### SPEC® CINT2006 Result

**Hewlett Packard Enterprise**

*(Test Sponsor: HPE)*

**Synergy 480 Gen10**

*(3.00 GHz, Intel Xeon Platinum 8158)*

**SPECint®_rate2006 = Not Run**

**SPECint_rate_base2006 = 1470**

<table>
<thead>
<tr>
<th>CPU2006 license:</th>
<th>HPE</th>
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<tr>
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<tr>
<th>Software Availability:</th>
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<th><strong>Hardware</strong></th>
<th><strong>Software</strong></th>
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<tbody>
<tr>
<td>CPU Name:</td>
<td>Operating System: SUSE Linux Enterprise Server 12 (x86_64) SP2</td>
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<tr>
<td>CPU Characteristics: Intel Xeon Platinum 8158</td>
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<tr>
<td>CPU MHZ:</td>
<td>Compiler: C/C++: Version 18.0.0.128 of Intel C/C++ Compiler for Linux</td>
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<tr>
<td>FPU:</td>
<td>Auto Parallel: No</td>
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<tr>
<td>CPU(s) enabled: 24 cores, 2 chips, 12 cores/chip, 2 threads/core</td>
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<tr>
<td>CPU(s) orderable: 1, 2 chip(s)</td>
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<tr>
<td>Primary Cache: 32 KB I + 32 KB D on chip per core</td>
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<tr>
<td>Secondary Cache: 1 MB I+D on chip per core</td>
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<tr>
<td>L3 Cache: 24.75 MB I+D on chip per chip</td>
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<tr>
<td>Other Cache: None</td>
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<tr>
<td>Memory: 384 GB (24 x 16 GB 2Rx8 PC4-2666V-R)</td>
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<td>Disk Subsystem: 1 x 480 GB SATA SSD, RAID 0</td>
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<tr>
<td>Other Hardware: None</td>
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<tr>
<td>System State: Run level 3 (multi-user)</td>
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<tr>
<td>Base Pointers: 32-bit</td>
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<td>Peak Pointers: Not Applicable</td>
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<td>Other Software: Microquill SmartHeap V10.2</td>
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Hewlett Packard Enterprise
Synergy 480 Gen10
(3.00 GHz, Intel Xeon Platinum 8158)

SPEC CINT2006 Result
Copyright 2006-2018 Standard Performance Evaluation Corporation

Test Sponsor: HPE
Hardware Availability: Nov-2017
Software Availability: Sep-2017
Test date: Nov-2017

SPECint_rate2006 = Not Run
SPECint_rate_base2006 = 1470

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Results Table

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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 with "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
LLC Prefetch set to Enabled
LLC Dead Line Allocation set to Disabled
Memory Patrol Scrubbing set to Disabled
Workload Profile set to General Throughput Compute
Minimum Processor Idle Power Core C-State set to C1E State
Sysinfo program /home/cpu2006/config/sysinfo.rev6993
Continued on next page
Platform Notes (Continued)

Revision 6993 of 2015-11-06 (b5e8d4b51ed28d7f98696cbe290c1) running on sy480_m3_sles Wed Nov 29 12:40:46 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
model name : Intel(R) Xeon(R) Platinum 8158 CPU @ 3.00GHz
2 "physical id"s (chips)
48 "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 : 12
siblings : 24
physical 0: cores 0 1 2 3 4 9 10 16 18 19 25 26
physical 1: cores 0 1 2 3 4 9 10 16 18 19 25 26
cache size : 25344 KB

From /proc/meminfo
MemTotal:       395926124 kB
HugePages_Total:       0
Hugepagesize:       2048 kB

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:
Linux sy480_m3_sles 4.4.21-69-default #1 SMP Tue Oct 25 10:58:20 UTC 2016
(9464f67) x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Nov 29 12:38

SPEC is set to: /home/cpu2006
Filesystem Type Size Used Avail Use% Mounted on
/dev/sda4 xfs 405G 61G 345G 15% /home
Additional information from dmidecode:
Continued on next page
SPEC CINT2006 Result

Hewlett Packard Enterprise
(Test Sponsor: HPE)
Synergy 480 Gen10
(3.00 GHz, Intel Xeon Platinum 8158)

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<thead>
<tr>
<th>CPU2006 license: 3</th>
<th>Test date: Nov-2017</th>
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SPECint_rate2006 = Not Run
SPECint_rate_base2006 = 1470

Platform Notes (Continued)

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 11/14/2017
Memory:
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:
LD_LIBRARY_PATH = "/home/cpu2006/libs/32:/home/cpu2006/libs/64:/home/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_2018.0.082/linux/lib/ia32

C++ benchmarks:
icpc -m32 -L/opt/intel/compilers_and_libraries_2018.0.082/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
Hewlett Packard Enterprise
(Test Sponsor: HPE)
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CPU2006 license: 3
Test sponsor: HPE
Tested by: HPE

**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/home/cpu2006/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-revH.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-revH.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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