SPEC® CINT2006 Result

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Supermicro

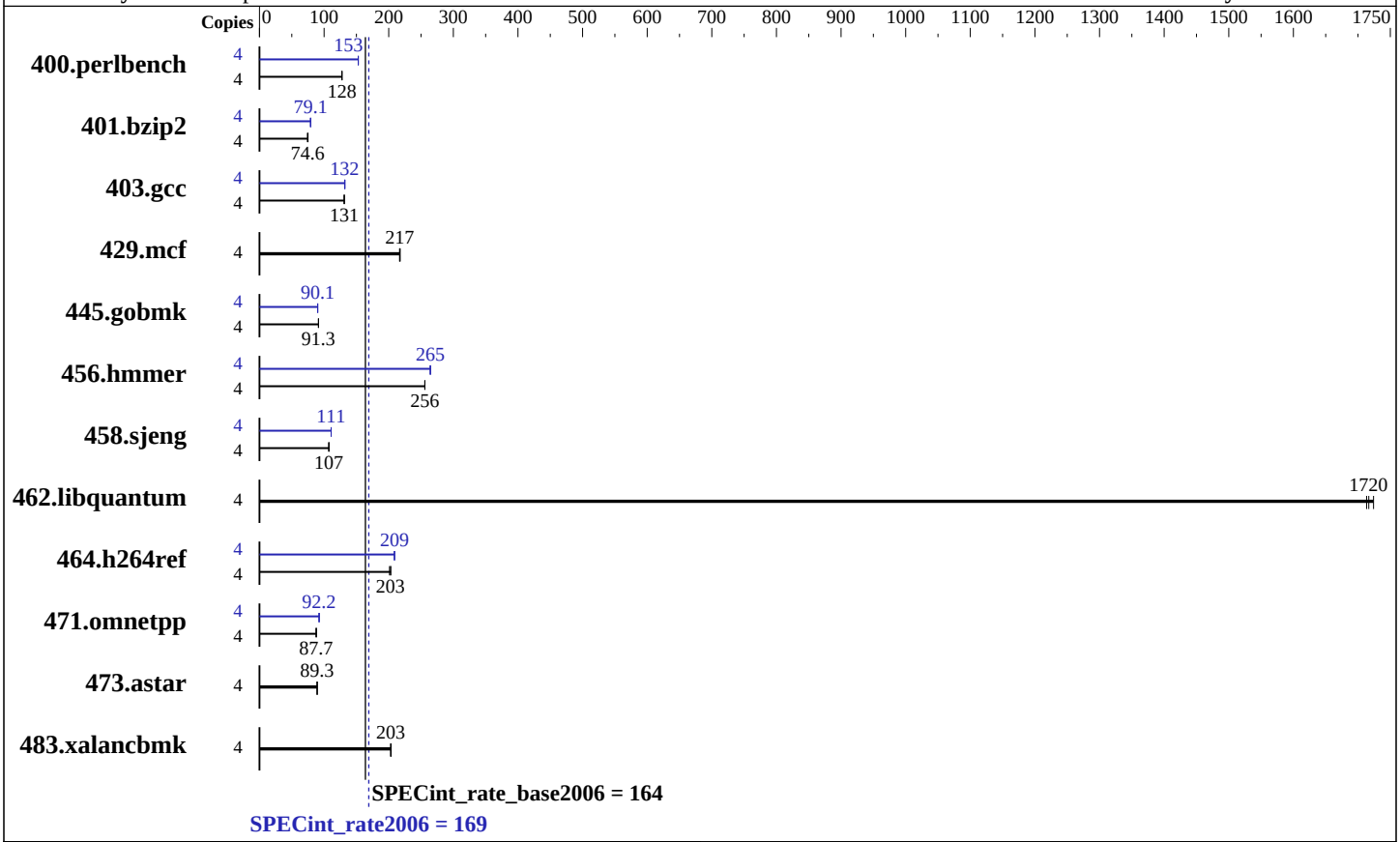
Supermicro X11SSL-nF motherboard
(X11SSL-nF , Intel Xeon E3-1235L v5)

SPECint®_rate2006 = 169

SPECint_rate_base2006 = 164

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

Test date: Jan-2016
Hardware Availability: Oct-2015
Software Availability: Mar-2015



Hardware

CPU Name:	Intel Xeon E3-1235L v5
CPU Characteristics:	Intel Turbo Boost Technology up to 3.00 GHz
CPU MHz:	2000
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
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

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:	No
File System:	xfs
System State:	Run level 3 (multi-user)
Base Pointers:	32-bit
Peak Pointers:	32/64-bit
Other Software:	Microquill SmartHeap V10.0

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Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	4	306	128	**306**	**128**	306	128	4	**256**	**153**	255	153	256	153
401.bzip2	4	514	75.1	519	74.4	**518**	**74.6**	4	489	79.0	**488**	**79.1**	487	79.2
403.gcc	4	245	131	246	131	**245**	**131**	4	243	132	244	132	**244**	**132**
429.mcf	4	168	218	168	217	**168**	**217**	4	168	218	168	217	**168**	**217**
445.gobmk	4	459	91.3	460	91.3	**459**	**91.3**	4	**466**	**90.1**	466	90.1	466	90.1
456.hmmer	4	146	256	146	256	**146**	**256**	4	141	265	141	264	**141**	**265**
458.sjeng	4	**451**	**107**	450	107	451	107	4	436	111	436	111	**436**	**111**
462.libquantum	4	48.4	1710	**48.3**	**1720**	48.1	1720	4	48.4	1710	**48.3**	**1720**	48.1	1720
464.h264ref	4	440	201	**436**	**203**	436	203	4	423	209	**424**	**209**	424	209
471.omnetpp	4	285	87.6	283	88.2	**285**	**87.7**	4	271	92.2	**271**	**92.2**	270	92.5
473.astar	4	315	89.1	314	89.3	**314**	**89.3**	4	315	89.1	314	89.3	**314**	**89.3**
483.xalancbmk	4	135	204	**136**	**203**	136	203	4	135	204	**136**	**203**	136	203

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Submit Notes

```
The taskset mechanism was used to bind copies to processors. The config file option 'submit'
was used to generate taskset commands to bind each copy to a specific processor.
For details, please see the config file.
```

Operating System Notes

```
Stack size set to unlimited using "ulimit -s unlimited"
```

Platform Notes

```
As tested, the system used a Supermicro CSE-113MFAC2-R606CB chassis.
The chassis is configured with 2 PWS-606P-1R redundant power supply, 1 SNK-P0046P heatsink,
as well as 4 FAN-0154L4 middle cooling fan.
 Sysinfo program /home/cpu2006/config/sysinfo.rev6914
 $Rev: 6914 $ $Date:: 2014-06-25 #$ e3fbb8667b5a285932ceab81e28219e1
 running on localhost.localdomain Fri Jan 15 13:10:30 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 E3-1235L v5 @ 2.00GHz
       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
```

Continued on next page

Platform Notes (Continued)

```
      caution.)
         cpu cores : 4
         siblings  : 4
         physical 0: cores 0 1 2 3
      cache size : 8192 KB

   From /proc/meminfo
      MemTotal:       65631332 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 Jan 15 02:30

   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. 1.0a 12/25/2015
     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:
LD_LIBRARY_PATH = "/home/cpu2006/libs/32:/home/cpu2006/libs/64:/home/cpu2006/sh"

 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 -m32 -L/opt/intel/composer_xe_2015/lib/ia32
```

C++ benchmarks:
```
icpc -m32 -L/opt/intel/composer_xe_2015/lib/ia32
```

Base Portability Flags

400.perlbench: `-DSPEC_CPU_LINUX_IA32`
462.libquantum: `-DSPEC_CPU_LINUX`
483.xalancbmk: `-DSPEC_CPU_LINUX`

Base Optimization Flags

C benchmarks:
```
-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch
-opt-mem-layout-trans=3
```

C++ benchmarks:
```
-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch
-opt-mem-layout-trans=3 -Wl,-z,muldefs -L/sh -lsmartheap
```

Base Other Flags

C benchmarks:

403.gcc: `-Dalloca=_alloca`

Peak Compiler Invocation

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

Continued on next page

Peak Compiler Invocation (Continued)

400.perlbench: icc -m64

401.bzip2: icc -m64

456.hmmer: icc -m64

458.sjeng: icc -m64

C++ benchmarks:
icpc -m32 -L/opt/intel/composer_xe_2015/lib/ia32

Peak Portability Flags

400.perlbench: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX_X64
401.bzip2: -DSPEC_CPU_LP64
456.hmmer: -DSPEC_CPU_LP64
458.sjeng: -DSPEC_CPU_LP64
462.libquantum: -DSPEC_CPU_LINUX
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)
-auto-ilp32

401.bzip2: -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 -auto-ilp32 -ansi-alias

403.gcc: -xCORE-AVX2 -ipo -O3 -no-prec-div

429.mcf: basepeak = yes

445.gobmk: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -prof-use(pass 2)
-ansi-alias -opt-mem-layout-trans=3

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

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 -auto-ilp32

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Peak Optimization Flags (Continued)

462.libquantum: basepeak = yes

464.h264ref: -xCORE-AVX2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -unroll2 -ansi-alias

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) -ansi-alias -opt-ra-region-strategy=block -Wl,-z,muldefs -L/sh -lsmartheap

473.astar: basepeak = yes

483.xalancbmk: basepeak = yes

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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