



# SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECint®2006 = 26.5

PowerEdge 1950 III (Intel Xeon E5440, 2.83 GHz)

SPECint\_base2006 = 23.2

CPU2006 license: 55

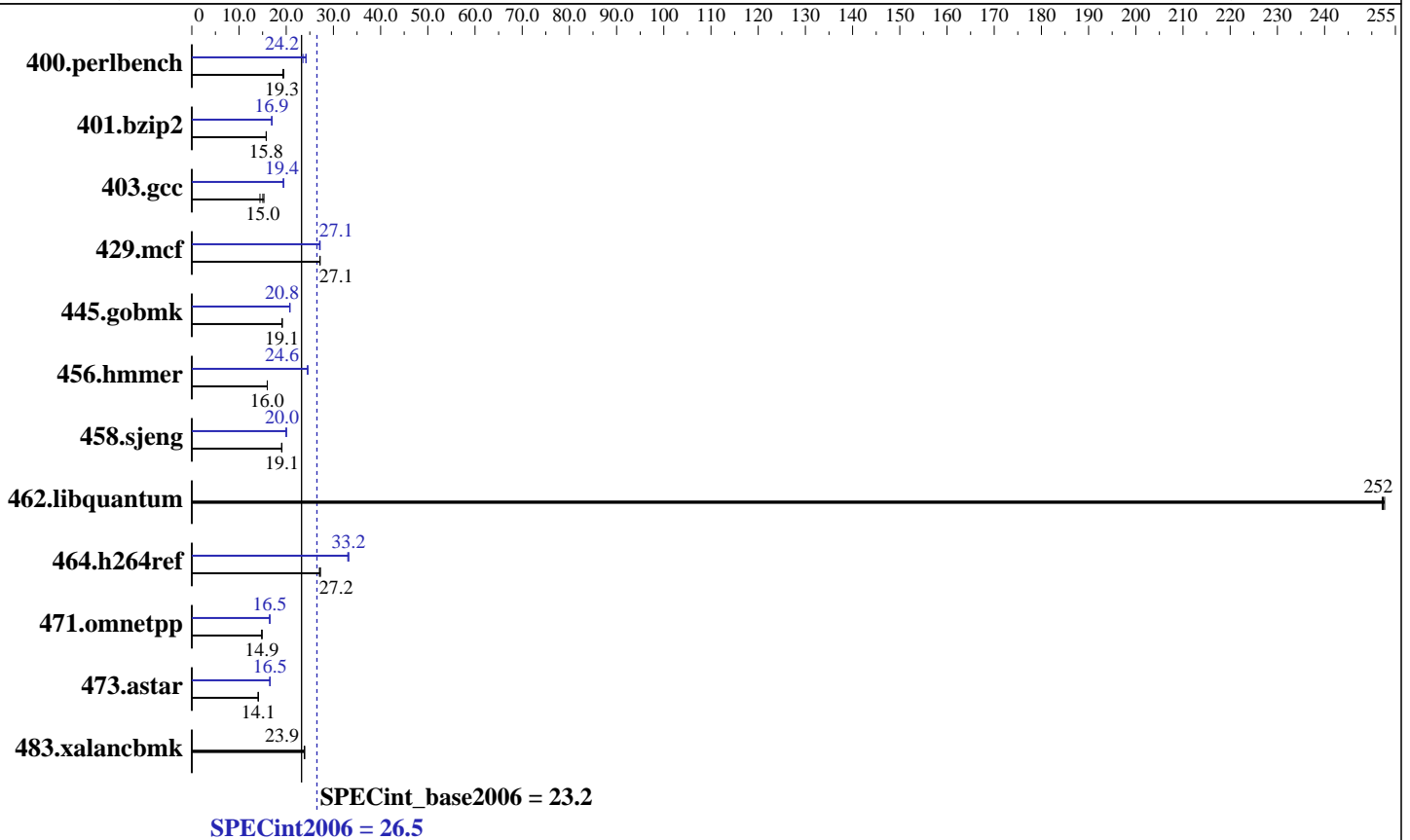
Test date: Sep-2008

Test sponsor: Dell Inc.

Hardware Availability: Nov-2007

Tested by: Dell Inc.

Software Availability: Nov-2008



### Hardware

CPU Name: Intel Xeon E5440  
 CPU Characteristics:  
 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 667 MHz ECC CL5 FB-DIMM)  
 Disk Subsystem: 1 x 73 GB 10000 RPM SAS  
 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 20080730 Package ID: l\_cproc\_b\_11.0.042  
 Auto Parallel: Yes  
 File System: ReiserFS  
 System State: Run level 3 (multi-user)  
 Base Pointers: 32-bit  
 Peak Pointers: 32/64-bit  
 Other Software: Binutils 2.18.50.0.7.20080502  
 Microquill SmartHeap V8.1



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## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	507	19.3	<u>505</u>	<u>19.3</u>	501	19.5	404	24.2	<u>404</u>	<u>24.2</u>	415	23.6
401.bzip2	613	15.7	612	15.8	<u>612</u>	<u>15.8</u>	569	17.0	<u>570</u>	<u>16.9</u>	570	16.9
403.gcc	<u>535</u>	<u>15.0</u>	558	14.4	527	15.3	415	19.4	414	19.4	<u>414</u>	<u>19.4</u>
429.mcf	336	27.2	336	27.1	<u>336</u>	<u>27.1</u>	335	27.2	<u>336</u>	<u>27.1</u>	337	27.1
445.gobmk	548	19.1	548	19.1	<u>548</u>	<u>19.1</u>	505	20.8	<u>505</u>	<u>20.8</u>	505	20.8
456.hammer	583	16.0	<u>584</u>	<u>16.0</u>	584	16.0	<u>380</u>	<u>24.6</u>	381	24.5	380	24.6
458.sjeng	634	19.1	<u>634</u>	<u>19.1</u>	637	19.0	606	20.0	<u>605</u>	<u>20.0</u>	604	20.0
462.libquantum	82.0	253	82.2	252	<u>82.1</u>	<u>252</u>	82.0	253	82.2	252	<u>82.1</u>	<u>252</u>
464.h264ref	813	27.2	819	27.0	<u>813</u>	<u>27.2</u>	666	33.2	670	33.0	<u>666</u>	<u>33.2</u>
471.omnetpp	<u>421</u>	<u>14.9</u>	422	14.8	420	14.9	379	16.5	378	16.5	<u>379</u>	<u>16.5</u>
473.astar	498	14.1	499	14.1	<u>499</u>	<u>14.1</u>	424	16.5	424	16.6	<u>424</u>	<u>16.5</u>
483.xalancbmk	289	23.9	<u>289</u>	<u>23.9</u>	290	23.8	289	23.9	<u>289</u>	<u>23.9</u>	290	23.8

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

## Operating System Notes

'ulimit -s unlimited' was used to set the stack size to unlimited prior to run

## General Notes

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



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## Base Optimization Flags

C benchmarks:

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

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/11.0/042/bin/intel64/icc  
-L/opt/intel/Compiler/11.0/042/ipp/em64t/lib  
-I/opt/intel/Compiler/11.0/042/ipp/em64t/include

456.hmmer: /opt/intel/Compiler/11.0/042/bin/intel64/icc  
-L/opt/intel/Compiler/11.0/042/ipp/em64t/lib  
-I/opt/intel/Compiler/11.0/042/ipp/em64t/include

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:

Continued on next page



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## Peak Optimization Flags (Continued)

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

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 files that were used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-int-linux64-revA.20090713.02.html>

<http://www.spec.org/cpu2006/flags/Intel-Linux64-Platform.20090713.02.html>



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You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2006/flags/Intel-ic11.0-int-linux64-revA.20090713.02.xml>

<http://www.spec.org/cpu2006/flags/Intel-Linux64-Platform.20090713.02.xml>

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For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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