Hewlett Packard Enterprise
(Test Sponsor: HPE)
ProLiant DL380 Gen10
(2.60 GHz, Intel Xeon Gold 6126)

SPECfp®2006 = Not Run
SPECfp_base2006 = 134

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

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

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>410.bwaves</td>
<td>924</td>
</tr>
<tr>
<td>416.gamess</td>
<td>49.4</td>
</tr>
<tr>
<td>433.milc</td>
<td>86.4</td>
</tr>
<tr>
<td>434.zeusmp</td>
<td>263</td>
</tr>
<tr>
<td>435.gromacs</td>
<td>55.9</td>
</tr>
<tr>
<td>436.cactusADM</td>
<td>727</td>
</tr>
<tr>
<td>437.leslie3d</td>
<td>319</td>
</tr>
<tr>
<td>444.namd</td>
<td>35.6</td>
</tr>
<tr>
<td>447.dealII</td>
<td>72.9</td>
</tr>
<tr>
<td>450.soplex</td>
<td>50.5</td>
</tr>
<tr>
<td>453.povray</td>
<td>69.4</td>
</tr>
<tr>
<td>454.calculix</td>
<td>72.9</td>
</tr>
<tr>
<td>459.GemsFDTD</td>
<td>272</td>
</tr>
<tr>
<td>465.tonto</td>
<td>53.1</td>
</tr>
<tr>
<td>470.lbm</td>
<td></td>
</tr>
<tr>
<td>481.wrf</td>
<td>136</td>
</tr>
<tr>
<td>482.sphinx3</td>
<td>75.2</td>
</tr>
</tbody>
</table>

SPECfp_base2006 = 134

Hardware
CPU Name: Intel Xeon Gold 6126
CPU Characteristics: Intel Turbo Boost Technology up to 3.70 GHz
CPU MHz: 2600
FPU: Integrated
CPU(s) enabled: 24 cores, 2 chips, 12 cores/chip
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)
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
**SPEC CFP2006 Result**

Hewlett Packard Enterprise  
(Test Sponsor: HPE)  
ProLiant DL380 Gen10  
(2.60 GHz, Intel Xeon Gold 6126)

**SPECfp2006 = Not Run**  
**SPECfp_base2006 = 134**

---

**CPU2006 license:** 3  
**Test sponsor:** HPE  
**Tested by:** HPE  
**Test date:** Oct-2017  
**Hardware Availability:** Oct-2017  
**Software Availability:** Apr-2017

---

**Results Table**

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Seconds Base</th>
<th>Ratio Base</th>
<th>Seconds Peak</th>
<th>Ratio Peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>410.bwaves</td>
<td>14.7</td>
<td>924</td>
<td>14.6</td>
<td>931</td>
</tr>
<tr>
<td>416.gamess</td>
<td>396</td>
<td>49.4</td>
<td>397</td>
<td>49.4</td>
</tr>
<tr>
<td>433.milc</td>
<td>104</td>
<td>88.2</td>
<td>107</td>
<td>85.9</td>
</tr>
<tr>
<td>434.zeusmp</td>
<td>34.8</td>
<td>261</td>
<td>34.5</td>
<td>264</td>
</tr>
<tr>
<td>435.gromacs</td>
<td><strong>128</strong></td>
<td><strong>55.9</strong></td>
<td>128</td>
<td>55.8</td>
</tr>
<tr>
<td>436.cactusADM</td>
<td>16.3</td>
<td>734</td>
<td>16.4</td>
<td>727</td>
</tr>
<tr>
<td>437.leslie3d</td>
<td>31.4</td>
<td>300</td>
<td><strong>29.4</strong></td>
<td><strong>319</strong></td>
</tr>
<tr>
<td>444.namd</td>
<td>225</td>
<td>35.6</td>
<td>225</td>
<td>35.7</td>
</tr>
<tr>
<td>447.dealII</td>
<td><strong>157</strong></td>
<td><strong>72.9</strong></td>
<td>157</td>
<td>72.9</td>
</tr>
<tr>
<td>450.soplex</td>
<td><strong>165</strong></td>
<td><strong>50.5</strong></td>
<td>165</td>
<td>50.5</td>
</tr>
<tr>
<td>453.povray</td>
<td>76.6</td>
<td>69.5</td>
<td><strong>76.6</strong></td>
<td><strong>69.4</strong></td>
</tr>
<tr>
<td>454.calculix</td>
<td>113</td>
<td>72.8</td>
<td><strong>113</strong></td>
<td><strong>72.9</strong></td>
</tr>
<tr>
<td>459.GemsFDTD</td>
<td>38.0</td>
<td>280</td>
<td>39.0</td>
<td>272</td>
</tr>
<tr>
<td>465.tonto</td>
<td>188</td>
<td>52.2</td>
<td>185</td>
<td>53.1</td>
</tr>
<tr>
<td>470.lbm</td>
<td>12.1</td>
<td>1130</td>
<td>11.7</td>
<td>1180</td>
</tr>
<tr>
<td>481.wrf</td>
<td><strong>82.0</strong></td>
<td><strong>136</strong></td>
<td>81.6</td>
<td>137</td>
</tr>
<tr>
<td>482.sphinx3</td>
<td>261</td>
<td>74.6</td>
<td>258</td>
<td>75.5</td>
</tr>
</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  
irqbalance disabled with "systemctl stop irqbalance"  
tuned profile set with "tuned-adm profile throughput-performance"

---

**Platform Notes**

BIOS Configuration:  
Intel Hyperthreading set to Disabled  
Thermal Configuration set to Maximum Cooling  
Memory Patrol Scrubbing set to Disabled  
LLC Prefetcher set to Enabled  
Continued on next page
SPEC CFP2006 Result

Hewlett Packard Enterprise
(Test Sponsor: HPE)
ProLiant DL380 Gen10
(2.60 GHz, Intel Xeon Gold 6126)

SPECfp2006 = Not Run
SPECfp_base2006 = 134

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

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

Platform Notes (Continued)

LLC Dead Line Allocation set to Disabled
Workload Profile set to General Peak Frequency Compute
Energy/Performance Bias set to Maximum Performance
Uncore Frequency Scaling set to Auto
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 DL380Gen10-2 Thu Oct  5 06:28:10 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) Gold 6126 CPU @ 2.60GHz
  2 "physical id"s (chips)
  24 "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 : 12
  physical 0: cores 0 1 3 5 6 8 9 10 11 12 13 14
  physical 1: cores 0 1 2 3 4 5 6 8 9 11 12 13
  cache size : 19712 KB

From /proc/meminfo
MemTotal:       197573772 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 DL380Gen10-2 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 Oct 5 06:25

Continued on next page
SPEC CFP2006 Result

Hewlett Packard Enterprise
(Test Sponsor: HPE)
ProLiant DL380 Gen10
(2.60 GHz, Intel Xeon Gold 6126)

SPECfp2006 = Not Run
SPECfp_base2006 = 134

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

Platform Notes (Continued)

SPEC is set to: /home/cpu2006
Filesystem Type Size Used Avail Use% Mounted on
/dev/mapper/rhel-home xfs 504G 14G 491G 3% /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 U30 09/29/2017
Memory:
24x UNKNOWN NOT AVAILABLE 8 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"
LD_LIBRARY_PATH = "$/LD_LIBRARY_PATH:/home/cpu2006/sh10.2"
OMP_NUM_THREADS = "24"

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

Continued on next page
Hewlett Packard Enterprise
(Test Sponsor: HPE)
ProLiant DL380 Gen10
(2.60 GHz, Intel Xeon Gold 6126)

SPECfp2006 = Not Run
SPECfp_base2006 = 134

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

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

Base Portability Flags (Continued)

433.milc: -DSPEC_CPU_LP64
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 -nofor_main
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-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 CFP2006 Result**

**SPECfp2006 = Not Run**

| SPECfp_base2006 | 134 |

- **Hewlett Packard Enterprise**
  (Test Sponsor: HPE)
  ProLiant DL380 Gen10
  (2.60 GHz, Intel Xeon Gold 6126)

| CPU2006 license: | 3 |
| Test sponsor: | HPE |
| Tested by: | HPE |
| Test date: | Oct-2017 |
| Hardware Availability: | Oct-2017 |
| Software Availability: | Apr-2017 |

---

SPEC and SPECfp 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 00:54:24 2017 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 31 October 2017.