



SPEC[®] CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei

SPECfp[®]2006 = 56.2

Huawei RH2288 V3 (Intel Xeon E5-2603 v3)

SPECfp_base2006 = 54.6

CPU2006 license: 3175

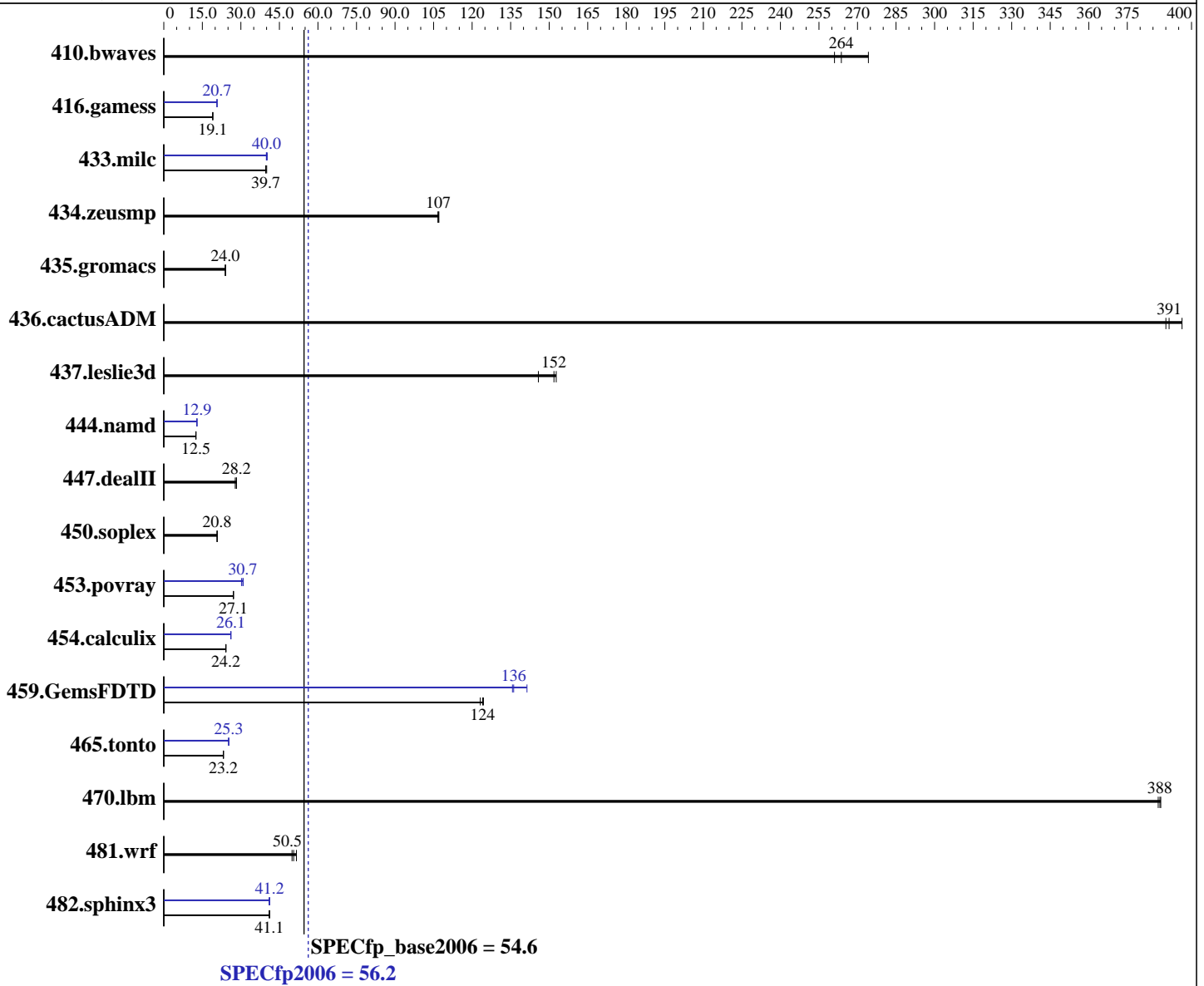
Test date: Nov-2014

Test sponsor: Huawei

Hardware Availability: Sep-2014

Tested by: Huawei

Software Availability: Jun-2014



Hardware

CPU Name: Intel Xeon E5-2603 v3
 CPU Characteristics:
 CPU MHz: 1600
 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 7.0 (Maipo)
 3.10.0-123.el7.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: Yes
 File System: xfs

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei

SPECfp2006 = **56.2**

Huawei RH2288 V3 (Intel Xeon E5-2603 v3)

SPECfp_base2006 = **54.6**

CPU2006 license: 3175

Test sponsor: Huawei

Tested by: Huawei

Test date: Nov-2014

Hardware Availability: Sep-2014

Software Availability: Jun-2014

L3 Cache: 15 MB I+D on chip per chip
Other Cache: None
Memory: 256 GB (16 x 16 GB 2Rx4 PC4-2133P-R, running at 1600 MHz)
Disk Subsystem: 1 x 500 GB SATA, 7200 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	49.6	274	52.1	261	51.5	264	49.6	274	52.1	261	51.5	264
416.gamess	1030	19.0	1026	19.1	1027	19.1	946	20.7	945	20.7	945	20.7
433.milc	229	40.0	231	39.7	231	39.7	230	39.9	230	40.0	228	40.3
434.zeusmp	85.3	107	85.2	107	85.0	107	85.3	107	85.2	107	85.0	107
435.gromacs	298	24.0	299	23.9	297	24.0	298	24.0	299	23.9	297	24.0
436.cactusADM	30.6	390	30.5	391	30.2	396	30.6	390	30.5	391	30.2	396
437.leslie3d	61.5	153	64.5	146	61.9	152	61.5	153	64.5	146	61.9	152
444.namd	641	12.5	642	12.5	641	12.5	621	12.9	622	12.9	622	12.9
447.dealII	412	27.8	405	28.3	405	28.2	412	27.8	405	28.3	405	28.2
450.soplex	402	20.8	402	20.7	401	20.8	402	20.8	402	20.7	401	20.8
453.povray	197	27.1	196	27.2	197	27.1	173	30.7	176	30.2	172	30.9
454.calculix	342	24.1	341	24.2	341	24.2	316	26.1	316	26.1	316	26.1
459.GemsFDTD	85.5	124	85.3	124	86.1	123	78.2	136	75.1	141	77.9	136
465.tonto	423	23.3	425	23.1	425	23.2	390	25.2	390	25.3	389	25.3
470.lbm	35.4	388	35.5	387	35.4	388	35.4	388	35.5	387	35.4	388
481.wrf	221	50.5	216	51.6	224	49.9	221	50.5	216	51.6	224	49.9
482.sphinx3	475	41.0	474	41.1	473	41.2	476	41.0	473	41.2	473	41.2

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 Snoop Mode to HS
Baseboard Management Controller used to adjust the fan speed to 100%
Sysinfo program /spec14/config/sysinfo.rev6818
\$Rev: 6818 \$ \$Date:: 2012-07-17 #\$ e86d102572650a6e4d596a3cee98f191
running on localhost.localdomain Sat Nov 15 07:42:58 2014

This section contains SUT (System Under Test) info as seen by

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei

SPECfp2006 = 56.2

Huawei RH2288 V3 (Intel Xeon E5-2603 v3)

SPECfp_base2006 = 54.6

CPU2006 license: 3175

Test sponsor: Huawei

Tested by: Huawei

Test date: Nov-2014

Hardware Availability: Sep-2014

Software Availability: Jun-2014

Platform Notes (Continued)

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 E5-2603 v3 @ 1.60GHz
 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:      263721960 kB
HugePages_Total:      0
Hugepagesize:    2048 kB

```

```

From /etc/*release* /etc/*version*
os-release:
NAME="Red Hat Enterprise Linux Server"
VERSION="7.0 (Maipo)"
ID="rhel"
ID_LIKE="fedora"
VERSION_ID="7.0"
PRETTY_NAME="Red Hat Enterprise Linux Server 7.0 (Maipo)"
ANSI_COLOR="0;31"
CPE_NAME="cpe:/o:redhat:enterprise_linux:7.0:GA:server"
redhat-release: Red Hat Enterprise Linux Server release 7.0 (Maipo)
system-release: Red Hat Enterprise Linux Server release 7.0 (Maipo)
system-release-cpe: cpe:/o:redhat:enterprise_linux:7.0:ga:server

```

```

uname -a:
Linux localhost.localdomain 3.10.0-123.el7.x86_64 #1 SMP Mon May 5 11:16:57
EDT 2014 x86_64 x86_64 x86_64 GNU/Linux

```

run-level 3 Nov 14 10:29

```

SPEC is set to: /spec14
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/sdal       xfs   98G   17G   81G  18% /

```

```

Additional information from dmidecode:
BIOS Insyde Corp. 1.16 09/02/2014
Memory:
 8x Samsung M393A2G40DB0-CPB 16 GB 1600 MHz 1 rank
 8x Samsung M393A2G40DB0-CPB 16 GB 1600 MHz 2 rank

```

(End of data from sysinfo program)



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei

SPECfp2006 = 56.2

Huawei RH2288 V3 (Intel Xeon E5-2603 v3)

SPECfp_base2006 = 54.6

CPU2006 license: 3175

Test date: Nov-2014

Test sponsor: Huawei

Hardware Availability: Sep-2014

Tested by: Huawei

Software Availability: Jun-2014

General Notes

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

LD_LIBRARY_PATH = "/spec14/libs/32:/spec14/libs/64:/spec14/sh"

OMP_NUM_THREADS = "12"

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

runspec command invoked through numactl i.e.:

numactl --interleave=all runspec <etc>

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



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei

SPECfp2006 = 56.2

Huawei RH2288 V3 (Intel Xeon E5-2603 v3)

SPECfp_base2006 = 54.6

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

Test date: Nov-2014
Hardware Availability: Sep-2014
Software Availability: Jun-2014

Base Optimization Flags

C benchmarks:

-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -opt-prefetch
-ansi-alias

C++ benchmarks:

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

Fortran benchmarks:

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

Benchmarks using both Fortran and C:

-xCORE-AVX2 -ipo -O3 -no-prec-div -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: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)
-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)
-auto-ilp32 -ansi-alias

470.lbm: basepeak = yes

482.sphinx3: -xCORE-AVX2 -ipo -O3 -no-prec-div -unroll2 -ansi-alias
-parallel

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei

SPECfp2006 = 56.2

Huawei RH2288 V3 (Intel Xeon E5-2603 v3)

SPECfp_base2006 = 54.6

CPU2006 license: 3175

Test sponsor: Huawei

Tested by: Huawei

Test date: Nov-2014

Hardware Availability: Sep-2014

Software Availability: Jun-2014

Peak Optimization Flags (Continued)

C++ benchmarks:

444.namd: -xCORE-AVX2(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

447.dealIII: 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) -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: -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 -opt-prefetch -parallel

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)
-inline-calloc -opt-malloc-options=3 -auto -unroll4

Benchmarks using both Fortran and C:

435.gromacs: basepeak = yes

436.cactusADM: basepeak = yes

454.calculix: -xCORE-AVX2 -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-ic15.0-official-linux64.html>

<http://www.spec.org/cpu2006/flags/Huawei-Platform-Settings-HASWELL-V1.1.20141216.html>



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei

SPECfp2006 = 56.2

Huawei RH2288 V3 (Intel Xeon E5-2603 v3)

SPECfp_base2006 = 54.6

CPU2006 license: 3175

Test sponsor: Huawei

Tested by: Huawei

Test date: Nov-2014

Hardware Availability: Sep-2014

Software Availability: Jun-2014

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

<http://www.spec.org/cpu2006/flags/Intel-ic15.0-official-linux64.xml>

<http://www.spec.org/cpu2006/flags/Huawei-Platform-Settings-HASWELL-V1.1.20141216.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 Tue Dec 30 16:11:01 2014 by SPEC CPU2006 PS/PDF formatter v6932.

Originally published on 30 December 2014.