SPEC® CINT2006 Result
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Supermicro

SuperServer 6047R-E1R36N (X9DRi-LN4F+, Intel E5-2680)

$SPECint®\_rate2006 =$ 661
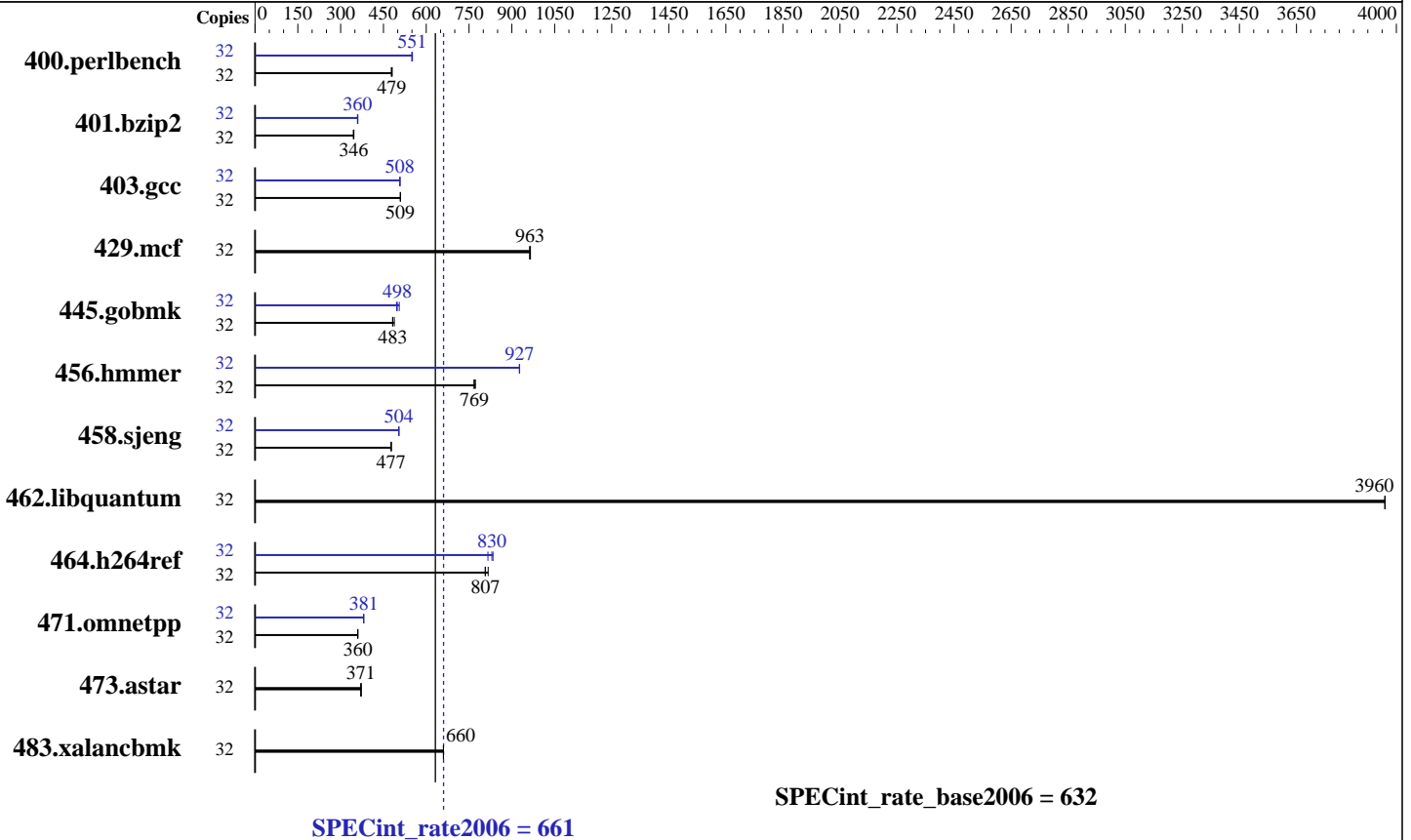
$SPECint\_rate\_base2006 =$ 632

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

Test date: Apr-2013
Hardware Availability: Feb-2012
Software Availability: Dec-2011

SPECint_rate2006 = 661

SPECint_rate_base2006 = 632

Hardware

CPU Name: Intel Xeon E5-2680
CPU Characteristics: Intel Turbo Boost Technology up to 3.50 GHz
CPU MHz: 2700
FPU: Integrated
CPU(s) enabled: 16 cores, 2 chips, 8 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: 20 MB I+D on chip per chip
Other Cache: None
Memory: 128 GB (16 x 8 GB 2Rx4 PC3-12800R-11, ECC)
Disk Subsystem: 1 x 1 TB SATA II, 7200 RPM
Other Hardware: None

Software

Operating System: Red Hat Enterprise Linux Server Release 6.2, Kernel 2.6.32-220.el6.x86_64
Compiler: C/C++: Version 12.1.0.225 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 V9.01

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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	32	655	478	**653**	**479**	650	481	32	**568**	**551**	569	549	567	552
401.bzip2	32	897	344	892	346	**892**	**346**	32	**859**	**360**	861	359	857	360
403.gcc	32	**506**	**509**	505	510	506	509	32	**507**	**508**	507	508	508	507
429.mcf	32	303	962	**303**	**963**	302	965	32	303	962	**303**	**963**	302	965
445.gobmk	32	696	482	**696**	**483**	688	488	32	**674**	**498**	664	505	676	496
456.hmmer	32	387	772	389	767	**388**	**769**	32	322	927	322	927	**322**	**927**
458.sjeng	32	811	477	**812**	**477**	812	477	32	**768**	**504**	768	504	769	504
462.libquantum	32	167	3960	**167**	**3960**	167	3960	32	167	3960	**167**	**3960**	167	3960
464.h264ref	32	**877**	**807**	878	807	867	817	32	868	816	**853**	**830**	849	834
471.omnetpp	32	555	360	**555**	**360**	556	360	32	525	381	**525**	**381**	526	381
473.astar	32	606	371	**606**	**371**	603	372	32	606	371	**606**	**371**	603	372
483.xalancbmk	32	334	660	**334**	**660**	334	660	32	334	660	**334**	**660**	334	660

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"

General Notes

Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = "/usr/cpu2006/libs/32:/usr/cpu2006/libs/64"

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB memory using RHEL5.5
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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CPU2006 license: 001176	**Test date:** Apr-2013
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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/smartheap -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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SPECint_rate2006 =   661

SPECint_rate_base2006 =   632

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

Test date: Apr-2013
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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/smartheap -lsmartheap

    473.astar: basepeak = yes

483.xalancbmk: basepeak = yes
```

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Peak Other Flags

C benchmarks:

403.gcc: `-Dalloca=_alloca`

The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.xml

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

Tested with SPEC CPU2006 v1.2.
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