### Dell Inc.

**PowerEdge T630 (Intel Xeon E5-2683 v3, 2.00 GHz)**

**SPECint\_rate2006 = 1080**

**SPECint\_rate\_base2006 = 1050**

<table>
<thead>
<tr>
<th>Test sponsor:</th>
<th>Dell Inc.</th>
<th>Test date:</th>
<th>Jul-2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tested by:</td>
<td>Dell Inc.</td>
<td>Hardware Availability:</td>
<td>Sep-2014</td>
</tr>
<tr>
<td>CPU_license:</td>
<td>55</td>
<td>Software Availability:</td>
<td>Sep-2014</td>
</tr>
</tbody>
</table>

#### Hardware

- **CPU Name:** Intel Xeon E5-2683 v3
- **CPU Characteristics:** Intel Turbo Boost Technology up to 3.00 GHz
- **CPU MHZ:** 2000
- **FPU:** Integrated
- **CPU(s) enabled:** 28 cores, 2 chips, 14 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:** 256 KB I+D on chip per core
- **L3 Cache:** 35 MB I+D on chip per chip
- **Other Cache:** None
- **Memory:** 256 GB (16 x 16 GB 2Rx4 PC4-2133P-R)
- **Disk Subsystem:** 1 x 300 GB 15000 RPM SAS
- **Other Hardware:** None

#### Software

- **Operating System:** SUSE Linux Enterprise Server 11 (x86_64) 3.0.76-0.11-default
- **Compiler:** C/C++: Version 14.0.0.0.80 of Intel C++ Studio XE for Linux
- **Auto Parallel:** No
- **File System:** ext2
- **System State:** Run level 3 (multi-user)
- **Base Pointers:** 32-bit
- **Peak Pointers:** 32/64-bit
- **Other Software:** Microquill SmartHeap V10.0

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PlewerEdge T630 (Intel Xeon E5-2683 v3, 2.00 GHz)  

CPU2006 license: 55  
Test sponsor: Dell Inc.  
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SPECint_rate2006 = 1080  
SPECint_rate_base2006 = 1050  

Test date: Jul-2014  
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Results Table

<table>
<thead>
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<th>Seconds</th>
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<td>56</td>
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<td>1110</td>
<td>348</td>
<td>1110</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:
Snoop Mode set to Cluster on Die
Virtualization Technology disabled
Execute Disable disabled
System Profile set to Performance
Sysinfo program /root/cpu2006-1.2/config/sysinfo.rev6818
$Rev: 6818 $ $Date:: 2012-07-17 #$ e86d102572650a6e4d596a3cee98f191
running on linux Tue Jul 1 10:36:09 2014

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) CPU E5-2683 v3 @ 2.00GHz
2 "physical id"s (chips)
56 "processors"
Dell Inc.

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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 : 14
- siblings : 28
- physical 0: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14
- physical 1: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14
- cache size : 17920 KB

From /proc/meminfo

- MemTotal: 264571712 kB
- HugePages_Total: 0
- Hugepagesize: 2048 kB

/usr/bin/lsb_release -d
SUSE Linux Enterprise Server 11 (x86_64)

From /etc/*release* /etc/*version*

SuSE-release:
- SUSE Linux Enterprise Server 11 (x86_64)
- VERSION = 11
- PATCHLEVEL = 3

uname -a:

Linux linux 3.0.76-0.11-default #1 SMP Fri Jun 14 08:21:43 UTC 2013 (ccab990)
x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Jul 1 10:33 last=S

SPEC is set to: /root/cpu2006-1.2

Filesystem Type Size Used Avail Use% Mounted on
/dev/sda2 ext2 222G 9.9G 211G 5% /

Additional information from dmidecode:

- BIOS Dell Inc. 0.3.25 06/26/2014
- Memory:
  - 8x 002C00B3002C 36ASF2G72PZ-2G1A1 16 GB 2133 MHz
  - 4x 00AD00B300AD HMA42GR7MFR4N-TPTD 16 GB 2133 MHz
  - 4x 00CE00B300CE M393A2G40DB0-CPB 16 GB 2133 MHz
  - 8x Not Specified Not Specified

(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/libs/32:/root/cpu2006-1.2/libs/64:/root/cpu2006-1.2/sh"

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB memory using RedHat EL 6.4
Transparent Huge Pages enabled with:

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**General Notes (Continued)**

- echo always > /sys/kernel/mm/transparent_hugepage/enabled  
- Filesystem page cache cleared with:  
  - echo 1> /proc/sys/vm/drop_caches  
  - runspec command invoked through numactl i.e.:  
  - numactl --interleave=all runspec <etc>

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**Base Compiler Invocation**

- C benchmarks:  
  - icc -m32  
- C++ benchmarks:  
  - icpc -m32

---

**Base Portability Flags**

- 400.perlbench: -DSPEC\_CPU\_LINUX\_IA32  
- 462.libquantum: -DSPEC\_CPU\_LINUX  
- 483.xalancbmk: -DSPEC\_CPU\_LINUX

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**Base Optimization Flags**

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

- C++ benchmarks:  
  - -xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch  
  - -opt-mem-layout-trans=3 -Wl,-z,muldefs -L/sh -ismartheap

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**Base Other Flags**

- C benchmarks:  
  - 403.gcc: -Dalloca=_alloca

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**Peak Compiler Invocation**

- C benchmarks (except as noted below):  
  - icc -m32

Continued on next page
Peak Compiler Invocation (Continued)

400.perlbench: icc -m64
401.bzip2: icc -m64
456.hmmer: icc -m64
458.sjeng: icc -m64

C++ benchmarks:
icpc -m32

Peak Portability Flags

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
401.bzip2: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LINUX
483.xalancbmk: -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:
400.perlbench: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-auto-ilp32

401.bzip2: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-opt-prefetch -auto-ilp32 -ansi-alias

403.gcc: basepeak = yes
429.mcf: basepeak = yes

445.gobmk: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)
-ansi-alias -opt-mem-layout-trans=3

456.hmmer: -xCORE-AVX2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32

458.sjeng: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-unroll4 -auto-ilp32

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Peak Optimization Flags (Continued)

462.libquantum: basepeak = yes

464.h264ref: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)  
-unroll2 -ansi-alias

C++ benchmarks:

471.omnetpp: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)  
-ansi-alias -opt-ra-region-strategy=block -Wl,-z,muldefs  
-L/sh -lsmartheap

473.astar: basepeak = yes

483.xalanchbmk: basepeak = yes

Peak 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/Dell-Platform-Settings-V1.2-revD.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Dell-Platform-Settings-V1.2-revD.xml

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