Supermicro
SuperServer 5019S-L
(X11SSL-F, Intel Xeon E3-1245 v5)

SPECfp®2006 = 98.1
SPECfp_base2006 = 95.8

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

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

SPECfp_base2006 = 95.8
SPECfp2006 = 98.1

Hardware
CPU Name: Intel Xeon E3-1245 v5
CPU Characteristics: Intel Turbo Boost Technology up to 3.90 GHz
CPU MHz: 3500
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 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)

Continued on next page
PRE SPEC CFP2006 RESULT

Supermicro
SuperServer 5019S-L
(X11SSL-F, Intel Xeon E3-1245 v5)

SPECfp2006 = 98.1
SPECfp_base2006 = 95.8

CPU2006 license: 001176
Test sponsor: Supermicro
Tested by: Supermicro
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 400 GB SATA III SSD
Other Hardware: None
Base Pointers: 64-bit
Peak Pointers: 32/64-bit

Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Base</th>
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</tr>
</tbody>
</table>

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 14 09:00:40 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 E3-1245 v5 @ 3.50GHz
Continued on next page
Supermicro
SuperServer 5019S-L
(X11SSL-F, Intel Xeon E3-1245 v5)

SPECfp2006 = 98.1
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CPU2006 license: 001176
Test date: Dec-2015
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Hardware Availability: Oct-2015
Tested by: Supermicro
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: 65923428 kB
HugePages_Total: 0
Hugepagesize: 2048 kB

From /etc/*release*/etc/*version*
من reclease:
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)

uname -a:
Linux X10SRA-01 3.10.0-229.e17.x86_64 #1 SMP Thu Jan 29 18:37:38 EST 2015
x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Jan 14 08:51

SPEC is set to: /usr/cpu2006
Filesystem Type Size Used Avail Use% Mounted on
/dev/sda2 xfs 183G 5.1G 178G 3% /

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. 1.0a 10/23/2015
Memory:
4x Samsung M391A2K43BB1-CPB 16 GB 2 rank 2133 MHz

(End of data from sysinfo program)
Supermicro
SuperServer 5019S-L
(X11SSL-F, Intel Xeon E3-1245 v5)

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Tested by: Supermicro
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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
Supermicro
SuperServer 5019S-L
(X11SSL-F, Intel Xeon E3-1245 v5)

SPECfp2006 = 98.1
SPECfp_base2006 = 95.8

CPU2006 license: 001176
Test sponsor: Supermicro
Test date: Dec-2015
Tested by: Supermicro
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: basepeak = yes
470.lbm: basepeak = yes
482.sphinx3: basepeak = yes

C++ benchmarks:

Continued on next page
Supermicro
SuperServer 5019S-L
(X11SSL-F, Intel Xeon E3-1245 v5)

SPECfp2006 = 98.1
SPECfp_base2006 = 95.8

CPU2006 license: 001176
Test sponsor: Supermicro
Tested by: Supermicro
Test date: Dec-2015
Hardware Availability: Oct-2015
Software Availability: Sep-2015

Peak Optimization Flags (Continued)

444.namd: -xCORE-AVX2(pass 2) -prof-gen:threadsafepass 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:threadsafepass 1
-ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2)
-par-num-threads=1(pass 1) -prof-use(pass 2) -unroll14
-ansi-alias

Fortran benchmarks:

410.bwaves: basepeak = yes

416.gamess: -xCORE-AVX2(pass 2) -prof-gen:threadsafepass 1
-ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2)
-par-num-threads=1(pass 1) -prof-use(pass 2) -unroll12
-inline-level=0 -scalar-rep-

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

459.GemsFDTD: -xCORE-AVX2(pass 2) -prof-gen:threadsafepass 1
-ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2)
-par-num-threads=1(pass 1) -prof-use(pass 2) -unroll12
-inline-level=0 -opt-prefetch -parallel

465.tonto: -xCORE-AVX2(pass 2) -prof-gen:threadsafepass 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 -unroll14

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
# SPEC CFP2006 Result

**Supermicro**

SuperServer 5019S-L  
(X11SSL-F, Intel Xeon E3-1245 v5)

| SPECfp2006 = | 98.1 |
| SPECfp_base2006 = | 95.8 |

**CPU2006 license:** 001176  
**Test sponsor:** Supermicro  
**Tested by:** Supermicro  
**Test date:** Dec-2015  
**Hardware Availability:** Oct-2015  
**Software Availability:** Sep-2015

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

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

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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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