SPEC® CINT2006 Result

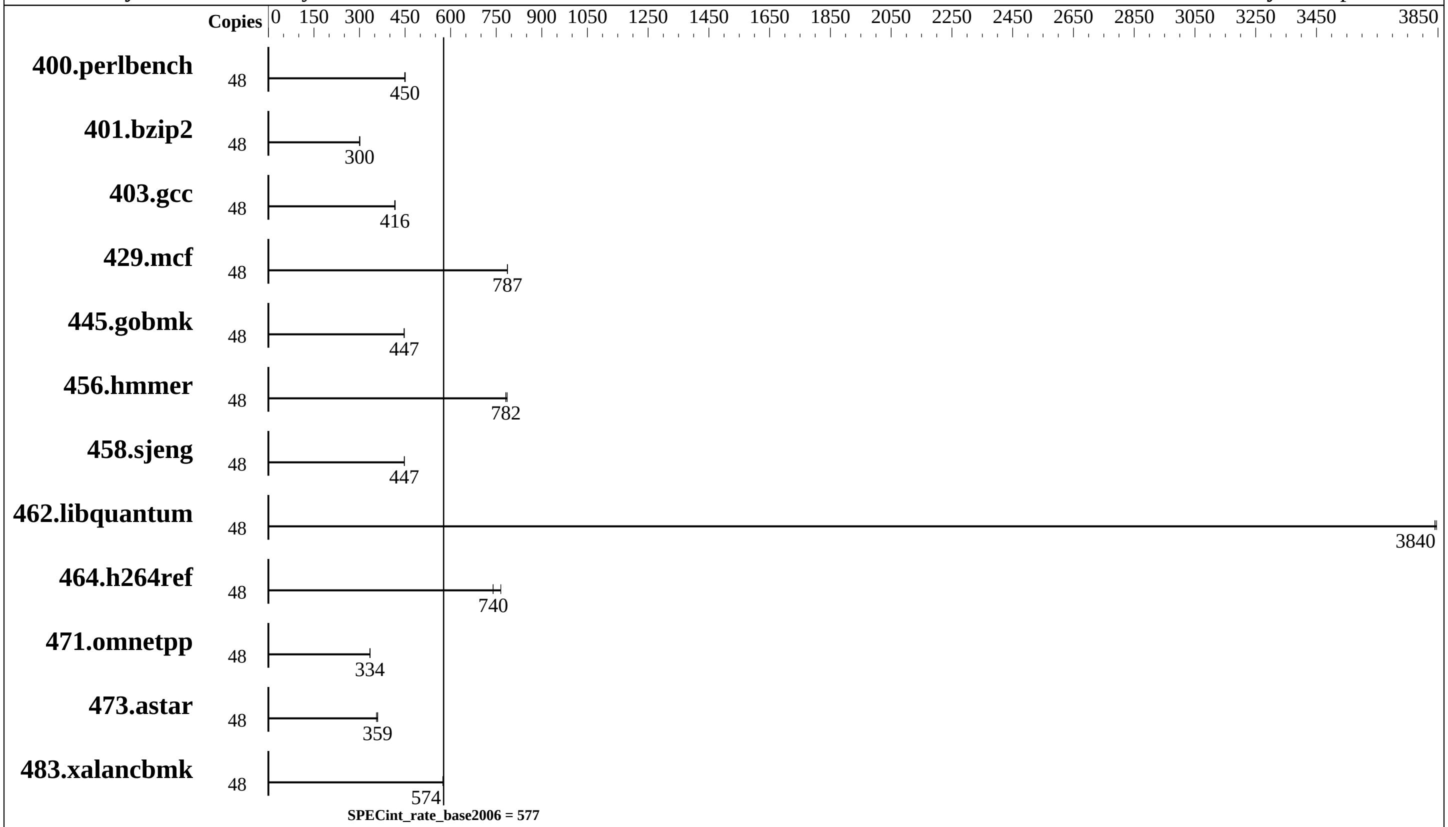
Cisco Systems

Cisco UCS C460 M4 (Intel Xeon E7-4809 v2 @ 1.90GHz)

SPECint®_rate2006 = Not Run

SPECint_rate_base2006 = 577

CPU2006 license:	9019	**Test date:**	Jan-2015
Test sponsor:	Cisco Systems	**Hardware Availability:**	Apr-2014
Tested by:	Cisco Systems	**Software Availability:**	Sep-2013



Hardware

CPU Name:	Intel Xeon E7-4809 v2
CPU Characteristics:	
CPU MHz:	1900
FPU:	Integrated
CPU(s) enabled:	24 cores, 4 chips, 6 cores/chip, 2 threads/core
CPU(s) orderable:	1,2,3,4 Chips
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	256 KB I+D on chip per core
L3 Cache:	12 MB I+D on chip per chip
Other Cache:	None
Memory:	512 GB (64 x 8 GB 2Rx4 PC3-12800R-11, ECC, and CL11, running at 1066 MHz)
Disk Subsystem:	1 x 300 GB SAS SATA 15K RPM
Other Hardware:	None

Software

Operating System:	Red Hat Enterprise Linux Server release 6.5 (Santiago) 2.6.32-431.el6.x86_64
Compiler:	C/C++: Version 14.0.0.080 of Intel C++ Studio XE for Linux
Auto Parallel:	No
File System:	ext4
System State:	Run level 3 (multi-user)
Base Pointers:	32-bit
Peak Pointers:	32/64-bit
Other Software:	Microquill SmartHeap V10.0

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Results Table

	Base							Peak						
Benchmark	**Copies**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Copies**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**
400.perlbench	48	1045	449	1040	451	**1043**	**450**							
401.bzip2	48	1544	300	1536	301	**1543**	**300**							
403.gcc	48	925	418	930	416	**928**	**416**							
429.mcf	48	556	787	557	786	**556**	**787**							
445.gobmk	48	1125	448	1127	447	**1127**	**447**							
456.hmmer	48	**573**	**782**	573	781	570	786							
458.sjeng	48	1297	448	**1298**	**447**	1299	447							
462.libquantum	48	259	3850	259	3840	**259**	**3840**							
464.h264ref	48	**1435**	**740**	1388	765	1436	740							
471.omnetpp	48	**897**	**334**	896	335	897	334							
473.astar	48	**938**	**359**	947	356	936	360							
483.xalancbmk	48	577	574	**577**	**574**	576	575							

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

```
CPU performance set to HPC
Power Technology set to Custom
CPU Power State C6 set to Enabled
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
 Sysinfo program /opt/cpu2006-1.2/config/sysinfo.rev6818
 $Rev: 6818 $ $Date:: 2012-07-17 #$ e86d102572650a6e4d596a3cee98f191
 running on SPEC-C460M4 Tue Feb 24 16:02:57 2015

 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
```

Continued on next page

Platform Notes (Continued)

```
From /proc/cpuinfo
   model name : Intel(R) Xeon(R) CPU E7-4809 v2 @ 1.90GHz
      4 "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 : 6
      siblings  : 12
      physical 0: cores 0 1 2 3 4 5
      physical 1: cores 0 1 2 3 4 5
      physical 2: cores 0 1 2 3 4 5
      physical 3: cores 0 1 2 3 4 5
   cache size : 12288 KB

From /proc/meminfo
   MemTotal:       528881644 kB
   HugePages_Total:       0
   Hugepagesize:       2048 kB

/usr/bin/lsb_release -d
   Red Hat Enterprise Linux Server release 6.5 (Santiago)

From /etc/*release* /etc/*version*
   redhat-release: Red Hat Enterprise Linux Server release 6.5 (Santiago)
   system-release: Red Hat Enterprise Linux Server release 6.5 (Santiago)
   system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server

uname -a:
   Linux SPEC-C460M4 2.6.32-431.el6.x86_64 #1 SMP Sun Nov 10 22:19:54 EST 2013
   x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Feb 24 16:02

SPEC is set to: /opt/cpu2006-1.2
   Filesystem     Type  Size  Used Avail Use% Mounted on
   /dev/sdc2      ext4  134G   32G   96G  25% /

Additional information from dmidecode:
  BIOS Cisco Systems, Inc. C460M4.1.5.6d.0.040520140752 04/05/2014
  Memory:
   64x   8 GB
   64x 0xCE00 M393B1K70QB0-YK0 8 GB 1066 MHz 2 rank
   32x 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   -m32`

C++ benchmarks:
`icpc -m32`

Base Portability Flags

400.perlbench: -DSPEC_CPU_LINUX_IA32
462.libquantum: -DSPEC_CPU_LINUX
483.xalancbmk: -DSPEC_CPU_LINUX

Base Optimization Flags

C benchmarks:
`-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3`

C++ benchmarks:
`-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -opt-mem-layout-trans=3`
`-Wl,-z,muldefs -L/sh -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-ic14.0-official-linux64.20140128.html
http://www.spec.org/cpu2006/flags/Cisco-Platform-Settings-V1.2-revC.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-revC.xml

Tested with SPEC CPU2006 v1.2.
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