Hewlett Packard Enterprise
(Test Sponsor: HPE)
ProLiant DL380 Gen10
(3.00 GHz, Intel Xeon Platinum 8158)

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

SPECint®_rate2006 =  Not Run
SPECint_rate_base2006 = 1470

Hardware
CPU Name: Intel Xeon Platinum 8158
CPU Characteristics: Intel Turbo Boost Technology up to 3.70 GHz
CPU MHz: 3000
FPU: Integrated
CPU(s) enabled: 24 cores, 2 chips, 12 cores/chip, 2 threads/core
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: 24.75 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 960 GB SATA SSD, RAID 0
Other Hardware: None

Software
Operating System: SUSE Linux Enterprise Server 12 (x86_64) SP2
Compiler: C/C++: Version 17.0.3.191 of Intel C/C++ Compiler for Linux
Auto Parallel: No
File System: Btrfs
System State: Run level 5 (multi-user w/GUI)
Base Pointers: 32-bit
Peak Pointers: Not Applicable
Other Software: Microquill SmartHeap V10.2
## SPEC CINT2006 Result

**Hewlett Packard Enterprise**
*(Test Sponsor: HPE)*

**ProLiant DL380 Gen10**
*(3.00 GHz, Intel Xeon Platinum 8158)*

**SPECint_rate2006 = Not Run**
**SPECint_rate_base2006 = 1470**

### Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Copies</th>
<th>Seconds Base</th>
<th>Ratio Base</th>
<th>Seconds Peak</th>
<th>Ratio Peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>400.perlbench</td>
<td>48</td>
<td>436</td>
<td>1070</td>
<td>437</td>
<td>1070</td>
</tr>
<tr>
<td>401.bzip2</td>
<td>48</td>
<td>704</td>
<td>658</td>
<td>708</td>
<td>654</td>
</tr>
<tr>
<td>403.gcc</td>
<td>48</td>
<td>352</td>
<td>1100</td>
<td>350</td>
<td>1100</td>
</tr>
<tr>
<td>429.mcf</td>
<td>48</td>
<td>216</td>
<td>2020</td>
<td>217</td>
<td>2010</td>
</tr>
<tr>
<td>445.gobmk</td>
<td>48</td>
<td>573</td>
<td>878</td>
<td>575</td>
<td>876</td>
</tr>
<tr>
<td>456.hmmer</td>
<td>48</td>
<td>219</td>
<td>2050</td>
<td>220</td>
<td>2040</td>
</tr>
<tr>
<td>458.sjeng</td>
<td>48</td>
<td>620</td>
<td>937</td>
<td>619</td>
<td>938</td>
</tr>
<tr>
<td>462.libquantum</td>
<td>48</td>
<td>40.6</td>
<td>24500</td>
<td>40.6</td>
<td>24500</td>
</tr>
<tr>
<td>464.h264ref</td>
<td>48</td>
<td>668</td>
<td>1590</td>
<td>667</td>
<td>1590</td>
</tr>
<tr>
<td>471.omnetpp</td>
<td>48</td>
<td>426</td>
<td>705</td>
<td>427</td>
<td>702</td>
</tr>
<tr>
<td>473.astar</td>
<td>48</td>
<td>407</td>
<td>828</td>
<td>406</td>
<td>829</td>
</tr>
<tr>
<td>483.xalancbmk</td>
<td>48</td>
<td>187</td>
<td>1770</td>
<td>187</td>
<td>1770</td>
</tr>
</tbody>
</table>

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

### Submit Notes

The numactl mechanism was used to bind copies to processors. The config file option 'submit' was used to generate numactl commands to bind each copy to a specific processor. For details, please see the config file.

### 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
runspec command invoked through numactl i.e.:
numactl --interleave=all runspec <etc>
irqbalance disabled with "service irqbalance stop"
tuned profile set wth "tuned-adm profile throughput-performance"
VM Dirty ratio was set to 40 using "echo 40 > /proc/sys/vm/dirty_ratio"
Numa balancing was disabled using "echo 0 > /proc/sys/kernel/numa_balancing"

### Platform Notes

BIOS Configuration:
- 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 Throughput Compute
- Minimum Processor Idle Power Core C-State set to C1E

Continued on next page
SPEC CINT2006 Result

Hewlett Packard Enterprise  
(Test Sponsor: HPE)  
ProLiant DL380 Gen10  
(3.00 GHz, Intel Xeon Platinum 8158)

<table>
<thead>
<tr>
<th>SPECint_rate2006</th>
<th>Not Run</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECint_rate_base2006</td>
<td>1470</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CPU2006 license</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test sponsor</td>
<td>HPE</td>
</tr>
<tr>
<td>Tested by</td>
<td>HPE</td>
</tr>
</tbody>
</table>

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

Platform Notes (Continued)

Sysinfo program /cpu2006/config/sysinfo.rev6993  
Revision 6993 of 2015-11-06  
running on dl380-sys2-sles Tue Oct 10  08:12:30 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

From /proc/cpuinfo  

cpu name : Intel(R) Xeon(R) Platinum 8158 CPU @ 3.00GHz  
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 : 12  
siblings : 24  
physical 0: cores 0 1 3 9 10 16 18 19 24 25 26 27  
physical 1: cores 0 1 2 3 4 9 10 16 18 19 25 26  
cache size : 25344 KB

From /proc/meminfo  

MemTotal: 197552052 kB  
HugePages_Total: 0  
Hugepagesize: 2048 kB

/usr/bin/lsb_release -d  
SUSE Linux Enterprise Server 12 SP2

From /etc/*release* /etc/*version*  
SuSE-release:  
SUSE Linux Enterprise Server 12 (x86_64)  
VERSION = 12  
PATCHLEVEL = 2
# This file is deprecated and will be removed in a future service pack or release.  
# Please check /etc/os-release for details about this release.

os-release:  
NAME="SLES"  
VERSION="12-SP2"  
VERSION_ID="12.2"  
PRETTY_NAME="SUSE Linux Enterprise Server 12 SP2"  
ID="sles"  
ANSI_COLOR="0;32"  
CPE_NAME="cpe:/o:suse:sles:12:sp2"

uname -a:  
(94b4f767) x86_64 x86_64 x86_64 GNU/Linux

run-level 5  
Oct 9 16:11

Continued on next page
Hewlett Packard Enterprise
(Test Sponsor: HPE)
ProLiant DL380 Gen10
(3.00 GHz, Intel Xeon Platinum 8158)

SPECint_rate2006 =  Not Run
SPECint_rate_base2006 = 1470

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

Platform Notes (Continued)

SPEC is set to: /cpu2006
Filesystem   Type   Size  Used Avail Use% Mounted on
/dev/sdb3    btrfs  489G  12G  476G   3% /

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

General Notes

Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = "/cpu2006/lib/ia32:/cpu2006/lib/intel64:/cpu2006/sh10.2"

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 -m32 -L/opt/intel/compilers_and_libraries_2017/linux/lib/ia32

C++ benchmarks:
icpc -m32 -L/opt/intel/compilers_and_libraries_2017/linux/lib/ia32

Base Portability Flags

400.perlbench: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LINUX_IA32
401.bzip2:  -D_FILE_OFFSET_BITS=64
403.gcc:    -D_FILE_OFFSET_BITS=64
429.mcf:    -D_FILE_OFFSET_BITS=64
445.gobmk:  -D_FILE_OFFSET_BITS=64
456.hmmer:  -D_FILE_OFFSET_BITS=64
458.sjeng:  -D_FILE_OFFSET_BITS=64
462.libquantum: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LINUX
464.h264ref: -D_FILE_OFFSET_BITS=64
471.omnetpp: -D_FILE_OFFSET_BITS=64
473.astar:   -D_FILE_OFFSET_BITS=64
483.xalancbmk: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LINUX
SPEC CINT2006 Result

Hewlett Packard Enterprise
(Test Sponsor: HPE)
ProLiant DL380 Gen10
(3.00 GHz, Intel Xeon Platinum 8158)

SPECint_rate2006 = Not Run
SPECint_rate_base2006 = 1470

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

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

**Base Optimization Flags**

C benchmarks:
-xCORE-AVX512 -ipo -O3 -no-prec-div -qopt-prefetch
-qopt-mem-layout-trans=3

C++ benchmarks:
-xCORE-AVX512 -ipo -O3 -no-prec-div -qopt-prefetch
-qopt-mem-layout-trans=3 -Wl,-z,muldefs -L/sh10.2 -lsmartheap

**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

SPEC and SPECint are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

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

Tested with SPEC CPU2006 v1.2.
Report generated on Wed Nov 1 00:54:25 2017 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 31 October 2017.