



SPEC® CINT2006 Result

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Cisco Systems

SPECint®_rate2006 = 287

Cisco UCS B230 M1 (Intel Xeon E6540, 2.00 GHz)

SPECint_rate_base2006 = 278

CPU2006 license: 9019

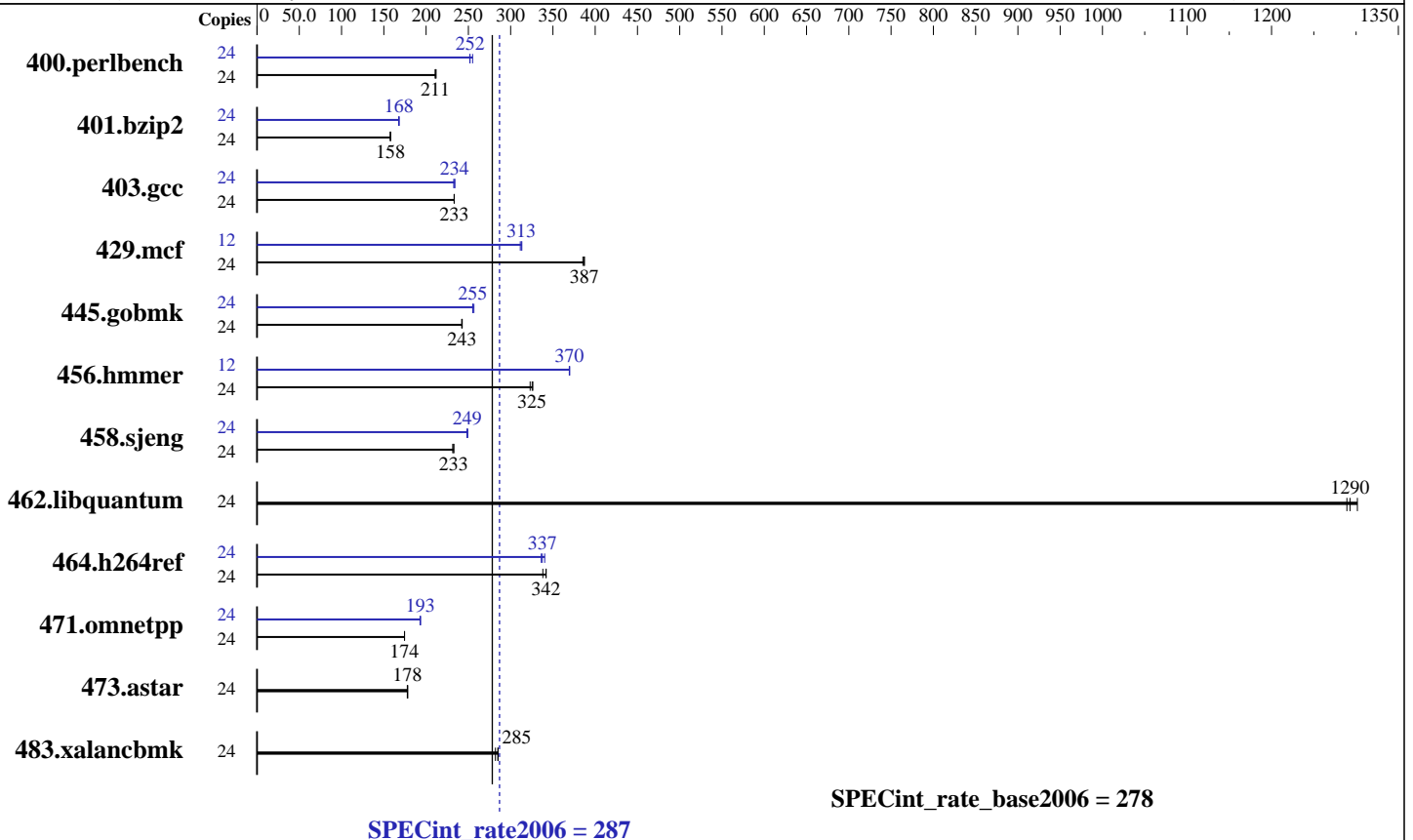
Test date: May-2011

Test sponsor: Cisco Systems

Hardware Availability: Mar-2011

Tested by: Cisco Systems

Software Availability: Mar-2011



Hardware

CPU Name: Intel Xeon E6540
 CPU Characteristics: Intel Turbo Boost Technology up to 2.27 GHz
 CPU MHz: 2000
 FPU: Integrated
 CPU(s) enabled: 12 cores, 2 chips, 6 cores/chip, 2 threads/core
 CPU(s) orderable: 1,2 chips
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 256 KB I+D on chip per core
 L3 Cache: 18 MB I+D on chip per chip
 Other Cache: None
 Memory: 128 GB (32 x 8 GB 2Rx4 PC3-10600R-9, ECC)
 Disk Subsystem: 128 GB SSD, SATA Gen2, 3Gb/s
 Other Hardware: None

Software

Operating System: Red Hat Enterprise Linux Server release 6.1 Beta
 Kernel 2.6.32-130.el6.x86_64
 Compiler: Intel C++ Compiler XE for applications running on IA-32
 Version 12.0.1.116 Build 20101116
 Auto Parallel: No
 File System: ext3
 System State: Run level 3 (multi-user)
 Base Pointers: 32-bit
 Peak Pointers: 32/64-bit
 Other Software: Microquill SmartHeap V9.01
 Binaries compiled on RHEL5.5 with binutils-2.17.50.0.6-14.el5



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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	24	<u>1111</u>	<u>211</u>	1112	211	1107	212	24	<u>930</u>	<u>252</u>	919	255	932	252
401.bzip2	24	<u>1467</u>	<u>158</u>	1469	158	1466	158	24	1382	168	<u>1379</u>	<u>168</u>	1378	168
403.gcc	24	828	233	829	233	<u>828</u>	<u>233</u>	24	<u>827</u>	<u>234</u>	830	233	826	234
429.mcf	24	568	385	<u>566</u>	<u>387</u>	565	387	12	349	313	<u>350</u>	<u>313</u>	351	311
445.gobmk	24	<u>1038</u>	<u>243</u>	1037	243	1040	242	24	987	255	981	257	<u>986</u>	<u>255</u>
456.hammer	24	693	323	<u>688</u>	<u>325</u>	686	326	12	303	369	<u>303</u>	<u>370</u>	303	370
458.sjeng	24	1255	231	1248	233	<u>1248</u>	<u>233</u>	24	<u>1167</u>	<u>249</u>	1170	248	1165	249
462.libquantum	24	<u>385</u>	<u>1290</u>	382	1300	386	1290	24	<u>385</u>	<u>1290</u>	382	1300	386	1290
464.h264ref	24	1571	338	<u>1554</u>	<u>342</u>	1553	342	24	<u>1574</u>	<u>337</u>	1580	336	1561	340
471.omnetpp	24	860	174	<u>860</u>	<u>174</u>	860	175	24	776	193	778	193	<u>776</u>	<u>193</u>
473.astar	24	948	178	945	178	<u>947</u>	<u>178</u>	24	948	178	945	178	<u>947</u>	<u>178</u>
483.xalancbmk	24	<u>581</u>	<u>285</u>	587	282	581	285	24	<u>581</u>	<u>285</u>	587	282	581	285

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.
numactl was used to bind copies to the cores

Operating System Notes

ulimit -s unlimited was used to set the stacksize to unlimited prior to run
Large pages were disabled for this run

Platform Notes

BIOS Configuration : Data Reuse Optimization = Disabled

Base Compiler Invocation

C benchmarks:
icc -m32

C++ benchmarks:
icpc -m32



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Base Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32
462.libquantum: -DSPEC_CPU_LINUX
483.xalancbmk: -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch
-B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT

C++ benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs
-L/smartheap -lsmartheap
-B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT

Base Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):

icc -m32

400.perlbench: icc -m64

401.bzip2: icc -m64

456.hmmer: icc -m64

458.sjeng: icc -m64

C++ benchmarks:

icpc -m32

Peak Portability Flags

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
401.bzip2: -DSPEC_CPU_LP64

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Peak Portability Flags (Continued)

456.hmmcr: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LINUX
483.xalancbmk: -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:

400.perlbench: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

401.bzp2: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-opt-prefetch -auto-ilp32 -ansi-alias
-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

403.gcc: -xSSE4.2 -ipo -O3 -no-prec-div
-B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT

429.mcf: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-ansi-alias -auto-ilp32

445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)
-ansi-alias -auto-ilp32

456.hmmcr: -xSSE4.2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32
-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

458.sjeng: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-unroll4 -auto-ilp32
-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

462.libquantum: basepeak = yes

464.h264ref: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-unroll2 -ansi-alias

C++ benchmarks:

471.omnetpp: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-ansi-alias -opt-ra-region-strategy=block -Wl,-z,muldefs
-L/smartheap -lsmartheap

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Peak Optimization Flags (Continued)

473.astar: basepeak = yes

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-ic12.0-linux64-revB.html>

<http://www.spec.org/cpu2006/flags/Cisco-Platform-Settings.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revB.xml>

<http://www.spec.org/cpu2006/flags/Cisco-Platform-Settings.xml>

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

Tested with SPEC CPU2006 v1.1.

Report generated on Wed Jul 23 21:47:19 2014 by SPEC CPU2006 PS/PDF formatter v6932.

Originally published on 5 July 2011.