



SPEC[®] CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei

SPECfp[®]_rate2006 = 313

Huawei CH222 V3 (Intel Xeon E5-2609 v3)

SPECfp_rate_base2006 = 307

CPU2006 license: 3175

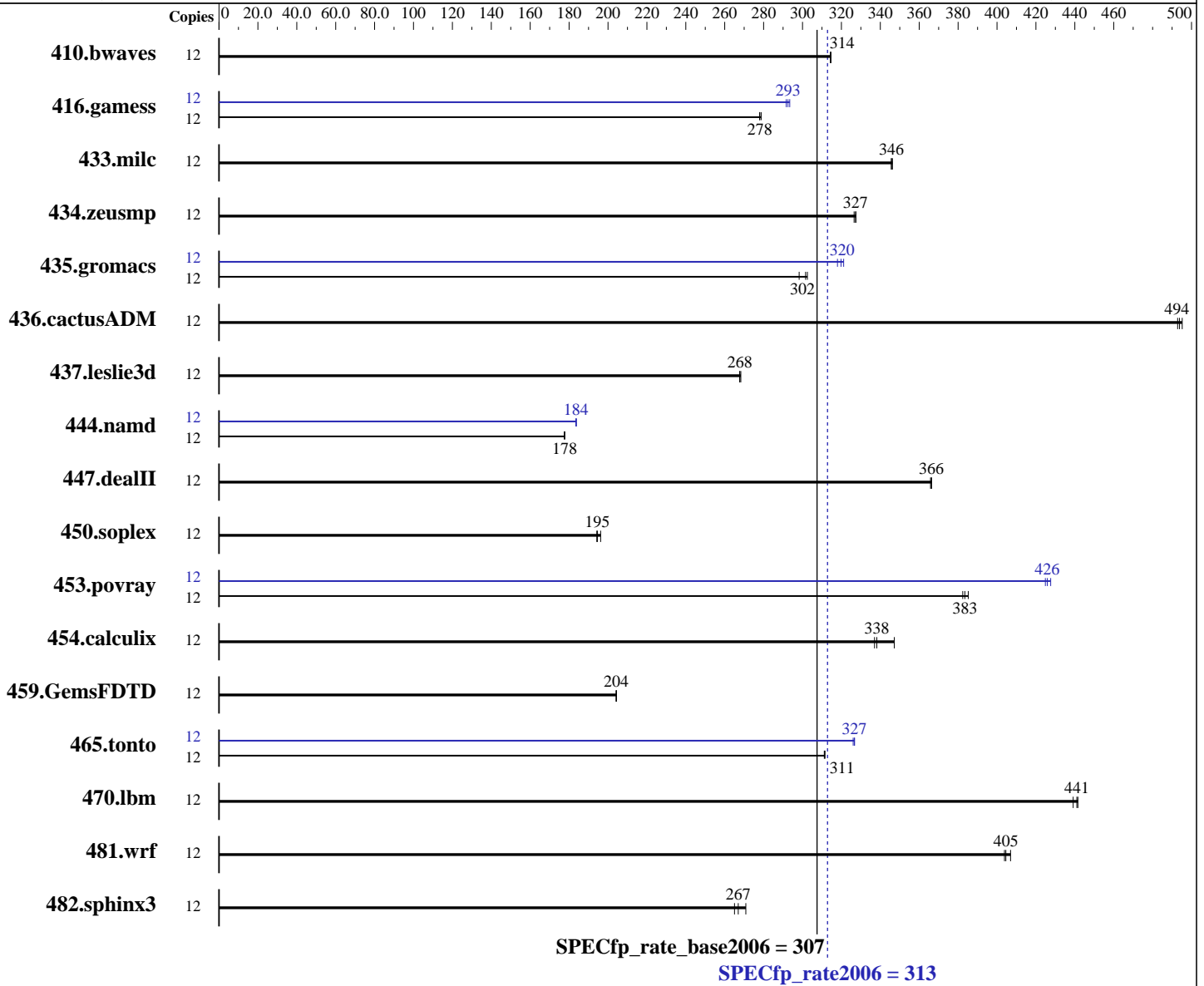
Test sponsor: Huawei

Tested by: Huawei

Test date: Jul-2014

Hardware Availability: Sep-2014

Software Availability: Nov-2013



Hardware

CPU Name: Intel Xeon E5-2609 v3
 CPU Characteristics:
 CPU MHz: 1900
 FPU: Integrated
 CPU(s) enabled: 12 cores, 2 chips, 6 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 14.0.0.080 of Intel C++ Studio XE for Linux;
 Fortran: Version 14.0.0.080 of Intel Fortran Studio XE for Linux
 Auto Parallel: No
 File System: ext4

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei

SPECfp_rate2006 = 313

Huawei CH222 V3 (Intel Xeon E5-2609 v3)

SPECfp_rate_base2006 = 307

CPU2006 license: 3175

Test sponsor: Huawei

Tested by: Huawei

Test date: Jul-2014

Hardware Availability: Sep-2014

Software Availability: Nov-2013

L3 Cache: 15 MB I+D on chip per chip
 Other Cache: None
 Memory: 128 GB (16 x 8 GB 2Rx4 PC4-2133P-R, running at 1600 MHz)
 Disk Subsystem: 1 x 256 GB SATA, SSD
 Other Hardware: None

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

Results Table

Benchmark	Base								Peak							
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio		
410.bwaves	12	<u>519</u>	<u>314</u>	518	315	519	314	12	<u>519</u>	<u>314</u>	518	315	519	314		
416.gamess	12	843	279	<u>845</u>	<u>278</u>	845	278	12	<u>803</u>	<u>293</u>	806	292	801	293		
433.milc	12	319	346	<u>319</u>	<u>346</u>	318	346	12	319	346	<u>319</u>	<u>346</u>	318	346		
434.zeusmp	12	<u>334</u>	<u>327</u>	334	327	333	327	12	<u>334</u>	<u>327</u>	334	327	333	327		
435.gromacs	12	<u>284</u>	<u>302</u>	283	302	287	298	12	267	321	269	318	<u>268</u>	<u>320</u>		
436.cactusADM	12	291	493	<u>290</u>	<u>494</u>	290	495	12	291	493	<u>290</u>	<u>494</u>	290	495		
437.leslie3d	12	420	268	<u>421</u>	<u>268</u>	421	268	12	420	268	<u>421</u>	<u>268</u>	421	268		
444.namd	12	<u>542</u>	<u>178</u>	542	178	542	178	12	524	184	525	183	<u>524</u>	<u>184</u>		
447.dealII	12	375	366	<u>375</u>	<u>366</u>	375	366	12	375	366	<u>375</u>	<u>366</u>	375	366		
450.soplex	12	<u>514</u>	<u>195</u>	515	194	510	196	12	<u>514</u>	<u>195</u>	515	194	510	196		
453.povray	12	<u>166</u>	<u>383</u>	167	382	166	385	12	<u>150</u>	<u>426</u>	149	428	150	425		
454.calculix	12	285	347	<u>293</u>	<u>338</u>	294	337	12	285	347	<u>293</u>	<u>338</u>	294	337		
459.GemsFDTD	12	<u>623</u>	<u>204</u>	624	204	623	204	12	<u>623</u>	<u>204</u>	624	204	623	204		
465.tonto	12	379	312	<u>379</u>	<u>311</u>	379	311	12	<u>361</u>	<u>327</u>	362	326	361	327		
470.lbm	12	<u>374</u>	<u>441</u>	373	442	375	439	12	<u>374</u>	<u>441</u>	373	442	375	439		
481.wrf	12	329	407	332	404	<u>331</u>	<u>405</u>	12	329	407	332	404	<u>331</u>	<u>405</u>		
482.sphinx3	12	<u>876</u>	<u>267</u>	863	271	882	265	12	<u>876</u>	<u>267</u>	863	271	882	265		

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"



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei

SPECfp_rate2006 = 313

Huawei CH222 V3 (Intel Xeon E5-2609 v3)

SPECfp_rate_base2006 = 307

CPU2006 license: 3175

Test sponsor: Huawei

Tested by: Huawei

Test date: Jul-2014

Hardware Availability: Sep-2014

Software Availability: Nov-2013

Platform Notes

BIOS configuration:

Set Power Efficiency Mode to Custom

Set Snoop Mode to HS

Set Hyper-Threading to Disabled

Baseboard Management Controller used to adjust the fan speed to 100%

Sysinfo program /spec/config/sysinfo.rev6818

\$Rev: 6818 \$ \$Date:: 2012-07-17 # \$ e86d102572650a6e4d596a3cee98f191

running on xjt Wed Jul 23 00:07:47 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 v3 @ 1.90GHz

2 "physical id"s (chips)

12 "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 : 6

siblings : 6

physical 0: cores 0 1 2 3 4 5

physical 1: cores 0 1 2 3 4 5

cache size : 15360 KB

From /proc/meminfo

MemTotal: 131928996 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 xjt 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 Jul 22 13:22

SPEC is set to: /spec

Filesystem	Type	Size	Used	Avail	Use%	Mounted on
/dev/sdal	ext4	222G	19G	192G	9%	/

Additional information from dmidecode:

BIOS Insyde Corp. 1.06 06/17/2014

Memory:

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei

SPECfp_rate2006 = 313

Huawei CH222 V3 (Intel Xeon E5-2609 v3)

SPECfp_rate_base2006 = 307

CPU2006 license: 3175

Test sponsor: Huawei

Tested by: Huawei

Test date: Jul-2014

Hardware Availability: Sep-2014

Software Availability: Nov-2013

Platform Notes (Continued)

8x Micron 18ASF1G72PDZ-2G1A1 8 GB 1600 MHz 1 rank
8x Micron 18ASF1G72PDZ-2G1A1 8 GB 1600 MHz 2 rank
8x NO DIMM NO DIMM 3 rank

(End of data from sysinfo program)

General Notes

Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = "/spec/libs/32:/spec/libs/64:/spec/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:
echo 1> /proc/sys/vm/drop_caches
runspec command invoked through numactl i.e.:
numactl --interleave=all runspec <etc>
The Huawei CH121 V3 and Huawei CH222 V3 are electronically equivalent.
The results have been measured on a Huawei CH121 V3 model

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

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei

SPECfp_rate2006 = 313

Huawei CH222 V3 (Intel Xeon E5-2609 v3)

SPECfp_rate_base2006 = 307

CPU2006 license: 3175

Test date: Jul-2014

Test sponsor: Huawei

Hardware Availability: Sep-2014

Tested by: Huawei

Software Availability: Nov-2013

Base Portability Flags (Continued)

```

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:

```

-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32
-ansi-alias -opt-mem-layout-trans=3

```

C++ benchmarks:

```

-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32
-ansi-alias -opt-mem-layout-trans=3

```

Fortran benchmarks:

```

-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch

```

Benchmarks using both Fortran and C:

```

-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32
-ansi-alias -opt-mem-layout-trans=3

```

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

```



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei

SPECfp_rate2006 = 313

Huawei CH222 V3 (Intel Xeon E5-2609 v3)

SPECfp_rate_base2006 = 307

CPU2006 license: 3175

Test sponsor: Huawei

Tested by: Huawei

Test date: Jul-2014

Hardware Availability: Sep-2014

Software Availability: Nov-2013

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:

433.milc: basepeak = yes

470.lbm: basepeak = yes

482.sphinx3: basepeak = yes

C++ benchmarks:

444.namd: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2)
-opt-mem-layout-trans=3(pass 2) -prof-use(pass 2) -fno-alias
-auto-ilp32

447.dealII: basepeak = yes

450.soplex: basepeak = yes

453.povray: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2)
-opt-mem-layout-trans=3(pass 2) -prof-use(pass 2) -unroll4
-ansi-alias

Fortran benchmarks:

410.bwaves: basepeak = yes

416.gamess: -xCORE-AVX2(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-

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

459.GemsFDTD: basepeak = yes

465.tonto: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -unroll4
-auto -inline-calloc -opt-malloc-options=3

Benchmarks using both Fortran and C:

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei

SPECfp_rate2006 = 313

Huawei CH222 V3 (Intel Xeon E5-2609 v3)

SPECfp_rate_base2006 = 307

CPU2006 license: 3175

Test sponsor: Huawei

Tested by: Huawei

Test date: Jul-2014

Hardware Availability: Sep-2014

Software Availability: Nov-2013

Peak Optimization Flags (Continued)

435.gromacs: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2)
-opt-mem-layout-trans=3(pass 2) -prof-use(pass 2)
-opt-prefetch -auto-ilp32

436.cactusADM: basepeak = yes

454.calculix: basepeak = yes

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-ic14.0-official-linux64.20140128.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-ic14.0-official-linux64.20140128.xml>

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

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 Wed Oct 22 12:20:12 2014 by SPEC CPU2006 PS/PDF formatter v6932.

Originally published on 22 October 2014.