SPEC® CFP2006 Result

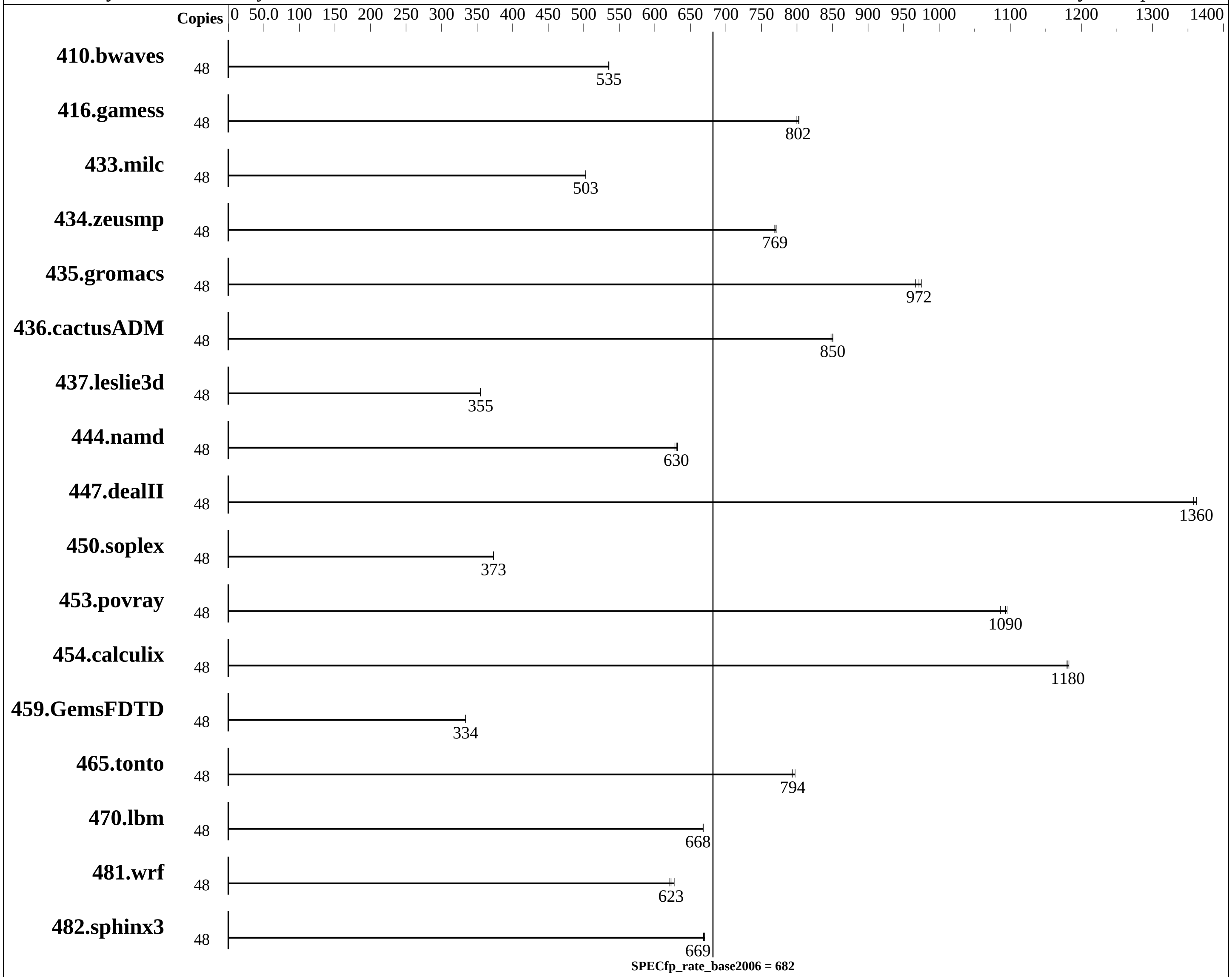
Cisco Systems

Cisco UCS C220 M3 (Intel Xeon E5-2697 v2 @ 2.70 GHz)

SPECfp®_rate2006 = Not Run

SPECfp_rate_base2006 = 682

CPU2006 license:	9019	**Test date:**	Sep-2013
Test sponsor:	Cisco Systems	**Hardware Availability:**	Sep-2013
Tested by:	Cisco Systems	**Software Availability:**	Sep-2013



Hardware

CPU Name:	Intel Xeon E5-2697 v2
CPU Characteristics:	Intel Turbo Boost Technology up to 3.50 GHz
CPU MHz:	2700
FPU:	Integrated
CPU(s) enabled:	24 cores, 2 chips, 12 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

Continued on next page

Software

Operating System:	Red Hat Enterprise Linux Server release 6.4 (Santiago) 2.6.32-358.el6.x86_64
Compiler:	C/C++: Version 14.0.0.080 of Intel C++ Studio XE for Linux; Fortran: Version 14.0.0.080 of Intel Fortran Studio XE for Linux
Auto Parallel:	No
File System:	ext4

Continued on next page

Cisco Systems

Cisco UCS C220 M3 (Intel Xeon E5-2697 v2 @ 2.70 GHz)

SPECfp_rate2006 = Not Run

SPECfp_rate_base2006 = 682

CPU2006 license: 9019
Test sponsor: Cisco Systems
Tested by: Cisco Systems
Test date: Sep-2013
Hardware Availability: Sep-2013
Software Availability: Sep-2013

L3 Cache:	30 MB I+D on chip per chip
Other Cache:	None
Memory:	128 GB (16 x 8 GB 2Rx4 PC3-14900R-11, ECC)
Disk Subsystem:	1 X 300 GB SAS, 15000 RPM
Other Hardware:	None

System State:	Run level 3 (multi-user)
Base Pointers:	32/64-bit
Peak Pointers:	Not Applicable
Other Software:	None

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	48	**1218**	**535**	1218	535	1220	535							
416.gamess	48	1171	803	**1172**	**802**	1175	800							
433.milc	48	876	503	876	503	**876**	**503**							
434.zeusmp	48	568	769	**568**	**769**	567	771							
435.gromacs	48	**353**	**972**	352	975	354	967							
436.cactusADM	48	674	850	**675**	**850**	676	848							
437.leslie3d	48	1270	355	**1271**	**355**	1272	355							
444.namd	48	609	632	**611**	**630**	613	628							
447.dealII	48	**403**	**1360**	404	1360	403	1360							
450.soplex	48	1073	373	**1073**	**373**	1073	373							
453.povray	48	235	1090	233	1100	**234**	**1090**							
454.calculix	48	335	1180	**335**	**1180**	336	1180							
459.GemsFDTD	48	1525	334	**1525**	**334**	1526	334							
465.tonto	48	592	797	596	793	**595**	**794**							
470.lbm	48	987	668	988	668	**987**	**668**							
481.wrf	48	863	621	**861**	**623**	855	627							
482.sphinx3	48	1399	668	1396	670	**1398**	**669**							

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

Submit Notes

The numactl mechanism was used to bind copies to processors. The config file option 'submit' was used to generate numactl commands to bind each copy to a specific processor. For details, please see the config file.

Operating System Notes

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

Platform Notes

```
BIOS Settings:
Intel HT Technology = Enabled
CPU performance set to HPC
```

Continued on next page

Platform Notes (Continued)

```
 Power Technology set to Custom
 CPU Power State C6 set to Enabled
 CPU Power State C1 Enhanced set to Disabled
 Energy Performance policy set to Performance
 Memory RAS configuration set to Maximum Performance
 DRAM Clock Throttling Set to Performance
 LV DDR Mode set to Performance-mode
 DRAM Refresh Rate Set to 1x

  Sysinfo program /opt/cpu2006-1.2/config/sysinfo.rev6818
  $Rev: 6818 $ $Date:: 2012-07-17 #$ e86d102572650a6e4d596a3cee98f191
  running on redhatnew Sat Sep  7 03:08:22 2013

  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 E5-2697 v2 @ 2.70GHz
        2 "physical id"s (chips)
        48 "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  : 24
        physical 0: cores 0 1 2 3 4 5 8 9 10 11 12 13
        physical 1: cores 0 1 2 3 4 5 8 9 10 11 12 13
     cache size : 30720 KB

  From /proc/meminfo
     MemTotal:       132122252 kB
     HugePages_Total:       0
     Hugepagesize:       2048 kB

  /usr/bin/lsb_release -d
     Red Hat Enterprise Linux Server release 6.4 (Santiago)

  From /etc/*release* /etc/*version*
     redhat-release: Red Hat Enterprise Linux Server release 6.4 (Santiago)
     system-release: Red Hat Enterprise Linux Server release 6.4 (Santiago)
     system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server

  uname -a:
     Linux redhatnew 2.6.32-358.el6.x86_64 #1 SMP Tue Jan 29 11:47:41 EST 2013
     x86_64 x86_64 x86_64 GNU/Linux

  run-level 3 Sep 7 03:05

  SPEC is set to: /opt/cpu2006-1.2
     Filesystem     Type     Size  Used Avail Use% Mounted on
     /dev/sda1      ext4      91G   65G   22G  75% /
```

Continued on next page

Platform Notes (Continued)

```
Additional information from dmidecode:
  BIOS Cisco Systems, Inc. C220M3.1.5.2.27.071120132232 07/11/2013
  Memory:
   16x 0xAD00 HMT31GR7EFR4C-RD 8 GB 1866 MHz 2 rank

(End of data from sysinfo program)
```

General Notes

```
Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = "/opt/cpu2006-1.2/libs/32:/opt/cpu2006-1.2/libs/64:/opt/cpu2006-1.2/sh"

 Binaries compiled on a system with 1x Core i7-860 CPU + 8GB
 memory using RedHat EL 6.4
 Transparent Huge Pages enabled with:
 echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled
 Filesystem page cache cleared with:
 echo 1>       /proc/sys/vm/drop_caches
 runspec command invoked through numactl i.e.:
 numactl --interleave=all runspec <etc>
```

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
437.leslie3d: -DSPEC_CPU_LP64
444.namd: -DSPEC_CPU_LP64

Continued on next page

Base Portability Flags (Continued)

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:
-xAVX -ipo -O3 -no-prec-div -opt-prefetch -auto-p32 -ansi-alias -opt-mem-layout-trans=3

C++ benchmarks:
-xAVX -ipo -O3 -no-prec-div -opt-prefetch -auto-p32 -ansi-alias -opt-mem-layout-trans=3

Fortran benchmarks:
-xAVX -ipo -O3 -no-prec-div -opt-prefetch

Benchmarks using both Fortran and C:
-xAVX -ipo -O3 -no-prec-div -opt-prefetch -auto-p32 -ansi-alias -opt-mem-layout-trans=3

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-V1.2.20130717.html

You can also download the XML flags sources by saving 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-V1.2.20130717.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 Thu Jul 24 17:22:28 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 25 October 2013.