SPEC has determined that this result was not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the submitter reported that the result used pre-production hardware and the production hardware would reduce production system performance by more than 1.75%. Asus will republish these results with production hardware.

### Hardware

- **CPU Name:** Intel Xeon E5-4650
- **CPU Characteristics:** Intel Turbo Boost Technology up to 3.30 GHz
- **CPU MHz:** 2700
- **FPU:** Integrated
- **CPU(s) enabled:** 32 cores, 4 chips, 8 cores/chip, 2 threads/core
- **CPU(s) orderable:** 2,4 chip
- **Primary Cache:** 32 KB I + 32 KB D on chip per core

### Software

- **Operating System:** Red Hat Enterprise Linux Server release 6.2 (Santiago) 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)
SPEC CINT2006 Result

ASUSTeK Computer Inc.

ASUS RS920-E7(Z9PX-Q32) Server System
(Intel Xeon E5-4650)

SPECint\_rate\_2006 = \text{NC}
SPECint\_rate\_base\_2006 = \text{NC}

CPU2006 license: 9016
Test sponsor: ASUSTeK Computer Inc.
Tested by: ASUSTeK Computer Inc.

Test date: Jul-2012
Hardware Availability: May-2012
Software Availability: Dec-2011

Secondary Cache: 256 KB I+D on chip per core
L3 Cache: 20 MB I+D on chip per chip
Other Cache: None
Memory: 256 GB (16 x 16 GB 2Rx4 PC3-12800R-11, ECC)
Disk Subsystem: Seagate ST3500320AS 1 x 500 GB SATA, 7200 RPM
Other Hardware: None

Base Pointers: 32-bit
Peak Pointers: 32/64-bit
Other Software: Microquill SmartHeap V9.01

### Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Copies</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
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<td>NC</td>
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<tr>
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<td>483.xalancbmk</td>
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<td>NC</td>
<td>NC</td>
</tr>
</tbody>
</table>

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.

SPEC has determined that this result was not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the submitter reported that the result used pre-production hardware and the production hardware would reduce production system performance by more than 1.75%. Asus will republish these results with production hardware.
SPEC CINT2006 Result

ASUSTeK Computer Inc.
ASUS RS920-E7(Z9PX-Q32) Server System
(Intel Xeon E5-4650)

SPECint_rate2006 = NC
SPECint_rate_base2006 = NC

CPU2006 license: 9016
Test sponsor: ASUSTeK Computer Inc.
Tested by: ASUSTeK Computer Inc.

Test date: Jul-2012
Hardware Availability: May-2012
Software Availability: Dec-2011

SPEC has determined that this result was not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the submitter reported that the result used pre-production hardware and the production hardware would reduce production system performance by more than 1.75%. Asus will republish these results with production hardware.

Operating System Notes
Stack size set to unlimited using "ulimit -s unlimited"

Platform Notes

Sysinfo program /cpu2006/config/sysinfo.rev6800
$Rev: 6800 $ $Date:: 2011-10-11 #$ 6f2ebdff5032aaa42e583f96b07f99d3
running on localhost Fri Jul 13 04:51:11 2012

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) CPU E5-4650 @ 2.70GHz
4 "physical id"s (chips)
64 "processors"
cores, siblings information: counting these is hw and system dependent. The following excerpts from /proc/cpuinfo might not be reliable. Use with caution.)
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
physical 2: cores 0 1 2 3 4 5 6 7
physical 3: cores 0 1 2 3 4 5 6 7
32 3MB cache size : 20480 KB

From /proc/meminfo
MemTotal: 264516044 kB
HugePages_Total: 0
Hugepagesize: 2048 kB

From /etc/*release* /etc/*version*
redhat-release: Red Hat Enterprise Linux Server release 6.2 (Santiago)
system-release: Red Hat Enterprise Linux Server release 6.2 (Santiago)
uname -a:

Continued on next page
SPEC has determined that this result was not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the submitter reported that the result used pre-production hardware and the production hardware would reduce production system performance by more than 1.75%. Asus will republish these results with production hardware.

Platform Notes (Continued)

Linux localhost 2.6.32-220.e16.x86_64 #1 SMP Wed Nov 9 08:03:13 EST 2011
x86_64 x86_64 x86_64 GNU/Linux

run-level 3 Jul 12 16:28

SPEC is set to: /cpu2006
Filesystem Type Size Used Avail Use% Mounted on
/dev/sda1 ext4 459G 173G 264G 40% /

Additional information from dmidecode

(End of data from sysinfo program)

General Notes

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

Base Compiler Invocation

C benchmarks:
  icc -m32

C++ benchmarks:
  icpc -m32
SPEC has determined that this result was not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the submitter reported that the result used pre-production hardware and the production hardware would reduce production system performance by more than 1.75%. Asus will republish these results with production hardware.

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):
16: -m32
400.perlbench: icc -m64
456.hmmer: icc -m64

Continued on next page
SPEC has determined that this result was not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the submitter reported that the result used pre-production hardware and the production hardware would reduce production system performance by more than 1.75%. Asus will republish these results with production hardware.

Peak Compiler Invocation (Continued)

458.sjeng: icc -m64

C++ benchmarks:
icpc -m32

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
-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

Continued on next page
SPEC has determined that this result was not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the submitter reported that the result used pre-production hardware and the production hardware would reduce production system performance by more than 1.75%. Asus will republish these results with production hardware.

Peak Optimization Flags (Continued)

456.hmmer: -xAVX -ipo -O3 -no-prec-div -unroll12 -auto-ilp32

458.sjeng: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-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)
-prec-div(pass 2) -prof-use(pass 2) -unroll12
-ansi-alias

C++ benchmarks:

471.omnetpp: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-prec-div(pass 2) -prof-use(pass 2) -ansi-alias
-opt-ra-reg-strategy=block -Wl,-z,muldefs
-L/smartheap -lsmartheap

473.astar: basepeak = yes

483.palancm: basepeak = yes

Peak Other Flags

C benchmarks:

490.gcc: -Dalloca=_alloca

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/ASUSTekPlatform.20120313.html
SPEC has determined that this result was not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the submitter reported that the result used pre-production hardware and the production hardware would reduce production system performance by more than 1.75%. Asus will republish these results with production hardware.