### Fujitsu

**PRIMERGY RX2530 M4, Intel Xeon Gold 6134, 3.20GHz**

<table>
<thead>
<tr>
<th>SPECfp&lt;sup&gt;®&lt;/sup&gt;_rate2006</th>
<th>Not Run</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECfp_rate_base2006</td>
<td>968</td>
</tr>
</tbody>
</table>

#### CPU2006 license: 19

- Test sponsor: Fujitsu
- Tested by: Fujitsu
- Test date: Aug-2017
- Hardware Availability: Jul-2017
- Software Availability: Apr-2017

#### Hardware

- **CPU Name:** Intel Xeon Gold 6134
- **CPU Characteristics:** Intel Turbo Boost Technology up to 3.70 GHz
- **CPU MHz:** 3200
- **FPU:** Integrated
- **CPU(s) enabled:** 16 cores, 2 chips, 8 cores/chip, 2 threads/core
- **CPU(s) orderable:** 1,2 chips
- **Primary Cache:** 32 KB I + 32 KB D on chip per core
- **Secondary Cache:** 1 MB I+D on chip per core

#### Software

- **Operating System:** SUSE Linux Enterprise Server 12 SP2 4.4.21-69-default
- **Compiler:** C/C++: Version 17.0.3.191 of Intel C/C++ Compiler for Linux; Fortran: Version 17.0.3.191 of Intel Fortran Compiler for Linux
- **Auto Parallel:** No
- **File System:** tmpfs
- **System State:** Run level 3 (multi-user)

### CactusADM

| Copies | 50.0 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 1150 | 1200 | 1250 |
|--------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 410.bwaves | 32   |     |     |     |     |     |     | 864 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 416.gamess  | 32   |     |     |     |     |     |     |     | 1020|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 433.milc    | 32   |     |     |     |     |     |     | 1170|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 434.zeusmp  | 32   |     |     |     |     |     |     |     | 1070|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 435.gromacs | 32   |     |     |     |     |     |     |     | 1240|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 436.cactusADM | 32   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 437.leslie3d| 32   |     |     |     |     |     |     | 632 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 444.namd    | 32   |     |     |     |     |     |     | 702 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 447.dealII  | 32   |     |     |     |     |     |     |     | 1390|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 450.soplex  | 32   |     |     |     |     |     |     | 663 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 453.povray  | 32   |     |     |     |     |     |     |     | 1210|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 454.calculix| 32   |     |     |     |     |     |     |     | 1350|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 459.GemsFDTD| 32   |     |     |     |     |     |     | 558 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 465.tonto   | 32   |     |     |     |     |     |     |     | 988 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 470.lbm     | 32   |     |     |     |     |     |     | 1090|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 481.wrf     | 32   |     |     |     |     |     |     | 1190|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
| 482.sphinx3 | 32   |     |     |     |     |     |     |     | 899 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |

### Continued on next page
# SPEC CFP2006 Result

## Fujitsu

PRIMERGY RX2530 M4, Intel Xeon Gold 6134, 3.20GHz

<table>
<thead>
<tr>
<th>CPU2006 license: 19</th>
<th>Test sponsor: Fujitsu</th>
<th>Tested by: Fujitsu</th>
<th>Test date: Aug-2017</th>
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<tbody>
<tr>
<td>3.20GHz</td>
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<td>Hardware Availability: Jul-2017</td>
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**Fujitsu**

Fujitsu

3.20GHz PRIMERGY RX2530 M4, Intel Xeon Gold 6134,

**SPECfp_rate2006 = Not Run**

**SPECfp_rate_base2006 = 968**

### Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Copies</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Base Pointers: 32/64-bit</th>
<th>Peak Pointers: Not Applicable</th>
<th>Other Software: None</th>
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<td>482.sphinx3</td>
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<td>694</td>
<td>899</td>
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<td>895</td>
<td>693</td>
</tr>
</tbody>
</table>

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

### Submit Notes

The numactl mechanism was used to bind copies to processors. The config file option 'submit' was used to generate numactl commands to bind each copy to a specific processor.

For details, please see the config file.

### Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"
Kernel Boot Parameter set with : nohz_full=1-31
Turbo mode set with :
cpuset --all frequency-set -g performance
Tmpfs filesystem can be set with:
mkdir /home/memory
mount -t tmpfs -o size=752g,rw tmpfs /home/memory
Process tunning setting:
Continued on next page
Fujitsu
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SPECFp_rate2006 = Not Run
SPECFp_rate_base2006 = 968

CPU2006 license: 19
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Operating System Notes (Continued)

echo 10000000 > /proc/sys/kernel/sched_min_granularity_ns
echo 15000000 > /proc/sys/kernel/sched_wakeup_granularity_ns
echo 0 > /proc/sys/kernel/nr_guaranteed_cpus

cpu idle state set with:
  cpupower idle-set -d 1
  cpupower idle-set -d 2

Platform Notes

BIOS configuration:
Link Frequency Select = 10.4 GT/s
HWPM Support = Disabled
Intel Virtualization Technology = Disabled
Sub NUMA Clustering = Enabled
IMC Interleaving = 1-way
LLC Dead Line Alloc = Disabled
Stale AtoS = Enabled
Sysinfo program /home/memory/SPECcpu/config/sysinfo.rev6993
Revision 6993 of 2015-11-06 (b5e8d4b4eb51ed28d7f98696cbe290c1)
running on linux-vv4c Wed Aug 9 23:10:05 2017

This section contains SUT (System Under Test) info as seen by
some common utilities. To remove or add to this section, see:
http://www.spec.org/cpu2006/Docs/config.html#sysinfo

From /proc/cpuinfo
  model name : Intel(R) Xeon(R) Gold 6134 CPU @ 3.20GHz
  2 "physical id"s (chips)
  2 "processors"
cores, siblings (Caution: counting these is hw and system dependent. The
following excerpts from /proc/cpuinfo might not be reliable. Use with
caution.)
cpu cores : 8
siblings : 16
  physical 0: cores 0 2 3 4 9 10 16 26
  physical 1: cores 0 2 3 9 16 19 26 27
  cache size : 25344 KB

From /proc/meminfo
  MemTotal:       394412256 kB
  HugePages_Total:       0
  Hugepagesize:       2048 kB

/usr/bin/lsb_release -d
  SUSE Linux Enterprise Server 12 SP2

From /etc/*release* /etc/*version*
  SuSE-release:
    SUSE Linux Enterprise Server 12 (x86_64)
    VERSION = 12
    PATCHLEVEL = 2
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spec

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Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = "/home/memory/SPECcpu/lib/ia32:/home/memory/SPECcpu/lib/intel64:/home/memory/SPECcpu/sh10.2"

Binaries compiled on a system with 1x Intel Core i7-4790 CPU + 32GB RAM
memory using Redhat Enterprise Linux 7.2
Transparent Huge Pages enabled with:
echo always > /sys/kernel/mm/transparent_hugepage/enabled
Filesystem page cache cleared with:
shell invocation of 'sync; echo 3 > /proc/vm/drop_caches' prior to run
runspec command invoked through numactl i.e.:
numactl --interleave=all runspec <etc>
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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

410.bwaves: -DSPEC_CPU_LP64
416.games: -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
450.soplex: -DSPEC_CPU_LP64
453.povray: -DSPEC_CPU_LP64
453.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:
  -xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -auto-p32
  -qopt-mem-layout-trans=3

C++ benchmarks:
  -xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch -auto-p32
  -qopt-mem-layout-trans=3

Fortran benchmarks:
  -xCORE-AVX2 -ipo -O3 -no-prec-div -qopt-prefetch
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Base Optimization Flags (Continued)

Benchmarks using both Fortran and C:
-xCORE-AVX2 -ipo -03 -no-prec-div -qopt-prefetch -auto-p32
-qopt-mem-layout-trans=3

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic17.0-official-linux64-revF.html
http://www.spec.org/cpu2006/flags/Fujitsu-Platform-Settings-V1.2-SKL-RevA.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic17.0-official-linux64-revF.xml
http://www.spec.org/cpu2006/flags/Fujitsu-Platform-Settings-V1.2-SKL-RevA.xml

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For other inquiries, please contact webmaster@spec.org.

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