



SPEC[®] CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Dell Inc.

SPECfp[®]2006 = 112

PowerEdge R730 (Intel Xeon E5-2685 v3, 2.60 GHz)

SPECfp_base2006 = 107

CPU2006 license: 55

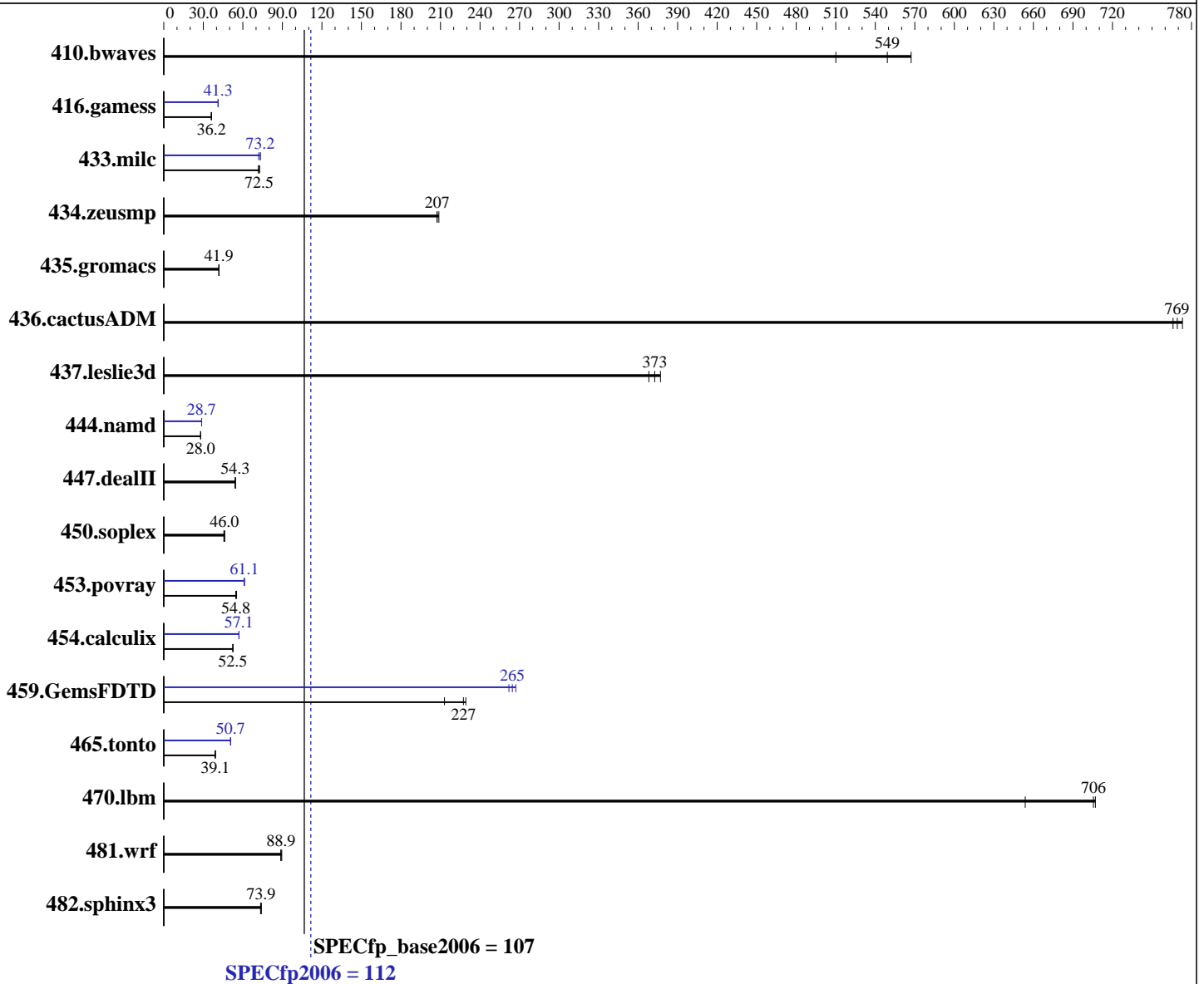
Test date: Jan-2015

Test sponsor: Dell Inc.

Hardware Availability: Apr-2015

Tested by: Dell Inc.

Software Availability: Nov-2014



Hardware

CPU Name: Intel Xeon E5-2685 v3
 CPU Characteristics: Intel Turbo Boost Technology up to 3.30 GHz
 CPU MHz: 2600
 FPU: Integrated
 CPU(s) enabled: 24 cores, 2 chips, 12 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: SUSE Linux Enterprise Server 12
 3.12.28-4-default
 Compiler: C/C++: Version 15.0.0.090 of Intel C++ Studio XE for Linux;
 Fortran: Version 15.0.0.090 of Intel Fortran Studio XE for Linux
 Auto Parallel: Yes
 File System: ext4
 System State: Run level 3 (multi-user)

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Dell Inc.

SPECfp2006 = 112

PowerEdge R730 (Intel Xeon E5-2685 v3, 2.60 GHz)

SPECfp_base2006 = 107

CPU2006 license: 55

Test date: Jan-2015

Test sponsor: Dell Inc.

Hardware Availability: Apr-2015

Tested by: Dell Inc.

Software Availability: Nov-2014

L3 Cache: 30 MB I+D on chip per chip
 Other Cache: None
 Memory: 256 GB (16 x 16 GB 2Rx4 PC4-2133P-R)
 Disk Subsystem: 2 x 300 GB 10000 RPM SAS RAID0
 Other Hardware: None

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	26.6	510	24.0	567	<u>24.7</u>	<u>549</u>	26.6	510	24.0	567	<u>24.7</u>	<u>549</u>
416.gamess	540	36.2	<u>540</u>	<u>36.2</u>	545	35.9	<u>474</u>	<u>41.3</u>	476	41.1	474	41.3
433.milc	128	71.8	126	72.7	<u>127</u>	<u>72.5</u>	128	71.9	<u>125</u>	<u>73.2</u>	125	73.2
434.zeusmp	43.6	209	43.9	207	<u>43.9</u>	<u>207</u>	43.6	209	43.9	207	<u>43.9</u>	<u>207</u>
435.gromacs	171	41.8	170	41.9	<u>171</u>	<u>41.9</u>	171	41.8	170	41.9	<u>171</u>	<u>41.9</u>
436.cactusADM	15.5	773	<u>15.5</u>	<u>769</u>	15.6	766	15.5	773	<u>15.5</u>	<u>769</u>	15.6	766
437.leslie3d	25.5	368	24.9	377	<u>25.2</u>	<u>373</u>	25.5	368	24.9	377	<u>25.2</u>	<u>373</u>
444.namd	287	28.0	<u>287</u>	<u>28.0</u>	287	28.0	<u>280</u>	<u>28.7</u>	279	28.7	280	28.7
447.dealII	210	54.4	<u>211</u>	<u>54.3</u>	211	54.1	210	54.4	<u>211</u>	<u>54.3</u>	211	54.1
450.soplex	183	45.6	<u>181</u>	<u>46.0</u>	180	46.2	183	45.6	<u>181</u>	<u>46.0</u>	180	46.2
453.povray	<u>97.1</u>	<u>54.8</u>	96.3	55.3	97.2	54.7	87.3	60.9	86.9	61.2	<u>87.0</u>	<u>61.1</u>
454.calculix	157	52.5	<u>157</u>	<u>52.5</u>	158	52.4	145	57.0	145	57.1	<u>145</u>	<u>57.1</u>
459.GemsFDTD	49.8	213	<u>46.7</u>	<u>227</u>	46.3	229	39.7	267	<u>40.1</u>	<u>265</u>	40.5	262
465.tonto	253	38.9	<u>252</u>	<u>39.1</u>	251	39.2	<u>194</u>	<u>50.7</u>	194	50.7	194	50.8
470.lbm	21.0	654	19.4	707	<u>19.5</u>	<u>706</u>	21.0	654	19.4	707	<u>19.5</u>	<u>706</u>
481.wrf	125	89.5	<u>126</u>	<u>88.9</u>	126	88.8	125	89.5	<u>126</u>	<u>88.9</u>	126	88.8
482.sphinx3	264	73.9	<u>264</u>	<u>73.9</u>	265	73.4	264	73.9	<u>264</u>	<u>73.9</u>	265	73.4

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 settings:
 Snoop Mode set to Home Snoop
 Virtualization Technology disabled
 System Profile set to Performance
 Sysinfo program /root/cpu2006-1.2/config/sysinfo.rev6914
 \$Rev: 6914 \$ \$Date:: 2014-06-25 #\$ e3fbb8667b5a285932ceab81e28219e1
 running on linux-wkha Fri Jan 16 17:18:41 2015

This section contains SUT (System Under Test) info as seen by some common utilities. To remove or add to this section, see:

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Dell Inc.

SPECfp2006 = 112

PowerEdge R730 (Intel Xeon E5-2685 v3, 2.60 GHz)

SPECfp_base2006 = 107

CPU2006 license: 55

Test date: Jan-2015

Test sponsor: Dell Inc.

Hardware Availability: Apr-2015

Tested by: Dell Inc.

Software Availability: Nov-2014

Platform Notes (Continued)

<http://www.spec.org/cpu2006/Docs/config.html#sysinfo>

From /proc/cpuinfo

model name : Intel(R) Xeon(R) CPU E5-2685 v3 @ 2.60GHz

2 "physical id"s (chips)

24 "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 : 12

siblings : 12

physical 0: cores 0 1 2 3 4 5 8 9 10 11 12 13

physical 1: cores 0 1 2 3 4 5 8 9 10 11 12 13

cache size : 30720 KB

From /proc/meminfo

MemTotal: 264569692 kB

HugePages_Total: 0

Hugepagesize: 2048 kB

/usr/bin/lsb_release -d

SUSE Linux Enterprise Server 12

From /etc/*release* /etc/*version*

SuSE-release:

SUSE Linux Enterprise Server 12 (x86_64)

VERSION = 12

PATCHLEVEL = 0

This file is deprecated and will be removed in a future service pack or release.

Please check /etc/os-release for details about this release.

os-release:

NAME="SLES"

VERSION="12"

VERSION_ID="12"

PRETTY_NAME="SUSE Linux Enterprise Server 12"

ID="sles"

ANSI_COLOR="0;32"

CPE_NAME="cpe:/o:suse:sles:12"

uname -a:

Linux linux-wkha 3.12.28-4-default #1 SMP Thu Sep 25 17:02:34 UTC 2014 (9879bd4) x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Jan 15 12:02 last=5

SPEC is set to: /root/cpu2006-1.2

Filesystem Type Size Used Avail Use% Mounted on

/dev/sdal ext4 493G 9.1G 482G 2% /

Additional information from dmidecode:

Warning: Use caution when you interpret this section. The 'dmidecode' program
Continued on next page



SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Dell Inc.

SPECfp2006 = 112

PowerEdge R730 (Intel Xeon E5-2685 v3, 2.60 GHz)

SPECfp_base2006 = 107

CPU2006 license: 55

Test date: Jan-2015

Test sponsor: Dell Inc.

Hardware Availability: Apr-2015

Tested by: Dell Inc.

Software Availability: Nov-2014

Platform Notes (Continued)

reads system data which is "intended to allow hardware to be accurately determined", but the intent may not be met, as there are frequent changes to hardware, firmware, and the "DMTF SMBIOS" standard.

BIOS Dell Inc. 1.2.3 12/16/2014

Memory:

16x 00AD00B300AD HMA42GR7MFR4N-TF 16 GB 2 rank 2133 MHz

8x Not Specified Not Specified

(End of data from sysinfo program)

General Notes

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

KMP_AFFINITY = "granularity=fine,compact,1,0"

LD_LIBRARY_PATH = "/root/cpu2006-1.2/libs/32:/root/cpu2006-1.2/libs/64:/root/cpu2006-1.2/sh"

OMP_NUM_THREADS = "24"

Binaries compiled on a system with 1x Core i5-4670K CPU + 16GB memory using RedHat EL 7.0

Transparent Huge Pages enabled with:

echo always > /sys/kernel/mm/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

Continued on next page

Standard Performance Evaluation Corporation

info@spec.org

http://www.spec.org/

Page 4



SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Dell Inc.

SPECfp2006 = 112

PowerEdge R730 (Intel Xeon E5-2685 v3, 2.60 GHz)

SPECfp_base2006 = 107

CPU2006 license: 55

Test date: Jan-2015

Test sponsor: Dell Inc.

Hardware Availability: Apr-2015

Tested by: Dell Inc.

Software Availability: Nov-2014

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 -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

```



SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Dell Inc.

SPECfp2006 = 112

PowerEdge R730 (Intel Xeon E5-2685 v3, 2.60 GHz)

SPECfp_base2006 = 107

CPU2006 license: 55

Test date: Jan-2015

Test sponsor: Dell Inc.

Hardware Availability: Apr-2015

Tested by: Dell Inc.

Software Availability: Nov-2014

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: 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) -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

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Dell Inc.

SPECfp2006 = 112

PowerEdge R730 (Intel Xeon E5-2685 v3, 2.60 GHz)

SPECfp_base2006 = 107

CPU2006 license: 55

Test date: Jan-2015

Test sponsor: Dell Inc.

Hardware Availability: Apr-2015

Tested by: Dell Inc.

Software Availability: Nov-2014

Peak Optimization Flags (Continued)

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/Dell-Platform-Settings-V1.2-revC.html>

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/Dell-Platform-Settings-V1.2-revC.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 Mar 10 16:04:16 2015 by SPEC CPU2006 PS/PDF formatter v6932.

Originally published on 10 March 2015.