



SPEC[®] CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.

ASUS TS700-E8(Z10PE-D16WS) Server System (Intel Xeon E5-2699 v3)

SPECfp[®]_rate2006 = 987

SPECfp_rate_base2006 = 955

CPU2006 license: 9016

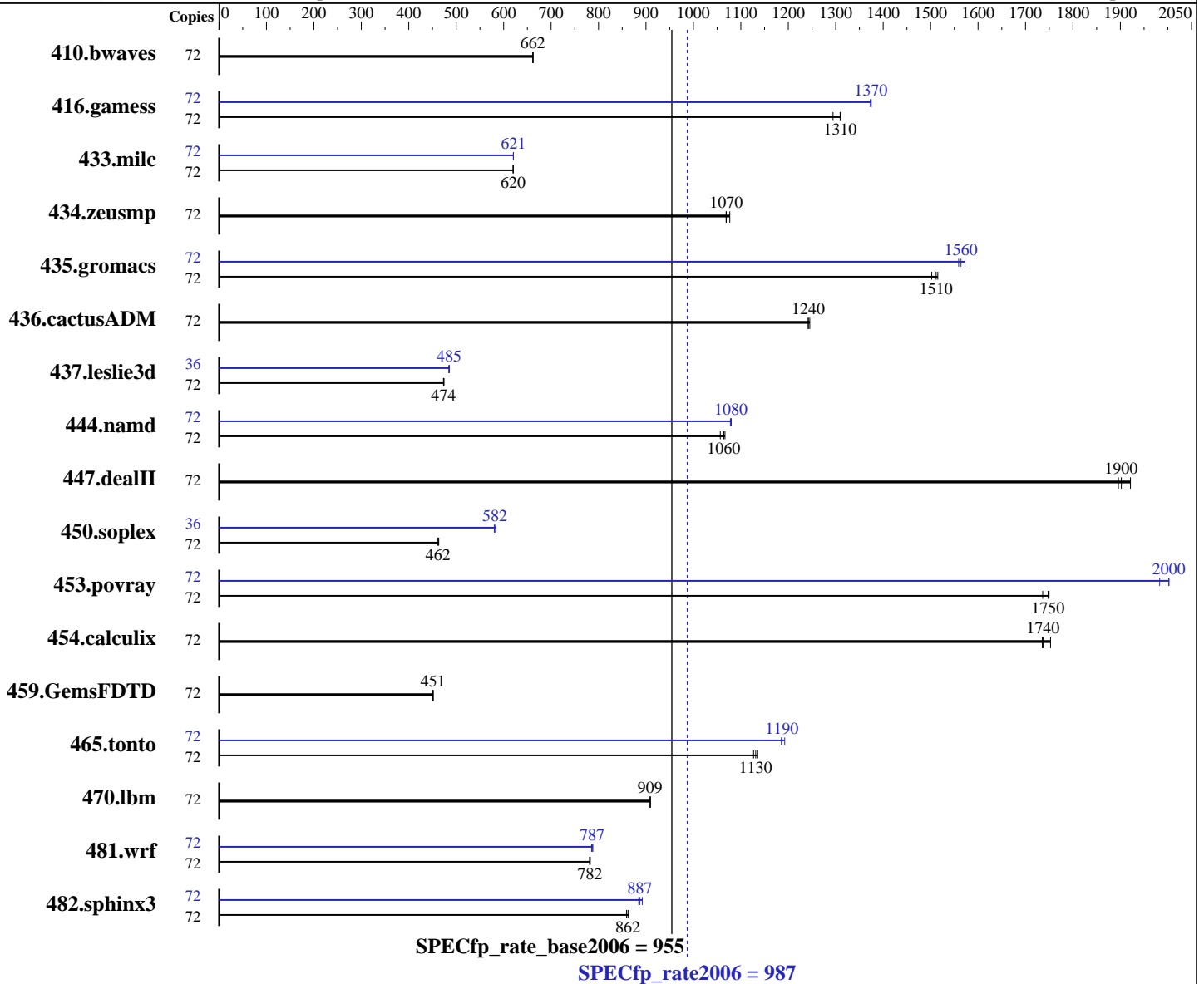
Test sponsor: ASUSTeK Computer Inc.

Tested by: ASUSTeK Computer Inc.

Test date: Feb-2015

Hardware Availability: Sep-2014

Software Availability: Sep-2013



Hardware

CPU Name: Intel Xeon E5-2699 v3
 CPU Characteristics: Intel Turbo Boost Technology up to 3.60 GHz
 CPU MHz: 2300
 FPU: Integrated
 CPU(s) enabled: 36 cores, 2 chips, 18 cores/chip, 2 threads/core
 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 6.5 (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 2006-2015 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.

SPECfp_rate2006 = **987**

ASUS TS700-E8(Z10PE-D16WS) Server System (Intel Xeon E5-2699 v3)

SPECfp_rate_base2006 = **955**

CPU2006 license: 9016

Test date: Feb-2015

Test sponsor: ASUSTeK Computer Inc.

Hardware Availability: Sep-2014

Tested by: ASUSTeK Computer Inc.

Software Availability: Sep-2013

L3 Cache: 45 MB I+D on chip per chip
 Other Cache: None
 Memory: 256 GB (16 x 16 GB 2Rx4 PC4-2133P-R)
 Disk Subsystem: HITACHI HDP725050GLA380 1 x 500 GB SATA, 7200 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	72	1479	662	1479	661	1478	662	72	1479	662	1479	661	1478	662
416.gamess	72	1077	1310	1089	1290	1076	1310	72	1026	1370	1027	1370	1025	1370
433.milc	72	1066	620	1066	620	1066	620	72	1065	621	1065	621	1065	621
434.zeusmp	72	613	1070	613	1070	609	1080	72	613	1070	613	1070	609	1080
435.gromacs	72	340	1510	342	1500	339	1520	72	329	1560	330	1560	327	1570
436.cactusADM	72	693	1240	693	1240	691	1250	72	693	1240	693	1240	691	1250
437.leslie3d	72	1427	474	1430	473	1429	474	36	697	485	699	484	697	485
444.namd	72	541	1070	543	1060	546	1060	72	535	1080	535	1080	536	1080
447.dealII	72	429	1920	434	1900	433	1900	72	429	1920	434	1900	433	1900
450.soplex	72	1300	462	1301	462	1296	463	36	517	580	516	582	514	584
453.povray	72	221	1740	219	1750	219	1750	72	191	2000	193	1980	191	2000
454.calculix	72	342	1740	339	1750	342	1740	72	342	1740	339	1750	342	1740
459.GemsFDTD	72	1693	451	1693	451	1693	451	72	1693	451	1693	451	1693	451
465.tonto	72	624	1140	629	1130	626	1130	72	598	1190	597	1190	594	1190
470.lbm	72	1089	909	1088	909	1088	909	72	1089	909	1088	909	1088	909
481.wrf	72	1030	781	1029	782	1028	783	72	1024	785	1022	787	1020	788
482.sphinx3	72	1625	864	1633	859	1628	862	72	1573	892	1586	885	1582	887

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Submit Notes

The config file option 'submit' was used.

Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"

Platform Notes

BIOS configuration:
 Snoop Mode = Cluster on Die
 OC Tune Level = Level 2
 Energy Performance BIAS setting = Performance
 Link Frequency Select = 9.6GT/s

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.

SPECfp_rate2006 = 987

ASUS TS700-E8(Z10PE-D16WS) Server System (Intel Xeon E5-2699 v3)

SPECfp_rate_base2006 = 955

CPU2006 license: 9016

Test date: Feb-2015

Test sponsor: ASUSTeK Computer Inc.

Hardware Availability: Sep-2014

Tested by: ASUSTeK Computer Inc.

Software Availability: Sep-2013

Platform Notes (Continued)

```

Enforce POR = Disabled
Memory Frequency = 2133
FAN = Full Speed
Sysinfo program /cpu2006/config/sysinfo.rev6818
$Rev: 6818 $ $Date:: 2012-07-17 #$ e86d102572650a6e4d596a3cee98f191
running on localhost.localdomain Sun Feb 1 10:36:55 2015

```

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 E5-2699 v3 @ 2.30GHz
 2 "physical id"s (chips)
 72 "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    : 18
  siblings    : 36
  physical 0: cores 0 1 2 3 4 8 9 10 11 16 17 18 19 20 24 25 26 27
  physical 1: cores 0 1 2 3 4 8 9 10 11 16 17 18 19 20 24 25 26 27
cache size     : 23040 KB

```

```

From /proc/meminfo
MemTotal:      264630080 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 localhost.localdomain 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 Jan 30 19:45

```

SPEC is set to: /cpu2006
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/sda1       ext4  459G  198G  238G  46% /

```

```

Additional information from dmidecode:
BIOS American Megatrends Inc. 0902 01/28/2015
Memory:
 16x 16 GB
 16x Micron 36ASF2G72PZ-2G1A2 16 GB 2133 MHz 2 rank
Continued on next page

```



SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.

SPECfp_rate2006 = 987

ASUS TS700-E8(Z10PE-D16WS) Server System (Intel Xeon E5-2699 v3)

SPECfp_rate_base2006 = 955

CPU2006 license: 9016

Test date: Feb-2015

Test sponsor: ASUSTeK Computer Inc.

Hardware Availability: Sep-2014

Tested by: ASUSTeK Computer Inc.

Software Availability: Sep-2013

Platform Notes (Continued)

(End of data from sysinfo program)

General Notes

Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = "/cpu2006/libs/32:/cpu2006/libs/64:/cpu2006/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>

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

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.

SPECfp_rate2006 = 987

ASUS TS700-E8(Z10PE-D16WS) Server System (Intel Xeon E5-2699 v3)

SPECfp_rate_base2006 = 955

CPU2006 license: 9016

Test date: Feb-2015

Test sponsor: ASUSTeK Computer Inc.

Hardware Availability: Sep-2014

Tested by: ASUSTeK Computer Inc.

Software Availability: Sep-2013

Base 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

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 (except as noted below):

icc -m64

482.sphinx3: icc -m32

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

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.

SPECfp_rate2006 = 987

ASUS TS700-E8(Z10PE-D16WS) Server System (Intel Xeon E5-2699 v3)

SPECfp_rate_base2006 = 955

CPU2006 license: 9016

Test date: Feb-2015

Test sponsor: ASUSTeK Computer Inc.

Hardware Availability: Sep-2014

Tested by: ASUSTeK Computer Inc.

Software Availability: Sep-2013

Peak Portability Flags (Continued)

```

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
465.tonto: -DSPEC_CPU_LP64
470.lbm: -DSPEC_CPU_LP64
481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX

```

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

470.lbm: basepeak = yes

482.sphinx3: -xCORE-AVX2 -ipo -O3 -no-prec-div -opt-mem-layout-trans=3
            -unroll2

```

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: -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-malloc-options=3

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

```

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.

SPECfp_rate2006 = 987

ASUS TS700-E8(Z10PE-D16WS) Server System (Intel Xeon E5-2699 v3)

SPECfp_rate_base2006 = 955

CPU2006 license: 9016

Test date: Feb-2015

Test sponsor: ASUSTeK Computer Inc.

Hardware Availability: Sep-2014

Tested by: ASUSTeK Computer Inc.

Software Availability: Sep-2013

Peak Optimization Flags (Continued)

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

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:

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: -xCORE-AVX2 -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-revC.html>

<http://www.spec.org/cpu2006/flags/ASUSTekPlatformWS-Settings-V1.2-revA.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-revC.xml>

<http://www.spec.org/cpu2006/flags/ASUSTekPlatformWS-Settings-V1.2-revA.xml>



SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

ASUSTeK Computer Inc.

ASUS TS700-E8(Z10PE-D16WS) Server System (Intel Xeon E5-2699 v3)

SPECfp_rate2006 = 987

SPECfp_rate_base2006 = 955

CPU2006 license: 9016

Test sponsor: ASUSTeK Computer Inc.

Tested by: ASUSTeK Computer Inc.

Test date: Feb-2015

Hardware Availability: Sep-2014

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 Wed Feb 25 11:31:17 2015 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 24 February 2015.