## SPEC® CINT2006 Result

### Test Sponsor: HPE

**ProLiant DL380 Gen10**  
(2.60 GHz, Intel Xeon Gold 6126)

<table>
<thead>
<tr>
<th>Test date:</th>
<th>Oct-2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardware Availability:</td>
<td>Oct-2017</td>
</tr>
<tr>
<td>Software Availability:</td>
<td>Apr-2017</td>
</tr>
</tbody>
</table>

### SPECint®_rate2006 = Not Run

### SPECint_rate_base2006 = 1340

| Software | Operating System: SUSE Linux Enterprise Server 12 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: xfs  
System State: Run level 3 (multi-user)  
Base Pointers: 32-bit  
Peak Pointers: Not Applicable  
Other Software: Microquill SmartHeap V10.2 |
|-----------------|-----------------------------------------------|

### 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, 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:** 19.25 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 SSD SATA, RAID 0  
- **Other Hardware:** None

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### Performance Results

<table>
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<tr>
<th>Test</th>
<th>specint_result</th>
<th>specint_rate_base2006</th>
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<tbody>
<tr>
<td>400.perlbench</td>
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<tr>
<td>401.bzip2</td>
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<tr>
<td>429.mcf</td>
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<td>473.astar</td>
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**SPECint_rate_base2006 = 1340**
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**Results Table**

<table>
<thead>
<tr>
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<th>Seconds</th>
<th>Ratio</th>
<th>Peak</th>
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<td>1600</td>
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<td>1610</td>
<td>206</td>
<td>1610</td>
</tr>
</tbody>
</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 wth "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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Spec CINT2006 Result

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SPECint_rate2006 = Not Run
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Platform Notes (Continued)

Sysinfo program /home/cpu2006/config/sysinfo.rev6993
Revision 6993 of 2015-11-06 (b5e8d4b4eb51ed28d7f98696cbe290c1)
running on dl380gen10-2 Wed Oct  4 09:50:16 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)
   48 "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 : 24
   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:       197552564 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 4 09:49

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

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

Platform Notes (Continued)

SPEC is set to: /home/cpu2006
Filesystem Type Size Used Avail Use% Mounted on
/dev/sda4 xfs 517G 12G 505G 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:
LD_LIBRARY_PATH = "/home/cpu2006/lib/ia32:/home/cpu2006/lib/intel64:/home/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.perlbmk: -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
456.hmmer: -D_FILE_OFFSET_BITS=64
458.sjeng: -D_FILE_OFFSET_BITS=64
462.libquantum: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LINUX
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**CPU2006 license:** 3  
**Test sponsor:** HPE  
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**Test date:** Oct-2017  
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### Base Optimization Flags

**C benchmarks:**
- `-xCORE-AVX512`  
- `-ipo`  
- `-03`  
- `-no-prec-div`  
- `-qopt-prefetch`  
- `-qopt-mem-layout-trans=3`

**C++ benchmarks:**
- `-xCORE-AVX512`  
- `-ipo`  
- `-03`  
- `-no-prec-div`  
- `-qopt-prefetch`  
- `-qopt-mem-layout-trans=3`  
- `-Wl,-z,muldefs`  
- `-L/sh10.2`  
- `-lsmartheap`

### 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-Platform-Flags-Intel-V1.2-SKX-revD.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/HPE-Platform-Flags-Intel-V1.2-SKX-revD.xml](http://www.spec.org/cpu2006/flags/HPE-Platform-Flags-Intel-V1.2-SKX-revD.xml)

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