



SPEC® CFP2006 Result

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Supermicro

Supermicro X11SSM-F motherboard
(X11SSM-F, Intel Xeon E3-1225 v5)

SPECfp®2006 = 95.1

SPECfp_base2006 = 92.8

CPU2006 license: 001176

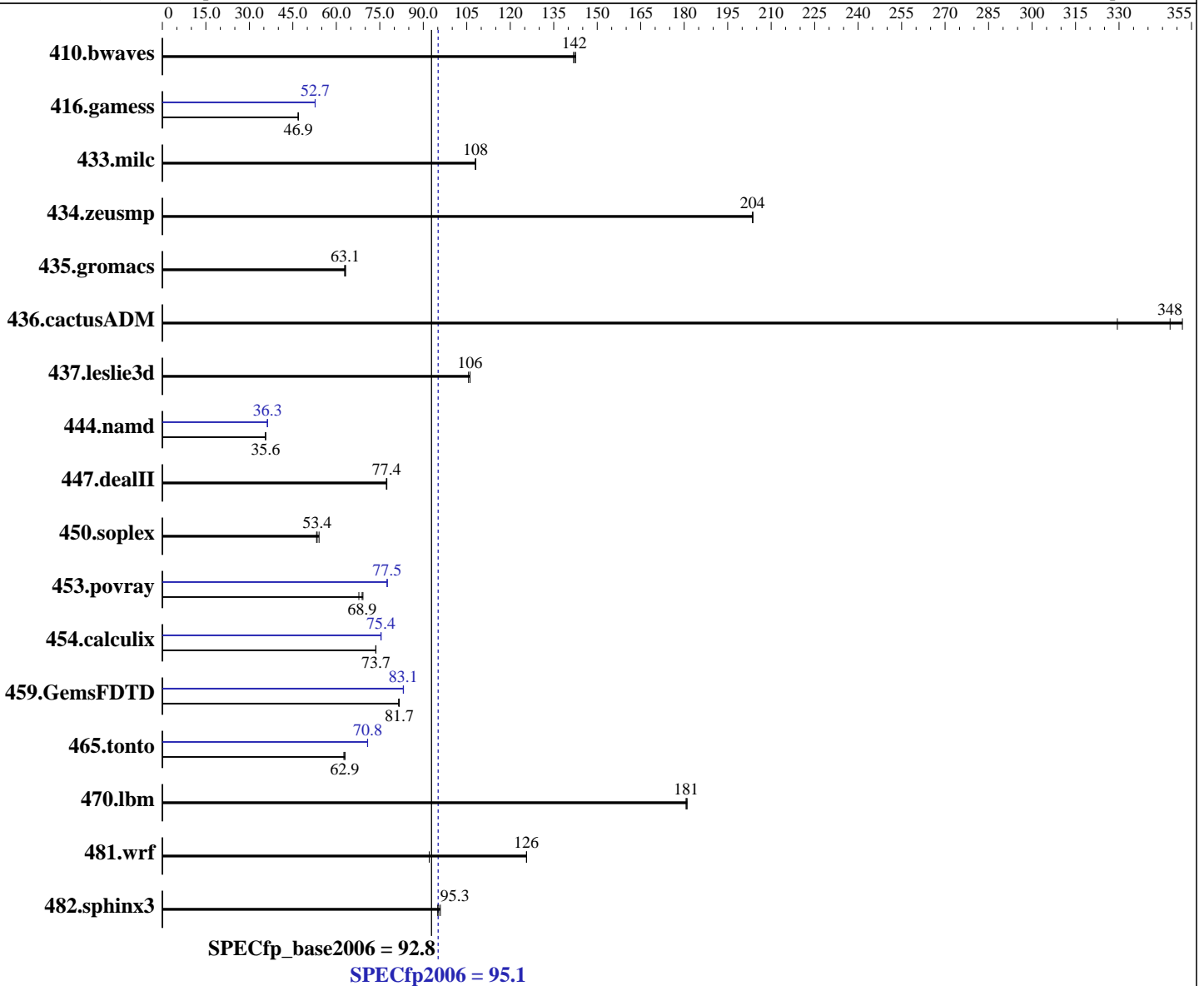
Test sponsor: Supermicro

Tested by: Supermicro

Test date: Jan-2016

Hardware Availability: Oct-2015

Software Availability: Sep-2015



Hardware

CPU Name: Intel Xeon E3-1225 v5
 CPU Characteristics: Intel Turbo Boost Technology up to 3.70 GHz
 CPU MHz: 3300
 FPU: Integrated
 CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip
 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

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Software

Operating System: Red Hat Enterprise Linux Server release 7.1, Kernel 3.10.0-229.el7.x86_64
 Compiler: C/C++: Version 16.0.0.101 of Intel C++ Studio XE for Linux;
 Fortran: Version 16.0.0.101 of Intel Fortran Studio XE for Linux
 Auto Parallel: Yes
 File System: xfs
 System State: Run level 3 (multi-user)

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L3 Cache: 8 MB I+D on chip per chip
Other Cache: None
Memory: 32 GB (2 x 16 GB 2Rx8 PC4-2133P-E)
Disk Subsystem: 1 x 400 GB SATA III SSD
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	95.3	143	<u>95.6</u>	<u>142</u>	95.8	142	95.3	143	<u>95.6</u>	<u>142</u>	95.8	142
416.gamess	418	46.8	<u>418</u>	<u>46.9</u>	417	46.9	371	52.7	372	52.7	<u>371</u>	<u>52.7</u>
433.milc	84.9	108	<u>85.0</u>	<u>108</u>	85.0	108	84.9	108	<u>85.0</u>	<u>108</u>	85.0	108
434.zeusmp	44.7	204	<u>44.7</u>	<u>204</u>	44.7	204	44.7	204	<u>44.7</u>	<u>204</u>	44.7	204
435.gromacs	<u>113</u>	<u>63.1</u>	114	62.9	113	63.2	<u>113</u>	<u>63.1</u>	114	62.9	113	63.2
436.cactusADM	34.0	352	<u>34.4</u>	<u>348</u>	36.3	329	34.0	352	<u>34.4</u>	<u>348</u>	36.3	329
437.leslie3d	<u>88.6</u>	<u>106</u>	88.6	106	89.0	106	<u>88.6</u>	<u>106</u>	88.6	106	89.0	106
444.namd	225	35.6	225	35.6	<u>225</u>	<u>35.6</u>	<u>221</u>	<u>36.3</u>	222	36.2	221	36.3
447.dealII	148	77.5	148	77.3	<u>148</u>	<u>77.4</u>	148	77.5	148	77.3	<u>148</u>	<u>77.4</u>
450.soplex	157	53.2	154	54.1	<u>156</u>	<u>53.4</u>	157	53.2	154	54.1	<u>156</u>	<u>53.4</u>
453.povray	78.5	67.8	76.9	69.2	<u>77.2</u>	<u>68.9</u>	<u>68.6</u>	<u>77.5</u>	68.6	77.5	68.6	77.6
454.calculix	112	73.7	112	73.6	<u>112</u>	<u>73.7</u>	109	75.4	109	75.5	<u>109</u>	<u>75.4</u>
459.GemsFDTD	<u>130</u>	<u>81.7</u>	130	81.5	130	81.7	<u>128</u>	<u>83.1</u>	128	83.1	128	83.2
465.tonto	156	63.0	<u>156</u>	<u>62.9</u>	157	62.6	139	70.8	139	70.8	<u>139</u>	<u>70.8</u>
470.lbm	76.0	181	75.9	181	<u>76.0</u>	<u>181</u>	76.0	181	75.9	181	<u>76.0</u>	<u>181</u>
481.wrf	88.9	126	<u>88.9</u>	<u>126</u>	121	92.0	88.9	126	<u>88.9</u>	<u>126</u>	121	92.0
482.sphinx3	203	95.9	205	95.0	<u>204</u>	<u>95.3</u>	203	95.9	205	95.0	<u>204</u>	<u>95.3</u>

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 /usr/cpu2006/config/sysinfo.rev6914
\$Rev: 6914 \$ \$Date:: 2014-06-25 #\$ e3fbb8667b5a285932ceab81e28219e1
running on X10SRA-01 Wed Jan 6 23:08:15 2016

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 E3-1225 v5 @ 3.30GHz
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Platform Notes (Continued)

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

From /proc/meminfo
MemTotal:      32768808 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 X10SRA-01 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 Jan 6 18:41

SPEC is set to: /usr/cpu2006
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/sda2        xfs   183G  6.9G 176G   4% /
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. 1.0b 12/22/2015
Memory:
2x Not Specified Not Specified
2x Samsung M391A2K43BB1-CPB 16 GB 2 rank 2133 MHz

(End of data from sysinfo program)

```



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General Notes

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

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

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

OMP_NUM_THREADS = "4"

Binaries compiled on a system with 1x Intel Core i5-4670K CPU + 32GB
memory using RedHat EL 7.1

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



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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: basepeak = yes

470.lbm: basepeak = yes

482.sphinx3: basepeak = yes

C++ benchmarks:

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Peak Optimization Flags (Continued)

444.namd: -xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1)
-ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2)
-par-num-threads=1(pass 1) -prof-use(pass 2) -fno-alias
-auto-ilp32

447.dealII: basepeak = yes

450.soplex: basepeak = yes

453.povray: -xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1)
-ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2)
-par-num-threads=1(pass 1) -prof-use(pass 2) -unroll4
-ansi-alias

Fortran benchmarks:

410.bwaves: basepeak = yes

416.gamess: -xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1)
-ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2)
-par-num-threads=1(pass 1) -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:threadsafe(pass 1)
-ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2)
-par-num-threads=1(pass 1) -prof-use(pass 2) -unroll2
-inline-level=0 -opt-prefetch -parallel

465.tonto: -xCORE-AVX2(pass 2) -prof-gen:threadsafe(pass 1)
-ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2)
-par-num-threads=1(pass 1) -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



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The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic16.0-official-linux64.html>

<http://www.spec.org/cpu2006/flags/Supermicro-Platform-Settings-V1.2-revH.html>

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

<http://www.spec.org/cpu2006/flags/Intel-ic16.0-official-linux64.xml>

<http://www.spec.org/cpu2006/flags/Supermicro-Platform-Settings-V1.2-revH.xml>

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For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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