



# SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## IBM Corporation

**SPECint®2006 = 34.4**

### IBM System x3650 M2 (Intel Xeon X5560)

**SPECint\_base2006 = 30.5**

CPU2006 license: 11

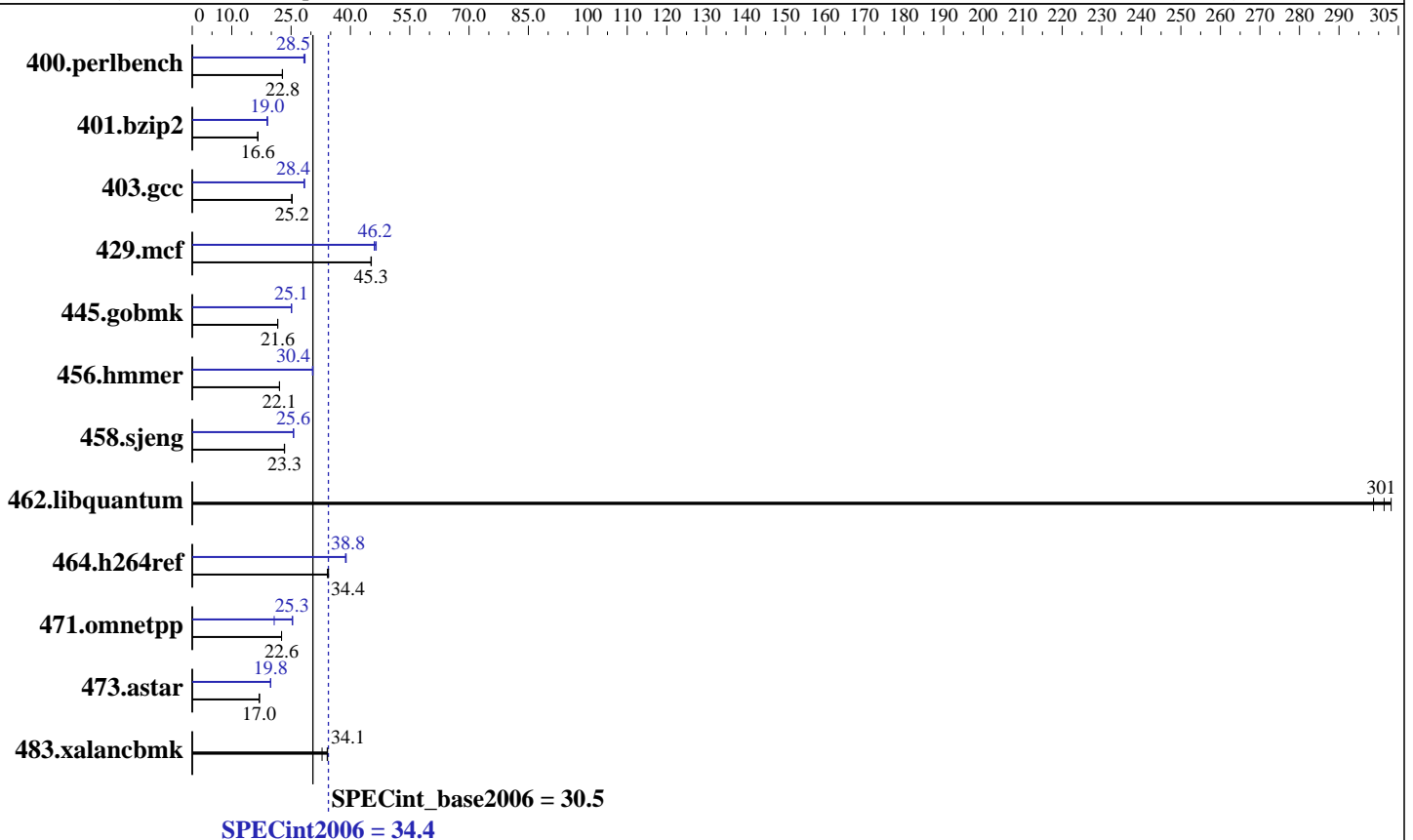
Test date: May-2009

Test sponsor: IBM Corporation

Hardware Availability: Apr-2009

Tested by: IBM Corporation

Software Availability: Feb-2009



### Hardware

CPU Name: Intel Xeon X5560  
 CPU Characteristics: Intel Turbo Boost Technology up to 3.20 GHz  
 CPU MHz: 2800  
 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 (6 x 4 GB PC3-10600R)  
 Disk Subsystem: 1 x 73 GB SAS, 15000 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: Yes  
 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

SPECint2006 = 34.4

IBM System x3650 M2 (Intel Xeon X5560)

SPECint\_base2006 = 30.5

CPU2006 license: 11

Test date: May-2009

Test sponsor: IBM Corporation

Hardware Availability: Apr-2009

Tested by: IBM Corporation

Software Availability: Feb-2009

## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	<b><u>428</u></b>	<b><u>22.8</u></b>	428	22.8	429	22.8	<b><u>343</u></b>	<b><u>28.5</u></b>	346	28.2	343	28.5
401.bzip2	582	16.6	<b><u>582</u></b>	<b><u>16.6</u></b>	581	16.6	507	19.0	508	19.0	<b><u>508</u></b>	<b><u>19.0</u></b>
403.gcc	318	25.3	320	25.1	<b><u>319</u></b>	<b><u>25.2</u></b>	284	28.3	<b><u>284</u></b>	<b><u>28.4</u></b>	284	28.4
429.mcf	201	45.3	<b><u>202</u></b>	<b><u>45.3</u></b>	202	45.2	196	46.5	198	46.0	<b><u>197</u></b>	<b><u>46.2</u></b>
445.gobmk	485	21.6	<b><u>485</u></b>	<b><u>21.6</u></b>	486	21.6	418	25.1	<b><u>418</u></b>	<b><u>25.1</u></b>	418	25.1
456.hammer	422	22.1	<b><u>423</u></b>	<b><u>22.1</u></b>	423	22.1	<b><u>306</u></b>	<b><u>30.4</u></b>	305	30.5	307	30.4
458.sjeng	518	23.4	520	23.3	<b><u>518</u></b>	<b><u>23.3</u></b>	<b><u>472</u></b>	<b><u>25.6</u></b>	473	25.6	472	25.6
462.libquantum	<b><u>68.7</u></b>	<b><u>301</u></b>	68.3	303	69.4	299	<b><u>68.7</u></b>	<b><u>301</u></b>	68.3	303	69.4	299
464.h264ref	642	34.5	648	34.2	<b><u>644</u></b>	<b><u>34.4</u></b>	<b><u>570</u></b>	<b><u>38.8</u></b>	571	38.8	568	38.9
471.omnetpp	277	22.6	277	22.6	<b><u>277</u></b>	<b><u>22.6</u></b>	<b><u>247</u></b>	<b><u>25.3</u></b>	302	20.7	246	25.4
473.astar	415	16.9	412	17.0	<b><u>414</u></b>	<b><u>17.0</u></b>	354	19.8	354	19.8	<b><u>354</u></b>	<b><u>19.8</u></b>
483.xalancbmk	202	34.2	210	32.8	<b><u>202</u></b>	<b><u>34.1</u></b>	202	34.2	210	32.8	<b><u>202</u></b>	<b><u>34.1</u></b>

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

## General Notes

'ulimit -s unlimited' was used to set the stack size to unlimited prior to run  
OMP\_NUM\_THREADS set to number of cores  
KMP\_AFFINITY set to granularity=fine,scatter  
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

SPECint2006 = 34.4

IBM System x3650 M2 (Intel Xeon X5560)

SPECint\_base2006 = 30.5

CPU2006 license: 11

Test date: May-2009

Test sponsor: IBM Corporation

Hardware Availability: Apr-2009

Tested by: IBM Corporation

Software Availability: Feb-2009

## Base Optimization Flags

C benchmarks:

```
-xSSE4.2 -ipo -O3 -no-prec-div -static -parallel  
-par-runtime-control -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

SPECint2006 = 34.4

IBM System x3650 M2 (Intel Xeon X5560)

SPECint\_base2006 = 30.5

CPU2006 license: 11

Test date: May-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) -auto-ilp32 -opt-prefetch -ansi-alias

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

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/spec/cpu2006.1.1/lib -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 -auto-ilp32  
 -Wl,-z,muldefs -L/spec/cpu2006.1.1/lib -lsmartheap64

483.xalancbmk: basepeak = yes



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

SPECint2006 = 34.4

IBM System x3650 M2 (Intel Xeon X5560)

SPECint\_base2006 = 30.5

CPU2006 license: 11

Test sponsor: IBM Corporation

Tested by: IBM Corporation

Test date: May-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 01:51:35 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 25 June 2009.