### SPEC CPU®2017 Integer Rate Result

**Test Sponsor:** HPE  
**Test Date:** Mar-2021  
**Software Availability:** Apr-2021  
**Hardware Availability:** Mar-2021

**SPEC CPU®2017_int_base = 559**  
**SPEC CPU®2017_int_peak = Not Run**

---

**Hewlett Packard Enterprise**  
**ProLiant XL225n Gen10 Plus**  
**CPU2017 License:** 3  
**Test Sponsor:** HPE  
**Tested by:** HPE  

<table>
<thead>
<tr>
<th>SPECrate Name</th>
<th>Copies</th>
</tr>
</thead>
<tbody>
<tr>
<td>500.perlbench_r</td>
<td>128</td>
</tr>
<tr>
<td>502.gcc_r</td>
<td>128</td>
</tr>
<tr>
<td>505.mcf_r</td>
<td>128</td>
</tr>
<tr>
<td>520.omnetpp_r</td>
<td>128</td>
</tr>
<tr>
<td>523.xalancbmk_r</td>
<td>128</td>
</tr>
<tr>
<td>525.x264_r</td>
<td>128</td>
</tr>
<tr>
<td>531.deepsjeng_r</td>
<td>128</td>
</tr>
<tr>
<td>541.leela_r</td>
<td>128</td>
</tr>
<tr>
<td>548.exchange2_r</td>
<td>128</td>
</tr>
<tr>
<td>557.zstd_r</td>
<td>128</td>
</tr>
</tbody>
</table>

---

### Hardware

**CPU Name:** AMD EPYC 75F3  
**Max MHz:** 4000  
**Nominal:** 2950  
**Enabled:** 64 cores, 2 chips, 2 threads/core  
**Orderable:** 1, 2 chips  
**Cache L1:** 32 KB I + 32 KB D on chip per core  
**L2:** 512 KB I+D on chip per core  
**L3:** 256 MB I+D on chip per core, 32 MB shared / 4 cores  
**Other:** None  
**Memory:** 2 TB (16 x 128 GB 4Rx4 PC4-3200AA-L)  
**Storage:** 1 x 960 GB SATA SSD, RAID 0  
**Other:** None

### Software

**OS:** Ubuntu 20.04.1 LTS (x86_64)  
**Kernel:** 5.4.0-42-generic  
**Compiler:** C/C++/Fortran: Version 3.0.0 of AOCC  
**Parallel:** No  
**Firmware:** HPE BIOS Version A46 v2.42 02/15/2021 released Feb-2021  
**File System:** ext4  
**System State:** Run level 5 (multi-user)  
**Base Pointers:** 64-bit  
**Peak Pointers:** Not Applicable  
**Other:** jemalloc: jemalloc memory allocator library v5.1.0  
**Power Management:** BIOS set to prefer performance at the cost of additional power usage
## SPEC CPU®2017 Integer Rate Result

### Hewlett Packard Enterprise

**Test Sponsor:** HPE  
**ProLiant XL225n Gen10 Plus**  
(2.95 GHz, AMD EPYC 75F3)

**SPEC CPU®2017**  
**2017 Integer Rate Result**

**Copyright 2017-2021 Standard Performance Evaluation Corporation**

**Test Sponsor:** HPE  
**CPU2017 License:** 3  
**Test Date:** Mar-2021  
**Tested by:** HPE

### Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Copies</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Base</th>
<th>Peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>500.perlbench_r</td>
<td>128</td>
<td>529</td>
<td>385</td>
<td>524</td>
<td>389</td>
<td>523</td>
<td>390</td>
<td></td>
<td></td>
</tr>
<tr>
<td>502.gcc_r</td>
<td>128</td>
<td>414</td>
<td>437</td>
<td>414</td>
<td>438</td>
<td>415</td>
<td>437</td>
<td></td>
<td></td>
</tr>
<tr>
<td>505.mcf_r</td>
<td>128</td>
<td>266</td>
<td>776</td>
<td>266</td>
<td>778</td>
<td>266</td>
<td>777</td>
<td></td>
<td></td>
</tr>
<tr>
<td>520.omnetpp_r</td>
<td>128</td>
<td>630</td>
<td>266</td>
<td>628</td>
<td>267</td>
<td>625</td>
<td>268</td>
<td></td>
<td></td>
</tr>
<tr>
<td>523.xalancbmk_r</td>
<td>128</td>
<td>200</td>
<td>675</td>
<td>202</td>
<td>670</td>
<td>201</td>
<td>672</td>
<td></td>
<td></td>
</tr>
<tr>
<td>525.x264_r</td>
<td>128</td>
<td>191</td>
<td>1180</td>
<td>190</td>
<td>1180</td>
<td>191</td>
<td>1170</td>
<td></td>
<td></td>
</tr>
<tr>
<td>531.deepsjeng_r</td>
<td>128</td>
<td>306</td>
<td>480</td>
<td>303</td>
<td>484</td>
<td>304</td>
<td>482</td>
<td></td>
<td></td>
</tr>
<tr>
<td>541.leela_r</td>
<td>128</td>
<td>406</td>
<td>522</td>
<td>405</td>
<td>524</td>
<td>406</td>
<td>522</td>
<td></td>
<td></td>
</tr>
<tr>
<td>548.exchange2_r</td>
<td>128</td>
<td>252</td>
<td>1330</td>
<td>252</td>
<td>1330</td>
<td>252</td>
<td>1330</td>
<td></td>
<td></td>
</tr>
<tr>
<td>557.xz_r</td>
<td>128</td>
<td>436</td>
<td>317</td>
<td>438</td>
<td>316</td>
<td>436</td>
<td>317</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SPECr®2017_int_base = 559  
SPECr®2017_int_peak = Not Run

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>  
'echo 8 > /proc/sys/vm/dirty_ratio' run as root to limit dirty cache to 8% of memory.  
'echo 1 > /proc/sys/vm/swappiness' run as root to limit swap usage to minimum necessary.  
'echo 1 > /proc/sys/vm/zone_reclaim_mode' run as root to free node-local memory and avoid remote memory usage.  
'sync; echo 3 > /proc/sys/vm/drop_caches' run as root to reset filesystem caches.  
'sysctl -w kernel.randomize_va_space=0' run as root to disable address space layout randomization (ASLR) to reduce run-to-run variability.  
'echo always > /sys/kernel/mm/transparent_hugepage/enabled' and

(Continued on next page)
SPEC CPU®2017 Integer Rate Result

Hewlett Packard Enterprise
(Test Sponsor: HPE)
ProLiant XL225n Gen10 Plus
(2.95 GHz, AMD EPYC 75F3)

SPECrate®2017_int_base = 559
SPECrate®2017_int_peak = Not Run

<table>
<thead>
<tr>
<th>CPU2017 License: 3</th>
<th>Test Date: Mar-2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Sponsor: HPE</td>
<td>Hardware Availability: Apr-2021</td>
</tr>
<tr>
<td>Tested by: HPE</td>
<td>Software Availability: Mar-2021</td>
</tr>
</tbody>
</table>

Operating System Notes (Continued)

'echo always > /sys/kernel/mm/transparent_hugepage/defrag' run as root for peak integer runs and all FP runs to enable Transparent Hugepages (THP).
'echo madvise > /sys/kernel/mm/transparent_hugepage/enabled' run as root for base integer runs to enable THP only on request.

Environment Variables Notes

Environment variables set by runcpu before the start of the run:
LD_LIBRARY_PATH = "/home/cpu2017/amd_rate_aocc300_milan_A_lib/64;/home/cpu2017/amd_rate_aocc300_milan_A_lib/32:":
MALLOC_CONF = "retain:true"

General Notes

Binaries were compiled on a system with 2x AMD EPYC 7742 CPU + 512GiB 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 Throughput Compute
Determinism Control set to Manual
  Performance Determinism set to Power Deterministic
Last-Level Cache (LLC) as NUMA Node set to Enabled
NUMA memory domains per socket set to Four memory domains per socket
Infinity Fabric Power Management set to Disabled
  Infinity Fabric Performance State set to P0
Thermal Configuration set to Maximum Cooling
Workload Profile set to Custom
L2 HW Prefetcher set to Disabled

(Continued on next page)
Platform Notes (Continued)

Sysinfo program /home/cpu2017/bin/sysinfo
Rev: r6538 of 2020-09-24 e8664e66d2d7080afeaa89d4b38e2f1c
running on ubuntu Wed Apr 1 22:58:36 2020

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 75F3 32-Core Processor
 2 "physical id"s (chips)
128 "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: 32
siblings: 64
physical 0: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
physical 1: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

From lscpu:
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): 128
On-line CPU(s) list: 0-127
Thread(s) per core: 2
Core(s) per socket: 32
Socket(s): 2
NUMA node(s): 16
Vendor ID: AuthenticAMD
CPU family: 25
Model: 1
Model name: AMD EPYC 75F3 32-Core Processor
Stepping: 1
CPU MHz: 1796.211
BogoMIPS: 5888.79
Virtualization: AMD-V
L1d cache: 2 MiB
L1i cache: 2 MiB
L2 cache: 32 MiB
L3 cache: 512 MiB
NUMA node0 CPU(s): 0-3, 64-67
NUMA node1 CPU(s): 4-7, 68-71
NUMA node2 CPU(s): 8-11, 72-75

(Continued on next page)
Platform Notes (Continued)

NUMA node3 CPU(s): 12-15, 76-79
NUMA node4 CPU(s): 16-19, 80-83
NUMA node5 CPU(s): 20-23, 84-87
NUMA node6 CPU(s): 24-27, 88-91
NUMA node7 CPU(s): 28-31, 92-95
NUMA node8 CPU(s): 32-35, 96-99
NUMA node9 CPU(s): 36-39, 100-103
NUMA node10 CPU(s): 40-43, 104-107
NUMA node11 CPU(s): 44-47, 108-111
NUMA node12 CPU(s): 48-51, 112-115
NUMA node13 CPU(s): 52-55, 116-119
NUMA node14 CPU(s): 56-59, 120-123
NUMA node15 CPU(s): 60-63, 124-127
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 sanitation
Vulnerability Spectre v2: Mitigation; Full AMD retpoline, IBPB conditional, IBRS_FW, STIBP always-on, RSB filling
Vulnerability Srbd: Not affected
Vulnerability Tsx async abort: Not affected
Flags: fpu vme de pse pmrs mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush cmx fxsr sse sse2 ht syscall nx mmx ext4 mmxi fxsr_opt pdpe1gb rdmsc lm constant_tsc rep_good nopl nonstop_tsc cpuid ext4 apicid aperfmperf pni pclmulqdq monitor sse3 fma cx16 pcid sse4_1 sse4_2 movbe popcnt aes xsave avx f16c rdrand lahf_lm cmp_legacy svm ext4 c8r8 Legacy abm sse4a misalignsse 3nowprefetch osuw ibs skinit wdt tce topoext perfctr_core perfctr_nb bpext perfctr_llc mwaitx cpb cat_l3 cdpy single hw pstate ssbd mba ibrs ibpb stibp vmmcall fsqsgbase bml1 avx2 smep bmi2 invpcid cmqm rdt_a rdseed adx smap clflushopt clwb sha ni xsaveopt xsavef xgetbv1 xsavees cmqm llc cmq_occupp llc cmq_mbb_total cmq_mbb_local clzero irperf xsaves xsaveopt vmsave_vmload vgfl umip pkv ospe vaes vpcmulqdq rdpid overflow_recov succor smca

/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 3 64 65 66 67
  node 0 size: 128776 MB
  node 0 free: 128603 MB

(Continued on next page)
Hewlett Packard Enterprise
(Test Sponsor: HPE)
ProLiant XL225n Gen10 Plus
(2.95 GHz, AMD EPYC 75F3)

SPEC CPU®2017 Integer Rate Result
Copyright 2017-2021 Standard Performance Evaluation Corporation

SPECrate®2017_int_base = 559
SPECrate®2017_int_peak = Not Run

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

Test Date: Mar-2021
Hardware Availability: Apr-2021
Software Availability: Mar-2021

Platform Notes (Continued)

node 1 cpus: 4 5 6 7 68 69 70 71
node 1 size: 129020 MB
node 1 free: 128883 MB
node 2 cpus: 8 9 10 11 72 73 74 75
node 2 size: 129022 MB
node 2 free: 128866 MB
node 3 cpus: 12 13 14 15 76 77 78 79
node 3 size: 129021 MB
node 3 free: 128815 MB
node 4 cpus: 16 17 18 19 80 81 82 83
node 4 size: 129022 MB
node 4 free: 128413 MB
node 5 cpus: 20 21 22 23 84 85 86 87
node 5 size: 129021 MB
node 5 free: 128791 MB
node 6 cpus: 24 25 26 27 88 89 90 91
node 6 size: 129022 MB
node 6 free: 128885 MB
node 7 cpus: 28 29 30 31 92 93 94 95
node 7 size: 128984 MB
node 7 free: 128821 MB
node 8 cpus: 32 33 34 35 96 97 98 99
node 8 size: 129022 MB
node 8 free: 128898 MB
node 9 cpus: 36 37 38 39 100 101 102 103
node 9 size: 129021 MB
node 9 free: 128899 MB
node 10 cpus: 40 41 42 43 104 105 106 107
node 10 size: 129022 MB
node 10 free: 128897 MB
node 11 cpus: 44 45 46 47 108 109 110 111
node 11 size: 129021 MB
node 11 free: 128897 MB
node 12 cpus: 48 49 50 51 112 113 114 115
node 12 size: 129022 MB
node 12 free: 128906 MB
node 13 cpus: 52 53 54 55 116 117 118 119
node 13 size: 129021 MB
node 13 free: 128901 MB
node 14 cpus: 56 57 58 59 120 121 122 123
node 14 size: 129022 MB
node 14 free: 128907 MB
node 15 cpus: 60 61 62 63 124 125 126 127
node 15 size: 129019 MB
node 15 free: 128903 MB
node distances:
node 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

(Continued on next page)
Hewlett Packard Enterprise
(Test Sponsor: HPE)
ProLiant XL225n Gen10 Plus
(2.95 GHz, AMD EPYC 75F3)

**SPEC CPU®2017 Integer Rate Result**

Copyright 2017-2021 Standard Performance Evaluation Corporation

SPEC CPU®2017_int_base = 559

SPEC CPU®2017_int_peak = Not Run

<table>
<thead>
<tr>
<th>CPU2017 License:</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Sponsor:</td>
<td>HPE</td>
</tr>
<tr>
<td>Tested by:</td>
<td>HPE</td>
</tr>
</tbody>
</table>

**Platform Notes (Continued)**

0: 10 11 12 12 12 12 12 12 32 32 32 32 32 32 32 32
1: 11 10 12 12 12 12 12 12 32 32 32 32 32 32 32 32
2: 12 12 10 11 12 12 12 12 32 32 32 32 32 32 32 32
3: 12 12 11 10 12 12 12 12 32 32 32 32 32 32 32 32
4: 12 12 12 12 10 11 12 12 32 32 32 32 32 32 32 32
5: 12 12 12 12 11 10 12 12 32 32 32 32 32 32 32 32
6: 12 12 12 12 12 12 10 11 32 32 32 32 32 32 32 32
7: 12 12 12 12 12 12 11 10 32 32 32 32 32 32 32 32
8: 32 32 32 32 32 32 32 32 32 32 10 11 12 12 12 12
9: 32 32 32 32 32 32 32 32 32 32 11 10 12 12 12 12
10: 32 32 32 32 32 32 32 32 32 32 12 10 11 12 12 12
11: 32 32 32 32 32 32 32 32 32 32 12 11 10 12 12 12
12: 32 32 32 32 32 32 32 32 32 32 12 12 10 11 12 12
13: 32 32 32 32 32 32 32 32 32 32 12 12 11 10 12 12
14: 32 32 32 32 32 32 32 32 32 32 12 12 12 10 11 11
15: 32 32 32 32 32 32 32 32 32 32 12 12 12 12 11 10

From /proc/meminfo
MemTotal: 2113598528 kB
HugePages_Total: 0
Hugepagesize: 2048 kB

/usr/bin/lsb_release -d
Ubuntu 20.04.1 LTS

debian_version: bullseye/sid
os-release:
NAME="Ubuntu"
VERSION="20.04.1 LTS (Focal Fossa)"
ID=ubuntu
ID_LIKE=debian
PRETTY_NAME="Ubuntu 20.04.1 LTS"
VERSION_ID="20.04"
HOME_URL="https://www.ubuntu.com/"
SUPPORT_URL="https://help.ubuntu.com/"

uname -a:
Linux ubuntu 5.4.0-42-generic #46-Ubuntu SMP Fri Jul 10 00:24:02 UTC 2020 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

(Continued on next page)
Hewlett Packard Enterprise
 ProLiant XL225n Gen10 Plus
 (2.95 GHz, AMD EPYC 75F3)

SPEC CPU®2017 Integer Rate Result

Copyright 2017-2021 Standard Performance Evaluation Corporation

Test Sponsor: HPE
ProLiant XL225n Gen10 Plus
(2.95 GHz, AMD EPYC 75F3)

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

SPECrater®2017_int_base = 559
SPECrater®2017_int_peak = Not Run

Test Date: Mar-2021
Hardware Availability: Apr-2021
Software Availability: Mar-2021

Platform Notes (Continued)

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: always-on, RSB filling

CVE-2020-0543 (Special Register Buffer Data Sampling): Not affected
CVE-2019-11135 (TSX Asynchronous Abort): Not affected

run-level 5 Apr 1 22:54

SPEC is set to: /home/cpu2017

Filesystem Type Size Used Avail Use% Mounted on
/dev/mapper/vgubuntu-root ext4 878G 9.3G 824G 2% /

From /sys/devices/virtual/dmi/id
Vendor: HPE
Product: ProLiant XL225n Gen10 Plus
Product Family: ProLiant
Serial: CN700303Z9

Additional information from dmidecode follows. WARNING: Use caution when you 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 UNKNOWN HMABAGL7ABR4N-XN 128 GB 4 rank 3200

BIOS:
BIOS Vendor: HPE
BIOS Version: A46
BIOS Date: 02/15/2021
BIOS Revision: 2.42
Firmware Revision: 2.40

(End of data from sysinfo program)

Compiler Version Notes

==============================================================================
C     500.perlbench_r(base) 502.gcc_r(base) 505.mcf_r(base)
     525.x264_r(base) 557.xz_r(base)
==============================================================================

(Continued on next page)
Hewlett Packard Enterprise
Test Sponsor: HPE
ProLiant XL225n Gen10 Plus
(2.95 GHz, AMD EPYC 75F3)

SPECrating
SPECrating = 559
SPECrating = Not Run

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

Compiler Version Notes (Continued)
AMD clang version 12.0.0 (CLANG: AOCC_3.0.0-Build#78 2020_12_10) (based on LLVM Mirror.Version.12.0.0)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /opt/AMD/aocc-compiler-3.0.0/bin

Base Compiler Invocation
C benchmarks:
clang
C++ benchmarks:
clang++
Fortran benchmarks:
flang

Base Portability Flags
500.perlbench_r: -DSPEC_LINUX_X64 -DSPEC_LP64
502.gcc_r: -DSPEC_LP64

(Continued on next page)
SPEC CPU®2017 Integer Rate Result

Hewlett Packard Enterprise
(Test Sponsor: HPE)
ProLiant XL225n Gen10 Plus
(2.95 GHz, AMD EPYC 75F3)

SPECrate®2017_int_base = 559
SPECrate®2017_int_peak = Not Run

Base Portability Flags (Continued)

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Flags</th>
</tr>
</thead>
<tbody>
<tr>
<td>505.mcf_r</td>
<td>-DSPEC_LP64</td>
</tr>
<tr>
<td>520.ommnettp_r</td>
<td>-DSPEC_LP64</td>
</tr>
<tr>
<td>523.xalancbmk_r</td>
<td>-DSPEC_LINUX -DSPEC_LP64</td>
</tr>
<tr>
<td>525.x264_r</td>
<td>-DSPEC_LP64</td>
</tr>
<tr>
<td>531.deepsjeng_r</td>
<td>-DSPEC_LP64</td>
</tr>
<tr>
<td>541.leela_r</td>
<td>-DSPEC_LP64</td>
</tr>
<tr>
<td>548.exchange2_r</td>
<td>-DSPEC_LP64</td>
</tr>
<tr>
<td>557.xz_r</td>
<td>-DSPEC_LP64</td>
</tr>
</tbody>
</table>

Base Optimization Flags

C benchmarks:

-m64 -Wl,-allow-multiple-definition -Wl,-mllvm -Wl,-enable-licm-vrp
-flto -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 -ffast-math
-march=znver3 -fveclib=AMDLIBM -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-sl=tp=true
-mllvm -enable-licm-vrp -mllvm -reduce-array-computations=3 -z muldefs
-lamdlibm -ljemalloc -lflang -lflangrti

C++ benchmarks:

-m64 -std=c++98 -Wl,-mllvm -Wl,-do-block-reorder=aggressive -flto
-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 -ffast-math
-march=znver3 -fveclib=AMDLIBM -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-sl=tp=true -mllvm -convert-pow-exp-to-int=false
-z muldefs -mllvm -do-block-reorder=aggressive
-fvirtual-function-elimination -fvisibility=hidden -lamdlibm
-ljemalloc -lflang -lflangrti

Fortran benchmarks:

-m64 -Wl,-mllvm -Wl,-inline-recursion=4
-Wl,-mllvm -Wl,-lsr-in-nested-loop -Wl,-mllvm -Wl,-enable-iv-split
-flto -Wl,-mllvm -Wl,-region-vectorize
-Wl,-mllvm -Wl,-function-specialize

(Continued on next page)
SPEC CPU®2017 Integer Rate Result

Hewlett Packard Enterprise
(Test Sponsor: HPE)
ProLiant XL225n Gen10 Plus
(2.95 GHz, AMD EPYC 75F3)

| SPECrate®2017_int_base = | 559 |
|---------------------------------|
| SPECrate®2017_int_peak = Not Run |

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

Test Date: Mar-2021
Hardware Availability: Apr-2021
Software Availability: Mar-2021

Base Optimization Flags (Continued)

Fortran benchmarks (continued):
-Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3 -03 -ffast-math
-march=znver3 -fveclib=AMDLIBM -z muldefs -mllvm -unroll-aggressive
-mllvm -unroll-threshold=500 -lamdlibm -ljemalloc -lflang -lflangrti

Base Other Flags

C benchmarks:
-Wno-unused-command-line-argument

C++ benchmarks:
-Wno-unused-command-line-argument

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-revP.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-revP.xml

SPEC CPU and SPECrate are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

For questions about this result, please contact the tester. For other inquiries, please contact info@spec.org.

Tested with SPEC CPU®2017 v1.1.5 on 2020-04-01 13:28:35-0400.
Report generated on 2021-03-30 15:30:57 by CPU2017 PDF formatter v6442.
Originally published on 2021-03-30.