SPEC® CINT2006 Result
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Supermicro

SuperServer 5019S-WR
(X11SSW-F , Intel Core i3-6100TE)

$SPECint^{®}2006 =$ 48.2

$SPECint\_base2006 =$ 47.1

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

Scale: 0 30.0 70.0 100 130 160 190 220 250 280 310 340 370 400 430 460 490 520 550 580 610 640 670 700 730 760 790 820 850 880 910 950

- 400.perlbench: 39.0 / 33.6
- 401.bzip2: 21.4 / 21.2
- 403.gcc: 35.0 / 34.0
- 429.mcf: 59.1 / 59.3
- 445.gobmk: 22.9 / 23.8
- 456.hmmer: 66.6 / 70.5
- 458.sjeng: 28.0 / 27.8
- 462.libquantum: 945
- 464.h264ref: 47.8
- 471.omnetpp: 30.0 / 25.5
- 473.astar: 27.3 / 27.2
- 483.xalancbmk: 58.3 / 57.4

SPECint_base2006 = 47.1

SPECint2006 = 48.2

Hardware

CPU Name:	Intel Core i3-6100TE
CPU Characteristics:	
CPU MHz:	2700
FPU:	Integrated
CPU(s) enabled:	2 cores, 1 chip, 2 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
L3 Cache:	4 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

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
Auto Parallel:	Yes
File System:	xfs
System State:	Run level 3 (multi-user)
Base Pointers:	32/64-bit
Peak Pointers:	32/64-bit
Other Software:	Microquill SmartHeap V10.0

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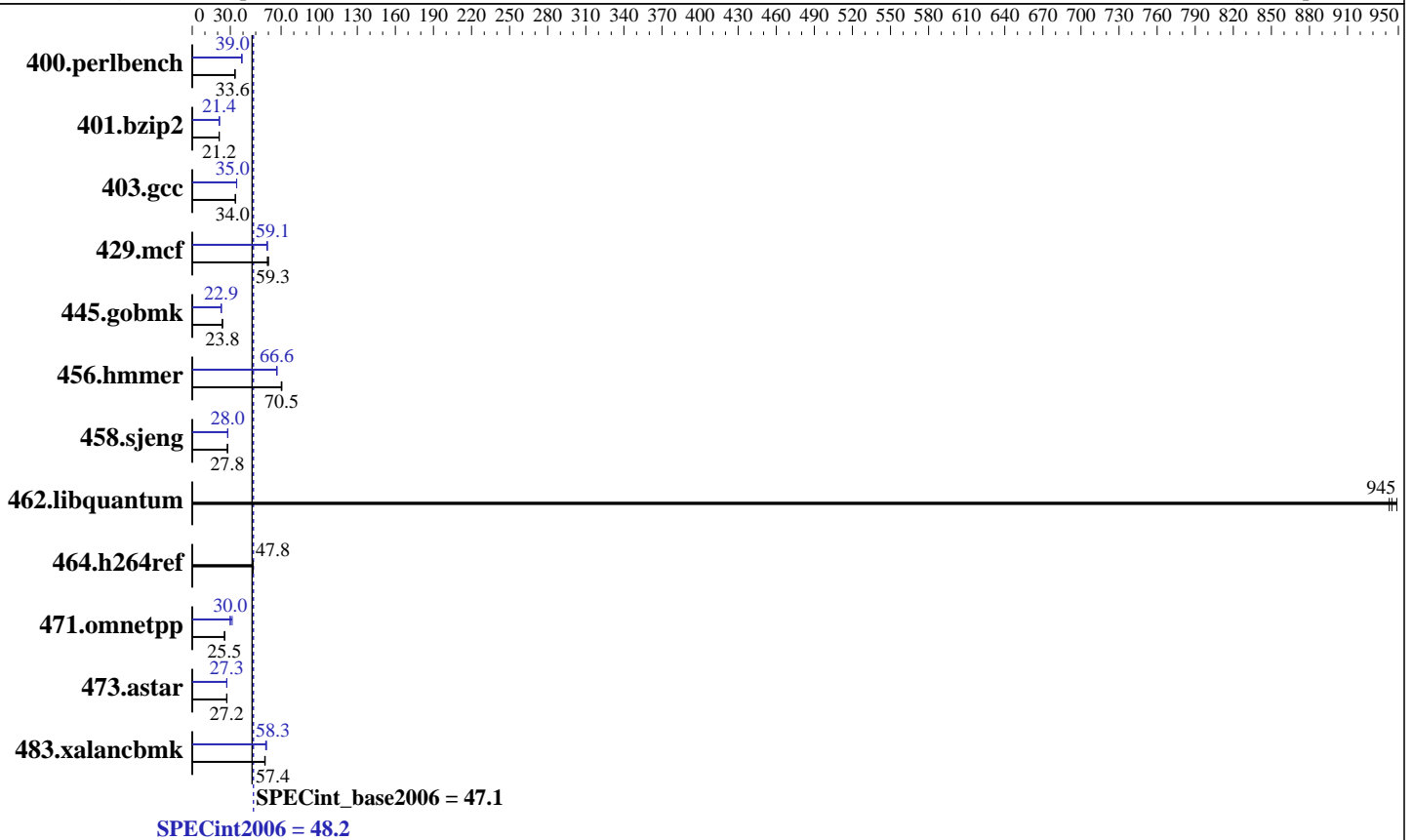SPECint2006 = 48.2

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Results Table

Benchmark	Base						Peak					
	Seconds	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**
400.perlbench	289	33.8	291	33.6	**291**	**33.6**	**251**	**39.0**	251	39.0	249	39.2
401.bzip2	454	21.2	**455**	**21.2**	455	21.2	452	21.3	**452**	**21.4**	451	21.4
403.gcc	236	34.0	**237**	**34.0**	237	34.0	230	35.0	230	35.0	**230**	**35.0**
429.mcf	152	60.1	154	59.3	**154**	**59.3**	154	59.2	**154**	**59.1**	155	58.9
445.gobmk	441	23.8	**441**	**23.8**	442	23.7	**459**	**22.9**	459	22.9	459	22.9
456.hmmer	**132**	**70.5**	133	70.1	132	70.5	140	66.6	**140**	**66.6**	140	66.7
458.sjeng	435	27.8	**436**	**27.8**	436	27.8	433	28.0	433	28.0	**433**	**28.0**
462.libquantum	21.8	949	**21.9**	**945**	22.0	943	21.8	949	**21.9**	**945**	22.0	943
464.h264ref	464	47.7	463	47.8	**463**	**47.8**	464	47.7	463	47.8	**463**	**47.8**
471.omnetpp	245	25.5	245	25.5	**245**	**25.5**	199	31.5	**208**	**30.0**	209	29.9
473.astar	257	27.4	259	27.2	**258**	**27.2**	**257**	**27.3**	259	27.1	257	27.3
483.xalancbmk	**120**	**57.4**	121	57.1	120	57.4	118	58.4	119	57.9	**118**	**58.3**

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 Settings:
    Hyper-threading = Disabled
    Sysinfo program /home/cpu2006/config/sysinfo.rev6914
    $Rev: 6914 $ $Date:: 2014-06-25 #$ e3fbb8667b5a285932ceab81e28219e1
    running on localhost.localdomain Mon Dec 28 17:53:42 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) Core(TM) i3-6100TE CPU @ 2.70GHz
          1 "physical id"s (chips)
          2 "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 : 2
          siblings  : 2
```

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Platform Notes (Continued)

```
      physical 0: cores 0 1
   cache size : 4096 KB

 From /proc/meminfo
    MemTotal:        65760188 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 Dec 28 17:44

 SPEC is set to: /home/cpu2006
    Filesystem              Type  Size  Used Avail Use% Mounted on
    /dev/mapper/rhel-home xfs   865G  170G  696G  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)
```

General Notes

```
 Environment variables set by runspec before the start of the run:
 KMP_AFFINITY = "granularity=fine,scatter"
 LD_LIBRARY_PATH = "/home/cpu2006/libs/32:/home/cpu2006/libs/64:/home/cpu2006/sh"
 OMP_NUM_THREADS = "2"
```

Continued on next page

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General Notes (Continued)

```
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
```

Base Portability Flags

```
400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
    401.bzip2: -DSPEC_CPU_LP64
      403.gcc: -DSPEC_CPU_LP64
      429.mcf: -DSPEC_CPU_LP64
    445.gobmk: -DSPEC_CPU_LP64
    456.hmmer: -DSPEC_CPU_LP64
    458.sjeng: -DSPEC_CPU_LP64
 462.libquantum: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
   464.h264ref: -DSPEC_CPU_LP64
   471.omnetpp: -DSPEC_CPU_LP64
     473.astar: -DSPEC_CPU_LP64
 483.xalancbmk: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX
```

Base Optimization Flags

C benchmarks:
```
-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -opt-prefetch -auto-p32
```

C++ benchmarks:
```
-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -auto-p32
-Wl,-z,muldefs -L/sh -lsmartheap64
```

Base Other Flags

C benchmarks:
```
403.gcc: -Dalloca=_alloca
```

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Peek Compiler Invocation

C benchmarks (except as noted below):
```
icc  -m64
```

    400.perlbench: `icc -m32 -L/opt/intel/composer_xe_2015/lib/ia32`

     445.gobmk: `icc -m32 -L/opt/intel/composer_xe_2015/lib/ia32`

C++ benchmarks (except as noted below):
```
icpc -m32 -L/opt/intel/composer_xe_2015/lib/ia32
```

      473.astar: `icpc -m64`

Peak Portability Flags

     400.perlbench: `-DSPEC_CPU_LINUX_IA32`
        401.bzip2: `-DSPEC_CPU_LP64`
          403.gcc: `-DSPEC_CPU_LP64`
         429.mcf: `-DSPEC_CPU_LP64`
      456.hmmer: `-DSPEC_CPU_LP64`
       458.sjeng: `-DSPEC_CPU_LP64`
    462.libquantum: `-DSPEC_CPU_LP64 -DSPEC_CPU_LINUX`
     464.h264ref: `-DSPEC_CPU_LP64`
       473.astar: `-DSPEC_CPU_LP64`
   483.xalancbmk: `-DSPEC_CPU_LINUX`

Peak Optimization Flags

C benchmarks:

    400.perlbench: `-xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)`
             `-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)`
             `-opt-prefetch -ansi-alias`

      401.bzip2: `-xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)`
              `-O3(pass 2) -no-prec-div -prof-use(pass 2) -auto-ilp32`
              `-opt-prefetch -ansi-alias`

       403.gcc: `-xCORE-AVX2 -ipo -O3 -no-prec-div -inline-calloc`
              `-opt-malloc-options=3 -auto-ilp32`

       429.mcf: `-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel`
              `-opt-prefetch -auto-p32`

     445.gobmk: `-xCORE-AVX2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)`
              `-ansi-alias`

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Peak Optimization Flags (Continued)

456.hmmer: `-xCORE-AVX2 -ipo -O3 -no-prec-div -unroll2 -auto-ilp32`
`-ansi-alias`

458.sjeng: `-xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)`
`-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)`
`-unroll4`

462.libquantum: `basepeak = yes`

464.h264ref: `basepeak = yes`

C++ benchmarks:

471.omnetpp: `-xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2)`
`-O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2)`
`-opt-ra-region-strategy=block        -ansi-alias`
`-Wl,-z,muldefs -L/sh -lsmartheap`

473.astar: `-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch`
`-auto-p32 -Wl,-z,muldefs -L/sh -lsmartheap64`

483.xalancbmk: `-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch`
`-ansi-alias -Wl,-z,muldefs -L/sh -lsmartheap`

Peak Other Flags

C benchmarks:

403.gcc: `-Dalloca=_alloca`

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

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

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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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