Hewlett Packard Enterprise
(Test Sponsor: HPE)
ProLiant DL360 Gen10
(3.00 GHz, Intel Xeon Platinum 8158)

SPEClnt
SPEClnt_base

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

SPECint_base2006 = 75.5

Hardware

CPU Name: Intel Xeon Platinum 8158
CPU Characteristics: Intel Turbo Boost Technology up to 3.70 GHz
CPU MHZ: 3000
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
L3 Cache: 24.75 MB I+D on chip per core
Other Cache: None
Memory: 192 GB (24 x 8 GB 2Rx8 PC4-2666V-R)
Disk Subsystem: 1 x 400 GB SATA SSD, RAID 0
Other Hardware: None

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
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
SPEC CINT2006 Result

Hewlett Packard Enterprise
(Test Sponsor: HPE)
ProLiant DL360 Gen10
(3.00 GHz, Intel Xeon Platinum 8158)

SPECint2006 = Not Run
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CPU2006 license: 3
Test sponsor: HPE
Tested by: HPE

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

Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Seconds</th>
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<td>429.mcf</td>
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<td>81.5</td>
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<td></td>
</tr>
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</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 Throughput-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
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 (b5e8d4b4eb51ed28d7f98696cbe290c1)
running on DL360G10 Thu Nov 9 02:00:13 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
**SPEC CINT2006 Result**

Hewlett Packard Enterprise  
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Not Run  
**SPECint_base2006 =** 75.5

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- **Test sponsor:** HPE  
- **Tested by:** HPE  
- **Test date:** Nov-2017  
- **Hardware Availability:** Oct-2017  
- **Software Availability:** Apr-2017

### Platform Notes (Continued)

From /proc/cpuinfo  
- model name : Intel(R) Xeon(R) Platinum 8158 CPU @ 3.00GHz  
- 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 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: 197749344 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 DL360G10 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 9 01:51

SPEC is set to: /home/cpu2006

Filesystem Type Size Used Avail Use% Mounted on  
/dev/mapper/rhel_dl360g10-home xfs 318G 40G 279G 13% /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 U32 09/29/2017  
Memory:  
- 24x UNKNOWN NOT AVAILABLE 8 GB 2 rank 2666 MHz

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## 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 = "/home/cpu2006/lib/ia32:/home/cpu2006/lib/intel64:/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`

### 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`
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- 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 -auto-p32`

- **C++ benchmarks:**  
  - `-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -auto-p32`
  - `-Wl,-z,muldefs -L/sh10.2 -lsmartheap64`
SPEC CINT2006 Result

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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-revF.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-revF.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.
Originally published on 29 November 2017.