SPEC® CINT2006 Result

Cisco Systems

SPECint®_rate2006 = 658

Cisco UCS B260 M4 (Intel Xeon E7-4830 v2 2.20GHz)

SPECint_rate_base2006 = 635

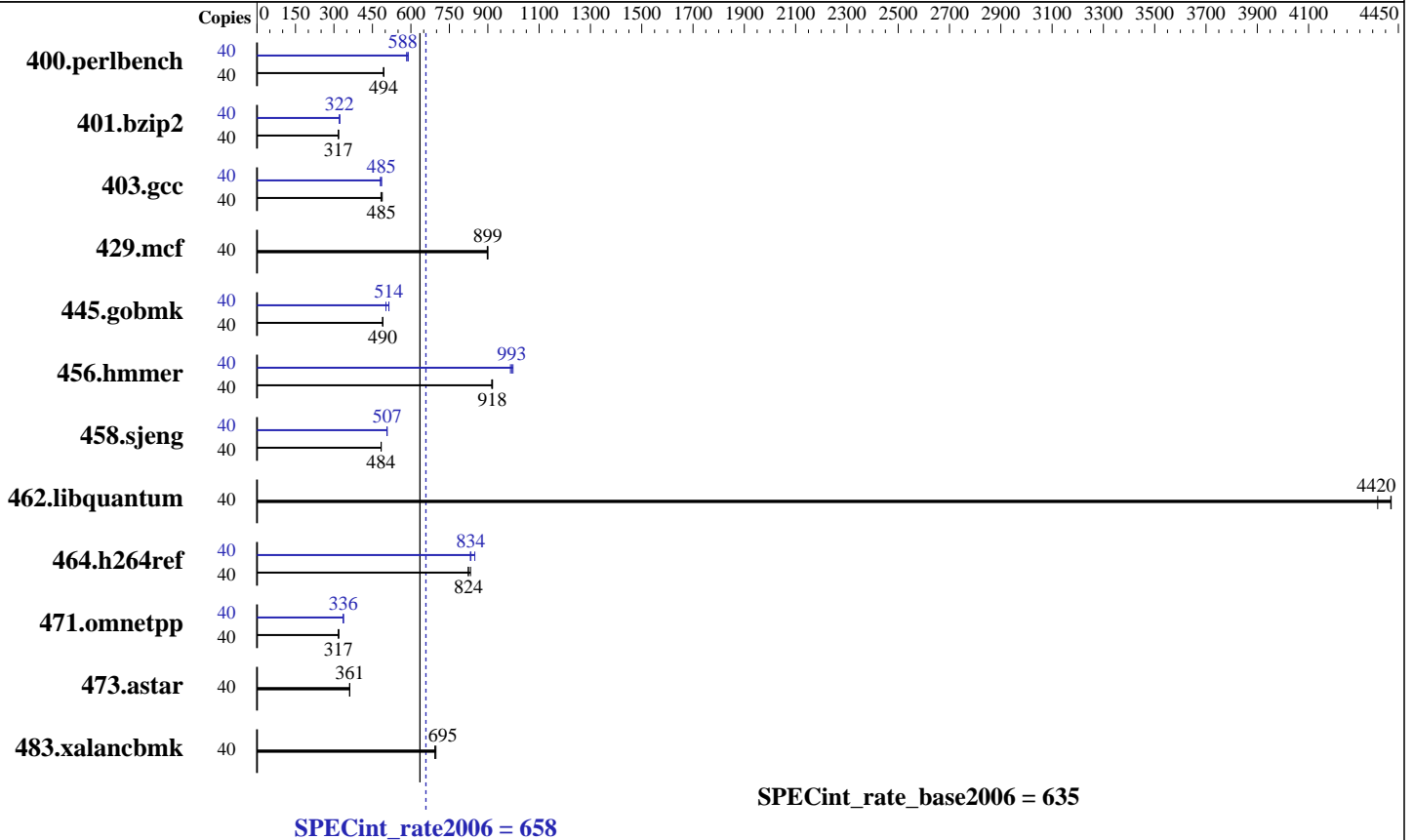|	
CPU2006 license: 9019	**Test date:** Oct-2014
Test sponsor: Cisco Systems	**Hardware Availability:** May-2014
Tested by: Cisco Systems	**Software Availability:** Sep-2013

SPECint_rate_base2006 = 635

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Hardware

CPU Name:	Intel Xeon E7-4830 v2
CPU Characteristics:	Intel Turbo Boost Technology up to 2.70 GHz
CPU MHz:	2200
FPU:	Integrated
CPU(s) enabled:	20 cores, 2 chips, 10 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:	20 MB I+D on chip per chip
Other Cache:	None
Memory:	256 GB (32 x 8 GB 2Rx4 PC3-12800R-11, ECC, running at 1066 MHz and CL11)
Disk Subsystem:	1 X 100 GB SATA SSD
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

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	40	790	495	**792**	**494**	792	493	40	663	590	**665**	**588**	670	583
401.bzip2	40	**1216**	**317**	1217	317	1214	318	40	1199	322	**1199**	**322**	1200	322
403.gcc	40	**663**	**485**	659	488	666	483	40	663	485	**664**	**485**	670	481
429.mcf	40	406	898	405	900	**406**	**899**	40	406	898	405	900	**406**	**899**
445.gobmk	40	**856**	**490**	855	491	857	490	40	**816**	**514**	816	514	835	503
456.hmmer	40	**407**	**918**	406	918	408	915	40	378	988	374	998	**376**	**993**
458.sjeng	40	**1000**	**484**	1000	484	1000	484	40	956	506	**954**	**507**	954	507
462.libquantum	40	187	4420	190	4370	**187**	**4420**	40	187	4420	190	4370	**187**	**4420**
464.h264ref	40	1075	824	1063	832	**1074**	**824**	40	**1061**	**834**	1042	849	1064	832
471.omnetpp	40	784	319	788	317	**788**	**317**	40	744	336	**743**	**336**	742	337
473.astar	40	777	362	777	361	**777**	**361**	40	777	362	777	361	**777**	**361**
483.xalancbmk	40	398	694	396	698	**397**	**695**	40	398	694	396	698	**397**	**695**

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

```
   Intel HT Technology = Enabled
   CPU performance set to HPC
   Power Technology set to Custom
   CPU Power State C6 set to Disabled
   CPU Power State C1 Enhanced set to Disabled
   Memory RAS configuration set to Maximum Performance
   DRAM Clock Throttling Set to Performance
    Sysinfo program /opt/cpu2006/config/sysinfo.rev6818
    $Rev: 6818 $ $Date:: 2012-07-17 #$ e86d102572650a6e4d596a3cee98f191
    running on b260m4 Fri Oct 10 00:39:06 2014

    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 E7-4830 v2 @ 2.20GHz
```
Continued on next page

Cisco Systems

SPECint_rate2006 =   658

Cisco UCS B260 M4 (Intel Xeon E7-4830 v2 2.20GHz)

SPECint_rate_base2006 =   635

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

Test date: Oct-2014
Hardware Availability: May-2014
Software Availability: Sep-2013

Platform Notes (Continued)

```
     2 "physical id"s (chips)
     40 "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 : 10
     siblings  : 20
     physical 0: cores 0 1 2 3 4 8 9 10 11 12
     physical 1: cores 0 1 2 3 4 8 9 10 11 12
  cache size : 20480 KB

From /proc/meminfo
  MemTotal:       263806728 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 b260m4 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 Oct 9 23:52

SPEC is set to: /opt/cpu2006
  Filesystem     Type  Size  Used Avail Use% Mounted on
  /dev/sda1      ext4   91G   12G   76G  13% /

Additional information from dmidecode:
  BIOS Cisco Systems, Inc. EXM4-1.2.2.2.0.042820141805 04/28/2014
  Memory:
   32x    8 GB
   32x 0xCE00 M393B1K70QB0-YK0 8 GB 1066 MHz 2 rank
   16x 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/libs/32:/opt/cpu2006/libs/64:/opt/cpu2006/sh"

 Binaries compiled on a system with 1x Core i7-860 CPU + 8GB
 memory using RedHat EL 6.4
 Transparent Huge Pages disabled with:
```

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General Notes (Continued)

```
echo never  > /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

Peak Compiler Invocation

C benchmarks (except as noted below):
    icc -m32

    400.perlbench: icc -m64

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Peak Compiler Invocation (Continued)

401.bzip2: `icc -m64`

456.hmmer: `icc -m64`

458.sjeng: `icc -m64`

C++ benchmarks:
`icpc -m32`

Peak Portability Flags

400.perlbench: `-DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64`
401.bzip2: `-DSPEC_CPU_LP64`
456.hmmer: `-DSPEC_CPU_LP64`
458.sjeng: `-DSPEC_CPU_LP64`
462.libquantum: `-DSPEC_CPU_LINUX`
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)
`-auto-ilp32`

401.bzip2: `-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 -auto-ilp32 -ansi-alias`

403.gcc: `-xSSE4.2 -ipo -O3 -no-prec-div`

429.mcf: `basepeak = yes`

445.gobmk: `-xSSE4.2`(pass 2) `-prof-gen`(pass 1) `-prof-use`(pass 2)
`-ansi-alias -opt-mem-layout-trans=3`

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

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 -auto-ilp32`

462.libquantum: `basepeak = yes`

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Peak Optimization Flags (Continued)

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)
`-ansi-alias -opt-ra-region-strategy=block -Wl,-z,muldefs`
`-L/sh -lsmartheap`

473.astar: basepeak = yes

483.xalancbmk: basepeak = yes

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-ic14.0-official-linux64.20140128.html
http://www.spec.org/cpu2006/flags/Cisco-Platform-Settings-V1.2-revB.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-revB.xml

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

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