**SPEC® CFP2006 Result**

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

Synergy 480 Gen10  
(3.0 GHz, Intel Xeon Platinum 8158)

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**SPECfp®_rate2006 = Not Run**  
**SPECfp_rate_base2006 = 1180**

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<th>Nov-2017</th>
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<td>Software Availability:</td>
<td>Apr-2017</td>
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**CPU2006 license:** 3  
**Test sponsor:** HPE  
**Tested by:** HPE

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**Hardware**

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**Software**

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<td>System State:</td>
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Continued on next page
SPEC CFP2006 Result

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

SPECfp_rate2006 = Not Run
SPECfp_rate_base2006 = 1180

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

L3 Cache: 24.75 MB I+D on chip per chip
Other Cache: None
Memory: 384 GB (24 x 16 GB 2Rx8 PC4-2666V-R)
Disk Subsystem: 1 x 480 GB SATA SSD, RAID 0
Other Hardware: None

Base Pointers: 32/64-bit
Peak Pointers: Not Applicable
Other Software: None

Results Table

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</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.:
umactl --interleave=all runspec <etc>
irqbalance disabled with "service irqbalance stop"
tuned profile set with "tuned-adm profile throughput-performance"
Continued on next page
Hewlett Packard Enterprise
(Test Sponsor: HPE)
Synergy 480 Gen10
(3.0 GHz, Intel Xeon Platinum 8158)

SPECfp_rate2006 = Not Run
SPECfp_rate_base2006 = 1180

Operating System Notes (Continued)

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
Revision 6993 of 2015-11-06 (b5e8d4b4eb51ed28d7f98696cbe290c1)
runtime on sy480_m3_sles Wed Nov 29 17:12:05 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: 395926120 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"
Continued on next page
Hewlett Packard Enterprise
(Test Sponsor: HPE)
Synergy 480 Gen10
(3.0 GHz, Intel Xeon Platinum 8158)

SPEC CFP2006 Result

SPECfp_rate2006 = Not Run
SPECfp_rate_base2006 = 1180

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

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

Platform Notes (Continued)

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 17:09

SPEC is set to: /home/cpu2006

Filesystem     Type  Size  Used Avail Use% Mounted on
/dev/sda4      xfs   405G   82G  324G  21% /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 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/lib/ia32:/home/cpu2006/lib/intel64:/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 -m64

C++ benchmarks:
    icpc -m64

Fortran benchmarks:
    ifort -m64

Benchmarks using both Fortran and C:
    icc -m64 ifort -m64
**SPEC CFP2006 Result**

**Hewlett Packard Enterprise**
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**Test sponsor:** HPE
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**Test date:** Nov-2017
**Hardware Availability:** Nov-2017
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**Base Portability Flags**

410.bwaves: -DSPEC_CPU_LP64
416.games: -DSPEC_CPU_LP64
433.milc: -DSPEC_CPU_LP64
434.zeusmp: -DSPEC_CPU_LP64
435.gromacs: -DSPEC_CPU_LP64
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465.tonto: -DSPEC_CPU_LP64
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481.wrf: -DSPEC_CPU_LP64
482.sphinx3: -DSPEC_CPU_LP64

**Base Optimization Flags**

C benchmarks:
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -auto-p32
-qopt-mem-layout-trans=3

C++ benchmarks:
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -auto-p32
-qopt-mem-layout-trans=3

Fortran benchmarks:
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch

Benchmarks using both Fortran and C:
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -auto-p32
-qopt-mem-layout-trans=3

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
# SPEC CFP2006 Result

## Hewlett Packard Enterprise

(Test Sponsor: HPE)

Synergy 480 Gen10  
(3.0 GHz, Intel Xeon Platinum 8158)

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