



# SPEC<sup>®</sup> CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## NEC Corporation

Express5800/R120b-2  
(Intel Xeon L5640)

SPECint<sup>®</sup>\_rate2006 = 289

SPECint\_rate\_base2006 = 270

CPU2006 license: 9006

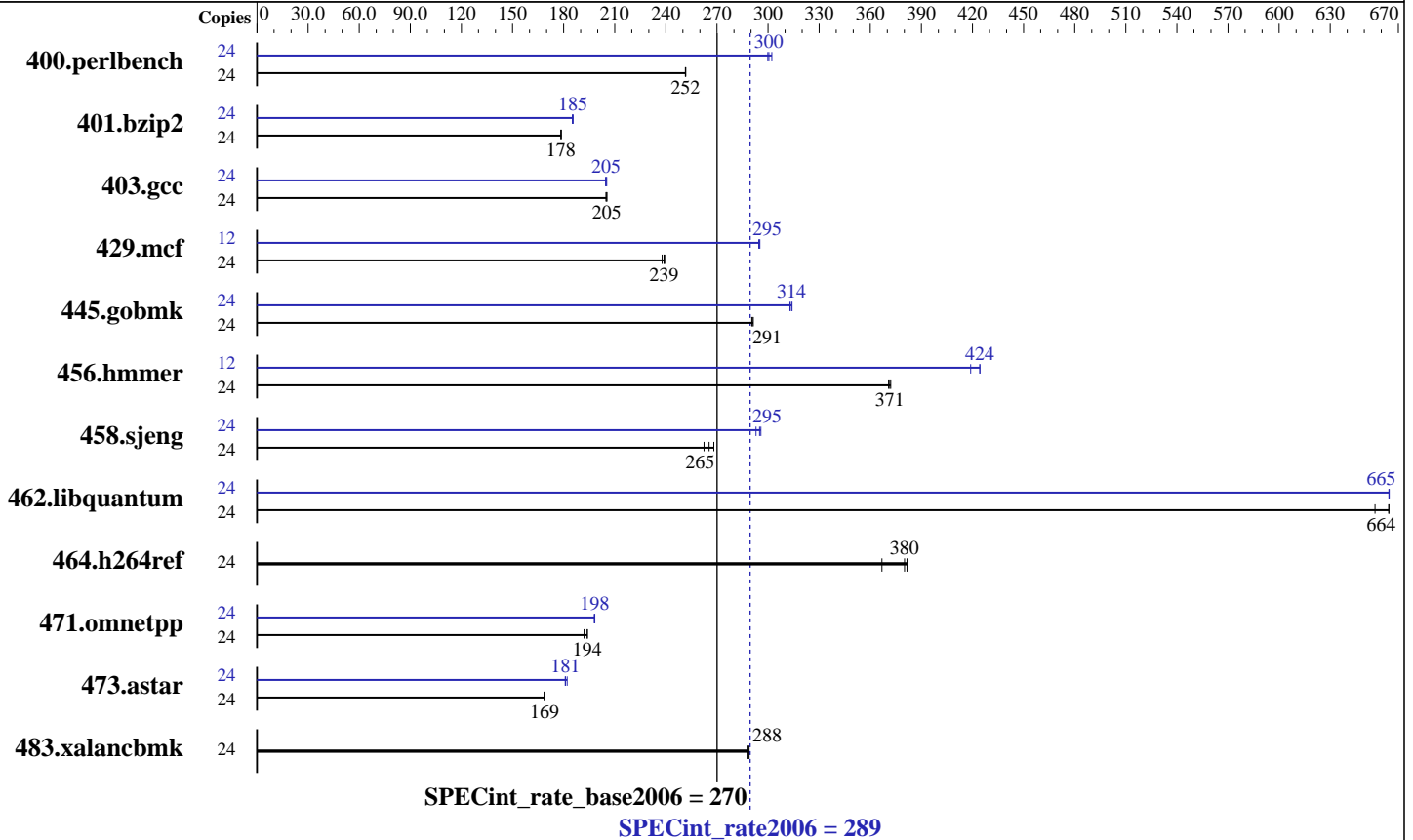
Test sponsor: NEC Corporation

Tested by: NEC Corporation

Test date: Jul-2010

Hardware Availability: Sep-2010

Software Availability: Dec-2009



### Hardware

CPU Name: Intel Xeon L5640  
 CPU Characteristics: Intel Turbo Boost Technology up to 2.80 GHz  
 CPU MHz: 2267  
 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: 12 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 96 GB (12 x 8 GB PC3L-10600R, 2 rank, CL9, ECC)  
 Disk Subsystem: 1x160 GB SATA, 7200 RPM  
 Other Hardware: None

### Software

Operating System: SUSE Linux Enterprise Server 11 (x86\_64), Kernel 2.6.27.19-5-default  
 Compiler: Intel C++ Professional Compiler for IA32 and Intel 64, Version 11.1 Build 20091130 Package ID: l\_cproc\_p\_11.1.064  
 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

Express5800/R120b-2  
(Intel Xeon L5640)

SPECint\_rate2006 = 289

SPECint\_rate\_base2006 = 270

CPU2006 license: 9006

Test sponsor: NEC Corporation

Tested by: NEC Corporation

Test date: Jul-2010

Hardware Availability: Sep-2010

Software Availability: Dec-2009

## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	24	932	251	<u>932</u>	<u>252</u>	932	252	24	<u>780</u>	<u>300</u>	776	302	782	300
401.bzip2	24	1298	178	<u>1298</u>	<u>178</u>	1297	179	24	<u>1249</u>	<u>185</u>	1251	185	1249	186
403.gcc	24	941	205	<u>941</u>	<u>205</u>	943	205	24	941	205	944	205	<u>943</u>	<u>205</u>
429.mcf	24	915	239	920	238	<u>916</u>	<u>239</u>	12	371	295	372	295	<u>371</u>	<u>295</u>
445.gobmk	24	867	290	<u>866</u>	<u>291</u>	864	291	24	805	313	802	314	<u>802</u>	<u>314</u>
456.hammer	24	604	371	602	372	<u>603</u>	<u>371</u>	12	264	424	267	419	<u>264</u>	<u>424</u>
458.sjeng	24	<u>1094</u>	<u>265</u>	1107	262	1083	268	24	982	296	991	293	<u>984</u>	<u>295</u>
462.libquantum	24	<u>748</u>	<u>664</u>	758	656	748	664	24	748	664	748	665	<u>748</u>	<u>665</u>
464.h264ref	24	1448	367	<u>1397</u>	<u>380</u>	1392	382	24	1448	367	<u>1397</u>	<u>380</u>	1392	382
471.omnetpp	24	781	192	<u>774</u>	<u>194</u>	774	194	24	<u>757</u>	<u>198</u>	756	198	758	198
473.astar	24	<u>998</u>	<u>169</u>	1000	169	998	169	24	931	181	925	182	<u>930</u>	<u>181</u>
483.xalancbmk	24	575	288	573	289	<u>574</u>	<u>288</u>	24	575	288	573	289	<u>574</u>	<u>288</u>

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

BIOS setting:  
Performance/Watt: Traditional  
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.

## Base Compiler Invocation

C benchmarks:  
icc -m32

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**NEC Corporation**

Express5800/R120b-2  
(Intel Xeon L5640)

**SPECint\_rate2006 = 289**

**SPECint\_rate\_base2006 = 270**

**CPU2006 license:** 9006

**Test sponsor:** NEC Corporation

**Tested by:** NEC Corporation

**Test date:** Jul-2010

**Hardware Availability:** Sep-2010

**Software Availability:** Dec-2009

## Base Compiler Invocation (Continued)

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 -static -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 -m32

401.bzip2: icc -m64

456.hmmer: icc -m64

458.sjeng: icc -m64

462.libquantum: icc -m64

C++ benchmarks (except as noted below):  
icpc -m32

473.astar: icpc -m64



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**NEC Corporation**

**SPECint\_rate2006 = 289**

Express5800/R120b-2  
(Intel Xeon L5640)

**SPECint\_rate\_base2006 = 270**

**CPU2006 license:** 9006

**Test date:** Jul-2010

**Test sponsor:** NEC Corporation

**Hardware Availability:** Sep-2010

**Tested by:** NEC Corporation

**Software Availability:** Dec-2009

## Peak Portability Flags

```

400.perlbench: -DSPEC_CPU_LINUX_IA32
401.bzip2: -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: -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

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: -xSSE4.2 -ipo -O3 -no-prec-div -static

429.mcf: -xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch

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 -auto-ilp32
                -opt-prefetch

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: -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 -Wl,-z,muldefs

```

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**NEC Corporation**

Express5800/R120b-2  
(Intel Xeon L5640)

**SPECint\_rate2006 = 289**

**SPECint\_rate\_base2006 = 270**

**CPU2006 license:** 9006

**Test sponsor:** NEC Corporation

**Tested by:** NEC Corporation

**Test date:** Jul-2010

**Hardware Availability:** Sep-2010

**Software Availability:** Dec-2009

## Peak Optimization Flags (Continued)

473.astar (continued):

`-L/opt/SmartHeap_8.1/lib64 -lsmartheap64`

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/Intel-ic11.1-linux64-revE.20100823.00.html>

You can also download the XML flags source by saving the following link:

<http://www.spec.org/cpu2006/flags/Intel-ic11.1-linux64-revE.20100823.00.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](mailto:webmaster@spec.org).

Tested with SPEC CPU2006 v1.1.

Report generated on Wed Jul 23 13:35:24 2014 by SPEC CPU2006 PS/PDF formatter v6932.

Originally published on 19 August 2010.