## SPECint® CINT2006 Result

**Dell Inc.**

**PowerEdge M620 (Intel Xeon E5-2667, 2.90 GHz)**

<table>
<thead>
<tr>
<th>SPECint_rate2006</th>
<th>524</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECint_rate_base2006</td>
<td>501</td>
</tr>
</tbody>
</table>

### Hardware

<table>
<thead>
<tr>
<th>CPU Name: Intel Xeon E5-2667</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU Characteristics: Intel Turbo Boost Technology up to 3.50 GHz</td>
</tr>
<tr>
<td>CPU MHz: 2900</td>
</tr>
<tr>
<td>FPU: Integrated</td>
</tr>
<tr>
<td>CPU(s) enabled: 12 cores, 2 chips, 6 cores/chip, 2 threads/core</td>
</tr>
<tr>
<td>CPU(s) orderable: 1.2 chip</td>
</tr>
<tr>
<td>Primary Cache: 32 KB I + 32 KB D on chip per core</td>
</tr>
<tr>
<td>Secondary Cache: 256 KB I+D on chip per core</td>
</tr>
<tr>
<td>L3 Cache: 15 MB I+D on chip per chip</td>
</tr>
<tr>
<td>Other Cache: None</td>
</tr>
<tr>
<td>Memory: 128 GB (16 x 8 GB 2Rx4 PC3-12800R-11, ECC)</td>
</tr>
<tr>
<td>Disk Subsystem: 1 x 146 GB 15000 RPM SAS</td>
</tr>
<tr>
<td>Other Hardware: None</td>
</tr>
</tbody>
</table>

### Software

<table>
<thead>
<tr>
<th>Operating System: SUSE Linux Enterprise Server 11 SP2 (x86_64) 3.0.13-0.9-default</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compiler: C++ Version 12.1.0.225 of Intel C++ Studio XE for Linux</td>
</tr>
<tr>
<td>Auto Parallel: No</td>
</tr>
<tr>
<td>File System: ext3</td>
</tr>
<tr>
<td>System State: Run level 3 (add definition here)</td>
</tr>
<tr>
<td>Base Pointers: 32-bit</td>
</tr>
<tr>
<td>Peak Pointers: 32/64-bit</td>
</tr>
<tr>
<td>Other Software: Microquill SmartHeap V9.01</td>
</tr>
</tbody>
</table>

### Test Details

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

### Software Package Copy Performance

![Graph of software package copy performance]
SPEC CINT2006 Result

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PowerEdge M620 (Intel Xeon E5-2667, 2.90 GHz)

Dell Inc.

SPECint_rate2006 = 524
SPECint_rate_base2006 = 501

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

Software Availability: Feb-2012

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>
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<tbody>
<tr>
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<td></td>
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<td></td>
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</tr>
<tr>
<td>400.perlbench</td>
<td>24</td>
<td>635</td>
<td>369</td>
<td>633</td>
<td>371</td>
<td>632</td>
<td>371</td>
</tr>
<tr>
<td>401.bzip2</td>
<td>24</td>
<td>857</td>
<td>270</td>
<td>860</td>
<td>269</td>
<td>859</td>
<td>270</td>
</tr>
<tr>
<td>403.gcc</td>
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<td>473</td>
<td>409</td>
<td>474</td>
<td>407</td>
<td>472</td>
<td>409</td>
</tr>
<tr>
<td>429.mcf</td>
<td>24</td>
<td>782</td>
<td>786</td>
<td>762</td>
<td>756</td>
<td>763</td>
<td>756</td>
</tr>
<tr>
<td>445.gobmk</td>
<td>24</td>
<td>352</td>
<td>637</td>
<td>352</td>
<td>637</td>
<td>352</td>
<td>637</td>
</tr>
<tr>
<td>456.hmmer</td>
<td>24</td>
<td>798</td>
<td>369</td>
<td>786</td>
<td>371</td>
<td>786</td>
<td>371</td>
</tr>
<tr>
<td>458.sjeng</td>
<td>24</td>
<td>165</td>
<td>3020</td>
<td>165</td>
<td>3020</td>
<td>165</td>
<td>3020</td>
</tr>
<tr>
<td>462.libquantum</td>
<td>24</td>
<td>851</td>
<td>624</td>
<td>842</td>
<td>631</td>
<td>844</td>
<td>629</td>
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<tr>
<td>464.h264ref</td>
<td>24</td>
<td>495</td>
<td>503</td>
<td>496</td>
<td>503</td>
<td>496</td>
<td>503</td>
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<tr>
<td>471.omnetpp</td>
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<td>567</td>
<td>297</td>
<td>565</td>
<td>298</td>
<td>566</td>
<td>298</td>
</tr>
<tr>
<td>483.xalancbmk</td>
<td>24</td>
<td>304</td>
<td>545</td>
<td>303</td>
<td>547</td>
<td>302</td>
<td>548</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

System Profile set to Custom
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 $ $Date:: 2011-10-11 #$ 6f2ebdf5032aaa42e583f96b07f99d3

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 E5-2667 0 @ 2.90GHz
2 "physical id"s (chips)
24 "processors"

continued on next page

Standard Performance Evaluation Corporation
info@spec.org
http://www.spec.org/
**SPEC CINT2006 Result**

**Dell Inc.**

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| SPECint_rate2006 | 524 |
| SPECint_rate_base2006 | 501 |

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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 : 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: 132089864 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 Mojo-SPA-01 3.0.13-0.9-default #1 SMP Mon Jan 16 17:33:03 UTC 2012
  (54ddfaf) x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Feb 22 18:32 last=S

SPEC is set to: /root/CPU2006-1.2

Filesystem Type Size Used Avail Use% Mounted on
/dev/sda2 ext3 133G 70G 62G 53% /

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
```

runspec command invoked through numactl i.e.:

```
umactl --interleave=all runspec <etc>
```
Dell Inc. PowerEdge M620 (Intel Xeon E5-2667, 2.90 GHz) SPECint_rate2006 = 524
SPECint_rate_base2006 = 501

CPU2006 license: 55
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Test date: Feb-2012
Hardware Availability: Mar-2012
Software Availability: Feb-2012

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
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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)
-03(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)
-03(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 -03 -no-prec-div -unroll2 -auto-ilp32

458.sjeng: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-03(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)
-03(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-unroll2 -ansi-alias

C++ benchmarks:

471.omnetpp: -xSSE4.2(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/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:


You can also download the XML flags sources by saving the following links:


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