5.4.70-2.3.0+g4f2631b022d8 (aarch64), Display Server: Wayland Weston 9.0.0 + X Server, Vulkan: 1.1.82, Compiler: GCC 9.2.0, File-System: ext4, Screen Resolution: 1280x800

Compiler Notes: --bindir=/usr/bin --build=x86\_64-linux --datadir=/usr/share --disable-bootstrap --disable-dependency-tracking --disable-libmudflap --disable-libssp --disable-silent-rules --disable-static --enable-\_\_cxa\_atexit --enable-c99 --enable-headers=c\_global --enable-checking=release --enable-default-pie --enable-initfini-array --enable-languages=c,c++ --enable-libitm --enable-libstdcxx-pch --enable-long-long --enable-lto --enable-multilib --enable-nls --enable-shared --enable-symvers=gnu --enable-threads=posix --exec\_prefix=/usr --host=aarch64-poky-linux --includedir=/usr/include --localstatedir=/var --mandir=/usr/share/man --oldincludedir=/usr/include --program-prefix=aarch64-poky-linux- --sbindir=/usr/sbin --sharedstatedir=/com --sysconfdir=/etc --target=aarch64-poky-linux --with-build-sysroot=/ --with-glibc-version=2.28 --with-gnu-ld --with-libtool-sysroot=/ --with-linker-hash-style=gnu --with-ppl=no --without-isl --without-local-prefix

Processor Notes: Scaling Governor: cpufreq-dt schedutil

Security Notes: itlb\_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec\_store\_bypass: Not affected + spectre\_v1: Mitigation of \_\_user pointer sanitization + spectre\_v2: Mitigation of Branch predictor hardening + srbds: Not affected + tsx\_async\_abort: Not affected

## mek\_hack

Processor: ARMv8 Cortex-A72 @ 1.20GHz (6 Cores), Motherboard: Freescale i.MX8QM MEK, Memory: 6144MB, Disk: 512GB MTFDHBK512TDP + 31GB R1J57L + 31GB SD32G, Graphics: imx-drmdrmfb, Monitor: ELO ET1002L

OS: waters-orion-xwayland 5.4-zeus, Kernel: 5.4.70-2.3.0+g4f2631b022d8 (aarch64), Display Server: Wayland Weston 9.0.0 + X Server, Vulkan: 1.1.82, Compiler: GCC 9.2.0, File-System: ext4, Screen Resolution: 1280x800

Compiler Notes: --bindir=/usr/bin --build=x86\_64-linux --datadir=/usr/share --disable-bootstrap --disable-dependency-tracking --disable-libmudflap --disable-libssp --disable-silent-rules --disable-static --enable-\_\_cxa\_atexit --enable-c99 --enable-headers=c\_global --enable-checking=release --enable-default-pie --enable-initfini-array --enable-languages=c,c++ --enable-libitm --enable-libstdcxx-pch --enable-long-long --enable-lto --enable-multilib --enable-nls --enable-shared --enable-symvers=gnu --enable-threads=posix --exec\_prefix=/usr --host=aarch64-poky-linux --includedir=/usr/include --localstatedir=/var --mandir=/usr/share/man --oldincludedir=/usr/include --program-prefix=aarch64-poky-linux- --sbindir=/usr/sbin --sharedstatedir=/com --sysconfdir=/etc --target=aarch64-poky-linux --with-build-sysroot=/ --with-glibc-version=2.28 --with-gnu-ld --with-libtool-sysroot=/ --with-linker-hash-style=gnu --with-ppl=no --without-isl --without-local-prefix

Processor Notes: Scaling Governor: cpufreq-dt schedutil

Security Notes: itlb\_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec\_store\_bypass: Not affected + spectre\_v1: Mitigation of \_\_user pointer sanitization + spectre\_v2: Mitigation of Branch predictor hardening + srbds: Not affected + tsx\_async\_abort: Not affected

## hackbench\_suitcase

Processor: ARMv8 Cortex-A72 @ 1.20GHz (6 Cores), Motherboard: Waters IGX8QM Orion, Memory: 6144MB, Disk: 512GB KINGSTON OM3PDP3512B-A01 + 31GB TX2932, Graphics: imx-drmdrmfb

OS: waters-orion-xwayland 5.4-zeus, Kernel: 5.4.70 (aarch64), Display Server: Wayland Weston 9.0.0 + X Server, Vulkan: 1.1.82, Compiler: GCC 9.2.0, File-System: ext4, Screen Resolution: 1280x800

Compiler Notes: --bindir=/usr/bin --build=x86\_64-linux --datadir=/usr/share --disable-bootstrap --disable-dependency-tracking --disable-libmudflap --disable-libssp --disable-silent-rules --disable-static --enable-\_\_cxa\_atexit --enable-c99 --enable-headers=c\_global --enable-checking=release --enable-default-pie --enable-initfini-array --enable-languages=c,c++ --enable-libitm --enable-libstdcxx-pch --enable-long-long --enable-lto --enable-multilib --enable-nls --enable-shared --enable-symvers=gnu --enable-threads=posix --exec\_prefix=/usr --host=aarch64-poky-linux --includedir=/usr/include --localstatedir=/var --mandir=/usr/share/man --oldincludedir=/usr/include --program-prefix=aarch64-poky-linux- --sbindir=/usr/sbin --sharedstatedir=/com --sysconfdir=/etc --target=aarch64-poky-linux --with-build-sysroot=/ --with-glibc-version=2.28 --with-gnu-ld --with-libtool-sysroot=/ --with-linker-hash-style=gnu --with-ppl=no --without-isl --without-local-prefix

Processor Notes: Scaling Governor: cpufreq-dt schedutil

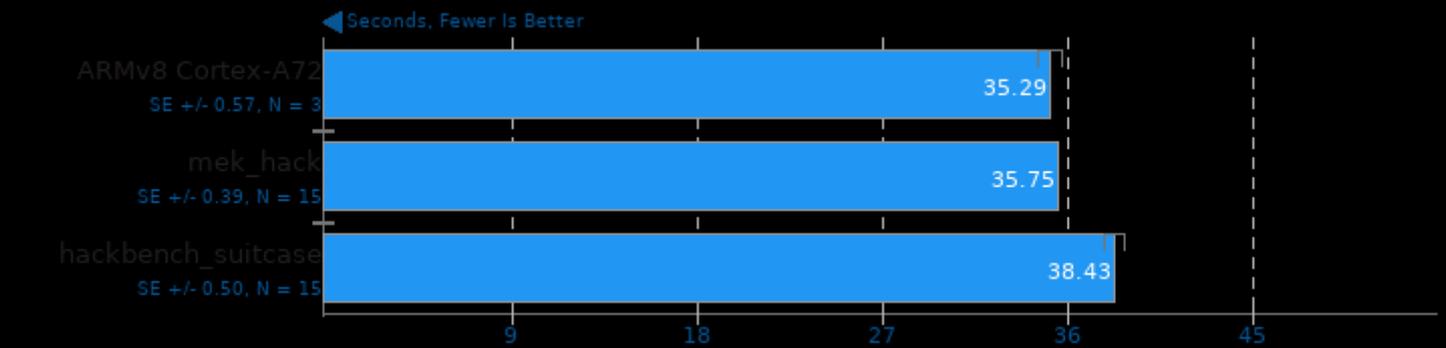
Security Notes: itlb\_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec\_store\_bypass: Not affected + spectre\_v1: Mitigation of \_\_user pointer sanitization + spectre\_v2: Mitigation of Branch predictor hardening + srbds: Not affected + tsx\_async\_abort: Not affected

	ARMv8 Cortex-A72	mek_hack	hackbench_suitcase
<b>Hackbench - 1 - Thread (sec)</b>	<b>35.29</b>	35.75	<b>38.43</b>
Normalized	100%	98.71%	91.83%
Standard Deviation	2.8%	4.2%	5%
<b>Hackbench - 2 - Thread (sec)</b>	<b>65.22</b>	66.87	<b>69.66</b>
Normalized	100%	97.53%	93.63%
Standard Deviation	1.7%	0.2%	2.9%

<b>Hackbench - 4 - Thread (sec)</b>	132	<b>139</b>	<b>130</b>
Normalized	98.48%	93.53%	100%
Standard Deviation	2.1%	2.3%	0.3%
<b>Hackbench - 8 - Thread (sec)</b>	266	<b>276</b>	<b>244</b>
Normalized	91.73%	88.41%	100%
Standard Deviation	1.5%	1.5%	1%
<b>Hackbench - 1 - Process (sec)</b>	<b>31.82</b>	<b>33.54</b>	33.13
Normalized	100%	94.87%	96.05%
Standard Deviation	2.7%	1.5%	1.9%
<b>Hackbench - 16 - Thread (sec)</b>	531	<b>541</b>	<b>489</b>
Normalized	92.09%	90.39%	100%
Standard Deviation	1.3%	1.7%	1.4%
<b>Hackbench - 2 - Process (sec)</b>	66.69	<b>65.18</b>	<b>68.77</b>
Normalized	97.74%	100%	94.78%
Standard Deviation	2.7%	2.2%	1.4%
<b>Hackbench - 4 - Process (sec)</b>	<b>129</b>	<b>129</b>	<b>128</b>
Normalized	99.22%	99.22%	100%
Standard Deviation	1.9%	2.9%	1.1%
<b>Hackbench - 8 - Process (sec)</b>	<b>262</b>	261	<b>238</b>
Normalized	90.84%	91.19%	100%
Standard Deviation	2.1%	1.3%	1.4%
<b>Hackbench - 16 - Process (sec)</b>	<b>533</b>	523	<b>467</b>
Normalized	87.62%	89.29%	100%
Standard Deviation	0.3%	1.7%	0.7%
<b>Hackbench - 32 - Process (sec)</b>	1057	<b>1072</b>	<b>945</b>
Normalized	89.4%	88.15%	100%
Standard Deviation	0.6%	2.9%	2.1%

### Hackbench

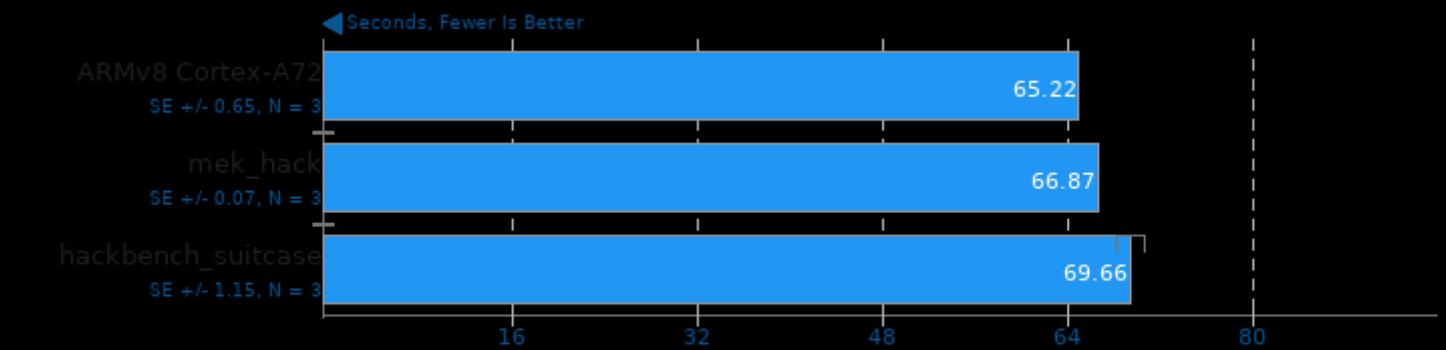
Count: 1 - Type: Thread



1. (CC) gcc options: -lpthread

### Hackbench

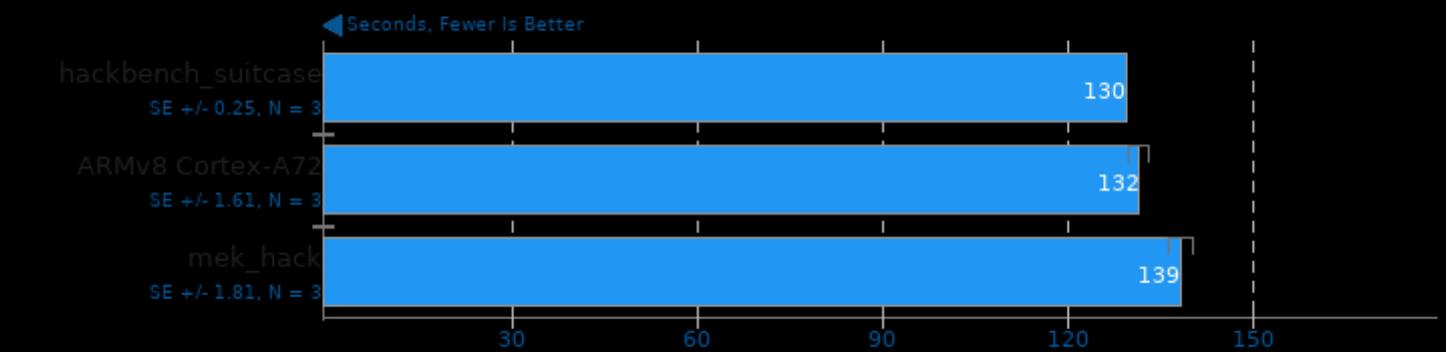
Count: 2 - Type: Thread



1. (CC) gcc options: -lpthread

### Hackbench

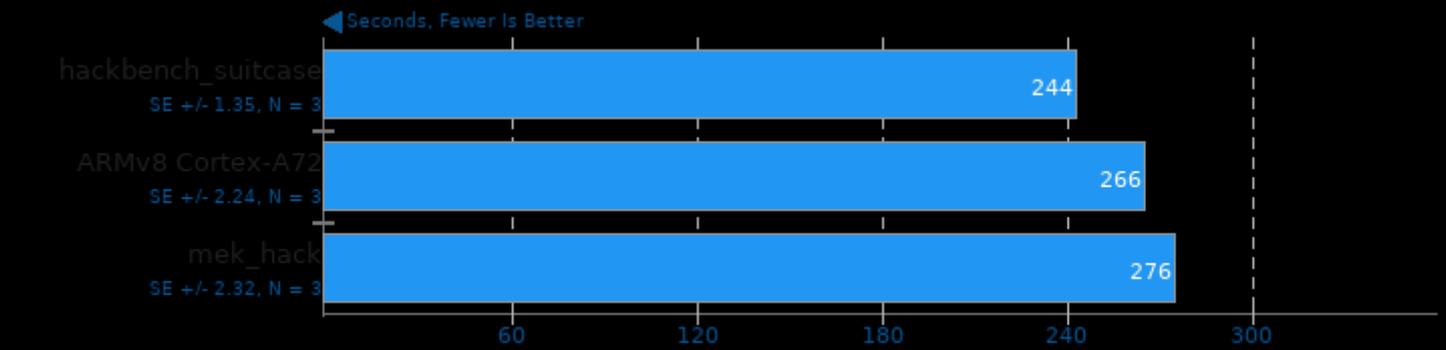
Count: 4 - Type: Thread



1. (CC) gcc options: -lpthread

### Hackbench

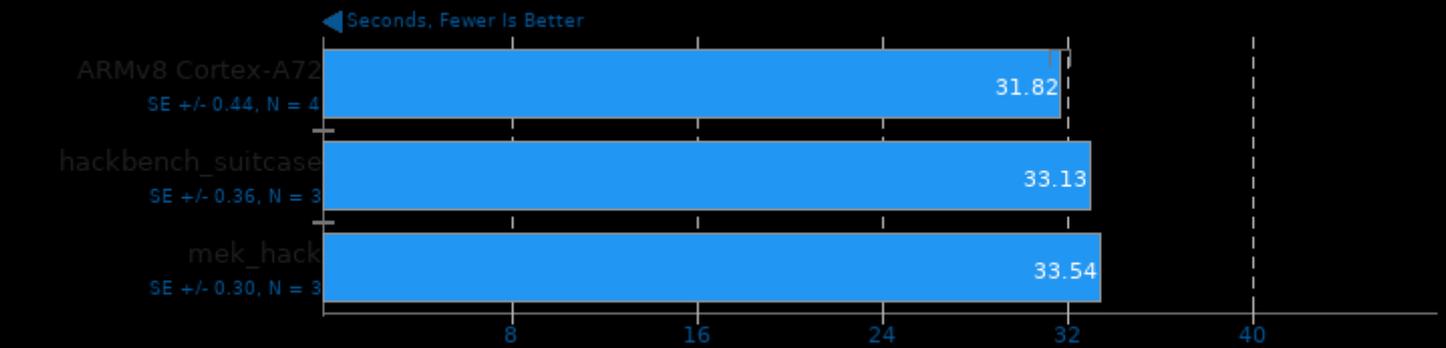
Count: 8 - Type: Thread



1. (CC) gcc options: -lpthread

### Hackbench

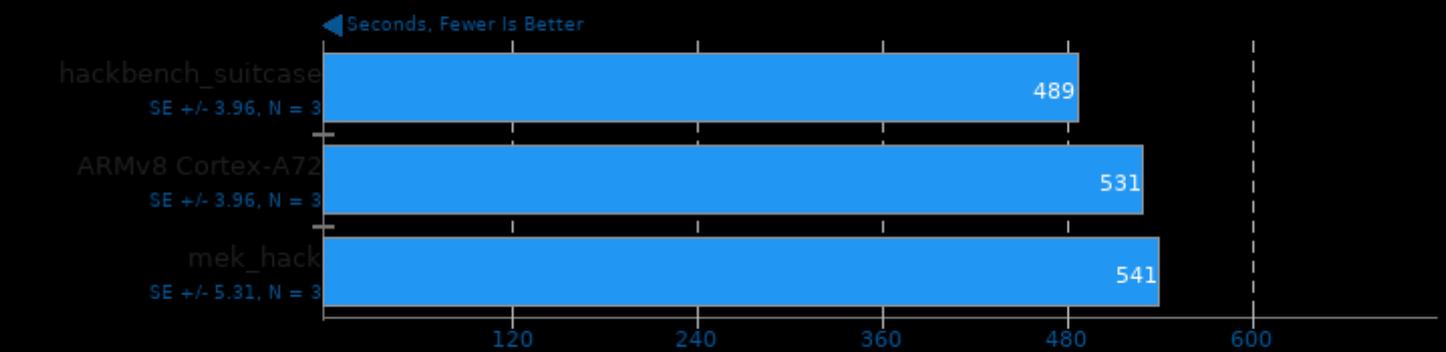
Count: 1 - Type: Process



1. (CC) gcc options: -lpthread

### Hackbench

Count: 16 - Type: Thread

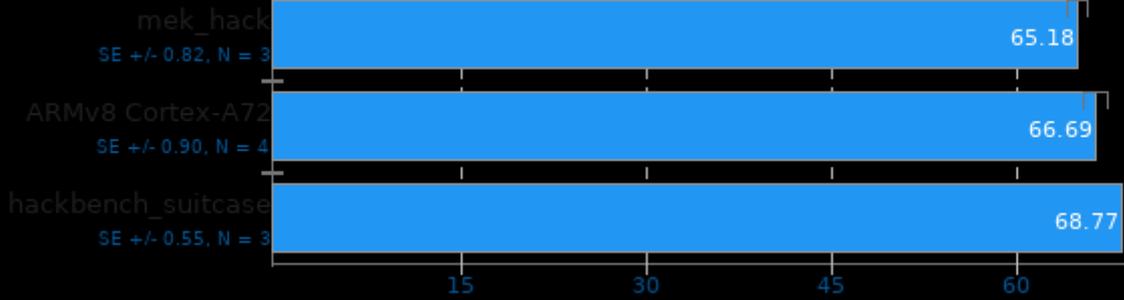


1. (CC) gcc options: -lpthread

### Hackbench

Count: 2 - Type: Process

← Seconds, Fewer Is Better

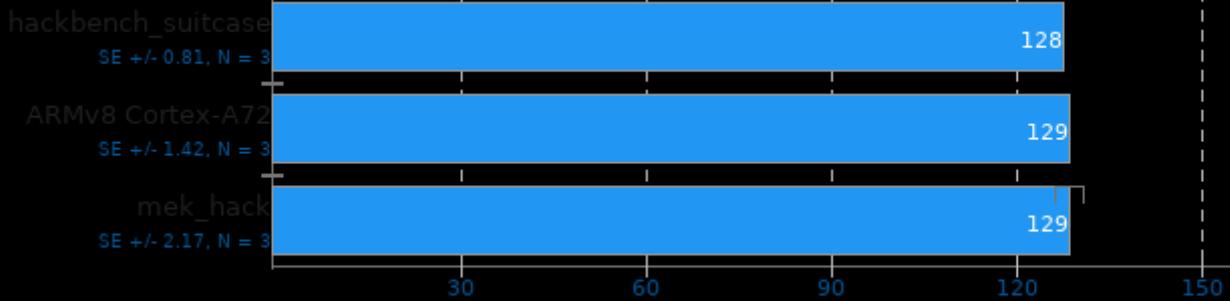


1. (CC) gcc options: -lpthread

### Hackbench

Count: 4 - Type: Process

← Seconds, Fewer Is Better

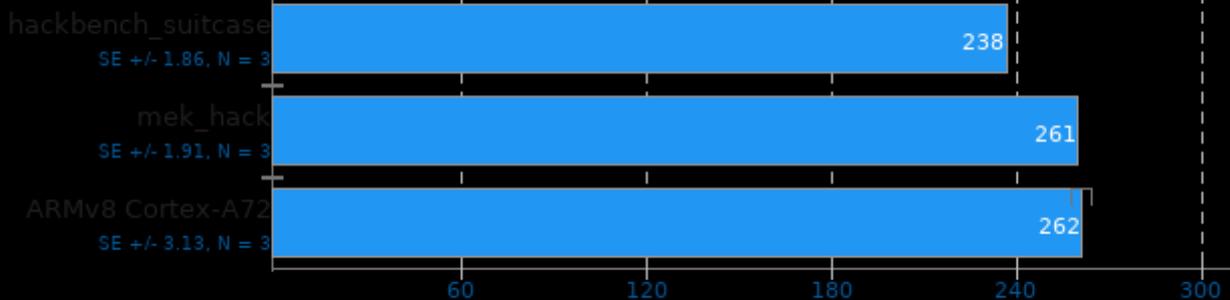


1. (CC) gcc options: -lpthread

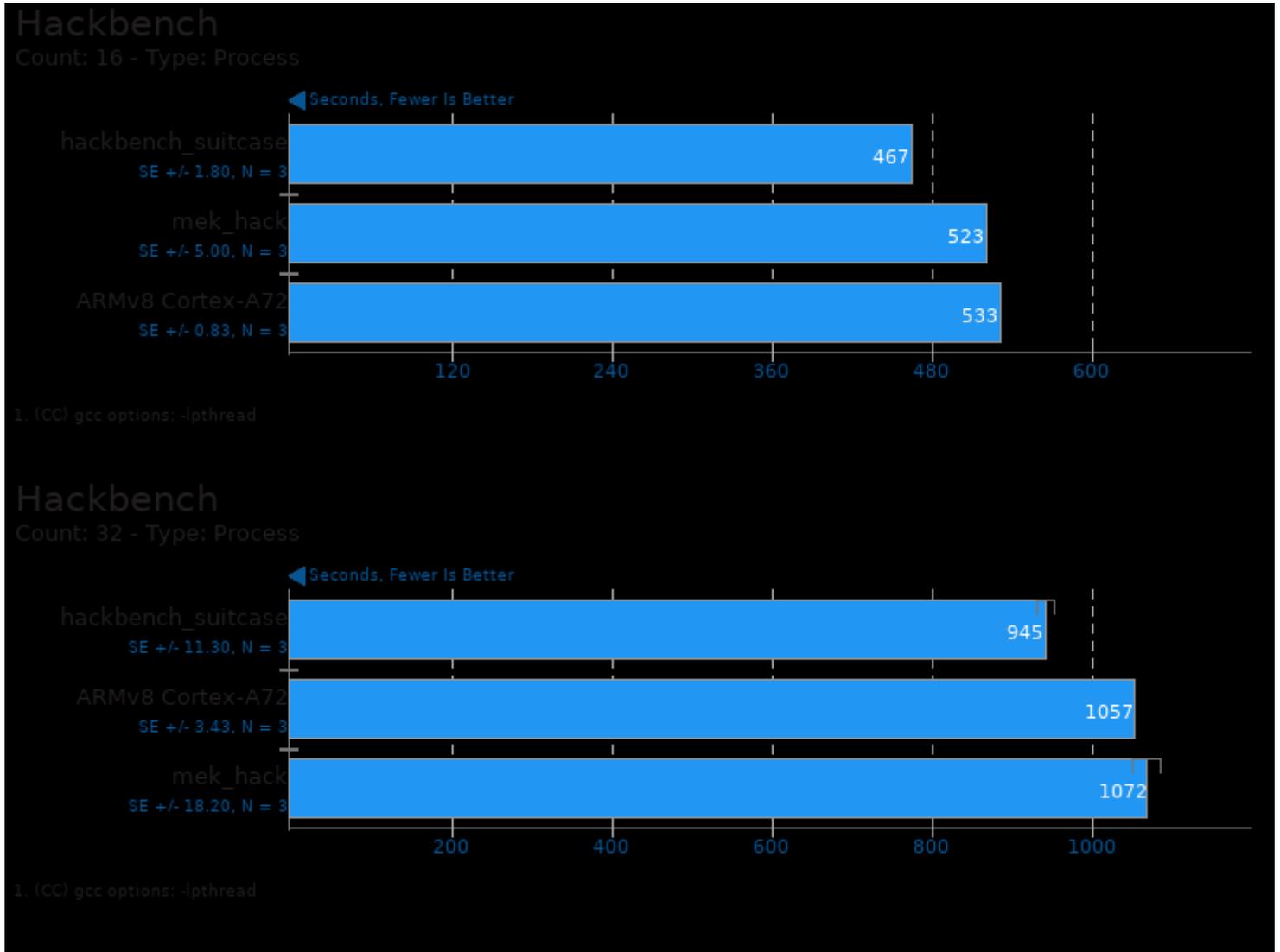
### Hackbench

Count: 8 - Type: Process

← Seconds, Fewer Is Better



1. (CC) gcc options: -lpthread



This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 21:20.