



# SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECint®2006 = 27.9

PowerEdge M600 (Intel Xeon X5460, 3.16 GHz)

SPECint\_base2006 = 24.3

CPU2006 license: 55

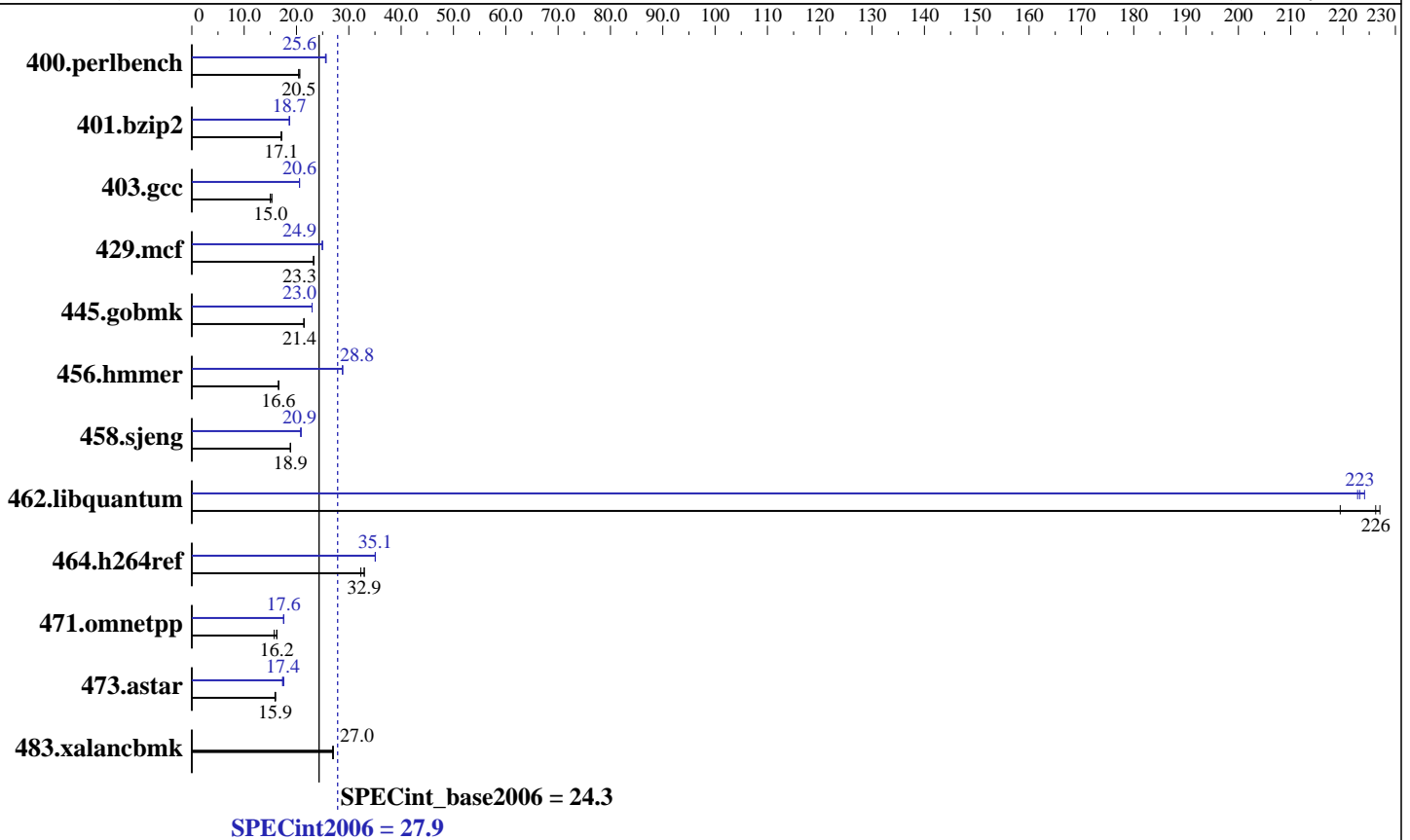
Test date: Aug-2008

Test sponsor: Dell Inc.

Hardware Availability: Jan-2008

Tested by: Dell Inc.

Software Availability: May-2008



## Hardware

CPU Name: Intel Xeon X5460  
 CPU Characteristics: 3166  
 CPU MHz: 3166  
 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 (4x4 GB, DDR2-667 MHz, CL5, Reg, Dual Rank)  
 Disk Subsystem: 1 x 80 GB SATA 5400 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 10.1 for Linux Build 20080312 Package ID: l\_cc\_p\_10.1.015  
 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



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## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	479	20.4	473	20.7	<u>477</u>	<u>20.5</u>	382	25.5	381	25.7	<u>381</u>	<u>25.6</u>
401.bzip2	565	17.1	563	17.2	<u>564</u>	<u>17.1</u>	517	18.7	518	18.6	<u>517</u>	<u>18.7</u>
403.gcc	<u>535</u>	<u>15.0</u>	536	15.0	526	15.3	391	20.6	<u>391</u>	<u>20.6</u>	391	20.6
429.mcf	392	23.3	<u>392</u>	<u>23.3</u>	392	23.3	<u>366</u>	<u>24.9</u>	366	24.9	365	25.0
445.gobmk	<u>489</u>	<u>21.4</u>	489	21.4	489	21.4	456	23.0	<u>456</u>	<u>23.0</u>	456	23.0
456.hmmmer	<u>563</u>	<u>16.6</u>	562	16.6	563	16.6	324	28.8	<u>324</u>	<u>28.8</u>	324	28.8
458.sjeng	<u>642</u>	<u>18.9</u>	641	18.9	643	18.8	<u>580</u>	<u>20.9</u>	580	20.9	582	20.8
462.libquantum	94.4	219	91.3	227	<u>91.6</u>	<u>226</u>	93.0	223	<u>92.8</u>	<u>223</u>	92.5	224
464.h264ref	<u>672</u>	<u>32.9</u>	685	32.3	671	33.0	631	35.1	632	35.0	<u>631</u>	<u>35.1</u>
471.omnetpp	397	15.7	<u>385</u>	<u>16.2</u>	385	16.2	356	17.6	<u>356</u>	<u>17.6</u>	356	17.5
473.astar	438	16.0	442	15.9	<u>441</u>	<u>15.9</u>	399	17.6	405	17.3	<u>403</u>	<u>17.4</u>
483.xalanbmk	255	27.0	<u>255</u>	<u>27.0</u>	256	26.9	255	27.0	<u>255</u>	<u>27.0</u>	256	26.9

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

All benchmarks compiled in 32-bit mode except 401.bzip2 and 456.hmmmer, for peak, are compiled in 64-bit mode  
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.xalanbmk: -DSPEC\_CPU\_LINUX



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## Base Optimization Flags

C benchmarks:

-fast -vec-guard-write -parallel -par-runtime-control

C++ benchmarks:

-xT -ipo -O3 -no-prec-div -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/cce/10.1.015/bin/icc  
-L/opt/intel/cce/10.1.015/lib  
-I/opt/intel/cce/10.1.015/include

456.hmmer: /opt/intel/cce/10.1.015/bin/icc  
-L/opt/intel/cce/10.1.015/lib  
-I/opt/intel/cce/10.1.015/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) -fast -ansi-alias -prefetch

401.bzip2: -prof-gen(pass 1) -prof-use(pass 2) -fast -prefetch -auto-ilp32

403.gcc: -fast -inline-calloc -opt-malloc-options=3

429.mcf: -fast -prefetch

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

456.hmmer: -fast -unroll2 -ansi-alias -opt-multi-version-aggressive -auto-ilp32

458.sjeng: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll4

462.libquantum: -fast -unroll4 -Ob0 -prefetch -opt-streaming-stores always -vec-guard-write -opt-malloc-options=3 -parallel -par-runtime-control

464.h264ref: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll2 -ansi-alias

C++ benchmarks:

471.omnetpp: -prof-gen(pass 1) -prof-use(pass 2) -xT -O3 -ipo -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) -xT -O3 -ipo -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-ic10.1-int-linux64-revD.20090713.00.html>

<http://www.spec.org/cpu2006/flags/Intel-Linux64-Platform.20090713.07.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-ic10.1-int-linux64-revD.20090713.00.xml>

<http://www.spec.org/cpu2006/flags/Intel-Linux64-Platform.20090713.07.xml>

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

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