SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

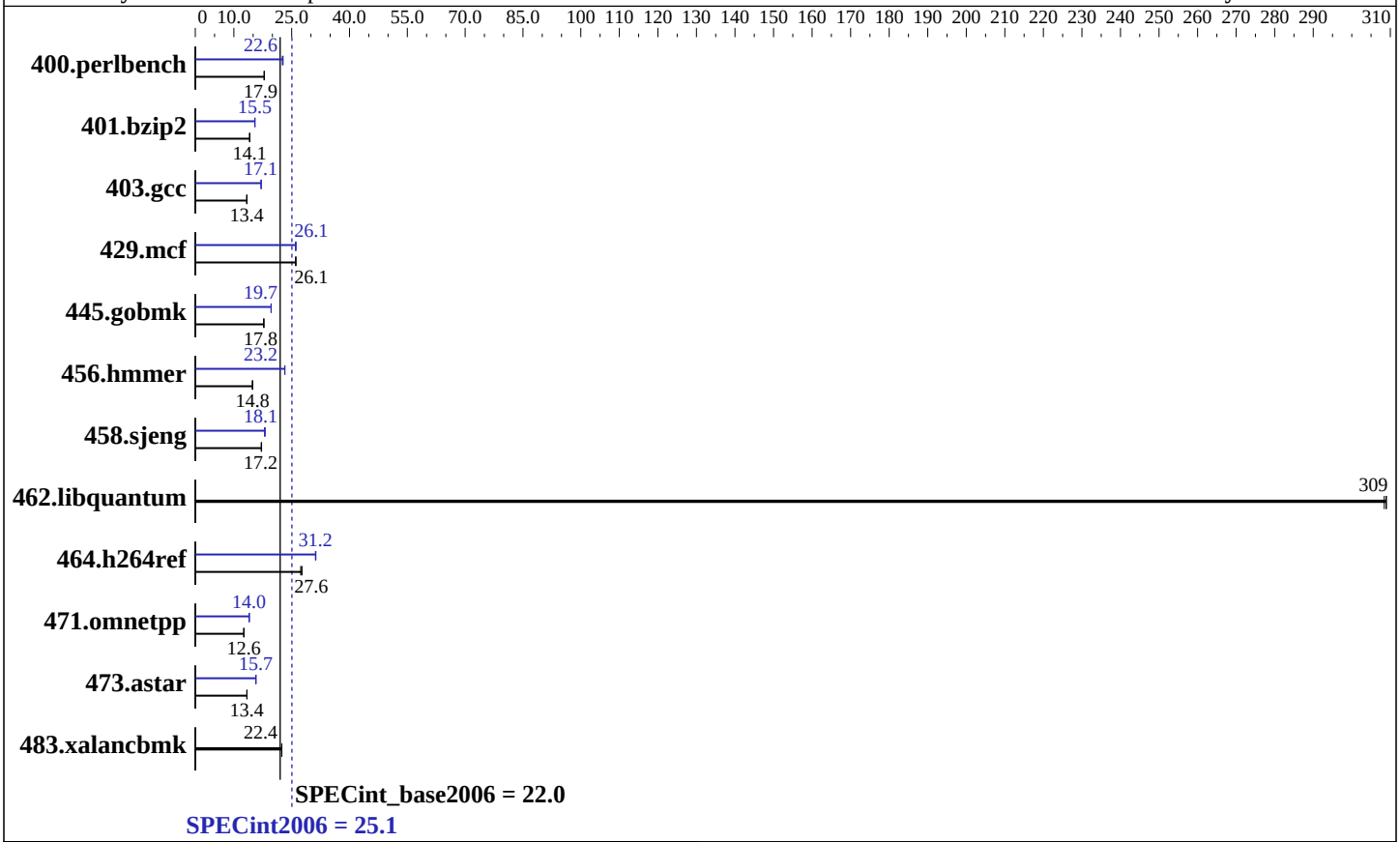
Express5800/R140a-4
(Intel Xeon X7460)

SPECint®2006 = 25.1

SPECint_base2006 = 22.0

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

Test date: Nov-2008
Hardware Availability: Nov-2008
Software Availability: Nov-2008



Hardware

CPU Name:	Intel Xeon X7460
CPU Characteristics:	1066 MHz system bus
CPU MHz:	2667
FPU:	Integrated
CPU(s) enabled:	24 cores, 4 chips, 6 cores/chip
CPU(s) orderable:	1,2,3,4 chips
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	9 MB I+D on chip per chip, 3 MB shared / 2 cores
L3 Cache:	16 MB I+D on chip per chip
Other Cache:	None
Memory:	32 GB (16x2 GB PC2-5300F, 2 rank, CL5-5-5, ECC)
Disk Subsystem:	1x73.2 GB SAS, 15000 RPM
Other Hardware:	None

Software

Operating System:	SUSE Linux Enterprise Server 10 (x86_64) SP2, Kernel 2.6.16.60-0.21-smp
Compiler:	Intel C++ Compiler 11.0 for Linux Build 20080930 Package ID: l_cproc_p_11.0.069
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 2.18.50.0.7.20080502

SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

Express5800/R140a-4
(Intel Xeon X7460)

SPECint2006 = 25.1

SPECint_base2006 = 22.0

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

Test date: Nov-2008
Hardware Availability: Nov-2008
Software Availability: Nov-2008

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	545	17.9	547	17.9	**546**	**17.9**	432	22.6	429	22.8	**432**	**22.6**
401.bzip2	687	14.0	**682**	**14.1**	681	14.2	626	15.4	623	15.5	**624**	**15.5**
403.gcc	605	13.3	**600**	**13.4**	600	13.4	472	17.1	**471**	**17.1**	471	17.1
429.mcf	351	26.0	349	26.1	**350**	**26.1**	**350**	**26.1**	351	26.0	349	26.1
445.gobmk	590	17.8	**590**	**17.8**	590	17.8	534	19.6	**533**	**19.7**	532	19.7
456.hmmer	628	14.9	**629**	**14.8**	629	14.8	402	23.2	402	23.2	**402**	**23.2**
458.sjeng	708	17.1	**704**	**17.2**	704	17.2	673	18.0	**669**	**18.1**	669	18.1
462.libquantum	67.2	308	**67.1**	**309**	67.1	309	67.2	308	**67.1**	**309**	67.1	309
464.h264ref	800	27.7	**802**	**27.6**	810	27.3	710	31.2	**709**	**31.2**	707	31.3
471.omnetpp	496	12.6	**496**	**12.6**	497	12.6	**447**	**14.0**	447	14.0	446	14.0
473.astar	**524**	**13.4**	524	13.4	524	13.4	448	15.7	**446**	**15.7**	446	15.8
483.xalancbmk	**308**	**22.4**	308	22.4	307	22.5	**308**	**22.4**	308	22.4	307	22.5

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
KMP_AFFINITY set to "physical,0"
```

Platform Notes

```
Bios settings:
Hardware Prefetcher:              Enabled
Adjacent Cache Line Prefetch:     Enabled
FSB High Bandwidth Optimization: Disabled
```

General Notes

```
The NEC Express5800/R140a-4(Intel Xeon X7460) and
the Bull NovaScale R480 E1(Intel Xeon X7460, 2.66 GHz) models are electronically equivalent.
The results have been measured on a NEC Express5800/R140a-4(Intel Xeon X7460) model.
```

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:
-xSSE4.1 -ipo -O3 -no-prec-div -static -parallel
-par-runtime-control -opt-prefetch

C++ benchmarks:
-xSSE4.1 -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/11.0/069/bin/intel64/icc
-L/opt/intel/Compiler/11.0/069/ipp/em64t/lib
-I/opt/intel/Compiler/11.0/069/ipp/em64t/include

456.hmmer: /opt/intel/Compiler/11.0/069/bin/intel64/icc
-L/opt/intel/Compiler/11.0/069/ipp/em64t/lib
-I/opt/intel/Compiler/11.0/069/ipp/em64t/include

C++ benchmarks:
icpc

Peak Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32
401.bzip2: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64

Continued on next page

Peak Portability Flags (Continued)

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) -xSSE4.1 -ipo -O3 -no-prec-div -static -ansi-alias -opt-prefetch

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

403.gcc: -xSSE4.1 -ipo -O3 -no-prec-div -static -inline-calloc -opt-malloc-options=3

429.mcf: -xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch

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

456.hmmer: -xSSE4.1 -ipo -O3 -no-prec-div -static -unroll2 -ansi-alias -auto-ilp32

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

462.libquantum: basepeak = yes

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

C++ benchmarks:

471.omnetpp: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3 -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) -xSSE4.1 -ipo -O3 -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 files that were used to format this result can be browsed at
`http://www.spec.org/cpu2006/flags/Intel-ic11.0-int-linux64-revD.20090713.html`
`http://www.spec.org/cpu2006/flags/NEC-Intel-Linux-Settings-flags-revB.html`

You can also download the XML flags sources by saving the following links:
`http://www.spec.org/cpu2006/flags/Intel-ic11.0-int-linux64-revD.20090713.xml`
`http://www.spec.org/cpu2006/flags/NEC-Intel-Linux-Settings-flags-revB.xml`

SPEC and SPECint are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

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 Tue Jul 22 21:44:11 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 24 December 2008.