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### Hardware
- **CPU Name:** Intel Xeon X5670
- **CPU Characteristics:** Intel Turbo Boost Technology up to 3.33 GHz
- **CPU MHz:** 2933
- **CPU(s) available:** 2,16 chips, 6 cores/chip, 2 threads/core
- **FPU:** Integrated
- **Primary Cache:** 32 KB I + 32 KB D on chip per core
- **Secondary Cache:** 256 KB I+D on chip per core
- **L3 Cache:** 12 MB I+D on chip per chip
- **Other Cache:** None

### Software
- **Operating System:** SUSE Linux Enterprise Server 11 SP1 (x86_64), Kernel 2.6.32.12-0.7-default
- **Compiler:** Intel C++ Compiler XE for applications running on IA-32
- **Version:** 12.0.1.116 Build 20101116
- **Auto Parallel:** No
- **File System:** ext3
- **System State:** Run level 3 (multi-user)
- **Base Pointers:** 32-bit
- **Peak Pointers:** 32/64-bit
SPEC has determined that this result is not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the submitter has notifed SPEC that the system was customized in a manner that did not meet SPEC's requirements for documented and supported systems.

Memory: 48 GB (12 x 4 GB 2Rx4 PC3-10600R-9, ECC)
Disk Subsystem: 1 x 300 GB SAS, 15K RPM
Other Hardware: None
Other Software: Microquill SmartHeap V9.01

Results Table

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Submit Notes

- The option 'submit' was used.
- numactl was used to bind copies to the cores

Operating System Notes

- 'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run
- 'mount -t hugetlbfs nodev /mnt/hugepages' was used to enable large pages
- echo 10800 > /proc/sys/vm/nr_hugepages
- export HUGETLB_MORECORE=yes
- export LD_PRELOAD=/usr/lib64/libhugetlbfs.so
Huawei RH2285, Intel Xeon X5670

SPECint_rate2006 = NC
SPECint_rate_base2006 = NC

CPU2006 license: 3175
Test sponsor: Huawei
Tested by: Huawei

Test date: May-2011
Hardware Availability: May-2011
Software Availability: Jan-2011

SPEC has determined that this result is not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the submitter has notified SPEC that the system was customized in a manner that did not meet SPEC's requirements for documented and supported systems.

Platform Notes
Data Reuse Optimization disabled in BIOS Setup.

General Notes
Binaries compiled on RHEL 5.5

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
  -xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch
  -B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT
C++ benchmarks:
  -xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -Wl,-z,muldefs
  -L/smartheap -lsmartheap
  -B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT

Non-Compliant
Huawei
Huawei RH2285, Intel Xeon X5670

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CPU2006 license: 3175
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### 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  -p64
```

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:

Continued on next page
Huawei

Huawei RH2285, Intel Xeon X5670

**SPEC CINT2006 Result**

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**CPU2006 license:** 3175

**Test sponsor:** Huawei

**Tested by:** Huawei

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**SPEC has determined that this result is not in compliance with the SPEC CPU2006 run and reporting rules. Specifically, the submitter has notified SPEC that the system was customized in a manner that did not meet SPEC's requirements for documented and supported systems.**

### Peak Optimization Flags (Continued)

400.perlbench:
- `-xSSE4.2` (pass 2)
- `-prof-gen(pass 1)`
- `-ipo(pass 2)`
- `-O3(pass 2)`
- `-no-prec-div(pass 2)`
- `-prof-use(pass 2)`
- `-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT`

401.bzip2:
- `-xSSE4.2` (pass 2)
- `-prof-gen(pass 1)`
- `-ipo(pass 2)`
- `-O3(pass 2)`
- `-no-prec-div(pass 2)`
- `-prof-use(pass 2)`
- `-opt-prefetch` (-2) `--ilp` (-3)`--ansi-alias`
- `-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT`

403.gcc:
- `-xSSE4.2` (-2)
- `-ipo` (-3)
- `-O3` (-no-prec-div)
- `-B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT`

429.mcf:
- `-xSSE4.2` (pass 2)
- `-prof-gen(pass 1)`
- `-ipo(pass 2)`
- `-O3(pass 2)`
- `-no-prec-div(pass 2)`
- `-prof-use(pass 2)`
- `-ansi-alias` (-auto-ilp32)

445.gobmk:
- `-xSSE4.2` (pass 2)
- `-prof-gen(pass 1)`
- `-prof-use(pass 2)`
- `-ansi-alias` (-auto-ilp32)

456.hmmer:
- `-xSSE4.2` (-2)
- `-ipo` (-3)
- `-O3` (-no-prec-div)
- `-unroll2` (-auto-ilp32)
- `-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT`

458.sjeng:
- `-xSSE4.2` (pass 2)
- `-prof-gen(pass 1)`
- `-ipo(pass 2)`
- `-O3(pass 2)`
- `-no-prec-div(pass 2)`
- `-prof-use(pass 2)`
- `-unroll4` (-auto-ilp32)
- `-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT`

462.libquantum:
- `-basepeak = yes`

464.h264ref:
- `-xSSE4.2` (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:
- `-xSSE4.2` (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`

Continued on next page
Huawei
Huawei RH2285, Intel Xeon X5670

SPECint_rate2006 = NC
SPECint_rate_base2006 = NC

CPU2006 license: 3175
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Peak Optimization Flags (Continued)
473.astar: basepeak = yes
483.xalancbmk: basepeak = yes

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-ic12.0-linux64-revB.html
http://www.spec.org/cpu2006/flags/HUAWEI-platform-linux64-revB.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revB.xml
http://www.spec.org/cpu2006/flags/HUAWEI-platform-linux64-revB.xml

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

Tested with SPEC CPU2006 v1.1.
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