Supermicro
SuperServer 2027TR-D70RF (X9DRT-HF, Intel Xeon E5-2660, 3.0GHz)

SPECint®2006 = 46.3
SPECint_base2006 = 43.3

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

Test date: Apr-2012
Hardware Availability: Mar-2012
Software Availability: Oct-2011

Hardware
CPU Name: Intel Xeon E5-2660
CPU Characteristics: Intel Turbo Boost Technology up to 3.00 GHz
CPU MHz: 2200
FPU: Integrated
CPU(s) enabled: 16 cores, 2 chips, 8 cores/chip, 2 threads/core
CPU(s) orderable: 1.2 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: 20 MB I+D on chip per chip
Other Cache: None
Memory: 64 GB (8 x 8 GB 2Rx4 PC3-12800R-11, ECC, operate @ 1600MHz)
Disk Subsystem: 1 x 1 TB SATA II, 7200 RPM
Other Hardware: None

Software
Operating System: Red Hat Enterprise Linux Server release 6.1 (Santiago)
Compiler: C/C++: Version 12.1.0.225 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 V9.01
Supermicro
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Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Seconds</th>
<th>Ratio</th>
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</thead>
<tbody>
<tr>
<td>400.perlbench</td>
<td>368</td>
<td>26.6</td>
<td>368</td>
<td>26.5</td>
<td>368</td>
<td>26.6</td>
<td>308</td>
<td>31.7</td>
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</tr>
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<td>401.bzip2</td>
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<td>19.8</td>
<td>487</td>
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<td>487</td>
<td>19.8</td>
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<tr>
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<td>296</td>
<td>27.2</td>
<td>296</td>
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<td>291</td>
<td>27.6</td>
<td>293</td>
<td>27.5</td>
</tr>
<tr>
<td>429.mcf</td>
<td>173</td>
<td>52.9</td>
<td>164</td>
<td>55.5</td>
<td>164</td>
<td>55.6</td>
<td>173</td>
<td>52.9</td>
<td>164</td>
<td>55.5</td>
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<tr>
<td>445.gobmk</td>
<td>487</td>
<td>21.5</td>
<td>488</td>
<td>21.5</td>
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<td>206</td>
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<td>502</td>
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<td>462.libquantum</td>
<td>7.93</td>
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<tr>
<td>464.h264ref</td>
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<td>39.1</td>
<td>568</td>
<td>39.0</td>
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<td>38.7</td>
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</tr>
<tr>
<td>471.omnetpp</td>
<td>314</td>
<td>19.9</td>
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<td>19.8</td>
<td>317</td>
<td>19.7</td>
<td>190</td>
<td>32.9</td>
<td>235</td>
<td>26.6</td>
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<tr>
<td>473.astar</td>
<td>268</td>
<td>26.2</td>
<td>269</td>
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</tr>
<tr>
<td>483.xalancbmk</td>
<td>156</td>
<td>44.2</td>
<td>156</td>
<td>44.3</td>
<td>156</td>
<td>44.3</td>
<td>153</td>
<td>45.1</td>
<td>153</td>
<td>45.2</td>
</tr>
</tbody>
</table>

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

Operating System Notes

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

Platform Notes

Sysinfo program /home/cpu2006/config/sysinfo.rev6800
$Rev: 6800 $ $Date:: 2011-10-11 #$ $Id:: 6f2ebdf5032aaa42e583f96b07f99d3$

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 E5-2660 0 @ 2.0GHz
  2 "physical id"s (chips)
  32 "processors"
cores, siblings (Caution: counting these is hw and system dependent. The
following excerpts from /proc/cpuinfo might not be reliable. Use with
cautions.)
cpu cores : 8
siblings  : 16
physical 0: cores 0 1 2 3 4 5 6 7
physical 1: cores 0 1 2 3 4 5 6 7

Continued on next page
SPEC CINT2006 Result

Supermicro
SuperServer 2027TR-D70RF (X9DRT-HF, Intel Xeon E5-2660, 3.0GHz)

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Platform Notes (Continued)

    cache size : 20480 KB

    From /proc/meminfo
    MemTotal:       65947512 kB
    HugePages_Total:       0
    Hugepagesize:       2048 kB

    /usr/bin/lsb_release -d
    Red Hat Enterprise Linux Server release 6.1 (Santiago)

    From /etc/*release* /etc/*version*
    redhat-release: Red Hat Enterprise Linux Server release 6.1 (Santiago)
    system-release: Red Hat Enterprise Linux Server release 6.1 (Santiago)

    uname -a:
    Linux 131-32.inet 2.6.32-131.0.15.el6.x86_64 #1 SMP Tue May 10 15:42:40 EDT 2011 x86_64 x86_64 x86_64 GNU/Linux

    run-level 3 Apr 20 11:53

    SPEC is set to: /home/cpu2006
    Filesystem    Type    Size  Used Avail Use% Mounted on
    /dev/mapper/vg_13132-lv_home
    ext4    162G   64G   90G  42% /home

    Additional information from dmidecode:
    Memory:
    8x Hynix Semiconductor HMT31GR7CFR4C 8 GB 1600 MHz 1 rank

    (End of data from sysinfo program)

General Notes

Environment variables set by runspec before the start of the run:
KMP_AFFINITY = "granularity=fine,scatter"
LD_LIBRARY_PATH = "/home/cpu2006/libs/32:/home/cpu2006/libs/64"
OMP_NUM_THREADS = "16"

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB
memory using RHEL5.5

Base Compiler Invocation

    C benchmarks:
    icc  -m64

    C++ benchmarks:
    icpc  -m64
Supermicro
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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:
-xAVX -ipo -O3 -no-prec-div -parallel -opt-prefetch -auto-p32

C++ benchmarks:
-xAVX -ipo -O3 -no-prec-div -opt-prefetch -auto-p32 -Wl,-z,muldefs
-L/smartheap -lsmartheap64

Base Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

Peak Compiler Invocation

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

400.perlbench: icc -m32
445.gobmk: icc -m32
464.h264ref: icc -m32

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

473.astar: icpc -m64
Supermicro
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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
473.astar: -DSPEC_CPU_LP64
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) -opt-prefetch
   -ansi-alias
401.bzip2: -xAVX(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: -xAVX -ipo -O3 -no-prec-div -inline-calloc
   -opt-malloc-options=3 -auto-Ilp32
429.mcf: basepeak = yes
445.gobmk: -xAVX(pass 2) -prof-gen(pass 1) -prof-use(pass 2)
   -ansi-alias
456.hmmer: -xAVX -ipo -O3 -no-prec-div -unroll2 -auto-Ilp32
   -ansi-alias
458.sjeng: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
   -no-prec-div(pass 2) -prof-use(pass 2) -unroll14
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)
   -opt-ra-region-strategy=block -ansi-alias
   -Wl,-z,muldefs -L/smartheap -Lsmartheap

Continued on next page
### SPEC CINT2006 Result

**Supermicro**  
SuperServer 2027TR-D70RF (X9DRT-HF, Intel Xeon E5-2660, 3.0GHz)  

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#### Peak Optimization Flags (Continued)

473.astar: basepeak = yes

483.xalancbmk: -xAVX -ipo -O3 -no-prec-div -opt-prefetch -ansi-alias  
-Wl,-z,muldefs -L/smartheap -lsmartheap

#### Peak Other Flags

C benchmarks:

403.gcc: -Dalloca=_alloca

The flags files that were used to format this result can be browsed at:


You can also download the XML flags sources by saving the following links:

- [http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20120425.xml](http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20120425.xml)

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For other inquiries, please contact webmaster@spec.org.

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