## SPEC® CINT2006 Result

### Hewlett Packard Enterprise
(2.80 GHz, Intel Xeon Gold 6143)

**SPECint®2006 =** Not Run  
**SPECint_base2006 =** 80.8

<table>
<thead>
<tr>
<th>Test Sponsor: HPE</th>
<th>Hardware Characteristics: Intel Xeon Gold 6143, 32 cores, 2 chips, 16 cores/chip</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test date: Nov-2017</td>
<td>CPU Frequency: 2800 MHz</td>
</tr>
<tr>
<td>Test sponsor: HPE</td>
<td>CPU Turbo Boost Technology up to 4.00 GHz</td>
</tr>
<tr>
<td>Hardware Availability: Oct-2017</td>
<td>Primary Cache: 32 KB I + 32 KB D on chip per core</td>
</tr>
<tr>
<td>Software Availability: Apr-2017</td>
<td>Secondary Cache: 1 MB I+D on chip per core</td>
</tr>
</tbody>
</table>

### Software
- **Operating System:** Red Hat Enterprise Linux Server release 7.3 (Maipo)  
- **Compiler:** C/C++: Version 17.0.3.191 of Intel C/C++ Compiler for Linux  
- **Auto Parallel:** Yes  
- **File System:** xfs  
- **System State:** Run level 3 (multi-user)  
- **Base Pointers:** 32/64-bit  
- **Peak Pointers:** Not Applicable  
- **Other Software:** Microquill SmartHeap V10.2

### Benchmarks

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>400.perlbench</td>
<td>1203</td>
</tr>
<tr>
<td>401.bzip2</td>
<td>106</td>
</tr>
<tr>
<td>403.gcc</td>
<td>123</td>
</tr>
<tr>
<td>429.mcf</td>
<td>124</td>
</tr>
<tr>
<td>445.gobmk</td>
<td>125</td>
</tr>
<tr>
<td>456.hmmer</td>
<td>126</td>
</tr>
<tr>
<td>458.sjeng</td>
<td>127</td>
</tr>
<tr>
<td>462.libquantum</td>
<td>128</td>
</tr>
<tr>
<td>464.h264ref</td>
<td>129</td>
</tr>
<tr>
<td>471.omnetpp</td>
<td>130</td>
</tr>
<tr>
<td>473.astar</td>
<td>131</td>
</tr>
<tr>
<td>483.xalancbmk</td>
<td>132</td>
</tr>
</tbody>
</table>

**SPECint_base2006 = 80.8**

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info@spec.org  
http://www.spec.org/
Hewlett Packard Enterprise
(Test Sponsor: HPE)
ProLiant DL380 Gen10
(2.80 GHz, Intel Xeon Gold 6143)

SPECint2006 = Not Run
SPECint_base2006 = 80.8

CPU2006 license: 3
Test sponsor: HPE
Tested by: HPE
Test date: Nov-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>
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<tbody>
<tr>
<td>Base</td>
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<tr>
<td>400.perlbench</td>
<td>195</td>
<td>50.2</td>
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<tr>
<td>401.bzip2</td>
<td>318</td>
<td>30.4</td>
<td>319</td>
<td>30.2</td>
<td>319</td>
<td>30.3</td>
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<tr>
<td>403.gcc</td>
<td>178</td>
<td>45.3</td>
<td>178</td>
<td>45.3</td>
<td>178</td>
<td>45.3</td>
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<tr>
<td>429.mcf</td>
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<td>445.gobmk</td>
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<td>456.hmmer</td>
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<td>89.6</td>
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<tr>
<td>458.sjeng</td>
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<td>462.libquantum</td>
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<td>464.h264ref</td>
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<td>76.4</td>
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<td>76.2</td>
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<tr>
<td>471.omnetpp</td>
<td>169</td>
<td>37.0</td>
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<td>37.1</td>
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<tr>
<td>473.astar</td>
<td>168</td>
<td>41.7</td>
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<td>41.8</td>
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<tr>
<td>483.xalancbmk</td>
<td>80.8</td>
<td>85.4</td>
<td>80.5</td>
<td>85.7</td>
<td>80.9</td>
<td>85.3</td>
<td></td>
<td></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
IRQ balance service was stop using "service irqbalance stop"
Tuned-adm profile was set to Throughtput-Performance

Platform Notes

BIOS Configuration:
Intel Hyperthreading set to Disabled
Thermal Configuration set to Maximum Cooling
LLC Prefetch set to Enabled
LLC Dead Line Allocation set to Disabled
Memory Patrol Scrubbing set to Disabled
Workload Profile set to General Peak Frequency Compute
Energy/Performance Bias set to Maximum Performance
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 Wed Nov 1 03:47:38 2017

This section contains SUT (System Under Test) info as seen by some common utilities. To remove or add to this section, see:
http://www.spec.org/cpu2006/Docs/config.html#sysinfo

Continued on next page
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Hewlett Packard Enterprise
(Test Sponsor: HPE)
ProLiant DL380 Gen10
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CPU2006 license: 3
Test sponsor: HPE
Tested by: HPE

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

Platform Notes (Continued)

From /proc/cpuinfo
model name : Intel(R) Xeon(R) Gold 6143 CPU @ 2.80GHz
  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*
os-release:
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 3.10.0-514.el7.x86_64 #1 SMP Wed Oct 19 11:24:13 EDT 2016
x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Nov 1 03:46

SPEC is set to: /home/cpu2006
Filesystem Type  Size  Used Avail Use% Mounted on
/devmapper/rhel-home xfs  839G  31G  808G  4% /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
Memory:
  24x UNKNOWN NOT AVAILABLE 8 GB 2 rank 2666 MHz

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Platform Notes (Continued)

(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
483.xalancbmk: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
464.h264ref: -DSPEC_CPU_LP64
471.omnetpp: -DSPEC_CPU_LP64
473.astar: -DSPEC_CPU_LP64

Base Optimization Flags

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

C++ benchmarks:
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -auto-p32
-Wl,-z,muldefs -L/sh10.2 -lsmartheap64
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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/Intel-ic17.0-official-linux64-revF.html
http://www.spec.org/cpu2006/flags/HPE-Platform-Flags-Intel-V1.2-SKX-revF.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic17.0-official-linux64-revF.xml
http://www.spec.org/cpu2006/flags/HPE-Platform-Flags-Intel-V1.2-SKX-revF.xml

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For other inquiries, please contact webmaster@spec.org.

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