



# SPEC<sup>®</sup> CINT2006 Result

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Cisco Systems

SPECint<sup>®</sup>\_rate2006 = **NC**

Cisco UCS B230 M2 (Intel Xeon E7-2860, 2.26 GHz)

SPECint\_rate\_base2006 = **NC**

CPU2006 license: 9019

Test date: Jan-2012

Test sponsor: Cisco Systems

Hardware Availability: May-2011

Tested by: Cisco Systems

Software Availability: Oct-2011

**SPEC has determined that this result is not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the result does not meet the 3 month availability requirement in the SPEC CPU2006 run rules, because the tested processor was not supported on this platform within three months of publication.**

	Copies
400.perlbench	
401.bzip2	
403.gcc	
429.mcf	
445.gobmk	
456.hmmer	
458.sjeng	
462.libquantum	
464.h264ref	
471.omnetpp	
473.astar	
483	

**Non-Compliant**

### Hardware

CPU Name: Intel Xeon E7-4860  
 CPU Characteristics: Intel Turbo Boost Technology up to 2.66 GHz  
 CPU MHz: 2267  
 FPU: Integrated  
 CPU(s) enabled: 20 cores, 2 chips, 10 cores/chip, 2 threads/core  
 CPU(s) orderable: 1,2 chips  
 Primary Cache: 32 KB I + 32 KB D on chip per core

Continued on next page

### Software

Operating System: Red Hat Enterprise Linux Server release 6.1 (Santiago)  
 2.6.32-131.0.15.el6.x86\_64  
 Compiler: C/C++: Version 12.1.0.225 of Intel C++ Studio XE for Linux  
 Auto Parallel: No  
 File System: ext4  
 System State: Run level 3 (multi-user)

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Secondary Cache: 256 KB I+D on chip per core  
L3 Cache: 24 MB I+D on chip per chip  
Other Cache: None  
Memory: 256 GB (32 x 8 GB 2Rx4 PC3L-10600R-9, ECC)  
Disk Subsystem: 2 x 64 GB SSD, SATA Gen2, 3Gb/s  
Other Hardware: None

Base Processors: 32-bit  
Link Pointers: 32/64-bit  
Other Software: Microquill SmartHeap V9.01

## Result Table

Benchmark	Base								Peak							
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio		
400.perlbench	40	NC	NC	NC	NC	NC	NC	40	NC	NC	NC	NC	NC	NC		
401.bzip2	40	NC	NC	NC	NC	NC	NC	40	NC	NC	NC	NC	NC	NC		
403.gcc	40	NC	NC	NC	NC	NC	NC	40	NC	NC	NC	NC	NC	NC		
429.mcf	40	NC	NC	NC	NC	NC	NC	40	NC	NC	NC	NC	NC	NC		
445.gobmk	40	NC	NC	NC	NC	NC	NC	40	NC	NC	NC	NC	NC	NC		
456.hmmer	40	NC	NC	NC	NC	NC	NC	40	NC	NC	NC	NC	NC	NC		
458.sjeng	40	NC	NC	NC	NC	NC	NC	40	NC	NC	NC	NC	NC	NC		
462.libquantum	40	NC	NC	NC	NC	NC	NC	40	NC	NC	NC	NC	NC	NC		
464.h264ref	40	NC	NC	NC	NC	NC	NC	40	NC	NC	NC	NC	NC	NC		
471.omnetpp	40	NC	NC	NC	NC	NC	NC	40	NC	NC	NC	NC	NC	NC		
473.astar	40	NC	NC	NC	NC	NC	NC	40	NC	NC	NC	NC	NC	NC		
483.xs	40	NC	NC	NC	NC	NC	NC	40	NC	NC	NC	NC	NC	NC		

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

## Submit Notes

The numactl mechanism was used to bind copies to processors. The config file option 'submit' was used to generate numactl commands to bind each copy to a specific processor. For details, please see the config file.



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## Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"

## Platform Notes

Sysinfo program /opt/cpu2006/config/sysinfo.rev6800  
\$Rev: 6800 \$ \$Date:: 2011-10-11 # \$ 6f2e515032aaa42e583f96b07f99d3  
running on localhost.localdomain Mon Jan 23 21:32:59 2012

This section contains SUT (System Under Test) info as seen by some common utilities. To remove or add to this section, see: <http://www.spec.org/cpu2006/config.html#sysinfo>

From /proc/cpuinfo  
model name : Intel(R) Xeon(R) CPU E7- 4860 @ 2.27GHz  
2 "physical id" (chips)  
40 "processors"  
cores, siblings (Caution: counting these is hw and system dependent. The following excerpt from /proc/cpuinfo might not be reliable. Use with caution.)  
cpu cores : 40  
siblings : 40  
physical 0: cores 0 1 2 8 9 16 17 18 24 25  
physical 1: cores 0 1 2 8 9 16 17 18 24 25  
cache size : 24576 KB

MemTotal: 264434356 kB  
PagePages\_Total: 0  
Hugepagesize: 2048 kB

/usr/bin/lsb\_release -d  
Red Hat Enterprise Linux Server release 6.1 (Santiago)

From /etc/\*release\* /etc/\*version\*  
redhat-release: Red Hat Enterprise Linux Server release 6.1 (Santiago)  
system-release: Red Hat Enterprise Linux Server release 6.1 (Santiago)  
system-release-cpe: cpe:/o:redhat:enterprise\_linux:6server:ga:server

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## Platform Notes (Continued)

```

uname -a:
  Linux localhost.localdomain 2.6.32-1300.0.15.el6.x86_64 #1 SMP Tue May 10
  15:42:40 EDT 2011 x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Jan 23 21:29

SPEC is set to: /opt/cpu2006
Filesystem      Type      Size  Used Avail Use% Mounted on
/dev/sdal       ext4      8G    5.5G  10G  10% /

Additional information from /dev/cdrom:

(End of data from sysinfo program)

```

## General Notes

```

Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = "/opt/cpu2006/libs/32:/opt/cpu2006/libs/64"

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB
memory using RHEL5.
Transparent Huge Pages enabled with:
echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled
Filesystem page cache cleared with:
echo 1 > /proc/sys/vm/drop_caches
numactl was invoked through numactl i.e.:
numactl --interleave=all runspec <etc>

```

## 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 -opt-mem-layout-trans=3  
C++ benchmarks:  
-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3  
-Wl,-z,muldefs -L/lib -lsmartheap

## 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

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## Peak Compiler Invocation (Continued)

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

456.hmmr: -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)  
-auto-ilp32

401.bzip2: -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

403.gcc: -xSSE4.2 -ipo -O3 -no-prec-div

429.mcf: basepeak = yes

445.gobmk: -xSSE4.2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)  
-ansi-alias -opt-mem-layout-trans=3

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## Peak Optimization Flags (Continued)

456.hmmmer: -xSSE4.2 -ipo -O3 -no-prec-div -unroll12 -auto-ilp32

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)  
-unroll14 -auto-ilp32

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)  
-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 -fcommon-obj-rs-region-strategy=block -Wl,-z,muldefs  
-L/\$smallheap -lsmartheap

473.astar: basepeak = yes

483.balancbm: basepeak = yes

## Peak Other Flags

C benchmarks:

402.gcc: -Dalloca=\_alloca

The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.html>

<http://www.spec.org/cpu2006/flags/Cisco-Platform-Settings-V1.2.html>





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You can also download the XML flags source by using the following links:

<http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux.201111.xml>  
<http://www.spec.org/cpu2006/flags/Cisco-Platform-Settings-V1.xml>

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For questions about this result, please contact the tester.  
For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

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