SPEC® CINT2006 Result
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Supermicro

SuperServer 6072R-WRF
(X9DRW-iF, Intel Xeon E5-2697 v2, 2.70 GHz)

SPECint®_rate2006 =   959

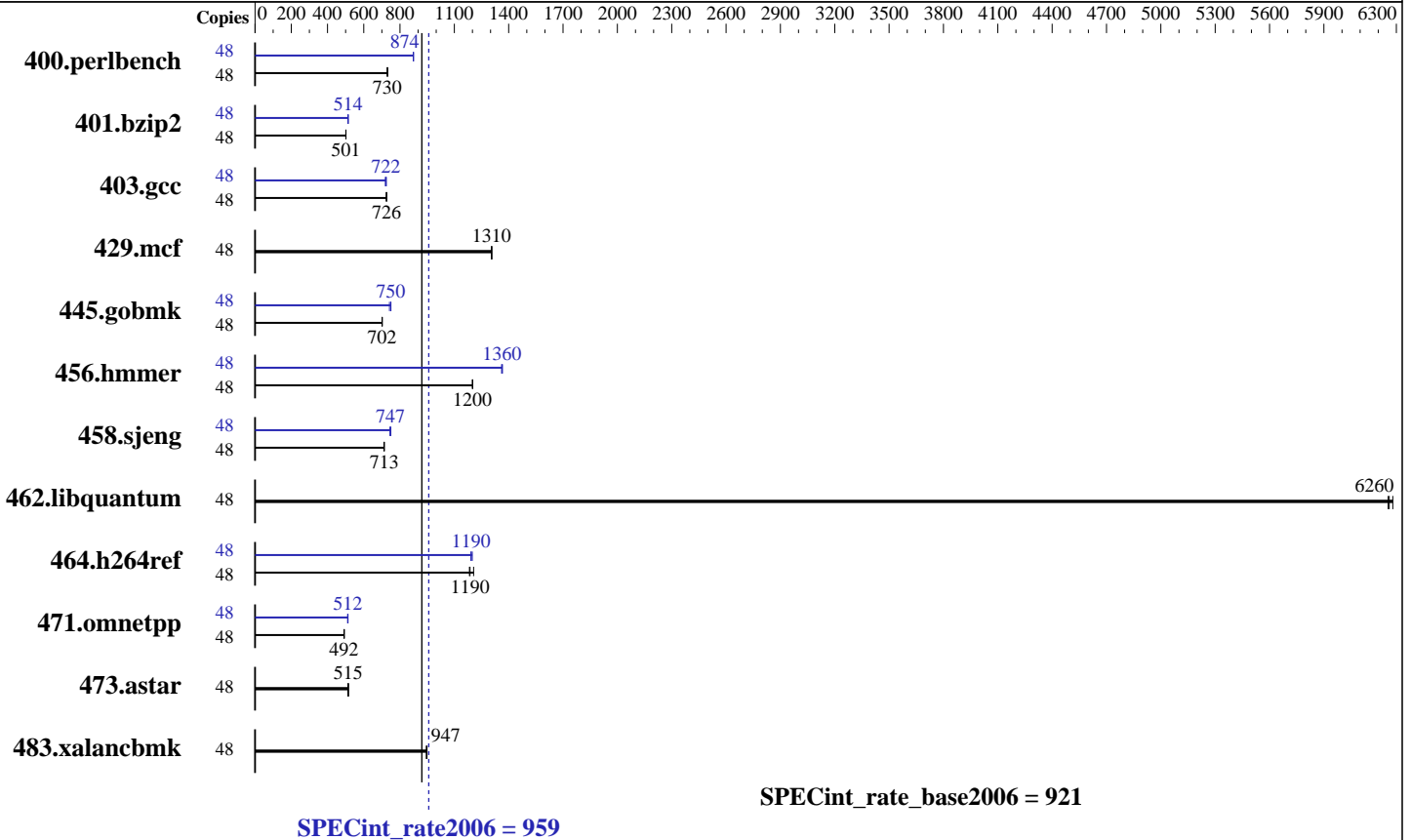SPECint_rate_base2006 =   921

CPU2006 license: 001176

Test sponsor: Supermicro

Tested by: Supermicro

Test date: Nov-2013

Hardware Availability: Sep-2013

Software Availability: Sep-2013

SPECint_rate2006 = 959

SPECint_rate_base2006 = 921

Hardware

CPU Name: Intel Xeon E5-2697 v2

CPU Characteristics: Intel Turbo Boost Technology up to 3.50 GHz

CPU MHz: 2700

FPU: Integrated

CPU(s) enabled: 24 cores, 2 chips, 12 cores/chip, 2 threads/core

CPU(s) orderable: 1,2 chips

Primary Cache: 32 KB I + 32 KB D on chip per core

Secondary Cache: 256 KB I+D on chip per core

L3 Cache: 30 MB I+D on chip per chip

Other Cache: None

Memory: 128 GB (16 x 8 GB 2Rx4 PC3-14900R-13, ECC)

Disk Subsystem: 2 x 100 GB SATAIII SSD as RAID-0

Other Hardware: None

Software

Operating System: Red Hat Enterprise Linux Server release 6.4 (Santiago)
2.6.32-358.18.1.el6.x86_64

Compiler: C/C++: Version 14.0.0.080 of Intel C++ Studio XE for Linux

Auto Parallel: No

File System: ext4

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	48	641	732	642	730	**642**	**730**	48	**537**	**874**	536	875	537	874
401.bzip2	48	**924**	**501**	924	501	923	502	48	901	514	904	513	**901**	**514**
403.gcc	48	532	727	**532**	**726**	534	724	48	**535**	**722**	537	719	533	725
429.mcf	48	**335**	**1310**	335	1310	335	1310	48	**335**	**1310**	335	1310	335	1310
445.gobmk	48	**718**	**702**	718	701	717	702	48	**672**	**750**	679	742	672	750
456.hmmer	48	373	1200	373	1200	**373**	**1200**	48	**329**	**1360**	328	1370	329	1360
458.sjeng	48	816	711	**815**	**713**	814	714	48	775	750	**777**	**747**	780	745
462.libquantum	48	159	6250	**159**	**6260**	158	6280	48	159	6250	**159**	**6260**	158	6280
464.h264ref	48	**895**	**1190**	898	1180	880	1210	48	892	1190	886	1200	**890**	**1190**
471.omnetpp	48	611	491	609	492	**610**	**492**	48	585	513	**585**	**512**	587	511
473.astar	48	658	512	653	516	**655**	**515**	48	658	512	653	516	**655**	**515**
483.xalancbmk	48	349	949	**350**	**947**	350	946	48	349	949	**350**	**947**	350	946

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

Submit Notes

The numactl mechanism was used to bind copies to processors. The config file option 'submit' was used to generate numactl 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

```
Sysinfo program /home/cpu2006/config/sysinfo.rev6818
$Rev: 6818 $ $Date:: 2012-07-17 #$ e86d102572650a6e4d596a3cee98f191
running on localhost.localdomain Mon Nov 25 13:06:03 2013

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 E5-2697 v2 @ 2.70GHz
     2 "physical id"s (chips)
     48 "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 : 12
     siblings  : 24
```

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Platform Notes (Continued)

```
    physical 0: cores 0 1 2 3 4 5 8 9 10 11 12 13
    physical 1: cores 0 1 2 3 4 5 8 9 10 11 12 13
  cache size : 30720 KB

From /proc/meminfo
   MemTotal:        132261624 kB
   HugePages_Total:         0
   Hugepagesize:         2048 kB

/usr/bin/lsb_release -d
   Red Hat Enterprise Linux Server release 6.4 (Santiago)

From /etc/*release* /etc/*version*
   mrg-realtime-release: Red Hat MRG Realtime release 2.3.0
   redhat-release: Red Hat Enterprise Linux Server release 6.4 (Santiago)
   system-release: Red Hat Enterprise Linux Server release 6.4 (Santiago)
   system-release-cpe: cpe:/o:redhat:enterprise_linux:6server:ga:server

uname -a:
   Linux localhost.localdomain 2.6.32-358.18.1.el6.x86_64 #1 SMP Wed Aug 28
   09:02:47 CEST 2013 x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Nov 25 13:05

SPEC is set to: /home/cpu2006
   Filesystem      Type    Size  Used Avail Use% Mounted on
   /dev/mapper/VolGroup-lv_home
                   ext4    121G  4.2G  111G   4% /home

Additional information from dmidecode:
  BIOS American Megatrends Inc. 3.0b.T201311141748 11/14/2013
  Memory:
   16x   8 GB
   16x Hynix Semiconductor HMT31GR7EFR4C-RD 8 GB 1866 MHz 2 rank

(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 i7-860 CPU + 8GB
 memory using RedHat EL 6.4
 Transparent Huge Pages enabled with:
 echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled
 Filesystem page cache cleared with:
 echo 1>      /proc/sys/vm/drop_caches
 runspec command invoked through numactl i.e.:
 numactl --interleave=all runspec <etc>
```

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Base Compiler Invocation

C benchmarks:
    icc   -m32

C++ benchmarks:
    icpc -m32

Base Portability Flags

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

Base Optimization Flags

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

C++ benchmarks:
    -xAVX -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

    400.perlbench: icc -m64

      401.bzip2: icc -m64

    456.hmmer: icc -m64

      458.sjeng: icc -m64

C++ benchmarks:
    icpc -m32

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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: -xAVX(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: -xAVX(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: -xAVX -ipo -O3 -no-prec-div

     429.mcf: basepeak = yes

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

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

    458.sjeng: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
               -no-prec-div(pass 2) -prof-use(pass 2) -unroll4
               -auto-ilp32

462.libquantum: basepeak = yes

  464.h264ref: -xAVX(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: -xAVX(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
```

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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-ic14.0-official-linux64.20140128.html
http://www.spec.org/cpu2006/flags/Supermicro-Platform-Settings-V1.2-revB.20130719.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.xml
http://www.spec.org/cpu2006/flags/Supermicro-Platform-Settings-V1.2-revB.20130719.xml

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

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