



SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

SPECint®2006 = 42.7

Express5800/R120e-1M (Intel Xeon E5-2620 v2)

SPECint_base2006 = 40.1

CPU2006 license: 9006

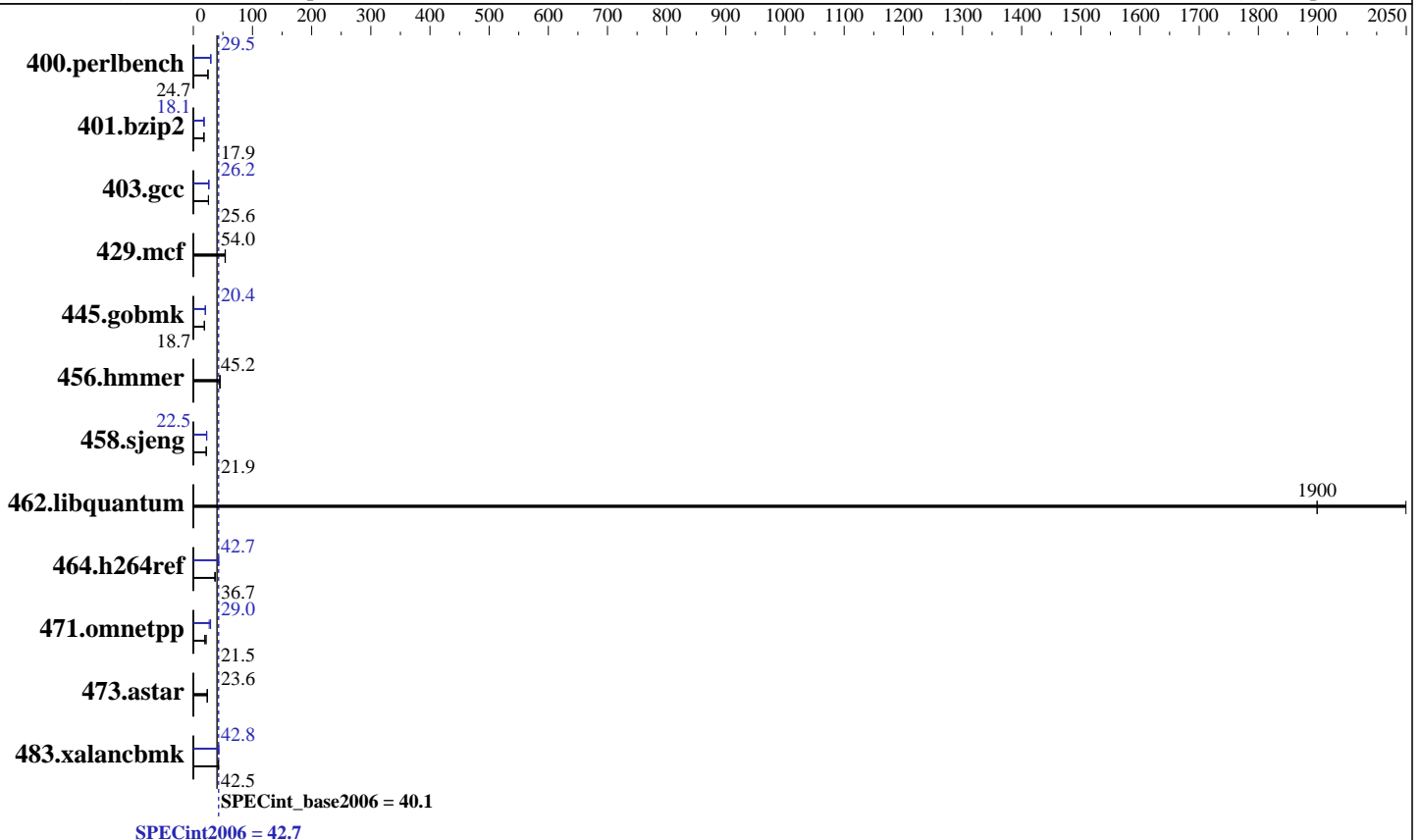
Test date: Nov-2013

Test sponsor: NEC Corporation

Hardware Availability: Sep-2013

Tested by: NEC Corporation

Software Availability: Sep-2013



Hardware

CPU Name: Intel Xeon E5-2620 v2
 CPU Characteristics: Intel Turbo Boost Technology up to 2.60 GHz
 CPU MHz: 2100
 FPU: Integrated
 CPU(s) enabled: 12 cores, 2 chips, 6 cores/chip, 2 threads/core
 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: 15 MB I+D on chip per chip
 Other Cache: None
 Memory: 256 GB (16 x 16 GB 2Rx4 PC3L-12800R-11, ECC)
 Disk Subsystem: 1 x 300 GB SAS, 10000 RPM, RAID 0
 Other Hardware: None

Software

Operating System: Red Hat Enterprise Linux Server release 6.4 (Santiago)
 Kernel 2.6.32-358.18.1.el6.x86_64
 Compiler: C/C++: Version 14.0.0.080 of Intel C++ Studio XE for Linux
 Auto Parallel: Yes
 File System: ext4
 System State: Run level 3 (multi-user)
 Base Pointers: 32/64-bit
 Peak Pointers: 32/64-bit
 Other Software: Microquill SmartHeap V8.1



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

SPECint2006 = **42.7**

Express5800/R120e-1M (Intel Xeon E5-2620 v2)

SPECint_base2006 = **40.1**

CPU2006 license: 9006

Test date: Nov-2013

Test sponsor: NEC Corporation

Hardware Availability: Sep-2013

Tested by: NEC Corporation

Software Availability: Sep-2013

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	396	24.7	395	24.7	395	24.8	332	29.5	331	29.5	331	29.5
401.bzip2	539	17.9	539	17.9	540	17.9	532	18.1	532	18.1	533	18.1
403.gcc	315	25.6	315	25.6	314	25.6	307	26.2	308	26.1	307	26.2
429.mcf	169	54.0	169	54.1	170	53.6	169	54.0	169	54.1	170	53.6
445.gobmk	558	18.8	561	18.7	561	18.7	515	20.4	515	20.4	515	20.4
456.hammer	206	45.2	209	44.6	206	45.2	206	45.2	209	44.6	206	45.2
458.sjeng	551	21.9	551	21.9	552	21.9	537	22.5	536	22.6	537	22.5
462.libquantum	10.1	2050	10.9	1900	10.9	1900	10.1	2050	10.9	1900	10.9	1900
464.h264ref	603	36.7	602	36.8	603	36.7	519	42.7	519	42.7	519	42.7
471.omnetpp	325	19.2	291	21.5	291	21.5	214	29.2	233	26.8	216	29.0
473.astar	298	23.5	296	23.7	297	23.6	298	23.5	296	23.7	297	23.6
483.xalancbmk	162	42.5	162	42.6	162	42.5	161	43.0	161	42.8	161	42.7

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

Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"

Platform Notes

BIOS Settings:
Energy Performance: Performance
Memory Voltage: 1.5 V
Package C state Limit: C0

General Notes

Environment variables set by runspec before the start of the run:

KMP_AFFINITY = "granularity=fine,compact,1,0"

LD_LIBRARY_PATH = "/home/cpu2006/libs/32:/home/cpu2006/libs/64:/home/cpu2006/sh"

OMP_NUM_THREADS = "12"

Transparent Huge Pages enabled with:

echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled

The Express5800/R120e-1M and

the Express5800/R120e-2M models are electronically equivalent.

The results have been measured on the Express5800/R120e-2M model.



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

SPECint2006 = 42.7

Express5800/R120e-1M (Intel Xeon E5-2620 v2)

SPECint_base2006 = 40.1

CPU2006 license: 9006

Test date: Nov-2013

Test sponsor: NEC Corporation

Hardware Availability: Sep-2013

Tested by: NEC Corporation

Software Availability: Sep-2013

Base Compiler Invocation

C benchmarks:

icc -m64

C++ benchmarks:

icpc -m64

Base Portability Flags

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
 401.bzip2: -DSPEC_CPU_LP64
 403.gcc: -DSPEC_CPU_LP64
 429.mcf: -DSPEC_CPU_LP64
 445.gobmk: -DSPEC_CPU_LP64
 456.hmmer: -DSPEC_CPU_LP64
 458.sjeng: -DSPEC_CPU_LP64
 462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
 464.h264ref: -DSPEC_CPU_LP64
 471.omnetpp: -DSPEC_CPU_LP64
 473.astar: -DSPEC_CPU_LP64
 483.xalancbmk: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:

-xAVX -ipo -O3 -no-prec-div -parallel -opt-prefetch -auto-p32

C++ benchmarks:

-xAVX -ipo -O3 -no-prec-div -opt-prefetch -auto-p32 -Wl,-z,muldefs
-L/sh -lsmartheap64

Base Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):

icc -m64

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

SPECint2006 = 42.7

Express5800/R120e-1M (Intel Xeon E5-2620 v2)

SPECint_base2006 = 40.1

CPU2006 license: 9006

Test date: Nov-2013

Test sponsor: NEC Corporation

Hardware Availability: Sep-2013

Tested by: NEC Corporation

Software Availability: Sep-2013

Peak Compiler Invocation (Continued)

400.perlbench: `icc -m32`

445.gobmk: `icc -m32`

464.h264ref: `icc -m32`

C++ benchmarks (except as noted below):

`icpc -m32`

473.astar: `icpc -m64`

Peak Portability Flags

400.perlbench: `-DSPEC_CPU_LINUX_IA32`

401.bzip2: `-DSPEC_CPU_LP64`

403.gcc: `-DSPEC_CPU_LP64`

429.mcf: `-DSPEC_CPU_LP64`

456.hmmer: `-DSPEC_CPU_LP64`

458.sjeng: `-DSPEC_CPU_LP64`

462.libquantum: `-DSPEC_CPU_LP64 -DSPEC_CPU_LINUX`

473.astar: `-DSPEC_CPU_LP64`

483.xalancbmk: `-DSPEC_CPU_LINUX`

Peak Optimization Flags

C benchmarks:

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

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

403.gcc: `-xAVX -ipo -O3 -no-prec-div -inline-calloc
-opt-malloc-options=3 -auto-ilp32`

429.mcf: `basepeak = yes`

445.gobmk: `-xAVX(pass 2) -prof-gen(pass 1) -prof-use(pass 2)
-ansi-alias`

456.hmmer: `basepeak = yes`

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation	SPECint2006 =	42.7
Express5800/R120e-1M (Intel Xeon E5-2620 v2)	SPECint_base2006 =	40.1

CPU2006 license: 9006	Test date: Nov-2013
Test sponsor: NEC Corporation	Hardware Availability: Sep-2013
Tested by: NEC Corporation	Software Availability: Sep-2013

Peak Optimization Flags (Continued)

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

462.libquantum: basepeak = yes

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

C++ benchmarks:

471.omnetpp: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
 -no-prec-div(pass 2) -prof-use(pass 2)
 -opt-ra-region-strategy=block -ansi-alias
 -Wl,-z,muldefs -L/sh -lsmartheap

473.astar: basepeak = yes

483.xalancbmk: -xAVX -ipo -O3 -no-prec-div -opt-prefetch -ansi-alias
 -Wl,-z,muldefs -L/sh -lsmartheap

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-ic14.0-official-linux64.20140128.html>
<http://www.spec.org/cpu2006/flags/NEC-Platform-Settings-V1.2-R120-RevB.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.xml>
<http://www.spec.org/cpu2006/flags/NEC-Platform-Settings-V1.2-R120-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 v1.2.
 Report generated on Thu Jul 24 19:32:50 2014 by SPEC CPU2006 PS/PDF formatter v6932.
 Originally published on 17 December 2013.