SPEC® CINT2006 Result

NTT System S. A.

NTT Tytan S6 Series (Intel Xeon E5420)

SPECint®_rate2006 =   125

SPECint_rate_base2006 =   116

CPU2006 license: 9013	**Test date:** Feb-2009
Test sponsor: NTT System S. A.	**Hardware Availability:** Jan-2009
Tested by: NTT System S. A.	**Software Availability:** Nov-2008

SPECint_rate_base2006 = 116

SPECint_rate2006 = 125
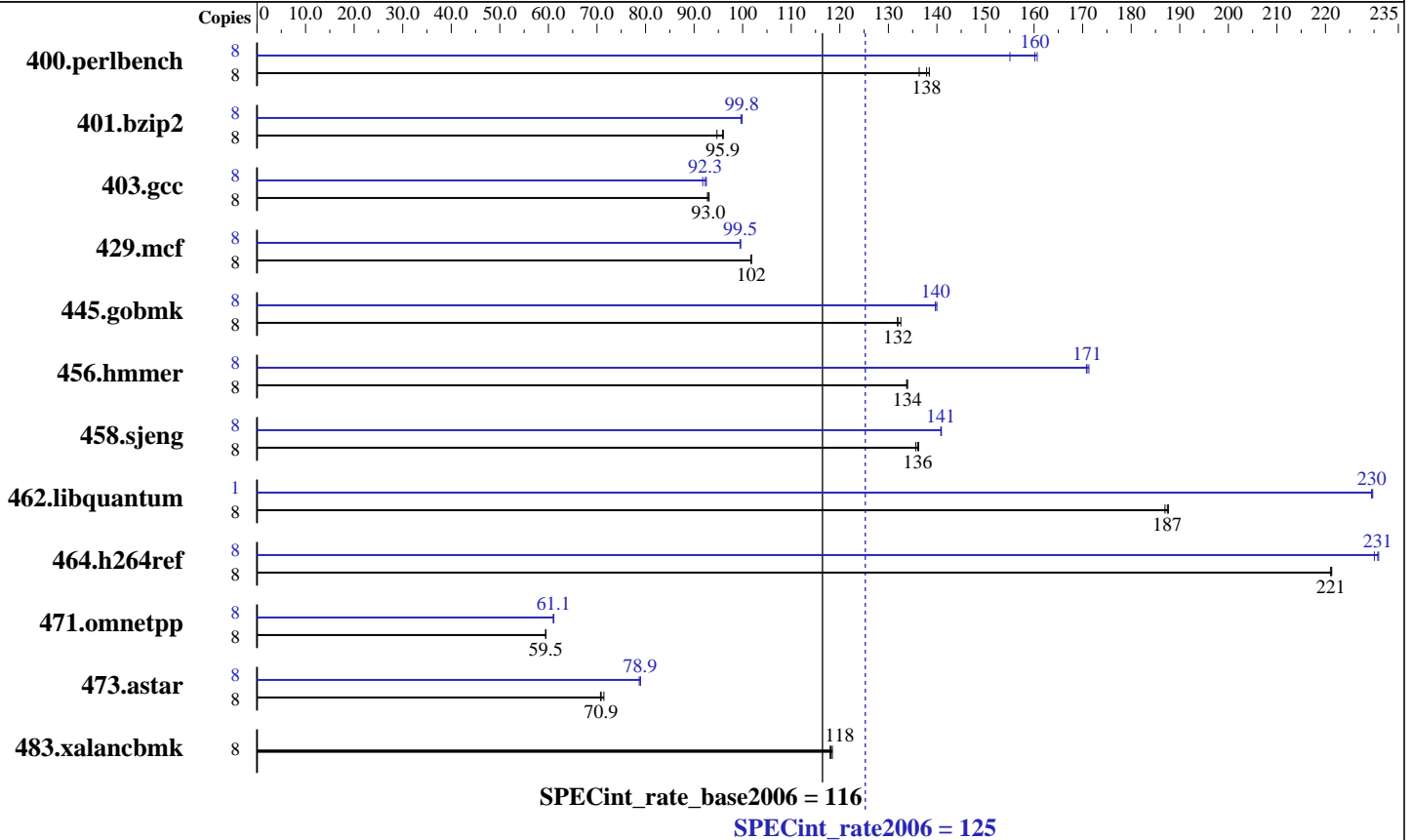
Hardware

CPU Name:	Intel Xeon E5420
CPU Characteristics:	2.5 GHz, 2x6 MB p2 shared, 1333 MHz System Bus
CPU MHz:	2500
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 (4 x 4GB DDR2-667 FBDIMM)
Disk Subsystem:	250 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 Copies	Base Seconds	Base Ratio	Base Seconds	Base Ratio	Base Seconds	Base Ratio	Peak Copies	Peak Seconds	Peak Ratio	Peak Seconds	Peak Ratio	Peak Seconds	Peak Ratio
400.perlbench	8	573	136	565	138	**567**	**138**	8	504	155	487	161	**488**	**160**
401.bzip2	8	815	94.7	**805**	**95.9**	804	96.0	8	775	99.6	**773**	**99.8**	773	99.9
403.gcc	8	692	93.1	**693**	**93.0**	694	92.8	8	696	92.5	**698**	**92.3**	702	91.8
429.mcf	8	717	102	717	102	**717**	**102**	8	**733**	**99.5**	734	99.5	732	99.6
445.gobmk	8	636	132	633	133	**636**	**132**	8	599	140	**601**	**140**	601	140
456.hmmer	8	557	134	**557**	**134**	558	134	8	436	171	**437**	**171**	437	171
458.sjeng	8	**712**	**136**	714	136	711	136	8	687	141	687	141	**687**	**141**
462.libquantum	8	887	187	**884**	**187**	883	188	1	90.2	230	**90.3**	**230**	90.3	229
464.h264ref	8	801	221	**801**	**221**	800	221	8	770	230	**767**	**231**	767	231
471.omnetpp	8	841	59.4	**841**	**59.5**	841	59.5	8	818	61.1	**819**	**61.1**	820	61.0
473.astar	8	**792**	**70.9**	786	71.4	794	70.7	8	**712**	**78.9**	714	78.7	711	79.0
483.xalancbmk	8	**467**	**118**	466	118	468	118	8	**467**	**118**	466	118	468	118

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
 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
    483.xalancbmk: -DSPEC_CPU_LINUX
```

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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.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`

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Peak Optimization Flags (Continued)

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.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`

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-icl11.0-int-linux64-revA.20090710.01.html
http://www.spec.org/cpu2006/flags/Intel-Linux64-Platform.20090710.html

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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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