



SPEC® CINT2006 Result

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Fujitsu Siemens Computers

SPECint®_rate2006 = 252

PRIMERGY RX600 S4, Intel Xeon E7450, 2.40 GHz

SPECint_rate_base2006 = 235

CPU2006 license: 22

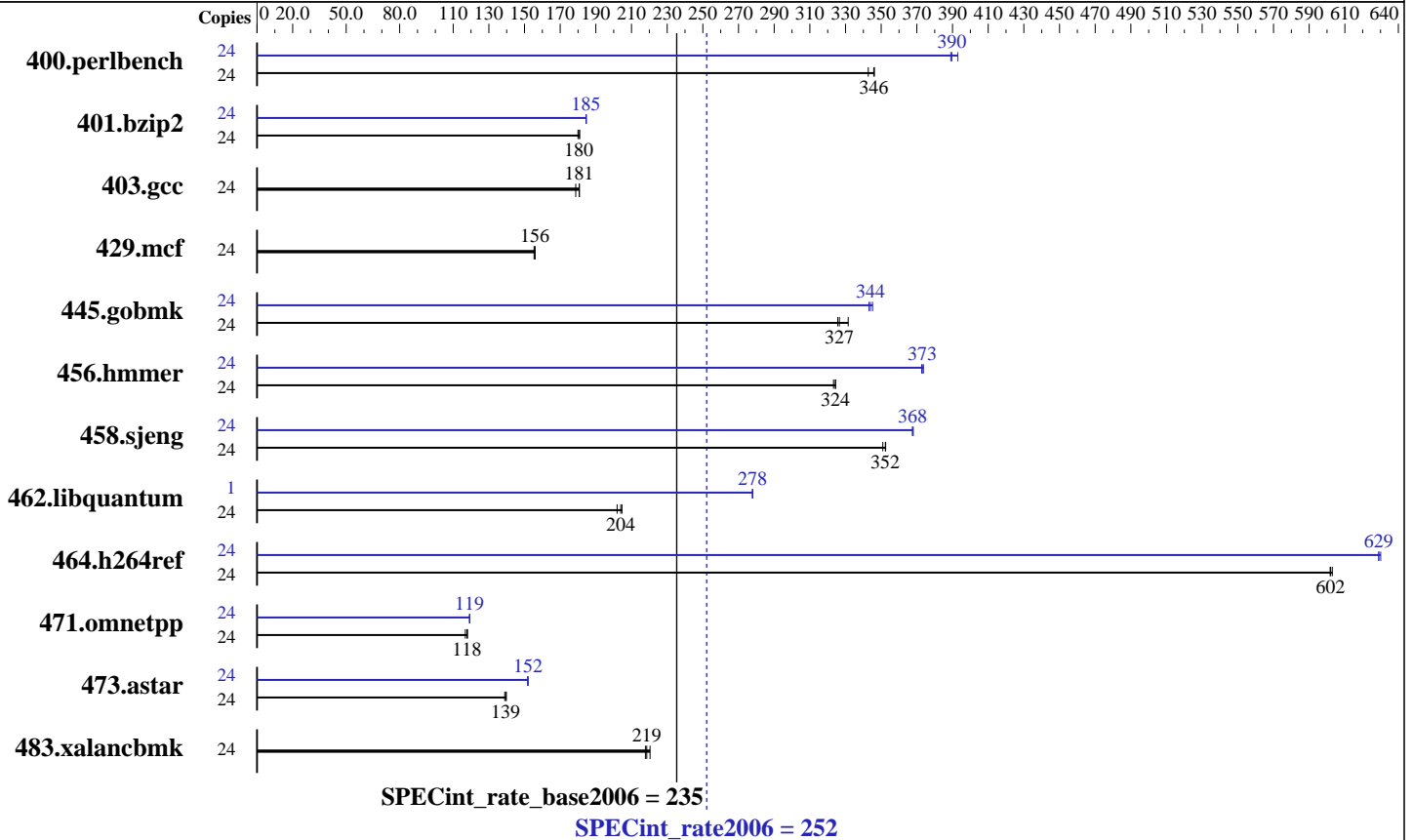
Test sponsor: Fujitsu Siemens Computers

Tested by: Fujitsu Siemens Computers

Test date: Sep-2008

Hardware Availability: Sep-2008

Software Availability: Nov-2008



Hardware

CPU Name: Intel Xeon E7450
 CPU Characteristics: 1067 MHz system bus
 CPU MHz: 2400
 FPU: Integrated
 CPU(s) enabled: 24 cores, 4 chips, 6 cores/chip
 CPU(s) orderable: 1,2,4 chips
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 9 MB I+D on chip per chip, 3 MB shared / 2 cores
 L3 Cache: 12 MB I+D on chip per chip
 Other Cache: None
 Memory: 64 GB (16x4 GB PC2-5300F, 2 rank, CL5-5-5, ECC)
 Disk Subsystem: 1x SAS, 36 GB, 10000 rpm
 Other Hardware: None

Software

Operating System: SUSE Linux Enterprise Server 10 (x86_64) SP2, Kernel 2.6.16.60-0.21-smp
 Compiler: Intel C++ Compiler 11.0 for Linux Build 20080730
 Auto Parallel: Yes
 File System: ext3
 System State: Multi-User Run Level 3
 Base Pointers: 32-bit
 Peak Pointers: 32/64-bit
 Other Software: Microquill SmartHeap Library, Version 8.1
 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	24	684	343	<u>678</u>	<u>346</u>	677	346	24	597	393	<u>602</u>	<u>390</u>	603	389
401.bzip2	24	1287	180	1280	181	<u>1283</u>	<u>180</u>	24	1254	185	<u>1255</u>	<u>185</u>	1255	184
403.gcc	24	1081	179	<u>1069</u>	<u>181</u>	1069	181	24	1081	179	<u>1069</u>	<u>181</u>	1069	181
429.mcf	24	1409	155	<u>1405</u>	<u>156</u>	1404	156	24	1409	155	<u>1405</u>	<u>156</u>	1404	156
445.gobmk	24	759	332	773	326	<u>771</u>	<u>327</u>	24	<u>732</u>	<u>344</u>	729	345	734	343
456.hmmmer	24	693	323	690	324	<u>690</u>	<u>324</u>	24	601	373	599	374	<u>600</u>	<u>373</u>
458.sjeng	24	<u>824</u>	<u>352</u>	824	353	828	351	24	<u>790</u>	<u>368</u>	790	368	789	368
462.libquantum	24	2463	202	<u>2438</u>	<u>204</u>	2430	205	1	74.6	278	74.5	278	<u>74.6</u>	<u>278</u>
464.h264ref	24	<u>882</u>	<u>602</u>	881	603	883	602	24	<u>844</u>	<u>629</u>	844	629	843	630
471.omnetpp	24	1284	117	<u>1274</u>	<u>118</u>	1271	118	24	1258	119	<u>1258</u>	<u>119</u>	1258	119
473.astar	24	1213	139	<u>1208</u>	<u>139</u>	1205	140	24	<u>1109</u>	<u>152</u>	1110	152	1109	152
483.xalancbmk	24	<u>758</u>	<u>219</u>	751	220	760	218	24	<u>758</u>	<u>219</u>	751	220	760	218

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

Compiler Invocation Notes

All binaries were built with 32-bit mode except:
401.bzip2 and 456.hmmmer in peak were built with 64-bit mode.

Submit Notes

The config file option 'submit' was used.
taskset has been used to bind processes to cores except
for 462.libquantum peak

Operating System Notes

'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run
OMP_NUM_THREADS set to number of cores (default)
KMP_AFFINITY set to "physical,0"
KMP_STACKSIZE set to 64M

General Notes

For information about Fujitsu Siemens Computers please see:
<http://www.fujitsu-siemens.com>



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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

Base Optimization Flags

C benchmarks:

-xSSE4.1 -ipo -O3 -no-prec-div -static -inline-calloc
-opt-malloc-options=3 -opt-prefetch

C++ benchmarks:

-xSSE4.1 -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/11.0/042/bin/intel64/icc
-L/opt/intel/Compiler/11.0/042/ipp/em64t/lib
-I/opt/intel/Compiler/11.0/042/ipp/em64t/include

456.hmmer: /opt/intel/Compiler/11.0/042/bin/intel64/icc
-L/opt/intel/Compiler/11.0/042/ipp/em64t/lib
-I/opt/intel/Compiler/11.0/042/ipp/em64t/include

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Peak Compiler Invocation (Continued)

C++ benchmarks:
icpc

Peak Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32
401.bzip2: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LINUX
483.xalancbmk: -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:

400.perlbench: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
-no-prec-div -static -ansi-alias -opt-prefetch
401.bzip2: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
-no-prec-div -static -opt-prefetch -ansi-alias
403.gcc: basepeak = yes
429.mcf: basepeak = yes
445.gobmk: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -O2 -ipo
-no-prec-div -ansi-alias
456.hmmer: -xSSE4.1 -ipo -O3 -no-prec-div -static -unroll2
-ansi-alias
458.sjeng: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
-no-prec-div -static -unroll4
462.libquantum: -xSSE4.1 -ipo -O3 -no-prec-div -static
-opt-malloc-options=3 -parallel -par-runtime-control
-opt-prefetch
464.h264ref: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
-no-prec-div -static -unroll2 -ansi-alias

C++ benchmarks:

471.omnetpp: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
-no-prec-div -ansi-alias -opt-ra-region-strategy=block
-Wl,-z,muldefs -L/spec/cpu2006.1.1/lib -lsmartheap

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Peak Optimization Flags (Continued)

```
473.astar: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
          -no-prec-div -ansi-alias -opt-ra-region-strategy=routine
          -Wl,-z,muldefs -L/spec/cpu2006.1.1/lib -lsmarthearp
```

```
483.xalancbmk: basepeak = yes
```

Peak Other Flags

C benchmarks:

```
403.gcc: -Dalloca=_alloca
```

The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-int-linux64-revA.20090713.08.html>

<http://www.spec.org/cpu2006/flags/Intel-Linux64-Platform.20090713.08.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-int-linux64-revA.20090713.08.xml>

<http://www.spec.org/cpu2006/flags/Intel-Linux64-Platform.20090713.08.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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