



# SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## IBM Corporation

**SPECint®2006 = 11.7**

### IBM BladeCenter LS41 (AMD Opteron 8216)

**SPECint\_base2006 = 10.6**

CPU2006 license: 11

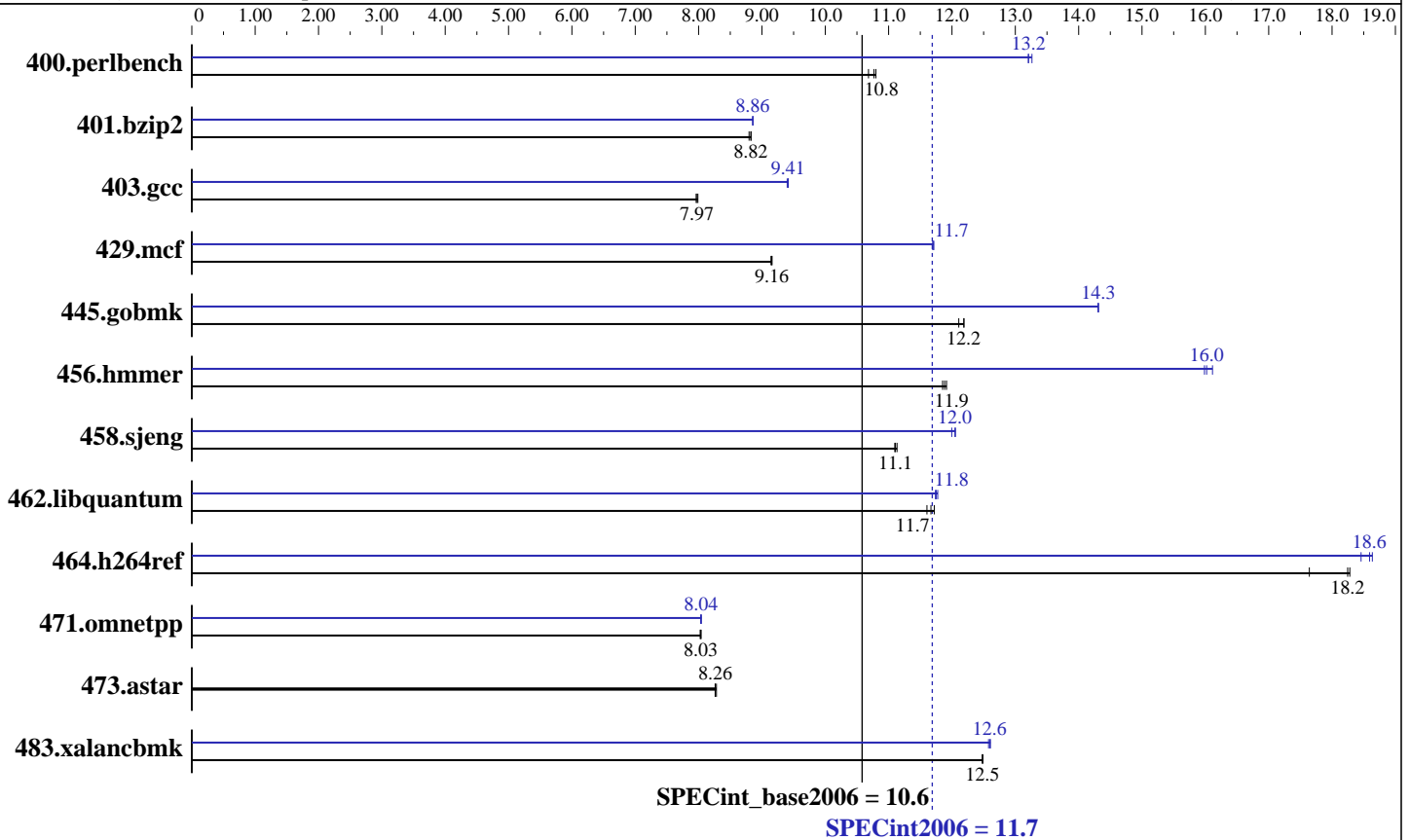
Test sponsor: IBM Corporation

Tested by: IBM Corporation

Test date: Jul-2007

Hardware Availability: Oct-2006

Software Availability: Mar-2007



### Hardware

CPU Name: AMD Opteron 8216  
 CPU Characteristics:  
 CPU MHz: 2400  
 FPU: Integrated  
 CPU(s) enabled: 8 cores, 4 chips, 2 cores/chip  
 CPU(s) orderable: 1, 2, 3, 4 chips  
 Primary Cache: 64 KB I + 64 KB D on chip per core  
 Secondary Cache: 1 MB I+D on chip per core  
 L3 Cache: None  
 Other Cache: None  
 Memory: 32 GB (16 x 2GB DDR2-5300 ECC)  
 Disk Subsystem: 1 x 36 GB SAS, 10000 RPM  
 Other Hardware: None

### Software

Operating System: SLES 10 (x86\_64), 2.6.16.21-0.8-smp  
 Compiler: QLogic PathScale Compiler Suite, Release 3.0  
 Auto Parallel: No  
 File System: ext3  
 System State: Multi-user, run level 3  
 Base Pointers: 32/64-bit  
 Peak Pointers: 32/64-bit  
 Other Software: MicroQuill SmartHeap 8.1



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## IBM Corporation

SPECint2006 = **11.7**

## IBM BladeCenter LS41 (AMD Opteron 8216)

SPECint\_base2006 = **10.6**

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

Test date: Jul-2007  
Hardware Availability: Oct-2006  
Software Availability: Mar-2007

### Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	915	10.7	<b>907</b>	<b>10.8</b>	905	10.8	<b>740</b>	<b>13.2</b>	737	13.3	740	13.2
401.bzip2	1093	8.83	1097	8.80	<b>1094</b>	<b>8.82</b>	<b>1090</b>	<b>8.86</b>	1090	8.85	1089	8.86
403.gcc	1008	7.99	1011	7.96	<b>1009</b>	<b>7.97</b>	<b>855</b>	<b>9.41</b>	857	9.40	855	9.41
429.mcf	<b>996</b>	<b>9.16</b>	998	9.14	996	9.16	780	11.7	779	11.7	<b>779</b>	<b>11.7</b>
445.gobmk	866	12.1	<b>861</b>	<b>12.2</b>	861	12.2	733	14.3	733	14.3	<b>733</b>	<b>14.3</b>
456.hmmmer	783	11.9	787	11.9	<b>785</b>	<b>11.9</b>	<b>582</b>	<b>16.0</b>	579	16.1	584	16.0
458.sjeng	<b>1089</b>	<b>11.1</b>	1087	11.1	1090	11.1	<b>1004</b>	<b>12.0</b>	1009	12.0	1004	12.1
462.libquantum	1785	11.6	<b>1776</b>	<b>11.7</b>	1768	11.7	1765	11.7	<b>1763</b>	<b>11.8</b>	1760	11.8
464.h264ref	<b>1213</b>	<b>18.2</b>	1254	17.6	1211	18.3	1187	18.6	<b>1190</b>	<b>18.6</b>	1199	18.5
471.omnetpp	<b>778</b>	<b>8.03</b>	779	8.02	777	8.04	778	8.03	<b>777</b>	<b>8.04</b>	777	8.04
473.astar	850	8.26	848	8.28	<b>849</b>	<b>8.26</b>	850	8.26	848	8.28	<b>849</b>	<b>8.26</b>
483.xalancbmk	<b>553</b>	<b>12.5</b>	553	12.5	553	12.5	547	12.6	<b>548</b>	<b>12.6</b>	549	12.6

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

### General Notes

taskset utility used to bind CPU(s) to processes

### Base Compiler Invocation

C benchmarks:  
pathcc

C++ benchmarks:  
pathCC

### 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.hmmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
464.h264ref: -DSPEC_CPU_LP64
483.xalancbmk: -DSPEC_CPU_LINUX

```



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

SPECint2006 = 11.7

IBM BladeCenter LS41 (AMD Opteron 8216)

SPECint\_base2006 = 10.6

CPU2006 license: 11

Test date: Jul-2007

Test sponsor: IBM Corporation

Hardware Availability: Oct-2006

Tested by: IBM Corporation

Software Availability: Mar-2007

## Base Optimization Flags

C benchmarks:

-Ofast -OPT:malloc\_alg=1

C++ benchmarks:

-Ofast -m32 -L/tools/SmartHeap\_8.1/lib -lsmartheap

## Base Other Flags

C benchmarks:

-IPA:max\_jobs=2

C++ benchmarks:

-IPA:max\_jobs=2

## Peak Compiler Invocation

C benchmarks:

pathcc

C++ benchmarks:

pathCC

## Peak Portability Flags

400.perlbench: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX\_X64  
401.bzip2: -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  
483.xalancbmk: -DSPEC\_CPU\_LINUX

## Peak Optimization Flags

C benchmarks:

400.perlbench: -fb\_create fbdata(pass 1) -fb\_opt fbdata(pass 2) -Ofast  
-LNO:opt=0

401.bzip2: -O3 -LNO:ou\_prod\_max=10 -OPT:Ofast -OPT:alias=disjoint

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

SPECint2006 = 11.7

IBM BladeCenter LS41 (AMD Opteron 8216)

SPECint\_base2006 = 10.6

CPU2006 license: 11

Test date: Jul-2007

Test sponsor: IBM Corporation

Hardware Availability: Oct-2006

Tested by: IBM Corporation

Software Availability: Mar-2007

## Peak Optimization Flags (Continued)

403.gcc: -fb\_create fbdata(pass 1) -fb\_opt fbdata(pass 2) -m32 -O3  
-OPT:Ofast

429.mcf: -m32 -O3 -ipa -L/tools/SmartHeap\_8.1/lib -lsmartheap

445.gobmk: -fb\_create fbdata(pass 1) -fb\_opt fbdata(pass 2) -O3  
-OPT:alias=disjoint -LNO:simd=0 -LNO:minvariant=off  
-WOPT:retype\_expr=on

456.hmmer: -O2 -OPT:alias=disjoint -OPT:malloc\_alg=1 -CG:cflow=0

458.sjeng: -fb\_create fbdata(pass 1) -fb\_opt fbdata(pass 2) -O3  
-IPA:plimit=50000 -IPA:pu\_reorder=2

462.libquantum: -O3 -ipa -CG:local\_fwd\_sched=on -IPA:space=1000

464.h264ref: -fb\_create fbdata(pass 1) -fb\_opt fbdata(pass 2) -O3  
-IPA:plimit=20000 -OPT:alias=disjoint -LNO:prefetch=0

C++ benchmarks:

471.omnetpp: -Ofast -CG:gcm=off -m32  
-L/tools/SmartHeap\_8.1/lib -lsmartheap

473.astar: basepeak = yes

483.xalancbmk: -Ofast -m32 -OPT:unroll\_times\_max=8  
-L/tools/SmartHeap\_8.1/lib -lsmartheap

## Peak Other Flags

C benchmarks:

-IPA:max\_jobs=2

C++ benchmarks:

-IPA:max\_jobs=2

The flags file that was used to format this result can be browsed at

[http://www.spec.org/cpu2006/flags/CPU2006\\_flags.20090714.13.html](http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.13.html)

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

[http://www.spec.org/cpu2006/flags/CPU2006\\_flags.20090714.13.xml](http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.13.xml)



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

SPECint2006 = 11.7

IBM BladeCenter LS41 (AMD Opteron 8216)

SPECint\_base2006 = 10.6

CPU2006 license: 11

Test date: Jul-2007

Test sponsor: IBM Corporation

Hardware Availability: Oct-2006

Tested by: IBM Corporation

Software Availability: Mar-2007

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 12:23:19 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 21 August 2007.