SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

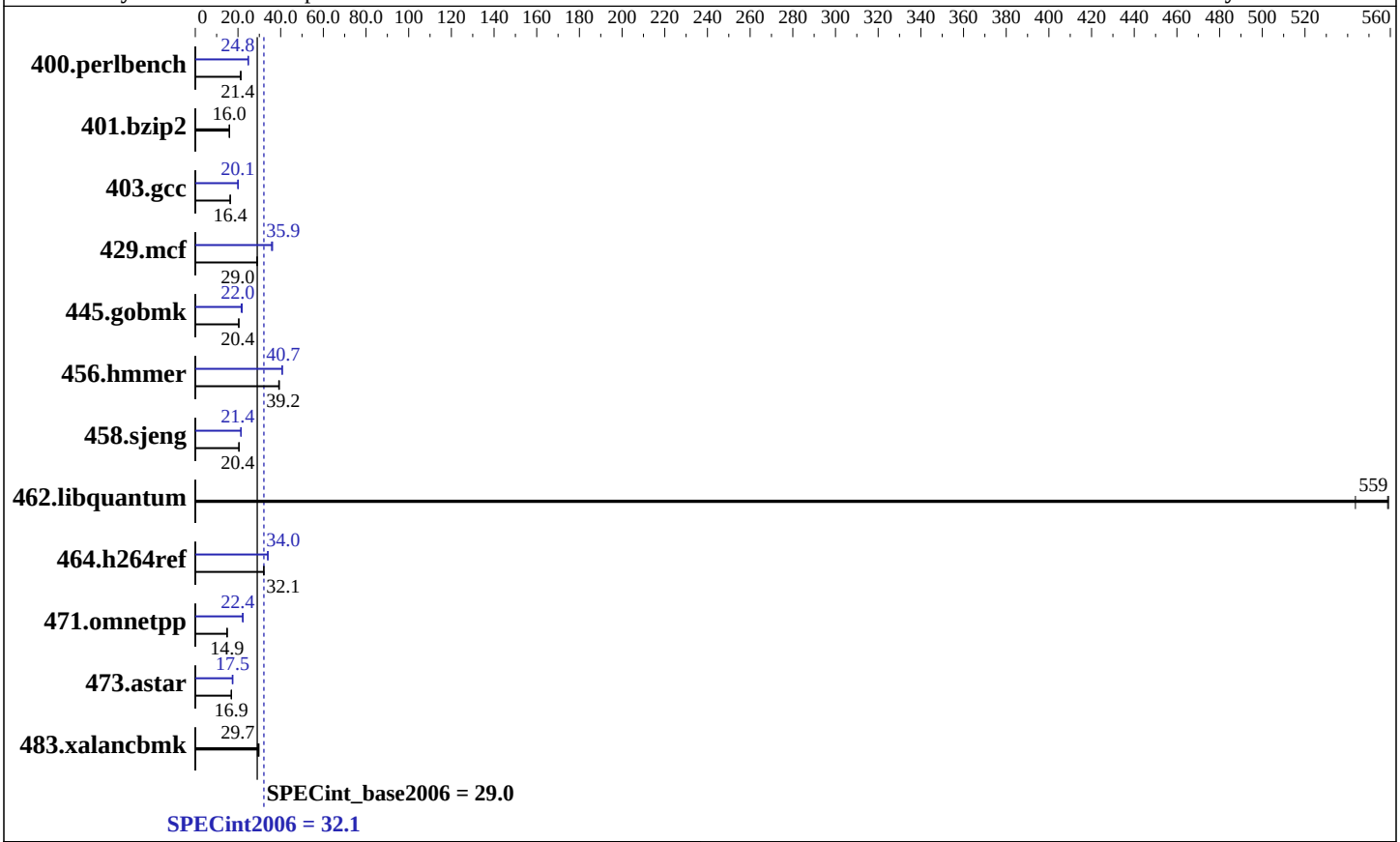
IBM BladeCenter HX5 (Intel Xeon X7542)

SPECint®2006 = 32.1

SPECint_base2006 = 29.0

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

Test date: Aug-2010
Hardware Availability: Oct-2010
Software Availability: Jan-2010



Hardware

CPU Name:	Intel Xeon X7542
CPU Characteristics:	Intel Turbo Boost Technology up to 2.80 GHz
CPU MHz:	2667
FPU:	Integrated
CPU(s) enabled:	12 cores, 2 chips, 6 cores/chip
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:	18 MB I+D on chip per chip
Other Cache:	None
Memory:	128 GB (16 x 8 GB PC3-8500R CL7, Quad Rank, running at 978 MHz)
Disk Subsystem:	2 x 50 GB SATA, SSD, RAID 0
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:	Yes
File System:	ext3
System State:	Run level 3 (multi-user)
Base Pointers:	64-bit
Peak Pointers:	32/64-bit
Other Software:	Microquill SmartHeap V8.1

SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

IBM BladeCenter HX5 (Intel Xeon X7542)

SPECint2006 = 32.1

SPECint_base2006 = 29.0

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

Test date: Aug-2010
Hardware Availability: Oct-2010
Software Availability: Jan-2010

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	457	21.4	**458**	**21.4**	462	21.2	**394**	**24.8**	394	24.8	393	24.8
401.bzip2	608	15.9	602	16.0	**602**	**16.0**	608	15.9	602	16.0	**602**	**16.0**
403.gcc	493	16.3	**491**	**16.4**	491	16.4	**401**	**20.1**	405	19.9	400	20.1
429.mcf	**315**	**29.0**	315	28.9	314	29.0	255	35.8	252	36.2	**254**	**35.9**
445.gobmk	514	20.4	516	20.3	**515**	**20.4**	478	22.0	488	21.5	**478**	**22.0**
456.hmmer	237	39.4	239	39.1	**238**	**39.2**	229	40.7	229	40.7	**229**	**40.7**
458.sjeng	**592**	**20.4**	590	20.5	592	20.4	566	21.4	565	21.4	**565**	**21.4**
462.libquantum	37.1	559	**37.1**	**559**	38.1	544	37.1	559	**37.1**	**559**	38.1	544
464.h264ref	**689**	**32.1**	690	32.1	688	32.2	**651**	**34.0**	650	34.0	652	33.9
471.omnetpp	417	15.0	**419**	**14.9**	423	14.8	279	22.4	**279**	**22.4**	283	22.1
473.astar	**414**	**16.9**	413	17.0	419	16.8	399	17.6	405	17.3	**400**	**17.5**
483.xalancbmk	**232**	**29.7**	231	29.9	237	29.2	**232**	**29.7**	231	29.9	237	29.2

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

Operating System Notes

```
echo 1 > /proc/sys/vm/zone_reclaim_mode
```

Platform Notes

```
Turbo Boost set to Traditional
```

General Notes

```
'ulimit -s unlimited' was used to set the stack size to unlimited prior to run
Binaries were compiled on SLES 10 with Binutils 2.18.50.0.7.20080502
OMP_NUM_THREADS set to number of cores
KMP_AFFINITY set to granularity=fine,scatter
```

Base Compiler Invocation

C benchmarks:

```
icc  -m64
```

C++ benchmarks:

```
icpc -m64
```

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`
471.omnetpp: `-DSPEC_CPU_LP64`
473.astar: `-DSPEC_CPU_LP64`
483.xalancbmk: `-DSPEC_CPU_LP64 -DSPEC_CPU_LINUX`

Base Optimization Flags

C benchmarks:
`-xSSE4.2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch`

C++ benchmarks:
`-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs`
`-L/home/cmplr/usr3/alrahate/cpu2006.1.1.ic11.1/libic11.1-64bit -lsmartheap64`

Base Other Flags

C benchmarks:

403.gcc: `-Dalloca=_alloca`

Peak Compiler Invocation

C benchmarks (except as noted below):
`icc -m64`

400.perlbench: `icc -m32`

429.mcf: `icc -m32`

445.gobmk: `icc -m32`

464.h264ref: `icc -m32`

C++ benchmarks (except as noted below):
`icpc -m64`

Continued on next page

Peak Compiler Invocation (Continued)

471.omnetpp: icpc -m32

Peak Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32
401.bzip2: -DSPEC_CPU_LP64
403.gcc: -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_LP64 -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 -opt-prefetch

401.bzip2: basepeak = yes

403.gcc: -xSSE4.2 -ipo -O3 -no-prec-div -static -inline-calloc
-opt-malloc-options=3 -auto-ilp32

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

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) -static(pass 2)
-prof-use(pass 2) -unroll2 -ansi-alias

C++ benchmarks:

Continued on next page

Peak Optimization Flags (Continued)

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/home/cmplr/usr3/alrahate/cpu2006.1.1.ic11.1/libic11.1-32bit -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 -L/home/cmplr/usr3/alrahate/cpu2006.1.1.ic11.1/libic11.1-64bit -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.20100929.00.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.20100929.00.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.

Tested with SPEC CPU2006 v1.1.
Report generated on Wed Jul 23 13:03:07 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 28 September 2010.