# SPEC® CINT2006 Result

## Dell Inc.

Dell Inc.

PowerEdge R720 (Intel Xeon E5-2667, 2.90 GHz)

### SPECint2006 = 52.5

### SPECint_base2006 = 49.4

<table>
<thead>
<tr>
<th>Test sponsor</th>
<th>Dell Inc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tested by</td>
<td>Dell Inc.</td>
</tr>
</tbody>
</table>

![Graph with SPECint results]

### Hardware

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU Name</td>
<td>Intel Xeon E5-2667</td>
</tr>
<tr>
<td>CPU Characteristics</td>
<td>Intel Turbo Boost Technology up to 3.50 GHz</td>
</tr>
<tr>
<td>CPU MHz</td>
<td>2900</td>
</tr>
<tr>
<td>FPU</td>
<td>Integrated</td>
</tr>
<tr>
<td>CPU(s) enabled</td>
<td>12 cores, 2 chips, 6 cores/chip, 2 threads/core</td>
</tr>
<tr>
<td>CPU(s) orderable</td>
<td>1.2 chip</td>
</tr>
<tr>
<td>Primary Cache</td>
<td>32 KB I + 32 KB D on chip per core</td>
</tr>
<tr>
<td>Secondary Cache</td>
<td>256 KB I+D on chip per core</td>
</tr>
<tr>
<td>L3 Cache</td>
<td>15 MB I+D on chip per chip</td>
</tr>
<tr>
<td>Memory</td>
<td>128 GB (16 x 8 GB 2Rx4 PC3-12800R-11, ECC)</td>
</tr>
<tr>
<td>Disk Subsystem</td>
<td>1 x 146 GB 10000 RPM SAS</td>
</tr>
<tr>
<td>Other Cache</td>
<td>None</td>
</tr>
</tbody>
</table>

### Software

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating System</td>
<td>SUSE Linux Enterprise Server 11 SP2 (x86_64) 3.0.13-0.9-default</td>
</tr>
<tr>
<td>Compiler</td>
<td>C++ Version 12.1.0.225 of Intel C++ Studio XE for Linux</td>
</tr>
<tr>
<td>Auto Parallel</td>
<td>Yes</td>
</tr>
<tr>
<td>File System</td>
<td>ext3</td>
</tr>
<tr>
<td>System State</td>
<td>Run level 3 (add definition here)</td>
</tr>
<tr>
<td>Base Pointers</td>
<td>32/64-bit</td>
</tr>
<tr>
<td>Peak Pointers</td>
<td>32/64-bit</td>
</tr>
<tr>
<td>Other Software</td>
<td>Microquill SmartHeap V9.01</td>
</tr>
</tbody>
</table>
### SPEC CINT2006 Result

**Dell Inc.**

PowerEdge R720 (Intel Xeon E5-2667, 2.90 GHz)

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Base</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>400.perlbench</td>
<td>314</td>
<td>31.1</td>
<td>314</td>
<td>31.2</td>
<td>313</td>
<td>31.2</td>
<td>262</td>
</tr>
<tr>
<td>401.bzip2</td>
<td>418</td>
<td>23.1</td>
<td>417</td>
<td>23.1</td>
<td>417</td>
<td>23.1</td>
<td>409</td>
</tr>
<tr>
<td>403.mcf</td>
<td>266</td>
<td>30.2</td>
<td>267</td>
<td>30.1</td>
<td>267</td>
<td>30.1</td>
<td>263</td>
</tr>
<tr>
<td>429.gcc</td>
<td>141</td>
<td>64.7</td>
<td>142</td>
<td>64.4</td>
<td>141</td>
<td>64.6</td>
<td>141</td>
</tr>
<tr>
<td>445.gobmk</td>
<td>423</td>
<td>24.8</td>
<td>422</td>
<td>24.8</td>
<td>422</td>
<td>24.8</td>
<td>395</td>
</tr>
<tr>
<td>456.hmmer</td>
<td>176</td>
<td>53.0</td>
<td>176</td>
<td>53.1</td>
<td>176</td>
<td>53.0</td>
<td>175</td>
</tr>
<tr>
<td>458.sjeng</td>
<td>430</td>
<td>28.2</td>
<td>430</td>
<td>28.1</td>
<td>430</td>
<td>28.1</td>
<td>428</td>
</tr>
<tr>
<td>462.libquantum</td>
<td>8.48</td>
<td>2440</td>
<td>8.48</td>
<td>2440</td>
<td>8.48</td>
<td>2440</td>
<td>8.48</td>
</tr>
<tr>
<td>464.h264ref</td>
<td>482</td>
<td>45.9</td>
<td>482</td>
<td>45.8</td>
<td>480</td>
<td>46.1</td>
<td>410</td>
</tr>
<tr>
<td>471.omnetpp</td>
<td>273</td>
<td>22.9</td>
<td>272</td>
<td>23.0</td>
<td>273</td>
<td>22.9</td>
<td>210</td>
</tr>
<tr>
<td>473.astar</td>
<td>231</td>
<td>30.4</td>
<td>230</td>
<td>30.5</td>
<td>231</td>
<td>30.4</td>
<td>231</td>
</tr>
<tr>
<td>483.xalancbmk</td>
<td>132</td>
<td>52.3</td>
<td>132</td>
<td>52.2</td>
<td>133</td>
<td>51.8</td>
<td>130</td>
</tr>
</tbody>
</table>

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

### 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-i51c Tue Feb 14 03:45:08 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

```plaintext
model name : Intel(R) Xeon(R) CPU E5-2667 0 @ 2.90GHz
  2 "physical id"s (chips)
  24 "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
physical 0: cores 0 1 2 3 4 5
```

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Dell Inc.

PowerEdge R720 (Intel Xeon E5-2667, 2.90 GHz)

SPECint2006 = 52.5
SPECint_base2006 = 49.4

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

Platform Notes (Continued)

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

From /proc/meminfo
   MemTotal: 132089856 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-i51c 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 14 03:43 last=S

SPEC is set to: /root/cpu2006-1.2
   Filesystem  Type  Size  Used Avail Use% Mounted on
   /dev/sda1    ext3  131G  7.7G  122G   6% /

Additional information from dmidecode:
   (End of data from sysinfo program)

General Notes

Environment variables set by runspec before the start of the run:
KMP_AFFINITY = "granularity=fine,scatter"
LD_LIBRARY_PATH = "/root/cpu2006-1.2/libs/32:/root/cpu2006-1.2/libs/64"
OMP_NUM_THREADS = "12"
The Dell PowerEdge R720 and
the Bull NovaScale R460 F3 models are electronically equivalent.
The results have been measured on a Dell PowerEdge R720 model
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
Binaries compiled on a system with 1x Core i7-860 CPU + 8GB memory using RHEL5.5
Dell Inc.

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

Base Compiler Invocation

C benchmarks:
icc -m64

C++ benchmarks:
icpc -m64

Base Portability Flags

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
401.bzip2: -DSPEC_CPU_LP64
403.gcc: -DSPEC_CPU_LP64
429.mcf: -DSPEC_CPU_LP64
445.gobmk: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
464.h264ref: -DSPEC_CPU_LP64
471.omnetpp: -DSPEC_CPU_LP64
473.astar: -DSPEC_CPU_LP64
483.xalancbmk: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:
-xAVX -ipo -O3 -no-prec-div -parallel -opt-prefetch -auto-p32

C++ benchmarks:
-xAVX -ipo -O3 -no-prec-div -opt-prefetch -auto-p32 -Wl,-z,muldefs
-L/smartheap -lsmartheap64

Base Other Flags

C benchmarks:
403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):
icc -m64
Dell Inc.
PowerEdge R720 (Intel Xeon E5-2667, 2.90 GHz)

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

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

Peak Compiler Invocation (Continued)

400.perlbench: icc -m32
445.gobmk: icc -m32
464.h264ref: icc -m32

C++ benchmarks (except as noted below):
icpc -m32
473.astar: icpc -m64

Peak Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32
401.bzip2: -DSPEC_CPU_LP64
403.gcc: -DSPEC_CPU_LP64
429.mcf: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
473.astar: -DSPEC_CPU_LP64
483.xalancbmk: -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:
400.perlbench: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -opt-prefetch
-ansi-alias

401.bzip2: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div -prof-use(pass 2) -auto-ilkp32 -opt-prefetch
-ansi-alias

403.gcc: -xAVX -ipo -O3 -no-prec-div -inline-calloc
-opt-malloc-options=3 -auto-ilkp32
429.mcf: basepeak = yes
445.gobmk: -xAVX(pass 2) -prof-gen(pass 1) -prof-use(pass 2)
-ansi-alias
456.hmmer: -xAVX -ipo -O3 -no-prec-div -unroll2 -auto-ilkp32
-ansi-alias

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**Software Availability:** Feb-2012

### Peak Optimization Flags (Continued)

```plaintext
458.sjeng: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
           -no-prec-div(pass 2) -prof-use(pass 2) -unroll4

462.libquantum: basepeak = yes

464.h264ref: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
           -no-prec-div(pass 2) -prof-use(pass 2) -unroll12
           -ansi-alias

C++ benchmarks:

471.omnetpp: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
           -no-prec-div(pass 2) -prof-use(pass 2)
           -opt-ra-region-strategy=block
           -ansi-alias
           -Wl,-z,muldefs -L/smartheap -lsmartheap

473.astar: basepeak = yes

483.xalancbmk: -xAVX -ipo -O3 -no-prec-div -opt-prefetch -ansi-alias
              -Wl,-z,muldefs -L/smartheap -lsmartheap
```

### Peak Other Flags

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

Tested with SPEC CPU2006 v1.2.


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