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CentOS-740-TunedThroughput-LPDisabled-RUN5

CentOS-operating-system-Dell-740-Default-tuning-profile-hyperthreading-off

Automated Executive Summary

CentOS-740-TunedThroughput-LPDisabled-RUN5---07-31-2021_10-08-08 had the most wins, coming in first place for 51% of the tests.

Based on the geometric mean of all complete results, the fastest (CentOS-740-TunedThroughput-LPDisabled-RUN5---07-31-2021_05-13-16) was 1.039x the speed of the slowest (CentOS-740-TunedThroughput-LPDisabled-RUN5---07-31-2021_10-08-08).

The results with the greatest spread from best to worst included:

RAMspeed SMP (Type: Triad - Benchmark: Integer) at 1.112x
RAMspeed SMP (Type: Average - Benchmark: Integer) at 1.109x
RAMspeed SMP (Type: Scale - Benchmark: Floating Point) at 1.097x
MBW (Test: Memory Copy, Fixed Block Size - Array Size: 4096 MiB) at 1.08x
MBW (Test: Memory Copy - Array Size: 8192 MiB) at 1.076x
MBW (Test: Memory Copy, Fixed Block Size - Array Size: 512 MiB) at 1.072x
MBW (Test: Memory Copy - Array Size: 4096 MiB) at 1.057x
MBW (Test: Memory Copy, Fixed Block Size - Array Size: 1024 MiB) at 1.055x

Intel Memory Latency Checker (Test: Peak Injection Bandwidth - 1:1 Reads-Writes) at 1.027x
Intel Memory Latency Checker (Test: Peak Injection Bandwidth - Stream-Triad Like) at 1.023x.

Test Systems:

CentOS-740-TunedThroughput-LPDisabled-RUN5---07-31-2021_05-13-16

CentOS-740-TunedThroughput-LPDisabled-RUN5---07-31-2021_10-08-08

Processor: 2 x Intel Xeon Gold 6254 @ 4.00GHz (36 Cores), Motherboard: Dell 0YWR7D (2.10.0 BIOS), Memory: 4 x 16384 MB DDR4-2933MT/s 18ASF2G72PDZ-2G9E1, Disk: 4 x 480GB PERC H740P Adp + 31GB USB DISK 2.0, Graphics: mgadrmfb, Monitor: DELL P2217H

OS: CentOS Linux 8, Kernel: 4.18.0-147.el8.x86_64 (x86_64), Compiler: GCC 8.4.1 20200928, File-System: xfs, Screen Resolution: 1600x900

Kernel Notes: Transparent Huge Pages: always
Compiler Notes: --build=x86_64-redhat-linux --disable-libmpx --disable-libunwind-exceptions --enable-__cxa_atexit --enable-bootstrap --enable-cet --enable-checking=release --enable-gnu-indirect-function --enable-gnu-unique-object --enable-initfini-array --enable-languages=c,c++,fortran,lto --enable-multilib --enable-offload-targets=nvptx-none --enable-plugin --enable-shared --enable-threads=posix --mandir=/usr/share/man --with-arch_32=x86-64 --with-gcc-major-version-only --with-isl --with-linker-hash-style=gnu --with-tune=generic --without-cuda-driver
Disk Notes: MQ-DEADLINE / attr2,inode64,noquota,relatime,rw,seclabel,sunit=512,swidth=512 / Block Size: 4096
Processor Notes: Scaling Governor: intel_pstate performance - CPU Microcode: 0x5003003
Security Notes: SELinux + l1tf: Not affected + mds: Not affected + meltdown: Not affected + 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 Enhanced IBRS IBPB: conditional RSB filling

	CentOS-740-TunedThroughput-LPDisabled-RUN5---07-31-2021_05-13-16	CentOS-740-TunedThroughput-LPDisabled-RUN5---07-31-2021_10-08-08
CacheBench - Read (MB/s)		3294
Standard Deviation		0%
CacheBench - Write (MB/s)		27100
Standard Deviation		0%
CacheBench - R.M.W (MB/s)		41254
Standard Deviation		0.6%
Core-Latency - A.L.B.C.C (ns)		247.837
Intel Memory Latency Checker - Idle Latency (ns)	**74.1**	**74.8**
Normalized	100%	99.06%
Standard Deviation	0.1%	0.8%
Intel Memory Latency Checker - Max Bandwidth - All Reads (MB/s)	**87555**	**86683**
Normalized	100%	99%
Standard Deviation	1.1%	0.2%

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Intel Memory Latency Checker - Max Bandwidth - 3:1 Reads-Writes (MB/s)	**75189**	**75265**
Normalized	99.9%	100%
Standard Deviation	0.4%	0.1%
Intel Memory Latency Checker - Max Bandwidth - 2:1 Reads-Writes (MB/s)	**72621**	**72827**
Normalized	99.72%	100%
Standard Deviation	0.3%	0.1%
Intel Memory Latency Checker - Max Bandwidth - 1:1 Reads-Writes (MB/s)	**66622**	**66580**
Normalized	100%	99.94%
Standard Deviation	0.1%	0.3%
Intel Memory Latency Checker - Max Bandwidth - Stream-Triad Like (MB/s)	**79034**	**78076**
Normalized	100%	98.79%
Standard Deviation	1.4%	0.1%
Intel Memory Latency Checker - P.I.B - All Reads	**87583**	**86157**
Normalized	100%	98.37%
Standard Deviation	1.7%	0%
Intel Memory Latency Checker - P.I.B - 3:1 Reads-Writes (MB/s)	**75270**	**75196**
Normalized	100%	99.9%
Standard Deviation	0.4%	0.1%
Intel Memory Latency Checker - P.I.B - 2:1 Reads-Writes (MB/s)	**71807**	**72642**
Normalized	98.85%	100%
Standard Deviation	0.8%	0.2%
Intel Memory Latency Checker - P.I.B - 1:1 Reads-Writes (MB/s)	**64464**	**66207**
Normalized	97.37%	100%
Standard Deviation	0.1%	0.1%
Intel Memory Latency Checker - P.I.B - Stream-Triad Like (MB/s)	**71401**	**69773**
Normalized	100%	97.72%
Standard Deviation	2.4%	0.2%
IOzone - 4Kb - 512MB - Write Performance (MB/s)	**65.84**	**66.81**
Normalized	98.55%	100%
Standard Deviation	0.1%	0.2%
MBW - Memory Copy - 128 MiB (MiB/s)	**3284**	**1287**
Normalized	100%	39.2%
Standard Deviation	0.8%	23.4%
MBW - Memory Copy - 512 MiB (MiB/s)	**3357**	**1319**
Normalized	100%	39.28%
Standard Deviation	0.9%	14.2%
MBW - Memory Copy - 1024 MiB (MiB/s)	**3357**	**3063**
Normalized	100%	91.25%
Standard Deviation	0.4%	13.9%
MBW - Memory Copy - 4096 MiB (MiB/s)	**3419**	**3233**
Normalized	100%	94.58%
Standard Deviation	1.6%	2.5%
MBW - Memory Copy - 8192 MiB (MiB/s)	**3447**	**3204**
Normalized	100%	92.95%
Standard Deviation	0%	2.5%
MBW - M.C.F.B.S - 128 MiB (MiB/s)	**3622**	**3255**

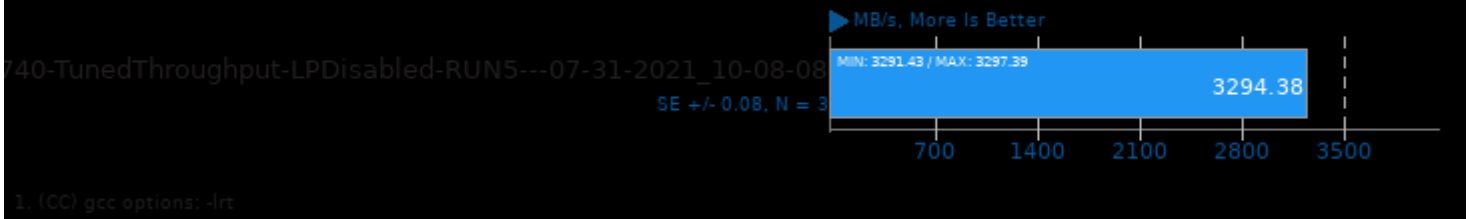
Normalized	100%	89.86%
Standard Deviation	0.2%	6.4%
MBW - M.C.F.B.S - 512 MiB (MiB/s)	**3631**	**3388**
Normalized	100%	93.31%
Standard Deviation	0%	4.6%
MBW - M.C.F.B.S - 1024 MiB (MiB/s)	**3608**	**3420**
Normalized	100%	94.79%
Standard Deviation	1%	3.9%
MBW - M.C.F.B.S - 4096 MiB (MiB/s)	**3198**	**3452**
Normalized	92.63%	100%
Standard Deviation	5.1%	2.5%
MBW - M.C.F.B.S - 8192 MiB (MiB/s)		3469
Standard Deviation		0.9%
pmbench - 1 - 50% (us - Page Latency)		0.0766
Standard Deviation		6.8%
pmbench - 4 - 50% (us - Page Latency)		0.0927
Standard Deviation		0.7%
pmbench - 16 - 50% (us - Page Latency)		0.0980
Standard Deviation		0.7%
pmbench - 1 - 100% Reads (us - Page Latency)		0.0397
Standard Deviation		0.1%
pmbench - 4 - 100% Reads (us - Page Latency)		0.0398
Standard Deviation		0.7%
pmbench - 1 - 100% Writes (us - Page Latency)		0.0370
Standard Deviation		2.4%
pmbench - 16 - 100% Reads (us - Page Latency)		0.0394
Standard Deviation		0.4%
pmbench - 4 - 100% Writes (us - Page Latency)		0.0625
Standard Deviation		27.7%
pmbench - 16 - 100% Writes (us - Page Latency)		0.0541
Standard Deviation		23.2%
pmbench - 1 - 8.R.2.W (us - Page Latency)		0.0902
Standard Deviation		0%
pmbench - 4 - 8.R.2.W (us - Page Latency)		0.1120
Standard Deviation		10.6%
pmbench - 16 - 8.R.2.W (us - Page Latency)		0.1164
Standard Deviation		2.5%
RAMspeed SMP - Add - Integer (MB/s)	**14190**	**15705**
Normalized	90.35%	100%
Standard Deviation	11.2%	1%
RAMspeed SMP - Copy - Integer (MB/s)	**12611**	**16326**
Normalized	77.24%	100%
Standard Deviation	31.6%	1.2%
RAMspeed SMP - Scale - Integer (MB/s)	**11693**	**12584**
Normalized	92.92%	100%
Standard Deviation	6%	0.4%
RAMspeed SMP - Triad - Integer (MB/s)	**13665**	**15197**
Normalized	89.92%	100%
Standard Deviation	1.2%	2.3%
RAMspeed SMP - Average - Integer (MB/s)	**13307**	**14757**
Normalized	90.18%	100%
Standard Deviation	0.7%	4.5%
RAMspeed SMP - Add - Floating Point (MB/s)	**11429**	**12671**
Normalized	90.2%	100%

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Standard Deviation	0.8%	8.7%
RAMspeed SMP - Copy - Floating Point (MB/s)	**15038**	**15396**
Normalized	97.67%	100%
Standard Deviation	1.2%	6.1%
RAMspeed SMP - Scale - Floating Point (MB/s)	**11871**	**13019**
Normalized	91.19%	100%
Standard Deviation	5.7%	5.2%
RAMspeed SMP - Triad - Floating Point (MB/s)	**11775**	**13654**
Normalized	86.24%	100%
Standard Deviation	14.7%	0.3%
RAMspeed SMP - Average - Floating Point (MB/s)	**13413**	**11680**
Normalized	100%	87.08%
Standard Deviation	4.6%	20%
Stream - Copy (MB/s)	**44169**	**39822**
Normalized	100%	90.16%
Standard Deviation	11.4%	8.9%
Stream - Scale (MB/s)	**44080**	**46881**
Normalized	94.03%	100%
Standard Deviation	12.4%	4.9%
Stream - Triad (MB/s)	**48018**	**50005**
Normalized	96.03%	100%
Standard Deviation	8.6%	6%
Stream - Add (MB/s)	**47449**	**50487**
Normalized	93.98%	100%
Standard Deviation	11.9%	6.5%
Sysbench - CPU (Events/sec)		48150
Standard Deviation		0.2%

CacheBench

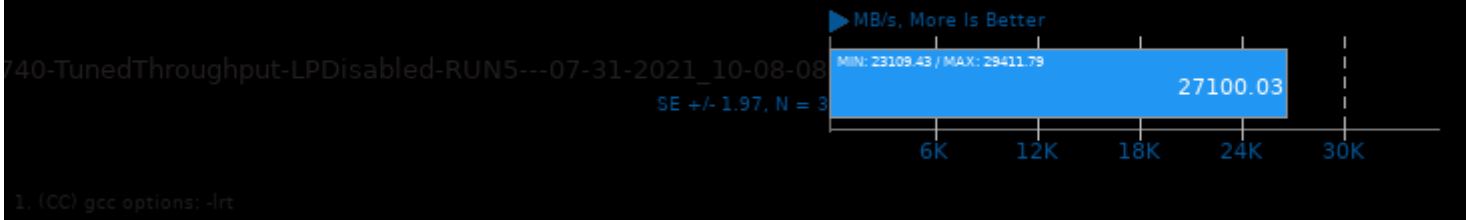
Test: Read



1. (CC) gcc options: -lrt

CacheBench

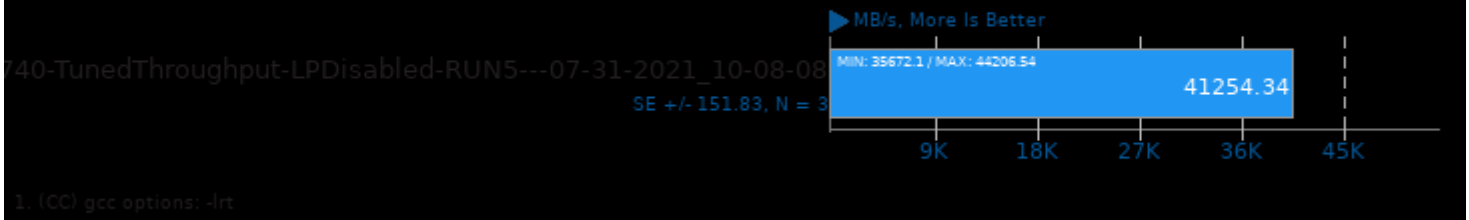
Test: Write



1. (CC) gcc options: -lrt

CacheBench

Test: Read / Modify / Write



1. (CC) gcc options: -lrt

Core-Latency

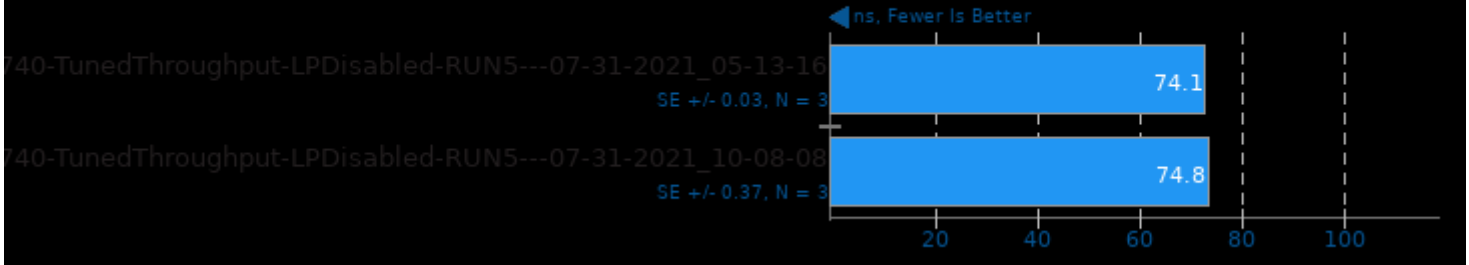
Average Latency Between CPU Cores



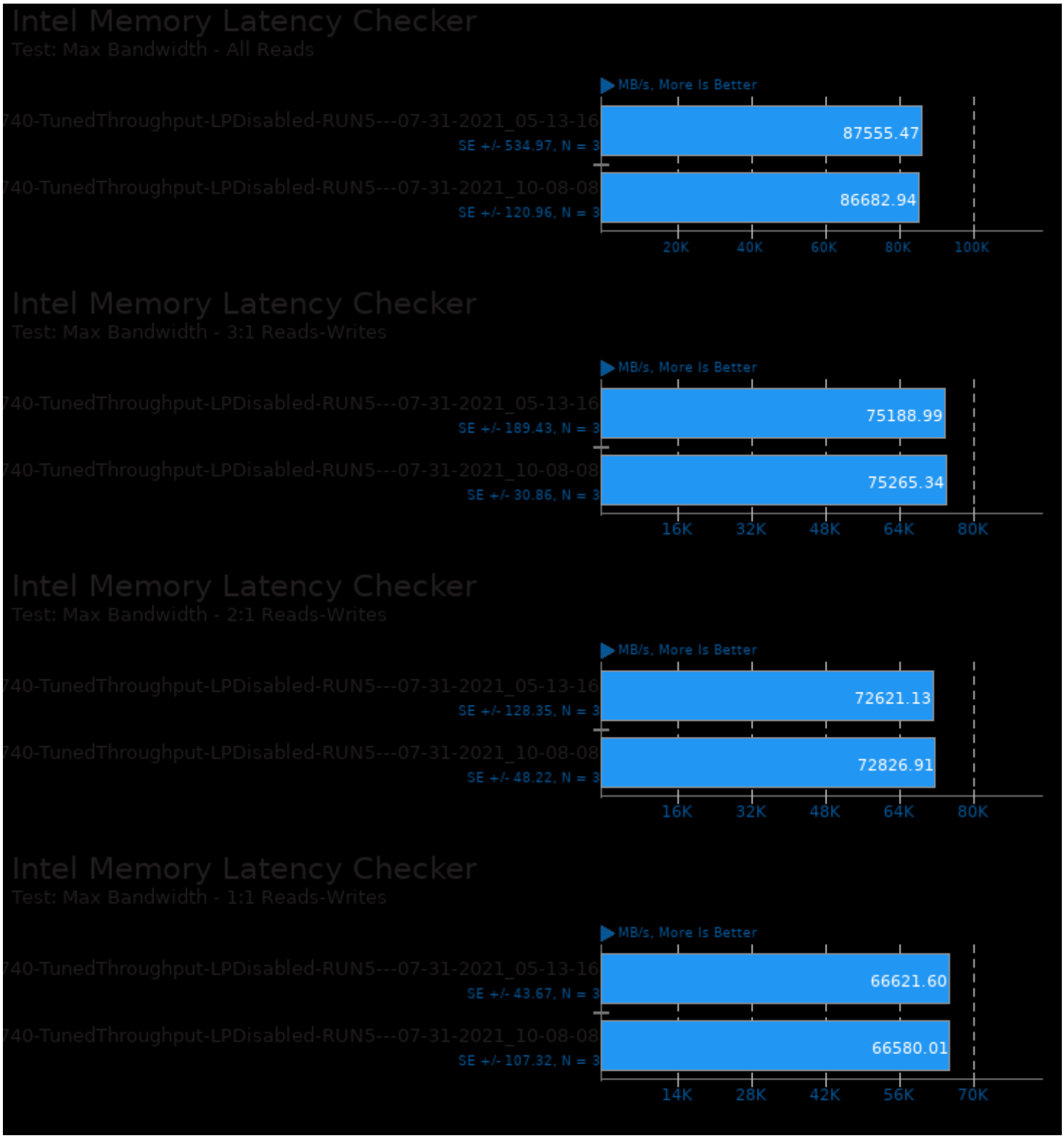
1. (CXX) g++ options: -std=c++11 -pthread -O3

Intel Memory Latency Checker

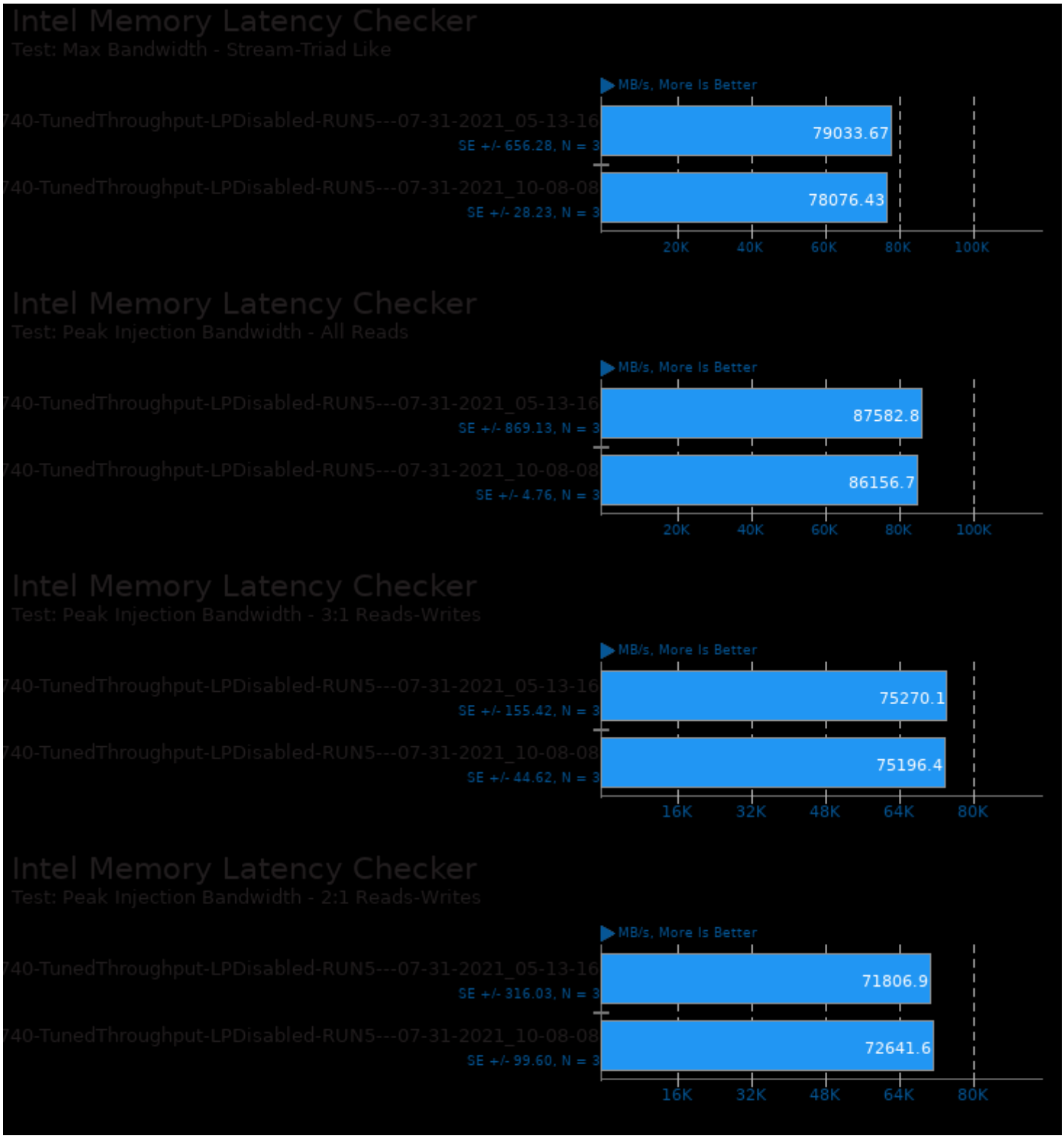
Test: Idle Latency



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Intel Memory Latency Checker

Test: Peak Injection Bandwidth - 1:1 Reads-Writes



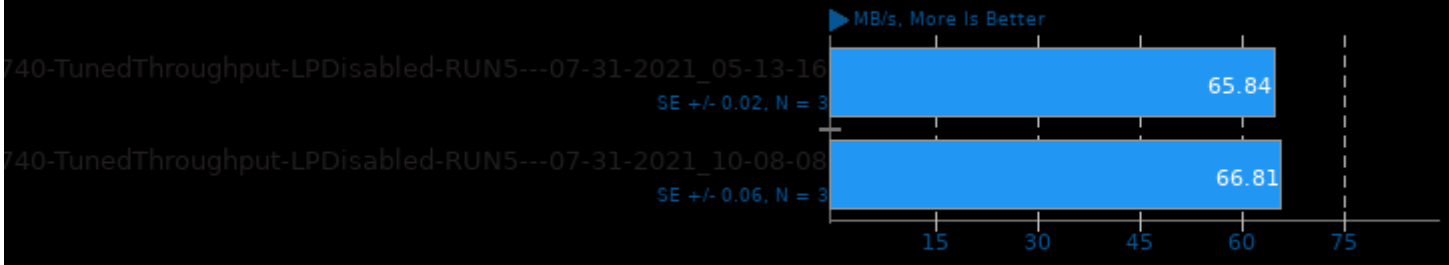
Intel Memory Latency Checker

Test: Peak Injection Bandwidth - Stream-Triad Like



IOzone 3.465

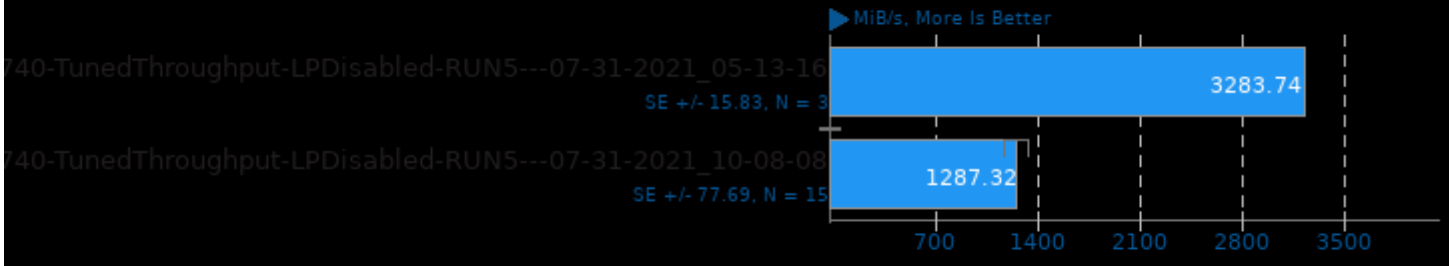
Record Size: 4Kb - File Size: 512MB - Disk Test: Write Performance



1. (CC) gcc options: -O3

MBW 2018-09-08

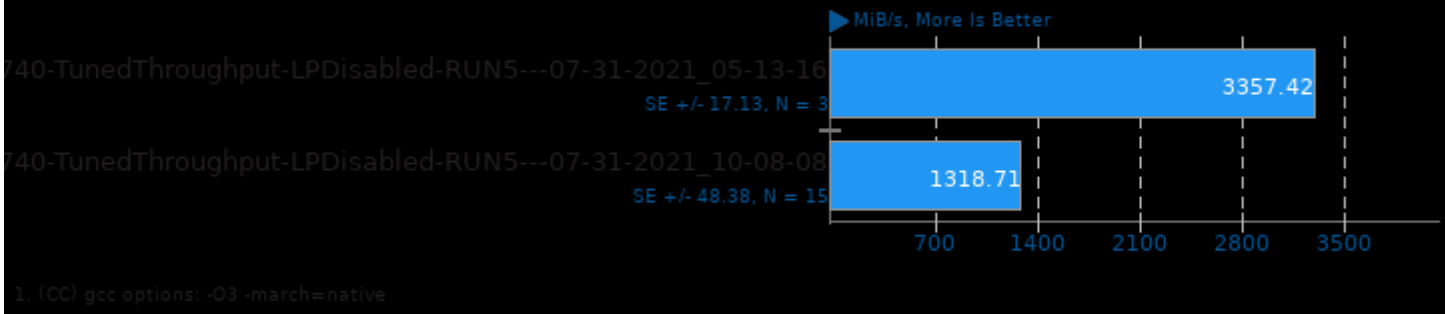
Test: Memory Copy - Array Size: 128 MiB



1. (CC) gcc options: -O3 -march=native

MBW 2018-09-08

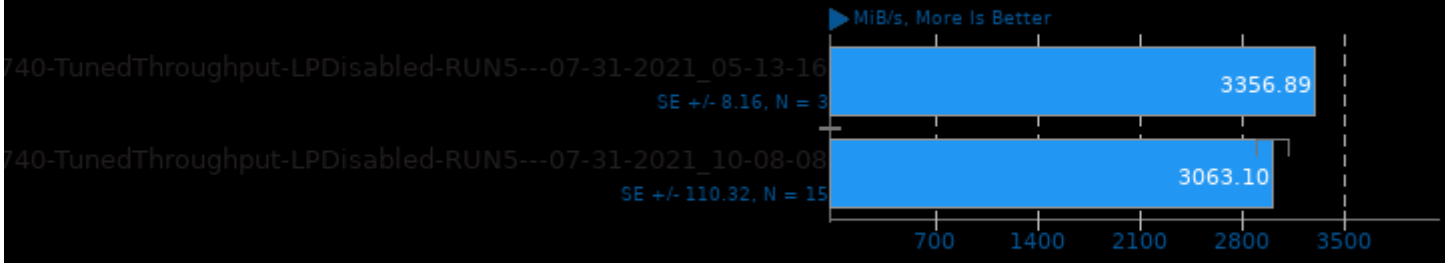
Test: Memory Copy - Array Size: 512 MiB



1. (CC) gcc options: -O3 -march=native

MBW 2018-09-08

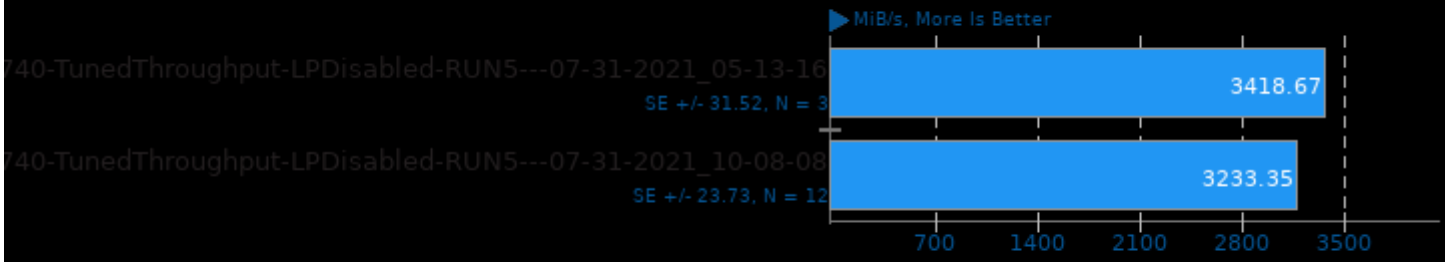
Test: Memory Copy - Array Size: 1024 MiB



1. (CC) gcc options: -O3 -march=native

MBW 2018-09-08

Test: Memory Copy - Array Size: 4096 MiB



1. (CC) gcc options: -O3 -march=native

MBW 2018-09-08

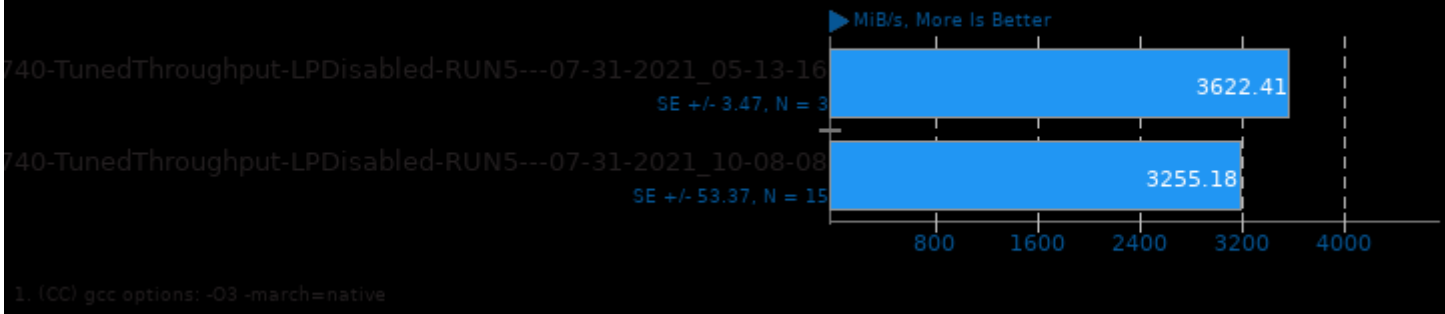
Test: Memory Copy - Array Size: 8192 MiB



1. (CC) gcc options: -O3 -march=native

MBW 2018-09-08

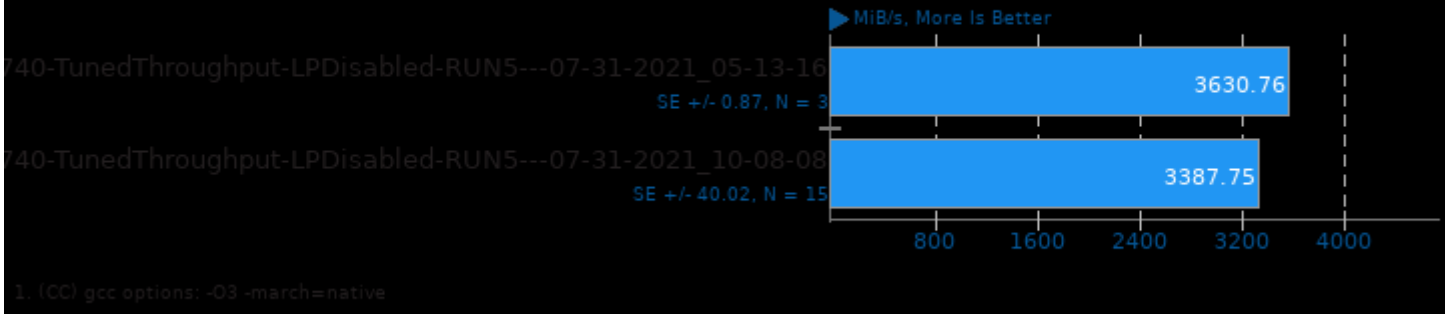
Test: Memory Copy, Fixed Block Size - Array Size: 128 MiB



1. (CC) gcc options: -O3 -march=native

MBW 2018-09-08

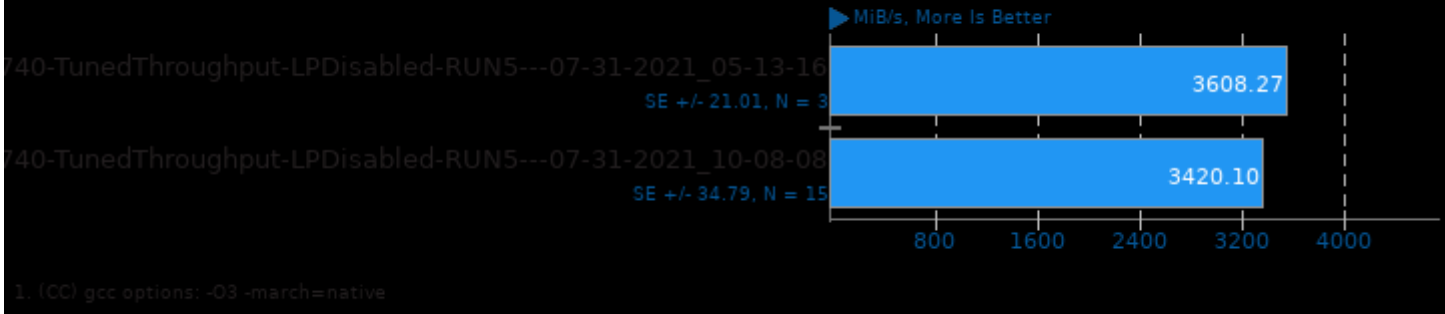
Test: Memory Copy, Fixed Block Size - Array Size: 512 MiB



1. (CC) gcc options: -O3 -march=native

MBW 2018-09-08

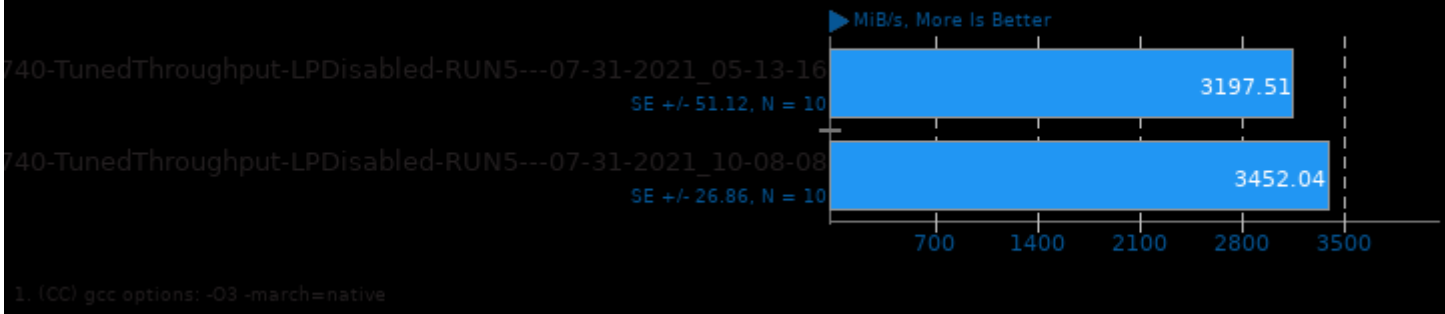
Test: Memory Copy, Fixed Block Size - Array Size: 1024 MiB



1. (CC) gcc options: -O3 -march=native

MBW 2018-09-08

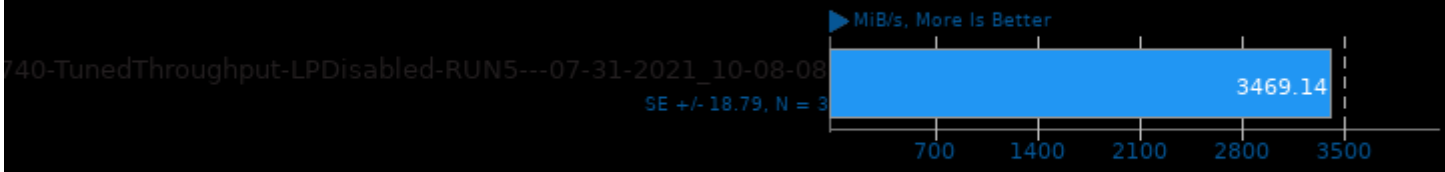
Test: Memory Copy, Fixed Block Size - Array Size: 4096 MiB



1. (CC) gcc options: -O3 -march=native

MBW 2018-09-08

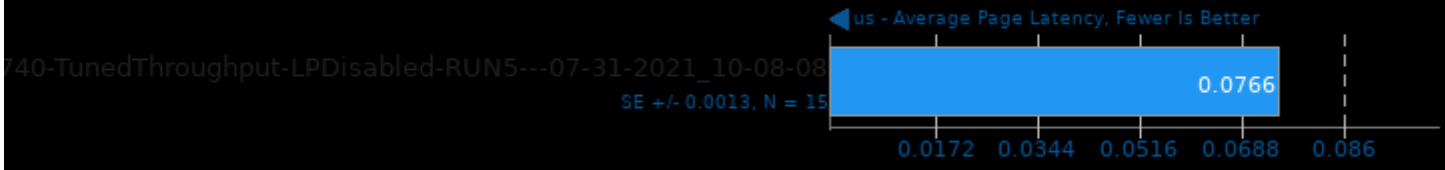
Test: Memory Copy, Fixed Block Size - Array Size: 8192 MiB



1. (CC) gcc options: -O3 -march=native

pmbench

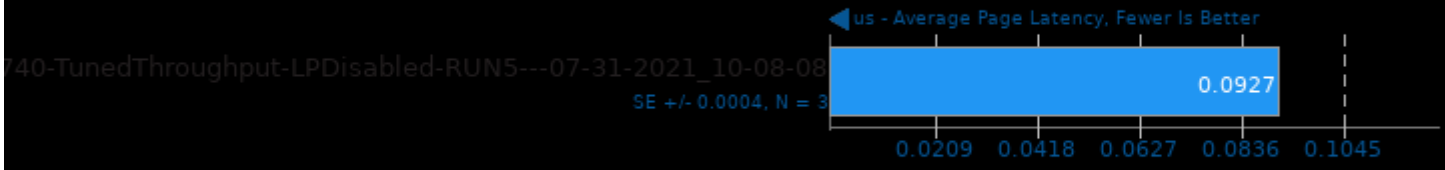
Concurrent Worker Threads: 1 - Read-Write Ratio: 50%



1. (CC) gcc options: -lm -luuid -lxml2 -m64 -pthread

pmbench

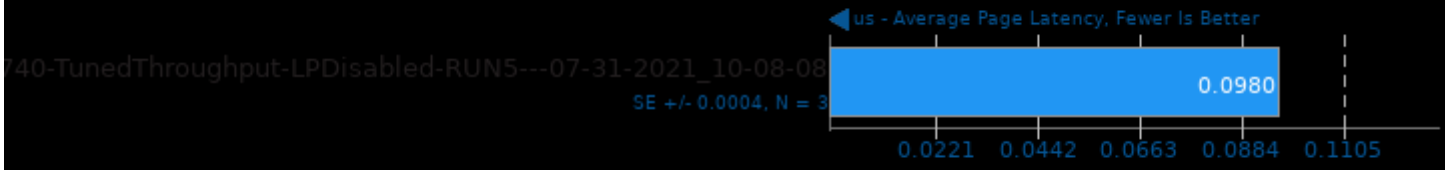
Concurrent Worker Threads: 4 - Read-Write Ratio: 50%



1. (CC) gcc options: -lm -luuid -lxml2 -m64 -pthread

pmbench

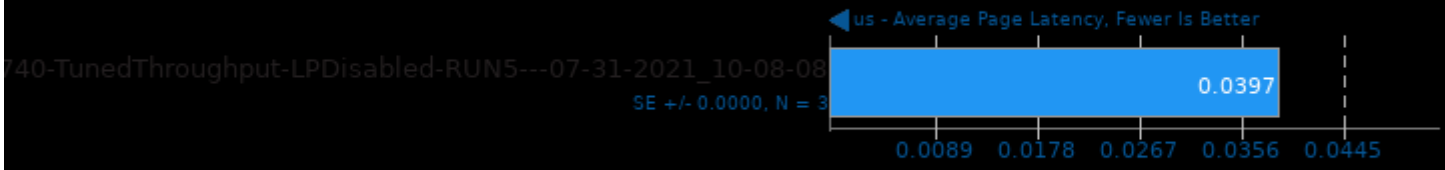
Concurrent Worker Threads: 16 - Read-Write Ratio: 50%



1. (CC) gcc options: -lm -luuid -lxml2 -m64 -pthread

pmbench

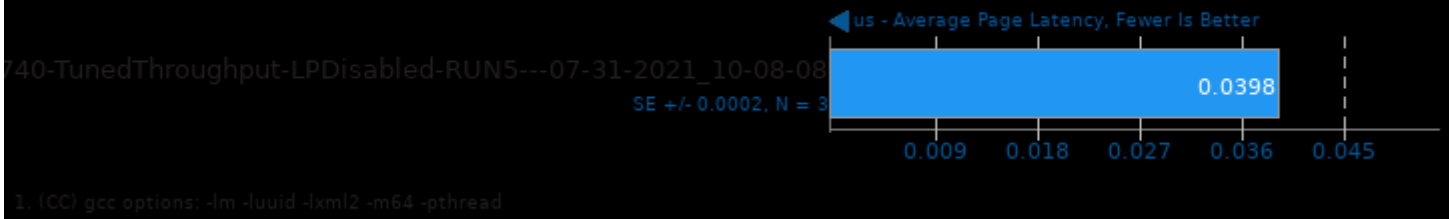
Concurrent Worker Threads: 1 - Read-Write Ratio: 100% Reads



1. (CC) gcc options: -lm -luuid -lxml2 -m64 -pthread

pmbench

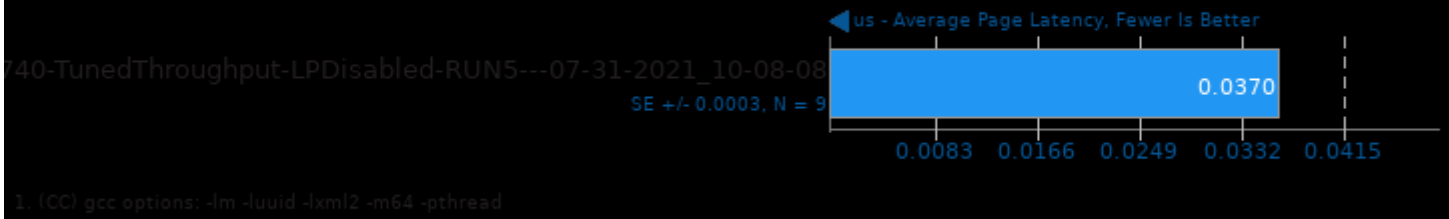
Concurrent Worker Threads: 4 - Read-Write Ratio: 100% Reads



1. (CC) gcc options: -lm -luuid -lxml2 -m64 -pthread

pmbench

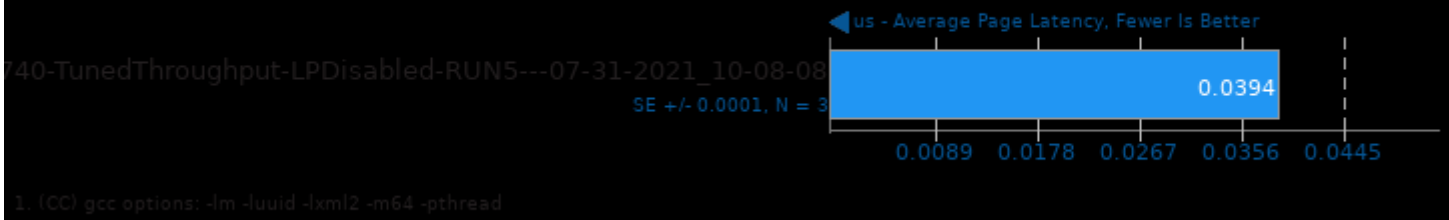
Concurrent Worker Threads: 1 - Read-Write Ratio: 100% Writes



1. (CC) gcc options: -lm -luuid -lxml2 -m64 -pthread

pmbench

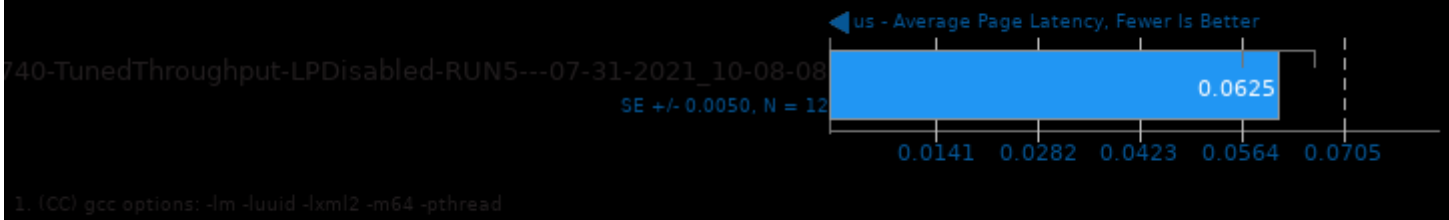
Concurrent Worker Threads: 16 - Read-Write Ratio: 100% Reads



1. (CC) gcc options: -lm -luuid -lxml2 -m64 -pthread

pmbench

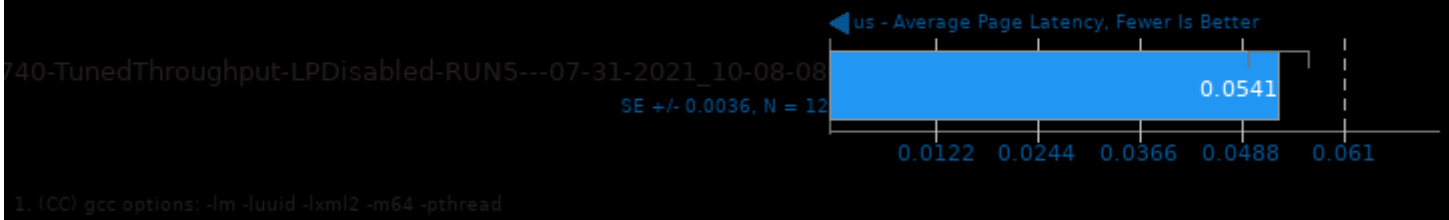
Concurrent Worker Threads: 4 - Read-Write Ratio: 100% Writes



1. (CC) gcc options: -lm -luuid -lxml2 -m64 -pthread

pmbench

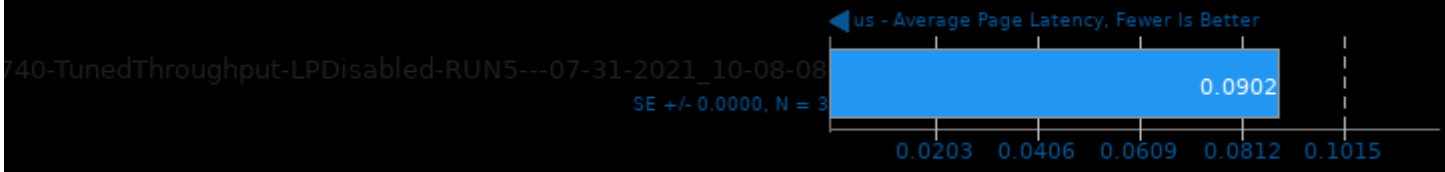
Concurrent Worker Threads: 16 - Read-Write Ratio: 100% Writes



1. (CC) gcc options: -lm -luuid -lxml2 -m64 -pthread

pmbench

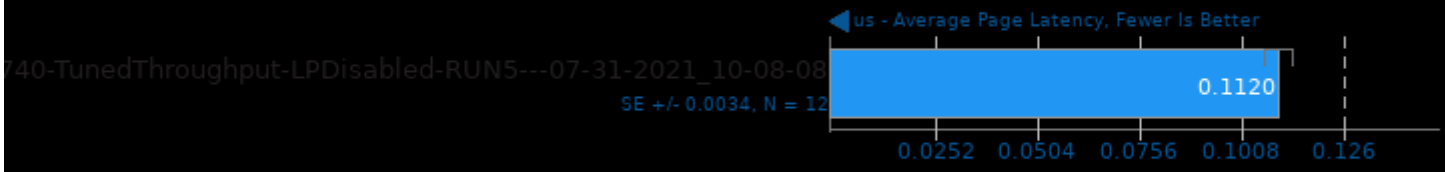
Concurrent Worker Threads: 1 - Read-Write Ratio: 80% Reads 20% Writes



1. (CC) gcc options: -lm -luuid -lxml2 -m64 -pthread

pmbench

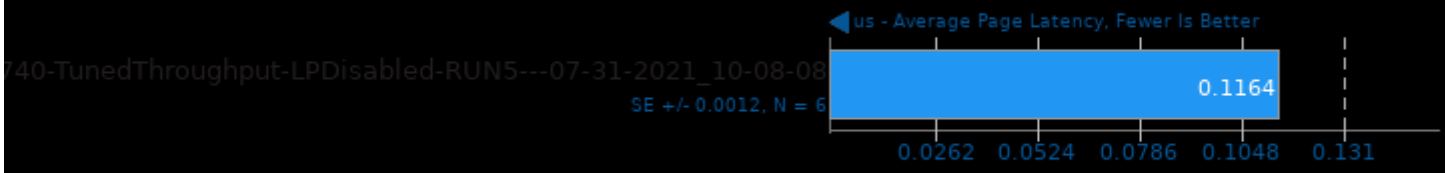
Concurrent Worker Threads: 4 - Read-Write Ratio: 80% Reads 20% Writes



1. (CC) gcc options: -lm -luuid -lxml2 -m64 -pthread

pmbench

Concurrent Worker Threads: 16 - Read-Write Ratio: 80% Reads 20% Writes



1. (CC) gcc options: -lm -luuid -lxml2 -m64 -pthread

RAMspeed SMP 3.5.0

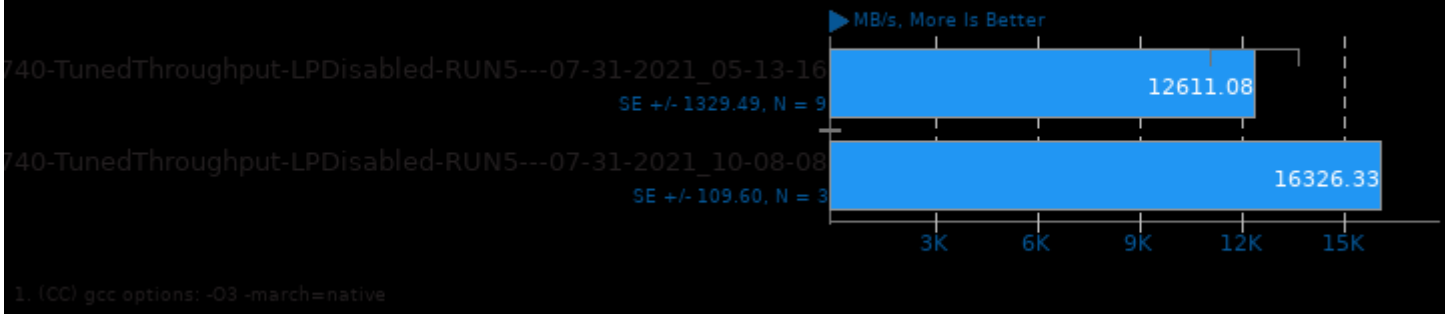
Type: Add - Benchmark: Integer



1. (CC) gcc options: -O3 -march=native

RAMspeed SMP 3.5.0

Type: Copy - Benchmark: Integer



1. (CC) gcc options: -O3 -march=native

RAMspeed SMP 3.5.0

Type: Scale - Benchmark: Integer



1. (CC) gcc options: -O3 -march=native

RAMspeed SMP 3.5.0

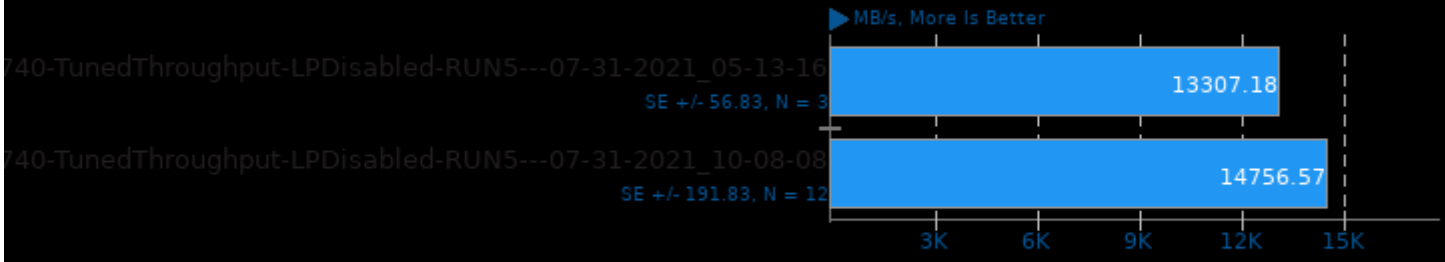
Type: Triad - Benchmark: Integer



1. (CC) gcc options: -O3 -march=native

RAMspeed SMP 3.5.0

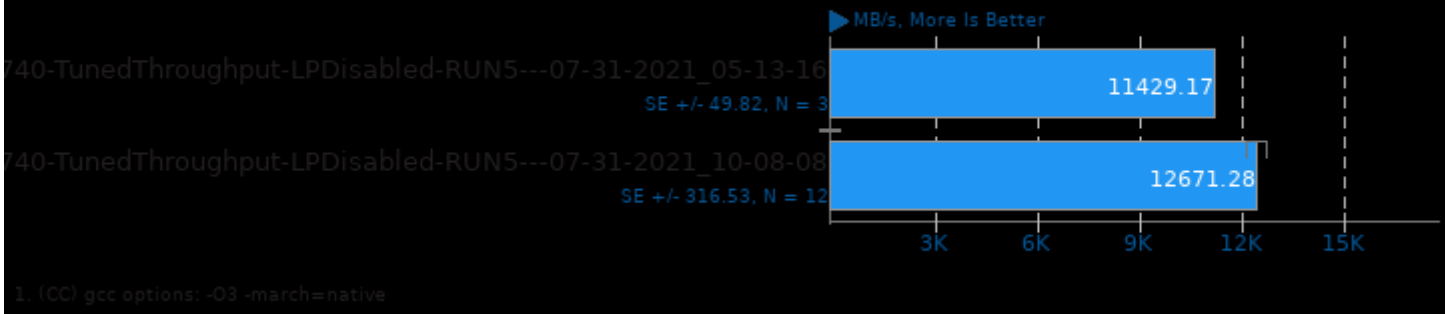
Type: Average - Benchmark: Integer



1. (CC) gcc options: -O3 -march=native

RAMspeed SMP 3.5.0

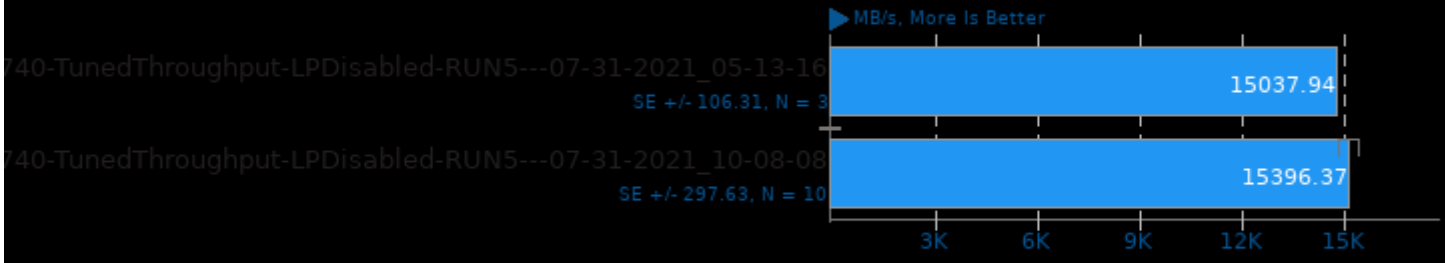
Type: Add - Benchmark: Floating Point



1. (CC) gcc options: -O3 -march=native

RAMspeed SMP 3.5.0

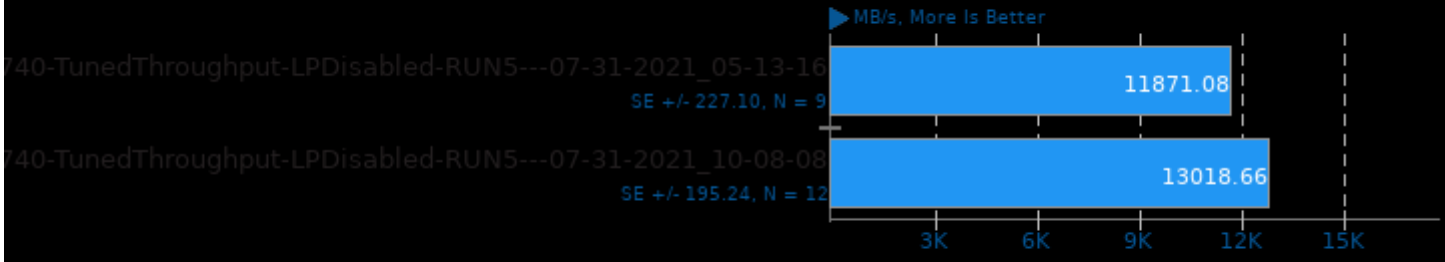
Type: Copy - Benchmark: Floating Point



1. (CC) gcc options: -O3 -march=native

RAMspeed SMP 3.5.0

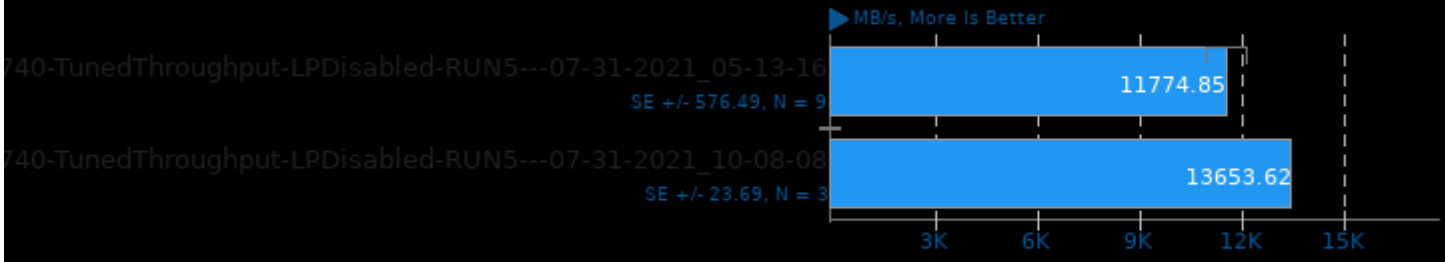
Type: Scale - Benchmark: Floating Point



1. (CC) gcc options: -O3 -march=native

RAMspeed SMP 3.5.0

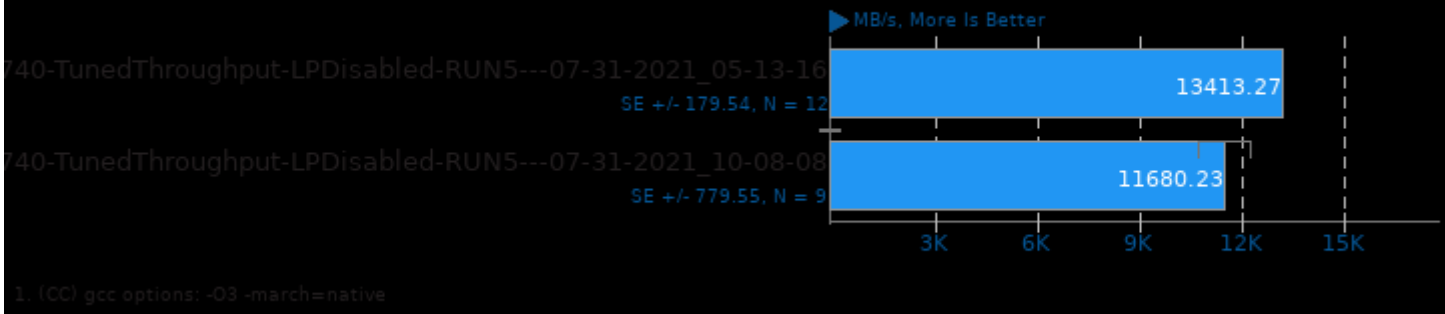
Type: Triad - Benchmark: Floating Point



1. (CC) gcc options: -O3 -march=native

RAMspeed SMP 3.5.0

Type: Average - Benchmark: Floating Point



1. (CC) gcc options: -O3 -march=native

Stream 2013-01-17

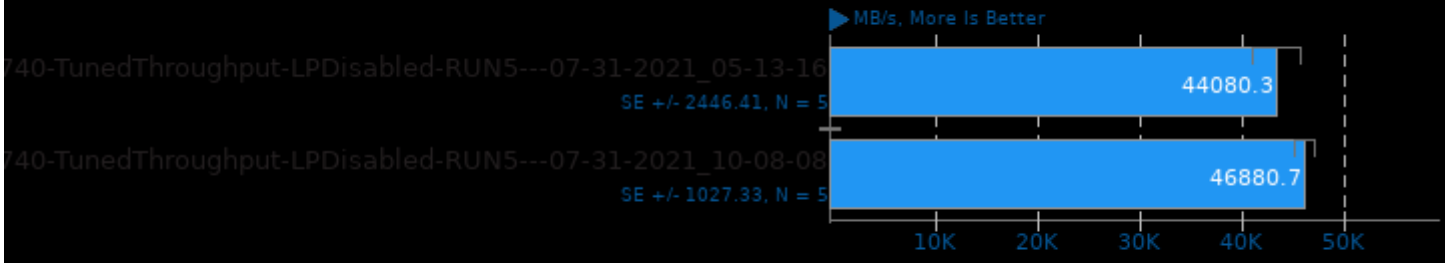
Type: Copy



1. (CC) gcc options: -O3 -march=native -fopenmp

Stream 2013-01-17

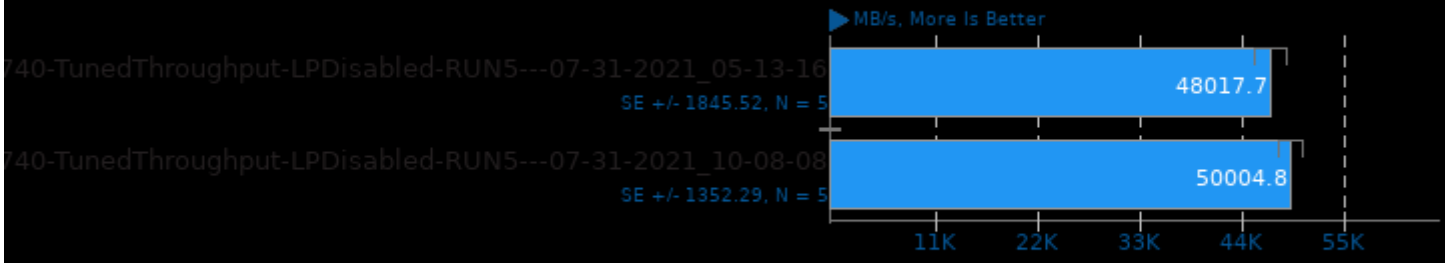
Type: Scale



1. (CC) gcc options: -O3 -march=native -fopenmp

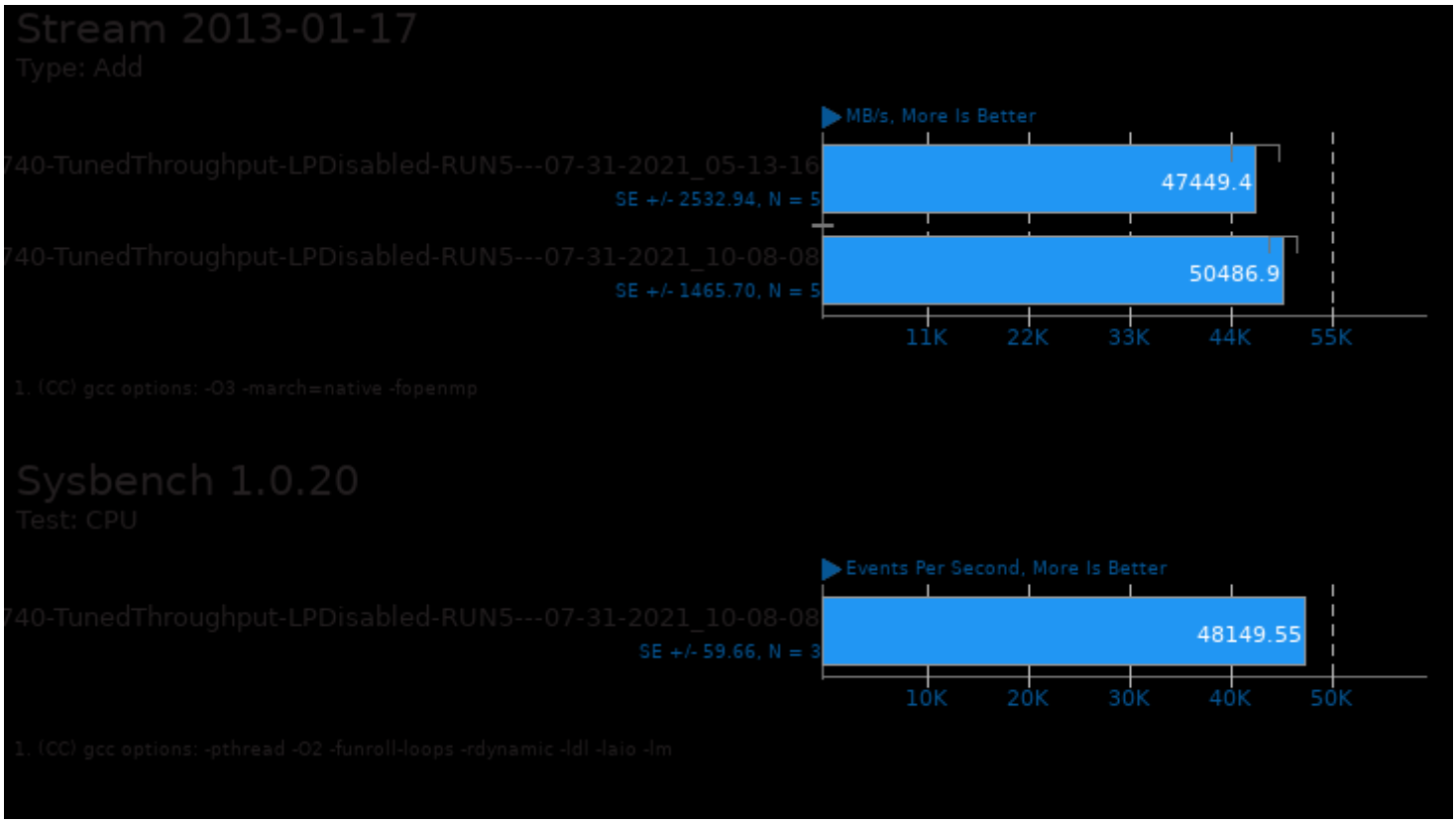
Stream 2013-01-17

Type: Triad



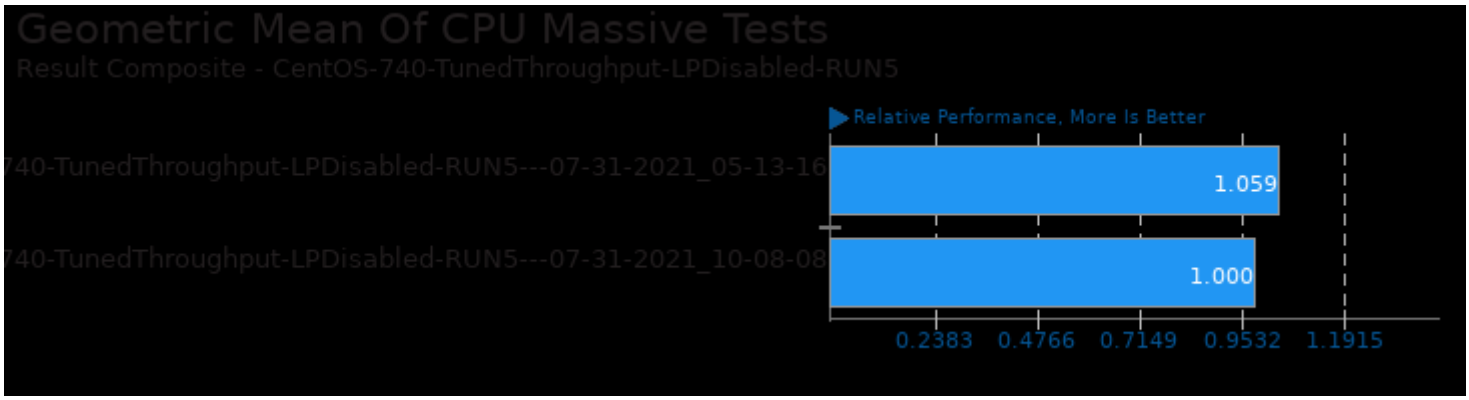
1. (CC) gcc options: -O3 -march=native -fopenmp

CentOS-740-TunedThroughput-LPDisabled-RUN5

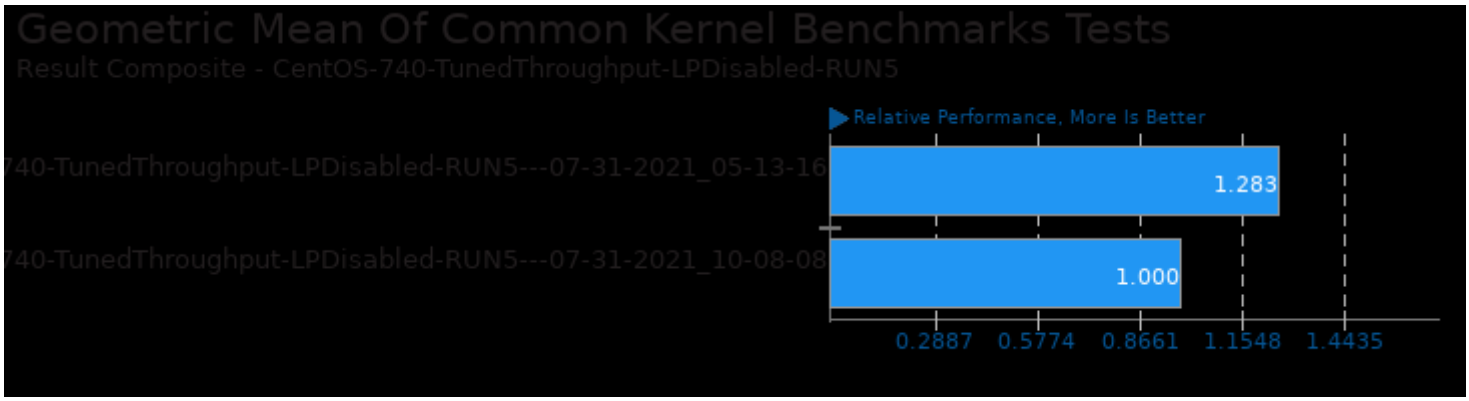


CentOS-740-TunedThroughput-LPDisabled-RUN5

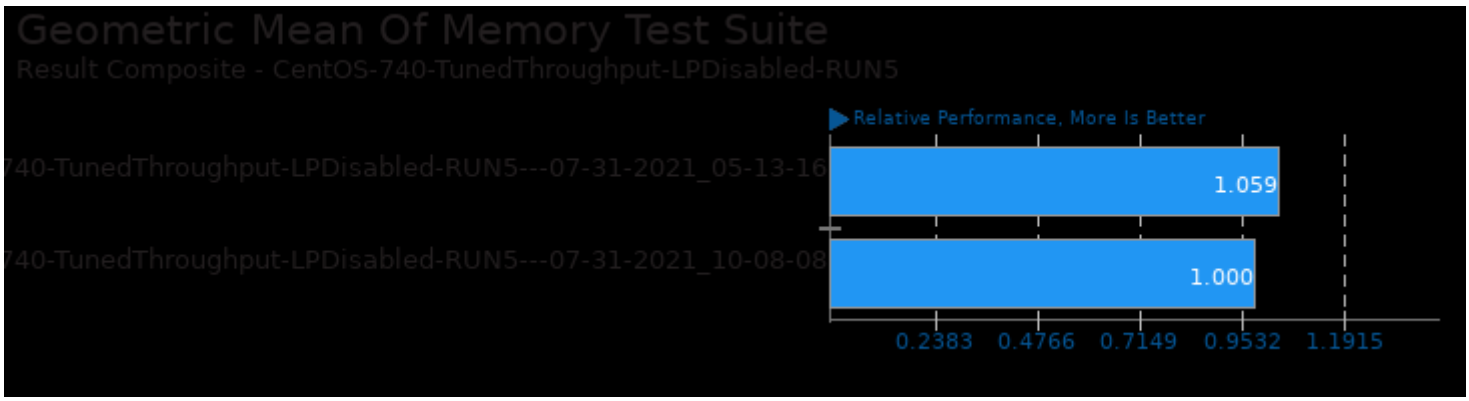
These geometric means are based upon test groupings / test suites for this result file.



Geometric mean based upon tests: pts/cachebench, pts/mbw, pts/ramspeed, pts/stream and pts/sysbench

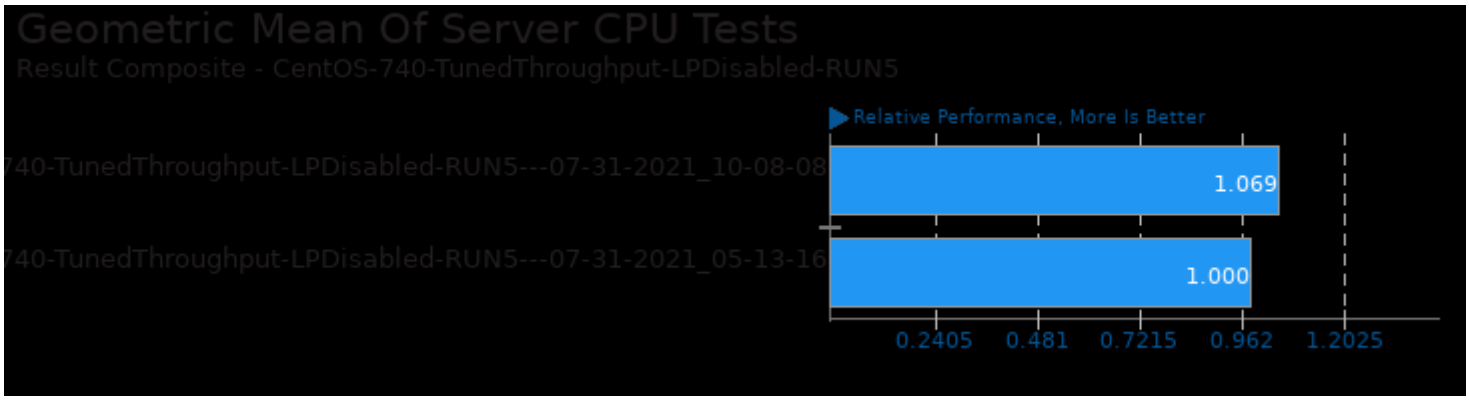


Geometric mean based upon tests: pts/pmbench and pts/mbw



Geometric mean based upon tests: pts/ramspeed, pts/stream, pts/cachebench and pts/mbw

CentOS-740-TunedThroughput-LPDisabled-RUN5



Geometric mean based upon tests: pts/sysbench, pts/ramspeed and pts/stream

This file was automatically generated via the Phoronix Test Suite benchmarking software on Friday, 29 March 2024 00:50.