



SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

SPECint®_rate2006 = 1010

IBM BladeCenter HX5 (Intel Xeon E7-4860)

SPECint_rate_base2006 = 947

CPU2006 license: 11

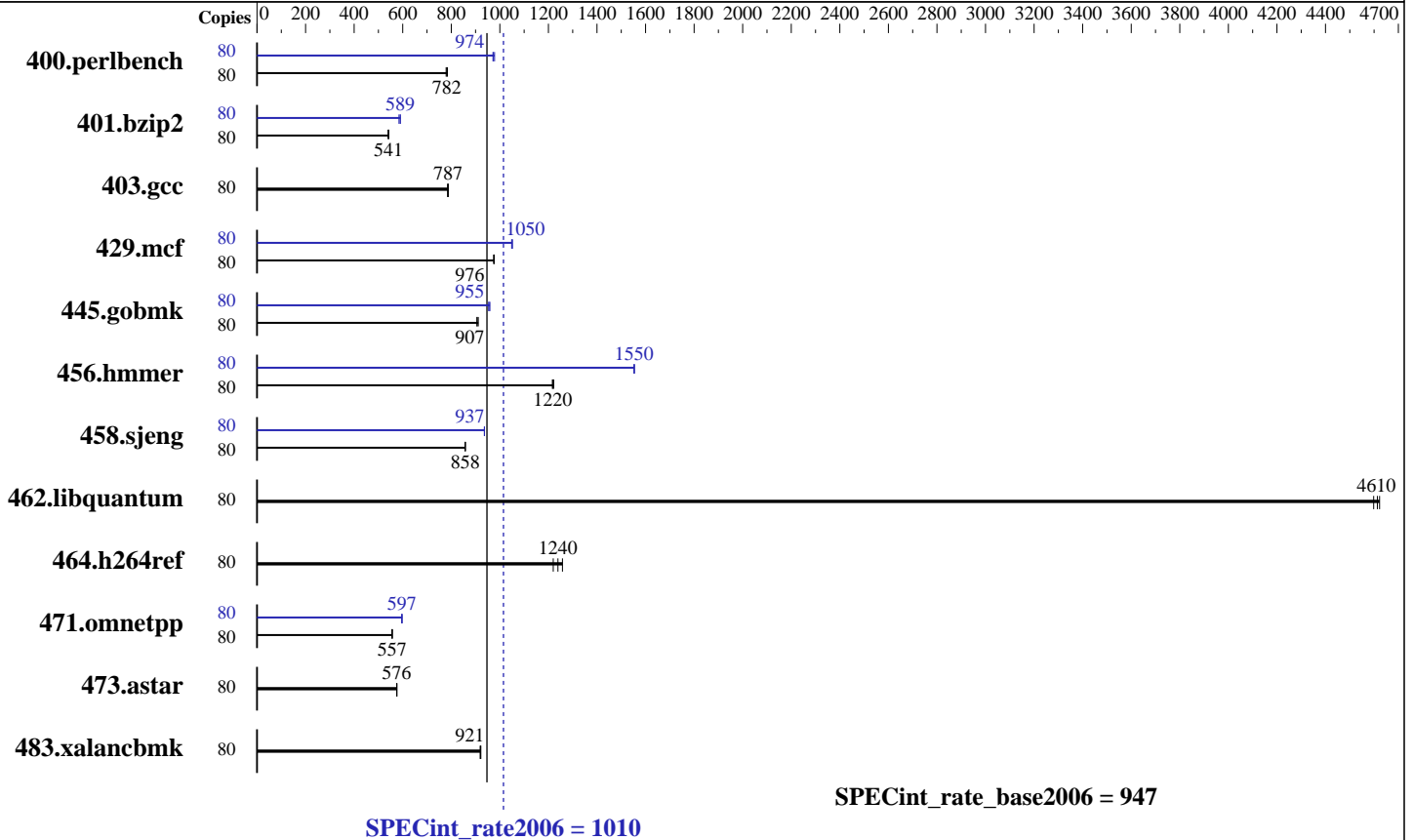
Test date: Apr-2011

Test sponsor: IBM Corporation

Hardware Availability: May-2011

Tested by: IBM Corporation

Software Availability: Jan-2011



Hardware

CPU Name: Intel Xeon E7-4860
 CPU Characteristics: Intel Turbo Boost Technology up to 2.66 GHz
 CPU MHz: 2266
 FPU: Integrated
 CPU(s) enabled: 40 cores, 4 chips, 10 cores/chip, 2 threads/core
 CPU(s) orderable: 1,2,3,4 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: 256 GB (32 x 8 GB 4Rx8 PC3-8500R-7, ECC)
 Disk Subsystem: 4 x 50 GB SSD, RAID 0
 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 IA-32 Version 12.0.1.116 Build 20101116
 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 V9.01



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

SPECint_rate2006 = 1010

IBM BladeCenter HX5 (Intel Xeon E7-4860)

SPECint_rate_base2006 = 947

CPU2006 license: 11

Test date: Apr-2011

Test sponsor: IBM Corporation

Hardware Availability: May-2011

Tested by: IBM Corporation

Software Availability: Jan-2011

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	80	<u>1000</u>	<u>782</u>	1004	779	997	784	80	<u>803</u>	<u>974</u>	804	972	799	978
401.bzip2	80	1423	543	<u>1426</u>	<u>541</u>	1430	540	80	<u>1310</u>	<u>589</u>	1308	590	1321	585
403.gcc	80	<u>818</u>	<u>787</u>	818	787	821	785	80	<u>818</u>	<u>787</u>	818	787	821	785
429.mcf	80	<u>747</u>	<u>976</u>	747	977	749	974	80	694	1050	<u>694</u>	<u>1050</u>	696	1050
445.gobmk	80	927	906	<u>926</u>	<u>907</u>	921	911	80	875	959	<u>879</u>	<u>955</u>	879	954
456.hammer	80	<u>613</u>	<u>1220</u>	611	1220	614	1220	80	480	1550	481	1550	<u>480</u>	<u>1550</u>
458.sjeng	80	<u>1129</u>	<u>858</u>	1128	858	1130	857	80	1033	937	1034	936	<u>1034</u>	<u>937</u>
462.libquantum	80	359	4620	360	4600	<u>359</u>	<u>4610</u>	80	359	4620	360	4600	<u>359</u>	<u>4610</u>
464.h264ref	80	1408	1260	<u>1429</u>	<u>1240</u>	1451	1220	80	1408	1260	<u>1429</u>	<u>1240</u>	1451	1220
471.omnetpp	80	<u>898</u>	<u>557</u>	899	556	898	557	80	837	597	839	596	<u>838</u>	<u>597</u>
473.astar	80	976	575	975	576	<u>975</u>	<u>576</u>	80	976	575	975	576	<u>975</u>	<u>576</u>
483.xalancbmk	80	<u>599</u>	<u>921</u>	601	919	599	921	80	<u>599</u>	<u>921</u>	601	919	599	921

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
echo 1 > /proc/sys/vm/zone_reclaim_mode
'mount -t hugetlbfs nodev /mnt/hugepages' was used to enable large pages
echo 52000 > /proc/sys/vm/nr_hugepages
export HUGETLB_MORECORE=yes
export LD_PRELOAD=/usr/lib64/libhugetlbfs.so
```

Platform Notes

BIOS Settings:
Turbo Boost Power Optimization set to Traditional

General Notes

Binaries were compiled on RHEL5.5



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

SPECint_rate2006 = 1010

IBM BladeCenter HX5 (Intel Xeon E7-4860)

SPECint_rate_base2006 = 947

CPU2006 license: 11

Test sponsor: IBM Corporation

Tested by: IBM Corporation

Test date: Apr-2011

Hardware Availability: May-2011

Software Availability: Jan-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/smartheap -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

IBM Corporation

SPECint_rate2006 = 1010

IBM BladeCenter HX5 (Intel Xeon E7-4860)

SPECint_rate_base2006 = 947

CPU2006 license: 11

Test date: Apr-2011

Test sponsor: IBM Corporation

Hardware Availability: May-2011

Tested by: IBM Corporation

Software Availability: Jan-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: basepeak = yes

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

464.h264ref: basepeak = yes

Continued on next page



SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

SPECint_rate2006 = 1010

IBM BladeCenter HX5 (Intel Xeon E7-4860)

SPECint_rate_base2006 = 947

CPU2006 license: 11

Test date: Apr-2011

Test sponsor: IBM Corporation

Hardware Availability: May-2011

Tested by: IBM Corporation

Software Availability: Jan-2011

Peak Optimization Flags (Continued)

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/smartheap -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/IBM-platform-linux64-revA.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/IBM-platform-linux64-revA.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 20:54:39 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 10 May 2011.