



# SPEC® CINT2006 Result

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## IBM Corporation

SPECint®\_rate2006 = 153

### IBM BladeCenter HS22V (Intel Xeon E5507)

SPECint\_rate\_base2006 = 144

CPU2006 license: 11

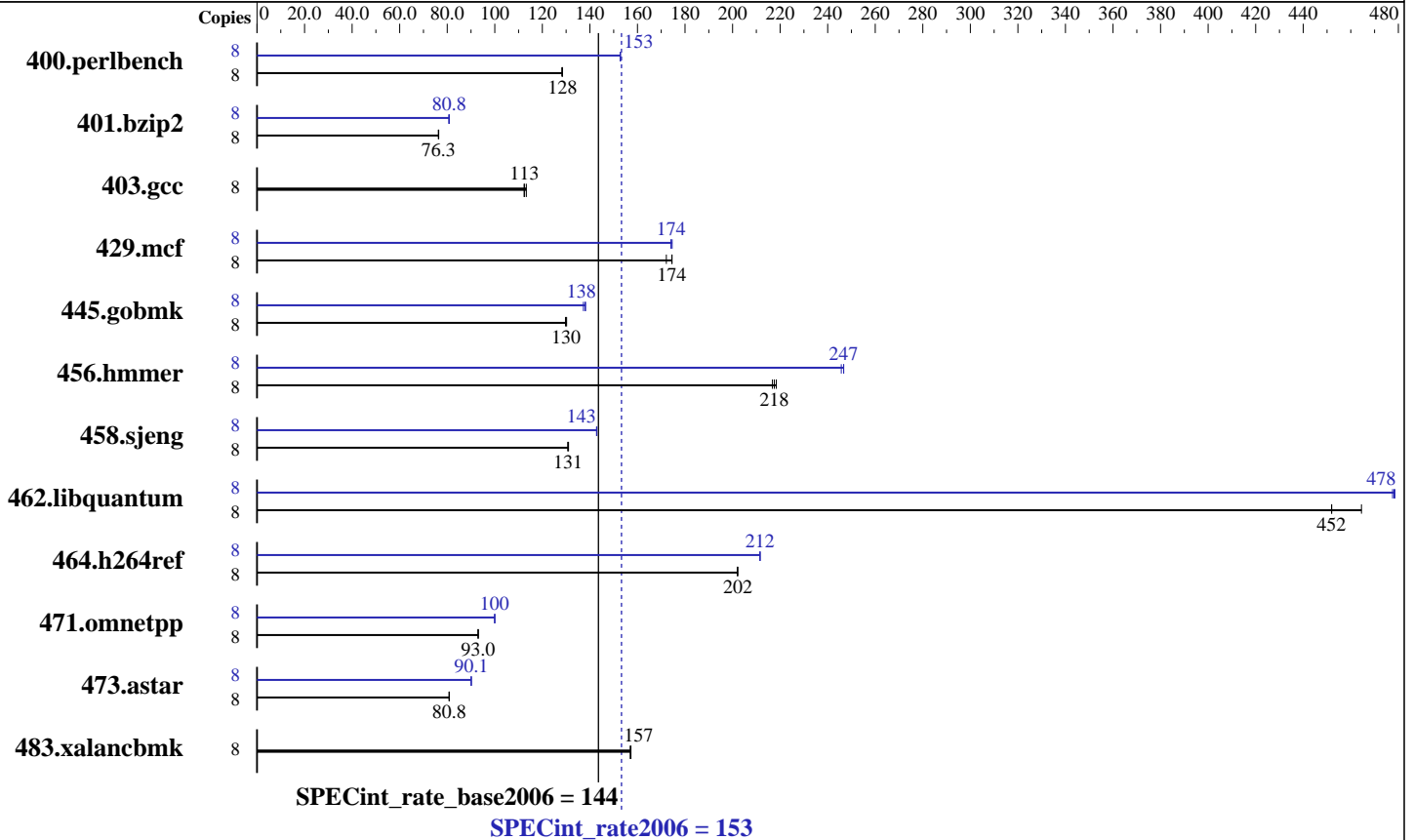
Test sponsor: IBM Corporation

Tested by: IBM Corporation

Test date: Oct-2010

Hardware Availability: Mar-2010

Software Availability: Jan-2010



### Hardware

CPU Name: Intel Xeon E5507  
 CPU Characteristics:  
 CPU MHz: 2267  
 FPU: Integrated  
 CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip  
 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: 4 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 48 GB (12 x 4 GB 2Rx8 PC3-10600R, ECC, running at 800 MHz and CL6)  
 Disk Subsystem: 2 x 50 GB SATA, SSD, RAID 0  
 Other Hardware: None

### Software

Operating System: SuSE Linux Enterprise Server 11 (x86\_64), Kernel 2.6.27.19-5-default  
 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: No  
 File System: ext3  
 System State: Run level 3 (multi-user)  
 Base Pointers: 32-bit  
 Peak Pointers: 32/64-bit  
 Other Software: Microquill SmartHeap V8.1



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## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	8	610	128	<b><u>608</u></b>	<b><u>128</u></b>	608	128	8	512	153	511	153	<b><u>512</u></b>	<b><u>153</u></b>
401.bzip2	8	1012	76.3	<b><u>1011</u></b>	<b><u>76.3</u></b>	1010	76.4	8	<b><u>955</u></b>	<b><u>80.8</u></b>	955	80.9	957	80.7
403.gcc	8	569	113	<b><u>572</u></b>	<b><u>113</u></b>	573	112	8	569	113	<b><u>572</u></b>	<b><u>113</u></b>	573	112
429.mcf	8	424	172	<b><u>418</u></b>	<b><u>174</u></b>	418	175	8	418	175	<b><u>419</u></b>	<b><u>174</u></b>	419	174
445.gobmk	8	<b><u>646</u></b>	<b><u>130</u></b>	647	130	644	130	8	607	138	<b><u>608</u></b>	<b><u>138</u></b>	611	137
456.hammer	8	<b><u>343</u></b>	<b><u>218</u></b>	342	218	344	217	8	<b><u>303</u></b>	<b><u>247</u></b>	304	246	303	247
458.sjeng	8	<b><u>740</u></b>	<b><u>131</u></b>	740	131	739	131	8	678	143	<b><u>678</u></b>	<b><u>143</u></b>	677	143
462.libquantum	8	367	452	<b><u>367</u></b>	<b><u>452</u></b>	357	464	8	347	478	<b><u>347</u></b>	<b><u>478</u></b>	346	479
464.h264ref	8	877	202	876	202	<b><u>876</u></b>	<b><u>202</u></b>	8	<b><u>837</u></b>	<b><u>212</u></b>	837	212	837	212
471.omnetpp	8	538	92.9	537	93.0	<b><u>537</u></b>	<b><u>93.0</u></b>	8	500	100	500	100	<b><u>500</u></b>	<b><u>100</u></b>
473.astar	8	<b><u>695</u></b>	<b><u>80.8</u></b>	694	80.9	695	80.8	8	624	90.0	<b><u>623</u></b>	<b><u>90.1</u></b>	623	90.1
483.xalancbmk	8	351	157	352	157	<b><u>351</u></b>	<b><u>157</u></b>	8	351	157	352	157	<b><u>351</u></b>	<b><u>157</u></b>

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

## Platform Notes

Power C-states enabled in BIOS

## General Notes

'ulimit -s unlimited' was used to set the stack size to unlimited prior to run  
Binaries were compiled on SLES 10 with Binutils 2.18.50.50.0.7.20080502

## Base Compiler Invocation

C benchmarks:  
icc -m32

C++ benchmarks:  
icpc -m32



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## Base Portability Flags

400.perlbench: -DSPEC\_CPU\_LINUX\_IA32  
462.libquantum: -DSPEC\_CPU\_LINUX  
483.xalancbmk: -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/libic11.1-32bit -lsmarheap

## Base Other Flags

C benchmarks:

403.gcc: -Dalloca=\_alloca

## Peak Compiler Invocation

C benchmarks (except as noted below):

icc -m32

401.bzip2: icc -m64

456.hmmer: icc -m64

458.sjeng: icc -m64

462.libquantum: icc -m64

C++ benchmarks (except as noted below):

icpc -m32

473.astar: icpc -m64

## Peak Portability Flags

400.perlbench: -DSPEC\_CPU\_LINUX\_IA32  
401.bzip2: -DSPEC\_CPU\_LP64

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## Peak Portability Flags (Continued)

456.hmmcr: -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

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: basepeak = yes

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.hmmcr: -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 -auto-ilp32  
 -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: -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

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## Peak Optimization Flags (Continued)

473.astar (continued):

`-L/home/cmplr/usr3/alrahate/cpu2006.1.1.ic11.1/libic11.1-64bit -lsmartheap64`

483.xalancbmk: 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-linux64-revE.20100929.00.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.20100929.00.xml>

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For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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