



# SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECint®\_rate2006 = 61.3

PowerEdge R210 (Intel Core i3-530, 2.93 GHz)

SPECint\_rate\_base2006 = 56.7

CPU2006 license: 55

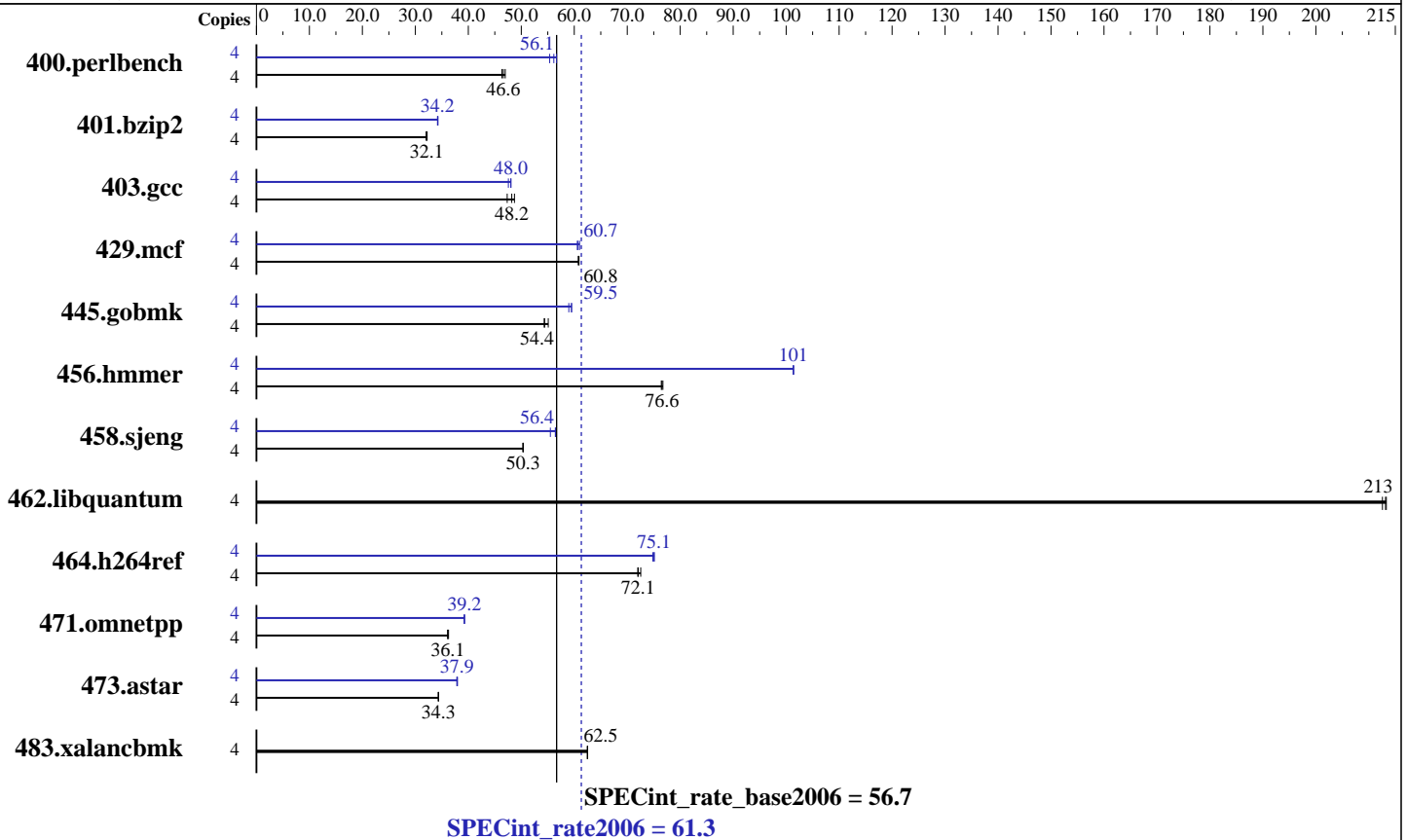
Test date: Jan-2010

Test sponsor: Dell Inc.

Hardware Availability: Jan-2010

Tested by: Dell Inc.

Software Availability: Dec-2009



### Hardware

CPU Name: Intel Core i3-530  
 CPU Characteristics:  
 CPU MHz: 2933  
 FPU: Integrated  
 CPU(s) enabled: 2 cores, 1 chip, 2 cores/chip, 2 threads/core  
 CPU(s) orderable: 1 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: 4 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 8 GB (4 x 2 GB DDR3-1333 DR UDIMM)  
 Disk Subsystem: 1 x 160 GB 7200 RPM SATA  
 Other Hardware: None

### Software

Operating System: Red Hat Enterprise Linux Server release 5.3, Kernel 2.6.18-128.el5  
 Compiler: Intel C++ Compiler Professional Edition 11.1 for Linux Build 20091012 Package ID: 1\_cproc\_p\_11.1.059  
 Auto Parallel: No  
 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	843	46.3	<b>838</b>	<b>46.6</b>	832	47.0	4	<b>696</b>	<b>56.1</b>	690	56.7	706	55.4
401.bzip2	4	1198	32.2	<b>1201</b>	<b>32.1</b>	1205	32.0	4	1129	34.2	<b>1128</b>	<b>34.2</b>	1126	34.3
403.gcc	4	<b>668</b>	<b>48.2</b>	680	47.3	661	48.7	4	670	48.0	<b>670</b>	<b>48.0</b>	677	47.6
429.mcf	4	<b>600</b>	<b>60.8</b>	600	60.8	599	60.9	4	602	60.6	598	61.0	<b>601</b>	<b>60.7</b>
445.gobmk	4	<b>771</b>	<b>54.4</b>	772	54.3	762	55.1	4	705	59.5	712	59.0	<b>705</b>	<b>59.5</b>
456.hammer	4	<b>487</b>	<b>76.6</b>	488	76.4	486	76.7	4	368	101	368	101	<b>368</b>	<b>101</b>
458.sjeng	4	961	50.4	962	50.3	<b>961</b>	<b>50.3</b>	4	858	56.4	872	55.5	<b>858</b>	<b>56.4</b>
462.libquantum	4	<b>389</b>	<b>213</b>	389	213	390	213	4	<b>389</b>	<b>213</b>	389	213	390	213
464.h264ref	4	<b>1228</b>	<b>72.1</b>	1230	72.0	1220	72.5	4	1183	74.8	1179	75.1	<b>1179</b>	<b>75.1</b>
471.omnetpp	4	689	36.3	692	36.1	<b>692</b>	<b>36.1</b>	4	636	39.3	<b>637</b>	<b>39.2</b>	637	39.2
473.astar	4	818	34.3	817	34.4	<b>818</b>	<b>34.3</b>	4	740	38.0	742	37.8	<b>741</b>	<b>37.9</b>
483.xalancbmk	4	<b>441</b>	<b>62.5</b>	442	62.4	441	62.5	4	<b>441</b>	<b>62.5</b>	442	62.4	441	62.5

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.  
numactl was used to bind copies to the cores

## Operating System Notes

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

## Platform Notes

BIOS Settings:  
Power Management = Maximum Performance (Default = Active Power Controller)

## General Notes

The Dell PowerEdge R210 and the Bull NovaScale R410 F2 models are electronically equivalent.  
This result was measured on a Dell PowerEdge R210.

## Base Compiler Invocation

C benchmarks:  
icc -m32  
  
C++ benchmarks:  
icpc -m32



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## 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 -static -opt-prefetch

C++ benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs  
-L/home/cmplr/usr3/alrahate/cpu2006.1.1.ic11.1/libic11.1-32bit -lsmartheap

## Base Other Flags

C benchmarks:

403.gcc: -Dalloca=\_alloca

## Peak Compiler Invocation

C benchmarks (except as noted below):

icc -m32

401.bzip2: icc -m64

456.hmmer: icc -m64

458.sjeng: icc -m64

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  
456.hmmer: -DSPEC\_CPU\_LP64  
458.sjeng: -DSPEC\_CPU\_LP64

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## Peak Portability Flags (Continued)

462.libquantum: -DSPEC\_CPU\_LINUX  
473.astar: -DSPEC\_CPU\_LP64  
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) -static(pass 2)  
-prof-use(pass 2) -ansi-alias

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

403.gcc: -xSSE4.2 -ipo -O3 -no-prec-div -static

429.mcf: -xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch

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

456.hmmer: -xSSE4.2 -ipo -O3 -no-prec-div -static -unroll2  
-ansi-alias -auto-ilp32

458.sjeng: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-O3(pass 2) -no-prec-div(pass 2) -static(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) -static(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/home/cmplr/usr3/alrahate/cpu2006.1.1.ic11.1/libic11.1-32bit -lsmartheap

473.astar: -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=routine -Wl,-z,muldefs  
-L/home/cmplr/usr3/alrahate/cpu2006.1.1.ic11.1/libic11.1-64bit -lsmartheap64

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## Peak Optimization Flags (Continued)

483.xalanbmk: basepeak = yes

## Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=\_alloca

The flags file that was used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic11.1-int-linux64-revA.20100216.html>

You can also download the XML flags source by saving the following link:

<http://www.spec.org/cpu2006/flags/Intel-ic11.1-int-linux64-revA.20100216.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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