SPEC® CINT2006 Result

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NEC Corporation

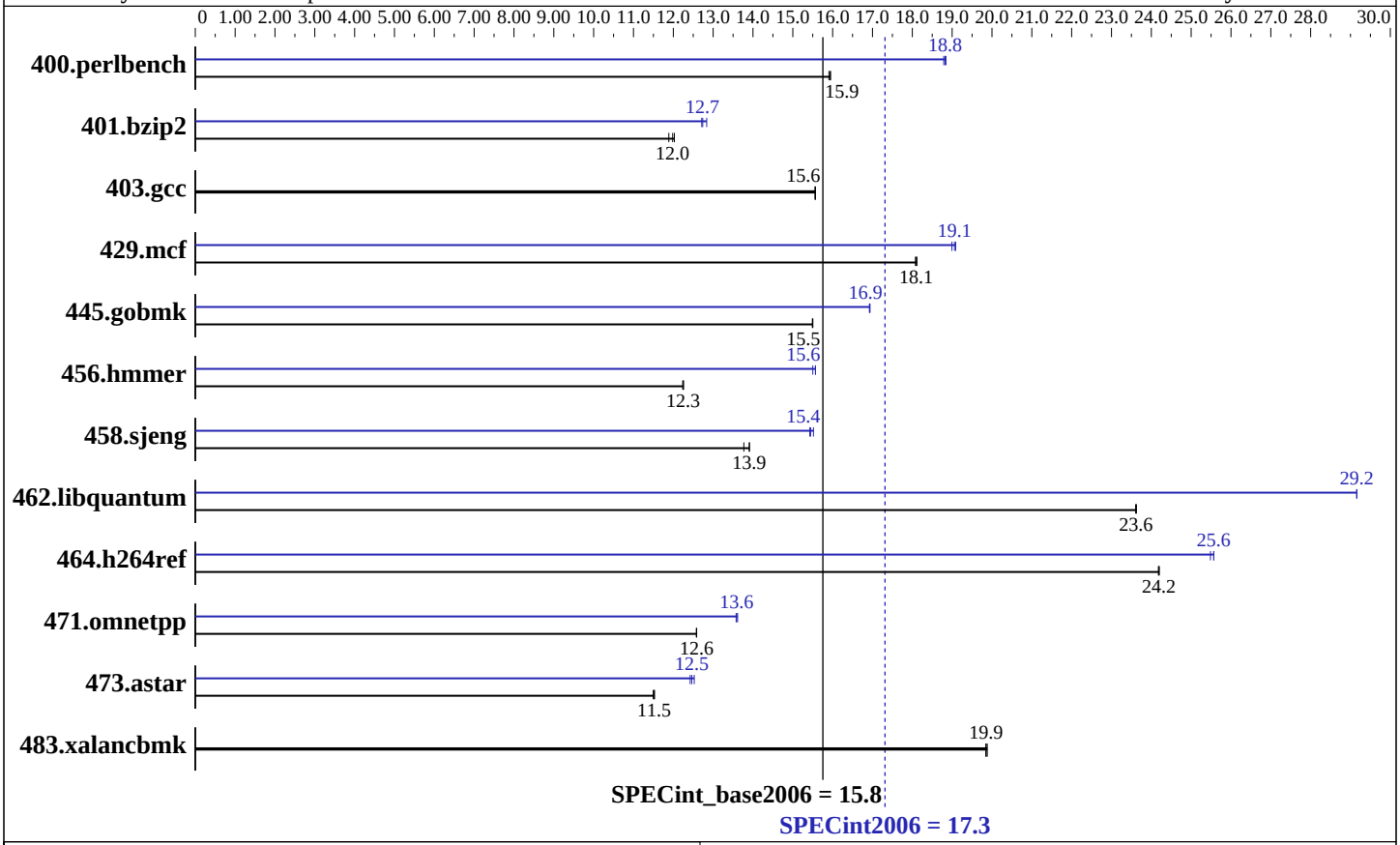
Express5800/120Li
(Intel Xeon processor E5345)

SPECint®2006 = 17.3

SPECint_base2006 = 15.8

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

Test date: Oct-2007
Hardware Availability: Jan-2007
Software Availability: Jun-2007



Hardware

CPU Name:	Intel Xeon E5345
CPU Characteristics:	2.33 GHz, 2x4 MB L2 shared, 1333 MHz bus
CPU MHz:	2333
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:	8 MB I+D on chip per chip, 4 MB shared / 2 cores
L3 Cache:	None
Other Cache:	None
Memory:	8 GB (8x1 GB PC2-5300F, 2 rank, CL5-5-5, ECC)
Disk Subsystem:	1x73.2 GB SAS, 15000RPM
Other Hardware:	None

Software

Operating System:	64-Bit SUSE LINUX Enterprise Server 10, Kernel 2.6.16.21-0.8-smp for x86_64
Compiler:	Intel C++ Compiler for IA32/EM64T application, 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					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	614	15.9	**613**	**15.9**	613	15.9	520	18.8	518	18.8	**519**	**18.8**
401.bzip2	812	11.9	802	12.0	**805**	**12.0**	759	12.7	752	12.8	**758**	**12.7**
403.gcc	517	15.6	**517**	**15.6**	517	15.6	517	15.6	**517**	**15.6**	517	15.6
429.mcf	503	18.1	504	18.1	**504**	**18.1**	**479**	**19.1**	480	19.0	478	19.1
445.gobmk	**677**	**15.5**	677	15.5	677	15.5	620	16.9	**620**	**16.9**	619	16.9
456.hmmer	761	12.3	763	12.2	**762**	**12.3**	**599**	**15.6**	599	15.6	602	15.5
458.sjeng	870	13.9	879	13.8	**870**	**13.9**	784	15.4	780	15.5	**783**	**15.4**
462.libquantum	**877**	**23.6**	877	23.6	878	23.6	**711**	**29.2**	711	29.2	711	29.2
464.h264ref	**915**	**24.2**	915	24.2	914	24.2	866	25.6	868	25.5	**866**	**25.6**
471.omnetpp	497	12.6	497	12.6	**497**	**12.6**	460	13.6	459	13.6	**460**	**13.6**
473.astar	609	11.5	611	11.5	**609**	**11.5**	560	12.5	565	12.4	**563**	**12.5**
483.xalancbmk	347	19.9	**348**	**19.9**	348	19.8	347	19.9	**348**	**19.9**	348	19.8

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

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`

456.hmmer: `/opt/intel/cce/10.0.023/bin/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) `-fast -ansi-alias`
`-prefetch`

401.bzip2: `-L/opt/intel/cce/10.0.023/lib -I/opt/intel/cce/10.0.023/include`
`-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast`

Continued on next page

Peak Optimization Flags (Continued)

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: -L/opt/intel/cce/10.0.023/lib -I/opt/intel/cce/10.0.023/include
-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: -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 -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-linux-flags.20090714.html

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

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