SPEC® CINT2006 Result
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Fujitsu Siemens Computers

PRIMERGY RX300 S4, Intel Xeon X5270, 3.50 GHz

$SPECint^{®}\_rate2006 =$ 90.7

$SPECint\_rate\_base2006 =$ 84.8

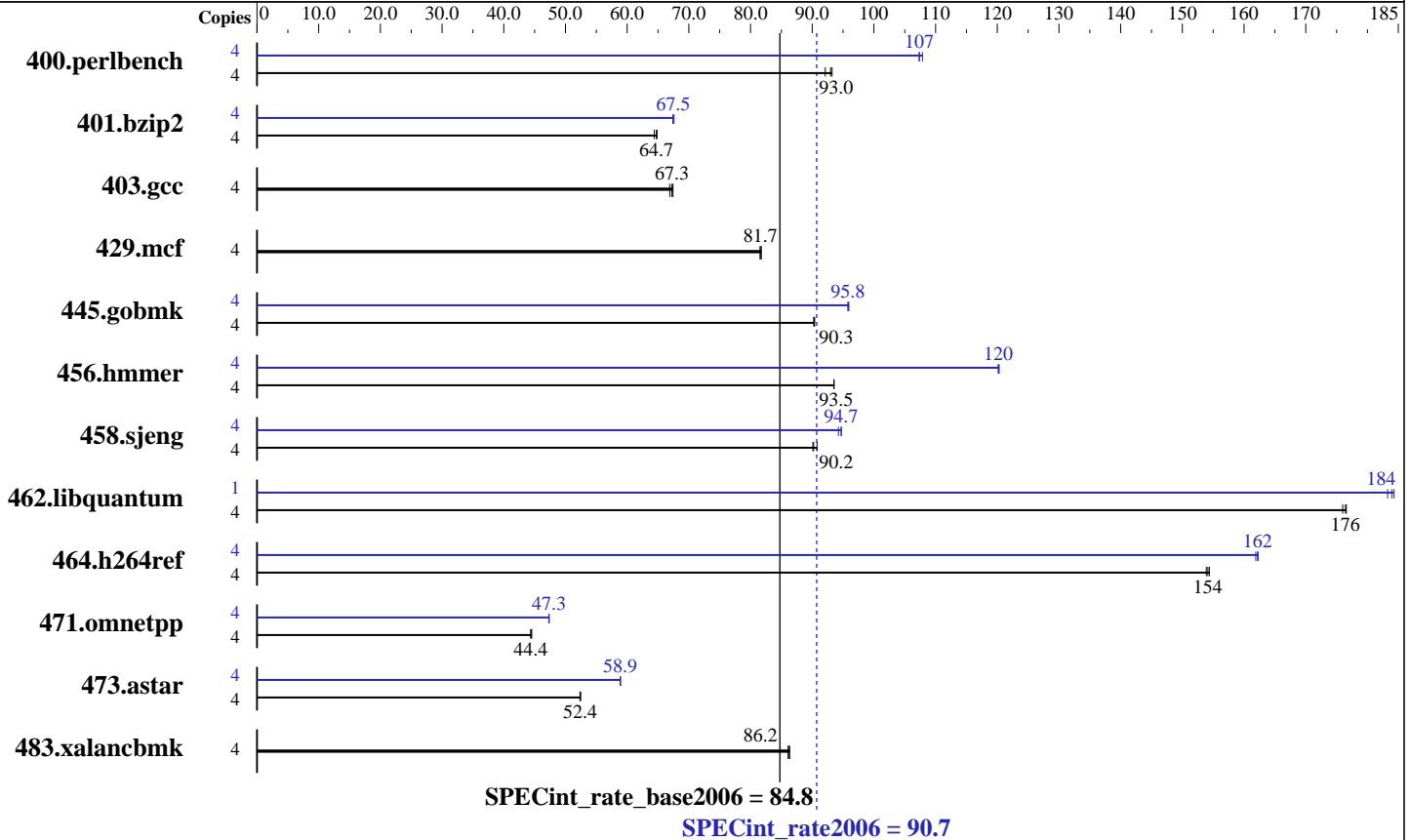**CPU2006 license:** 22
Test sponsor: Fujitsu Siemens Computers
Tested by: Fujitsu Siemens Computers

Test date: Sep-2008
Hardware Availability: Oct-2008
Software Availability: Nov-2008

SPECint_rate_base2006 = 84.8

SPECint_rate2006 = 90.7

Hardware

CPU Name:	Intel Xeon X5270
CPU Characteristics:	1333 MHz system bus
CPU MHz:	3500
FPU:	Integrated
CPU(s) enabled:	4 cores, 2 chips, 2 cores/chip
CPU(s) orderable:	1,2 chips
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	6 MB I+D on chip per chip
L3 Cache:	None
Other Cache:	None
Memory:	16 GB (8x2 GB PC2-5300F, 2 rank, CL5-5-5, ECC)
Disk Subsystem:	1x SATA, 160 GB, 7200 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	4	424	92.1	419	93.2	**420**	**93.0**	4	**364**	**107**	362	108	364	107
401.bzip2	4	595	64.8	**596**	**64.7**	599	64.4	4	571	67.6	573	67.4	**572**	**67.5**
403.gcc	4	478	67.4	**479**	**67.3**	481	66.9	4	478	67.4	**479**	**67.3**	481	66.9
429.mcf	4	447	81.5	**447**	**81.7**	446	81.7	4	447	81.5	**447**	**81.7**	446	81.7
445.gobmk	4	464	90.4	**464**	**90.3**	465	90.2	4	437	95.9	**438**	**95.8**	438	95.8
456.hmmer	4	399	93.5	399	93.5	**399**	**93.5**	4	311	120	310	120	**311**	**120**
458.sjeng	4	**536**	**90.2**	537	90.1	533	90.8	4	511	94.7	514	94.2	**511**	**94.7**
462.libquantum	4	471	176	469	177	**470**	**176**	1	112	184	113	183	**113**	**184**
464.h264ref	4	575	154	573	154	**574**	**154**	4	547	162	545	162	**546**	**162**
471.omnetpp	4	561	44.5	**563**	**44.4**	563	44.4	4	528	47.3	**528**	**47.3**	528	47.3
473.astar	4	535	52.5	**536**	**52.4**	536	52.3	4	477	58.9	**477**	**58.9**	477	58.9
483.xalancbmk	4	320	86.4	**320**	**86.2**	321	86.1	4	320	86.4	**320**	**86.2**	321	86.1

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.hmmer 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
```

Platform Notes

```
BIOS configuration:
Adjacent Sector Prefetch = Disable
Memory Throttling = Enable
```

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General Notes

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

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
```

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Peak Compiler Invocation (Continued)

```
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
```

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
```

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Peak Optimization Flags (Continued)

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

   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 -lsmartheap

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-ic11.0-int-linux64-revA.20090713.09.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.20090713.09.xml

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

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