**SPECint®2006** = Not Run

**SPECint_base2006** = 78.2

---

**Hardware**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU Name</td>
<td>Intel Xeon Platinum 8164</td>
</tr>
<tr>
<td>CPU Characteristics</td>
<td>Intel Turbo Boost Technology up to 3.70 GHz</td>
</tr>
<tr>
<td>CPU MHz</td>
<td>2000</td>
</tr>
<tr>
<td>FPU</td>
<td>Integrated</td>
</tr>
<tr>
<td>CPU(s) enabled</td>
<td>52 cores, 2 chips, 26 cores/chip</td>
</tr>
<tr>
<td>CPU(s) orderable</td>
<td>1, 2 chip(s)</td>
</tr>
<tr>
<td>Primary Cache</td>
<td>32 KB I + 32 KB D on chip per core</td>
</tr>
<tr>
<td>Secondary Cache</td>
<td>1 MB I+D on chip per core</td>
</tr>
<tr>
<td>L3 Cache</td>
<td>35.75 MB I+D on chip per chip</td>
</tr>
<tr>
<td>Other Cache</td>
<td>None</td>
</tr>
<tr>
<td>Memory</td>
<td>384 GB (24 x 16 GB 2Rx8 PC4-2666V-R)</td>
</tr>
<tr>
<td>Disk Subsystem</td>
<td>1 x 480 GB SATA SSD, RAID 0</td>
</tr>
<tr>
<td>Other Hardware</td>
<td>None</td>
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</tbody>
</table>

---

**Software**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating System</td>
<td>Red Hat Enterprise Linux Server release 7.3</td>
</tr>
<tr>
<td></td>
<td>(Maipo)</td>
</tr>
<tr>
<td></td>
<td>Kernel 3.10.0-514.el7.x86_64</td>
</tr>
<tr>
<td>Compiler</td>
<td>C/C++: Version 17.0.3.191 of Intel C/C++ Compiler for Linux</td>
</tr>
<tr>
<td>Auto Parallel</td>
<td>Yes</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>32/64-bit</td>
</tr>
<tr>
<td>Peak Pointers</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Other Software</td>
<td>Microquill SmartHeap V10.2</td>
</tr>
</tbody>
</table>
SPEC CINT2006 Result

Hewlett Packard Enterprise
(Test Sponsor: HPE)
Synergy 480 Gen10
(2.00 GHz, Intel Xeon Platinum 8164)

SPECint2006 = Not Run
SPECint_base2006 = 78.2

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

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>
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<td></td>
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<td></td>
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<tr>
<td>400.perlbench</td>
<td>211</td>
<td>46.4</td>
<td>210</td>
<td>46.5</td>
<td>211</td>
<td>46.4</td>
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<td>401.bzip2</td>
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<td>28.2</td>
<td>342</td>
<td>28.2</td>
<td>342</td>
<td>28.2</td>
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<tr>
<td>403.gcc</td>
<td>181</td>
<td>44.6</td>
<td>182</td>
<td>44.3</td>
<td>181</td>
<td>44.4</td>
</tr>
<tr>
<td>429.mcf</td>
<td>117</td>
<td>78.2</td>
<td>117</td>
<td>77.9</td>
<td>117</td>
<td>78.2</td>
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<tr>
<td>445.gobmk</td>
<td>311</td>
<td>33.7</td>
<td>311</td>
<td>33.7</td>
<td>311</td>
<td>33.7</td>
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<tr>
<td>456.hmmer</td>
<td>96.4</td>
<td>96.8</td>
<td>96.5</td>
<td>96.6</td>
<td>96.6</td>
<td>96.6</td>
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<tr>
<td>458.sjeng</td>
<td>324</td>
<td>37.3</td>
<td>324</td>
<td>37.3</td>
<td>324</td>
<td>37.3</td>
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<tr>
<td>462.libquantum</td>
<td>2.25</td>
<td>9220</td>
<td>2.25</td>
<td>9230</td>
<td>2.26</td>
<td>9160</td>
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<tr>
<td>464.h264ref</td>
<td>332</td>
<td>66.6</td>
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<td>67.1</td>
<td>332</td>
<td>66.7</td>
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<tr>
<td>471.omnetpp</td>
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<td>46.9</td>
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<td>47.0</td>
<td>132</td>
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<tr>
<td>473.astar</td>
<td>179</td>
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<td>39.4</td>
<td>178</td>
<td>39.4</td>
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<tr>
<td>483.xalancbmk</td>
<td>83.5</td>
<td>82.7</td>
<td>83.9</td>
<td>82.2</td>
<td>83.5</td>
<td>82.7</td>
</tr>
</tbody>
</table>

Operating System Notes

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
_revision 6993 of 2015-11-06 (b5e8d4b4eb51ed28d7f98696cbe290c1)
running on SY480_Hjp_RHEL Thu Nov 23 06:35:51 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
Platform Notes (Continued)

From /proc/cpuinfo
  model name : Intel(R) Xeon(R) Platinum 8164 CPU @ 2.00GHz
  2 "physical id"s (chips)
  52 "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 : 26
  siblings : 26
  physical 0: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 16 17 18 19 20 21 22 24 25
  26 27 28 29
  physical 1: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 16 17 18 19 20 21 22 24 25
  26 27 28 29
  cache size : 36608 KB

From /proc/meminfo
  MemTotal:       395927248 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 SY480_Hjp_RHEL 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 23 06:32

  SPEC is set to: /home/cpu2006
  Filesystem            Type  Size  Used Avail Use% Mounted on
  /dev/mapper/rhel-home  xfs   392G   29G  363G   8% /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 I42 09/27/2017
  Memory:
**平台注释（续）**

24x UNKNOWN NOT AVAILABLE 16 GB 2 rank 2666 MHz

(End of data from sysinfo program)

**一般注释**

环境变量设置由runspec在开始运行之前设置:
KMP_AFFINITY = "granularity= fine, compact"
LD_LIBRARY_PATH = " /home/cpu2006/lib/ia32:/home/cpu2006/lib/intel64:/home/cpu2006/sh10.2"
OMP_NUM_THREADS = "52"

编译器在1x Intel Core i7-4790 CPU + 32GB RAM的系统上编译，使用Redhat Enterprise Linux 7.2

**基编译器调用**

C benchmarks:
icc -m64

C++ benchmarks:
icpc -m64

**基保有性标志**

400.perlbmk: -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

**基优化标志**

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
### SPEC CINT2006 Result

**Hewlett Packard Enterprise**

(Test Sponsor: HPE)

Synergy 480 Gen10

(2.00 GHz, Intel Xeon Platinum 8164)

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**CPU2006 license:** 3  
**Test date:** Nov-2017  
**Tested by:** HPE  
**Hardware Availability:** Oct-2017  
**Software Availability:** Apr-2017  

**Test sponsor:** HPE  
**Test date:** Nov-2017  
**Hardware Availability:** Oct-2017  
**Software Availability:** Apr-2017

**Base Other Flags**

C benchmarks:

- 403.gcc -Dalloca=_alloca

The flags files that were used to format this result can be browsed at

- [Intel-ic17.0-official-linux64-revF.html](http://www.spec.org/cpu2006/flags/Intel-ic17.0-official-linux64-revF.html)
- [HPE-Platform-Flags-Intel-V1.2-SKX-revH.html](http://www.spec.org/cpu2006/flags/HPE-Platform-Flags-Intel-V1.2-SKX-revH.html)

You can also download the XML flags sources by saving the following links:

- [Intel-ic17.0-official-linux64-revF.xml](http://www.spec.org/cpu2006/flags/Intel-ic17.0-official-linux64-revF.xml)
- [HPE-Platform-Flags-Intel-V1.2-SKX-revH.xml](http://www.spec.org/cpu2006/flags/HPE-Platform-Flags-Intel-V1.2-SKX-revH.xml)

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Tested with SPEC CPU2006 v1.2.  