SPEC has determined that this result was not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the submitter reported that the result used pre-production hardware and the production hardware would reduce production system performance by more than 1.75%. Dell will republish these results with production hardware.

### Hardware

<table>
<thead>
<tr>
<th>Test</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>400</td>
<td>perlbench</td>
</tr>
<tr>
<td>401</td>
<td>bzip2</td>
</tr>
<tr>
<td>403</td>
<td>gcc</td>
</tr>
<tr>
<td>429</td>
<td>mcf</td>
</tr>
<tr>
<td>445</td>
<td>gobmk</td>
</tr>
<tr>
<td>456</td>
<td>hminer</td>
</tr>
<tr>
<td>458</td>
<td>sjeng</td>
</tr>
<tr>
<td>462</td>
<td>libquantum</td>
</tr>
<tr>
<td>464</td>
<td>h264ref</td>
</tr>
<tr>
<td>471</td>
<td>omnetpp</td>
</tr>
<tr>
<td>473</td>
<td>astart</td>
</tr>
</tbody>
</table>

### Software

- **Operating System:** SUSE Linux Enterprise Server 11 SP2 (x86_64) 3.0.13-0.19-default
- **Compiler:** C/C++: Version 12.1.0.225 of Intel C++ Studio XE for Linux
- **Auto Parallel:** Yes
- **File System:** ext3
- **System State:** Run level 3 (multi-user)
- **Base Pointers:** 32/64-bit

---

**Non-Compliant**
SPEC has determined that this result was not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the submitter reported that the result used pre-production hardware and the production hardware would reduce production system performance by more than 1.75%. Dell will republish these results with production hardware.

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

Continued on next page
SPEC has determined that this result was not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the submitter reported that the result used pre-production hardware and the production hardware would reduce production system performance by more than 1.75%. Dell will republish these results with production hardware.

Platform Notes (Continued)

Turbo Boost set to Enabled
C States/CIE set to Enabled
Sysinfo program /root/cpu2006-1.2/config/sysinfo.rev6800
$Rev: 6800 $ $Date: 2011-10-11 6:2ebdffe32aaa42e583f96b07f99d3
running on linux-2.6.46 Mon Feb 27 12:26:18 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 : Genuine Intel(R) CPU @ 2.70GHz
- 4 "physical id"s (chips)
- 64 "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
  - siblings : 16
  - physical 0: cores 0 1 2 3 4 5 6 7
  - physical 1: cores 0 1 2 3 4 5 6 7
  - physical 2: cores 0 1 2 3 4 5 6 7
  - physical 3: cores 0 1 2 3 4 5 6 7
- cache size : 20480 KB

From /proc/meminfo

- MemTotal: 264501512 kB
- HugePages_Total: 0
- Hugepagesize: 2048 kB

From /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
Dell Inc.
PowerEdge R820 (Intel Xeon E5-4650, 2.70 GHz)

SPECint2006 = NC
SPECint_base2006 = NC

CPU2006 license: 55
Test sponsor: Dell Inc.
Test date: Feb-2012
Tested by: Dell Inc.

Hardware Availability: May-2012
Software Availability: Feb-2012

SPEC has determined that this result was not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the submitter reported that the result used pre-production hardware and the production hardware would reduce production system performance by more than 1.75%. Dell will republish these results with production hardware.

Platform Notes (Continued)

uname -a:
Linux linux-2z46 3.0.13-0.19-default SMP Fri Feb 3 15:38:23 UTC 2012
(7f256ae) x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Feb 27 12:14 last 0

SPEC is set to: /root/cpu2006-1.2

Filesystem     Type   Size  Used Avail Use% Mounted on
/dev/sda1      ext3   119G  8.7G  109G   8% /

Additional information from dmidecode:

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 = "32"

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
The Dell PowerEdge R820 and the Dell NovaScale R470 F3 Models are electronically equivalent.
The results have been measured on a Dell PowerEdge R820 model.

Base Compiler Invocation

C benchmarks:
icc -m64

Continued on next page
SPEC has determined that this result was not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the submitter reported that the result used pre-production hardware and the production hardware would reduce production system performance by more than 1.75%. Dell will republish these results with production hardware.

Base Compiler Invocation (Continued)

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:

-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/L/smartheap -lsmartheap64

Base Other Flags

C benchmarks:

Continued on next page
SPEC has determined that this result was not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the submitter reported that the result used pre-production hardware and the production hardware would reduce production system performance by more than 1.75%. Dell will republish these results with production hardware.

Base Other Flags (Continued)

403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):
  icc -m64

 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
  -DSPEC_CPU_LP64
  403.gcc: -DSPEC_CPU_LP64
  429.mcf: -DSPEC_CPU_LP64
  456.hmmer: -DSPEC_CPU_LP64
  458.sjeng: -DSPEC_CPU_LP64
  482.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
  473.astar: -DSPEC_CPU_LP64
  483.xalancbmk: -DSPEC_CPU_LINUX
SPEC has determined that this result was not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the submitter reported that the result used pre-production hardware and the production hardware would reduce production system performance by more than 1.75%. Dell will republish these results with production hardware.

**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) -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-ilp32 -opt-prefetch -ansi-alias

403.gcc: -xAVX -ipo -O3 -no-prec-div -inline-calloc -opt-malloc-options=3 -auto-ilp32

429.mcf: basepeak = y,

445.gobmk: -xAVX -prof-gen(pass 1) -prof-use(pass 2) -ansi-alias

456.hmmer: -xAVX -O3 -no-prec-div -unroll2 -auto-ilp32 -ansi-alias

458.sjeng: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -unroll2 -ansi-alias

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) -unroll2 -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 -L/smartheap

Continued on next page
SPEC has determined that this result was not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the submitter reported that the result used pre-production hardware and the production hardware would reduce production system performance by more than 1.75%. Dell will republish these results with production hardware.

**Peak Optimization Flags (Continued)**

473.astar: basepeak = yes

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

**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 source 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