SPEC® CINT2006 Result

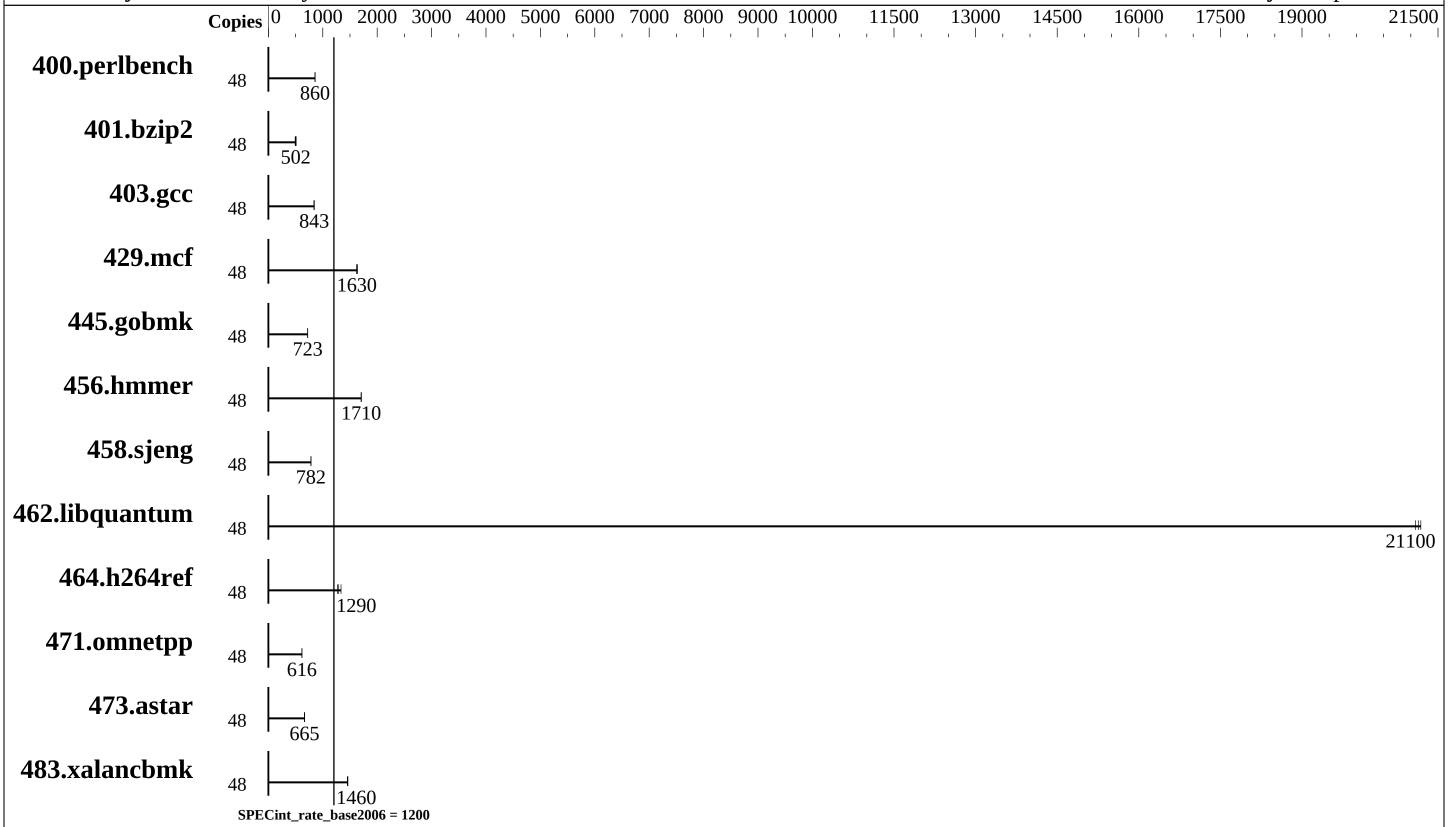
Cisco Systems

Cisco UCS B200 M5 (Intel Xeon Gold 5118, 2.30GHz)

SPECint®_rate2006 = Not Run

SPECint_rate_base2006 = 1200

CPU2006 license:	9019	**Test date:**	Jan-2010
Test sponsor:	Cisco Systems	**Hardware Availability:**	Aug-2017
Tested by:	Cisco Systems	**Software Availability:**	Apr-2017



Hardware

CPU Name:	Intel Xeon Gold 5118
CPU Characteristics:	Intel Turbo Boost Technology up to 3.20 GHz
CPU MHz:	2300
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:	1 MB I+D on chip per core
L3 Cache:	16.5 MB I+D on chip per chip
Other Cache:	None
Memory:	384 GB (24 x 16 GB 2Rx4 PC4-2666V-R, running at 2400 MHz)
Disk Subsystem:	1 x 240 GB M.2 SATA SSD
Other Hardware:	None

Software

Operating System:	SUSE Linux Enterprise Server 12 SP2 (x86_64) 4.4.21-69-default
Compiler:	C/C++: Version 18.0.0.128 of Intel C/C++ Compiler for Linux; Fortran: Version 18.0.0.128 of Intel Fortran
Auto Parallel:	No
File System:	xfs
System State:	Run level 3 (multi-user)
Base Pointers:	32-bit
Peak Pointers:	Not Applicable
Other Software:	Microquill SmartHeap V10.2

spec®

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Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	48	545	861	548	856	**545**	**860**							
401.bzip2	48	907	511	940	493	**923**	**502**							
403.gcc	48	**459**	**843**	458	844	462	837							
429.mcf	48	267	1640	270	1620	**269**	**1630**							
445.gobmk	48	**697**	**723**	697	723	697	723							
456.hmmer	48	**263**	**1710**	262	1710	263	1710							
458.sjeng	48	**743**	**782**	743	781	743	782							
462.libquantum	48	**47.1**	**21100**	46.9	21200	47.2	21100							
464.h264ref	48	**822**	**1290**	834	1270	795	1340							
471.omnetpp	48	487	616	**487**	**616**	487	616							
473.astar	48	509	662	506	665	**507**	**665**							
483.xalancbmk	48	228	1450	**227**	**1460**	227	1460							

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-ic18/config/sysinfo.rev6993
 Revision 6993 of 2015-11-06 (b5e8d4b4eb51ed28d7f98696cbe290c1)
 running on linux-mys2 Mon Jan  4 12:16:45 2010

 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) Gold 5118 CPU @ 2.30GHz
```

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Platform Notes (Continued)

```
        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 : 16896 KB

  From /proc/meminfo
     MemTotal:       394832004 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:
     Linux linux-mys2 4.4.21-69-default #1 SMP Tue Oct 25 10:58:20 UTC 2016
     (9464f67) x86_64 x86_64 x86_64 GNU/Linux

  run-level 3 Jan 1 02:31

  SPEC is set to: /home/cpu2006-ic18
     Filesystem     Type  Size  Used Avail Use% Mounted on
     /dev/sda3      xfs   182G   21G  162G  12% /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
     hardware, firmware, and the "DMTF SMBIOS" standard.
```

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Platform Notes (Continued)

```
    BIOS Cisco Systems, Inc. B200M5.3.2.1d.5.0727171353 07/27/2017
    Memory:
     24x 0xCE00 M393A2G40EB2-CTD 16 GB 2 rank 2666 MHz, configured at 2400 MHz

 (End of data from sysinfo program)
```

General Notes

```
Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = "/opt/intel/compilers_and_libraries_2018.0.128/linux/compiler/lib/ia32:/opt/intel/compilers_and_libraries_2018.0.128/linux/compiler/lib/intel64:/home/cpu2006-ic18/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_2018.0.128/linux/compiler/lib/ia32`

C++ benchmarks:

`icpc -m32 -L/opt/intel/compilers_and_libraries_2018.0.128/linux/compiler/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
462.libquantum:	-D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LINUX
464.h264ref:	-D_FILE_OFFSET_BITS=64
471.omnetpp:	-D_FILE_OFFSET_BITS=64
473.astar:	-D_FILE_OFFSET_BITS=64
483.xalancbmk:	-D_FILE_OFFSET_BITS=64 -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:

`-xHOST -ipo -O3 -no-prec-div -qopt-prefetch -qopt-mem-layout-trans=3`

C++ benchmarks:

`-xHOST -ipo -O3 -no-prec-div -qopt-prefetch -qopt-mem-layout-trans=3`
`-Wl,-z,muldefs -L/home/cpu2006-1.2/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-revH.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-revH.xml

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

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