SPEC® CFP2006 Result
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Cisco Systems

Cisco UCS B200 M5 (Intel Xeon Gold 6136, 3.00 GHz)

$SPECfp^{®}2006 =$ Not Run

$SPECfp\_base2006 =$ 149

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

410.bwaves 1100
416.gamess 49.1
433.milc 78.4
434.zeusmp 265
435.gromacs 64.3
436.cactusADM 1330
437.leslie3d 518
444.namd 35.7
447.dealII 72.8
450.soplex 52.5
453.povray 69.9
454.calculix 75.7
459.GemsFDTD 284
465.tonto 58.8
470.lbm 1350
481.wrf 137
482.sphinx3 82.0

SPECfp_base2006 = 149

Hardware

CPU Name:	Intel Xeon Gold 6136
CPU Characteristics:	Intel Turbo Boost Technology up to 3.70 GHz
CPU MHz:	3000
FPU:	Integrated
CPU(s) enabled:	24 cores, 2 chips, 12 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

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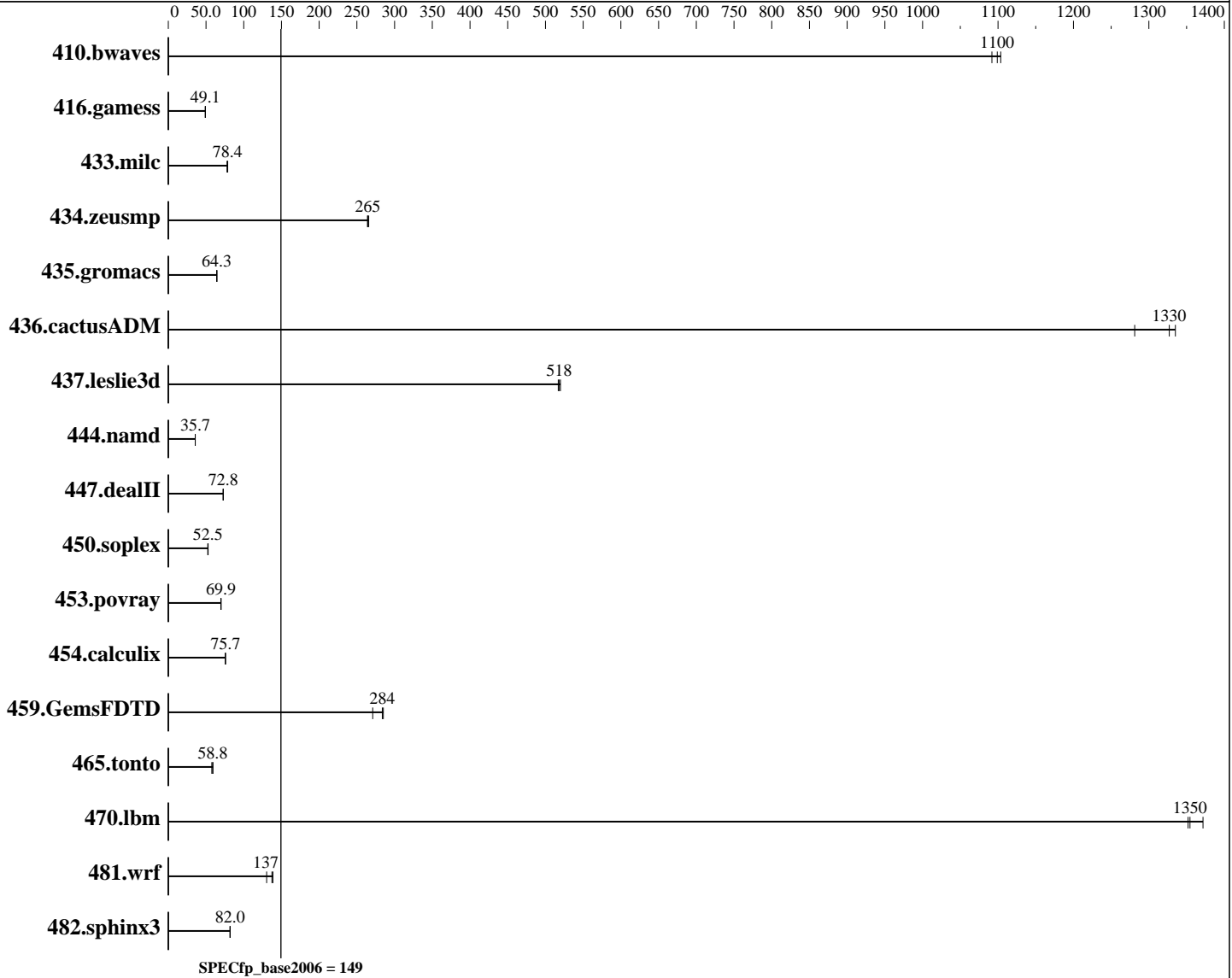|	
CPU2006 license: 9019	**Test date:** Dec-2017
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L3 Cache:	24.75 MB I+D on chip per chip	Base Pointers:	64-bit
Other Cache:	None	Peak Pointers:	32/64-bit
Memory:	384 GB (24 x 16 GB 2Rx4 PC4-2666V-R)	Other Software:	None
Disk Subsystem:	1 x 600 GB SAS HDD, 10K RPM		
Other Hardware:	None		

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	12.3	1100	**12.4**	**1100**	12.4	1090						
416.gamess	**399**	**49.1**	398	49.2	399	49.1						
433.milc	**117**	**78.4**	118	77.9	117	78.8						
434.zeusmp	34.5	264	**34.4**	**265**	34.2	266						
435.gromacs	111	64.3	**111**	**64.3**	111	64.3						
436.cactusADM	9.33	1280	8.95	1340	**9.00**	**1330**						
437.leslie3d	18.2	517	18.1	520	**18.1**	**518**						
444.namd	225	35.7	225	35.7	**225**	**35.7**						
447.dealII	**157**	**72.8**	157	72.8	157	72.8						
450.soplex	159	52.5	**159**	**52.5**	158	52.8						
453.povray	76.1	69.9	**76.2**	**69.9**	76.4	69.6						
454.calculix	**109**	**75.7**	109	75.8	109	75.5						
459.GemsFDTD	37.2	285	**37.4**	**284**	39.1	271						
465.tonto	171	57.7	166	59.1	**167**	**58.8**						
470.lbm	10.0	1370	10.2	1350	**10.1**	**1350**						
481.wrf	80.5	139	**81.3**	**137**	85.7	130						
482.sphinx3	238	81.8	**238**	**82.0**	238	82.1						

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 Controls
    SNC set to Disabled
    Patrol Scrub set to Disabled
     Sysinfo program /home/cpu2006-1.2/config/sysinfo.rev6993
     Revision 6993 of 2015-11-06 (b5e8d4b4eb51ed28d7f98696cbe290c1)
     running on linux-mys2 Tue Dec 19 02:08:09 2017

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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) Gold 6136 CPU @ 3.00GHz
      2 "physical id"s (chips)
      24 "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 : 12
      siblings  : 12
      physical 0: cores 0 1 2 3 4 8 9 11 17 18 19 20
      physical 1: cores 0 1 4 9 10 11 17 18 24 25 26 27
   cache size : 25344 KB

From /proc/meminfo
   MemTotal:       394832468 kB
   HugePages_Total:        0
   Hugepagesize:        2048 kB

/usr/bin/lsb_release -d
   SUSE Linux Enterprise Server 12 SP2

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-mys2 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 13 14:24

SPEC is set to: /home/cpu2006-1.2
   Filesystem      Type  Size  Used Avail Use% Mounted on
   /dev/sda3       xfs   182G   68G  115G  38% /home
Additional information from dmidecode:
```
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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 = "24"

 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
 No: The test sponsor attests, as of date of publication, that CVE-2017-5754 (Meltdown)
 is mitigated in the system as tested and documented.
 No: The test sponsor attests, as of date of publication, that CVE-2017-5753 (Spectre variant 1)
 is mitigated in the system as tested and documented.
 No: The test sponsor attests, as of date of publication, that CVE-2017-5715 (Spectre variant 2)
 is mitigated in the system as tested and documented.

This benchmark result is intended to provide perspective on
past performance using the historical hardware and/or
software described on this result page.

The system as described on this result page was formerly
generally available.  At the time of this publication, it may
not be shipping, and/or may not be supported, and/or may fail
to meet other tests of General Availability described in the
SPEC OSG Policy document, http://www.spec.org/osg/policy.html

This measured result may not be representative of the result
that would be measured were this benchmark run with hardware
and software available as of the publication date.
```

Base Compiler Invocation

C benchmarks:
```
     icc -m64
```

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Base Compiler Invocation (Continued)

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
       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

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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-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.

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