**Dell Inc.**

**PowerEdge T630 (Intel Xeon E5-2670 v3, 2.30 GHz)**

<table>
<thead>
<tr>
<th>SPECint Rate2006</th>
<th>SPECint Rate Base2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000</td>
<td>969</td>
</tr>
</tbody>
</table>

**CPU2006 license:** 55  
**Test sponsor:** Dell Inc.  
**Tested by:** Dell Inc.  
**Hardware Availability:** Sep-2014  
**Software Availability:** Sep-2014

**CPU Name:** Intel Xeon E5-2670 v3  
**CPU Characteristics:** Intel Turbo Boost Technology up to 3.10 GHz  
**CPU MHz:** 2300  
**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:** 256 KB I+D on chip per core  
**L3 Cache:** 30 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

**Operating System:** SUSE Linux Enterprise Server 11 (x86_64)  
**Compiler:** C/C++: Version 14.0.0.080 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
### 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>Base</td>
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<td>58</td>
<td>518</td>
<td>746</td>
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<td>745</td>
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<td>464.h264ref</td>
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<td>1100</td>
<td>956</td>
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<td>473.astar</td>
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<td>647</td>
<td>521</td>
<td>640</td>
<td>526</td>
<td>640</td>
<td>527</td>
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<tr>
<td>483.xalancbmk</td>
<td>48</td>
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<td>1060</td>
<td>314</td>
<td>1060</td>
<td>314</td>
<td>1050</td>
</tr>
</tbody>
</table>

**Results 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 Fri Jul 18 17:55:50 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 E5-2670 v3 @ 2.30GHz
- 2 "physical id"s (chips)
- 48 "processors"

Continued on next page
SPEC CINT2006 Result

Dell Inc.
PowerEdge T630 (Intel Xeon E5-2670 v3, 2.30 GHz)

SPECint_rate2006 = 1000
SPECint_rate_base2006 = 969

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

Test date: Jul-2014
Hardware Availability: Sep-2014
Software Availability: Sep-2014

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 : 12
siblings : 24
physical 0: cores 0 1 2 3 4 5 8 9 10 11 12 13
physical 1: cores 0 1 2 3 4 5 8 9 10 11 12 13
cache size : 15360 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:
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 18 17:52 last=S

SPEC is set to: /root/cpu2006-1.2

Additional information from dmidecode:
BIOS Dell Inc. 0.3.28 07/14/2014
Memory:
16x 00AD00B300AD HMA42GR7MFR4N-TFTD 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:
echo always > /sys/kernel/mm/transparent_hugepage/enabled
Filesystem page cache cleared with:

Continued on next page
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General Notes (Continued)

echo 1> /proc/sys/vm/drop_caches
runspec command invoked through numactl i.e.: 
numactl --interleave=all runspec <etc>

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

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 -lsmartheap

Base Other Flags

C benchmarks:
   403.gcc:  -Dalloca=_alloca

Peak Compiler Invocation

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

   400.perlbench:  icc  -m64

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**Software Availability:** Sep-2014

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**Peak Compiler Invocation (Continued)**

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

C++ benchmarks:  
1cpc -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

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**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.mc: 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 -unroll12 -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  
462.libquantum: basepeak = yes
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Peak Optimization Flags (Continued)

464.h264ref: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-03(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)
-03(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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For other inquiries, please contact webmaster@spec.org.

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