



# SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Huawei

**SPECfp®2006 = 46.0**

### Huawei RH2285 V2 (Intel Xeon E5-2403)

**SPECfp\_base2006 = 44.6**

CPU2006 license: 3175

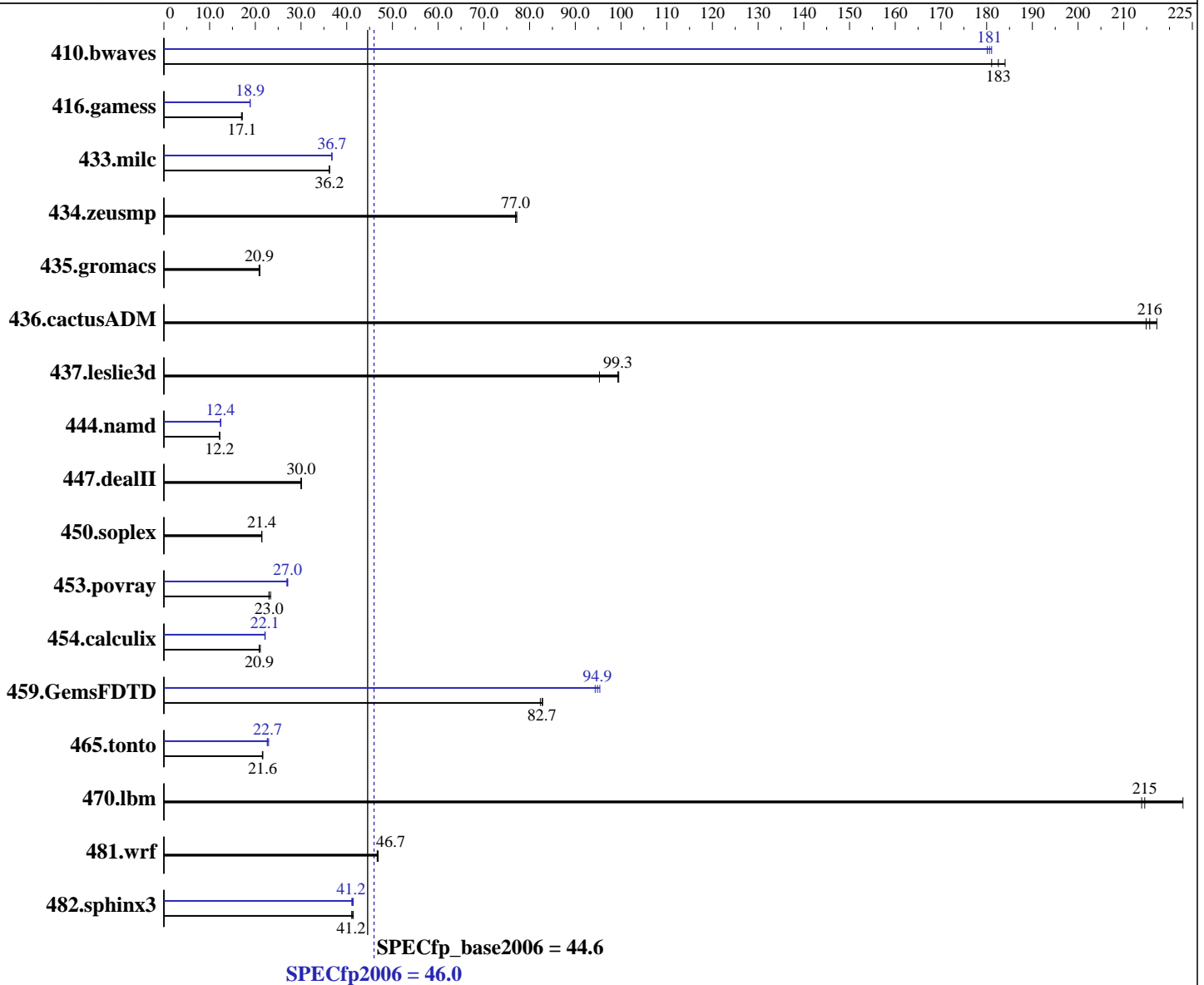
Test sponsor: Huawei

Tested by: Huawei

Test date: Oct-2012

Hardware Availability: May-2012

Software Availability: Dec-2011



### Hardware

CPU Name: Intel Xeon E5-2403  
 CPU Characteristics:  
 CPU MHz: 1800  
 FPU: Integrated  
 CPU(s) enabled: 8 cores, 2 chips, 4 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

Continued on next page

### 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;  
 Fortran: Version 12.1.0.225 of Intel Fortran Studio XE for Linux  
 Auto Parallel: Yes  
 File System: ext4

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Huawei

SPECfp2006 = **46.0**

## Huawei RH2285 V2 (Intel Xeon E5-2403)

SPECfp\_base2006 = **44.6**

CPU2006 license: 3175

Test sponsor: Huawei

Tested by: Huawei

Test date: Oct-2012

Hardware Availability: May-2012

Software Availability: Dec-2011

L3 Cache: 10 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 48 GB (12 x 4 GB 1Rx4 PC3-10600R-11, ECC, running at 1067 MHz and CL7)  
 Disk Subsystem: 1 x 300 GB SAS, 10K RPM  
 Other Hardware: None

System State: Run level 3 (multi-user)  
 Base Pointers: 64-bit  
 Peak Pointers: 32/64-bit  
 Other Software: None

## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	75.0	181	73.8	184	<b>74.4</b>	<b>183</b>	75.4	180	<b>75.2</b>	<b>181</b>	75.0	181
416.gamess	<b>1144</b>	<b>17.1</b>	1154	17.0	1143	17.1	<b>1037</b>	<b>18.9</b>	1039	18.8	1037	18.9
433.milc	254	36.2	<b>254</b>	<b>36.2</b>	253	36.2	250	36.8	250	36.7	<b>250</b>	<b>36.7</b>
434.zeusmp	<b>118</b>	<b>77.0</b>	118	77.0	118	77.2	<b>118</b>	<b>77.0</b>	118	77.0	118	77.2
435.gromacs	343	20.8	<b>342</b>	<b>20.9</b>	340	21.0	343	20.8	<b>342</b>	<b>20.9</b>	340	21.0
436.cactusADM	55.6	215	55.0	217	<b>55.4</b>	<b>216</b>	55.6	215	55.0	217	<b>55.4</b>	<b>216</b>
437.leslie3d	98.7	95.3	94.5	99.5	<b>94.7</b>	<b>99.3</b>	98.7	95.3	94.5	99.5	<b>94.7</b>	<b>99.3</b>
444.namd	658	12.2	658	12.2	<b>658</b>	<b>12.2</b>	647	12.4	646	12.4	<b>646</b>	<b>12.4</b>
447.dealII	380	30.1	<b>381</b>	<b>30.0</b>	381	30.0	380	30.1	<b>381</b>	<b>30.0</b>	381	30.0
450.soplex	<b>389</b>	<b>21.4</b>	389	21.4	390	21.4	<b>389</b>	<b>21.4</b>	389	21.4	390	21.4
453.povray	<b>231</b>	<b>23.0</b>	231	23.0	228	23.3	198	26.9	<b>197</b>	<b>27.0</b>	196	27.1
454.calculix	<b>395</b>	<b>20.9</b>	391	21.1	396	20.8	372	22.2	373	22.1	<b>373</b>	<b>22.1</b>
459.GemsFDTD	129	82.3	128	82.9	<b>128</b>	<b>82.7</b>	<b>112</b>	<b>94.9</b>	112	94.4	111	95.4
465.tonto	457	21.5	455	21.6	<b>455</b>	<b>21.6</b>	430	22.9	435	22.6	<b>434</b>	<b>22.7</b>
470.lbm	64.2	214	61.6	223	<b>64.0</b>	<b>215</b>	64.2	214	61.6	223	<b>64.0</b>	<b>215</b>
481.wrf	<b>239</b>	<b>46.7</b>	239	46.7	238	46.9	<b>239</b>	<b>46.7</b>	239	46.7	238	46.9
482.sphinx3	470	41.4	<b>473</b>	<b>41.2</b>	474	41.1	474	41.1	<b>473</b>	<b>41.2</b>	471	41.4

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-yjp2 Mon Oct 15 18:46:15 2012

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei

SPECfp2006 = 46.0

Huawei RH2285 V2 (Intel Xeon E5-2403)

SPECfp\_base2006 = 44.6

CPU2006 license: 3175

Test sponsor: Huawei

Tested by: Huawei

Test date: Oct-2012

Hardware Availability: May-2012

Software Availability: Dec-2011

## Platform Notes (Continued)

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 E5-2403 0 @ 1.80GHz
 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:      49403792 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-yjp2 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 Oct 15 08:41

SPEC is set to: /spec

```
Filesystem      Type      Size  Used Avail Use% Mounted on
/dev/sdal        ext3      270G  44G  212G  18% /
```

Additional information from dmidecode:

```
Memory:
 12x Samsu M393B 4 GB 1333 MHz 1 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 = "8"
```

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei

SPECfp2006 = 46.0

Huawei RH2285 V2 (Intel Xeon E5-2403)

SPECfp\_base2006 = 44.6

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

Test date: Oct-2012  
Hardware Availability: May-2012  
Software Availability: Dec-2011

## General Notes (Continued)

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

## Base Compiler Invocation

C benchmarks:  
icc -m64

C++ benchmarks:  
icpc -m64

Fortran benchmarks:  
ifort -m64

Benchmarks using both Fortran and C:  
icc -m64 ifort -m64

## Base Portability Flags

410.bwaves: -DSPEC\_CPU\_LP64  
416.gamess: -DSPEC\_CPU\_LP64  
433.milc: -DSPEC\_CPU\_LP64  
434.zeusmp: -DSPEC\_CPU\_LP64  
435.gromacs: -DSPEC\_CPU\_LP64 -nofor\_main  
436.cactusADM: -DSPEC\_CPU\_LP64 -nofor\_main  
437.leslie3d: -DSPEC\_CPU\_LP64  
444.namd: -DSPEC\_CPU\_LP64  
447.dealII: -DSPEC\_CPU\_LP64  
450.soplex: -DSPEC\_CPU\_LP64  
453.povray: -DSPEC\_CPU\_LP64  
454.calculix: -DSPEC\_CPU\_LP64 -nofor\_main  
459.GemsFDTD: -DSPEC\_CPU\_LP64  
465.tonto: -DSPEC\_CPU\_LP64  
470.lbm: -DSPEC\_CPU\_LP64  
481.wrf: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_CASE\_FLAG -DSPEC\_CPU\_LINUX  
482.sphinx3: -DSPEC\_CPU\_LP64

## Base Optimization Flags

C benchmarks:  
-xAVX -ipo -O3 -no-prec-div -static -parallel -opt-prefetch  
-ansi-alias

C++ benchmarks:  
-xAVX -ipo -O3 -no-prec-div -static -opt-prefetch -ansi-alias

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei

SPECfp2006 = 46.0

Huawei RH2285 V2 (Intel Xeon E5-2403)

SPECfp\_base2006 = 44.6

CPU2006 license: 3175

Test date: Oct-2012

Test sponsor: Huawei

Hardware Availability: May-2012

Tested by: Huawei

Software Availability: Dec-2011

## Base Optimization Flags (Continued)

Fortran benchmarks:

-xAVX -ipo -O3 -no-prec-div -static -parallel -opt-prefetch

Benchmarks using both Fortran and C:

-xAVX -ipo -O3 -no-prec-div -static -parallel -opt-prefetch  
-ansi-alias

## Peak Compiler Invocation

C benchmarks:

icc -m64

C++ benchmarks:

icpc -m64

Fortran benchmarks:

ifort -m64

Benchmarks using both Fortran and C:

icc -m64 ifort -m64

## Peak Portability Flags

Same as Base Portability Flags

## Peak Optimization Flags

C benchmarks:

433.milc: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -static -auto-ilp32  
-ansi-alias

470.lbm: basepeak = yes

482.sphinx3: -xAVX -ipo -O3 -no-prec-div -unroll2 -ansi-alias  
-parallel

C++ benchmarks:

444.namd: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -fno-alias  
-auto-ilp32

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei

SPECfp2006 = 46.0

Huawei RH2285 V2 (Intel Xeon E5-2403)

SPECfp\_base2006 = 44.6

CPU2006 license: 3175

Test sponsor: Huawei

Tested by: Huawei

Test date: Oct-2012

Hardware Availability: May-2012

Software Availability: Dec-2011

## Peak Optimization Flags (Continued)

447.dealIII: basepeak = yes

450.soplex: basepeak = yes

453.povray: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -unroll4 -ansi-alias

### Fortran benchmarks:

410.bwaves: -xAVX -ipo -O3 -no-prec-div -opt-prefetch -parallel  
-static

416.gamess: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -unroll2  
-inline-level=0 -scalar-rep- -static

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

459.GemsFDTD: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -unroll2  
-inline-level=0 -opt-prefetch -parallel

465.tonto: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -inline-calloc  
-opt-malloc-options=3 -auto -unroll4

### Benchmarks using both Fortran and C:

435.gromacs: basepeak = yes

436.cactusADM: basepeak = yes

454.calculix: -xAVX -ipo -O3 -no-prec-div -auto-ilp32 -ansi-alias

481.wrf: basepeak = yes

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.20121120.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.20121120.xml>



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei

SPECfp2006 = 46.0

Huawei RH2285 V2 (Intel Xeon E5-2403)

SPECfp\_base2006 = 44.6

CPU2006 license: 3175

Test sponsor: Huawei

Tested by: Huawei

Test date: Oct-2012

Hardware Availability: May-2012

Software Availability: Dec-2011

SPEC and SPECfp 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 13:06:01 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 21 November 2012.