



SPEC[®] CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Supermicro

SuperServer 5019S-WR
(X11SSW-F, Intel Xeon E3-1275 v5)

SPECfp[®]2006 = 97.3

SPECfp_base2006 = 94.8

CPU2006 license: 001176

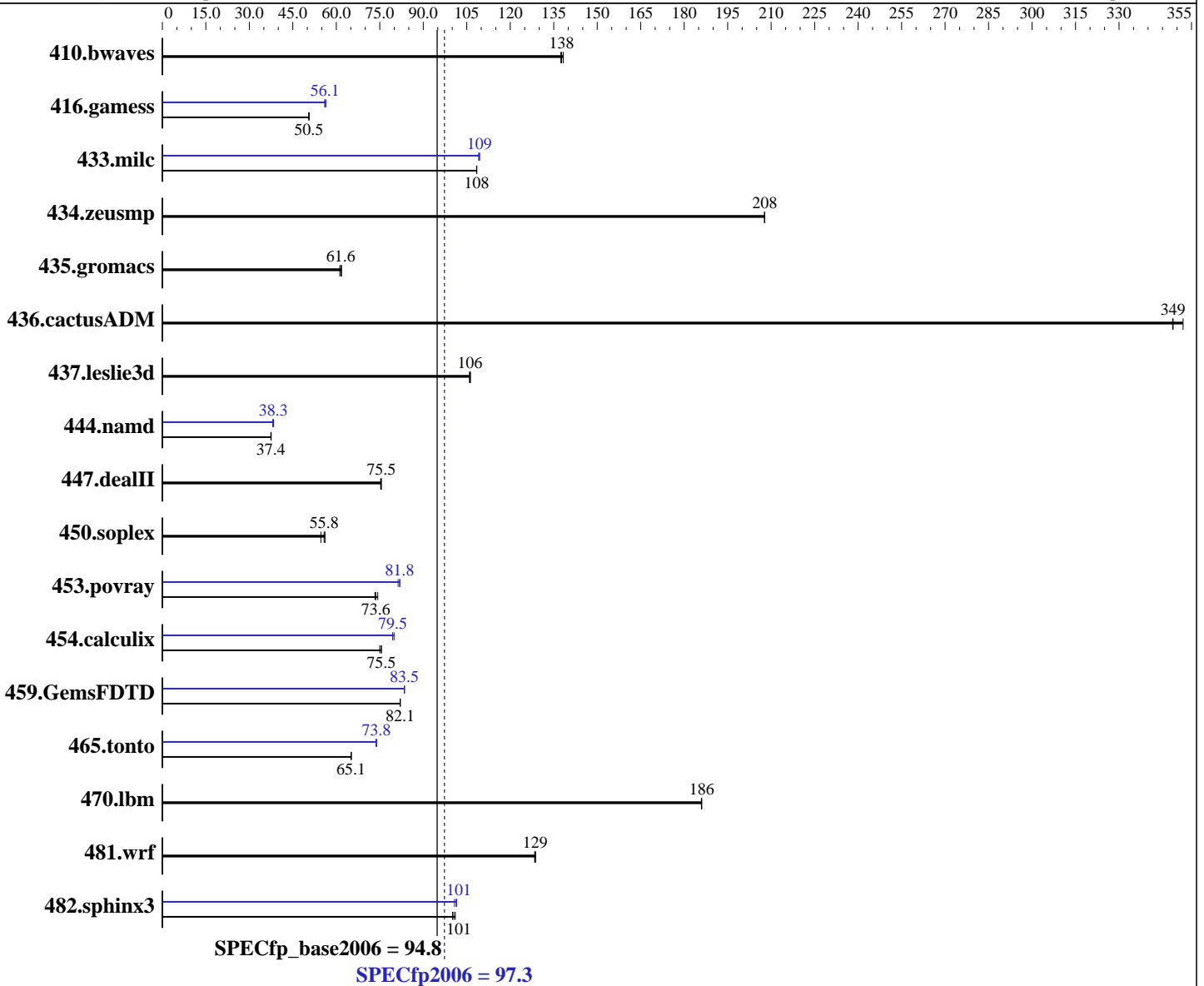
Test sponsor: Supermicro

Tested by: Supermicro

Test date: Nov-2015

Hardware Availability: Oct-2015

Software Availability: Sep-2015



Hardware

CPU Name: Intel Xeon E3-1275 v5
 CPU Characteristics: Intel Turbo Boost Technology up to 4.00 GHz
 CPU MHz: 3600
 FPU: Integrated
 CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip, 2 threads/core
 CPU(s) orderable: 1 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 7.1, Kernel 3.10.0-229.el7.x86_64
 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: xfs
 System State: Run level 3 (multi-user)

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Supermicro

SuperServer 5019S-WR
(X11SSW-F, Intel Xeon E3-1275 v5)

SPECfp2006 = **97.3**

SPECfp_base2006 = **94.8**

CPU2006 license: 001176

Test sponsor: Supermicro

Tested by: Supermicro

Test date: Nov-2015

Hardware Availability: Oct-2015

Software Availability: Sep-2015

L3 Cache: 8 MB I+D on chip per chip
Other Cache: None
Memory: 64 GB (4 x 16 GB 2Rx8 PC4-2133P-E)
Disk Subsystem: 1 x 1000 GB SATA III, 7200 RPM
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 | 98.7 | 138 | 98.3 | 138 | 98.9 | 137 | 98.7 | 138 | 98.3 | 138 | 98.9 | 137 |
| 416.gamess | 387 | 50.5 | 387 | 50.5 | 387 | 50.6 | 347 | 56.5 | 350 | 56.0 | 349 | 56.1 |
| 433.milc | 84.6 | 108 | 84.7 | 108 | 84.7 | 108 | 84.1 | 109 | 83.9 | 109 | 84.0 | 109 |
| 434.zeusmp | 43.8 | 208 | 43.8 | 208 | 43.8 | 208 | 43.8 | 208 | 43.8 | 208 | 43.8 | 208 |
| 435.gromacs | 116 | 61.6 | 117 | 61.2 | 115 | 61.8 | 116 | 61.6 | 117 | 61.2 | 115 | 61.8 |
| 436.cactusADM | 34.3 | 348 | 34.3 | 349 | 33.9 | 352 | 34.3 | 348 | 34.3 | 349 | 33.9 | 352 |
| 437.leslie3d | 88.6 | 106 | 88.4 | 106 | 88.7 | 106 | 88.6 | 106 | 88.4 | 106 | 88.7 | 106 |
| 444.namd | 214 | 37.4 | 214 | 37.4 | 214 | 37.5 | 209 | 38.3 | 211 | 38.0 | 209 | 38.4 |
| 447.dealII | 152 | 75.5 | 151 | 75.5 | 152 | 75.3 | 152 | 75.5 | 151 | 75.5 | 152 | 75.3 |
| 450.soplex | 149 | 55.8 | 152 | 54.7 | 149 | 56.1 | 149 | 55.8 | 152 | 54.7 | 149 | 56.1 |
| 453.povray | 72.5 | 73.3 | 72.3 | 73.6 | 71.6 | 74.3 | 64.9 | 81.9 | 65.4 | 81.3 | 65.0 | 81.8 |
| 454.calculix | 109 | 75.6 | 110 | 75.0 | 109 | 75.5 | 104 | 79.4 | 104 | 79.5 | 103 | 80.0 |
| 459.GemsFDTD | 129 | 82.1 | 129 | 82.1 | 129 | 82.0 | 127 | 83.5 | 127 | 83.5 | 127 | 83.6 |
| 465.tonto | 151 | 65.1 | 151 | 65.1 | 151 | 65.2 | 133 | 73.9 | 134 | 73.7 | 133 | 73.8 |
| 470.lbm | 73.9 | 186 | 73.9 | 186 | 73.9 | 186 | 73.9 | 186 | 73.9 | 186 | 73.9 | 186 |
| 481.wrf | 86.8 | 129 | 86.8 | 129 | 87.0 | 128 | 86.8 | 129 | 86.8 | 129 | 87.0 | 128 |
| 482.sphinx3 | 194 | 101 | 195 | 100 | 193 | 101 | 192 | 101 | 192 | 101 | 193 | 101 |

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

Sysinfo program /home/cpu2006/config/sysinfo.rev6914
\$Rev: 6914 \$ \$Date:: 2014-06-25 #\$ e3fbb8667b5a285932ceab81e28219e1
running on localhost.localdomain Mon Nov 30 17:32:07 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 E3-1275 v5 @ 3.60GHz
Continued on next page



SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Supermicro

SuperServer 5019S-WR
(X11SSW-F, Intel Xeon E3-1275 v5)

SPECfp2006 = 97.3

SPECfp_base2006 = 94.8

CPU2006 license: 001176
Test sponsor: Supermicro
Tested by: Supermicro

Test date: Nov-2015
Hardware Availability: Oct-2015
Software Availability: Sep-2015

Platform Notes (Continued)

```
1 "physical id"s (chips)
8 "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 : 4
  siblings  : 8
  physical 0: cores 0 1 2 3
cache size : 8192 KB
```

```
From /proc/meminfo
MemTotal:      65755200 kB
HugePages_Total: 0
Hugepagesize:  2048 kB
```

```
From /etc/*release* /etc/*version*
os-release:
NAME="Red Hat Enterprise Linux Server"
VERSION="7.1 (Maipo)"
ID="rhel"
ID_LIKE="fedora"
VERSION_ID="7.1"
PRETTY_NAME="Red Hat Enterprise Linux Server 7.1 (Maipo)"
ANSI_COLOR="0;31"
CPE_NAME="cpe:/o:redhat:enterprise_linux:7.1:GA:server"
redhat-release: Red Hat Enterprise Linux Server release 7.1 (Maipo)
system-release: Red Hat Enterprise Linux Server release 7.1 (Maipo)
system-release-cpe: cpe:/o:redhat:enterprise_linux:7.1:ga:server
```

```
uname -a:
Linux localhost.localdomain 3.10.0-229.el7.x86_64 #1 SMP Thu Jan 29 18:37:38
EST 2015 x86_64 x86_64 x86_64 GNU/Linux
```

```
run-level 3 Nov 27 18:17
```

```
SPEC is set to: /home/cpu2006
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/mapper/rhel-home xfs  865G  169G  697G  20% /home
```

Additional information from dmidecode:

Warning: Use caution when you interpret this section. The 'dmidecode' program 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 American Megatrends Inc. 1.0 11/03/2015
Memory:
4x Samsung M391A2K43BB1-CPB 16 GB 2 rank 2133 MHz

(End of data from sysinfo program)



SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Supermicro

SuperServer 5019S-WR
(X11SSW-F, Intel Xeon E3-1275 v5)

SPECfp2006 = 97.3

SPECfp_base2006 = 94.8

CPU2006 license: 001176
Test sponsor: Supermicro
Tested by: Supermicro

Test date: Nov-2015
Hardware Availability: Oct-2015
Software Availability: Sep-2015

General Notes

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

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

LD_LIBRARY_PATH = "/home/cpu2006/libs/32:/home/cpu2006/libs/64:/home/cpu2006/sh"

OMP_NUM_THREADS = "4"

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
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 2006-2015 Standard Performance Evaluation Corporation

Supermicro

SuperServer 5019S-WR
(X11SSW-F, Intel Xeon E3-1275 v5)

SPECfp2006 = 97.3

SPECfp_base2006 = 94.8

CPU2006 license: 001176
Test sponsor: Supermicro
Tested by: Supermicro

Test date: Nov-2015
Hardware Availability: Oct-2015
Software Availability: Sep-2015

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 2006-2015 Standard Performance Evaluation Corporation

Supermicro

SuperServer 5019S-WR
(X11SSW-F, Intel Xeon E3-1275 v5)

SPECfp2006 = 97.3

SPECfp_base2006 = 94.8

CPU2006 license: 001176

Test sponsor: Supermicro

Tested by: Supermicro

Test date: Nov-2015

Hardware Availability: Oct-2015

Software Availability: Sep-2015

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/Supermicro-Platform-Settings-V1.2-revG.20141230.00.html>



SPEC CFP2006 Result

Copyright 2006-2015 Standard Performance Evaluation Corporation

Supermicro

SuperServer 5019S-WR
(X11SSW-F, Intel Xeon E3-1275 v5)

SPECfp2006 = 97.3

SPECfp_base2006 = 94.8

CPU2006 license: 001176

Test sponsor: Supermicro

Tested by: Supermicro

Test date: Nov-2015

Hardware Availability: Oct-2015

Software Availability: Sep-2015

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/Supermicro-Platform-Settings-V1.2-revG.20141230.00.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 Dec 30 19:57:10 2015 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 29 December 2015.