SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

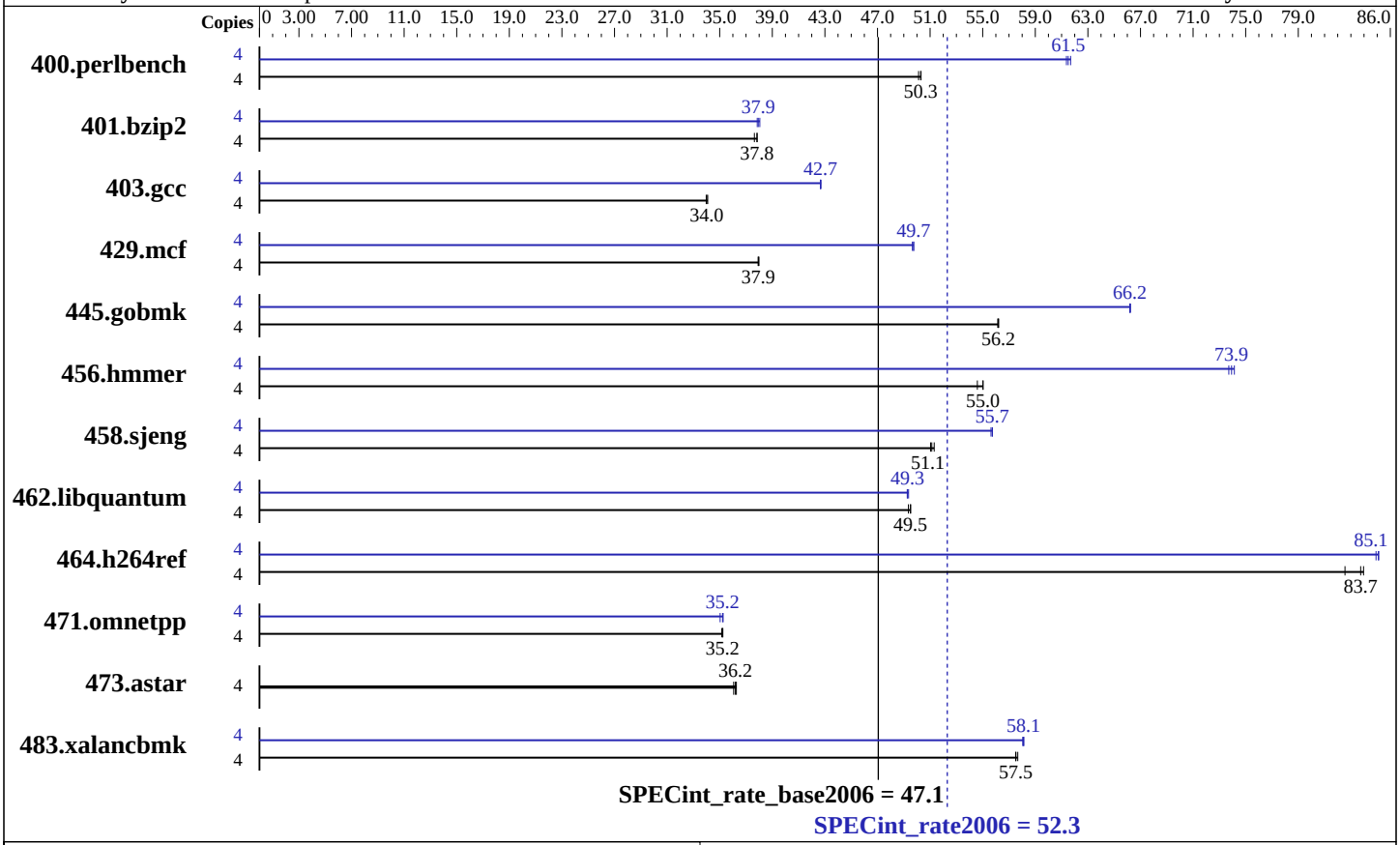
IBM System x3455 (AMD Opteron 2220)

SPECint®_rate2006 = 52.3

SPECint_rate_base2006 = 47.1

CPU2006 license: 11
Test sponsor: IBM Corporation
Tested by: IBM Corporation

Test date: Jul-2007
Hardware Availability: Apr-2007
Software Availability: Mar-2007



Hardware

CPU Name:	AMD Opteron 2220
CPU Characteristics:	
CPU MHz:	2800
FPU:	Integrated
CPU(s) enabled:	4 cores, 2 chips, 2 cores/chip
CPU(s) orderable:	1, 2 chips
Primary Cache:	64 KB I + 64 KB D on chip per core
Secondary Cache:	1 MB I+D on chip per core
L3 Cache:	None
Other Cache:	None
Memory:	16 GB (8 x 2GB DDR2-5300 ECC)
Disk Subsystem:	1 x 160 GB Serial ATA, 7200 RPM
Other Hardware:	None

Software

Operating System:	SLES 10 (x86_64), 2.6.16.21-0.8-smp
Compiler:	QLogic PathScale Compiler Suite, Release 3.0
Auto Parallel:	No
File System:	ext3
System State:	Multi-user, run level 3
Base Pointers:	64-bit
Peak Pointers:	32/64-bit
Other Software:	MicroQuill SmartHeap 8.1

SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

IBM System x3455 (AMD Opteron 2220)

SPECint_rate2006 = 52.3

SPECint_rate_base2006 = 47.1

CPU2006 license: 11
Test sponsor: IBM Corporation
Tested by: IBM Corporation

Test date: Jul-2007
Hardware Availability: Apr-2007
Software Availability: Mar-2007

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	4	777	50.3	**777**	**50.3**	780	50.1	4	634	61.7	637	61.4	**635**	**61.5**
401.bzip2	4	1020	37.9	**1020**	**37.8**	1026	37.6	4	1014	38.1	1020	37.9	**1018**	**37.9**
403.gcc	4	945	34.1	948	34.0	**946**	**34.0**	4	754	42.7	755	42.7	**755**	**42.7**
429.mcf	4	960	38.0	962	37.9	**962**	**37.9**	4	733	49.8	**733**	**49.7**	735	49.7
445.gobmk	4	746	56.2	747	56.1	**747**	**56.2**	4	634	66.2	**634**	**66.2**	633	66.2
456.hmmer	4	684	54.6	678	55.0	**678**	**55.0**	4	506	73.7	503	74.1	**505**	**73.9**
458.sjeng	4	943	51.3	**947**	**51.1**	948	51.0	4	870	55.6	**869**	**55.7**	868	55.7
462.libquantum	4	1674	49.5	**1674**	**49.5**	1679	49.4	4	1679	49.4	1682	49.3	**1682**	**49.3**
464.h264ref	4	1054	84.0	1072	82.6	**1057**	**83.7**	4	**1040**	**85.1**	1040	85.1	1042	84.9
471.omnetpp	4	709	35.2	**710**	**35.2**	711	35.2	4	709	35.3	**710**	**35.2**	714	35.0
473.astar	4	774	36.3	**776**	**36.2**	779	36.1	4	774	36.3	**776**	**36.2**	779	36.1
483.xalancbmk	4	479	57.7	480	57.5	**480**	**57.5**	4	475	58.1	476	58.0	**475**	**58.1**

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

General Notes

```
taskset utility used to bind CPU(s) to processes
```

Base Compiler Invocation

C benchmarks:
pathcc

C++ benchmarks:
pathCC

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
483.xalancbmk: -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:
`-Ofast -OPT:malloc_alg=1`

C++ benchmarks:
`-Ofast -m32 -L/tools/SmartHeap_8.1/lib -lsmartheap`

Base Other Flags

C benchmarks:
`-IPA:max_jobs=2`

C++ benchmarks:
`-IPA:max_jobs=2`

Peak Compiler Invocation

C benchmarks:
`pathcc`

C++ benchmarks:
`pathCC`

Peak Portability Flags

400.perlbench: `-DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64`
401.bzip2: `-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`
483.xalancbmk: `-DSPEC_CPU_LINUX`

Peak Optimization Flags

C benchmarks:

400.perlbench: `-fb_create fbdata`(pass 1) `-fb_opt fbdata`(pass 2) `-Ofast -LNO:opt=0`

401.bzip2: `-O3 -LNO:ou_prod_max=10 -OPT:Ofast -OPT:alias=disjoint`

Continued on next page

Peak Optimization Flags (Continued)

403.gcc: `-fb_create fbdata`(pass 1) `-fb_opt fbdata`(pass 2) `-m32 -O3 -OPT:Ofast`

429.mcf: `-m32 -O3 -ipa -L/tools/SmartHeap_8.1/lib -lsmartheap`

445.gobmk: `-fb_create fbdata`(pass 1) `-fb_opt fbdata`(pass 2) `-O3 -OPT:alias=disjoint -LNO:simd=0 -LNO:minvariant=off -WOPT:retype_expr=on`

456.hmmer: `-O2 -OPT:alias=disjoint -OPT:malloc_alg=1 -CG:cflow=0`

458.sjeng: `-fb_create fbdata`(pass 1) `-fb_opt fbdata`(pass 2) `-O3 -IPA:plimit=50000 -IPA:pu_reorder=2`

462.libquantum: `-O3 -ipa -CG:local_fwd_sched=on -IPA:space=1000`

464.h264ref: `-fb_create fbdata`(pass 1) `-fb_opt fbdata`(pass 2) `-O3 -IPA:plimit=20000 -OPT:alias=disjoint -LNO:prefetch=0`

C++ benchmarks:

471.omnetpp: `-Ofast -CG:gcm=off -m32 -L/tools/SmartHeap_8.1/lib -lsmartheap`

473.astar: `basepeak = yes`

483.xalancbmk: `-Ofast -m32 -OPT:unroll_times_max=8 -L/tools/SmartHeap_8.1/lib -lsmartheap`

Peak Other Flags

C benchmarks:
`-IPA:max_jobs=2`

C++ benchmarks:
`-IPA:max_jobs=2`

The flags file that was used to format this result can be browsed at
`http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.13.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/CPU2006_flags.20090714.13.xml`

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

IBM System x3455 (AMD Opteron 2220)

SPECint_rate2006 = 52.3

SPECint_rate_base2006 = 47.1

CPU2006 license: 11
Test sponsor: IBM Corporation
Tested by: IBM Corporation

Test date: Jul-2007
Hardware Availability: Apr-2007
Software Availability: Mar-2007

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 v1.0.
Report generated on Tue Jul 22 12:50:50 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 8 August 2007.