SPEC® CINT2006 Result

NEC Corporation

Express5800/120Bb-m6
(Intel Xeon X5260)

SPECint®2006 =	26.8

SPECint_base2006 =	22.6

CPU2006 license: 9006

Test sponsor: NEC Corporation

Tested by: NEC Corporation

Test date: Feb-2008

Hardware Availability: Feb-2008

Software Availability: Nov-2007

SPECint_base2006 = 22.6
SPECint2006 = 26.8

Benchmark	Peak	Base
400.perlbench	27.0	21.6
401.bzip2	19.5	18.0
403.gcc	20.1	16.0
429.mcf	24.3	24.6
445.gobmk	24.1	21.8
456.hmmer	30.5	17.5
458.sjeng	21.6	19.4
462.libquantum	114	64.9
464.h264ref	37.2	34.7
471.omnetpp	16.4	15.2
473.astar	17.6	16.2
483.xalancbmk		27.5

Hardware

CPU Name: Intel Xeon X5260

CPU Characteristics: 3.33 GHz, 6 MB L2, 1333 MHz bus

CPU MHz: 3333

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: 6 MB I+D on chip per chip

L3 Cache: None

Other Cache: None

Memory: 12 GB (12x1 GB PC2-5300F, 2 rank, CL5-5-5, ECC)

Disk Subsystem: 1x73.2 GB SAS, 10000RPM

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 and Linux64 version 10.1 Build 20070913 Package ID: l_cc_p_10.1.008

Auto Parallel: Yes

File System: ext2

System State: Run level 3 (multi-user)

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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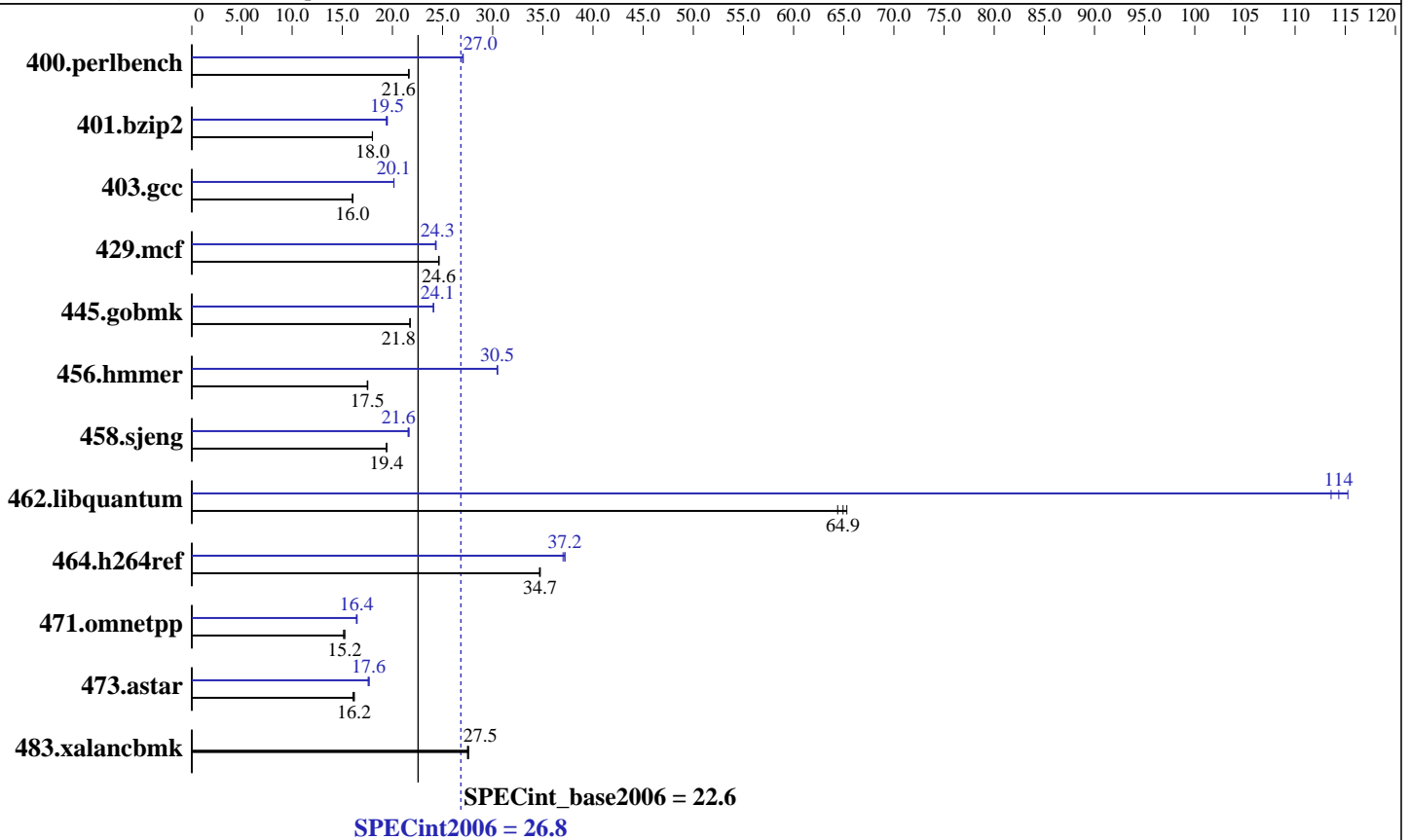SPECint2006 = 26.8

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Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	451	21.7	**451**	**21.6**	452	21.6	**362**	**27.0**	361	27.1	362	27.0
401.bzip2	**536**	**18.0**	536	18.0	536	18.0	495	19.5	498	19.4	**496**	**19.5**
403.gcc	501	16.1	**502**	**16.0**	503	16.0	400	20.1	399	20.2	**400**	**20.1**
429.mcf	371	24.6	**370**	**24.6**	370	24.7	374	24.4	375	24.3	**375**	**24.3**
445.gobmk	**482**	**21.8**	482	21.8	482	21.8	435	24.1	435	24.1	**435**	**24.1**
456.hmmer	**533**	**17.5**	533	17.5	532	17.5	**306**	**30.5**	306	30.4	306	30.5
458.sjeng	624	19.4	**623**	**19.4**	623	19.4	561	21.6	559	21.7	**560**	**21.6**
462.libquantum	**319**	**64.9**	322	64.4	317	65.3	**181**	**114**	182	114	180	115
464.h264ref	**638**	**34.7**	637	34.7	638	34.7	595	37.2	598	37.0	**595**	**37.2**
471.omnetpp	410	15.3	**410**	**15.2**	413	15.1	379	16.5	381	16.4	**380**	**16.4**
473.astar	437	16.1	433	16.2	**434**	**16.2**	399	17.6	397	17.7	**398**	**17.6**
483.xalancbmk	250	27.6	251	27.5	**251**	**27.5**	250	27.6	251	27.5	**251**	**27.5**

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
  OMP_NUM_THREADS set to number of cores

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

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Base Optimization Flags

C benchmarks:
```
-fast -vec-guard-write -parallel -par-runtime-control
```

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/10.1.008/bin/icc
             -L/opt/intel/cce/10.1.008/lib
             -I/opt/intel/cce/10.1.008/include
```

```
  456.hmmer: /opt/intel/cce/10.1.008/bin/icc
             -L/opt/intel/cce/10.1.008/lib
             -I/opt/intel/cce/10.1.008/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

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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 -prefetch
                     -auto-ilp32

            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
                     -auto-ilp32

          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/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/SmartHeap_8.1/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/NEC-Intel-ic10.1-INT-ia32-linux-flags.20090714.00.html

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You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/NEC-Intel-ic10.1-INT-ia32-linux-flags.20090714.00.xml

For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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