# SPEC® CFP2006 Result

## Hewlett Packard Enterprise

(Test Sponsor: HPE)

**Synergy 480 Gen10**  
(2.50 GHz, Intel Xeon Platinum 8180M)

<table>
<thead>
<tr>
<th>SPECfp®2006 =</th>
<th>Not Run</th>
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<tbody>
<tr>
<td>SPECfp_base2006 =</td>
<td>148</td>
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**CPU2006 license:** 3  
**Test sponsor:** HPE  
**Tested by:** HPE

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<thead>
<tr>
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### 410.bwaves

50.4

### 416.gamess

86.8

### 433.milc

298

### 434.zeusmp

51.9

### 435.gromacs

1130

### 436.cactusADM

505

### 444.namd

36.6

### 447.dealII

74.1

### 450.soplex

53.4

### 453.povray

71.2

### 454.calculix

73.3

### 459.GemsFDTD

262

### 465.tonto

52.1

### 470.lbm

136

### 481.wrf

73.5

### 482.sphinx3

**Hardware**

**CPU Name:** Intel Xeon Platinum 8180M  
**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/chi  
**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

### Software

**Operating System:** Red Hat Enterprise Linux Server release 7.3 (Maipo)  
**Kernel:** 3.10.0-514.el7.x86_64  
**Compiler:** C/C++: Version 17.0.3.191 of Intel C/C++ Compiler for Linux; Fortran: Version 17.0.3.191 of Intel Fortran Compiler for Linux  
**Auto Parallel:** Yes  
**File System:** xfs
**Hewlett Packard Enterprise**  
(Test Sponsor: HPE)  
Synergy 480 Gen10  
(2.50 GHz, Intel Xeon Platinum 8180M)  

**SPEC CFP2006 Result**  
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<th>Benchmark</th>
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<td>73.4</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

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

| SPECfp2006 = | Not Run |
| SPECfp_base2006 = | 148 |

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

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

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**Platform Notes (Continued)**

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 (b5e84d4eb51ed28d7f98696cbe290c1)
running on SY480_Hjp_RHEL Wed Nov 8 18:10:35 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 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*

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 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 18:06
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Platform Notes (Continued)

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:
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=core,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

Fortran benchmarks:
  ifort -m64

Benchmarks using both Fortran and C:
  icc -m64 ifort -m64

Base Portability Flags

410.bwaves: -DSPEC_CPU_LP64
416.gamess: -DSPEC_CPU_LP64
433.milc: -DSPEC_CPU_LP64

Continued on next page
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Base Portability Flags (Continued)

434.zeusmp: -DSPEC_CPU_LP64
435.gromacs: -DSPEC_CPU_LP64 -nofor_main
436.cactusADM: -DSPEC_CPU_LP64 -nofor_main
437.leslie3d: -DSPEC_CPU_LP64
444.namd: -DSPEC_CPU_LP64
447.dealII: -DSPEC_CPU_LP64
450.soplex: -DSPEC_CPU_LP64
453.povray: -DSPEC_CPU_LP64
454.calculix: -DSPEC_CPU_LP64 -nofor_main
459.GemsFDTD: -DSPEC_CPU_LP64
465.tonto: -DSPEC_CPU_LP64
470.lbm: -DSPEC_CPU_LP64
481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
482.sphinx3: -DSPEC_CPU_LP64

Base Optimization Flags

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

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

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

Benchmarks using both Fortran and C:
-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -qopt-prefetch

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 other inquiries, please contact webmaster@spec.org.

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