SPEC® CINT2006 Result

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Itautec

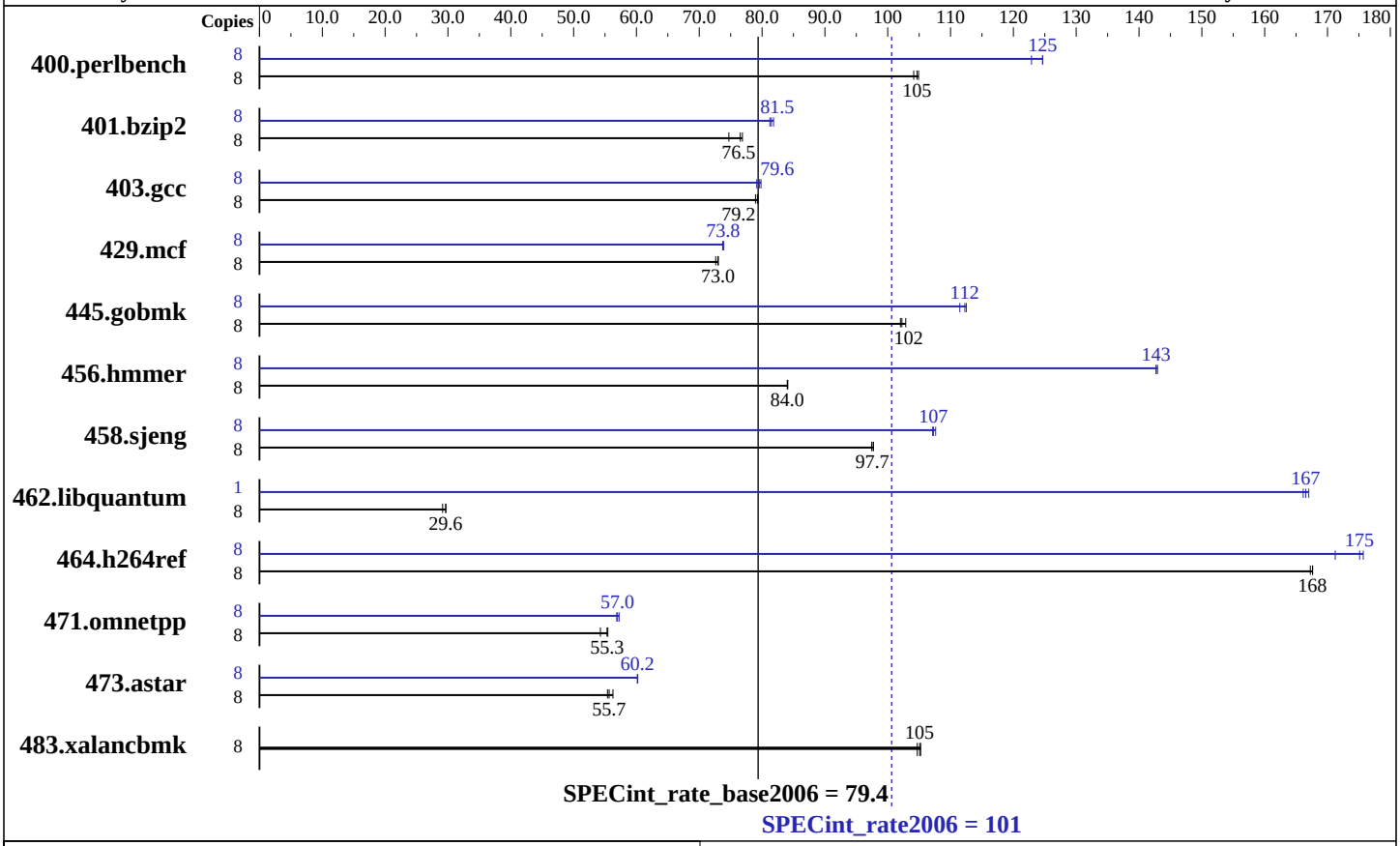
Servidor Itautec LX211 (Intel Xeon E5405)

SPECint®_rate2006 = 101

SPECint_rate_base2006 = 79.4

CPU2006 license: 9001
Test sponsor: Itautec
Tested by: Itautec

Test date: Apr-2008
Hardware Availability: Dec-2007
Software Availability: Jan-2008



Hardware

CPU Name:	Intel Xeon E5405
CPU Characteristics:	
CPU MHz:	2000
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:	12 GB (6 * 2 GB PC2-5300 FBDIMM, CL-5-5-5, ECC)
Disk Subsystem:	1 x SCSI, 73GB, 15000 RPM
Other Hardware:	None

Software

Operating System:	SUSE Linux Enterprise Server 10 (x86_64) SP1, Kernel 2.6.16.46-0.12-smp
Compiler:	Intel C++ Compiler for Linux version 10.1 Build 20080112 Package ID: l_cc_p_10.1.012
Auto Parallel:	Yes
File System:	ReiserFS
System State:	Run Level 3 (multi-user)
Base Pointers:	32-bit
Peak Pointers:	32/64-bit
Other Software:	Binutils 2.17.10.50 MicroQuill SmartHeap V8.1

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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	**747**	**105**	745	105	751	104	8	636	123	627	125	**627**	**125**
401.bzip2	8	1033	74.7	**1009**	**76.5**	1004	76.9	8	950	81.2	**948**	**81.5**	943	81.8
403.gcc	8	**813**	**79.2**	812	79.3	816	78.9	8	807	79.8	**809**	**79.6**	814	79.1
429.mcf	8	1005	72.6	999	73.0	**1000**	**73.0**	8	987	73.9	990	73.7	**989**	**73.8**
445.gobmk	8	816	103	823	102	**821**	**102**	8	746	113	**747**	**112**	753	111
456.hmmer	8	888	84.0	**888**	**84.0**	888	84.1	8	522	143	**523**	**143**	523	143
458.sjeng	8	991	97.7	993	97.4	**991**	**97.7**	8	903	107	899	108	**902**	**107**
462.libquantum	8	5686	29.2	5589	29.7	**5591**	**29.6**	1	**124**	**167**	125	166	124	167
464.h264ref	8	1058	167	1056	168	**1056**	**168**	8	**1011**	**175**	1034	171	1008	176
471.omnetpp	8	921	54.3	**904**	**55.3**	902	55.4	8	873	57.2	**877**	**57.0**	879	56.9
473.astar	8	1014	55.4	**1009**	**55.7**	998	56.3	8	934	60.1	**933**	**60.2**	933	60.2
483.xalancbmk	8	527	105	**525**	**105**	524	105	8	527	105	**525**	**105**	524	105

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

Compiler Invocation Notes

```
OMP_NUM_THREADS set to number of cores
KMP_STACK_SIZE set to 64M
KMP_AFFINITY set to physical,0
```

Operating System Notes

```
'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run.
'/usr/bin/taskset' used to bind benchmark copies to processors, except for 462.libquantum at peak.
```

Platform Notes

```
BIOS configuration:
Hardware Prefetch Enabled
```

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:
`-fast -inline-calloc -opt-malloc-options=3`

C++ benchmarks:
`-xT -ipo -O3 -no-prec-div -Wl,-z,muldefs`
`-L/opt/sh/SmartHeap_8.1/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/cce/10.1.012/bin/icc`
`-L/opt/intel/cce/10.1.012/lib`
`-I/opt/intel/cce/10.1.012/include`

456.hmmer: `/opt/intel/cce/10.1.012/bin/icc`
`-L/opt/intel/cce/10.1.012/lib`
`-I/opt/intel/cce/10.1.012/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`

Continued on next page

Peak Portability Flags (Continued)

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

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

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/sh/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/sh/SmartHeap_8.1/lib -lsmartheap

483.xalancbmk: basepeak = yes

Peak Other Flags

C benchmarks:

Continued on next page

Peak Other Flags (Continued)

403.gcc: `-Dalloca=_alloca`

The flags file that was used to format this result can be browsed at
`http://www.spec.org/cpu2006/flags/Itautec-ic10.1-INT-intel64-linux-flags.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/Itautec-ic10.1-INT-intel64-linux-flags.xml`

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