



SPEC® CINT2006 Result

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NTT System S. A.

SPECint®_rate2006 = 120

NTT Tytan S8 Series (Intel Xeon E5410)

SPECint_rate_base2006 = 111

CPU2006 license: 9013

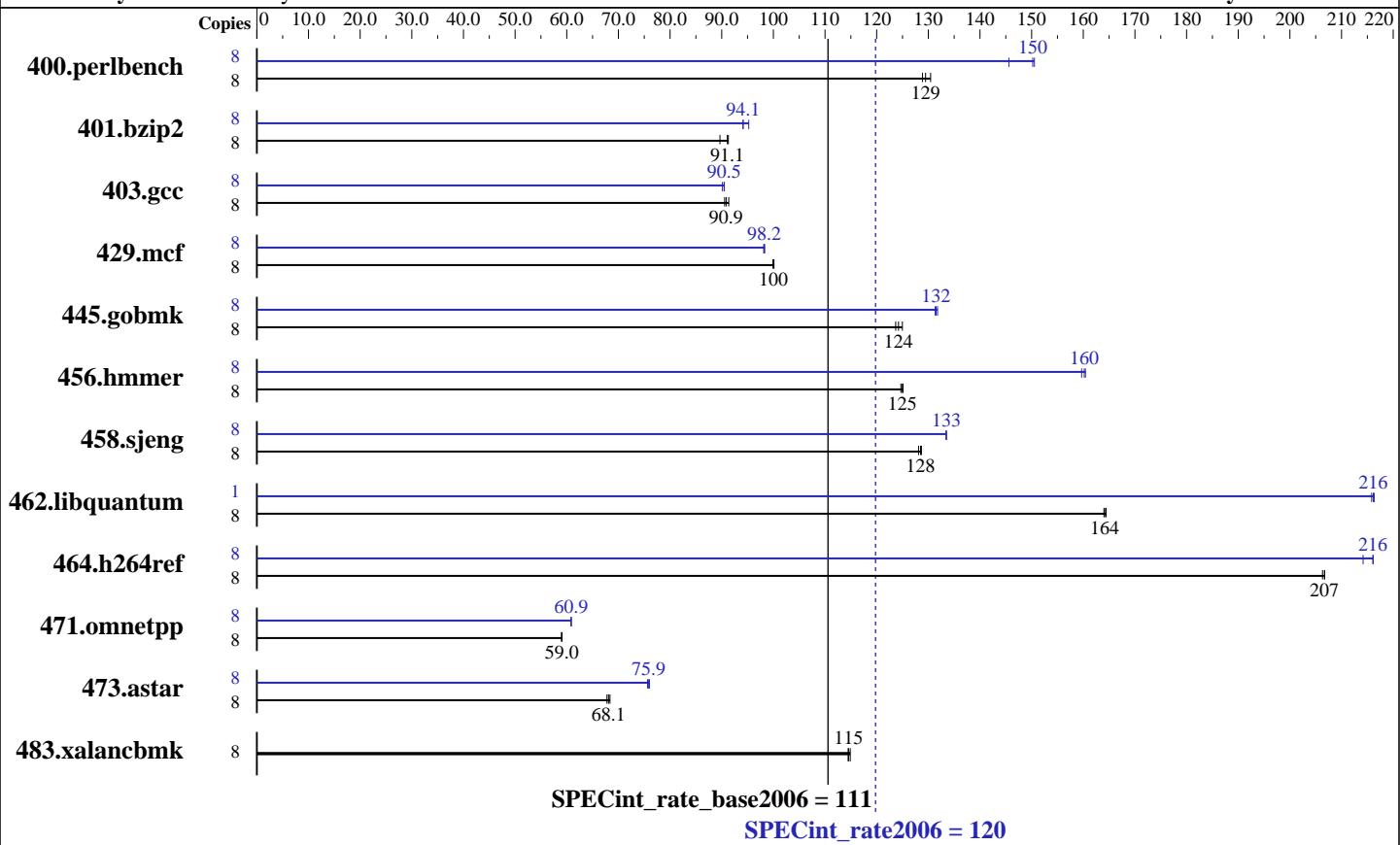
Test date: Jan-2009

Test sponsor: NTT System S. A.

Hardware Availability: Dec-2008

Tested by: NTT System S. A.

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						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	8	606	129	599	130	604	129	8	537	146	519	151	520	150
401.bzip2	8	861	89.7	846	91.3	848	91.1	8	820	94.1	820	94.1	811	95.2
403.gcc	8	705	91.4	709	90.9	711	90.6	8	712	90.5	714	90.1	712	90.5
429.mcf	8	729	100	730	99.9	729	100	8	744	98.1	742	98.3	743	98.2
445.gobmk	8	671	125	679	124	676	124	8	637	132	639	131	638	132
456.hammer	8	599	125	597	125	597	125	8	467	160	465	160	466	160
458.sjeng	8	756	128	752	129	753	128	8	725	133	725	133	725	133
462.libquantum	8	1010	164	1011	164	1008	164	1	95.9	216	95.8	216	96.0	216
464.h264ref	8	858	206	856	207	857	207	8	827	214	819	216	819	216
471.omnetpp	8	846	59.1	847	59.0	848	59.0	8	822	60.9	822	60.9	822	60.8
473.astar	8	829	67.8	821	68.4	825	68.1	8	740	75.9	742	75.6	739	76.0
483.xalancbmk	8	482	114	480	115	482	115	8	482	114	480	115	482	115

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.
taskset was used to bind processes to cores except
for 462.libquantum peak

Operating System Notes

OMP_NUM_THREADS set to number of processors
KMP_AFFINITY set to "physical,0"
KMP_STACKSIZE set to 64M

Base Compiler Invocation

C benchmarks:
icc

C++ benchmarks:
icpc

Base Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32

462.libquantum: -DSPEC_CPU_LINUX

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Base Portability Flags (Continued)

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/11.0/066/bin/intel64/icc

456.hmmr: /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.hmmr: -DSPEC_CPU_LP64

462.libquantum: -DSPEC_CPU_LINUX

483.xalancbmk: -DSPEC_CPU_LINUX



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

429.mcf: -prof-gen(pass 1) -prof-use(pass 2) -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.hmmr: -xSSE4.1 -ipo -O3 -no-prec-div -static -unroll12
            -ansi-alias

458.sjeng: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3
            -no-prec-div -static -unroll14

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 -unroll12 -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
```



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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>

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For other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.1.

Report generated on Wed Jul 23 01:41:59 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 24 April 2009.