



SPEC® CINT2006 Result

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Cisco Systems

Cisco UCS B200 M3 (Intel Xeon E5-2609 v2, 2.50 GHz)

SPECint®_rate2006 = 246

SPECint_rate_base2006 = 238

CPU2006 license: 9019

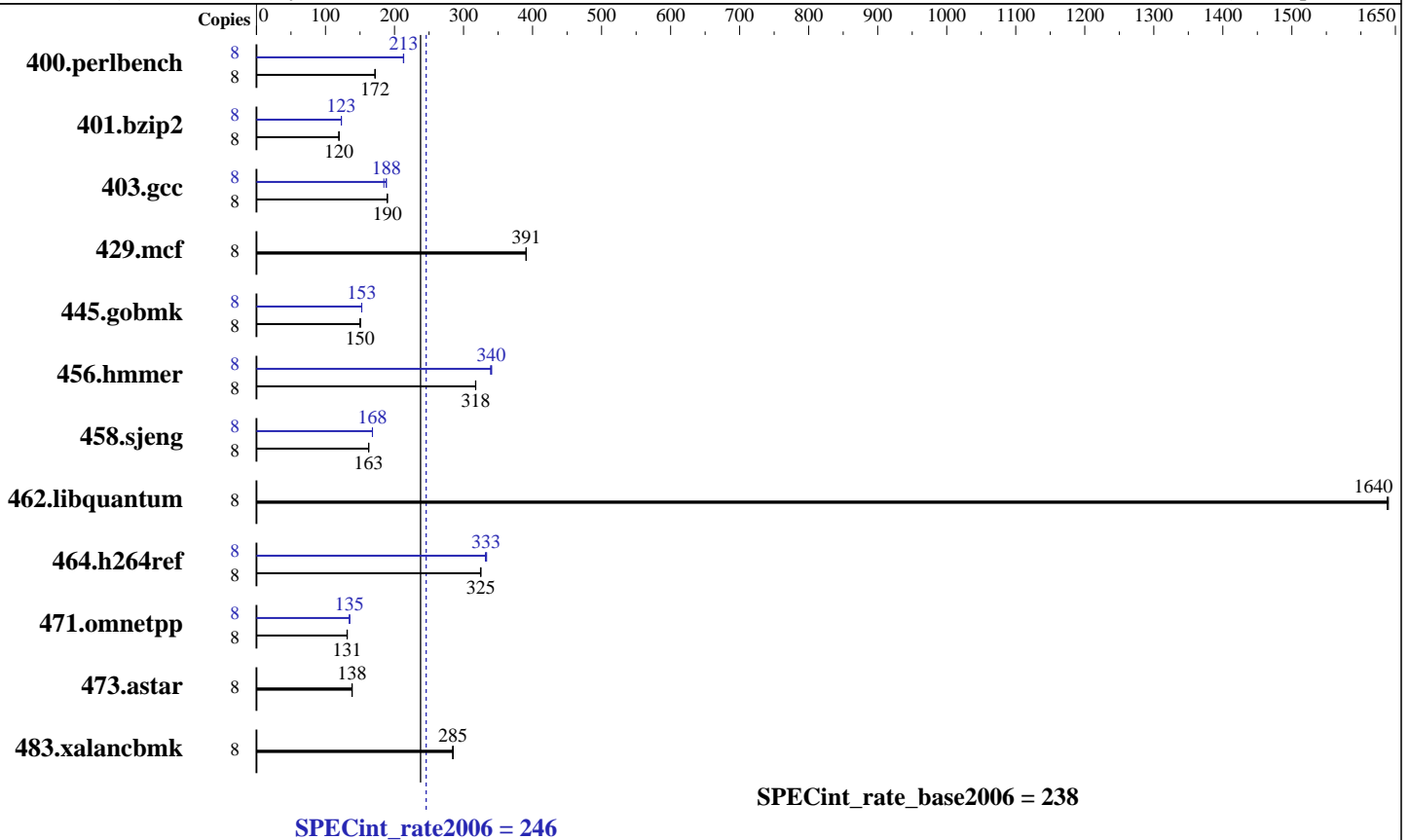
Test sponsor: Cisco Systems

Tested by: Cisco Systems

Test date: Dec-2013

Hardware Availability: Dec-2013

Software Availability: Sep-2013



Hardware

CPU Name: Intel Xeon E5-2609 v2
 CPU Characteristics:
 CPU MHz: 2500
 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: 256 GB (16 x 16 GB 2Rx4 PC3-14900R-13, ECC, running at 1333 MHz and CL7)
 Disk Subsystem: 1 X 300 GB 15000 RPM SAS
 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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Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	8	<u>455</u>	<u>172</u>	455	172	455	172	8	366	213	367	213	<u>367</u>	<u>213</u>
401.bzip2	8	646	119	<u>646</u>	<u>120</u>	645	120	8	<u>628</u>	<u>123</u>	628	123	627	123
403.gcc	8	339	190	<u>340</u>	<u>190</u>	340	189	8	<u>342</u>	<u>188</u>	342	188	349	185
429.mcf	8	<u>187</u>	<u>391</u>	187	391	187	390	8	<u>187</u>	<u>391</u>	187	391	187	390
445.gobmk	8	<u>558</u>	<u>150</u>	559	150	558	150	8	<u>550</u>	<u>153</u>	550	153	551	152
456.hammer	8	<u>235</u>	<u>318</u>	235	318	235	317	8	220	339	219	341	<u>219</u>	<u>340</u>
458.sjeng	8	<u>596</u>	<u>163</u>	595	163	596	163	8	<u>576</u>	<u>168</u>	576	168	576	168
462.libquantum	8	101	1640	101	1640	<u>101</u>	<u>1640</u>	8	101	1640	101	1640	<u>101</u>	<u>1640</u>
464.h264ref	8	544	325	546	325	<u>545</u>	<u>325</u>	8	<u>532</u>	<u>333</u>	531	333	534	332
471.omnetpp	8	<u>380</u>	<u>131</u>	381	131	380	132	8	370	135	<u>371</u>	<u>135</u>	372	135
473.astar	8	405	139	406	138	<u>406</u>	<u>138</u>	8	405	139	406	138	<u>406</u>	<u>138</u>
483.xalancbmk	8	194	285	194	284	<u>194</u>	<u>285</u>	8	194	285	194	284	<u>194</u>	<u>285</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 =
 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 B200M3-IVB Wed Dec 4 19:39:01 2013

This section contains SUT (System Under Test) info as seen by some common utilities. To remove or add to this section, see:

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Platform Notes (Continued)

<http://www.spec.org/cpu2006/Docs/config.html#sysinfo>

```

From /proc/cpuinfo
  model name : Intel(R) Xeon(R) CPU E5-2609 v2 @ 2.50GHz
    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
    physical 0: cores 0 1 2 3
    physical 1: cores 0 1 2 3
  cache size : 10240 KB

```

```

From /proc/meminfo
  MemTotal:      264464784 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 B200M3-IVB 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 Dec 4 19:35

```

SPEC is set to: /opt/cpu2006-1.2
  Filesystem      Type      Size Used Avail Use% Mounted on
  /dev/sdal       ext4     275G  52G  210G  20% /

```

```

Additional information from dmidecode:
  BIOS Cisco Systems, Inc. B200M3.2.1.3a.0.082320131800 08/23/2013
  Memory:
    16x 0xAD00 HMT42GR7AFR4C-RD 16 GB 1333 MHz 2 rank
    8x 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"

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General Notes (Continued)

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

Peak Compiler Invocation

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

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Peak Compiler Invocation (Continued)

400.perlbench: icc -m64

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

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Peak Optimization Flags (Continued)

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)
-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-V1.2.20130717.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-V1.2.20130717.xml>

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

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