SPEC® CINT2006 Result

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Fujitsu Siemens Computers

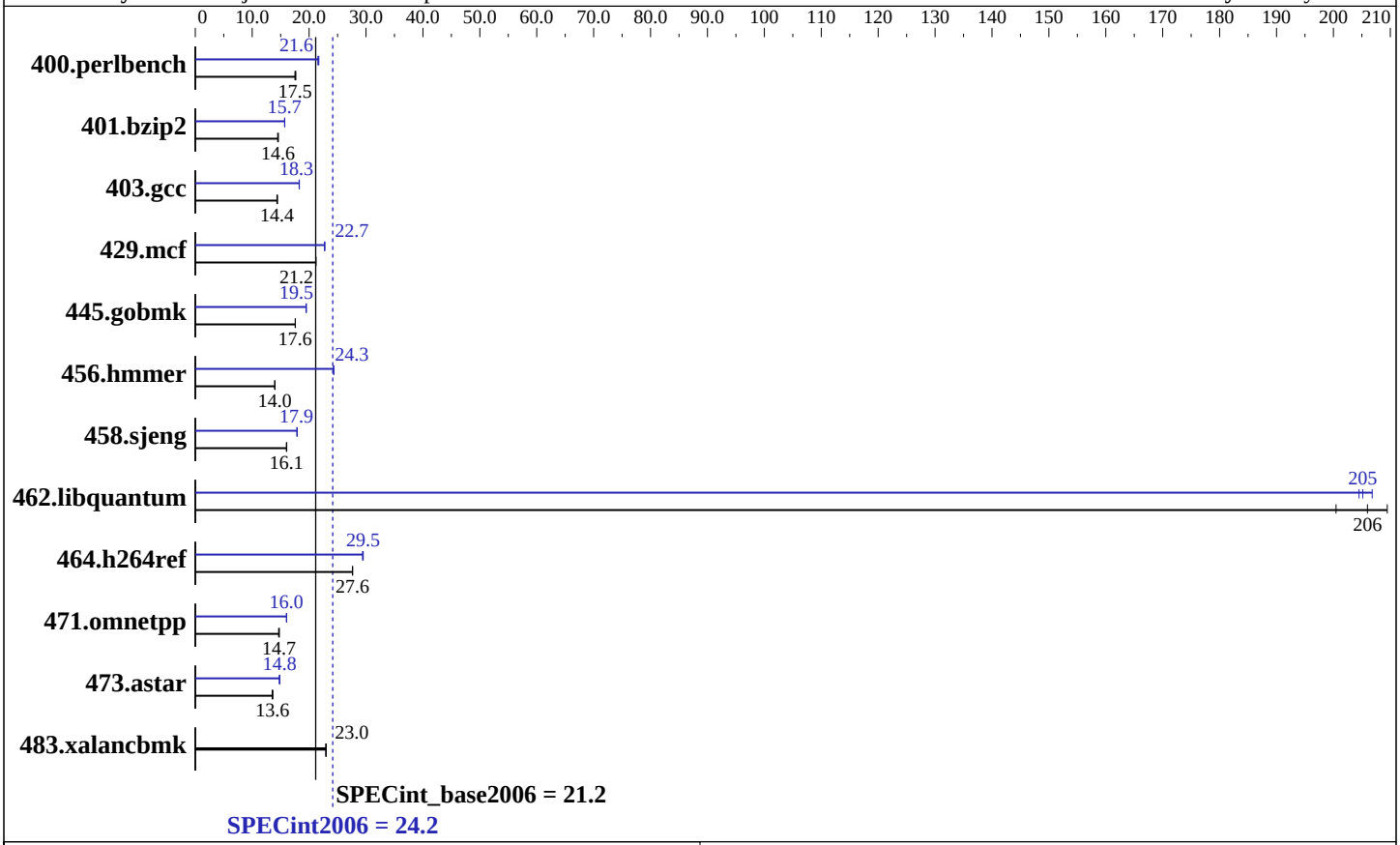
PRIMERGY RX200 S4, Intel Xeon E5430, 2.66 GHz

SPECint®2006 = 24.2

SPECint_base2006 = 21.2

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

Test date: Aug-2008
Hardware Availability: Dec-2007
Software Availability: May-2008



Hardware

CPU Name:	Intel Xeon E5430
CPU Characteristics:	1333 MHz system bus
CPU MHz:	2667
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:	12 MB I+D on chip per chip, 6 MB shared / 2 cores
L3 Cache:	None
Other Cache:	None
Memory:	16 GB (8x2 GB PC2-5300F, 2 rank, CL 5-5-5, ECC)
Disk Subsystem:	1x SAS, 73 GB, 15000 rpm
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 for Linux32 and Linux64, Version 10.1, Build 20070913
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-2.17.50.0.5-0.1.x86_64

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Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	557	17.5	553	17.7	**557**	**17.5**	453	21.6	450	21.7	**452**	**21.6**
401.bzip2	662	14.6	**662**	**14.6**	667	14.5	615	15.7	**615**	**15.7**	614	15.7
403.gcc	561	14.3	**560**	**14.4**	557	14.4	**441**	**18.3**	441	18.2	440	18.3
429.mcf	431	21.2	430	21.2	**430**	**21.2**	401	22.8	402	22.7	**401**	**22.7**
445.gobmk	597	17.6	597	17.6	**597**	**17.6**	**538**	**19.5**	538	19.5	538	19.5
456.hmmer	667	14.0	668	14.0	**668**	**14.0**	**384**	**24.3**	384	24.3	383	24.3
458.sjeng	753	16.1	**754**	**16.1**	756	16.0	677	17.9	676	17.9	**677**	**17.9**
462.libquantum	98.9	209	103	200	**101**	**206**	100	207	101	205	**101**	**205**
464.h264ref	**801**	**27.6**	801	27.6	801	27.6	**750**	**29.5**	753	29.4	750	29.5
471.omnetpp	424	14.7	**424**	**14.7**	427	14.6	**390**	**16.0**	390	16.0	390	16.0
473.astar	516	13.6	**516**	**13.6**	520	13.5	**473**	**14.8**	473	14.9	476	14.8
483.xalancbmk	300	23.0	301	22.9	**301**	**23.0**	300	23.0	301	22.9	**301**	**23.0**

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 Intel compiler except:
401.bzip2 and 456.hmmer in peak were built with 64-bit Intel compiler.
```

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)
```

Platform Notes

```
BIOS configuration:
Hardware Prefetch = Enable, Adjacent Sector Prefetch = Enable
```

General Notes

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

Base Compiler Invocation

C benchmarks:

```
/opt/intel/cc/10.1.008/bin/icc -L/opt/intel/cc/10.1.008/lib
-I/opt/intel/cc/10.1.008/include
```

Continued on next page

Base Compiler Invocation (Continued)

C++ benchmarks:
/opt/intel/cc/10.1.008/bin/icpc -L/opt/intel/cc/10.1.008/lib
-I/opt/intel/cc/10.1.008/include

Base Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32
462.libquantum: -DSPEC_CPU_LINUX
483.xalancbmk: -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:
-fast -vec-guard-write -parallel -par-runtime-control

C++ benchmarks:
-xT -ipo -O3 -no-prec-div -Wl,-z,muldefs
-L/opt/SmartHeap_8.1/lib -lsmartheap

Base Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):
/opt/intel/cc/10.1.008/bin/icc -L/opt/intel/cc/10.1.008/lib
-I/opt/intel/cc/10.1.008/include

401.bzip2: icc

456.hmmer: icc

C++ benchmarks:
/opt/intel/cc/10.1.008/bin/icpc -L/opt/intel/cc/10.1.008/lib
-I/opt/intel/cc/10.1.008/include

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) -fast -ansi-alias -prefetch

401.bzip2: -prof-gen(pass 1) -prof-use(pass 2) -fast -prefetch -auto-ilp32

403.gcc: -fast -inline-calloc -opt-malloc-options=3

429.mcf: -fast -prefetch

445.gobmk: -prof-gen(pass 1) -prof-use(pass 2) -xT -O2 -ipo -no-prec-div -ansi-alias

456.hmmer: -fast -unroll2 -ansi-alias -opt-multi-version-aggressive -auto-ilp32

458.sjeng: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4

462.libquantum: -fast -unroll4 -Ob0 -prefetch -opt-streaming-stores always -vec-guard-write -opt-malloc-options=3 -parallel -par-runtime-control

464.h264ref: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2 -ansi-alias

C++ benchmarks:

471.omnetpp: -prof-gen(pass 1) -prof-use(pass 2) -xT -O3 -ipo -no-prec-div -ansi-alias -opt-ra-region-strategy=block -Wl,-z,muldefs -L/opt/SmartHeap_8.1/lib -lsmartheap

473.astar: -prof-gen(pass 1) -prof-use(pass 2) -xT -O3 -ipo -no-prec-div -ansi-alias -opt-ra-region-strategy=routine -Wl,-z,muldefs -L/opt/SmartHeap_8.1/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/flags-ic101-linux-intel64.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/flags-ic101-linux-intel64.xml`

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Tested with SPEC CPU2006 v1.1.
Report generated on Tue Jul 22 19:14:47 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 2 September 2008.