Hewlett Packard Enterprise
(Test Sponsor: HPE)
ProLiant DL380 Gen10
(2.00 GHz, Intel Xeon Platinum 8153)

SPECint®_rate2006 = Not Run
SPECint_rate_base2006 = 1370

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

<table>
<thead>
<tr>
<th>Benchmark</th>
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Hardware
CPU Name: Intel Xeon Platinum 8153
CPU Characteristics: Intel Turbo Boost Technology up to 2.80 GHz
CPU MHz: 2000
FPU: Integrated
CPU(s) enabled: 32 cores, 2 chips, 16 cores/chip, 2 threads/core
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: 22 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 960 GB SATA SSD, RAID 0
Other Hardware: None

Software
Operating System: SUSE Linux Enterprise Server 12 (x86_64) SP2
Kernel 4.4.21-69-default
Compiler: C/C++: Version 17.0.3.191 of Intel C/C++ Compiler for Linux
Auto Parallel: No
File System: btrfs
System State: Run level 3 (multi-user)
Base Pointers: 32-bit
Peak Pointers: 32/64-bit
Other Software: Microquill SmartHeap V10.2
## SPEC CINT2006 Result

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### Results Table

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<td>254</td>
<td>1740</td>
<td>256</td>
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</tr>
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</table>

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

### Submit Notes

The numactl mechanism was used to bind copies to processors. The config file option 'submit' was used to generate numactl commands to bind each copy to a specific processor. For details, please see the config file.

### 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 runspec command invoked through numactl i.e.:
numactl --interleave=all runspec <etc>
```

irqbalance disabled with "service irqbalance stop"

```
tuned profile set with "tuned-adm profile throughput-performance"
```

VM Dirty ratio was set to 40 using "echo 40 > /proc/sys/vm/dirty_ratio"

Numa balancing was disabled using "echo 0 > /proc/sys/kernel/numa_balancing"

### Platform Notes

BIOS Configuration:

- 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 Throughput Compute
- Minimum Processor Idle Power Core C-State set to C1E

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Platform Notes (Continued)

Sysinfo program /cpu2006/config/sysinfo.rev6993
Revision 6993 of 2015-11-06 (b5e8d4b4eb51ed28d7f98696cbe290c1)
running on sys1-dl380-suse Thu Oct 12 11:21:32 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 8153 CPU @ 2.00GHz
  2 "physical id"s (chips)
  64 "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 : 16
siblings : 32
physical 0: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
physical 1: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
cache size : 22528 KB

From /proc/meminfo
MemTotal: 197550452 kB
HugePages_Total: 0
Hugepagesize: 2048 kB

/usr/bin/lsb_release -d
SUSE Linux Enterprise Server 12 SP2

From /etc/*release* /etc/*version*
SuSE-release:
  SUSE Linux Enterprise Server 12 (x86_64)
  VERSION = 12
  PATCHLEVEL = 2
  # This file is deprecated and will be removed in a future service pack or
  release.
  # Please check /etc/os-release for details about this release.
os-release:
  NAME="SLES"
  VERSION="12-SP2"
  VERSION_ID="12.2"
  PRETTY_NAME="SUSE Linux Enterprise Server 12 SP2"
  ID="sles"
  ANSI_COLOR="0;32"
  CPE_NAME="cpe:/o:suse:sles:12:sp2"

uname -a:
(9464f67) x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Oct 11 11:52:52

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Platform Notes (Continued)

SPEC is set to: /cpu2006
Filesystem Type Size Used Avail Use% Mounted on
/dev/sda3 btrfs 489G 26G 462G 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
(End of data from sysinfo program)

General Notes

Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = "/cpu2006/lib/ia32:/cpu2006/lib/intel64:/cpu2006/sh10.2"

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 -m32 -L/opt/intel/compilers_and_libraries_2017/linux/lib/ia32

C++ benchmarks:
icpc -m32 -L/opt/intel/compilers_and_libraries_2017/linux/lib/ia32

Base Portability Flags

400.perlbench: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LINUX_IA32
401.bzip2: -D_FILE_OFFSET_BITS=64
403.gcc: -D_FILE_OFFSET_BITS=64
429.mcf: -D_FILE_OFFSET_BITS=64
445.gobmk: -D_FILE_OFFSET_BITS=64
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462.libquantum: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LINUX
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Base Optimization Flags

C benchmarks:
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch
-qopt-mem-layout-trans=3

C++ benchmarks:
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch
-qopt-mem-layout-trans=3 -Wl,-z,muldefs -L/sh10.2 -lsmartheap

Base Other Flags

C benchmarks:
403.gcc: -Dalocca=_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.

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