



# SPEC® CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Huawei

SPECint®2006 = 45.2

### Huawei RH2288 V2 (Intel Xeon E5-2650)

SPECint\_base2006 = 42.0

CPU2006 license: 3175

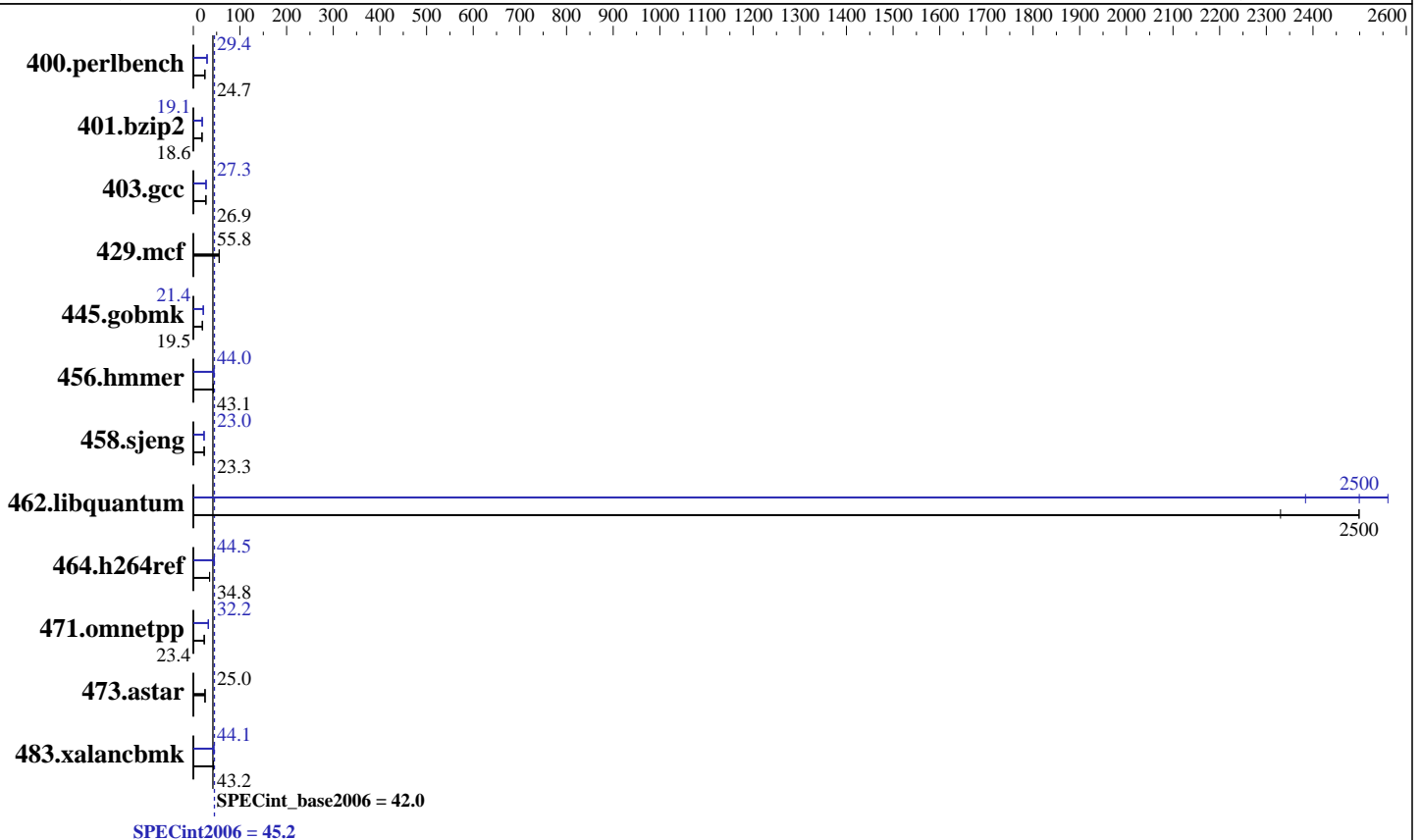
Test sponsor: Huawei

Tested by: Huawei

Test date: Jun-2012

Hardware Availability: Mar-2012

Software Availability: Dec-2011



### Hardware

CPU Name: Intel Xeon E5-2650  
 CPU Characteristics: Intel Turbo Boost Technology up to 2.80 GHz  
 CPU MHz: 2000  
 FPU: Integrated  
 CPU(s) enabled: 16 cores, 2 chips, 8 cores/chip  
 CPU(s) orderable: 1,2 chips  
 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: 128 GB (16 x 8 GB 2Rx4 PC3-12800R-11, ECC)  
 Disk Subsystem: 1 x 300 GB SAS, 10K RPM  
 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 12.1.0.225 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



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Huawei

SPECint2006 = 45.2

## Huawei RH2288 V2 (Intel Xeon E5-2650)

SPECint\_base2006 = 42.0

CPU2006 license: 3175  
Test sponsor: Huawei  
Tested by: Huawei

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

### Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	395	24.7	395	24.7	<u>395</u>	<u>24.7</u>	<u>332</u>	<u>29.4</u>	332	29.4	332	29.4
401.bzip2	519	18.6	<u>518</u>	<u>18.6</u>	518	18.6	507	19.0	<u>506</u>	<u>19.1</u>	505	19.1
403.gcc	299	26.9	<u>299</u>	<u>26.9</u>	299	27.0	295	27.3	295	27.3	<u>295</u>	<u>27.3</u>
429.mcf	<u>164</u>	<u>55.8</u>	163	55.8	166	55.0	<u>164</u>	<u>55.8</u>	163	55.8	166	55.0
445.gobmk	538	19.5	<u>538</u>	<u>19.5</u>	539	19.5	<u>490</u>	<u>21.4</u>	490	21.4	490	21.4
456.hammer	218	42.8	<u>217</u>	<u>43.1</u>	217	43.1	<u>212</u>	<u>44.0</u>	212	44.0	212	44.0
458.sjeng	520	23.3	<u>519</u>	<u>23.3</u>	519	23.3	<u>526</u>	<u>23.0</u>	525	23.0	526	23.0
462.libquantum	8.89	2330	<u>8.29</u>	<u>2500</u>	8.29	2500	8.09	2560	<u>8.29</u>	<u>2500</u>	8.69	2380
464.h264ref	<u>636</u>	<u>34.8</u>	636	34.8	634	34.9	497	44.5	<u>497</u>	<u>44.5</u>	497	44.5
471.omnetpp	<u>267</u>	<u>23.4</u>	267	23.4	266	23.5	194	32.2	194	32.2	<u>194</u>	<u>32.2</u>
473.astar	<u>280</u>	<u>25.0</u>	278	25.2	281	25.0	<u>280</u>	<u>25.0</u>	278	25.2	281	25.0
483.xalancbmk	160	43.2	160	43.2	<u>160</u>	<u>43.2</u>	156	44.2	<u>156</u>	<u>44.1</u>	161	43.0

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"  
Transparent Huge Pages enabled with:  
echo always > /sys/kernel/mm/redhat\_transparent\_hugepage/enabled  
Select only test related files when installing the operating system

### Platform Notes

BIOS configuration:  
Intel Hyper-Threading set to Disabled  
Set Power Efficiency Mode to Performance  
Sysinfo program /spec/config/sysinfo.rev6800  
\$Rev: 6800 \$ \$Date:: 2011-10-11 #\$ 6f2ebdff5032aaa42e583f96b07f99d3  
running on RH62-rebuild Fri Jun 22 09:32:52 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 E5-2650 0 @ 2.00GHz  
2 "physical id"s (chips)  
16 "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 : 8  
siblings : 8

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei

SPECint2006 = 45.2

Huawei RH2288 V2 (Intel Xeon E5-2650)

SPECint\_base2006 = 42.0

CPU2006 license: 3175  
Test sponsor: Huawei  
Tested by: Huawei

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

## Platform Notes (Continued)

```
physical 0: cores 0 1 2 3 4 5 6 7
physical 1: cores 0 1 2 3 4 5 6 7
cache size : 20480 KB
```

```
From /proc/meminfo
MemTotal:      132124032 kB
HugePages_Total:    0
Hugepagesize:    2048 kB
```

```
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 RH62-rebuild 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 Jun 21 09:16
```

```
SPEC is set to: /spec
Filesystem      Type      Size  Used Avail Use% Mounted on
/dev/sdal       ext4      289G  102G  173G   37% /
```

Additional information from dmidecode:

(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 = "16"

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB memory using RHEL5.5

## Base Compiler Invocation

C benchmarks:  
icc -m64

C++ benchmarks:  
icpc -m64



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei

SPECint2006 = 45.2

Huawei RH2288 V2 (Intel Xeon E5-2650)

SPECint\_base2006 = 42.0

CPU2006 license: 3175

Test sponsor: Huawei

Tested by: Huawei

Test date: Jun-2012

Hardware Availability: Mar-2012

Software Availability: Dec-2011

## 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

464.h264ref: icc -m32

C++ benchmarks (except as noted below):

icpc -m32

473.astar: icpc -m64



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei

SPECint2006 = 45.2

Huawei RH2288 V2 (Intel Xeon E5-2650)

SPECint\_base2006 = 42.0

CPU2006 license: 3175

Test sponsor: Huawei

Tested by: Huawei

Test date: Jun-2012

Hardware Availability: Mar-2012

Software Availability: Dec-2011

## 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: -xAVX -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

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: -xAVX -ipo -O3 -no-prec-div -parallel -opt-prefetch
                -auto-p32

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

```

Continued on next page



# SPEC CINT2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei

SPECint2006 = 45.2

Huawei RH2288 V2 (Intel Xeon E5-2650)

SPECint\_base2006 = 42.0

CPU2006 license: 3175

Test sponsor: Huawei

Tested by: Huawei

Test date: Jun-2012

Hardware Availability: Mar-2012

Software Availability: Dec-2011

## Peak Optimization Flags (Continued)

471.omnetpp (continued):

`-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-linux64.20120425.html>

<http://www.spec.org/cpu2006/flags/Huawei-Platform-Settings-revE.20120703.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-revE.20120703.xml>

SPEC and SPECint are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

For questions about this result, please contact the tester.  
For other inquiries, please contact [webmaster@spec.org](mailto:webmaster@spec.org).

Tested with SPEC CPU2006 v1.2.

Report generated on Thu Jul 24 10:03:57 2014 by SPEC CPU2006 PS/PDF formatter v6932.

Originally published on 25 July 2012.