



SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

SPECint®_rate2006 = 240

IBM System x3500 M2 (Intel Xeon X5550)

SPECint_rate_base2006 = 223

CPU2006 license: 11

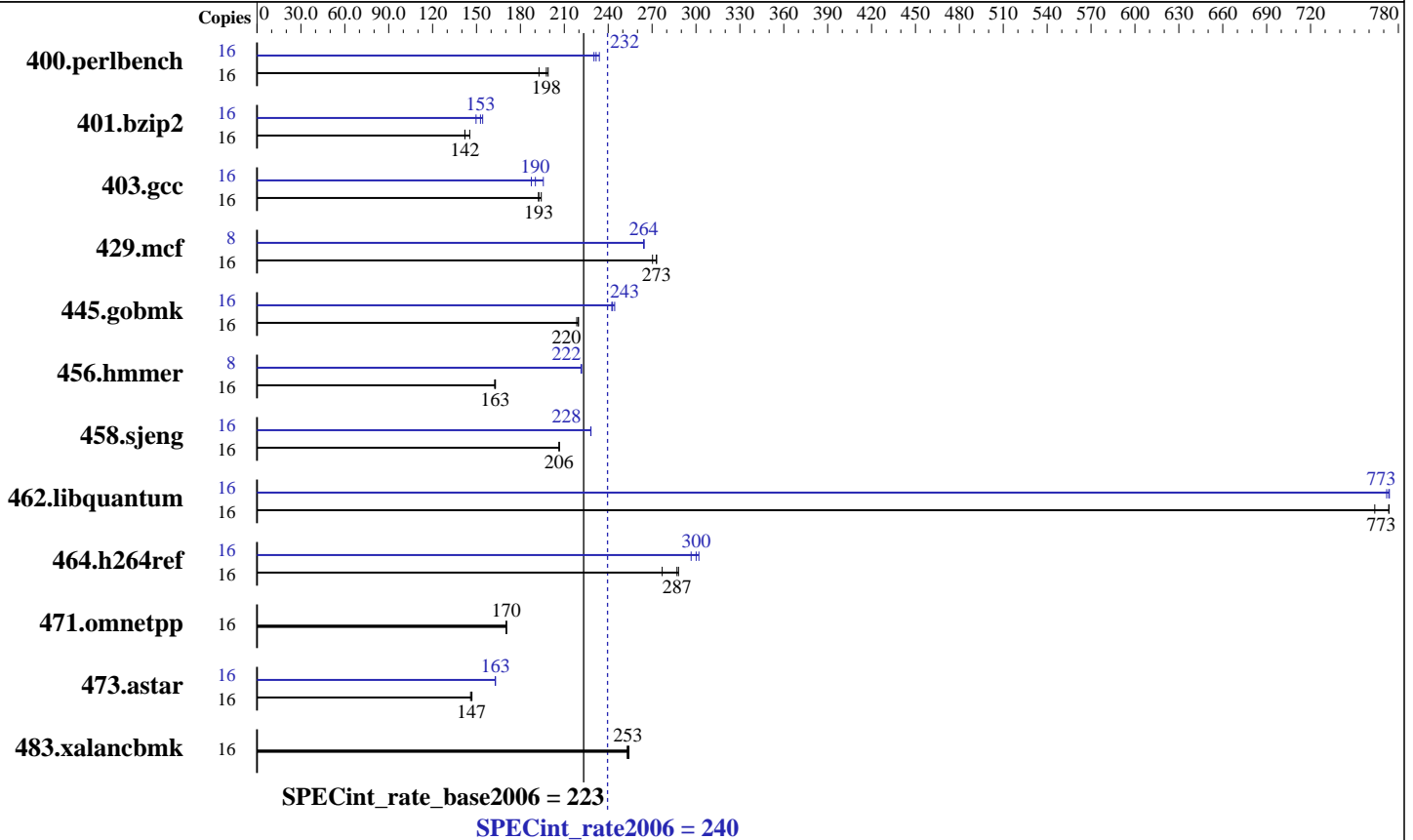
Test date: May-2009

Test sponsor: IBM Corporation

Hardware Availability: Apr-2009

Tested by: IBM Corporation

Software Availability: Feb-2009



Hardware

CPU Name: Intel Xeon X5550
 CPU Characteristics: Intel Turbo Boost Technology up to 3.06 GHz
 CPU MHz: 2667
 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, 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: 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



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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	16	811	193	<u>790</u>	<u>198</u>	786	199	16	679	230	<u>675</u>	<u>232</u>	668	234
401.bzip2	16	1087	142	<u>1086</u>	<u>142</u>	1062	145	16	1031	150	<u>1011</u>	<u>153</u>	1001	154
403.gcc	16	<u>669</u>	<u>193</u>	663	194	669	192	16	658	196	<u>677</u>	<u>190</u>	687	187
429.mcf	16	<u>535</u>	<u>273</u>	540	270	534	273	8	<u>276</u>	<u>264</u>	276	265	276	264
445.gobmk	16	<u>764</u>	<u>220</u>	764	220	768	219	16	687	244	<u>691</u>	<u>243</u>	692	242
456.hammer	16	916	163	<u>917</u>	<u>163</u>	919	162	8	337	221	<u>337</u>	<u>222</u>	337	222
458.sjeng	16	938	206	937	207	<u>938</u>	<u>206</u>	16	849	228	848	228	<u>849</u>	<u>228</u>
462.libquantum	16	<u>429</u>	<u>773</u>	434	764	429	774	16	429	772	<u>429</u>	<u>773</u>	428	774
464.h264ref	16	<u>1234</u>	<u>287</u>	1229	288	1279	277	16	1173	302	<u>1180</u>	<u>300</u>	1193	297
471.omnetpp	16	586	171	587	170	<u>587</u>	<u>170</u>	16	586	171	587	170	<u>587</u>	<u>170</u>
473.astar	16	765	147	770	146	<u>766</u>	<u>147</u>	16	<u>689</u>	<u>163</u>	690	163	689	163
483.xalancbmk	16	<u>436</u>	<u>253</u>	434	254	436	253	16	<u>436</u>	<u>253</u>	434	254	436	253

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
OMP_NUM_THREADS set to number of processors

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



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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
```



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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



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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>

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For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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