## SPEC CPU®2017 Integer Speed Result

**Hewlett Packard Enterprise**  
(Test Sponsor: HPE)  
ProLiant DL380 Gen10 Plus  
(2.30 GHz, Intel Xeon Platinum 8352M)  

**SPECspeed®2017_int_base = 11.8**  
**SPECspeed®2017_int_peak = 12.1**  

<table>
<thead>
<tr>
<th>Test Date:</th>
<th>Aug-2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Sponsor:</td>
<td>HPE</td>
</tr>
<tr>
<td>Hardware Availability:</td>
<td>Jun-2021</td>
</tr>
<tr>
<td>Software Availability:</td>
<td>Dec-2020</td>
</tr>
</tbody>
</table>

### Threads

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>600.perlbench_s</td>
<td>7.16</td>
</tr>
<tr>
<td>602.gcc_s</td>
<td>10.8</td>
</tr>
<tr>
<td>605.mcf_s</td>
<td>11.2</td>
</tr>
<tr>
<td>620.omnetpp_s</td>
<td>12.0</td>
</tr>
<tr>
<td>623.xalancbmk_s</td>
<td>13.2</td>
</tr>
<tr>
<td>625.x264_s</td>
<td>17.1</td>
</tr>
<tr>
<td>631.deepsjeng_s</td>
<td>5.92</td>
</tr>
<tr>
<td>641.leela_s</td>
<td>4.85</td>
</tr>
<tr>
<td>648.exchange2_s</td>
<td>19.4</td>
</tr>
<tr>
<td>657.xz_s</td>
<td>23.8</td>
</tr>
</tbody>
</table>

**SPECspeed®2017_int_base (11.8)**  
**SPECspeed®2017_int_peak (12.1)**

### Hardware

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU Name:</td>
<td>Intel Xeon Platinum 8352M</td>
</tr>
<tr>
<td>Max MHz:</td>
<td>3500</td>
</tr>
<tr>
<td>Nominal:</td>
<td>2300</td>
</tr>
<tr>
<td>Enabled:</td>
<td>64 cores, 2 chips</td>
</tr>
<tr>
<td>Orderable:</td>
<td>1, 2 chip(s)</td>
</tr>
<tr>
<td>Cache L1:</td>
<td>32 KB I + 48 KB D on chip per core</td>
</tr>
<tr>
<td>L2:</td>
<td>1.25 MB I+D on chip per core</td>
</tr>
<tr>
<td>L3:</td>
<td>48 MB I+D on chip per core</td>
</tr>
<tr>
<td>Other:</td>
<td>None</td>
</tr>
<tr>
<td>Memory:</td>
<td>2 TB (32 x 64 GB 2Rx4 PC4-3200AA-R)</td>
</tr>
<tr>
<td>Storage:</td>
<td>1 x 400 GB SAS SSD, RAID 0</td>
</tr>
<tr>
<td>Other:</td>
<td>None</td>
</tr>
</tbody>
</table>

### Software

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>OS:</td>
<td>Red Hat Enterprise Linux 8.3 (Ootpa)</td>
</tr>
<tr>
<td>Compiler:</td>
<td>C/C++: Version 2021.1 of Intel oneAPI DPC++/C++ Compiler Build 20201113 for Linux; Fortran: Version 2021.1 of Intel Fortran Compiler Classic Build 20201112 for Linux; C/C++: Version 2021.1 of Intel C/C++ Compiler Classic Build 20201112 for Linux</td>
</tr>
<tr>
<td>Parallel:</td>
<td>Yes</td>
</tr>
<tr>
<td>Firmware:</td>
<td>HPE BIOS Version U46 v1.50 05/27/2021 released May-2021</td>
</tr>
<tr>
<td>File System:</td>
<td>xfs</td>
</tr>
<tr>
<td>System State:</td>
<td>Run level 3 (multi-user)</td>
</tr>
<tr>
<td>Base Pointers:</td>
<td>64-bit</td>
</tr>
<tr>
<td>Peak Pointers:</td>
<td>64-bit</td>
</tr>
<tr>
<td>Other:</td>
<td>jemalloc memory allocator V5.0.1</td>
</tr>
<tr>
<td>Power Management:</td>
<td>BIOS set to prefer performance at the cost of additional power usage</td>
</tr>
</tbody>
</table>
Hewlett Packard Enterprise
(ProcLiant DL380 Gen10 Plus
(2.30 GHz, Intel Xeon Platinum 8352M))

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

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

SPECspeed®2017_int_base = 11.8
SPECspeed®2017_int_peak = 12.1

Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Threads</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Threads</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>600.perlbench_s</td>
<td>64</td>
<td>249</td>
<td>7.14</td>
<td>248</td>
<td>7.16</td>
<td>248</td>
<td>7.16</td>
<td>64</td>
<td>216</td>
<td>8.23</td>
<td>216</td>
<td>8.22</td>
</tr>
<tr>
<td>602.mcf_s</td>
<td>64</td>
<td>369</td>
<td>10.8</td>
<td>369</td>
<td>10.8</td>
<td>370</td>
<td>10.8</td>
<td>64</td>
<td>357</td>
<td>11.1</td>
<td>355</td>
<td>11.2</td>
</tr>
<tr>
<td>605.mcf_s</td>
<td>64</td>
<td>240</td>
<td>19.6</td>
<td>241</td>
<td>19.6</td>
<td>241</td>
<td>19.6</td>
<td>64</td>
<td>240</td>
<td>19.6</td>
<td>241</td>
<td>19.6</td>
</tr>
<tr>
<td>620.omnetpp_s</td>
<td>64</td>
<td>135</td>
<td>12.1</td>
<td>136</td>
<td>12.0</td>
<td>138</td>
<td>11.8</td>
<td>64</td>
<td>135</td>
<td>12.1</td>
<td>136</td>
<td>12.0</td>
</tr>
<tr>
<td>623.xalanchmk_s</td>
<td>64</td>
<td>107</td>
<td>13.2</td>
<td>105</td>
<td>13.4</td>
<td>108</td>
<td>13.1</td>
<td>64</td>
<td>107</td>
<td>13.2</td>
<td>105</td>
<td>13.4</td>
</tr>
<tr>
<td>625.x264_s</td>
<td>64</td>
<td>103</td>
<td>17.1</td>
<td>103</td>
<td>17.1</td>
<td>103</td>
<td>17.1</td>
<td>64</td>
<td>99.5</td>
<td>17.7</td>
<td>99.0</td>
<td>17.8</td>
</tr>
<tr>
<td>631.deepsjeng_s</td>
<td>64</td>
<td>242</td>
<td>5.92</td>
<td>242</td>
<td>5.93</td>
<td>242</td>
<td>5.92</td>
<td>64</td>
<td>242</td>
<td>5.92</td>
<td>242</td>
<td>5.93</td>
</tr>
<tr>
<td>641.leela_s</td>
<td>64</td>
<td>352</td>
<td>4.85</td>
<td>352</td>
<td>4.85</td>
<td>352</td>
<td>4.85</td>
<td>64</td>
<td>352</td>
<td>4.85</td>
<td>352</td>
<td>4.85</td>
</tr>
<tr>
<td>648.exchange2_s</td>
<td>64</td>
<td>152</td>
<td>19.4</td>
<td>152</td>
<td>19.3</td>
<td>152</td>
<td>19.4</td>
<td>64</td>
<td>152</td>
<td>19.4</td>
<td>152</td>
<td>19.3</td>
</tr>
<tr>
<td>657.xz_s</td>
<td>64</td>
<td>260</td>
<td>23.8</td>
<td>259</td>
<td>23.9</td>
<td>260</td>
<td>23.8</td>
<td>64</td>
<td>260</td>
<td>23.8</td>
<td>259</td>
<td>23.9</td>
</tr>
</tbody>
</table>

Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"
Transparent Huge Pages enabled by default
Prior to runcpu invocation
Filesystem page cache synced and cleared with:
    sync; echo 3> /proc/sys/vm/drop_caches

Environment Variables Notes

Environment variables set by runcpu before the start of the run:
    KMP_AFFINITY = "granularity=fine,scatter"
    LD_LIBRARY_PATH = "/home/cpu2017/lib/intel64:/home/cpu2017/je5.0.1-64"
    MALLOC_CONF = "retain:true"
    OMP_STACKSIZE = "192M"

General Notes

Binaries compiled on a system with 1x Intel Core i9-7980XE CPU + 64GB RAM memory using Redhat Enterprise Linux 8.0
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, a general purpose malloc implementation built with the RedHat Enterprise 7.5, and the system compiler gcc 4.8.5

(Continued on next page)
Hewlett Packard Enterprise

ProLiant DL380 Gen10 Plus
(2.30 GHz, Intel Xeon Platinum 8352M)

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

SPECspeed®2017_int_base = 11.8
SPECspeed®2017_int_peak = 12.1

Test Date: Aug-2021
Hardware Availability: Jun-2021
Software Availability: Dec-2020

General Notes (Continued)


Platform Notes

The system ROM used for this result contains Intel microcode version 0xd0002a0 for the Intel Xeon Platinum 8352M processor.

BIOS Configuration:
- Workload Profile set to General Peak Frequency Compute
- Intel Hyper-Threading set to Disabled
- Thermal Configuration set to Maximum Cooling
- Memory Patrol Scrubbing set to Disabled
- Advanced Memory Protection set to Advanced ECC
- Last Level Cache (LLC) Prefetch set to Enabled
- Last Level Cache (LLC) Dead Line Allocation set to Disabled
- Enhanced Processor Performance set to Enabled
- Workload Profile set to Custom
  - Energy/Performance Bias set to Balanced Power
  - DCU Stream Prefetcher set to Disabled
  - Adjacent Sector Prefetch set to Disabled
  - Minimum Processor Idle Power Package C-State set to No Package State
  - Numa Group Size Optimization set to Flat

Sysinfo program /home/cpu2017/bin/sysinfo
Rev: r6622 of 2021-04-07 982a61ec0915b55891ef0e16acafc64d
running on localhost.localdomain Fri Aug 13 06:30:51 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 : Intel(R) Xeon(R) Platinum 8352M CPU @ 2.30GHz
- 2 "physical id"s (chips)
- 64 "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 : 32
  - 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 from util-linux 2.32.1:
- Architecture: x86_64
- CPU op-mode(s): 32-bit, 64-bit

(Continued on next page)
Hewlett Packard Enterprise
(Test Sponsor: HPE)
ProLiant DL380 Gen10 Plus
(2.30 GHz, Intel Xeon Platinum 8352M)

SPECspeed®2017_int_base = 11.8
SPECspeed®2017_int_peak = 12.1

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

Test Date: Aug-2021
Hardware Availability: Jun-2021
Software Availability: Dec-2020

Platform Notes (Continued)

Byte Order: Little Endian
CPU(s): 64
On-line CPU(s) list: 0-63
Thread(s) per core: 1
Core(s) per socket: 32
Socket(s): 2
NUMA node(s): 2
Vendor ID: GenuineIntel
CPU family: 6
Model: 106
Model name: Intel(R) Xeon(R) Platinum 8352M CPU @ 2.30GHz
Stepping: 6
CPU MHz: 801.873
BogoMIPS: 4600.00
Virtualization: VT-x
L1d cache: 48K
L1i cache: 32K
L2 cache: 1280K
L3 cache: 49152K
NUMA node0 CPU(s): 0-31
NUMA node1 CPU(s): 32-63
Flags: fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov pat pse36 clflush dts acp1 mmx fxsr sse sse2 ss ht tm pbe syscall nx pdpe1gb rdtscp lm constant_tsc art arch_perfmon pebs bts rep_good nopl xtopology nonstop_tsc cpuid aperfmperf pni pclmulqdq dtes64 monitor ds_cpl vmx smx est tm2 ssse3 sdbg fma cx16 xtrr pdcm pcid dca sse4_1 sse4_2 x2apic movbe popcnt tsc_deadline_timer aes xsave avx f16c rdrand lahf_lm abm 3dnowprefetch cpuid_fault epb cat_l3 invpcid_single ssbd mba ibrs ibpb stibp ibrs_enhanced tpr_shadow vni flexpriority ept vpid ept_ad fs gargbase tsc_adjust mmu hle avx2 smep bmi2 erms invpcid cqm rdtr a axv512f axv512d q rseed adx smap axv512 fma clflushopt clwb intelt pt axv512 c shay ni axv512 bw axv512 v xsaveopt xsave xdebug xsave xsv cm q llc cm q occup llc cm q mbm total cm_q mbm local split lock detect wbo invd dtherm ida arat pin pts avx512vbmi umip pk u ospe axv512 vbm2 gfini vaes vcp1mulqd axv512 vnni axv512 bitalg tme avx512 v popcnt dq la57 rdpid md_clear pconfig flush_l1d arch_capabilities

/proc/cpuinfo cache data

From numactl --hardware
WARNING: a numactl 'node' might or might not correspond to a physical chip.
available: 2 nodes (0-1)
node 0 cpus: 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
node 0 size: 963264 MB
node 0 free: 103194 MB
node 1 cpus: 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63

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

Hewlett Packard Enterprise
(Test Sponsor: HPE)
ProLiant DL380 Gen10 Plus
(2.30 GHz, Intel Xeon Platinum 8352M)

SPECspeed®2017_int_base = 11.8
SPECspeed®2017_int_peak = 12.1

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

Platform Notes (Continued)

node 1 size: 964979 MB
node 1 free: 1031497 MB
node distances:
node  0  1
  0: 10 20
  1: 20 10

From /proc/meminfo
MemTotal:       2113488840 kB
HugePages_Total:       0
Hugepagesize:       2048 kB

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

From /etc/*release* /etc/*version*
  os-release:
    NAME="Red Hat Enterprise Linux"
    VERSION="8.3 (Ootpa)"
    ID="rhel"
    ID_LIKE="fedora"
    VERSION_ID="8.3"
    PLATFORM_ID="platform:el8"
    PRETTY_NAME="Red Hat Enterprise Linux 8.3 (Ootpa)"
    ANSI_COLOR="0;31"
    redhat-release: Red Hat Enterprise Linux release 8.3 (Ootpa)
    system-release: Red Hat Enterprise Linux release 8.3 (Ootpa)
    system-release-cpe: cpe:/o:redhat:enterprise_linux:8.3:ga

uname -a:
  Linux localhost.localdomain 4.18.0-240.el8.x86_64 #1 SMP Wed Sep 23 05:13:10 EDT 2020
  x86_64 x86_64 x86_64 GNU/Linux

Kernel self-reported vulnerability status:

CVE-2018-12207 (iTLB Multithit):
  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/swaps barriers and __user pointer sanitization
CVE-2017-5715 (Spectre variant 2):
  Mitigation: Enhanced IBRS, IBPB: conditional, RSB filling

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

Hewlett Packard Enterprise  
(Test Sponsor: HPE)  
ProLiant DL380 Gen10 Plus  
(2.30 GHz, Intel Xeon Platinum 8352M)

<table>
<thead>
<tr>
<th>SPECspeed®2017_int_base</th>
<th>11.8</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECspeed®2017_int_peak</td>
<td>12.1</td>
</tr>
</tbody>
</table>

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

**Platform Notes (Continued)**

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

run-level 3 Aug 13 06:30

SPEC is set to: /home/cpu2017  
`Filesystem Type Size Used Avail Use% Mounted on`  
`/dev/mapper/rhel-home xfs 297G 101G 197G 34% /home`

From /sys/devices/virtual/dmi/id  
Vendor: HPE  
Product: ProLiant DL380 Gen10 Plus  
Product Family: ProLiant  
Serial: CN70110BZV

Additional information from dmidecode 3.2 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:**  
32x Micron 36ASF8G72PZ-3G2B2 64 GB 2 rank 3200

**BIOS:**  
BIOS Vendor: HPE  
BIOS Version: U46  
BIOS Date: 05/27/2021  
BIOS Revision: 1.50  
Firmware Revision: 2.50

(End of data from sysinfo program)

---

**Compiler Version Notes**

<table>
<thead>
<tr>
<th>C</th>
<th>600.perlbench_s (peak)</th>
</tr>
</thead>
</table>

Intel(R) C Intel(R) 64 Compiler Classic for applications running on Intel(R) 64, Version 2021.1 Build 20201112_000000  
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

---

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

Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64,

(Continued on next page)
Hewlett Packard Enterprise
(Test Sponsor: HPE)
ProLiant DL380 Gen10 Plus
(2.30 GHz, Intel Xeon Platinum 8352M)

SPECspeed®2017_int_base = 11.8
SPECspeed®2017_int_peak = 12.1

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

Test Date: Aug-2021
Hardware Availability: Jun-2021
Software Availability: Dec-2020

Compiler Version Notes (Continued)

Copyright 2021 Standard Performance Evaluation Corporation

Version 2021.1 Build 20201113
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

------------------------------------------------------------------------------
C       | 600.perlbench_s(peak)
-----
Intel(R) C Intel(R) 64 Compiler Classic for applications running on Intel(R) 64, Version 2021.1 Build 20201112_000000
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

------------------------------------------------------------------------------
C       | 600.perlbench_s(base) 602.gcc_s(base, peak) 605.mcf_s(base, peak)
       | 625.x264_s(base, peak) 657.xz_s(base, peak)
------------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2021.1 Build 20201113
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

------------------------------------------------------------------------------
C++     | 620.omnetpp_s(base, peak) 623.xalancbmk_s(base, peak)
       | 631.deepsjeng_s(base, peak) 641.leela_s(base, peak)
------------------------------------------------------------------------------
Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2021.1 Build 20201113
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

------------------------------------------------------------------------------
Fortran | 648.exchange2_s(base, peak)
-----
Intel(R) Fortran Intel(R) 64 Compiler Classic for applications running on Intel(R) 64, Version 2021.1 Build 20201112_000000
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

Base Compiler Invocation

C benchmarks:
icx

C++ benchmarks:
icpx
## SPEC CPU®2017 Integer Speed Result

Hewlett Packard Enterprise
(Test Sponsor: HPE)
ProLiant DL380 Gen10 Plus
(2.30 GHz, Intel Xeon Platinum 8352M)

### SPECspeed®2017_int_base = 11.8
### SPECspeed®2017_int_peak = 12.1

<table>
<thead>
<tr>
<th>CPU2017 License: 3</th>
<th>Test Date: Aug-2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Sponsor: HPE</td>
<td>Hardware Availability: Jun-2021</td>
</tr>
<tr>
<td>Tested by: HPE</td>
<td>Software Availability: Dec-2020</td>
</tr>
</tbody>
</table>

#### Base Compiler Invocation (Continued)

Fortran benchmarks:
```fortran
ifort
```

#### Base Portability Flags

- `600.perlbench_s`: `-DSPEC_LP64 -DSPEC_LINUX_X64`
- `602.gcc_s`: `-DSPEC_LP64`
- `605.mcf_s`: `-DSPEC_LP64`
- `620.omnetpp_s`: `-DSPEC_LP64`
- `623.xalancbmk_s`: `-DSPEC_LP64 -DSPEC_LINUX`
- `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:**
  ```
  -DSPEC_OPENMP -std=c11 -m64 -fopenmp -Wl,-z,muldefs -xCORE-AVX512
  -O3 -ffast-math -flto -mfpmath=sse -funroll-loops
  -qopt-mem-layout-trans=4 -mbranches-within-32B-boundaries
  -L/usr/local/jemalloc64-5.0.1/lib -ljemalloc
  ```
- **C++ benchmarks:**
  ```
  -DSPEC_OPENMP -m64 -Wl,-z,muldefs -xCORE-AVX512 -O3 -ffast-math
  -flto -mfpmath=sse -funroll-loops -qopt-mem-layout-trans=4
  -mbranches-within-32B-boundaries
  -L/opt/intel/oneapi/compiler/2021.1.1/linux/compiler/lib/intel64_lin/
  -lqkmalloc
  ```
- **Fortran benchmarks:**
  ```
  -m64 -xCORE-AVX512 -O3 -ipo -no-prec-div -qopt-mem-layout-trans=4
  -nostandard-realloc-lhs -align array32byte -auto
  -mbranches-within-32B-boundaries
  ```

#### Peak Compiler Invocation

C benchmarks (except as noted below):
```fortran
icx
```
Peak Compiler Invocation (Continued)

600.perlbench_s: icc

C++ benchmarks:
icpx

Fortran benchmarks:
ifort

Peak Portability Flags
Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:
600.perlbench_s: -Wl, -z, muldefs -prof-gen(pass 1) -prof-use(pass 2)
-xCORE-AVX512 -ipo -O3 -no-prec-div
-qopt-mem-layout-trans=4 -fno-strict-overflow
-mbranches-within-32B-boundaries
-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

602.gcc_s: -m64 -std=c11 -Wl, -z, muldefs -fprofile-generate(pass 1)
-fprofile-use=default.profdata(pass 2) -xCORE-AVX512 -flto
-Ofast(pass 1) -O3 -ffast-math -qopt-mem-layout-trans=4
-mbranches-within-32B-boundaries
-L/usr/local/jemalloc64-5.0.1/lib -ljemalloc

605.mcf_s: basepeak = yes

(Continued on next page)
Hewlett Packard Enterprise
(Test Sponsor: HPE)
ProLiant DL380 Gen10 Plus
(2.30 GHz, Intel Xeon Platinum 8352M)

| SPECspeed®2017_int_base = 11.8 |
| SPECspeed®2017_int_peak = 12.1 |

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

Peak Optimization Flags (Continued)

620.omnetpp_s: basepeak = yes
623.xalancbmk_s: basepeak = yes
631.deepsjeng_s: basepeak = yes
641.leela_s: basepeak = yes
Fortran benchmarks:
648.exchange2_s: basepeak = yes

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2017/flags/HPE-Platform-Flags-Intel-V1.0-ICX-revE.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2017/flags/HPE-Platform-Flags-Intel-V1.0-ICX-revE.xml
http://www.spec.org/cpu2017/flags/Intel-ic2021-official-linux64_revA.xml

SPEC CPU and SPECspeed 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 v1.1.8 on 2021-08-12 21:00:50-0400.
Report generated on 2021-09-01 14:21:57 by CPU2017 PDF formatter v6442.
Originally published on 2021-08-31.