SPEC® CINT2006 Result

Cisco Systems

Cisco UCS C220 M3 (Intel Xeon E5-2697 v2 @ 2.70 GHz)

SPECint®_rate2006 = Not Run

SPECint_rate_base2006 = 941

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

Copies 0 200 400 600 800 1100 1400 1700 2000 2300 2600 2900 3200 3500 3800 4100 4400 4700 5000 5300 5600 5900 6400

Benchmark	Copies	Value
400.perlbench	48	743
401.bzip2	48	512
403.gcc	48	732
429.mcf	48	1380
445.gobmk	48	719
456.hmmer	48	1270
458.sjeng	48	711
462.libquantum	48	6340
464.h264ref	48	1250
471.omnetpp	48	501
473.astar	48	515
483.xalancbmk	48	954

SPECint_rate_base2006 = 941

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 chip
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	256 KB I+D on chip per core
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 146 GB SAS, 15000 RPM
Other Hardware:	None

Software

Operating System:	Red Hat Enterprise Linux Server release 6.4 (Santiago) 2.6.32-358.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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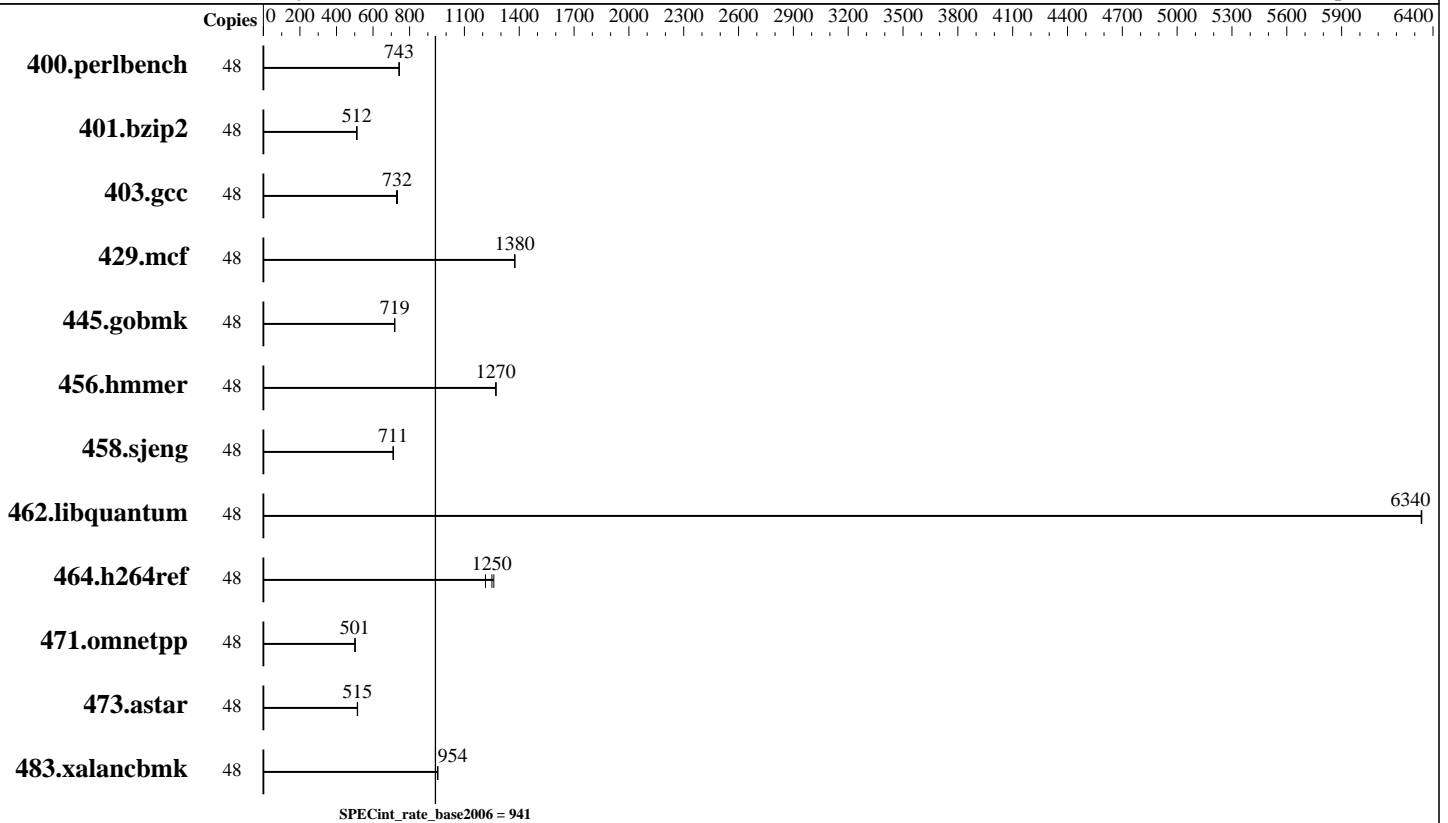
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Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	48	**<u>631</u>**	**<u>743</u>**	632	742	631	743							
401.bzip2	48	907	511	**<u>905</u>**	**<u>512</u>**	905	512							
403.gcc	48	527	733	530	729	**<u>528</u>**	**<u>732</u>**							
429.mcf	48	318	1380	318	1380	**<u>318</u>**	**<u>1380</u>**							
445.gobmk	48	701	718	700	719	**<u>701</u>**	**<u>719</u>**							
456.hmmer	48	**<u>352</u>**	**<u>1270</u>**	352	1270	352	1270							
458.sjeng	48	**<u>817</u>**	**<u>711</u>**	817	711	818	710							
462.libquantum	48	157	6340	157	6340	**<u>157</u>**	**<u>6340</u>**							
464.h264ref	48	**<u>849</u>**	**<u>1250</u>**	874	1220	842	1260							
471.omnetpp	48	599	501	**<u>599</u>**	**<u>501</u>**	597	503							
473.astar	48	**<u>655</u>**	**<u>515</u>**	653	516	655	514							
483.xalancbmk	48	348	953	347	954	**<u>347</u>**	**<u>954</u>**							

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 HT Technology = Enabled
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
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 1x

 Sysinfo program /opt/cpu2006-1.2/config/sysinfo.rev6818
 $Rev: 6818 $ $Date:: 2012-07-17 #$ e86d102572650a6e4d596a3cee98f191
 running on specompc220 Tue Sep  3 14:11:07 2013

 This section contains SUT (System Under Test) info as seen by
```

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Platform Notes (Continued)

```
  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:       132122292 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)
     system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server

  uname -a:
     Linux specompc220 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 Sep 3 04:57

  SPEC is set to: /opt/cpu2006-1.2
     Filesystem     Type    Size  Used Avail Use% Mounted on
     /dev/sdb1      ext4    134G   30G   99G  23% /

  Additional information from dmidecode:
    BIOS Cisco Systems, Inc. C220M3.1.5.2.27.071120132232 07/11/2013
    Memory:
     16x 0xAD00 HMT31GR7EFR4C-RD 8 GB 1866 MHz 2 rank

  (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"
```

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General Notes (Continued)

```
Binaries compiled on a system with 1x Core i7-860 CPU + 8GB
memory using RHEL5.5
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-V1.2.20130717.html

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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`

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

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