SPEC® CFP2006 Result

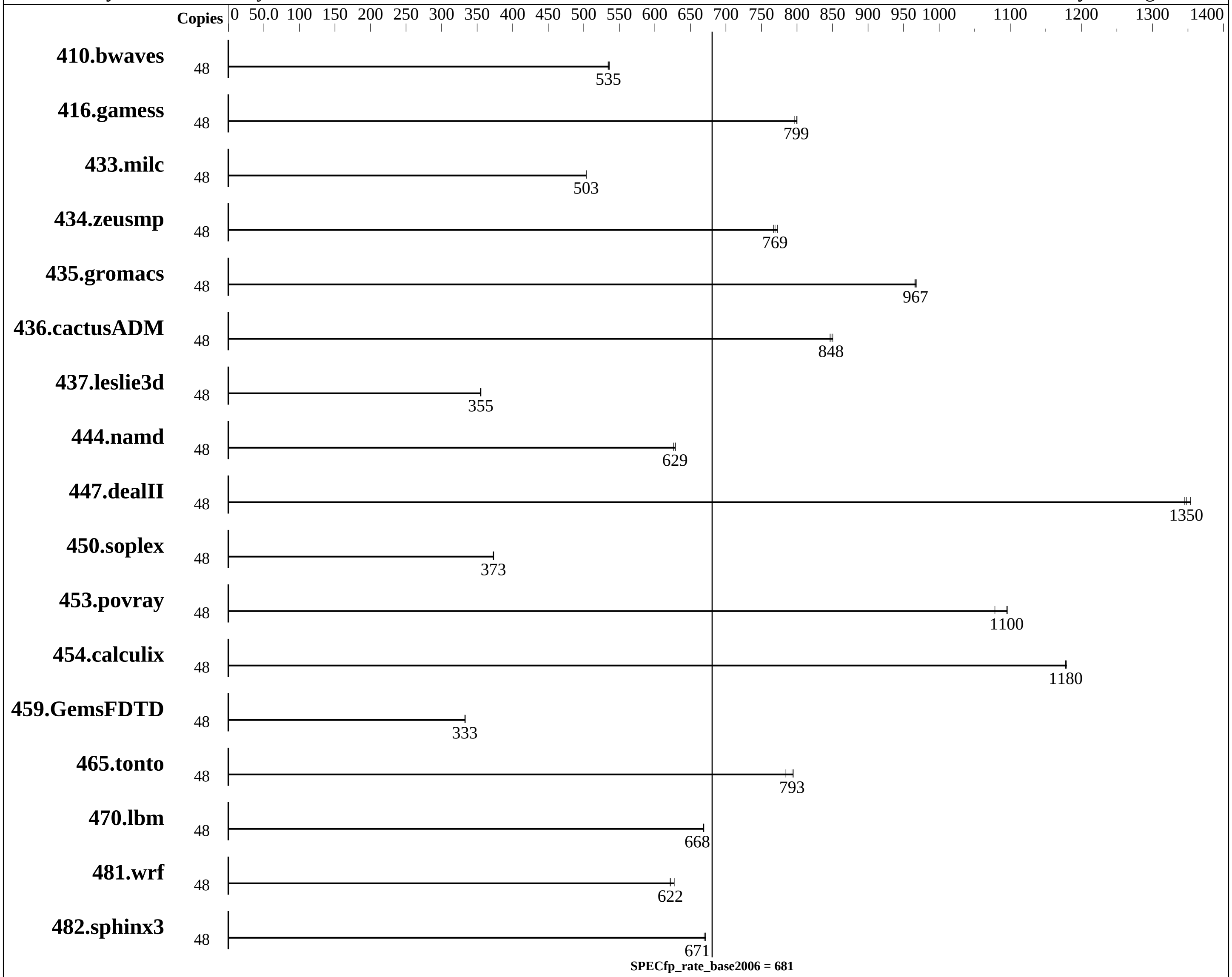
Cisco Systems

Cisco UCS B200 M3 (Intel Xeon E5-2697 v2 @ 2.70 GHz)

SPECfp®_rate2006 = Not Run

SPECfp_rate_base2006 = 681

CPU2006 license:	9019	**Test date:**	Aug-2013
Test sponsor:	Cisco Systems	**Hardware Availability:**	Sep-2013
Tested by:	Cisco Systems	**Software Availability:**	Aug-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 chips
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	256 KB I+D on chip per core

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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

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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 300GB SAS, 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

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	48	1221	534	1217	536	**1220**	**535**							
416.gamess	48	1175	800	1179	797	**1176**	**799**							
433.milc	48	875	504	875	503	**875**	**503**							
434.zeusmp	48	565	773	569	767	**568**	**769**							
435.gromacs	48	355	966	**355**	**967**	354	968							
436.cactusADM	48	678	847	675	850	**677**	**848**							
437.leslie3d	48	1270	355	**1270**	**355**	1272	355							
444.namd	48	**613**	**629**	612	629	615	626							
447.dealII	48	**407**	**1350**	408	1340	406	1350							
450.soplex	48	1072	373	1074	373	**1074**	**373**							
453.povray	48	233	1100	**233**	**1100**	237	1080							
454.calculix	48	336	1180	336	1180	**336**	**1180**							
459.GemsFDTD	48	**1530**	**333**	1531	333	1528	333							
465.tonto	48	602	784	**596**	**793**	594	795							
470.lbm	48	986	669	**987**	**668**	987	668							
481.wrf	48	**862**	**622**	855	627	863	622							
482.sphinx3	48	**1395**	**671**	1393	672	1397	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:
CPU performance set to HPC
Processor C State set to Disabled
```

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Platform Notes (Continued)

```
    Processor C1E set to Disabled
    Processor C6 report set to Disabled
    Energy Performance Policy set to Performance
    Memory RAS configuration Set to Max-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 B200M3CRCR Thu Aug 29 13:35:54 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:       132085336 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 B200M3CRCR 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 Aug 28 23:23

     SPEC is set to: /opt/cpu2006-1.2
        Filesystem     Type     Size  Used Avail Use% Mounted on
        /dev/sda1      ext4     134G   37G   91G  29% /

     Additional information from dmidecode:
```

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Platform Notes (Continued)

```
      BIOS Cisco Systems, Inc. B200M3.2.1.2.12.080620131158 08/06/2013
      Memory:
       16x 0xAD00 HMT31GR7EFR4C-RD 8 GB 1866 MHz 2 rank
       8x 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/cpu2006-1.2/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
447.dealII: -DSPEC_CPU_LP64

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Base Portability Flags (Continued)

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.

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