SPEC® CINT2006 Result

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NEC Corporation

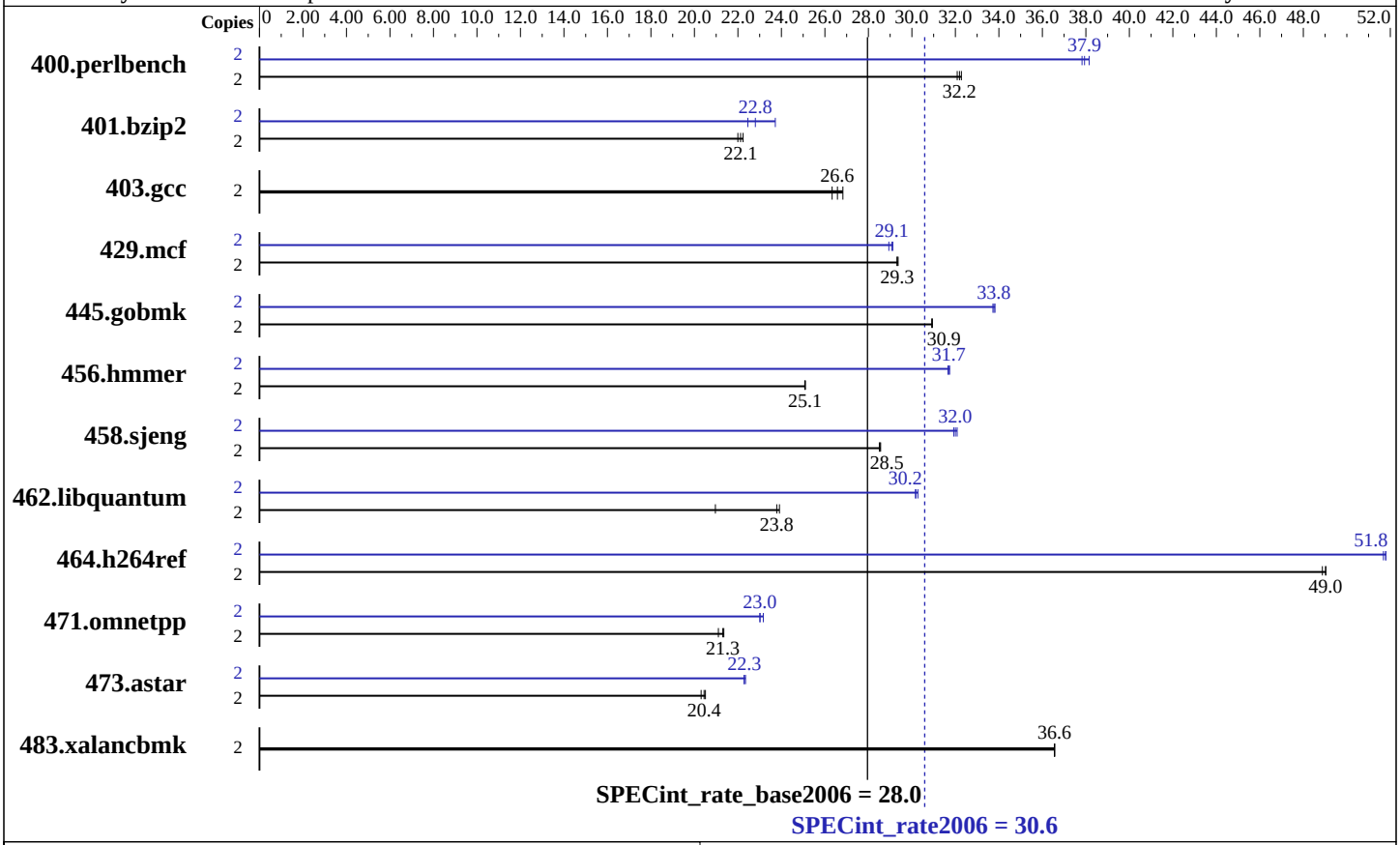
Express5800/110Rh-1
(Intel Xeon processor 3060)

SPECint®_rate2006 = 30.6

SPECint_rate_base2006 = 28.0

CPU2006 license: 9006
Test sponsor: NEC Corporation
Tested by: NEC Corporation

Test date: Nov-2007
Hardware Availability: Nov-2006
Software Availability: Jun-2007



Hardware

CPU Name:	Intel Xeon 3060
CPU Characteristics:	2.40 GHz, 4 MB L2, 1066 MHz bus
CPU MHz:	2400
FPU:	Integrated
CPU(s) enabled:	2 cores, 1 chip, 2 cores/chip
CPU(s) orderable:	1 chip
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	4 MB I+D on chip per chip
L3 Cache:	None
Other Cache:	None
Memory:	4 GB (4x1 GB PC2-5300E, 2 rank, CL5-5-5, ECC)
Disk Subsystem:	1x80 GB SATAII, 7200RPM
Other Hardware:	None

Software

Operating System:	SUSE Linux Enterprise Server 10 (x86_64), Kernel 2.6.16.21-0.8-smp
Compiler:	Intel C++ Compiler for Linux32 and Linux64 version 10.0 Build 20070426 Package ID: l_cc_p_10.0.023
Auto Parallel:	No
File System:	ext2
System State:	Multiuser, Runlevel 3
Base Pointers:	32-bit
Peak Pointers:	32/64-bit
Other Software:	MicroQuill SmartHeap library 8.1 binutils-2.17.tar.gz, Version 2.17

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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	2	**607**	**32.2**	605	32.3	609	32.1	2	517	37.8	512	38.2	**515**	**37.9**
401.bzip2	2	**872**	**22.1**	877	22.0	868	22.2	2	**846**	**22.8**	814	23.7	859	22.5
403.gcc	2	611	26.3	**606**	**26.6**	600	26.8	2	611	26.3	**606**	**26.6**	600	26.8
429.mcf	2	622	29.3	621	29.4	**622**	**29.3**	2	**627**	**29.1**	630	28.9	626	29.1
445.gobmk	2	678	30.9	**678**	**30.9**	678	30.9	2	**621**	**33.8**	622	33.7	620	33.8
456.hmmer	2	744	25.1	743	25.1	**744**	**25.1**	2	588	31.7	**589**	**31.7**	589	31.7
458.sjeng	2	**848**	**28.5**	849	28.5	847	28.6	2	754	32.1	758	31.9	**756**	**32.0**
462.libquantum	2	1977	21.0	1733	23.9	**1742**	**23.8**	2	1369	30.3	**1373**	**30.2**	1374	30.2
464.h264ref	2	906	48.9	**903**	**49.0**	903	49.0	2	856	51.7	**855**	**51.8**	855	51.8
471.omnetpp	2	592	21.1	585	21.4	**587**	**21.3**	2	540	23.2	543	23.0	**543**	**23.0**
473.astar	2	691	20.3	685	20.5	**687**	**20.4**	2	628	22.3	**630**	**22.3**	630	22.3
483.xalancbmk	2	377	36.6	378	36.6	**378**	**36.6**	2	377	36.6	378	36.6	**378**	**36.6**

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

Operating System Notes

```
'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run
'/usr/bin/taskset' used to bind processes to CPUs
```

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`

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`

C++ benchmarks:
`-xT -ipo -O3 -no-prec-div -Wl,-z,muldefs`
`-L/opt/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/10.0.023/bin/icc`
`-L/opt/intel/cce/10.0.023/lib`
`-I/opt/intel/cce/10.0.023/include`

456.hmmer: `/opt/intel/cce/10.0.023/bin/icc`
`-L/opt/intel/cce/10.0.023/lib`
`-I/opt/intel/cce/10.0.023/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:

Continued on next page

Peak Optimization Flags (Continued)

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`

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: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -unroll2 -ansi-alias`

458.sjeng: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -unroll4`

462.libquantum: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -unroll4 -Ob0 -prefetch -opt-streaming-stores always`

464.h264ref: `Same as 456.hmmer`

C++ benchmarks:

471.omnetpp: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-xT -O3 -ipo -no-prec_div -ansi-alias -Wl,-z,muldefs -L/opt/SmartHeap_8.1/lib -lsmartheap`

473.astar: `Same as 471.omnetpp`

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/NEC-ic10-INT-ia32-intel64-linux-flags.html`

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

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