



# SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECint®\_rate2006 = 56.3

PowerEdge 860 (Intel Xeon X3220, 2.40 GHz)

SPECint\_rate\_base2006 = 49.7

CPU2006 license: 55

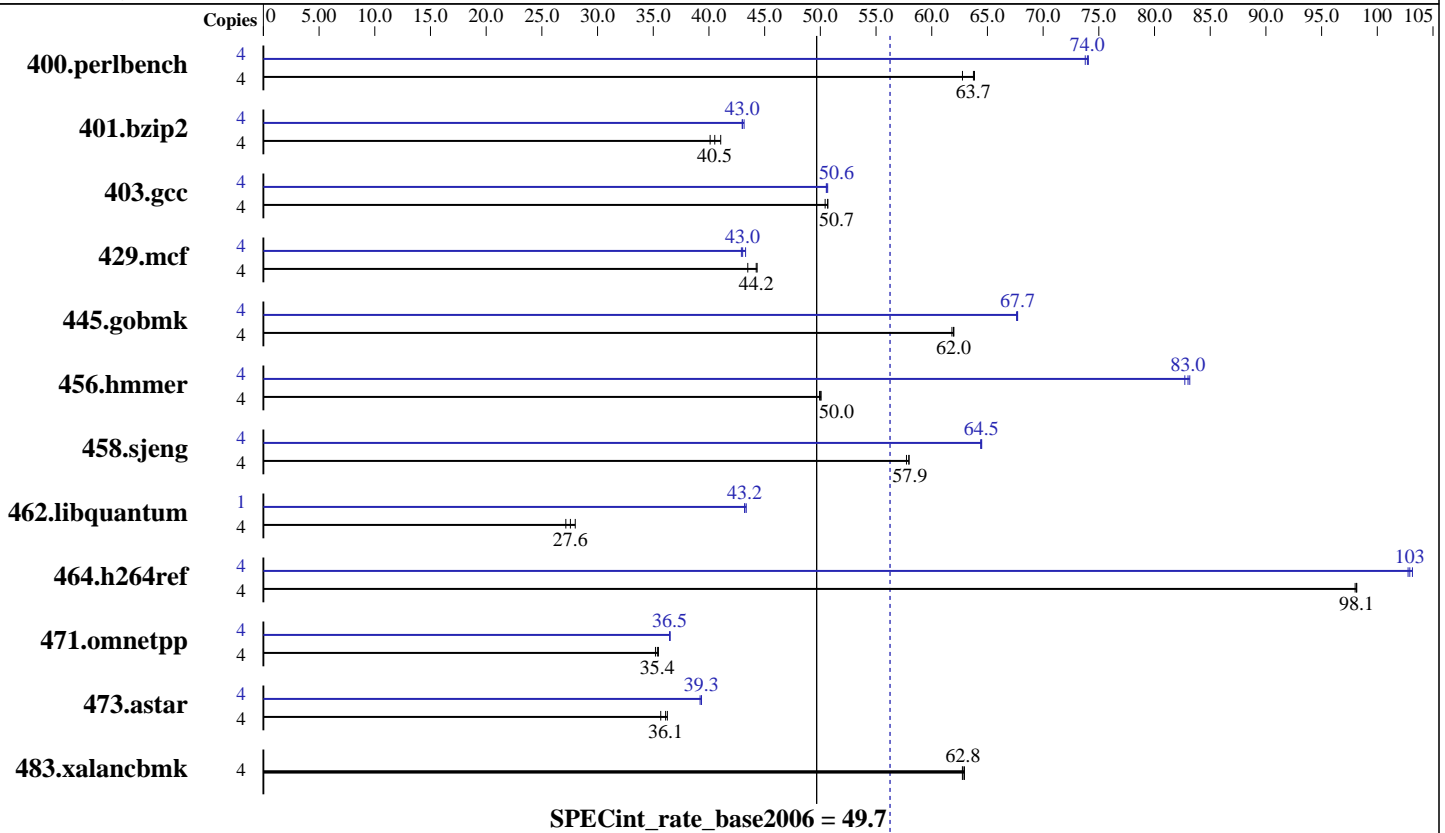
Test date: Sep-2007

Test sponsor: Dell Inc.

Hardware Availability: Jan-2007

Tested by: Dell Inc.

Software Availability: Nov-2007



SPECint\_rate\_base2006 = 49.7

SPECint\_rate2006 = 56.3

### Hardware

CPU Name: Intel Xeon X3220  
 CPU Characteristics: 1066MHz system bus  
 CPU MHz: 2400  
 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: 8 MB I+D on chip per chip, 4 MB shared / 2 cores  
 L3 Cache: None  
 Other Cache: None  
 Memory: 8 GB (4x2 GB 667 MHz DIMM)  
 Disk Subsystem: 1 x 73 GB SAS 10k RPM  
 Other Hardware: None

### Software

Operating System: 64-Bit SUSE LINUX Enterprise Server 10  
 Compiler: Intel C++ Compiler for Linux32 and Linux64 version 10.1 Build 20070725  
 Auto Parallel: Yes  
 File System: ReiserFS  
 System State: Multi-user, run level 3  
 Base Pointers: 32-bit  
 Peak Pointers: 32/64-bit  
 Other Software: SmartHeap library V8.1



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECint\_rate2006 = 56.3

PowerEdge 860 (Intel Xeon X3220, 2.40 GHz)

SPECint\_rate\_base2006 = 49.7

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

Test date: Sep-2007  
Hardware Availability: Jan-2007  
Software Availability: Nov-2007

## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	4	<b>613</b>	<b>63.7</b>	612	63.8	623	62.8	4	528	74.1	<b>528</b>	<b>74.0</b>	530	73.8
401.bzip2	4	<b>953</b>	<b>40.5</b>	962	40.1	940	41.1	4	894	43.2	<b>898</b>	<b>43.0</b>	898	43.0
403.gcc	4	<b>636</b>	<b>50.7</b>	635	50.7	638	50.4	4	637	50.5	636	50.7	<b>637</b>	<b>50.6</b>
429.mcf	4	839	43.5	823	44.3	<b>825</b>	<b>44.2</b>	4	843	43.3	850	42.9	<b>848</b>	<b>43.0</b>
445.gobmk	4	<b>677</b>	<b>62.0</b>	677	62.0	679	61.8	4	621	67.6	620	67.7	<b>620</b>	<b>67.7</b>
456.hammer	4	<b>746</b>	<b>50.0</b>	745	50.1	747	49.9	4	451	82.7	449	83.2	<b>450</b>	<b>83.0</b>
458.sjeng	4	838	57.7	835	58.0	<b>835</b>	<b>57.9</b>	4	<b>751</b>	<b>64.5</b>	752	64.4	751	64.5
462.libquantum	4	3052	27.2	2960	28.0	<b>3007</b>	<b>27.6</b>	1	478	43.3	<b>479</b>	<b>43.2</b>	480	43.2
464.h264ref	4	<b>902</b>	<b>98.1</b>	902	98.2	903	98.0	4	<b>860</b>	<b>103</b>	861	103	858	103
471.omnetpp	4	<b>707</b>	<b>35.4</b>	710	35.2	705	35.5	4	686	36.5	<b>685</b>	<b>36.5</b>	685	36.5
473.astar	4	787	35.7	774	36.3	<b>778</b>	<b>36.1</b>	4	<b>714</b>	<b>39.3</b>	714	39.3	716	39.2
483.xalancbmk	4	<b>439</b>	<b>62.8</b>	440	62.8	439	62.9	4	<b>439</b>	<b>62.8</b>	440	62.8	439	62.9

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

## Compiler Invocation Notes

OMP\_NUM\_THREADS set to number of cores  
KMP\_STACK\_SIZE set to 64M  
KMP\_AFFINITY set to physical,0

## Operating System Notes

'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run  
'/usr/bin/taskset' used to bind processes to CPUs

## Platform Notes

BIOS Settings:  
Adjacent Cache Line Prefetch = Disabled (default Enabled)  
Hardware Prefetcher = Disabled (default Enabled)

## Base Compiler Invocation

C benchmarks:  
icc

C++ benchmarks:  
icpc



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECint\_rate2006 = 56.3

PowerEdge 860 (Intel Xeon X3220, 2.40 GHz)

SPECint\_rate\_base2006 = 49.7

CPU2006 license: 55

Test date: Sep-2007

Test sponsor: Dell Inc.

Hardware Availability: Jan-2007

Tested by: Dell Inc.

Software Availability: Nov-2007

## Base Portability Flags

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

## Base Optimization Flags

C benchmarks:  
-fast -inline-calloc -opt-malloc-options=3  
C++ benchmarks:  
-xT -ipo -O3 -no-prec-div -Wl,-z,muldefs  
-L/home/cmplr/usr3/alrahate/cpu2006.1.0/lib -lsmartheap

## Base Other Flags

C benchmarks:  
403.gcc: -Dalloca=\_alloca

## Peak Compiler Invocation

C benchmarks (except as noted below):  
icc  
401.bzip2: /home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux64/bin/icc  
-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux64/lib  
-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux64/include  
456.hmmer: /home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux64/bin/icc  
-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux64/lib  
-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux64/include  
C++ benchmarks:  
icpc

## Peak Portability Flags

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

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECint\_rate2006 = 56.3

PowerEdge 860 (Intel Xeon X3220, 2.40 GHz)

SPECint\_rate\_base2006 = 49.7

CPU2006 license: 55

Test date: Sep-2007

Test sponsor: Dell Inc.

Hardware Availability: Jan-2007

Tested by: Dell Inc.

Software Availability: Nov-2007

## Peak Portability Flags (Continued)

483.xalanbmk: -DSPEC\_CPU\_LINUX

## Peak Optimization Flags

C benchmarks:

400.perlbench: -prof-gen(pass 1) -prof-use(pass 2) -fast -ansi-alias  
-prefetch

401.bzip2: -prof-gen(pass 1) -prof-use(pass 2) -fast -prefetch

403.gcc: -fast -inline-alloc -opt-malloc-options=3

429.mcf: -fast -prefetch

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

456.hmmer: -fast -unroll2 -ansi-alias -opt-multi-version-aggressive

458.sjeng: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4

462.libquantum: -fast -unroll4 -Ob0 -prefetch  
-opt-streaming-stores always -vec-guard-write  
-opt-malloc-options=3 -parallel -par-runtime-control

464.h264ref: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2  
-ansi-alias

C++ benchmarks:

471.omnetpp: -prof-gen(pass 1) -prof-use(pass 2) -xT -O3 -ipo  
-no-prec-div -ansi-alias -opt-ra-region-strategy=block  
-Wl,-z,muldefs  
-L/home/cmplr/usr3/alrahate/cpu2006.1.0/lib -lsmarheap

473.astar: -prof-gen(pass 1) -prof-use(pass 2) -xT -O3 -ipo  
-no-prec-div -ansi-alias -opt-ra-region-strategy=routine  
-Wl,-z,muldefs  
-L/home/cmplr/usr3/alrahate/cpu2006.1.0/lib -lsmarheap

483.xalanbmk: basepeak = yes



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECint\_rate2006 = 56.3

PowerEdge 860 (Intel Xeon X3220, 2.40 GHz)

SPECint\_rate\_base2006 = 49.7

CPU2006 license: 55

Test date: Sep-2007

Test sponsor: Dell Inc.

Hardware Availability: Jan-2007

Tested by: Dell Inc.

Software Availability: Nov-2007

## 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-ic10-ia32-intel64-linux-flags.20090713.02.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic10-ia32-intel64-linux-flags.20090713.02.xml>

SPEC and SPECint are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

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

Tested with SPEC CPU2006 v1.0.  
Report generated on Tue Jul 22 13:55:42 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 2 October 2007.