**Hewlett Packard Enterprise**  
(Test Sponsor: HPE)  
ProLiant DL380 Gen10  
(2.20 GHz, Intel Xeon Silver 4114)  

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

<table>
<thead>
<tr>
<th>SPECint Base2006 = 60.2</th>
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<th>Software</th>
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</table>

| Operating System: Red Hat Enterprise Linux Server release 7.3 (Maipo), Kernel 3.10.0-514.6.1.el7.x86_64 |
| Compiler: C/C++: Version 17.0.3.191 of Intel C/C++ Compiler for Linux |
| Auto Parallel: Yes |
| File System: xfs |
| System State: Run level 3 (multi-user) |
| Base Pointers: 32/64-bit |
| Peak Pointers: Not Applicable |
| Other Software: Microquill SmartHeap V10.2 |

### Hardware

| CPU Name: Intel Xeon Silver 4114 |
| CPU Characteristics: Intel Turbo Boost Technology up to 3.00 GHz |
| CPU MHZ: 2200 |
| FPU: Integrated |
| CPU(s) enabled: 20 cores, 2 chips, 10 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 |
| L3 Cache: 13.75 MB I+D on chip per chip |
| Other Cache: None |
| Memory: 192 GB (24 x 8 GB 2Rx8 PC4-2666V-R, running at 2400) |
| Disk Subsystem: 1 x 960 GB SATA SSD, RAID 0 |
| Other Hardware: None |

### Software

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**SPEC CINT2006 Result**

**Hewlett Packard Enterprise**  
(Test Sponsor: HPE)  
ProLiant DL380 Gen10  
(2.20 GHz, Intel Xeon Silver 4114)  

**SPECint2006 = Not Run**  
**SPECint_base2006 = 60.2**

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

**Results Table**

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Base</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Peak</th>
<th>Seconds</th>
<th>Ratio</th>
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<td>37.9</td>
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<td>38.0</td>
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<td>401.bzip2</td>
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<td>403gcc</td>
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<td>473.astar</td>
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<td>103</td>
<td>66.8</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  
irqbalance disabled with "systemctl stop irqbalance"  
tuned profile set wth "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  
LLC Dead Line Allocation 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 /cpu2006/config/sysinfo.rev6993  
Revision 6993 of 2015-11-06 (b5e8d4b4eb51ed28d7f98696cbe290c1)  
running on DL380-sys2-RHEL73 Mon Oct 16 14:35:14 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

Continued on next page
Platform Notes (Continued)

From /proc/cpuinfo

model name : Intel(R) Xeon(R) Silver 4114 CPU @ 2.20GHz
2 "physical id"s (chips)
20 "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 : 10
siblings : 10
physical 0: cores 0 1 2 3 4 8 9 10 11 12
physical 1: cores 0 1 2 3 4 8 9 10 11 12
cache size : 14080 KB

From /proc/meminfo
MemTotal: 197574284 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 DL380-sys2-RHEL73 3.10.0-514.6.1.el7.x86_64 #1 SMP Sat Dec 10 11:15:38
EST 2016 x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Oct 16 14:24

SPEC is set to: /cpu2006
Filesystem Type Size Used Avail Use% Mounted on
/dev/sda4 xfs 889G 51G 839G 6% /

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, configured at 2400 MHz
Continued on next page
SPEC CINT2006 Result

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Platform Notes (Continued)

(End of data from sysinfo program)

General Notes

Environment variables set by runspec before the start of the run:
KMP_AFFINITY = "granularity=fine,compact"
LD_LIBRARY_PATH = "/cpu2006/lib/ia32:/cpu2006/lib/intel64:/cpu2006/sh10.2"
OMP_NUM_THREADS = "20"

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

Base Portability Flags

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
401.bzip2: -DSPEC_CPU_LP64
403.gcc: -DSPEC_CPU_LP64
429.mcf: -DSPEC_CPU_LP64
445.gobmk: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
464.h264ref: -DSPEC_CPU_LP64
471.omnetpp: -DSPEC_CPU_LP64
473.astar: -DSPEC_CPU_LP64
483.xalancbmk: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:
-xcORE-AVX2 -ipo -O3 -no-prec-div -parallel -qopt-prefetch
-autom-p32

C++ benchmarks:
-xcORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -auto-p32
-Wl,-z,muldefs -L/sh10.2 -lsmartheap64
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Test date: Oct-2017
Hardware Availability: Oct-2017
Software Availability: Jul-2017

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

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

Tested with SPEC CPU2006 v1.2.