



# SPEC® CINT2006 Result

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Dell Inc.

**SPECint®2006 = 28.6**

PowerEdge R300 (Intel Xeon X5460, 3.16 GHz)

**SPECint\_base2006 = 25.5**

CPU2006 license: 55

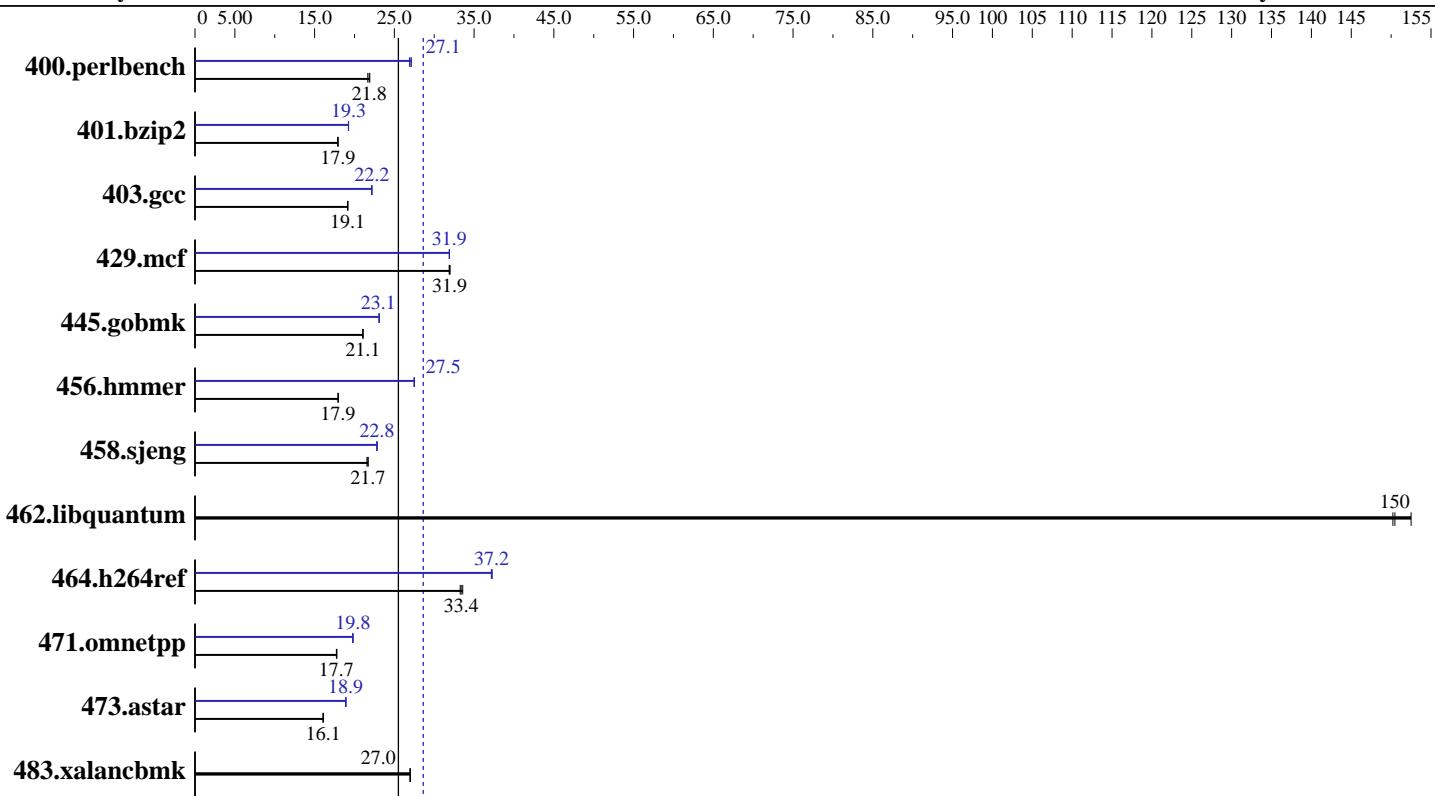
Test sponsor: Dell Inc.

Tested by: Dell Inc.

**Test date:** Oct-2008

**Hardware Availability:** Mar-2008

**Software Availability:** Nov-2008



## Hardware

CPU Name:	Intel Xeon X5460
CPU Characteristics:	
CPU MHz:	3166
FPU:	Integrated
CPU(s) enabled:	4 cores, 1 chip, 4 cores/chip
CPU(s) orderable:	1 chip
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	12 MB I+D on chip per chip, 6 MB shared / 2 cores
L3 Cache:	None
Other Cache:	None
Memory:	16 GB (4 x 4 GB DDR2-667 FBDIMM)
Disk Subsystem:	2 x 36 GB SAS, 15k RPM
Other Hardware:	None

## Software

Operating System:	SUSE Linux Enterprise Server 10 (x86_64) SP2, Kernel 2.6.16.60-0.21-smp
Compiler:	Intel C++ Compiler 11.0 for Linux Build 20080730 Package ID: l_cproc_b_11.0.042
Auto Parallel:	Yes
File System:	ReiserFS
System State:	Run level 3 (multi-user)
Base Pointers:	32-bit
Peak Pointers:	32/64-bit
Other Software:	Microquill SmartHeap V8.1 Binutils 2.18.50.0.7.20080502



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## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio										
400.perlbench	446	21.9	<b>447</b>	<b>21.8</b>	451	21.7	360	27.1	363	26.9	<b>361</b>	<b>27.1</b>
401.bzip2	<b>538</b>	<b>17.9</b>	539	17.9	538	17.9	502	19.2	<b>501</b>	<b>19.3</b>	501	19.3
403.gcc	421	19.1	<b>420</b>	<b>19.1</b>	420	19.2	363	22.2	363	22.2	<b>363</b>	<b>22.2</b>
429.mcf	286	31.9	285	32.0	<b>286</b>	<b>31.9</b>	<b>286</b>	<b>31.9</b>	286	31.9	286	31.9
445.gobmk	<b>498</b>	<b>21.1</b>	498	21.1	498	21.1	454	23.1	<b>454</b>	<b>23.1</b>	454	23.1
456.hmmer	519	18.0	<b>520</b>	<b>17.9</b>	520	17.9	339	27.5	<b>339</b>	<b>27.5</b>	340	27.5
458.sjeng	558	21.7	<b>558</b>	<b>21.7</b>	561	21.6	530	22.8	<b>530</b>	<b>22.8</b>	531	22.8
462.libquantum	136	153	138	150	<b>138</b>	<b>150</b>	136	153	138	150	<b>138</b>	<b>150</b>
464.h264ref	659	33.6	665	33.3	<b>663</b>	<b>33.4</b>	<b>595</b>	<b>37.2</b>	596	37.2	594	37.3
471.omnetpp	351	17.8	<b>352</b>	<b>17.7</b>	352	17.7	<b>316</b>	<b>19.8</b>	316	19.8	315	19.8
473.astar	<b>437</b>	<b>16.1</b>	436	16.1	437	16.1	372	18.9	370	18.9	<b>371</b>	<b>18.9</b>
483.xalancbmk	<b>256</b>	<b>27.0</b>	256	27.0	256	27.0	<b>256</b>	<b>27.0</b>	256	27.0	256	27.0

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

## General Notes

OMP\_NUM\_THREADS set to number of processors  
KMP\_AFFINITY set to "physical,0"

## Base Compiler Invocation

C benchmarks:  
icc

C++ benchmarks:  
icpc

## Base Portability Flags

400.perlbench: -DSPEC\_CPU\_LINUX\_IA32  
462.libquantum: -DSPEC\_CPU\_LINUX  
483.xalancbmk: -DSPEC\_CPU\_LINUX

## Base Optimization Flags

C benchmarks:  
-xSSE4.1 -ipo -O3 -no-prec-div -static -parallel  
-par-runtime-control -opt-prefetch

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## Base Optimization Flags (Continued)

C++ benchmarks:

```
-xSSE4.1 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs  
-L/spec/cpu2006.1.1/lib -lsmartheap
```

## Base Other Flags

C benchmarks:

```
403.gcc: -Dalloca=_alloca
```

## Peak Compiler Invocation

C benchmarks (except as noted below):

icc

```
401.bzip2: /opt/intel/Compiler/11.0/042/bin/intel64/icc  
          -L/opt/intel/Compiler/11.0/042/ipp/em64t/lib  
          -I/opt/intel/Compiler/11.0/042/ipp/em64t/include
```

```
456.hmmr: /opt/intel/Compiler/11.0/042/bin/intel64/icc  
          -L/opt/intel/Compiler/11.0/042/ipp/em64t/lib  
          -I/opt/intel/Compiler/11.0/042/ipp/em64t/include
```

C++ benchmarks:

icpc

## Peak Portability Flags

400.perlbench: -DSPEC\_CPU\_LINUX\_IA32

401.bzip2: -DSPEC\_CPU\_LP64

456.hmmr: -DSPEC\_CPU\_LP64

462.libquantum: -DSPEC\_CPU\_LINUX

483.xalancbmk: -DSPEC\_CPU\_LINUX

## Peak Optimization Flags

C benchmarks:

```
400.perlbench: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3  
              -no-prec-div -static -ansi-alias -opt-prefetch
```

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## Peak Optimization Flags (Continued)

```
401.bzip2: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
           -no-prec-div -static -auto-ilp32 -opt-prefetch
           -ansi-alias

403.gcc: -xSSE4.1 -ipo -O3 -no-prec-div -static -inline-calloc
          -opt-malloc-options=3

429.mcf: -xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch

445.gobmk: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -O2 -ipo
            -no-prec-div -ansi-alias

456.hmmer: -xSSE4.1 -ipo -O3 -no-prec-div -static -unroll12
            -ansi-alias -auto-ilp32

458.sjeng: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
            -no-prec-div -static -unroll14

462.libquantum: basepeak = yes

464.h264ref: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
              -no-prec-div -static -unroll12 -ansi-alias
```

C++ benchmarks:

```
471.omnetpp: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
              -no-prec-div -ansi-alias -opt-ra-region-strategy=block
              -Wl,-z,muldefs -L/spec/cpu2006.1.1/lib -lsmartheap

473.astar: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
            -no-prec-div -ansi-alias -opt-ra-region-strategy=routine
            -Wl,-z,muldefs -L/spec/cpu2006.1.1/lib -lsmartheap

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-ic11.0-int-linux64-revA.20090713.02.html>  
<http://www.spec.org/cpu2006/flags/Intel-Linux64-Platform.20090713.02.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-int-linux64-revA.20090713.02.xml>  
<http://www.spec.org/cpu2006/flags/Intel-Linux64-Platform.20090713.02.xml>



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For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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