### SPECint®_rate2006 = 380

| SPECint_rate_base2006 = 364 |

#### Hardware

- **CPU Name:** Intel Xeon E5-2430L
- **CPU Characteristics:** Intel Turbo Boost Technology up to 2.50 GHz
- **CPU MHz:** 2000
- **FPU:** Integrated
- **CPU(s) enabled:** 12 cores, 2 chips, 6 cores/chip, 2 threads/core
- **Primary Cache:** 32 KB I + 32 KB D on chip per core
- **Secondary Cache:** 256 KB I+D on chip per core
- **L3 Cache:** 15 MB I+D on chip per chip
- **Other Cache:** None
- **Memory:** 96 GB (12 x 8 GB 2Rx4 PC3-12800R-11, ECC, running at 1333 MHz)
- **Disk Subsystem:** 1 x 600 GB 10000 RPM SAS
- **Other Hardware:** None

#### Software

- **Operating System:** SUSE Linux Enterprise Server 11 SP2 (x86_64) 3.0.13-0.27-default
- **Compiler:** CIC++ Version 12.1.0.225 of Intel C++ Studio XE for Linux
- **Auto Parallel:** No
- **File System:** ext3
- **System State:** Run level 3 (add definition here)
- **Base Pointers:** 32-bit
- **Peak Pointers:** 32/64-bit
- **Other Software:** Microquill SmartHeap V9.01
### Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Copies</th>
<th>Seconds Base</th>
<th>Ratio Base</th>
<th>Seconds Peak</th>
<th>Ratio Peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>perlbench</td>
<td>24</td>
<td>866 271</td>
<td>864 272</td>
<td>865 271</td>
<td></td>
</tr>
<tr>
<td>bzip2</td>
<td>24</td>
<td>1153 201</td>
<td>1147 202</td>
<td>1152 201</td>
<td></td>
</tr>
<tr>
<td>gcc</td>
<td>24</td>
<td>246 999</td>
<td>248 98</td>
<td>247 999</td>
<td></td>
</tr>
<tr>
<td>mcf</td>
<td>24</td>
<td>370 591</td>
<td>370 591</td>
<td>370 591</td>
<td></td>
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<tr>
<td>gobmk</td>
<td>24</td>
<td>927 272</td>
<td>928 271</td>
<td>923 273</td>
<td></td>
</tr>
<tr>
<td>hammer</td>
<td>24</td>
<td>498 449</td>
<td>502 446</td>
<td>503 445</td>
<td></td>
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<tr>
<td>sjeng</td>
<td>24</td>
<td>1080 269</td>
<td>1071 271</td>
<td>1073 271</td>
<td></td>
</tr>
<tr>
<td>libquantum</td>
<td>24</td>
<td>235 2110</td>
<td>235 2110</td>
<td>235 2110</td>
<td></td>
</tr>
<tr>
<td>h264ref</td>
<td>24</td>
<td>1152 461</td>
<td>1158 459</td>
<td>1156 460</td>
<td></td>
</tr>
<tr>
<td>omnetpp</td>
<td>24</td>
<td>670 224</td>
<td>671 224</td>
<td>670 224</td>
<td></td>
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<tr>
<td>astar</td>
<td>24</td>
<td>779 216</td>
<td>779 216</td>
<td>779 216</td>
<td></td>
</tr>
<tr>
<td>xalancbmk</td>
<td>24</td>
<td>454 365</td>
<td>455 364</td>
<td>454 365</td>
<td></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

CPU Power Management set to Maximum Performance
Memory Frequency set to Maximum Performance
Turbo Boost set to Enabled
C States/C1E set to Enabled
Sysinfo program /root/CPU2006-1.2/config/sysinfo.rev6800
$Rev: 6800 $ $Date:: 2011-10-11 #$ 6f2ebdf5032aa42e583f6b07f99d3
running on linux-SLES11 Thu Mar 22 21:59:09 2012

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 E5-2430L 0 @ 2.00GHz
2 "physical id"s (chips)
24 "processors"
cores, siblings (Caution: counting these is hw and system dependent. The Continued on next page
SPEC CINT2006 Result

Dell Inc.
PowerEdge M520 (Intel Xeon E5-2430L, 2.00 GHz)

<table>
<thead>
<tr>
<th>SPECint_rate2006</th>
<th>380</th>
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<tr>
<td>SPECint_rate_base2006</td>
<td>364</td>
</tr>
</tbody>
</table>

CPU2006 license: 55
Test sponsor: Dell Inc.
Tested by: Dell Inc.
Test date: Mar-2012
Hardware Availability: May-2012
Software Availability: Feb-2012

Platform Notes (Continued)

following excerpts from /proc/cpuinfo might not be reliable. Use with caution.)
- cpu cores : 6
- siblings : 12
- physical 0: cores 0 1 2 3 4 5
- physical 1: cores 0 1 2 3 4 5
- cache size : 15360 KB

From /proc/meminfo
- MemTotal: 99027020 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 = 2

uname -a:
- Linux linux-SLES11 3.0.13-0.27-default #1 SMP Wed Feb 15 13:33:49 UTC 2012
d73692b) x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Mar 22 21:56 last=S

SPEC is set to: /root/CPU2006-1.2
- Filesystem     Type  Size  Used Avail Use% Mounted on
- /dev/sdi1      ext3  546G  7.5G  511G   2% /

Additional information from dmidecode:

(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"

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/transparent_hugepage/enabled

Filesystem page cache cleared with:
- echo 1>/proc/sys/vm/drop_caches

runcspec command invoked through numaclt i.e.:
numactl --interleave=all runspec <etc>
Dell Inc.

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

C++ benchmarks:
  icpc  -m32
SPEC CINT2006 Result

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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: -xSSE4.2(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: -xSSE4.2(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: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)
-ansi-alias -opt-mem-layout-trans=3

456.hmmer: -xSSE4.2 -ipo -o3 -no-prec-div -unroll2 -auto-ilp32

458.sjeng: -xSSE4.2(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

464.h264ref: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-o3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)

C++ benchmarks:

471.omnetpp: -xSSE4.2(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/smartheap -lsmartheap

473.astar: basepeak = yes

Continued on next page
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Peak Optimization Flags (Continued)

483.xalancbmk: 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/Intel-ic12.1-official-linux64.20111122.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-ic12.1-official-linux64.20111122.xml
http://www.spec.org/cpu2006/flags/Dell-Platform-Settings-V1.2-revA.20120410.00.xml

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For other inquiries, please contact webmaster@spec.org.

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