SPEC® CINT2006 Result
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Supermicro

SuperServer 5018R-M
(X10SRi-F , Intel Xeon E5-2697 v3)

$SPECint®2006 =$ 65.0
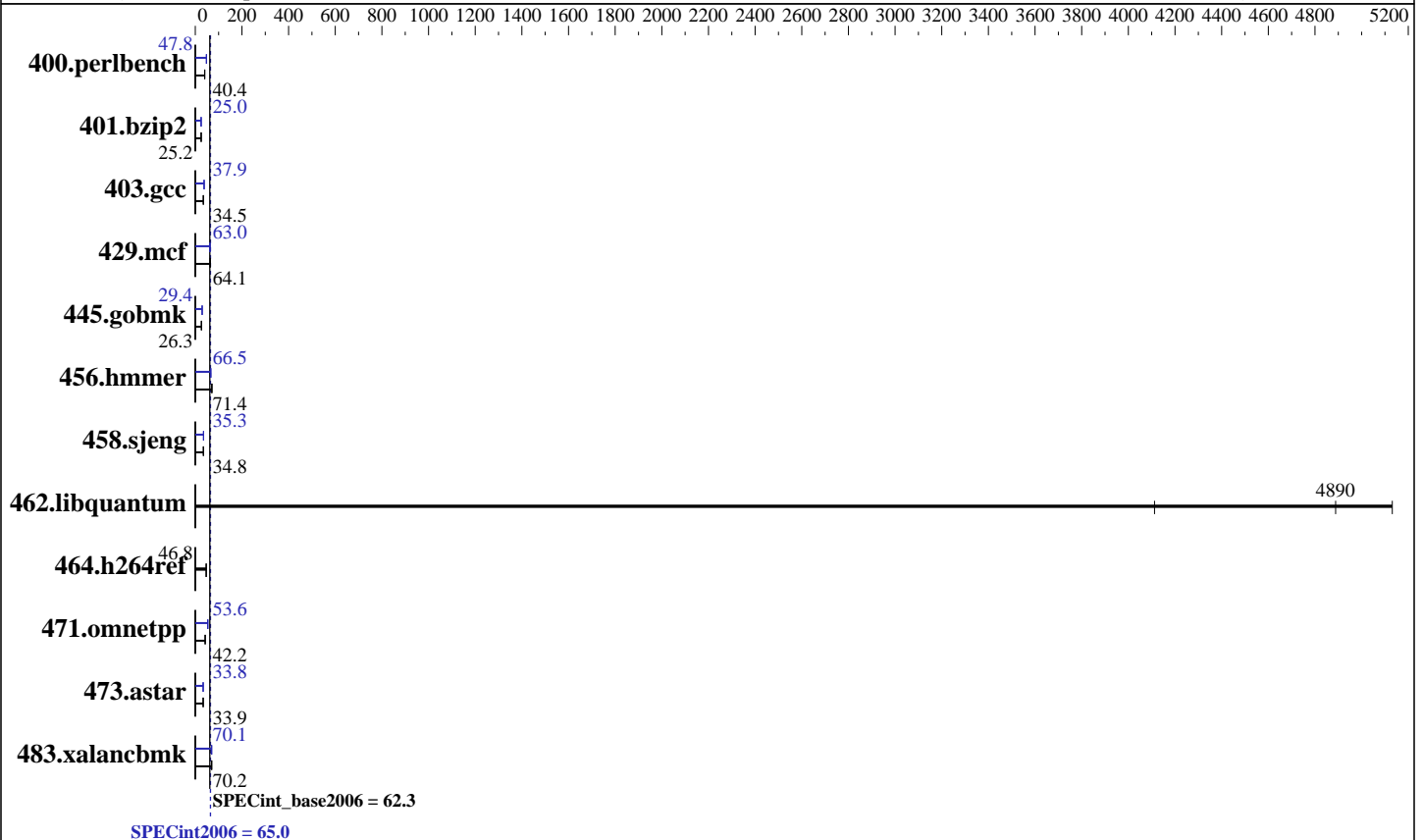
$SPECint\_base2006 =$ 62.3

CPU2006 license: 001176　　　　　　　　　　　　　　　**Test date:** May-2014
Test sponsor: Supermicro　　　　　　　　　　　　　　**Hardware Availability:** Sep-2014
Tested by: Supermicro　　　　　　　　　　　　　　　**Software Availability:** Nov-2013

0　200　400　600　800　1000　1200　1400　1600　1800　2000　2200　2400　2600　2800　3000　3200　3400　3600　3800　4000　4200　4400　4600　4800　5200

- 400.perlbench: 47.8 / 40.4
- 401.bzip2: 25.0 / 25.2
- 403.gcc: 37.9 / 34.5
- 429.mcf: 63.0 / 64.1
- 445.gobmk: 29.4 / 26.3
- 456.hmmer: 66.5 / 71.4
- 458.sjeng: 35.3 / 34.8
- 462.libquantum: 4890
- 464.h264ref: 46.8
- 471.omnetpp: 53.6 / 42.2
- 473.astar: 33.8 / 33.9
- 483.xalancbmk: 70.1 / 70.2

SPECint_base2006 = 62.3

SPECint2006 = 65.0

Hardware

CPU Name:	Intel Xeon E5-2697 v3
CPU Characteristics:	Intel Turbo Boost Technology up to 3.60 GHz
CPU MHz:	2600
FPU:	Integrated
CPU(s) enabled:	14 cores, 1 chip, 14 cores/chip, 2 threads/core
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:	35 MB I+D on chip per chip
Other Cache:	None
Memory:	128 GB (8 x 16 GB 2Rx4 PC4-2133P-R)
Disk Subsystem:	1 x 400 GB SATA III SSD
Other Hardware:	None

Software

Operating System:	Red Hat Enterprise Linux Server release 6.5, Kernel 2.6.32-431.e16.x86_64
Compiler:	C/C++: Version 14.0.0.080 of Intel C++ Studio XE for Linux
Auto Parallel:	Yes
File System:	ext4
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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Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	242	40.3	242	40.4	**242**	**40.4**	205	47.7	204	47.8	**204**	**47.8**
401.bzip2	**383**	**25.2**	381	25.3	386	25.0	386	25.0	386	25.0	**386**	**25.0**
403.gcc	**233**	**34.5**	233	34.5	233	34.5	212	38.0	215	37.4	**212**	**37.9**
429.mcf	**142**	**64.1**	143	63.7	142	64.4	144	63.5	146	62.4	**145**	**63.0**
445.gobmk	**399**	**26.3**	398	26.4	399	26.3	356	29.4	**357**	**29.4**	357	29.4
456.hmmer	133	70.2	**131**	**71.4**	131	71.4	140	66.6	141	66.0	**140**	**66.5**
458.sjeng	348	34.7	**348**	**34.8**	347	34.9	**343**	**35.3**	343	35.3	343	35.3
462.libquantum	5.04	4110	**4.24**	**4890**	4.04	5130	5.04	4110	**4.24**	**4890**	4.04	5130
464.h264ref	473	46.8	472	46.9	**473**	**46.8**	473	46.8	472	46.9	**473**	**46.8**
471.omnetpp	148	42.2	**148**	**42.2**	146	42.7	116	53.9	**117**	**53.6**	117	53.3
473.astar	**207**	**33.9**	209	33.5	207	34.0	209	33.6	**208**	**33.8**	207	33.8
483.xalancbmk	98.7	69.9	**98.2**	**70.2**	98.0	70.4	**98.4**	**70.1**	98.7	69.9	98.2	70.2

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:
    Early Snoop = Disabled
    Enforce POR = Disabled
    Hyper-Threading (ALL) = Enabled
    Memory Frequency = 2133

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"
    OMP_NUM_THREADS = "14"

    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
    runspec command invoked through numactl i.e.:
    numactl --interleave=all runspec <etc>

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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

Peak Compiler Invocation

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

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Peak Compiler Invocation (Continued)

    400.perlbench: `icc -m32`

    445.gobmk: `icc -m32`

C++ benchmarks (except as noted below):
    `icpc -m32`

    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`

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

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Peak Optimization Flags (Continued)

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

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

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