Hewlett Packard Enterprise
(Test Sponsor: HPE)
ProLiant DL380 Gen10 Plus
(2.30 GHz, Intel Xeon Gold 6314U)

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

SPECrates®2017_int_base = 228
SPECrates®2017_int_peak = 237

Hardware

CPU Name: Intel Xeon Gold 6314U
Max MHz: 3400
Nominal: 2300
Enabled: 32 cores, 1 chip, 2 threads/core
Orderable: 1, 2 chip(s)
Cache L1: 32 KB I + 48 KB D on chip per core
L2: 1.25 MB I+D on chip per core
L3: 48 MB I+D on chip per chip
Other: None
Memory: 1 TB (16 x 64 GB 2Rx4 PC4-3200AA-R)
Storage: 1 x 400 GB SAS SSD, RAID 0
Other: None

Software

OS: Red Hat Enterprise Linux 8.3 (Ootpa)
Kernel 4.18.0-240.el8.x86_64
Compiler: 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
Parallel: No
Firmware: HPE BIOS Version U46 v1.50 05/27/2021 released
May-2021
File System: xfs
System State: Run level 3 (multi-user)
Base Pointers: 64-bit
Peak Pointers: 32/64-bit
Other: jemalloc memory allocator V5.0.1
Power Management: BIOS set to prefer performance at the cost of additional power usage
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>Copies</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>500.perlbench_r</td>
<td>64</td>
<td>649</td>
<td>157</td>
<td>649</td>
<td>157</td>
<td>649</td>
<td>157</td>
<td>64</td>
<td>555</td>
<td>184</td>
<td>555</td>
<td>184</td>
<td>555</td>
<td>184</td>
</tr>
<tr>
<td>502.gcc_r</td>
<td>64</td>
<td>507</td>
<td>179</td>
<td>511</td>
<td>177</td>
<td>502</td>
<td>180</td>
<td>64</td>
<td>424</td>
<td>214</td>
<td>425</td>
<td>213</td>
<td>425</td>
<td>213</td>
</tr>
<tr>
<td>505.mcf_r</td>
<td>64</td>
<td>274</td>
<td>377</td>
<td>273</td>
<td>379</td>
<td>274</td>
<td>378</td>
<td>64</td>
<td>274</td>
<td>377</td>
<td>273</td>
<td>379</td>
<td>274</td>
<td>378</td>
</tr>
<tr>
<td>520.omnetpp_r</td>
<td>64</td>
<td>577</td>
<td>145</td>
<td>577</td>
<td>146</td>
<td>577</td>
<td>146</td>
<td>64</td>
<td>577</td>
<td>145</td>
<td>577</td>
<td>146</td>
<td>577</td>
<td>146</td>
</tr>
<tr>
<td>523.xalanbmkr</td>
<td>64</td>
<td>234</td>
<td>289</td>
<td>233</td>
<td>290</td>
<td>235</td>
<td>288</td>
<td>64</td>
<td>234</td>
<td>289</td>
<td>233</td>
<td>290</td>
<td>235</td>
<td>288</td>
</tr>
<tr>
<td>525.x264_r</td>
<td>64</td>
<td>235</td>
<td>476</td>
<td>235</td>
<td>476</td>
<td>236</td>
<td>476</td>
<td>64</td>
<td>224</td>
<td>499</td>
<td>225</td>
<td>498</td>
<td>224</td>
<td>500</td>
</tr>
<tr>
<td>531.deepsjeng_r</td>
<td>64</td>
<td>421</td>
<td>174</td>
<td>422</td>
<td>174</td>
<td>422</td>
<td>174</td>
<td>64</td>
<td>421</td>
<td>174</td>
<td>422</td>
<td>174</td>
<td>422</td>
<td>174</td>
</tr>
<tr>
<td>541.leela_r</td>
<td>64</td>
<td>624</td>
<td>170</td>
<td>624</td>
<td>170</td>
<td>624</td>
<td>170</td>
<td>64</td>
<td>624</td>
<td>170</td>
<td>624</td>
<td>170</td>
<td>624</td>
<td>170</td>
</tr>
<tr>
<td>548.exchange2_r</td>
<td>64</td>
<td>360</td>
<td>466</td>
<td>358</td>
<td>468</td>
<td>358</td>
<td>469</td>
<td>64</td>
<td>360</td>
<td>466</td>
<td>358</td>
<td>468</td>
<td>358</td>
<td>469</td>
</tr>
<tr>
<td>557.xz_r</td>
<td>64</td>
<td>542</td>
<td>128</td>
<td>542</td>
<td>128</td>
<td>544</td>
<td>127</td>
<td>64</td>
<td>542</td>
<td>128</td>
<td>542</td>
<td>128</td>
<td>544</td>
<td>127</td>
</tr>
</tbody>
</table>

SPECrate®2017_int_base = 228
SPECrate®2017_int_peak = 237

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

Submit Notes
The numactl mechanism was used to bind copies to processors. The config file option 'submit' was used to generate numactl commands to bind each copy to a specific processor. For details, please see the config file.

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:
LD_LIBRARY_PATH = "/home/cpu2017/lib/intel64:/home/cpu2017/lib/ia32:/home/cpu2017/je5.0.1-32"
MALLOCP_CONF = "retain:true"

General Notes
Binaries compiled on a system with 1x Intel Core i9-7980XE CPU + 64GB RAM memory using Red Hat Enterprise Linux 8.1

(Continued on next page)
General Notes (Continued)

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

Submitted_by: "Bhatnagar, Prateek" <prateek.bhatnagar@hpe.com>
Submitted: Mon Aug 2 07:54:41 EDT 2021
Submission: cpu2017-20210802-28505.sub

Platform Notes

The system ROM used for this result contains Intel microcode version 0xd0002a0 for
the Intel Xeon Gold 6314U processor.
   BIOS Configuration:
   Workload Profile set to General Throughput Compute
   Memory Patrol Scrubbing set to Disabled
   Advanced Memory Protection set to Advanced ECC
   XPT Remote Prefetcher set to Enabled
   Last Level Cache (LLC) Dead Line Allocation set to Disabled
   Enhanced Processor Performance set to Enabled
   Enhanced Processor Performance Profile set to Aggressive
   Thermal Configuration set to Maximum Cooling
   Intel UPI Link Frequency set to Min UPI Speed
   Intel UPI Link Enablement set to Single Link
   D2K set to Disabled
   Workload Profile set to Custom
      DCU Stream Prefetcher set to Disabled
      Energy Efficient Turbo set to Enabled
      Adjacent Sector Prefetch set to Disabled
      Intel UPI Link Power Management set to Enabled

Sysinfo program /home/cpu2017/bin/sysinfo
Rev: r6622 of 2021-04-07 982a61ec0915b55891ef0e16acaf64d
running on localhost.localdomain Fri Jul 30 05:01:50 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

(Continued on next page)
Hewlett Packard Enterprise
ProLiant DL380 Gen10 Plus
(2.30 GHz, Intel Xeon Gold 6314U)

SPEC CPU®2017 Integer Rate Result

Copyright 2017-2021 Standard Performance Evaluation Corporation

Test Sponsor: HPE
Hardware Availability: Jun-2021
Software Availability: Dec-2020

Test Date: Jul-2021

CPU2017 License: 3
Tested by: HPE

SPECrate®2017_int_base = 228
SPECrate®2017_int_peak = 237

Platform Notes (Continued)

From /proc/cpuinfo
model name : Intel(R) Xeon(R) Gold 6314U CPU @ 2.30GHz
  1 "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 : 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

From lscpu from util-linux 2.32.1:
Architecture: x86_64
CPU op-mode(s): 32-bit, 64-bit
Byte Order: Little Endian
CPU(s): 64
On-line CPU(s) list: 0-63
Thread(s) per core: 2
Core(s) per socket: 32
Socket(s): 1
NUMA node(s): 2
Vendor ID: GenuineIntel
CPU family: 6
Model: 106
Model name: Intel(R) Xeon(R) Gold 6314U CPU @ 2.30GHz
Stepping: 6
CPU MHz: 3400.000
BogoMIPS: 4600.00
Virtualization: VT-x
L1d cache: 48K
L1i cache: 32K
L2 cache: 1280K
L3 cache: 49152K
NUMA node0 CPU(s): 0-15,32-47
NUMA node1 CPU(s): 16-31,48-63
Flags: fpu vme de pse tsc msr pae mce cmov pat pse36 clflush dts acpi 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 xtpr 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_13 invpcid_single ssbd mba ibrs ibpb stibp ibrs_enhanced tpr_shadow vnmi flexpriority ept vpid ept_ad fs glebase tsc_adjust bmi1 hle avx2 smep bmi2 末端s invpcid cqm rdt_a avx512f avx512dq rdseed adx smap axv512ifma clflushopt clwb intel_pt avx512cd sha ni avx512bw avx512vl xsaveopt xsavec xsave xgetbv1 xsaves cqm_llc cqm_occup_llc cqm_mbb_total cqm_mbb_local split_lock_detect wbinvd dtherm ida arat pln pts avx512vbm1 umip pku ospke avx512_vbmi2 gfni vaes vpclmulqdq avx512_vnni avx512_bitalg tme

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

Hewlett Packard Enterprise  
(Test Sponsor: HPE)  
ProLiant DL380 Gen10 Plus  
(2.30 GHz, Intel Xeon Gold 6314U)  

**SPECrate®2017_int_base = 228**  
**SPECrate®2017_int_peak = 237**

<table>
<thead>
<tr>
<th>CPU2017 License: 3</th>
<th>Test Date: Jul-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>

Platform Notes (Continued)

```
avx512_vpopcntdq la57 rdpid md_clear pconfig flush_l1d arch_capabilities
```

```
/proc/cpuinfo  
cache data  
  cache size : 49152 KB

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 32 33 34 35 36 37 38 39 40 41 42 43
  44 45 46 47
  node 0 size: 493180 MB
  node 0 free: 515188 MB
  node 1 cpus: 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 48 49 50 51 52 53 54 55 56
  57 58 59 60 61 62 63
  node 1 size: 493112 MB
  node 1 free: 515211 MB
  node distances:
    node 0 1
    0: 10 20
    1: 20 10

From /proc/meminfo  
  MemTotal: 1056525472 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
```

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

Hewlett Packard Enterprise
(Test Sponsor: HPE)
ProLiant DL380 Gen10 Plus
(2.30 GHz, Intel Xeon Gold 6314U)  

SPECrate®2017_int_base = 228
SPECrate®2017_int_peak = 237

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

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

Platform Notes (Continued)

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): Mitigation: Speculative Store Bypass disabled via prct1 and seccomp
CVE-2018-3639 (Speculative Store Bypass): Mitigation: usercopy/swapgs barriers and __user pointer sanitation
CVE-2017-5753 (Spectre variant 1): Mitigation: Enhanced IBRS, IBPB: conditional, RSB filling
CVE-2017-5715 (Spectre variant 2): Not affected
CVE-2020-0543 (Special Register Buffer Data Sampling): Not affected
CVE-2019-11135 (TSX Asynchronous Abort): Not affected

run-level 3 Jul 30 05:00

SPEC is set to: /home/cpu2017

Filesystem Type Size Used Avail Use% Mounted on
/dev/mapper/rhel-home xfs 297G 102G 196G 35% /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:
16x Micron 36ASF8G72PZ-3G2B2 64 GB 2 rank 3200
16x UNKNOWN NOT AVAILABLE

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)
# SPEC CPU®2017 Integer Rate Result

Hewlett Packard Enterprise  
(Test Sponsor: HPE)  
ProLiant DL380 Gen10 Plus  
(2.30 GHz, Intel Xeon Gold 6314U)  

| SPECrate®2017_int_base | 228  
|------------------------|------  
| SPECrate®2017_int_peak | 237  

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

### Compiler Version Notes

<table>
<thead>
<tr>
<th>C</th>
<th>500.perlbench_r(peak)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel(R) C Intel(R) 64 Compiler Classic for applications running on Intel(R) 64, Version 2021.1 Build 20201112_000000</td>
<td></td>
</tr>
<tr>
<td>Copyright (C) 1985-2020 Intel Corporation. All rights reserved.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>C</th>
<th>502.gcc_r(peak)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel(R) oneAPI DPC++/C++ Compiler for applications running on IA-32, Version 2021.1 Build 20201113</td>
<td></td>
</tr>
<tr>
<td>Copyright (C) 1985-2020 Intel Corporation. All rights reserved.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>C</th>
<th>500.perlbench_r(base) 502.gcc_r(base) 505.mcf_r(base, peak) 525.x264_r(base, peak) 557.xz_r(base, peak)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intel(R) oneAPI DPC++/C++ Compiler for applications running on Intel(R) 64, Version 2021.1 Build 20201113</td>
<td></td>
</tr>
<tr>
<td>Copyright (C) 1985-2020 Intel Corporation. All rights reserved.</td>
<td></td>
</tr>
</tbody>
</table>

(Continued on next page)
Hewlett Packard Enterprise
(Test Sponsor: HPE)
ProLiant DL380 Gen10 Plus
(2.30 GHz, Intel Xeon Gold 6314U)

<table>
<thead>
<tr>
<th>SPECrate®2017_int_base = 228</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECrate®2017_int_peak = 237</td>
</tr>
</tbody>
</table>

**CPU2017 License:** 3  
**Test Sponsor:** HPE  
**Tested by:** HPE  
**Test Date:** Jul-2021  
**Hardware Availability:** Jun-2021  
**Software Availability:** Dec-2020

---

### Compiler Version Notes (Continued)

Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

---------------------------

<table>
<thead>
<tr>
<th>C</th>
<th>500.perlbench_r(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.

---------------------------

<table>
<thead>
<tr>
<th>C</th>
<th>502.gcc_r(peak)</th>
</tr>
</thead>
</table>

Intel(R) oneAPI DPC++/C++ Compiler for applications running on IA-32, Version 2021.1 Build 20201113  
Copyright (C) 1985-2020 Intel Corporation. All rights reserved.

---------------------------

<table>
<thead>
<tr>
<th>C</th>
<th>500.perlbench_r(base) 502.gcc_r(base) 505.mcf_r(base, peak) 525.x264_r(base, peak) 557.xz_r(base, peak)</th>
</tr>
</thead>
</table>

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.

---------------------------

<table>
<thead>
<tr>
<th>C++</th>
<th>520.omnetpp_r(base, peak) 523.xalancbmk_r(base, peak) 531.deepsjeng_r(base, peak) 541.leela_r(base, peak)</th>
</tr>
</thead>
</table>

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.

---------------------------

<table>
<thead>
<tr>
<th>Fortran</th>
<th>548.exchange2_r(base, peak)</th>
</tr>
</thead>
</table>

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

**Hewlett Packard Enterprise**
(Test Sponsor: HPE)
ProLiant DL380 Gen10 Plus
(2.30 GHz, Intel Xeon Gold 6314U)

<table>
<thead>
<tr>
<th>SPECrate®2017_int_base</th>
<th>228</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECrate®2017_int_peak</td>
<td>237</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Test Date</th>
<th>Jul-2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardware Availability</td>
<td>Jun-2021</td>
</tr>
<tr>
<td>Software Availability</td>
<td>Dec-2020</td>
</tr>
</tbody>
</table>

## Base Compiler Invocation

C benchmarks:  
icx

C++ benchmarks:  
icpx

Fortran benchmarks:  
ifort

## Base Portability Flags

```
500.perlbench_r: -DSPEC_LP64 -DSPEC_LINUX_X64
502.gcc_r: -DSPEC_LP64
505.mcf_r: -DSPEC_LP64
520.omnetpp_r: -DSPEC_LP64
523.xalancbmk_r: -DSPEC_LP64 -DSPEC_LINUX
525.x264_r: -DSPEC_LP64
531.deepsjeng_r: -DSPEC_LP64
541.leela_r: -DSPEC_LP64
548.exchange2_r: -DSPEC_LP64
557.xz_r: -DSPEC_LP64
```

## Base Optimization Flags

**C benchmarks:**
- `-w -std=c11 -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`

**C++ benchmarks:**
- `-w -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:**
- `-w -m64 -Wl,-z,muldefs -xCORE-AVX512 -O3 -ipo -no-prec-div`
- `-qopt-mem-layout-trans=4 -nostandard-realloc-lhs -align array32byte`
- `-auto -mbranches-within-32B-boundaries`

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

**Hewlett Packard Enterprise**  
(Test Sponsor: HPE)  
ProLiant DL380 Gen10 Plus  
(2.30 GHz, Intel Xeon Gold 6314U)

<table>
<thead>
<tr>
<th>SPECrate®2017_int_base = 228</th>
<th>SPECrate®2017_int_peak = 237</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU2017 License: 3</td>
<td>Test Date: Jul-2021</td>
</tr>
<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 Optimization Flags (Continued)**

Fortran benchmarks (continued):
- `-L/opt/intel/oneapi/compiler/2021.1.1/linux/compiler/lib/intel64_lin`
- `-lqkmalloc`

**Peak Compiler Invocation**

C benchmarks (except as noted below):
- `icx`
- `500.perlbench_r:icc`

C++ benchmarks:
- `icpx`

Fortran benchmarks:
- `ifort`

**Peak Portability Flags**

- `500.perlbench_r: -DSPEC_LP64 -DSPEC_LINUX_X64`
- `502.gcc_r: -D_FILE_OFFSET_BITS=64`
- `505.mcf_r: -DSPEC_LP64`
- `520.omnetpp_r: -DSPEC_LP64`
- `523.xalancbmk_r: -DSPEC_LP64 -DSPEC_LINUX`
- `525.x264_r: -DSPEC_LP64`
- `531.deepsjeng_r: -DSPEC_LP64`
- `541.leela_r: -DSPEC_LP64`
- `548.exchange2_r: -DSPEC_LP64`
- `557.xz_r: -DSPEC_LP64`

**Peak Optimization Flags**

C benchmarks:
- `500.perlbench_r: -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/opt/intel/oneapi/compiler/2021.1.1/linux/compiler/lib/intel64_lin`
- `-lqkmalloc`
SPEC CPU®2017 Integer Rate Result

Copyright 2017-2021 Standard Performance Evaluation Corporation

Hewlett Packard Enterprise
(Test Sponsor: HPE)
ProLiant DL380 Gen10 Plus
(2.30 GHz, Intel Xeon Gold 6314U)

SPECrate®2017_int_base = 228
SPECrate®2017_int_peak = 237

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

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

Peak Optimization Flags (Continued)

502.gcc_r: -m32
-L/opt/intel/oneapi/compiler/2021.1.1/linux/compiler/lib/ia32_lin
-std=gnu89 -Wl,-z,muldefs -fprofile-generate(pass 1)
-fprofile-use=default.profdata(pass 2) -xCORE-AVX512 -flto
-Ofast(pass1) -O3 -ffast-math -qopt-mem-layout-trans=4
-mbranches-within-32B-boundaries
-L/usr/local/jemalloc32-5.0.1/lib -ljemalloc

505.mcf_r: basepeak = yes

525.x264_r: -w -std=c11 -m64 -Wl,-z,muldefs -xCORE-AVX512 -flto
-O3 -ffast-math -qopt-mem-layout-trans=4 -fno-alias
-mbranches-within-32B-boundaries
-L/opt/intel/oneapi/compiler/2021.1.1/linux/compiler/lib/intel64_lin
-lqkmalloc

557.xz_r: basepeak = yes

C++ benchmarks:

520.omnetpp_r: basepeak = yes

523.xalancbmk_r: basepeak = yes

531.deepsjeng_r: basepeak = yes

541.leela_r: basepeak = yes

Fortran benchmarks:

548.exchange2_r: 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
<table>
<thead>
<tr>
<th>SPEC CPU®2017 Integer Rate Result</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hewlett Packard Enterprise</strong></td>
<td></td>
</tr>
<tr>
<td><em>(Test Sponsor: HPE)</em></td>
<td></td>
</tr>
<tr>
<td><strong>ProLiant DL380 Gen10 Plus</strong></td>
<td></td>
</tr>
<tr>
<td><em>(2.30 GHz, Intel Xeon Gold 6314U)</em></td>
<td></td>
</tr>
<tr>
<td><strong>SPECrate®2017_int_base = 228</strong></td>
<td></td>
</tr>
<tr>
<td><strong>SPECrate®2017_int_peak = 237</strong></td>
<td></td>
</tr>
<tr>
<td><strong>CPU2017 License:</strong> 3</td>
<td><strong>Test Date:</strong> Jul-2021</td>
</tr>
<tr>
<td><strong>Test Sponsor:</strong> HPE</td>
<td><strong>Hardware Availability:</strong> Jun-2021</td>
</tr>
<tr>
<td><strong>Tested by:</strong> HPE</td>
<td><strong>Software Availability:</strong> Dec-2020</td>
</tr>
</tbody>
</table>

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 v1.1.8 on 2021-07-29 19:31:50-0400.
Report generated on 2021-08-19 10:50:56 by CPU2017 PDF formatter v6442.
Originally published on 2021-08-17.