SPEC® CINT2006 Result

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Huawei

Huawei RH2285,Intel Xeon E5620

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.

Non-Compliant

	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	

Hardware

CPU Name:	Intel Xeon E5620
CPU Characteristics:	Intel Turbo Boost Technology up to 2.67 GHz
CPU MHz:	2400
FPU:	Integrated
CPU(s) enabled:	8 cores, 2 chips, 4 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:	12 MB I+D on chip per chip
Other Cache:	None

Continued on next page

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

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Memory:	48 GB (12 x 4 GB 2Rx4 PC3-10600R-9, ECC, running at 1066 MHz)
Disk Subsystem:	1 x 300 GB SAS, 15K RPM
Other Hardware:	None
Other Software:	Mentoquill SmartHeap V9.01

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
400.perlbench	16	NC	NC	NC	NC	NC	NC	16	NC	NC	NC	NC	NC	NC
401.bzip2	16	NC	NC	NC	NC	NC	NC	16	NC	NC	NC	NC	NC	NC
403.gcc	16	NC	NC	NC	NC	NC	NC	16	NC	NC	NC	NC	NC	NC
429.mcf	16	NC	NC	NC	NC	NC	NC	8	NC	NC	NC	NC	NC	NC
445.gobmk	16	NC	NC	NC	NC	NC	NC	16	NC	NC	NC	NC	NC	NC
456.hmmer	16	NC	NC	NC	NC	NC	NC	8	NC	NC	NC	NC	NC	NC
458.sjeng	16	NC	NC	NC	NC	NC	NC	16	NC	NC	NC	NC	NC	NC
462.libquantum	16	NC	NC	NC	NC	NC	NC	16	NC	NC	NC	NC	NC	NC
464.h264ref	16	NC	NC	NC	NC	NC	NC	16	NC	NC	NC	NC	NC	NC
471.omnetpp	16	NC	NC	NC	NC	NC	NC	16	NC	NC	NC	NC	NC	NC
473.astar	16	NC	NC	NC	NC	NC	NC	16	NC	NC	NC	NC	NC	NC
483.xalancbmk	16	NC	NC	NC	NC	NC	NC	16	NC	NC	NC	NC	NC	NC

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 7200 > /proc/sys/vm/nr_hugepages
export HUGETLB_MORECORE=yes
export LD_PRELOAD=/usr/lib64/libhugetlbfs.so
```

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Non-Compliant

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
```

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.

Non-Compliant

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 -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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Non-Compliant

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

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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Non-Compliant

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.

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