SPEC® CINT2006 Result

Huawei
Huawei BH620, Intel Xeon X5670

SPEC®_rate2006 = NC
SPECint_rate_base2006 = NC

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

CPU2006 license: 3175
Test date: Apr-2011
Hardware Availability: Apr-2011
Software Availability: Jan-2011

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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.

Hardware
CPU Name: Intel Xeon X5670
CPU Characteristics: Intel Turbo Boost Technology up to 3.33 GHz
CPU MHz: 2933
FPU: Integrated
CPU(s) enabled: 12 cores, 2 chips, 6 cores/chip, 2 threads/core
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
Auto Parallel: No
File System: ext3
System State: Run level 3 (multi-user)
Base Pointers: 32-bit
Peak Pointers: 32/64-bit

Non-Compliant
SPECint®_rate2006 = NC
SPECint_rate_base2006 = NC

Copies
400.perlbench
401.bzip2
403.gcc
429.mcf
445.gobmk
456.hmmer
458.sjeng
462.libquantum
464.h264ref
471.omnetpp
473.astar
483.xalancbmk

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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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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.
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
### SPEC CINT2006 Result

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#### 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

- **C benchmarks:**
  - `-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`
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### Base Other Flags

**C benchmarks:**

403.gcc: -Dalloca=_alloca

### Peak Compiler Invocation

**C benchmarks (except as noted below):**

icc  
400.perlbench: icc -m64
401.bzip2: icc -m64
456.hmmer: icc -m64
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:

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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 -auto-ilp32 -ansi-alias -B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT
403.gcc: -xSSE4.2 -ipo -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 -ipo -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

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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 other inquiries, please contact webmaster@spec.org.

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