



SPEC[®] CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei

SPECfp[®]2006 = 76.9

Huawei CH220 (Intel Xeon E5-2640v2)

SPECfp_base2006 = 74.1

CPU2006 license: 3175

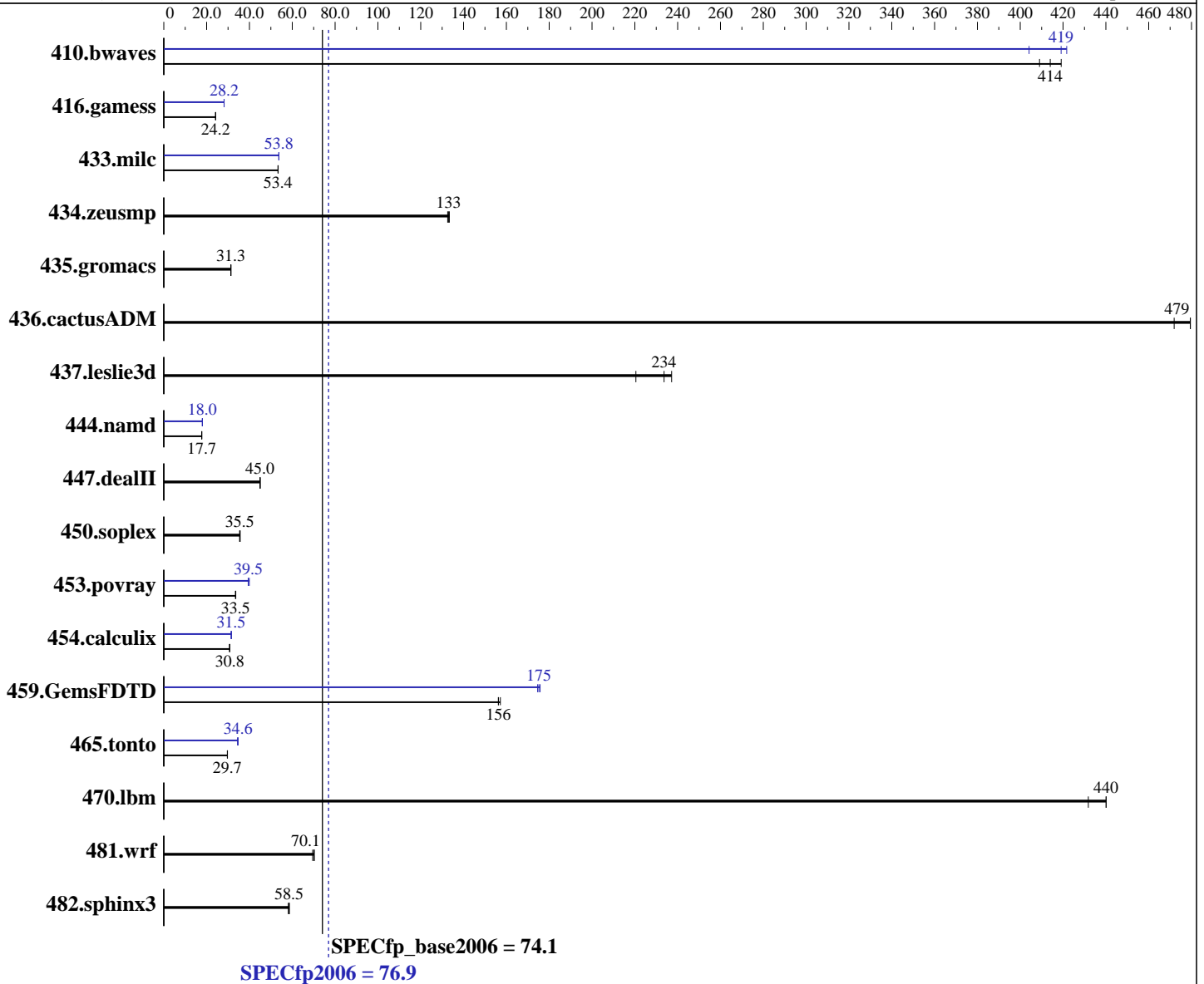
Test sponsor: Huawei

Tested by: Huawei

Test date: Aug-2014

Hardware Availability: Sep-2013

Software Availability: Sep-2013



Hardware

CPU Name: Intel Xeon E5-2640 v2
 CPU Characteristics: Intel Turbo Boost Technology up to 2.50 GHz
 CPU MHz: 2000
 FPU: Integrated
 CPU(s) enabled: 16 cores, 2 chips, 8 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

Continued on next page

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;
 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 = **76.9**

Huawei CH220 (Intel Xeon E5-2640v2)

SPECfp_base2006 = **74.1**

CPU2006 license: 3175

Test sponsor: Huawei

Tested by: Huawei

Test date: Aug-2014

Hardware Availability: Sep-2013

Software Availability: Sep-2013

L3 Cache: 20 MB I+D on chip per chip
 Other Cache: None
 Memory: 128 GB (16 x 8 GB 2Rx8 PC3-12800R-11, ECC)
 Disk Subsystem: 1 x 300 GB SAS, 10K RPM
 Other Hardware: None

System State: Run level 3 (mulri-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	33.2	409	32.8	414	32.4	419	32.2	422	32.4	419	33.6	404
416.gamess	809	24.2	809	24.2	809	24.2	695	28.2	695	28.2	695	28.2
433.milc	172	53.3	172	53.4	172	53.4	171	53.7	171	53.8	171	53.8
434.zeusmp	68.4	133	68.6	133	68.2	133	68.4	133	68.6	133	68.2	133
435.gromacs	228	31.3	228	31.3	228	31.3	228	31.3	228	31.3	228	31.3
436.cactusADM	25.3	472	24.9	479	24.9	479	25.3	472	24.9	479	24.9	479
437.leslie3d	42.6	220	40.2	234	39.6	237	42.6	220	40.2	234	39.6	237
444.namd	453	17.7	453	17.7	453	17.7	445	18.0	445	18.0	445	18.0
447.dealII	254	45.0	254	45.0	255	44.9	254	45.0	254	45.0	255	44.9
450.soplex	235	35.4	234	35.7	235	35.5	235	35.4	234	35.7	235	35.5
453.povray	158	33.6	159	33.5	159	33.5	133	39.9	135	39.4	135	39.5
454.calculix	268	30.8	268	30.8	268	30.7	262	31.5	262	31.5	262	31.5
459.GemsFDTD	67.9	156	67.9	156	67.5	157	60.8	175	60.6	175	60.4	176
465.tonto	331	29.7	332	29.7	331	29.7	284	34.6	286	34.5	284	34.6
470.lbm	31.8	432	31.2	440	31.2	440	31.8	432	31.2	440	31.2	440
481.wrf	161	69.5	159	70.3	159	70.1	161	69.5	159	70.3	159	70.1
482.sphinx3	335	58.2	333	58.6	333	58.5	335	58.2	333	58.6	333	58.5

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
 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 wbspeccpu Wed Aug 6 06:18:34 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>

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei

SPECfp2006 = 76.9

Huawei CH220 (Intel Xeon E5-2640v2)

SPECfp_base2006 = 74.1

CPU2006 license: 3175

Test sponsor: Huawei

Tested by: Huawei

Test date: Aug-2014

Hardware Availability: Sep-2013

Software Availability: Sep-2013

Platform Notes (Continued)

```

From /proc/cpuinfo
model name : Intel(R) Xeon(R) CPU E5-2640 v2 @ 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
  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:      132103760 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 wbspeccpu 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 4 18:31

```

SPEC is set to: /spec
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/sdal       ext4  270G  73G  184G  29% /

```

```

Additional information from dmidecode:
Memory:
 16x Micron 18JSF1G72PDZ-1G6E 8 GB 1600 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 = "16"

```

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

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei

SPECfp2006 = 76.9

Huawei CH220 (Intel Xeon E5-2640v2)

SPECfp_base2006 = 74.1

CPU2006 license: 3175

Test sponsor: Huawei

Tested by: Huawei

Test date: Aug-2014

Hardware Availability: Sep-2013

Software Availability: Sep-2013

General Notes (Continued)

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

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 =	76.9
Huawei CH220 (Intel Xeon E5-2640v2)	SPECfp_base2006 =	74.1

CPU2006 license: 3175	Test date: Aug-2014
Test sponsor: Huawei	Hardware Availability: Sep-2013
Tested by: Huawei	Software Availability: Sep-2013

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: `basepeak = yes`

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 = 76.9

Huawei CH220 (Intel Xeon E5-2640v2)

SPECfp_base2006 = 74.1

CPU2006 license: 3175

Test sponsor: Huawei

Tested by: Huawei

Test date: Aug-2014

Hardware Availability: Sep-2013

Software Availability: Sep-2013

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-linux64.20111122.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-linux64.20111122.xml>

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



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei

SPECfp2006 = 76.9

Huawei CH220 (Intel Xeon E5-2640v2)

SPECfp_base2006 = 74.1

CPU2006 license: 3175

Test sponsor: Huawei

Tested by: Huawei

Test date: Aug-2014

Hardware Availability: Sep-2013

Software Availability: Sep-2013

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.

Tested with SPEC CPU2006 v1.2.
Report generated on Mon Sep 15 16:49:11 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 26 August 2014.