



# SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## IBM Corporation

**SPECint®2006 = 26.1**

IBM System x iDataPlex dx360 (Intel Xeon E5440)

**SPECint\_base2006 = 23.1**

CPU2006 license: 11

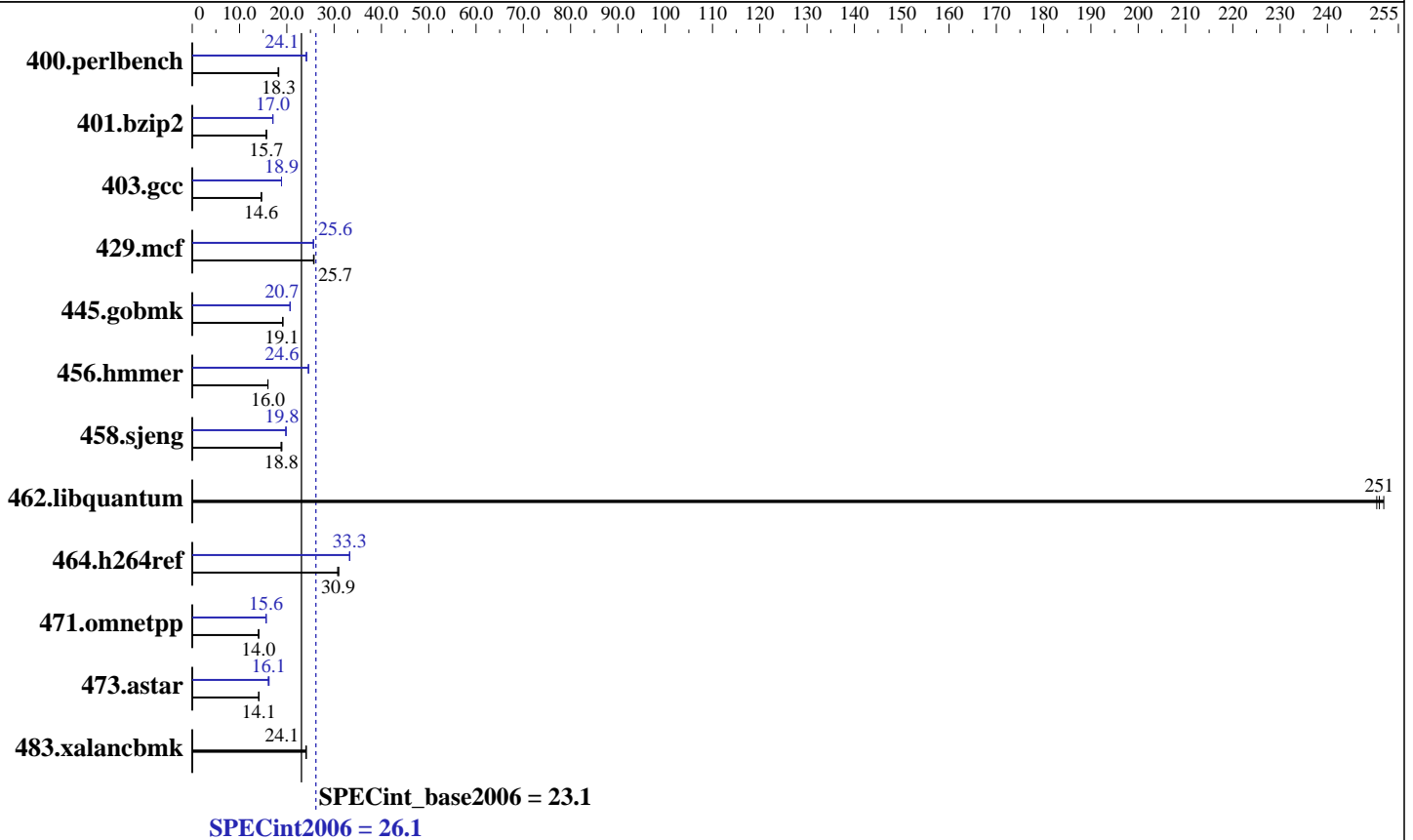
Test date: Mar-2009

Test sponsor: IBM Corporation

Hardware Availability: Nov-2008

Tested by: IBM Corporation

Software Availability: Feb-2009



### Hardware

CPU Name: Intel Xeon E5440  
 CPU Characteristics: 1333MHz system bus  
 CPU MHz: 2833  
 FPU: Integrated  
 CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip  
 CPU(s) orderable: 1,2 chips  
 Primary Cache: 32 KB I + 32 KB D on chip per core  
 Secondary Cache: 12 MB I+D on chip per chip, 6 MB shared / 2 cores  
 L3 Cache: None  
 Other Cache: None  
 Memory: 16 GB (8 x 2 GB DDR2-5300F ECC)  
 Disk Subsystem: 1 x 250 GB SATA, 7200 RPM  
 Other Hardware: None

### Software

Operating System: SuSE Linux Enterprise Server 10(x86\_64) SP2, Kernel 2.6.16.60-0.21-smp  
 Compiler: Intel C++ Compiler 11.0 for Linux Build 20080930 Package ID: l\_cproc\_p\_11.0.066  
 Auto Parallel: Yes  
 File System: ReiserFS  
 System State: Run level 3 (multi-user)  
 Base Pointers: 32-bit  
 Peak Pointers: 32/64-bit  
 Other Software: Microquill SmartHeap V8.1 Binutils 2.18.50.0.7.20080502



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

SPECint2006 = 26.1

IBM System x iDataPlex dx360 (Intel Xeon E5440)

SPECint\_base2006 = 23.1

CPU2006 license: 11

Test date: Mar-2009

Test sponsor: IBM Corporation

Hardware Availability: Nov-2008

Tested by: IBM Corporation

Software Availability: Feb-2009

## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	534	18.3	538	18.1	<u>535</u>	<u>18.3</u>	405	24.1	404	24.2	<u>405</u>	<u>24.1</u>
401.bzip2	617	15.6	614	15.7	<u>615</u>	<u>15.7</u>	567	17.0	565	17.1	<u>566</u>	<u>17.0</u>
403.gcc	549	14.7	<u>551</u>	<u>14.6</u>	552	14.6	<u>426</u>	<u>18.9</u>	426	18.9	427	18.9
429.mcf	356	25.6	354	25.7	<u>354</u>	<u>25.7</u>	<u>356</u>	<u>25.6</u>	356	25.6	356	25.6
445.gobmk	548	19.2	548	19.1	<u>548</u>	<u>19.1</u>	507	20.7	<u>507</u>	<u>20.7</u>	507	20.7
456.hammer	583	16.0	<u>583</u>	<u>16.0</u>	583	16.0	<u>380</u>	<u>24.6</u>	379	24.6	380	24.6
458.sjeng	<u>642</u>	<u>18.8</u>	644	18.8	638	19.0	611	19.8	610	19.8	<u>611</u>	<u>19.8</u>
462.libquantum	82.2	252	<u>82.6</u>	<u>251</u>	82.7	250	82.2	252	<u>82.6</u>	<u>251</u>	82.7	250
464.h264ref	715	31.0	720	30.7	<u>716</u>	<u>30.9</u>	<u>664</u>	<u>33.3</u>	666	33.2	664	33.3
471.omnetpp	446	14.0	444	14.1	<u>445</u>	<u>14.0</u>	<u>400</u>	<u>15.6</u>	400	15.6	400	15.6
473.astar	<u>499</u>	<u>14.1</u>	498	14.1	499	14.1	<u>435</u>	<u>16.1</u>	432	16.2	436	16.1
483.xalancbmk	286	24.1	<u>287</u>	<u>24.1</u>	287	24.1	286	24.1	<u>287</u>	<u>24.1</u>	287	24.1

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

## General Notes

Hardware Sector Prefetch Enable and Adjacent Sector Prefetch Enable  
OMP\_NUM\_THREADS set to number of processors  
KMP\_AFFINITY set to "physical,0"

## Base Compiler Invocation

C benchmarks:  
icc

C++ benchmarks:  
icpc

## Base Portability Flags

400.perlbench: -DSPEC\_CPU\_LINUX\_IA32  
462.libquantum: -DSPEC\_CPU\_LINUX  
483.xalancbmk: -DSPEC\_CPU\_LINUX

## Base Optimization Flags

C benchmarks:  
-xSSE4.1 -ipo -O3 -no-prec-div -static -parallel  
-par-runtime-control -opt-prefetch

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

SPECint2006 = 26.1

IBM System x iDataPlex dx360 (Intel Xeon E5440)

SPECint\_base2006 = 23.1

CPU2006 license: 11

Test date: Mar-2009

Test sponsor: IBM Corporation

Hardware Availability: Nov-2008

Tested by: IBM Corporation

Software Availability: Feb-2009

## Base Optimization Flags (Continued)

C++ benchmarks:

-xSSE4.1 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs  
-L/spec/cpu2006.1.1/lib -lsmartheap

## Base Other Flags

C benchmarks:

403.gcc: -Dalloca=\_alloca

## Peak Compiler Invocation

C benchmarks (except as noted below):

icc

401.bzip2: /opt/intel/Compiler/11.0/066/bin/intel64/icc

456.hmmer: /opt/intel/Compiler/11.0/066/bin/intel64/icc

C++ benchmarks:

icpc

## Peak Portability Flags

400.perlbench: -DSPEC\_CPU\_LINUX\_IA32

401.bzip2: -DSPEC\_CPU\_LP64

456.hmmer: -DSPEC\_CPU\_LP64

462.libquantum: -DSPEC\_CPU\_LINUX

483.xalancbmk: -DSPEC\_CPU\_LINUX

## Peak Optimization Flags

C benchmarks:

400.perlbench: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3  
-no-prec-div -static -ansi-alias -opt-prefetch

401.bzip2: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3  
-no-prec-div -static -auto-ilp32 -opt-prefetch  
-ansi-alias

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

SPECint2006 = 26.1

IBM System x iDataPlex dx360 (Intel Xeon E5440)

SPECint\_base2006 = 23.1

CPU2006 license: 11

Test date: Mar-2009

Test sponsor: IBM Corporation

Hardware Availability: Nov-2008

Tested by: IBM Corporation

Software Availability: Feb-2009

## Peak Optimization Flags (Continued)

403.gcc: -xSSE4.1 -ipo -O3 -no-prec-div -static -inline-alloc  
-opt-malloc-options=3

429.mcf: -xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch

445.gobmk: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -O2 -ipo  
-no-prec-div -ansi-alias

456.hmmer: -xSSE4.1 -ipo -O3 -no-prec-div -static -unroll2  
-ansi-alias -auto-ilp32

458.sjeng: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3  
-no-prec-div -static -unroll4

462.libquantum: basepeak = yes

464.h264ref: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3  
-no-prec-div -static -unroll2 -ansi-alias

C++ benchmarks:

471.omnetpp: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3  
-no-prec-div -ansi-alias -opt-ra-region-strategy=block  
-Wl,-z,muldefs -L/spec/cpu2006.1.1/lib -lsmartheap

473.astar: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3  
-no-prec-div -ansi-alias -opt-ra-region-strategy=routine  
-Wl,-z,muldefs -L/spec/cpu2006.1.1/lib -lsmartheap

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-ic11.0-int-linux64-revA.20090710.17.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-int-linux64-revA.20090710.17.xml>



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

IBM Corporation

SPECint2006 = 26.1

IBM System x iDataPlex dx360 (Intel Xeon E5440)

SPECint\_base2006 = 23.1

CPU2006 license: 11

Test date: Mar-2009

Test sponsor: IBM Corporation

Hardware Availability: Nov-2008

Tested by: IBM Corporation

Software Availability: Feb-2009

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 00:39:19 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 24 June 2009.