



SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei

SPECfp®_rate2006 = 509

Huawei E9000 CH121 (Intel Xeon E5-2680)

SPECfp_rate_base2006 = 497

CPU2006 license: 3175

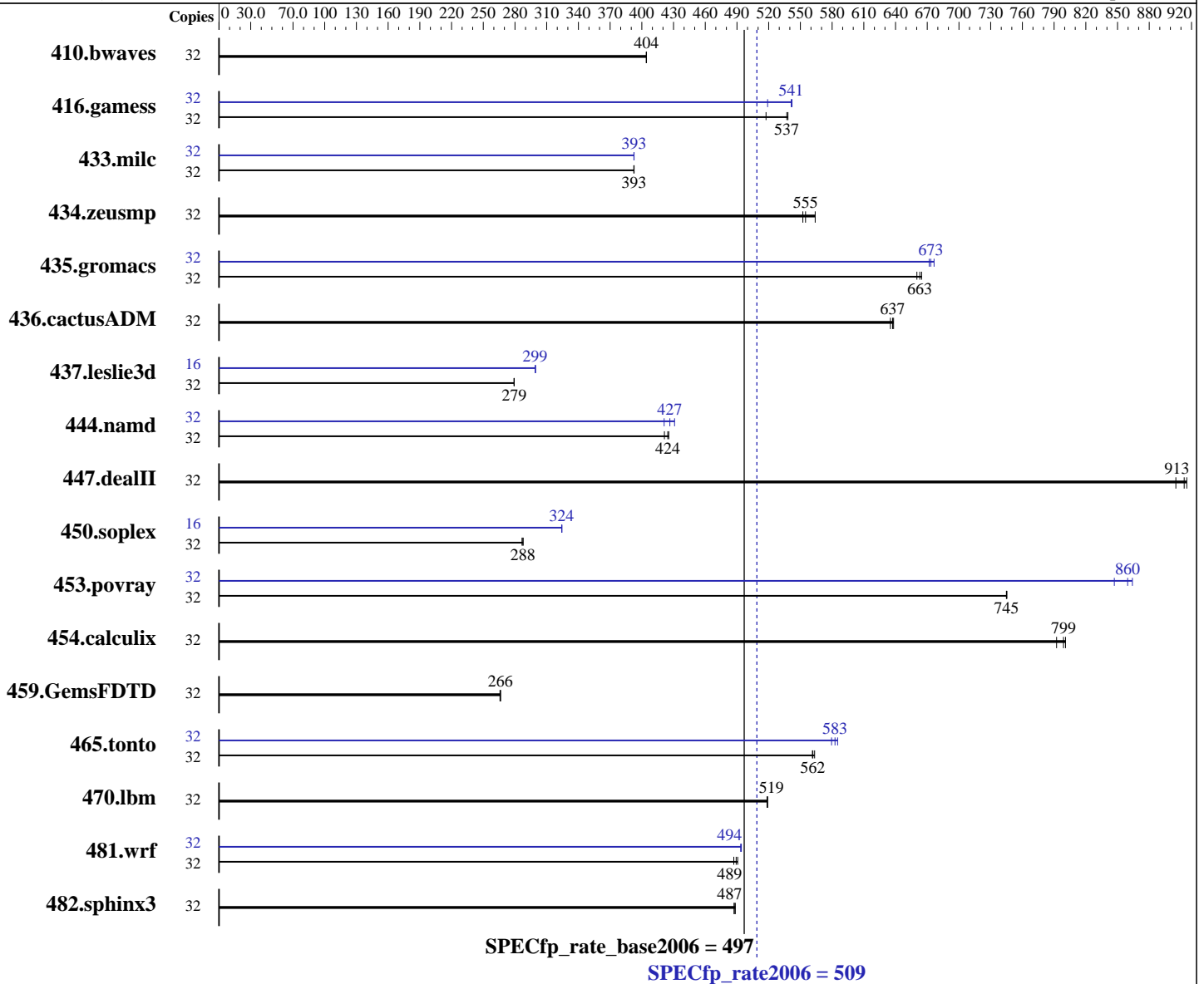
Test sponsor: Huawei

Tested by: Huawei

Test date: Sep-2013

Hardware Availability: Feb-2012

Software Availability: Sep-2013



Hardware

CPU Name: Intel Xeon E5-2680
 CPU Characteristics: Intel Turbo Boost Technology up to 3.50 GHz
 CPU MHz: 2700
 FPU: Integrated
 CPU(s) enabled: 16 cores, 2 chips, 8 cores/chip, 2 threads/core
 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 6.4 (Santiago)
 2.6.32-358.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 = 509

Huawei E9000 CH121 (Intel Xeon E5-2680)

SPECfp_rate_base2006 = 497

CPU2006 license: 3175

Test sponsor: Huawei

Tested by: Huawei

Test date: Sep-2013

Hardware Availability: Feb-2012

Software Availability: Sep-2013

L3 Cache: 20 MB I+D on chip per chip
 Other Cache: None
 Memory: 128 GB (16 x 8 GB 2Rx4 PC3-12800R-13, ECC)
 Disk Subsystem: 1 x 600 GB SAS, 10K RPM
 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	32	1075	404	1076	404	<u>1076</u>	<u>404</u>	32	1075	404	1076	404	<u>1076</u>	<u>404</u>
416.gamess	32	1164	538	<u>1167</u>	<u>537</u>	1211	517	32	1156	542	<u>1157</u>	<u>541</u>	1207	519
433.milc	32	748	393	749	392	<u>748</u>	<u>393</u>	32	748	393	<u>748</u>	<u>393</u>	748	393
434.zeusmp	32	<u>525</u>	<u>555</u>	516	564	527	552	32	<u>525</u>	<u>555</u>	516	564	527	552
435.gromacs	32	<u>345</u>	<u>663</u>	344	665	346	660	32	338	676	<u>339</u>	<u>673</u>	340	672
436.cactusADM	32	599	638	<u>600</u>	<u>637</u>	602	635	32	599	638	<u>600</u>	<u>637</u>	602	635
437.leslie3d	32	1077	279	1078	279	<u>1077</u>	<u>279</u>	16	<u>503</u>	<u>299</u>	503	299	502	300
444.namd	32	<u>605</u>	<u>424</u>	609	421	603	426	32	609	421	<u>602</u>	<u>427</u>	596	431
447.dealII	32	<u>401</u>	<u>913</u>	400	915	404	905	32	<u>401</u>	<u>913</u>	400	915	404	905
450.soplex	32	<u>928</u>	<u>288</u>	928	288	931	287	16	412	324	411	324	<u>412</u>	<u>324</u>
453.povray	32	<u>229</u>	<u>745</u>	228	745	229	745	32	<u>198</u>	<u>860</u>	201	847	197	864
454.calculix	32	<u>330</u>	<u>799</u>	330	801	333	792	32	<u>330</u>	<u>799</u>	330	801	333	792
459.GemsFDTD	32	1274	266	<u>1276</u>	<u>266</u>	1277	266	32	1274	266	<u>1276</u>	<u>266</u>	1277	266
465.tonto	32	559	563	561	561	<u>560</u>	<u>562</u>	32	<u>540</u>	<u>583</u>	538	585	543	579
470.lbm	32	847	519	848	518	<u>847</u>	<u>519</u>	32	847	519	848	518	<u>847</u>	<u>519</u>
481.wrf	32	728	491	734	487	<u>731</u>	<u>489</u>	32	724	494	<u>724</u>	<u>494</u>	723	494
482.sphinx3	32	1280	487	1277	488	<u>1279</u>	<u>487</u>	32	1280	487	1277	488	<u>1279</u>	<u>487</u>

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"

Platform Notes

BIOS Settings:
Set Power Efficiency Mode to Performance (Default = custom)
Sysinfo program /spec/config/sysinfo.rev6818

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei

SPECfp_rate2006 = 509

Huawei E9000 CH121 (Intel Xeon E5-2680)

SPECfp_rate_base2006 = 497

CPU2006 license: 3175

Test sponsor: Huawei

Tested by: Huawei

Test date: Sep-2013

Hardware Availability: Feb-2012

Software Availability: Sep-2013

Platform Notes (Continued)

\$Rev: 6818 \$ \$Date:: 2012-07-17 #\$ e86d102572650a6e4d596a3cee98f191
running on speccpu Thu Sep 26 09:07:24 2013

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 E5-2680 0 @ 2.70GHz
 2 "physical id"s (chips)
 32 "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  : 16
  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:      132117844 kB
HugePages_Total:    0
Hugepagesize:    2048 kB
```

```
/usr/bin/lsb_release -d
Red Hat Enterprise Linux Server release 6.4 (Santiago)
```

```
From /etc/*release* /etc/*version*
redhat-release: Red Hat Enterprise Linux Server release 6.4 (Santiago)
system-release: Red Hat Enterprise Linux Server release 6.4 (Santiago)
system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server
```

```
uname -a:
Linux speccpu 2.6.32-358.el6.x86_64 #1 SMP Tue Jan 29 11:47:41 EST 2013
x86_64 x86_64 x86_64 GNU/Linux
```

```
run-level 3 Sep 25 19:07
```

```
SPEC is set to: /spec
Filesystem      Type      Size  Used Avail Use% Mounted on
/dev/sdal        ext4      481G  79G  378G  18% /
```

```
Additional information from dmidecode:
BIOS Insyde Corp. RMISV053 01/18/2013
Memory:
 2x Hynix HMT31GR7CFR4C-PB 8 GB 1600 MHz
 8x Micron 36JSF1G72PZ-1G6K1 8 GB 1600 MHz
 8x NO DIMM NO DIMM
 6x Samsung M393B1K70DH0-CK0 8 GB 1600 MHz
```

(End of data from sysinfo program)



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei

SPECfp_rate2006 = 509

Huawei E9000 CH121 (Intel Xeon E5-2680)

SPECfp_rate_base2006 = 497

CPU2006 license: 3175

Test date: Sep-2013

Test sponsor: Huawei

Hardware Availability: Feb-2012

Tested by: Huawei

Software Availability: Sep-2013

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 RHEL 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>

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.deallI: -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

SPECfp_rate2006 = 509

Huawei E9000 CH121 (Intel Xeon E5-2680)

SPECfp_rate_base2006 = 497

CPU2006 license: 3175

Test sponsor: Huawei

Tested by: Huawei

Test date: Sep-2013

Hardware Availability: Feb-2012

Software Availability: Sep-2013

Base Optimization Flags

C benchmarks:

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

C++ benchmarks:

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

Fortran benchmarks:

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

Benchmarks using both Fortran and C:

-xAVX -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 (except as noted below):

icpc -m64

450.soplex: icpc -m32

Fortran benchmarks:

ifort -m64

Benchmarks using both Fortran and C:

icc -m64 ifort -m64

Peak 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
453.povray: -DSPEC_CPU_LP64
454.calculix: -DSPEC_CPU_LP64 -nofor_main
459.GemsFDTD: -DSPEC_CPU_LP64

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei

SPECfp_rate2006 = 509

Huawei E9000 CH121 (Intel Xeon E5-2680)

SPECfp_rate_base2006 = 497

CPU2006 license: 3175

Test sponsor: Huawei

Tested by: Huawei

Test date: Sep-2013

Hardware Availability: Feb-2012

Software Availability: Sep-2013

Peak Portability Flags (Continued)

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

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) -opt-mem-layout-trans=3(pass 2)
 -prof-use(pass 2) -auto-ilp32

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) -opt-mem-layout-trans=3(pass 2)
 -prof-use(pass 2) -fno-alias -auto-ilp32

447.dealIII: basepeak = yes

450.soplex: -xAVX(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-malloc-options=3

453.povray: -xAVX(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: -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-

434.zeusmp: basepeak = yes

437.leslie3d: -xAVX -ipo -O3 -no-prec-div -opt-prefetch

459.GemsFDTD: basepeak = yes

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Huawei

SPECfp_rate2006 = 509

Huawei E9000 CH121 (Intel Xeon E5-2680)

SPECfp_rate_base2006 = 497

CPU2006 license: 3175

Test sponsor: Huawei

Tested by: Huawei

Test date: Sep-2013

Hardware Availability: Feb-2012

Software Availability: Sep-2013

Peak Optimization Flags (Continued)

465.tonto: -xAVX(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:

435.gromacs: -xAVX(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: -xAVX -ipo -O3 -no-prec-div -auto-ilp32

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-revE.20121120.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-revE.20121120.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 Thu Jul 24 18:52:56 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 22 October 2013.