



# SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECint®\_rate2006 = 87.6

PowerEdge 2900 III (Intel Xeon X5260, 3.33 GHz)

SPECint\_rate\_base2006 = 82.6

CPU2006 license: 55

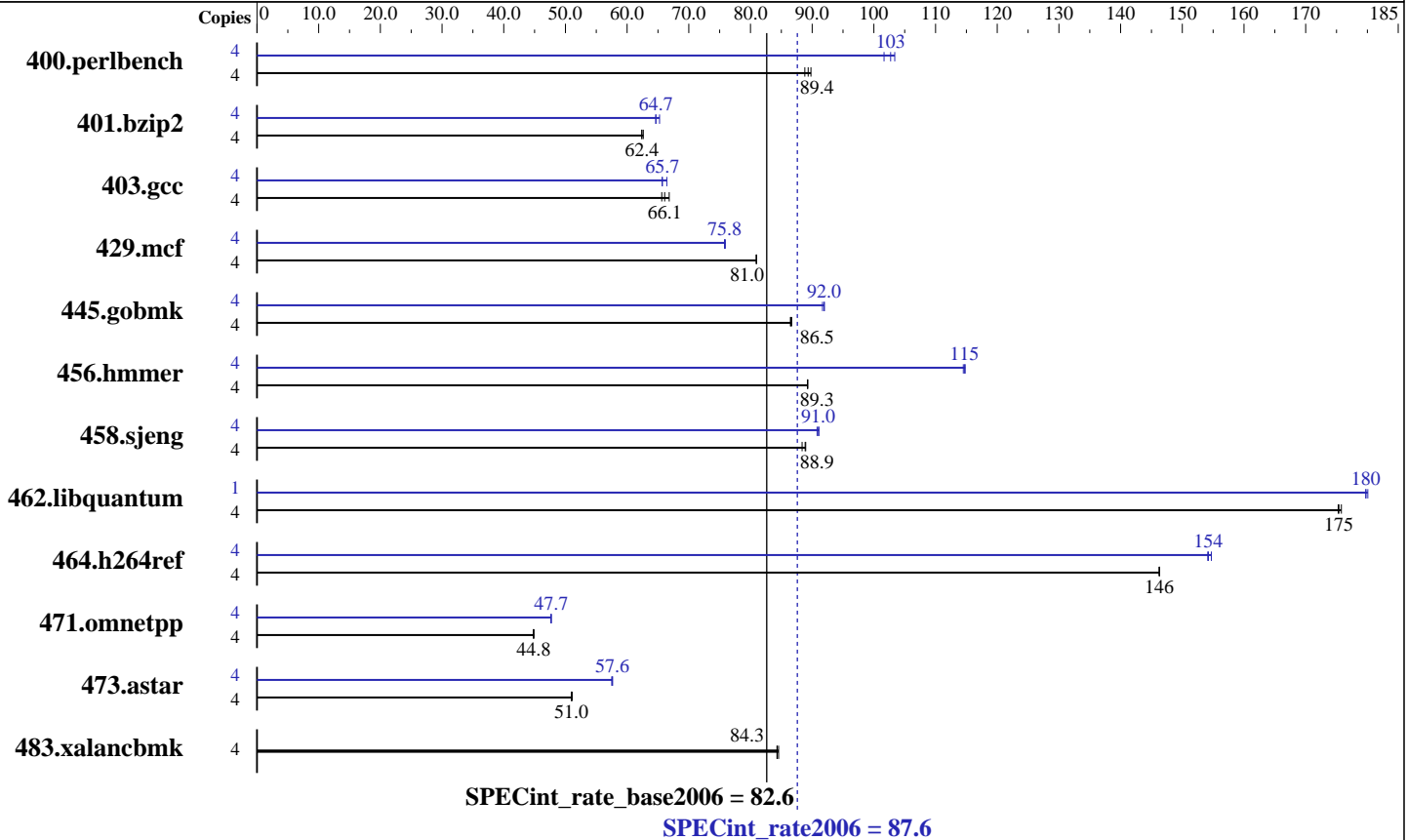
Test date: Sep-2008

Test sponsor: Dell Inc.

Hardware Availability: Jan-2008

Tested by: Dell Inc.

Software Availability: Nov-2008



## Hardware

CPU Name: Intel Xeon X5260  
 CPU Characteristics:  
 CPU MHz: 3333  
 FPU: Integrated  
 CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip  
 CPU(s) orderable: 1,2 chips  
 Primary Cache: 32 KB I + 32 KB D on chip per core  
 Secondary Cache: 6 MB I+D on chip per chip  
 L3 Cache: None  
 Other Cache: None  
 Memory: 16 GB (8 x 2 GB 667 MHz CL5 DDR2 Dual Rank)  
 Disk Subsystem: 2 x 73 GB SAS 15000 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						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	4	440	88.8	<b><u>437</u></b>	<b><u>89.4</u></b>	435	89.8	4	384	102	<b><u>380</u></b>	<b><u>103</u></b>	378	103
401.bzip2	4	619	62.4	616	62.6	<b><u>619</u></b>	<b><u>62.4</u></b>	4	597	64.6	591	65.3	<b><u>597</u></b>	<b><u>64.7</u></b>
403.gcc	4	491	65.6	<b><u>487</u></b>	<b><u>66.1</u></b>	482	66.8	4	485	66.4	<b><u>490</u></b>	<b><u>65.7</u></b>	490	65.7
429.mcf	4	<b><u>451</u></b>	<b><u>81.0</u></b>	451	81.0	451	80.9	4	481	75.8	480	75.9	<b><u>481</u></b>	<b><u>75.8</u></b>
445.gobmk	4	485	86.5	484	86.7	<b><u>485</u></b>	<b><u>86.5</u></b>	4	<b><u>456</u></b>	<b><u>92.0</u></b>	456	92.0	458	91.7
456.hammer	4	418	89.2	418	89.3	<b><u>418</u></b>	<b><u>89.3</u></b>	4	325	115	<b><u>325</u></b>	<b><u>115</u></b>	326	115
458.sjeng	4	<b><u>545</u></b>	<b><u>88.9</u></b>	544	89.0	548	88.4	4	<b><u>532</u></b>	<b><u>91.0</u></b>	533	90.8	531	91.1
462.libquantum	4	473	175	<b><u>473</u></b>	<b><u>175</u></b>	471	176	1	115	180	115	180	<b><u>115</u></b>	<b><u>180</u></b>
464.h264ref	4	605	146	<b><u>605</u></b>	<b><u>146</u></b>	605	146	4	572	155	574	154	<b><u>574</u></b>	<b><u>154</u></b>
471.omnetpp	4	558	44.8	557	44.9	<b><u>558</u></b>	<b><u>44.8</u></b>	4	525	47.6	524	47.7	<b><u>524</u></b>	<b><u>47.7</u></b>
473.astar	4	<b><u>551</u></b>	<b><u>51.0</u></b>	551	51.0	549	51.1	4	<b><u>487</u></b>	<b><u>57.6</u></b>	488	57.5	487	57.6
483.xalancbmk	4	327	84.3	326	84.6	<b><u>327</u></b>	<b><u>84.3</u></b>	4	327	84.3	326	84.6	<b><u>327</u></b>	<b><u>84.3</u></b>

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

## Submit Notes

The config file option 'submit' was used.  
taskset was used to bind processes to cores except  
for 462.libquantum peak

## Operating System Notes

'ulimit -s unlimited' was used to set the stack size to unlimited prior to run

## Platform Notes

BIOS Settings:  
Adjacent Cache Line Prefetch = Disabled (Default = Enabled)

## General Notes

OMP\_NUM\_THREADS set to number of processors  
KMP\_AFFINITY set to "physical,0"  
KMP\_STACKSIZE set to 64M

## Base Compiler Invocation

C benchmarks:  
icc

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## Base Compiler Invocation (Continued)

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 -inline-alloc  
-opt-malloc-options=3 -opt-prefetch

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.hmmer: /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



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## Peak Portability Flags

400.perlbench: -DSPEC\_CPU\_LINUX\_IA32  
 401.bzip2: -DSPEC\_CPU\_LP64  
 456.hmmer: -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

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

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

429.mcf: -prof-gen(pass 1) -prof-use(pass 2) -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 -unroll2  
 -ansi-alias

458.sjeng: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3  
 -no-prec-div -static -unroll4

462.libquantum: -xSSE4.1 -ipo -O3 -no-prec-div -static  
 -opt-malloc-options=3 -parallel -par-runtime-control  
 -opt-prefetch

464.h264ref: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3  
 -no-prec-div -static -unroll2 -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 -lsmarheap

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 -lsmarheap

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## Peak Optimization Flags (Continued)

483.xalanbmk: 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 questions about this result, please contact the tester.  
For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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