



# SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## IBM Corporation

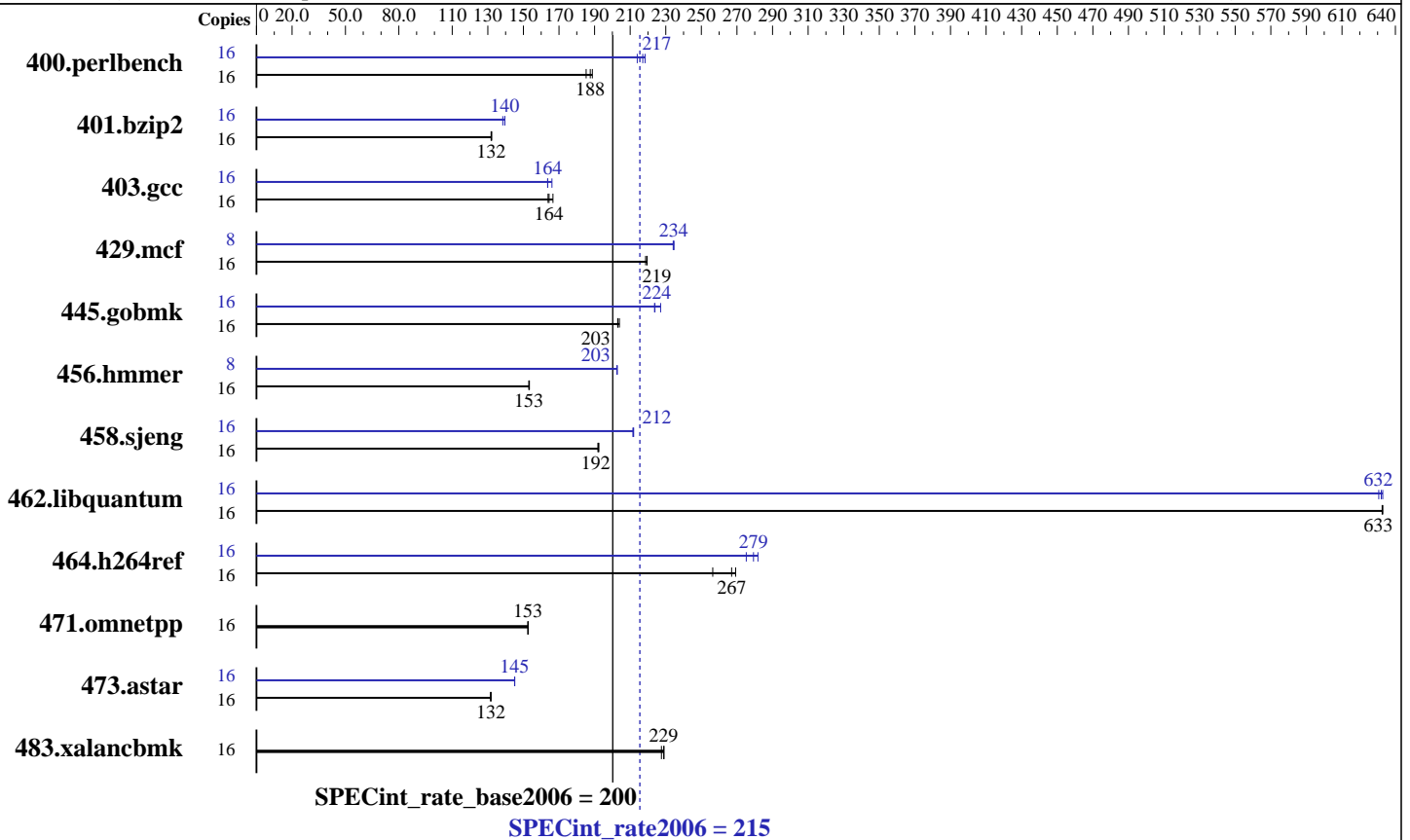
### SPECint®\_rate2006 = 215

### IBM BladeCenter HS22 (Intel Xeon E5540)

### SPECint\_rate\_base2006 = 200

CPU2006 license: 11  
Test sponsor: IBM Corporation  
Tested by: IBM Corporation

Test date: Jul-2009  
Hardware Availability: Apr-2009  
Software Availability: Feb-2009



#### Hardware

CPU Name: Intel Xeon E5540  
 CPU Characteristics: Intel Turbo Boost Technology up to 2.80 GHz  
 CPU MHz: 2533  
 FPU: Integrated  
 CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip, 2 threads/core  
 CPU(s) orderable: 1,2 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: 8 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 24 GB (12 x 2 GB PC3-10600R, 2 Rank, running at 1066 MHz)  
 Disk Subsystem: 1 x 73 GB SAS, 10000 RPM  
 Other Hardware: None

#### Software

Operating System: SuSE Linux Enterprise Server 10 (x86\_64) SP2 with patch Linux kernel 20090119, Kernel 2.6.16.60-0.34-smp  
 Compiler: Intel C++ Compiler Professional 11.0 for Linux Build 20090131 Package ID: l\_cproc\_p\_11.0.080  
 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



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

SPECint\_rate2006 = 215

IBM BladeCenter HS22 (Intel Xeon E5540)

SPECint\_rate\_base2006 = 200

CPU2006 license: 11  
Test sponsor: IBM Corporation  
Tested by: IBM Corporation

Test date: Jul-2009  
Hardware Availability: Apr-2009  
Software Availability: Feb-2009

## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	16	844	185	828	189	<u>833</u>	<u>188</u>	16	731	214	<u>720</u>	<u>217</u>	716	218
401.bzip2	16	1171	132	<u>1170</u>	<u>132</u>	1168	132	16	1115	138	1106	140	<u>1106</u>	<u>140</u>
403.gcc	16	773	167	786	164	<u>783</u>	<u>164</u>	16	776	166	787	164	<u>787</u>	<u>164</u>
429.mcf	16	<u>665</u>	<u>219</u>	665	220	667	219	8	311	235	312	234	<u>311</u>	<u>234</u>
445.gobmk	16	823	204	827	203	<u>826</u>	<u>203</u>	16	739	227	<u>750</u>	<u>224</u>	750	224
456.hammer	16	973	153	<u>975</u>	<u>153</u>	975	153	8	368	203	368	203	<u>368</u>	<u>203</u>
458.sjeng	16	<u>1008</u>	<u>192</u>	1009	192	1006	192	16	915	212	<u>914</u>	<u>212</u>	914	212
462.libquantum	16	524	633	<u>524</u>	<u>633</u>	524	633	16	526	631	524	633	<u>524</u>	<u>632</u>
464.h264ref	16	1315	269	<u>1326</u>	<u>267</u>	1381	256	16	1257	282	<u>1268</u>	<u>279</u>	1286	275
471.omnetpp	16	656	153	<u>655</u>	<u>153</u>	655	153	16	656	153	<u>655</u>	<u>153</u>	655	153
473.astar	16	<u>853</u>	<u>132</u>	854	132	852	132	16	774	145	<u>774</u>	<u>145</u>	774	145
483.xalancbmk	16	<u>482</u>	<u>229</u>	482	229	485	228	16	<u>482</u>	<u>229</u>	482	229	485	228

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

## General Notes

'ulimit -s unlimited' was used to set the stack size to unlimited prior to run  
Processor CPU C-States Enabled

## Base Compiler Invocation

C benchmarks:  
icc  
  
C++ benchmarks:  
icpc

## Base Portability Flags

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



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

SPECint\_rate2006 = 215

IBM BladeCenter HS22 (Intel Xeon E5540)

SPECint\_rate\_base2006 = 200

CPU2006 license: 11

Test sponsor: IBM Corporation

Tested by: IBM Corporation

Test date: Jul-2009

Hardware Availability: Apr-2009

Software Availability: Feb-2009

## Base Optimization Flags

C benchmarks:

```
-xSSE4.2 -ipo -O3 -no-prec-div -static -inline-calloc  
-opt-malloc-options=3 -opt-prefetch
```

C++ benchmarks:

```
-xSSE4.2 -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/11.0/080/bin/intel64/icc
```

```
456.hmmer: /opt/intel/Compiler/11.0/080/bin/intel64/icc
```

```
458.sjeng: /opt/intel/Compiler/11.0/080/bin/intel64/icc
```

C++ benchmarks (except as noted below):

icpc

```
473.astar: /opt/intel/Compiler/11.0/080/bin/intel64/icpc
```

## Peak Portability Flags

```
400.perlbench: -DSPEC_CPU_LINUX_IA32
```

```
401.bzip2: -DSPEC_CPU_LP64
```

```
456.hmmer: -DSPEC_CPU_LP64
```

```
458.sjeng: -DSPEC_CPU_LP64
```

```
462.libquantum: -DSPEC_CPU_LINUX
```

```
473.astar: -DSPEC_CPU_LP64
```

```
483.xalancbmk: -DSPEC_CPU_LINUX
```



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

SPECint\_rate2006 = 215

IBM BladeCenter HS22 (Intel Xeon E5540)

SPECint\_rate\_base2006 = 200

CPU2006 license: 11

Test date: Jul-2009

Test sponsor: IBM Corporation

Hardware Availability: Apr-2009

Tested by: IBM Corporation

Software Availability: Feb-2009

## 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(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 -inline-calloc  
 -opt-malloc-options=3

429.mcf: -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

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: -xSSE4.2 -ipo -O3 -no-prec-div -static  
 -opt-malloc-options=3 -opt-prefetch

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: basepeak = yes

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 -auto-ilp32  
 -Wl,-z,muldefs -L/spec/cpu2006.1.1/lib -lsmarheap64

483.xalancbmk: basepeak = yes



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

SPECint\_rate2006 = 215

IBM BladeCenter HS22 (Intel Xeon E5540)

SPECint\_rate\_base2006 = 200

CPU2006 license: 11

Test sponsor: IBM Corporation

Tested by: IBM Corporation

Test date: Jul-2009

Hardware Availability: Apr-2009

Software Availability: Feb-2009

## 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-ic11.0-int-linux64-revA.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-int-linux64-revA.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 03:15:43 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 5 August 2009.