



SPEC® CINT2006 Result

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Cisco Systems

Cisco UCS B260 M4 (Intel Xeon E7-4830 v2, 2.20 GHz)

SPECint®2006 = **NC**

SPECint_base2006 = **NC**

CPU2006 license: 9019

Test sponsor: Cisco Systems

Tested by: Cisco Systems

Test date: Apr-2014

Hardware Availability: May-2014

Software Availability: Sep-2013

SPEC has determined that this result is not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the submitter has notified SPEC that the system was run with a BIOS which included a version of the Intel MRC (Memory Reference Code) that is not supported by Cisco or Intel.

400.perlbench

401.bzip2

403.gcc

429.mcf

445.gobmk

456.hmmer

458.sjeng

462.libquantum

464.h264ref

471.omnetpp

473.astar

483.xalancbmk

Hardware

CPU Name: Intel Xeon E7-4830 v2
CPU Characteristics: Intel Turbo Boost Technology up to 2.70 GHz
CPU MHz: 2200
FPU: Integrated
CPU(s) enabled: 20 cores, 2 chips, 10 cores/chip, 2 threads/core
CPU(s) orderable: 1,2 chip
Primary Cache: 32 KB I + 32 KB D on chip per core
Secondary Cache: 256 KB I+D on chip per core
L3 Cache: 20 MB I+D on chip per chip
Other Cache: None

Continued on next page

Software

Operating System: Red Hat Enterprise Linux Server release 6.5 (Santiago)
2.6.32-431.el6.x86_64
Compiler: C/C++: Version 14.0.0.080 of Intel C++ Studio XE for Linux
Auto Parallel: Yes
File System: ext4
System State: Run level 3 (multi-user)
Base Pointers: 32/64-bit
Peak Pointers: 32/64-bit

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Memory: 256 GB (32 x 8 GB 2Rx4 PC3L-12800R-11, ECC)
Disk Subsystem: 1 X 300 GB 15000 RPM SAS
Other Hardware: None

Other Software: Mellanox SmartHeap V10.0

Results Table

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

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

Operating System Notes

Set to unlimited using "ulimit -s unlimited"

Platform Notes

Intel HT Technology = Enabled
 CPU performance set to HPC
 Power Technology set to Custom
 CPU Power State C6 set to Disabled
 CPU Power State C1 Enhanced set to Disabled
 Memory RAS configuration set to Maximum Performance
 DRAM Clock Throttling Set to Performance
 Sysinfo program /opt/cpu2006-1.4/config/sysinfo.rev6818
 \$Rev: 6818 \$ \$Date:: 2012-07-17 # \$ e86d102572650a6e4d596a3cee98f191
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Platform Notes (Continued)

running on yos Sun Apr 20 11:09:39 2014

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/Docs/config.html#sysinfo>

From /proc/cpuinfo

model name : Intel(R) Xeon(R) CPU E7-4830 v2 @ 2.20GHz

2 "physical id"s (chips)

40 "processors"

cores, siblings (Caution: counting these is hw and system dependent. The following excerpts from /proc/cpuinfo might not be reliable. Use with caution.)

cpu cores : 10

siblings : 20

physical 0: cores 0 1 2 3 4 8 9 10 11 12

physical 1: cores 0 2 2 3 4 8 9 10 11 12

cache size : 2048 kB

From /proc/meminfo

MemTotal: 22970536 kB

HugePages_Total: 0

Hugepagesize: 2048 kB

/usr/bin/lshw release -d

Red Hat Enterprise Linux Server release 6.5 (Santiago)

From /etc/*-release* /etc/*version*

base: Red Hat Enterprise Linux Server release 6.5 (Santiago)

system-release: Red Hat Enterprise Linux Server release 6.5 (Santiago)

system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server

uname -a

Linux yos 2.6.32-431.el6.x86_64 #1 SMP Sun Nov 10 22:19:54 EST 2013 x86_64

x86_64 x86_64 GNU/Linux

run-level 3 Apr 20 11:07

SPEC is set to: /opt/cpu2006-1.4

Filesystem	Type	Size	Used	Avail	Use%	Mounted on
/dev/sdal	ext4	275G	48G	213G	19%	/

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Platform Notes (Continued)

Additional information from dmidecode:
BIOS Cisco Systems, Inc. EXM4-1.2.2.1.15.0 02020141613 02/20/2014
Memory:
32x 8 GB
32x 0xCE00 M393B1K70QB0-YK0 8 GB 1333 MHz 2 rank
16x NO DIMM NO DIMM

(End of data from sysinfo program)

General Notes

Environment variables set by spec before the start of the run:
KMP_AFFINITY = "granularity=fine/scatter"
LD_LIBRARY_PATH = "/opt/cpu2006-1.4/libs/32:/opt/cpu2006-1.4/libs/64:/opt/cpu2006-1.4/sh"
OMP_NUM_THREADS = "40"

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB memory using RedHat EL 6
Transparent Huge Pages enabled with:
echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled
runspec command invoked through numactl i.e.:
numactl --interleave=all runspec <etc>

Base Compiler Invocation

icc -m64

C++ benchmarks:
icpc -m64

Base Portability Flags

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64

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Base Portability Flags (Continued)

```

401.bzip2: -DSPEC_CPU_LP64
403.gcc: -DSPEC_CPU_LP64
429.mcf: -DSPEC_CPU_LP64
445.gobmk: -DSPEC_CPU_LP64
456.hmmr: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
464.h264ref: -DSPEC_CPU_LP64
471.omnetpp: -DSPEC_CPU_LP64
473.astar: -DSPEC_CPU_LP64
483.xalancbmk: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX

```

Base Optimization Flags

```

C benchmarks:
-xSSE4.2 -ipo -Os -fcommon -fno-prec-div -parallel -opt-prefetch -auto-p32

C++ benchmarks:
-xSSE4.2 -ipo -Os -fcommon -fno-prec-div -opt-prefetch -auto-p32
-Wl,-z,muldefs -L/s -lsmarthheap64

```

Base Other Flags

403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

C benchmarks (except as noted below):
icc -m64

400.perlbench: icc -m32

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Peak Compiler Invocation (Continued)

445.gobmk: icc -m32
464.h264ref: icc -m32
C++ benchmarks (except as noted below):
icpc -m32
473.astar: icpc -m64

Peak Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_
401.bzip2: -DSPEC_CPU_LP64
403.gcc: -DSPEC_CPU_LP64
429.mcf: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
473.astar: -DSPEC_CPU_LP64
483.xalanbmk: -DSPEC_CPU_LINUX

Peak Optimization Flags

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)
-opt-prefetch -ansi-alias
401.bzip2: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div -prof-use(pass 2) -auto-ilp32
-opt-prefetch -ansi-alias
403.gcc: -xSSE4.2 -ipo -O3 -no-prec-div -inline-calloc
-opt-malloc-options=3 -auto-ilp32

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Peak Optimization Flags (Continued)

429.mcf: basepeak = yes

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

456.hmmer: -xSSE4.2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32
-ansi-alias

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

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)
-unroll8 -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)
-opt-pa-region-strategy=block -ansi-alias
-Wl,-z,muldefs -L/sh -lsmartheap

472.pastor: basepeak = yes

483.libquantum: -xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -ansi-alias
-Wl,-z,muldefs -L/sh -lsmartheap

Peak Other Flags

C benchmarks:
403.gcc: -Dalloca=_alloca



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The flags files that were used to format this result can be browsed at
<http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.html>
<http://www.spec.org/cpu2006/flags/Cisco-Platform-Settings-V1.2.20140311.html>

You can also download the XML flags source files using the following links:
<http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.xml>
<http://www.spec.org/cpu2006/flags/Cisco-Platform-Settings-V1.2.20140311.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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