**Fujitsu**  
PRIMERGY RX200 S6, Intel Xeon E5649, 2.53 GHz

**SPECfp®2006 =** 53.0  
**SPECfp_base2006 =** 49.3

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**Hardware**

- **CPU Name:** Intel Xeon E5649
- **CPU Characteristics:** Intel Turbo Boost Technology up to 2.93 GHz
- **CPU MHz:** 2533
- **FPU:** Integrated
- **CPU(s) enabled:** 12 cores, 2 chips, 6 cores/chip
- **CPU(s) orderable:** 1.2 chips
- **Primary Cache:** 32 KB I + 32 KB D on chip per core
- **Secondary Cache:** 256 KB I+D on chip per core

---

**Software**

- **Operating System:** SUSE Linux Enterprise Server 11 (x86_64) with SP1, 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

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**Test Sponsor:** Fujitsu  
**Hardware Availability:** Feb-2011  
**Software Availability:** Apr-2011  
**Test date:** Mar-2011  
**CPU2006 license:** 19  
**Tested by:** Fujitsu

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</tr>
<tr>
<td>416.gamess</td>
<td>20.2</td>
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Fujitsu

PRIMERGY RX200 S6, Intel Xeon E5649, 2.53 GHz

**SPEC CFP2006 Result**

Fujitsu

**SPECfp2006 = 53.0**

**SPECfp_base2006 = 49.3**

CPU2006 license: 19
Test sponsor: Fujitsu
Tested by: Fujitsu

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 SAS, 300 GB, 10000 RPM
Other Hardware: --

Peak Pointers: 32/64-bit
Other Software: None

Operating System Notes

'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run

'nodev /mnt/hugepages hugetlbfs defaults 0 0' added to /etc/fstab

echo 900 > /proc/sys/vm/nr_hugepages
export HUGETLB_MORECORE=yes
export LD_PRELOAD=/usr/lib64/libhugetlbfs.so

Platform Notes

BIOS configuration:
Data Reuse Optimization = Disable
Intel HT Technology = Disable

Results Table

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

Test date: Mar-2011
Hardware Availability: Feb-2011
Software Availability: Apr-2011
### SPEC CFP2006 Result

**Fujitsu**

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**Test sponsor:** Fujitsu  
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#### General Notes

OMP_NUM_THREADS set to number of cores  
For information about Fujitsu please visit: [http://www.fujitsu.com](http://www.fujitsu.com)  
Binaries were compiled on RHEL5.5 with binutils-2.17.50.0.6-14.el5

#### 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

<table>
<thead>
<tr>
<th>Benchmark</th>
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<tr>
<td>410.bwaves</td>
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<td>416.gamess</td>
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<td>-DSPEC_CPU_LP64</td>
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<td>-DSPEC_CPU_LP64</td>
</tr>
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<td>435.gromacs</td>
<td>-DSPEC_CPU_LP64 -nofor_main</td>
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<td>436.cactusADM</td>
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<td>459.GemsFDTD</td>
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<td>468.tonto</td>
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<td>470.lbm</td>
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<td>481.wrf</td>
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#### 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`

Continued on next page
SPEC CFP2006 Result

Fujitsu

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Base Optimization Flags (Continued)

Fortran benchmarks:
-xSSE4.2 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch

Benchmarks using both Fortran and C:
-xSSE4.2 -ipo -O3 -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

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 -O3 -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
-auto-ilp32

Continued on next page
Peak Optimization Flags (Continued)

447.dealII: basepeak = yes
450.soplex: basepeak = yes
453.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: basepeak = yes
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) -unroll12
            -inline-level=0 -scalar=rep= -static
434.zeusmp: basepeak = yes
437.leslie3d: basepeak = yes
459.GemsFDTD: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
              -no-prec-div(pass 2) -prof-use(pass 2) -unroll12
              -inline-level=0 -opt-prefetch -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)
           -no-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)
             -no-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

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revB.20110316.xml
http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revA.20110316.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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