Dell Inc.

PowerEdge R740 (Intel Xeon Gold 6126T, 2.60 GHz)

SPEClnt\_rate2006 = Not Run

SPEClnt\_rate\_base2006 = 1320

CPU2006 license: 55
Test sponsor: Dell Inc.
Tested by: Dell Inc.

CPU Name: Intel Xeon Gold 6126T
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
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: 384 GB (24 x 16 GB 2Rx8 PC4-2666V-R)
Disk Subsystem: 1 x 960 GB SATA SSD
Other Hardware: None

Software

Operating System: SUSE Linux Enterprise Server 12 SP2 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: 32/64-bit
Other Software: Microquill SmartHeap V10.2

Hardware

400.perlb anch 48
401.bzip2 48
403.gcc 48
429.mcf 48
445.gobmk 48
456.hmmer 48
458.sjeng 48
462.libquantum 48
464.h264ref 48
471.omnetpp 48
473.astar 48
483.xalancbmk 48

SPECint\_rate\_base2006 = 1320

Test date: Sep-2017
Hardware Availability: Sep-2017
Software Availability: Nov-2016
Dell Inc.

PowerEdge R740 (Intel Xeon Gold 6126T, 2.60 GHz)

SPECint_rate2006 =  Not Run
SPECint_rate_base2006 = 1320

CPU2006 license: 55

Test sponsor: Dell Inc.
Tested by: Dell Inc.

Test date: Sep-2017
Hardware Availability: Sep-2017
Software Availability: Nov-2016

Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Copies</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
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</thead>
<tbody>
<tr>
<td>400.perlbench</td>
<td>48</td>
<td>485</td>
<td>967</td>
<td>485</td>
<td>967</td>
<td>484</td>
<td>969</td>
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<tr>
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<td>806</td>
<td>577</td>
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<td>575</td>
<td>821</td>
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<td>403.gcc</td>
<td>48</td>
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<td>967</td>
<td>398</td>
<td>970</td>
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<td>774</td>
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<tr>
<td>456.hmmer</td>
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<td>458.sjeng</td>
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<td>462.libquantum</td>
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<td>45.5</td>
<td>21900</td>
<td>45.4</td>
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<td>45.6</td>
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<td>464.h264ref</td>
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<td>753</td>
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<td>471.omnetpp</td>
<td>48</td>
<td>460</td>
<td>652</td>
<td>461</td>
<td>651</td>
<td>461</td>
<td>651</td>
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<tr>
<td>473.astar</td>
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<td>442</td>
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<td>758</td>
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<tr>
<td>483.xalancbmk</td>
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<td>206</td>
<td>1610</td>
<td>206</td>
<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"

Platform Notes

BIOS settings:
Sub NUMA Cluster enabled
Virtualization Technology disabled
System Profile set to Custom
CPU Performance set to Maximum Performance
C States set to Autonomous
C1E disabled
Uncore Frequency set to Dynamic
Energy Efficiency Policy set to Performance
Memory Patrol Scrub disabled
Logical Processor enabled
CPU Interconnect Bus Link Power Management disabled
PCI ASPM L1 Link Power Management disabled
Sysinfo program /root/cpu2006-1.2_ic17u3/config/sysinfo.rev6993
Revision 6993 of 2015-11-06 (b5e8d4b4eb51ed28d7f98696cbe290c1)
running on linux-wwko Tue Sep 12 12:37:48 2017

Continued on next page
Dell Inc.

PowerEdge R740 (Intel Xeon Gold 6126T, 2.60 GHz)

SPECint_rate2006 = Not Run
SPECint_rate_base2006 = 1320

CPU2006 license: 55
Test sponsor: Dell Inc.
Tested by: Dell Inc.

Test date: Sep-2017
Hardware Availability: Sep-2017
Software Availability: Nov-2016

Platform Notes (Continued)

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

```plaintext
model name : Intel(R) Xeon(R) Gold 6126T 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 4 5 6 8 9 10 11 12 13
physical 1: cores 0 1 3 5 6 8 9 10 11 12 13 14
cache size : 19712 KB
```

From /proc/meminfo

```plaintext
MemTotal:       394867840 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:

```
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:

```
(x86_64) x86_64 x86_64 GNU/Linuxun-level 3 Sep 12 12:31
```

SPEC is set to: /root/cpu2006-1.2_ic17u3

Additional information from dmidecode:

Continued on next page
SPEC CINT2006 Result

Dell Inc.

PowerEdge R740 (Intel Xeon Gold 6126T, 2.60 GHz) SPECint_rate2006 = Not Run
SPECint_rate_base2006 = 1320

CPU2006 license: 55
Test sponsor: Dell Inc.
Tested by: Dell Inc.

Test date: Sep-2017
Hardware Availability: Sep-2017
Software Availability: Nov-2016

Platform Notes (Continued)

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 SM BIOS" standard.

BIOS Dell Inc. 1.0.7 07/01/2017
Memory:
24x 00AD00B300AD HMA82GR7AFR8N-VK 16 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 = "/root/cpu2006-1.2_ic17u3/lib/ia32:/root/cpu2006-1.2_ic17u3/lib/intel64:/root/cpu2006-1.2_ic17u3/sh10.2"

Binaries compiled on a system with 1x Intel Core i7-4790 CPU + 32GB RAM
memory using Redhat Enterprise Linux 7.2
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>

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
456.hmmer: -D_FILE_OFFSET_BITS=64
458.sjeng: -D_FILE_OFFSET_BITS=64
462.libquantum: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LINUX
464.h264ref: -D_FILE_OFFSET_BITS=64
471.omnetpp: -D_FILE_OFFSET_BITS=64
473.astar: -D_FILE_OFFSET_BITS=64

Continued on next page
Dell Inc.

PowerEdge R740 (Intel Xeon Gold 6126T, 2.60 GHz)

SPECint\textsubscript{rate}2006 = Not Run
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Base Portability Flags (Continued)

483.xalancbmk: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:
-xCORE-AVX512 -ipo -O3 -no-prec-div -qopt-prefetch
-qopt-mem-layout-trans=3

C++ benchmarks:
-xCORE-AVX512 -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: -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

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

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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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