

SPEC® CINT2006 Result

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Cisco Systems

Cisco UCS C220 M4 (Intel Xeon E5-2699 v4, 2.20 GHz)

SPECint®2006 = **Not Run**

SPECint_base2006 = **73.1**

CPU2006 license: 9019

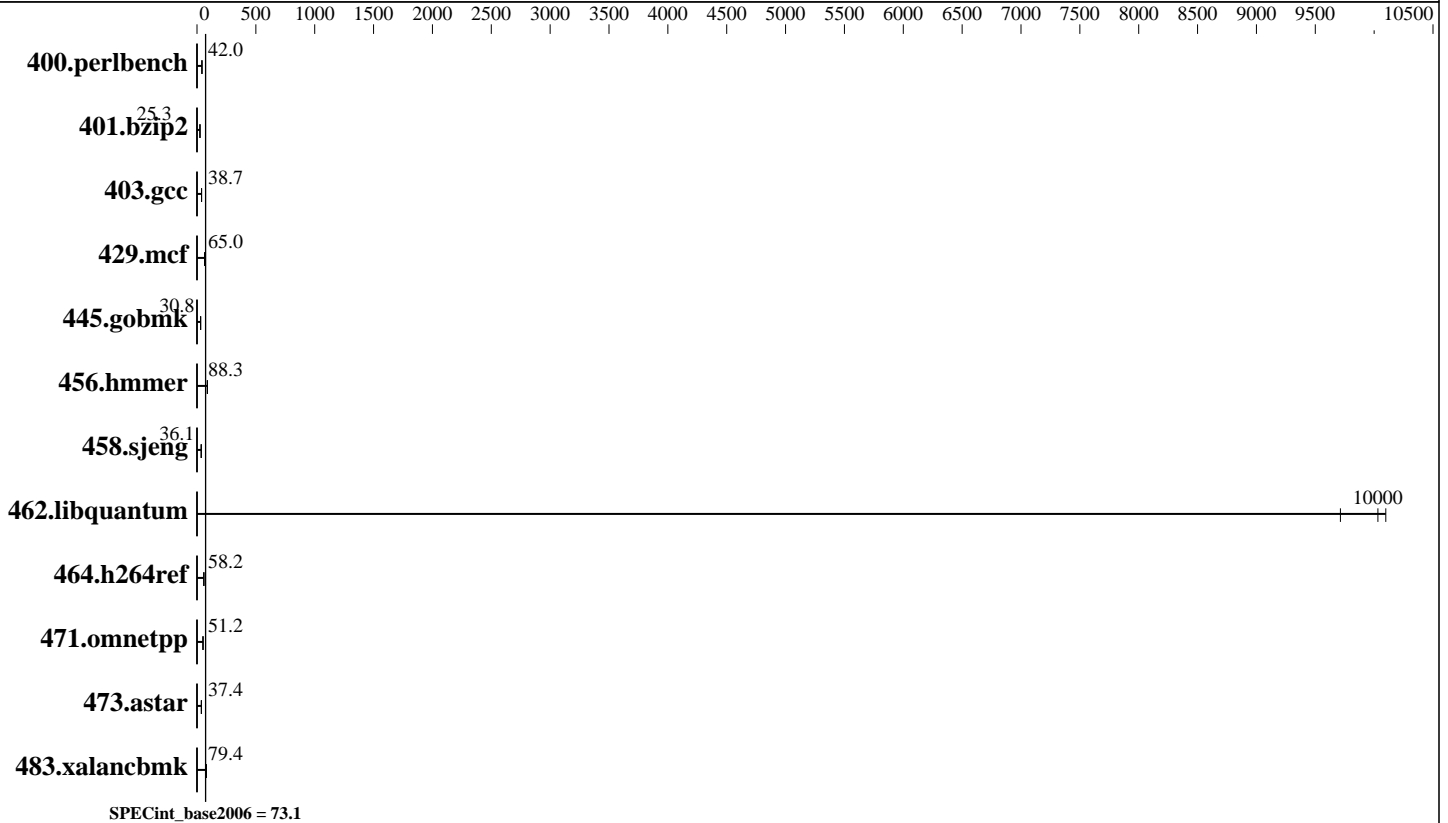
Test sponsor: Cisco Systems

Tested by: Cisco Systems

Test date: Mar-2016

Hardware Availability: Mar-2016

Software Availability: Dec-2015



Hardware

CPU Name: Intel Xeon E5-2699 v4
 CPU Characteristics: Intel Turbo Boost Technology up to 3.60 GHz
 CPU MHz: 2200
 FPU: Integrated
 CPU(s) enabled: 44 cores, 2 chips, 22 cores/chip
 CPU(s) orderable: 1,2 chips
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 256 MB I+D on chip per core
 L3 Cache: 55 MB I+D on chip per chip
 Other Cache: None
 Memory: 256 GB (16 x 16 GB 2Rx4 PC4-2400T-R, ECC)
 Disk Subsystem: 1 x 300 GB SAS, 15K RPM
 Other Hardware: None

Software

Operating System: SUSE Linux Enterprise Server 12 SP1 (x86_64)
 3.12.49-11-default
 Compiler: C/C++; Version 16.0.0.101 of Intel C++ Studio XE for Linux
 Auto Parallel: Yes
 File System: xfs
 System State: Run level 3 (multi-user)
 Base Pointers: 32/64-bit
 Peak Pointers: 32/64-bit
 Other Software: Microquill SmartHeap V10.2

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Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	233	42.0	<u>232</u>	<u>42.0</u>	232	42.0						
401.bzip2	382	25.3	384	25.1	<u>382</u>	<u>25.3</u>						
403.gcc	<u>208</u>	<u>38.7</u>	208	38.8	208	38.7						
429.mcf	141	64.8	<u>140</u>	<u>65.0</u>	140	65.1						
445.gobmk	<u>341</u>	<u>30.8</u>	340	30.8	341	30.7						
456.hmmr	106	88.2	<u>106</u>	<u>88.3</u>	106	88.3						
458.sjeng	<u>335</u>	<u>36.1</u>	335	36.1	336	36.0						
462.libquantum	<u>2.07</u>	<u>10000</u>	2.05	10100	2.13	9710						
464.h264ref	<u>381</u>	<u>58.2</u>	382	57.9	380	58.3						
471.omnetpp	122	51.3	<u>122</u>	<u>51.2</u>	124	50.6						
473.astar	<u>188</u>	<u>37.4</u>	189	37.2	188	37.4						
483.xalancbmk	86.1	80.1	87.0	79.3	<u>86.9</u>	<u>79.4</u>						

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

Operating System Notes

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

Platform Notes

BIOS Settings:

Intel Hyper-Threading Technology option set to Disabled
CPU performance set to Enterprise
Power Technology set to Energy Efficient
Energy Performance BIAS setting set to Balanced Performance
Memory RAS configuration set to Maximum Performance
Memory Power Saving Mode set to Disabled
QPI Snoop Mode set to Home Directory Snoop with OSB
Sysinfo program /home/cpu2006-1.2/config/sysinfo.rev6914
\$Rev: 6914 \$ \$Date:: 2014-06-25 #\$ e3fbb8667b5a285932ceab81e28219e1
running on linux-t2je Thu Mar 10 16:29:30 2016

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 E5-2699 v4 @ 2.20GHz
 2 "physical id"s (chips)
 44 "processors"
cores, siblings (Caution: counting these is hw and system dependent. The
following excerpts from /proc/cpuinfo might not be reliable. Use with
caution.)
```

Continued on next page

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Platform Notes (Continued)

```
cpu cores : 22
siblings : 22
physical 0: cores 0 1 2 3 4 5 8 9 10 11 12 16 17 18 19 20 21 24 25 26 27
28
physical 1: cores 0 1 2 3 4 5 8 9 10 11 12 16 17 18 19 20 21 24 25 26 27
28
cache size : 56320 KB

From /proc/meminfo
MemTotal:      264565824 kB
HugePages_Total:      0
Hugepagesize:   2048 kB

From /etc/*release* /etc/*version*
SuSE-release:
SUSE Linux Enterprise Server 12 (x86_64)
VERSION = 12
PATCHLEVEL = 1
# This file is deprecated and will be removed in a future service pack or
release.
# Please check /etc/os-release for details about this release.
os-release:
NAME="SLES"
VERSION="12-SP1"
VERSION_ID="12.1"
PRETTY_NAME="SUSE Linux Enterprise Server 12 SP1"
ID="sles"
ANSI_COLOR="0;32"
CPE_NAME="cpe:/o:suse:sles:12:sp1"

uname -a:
Linux linux-t2je 3.12.49-11-default #1 SMP Wed Nov 11 20:52:43 UTC 2015
(8d714a0) x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Mar 10 16:29

SPEC is set to: /home/cpu2006-1.2
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/sda3       xfs   268G   24G  244G   9% /home
Additional information from dmidecode:

Warning: Use caution when you interpret this section. The 'dmidecode' program
reads system data which is "intended to allow hardware to be accurately
determined", but the intent may not be met, as there are frequent changes to
hardware, firmware, and the "DMTF SMBIOS" standard.

BIOS Cisco Systems, Inc. C220M4.2.0.9.42.021920161702 02/19/2016
Memory:
16x 0xCE00 M393A2G40EB1-CRC 16 GB 2 rank 2400 MHz
8x NO DIMM NO DIMM

(End of data from sysinfo program)
```

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General Notes

Environment variables set by runspec before the start of the run:

KMP_AFFINITY = "granularity=fine,compact"

LD_LIBRARY_PATH = "/home/cpu2006-1.2/libs/32:/home/cpu2006-1.2/libs/64:/home/cpu2006-1.2/sh"

OMP_NUM_THREADS = "44"

Binaries compiled on a system with 1x Intel Core i5-4670K CPU + 32GB memory using RedHat EL 7.1

Transparent Huge Pages enabled with:

echo always > /sys/kernel/mm/transparent_hugepage/enabled

Submitted_by: "Rajendra Yogendra (ryogendr)" <ryogendr@cisco.com>

Submitted: Tue Mar 22 00:31:24 EDT 2016

Submission: cpu2006-20160322-39738.sub

Base Compiler Invocation

C benchmarks:

icc -m64

C++ benchmarks:

icpc -m64

Base Portability Flags

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
401.bzip2: -DSPEC_CPU_LP64
403.gcc: -DSPEC_CPU_LP64
429.mcf: -DSPEC_CPU_LP64
445.gobmk: -DSPEC_CPU_LP64
456.hmmer: -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:

-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -opt-prefetch -auto-p32

C++ benchmarks:

-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32

-Wl,-z,muldefs -L/sh -lsmartheap64

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Base Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

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

<https://pro.spec.org/private/osg/submit/cpu2006/flags/Intel-ic16.0-official-linux64.html>

<https://pro.spec.org/private/osg/submit/cpu2006/flags/Cisco-Platform-Settings-V1.2-revD.html>

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

<https://pro.spec.org/private/osg/submit/cpu2006/flags/Intel-ic16.0-official-linux64.xml>

<https://pro.spec.org/private/osg/submit/cpu2006/flags/Cisco-Platform-Settings-V1.2-revD.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 v1.2.
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