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

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

Test date: Aug-2013
Hardware Availability: Sep-2013
Software Availability: Aug-2013

SPECfp\_rate2006 = Not Run
SPECfp\_rate_base2006 = 681

**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

**Software**

Operating System: Red Hat Enterprise Linux Server release 6.4 (Santiago)
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

Standard Performance Evaluation Corporation
info@spec.org
http://www.spec.org/
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SPEC CFP2006 Result
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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

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<th>Copies</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
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</table>

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)

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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SPECfp_rate2006 =  Not Run
SPECfp_rate_base2006 =  681

CPU2006 license: 9019
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Tested by: Cisco Systems

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.camemb: -DSPEC_CPU_LP64
433.milc: -DSPEC_CPU_LP64
434.zeusmp: -DSPEC_CPU_LP64
436.cactusADM: -DSPEC_CPU_LP64 -nofor_main
437.leslie3d: -DSPEC_CPU_LP64
444.namd: -DSPEC_CPU_LP64 -nofor_main
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

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For other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.2.