SPEC® CINT2006 Result

Itautec

Servidor Itautec LX211 (Intel Xeon X5460)

SPECint®_rate2006 = 115

SPECint_rate_base2006 = 104

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

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

Benchmark results (Copies):

- 400.perlbench: 8 — 180 (peak); 8 — 153 (base)
- 401.bzip2: 8 — 110 (peak); 8 — 104 (base)
- 403.gcc: 8 — 94.0
- 429.mcf: 8 — 77.7 (peak); 8 — 76.7 (base)
- 445.gobmk: 8 — 159 (peak); 8 — 148 (base)
- 456.hmmer: 8 — 207 (peak); 8 — 128 (base)
- 458.sjeng: 8 — 161 (peak); 8 — 146 (base)
- 462.libquantum: 1 — 38.6 (peak); 8 — 29.3 (base)
- 464.h264ref: 8 — 273 (peak); 8 — 263 (base)
- 471.omnetpp: 8 — 69.5 (peak); 8 — 67.3 (base)
- 473.astar: 8 — 77.6 (peak); 8 — 73.5 (base)
- 483.xalancbmk: 8 — 126

SPECint_rate_base2006 = 104

SPECint_rate2006 = 115

Hardware

CPU Name: Intel Xeon X5460
CPU Characteristics:
CPU MHz: 3160
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, 10000 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

SPEC CINT2006 Result
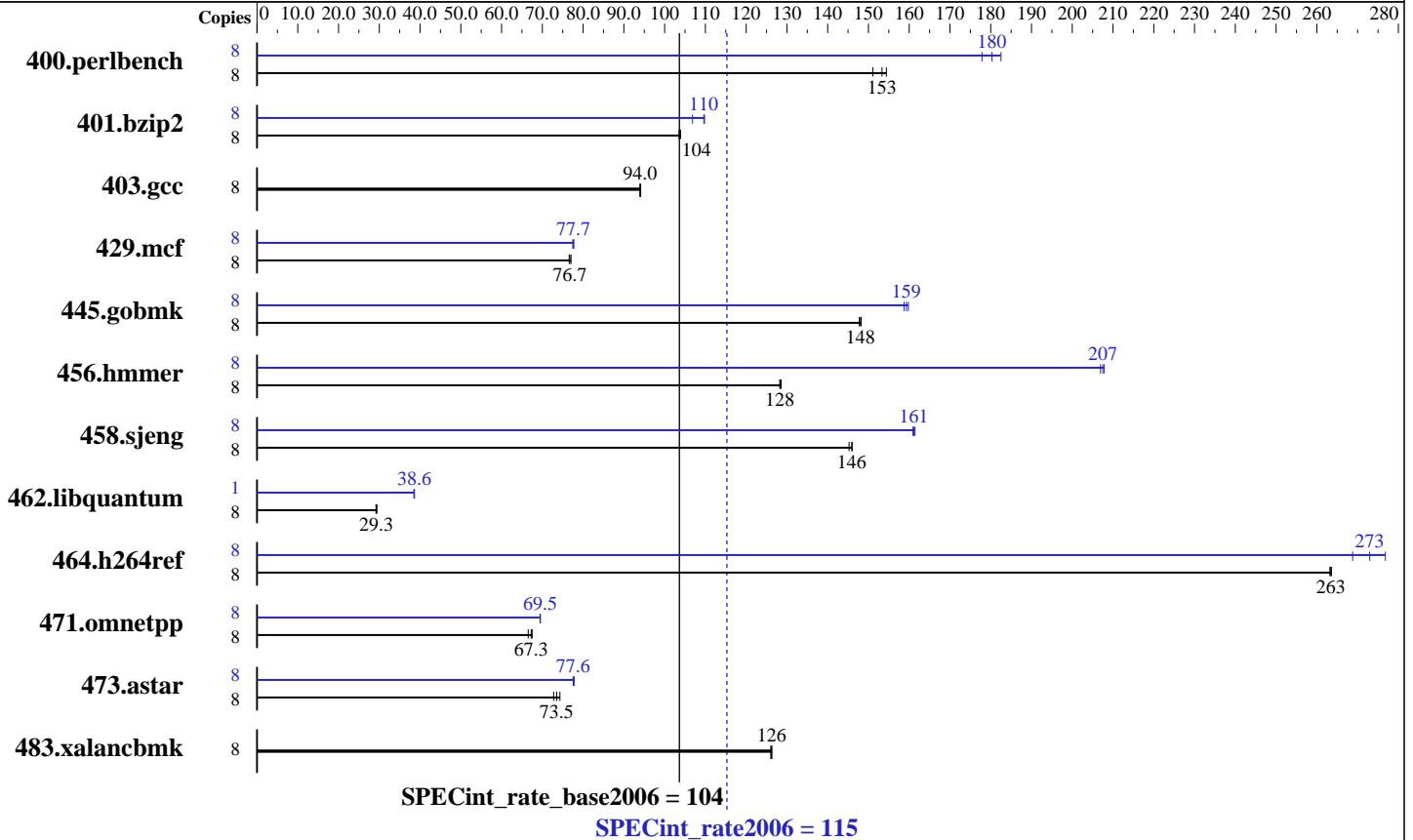Copyright 2006-2014 Standard Performance Evaluation Corporation

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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	517	151	506	154	**510**	**153**	8	439	178	428	183	**434**	**180**
401.bzip2	8	746	104	743	104	**745**	**104**	8	723	107	703	110	**704**	**110**
403.gcc	8	685	94.0	684	94.1	**685**	**94.0**	8	685	94.0	684	94.1	**685**	**94.0**
429.mcf	8	953	76.6	**951**	**76.7**	947	77.0	8	939	77.7	**940**	**77.7**	942	77.5
445.gobmk	8	566	148	**567**	**148**	568	148	8	529	159	**527**	**159**	525	160
456.hmmer	8	580	129	582	128	**582**	**128**	8	361	207	**360**	**207**	359	208
458.sjeng	8	666	145	663	146	**663**	**146**	8	602	161	**601**	**161**	600	161
462.libquantum	8	5680	29.2	**5655**	**29.3**	5640	29.4	1	537	38.6	**537**	**38.6**	538	38.5
464.h264ref	8	**672**	**263**	672	264	673	263	8	**649**	**273**	640	277	659	269
471.omnetpp	8	752	66.5	**743**	**67.3**	741	67.5	8	719	69.5	**720**	**69.5**	720	69.4
473.astar	8	772	72.8	**764**	**73.5**	756	74.3	8	724	77.6	722	77.8	**724**	**77.6**
483.xalancbmk	8	438	126	**437**	**126**	437	126	8	438	126	**437**	**126**	437	126

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.
```

Platform Notes

```
BIOS configuration:
Hardware Prefetch Disabled
```

Base Compiler Invocation

C benchmarks:
```
icc
```

C++ benchmarks:
```
icpc
```

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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
```

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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: `basepeak = yes`

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:

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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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