SPEC® CINT2006 Result

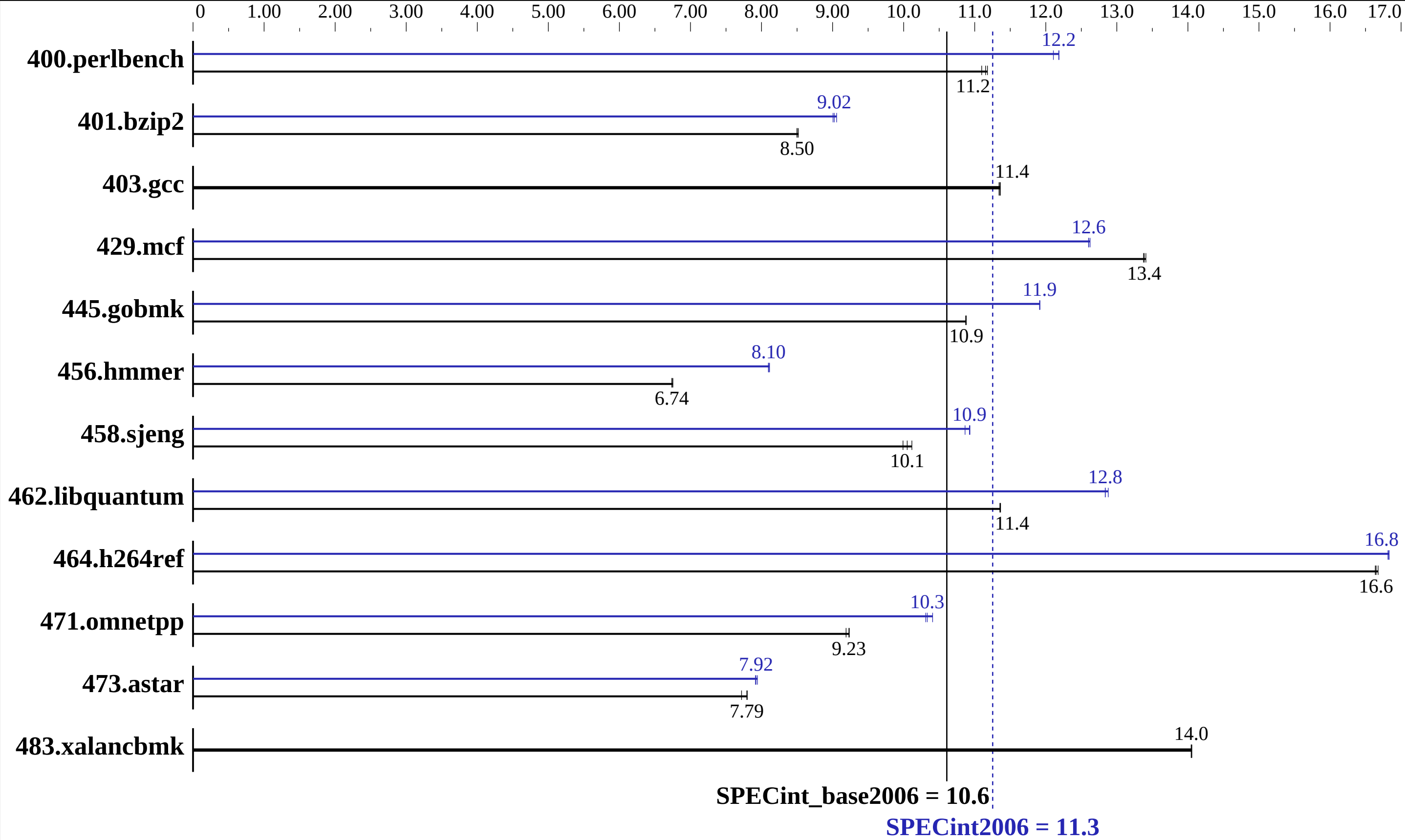
NEC Corporation

Express5800/120Ri-2
(Intel Xeon processor 5110)

SPECint®2006 = 11.3

SPECint_base2006 = 10.6

CPU2006 license:	9006	**Test date:**	Jun-2007
Test sponsor:	NEC Corporation	**Hardware Availability:**	May-2007
Tested by:	NEC Corporation	**Software Availability:**	Apr-2007



Hardware

CPU Name:	Intel Xeon 5110
CPU Characteristics:	1.60 GHz, 4MB L2, 1066MHz bus
CPU MHz:	1600
FPU:	Integrated
CPU(s) enabled:	4 cores, 2 chips, 2 cores/chip
CPU(s) orderable:	1,2 chips
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:	8 GB (4x2 GB DDR2 5300F, 2 rank, CL5-5-5, ECC)
Disk Subsystem:	1x146.5 GB SAS, 15000RPM
Other Hardware:	None

Software

Operating System:	64-Bit SUSE LINUX Enterprise Server 10, Kernel 2.6.16.21-0.8-smp on an x86_64
Compiler:	Intel C++ Compiler for IA32/EM64T application, Version 9.1 - Build 20070320, Package-ID: l_cc_c_9.1.049
Auto Parallel:	No
File System:	ReiserFS
System State:	Multiuser, Runlevel 3
Base Pointers:	32-bit
Peak Pointers:	32/64-bit
Other Software:	MicroQuill SmartHeap Library 8.1

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Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	880	11.1	**876**	**11.2**	874	11.2	**802**	**12.2**	807	12.1	802	12.2
401.bzip2	1133	8.52	**1135**	**8.50**	1135	8.50	1065	9.06	1072	9.01	**1069**	**9.02**
403.gcc	709	11.4	**709**	**11.4**	710	11.3	709	11.4	**709**	**11.4**	710	11.3
429.mcf	682	13.4	**681**	**13.4**	680	13.4	**724**	**12.6**	724	12.6	722	12.6
445.gobmk	965	10.9	**964**	**10.9**	964	10.9	880	11.9	881	11.9	**880**	**11.9**
456.hmmer	1385	6.74	1382	6.75	**1384**	**6.74**	1150	8.11	**1152**	**8.10**	1152	8.10
458.sjeng	1196	10.1	1211	9.99	**1204**	**10.1**	1114	10.9	1107	10.9	**1108**	**10.9**
462.libquantum	1823	11.4	**1825**	**11.4**	1825	11.4	1614	12.8	1609	12.9	**1614**	**12.8**
464.h264ref	1330	16.6	1327	16.7	**1329**	**16.6**	**1315**	**16.8**	1315	16.8	1316	16.8
471.omnetpp	**677**	**9.23**	677	9.24	680	9.19	606	10.3	601	10.4	**605**	**10.3**
473.astar	909	7.72	900	7.80	**901**	**7.79**	887	7.91	884	7.94	**886**	**7.92**
483.xalancbmk	491	14.0	**491**	**14.0**	491	14.1	491	14.0	**491**	**14.0**	491	14.1

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

Operating System Notes

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'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run
```

General Notes

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The system bus runs at 1066 MHz
All binaries were built with 32-bit Intel compiler except:
401.bzip2, 456.hmmer and 462.libquantum in peak were built with
64-bit Intel compiler by changing the path for include and library files.

The Express5800/120Rg-1 and the Express5800/120Ri-2 models are
electronically equivalent.
The results have been measured on a Express5800/120Ri-2 model.
```

Base Compiler Invocation

C benchmarks:
    icc

C++ benchmarks:
    icpc

Base Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_X64
462.libquantum: -DSPEC_CPU_LINUX
483.xalancbmk: -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:
-fast

C++ benchmarks:
-xP -O3 -ipo -no-prec-div -L/opt/SmartHeap_8.1/lib -lsmartheap

Peak Compiler Invocation

C benchmarks (except as noted below):
icc

401.bzip2: /opt/intel/cce/9.1.049/bin/icc
-I/opt/intel/cce/9.1.049/include
-L/opt/intel/cce/9.1.049/lib

456.hmmer: /opt/intel/cce/9.1.049/bin/icc
-I/opt/intel/cce/9.1.049/include
-L/opt/intel/cce/9.1.049/lib

462.libquantum: /opt/intel/cce/9.1.049/bin/icc
-I/opt/intel/cce/9.1.049/include
-L/opt/intel/cce/9.1.049/lib

C++ benchmarks:
icpc

Peak Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_X64
401.bzip2: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
483.xalancbmk: -DSPEC_CPU_LINUX

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Tested by: NEC Corporation

Test date: Jun-2007
Hardware Availability: May-2007
Software Availability: Apr-2007

Peak Optimization Flags

C benchmarks:

400.perlbench: -prof_gen(pass 1) -prof_use(pass 2) -fast

401.bzip2: -fast

403.gcc: basepeak = yes

429.mcf: -prof_gen(pass 1) -prof_use(pass 2) -fast
-L/opt/SmartHeap_8.1/lib -lsmartheap

445.gobmk: Same as 429.mcf

456.hmmer: Same as 400.perlbench

458.sjeng: Same as 429.mcf

462.libquantum: Same as 400.perlbench

464.h264ref: Same as 429.mcf

C++ benchmarks:

471.omnetpp: -prof_gen(pass 1) -prof_use(pass 2) -xP -O3 -ipo
-no-prec-div -L/opt/SmartHeap_8.1/lib -lsmartheap

473.astar: -prof_gen(pass 1) -prof_use(pass 2) -fast
-L/opt/SmartHeap_8.1/lib -lsmartheap

483.xalancbmk: basepeak = yes

The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/NEC-ic91-linux-flags.20090714.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/NEC-ic91-linux-flags.20090714.xml

Tested with SPEC CPU2006 v1.0.
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