SPEC® CINT2006 Result

NTT System S. A.

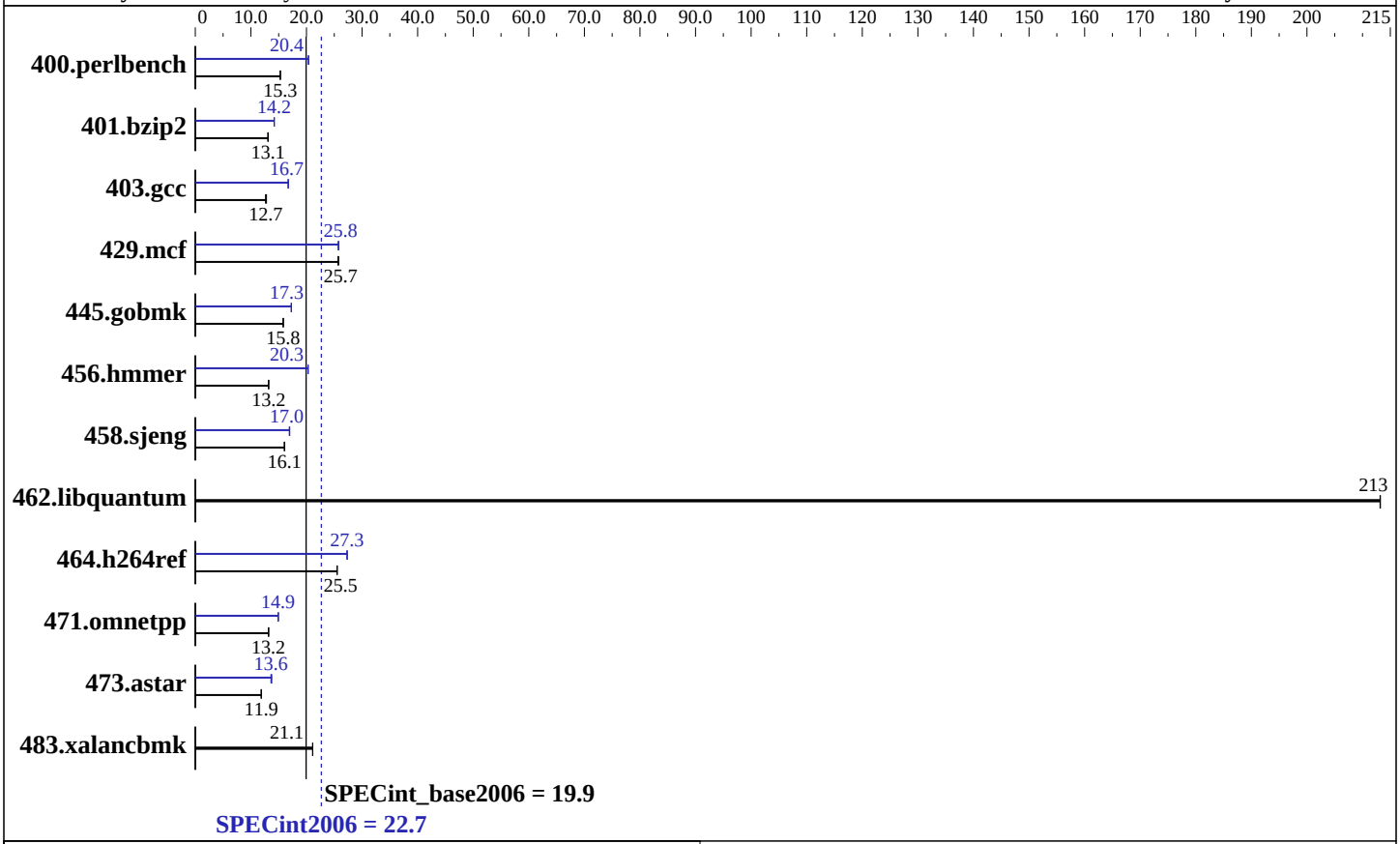
NTT Tytan S8 Series (Intel Xeon E5410)

SPECint®2006 = 22.7

SPECint_base2006 = 19.9

CPU2006 license: 9013
Test sponsor: NTT System S. A.
Tested by: NTT System S. A.

Test date: Jan-2009
Hardware Availability: Dec-2008
Software Availability: Dec-2008



Hardware

CPU Name:	Intel Xeon E5410
CPU Characteristics:	2.33 GHz, 2x6 MB P2 shared, 1333 MHz System Bus
CPU MHz:	2333
FPU:	Integrated
CPU(s) enabled:	8 cores, 2 chips, 4 cores/chip
CPU(s) orderable:	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 (4 x 4GB DDR2-667 FBDIMM)
Disk Subsystem:	300 GB SATA, 7200RPM
Other Hardware:	None

Software

Operating System:	SuSe Linux Enterprise Server 10 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:	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					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	638	15.3	**639**	**15.3**	639	15.3	480	20.4	**480**	**20.4**	481	20.3
401.bzip2	735	13.1	**737**	**13.1**	740	13.0	679	14.2	680	14.2	**679**	**14.2**
403.gcc	**635**	**12.7**	636	12.7	628	12.8	481	16.7	482	16.7	**481**	**16.7**
429.mcf	355	25.7	354	25.8	**354**	**25.7**	**354**	**25.8**	354	25.8	355	25.7
445.gobmk	663	15.8	**663**	**15.8**	663	15.8	607	17.3	607	17.3	**607**	**17.3**
456.hmmer	**707**	**13.2**	707	13.2	707	13.2	**460**	**20.3**	460	20.3	460	20.3
458.sjeng	756	16.0	753	16.1	**753**	**16.1**	712	17.0	716	16.9	**713**	**17.0**
462.libquantum	97.2	213	97.2	213	**97.2**	**213**	97.2	213	97.2	213	**97.2**	**213**
464.h264ref	**867**	**25.5**	868	25.5	867	25.5	810	27.3	811	27.3	**810**	**27.3**
471.omnetpp	475	13.2	**475**	**13.2**	473	13.2	419	14.9	419	14.9	**419**	**14.9**
473.astar	591	11.9	**591**	**11.9**	592	11.9	510	13.8	**515**	**13.6**	515	13.6
483.xalancbmk	**327**	**21.1**	327	21.1	327	21.1	**327**	**21.1**	327	21.1	327	21.1

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

Operating System Notes

```
OMP_NUM_THREADS set to number of processors
KMP_AFFINITY set to "physical,0"
KMP_STACKSIZE set to 200M
```

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 -parallel -par-runtime-control -opt-prefetch`

Continued on next page

Base Optimization Flags (Continued)

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/11.0/066/bin/intel64/icc

456.hmmer: /opt/intel/Compiler/11.0/066/bin/intel64/icc

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 -auto-ilp32 -opt-prefetch
-ansi-alias

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Peak Optimization Flags (Continued)

403.gcc: `-xSSE4.1 -ipo -O3 -no-prec-div -static -inline-calloc -opt-malloc-options=3`

429.mcf: `-xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch`

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 -auto-ilp32`

458.sjeng: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-xSSE4.1 -ipo -O3 -no-prec-div -static -unroll4`

462.libquantum: `basepeak = yes`

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`

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 files that were used to format this result can be browsed at
`http://www.spec.org/cpu2006/flags/Intel-ic11.0-int-linux64-revA.20090710.01.html`
`http://www.spec.org/cpu2006/flags/Intel-Linux64-Platform.20090710.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.20090710.01.xml`
`http://www.spec.org/cpu2006/flags/Intel-Linux64-Platform.20090710.xml`

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

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