



SPEC[®] CINT2006 Result

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ACTION S.A.

SPECint[®]_rate2006 = 201

ACTINA SOLAR 200 X3 (Intel Xeon E5520)

SPECint_rate_base2006 = 188

CPU2006 license: 9008

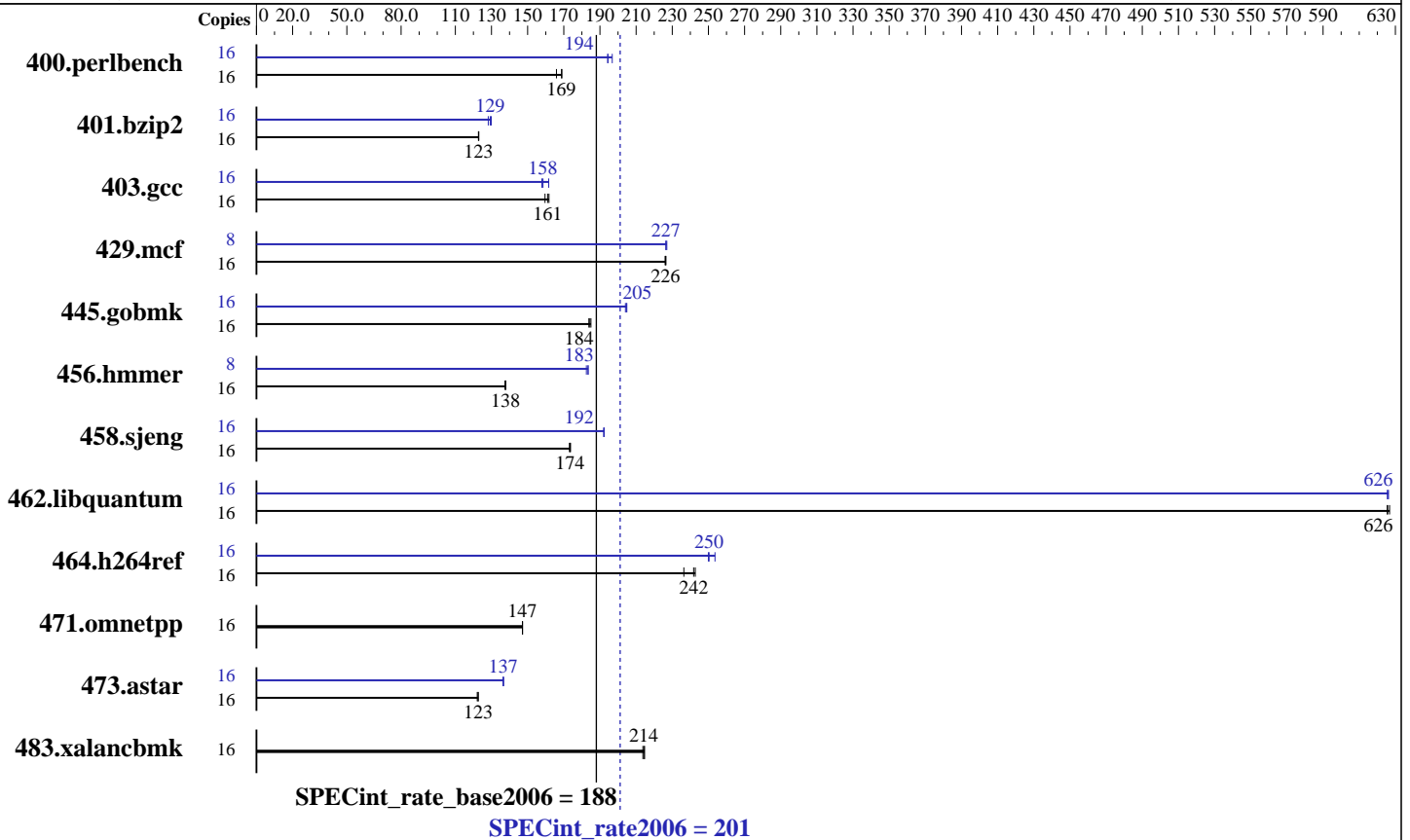
Test sponsor: ACTION S.A.

Tested by: ACTION S.A.

Test date: Jun-2009

Hardware Availability: Apr-2009

Software Availability: Feb-2009



Hardware

CPU Name: Intel Xeon E5520
 CPU Characteristics: Intel Turbo Boost Technology up to 2.53 GHz
 CPU MHz: 2267
 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 PC3-8500, 1066 MHz, DDR3, ECC)
 Disk Subsystem: 8 x 146 GB SAS, 15000 RPM, HW RAID5
 Other Hardware: None

Software

Operating System: SuSe Linux Enterprise Server 10 (x86_64) with SP2, kernel 2.6.16.60-0.21-smp
 Compiler: Intel C++ Compiler 11.0 for Linux Build 20080930 Package ID: l_cproc_p_11.0.066
 Auto Parallel: No
 File System: ReiserFS
 System State: Run level 3 (multi-user)
 Base Pointers: 32-bit
 Peak Pointers: 32/64-bit
 Other Software: Binutils 2.18.50.0.7.20080502
 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 | 16 | 942 | 166 | 925 | 169 | <u>926</u> | <u>169</u> | 16 | 794 | 197 | 805 | 194 | <u>804</u> | <u>194</u> |
| 401.bzip2 | 16 | 1255 | 123 | <u>1256</u> | <u>123</u> | 1258 | 123 | 16 | 1204 | 128 | <u>1194</u> | <u>129</u> | 1189 | 130 |
| 403.gcc | 16 | 796 | 162 | 807 | 160 | <u>800</u> | <u>161</u> | 16 | <u>813</u> | <u>158</u> | 797 | 162 | 816 | 158 |
| 429.mcf | 16 | 644 | 226 | 646 | 226 | <u>645</u> | <u>226</u> | 8 | 321 | 227 | <u>322</u> | <u>227</u> | 322 | 226 |
| 445.gobmk | 16 | <u>910</u> | <u>184</u> | 913 | 184 | 907 | 185 | 16 | 822 | 204 | 819 | 205 | <u>820</u> | <u>205</u> |
| 456.hammer | 16 | <u>1083</u> | <u>138</u> | 1083 | 138 | 1086 | 137 | 8 | <u>407</u> | <u>183</u> | 409 | 182 | 407 | 183 |
| 458.sjeng | 16 | <u>1116</u> | <u>174</u> | 1118 | 173 | 1114 | 174 | 16 | 1008 | 192 | <u>1007</u> | <u>192</u> | 1007 | 192 |
| 462.libquantum | 16 | <u>530</u> | <u>626</u> | 530 | 625 | 529 | 627 | 16 | <u>530</u> | <u>626</u> | 530 | 626 | 529 | 626 |
| 464.h264ref | 16 | <u>1464</u> | <u>242</u> | 1459 | 243 | 1498 | 236 | 16 | 1396 | 254 | 1416 | 250 | <u>1414</u> | <u>250</u> |
| 471.omnetpp | 16 | 680 | 147 | 679 | 147 | <u>680</u> | <u>147</u> | 16 | 680 | 147 | 679 | 147 | <u>680</u> | <u>147</u> |
| 473.astar | 16 | <u>916</u> | <u>123</u> | 920 | 122 | 916 | 123 | 16 | 822 | 137 | 823 | 136 | <u>823</u> | <u>137</u> |
| 483.xalancbmk | 16 | 517 | 214 | <u>515</u> | <u>214</u> | 514 | 215 | 16 | 517 | 214 | <u>515</u> | <u>214</u> | 514 | 215 |

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.

General Notes

'numactl' was used to bind copies to the cores
'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run

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-alloc
 -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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