Huawei
Huawei BH620, Intel Xeon L5630

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<thead>
<tr>
<th>SPECint_rate2006 = NC</th>
<th>SPECint_rate_base2006 = NC</th>
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CPU2006 license: 3175
Test sponsor: Huawei
Tested by: Huawei

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**Hardware**

- **CPU Name:** Intel Xeon L5630
- **CPU Characteristics:** Intel Turbo Boost Technology up to 2.40 GHz
- **CPU MHz:** 2133
- **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

**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

Non-Compliant

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SPEC CINT2006 Result

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Test date: May-2011
Hardware Availability: May-2011
Tested by: Huawei
Software Availability: Jan-2011

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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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<th>Benchmark</th>
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Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

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

Standard Performance Evaluation Corporation
info@spec.org
http://www.spec.org/
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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:  
\texttt{icc -m32}

C++ benchmarks:  
\texttt{icpc -m32}

Base Portability Flags
400.perlbench: -DSPEC_CPU_LINUX_IA32
462.libquantum: -DSPEC_CPU_LINUX
483.xalancbmk: -DSPEC_CPU_LINUX

Base Optimization Flags
\texttt{-xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT}

C++ benchmarks:
\texttt{-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 -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:

Continued on next page
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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: basepeak = yes

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 -ansi-alias -opt-ra-region-strategy=block -Wl,-z,muldefs -L/smartheap -lsmartheap

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) -unroll2 -auto-ilp32 -B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

462.libquantum: basepeak = yes

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

C++ benchmarks:

464.n2d4ffe: -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 questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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