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Huawei
Huawei RH2285, Intel Xeon E5620

| SPECfp2006 = | NC |
| SPECfp_base2006 = | NC |

**CPU2006 license:** 3175  
**Test date:** May-2011  
**Test sponsor:** Huawei  
**Hardware Availability:** May-2011  
**Tested by:** Huawei  
**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.**

### 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  
- **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  
- **Memory:** 48 GB (12 x 4 GB 2Rx4 PC3-10600R-9, ECC)  
- **Disk Subsystem:** 1 x 300 GB SAS, 15K RPM  
- **Other Hardware:** None

### Software
- **Operating System:** SUSE Linux Enterprise Server 11 SP1 (x86_64), Kernel 2.6.32.12-0.7-default  
- **Compiler:** Intel C++ and Fortran Intel 64 Compiler XE for applications running on Intel 64 Version 12.0 Update 3  
- **Auto Parallel:** Yes  
- **File System:** ext3  
- **System State:** Run level 3 (multi-user)  
- **Base Pointers:** 64-bit  
- **Peak Pointers:** 32/64-bit  
- **Other Software:** None
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.

Results Table:

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</tbody>
</table>

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

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 900 > /proc/sys/vm.nr_hugepages'
'export HUGETLB_MORECORE=yes'
'export LD_PRELOAD=/usr/lib64/libhugetlbfs.so'
Huawei
Huawei RH2285, Intel Xeon E5620

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

SPECfp2006 = NC
SPECfp_base2006 = NC

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

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Platform Notes
Data Reuse Optimization disabled in BIOS Setup.
Intel HT technology Disabled in BIOS Setup.

General Notes:
Binaries compiled on RHEL5.5
OMP_NUM_THREADS set to number of CPUs

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

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 -nofor_main
447.dealII: -DSPEC_CPU_LP64
450.soplex: -DSPEC_CPU_LP64
453.povray: -DSPEC_CPU_LP64

Spec CFP2006 Result
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447.dealII: -DSPEC_CPU_LP64
450.soplex: -DSPEC_CPU_LP64
453.povray: -DSPEC_CPU_LP64

Continued on next page

Standard Performance Evaluation Corporation
info@spec.org
http://www.spec.org/
Huawei
Huawei RH2285, Intel Xeon E5620

<table>
<thead>
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CPU2006 license: 3175
Test sponsor: Huawei
Tested by: Huawei

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### Base Portability Flags (Continued)

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<tbody>
<tr>
<td>454.calculix: -DSPEC_CPU_LP64 -nofor_main</td>
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<tr>
<td>459.GemsFDTD: -DSPEC_CPU_LP64</td>
</tr>
<tr>
<td>465.tonto: -DSPEC_CPU_LP64</td>
</tr>
<tr>
<td>470.lbm: -DSPEC_CPU_LP64</td>
</tr>
<tr>
<td>481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX</td>
</tr>
<tr>
<td>482.sphinx3: -DSPEC_CPU_LP64</td>
</tr>
</tbody>
</table>

### Base Optimization Flags

**C benchmarks:**
- -xSSE4.2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch
- -ansi-alias

**C++ benchmarks:**
- -xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch -ansi-alias

**Fortran benchmarks:**
- -xSSE4.2 -ipo - -no-prec-div -static -parallel -opt-prefetch

**Benchmarks using both Fortran and C:**
- -xSSE4.2 -ipo - -no-prec-div -static -parallel -opt-prefetch
- -ansi-alias

### Peak Compiler Invocation

**C benchmarks:**
- icc -m64

**C++ benchmarks:**
- icpc -m64

**Fortran benchmarks:**
- ifort -m64

**Benchmarks using both Fortran and C:**
- icc -m64 ifort -m64
Huawei
Huawei RH2285, Intel Xeon E5620

| SPECfp2006 = | NC |
| SPECfp_base2006 = | NC |

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

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Peak Portability Flags
Same as Base Portability Flags

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
-ansi-alias

470.lbm: basepeak = yes

482.sphinx3: -xSSE4.2 -ipo +3 -no-prec-div -unroll2 -ansi-alias
-parallel

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
-static

47.dealII: basepeak = yes

450.soplex: basepeak = yes

452.povray: -xSSE4.2 (pass 2) -prof-gen (pass 1) -ipo (pass 2) -O3 (pass 2)
-no-prec-div (pass 2) -prof-use (pass 2) -unroll4 -ansi-alias
-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

Fortran benchmarks:

410.bwaves: -xSSE4.2 -ipo -O3 -no-prec-div -opt-prefetch -parallel
-static

416.gamess: -xSSE4.2 (pass 2) -prof-gen (pass 1) -ipo (pass 2) -O3 (pass 2)
-no-prec-div (pass 2) -prof-use (pass 2) -unroll2
-inline-level=0 -scalar-rep- -static
Huawei RH2285, Intel Xeon E5620

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Peak Optimization Flags (Continued)

434.zeusmp: basepeak = yes
437.leslie3d: basepeak = yes
459.GemsFDTD: -xsse4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-prec-div(pass 2) -prof-use(pass 3) -unroll2
-inline-level=0 -dp-preetch -parallel
-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

465.tonto: -xsse4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-prec-div(pass 2) -prof-use(pass 2) -inline-calloc
-opt-malloc-options=3 -auto -unroll14
-B /usr/share/libhugetlbfs/ -Wl,-melf_x86_64 -Wl,-hugetlbfs-link=BDT

Benchmarks using both Fortran and C:

435.gromacs: -xsse4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-prec-div(pass 2) -prof-use(pass 2) -static -auto-ilp32
-ansi-alias

436.cactusADM: basepeak = yes
454.calculix: -xsse4.2 -ipo -O3 -no-prec-div -auto-ilp32 -ansi-alias
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
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
SPEC CFP2006 Result

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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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