



SPEC[®] CINT2006 Result

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Dell Inc.

SPECint[®]_rate2006 = 148

PowerEdge 2900 III (Intel Xeon X5470, 3.33 GHz)

SPECint_rate_base2006 = 135

CPU2006 license: 55

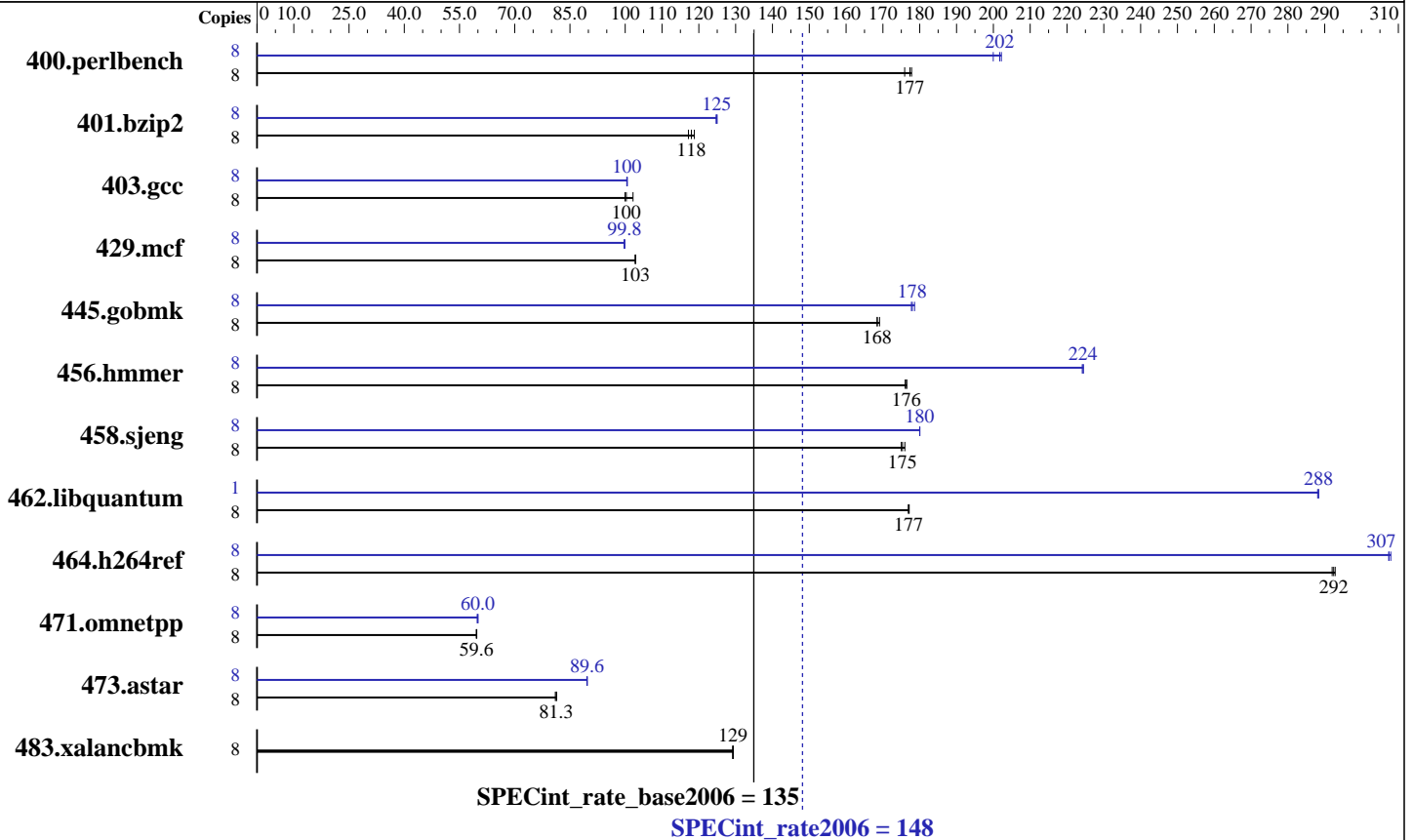
Test date: Oct-2008

Test sponsor: Dell Inc.

Hardware Availability: Sep-2008

Tested by: Dell Inc.

Software Availability: Nov-2008



Hardware

CPU Name: Intel Xeon X5470
 CPU Characteristics:
 CPU MHz: 3333
 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 DDR2-667)
 Disk Subsystem: 2 x 73 GB 15000 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: Microquill SmartHeap V8.1 Binutils 2.18.50.0.7.20080502



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Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	8	440	178	444	176	441	177	8	387	202	387	202	391	200
401.bzip2	8	654	118	659	117	650	119	8	619	125	618	125	618	125
403.gcc	8	631	102	642	100	644	99.9	8	641	100	640	101	641	100
429.mcf	8	710	103	710	103	710	103	8	732	99.7	730	99.9	731	99.8
445.gobmk	8	498	168	498	168	496	169	8	471	178	472	178	470	179
456.hammer	8	423	176	424	176	423	176	8	333	224	333	224	333	224
458.sjeng	8	553	175	550	176	552	175	8	538	180	538	180	538	180
462.libquantum	8	936	177	937	177	937	177	1	71.9	288	71.9	288	71.9	288
464.h264ref	8	606	292	605	293	605	292	8	575	308	576	307	576	307
471.omnetpp	8	838	59.7	839	59.6	839	59.6	8	833	60.0	833	60.0	836	59.8
473.astar	8	690	81.4	693	81.0	691	81.3	8	627	89.6	626	89.7	626	89.6
483.xalancbmk	8	427	129	427	129	427	129	8	427	129	427	129	427	129

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

Submit Notes

The config file option 'submit' was used.

Operating System Notes

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

Platform Notes

BIOS Settings:
Adjacent Cache Line Prefetch = Disabled (Default = Enabled)

General Notes

taskset was used to bind processes to cores except for 462.libquantum peak
OMP_NUM_THREADS set to number of processors
KMP_AFFINITY set to "physical,0"
KMP_STACKSIZE set to 64M

Base Compiler Invocation

C benchmarks:
icc

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Base Compiler Invocation (Continued)

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 -inline-calloc
-opt-malloc-options=3 -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:
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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 -opt-prefetch -ansi-alias

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

429.mcf: -prof-gen(pass 1) -prof-use(pass 2) -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

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

462.libquantum: -xSSE4.1 -ipo -O3 -no-prec-div -static
 -opt-malloc-options=3 -parallel -par-runtime-control
 -opt-prefetch

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 -lsmarheap

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 -lsmarheap

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Peak Optimization Flags (Continued)

483.xalanbmk: 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>

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 questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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