SPEC® CFP2006 Result

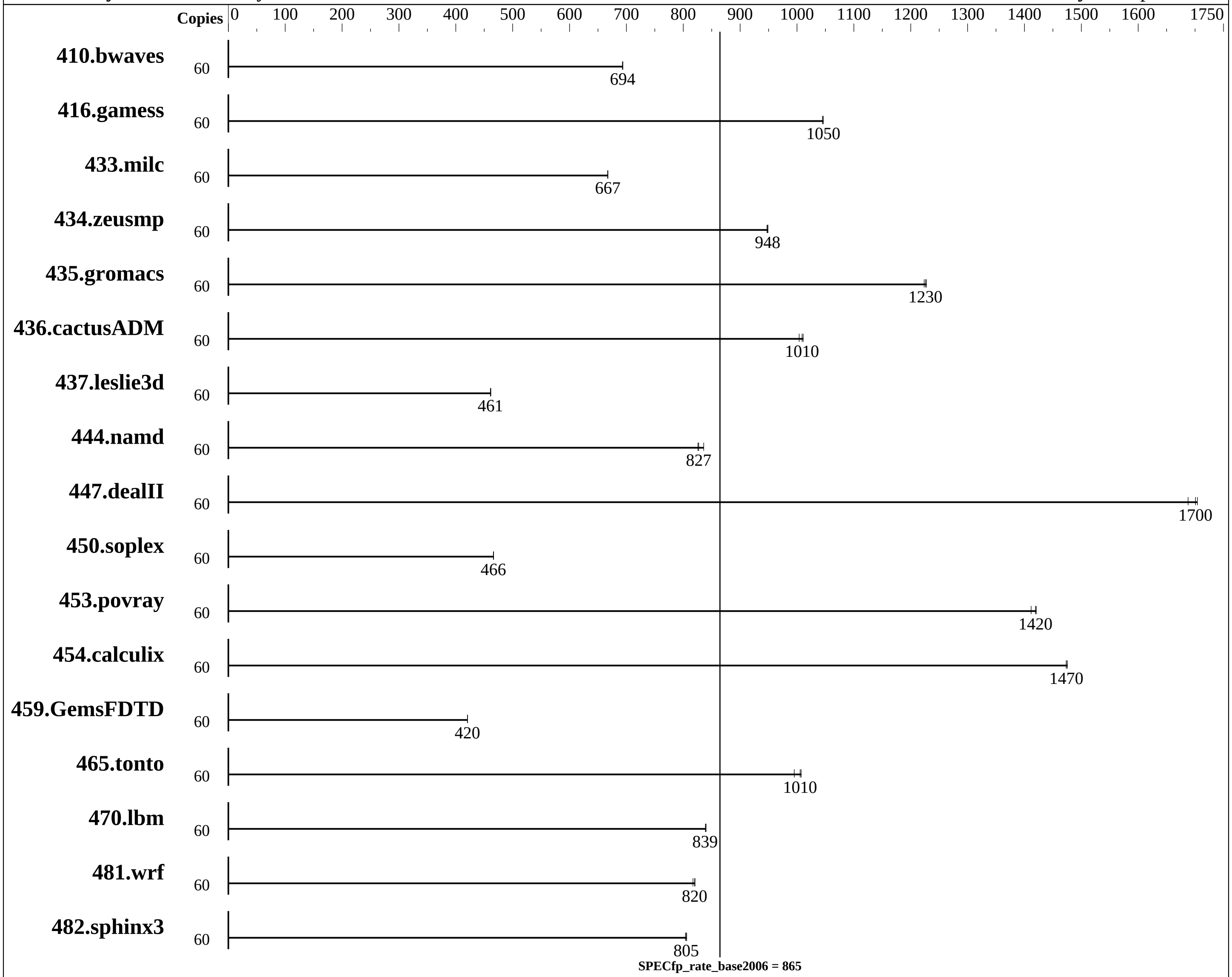
Cisco Systems

Cisco UCS B260 M4 (Intel Xeon E7-4890 v2 @ 2.80GHz)

SPECfp®_rate2006 = Not Run

SPECfp_rate_base2006 = 865

CPU2006 license:	9019	**Test date:**	Feb-2014
Test sponsor:	Cisco Systems	**Hardware Availability:**	May-2014
Tested by:	Cisco Systems	**Software Availability:**	Sep-2013



Hardware

CPU Name:	Intel Xeon E7-4890 v2
CPU Characteristics:	Intel Turbo Boost Technology up to 3.40 GHz
CPU MHz:	2800
FPU:	Integrated
CPU(s) enabled:	30 cores, 2 chips, 15 cores/chip, 2 threads/core
CPU(s) orderable:	1,2 Chips
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 B260 M4 (Intel Xeon E7-4890 v2 @ 2.80GHz)

SPECfp_rate2006 = Not Run

SPECfp_rate_base2006 = 865

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

Test date: Feb-2014
Hardware Availability: May-2014
Software Availability: Sep-2013

L3 Cache:	37.5 MB I+D on chip per chip
Other Cache:	None
Memory:	256 GB (32 x 8 GB 2Rx4 PC3-12800R-11, ECC, and CL11)
Disk Subsystem:	1 x 300 GB SAS SATA 15K 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

	Base							Peak						
Benchmark	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	60	**1176**	**694**	1175	694	1177	693							
416.gamess	60	1123	1050	1124	1040	**1123**	**1050**							
433.milc	60	**825**	**667**	825	667	826	667							
434.zeusmp	60	575	949	**576**	**948**	576	947							
435.gromacs	60	**349**	**1230**	350	1220	349	1230							
436.cactusADM	60	709	1010	**711**	**1010**	714	1000							
437.leslie3d	60	**1224**	**461**	1224	461	1222	462							
444.namd	60	**582**	**827**	576	836	583	826							
447.dealII	60	403	1700	407	1690	**404**	**1700**							
450.soplex	60	1074	466	1073	467	**1073**	**466**							
453.povray	60	**225**	**1420**	225	1420	226	1410							
454.calculix	60	**336**	**1470**	336	1470	335	1480							
459.GemsFDTD	60	**1514**	**420**	1514	420	1514	421							
465.tonto	60	593	995	586	1010	**587**	**1010**							
470.lbm	60	**982**	**839**	981	840	983	839							
481.wrf	60	**817**	**820**	820	817	817	821							
482.sphinx3	60	1451	806	**1452**	**805**	1455	804							

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

```
    CPU performance set to Enterprise
    Power Technology set to Custom
    CPU Power State C6 set to Disabled
    CPU Power State C1 Enhanced set to Disabled
    Package C State Limit set to C0/C1 State
    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 Auto
     Sysinfo program /opt/cpu2006-1.4/config/sysinfo.rev6818
     $Rev: 6818 $ $Date:: 2012-07-17 #$ e86d102572650a6e4d596a3cee98f191
     running on SPEccpu-YOS Tue Feb 11 18:42:44 2014

     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 E7-4890 v2 @ 2.80GHz
           2 "physical id"s (chips)
           60 "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 : 15
           siblings  : 30
           physical 0: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14
           physical 1: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14
        cache size : 38400 KB

     From /proc/meminfo
        MemTotal:       264231092 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 SPEccpu-YOS 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 Feb 11 18:29

     SPEC is set to: /opt/cpu2006-1.4
        Filesystem    Type    Size  Used Avail Use% Mounted on
```

Continued on next page

Platform Notes (Continued)

```
     /dev/sda1     ext4    275G   10G  251G   4% /

  Additional information from dmidecode:
    BIOS Cisco Systems, Inc. EXM4-1.2.2.1.12.012920142034 01/29/2014
    Memory:
     32x   8 GB
     32x 0xCE00 M393B1K70QB0-YK0 8 GB 1333 MHz 2 rank
     16x NO DIMM NO DIMM

  (End of data from sysinfo program)
```

General Notes

```
Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = "/opt/cpu2006-1.4/libs/32:/opt/cpu2006-1.4/libs/64:/opt/cpu2006-1.4/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`

Continued on next page

Base Portability Flags (Continued)

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:
-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-V1.2.20140311.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-V1.2.20140311.xml

Cisco Systems

Cisco UCS B260 M4 (Intel Xeon E7-4890 v2 @ 2.80GHz)

SPECfp_rate2006 = Not Run

SPECfp_rate_base2006 = 865

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

Test date: Feb-2014
Hardware Availability: May-2014
Software Availability: Sep-2013

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 21:23:25 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 11 March 2014.