



# SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECint®2006 = 27.6

PowerEdge T310 (Intel Core i3-530, 2.93 GHz)

SPECint\_base2006 = 24.6

CPU2006 license: 55

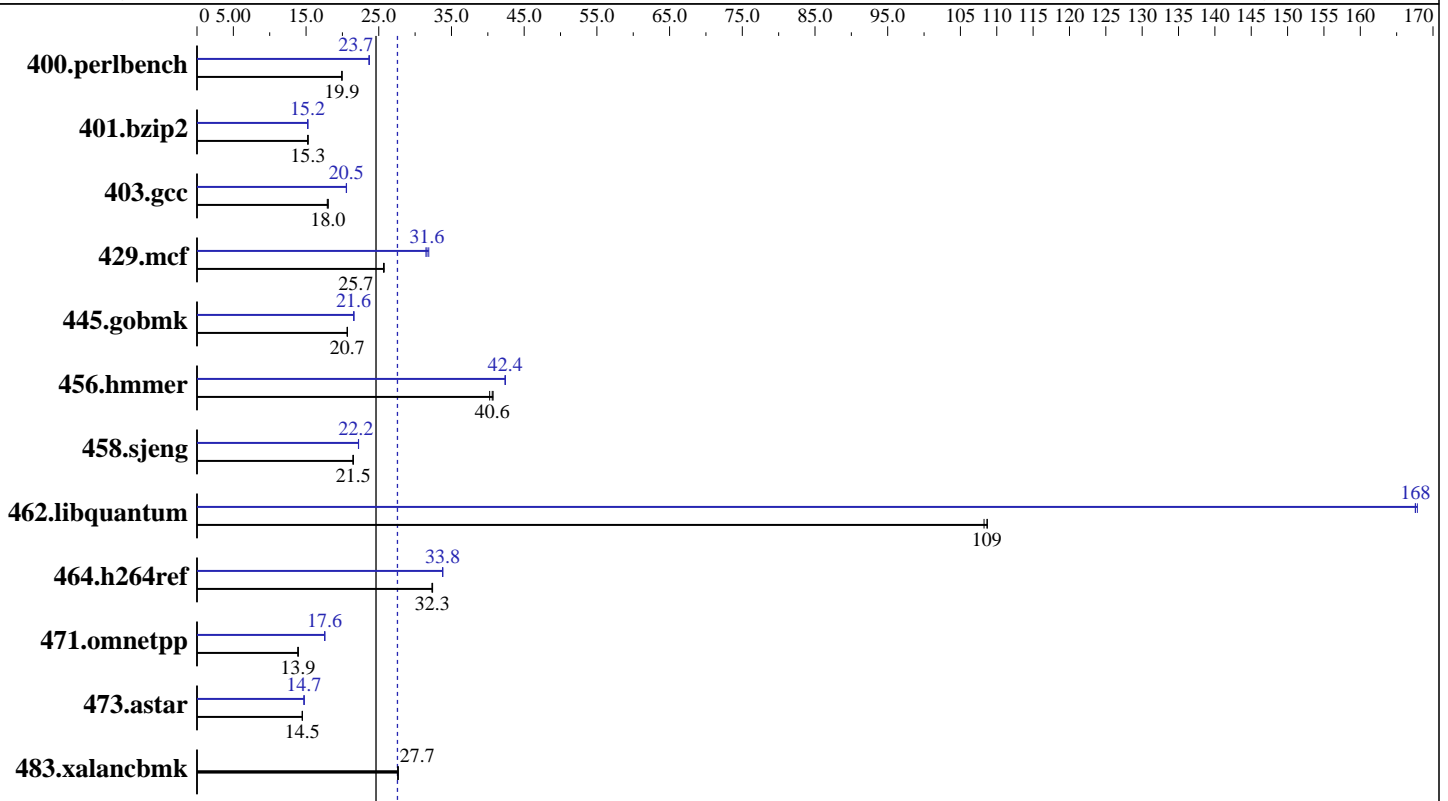
Test date: Jan-2010

Test sponsor: Dell Inc.

Hardware Availability: Jan-2010

Tested by: Dell Inc.

Software Availability: Dec-2009



SPECint\_base2006 = 24.6  
SPECint2006 = 27.6

## Hardware

CPU Name: Intel Core i3-530  
 CPU Characteristics: 2933  
 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: Yes  
 File System: ReiserFS  
 System State: Run level 3 (multi-user)  
 Base Pointers: 64-bit  
 Peak Pointers: 32/64-bit  
 Other Software: Microquill SmartHeap V8.1 Binutils 2.18.50.0.7.20080502



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECint2006 = 27.6

PowerEdge T310 (Intel Core i3-530, 2.93 GHz)

SPECint\_base2006 = 24.6

CPU2006 license: 55

Test date: Jan-2010

Test sponsor: Dell Inc.

Hardware Availability: Jan-2010

Tested by: Dell Inc.

Software Availability: Dec-2009

## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	<b>490</b>	<b>19.9</b>	490	19.9	490	19.9	413	23.7	412	23.7	<b>412</b>	<b>23.7</b>
401.bzip2	631	15.3	<b>633</b>	<b>15.3</b>	634	15.2	<b>633</b>	<b>15.2</b>	633	15.3	635	15.2
403.gcc	<b>447</b>	<b>18.0</b>	446	18.0	449	17.9	391	20.6	<b>392</b>	<b>20.5</b>	392	20.5
429.mcf	354	25.8	355	25.7	<b>355</b>	<b>25.7</b>	<b>288</b>	<b>31.6</b>	290	31.5	286	31.9
445.gobmk	507	20.7	<b>508</b>	<b>20.7</b>	508	20.7	486	21.6	<b>486</b>	<b>21.6</b>	486	21.6
456.hammer	229	40.7	232	40.3	<b>230</b>	<b>40.6</b>	<b>220</b>	<b>42.4</b>	220	42.4	220	42.4
458.sjeng	<b>563</b>	<b>21.5</b>	564	21.5	563	21.5	<b>545</b>	<b>22.2</b>	545	22.2	544	22.2
462.libquantum	191	109	<b>191</b>	<b>109</b>	191	108	123	168	<b>124</b>	<b>168</b>	124	168
464.h264ref	<b>684</b>	<b>32.3</b>	683	32.4	684	32.3	<b>655</b>	<b>33.8</b>	655	33.8	655	33.8
471.omnetpp	448	13.9	<b>450</b>	<b>13.9</b>	451	13.9	356	17.6	356	17.6	<b>356</b>	<b>17.6</b>
473.astar	<b>484</b>	<b>14.5</b>	485	14.5	484	14.5	<b>477</b>	<b>14.7</b>	476	14.7	477	14.7
483.xalancbmk	249	27.7	<b>249</b>	<b>27.7</b>	250	27.6	249	27.7	<b>249</b>	<b>27.7</b>	250	27.6

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

OMP\_NUM\_THREADS set to number of cores  
KMP\_AFFINITY set to granularity=fine,scatter  
The Dell PowerEdge T310 and the Bull NovaScale T820 F2 models are electronically equivalent.  
This result was measured on a Dell PowerEdge T310.

## Base Compiler Invocation

C benchmarks:  
icc -m64

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECint2006 = 27.6

PowerEdge T310 (Intel Core i3-530, 2.93 GHz)

SPECint\_base2006 = 24.6

CPU2006 license: 55

Test date: Jan-2010

Test sponsor: Dell Inc.

Hardware Availability: Jan-2010

Tested by: Dell Inc.

Software Availability: Dec-2009

## 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:  
-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/libic11.1-64bit -lsmartheap64

## Base Other Flags

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

## Peak Compiler Invocation

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

400.perlbench: icc -m32

429.mcf: icc -m32

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECint2006 = 27.6

PowerEdge T310 (Intel Core i3-530, 2.93 GHz)

SPECint\_base2006 = 24.6

CPU2006 license: 55

Test date: Jan-2010

Test sponsor: Dell Inc.

Hardware Availability: Jan-2010

Tested by: Dell Inc.

Software Availability: Dec-2009

## Peak Compiler Invocation (Continued)

445.gobmk: `icc -m32`

464.h264ref: `icc -m32`

C++ benchmarks (except as noted below):

`icpc -m64`

471.omnetpp: `icpc -m32`

## Peak Portability Flags

400.perlbench: `-DSPEC_CPU_LINUX_X64`  
 401.bzip2: `-DSPEC_CPU_LP64`  
 403.gcc: `-DSPEC_CPU_LP64`  
 456.hmmer: `-DSPEC_CPU_LP64`  
 458.sjeng: `-DSPEC_CPU_LP64`  
 462.libquantum: `-DSPEC_CPU_LP64 -DSPEC_CPU_LINUX`  
 473.astar: `-DSPEC_CPU_LP64`  
 483.xalancbmk: `-DSPEC_CPU_LP64 -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 -opt-prefetch`

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

403.gcc: `-xSSE4.2 -ipo -O3 -no-prec-div -static -inline-alloc -opt-malloc-options=3 -auto-ilp32`

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`

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECint2006 = 27.6

PowerEdge T310 (Intel Core i3-530, 2.93 GHz)

SPECint\_base2006 = 24.6

CPU2006 license: 55

Test date: Jan-2010

Test sponsor: Dell Inc.

Hardware Availability: Jan-2010

Tested by: Dell Inc.

Software Availability: Dec-2009

## Peak Optimization Flags (Continued)

462.libquantum: -xSSE4.2 -ipo -O3 -no-prec-div -static -parallel  
-opt-prefetch -par-schedule-static=32768 -ansi-alias

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

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>

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 v1.1.  
Report generated on Wed Jul 23 06:39:32 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 16 February 2010.