



SPEC® CINT2006 Result

Copyright 2006-2008 Standard Performance Evaluation Corporation

Dell Inc.

SPECint®2006 = 29.5

PowerEdge R300 (Intel Xeon X5470, 3.33 GHz)

SPECint_base2006 = 26.2

CPU2006 license: 55

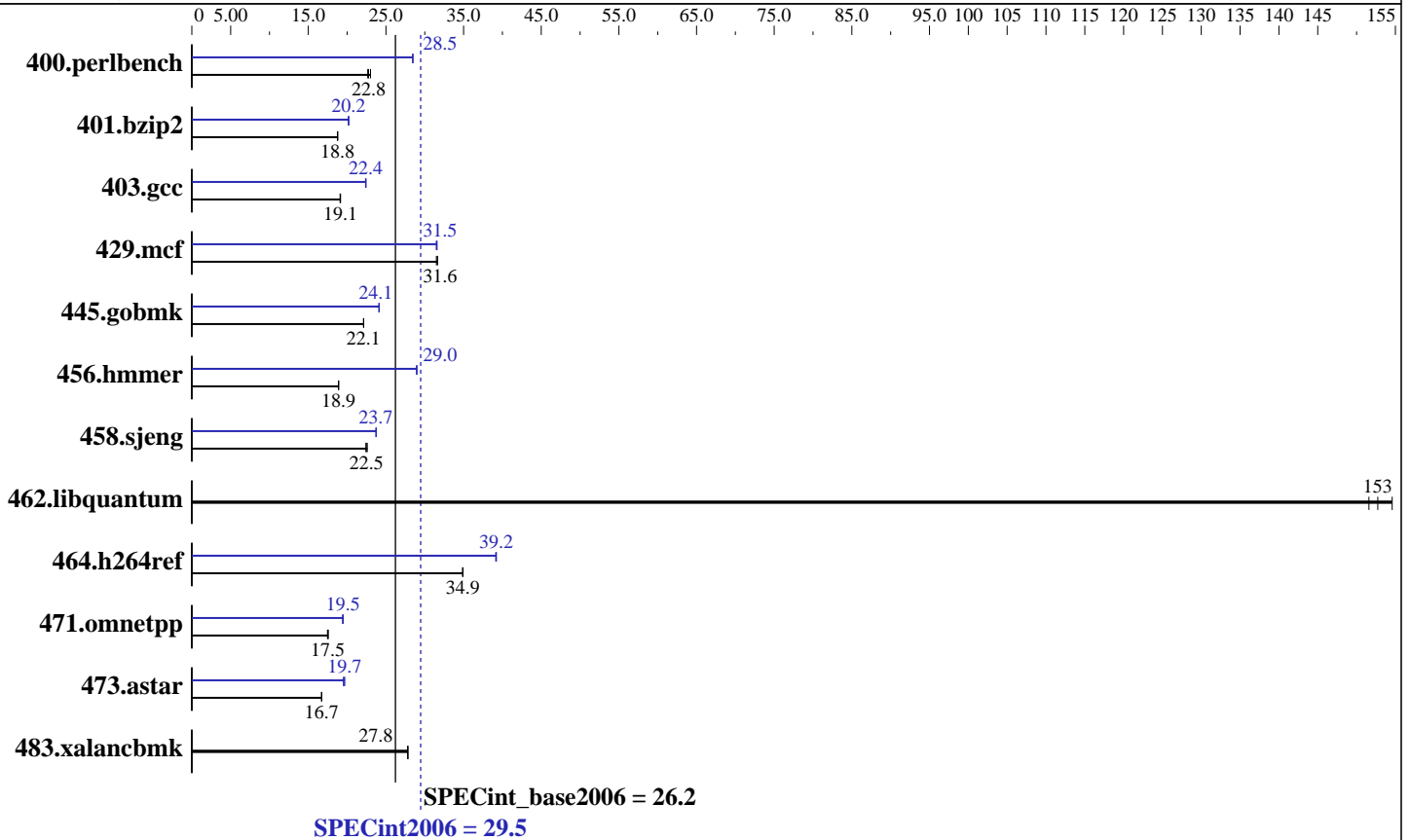
Test date: Sep-2008

Test sponsor: Dell Inc.

Hardware Availability: Sep-2008

Tested by: Dell Inc.

Software Availability: Oct-2008



Hardware

CPU Name: Intel Xeon X5470
 CPU Characteristics:
 CPU MHz: 3333
 FPU: Integrated
 CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip
 CPU(s) orderable: 1 chip
 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 (4 x 4 GB DDR2-667)
 Disk Subsystem: 1 x 160 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 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: 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	<u>429</u>	<u>22.8</u>	425	23.0	431	22.7	343	28.5	<u>343</u>	<u>28.5</u>	344	28.4
401.bzip2	<u>514</u>	<u>18.8</u>	515	18.8	514	18.8	<u>478</u>	<u>20.2</u>	477	20.2	479	20.2
403.gcc	<u>421</u>	<u>19.1</u>	422	19.1	420	19.2	360	22.4	<u>359</u>	<u>22.4</u>	359	22.4
429.mcf	290	31.5	<u>288</u>	<u>31.6</u>	288	31.6	290	31.5	<u>289</u>	<u>31.5</u>	289	31.6
445.gobmk	474	22.1	<u>474</u>	<u>22.1</u>	475	22.1	<u>435</u>	<u>24.1</u>	435	24.1	435	24.1
456.hammer	494	18.9	<u>494</u>	<u>18.9</u>	494	18.9	322	29.0	<u>322</u>	<u>29.0</u>	322	29.0
458.sjeng	536	22.6	540	22.4	<u>538</u>	<u>22.5</u>	510	23.7	510	23.7	<u>510</u>	<u>23.7</u>
462.libquantum	134	155	137	152	<u>136</u>	<u>153</u>	134	155	137	152	<u>136</u>	<u>153</u>
464.h264ref	634	34.9	635	34.9	<u>634</u>	<u>34.9</u>	564	39.2	<u>564</u>	<u>39.2</u>	565	39.1
471.omnetpp	356	17.6	<u>356</u>	<u>17.5</u>	358	17.5	320	19.5	322	19.4	<u>321</u>	<u>19.5</u>
473.astar	419	16.7	420	16.7	<u>420</u>	<u>16.7</u>	360	19.5	357	19.7	<u>357</u>	<u>19.7</u>
483.xalancbmk	248	27.8	<u>248</u>	<u>27.8</u>	248	27.8	248	27.8	<u>248</u>	<u>27.8</u>	248	27.8

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

Same as Base Other Flags

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.20081001.html>

<http://www.spec.org/cpu2006/flags/Intel-Linux64-Platform.20081126.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.20081001.xml>

<http://www.spec.org/cpu2006/flags/Intel-Linux64-Platform.20081126.xml>

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