



# SPEC<sup>®</sup> CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECint<sup>®</sup>2006 = 26.0

PowerEdge R810 (Intel Xeon E7540, 2.00 GHz)

SPECint\_base2006 = 23.4

CPU2006 license: 55

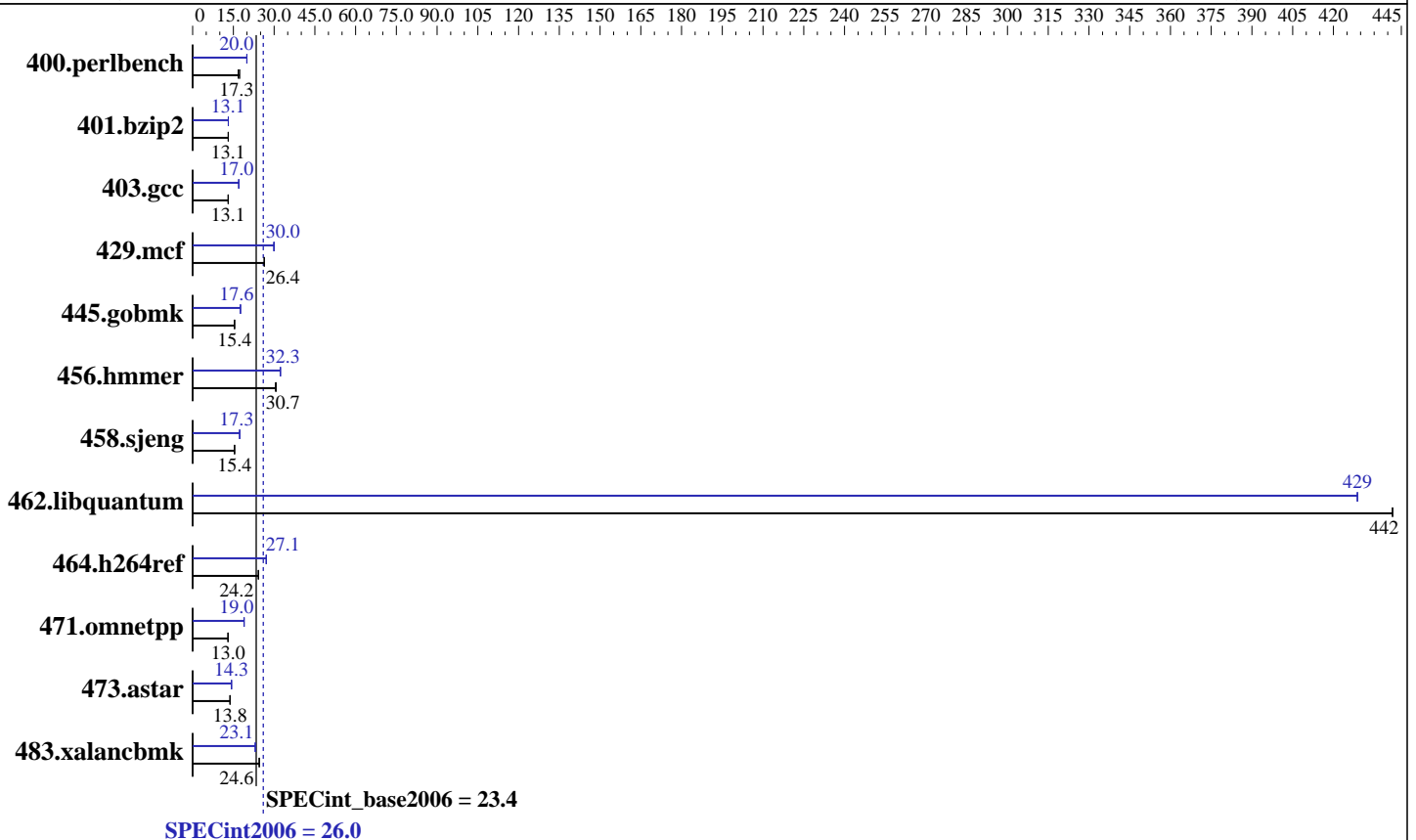
Test date: Mar-2010

Test sponsor: Dell Inc.

Hardware Availability: Mar-2010

Tested by: Dell Inc.

Software Availability: Dec-2009



## Hardware

CPU Name: Intel Xeon E7540  
 CPU Characteristics: Intel Turbo Boost Technology up to 2.27 GHz  
 CPU MHz: 2000  
 FPU: Integrated  
 CPU(s) enabled: 12 cores, 2 chips, 6 cores/chip, 2 threads/core  
 CPU(s) orderable: 2 chips  
 Primary Cache: 32 KB I + 32 KB D on chip per core  
 Secondary Cache: 256 KB I+D on chip per core  
 L3 Cache: 18 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 128 GB (32 x 4 GB DDR3-1066 QR RDIMM)  
 Disk Subsystem: 6 x 73 GB 15000 RPM SAS  
 Other Hardware: None

## Software

Operating System: Red Hat Enterprise Linux 5 (x86\_64) Update 4 errata kernel (RHEL 5.4.z) kernel-2.6.18-164.9.1.el5.x86\_64  
 Compiler: Intel C++ Professional Compiler for IA32 and Intel 64, Version 11.1 Build 20091130 Package ID: l\_cproc\_p\_11.1.064  
 Auto Parallel: Yes  
 File System: ext3  
 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 = 26.0

PowerEdge R810 (Intel Xeon E7540, 2.00 GHz)

SPECint\_base2006 = 23.4

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

Test date: Mar-2010  
Hardware Availability: Mar-2010  
Software Availability: Dec-2009

## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	583	16.8	566	17.3	<b>566</b>	<b>17.3</b>	<b>489</b>	<b>20.0</b>	488	20.0	491	19.9
401.bzip2	<b>736</b>	<b>13.1</b>	737	13.1	736	13.1	<b>735</b>	<b>13.1</b>	734	13.2	735	13.1
403.gcc	613	13.1	618	13.0	<b>614</b>	<b>13.1</b>	473	17.0	<b>474</b>	<b>17.0</b>	475	17.0
429.mcf	346	26.3	345	26.4	<b>346</b>	<b>26.4</b>	306	29.8	<b>304</b>	<b>30.0</b>	303	30.1
445.gobmk	<b>679</b>	<b>15.4</b>	681	15.4	679	15.4	595	17.6	<b>595</b>	<b>17.6</b>	597	17.6
456.hammer	303	30.8	<b>304</b>	<b>30.7</b>	306	30.5	289	32.3	<b>289</b>	<b>32.3</b>	289	32.3
458.sjeng	<b>784</b>	<b>15.4</b>	784	15.4	784	15.4	698	17.3	700	17.3	<b>699</b>	<b>17.3</b>
462.libquantum	46.9	442	46.9	442	<b>46.9</b>	<b>442</b>	<b>48.3</b>	<b>429</b>	48.3	429	48.3	429
464.h264ref	<b>913</b>	<b>24.2</b>	916	24.2	913	24.2	816	27.1	<b>816</b>	<b>27.1</b>	818	27.1
471.omnetpp	<b>480</b>	<b>13.0</b>	479	13.1	481	13.0	<b>330</b>	<b>19.0</b>	330	18.9	329	19.0
473.astar	<b>510</b>	<b>13.8</b>	511	13.7	509	13.8	<b>490</b>	<b>14.3</b>	491	14.3	490	14.3
483.xalancbmk	281	24.6	282	24.5	<b>281</b>	<b>24.6</b>	299	23.0	<b>299</b>	<b>23.1</b>	299	23.1

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

## Operating System Notes

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

## Platform Notes

vm.zone\_reclaim\_mode = 1 in /etc/sysctl.conf file  
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

## Base Compiler Invocation

C benchmarks:  
icc -m64  
  
C++ benchmarks:  
icpc -m64



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECint2006 = 26.0

PowerEdge R810 (Intel Xeon E7540, 2.00 GHz)

SPECint\_base2006 = 23.4

CPU2006 license: 55

Test date: Mar-2010

Test sponsor: Dell Inc.

Hardware Availability: Mar-2010

Tested by: Dell Inc.

Software Availability: Dec-2009

## 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 -parallel -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

445.gobmk: icc -m32

464.h264ref: icc -m32

C++ benchmarks (except as noted below):

icpc -m32

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECint2006 = 26.0

PowerEdge R810 (Intel Xeon E7540, 2.00 GHz)

SPECint\_base2006 = 23.4

CPU2006 license: 55

Test date: Mar-2010

Test sponsor: Dell Inc.

Hardware Availability: Mar-2010

Tested by: Dell Inc.

Software Availability: Dec-2009

## Peak Compiler Invocation (Continued)

473.astar: icpc -m64

## Peak Portability Flags

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

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

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECint2006 = 26.0

PowerEdge R810 (Intel Xeon E7540, 2.00 GHz)

SPECint\_base2006 = 23.4

CPU2006 license: 55

Test date: Mar-2010

Test sponsor: Dell Inc.

Hardware Availability: Mar-2010

Tested by: Dell Inc.

Software Availability: Dec-2009

## Peak Optimization Flags (Continued)

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.xalancbmk: -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
```

## 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-linux64-revE.20100330.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic11.1-linux64-revE.20100330.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 07:17:38 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 27 April 2010.