SPEC® CINT2006 Result

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Itautec

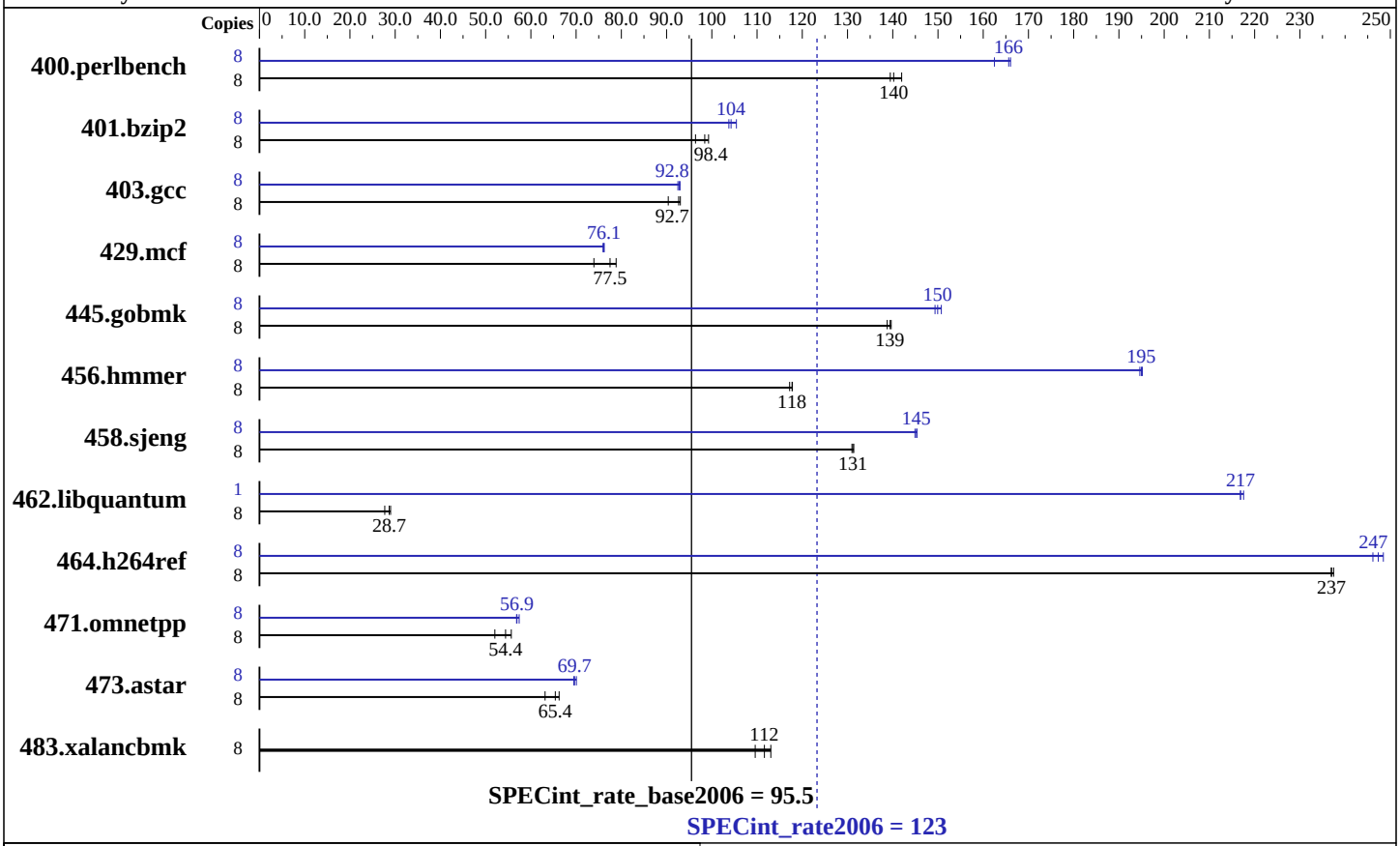
Servidor Itautec LX211 (Intel Xeon E5440)

SPECint®_rate2006 = 123

SPECint_rate_base2006 = 95.5

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

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



Hardware

CPU Name:	Intel Xeon E5440
CPU Characteristics:	
CPU MHz:	2833
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 * 2GB DDR2 5300F, 2 rank, CL5-5-5, ECC)
Disk Subsystem:	1 x SATA, 200GB, 7200 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 Linux32 version 10.1 Build 20080112 Package ID: l_cc_p_10.1.012
Auto Parallel:	Yes
File System:	ReiserFS
System State:	Multi-user, run level 3
Base Pointers:	32-bit
Peak Pointers:	32/64-bit
Other Software:	Binutils 2.17.50.0.15 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	551	142	560	139	**557**	**140**	8	481	162	**472**	**166**	471	166
401.bzip2	8	801	96.4	**784**	**98.4**	778	99.3	8	**740**	**104**	744	104	732	105
403.gcc	8	713	90.4	**695**	**92.7**	692	93.0	8	693	93.0	696	92.5	**694**	**92.8**
429.mcf	8	987	73.9	**941**	**77.5**	925	78.8	8	957	76.2	**958**	**76.1**	961	75.9
445.gobmk	8	**602**	**139**	605	139	601	140	8	557	151	562	149	**560**	**150**
456.hmmer	8	637	117	**634**	**118**	634	118	8	**383**	**195**	382	195	384	195
458.sjeng	8	**738**	**131**	739	131	737	131	8	**666**	**145**	668	145	666	145
462.libquantum	8	5985	27.7	**5780**	**28.7**	5719	29.0	1	95.5	217	95.2	218	**95.5**	**217**
464.h264ref	8	746	237	747	237	**747**	**237**	8	**716**	**247**	713	248	719	246
471.omnetpp	8	961	52.0	**919**	**54.4**	898	55.7	8	871	57.4	**878**	**56.9**	880	56.8
473.astar	8	889	63.1	**859**	**65.4**	848	66.2	8	802	70.1	**806**	**69.7**	808	69.5
483.xalancbmk	8	504	110	**494**	**112**	488	113	8	504	110	**494**	**112**	488	113

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 stack size to unlimited prior to run.
'/usr/bin/taskset' used to bind benchmark copies to processors.
```

Platform Notes

```
BIOS configuration:
Default
```

General Notes

```
All benchmarks compiled in 32-bit mode except 401.bzip2 and 456.hmmer,
for peak, are compiled in 64-bit mode
```

Base Compiler Invocation

C benchmarks:

```
icc
```

Continued on next page

Base Compiler Invocation (Continued)

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/CPU2006/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
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/CPU2006/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/CPU2006/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/Itautec-Intel-ic10-ia32-intel64-linux-flags.20090714.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/Itautec-Intel-ic10-ia32-intel64-linux-flags.20090714.xml`

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