



# SPEC® CINT2006 Result

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## Cisco Systems

Cisco UCS B440 M1 (Intel Xeon E7540, 2.00 GHz)

**SPECint\_rate2006 = 532**

**SPECint\_rate\_base2006 = 499**

**CPU2006 license:** 9019

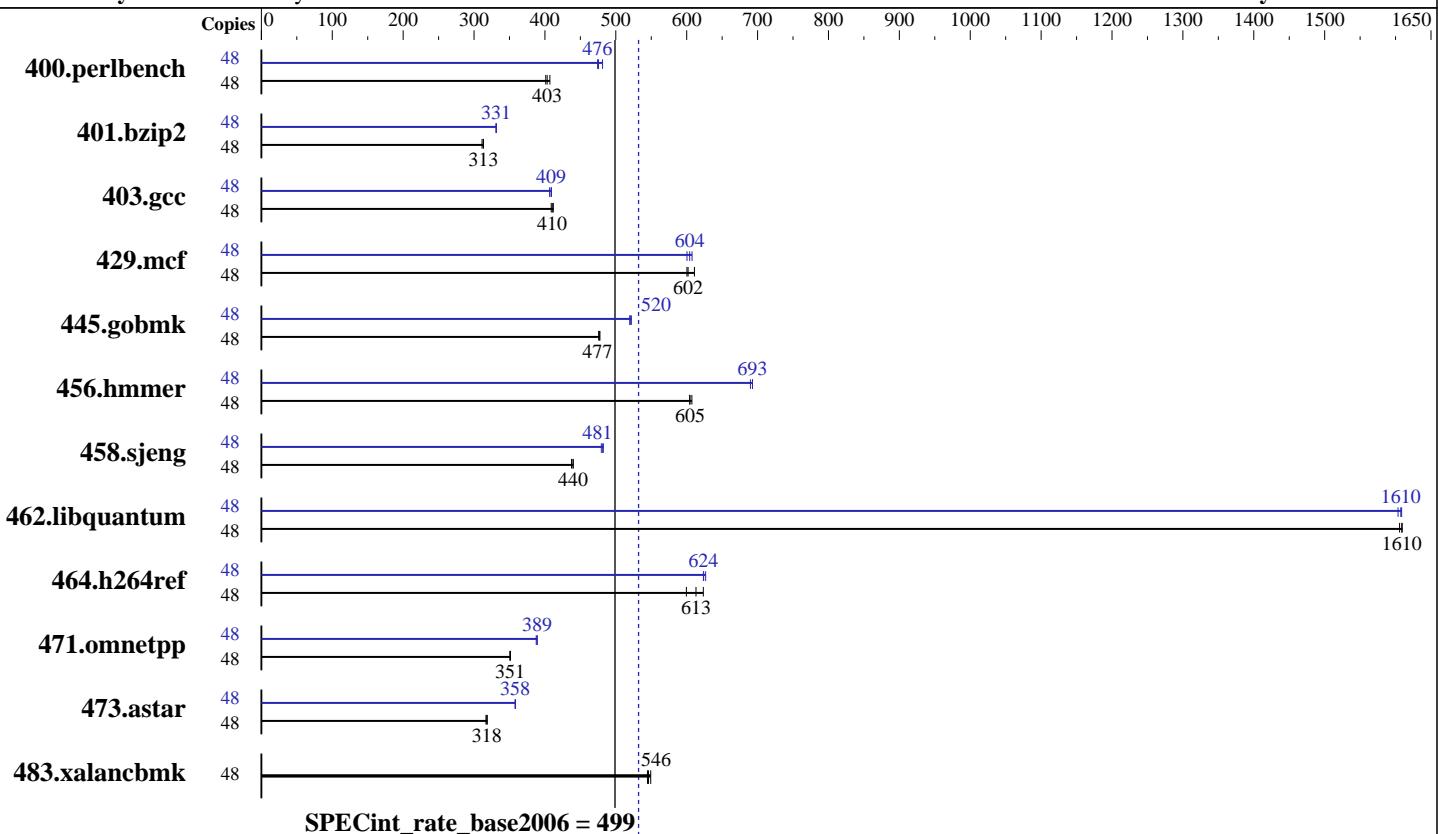
**Test date:** Sep-2010

**Test sponsor:** Cisco Systems

**Hardware Availability:** May-2010

**Tested by:** Cisco Systems

**Software Availability:** Jan-2010



### Hardware

CPU Name: Intel Xeon E7540  
CPU Characteristics: Intel Turbo Boost Technology up to 2.26 GHz  
CPU MHz: 2000  
FPU: Integrated  
CPU(s) enabled: 24 cores, 4 chips, 6 cores/chip, 2 threads/core  
CPU(s) orderable: 1,2,3,4 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: 512 GB (64 x 8 GB 4Rx4 PC3-8500R, ECC)  
Disk Subsystem: 146 GB SAS, 15K RPM  
Other Hardware: None

### Software

Operating System: SuSe Linux Enterprise Server 11 (x86\_64), Kernel 2.6.27-19-5-default  
Compiler: Intel C++ Professional Compiler for IA32 and Intel 64, Version 11.1 Build 20091130 Package ID: l\_cproc\_p\_11.1.064  
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 Library V8.1



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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	48	1152	407	1169	401	<b>1163</b>	<b>403</b>	48	989	474	<b>986</b>	<b>476</b>	974	481
401.bzip2	48	<b>1479</b>	<b>313</b>	1479	313	1488	311	48	1399	331	1398	331	<b>1398</b>	<b>331</b>
403.gcc	48	<b>942</b>	<b>410</b>	945	409	938	412	48	950	407	<b>946</b>	<b>409</b>	944	409
429.mcf	48	717	611	<b>727</b>	<b>602</b>	729	600	48	<b>725</b>	<b>604</b>	721	608	729	600
445.gobmk	48	1058	476	1054	478	<b>1056</b>	<b>477</b>	48	<b>968</b>	<b>520</b>	965	522	969	520
456.hammer	48	737	607	<b>741</b>	<b>605</b>	741	604	48	649	690	<b>646</b>	<b>693</b>	646	693
458.sjeng	48	<b>1321</b>	<b>440</b>	1327	438	1321	440	48	<b>1206</b>	<b>481</b>	1204	482	1211	480
462.libquantum	48	<b>618</b>	<b>1610</b>	618	1610	619	1610	48	620	1600	<b>619</b>	<b>1610</b>	618	1610
464.h264ref	48	1704	623	1772	600	<b>1733</b>	<b>613</b>	48	1695	627	<b>1703</b>	<b>624</b>	1703	624
471.omnetpp	48	856	351	<b>855</b>	<b>351</b>	854	351	48	<b>771</b>	<b>389</b>	771	389	774	388
473.astar	48	1057	319	<b>1060</b>	<b>318</b>	1064	317	48	<b>941</b>	<b>358</b>	941	358	940	358
483.xalancbmk	48	608	545	603	549	<b>606</b>	<b>546</b>	48	608	545	603	549	<b>606</b>	<b>546</b>

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

## General Notes

Binaries were compiled on SLES 10 with Binutils 2.18.50.0.0.7.20080502

## Base Compiler Invocation

C benchmarks:  
icc -m32

C++ benchmarks:  
icpc -m32

## Base Portability Flags

400.perlbench: -DSPEC\_CPU\_LINUX\_IA32

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## Base Portability Flags (Continued)

462.libquantum: -DSPEC\_CPU\_LINUX  
483.xalancbmk: -DSPEC\_CPU\_LINUX

## Base Optimization Flags

C benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch

C++ benchmarks:

-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs  
-L/home/cmpllr/usr3/alrahate/cpu2006.1.1.ic11.1/libic11.1-32bit -lsmartheap

## Base Other Flags

C benchmarks:

403.gcc: -Dalloca=\_alloca

## Peak Compiler Invocation

C benchmarks (except as noted below):

icc -m32

401.bzip2: icc -m64

456.hmmr: icc -m64

458.sjeng: icc -m64

462.libquantum: icc -m64

C++ benchmarks (except as noted below):

icpc -m32

473.astar: icpc -m64

## Peak Portability Flags

400.perlbench: -DSPEC\_CPU\_LINUX\_IA32

401.bzip2: -DSPEC\_CPU\_LP64

456.hmmr: -DSPEC\_CPU\_LP64

Continued on next page



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## Peak Portability Flags (Continued)

458.sjeng: -DSPEC\_CPU\_LP64  
462.libquantum: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_LINUX  
473.astar: -DSPEC\_CPU\_LP64  
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) -static(pass 2)  
-prof-use(pass 2) -ansi-alias  
  
401.bzip2: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-O3(pass 2) -no-prec-div(pass 2) -static(pass 2)  
-prof-use(pass 2) -opt-prefetch -ansi-alias -auto-ilp32  
  
403.gcc: -xSSE4.2 -ipo -O3 -no-prec-div -static  
  
429.mcf: -xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch  
  
445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2) -O2  
-ipo -no-prec-div -ansi-alias  
  
456.hmmr: -xSSE4.2 -ipo -O3 -no-prec-div -static -unroll12  
-ansi-alias -auto-ilp32  
  
458.sjeng: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-O3(pass 2) -no-prec-div(pass 2) -static(pass 2)  
-prof-use(pass 2) -unroll14 -auto-ilp32  
  
462.libquantum: -xSSE4.2 -ipo -O3 -no-prec-div -static -auto-ilp32  
-opt-prefetch  
  
464.h264ref: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)  
-O3(pass 2) -no-prec-div(pass 2) -static(pass 2)  
-prof-use(pass 2) -unroll12 -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/home/cmpllr/usr3/alrahate/cpu2006.1.1.ic11.1/libic11.1-32bit -lsmartheap  
  
473.astar: -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=routine -Wl,-z,muldefs  
-L/home/cmpllr/usr3/alrahate/cpu2006.1.1.ic11.1/libic11.1-64bit -lsmartheap64

Continued on next page



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## Peak Optimization Flags (Continued)

483.xalancbmk: basepeak = yes

## Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=\_alloca

The flags file that was used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic11.1-linux64-revE.20100316.html>

You can also download the XML flags source by saving the following link:

<http://www.spec.org/cpu2006/flags/Intel-ic11.1-linux64-revE.20100316.xml>

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

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