Huawei
Huawei XH620, Intel Xeon E5606

SPECfp<sup>®</sup>_rate2006 = NC
SPECfp_rate_base2006 = NC

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Huawei

Huawei XH620, Intel Xeon E5606

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<table>
<thead>
<tr>
<th>Hardware</th>
<th>Software</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU Name:</td>
<td>Operating System:</td>
</tr>
<tr>
<td>CPU Characteristics:</td>
<td>SUSE Linux Enterprise Server 11 SP1 (x86_64),</td>
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<tr>
<td>CPU MHz:</td>
<td>Kernel 2.6.32.12-0.7-default</td>
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<tr>
<td>FPU:</td>
<td>Compiler:</td>
</tr>
<tr>
<td>CPU(s) enabled:</td>
<td>Intel C++ and Fortran Intel 64 Compiler XE</td>
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<tr>
<td>CPU(s) orderable:</td>
<td>for applications running on Intel 64</td>
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<td>Primary Cache:</td>
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<td>Other Cache:</td>
<td>System State:</td>
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<td>Memory:</td>
<td>Run level 3 (multi-user)</td>
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<td>Disk Subsystem:</td>
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<td>Other Software:</td>
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CPU2006 license: 3175
Test date: Jun-2011
Hardware Availability: May-2011
Software Availability: Jan-2011

SPECfp_rate2006 = NC
SPECfp_rate_base2006 = NC

CPU Name: Intel Xeon E5606
CPU Characteristics:
CPU MHz: 2133
FPU: Integrated
CPU(s) enabled: 8 cores, 2 chips, 4 cores/chip
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: 8 MB I+D on chip per chip
Other Cache: None
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

Test sponsor: Huawei
Tested by: Huawei
Huawei
Huawei XH620, Intel Xeon E5606

SPEC CFP2006 Result
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SPECfp_rate2006 = NC
SPECfp_rate_base2006 = NC

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

Test date: Jun-2011
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Results Table

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</table>

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
echo 1 >/proc/sys/vm/zone_reclaim_mode
'mount -t hugetlbfs nodev /mnt/hugepages' was used to enable large pages
echo 7200 > /proc/sys/vm/nr_hugepages

Continued on next page
Huawei

Huawei XH620, Intel Xeon E5606

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Operating System Notes (Continued)

export HUGETLB_MORECORE=yes
export LD_PRELOAD=/usr/lib64/libhugetlbfs

Platform Notes

Data Reuse Optimization disabled in BIOS Setup.

General Notes

Binaries compiled on RHEL 5.5

Base Compiler Invocation

C benchmarks:
   icc  -m64
C++ benchmarks:
   icpc -m64
Fortran benchmarks:
   ifort -m64
Benchmarks using both Fortran and C:
   icc  -m64  ifort -m64

Base Portability Flags

416.bwaves: -DSPEC_CPU_LP64
416.gmres: -DSPEC_CPU_LP64
435.milc: -DSPEC_CPU_LP64
434.zesmp: -DSPEC_CPU_LP64
435.gromacs: -DSPEC_CPU_LP64  -nofor_main
436.cactusADM: -DSPEC_CPU_LP64  -nofor_main
437.leslie3d: -DSPEC_CPU_LP64
444.namd: -DSPEC_CPU_LP64

Continued on next page
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Base Portability Flags (Continued)

447.dealII: -DSPEC_CPU_LP64
450.soplex: -DSPEC_CPU_LP64
453.povray: -DSPEC_CPU_LP64
454.calculix: -DSPEC_CPU_LP64 -nofor_main
459.GemsFDTD: -DSPEC_CPU_LP64
465.tonto: -DSPEC_CPU_LP64
470.lbm: -DSPEC_CPU_LP64
481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
482.sphinx3: -DSPEC_CPU_LP64

Base Optimization Flags

C benchmarks:
-xSSE4.2 -ipo -O3 -no-prec-div -static -ansi-alias
C++ benchmarks:
-xSSE4.2 -ipo -O3 -no-prec-div -static -ansi-alias
Fortran benchmarks:
-xSSE4.2 -ipo -O3 -no-prec-div -static
Benchmarks using both Fortran and C:
-xSSE4.2 -ipo -O3 -no-prec-div -static -ansi-alias

Peak Compiler Invocation

C benchmarks (except as noted below):
icc -m64
482.sphinx3: icc -m32
C++ benchmarks (except as noted below):
icpc -m64
450.soplex: icpc -m32

Continued on next page
SPEC CFP2006 Result

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Peak Compiler Invocation (Continued)

Fortran benchmarks:
ifort -m64

Benchmarks using both Fortran and C:
icc -m64 ifort -m64

Peak Portability Flags

410.bwaves: -DSPEC_CPU_LP64
416.gamess: -DSPEC_CPU_LP64
433.milc: -DSPEC_CPU_LP64
434.zeusmp: -DSPEC_CPU_LP64
435.gromacs: -DSPEC_CPU_LP64 -nofor_main
436.cactusADM: -DSPEC_CPU_LP64 -nofor_main
437.leslie3d: -DSPEC_CPU_LP64
444.namd: -DSPEC_CPU_LP64
447.dealII: -DSPEC_CPU_LP64
453.povray: -DSPEC_CPU_LP64
454.calculix: -DSPEC_CPU_LP64 -nofor_main
459.GemsFDTD: -DSPEC_CPU_LP64
465.tonto: -DSPEC_CPU_LP64
470.lbm: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX

Peak Optimization Flags

C benchmarks:

433.milc: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
   -no-prec-div(pass 2) -prof-use(pass 2) -static -auto-ilp32

470.lbm: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
   -no-prec-div(pass 2) -prof-use(pass 2) -opt-malloc-options=3
   -ansi-alias -opt-prefetch -static -auto-ilp32

Continued on next page
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Peak Optimization Flags (Continued)

C++ benchmarks:

444.namd: -xsse4.2 (pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
                           -no-prec-div(pass 2) -prof-use(pass 2) -fno-alias
                           -auto-ilp32

447.dealII: basepeak = yes

Fortran benchmarks:

410.bwaves: -xsse4.2 (pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
                  -no-prec-div(pass 2) -prof-use(pass 2) -static

437.leslie3d: -xsse4.2 -ipo -O3 -no-prec-div
              -B /usr/share/libhugetlbfs/ -WL,-hugetlbfs-link=BDT

459.GemsFDTD: basepeak = yes
SPEC CFP2006 Result

Huawei

Huawei XH620, Intel Xeon E5606

SPECfp_rate2006 = NC
SPECfp_rate_base2006 = NC

CPU2006 license: 3175
Test sponsor: Huawei
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Peak Optimization Flags (Continued)

Benchmarks using both Fortran and C:

435.gromacs: basepeak = yes
436.cactusADM: basepeak = yes
454.calculix: basepeak = yes
481.wrf: basepeak = yes

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

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-revC.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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