SPEC® CINT2006 Result

Hewlett Packard Enterprise
(Test Sponsor: HPE)
ProLiant DL380 Gen10
(2.50 GHz, Intel Xeon Platinum 8180)

SPECint®2006 = Not Run
SPECint_base2006 = 81.6

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

Test date: Jun-2017
Hardware Availability: Sep-2017
Software Availability: May-2017

Hardware

<table>
<thead>
<tr>
<th>Test</th>
<th>Reference</th>
<th>Result</th>
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Software

Operating System: Red Hat Enterprise Linux Server release 7.3 (Maipo)
Compiler: C/C++: Version 17.0.4.196 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: 32/64-bit
Other Software: Microquill SmartHeap V10.2

Hardware

CPU Name: Intel Xeon Platinum 8180
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/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: 38.5 MB I+D on chip per chip
Other Cache: None
Memory: 192 GB (24 x 8 GB 2Rx8 PC4-2666V-R)
Disk Subsystem: 1 x 450 GB SATA SSD, RAID 0
Other Hardware: None
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### Results Table

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<tr>
<th>Benchmark</th>
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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 service stopped using: "systemctl stop irqbalance.service"

### Platform Notes

BIOS Configuration:
Hyper-Threaded set to Disabled
Thermal Configuration set to Maximum Cooling
LLC Dead Line Allocation set to Disabled
XPT Prefetch set to Disabled
Workload Profile set to General Peak Frequency Compute
Energy/Performance Bias set to Maximum Performance
Sysinfo program /spec_cpu/cpu2006/config/sysinfo.rev6993
Revision 6993 of 2015-11-06 (b5e8d4b4eb51ed28d7f98696cbe290c1)
running on localhost.localdomain Tue Jul 18 10:18:46 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 8180 CPU @ 2.50GHz
  2 "physical id"s (chips)
  56 "processors"

Continued on next page
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Platform Notes (Continued)

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: 197569796 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 localhost.localdomain 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 Jul 18 10:07

SPEC is set to: /spec_cpu/cpu2006
Filesystem Type Size Used Avail Use% Mounted on
/dev/mapper/rhel-root xfs 442G 81G 362G 19% /

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 06/08/2017
Memory:
- 24x UNKNOWN NOT AVAILABLE 8 GB 2 rank 2666 MHz

(End of data from sysinfo program)
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General Notes

Environment variables set by runspec before the start of the run:
KMP_AFFINITY = "granularity=fine,compact"
LD_LIBRARY_PATH = "/spec_cpu/cpu2006/lib/ia32:/spec_cpu/cpu2006/lib/intel64:/spec_cpu/cpu2006/sh10.2"
OMP_NUM_THREADS = "52"

Binaries compiled on a system with 2x Intel Xeon Platinum 8180 CPU + 384GB RAM memory using Redhat Enterprise Linux 7.3

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
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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
   -auto-p32 -complex-limited-range -qopt-prefetch-issue-excl-hint
   -ansi-alias

C++ benchmarks:
   -xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -auto-p32
   -W1, -z, muldefs -L/spec_cpu/cpu2006/sh10.2 -lsmartheap64
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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/HPE-Compiler-Flags-Intel-V1.2-HSW-revJ.html
http://www.spec.org/cpu2006/flags/HPE-Platform-Flags-Intel-V1.2-SKX-revB.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/HPE-Compiler-Flags-Intel-V1.2-HSW-revJ.xml
http://www.spec.org/cpu2006/flags/HPE-Platform-Flags-Intel-V1.2-SKX-revB.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.  