Dell Inc.

PowerEdge T320 (Intel Xeon E5-2430, 2.20 GHz)

**SPECint\_rate2006 = Not Run**

**SPECint\_rate\_base2006 = 205**

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

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<td>CPU Characteristics: Intel Turbo Boost Technology up to 2.70 GHz</td>
<td>Compiler: C/C++: Version 13.0.0.133 of Intel C++ Studio XE for Linux</td>
</tr>
<tr>
<td>CPU MHZ: 2200</td>
<td>Auto Parallel: No</td>
</tr>
<tr>
<td>FPU: Integrated</td>
<td>File System: ext4</td>
</tr>
<tr>
<td>CPU(s) enabled: 6 cores, 1 chip, 6 cores/chip, 2 threads/core</td>
<td>System State: Run level 3 (multi-user)</td>
</tr>
<tr>
<td>CPU(s) orderable: 1 chip</td>
<td>Base Pointers: 32-bit</td>
</tr>
<tr>
<td>Primary Cache: 32 KB I + 32 KB D on chip per core</td>
<td>Peak Pointers: 32/64-bit</td>
</tr>
<tr>
<td>Secondary Cache: 256 KB I+D on chip per core</td>
<td>Other Software: Microquill SmartHeap V10.0</td>
</tr>
<tr>
<td>L3 Cache: 15 MB I+D on chip per chip</td>
<td></td>
</tr>
<tr>
<td>Other Cache: None</td>
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<td>Memory: 48 GB (6 x 8 GB 2Rx4 PC3-12800R-11, ECC, running at 1333 MHz)</td>
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<tr>
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<tr>
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CPU2006 license: 55  
Test sponsor: Dell Inc.  
Tested by: Dell Inc.  
Test date: Mar-2013  
Hardware Availability: Mar-2013  
Software Availability: Feb-2013

## Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Copies</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
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<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
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</thead>
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<tr>
<td>400.perlbench</td>
<td>12</td>
<td>772</td>
<td>152</td>
<td>772</td>
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<td>401.bzip2</td>
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<td>1014</td>
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<td>403.gcc</td>
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<td>429.mcf</td>
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<td>351</td>
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<tr>
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<td>151</td>
<td>840</td>
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<td>264</td>
<td>429</td>
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<tr>
<td>458.sjeng</td>
<td>12</td>
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<td>148</td>
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<td>462.libquantum</td>
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<td>464.h264ref</td>
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<td>471.omnetpp</td>
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<td>593</td>
<td>127</td>
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<tr>
<td>473.astar</td>
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<td>700</td>
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<td>483.xalancbmk</td>
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<td>219</td>
<td>378</td>
<td>219</td>
<td></td>
<td></td>
</tr>
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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

Sysinfo program /root/cpu2006-1.2/config/sysinfo.rev6818  
$Rev: 6818 $ $Date:: 2012-07-17 #$ e86d102572650a6e4d596a3cee98f191  
running on T320 Tue Mar 26 11:25:29 2013

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 E5-2430 0 @ 2.20GHz  
    1 "physical id"s (chips)  
    12 "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 : 6  
    siblings : 12

Continued on next page
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Platform Notes (Continued)

physical 0: cores 0 1 2 3 4 5
cache size : 15360 KB

From /proc/meminfo
MemTotal: 49380616 kB
HugePages_Total: 0
Hugepagesize: 2048 kB

/usr/bin/lsb_release -d
Red Hat Enterprise Linux Server release 6.4 (Santiago)

From /etc/*release* /etc/*version*
redhat-release: Red Hat Enterprise Linux Server release 6.4 (Santiago)
system-release: Red Hat Enterprise Linux Server release 6.4 (Santiago)

uname -a:
Linux T320 2.6.32-358.el6.x86_64 #1 SMP Tue Jan 29 11:47:41 EST 2013 x86_64
x86_64 x86_64 GNU/Linux

run-level 3 Mar 26 11:23

SPEC is set to: /root/cpu2006-1.2
Filesystem Type Size Used Avail Use% Mounted on
/dev/sda2 ext4 546G 12G 507G 3% /

Additional information from dmidecode:
BIOS Dell Inc. 1.5.1 03/08/2013
Memory:
2x 0OAD00B300AD HMT31GR7BF4C-PB 8 GB 1333 MHz 2 rank
2x 0OAD04B300AD HMT31GR7BF4C-PB 8 GB 1333 MHz 2 rank
2x 0CE00B300CE M393B1K70DH0-CK0 8 GB 1333 MHz 2 rank
(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 RHEL5.5
Transparent Huge Pages enabled with:
echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled
Filesystem page cache cleared with:
echo 1 > /proc/sys/vm/drop_caches
runspec command invoked through numactl i.e.:
umactl --interleave=all runspec <etc>
SPEC CINT2006 Result

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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

Base Optimization Flags

C benchmarks:
  -xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3

C++ benchmarks:
  -xSSE4.2 -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

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic13-official-linux64.html
http://www.spec.org/cpu2006/flags/Dell-Platform-Settings-V1.2-revA.20120410.00.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic13-official-linux64.xml
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For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.2.
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