



SPEC® CINT2006 Result

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Cisco Systems

Cisco UCS C240 M3 (Intel Xeon E5-2609 v2, 2.50 GHz)

SPECint®_rate2006 = 247

SPECint_rate_base2006 = 239

CPU2006 license: 9019

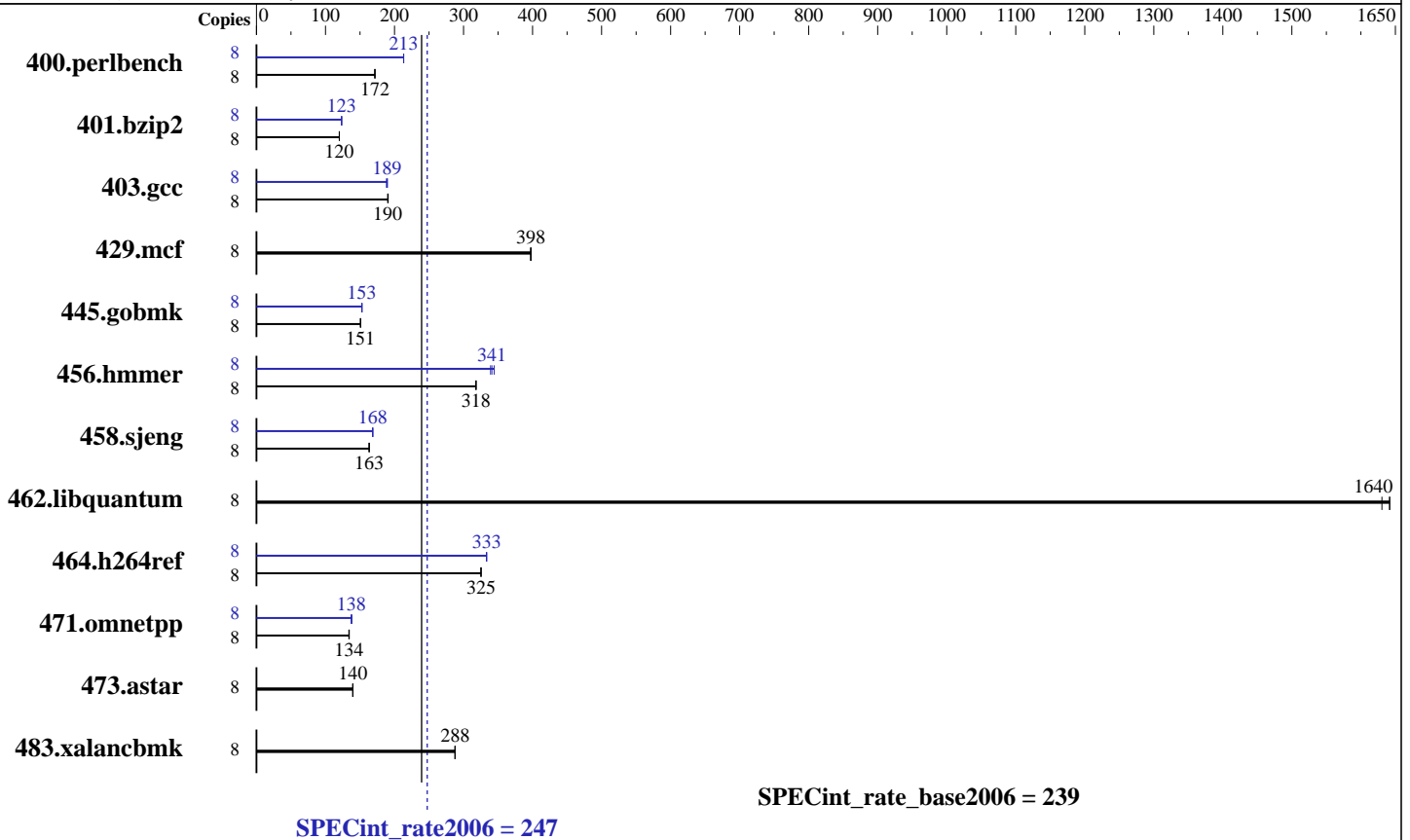
Test sponsor: Cisco Systems

Tested by: Cisco Systems

Test date: May-2014

Hardware Availability: Dec-2013

Software Availability: Mar-2014



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: 128 GB (16 x 8 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 6.5 (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	8	<u>455</u>	<u>172</u>	456	171	455	172	8	<u>367</u>	<u>213</u>	366	213	367	213
401.bzip2	8	<u>643</u>	<u>120</u>	643	120	643	120	8	<u>626</u>	<u>123</u>	626	123	626	123
403.gcc	8	338	190	337	191	<u>338</u>	<u>190</u>	8	<u>340</u>	<u>189</u>	340	190	342	188
429.mcf	8	184	397	183	398	<u>184</u>	<u>398</u>	8	184	397	183	398	<u>184</u>	<u>398</u>
445.gobmk	8	<u>556</u>	<u>151</u>	557	151	556	151	8	549	153	549	153	<u>549</u>	<u>153</u>
456.hmmer	8	<u>235</u>	<u>318</u>	235	318	235	318	8	<u>219</u>	<u>341</u>	220	339	217	344
458.sjeng	8	<u>593</u>	<u>163</u>	593	163	593	163	8	<u>575</u>	<u>168</u>	575	168	574	169
462.libquantum	8	101	1640	102	1630	<u>101</u>	<u>1640</u>	8	101	1640	102	1630	<u>101</u>	<u>1640</u>
464.h264ref	8	<u>544</u>	<u>325</u>	544	325	544	325	8	531	334	<u>531</u>	<u>333</u>	531	333
471.omnetpp	8	372	134	374	134	<u>372</u>	<u>134</u>	8	364	137	<u>364</u>	<u>138</u>	362	138
473.astar	8	<u>402</u>	<u>140</u>	403	139	402	140	8	<u>402</u>	<u>140</u>	403	139	402	140
483.xalancbmk	8	192	288	192	288	<u>192</u>	<u>288</u>	8	192	288	192	288	<u>192</u>	<u>288</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

```
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
Memory RAS configuration set to Maximum Performance
DRAM Clock Throttling Set to Performance
Sysinfo program /opt/cpu2006-1.4/config/sysinfo.rev6818
$Rev: 6818 $ $Date:: 2012-07-17 #$ e86d102572650a6e4d596a3cee98f191
running on c240m3 Tue May 27 16:37:41 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 E5-2609 v2 @ 2.50GHz
2 "physical id"s (chips)
```

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Platform Notes (Continued)

```

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:      132126952 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 c240m3 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 May 27 16:36

SPEC is set to: /opt/cpu2006-1.4
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/sdal       ext4  275G  11G  250G   5% /

Additional information from dmidecode:
BIOS Cisco Systems, Inc. C240M3.1.5.4h.0.031920140456 03/19/2014
Memory:
16x 0xAD00 HMT31GR7EFR4C-RD 8 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/cpu2006-1.4/libs/32:/opt/cpu2006-1.4/libs/64:/opt/cpu2006-1.4/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:

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General Notes (Continued)

```
echo 1> /proc/sys/vm/drop_caches
runspec command invoked through numactl i.e.:
numactl --interleave=all runspec <etc>
```

Submitted_by: "Sheshgiri I (shei)" <shei@cisco.com>

Submitted: Mon Jun 2 06:05:28 EDT 2014

Submission: cpu2006-20140602-29746.sub

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-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>

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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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