SPEC® CINT2006 Result

NEC Corporation

Express5800/B120a-d
(Intel Xeon E5502)

SPECint®_rate2006 =   36.1

SPECint_rate_base2006 = 33.6

CPU2006 license: 9006

Test sponsor: NEC Corporation

Tested by: NEC Corporation

Test date: Aug-2009

Hardware Availability: Jun-2009

Software Availability: Feb-2009

Copies

Benchmark	Value (blue)	Value (black)
400.perlbench	33.1	28.4
401.bzip2	20.3	19.4
403.gcc		31.9
429.mcf		51.0
445.gobmk	29.4	27.4
456.hmmer	35.8	26.3
458.sjeng	30.7	28.5
462.libquantum	132	131
464.h264ref	45.6	43.1
471.omnetpp		26.7
473.astar	22.0	19.2
483.xalancbmk		39.1

SPECint_rate_base2006 = 33.6

SPECint_rate2006 = 36.1

Hardware

CPU Name: Intel Xeon E5502
CPU Characteristics:
CPU MHz: 1867
FPU: Integrated
CPU(s) enabled: 2 cores, 1 chip, 2 cores/chip
CPU(s) orderable: 1,2 chips
Primary Cache: 32 KB I + 32 KB D on chip per core
Secondary Cache: 256 KB I+D on chip per core
L3 Cache: 4 MB I+D on chip per chip
Other Cache: None
Memory: 24 GB (6 X 4 GB PC3-8500R running at 800 MHz)
Disk Subsystem: 1x73.2 GB SAS, 10000 RPM
Other Hardware: None

Software

Operating System: SUSE Linux Enterprise Server 10 (x86_64)
                    SP2 with patch Linux kernel 20090119,
                    Kernel 2.6.16.60-0.34-smp
Compiler: Intel C++ Compiler Professional 11.0 for Linux
                    Build 20090131 Package ID: l_cproc_p_11.0.081
Auto Parallel: No
File System: ReiserFS
System State: Run level 3 (multi-user)
Base Pointers: 32-bit
Peak Pointers: 32/64-bit
Other Software: MicroQuill SmartHeap Library 8.1
                    Binutils 2.18.50.0.7.20080502

SPEC CINT2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

Express5800/B120a-d
(Intel Xeon E5502)

SPECint_rate2006 = 36.1
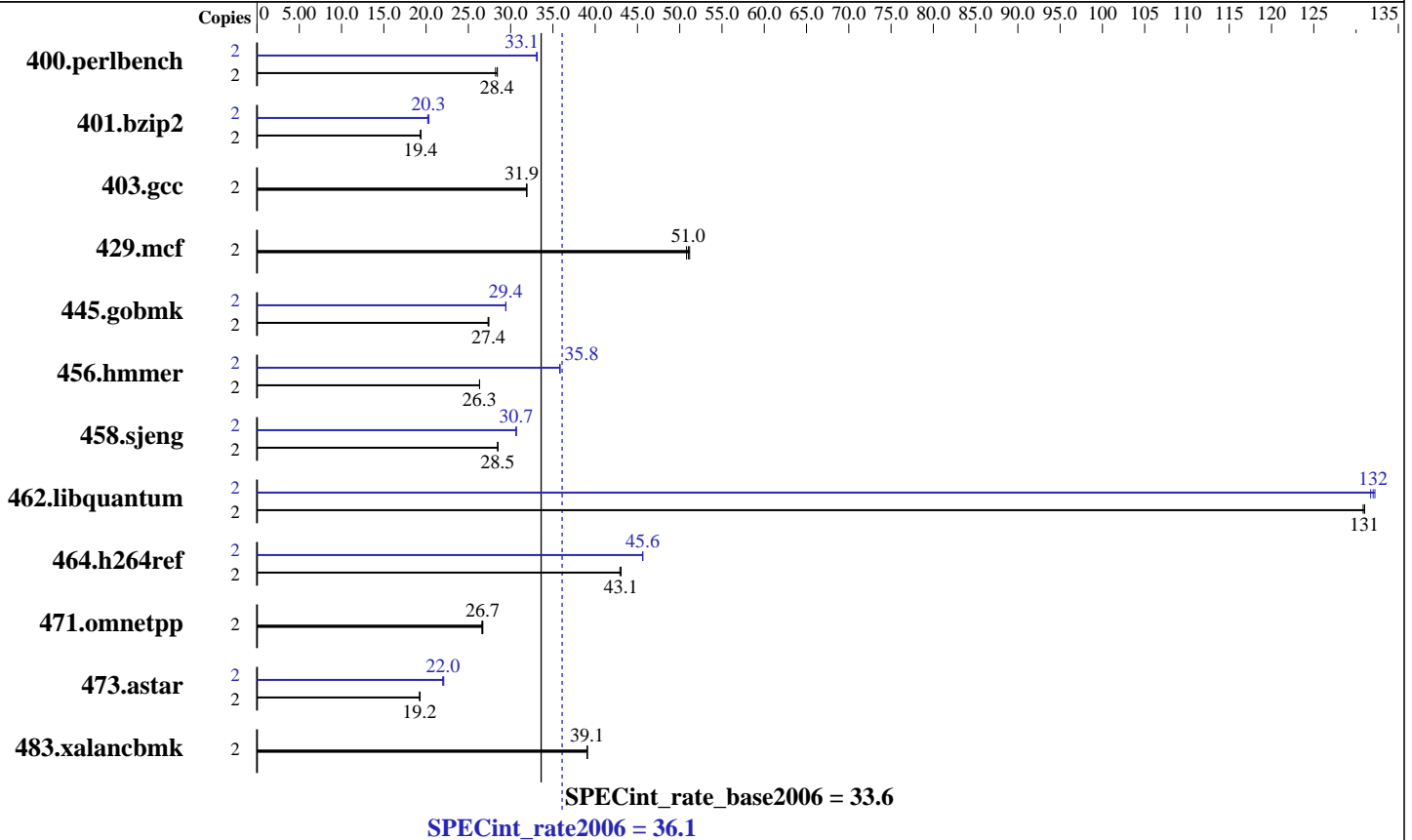
SPECint_rate_base2006 = 33.6

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

Test date: Aug-2009
Hardware Availability: Jun-2009
Software Availability: Feb-2009

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio		Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	2	693	28.2	**688**	**28.4**	687	28.4		2	589	33.2	**590**	**33.1**	591	33.1
401.bzip2	2	**997**	**19.4**	995	19.4	999	19.3		2	**951**	**20.3**	956	20.2	949	20.3
403.gcc	2	504	31.9	**505**	**31.9**	505	31.9		2	504	31.9	**505**	**31.9**	505	31.9
429.mcf	2	**357**	**51.0**	356	51.2	359	50.8		2	**357**	**51.0**	356	51.2	359	50.8
445.gobmk	2	**766**	**27.4**	768	27.3	766	27.4		2	712	29.5	**713**	**29.4**	713	29.4
456.hmmer	2	**709**	**26.3**	709	26.3	709	26.3		2	**521**	**35.8**	521	35.8	521	35.8
458.sjeng	2	849	28.5	**850**	**28.5**	850	28.5		2	789	30.7	**789**	**30.7**	790	30.6
462.libquantum	2	316	131	317	131	**316**	**131**		2	315	132	**314**	**132**	313	132
464.h264ref	2	1028	43.1	**1028**	**43.1**	1031	42.9		2	970	45.6	**970**	**45.6**	971	45.6
471.omnetpp	2	468	26.7	**469**	**26.7**	470	26.6		2	468	26.7	**469**	**26.7**	470	26.6
473.astar	2	728	19.3	730	19.2	**730**	**19.2**		2	**638**	**22.0**	639	22.0	636	22.1
483.xalancbmk	2	353	39.1	**353**	**39.1**	353	39.1		2	353	39.1	**353**	**39.1**	353	39.1

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

Submit Notes

```
The config file option 'submit' was used.
 numactl was used to bind copies to the cores
```

Operating System Notes

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

Platform Notes

```
Default BIOS settings were used.
```

Base Compiler Invocation

C benchmarks:
```
icc
```

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

Base Portability Flags

```
400.perlbench: -DSPEC_CPU_LINUX_IA32
```

Continued on next page

SPEC CINT2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

Express5800/B120a-d
(Intel Xeon E5502)

SPECint_rate2006 =   36.1

SPECint_rate_base2006 = 33.6

CPU2006 license: 9006   **Test date:**   Aug-2009
Test sponsor: NEC Corporation   **Hardware Availability:** Jun-2009
Tested by: NEC Corporation   **Software Availability:** Feb-2009

Base Portability Flags (Continued)

462.libquantum: `-DSPEC_CPU_LINUX`
483.xalancbmk: `-DSPEC_CPU_LINUX`

Base Optimization Flags

C benchmarks:
```
-xSSE4.2 -ipo -O3 -no-prec-div -static -inline-calloc
-opt-malloc-options=3 -opt-prefetch
```

C++ benchmarks:
```
-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -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/Compiler/11.0/081/bin/intel64/icc`

456.hmmer: `/opt/intel/Compiler/11.0/081/bin/intel64/icc`

458.sjeng: `/opt/intel/Compiler/11.0/081/bin/intel64/icc`

C++ benchmarks (except as noted below):
`icpc`

473.astar: `/opt/intel/Compiler/11.0/081/bin/intel64/icpc`

Peak Portability Flags

400.perlbench: `-DSPEC_CPU_LINUX_IA32`
401.bzip2: `-DSPEC_CPU_LP64`
456.hmmer: `-DSPEC_CPU_LP64`
458.sjeng: `-DSPEC_CPU_LP64`

NEC Corporation

Express5800/B120a-d
(Intel Xeon E5502)

SPECint_rate2006 =   36.1

SPECint_rate_base2006 = 33.6

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

Test date: Aug-2009
Hardware Availability: Jun-2009
Software Availability: Feb-2009

Peak Portability Flags (Continued)

```
462.libquantum: -DSPEC_CPU_LINUX
      473.astar: -DSPEC_CPU_LP64
  483.xalancbmk: -DSPEC_CPU_LINUX
```

Peak Optimization Flags

C benchmarks:

```
400.perlbench: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
               -O3(pass 2) -no-prec-div(pass 2) -static(pass 2)
               -prof-use(pass 2) -ansi-alias -opt-prefetch

    401.bzip2: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
               -O3(pass 2) -no-prec-div(pass 2) -static(pass 2)
               -prof-use(pass 2) -opt-prefetch -ansi-alias -auto-ilp32

      403.gcc: basepeak = yes

      429.mcf: basepeak = yes

    445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2) -O2
               -ipo -no-prec-div -ansi-alias

    456.hmmer: -xSSE4.2 -ipo -O3 -no-prec-div -static -unroll2
               -ansi-alias -auto-ilp32

    458.sjeng: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
               -O3(pass 2) -no-prec-div(pass 2) -static(pass 2)
               -prof-use(pass 2) -unroll4 -auto-ilp32

462.libquantum: -xSSE4.2 -ipo -O3 -no-prec-div -static
                -opt-malloc-options=3 -opt-prefetch

   464.h264ref: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
                -O3(pass 2) -no-prec-div(pass 2) -static(pass 2)
                -prof-use(pass 2) -unroll2 -ansi-alias
```

C++ benchmarks:

```
   471.omnetpp: basepeak = yes

     473.astar: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
                -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
                -ansi-alias -opt-ra-region-strategy=routine -auto-ilp32
                -Wl,-z,muldefs -L/opt/SmartHeap_8.1/lib64 -lsmartheap64

  483.xalancbmk: basepeak = yes
```

SPEC CINT2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

Express5800/B120a-d
(Intel Xeon E5502)

SPECint_rate2006 =   36.1

SPECint_rate_base2006 = 33.6

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

Test date: Aug-2009
Hardware Availability: Jun-2009
Software Availability: Feb-2009

Peak Other Flags

C benchmarks:

403.gcc: `-Dalloca=_alloca`

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-icl1.0-int-linux64-revG.html
http://www.spec.org/cpu2006/flags/NEC-Intel-Linux-Settings-flags-revE.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-icl1.0-int-linux64-revG.xml
http://www.spec.org/cpu2006/flags/NEC-Intel-Linux-Settings-flags-revE.xml

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

Tested with SPEC CPU2006 v1.1.
Report generated on Wed Jul 23 02:09:56 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 1 September 2009.