**SPECint®2006 = Not Run**

**SPECint_base2006 = 81.5**

**Hardware**

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<tr>
<th>Test Sponsor: HPE</th>
<th>ProLiant DL380 Gen10 (2.50 GHz, Intel Xeon Platinum 8180)</th>
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<tr>
<th>Benchmark</th>
<th>Result</th>
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<tr>
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<td>40.3</td>
</tr>
<tr>
<td>473.astar</td>
<td>84.8</td>
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</table>

**Software**

<table>
<thead>
<tr>
<th>Operating System:</th>
<th>Red Hat Enterprise Linux Server release 7.3 (Maipo), Kernel 3.10.0-514.6.1.el7.x86_64</th>
</tr>
</thead>
<tbody>
<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>

**CPU Name:** Intel Xeon Platinum 8180  
**CPU Characteristics:** Intel Turbo Boost Technology up to 3.80 GHz  
**CPU MHz:** 2500  
**FPU:** Integrated  
**CPU(s) enabled:** 56 cores, 2 chips, 28 cores/chip  
**CPU(s) orderable:** 1, 2 chip(s)  
**Primary Cache:** 32 KB I + 32 KB D on chip per core  
**Secondary Cache:** 1 MB I+D on chip per core  
**L3 Cache:** 38.5 MB I+D on chip per chip  
**Other Cache:** None  
**Memory:** 192 GB (24 x 8 GB 2Rx8 PC4-2666V-R)  
**Disk Subsystem:** 1 x 480 GB SATA SSD, RAID 0  
**Other Hardware:** None
Hewlett Packard Enterprise
(Test Sponsor: HPE)
ProLiant DL380 Gen10
(2.50 GHz, Intel Xeon Platinum 8180)

SPECint2006 = Not Run
SPECint_base2006 = 81.5

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

Test date: Oct-2017
Hardware Availability: Oct-2017
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Results Table

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<tr>
<th>Benchmark</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Base</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Peak</th>
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<td>47.8</td>
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<td>47.8</td>
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<td>47.7</td>
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<td>401.bzip2</td>
<td>334</td>
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<td>335</td>
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<td>45.8</td>
<td>176</td>
<td>45.7</td>
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<tr>
<td>429.mcf</td>
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<td>81.3</td>
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<td>2.02</td>
<td>10200</td>
<td>1.94</td>
<td>10700</td>
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<tr>
<td>483.xalancbmk</td>
<td>81.3</td>
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<td>81.4</td>
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</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
- Workload Profile set to General Peak Frequency Compute
- Energy/Performance Bias set to Maximum Performance
- Uncore Frequency Scaling set to Auto
- Workload Profile set to Custom
- NUMA Group Size Optimization set to Flat

Sysinfo program /cpu2006/config/sysinfo.rev6993
Revision 6993 of 2015-11-06 (b5e8d4b4eb51ed28d7f98696cbe290c1)
running on localhost.localdomain Mon Oct 16 16:49:47 2017

This section contains SUT (System Under Test) info as seen by some common utilities. To remove or add to this section, see:

Continued on next page
SPEC CINT2006 Result

Hewlett Packard Enterprise
(Test Sponsor: HPE)
ProLiant DL380 Gen10
(2.50 GHz, Intel Xeon Platinum 8180)

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

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

Platform Notes (Continued)

http://www.spec.org/cpu2006/Docs/config.html#sysinfo

From /proc/cpuinfo
- model name: Intel(R) Xeon(R) Platinum 8180 CPU @ 2.50GHz
- 2 "physical id"s (chips)
- 56 "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: 28
  - siblings: 28
  - physical 0: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14 16 17 18 19 20 21 22 24
    25 26 27 28 29 30
  - physical 1: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14 16 17 18 19 20 21 22 24
    25 26 27 28 29 30
- cache size: 39424 KB

From /proc/meminfo
- MemTotal: 197569820 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 localhost.localdomain 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 Oct 16 16:48

SPEC is set to: /cpu2006

Filesystem Type Size Used Avail Use% Mounted on
/dev/sda3 xfs 442G 19G 423G 5% /

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.

Continued on next page
**SPEC CINT2006 Result**

**Hewlett Packard Enterprise**  
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ProLiant DL380 Gen10  
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CPU2006 license: 3  
Test sponsor: HPE  
Tested by: HPE

**Platform Notes (Continued)**

BIOS HPE U30 09/29/2017  
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 = "/cpu2006/lib/ia32:/cpu2006/lib/intel64:/cpu2006/sh10.2"  
OMP_NUM_THREADS = "56"

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.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

**Base Optimization Flags**

C benchmarks:  
-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -qopt-prefetch -auto-p32
SPEC CINT2006 Result

Hewlett Packard Enterprise
(Test Sponsor: HPE)
ProLiant DL380 Gen10
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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/Intel-ic17.0-official-linux64-revF.html
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/Intel-ic17.0-official-linux64-revF.xml
http://www.spec.org/cpu2006/flags/HPE-Platform-Flags-Intel-V1.2-SKX-revD.xml

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

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