SPEC® CINT2006 Result

Supermicro

SuperServer 6017TR-TQF (X9DRT-IBQF,
Intel Xeon E5-2650L, 1.80 GHz)

SPECint®_rate2006 =   455

SPECint_rate_base2006 =   440

CPU2006 license: 001176	**Test date:** Apr-2013
Test sponsor: Supermicro	**Hardware Availability:** Mar-2012
Tested by: Supermicro	**Software Availability:** Oct-2012

Copies

```
400.perlbench    32   368
                 32   320
401.bzip2        32   243
                 32   234
403.gcc          32   359
                 32   363
429.mcf          32   678
445.gobmk        32   325
                 32   313
456.hmmer        32   571
                 32   518
458.sjeng        32   336
                 32   326
462.libquantum   32   2850
464.h264ref      32   549
                 32   536
471.omnetpp      32   301
                 32   282
473.astar        32   264
483.xalancbmk    32   473
```

SPECint_rate_base2006 = 440

SPECint_rate2006 = 455

Hardware

CPU Name:	Intel Xeon E5-2650L
CPU Characteristics:	Intel Turbo Boost Technology up to 2.30 GHz
CPU MHz:	1800
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:	64 GB (8 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 13.0.0.133 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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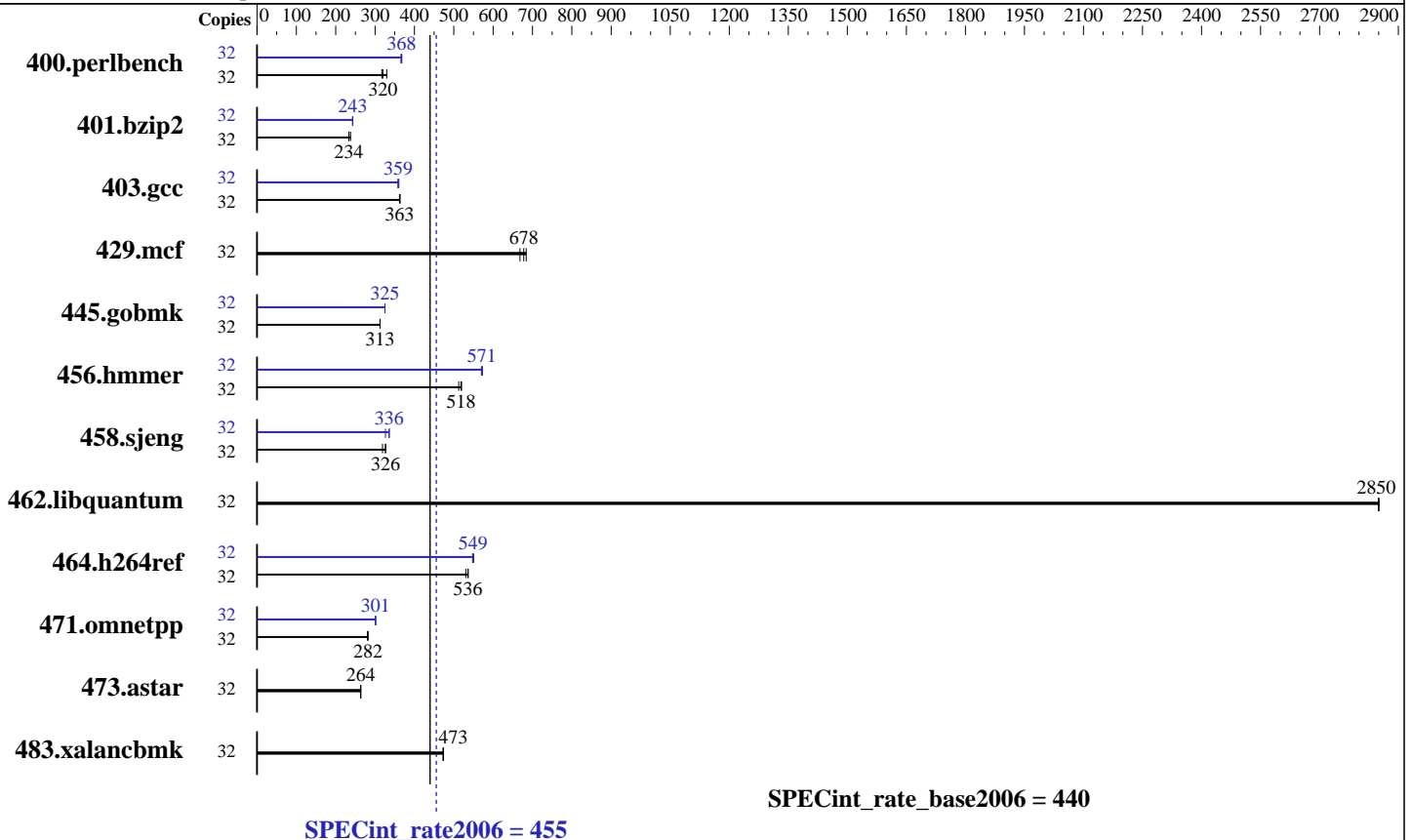
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Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	32	948	330	986	317	**977**	**320**	32	**851**	**368**	855	366	850	368
401.bzip2	32	1299	238	1322	234	**1322**	**234**	32	1273	243	**1270**	**243**	1268	243
403.gcc	32	709	363	712	362	**710**	**363**	32	**717**	**359**	715	361	720	358
429.mcf	32	**431**	**678**	437	668	427	684	32	**431**	**678**	437	668	427	684
445.gobmk	32	**1074**	**313**	1074	313	1073	313	32	1033	325	1032	325	**1032**	**325**
456.hmmer	32	**576**	**518**	582	513	574	520	32	521	573	**523**	**571**	524	570
458.sjeng	32	1185	327	1214	319	**1186**	**326**	32	1187	326	**1153**	**336**	1152	336
462.libquantum	32	233	2850	233	2850	**233**	**2850**	32	233	2850	233	2850	**233**	**2850**
464.h264ref	32	**1321**	**536**	1335	531	1320	537	32	1286	551	1293	548	**1290**	**549**
471.omnetpp	32	709	282	**710**	**282**	712	281	32	**664**	**301**	664	301	664	301
473.astar	32	854	263	**852**	**264**	852	264	32	854	263	**852**	**264**	852	264
483.xalancbmk	32	466	474	**467**	**473**	467	473	32	466	474	**467**	**473**	467	473

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 = "/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 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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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/Supermicro-Platform-Settings-V1.2-revB.20130719.html
http://www.spec.org/cpu2006/flags/Intel-ic13-official-linux64.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Supermicro-Platform-Settings-V1.2-revB.20130719.xml
http://www.spec.org/cpu2006/flags/Intel-ic13-official-linux64.xml

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

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