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## RPI4\_64

AMD G-T56N testing with a HP 17E2 (K30 v01.16 BIOS) and AMD Radeon HD 6320 384MB on Ubuntu 20.04 via the Phoronix Test Suite.

### Automated Executive Summary

*HP\_T610\_4GB\_SSD\_UbuntuFocal had the most wins, coming in first place for 50% of the tests.*

*Based on the geometric mean of all complete results, the fastest (HP\_T610\_4GB\_SSD\_UbuntuFocal) was 2.421x the speed of the slowest (RPI4\_64).*

### Test Systems:

#### RPI4\_64

Processor: ARMv8 Cortex-A72 @ 1.50GHz (4 Cores), Motherboard: BCM2835 Raspberry Pi 4 Model B Rev 1.4,  
Memory: 8GB, Disk: 32GB SL32G

OS: Debian 10, Kernel: 5.4.42-v8+ (aarch64), Display Server: X Server 1.20.4, Compiler: GCC 8.3.0, 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-libphobos --disable-libquadmath --disable-libquadmath-support --disable-werror --enable-bootstrap  
 --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++,gm2 --enable-libstdcxx-debug --enable-libstdcxx-time=yes --enable-multiarch --enable-nls --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 -v  
 Processor Notes: Scaling Governor: cpufreq-dt ondemand  
 Disk Mount Options Notes: noatime,rw  
 Java Notes: OpenJDK Runtime Environment (build 11.0.7+10-post-Debian-3deb10u1)  
 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 + tsx\_async\_abort: Not affected

## **HP\_T610\_4GB\_SSD\_UbuntuFocal**

Processor: AMD G-T56N @ 1.65GHz (2 Cores), Motherboard: HP 17E2 (K30 v01.16 BIOS), Chipset: AMD 14h Root Complex, Memory: 3584MB, Disk: 16GB SATA Flash + 128GB ADATA SP900, Graphics: AMD Radeon HD 6320 384MB, Audio: AMD Wrestler HDMI Audio, Network: Broadcom NetLink BCM57781 PCIe

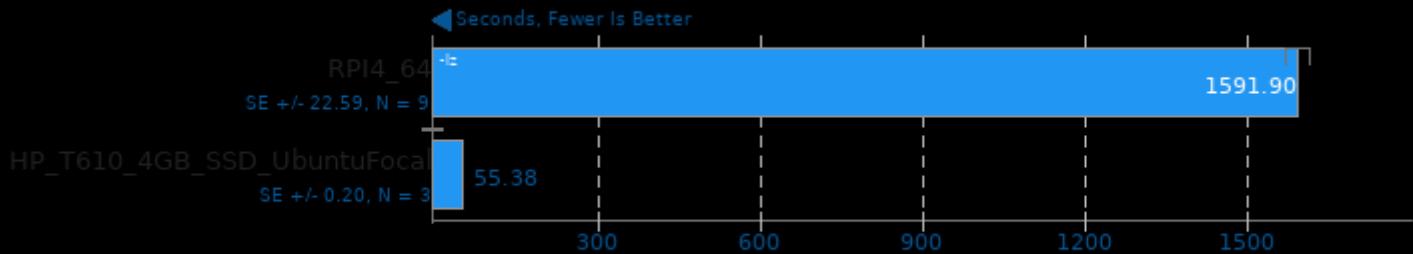
OS: Ubuntu 20.04, Kernel: 5.4.0-42-generic (x86\_64), Compiler: GCC 9.3.0, File-System: ext4

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,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  
 Disk Notes: MQ\_DEADLINE / errors=remount-ro,relatime,rw  
 Processor Notes: Scaling Governor: acpi-cpufreq ondemand - CPU Microcode: 0x50000119  
 Java Notes: OpenJDK Runtime Environment (build 11.0.8+10-post-Ubuntu-0ubuntu120.04)  
 Security Notes: itlb\_multihit: Not affected + l1tf: Not affected + mds: Not affected + meltdown: Not affected + spec\_store\_bypass: Vulnerable + spectre\_v1: Mitigation of  
 usercopy/swaps barriers and \_\_user pointer sanitization + spectre\_v2: Mitigation of Full AMD retrpoline STIBP: disabled RSB filling + srbd: Not affected +  
 tsx\_async\_abort: Not affected

|                                                | <b>RPI4_64</b> | <b>HP_T610_4GB_SSD_Ubun<br/>tuFocal</b> |
|------------------------------------------------|----------------|-----------------------------------------|
| <b>SQLite - 8 (sec)</b>                        | <b>1592</b>    | <b>55.380</b>                           |
| Normalized                                     | 3.48%          | 100%                                    |
| Standard Deviation                             | 4.3%           | 0.6%                                    |
| <b>Bork File Encrypter - F.E.T (sec)</b>       | <b>112.323</b> | <b>56.219</b>                           |
| Normalized                                     | 50.05%         | 100%                                    |
| Standard Deviation                             | 27.8%          | 9.4%                                    |
| <b>CacheBench - Read (MB/s)</b>                | <b>3806</b>    |                                         |
| Standard Deviation                             | 0%             |                                         |
| <b>CacheBench - Write (MB/s)</b>               | <b>5571</b>    |                                         |
| Standard Deviation                             | 0%             |                                         |
| <b>CacheBench - R.M.W (MB/s)</b>               | <b>11077</b>   |                                         |
| Standard Deviation                             | 0.2%           |                                         |
| <b>FLAC Audio Encoding - WAV To FLAC (sec)</b> | <b>88.620</b>  | <b>95.807</b>                           |
| Normalized                                     | 100%           | 92.5%                                   |
| Standard Deviation                             | 2.3%           | 0.2%                                    |
| <b>Apache Benchmark - S.W.P.S (Req/sec)</b>    | <b>3912</b>    | <b>2530</b>                             |
| Normalized                                     | 100%           | 64.68%                                  |
| Standard Deviation                             | 0.3%           | 0.6%                                    |

## SQLite 3.30.1

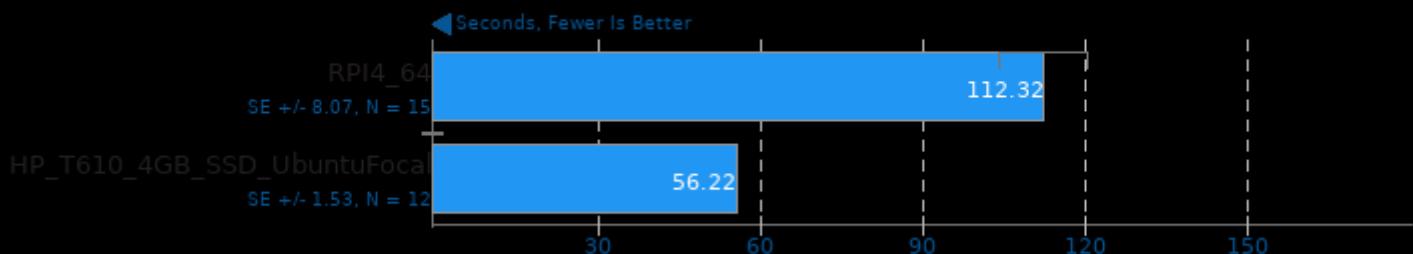
Threads / Copies: 8



1. (CC) gcc options: -O2 -lm -ldl -lpthread

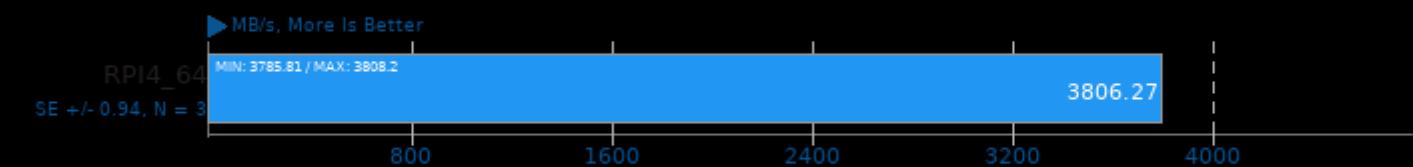
## Bork File Encrypter 1.4

File Encryption Time



## CacheBench

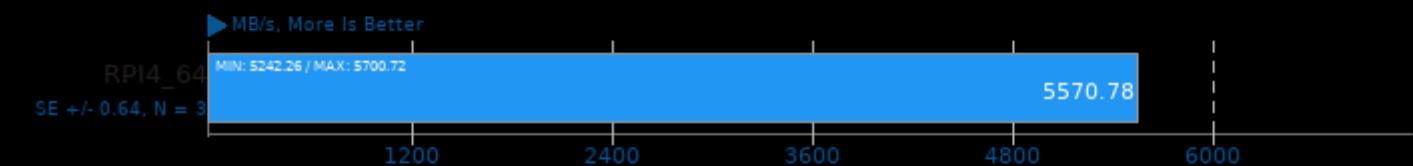
Test: Read



1. (CC) gcc options: -lrt

## CacheBench

Test: Write



1. (CC) gcc options: -lrt

## CacheBench

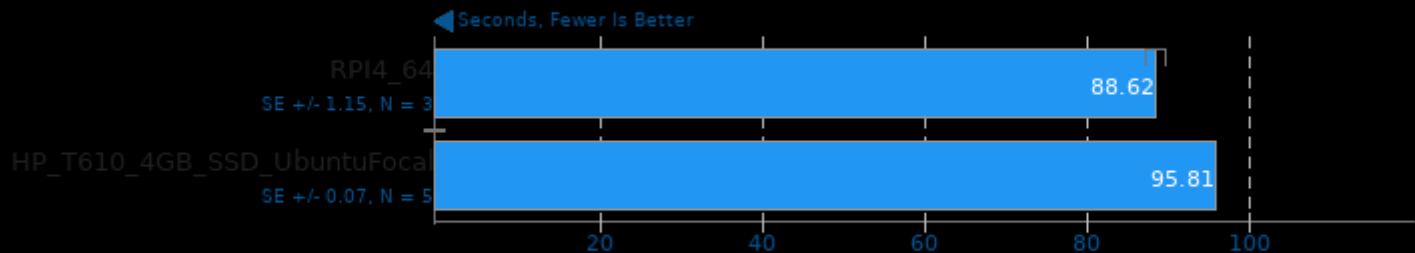
Test: Read / Modify / Write



1. (CC) gcc options: -lrt

## FLAC Audio Encoding 1.3.2

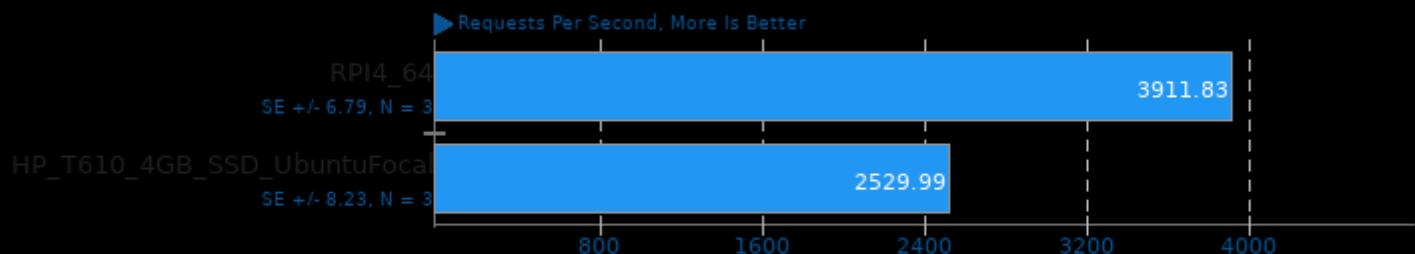
WAV To FLAC



1. (CXX) g++ options: -O2 -fvisibility=hidden -lm

## Apache Benchmark 2.4.29

Static Web Page Serving

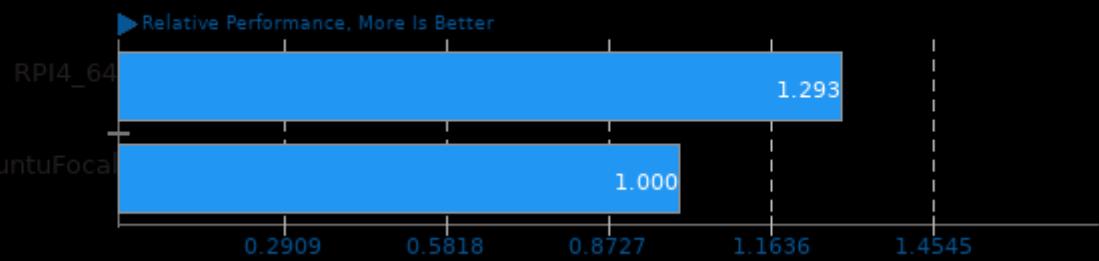


1. (CC) gcc options: -shared -fPIC -O2 -pthread

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

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

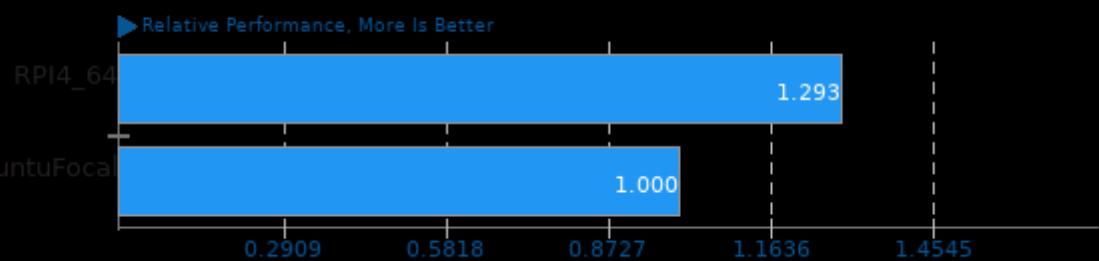
Result Composite - RPI4\_64



Geometric mean based upon tests: pts/encode-flac and pts/apache

### Geometric Mean Of CPU Massive Tests

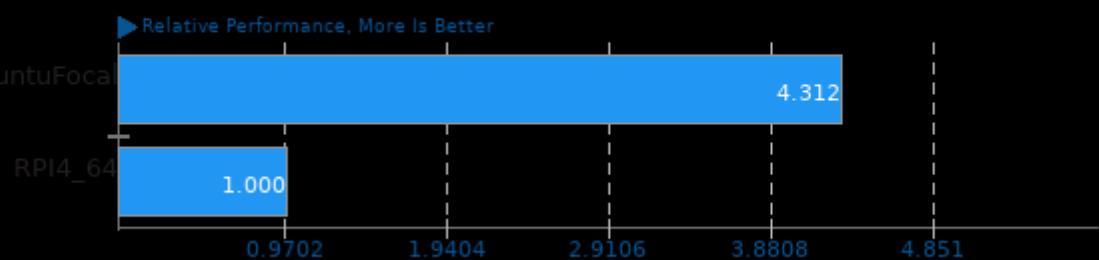
Result Composite - RPI4\_64



Geometric mean based upon tests: pts/apache, pts/cachebench and pts/encode-flac

### Geometric Mean Of Server Tests

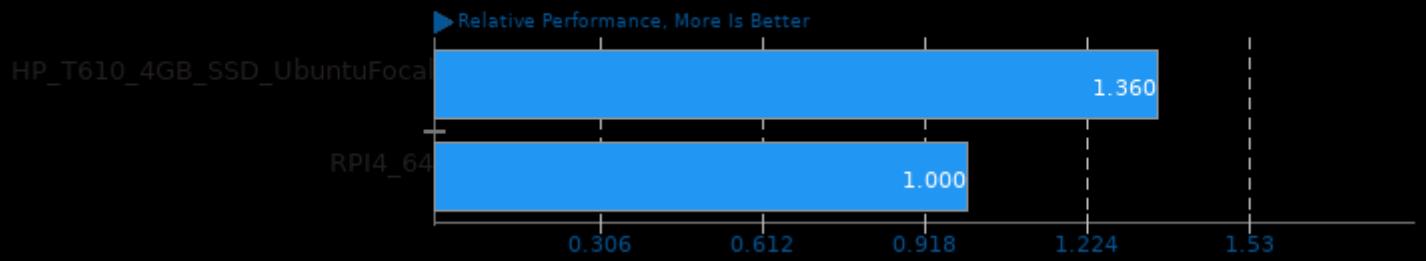
Result Composite - RPI4\_64



Geometric mean based upon tests: pts/apache and pts/sqlite

## Geometric Mean Of Single-Threaded Tests

Result Composite - RPI4\_64



Geometric mean based upon tests: pts/bork, pts/cachebench and pts/encode-flac

*This file was automatically generated via the Phoronix Test Suite benchmarking software on Thursday, 28 March 2024 12:20.*