SPEC® CFP2006 Result

Cisco Systems

Cisco UCS B200 M5 (Intel Xeon Platinum 8164, 2.00GHz)

$SPECfp^{®}2006 =$ **Not Run**

$SPECfp\_base2006 =$ 143

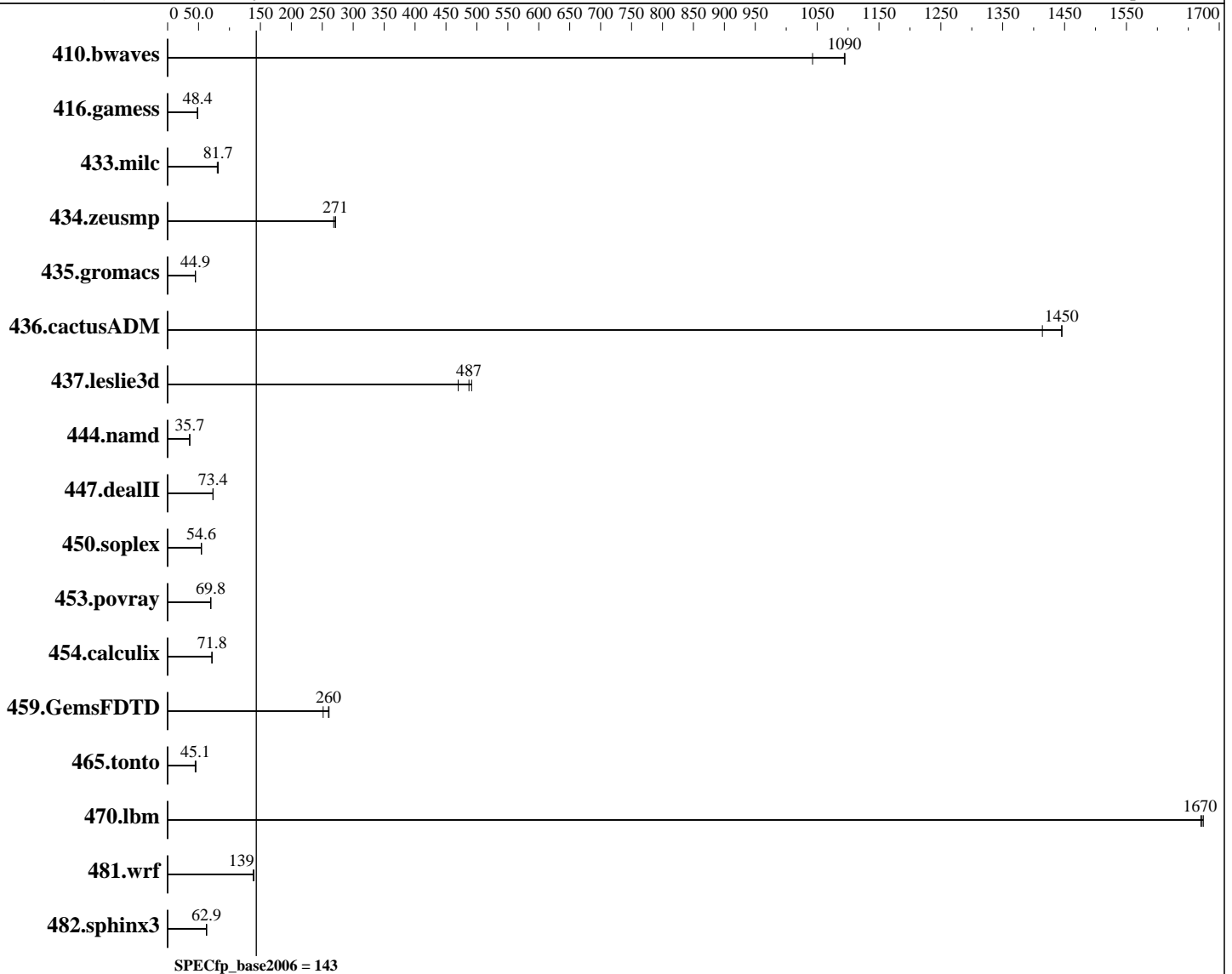|		
CPU2006 license: 9019	**Test date:**	Aug-2017
Test sponsor: Cisco Systems	**Hardware Availability:**	Aug-2017
Tested by: Cisco Systems	**Software Availability:**	Apr-2017

Scale: 0 50.0 150 200 250 300 350 400 450 500 550 600 650 700 750 800 850 900 950 1050 1150 1250 1350 1450 1550 1700

Benchmark	Result
410.bwaves	1090
416.gamess	48.4
433.milc	81.7
434.zeusmp	271
435.gromacs	44.9
436.cactusADM	1450
437.leslie3d	487
444.namd	35.7
447.dealII	73.4
450.soplex	54.6
453.povray	69.8
454.calculix	71.8
459.GemsFDTD	260
465.tonto	45.1
470.lbm	1670
481.wrf	139
482.sphinx3	62.9

SPECfp_base2006 = 143

Hardware

CPU Name:	Intel Xeon Platinum 8164
CPU Characteristics:	Intel Turbo Boost Technology up to 3.70 GHz
CPU MHz:	2000
FPU:	Integrated
CPU(s) enabled:	52 cores, 2 chips, 26 cores/chip
CPU(s) orderable:	1,2 chips
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	1 MB I+D on chip per core

Continued on next page

Software

Operating System:	SUSE Linux Enterprise Server 12 SP2 (x86_64) 4.4.21-69-default
Compiler:	C/C++: Version 17.0.3.191 of Intel C/C++ Compiler for Linux; Fortran: Version 17.0.3.191 of Intel Fortran Compiler for Linux
Auto Parallel:	Yes
File System:	xfs
System State:	Run level 3 (multi-user)

Continued on next page

SPEC CFP2006 Result
Copyright 2006-2017 Standard Performance Evaluation Corporation

Cisco Systems

Cisco UCS B200 M5 (Intel Xeon Platinum 8164, 2.00GHz)

$SPECfp2006 =$ Not Run

$SPECfp\_base2006 =$ 143

CPU2006 license: 9019	**Test date:** Aug-2017
Test sponsor: Cisco Systems	**Hardware Availability:** Aug-2017
Tested by: Cisco Systems	**Software Availability:** Apr-2017

L3 Cache:	35.75 MB I+D on chip per chip	Base Pointers:	64-bit
Other Cache:	None	Peak Pointers:	32/64-bit
Memory:	384 GB (24 x 16 GB 2Rx4 PC4-2666V-R)	Other Software:	None
Disk Subsystem:	1 x 900 GB M.2 SATA SSD		
Other Hardware:	None		

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	13.0	1040	**12.4**	**1090**	12.4	1100						
416.gamess	**405**	**48.4**	404	48.4	405	48.4						
433.milc	112	81.7	114	80.3	**112**	**81.7**						
434.zeusmp	33.9	269	33.5	271	**33.6**	**271**						
435.gromacs	159	45.0	**159**	**44.9**	159	44.9						
436.cactusADM	8.45	1410	**8.27**	**1450**	8.26	1450						
437.leslie3d	20.0	470	**19.3**	**487**	19.1	492						
444.namd	**225**	**35.7**	224	35.7	225	35.7						
447.dealII	156	73.5	156	73.4	**156**	**73.4**						
450.soplex	152	54.8	**153**	**54.6**	153	54.4						
453.povray	76.2	69.8	**76.2**	**69.8**	76.4	69.7						
454.calculix	115	71.9	**115**	**71.8**	115	71.5						
459.GemsFDTD	**40.8**	**260**	40.7	261	42.2	251						
465.tonto	**218**	**45.1**	221	44.6	215	45.8						
470.lbm	**8.22**	**1670**	8.21	1670	8.23	1670						
481.wrf	**80.5**	**139**	80.0	140	80.6	139						
482.sphinx3	311	62.7	**310**	**62.9**	309	63.1						

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 HyperThreading Technology set to Disabled
    CPU performance set to Enterprise
    Power Performance Tuning set to OS
    SNC set to Disabled
    IMC Interleaving set to Auto
    Patrol Scrub set to Disabled
     Sysinfo program /home/cpu2006-1.2/config/sysinfo.rev6993
     Revision 6993 of 2015-11-06 (b5e8d4b4eb51ed28d7f98696cbe290c1)
     running on linux-uezu Sun Jan 3 00:42:24 2010

Cisco Systems

Cisco UCS B200 M5 (Intel Xeon Platinum 8164, 2.00GHz)

$SPECfp2006 = $ Not Run

$SPECfp_base2006 = $ 143

CPU2006 license: 9019
Test sponsor: Cisco Systems
Tested by: Cisco Systems

Test date: Aug-2017
Hardware Availability: Aug-2017
Software Availability: Apr-2017

Platform Notes (Continued)

```
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) Platinum 8164 CPU @ 2.00GHz
      2 "physical id"s (chips)
      52 "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 : 26
      siblings  : 26
      physical 0: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 16 17 18 19 20 21 22 24 25
      26 27 28 29
      physical 1: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 16 17 18 19 20 21 22 24 25
      26 27 28 29
   cache size : 36608 KB

From /proc/meminfo
   MemTotal:       394832536 kB
   HugePages_Total:        0
   Hugepagesize:        2048 kB

From /etc/*release* /etc/*version*
   SuSE-release:
      SUSE Linux Enterprise Server 12 (x86_64)
      VERSION = 12
      PATCHLEVEL = 2
      # 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-SP2"
      VERSION_ID="12.2"
      PRETTY_NAME="SUSE Linux Enterprise Server 12 SP2"
      ID="sles"
      ANSI_COLOR="0;32"
      CPE_NAME="cpe:/o:suse:sles:12:sp2"

uname -a:
   Linux linux-uezu 4.4.21-69-default #1 SMP Tue Oct 25 10:58:20 UTC 2016
   (9464f67) x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Jan 3 00:39

SPEC is set to: /home/cpu2006-1.2
   Filesystem      Type  Size  Used Avail Use% Mounted on
   /dev/sda1       xfs   894G   38G  857G   5% /
Additional information from dmidecode:
```

Cisco Systems

Cisco UCS B200 M5 (Intel Xeon Platinum 8164, 2.00GHz)

$SPECfp2006 = $ Not Run

$SPECfp_base2006 = $ 143

CPU2006 license: 9019
Test sponsor: Cisco Systems
Tested by: Cisco Systems

Test date: Aug-2017
Hardware Availability: Aug-2017
Software Availability: Apr-2017

Platform Notes (Continued)

```
   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. B200M5.3.2.1d.5.0727171353 07/27/2017
  Memory:
   24x 0xCE00 M393A2G40EB2-CTD 16 GB 2 rank 2666 MHz

 (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/lib/ia32:/home/cpu2006-1.2/lib/intel64:/home/cpu2006-1.2/sh10.2"
OMP_NUM_THREADS = "52"

 Binaries compiled on a system with 1x Intel Core i7-4790 CPU + 32GB RAM
 memory using Redhat Enterprise Linux 7.2
 Transparent Huge Pages enabled with:
 echo always > /sys/kernel/mm/transparent_hugepage/enabled
```

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`
    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`

SPEC CFP2006 Result
Copyright 2006-2017 Standard Performance Evaluation Corporation

Cisco Systems

Cisco UCS B200 M5 (Intel Xeon Platinum 8164, 2.00GHz)

$SPECfp2006 = $ **Not Run**

$SPECfp_base2006 = $ **143**

CPU2006 license: 9019	**Test date:** Aug-2017
Test sponsor: Cisco Systems	**Hardware Availability:** Aug-2017
Tested by: Cisco Systems	**Software Availability:** Apr-2017

Base Portability Flags (Continued)

```
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 -qopt-prefetch
```

C++ benchmarks:

```
-xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch
```

Fortran benchmarks:

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

Benchmarks using both Fortran and C:

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

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic17.0-official-linux64-revF.html
http://www.spec.org/cpu2006/flags/Cisco-Platform-Settings-V1.2-revH.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic17.0-official-linux64-revF.xml
http://www.spec.org/cpu2006/flags/Cisco-Platform-Settings-V1.2-revH.xml

For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.2.
Report generated on Wed Sep 20 11:06:23 2017 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 19 September 2017.