

SPEC® CFP2006 Result

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Cisco Systems

Cisco UCS C220 M4 (Intel Xeon E5-2667 v4, 3.20 GHz)

SPECfp®2006 = **Not Run**

SPECfp_base2006 = **125**

CPU2006 license: 9019

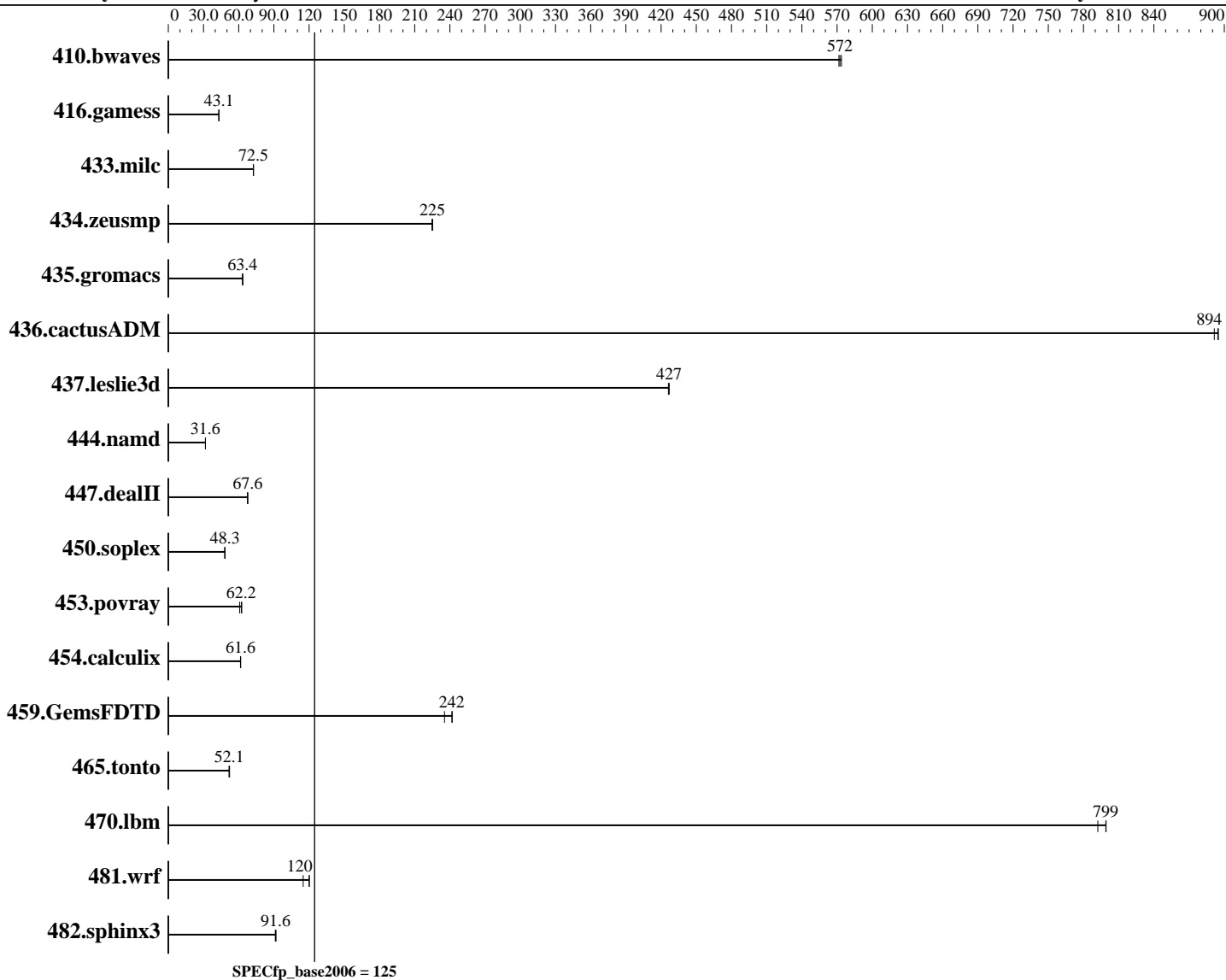
Test sponsor: Cisco Systems

Tested by: Cisco Systems

Test date: Mar-2016

Hardware Availability: Mar-2016

Software Availability: Dec-2015



Hardware

CPU Name: Intel Xeon E5-2667 v4
CPU Characteristics: Intel Turbo Boost Technology up to 3.60 GHz
CPU MHz: 3200
FPU: Integrated
CPU(s) enabled: 16 cores, 2 chips, 8 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

Continued on next page

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;
Fortran: Version 16.0.0.101 of Intel Fortran Studio XE for Linux
Auto Parallel: Yes
File System: xfs
System State: Run level 3 (multi-user)

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L3 Cache: 25 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 400 GB SAS SSD
 Other Hardware: None

Base Pointers: 64-bit
 Peak Pointers: 32/64-bit
 Other Software: None

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	23.8	572	<u>23.7</u>	<u>572</u>	23.7	574						
416.gamess	455	43.1	<u>454</u>	<u>43.1</u>	453	43.2						
433.milc	127	72.5	<u>127</u>	<u>72.5</u>	126	72.6						
434.zeusmp	40.5	225	40.4	225	<u>40.4</u>	<u>225</u>						
435.gromacs	113	63.2	113	63.4	<u>113</u>	<u>63.4</u>						
436.cactusADM	13.4	895	13.4	891	<u>13.4</u>	<u>894</u>						
437.leslie3d	22.0	427	<u>22.0</u>	<u>427</u>	22.1	426						
444.namd	253	31.7	253	31.6	<u>253</u>	<u>31.6</u>						
447.dealII	<u>169</u>	<u>67.6</u>	169	67.6	169	67.6						
450.soplex	172	48.4	<u>173</u>	<u>48.3</u>	174	48.1						
453.povray	<u>85.5</u>	<u>62.2</u>	87.4	60.8	85.0	62.6						
454.calculix	134	61.6	<u>134</u>	<u>61.6</u>	134	61.5						
459.GemsFDTD	45.1	235	43.8	242	<u>43.9</u>	<u>242</u>						
465.tonto	<u>189</u>	<u>52.1</u>	190	51.7	188	52.2						
470.lbm	17.3	792	17.2	799	<u>17.2</u>	<u>799</u>						
481.wrf	97.2	115	92.9	120	<u>93.1</u>	<u>120</u>						
482.sphinx3	214	91.2	<u>213</u>	<u>91.6</u>	212	91.7						

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 Cluster-on-Die

Sysinfo program /home/cpu2006-1.2/config/sysinfo.rev6914

\$Rev: 6914 \$ \$Date:: 2014-06-25 #\$ e3fbb8667b5a285932ceab81e28219e1

Continued on next page

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Page 2

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Platform Notes (Continued)

running on linux-jrq0 Mon Mar 14 08:14:34 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 E5-2667 v4 @ 3.20GHz
 2 "physical id"s (chips)
 16 "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 : 8
  siblings  : 8
  physical 0: cores 0 2 3 4 8 10 11 12
  physical 1: cores 0 2 3 4 8 10 11 12
cache size : 25600 KB
```

From /proc/meminfo

```
MemTotal:      264368568 kB
HugePages_Total:      0
Hugepagesize:    2048 kB
```

/usr/bin/lsb_release -d

```
SUSE Linux Enterprise Server 12 SP1
```

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-jrq0 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 14 08:06

SPEC is set to: /home/cpu2006-1.2

```
Filesystem      Type  Size  Used Avail Use% Mounted on
Continued on next page
```

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Platform Notes (Continued)

/dev/sdb3 xfs 330G 43G 288G 13% /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. C220M4.2.0.9.41.021820161009 02/18/2016

Memory:

16x 0xCE00 M393A2G40EB1-CRC 16 GB 2 rank 2400 MHz

8x NO DIMM NO DIMM

(End of data from sysinfo program)

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 = "16"

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

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

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

Submission: cpu2006-20160322-39739.sub

Base Compiler Invocation

C benchmarks:

icc -m64

C++ benchmarks:

icpc -m64

Fortran benchmarks:

ifort -m64

Benchmarks using both Fortran and C:

icc -m64 ifort -m64

Base Portability Flags

410.bwaves: -DSPEC_CPU_LP64

Continued on next page

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Page 4

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Base Portability Flags (Continued)

```
416.gamess: -DSPEC_CPU_LP64
433.milc: -DSPEC_CPU_LP64
434.zeusmp: -DSPEC_CPU_LP64
435.gromacs: -DSPEC_CPU_LP64 -nofor_main
436.cactusADM: -DSPEC_CPU_LP64 -nofor_main
437.leslie3d: -DSPEC_CPU_LP64
444.namd: -DSPEC_CPU_LP64
447.dealII: -DSPEC_CPU_LP64
450.soplex: -DSPEC_CPU_LP64
453.povray: -DSPEC_CPU_LP64
454.calculix: -DSPEC_CPU_LP64 -nofor_main
459.GemsFDTD: -DSPEC_CPU_LP64
465.tonto: -DSPEC_CPU_LP64
470.lbm: -DSPEC_CPU_LP64
481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
482.sphinx3: -DSPEC_CPU_LP64
```

Base Optimization Flags

C benchmarks:

```
-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -opt-prefetch
-ansi-alias
```

C++ benchmarks:

```
-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -ansi-alias
```

Fortran benchmarks:

```
-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -opt-prefetch
```

Benchmarks using both Fortran and C:

```
-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -opt-prefetch
-ansi-alias
```

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 other inquiries, please contact webmaster@spec.org.

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