Hewlett Packard Enterprise
(Test Sponsor: HPE)
ProLiant DL380 Gen10
(2.60 GHz, Intel Xeon Gold 6142)

<table>
<thead>
<tr>
<th>SPECint®2006</th>
<th>=</th>
<th>Not Run</th>
</tr>
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<tbody>
<tr>
<td>SPECint_base2006</td>
<td>=</td>
<td>75.7</td>
</tr>
</tbody>
</table>

**CPU2006 license:** 3
**Test sponsor:** HPE
**Tested by:** HPE

**Test date:** Oct-2017
**Hardware Availability:** Oct-2017
**Software Availability:** Apr-2017

### Hardware

<table>
<thead>
<tr>
<th><strong>CPU Name:</strong></th>
<th>Intel Xeon Gold 6142</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CPU Characteristics:</strong></td>
<td>Intel Turbo Boost Technology up to 3.70 GHz</td>
</tr>
<tr>
<td><strong>CPU MHz:</strong></td>
<td>2600</td>
</tr>
<tr>
<td><strong>FPU:</strong></td>
<td>Integrated</td>
</tr>
<tr>
<td><strong>CPU(s) enabled:</strong></td>
<td>32 cores, 2 chips, 16 cores/chip</td>
</tr>
<tr>
<td><strong>CPU(s) orderable:</strong></td>
<td>1, 2 chip(s)</td>
</tr>
<tr>
<td><strong>Primary Cache:</strong></td>
<td>32 KB I + 32 KB D on chip per core</td>
</tr>
<tr>
<td><strong>Secondary Cache:</strong></td>
<td>1 MB I+D on chip per core</td>
</tr>
<tr>
<td><strong>L3 Cache:</strong></td>
<td>22 MB I+D on chip per chip</td>
</tr>
<tr>
<td><strong>Other Cache:</strong></td>
<td>None</td>
</tr>
<tr>
<td><strong>Memory:</strong></td>
<td>192 GB (24 x 8 GB 2Rx8 PC4-2666V-R)</td>
</tr>
<tr>
<td><strong>Disk Subsystem:</strong></td>
<td>1 x 960 GB SSD SATA, RAID 0</td>
</tr>
<tr>
<td><strong>Other Hardware:</strong></td>
<td>None</td>
</tr>
</tbody>
</table>

### Software

<table>
<thead>
<tr>
<th><strong>Operating System:</strong></th>
<th>Red Hat Enterprise Linux Server release 7.3 (Maipo)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Kernel:</strong></td>
<td>3.10.0-514.el7.x86_64</td>
</tr>
<tr>
<td><strong>Compiler:</strong></td>
<td>C/C++: Version 17.0.3.191 of Intel C/C++ Compiler for Linux</td>
</tr>
<tr>
<td><strong>Auto Parallel:</strong></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>File System:</strong></td>
<td>xfs</td>
</tr>
<tr>
<td><strong>System State:</strong></td>
<td>Run level 3 (multi-user)</td>
</tr>
<tr>
<td><strong>Base Pointers:</strong></td>
<td>32/64-bit</td>
</tr>
<tr>
<td><strong>Peak Pointers:</strong></td>
<td>Not Applicable</td>
</tr>
<tr>
<td><strong>Other Software:</strong></td>
<td>Microquill SmartHeap V10.2</td>
</tr>
</tbody>
</table>
RESULTS

SPEC CINT2006 Result

Hewlett Packard Enterprise
(Test Sponsor: HPE)
ProLiant DL380 Gen10
(2.60 GHz, Intel Xeon Gold 6142)

CPU2006 license: 3
Test sponsor: HPE
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SPECint2006 = Not Run
SPECint_base2006 = 75.7

Test date: Oct-2017
Hardware Availability: Oct-2017
Software Availability: Apr-2017

Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>400.perlbench</td>
<td>209</td>
<td>46.8</td>
<td>210</td>
<td>46.6</td>
<td>210</td>
<td>46.6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>401.bzip2</td>
<td>341</td>
<td>28.3</td>
<td>341</td>
<td>28.3</td>
<td>341</td>
<td>28.3</td>
<td>210</td>
<td>28.3</td>
</tr>
<tr>
<td>403.gcc</td>
<td>184</td>
<td>43.7</td>
<td>184</td>
<td>43.7</td>
<td>184</td>
<td>43.7</td>
<td>114</td>
<td>43.8</td>
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<tr>
<td>429.mcf</td>
<td>114</td>
<td>80.0</td>
<td>114</td>
<td>79.8</td>
<td>114</td>
<td>79.9</td>
<td>114</td>
<td>79.9</td>
</tr>
<tr>
<td>445.gobmk</td>
<td>313</td>
<td>33.5</td>
<td>313</td>
<td>33.5</td>
<td>313</td>
<td>33.5</td>
<td>313</td>
<td>33.5</td>
</tr>
<tr>
<td>456.hmmer</td>
<td>96.4</td>
<td>96.8</td>
<td>96.4</td>
<td>96.6</td>
<td>96.5</td>
<td>96.7</td>
<td>96.5</td>
<td>96.7</td>
</tr>
<tr>
<td>458.sjeng</td>
<td>327</td>
<td>37.0</td>
<td>327</td>
<td>37.0</td>
<td>327</td>
<td>37.0</td>
<td>327</td>
<td>37.0</td>
</tr>
<tr>
<td>462.libquantum</td>
<td>2.59</td>
<td>80.10</td>
<td>2.60</td>
<td>7980</td>
<td>2.60</td>
<td>7960</td>
<td>2.60</td>
<td>7960</td>
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<tr>
<td>464.h264ref</td>
<td>317</td>
<td>69.7</td>
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<td>69.7</td>
<td>318</td>
<td>69.7</td>
<td>318</td>
<td>69.7</td>
</tr>
<tr>
<td>471.omnetpp</td>
<td>173</td>
<td>36.2</td>
<td>172</td>
<td>36.4</td>
<td>173</td>
<td>36.1</td>
<td>173</td>
<td>36.1</td>
</tr>
<tr>
<td>473.astar</td>
<td>180</td>
<td>39.0</td>
<td>179</td>
<td>39.2</td>
<td>179</td>
<td>39.2</td>
<td>179</td>
<td>39.2</td>
</tr>
<tr>
<td>483.xalancbmk</td>
<td>84.8</td>
<td>81.4</td>
<td>85.3</td>
<td>80.9</td>
<td>85.1</td>
<td>81.1</td>
<td>85.1</td>
<td>81.1</td>
</tr>
</tbody>
</table>

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

Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"
Transparent Huge Pages enabled by default
Filesystem page cache cleared with:
  shell invocation of 'sync; echo 3 > /proc/sys/vm/drop_caches' prior to run
irqbalance disabled with "systemctl stop irqbalance"
tuned profile set with "tuned-adm profile throughput-performance"

Platform Notes

BIOS Configuration:
  Intel Hyperthreading set to Disabled
  Thermal Configuration set to Maximum Cooling
  Memory Patrol Scrubbing set to Disabled
  LLC Prefetcher set to Enabled
  LLC Dead Line Allocation set to Disabled
  Stale A to S set to Disabled
  Energy/Performance Bias set to General Peak Frequency Compute
  Uncore Frequency Scaling set to Auto
  Workload Profile set to Custom
  NUMA Group Size Optimization set to Flat

Sysinfo program /home/cpu2006/config/sysinfo.rev6993
Revision 6993 of 2015-11-06 (b5e8d4b4eb51ed28d7f98696cbe290c1)
running on DL380Gen10-2 Wed Oct 25 02:04:34 2017

This section contains SUT (System Under Test) info as seen by
**Spec CINT2006 Result**

**Hewlett Packard Enterprise**

(Test Sponsor: HPE)

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**CPU2006 license:** 3

**Test sponsor:** HPE

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**Hardware Availability:** Oct-2017

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---

**Platform Notes**

some common utilities. To remove or add to this section, see:
http://www.spec.org/cpu2006/Docs/config.html#sysinfo

From /proc/cpuinfo

- model name: Intel(R) Xeon(R) Gold 6142 CPU @ 2.60GHz
- 2 "physical id"s (chips)
- 32 "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: 16
  - siblings: 16
  - physical 0: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
  - physical 1: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
- cache size: 22528 KB

From /proc/meminfo

- MemTotal: 197572716 kB
- HugePages_Total: 0
- Hugepagesize: 2048 kB

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

- NAME="Red Hat Enterprise Linux Server"
- VERSION="7.3 (Maipo)"
- ID="rhel"
- ID_LIKE="fedora"
- VERSION_ID="7.3"
- PRETTY_NAME="Red Hat Enterprise Linux Server 7.3 (Maipo)"
- ANSI_COLOR="0;31"
- CPE_NAME="cpe:/o:redhat:enterprise_linux:7.3:ga:server"
- redhat-release: Red Hat Enterprise Linux Server release 7.3 (Maipo)
- system-release: Red Hat Enterprise Linux Server release 7.3 (Maipo)

uname -a:

```
Linux DL380Gen10-2 3.10.0-514.17.e17.x86_64 #1 SMP Wed Oct 19 11:24:13 EDT 2016
x86_64 x86_64 x86_64 GNU/Linux
```

run-level 3 Oct 25 02:01

SPEC is set to: /home/cpu2006

```
Filesystem     Type  Size  Used  Avail Use% Mounted on
/dev/mapper/rhel-home  xfs  504G  30G  474G  6%  /home
```

Additional information from dmidecode:

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.

BIOS HPE U30 09/29/2017
SPEC CINT2006 Result

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SPECint2006 = Not Run
SPECint_base2006 = 75.7

CPU2006 license: 3
Test sponsor: HPE
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Platform Notes (Continued)

Memory:
24x UNKNOWN NOT AVAILABLE 8 GB 2 rank 2666 MHz

(End of data from sysinfo program)

General Notes

Environment variables set by runspec before the start of the run:
KMP_AFFINITY = "granularity=fine,compact"
LD_LIBRARY_PATH = "/home/cpu2006/lib/ia32:/home/cpu2006/lib/intel64:/home/cpu2006/sh10.2"
OMP_NUM_THREADS = "32"

Binaries compiled on a system with 1x Intel Core i7-4790 CPU + 32GB RAM
memory using Redhat Enterprise Linux 7.2

Base Compiler Invocation

C benchmarks:
icc -m64

C++ benchmarks:
icpc -m64

Base Portability Flags

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
401.bzip2: -DSPEC_CPU_LP64
403.gcc: -DSPEC_CPU_LP64
429.mcf: -DSPEC_CPU_LP64
445.gobmk: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
464.h264ref: -DSPEC_CPU_LP64
471.omnetpp: -DSPEC_CPU_LP64
473.astar: -DSPEC_CPU_LP64
483.xalancbmk: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:
-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -qopt-prefetch
-auto-p32

Continued on next page
Hewlett Packard Enterprise  
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**Base Optimization Flags (Continued)**

C++ benchmarks:
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -auto-p32
-Wl,-z,muldefs -L/sh10.2 -lsmartheap64

**Base Other Flags**

C benchmarks:
403.gcc: -Dalloca=_alloca

The flags files that were used to format this result can be browsed at:
- http://www.spec.org/cpu2006/flags/HPE-Platform-Flags-Intel-V1.2-SKX-revD.html

You can also download the XML flags sources by saving the following links:
- http://www.spec.org/cpu2006/flags/HPE-Platform-Flags-Intel-V1.2-SKX-revD.xml

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

Tested with SPEC CPU2006 v1.2.  