



SPEC CPU®2017 Integer Speed Result

Copyright 2017-2022 Standard Performance Evaluation Corporation

Hewlett Packard Enterprise

(Test Sponsor: HPE)

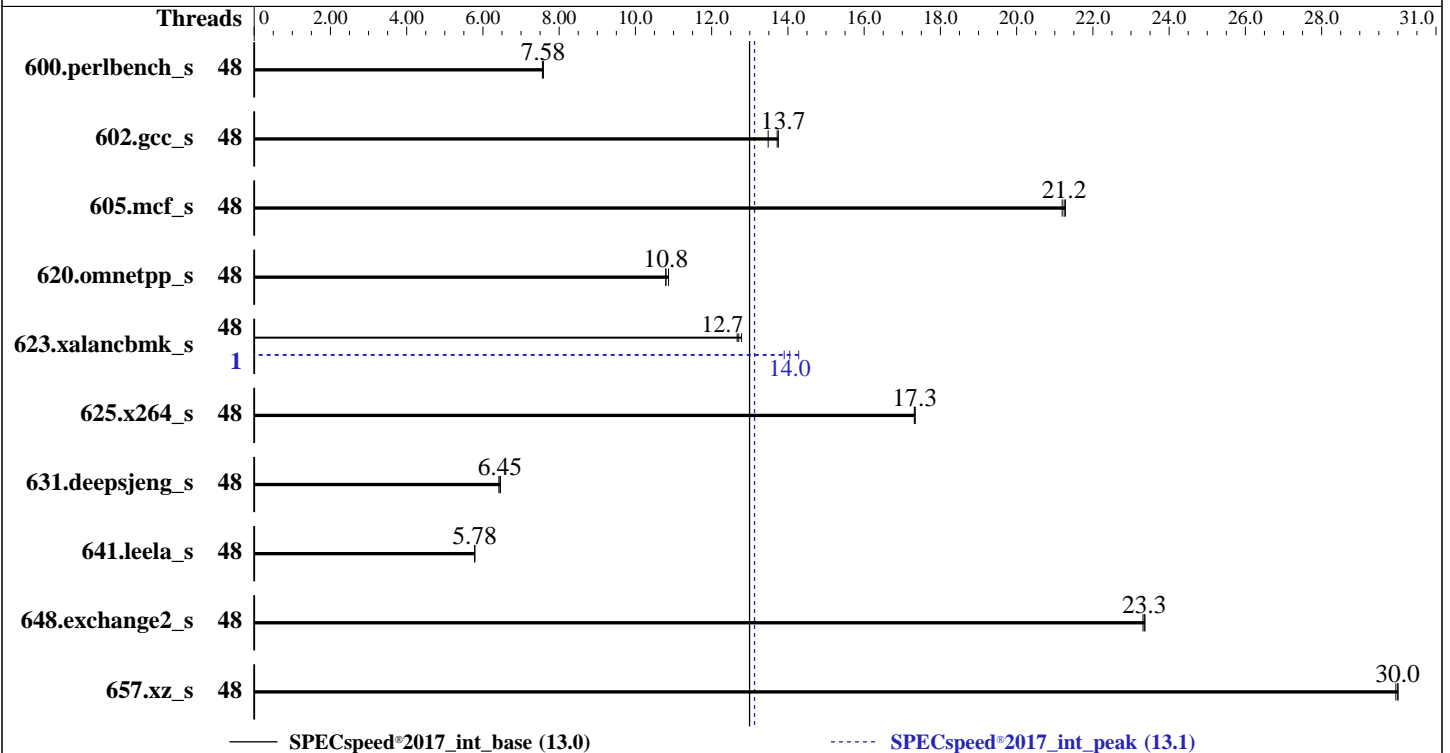
ProLiant DL385 Gen10 Plus v2
(2.80 GHz, AMD EPYC 7473X)

SPECspeed®2017_int_base = 13.0

SPECspeed®2017_int_peak = 13.1

CPU2017 License: 3
Test Sponsor: HPE
Tested by: HPE

Test Date: Feb-2022
Hardware Availability: Mar-2022
Software Availability: Jan-2022



Hardware

CPU Name: AMD EPYC 7473X
 Max MHz: 3700
 Nominal: 2800
 Enabled: 48 cores, 2 chips
 Orderable: 1, 2 chip(s)
 Cache L1: 32 KB I + 32 KB D on chip per core
 L2: 512 KB I+D on chip per core
 L3: 768 MB I+D on chip per chip,
 96 MB shared / 3 cores
 Other: None
 Memory: 2 TB (16 x 128 GB 4Rx4 PC4-3200AA-L)
 Storage: 1 x 400 GB SAS SSD
 Other: None

Software

OS: Ubuntu 20.04.2 LTS (x86_64)
 Kernel 5.11.0-41-generic
 Compiler: C/C++/Fortran: Version 3.2.0 of AOCC
 Parallel: Yes
 Firmware: HPE BIOS Version A42 v2.56 02/10/2022 released
 Feb-2022
 File System: ext4
 System State: Run level 3 (multi-user)
 Base Pointers: 64-bit
 Peak Pointers: 64-bit
 Other: jemalloc: jemalloc memory allocator library v5.1.0
 Power Management: BIOS set to prefer performance at the cost of
 additional power usage



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Results Table

Benchmark	Base							Peak						
	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Threads	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
600.perlbench_s	48	234	7.58	<u>234</u>	<u>7.58</u>	235	7.56	48	234	7.58	<u>234</u>	<u>7.58</u>	235	7.56
602.gcc_s	48	290	13.7	<u>290</u>	<u>13.7</u>	295	13.5	48	290	13.7	<u>290</u>	<u>13.7</u>	295	13.5
605.mcf_s	48	223	21.2	<u>222</u>	<u>21.2</u>	222	21.3	48	223	21.2	<u>222</u>	<u>21.2</u>	222	21.3
620.omnetpp_s	48	<u>151</u>	<u>10.8</u>	150	10.9	151	10.8	48	<u>151</u>	<u>10.8</u>	150	10.9	151	10.8
623.xalancbmk_s	48	111	12.8	<u>111</u>	<u>12.7</u>	112	12.7	1	<u>101</u>	<u>14.0</u>	102	13.9	99.2	14.3
625.x264_s	48	<u>102</u>	<u>17.3</u>	102	17.3	102	17.3	48	<u>102</u>	<u>17.3</u>	102	17.3	102	17.3
631.deepsjeng_s	48	223	6.42	222	6.46	<u>222</u>	<u>6.45</u>	48	223	6.42	222	6.46	<u>222</u>	<u>6.45</u>
641.leela_s	48	295	5.79	295	5.78	<u>295</u>	<u>5.78</u>	48	295	5.79	295	5.78	<u>295</u>	<u>5.78</u>
648.exchange2_s	48	126	23.3	<u>126</u>	<u>23.3</u>	126	23.4	48	126	23.3	<u>126</u>	<u>23.3</u>	126	23.4
657.xz_s	48	<u>206</u>	<u>30.0</u>	206	30.0	206	29.9	48	<u>206</u>	<u>30.0</u>	206	30.0	206	29.9

SPECspeed®2017_int_base = **13.0**

SPECspeed®2017_int_peak = **13.1**

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Compiler Notes

The AMD64 AOCC Compiler Suite is available at
<http://developer.amd.com/amd-aocc/>

Submit Notes

The config file option 'submit' was used.
'numactl' was used to bind copies to the cores.
See the configuration file for details.

Operating System Notes

'ulimit -s unlimited' was used to set environment stack size limit
'ulimit -l 2097152' was used to set environment locked pages in memory limit

runcpu command invoked through numactl i.e.:
numactl --interleave=all runcpu <etc>

To limit dirty cache to 8% of memory, 'sysctl -w vm.dirty_ratio=8' run as root.
To limit swap usage to minimum necessary, 'sysctl -w vm.swappiness=1' run as root.
To free node-local memory and avoid remote memory usage,
'sysctl -w vm.zone_reclaim_mode=1' run as root.
To clear filesystem caches, 'sync; sysctl -w vm.drop_caches=3' run as root.
To disable address space layout randomization (ASLR) to reduce run-to-run
variability, 'sysctl -w kernel.randomize_va_space=0' run as root.

To enable Transparent Hugepages (THP) for all allocations,

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Operating System Notes (Continued)

'echo always > /sys/kernel/mm/transparent_hugepage/enabled' and
'echo always > /sys/kernel/mm/transparent_hugepage/defrag' run as root.

Environment Variables Notes

Environment variables set by runcpu before the start of the run:
GOMP_CPU_AFFINITY = "0-47"
LD_LIBRARY_PATH =
"/home/cpu2017/amd_speed_aocc320_milanx_A_lib/lib;/home/cpu2017/amd_speed_aocc320_milanx_A_lib/lib32:"
LIBOMP_NUM_HIDDEN_HELPER_THREADS = "0"
MALLOC_CONF = "retain:true"
OMP_DYNAMIC = "false"
OMP_SCHEDULE = "static"
OMP_STACKSIZE = "128M"
OMP_THREAD_LIMIT = "48"

Environment variables set by runcpu during the 623.xalancbmk_s peak run:
GOMP_CPU_AFFINITY = "0"

General Notes

Binaries were compiled on a system with 2x AMD EPYC 7742 CPU + 1TiB Memory using openSUSE 15.2

NA: The test sponsor attests, as of date of publication, that CVE-2017-5754 (Meltdown) is mitigated in the system as tested and documented.

Yes: The test sponsor attests, as of date of publication, that CVE-2017-5753 (Spectre variant 1) is mitigated in the system as tested and documented.

Yes: The test sponsor attests, as of date of publication, that CVE-2017-5715 (Spectre variant 2) is mitigated in the system as tested and documented.

jemalloc: configured and built with GCC v4.8.2 in RHEL 7.4 (No options specified)
jemalloc 5.1.0 is available here:
<https://github.com/jemalloc/jemalloc/releases/download/5.1.0/jemalloc-5.1.0.tar.bz2>

Platform Notes

BIOS Configuration
Workload Profile set to General Peak Frequency Compute
AMD SMT Option set to Disabled
Determinism Control set to Manual
Performance Determinism set to Power Deterministic

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Platform Notes (Continued)

Last-Level Cache (LLC) as NUMA Node set to Enabled
NUMA memory domains per socket set to One memory domain per socket
Thermal Configuration set to Maximum Cooling
Infinity Fabric Power Management set to Disabled
Infinity Fabric Performance State set to P0

The system date and time as discovered by sysinfo is incorrect as the time was not updated prior to the run. The test_date field shows an accurate date for the result.

The system ROM used for this result contains microcode version 0x 0A001227h for the AMD EPYC 7nn3X family of processors. The reference code/AGESA version used in this ROM is version MilanPI 1.0.0.8.

sysinfo program /home/cpu2017/bin/sysinfo
Rev: r6622 of 2021-04-07 982a61ec0915b55891ef0e16acafc64d
running on oem-ProLiant-DL385-Gen10-Plus Thu Jul 22 00:34:12 2021

SUT (System Under Test) info as seen by some common utilities.
For more information on this section, see
<https://www.spec.org/cpu2017/Docs/config.html#sysinfo>

From /proc/cpuinfo
model name : AMD EPYC 7473X 24-Core Processor
2 "physical id"s (chips)
48 "processors"
cores, siblings (Caution: counting these is hw and system dependent. The following excerpts from /proc/cpuinfo might not be reliable. Use with caution.)
cpu cores : 24
siblings : 24
physical 0: cores 0 1 2 4 5 6 8 9 10 12 13 14 16 17 18 20 21 22 24 25 26 28 29 30
physical 1: cores 0 1 2 4 5 6 8 9 10 12 13 14 16 17 18 20 21 22 24 25 26 28 29 30

From lscpu from util-linux 2.34:
Architecture: x86_64
CPU op-mode(s): 32-bit, 64-bit
Byte Order: Little Endian
Address sizes: 48 bits physical, 48 bits virtual
CPU(s): 48
On-line CPU(s) list: 0-47
Thread(s) per core: 1
Core(s) per socket: 24
Socket(s): 2
NUMA node(s): 16
Vendor ID: AuthenticAMD
CPU family: 25
Model: 1
Model name: AMD EPYC 7473X 24-Core Processor

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Platform Notes (Continued)

```

Stepping:                2
CPU MHz:                  2794.539
BogoMIPS:                 5589.07
Virtualization:          AMD-V
L1d cache:                1.5 MiB
L1i cache:                1.5 MiB
L2 cache:                 24 MiB
L3 cache:                 1.5 GiB
NUMA node0 CPU(s):       0-2
NUMA node1 CPU(s):       3-5
NUMA node2 CPU(s):       6-8
NUMA node3 CPU(s):       9-11
NUMA node4 CPU(s):       12-14
NUMA node5 CPU(s):       15-17
NUMA node6 CPU(s):       18-20
NUMA node7 CPU(s):       21-23
NUMA node8 CPU(s):       24-26
NUMA node9 CPU(s):       27-29
NUMA node10 CPU(s):      30-32
NUMA node11 CPU(s):      33-35
NUMA node12 CPU(s):      36-38
NUMA node13 CPU(s):      39-41
NUMA node14 CPU(s):      42-44
NUMA node15 CPU(s):      45-47
Vulnerability Itlb multihit: Not affected
Vulnerability L1tf:       Not affected
Vulnerability Mds:        Not affected
Vulnerability Meltdown:   Not affected
Vulnerability Spec store bypass: Mitigation; Speculative Store Bypass disabled via prctl and seccomp
Vulnerability Spectre v1:  Mitigation; usercopy/swapgs barriers and __user pointer sanitization
Vulnerability Spectre v2:  Mitigation; Full AMD retpoline, IBPB conditional, IBRS_FW, STIBP disabled, RSB filling
Vulnerability Srbds:      Not affected
Vulnerability Tsx async abort: Not affected
Flags:                    fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush mmx fxsr sse sse2 ht syscall nx mmxext fxsr_opt pdpe1gb rdtscp lm constant_tsc rep_good nopl nonstop_tsc cpuid extd_apicid aperfmperf pni pclmulqdq monitor ssse3 fma cx16 pcid sse4_1 sse4_2 movbe popcnt aes xsave avx f16c rdrand lahf_lm cmp_legacy svm extapic cr8_legacy abm sse4a misalignsse 3dnowprefetch osvw ibs skinit wdt tce topoext perfctr_core perfctr_nb bpext perfctr_llc mwaitx cpb cat_l3 cdp_l3 invpcid_single hw_pstate ssbd mba ibrs ibpb stibp vmmcall fsgsbase bmi1 avx2 smep bmi2 invpcid cqm rdt_a rdseed adx smap clflushopt clwb sha_ni xsaveopt xsavec xgetbv1 xsaves cqm_llc cqm_occup_llc cqm_mbm_total cqm_mbm_local clzero irperf xsaveerptr rdpru wbnoinvd amd_ppin arat npt lbrv svm_lock nrip_save tsc_scale vmcb_clean flushbyasid decodeassists

```

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Platform Notes (Continued)

```
pausefilter pfthreshold v_vmsave_vmload vgif umip pku ospke vaes vpclmulqdq rdpid
overflow_recov succor smca
```

From lscpu --cache:

NAME	ONE-SIZE	ALL-SIZE	WAYS	TYPE	LEVEL
L1d	32K	1.5M	8	Data	1
L1i	32K	1.5M	8	Instruction	1
L2	512K	24M	8	Unified	2
L3	96M	1.5G	16	Unified	3

```
/proc/cpuinfo cache data
cache size : 512 KB
```

From numactl --hardware

WARNING: a numactl 'node' might or might not correspond to a physical chip.

```
available: 16 nodes (0-15)
```

```
node 0 cpus: 0 1 2
```

```
node 0 size: 128711 MB
```

```
node 0 free: 128562 MB
```

```
node 1 cpus: 3 4 5
```

```
node 1 size: 129023 MB
```

```
node 1 free: 128852 MB
```

```
node 2 cpus: 6 7 8
```

```
node 2 size: 129023 MB
```

```
node 2 free: 128863 MB
```

```
node 3 cpus: 9 10 11
```

```
node 3 size: 129023 MB
```

```
node 3 free: 128963 MB
```

```
node 4 cpus: 12 13 14
```

```
node 4 size: 129023 MB
```

```
node 4 free: 128946 MB
```

```
node 5 cpus: 15 16 17
```

```
node 5 size: 129023 MB
```

```
node 5 free: 128942 MB
```

```
node 6 cpus: 18 19 20
```

```
node 6 size: 129023 MB
```

```
node 6 free: 128955 MB
```

```
node 7 cpus: 21 22 23
```

```
node 7 size: 116910 MB
```

```
node 7 free: 116841 MB
```

```
node 8 cpus: 24 25 26
```

```
node 8 size: 129023 MB
```

```
node 8 free: 128730 MB
```

```
node 9 cpus: 27 28 29
```

```
node 9 size: 128991 MB
```

```
node 9 free: 128926 MB
```

```
node 10 cpus: 30 31 32
```

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Platform Notes (Continued)

```

node 10 size: 129023 MB
node 10 free: 128962 MB
node 11 cpus: 33 34 35
node 11 size: 129023 MB
node 11 free: 128896 MB
node 12 cpus: 36 37 38
node 12 size: 129023 MB
node 12 free: 128935 MB
node 13 cpus: 39 40 41
node 13 size: 129023 MB
node 13 free: 128963 MB
node 14 cpus: 42 43 44
node 14 size: 129023 MB
node 14 free: 128932 MB
node 15 cpus: 45 46 47
node 15 size: 129016 MB
node 15 free: 128950 MB
node distances:
node  0  1  2  3  4  5  6  7  8  9 10 11 12 13 14 15
 0: 10 11 11 11 11 11 11 11 11 32 32 32 32 32 32 32
 1: 11 10 11 11 11 11 11 11 11 32 32 32 32 32 32 32
 2: 11 11 10 11 11 11 11 11 11 32 32 32 32 32 32 32
 3: 11 11 11 10 11 11 11 11 11 32 32 32 32 32 32 32
 4: 11 11 11 11 10 11 11 11 11 32 32 32 32 32 32 32
 5: 11 11 11 11 11 10 11 11 11 32 32 32 32 32 32 32
 6: 11 11 11 11 11 11 10 11 11 32 32 32 32 32 32 32
 7: 11 11 11 11 11 11 11 10 11 32 32 32 32 32 32 32
 8: 32 32 32 32 32 32 32 32 10 11 11 11 11 11 11 11
 9: 32 32 32 32 32 32 32 32 11 10 11 11 11 11 11 11
10: 32 32 32 32 32 32 32 32 11 11 10 11 11 11 11 11
11: 32 32 32 32 32 32 32 32 11 11 11 10 11 11 11 11
12: 32 32 32 32 32 32 32 32 11 11 11 11 10 11 11 11
13: 32 32 32 32 32 32 32 32 11 11 11 11 11 10 11 11
14: 32 32 32 32 32 32 32 32 11 11 11 11 11 11 10 11
15: 32 32 32 32 32 32 32 32 11 11 11 11 11 11 11 10

```

```

From /proc/meminfo
MemTotal:      2101152972 kB
HugePages_Total:      0
Hugepagesize:    2048 kB

```

```

/sbin/tuned-adm active
Current active profile: throughput-performance

```

```

/usr/bin/lsb_release -d
Ubuntu 20.04.2 LTS

```

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Platform Notes (Continued)

From /etc/*release* /etc/*version*

debian_version: bullseye/sid

os-release:

NAME="Ubuntu"

VERSION="20.04.2 LTS (Focal Fossa)"

ID=ubuntu

ID_LIKE=debian

PRETTY_NAME="Ubuntu 20.04.2 LTS"

VERSION_ID="20.04"

HOME_URL="https://www.ubuntu.com/"

SUPPORT_URL="https://help.ubuntu.com/"

uname -a:

Linux oem-ProLiant-DL385-Gen10-Plus 5.11.0-41-generic #45~20.04.1-Ubuntu SMP Wed Nov 10 10:20:10 UTC 2021 x86_64 x86_64 x86_64 GNU/Linux

Kernel self-reported vulnerability status:

CVE-2018-12207 (iTLB Multihit):

Not affected

CVE-2018-3620 (L1 Terminal Fault):

Not affected

Microarchitectural Data Sampling:

Not affected

CVE-2017-5754 (Meltdown):

Not affected

CVE-2018-3639 (Speculative Store Bypass):

Mitigation: Speculative Store Bypass disabled via prctl and seccomp

CVE-2017-5753 (Spectre variant 1):

Mitigation: usercopy/swapgs barriers and __user pointer sanitization

CVE-2017-5715 (Spectre variant 2):

Mitigation: Full AMD retpoline, IBPB: conditional, IBRS_FW, STIBP: disabled, RSB filling

CVE-2020-0543 (Special Register Buffer Data Sampling):

Not affected

CVE-2019-11135 (TSX Asynchronous Abort):

Not affected

run-level 3 Jul 22 00:30

SPEC is set to: /home/cpu2017

Filesystem	Type	Size	Used	Avail	Use%	Mounted on
/dev/sdb2	ext4	366G	75G	273G	22%	/

From /sys/devices/virtual/dmi/id

Vendor: HPE

Product: ProLiant DL385 Gen10 Plus

Product Family: ProLiant

Serial: CN7931051F

Additional information from dmidecode 3.2 follows. WARNING: Use caution when you

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Platform Notes (Continued)

interpret this section. The 'dmidecode' program reads system data which is "intended to allow hardware to be accurately determined", but the intent may not be met, as there are frequent changes to hardware, firmware, and the "DMTF SMBIOS" standard.

Memory:

16x Samsung M386AAG40AM3-CWE 128 GB 4 rank 3200

16x UNKNOWN NOT AVAILABLE

BIOS:

BIOS Vendor: HPE

BIOS Version: A42

BIOS Date: 02/10/2022

BIOS Revision: 2.56

Firmware Revision: 2.55

(End of data from sysinfo program)

Compiler Version Notes

```
=====  
C      | 600.perlbench_s(base, peak) 602.gcc_s(base, peak) 605.mcf_s(base,  
      | peak) 625.x264_s(base, peak) 657.xz_s(base, peak)  
=====
```

AMD clang version 13.0.0 (CLANG: AOCC_3.2.0-Build#128 2021_11_12) (based on LLVM Mirror.Version.13.0.0)

Target: x86_64-unknown-linux-gnu

Thread model: posix

InstalledDir: /opt/AMD/aocc-compiler-3.2.0/bin
=====

```
=====  
C++   | 620.omnetpp_s(base, peak) 623.xalanbmk_s(base, peak)  
     | 631.deepsjeng_s(base, peak) 641.leela_s(base, peak)  
=====
```

AMD clang version 13.0.0 (CLANG: AOCC_3.2.0-Build#128 2021_11_12) (based on LLVM Mirror.Version.13.0.0)

Target: x86_64-unknown-linux-gnu

Thread model: posix

InstalledDir: /opt/AMD/aocc-compiler-3.2.0/bin
=====

```
=====  
Fortran | 648.exchange2_s(base, peak)  
=====
```

AMD clang version 13.0.0 (CLANG: AOCC_3.2.0-Build#128 2021_11_12) (based on LLVM Mirror.Version.13.0.0)

Target: x86_64-unknown-linux-gnu

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Compiler Version Notes (Continued)

Thread model: posix
InstalledDir: /opt/AMD/aocc-compiler-3.2.0/bin

Base Compiler Invocation

C benchmarks:
clang

C++ benchmarks:
clang++

Fortran benchmarks:
flang

Base Portability Flags

600.perlbench_s: -DSPEC_LINUX_X64 -DSPEC_LP64
602.gcc_s: -DSPEC_LP64
605.mcf_s: -DSPEC_LP64
620.omnetpp_s: -DSPEC_LP64
623.xalancbmk_s: -DSPEC_LINUX -DSPEC_LP64
625.x264_s: -DSPEC_LP64
631.deepsjeng_s: -DSPEC_LP64
641.leela_s: -DSPEC_LP64
648.exchange2_s: -DSPEC_LP64
657.xz_s: -DSPEC_LP64

Base Optimization Flags

C benchmarks:
-m64 -Wl,-allow-multiple-definition -Wl,-mllvm -Wl,-enable-licm-vrp
-Wl,-mllvm -Wl,-region-vectorize -Wl,-mllvm -Wl,-function-specialize
-Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3 -O3 -march=znver3
-fveclib=AMDLIBM -ffast-math -fopenmp -flto -fstruct-layout=5
-mllvm -unroll-threshold=50 -mllvm -inline-threshold=1000
-fremap-arrays -mllvm -function-specialize -flv-function-specialization
-mllvm -enable-gvn-hoist -mllvm -global-vectorize-slp=true
-mllvm -enable-licm-vrp -mllvm -reduce-array-computations=3 -z muldefs
-DSPEC_OPENMP -fopenmp=libomp -lomp -lamdlibm -ljemalloc -lflang

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SPEC CPU®2017 Integer Speed Result

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Hewlett Packard Enterprise

(Test Sponsor: HPE)

ProLiant DL385 Gen10 Plus v2
(2.80 GHz, AMD EPYC 7473X)

SPECspeed®2017_int_base = 13.0

SPECspeed®2017_int_peak = 13.1

CPU2017 License: 3
Test Sponsor: HPE
Tested by: HPE

Test Date: Feb-2022
Hardware Availability: Mar-2022
Software Availability: Jan-2022

Base Optimization Flags (Continued)

C++ benchmarks:

```
-m64 -Wl,-mllvm -Wl,-region-vectorize
-Wl,-mllvm -Wl,-function-specialize
-Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3 -O3 -march=znver3
-fveclib=AMDLIBM -ffast-math -fopenmp -flto
-mllvm -enable-partial-unswitch -mllvm -unroll-threshold=100
-finline-aggressive -flv-function-specialization
-mllvm -loop-unswitch-threshold=200000 -mllvm -reroll-loops
-mllvm -aggressive-loop-unswitch -mllvm -extra-vectorizer-passes
-mllvm -reduce-array-computations=3 -mllvm -global-vectorize-slp=true
-mllvm -convert-pow-exp-to-int=false -z muldefs
-fvirtual-function-elimination -fvisibility=hidden -DSPEC_OPENMP
-fopenmp=libomp -lomp -lamdlibm -ljemalloc -lflang
```

Fortran benchmarks:

```
-m64 -Wl,-mllvm -Wl,-inline-recursion=4
-Wl,-mllvm -Wl,-lsr-in-nested-loop -Wl,-mllvm -Wl,-enable-iv-split
-Wl,-mllvm -Wl,-region-vectorize -Wl,-mllvm -Wl,-function-specialize
-Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3 -O3 -march=znver3
-fveclib=AMDLIBM -ffast-math -fopenmp -flto -z muldefs
-mllvm -unroll-aggressive -mllvm -unroll-threshold=150 -DSPEC_OPENMP
-fopenmp=libomp -lomp -lamdlibm -ljemalloc -lflang
```

Base Other Flags

C benchmarks:

```
-Wno-unused-command-line-argument -Wno-return-type
```

C++ benchmarks:

```
-Wno-unused-command-line-argument -Wno-return-type
```

Fortran benchmarks:

```
-Wno-return-type
```

Peak Compiler Invocation

C benchmarks:

```
clang
```

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Peak Compiler Invocation (Continued)

C++ benchmarks:
clang++

Fortran benchmarks:
flang

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:

600.perlbench_s: basepeak = yes

602.gcc_s: basepeak = yes

605.mcf_s: basepeak = yes

625.x264_s: basepeak = yes

657.xz_s: basepeak = yes

C++ benchmarks:

620.omnetpp_s: basepeak = yes

623.xalancbmk_s: -m64 -Wl,-mllvm -Wl,-function-specialize
-Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3
-Wl,-mllvm -Wl,-do-block-reorder=aggressive -Ofast
-march=znver3 -fveclib=AMDLIBM -ffast-math -fopenmp
-flto -finline-aggressive -mllvm -unroll-threshold=100
-flv-function-specialization -mllvm -enable-licm-vrp
-mllvm -reroll-loops -mllvm -aggressive-loop-unswitch
-mllvm -reduce-array-computations=3
-mllvm -global-vectorize-slp=true
-mllvm -do-block-reorder=aggressive
-fvirtual-function-elimination -fvisibility=hidden

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SPECspeed®2017_int_peak = 13.1

CPU2017 License: 3

Test Sponsor: HPE

Tested by: HPE

Test Date: Feb-2022

Hardware Availability: Mar-2022

Software Availability: Jan-2022

Peak Optimization Flags (Continued)

623.xalancbmk_s (continued):

-DSPEC_OPENMP -fopenmp=libomp -lomp -lamdlibm -ljemalloc
-lflang

631.deepsjeng_s: basepeak = yes

641.leela_s: basepeak = yes

Fortran benchmarks:

648.exchange2_s: basepeak = yes

Peak Other Flags

C benchmarks:

-Wno-unused-command-line-argument -Wno-return-type

C++ benchmarks:

-Wno-unused-command-line-argument -Wno-return-type

Fortran benchmarks:

-Wno-return-type

The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2017/flags/HPE-Platform-Flags-AMD-V1.2-EPYC-revR.html>

<http://www.spec.org/cpu2017/flags/aocc320-flags-A1.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2017/flags/HPE-Platform-Flags-AMD-V1.2-EPYC-revR.xml>

<http://www.spec.org/cpu2017/flags/aocc320-flags-A1.xml>

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Tested with SPEC CPU®2017 v1.1.8 on 2021-07-21 15:04:12-0400.

Report generated on 2022-04-01 13:23:16 by CPU2017 PDF formatter v6442.

Originally published on 2022-03-21.