



SPEC® CINT2006 Result

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Hewlett-Packard Company

SPECint®_rate2006 = 136

ProLiant BL680c G5
(2.4 GHz, Intel Xeon E7450)

SPECint_rate_base2006 = 126

CPU2006 license: 3

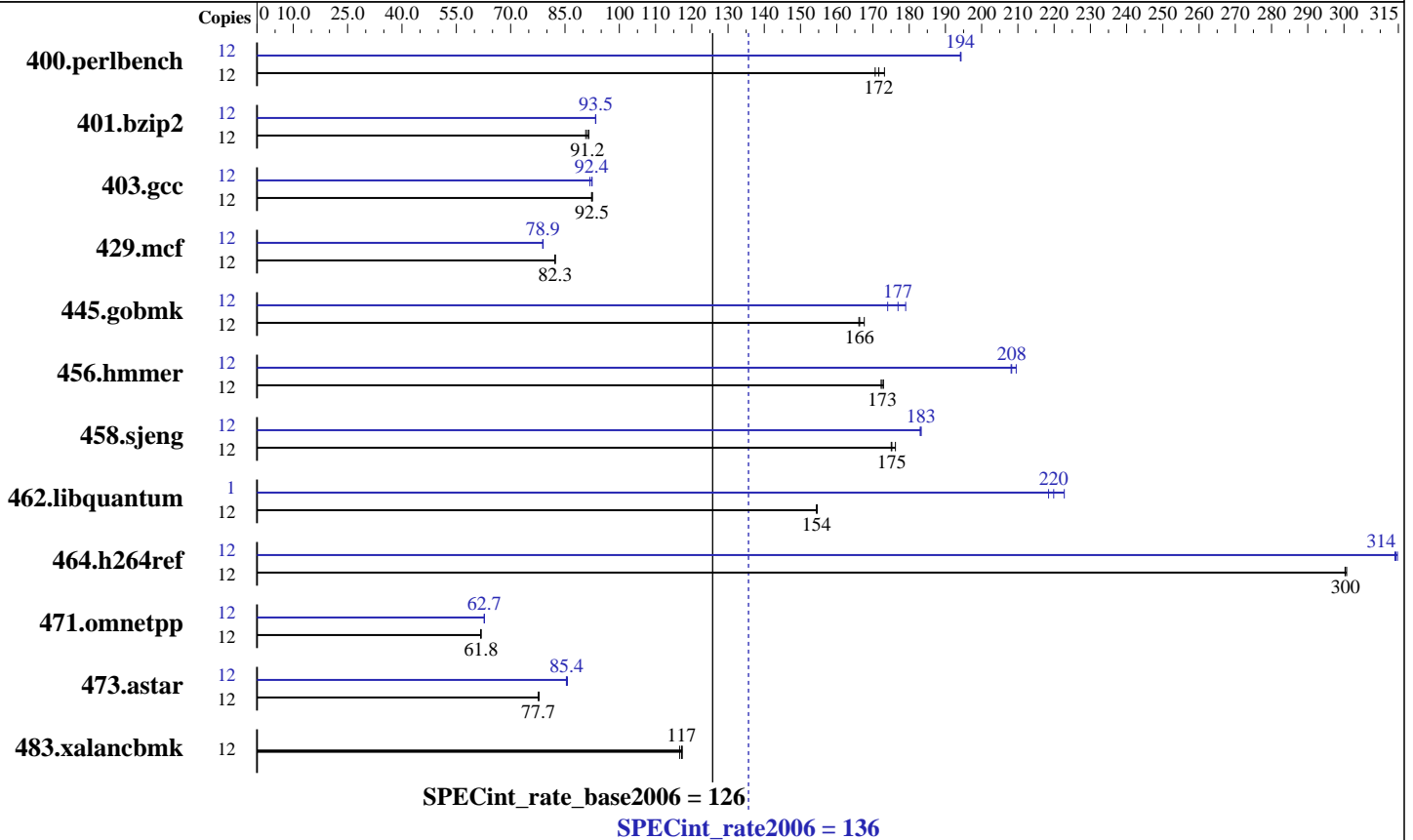
Test date: Sep-2008

Test sponsor: Hewlett-Packard Company

Hardware Availability: Sep-2008

Tested by: Hewlett-Packard Company

Software Availability: Nov-2008



Hardware

CPU Name: Intel Xeon E7450
 CPU Characteristics: 2.40 GHz, 12 MB L3 shared, 1066 MHz system bus
 CPU MHz: 2400
 FPU: Integrated
 CPU(s) enabled: 12 cores, 2 chips, 6 cores/chip
 CPU(s) orderable: 2,4 chips
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 9 MB I+D on chip per chip, 3 MB shared / 2 cores
 L3 Cache: 12 MB I+D on chip per chip
 Other Cache: None
 Memory: 64 GB (16x4 GB PC2-5300F CL5)
 Disk Subsystem: 1x146 GB 10 K SAS
 Other Hardware: None

Software

Operating System: SUSE Linux Enterprise Server 10 (x86_64) SP1, Kernel 2.6.16.46-0.12-smp
 Compiler: Intel C++ Compiler 11.0 for Linux Build 20080730 Package ID: l_cproc_b_11.0.042
 Auto Parallel: Yes
 File System: ext2
 System State: Run level 3 (multi-user)
 Base Pointers: 32-bit
 Peak Pointers: 32/64-bit
 Other Software: MicroQuill SmartHeap Library 8.1 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	12	687	171	683	172	677	173	12	604	194	603	194	604	194
401.bzip2	12	1265	91.6	1276	90.7	1270	91.2	12	1239	93.5	1240	93.4	1239	93.5
403.gcc	12	1044	92.6	1045	92.5	1046	92.3	12	1051	91.9	1046	92.4	1044	92.5
429.mcf	12	1330	82.3	1331	82.2	1330	82.3	12	1387	78.9	1388	78.8	1386	79.0
445.gobmk	12	758	166	757	166	751	168	12	703	179	723	174	712	177
456.hmmer	12	650	172	648	173	649	173	12	538	208	534	210	538	208
458.sjeng	12	824	176	829	175	830	175	12	792	183	792	183	793	183
462.libquantum	12	1609	154	1610	154	1608	155	1	93.0	223	94.8	218	94.2	220
464.h264ref	12	884	300	884	300	883	301	12	845	314	846	314	844	315
471.omnetpp	12	1215	61.7	1213	61.8	1213	61.8	12	1196	62.7	1195	62.8	1195	62.7
473.astar	12	1084	77.7	1082	77.8	1085	77.7	12	983	85.7	986	85.4	987	85.4
483.xalancbmk	12	707	117	710	117	705	117	12	707	117	710	117	705	117

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.
'/usr/bin/taskset' used to bind processes to CPUs

Operating System Notes

'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run
OMP_NUM_THREADS set to number of cores
KMP_AFFINITY set to physical,0
KMP_STACKSIZE set to 64M

Platform Notes

BIOS configuration:
Power Regulator set to Static High Performance Mode
Adjacent Sector Prefetch Disabled
Hardware Prefetcher Disabled

General Notes

All benchmarks compiled in 32-bit mode except 401.bzip2 and 456.hmmer, for peak, are compiled in 64-bit mode



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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 -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

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Peak Compiler Invocation (Continued)

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 -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:

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Peak Optimization Flags (Continued)

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-revD.20090713.01.html>

<http://www.spec.org/cpu2006/flags/HP-Intel-Linux-Settings-flags.20090713.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-revD.20090713.01.xml>

<http://www.spec.org/cpu2006/flags/HP-Intel-Linux-Settings-flags.20090713.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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