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

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

<table>
<thead>
<tr>
<th>SPECfp_produkție</th>
<th>Rate Base2006</th>
<th>Not Run</th>
<th>SPECfp_rate_base2006 = 865</th>
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<td>410.bwaves</td>
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<tr>
<td>482.sphinx3</td>
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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

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

CPU2006 license: 9019
Test sponsor: Cisco Systems
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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

SPECfp_rate2006 = Not Run
SPECfp_rate_base2006 = 865

Results Table

<table>
<thead>
<tr>
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</tbody>
</table>

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"
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

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)

uname -a:
  Linux SPEccpu-YOS 2.6.32-358.e16.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

Continued on next page
Cisco Systems
Cisco UCS B260 M4 (Intel Xeon E7-4890 v2 @ 2.80GHz)

SPECfp_rate2006 = Not Run
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Platform Notes (Continued)
/dev/sdal 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
Cisco Systems
Cisco UCS B260 M4 (Intel Xeon E7-4890 v2 @ 2.80GHz)

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CPU2006 license: 9019
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Test date: Feb-2014
Hardware Availability: May-2014
Software Availability: Sep-2013

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)

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For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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