



SPEC® CINT2006 Result

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Huawei

SPECint®2006 = 57.3

Huawei RH1288 v2 (Intel Xeon E5-2690 v2)

SPECint_base2006 = 57.3

CPU2006 license: 3175

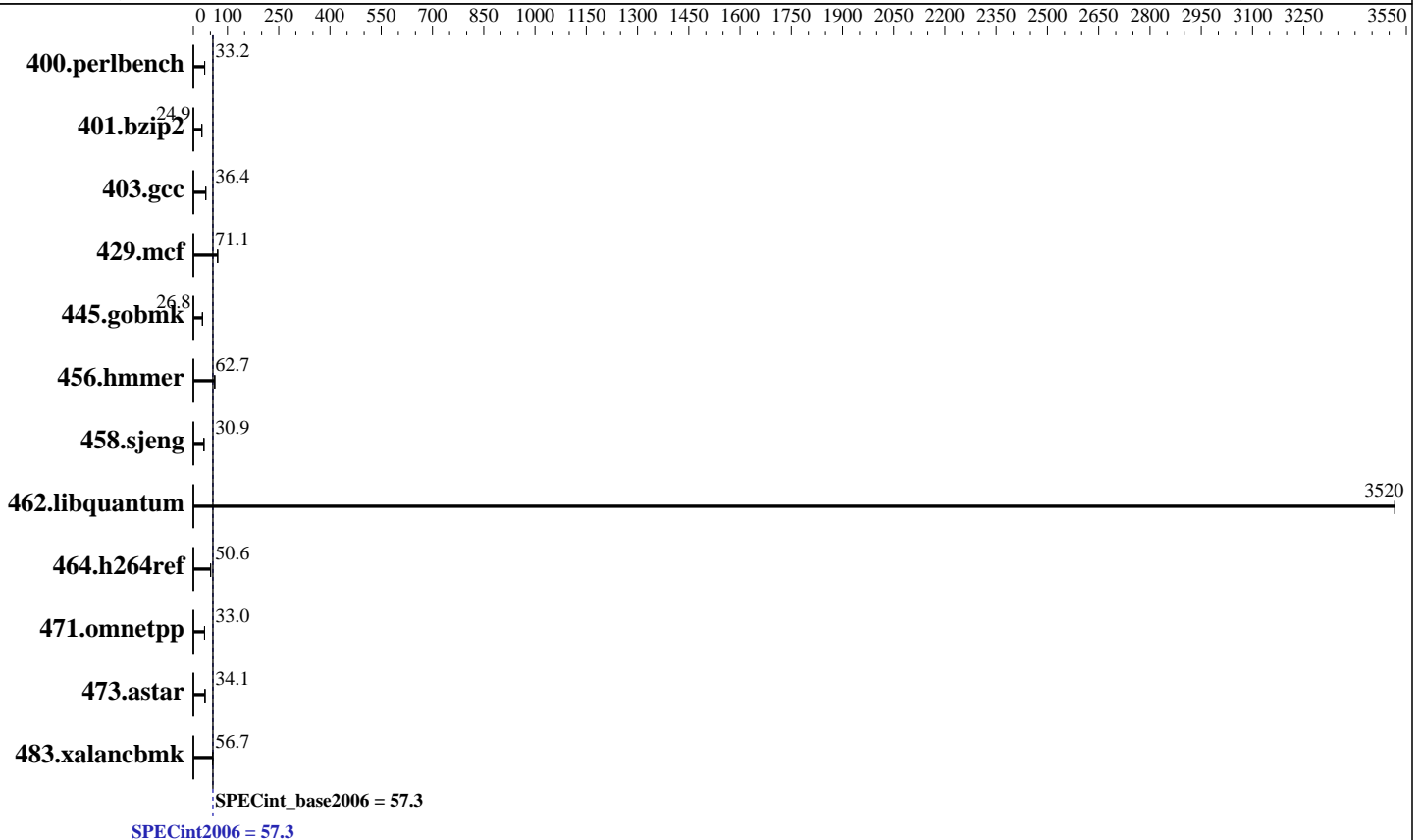
Test sponsor: Huawei

Tested by: Huawei

Test date: Aug-2014

Hardware Availability: Sep-2013

Software Availability: Nov-2013



Hardware

CPU Name: Intel Xeon E5-2690 v2
 CPU Characteristics: Intel Turbo Boost Technology up to 3.60 GHz
 CPU MHz: 3000
 FPU: Integrated
 CPU(s) enabled: 20 cores, 2 chips, 10 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: 25 MB I+D on chip per chip
 Other Cache: None
 Memory: 256 GB (16 x 16 GB 2Rx4 PC3-14900R-13, ECC)
 Disk Subsystem: 1 x 300 GB SAS, 10000 RPM
 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 12.1.0.225 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 | <u>294</u> | <u>33.2</u> | 295 | 33.2 | 294 | 33.2 | <u>294</u> | <u>33.2</u> | 295 | 33.2 | 294 | 33.2 |
| 401.bzip2 | <u>388</u> | <u>24.9</u> | 388 | 24.9 | 388 | 24.9 | <u>388</u> | <u>24.9</u> | 388 | 24.9 | 388 | 24.9 |
| 403.gcc | <u>221</u> | <u>36.4</u> | 221 | 36.4 | 221 | 36.4 | <u>221</u> | <u>36.4</u> | 221 | 36.4 | 221 | 36.4 |
| 429.mcf | 128 | 71.5 | <u>128</u> | <u>71.1</u> | 129 | 70.9 | <u>128</u> | <u>71.5</u> | <u>128</u> | <u>71.1</u> | 129 | 70.9 |
| 445.gobmk | <u>392</u> | <u>26.8</u> | 392 | 26.8 | 391 | 26.8 | <u>392</u> | <u>26.8</u> | 392 | 26.8 | 391 | 26.8 |
| 456.hammer | 149 | 62.8 | 149 | 62.5 | <u>149</u> | <u>62.7</u> | 149 | 62.8 | 149 | 62.5 | <u>149</u> | <u>62.7</u> |
| 458.sjeng | 391 | 30.9 | <u>391</u> | <u>30.9</u> | 391 | 31.0 | 391 | 30.9 | <u>391</u> | <u>30.9</u> | 391 | 31.0 |
| 462.libquantum | <u>5.89</u> | <u>3520</u> | 5.89 | 3520 | 5.89 | 3520 | <u>5.89</u> | <u>3520</u> | 5.89 | 3520 | 5.89 | 3520 |
| 464.h264ref | <u>437</u> | <u>50.6</u> | 437 | 50.6 | 437 | 50.6 | <u>437</u> | <u>50.6</u> | 437 | 50.6 | 437 | 50.6 |
| 471.omnetpp | <u>190</u> | <u>33.0</u> | 190 | 33.0 | 190 | 32.8 | <u>190</u> | <u>33.0</u> | 190 | 33.0 | 190 | 32.8 |
| 473.astar | 206 | 34.0 | 205 | 34.2 | <u>206</u> | <u>34.1</u> | 206 | 34.0 | 205 | 34.2 | <u>206</u> | <u>34.1</u> |
| 483.xalancbmk | <u>122</u> | <u>56.7</u> | 122 | 56.7 | 122 | 56.6 | <u>122</u> | <u>56.7</u> | 122 | 56.7 | 122 | 56.6 |

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:
Set Power Efficiency Mode to Custom
Set Hyper-Threading to Disabled
Baseboard Management Controller used to adjust the fan speed to 100%
Sysinfo program /spec/config/sysinfo.rev6800
\$Rev: 6800 \$ \$Date:: 2011-10-11 #\$ 6f2ebdff5032aaa42e583f96b07f99d3
running on localhost Wed Aug 20 19:38:26 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 E5-2690 v2 @ 3.00GHz
 2 "physical id"s (chips)
 20 "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 : 10
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
```

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Platform Notes (Continued)

cache size : 25600 KB

From /proc/meminfo

MemTotal: 264478184 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 localhost 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 Aug 20 19:37

SPEC is set to: /spec

| Filesystem | Type | Size | Used | Avail | Use% | Mounted on |
|------------|------|------|------|-------|------|------------|
| /dev/sda2 | ext4 | 272G | 102G | 157G | 40% | / |

Additional information from dmidecode:

Memory:

4x Hynix HMT42GR7AFR4C-RD 16 GB 1867 MHz 2 rank

12x Samsung M393B2G70DB0-CMA 16 GB 1867 MHz 2 rank

(End of data from sysinfo program)

General Notes

Environment variables set by runspec before the start of the run:

KMP_AFFINITY = "granularity=fine,compact,0,1"

LD_LIBRARY_PATH = "/spec/libs/32:/spec/libs/64"

OMP_NUM_THREADS = "20"

Binaries compiled on a system with 2 x Xeon X5645 CPU + 16GB memory using RHEL 6.1

Transparent Huge Pages enabled with:

echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled

Base Compiler Invocation

C benchmarks:

icc -m64

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Base Compiler Invocation (Continued)

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
400.perlbench: icc -m32
445.gobmk: icc -m32

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Peak Compiler Invocation (Continued)

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: basepeak = yes

401.bzip2: basepeak = yes

403.gcc: basepeak = yes

429.mcf: basepeak = yes

445.gobmk: basepeak = yes

456.hmmer: basepeak = yes

458.sjeng: basepeak = yes

462.libquantum: basepeak = yes

464.h264ref: basepeak = yes

C++ benchmarks:

471.omnetpp: basepeak = yes

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Peak Optimization Flags (Continued)

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-ic12.1-official-linux64.20120425.html>

<http://www.spec.org/cpu2006/flags/Huawei-Platform-Settings-V1.0-IVB-RevG.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20120425.xml>

<http://www.spec.org/cpu2006/flags/Huawei-Platform-Settings-V1.0-IVB-RevG.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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