



SPEC[®] CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

SPECint[®]_rate2006 = 215

Express5800/R120b-2 (Intel Xeon X5690)

SPECint_rate_base2006 = 203

CPU2006 license: 9006

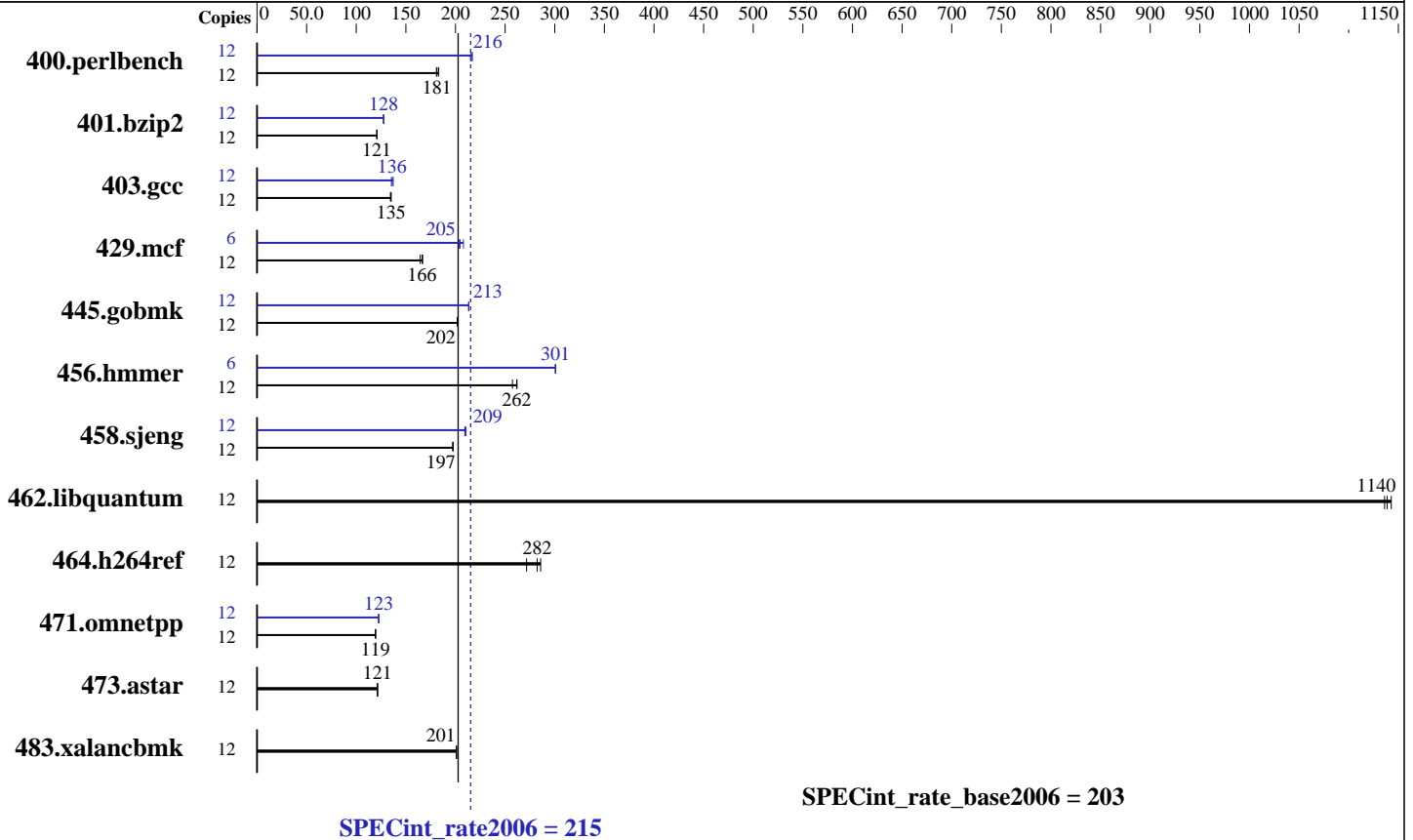
Test sponsor: NEC Corporation

Tested by: NEC Corporation

Test date: Jul-2011

Hardware Availability: Feb-2011

Software Availability: Mar-2011



Hardware

CPU Name: Intel Xeon X5690
 CPU Characteristics: Intel Turbo Boost Technology up to 3.73 GHz
 CPU MHz: 3467
 FPU: Integrated
 CPU(s) enabled: 6 cores, 1 chip, 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: 12 MB I+D on chip per chip
 Other Cache: None
 Memory: 48 GB (6 x 8 GB 2Rx4 PC3-10600R-9, ECC)
 Disk Subsystem: 1 x 500 GB SATA, 7200 RPM
 Other Hardware: None

Software

Operating System: SUSE Linux Enterprise Server 11 SP1 (x86_64), Kernel 2.6.32.12-0.7-default
 Compiler: Intel C++ Compiler XE for applications running on IA32, Version 12.0.3.174 Build 20110309
 Auto Parallel: No
 File System: ext3
 System State: Run level 3 (multi-user)
 Base Pointers: 32-bit
 Peak Pointers: 32/64-bit
 Other Software: Microquill SmartHeap V8.1



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

SPECint_rate2006 = 215

Express5800/R120b-2 (Intel Xeon X5690)

SPECint_rate_base2006 = 203

CPU2006 license: 9006

Test sponsor: NEC Corporation

Tested by: NEC Corporation

Test date: Jul-2011

Hardware Availability: Feb-2011

Software Availability: Mar-2011

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	12	648	181	<u>646</u>	<u>181</u>	640	183	12	544	216	<u>543</u>	<u>216</u>	540	217
401.bzip2	12	957	121	<u>959</u>	<u>121</u>	959	121	12	909	127	908	128	<u>908</u>	<u>128</u>
403.gcc	12	<u>715</u>	<u>135</u>	719	134	715	135	12	<u>709</u>	<u>136</u>	704	137	713	135
429.mcf	12	666	164	<u>658</u>	<u>166</u>	656	167	6	268	204	263	208	<u>268</u>	<u>205</u>
445.gobmk	12	624	202	<u>623</u>	<u>202</u>	622	202	12	590	213	<u>590</u>	<u>213</u>	590	213
456.hammer	12	<u>428</u>	<u>262</u>	427	262	435	257	6	186	301	186	300	<u>186</u>	<u>301</u>
458.sjeng	12	<u>736</u>	<u>197</u>	736	197	734	198	12	<u>693</u>	<u>209</u>	689	211	693	209
462.libquantum	12	218	1140	<u>218</u>	<u>1140</u>	219	1140	12	218	1140	<u>218</u>	<u>1140</u>	219	1140
464.h264ref	12	929	286	<u>941</u>	<u>282</u>	978	272	12	929	286	<u>941</u>	<u>282</u>	978	272
471.omnetpp	12	<u>628</u>	<u>119</u>	628	119	628	119	12	612	123	<u>612</u>	<u>123</u>	612	123
473.astar	12	692	122	<u>695</u>	<u>121</u>	696	121	12	692	122	<u>695</u>	<u>121</u>	696	121
483.xalancbmk	12	<u>412</u>	<u>201</u>	412	201	412	201	12	<u>412</u>	<u>201</u>	412	201	412	201

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
Huge pages were not configured for this run

Platform Notes

BIOS Settings:
Performance/Watt: Traditional
Server Class: Custom
Data Reuse Optimization: Disabled
Memory Voltage: Normal

General Notes

The Express5800/R120b-1 and the Express5800/R120b-2 models are electronically equivalent.
The results have been measured on the Express5800/R120b-1 model.



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

SPECint_rate2006 = 215

Express5800/R120b-2 (Intel Xeon X5690)

SPECint_rate_base2006 = 203

CPU2006 license: 9006

Test date: Jul-2011

Test sponsor: NEC Corporation

Hardware Availability: Feb-2011

Tested by: NEC Corporation

Software Availability: Mar-2011

Base Compiler Invocation

C benchmarks:

icc -m32

C++ benchmarks:

icpc -m32

Base Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32
462.libquantum: -DSPEC_CPU_LINUX
483.xalancbmk: -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch
-B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT

C++ benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs
-L/opt/SmartHeap_8.1/lib -lsmartheap
-B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT

Base Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):

icc -m32

400.perlbench: icc -m64

401.bzip2: icc -m64

456.hmmer: icc -m64

458.sjeng: icc -m64

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

SPECint_rate2006 = 215

Express5800/R120b-2 (Intel Xeon X5690)

SPECint_rate_base2006 = 203

CPU2006 license: 9006

Test date: Jul-2011

Test sponsor: NEC Corporation

Hardware Availability: Feb-2011

Tested by: NEC Corporation

Software Availability: Mar-2011

Peak Compiler Invocation (Continued)

C++ benchmarks:
icpc -m32

Peak Portability Flags

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
401.bzip2: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LINUX
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) -prof-use(pass 2)
-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

401.bzip2: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-opt-prefetch -auto-ilp32 -ansi-alias
-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

403.gcc: -xSSE4.2 -ipo -O3 -no-prec-div
-B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT

429.mcf: -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 -auto-ilp32

445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)
-ansi-alias -auto-ilp32

456.hmmer: -xSSE4.2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32
-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

458.sjeng: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-unroll4 -auto-ilp32
-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

462.libquantum: basepeak = yes

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

SPECint_rate2006 = 215

Express5800/R120b-2 (Intel Xeon X5690)

SPECint_rate_base2006 = 203

CPU2006 license: 9006

Test date: Jul-2011

Test sponsor: NEC Corporation

Hardware Availability: Feb-2011

Tested by: NEC Corporation

Software Availability: Mar-2011

Peak Optimization Flags (Continued)

464.h264ref: basepeak = yes

C++ benchmarks:

```
471.omnetpp: -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=block -Wl,-z,muldefs
             -L/opt/SmartHeap_8.1/lib -lsmartheap
```

473.astar: basepeak = yes

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-ic12.0-linux64-revB.html>

<http://www.spec.org/cpu2006/flags/NEC-Intel-Linux-Settings-flags-revF.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revB.xml>

<http://www.spec.org/cpu2006/flags/NEC-Intel-Linux-Settings-flags-revF.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 Wed Jul 23 22:46:41 2014 by SPEC CPU2006 PS/PDF formatter v6932.

Originally published on 16 August 2011.