Cisco Systems
Cisco UCS C240 M5 (Intel Xeon Platinum 8180, 2.50GHz)

**SPECint_rate2006 = Not Run**
SPECint_rate_base2006 = 2720

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<td>401.bzip2</td>
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<td>403.gcc</td>
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<tr>
<td>483.xalancbmk</td>
<td>112</td>
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</table>

**Hardware**
- **CPU Name:** Intel Xeon Platinum 8180
- **CPU Characteristics:** Intel Turbo Boost Technology up to 3.80 GHz
- **CPU MHz:** 2500
- **FPU:** Integrated
- **CPU(s) enabled:** 56 cores, 2 chips, 28 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:** 1 MB I+D on chip per core
- **L3 Cache:** 38.5 MB I+D on chip per chip
- **Other Cache:** None
- **Memory:** 384 GB (24 x 16 GB 2Rx4 PC4-2666V-R)
- **Disk Subsystem:** 1 x 600 GB SAS 10K RPM
- **Other Hardware:** None

**Software**
- **Operating System:** SUSE Linux Enterprise Server 12 SP2 (x86_64)
- **Compiler:** C/C++: Version 17.0.3.191 of Intel C/C++ Compiler for Linux
- **Auto Parallel:** No
- **File System:** xfs
- **System State:** Run level 5 (multi-user)
- **Base Pointers:** 32-bit
- **Peak Pointers:** 32/64-bit
- **Other Software:** Microquill SmartHeap V10.2

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

Results Table

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</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"

Platform Notes

BIOS Settings:
Intel HyperThreading Technology set to Enabled
CPU performance set to Enterprise
Power Performance Tuning set to OS
SNC set to Enabled
IMC Interleaving set to 1-way Interleave
Patrol Scrub set to Disabled
Sysinfo program /home/cpu2006-1.2/config/sysinfo.rev6993
Revision 6993 of 2015-11-06 (b5e8d4b4eb51ed28d7f98696cbe290c1)
running on linux-nsv2 Tue Jun 20 12:24:15 2017

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) Platinum 8180 CPU @ 2.50GHz

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Platform Notes (Continued)

2 "physical id"s (chips)
112 "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 : 28
siblings : 56
physical 0: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14 16 17 18 19 20 21 22 24
25 26 27 28 29 30
physical 1: cores 0 1 2 3 4 5 6 8 9 10 11 12 13 14 16 17 18 19 20 21 22 24
25 26 27 28 29 30
cache size : 39424 KB

From /proc/meminfo
    MemTotal:       394863472 kB
    HugePages_Total:       0
    Hugepagesize:       2048 kB

/usr/bin/lsb_release -d
    SUSE Linux Enterprise Server 12 SP2

From /etc/*release* /etc/*version*
    SuSE-release:
        SUSE Linux Enterprise Server 12 (x86_64)
        VERSION = 12
        PATCHLEVEL = 2
        # This file is deprecated and will be removed in a future service pack or
        # release.
        # Please check /etc/os-release for details about this release.
    os-release:
        NAME="SLES"
        VERSION="12-SP2"
        VERSION_ID="12.2"
        PRETTY_NAME="SUSE Linux Enterprise Server 12 SP2"
        ID="sles"
        ANSI_COLOR="0;32"
        CPE_NAME="cpe:/o:suse:sles:12:sp2"

uname -a:
    (9464f67) x86_64 x86_64 x86_64 GNU/Linux

run-level 5 Jun 19 23:46

SPEC is set to: /home/cpu2006-1.2
    Filesystem Type Size Used Avail Use% Mounted on
    /dev/sda3 xfs 517G 79G 439G 16% /home
Additional information from dmidecode:

Warning: Use caution when you interpret this section. The 'dmidecode' program
reads system data which is "intended to allow hardware to be accurately
determined", but the intent may not be met, as there are frequent changes to
Continued on next page
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Platform Notes (Continued)

hardware, firmware, and the "DMTF SMBIOS" standard.

BIOS Cisco Systems, Inc. C240M5.3.1.1a.o.0.0607170937 06/07/2017
Memory:
24x 0xCE00 M393A2G40EB2-CTD 16 GB 2 rank 2666 MHz

(End of data from sysinfo program)

General Notes

Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = */home/cpu2006-1.2/lib/ia32:/home/cpu2006-1.2/lib/intel64:/home/cpu2006-1.2/sh10.2*

Binaries compiled on a system with 1x Intel Core i7-4790 CPU + 32GB RAM
memory using Redhat Enterprise Linux 7.2
Transparent Huge Pages enabled with:
echo always > /sys/kernel/mm/transparent_hugepage/enabled
Filesystem page cache cleared with:
shell invocation of 'sync; echo 3 > /proc/sys/vm/drop_caches' prior to run
runspec command invoked through numactl i.e.:
numactl --interleave=all runspec <etc>

Base Compiler Invocation

C benchmarks:
icc -m32 -L/opt/intel/compilers_and_libraries_2017/linux/lib/ia32
C++ benchmarks:
icpc -m32 -L/opt/intel/compilers_and_libraries_2017/linux/lib/ia32

Base Portability Flags

400.perlbench: -D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LINUX_IA32
401.bzip2: -D_FILE_OFFSET_BITS=64
403.gcc: -D_FILE_OFFSET_BITS=64
429.mcf: -D_FILE_OFFSET_BITS=64
445.gobmk: -D_FILE_OFFSET_BITS=64
456.hmmer: -D_FILE_OFFSET_BITS=64
458.sjeng: -D_FILE_OFFSET_BITS=64
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CPU2006 license: 9019
Test date: Jun-2017
Test sponsor: Cisco Systems
Hardware Availability: Aug-2017
Tested by: Cisco Systems
Software Availability: Apr-2017

Base Optimization Flags

C benchmarks:
-xCORE-AVX512 -ipo -O3 -no-prec-div -qopt-prefetch
-qopt-mem-layout-trans=3

C++ benchmarks:
-xCORE-AVX512 -ipo -O3 -no-prec-div -qopt-prefetch
-qopt-mem-layout-trans=3 -Wl,-z,muldefs -L/sh10.2 -lsmartheap

Base Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic17.0-official-linux64-revF.html
http://www.spec.org/cpu2006/flags/Cisco-Platform-Settings-V1.2-revG.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic17.0-official-linux64-revF.xml
http://www.spec.org/cpu2006/flags/Cisco-Platform-Settings-V1.2-revG.xml

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

Tested with SPEC CPU2006 v1.2.
Originally published on 13 July 2017.