SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

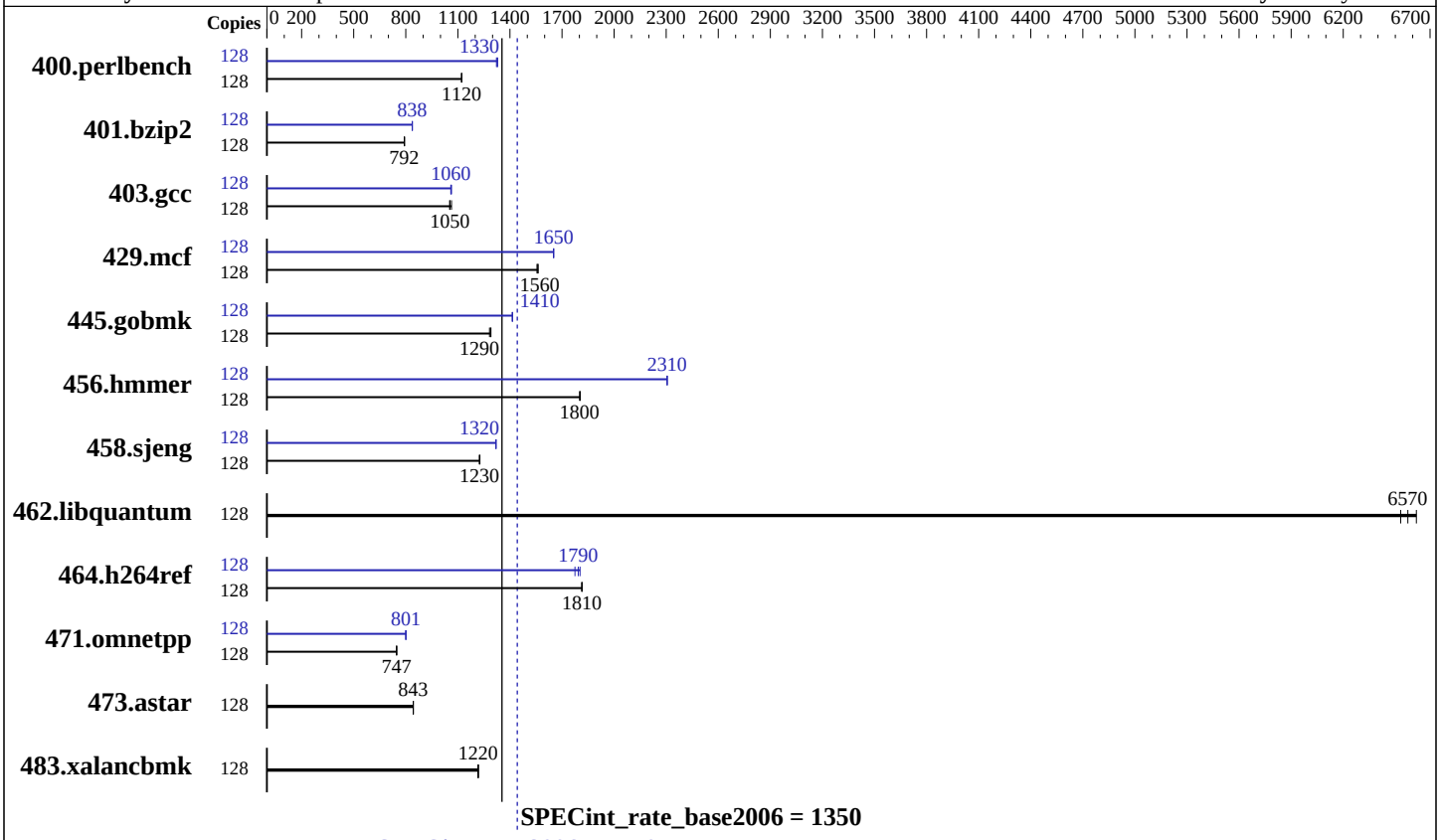
Express5800/A1080a-E (Intel Xeon E7-8830)

SPECint®_rate2006 = 1440

SPECint_rate_base2006 = 1350

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

Test date: Aug-2011
Hardware Availability: Nov-2011
Software Availability: May-2011



Hardware

CPU Name:	Intel Xeon E7-8830
CPU Characteristics:	Intel Turbo Boost Technology up to 2.40 GHz
CPU MHz:	2133
FPU:	Integrated
CPU(s) enabled:	64 cores, 8 chips, 8 cores/chip, 2 threads/core
CPU(s) orderable:	8 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:	24 MB I+D on chip per chip
Other Cache:	None
Memory:	512 GB (128 x 4 GB 2Rx4 PC3-8500R-7, ECC)
Disk Subsystem:	2x300 GB SAS, 10000 RPM, RAID 0
Other Hardware:	None

Software

Operating System:	Red Hat Enterprise Linux Server release 6.1, Kernel 2.6.32-131.0.15.el6.x86_64 on an x86_64
Compiler:	C/C++: Version 12.0.4.191 of Intel Compiler XE for applications on IA-32 Build 20110427
Auto Parallel:	No
File System:	ext4
System State:	Run level 3 (multi-user)
Base Pointers:	32-bit
Peak Pointers:	32/64-bit
Other Software:	Microquill SmartHeap V9.01

SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

NEC Corporation

Express5800/A1080a-E (Intel Xeon E7-8830)

SPECint_rate2006 = 1440

SPECint_rate_base2006 = 1350

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

Test date: Aug-2011
Hardware Availability: Nov-2011
Software Availability: May-2011

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	128	1115	1120	1114	1120	**1115**	**1120**	128	941	1330	**943**	**1330**	946	1320
401.bzip2	128	1557	793	1561	791	**1560**	**792**	128	1474	838	**1474**	**838**	1476	837
403.gcc	128	**977**	**1050**	979	1050	969	1060	128	**972**	**1060**	973	1060	969	1060
429.mcf	128	750	1560	**748**	**1560**	747	1560	128	707	1650	**707**	**1650**	707	1650
445.gobmk	128	1040	1290	**1042**	**1290**	1047	1280	128	950	1410	949	1420	**949**	**1410**
456.hmmer	128	661	1810	663	1800	**663**	**1800**	128	**518**	**2310**	518	2310	518	2310
458.sjeng	128	1262	1230	**1264**	**1230**	1265	1220	128	**1174**	**1320**	1175	1320	1173	1320
462.libquantum	128	401	6620	**404**	**6570**	406	6530	128	401	6620	**404**	**6570**	406	6530
464.h264ref	128	**1561**	**1810**	1559	1820	1562	1810	128	1570	1800	**1579**	**1790**	1596	1770
471.omnetpp	128	1070	747	**1070**	**747**	1071	747	128	**999**	**801**	999	801	1000	800
473.astar	128	1066	843	**1066**	**843**	1065	844	128	1066	843	**1066**	**843**	1065	844
483.xalancbmk	128	727	1220	725	1220	**726**	**1220**	128	727	1220	725	1220	**726**	**1220**

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 stack size to unlimited prior to run
echo 1 > /proc/sys/vm/zone_reclaim_mode
Huge pages were not configured for this run
```

Platform Notes

```
ACPI Type set to Type 3 in BIOS
Patrol Scrubbing set to disabled in Maintenance Console
```

General Notes

```
Binaries were compiled on RHEL 5.6
```

Base Compiler Invocation

C benchmarks:

```
icc  -m32
```

Continued on next page

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 -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_9/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

401.bzip2: icc -m64

456.hmmer: icc -m64

458.sjeng: icc -m64

C++ benchmarks:
icpc -m32

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_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) -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
-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) -O2
-ipo -no-prec-div -ansi-alias

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

464.h264ref: -xSSE4.2(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: -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_9/lib -lsmartheap

Continued on next page

Peak Optimization Flags (Continued)

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.20110705.html`
`http://www.spec.org/cpu2006/flags/NEC-platform-linux64-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.20110705.xml`
`http://www.spec.org/cpu2006/flags/NEC-platform-linux64-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 Thu Jul 24 00:47:24 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 20 December 2011.