Hewlett Packard Enterprise
(Test Sponsor: HPE)
Synergy 480 Gen10
(2.50 GHz, Intel Xeon Platinum 8180M)

SPECint®2006 = Not Run
SPECint_base2006 = 80.9

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

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

Hardware

<table>
<thead>
<tr>
<th>Application</th>
<th>CPU Name</th>
<th>CPU Characteristics</th>
<th>CPU MHz:</th>
<th>FPU:</th>
<th>CPU(s) enabled:</th>
<th>Primary Cache:</th>
<th>Secondary Cache:</th>
<th>L3 Cache:</th>
<th>Other Cache:</th>
<th>Memory:</th>
<th>Disk Subsystem:</th>
<th>Other Hardware:</th>
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</thead>
<tbody>
<tr>
<td>perlbench</td>
<td>Intel Xeon Platinum 8180M</td>
<td>Intel Turbo Boost Technology up to 3.80 GHz</td>
<td>2500</td>
<td>Integrated</td>
<td>56 cores, 2 chips, 28 cores/chip</td>
<td>32 KB I + 32 KB D on chip per core</td>
<td>1 MB I+D on chip per core</td>
<td>38.5 MB I+D on chip per chip</td>
<td>None</td>
<td>384 GB (24 x 16 GB 2Rx8 PC4-2666V-R)</td>
<td>1 x 480 GB SATA SSD, RAID 0</td>
<td>None</td>
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<td>bzip2</td>
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Software

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<tbody>
<tr>
<td></td>
<td>Red Hat Enterprise Linux Server release 7.3</td>
<td>C/C++: Version 17.0.3.191 of Intel C/C++ Compiler for Linux</td>
<td>Yes</td>
<td>xfs</td>
<td>Run level 3 (multi-user)</td>
<td>32/64-bit</td>
<td>Not Applicable</td>
<td>Microquill SmartHeap V10.2</td>
</tr>
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</table>

Standard Performance Evaluation Corporation
info@spec.org
http://www.spec.org/
Results Table

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<thead>
<tr>
<th>Benchmark</th>
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<th>Ratio</th>
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<td>84.0</td>
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<td>84.2</td>
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</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 SY480_Hjp_RHEL Wed Nov 8 13:36:19 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
**SPEC CINT2006 Result**

**Hewlett Packard Enterprise**
(Test Sponsor: HPE)
Synergy 480 Gen10
(2.50 GHz, Intel Xeon Platinum 8180M)

| SPECint2006 = | Not Run |
| SPECint_base2006 = | 80.9 |

- **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) Platinum 8180M 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:       395926720 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 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 8 13:35
```

SPEC is set to: /home/cpu2006

```
Filesystem            Type  Size  Used Avail Use% Mounted on
/dev/mapper/rhel-home xfs   392G   28G  365G   7% /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:
```

Continued on next page
## Platform Notes (Continued)

24x UNKNOWN NOT AVAILABLE 16 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 = "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

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Portability Flags</th>
</tr>
</thead>
<tbody>
<tr>
<td>400.perlbench</td>
<td>-DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64</td>
</tr>
<tr>
<td>401.bzip2</td>
<td>-DSPEC_CPU_LP64</td>
</tr>
<tr>
<td>403.gcc</td>
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<tr>
<td>483.xalancbmk</td>
<td>-DSPEC_CPU_LP64</td>
</tr>
</tbody>
</table>

## 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
Hewlett Packard Enterprise
(Test Sponsor: HPE)
Synergy 480 Gen10
(2.50 GHz, Intel Xeon Platinum 8180M)

SPECint2006 = Not Run
SPECint_base2006 = 80.9

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-revG.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-revG.xml

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

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