SPEC® CINT2006 Result
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Cisco Systems

Cisco UCS C240 M3(Intel Xeon E5-2643, 3.30 GHz)

SPECint®2006 = 52.0

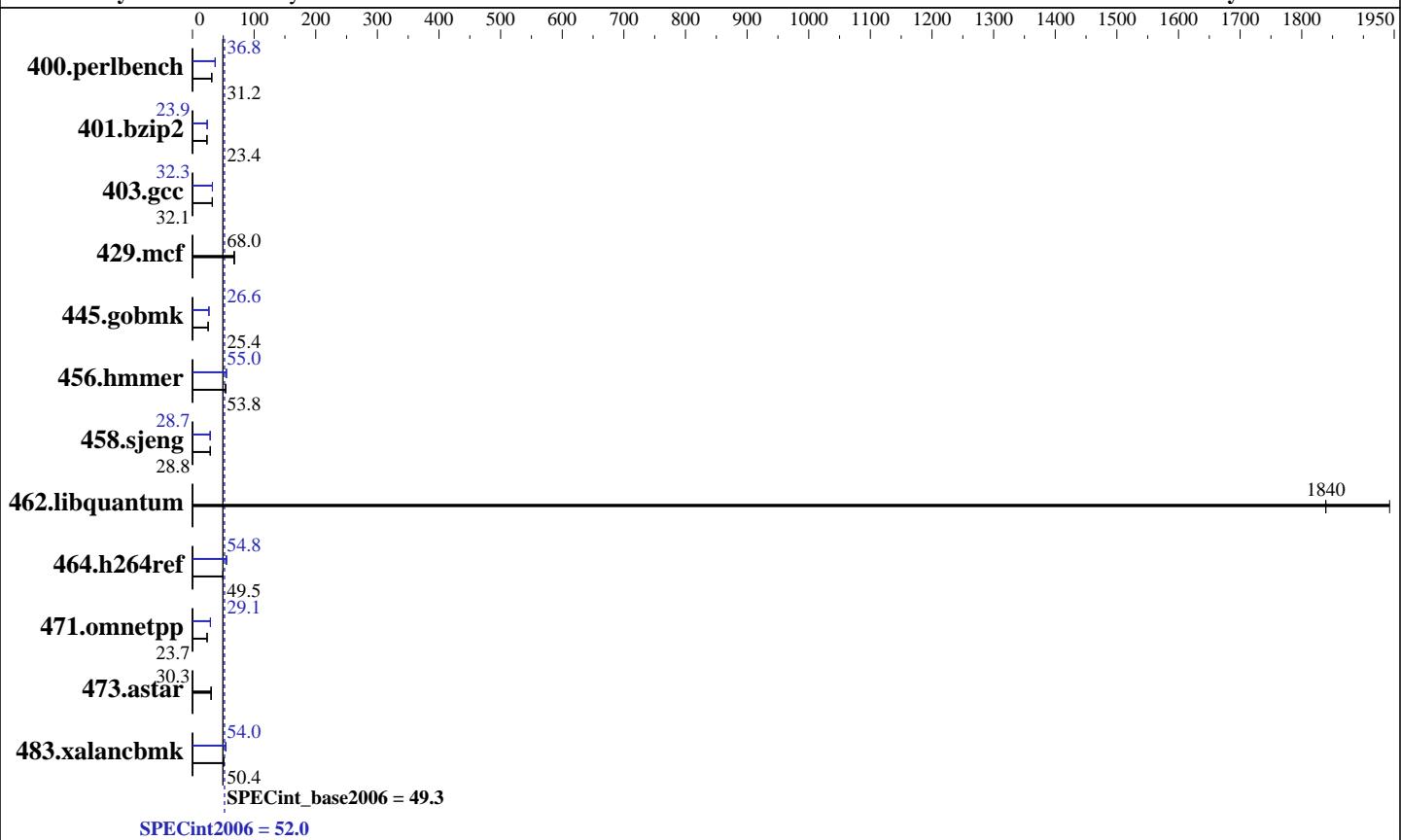SPECint_base2006 = 49.3

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

Test date: May-2012
Hardware Availability: Jun-2012
Software Availability: Dec-2011

400.perlbench 36.8 / 31.2
401.bzip2 23.9 / 23.4
403.gcc 32.3 / 32.1
429.mcf 68.0
445.gobmk 26.6 / 25.4
456.hmmer 55.0 / 53.8
458.sjeng 28.7 / 28.8
462.libquantum 1840
464.h264ref 54.8 / 49.5
471.omnetpp 29.1 / 23.7
473.astar 30.3
483.xalancbmk 54.0 / 50.4

SPECint_base2006 = 49.3
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Hardware

CPU Name: Intel Xeon E5-2643
CPU Characteristics: Intel Turbo Boost Technology up to 3.50 GHz
CPU MHz: 3300
FPU: Integrated
CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip
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: 10 MB I+D on chip per chip
Other Cache: None
Memory: 128 GB (16 x 8 GB 2Rx4 PC3-12800R-11, ECC)
Disk Subsystem: 1 X 73 GB 10000 RPM SAS
Other Hardware: None

Software

Operating System: Red Hat Enterprise Linux Server release 6.2 (Santiago)
2.6.32-220.el6.x86_64
Compiler: C/C++: Version 12.1.3.293 of Intel C++ Studio XE for Linux
Auto Parallel: Yes
File System: ext4
System State: Run level 3 (multi-user)
Base Pointers: 32/64-bit
Peak Pointers: 32/64-bit
Other Software: Microquill SmartHeap V9.01

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Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	313	31.2	313	31.2	**313**	**31.2**	**265**	**36.8**	265	36.8	265	36.8
401.bzip2	412	23.4	**412**	**23.4**	412	23.4	405	23.8	**404**	**23.9**	403	23.9
403.gcc	251	32.1	**251**	**32.1**	250	32.1	**249**	**32.3**	250	32.2	249	32.3
429.mcf	136	67.2	134	68.1	**134**	**68.0**	136	67.2	134	68.1	**134**	**68.0**
445.gobmk	413	25.4	**413**	**25.4**	414	25.4	394	26.6	394	26.6	**394**	**26.6**
456.hmmer	174	53.7	**174**	**53.8**	173	53.8	170	55.0	**170**	**55.0**	170	55.0
458.sjeng	419	28.9	420	28.8	**420**	**28.8**	**422**	**28.7**	421	28.7	422	28.7
462.libquantum	10.7	1940	11.3	1840	**11.3**	**1840**	10.7	1940	11.3	1840	**11.3**	**1840**
464.h264ref	448	49.4	**447**	**49.5**	447	49.5	398	55.6	**404**	**54.8**	404	54.7
471.omnetpp	263	23.7	**264**	**23.7**	264	23.7	216	28.9	215	29.1	**215**	**29.1**
473.astar	233	30.1	232	30.3	**232**	**30.3**	233	30.1	232	30.3	**232**	**30.3**
483.xalancbmk	137	50.4	**137**	**50.4**	137	50.4	**128**	**54.0**	128	54.1	128	53.9

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Operating System Notes

    Stack size set to unlimited using "ulimit -s unlimited"

Platform Notes

    BIOS Configuration:
    Processor Power State C6 set to Disabled
    Processor Power State C1 Enhanced set to Disabled
    Power Technology set to Custom
    Energy Performance set to Performance
    DRAM Clock Throttling set to Performance
     Sysinfo program /opt/cpu2006-1.2/config/sysinfo.rev6800
     $Rev: 6800 $ $Date:: 2011-10-11 #$ 6f2ebdff5032aaa42e583f96b07f99d3
     running on localhost.localdomain Wed May 16 12:08:43 2012

     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 E5-2643 0 @ 3.30GHz
          2 "physical id"s (chips)
          8 "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 : 4
          siblings : 4

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Platform Notes (Continued)

```
     physical 0: cores 0 1 2 3
     physical 1: cores 0 1 2 3
   cache size : 10240 KB

 From /proc/meminfo
    MemTotal:      132103600 kB
    HugePages_Total:        0
    Hugepagesize:       2048 kB

 /usr/bin/lsb_release -d
    Red Hat Enterprise Linux Server release 6.2 (Santiago)

 From /etc/*release* /etc/*version*
    redhat-release: Red Hat Enterprise Linux Server release 6.2 (Santiago)
    system-release: Red Hat Enterprise Linux Server release 6.2 (Santiago)
    system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server

 uname -a:
    Linux localhost.localdomain 2.6.32-220.el6.x86_64 #1 SMP Wed Nov 9 08:03:13
    EST 2011 x86_64 x86_64 x86_64 GNU/Linux

 run-level 3 May 16 12:02

 SPEC is set to: /opt/cpu2006-1.2
    Filesystem     Type    Size  Used Avail Use% Mounted on
    /dev/sda1      ext4     66G  9.9G   53G  16% /

 Additional information from dmidecode:
   Memory:
    16x 0xCE00 M393B1K70DH0-YK0 8 GB 1600 MHz 1 rank

 (End of data from sysinfo program)
```

General Notes

```
 Environment variables set by runspec before the start of the run:
 KMP_AFFINITY = "granularity=fine,scatter"
 LD_LIBRARY_PATH = "/opt/cpu2006-1.2/libs/32:/opt/cpu2006-1.2/libs/64"
 OMP_NUM_THREADS = "8"
 Intel HT Technology = disable
  Binaries compiled on a system with 2 X Intel Xeon E5-2690 CPU + 128 GB memory using RHEL 6.2
  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
```

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Base Compiler Invocation

C benchmarks:
```
icc  -m64
```

C++ benchmarks:
```
icpc -m64
```

Base Portability Flags

```
 400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
     401.bzip2: -DSPEC_CPU_LP64
       403.gcc: -DSPEC_CPU_LP64
       429.mcf: -DSPEC_CPU_LP64
     445.gobmk: -DSPEC_CPU_LP64
     456.hmmer: -DSPEC_CPU_LP64
     458.sjeng: -DSPEC_CPU_LP64
  462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
    464.h264ref: -DSPEC_CPU_LP64
    471.omnetpp: -DSPEC_CPU_LP64
     473.astar: -DSPEC_CPU_LP64
  483.xalancbmk: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
```

Base Optimization Flags

C benchmarks:
```
-xSSE4.2 -ipo -O3 -no-prec-div -parallel -opt-prefetch -auto-p32
```

C++ benchmarks:
```
-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32
-Wl,-z,muldefs -L/smartheap -lsmartheap64
```

Base Other Flags

C benchmarks:
```
403.gcc: -Dalloca=_alloca
```

Peak Compiler Invocation

C benchmarks (except as noted below):
```
icc  -m64
```

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Peak Compiler Invocation (Continued)

400.perlbench: `icc -m32`

445.gobmk: `icc -m32`

464.h264ref: `icc -m32`

C++ benchmarks (except as noted below):
`icpc -m32`

473.astar: `icpc -m64`

Peak Portability Flags

400.perlbench: `-DSPEC_CPU_LINUX_IA32`
401.bzip2: `-DSPEC_CPU_LP64`
403.gcc: `-DSPEC_CPU_LP64`
429.mcf: `-DSPEC_CPU_LP64`
456.hmmer: `-DSPEC_CPU_LP64`
458.sjeng: `-DSPEC_CPU_LP64`
462.libquantum: `-DSPEC_CPU_LP64 -DSPEC_CPU_LINUX`
473.astar: `-DSPEC_CPU_LP64`
483.xalancbmk: `-DSPEC_CPU_LINUX`

Peak Optimization Flags

C benchmarks:

400.perlbench: `-xSSE4.2`(pass 2) `-prof-gen`(pass 1) `-ipo`(pass 2)
`-O3`(pass 2) `-no-prec-div`(pass 2) `-prof-use`(pass 2)
`-opt-prefetch -ansi-alias`

401.bzip2: `-xSSE4.2`(pass 2) `-prof-gen`(pass 1) `-ipo`(pass 2)
`-O3`(pass 2) `-no-prec-div -prof-use`(pass 2) `-auto-ilp32`
`-opt-prefetch -ansi-alias`

403.gcc: `-xSSE4.2 -ipo -O3 -no-prec-div -inline-calloc`
`-opt-malloc-options=3 -auto-ilp32`

429.mcf: `basepeak = yes`

445.gobmk: `-xSSE4.2`(pass 2) `-prof-gen`(pass 1) `-prof-use`(pass 2)
`-ansi-alias`

456.hmmer: `-xSSE4.2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32`
`-ansi-alias`

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Peak Optimization Flags (Continued)

  458.sjeng: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
             -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
             -unroll4

 462.libquantum: basepeak = yes

  464.h264ref: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
               -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
               -unroll2 -ansi-alias

C++ benchmarks:

  471.omnetpp: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
               -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
               -opt-ra-region-strategy=block   -ansi-alias
               -Wl,-z,muldefs -L/smartheap -lsmartheap

  473.astar: basepeak = yes

  483.xalancbmk: -xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -ansi-alias
                 -Wl,-z,muldefs -L/smartheap -lsmartheap

Peak 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-ic12.1-official-linux64.20111122.html
http://www.spec.org/cpu2006/flags/Cisco-Platform-Settings-V1.2.20130607.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.xml
http://www.spec.org/cpu2006/flags/Cisco-Platform-Settings-V1.2.20130607.xml

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

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