## SPEC® CINT2006 Result

**Dell Inc.**

**PowerEdge T620 (Intel Xeon E5-2637, 3.00 GHz)**

| Test date: | Feb-2012 |
| Hardware Availability: | Mar-2012 |
| Software Availability: | Feb-2012 |

### Hardware

- **CPU Name:** Intel Xeon E5-2637
- **CPU Characteristics:** Intel Turbo Boost Technology up to 3.50 GHz
- **CPU MHz:** 3000
- **FPU:** Integrated
- **CPU(s) enabled:** 4 cores, 2 chips, 2 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:** 5 MB I+D on chip per chip
- **Other Cache:** None
- **Memory:** 128 GB (16 x 8 GB 2Rx4 PC3-12800R-11, ECC)
- **Disk Subsystem:** 1 x 1 TB 7200 RPM SATA
- **Other Hardware:** None

### Software

- **Operating System:** SUSE Linux Enterprise Server 11 SP2 (x86_64) 3.0.13-0.9-default
- **Compiler:** C/C++: Version 12.1.0.225 of Intel C++ Studio XE for Linux
- **Auto Parallel:** No
- **File System:** ext3
- **System State:** Run level 3 (multi-user)
- **Base Pointers:** 32-bit
- **Peak Pointers:** 32/64-bit
- **Other Software:** Microquill SmartHeap V9.01

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>SPECint_rate2006</th>
<th>SPECint_rate_base2006</th>
</tr>
</thead>
<tbody>
<tr>
<td>400.perlbench</td>
<td>158</td>
<td>136</td>
</tr>
<tr>
<td>401.bzip2</td>
<td>99.0</td>
<td>96.5</td>
</tr>
<tr>
<td>403.gcc</td>
<td>152</td>
<td></td>
</tr>
<tr>
<td>429.mcf</td>
<td>297</td>
<td></td>
</tr>
<tr>
<td>445.gobmk</td>
<td>141</td>
<td>139</td>
</tr>
<tr>
<td>456.hmmer</td>
<td>281</td>
<td>233</td>
</tr>
<tr>
<td>458.sjeng</td>
<td>143</td>
<td>134</td>
</tr>
<tr>
<td>462.libquantum</td>
<td>1110</td>
<td></td>
</tr>
<tr>
<td>464.h264ref</td>
<td>239</td>
<td>236</td>
</tr>
<tr>
<td>471.omnetpp</td>
<td>110</td>
<td>102</td>
</tr>
<tr>
<td>473.astar</td>
<td>116</td>
<td></td>
</tr>
<tr>
<td>483.xalancbmk</td>
<td>206</td>
<td></td>
</tr>
</tbody>
</table>

**SPECint_rate2006 = 194**

**SPECint_rate_base2006 = 185**
Dell Inc.

PowerEdge T620 (Intel Xeon E5-2637, 3.00 GHz)

SPEC int_rate2006 = 194
SPEC int_rate_base2006 = 185

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

Test date: Feb-2012
Hardware Availability: Mar-2012
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>
<th>Ratio</th>
<th>Copies</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>400.perlbench</td>
<td>8</td>
<td>574.00</td>
<td>136</td>
<td>576.00</td>
<td>136</td>
<td>577.16</td>
<td>136</td>
<td>8</td>
<td>485.00</td>
<td>161</td>
<td>494.00</td>
<td>158</td>
<td>494.00</td>
<td>158</td>
</tr>
<tr>
<td>401.bzip2</td>
<td>8</td>
<td>800.00</td>
<td>96.5</td>
<td>799.00</td>
<td>96.6</td>
<td>805.95</td>
<td>95.8</td>
<td>8</td>
<td>783.00</td>
<td>98.6</td>
<td>780.00</td>
<td>99.0</td>
<td>780.00</td>
<td>99.0</td>
</tr>
<tr>
<td>403.gcc</td>
<td>8</td>
<td>425.00</td>
<td>152</td>
<td>426.00</td>
<td>151</td>
<td>424.52</td>
<td>152</td>
<td>8</td>
<td>425.00</td>
<td>152</td>
<td>426.00</td>
<td>151</td>
<td>424.00</td>
<td>152</td>
</tr>
<tr>
<td>429.mcf</td>
<td>8</td>
<td>246.00</td>
<td>297</td>
<td>246.00</td>
<td>297</td>
<td>247.29</td>
<td>296</td>
<td>8</td>
<td>246.00</td>
<td>297</td>
<td>246.00</td>
<td>297</td>
<td>247.00</td>
<td>296</td>
</tr>
<tr>
<td>445.gobmk</td>
<td>8</td>
<td>604.00</td>
<td>139</td>
<td>603.00</td>
<td>139</td>
<td>604.00</td>
<td>139</td>
<td>8</td>
<td>597.00</td>
<td>141</td>
<td>602.00</td>
<td>139</td>
<td>593.00</td>
<td>141</td>
</tr>
<tr>
<td>456.hmmer</td>
<td>8</td>
<td>321.00</td>
<td>233</td>
<td>321.00</td>
<td>233</td>
<td>321.00</td>
<td>233</td>
<td>8</td>
<td>266.00</td>
<td>281</td>
<td>266.00</td>
<td>280</td>
<td>266.00</td>
<td>281</td>
</tr>
<tr>
<td>458.sjeng</td>
<td>8</td>
<td>726.00</td>
<td>134</td>
<td>726.00</td>
<td>133</td>
<td>723.14</td>
<td>134</td>
<td>8</td>
<td>677.00</td>
<td>143</td>
<td>689.00</td>
<td>141</td>
<td>676.00</td>
<td>143</td>
</tr>
<tr>
<td>462.libquantum</td>
<td>8</td>
<td>149.00</td>
<td>1110</td>
<td>149.00</td>
<td>1110</td>
<td>149.11</td>
<td>1110</td>
<td>8</td>
<td>149.00</td>
<td>1110</td>
<td>149.00</td>
<td>1110</td>
<td>149.00</td>
<td>1110</td>
</tr>
<tr>
<td>464.h264ref</td>
<td>8</td>
<td>748.00</td>
<td>237</td>
<td>750.00</td>
<td>236</td>
<td>756.23</td>
<td>234</td>
<td>8</td>
<td>741.00</td>
<td>239</td>
<td>741.00</td>
<td>239</td>
<td>740.00</td>
<td>239</td>
</tr>
<tr>
<td>471.omnetpp</td>
<td>8</td>
<td>484.00</td>
<td>103</td>
<td>488.00</td>
<td>102</td>
<td>489.02</td>
<td>102</td>
<td>8</td>
<td>453.00</td>
<td>110</td>
<td>453.00</td>
<td>110</td>
<td>452.00</td>
<td>111</td>
</tr>
<tr>
<td>473.astar</td>
<td>8</td>
<td>485.00</td>
<td>116</td>
<td>498.00</td>
<td>113</td>
<td>486.11</td>
<td>116</td>
<td>8</td>
<td>485.00</td>
<td>116</td>
<td>498.00</td>
<td>113</td>
<td>486.00</td>
<td>116</td>
</tr>
<tr>
<td>483.xalancbmk</td>
<td>8</td>
<td>269.00</td>
<td>206</td>
<td>266.00</td>
<td>208</td>
<td>269.05</td>
<td>205</td>
<td>8</td>
<td>269.00</td>
<td>206</td>
<td>266.00</td>
<td>208</td>
<td>269.00</td>
<td>205</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
running on linux-Sandy Fri Feb 10 08:50:57 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 E5-2637 0 @ 3.00GHz
2 "physical id"s (chips)
8 "processors"

Continued on next page
Dell Inc.

PowerEdge T620 (Intel Xeon E5-2637, 3.00 GHz)

SPECint_rate2006 = 194
SPECint_rate_base2006 = 185

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

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 : 2
siblings : 4
physical 0: cores 0 1
physical 1: cores 0 1
cache size : 5120 KB

From /proc/meminfo
MemTotal: 132122692 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-Sandy 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 10 08:49 last=5

SPEC is set to: /root/CPU2006-1.2
Additional information from dmidecode:

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
The Dell PowerEdge T620 and
the Bull NovaScale T840 F3 models are electronically equivalent.
The results have been measured on a Dell PowerEdge T620 model
Filesystem page cache cleared with:
echo 1 > /proc/sys/vm/drop_caches
runspec command invoked through numactl i.e.:
numactl --interleave=all runspec <etc>
Dell Inc. PowerEdge T620 (Intel Xeon E5-2637, 3.00 GHz)

**SPECint_rate2006 = 194**

**SPECint_rate_base2006 = 185**

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

Test date: Feb-2012
Hardware Availability: Mar-2012
Software Availability: Feb-2012

### Base Compiler Invocation

C benchmarks:

```
icc -m32
```

C++ benchmarks:

```
icc -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:

```
icc -m32
```
## SPEC CINT2006 Result

**Dell Inc.**

PowerEdge T620 (Intel Xeon E5-2637, 3.00 GHz)

| SPECint_rate2006 = | 194 |
| SPECint_rate_base2006 = | 185 |

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

**Test date:** Feb-2012  
**Hardware Availability:** Mar-2012  
**Software Availability:** Feb-2012

### 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) -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) -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) -unroll2 -ansi-alias

#### 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
spec

Dell Inc.
PowerEdge T620 (Intel Xeon E5-2637, 3.00 GHz)  

<table>
<thead>
<tr>
<th>SPECint_rate2006</th>
<th>194</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECint_rate_base2006</td>
<td>185</td>
</tr>
</tbody>
</table>

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

Test date: Feb-2012  
Hardware Availability: Mar-2012  
Software Availability: Feb-2012  

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

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.20120328.xml

SPEC and SPECint are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

For questions about this result, please contact the tester.  
For other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.2.  
Originally published on 27 March 2012.