SPEC® CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Fujitsu

PRIMERGY RX300 S8, Intel Xeon E5-2695 v2, 2.40 GHz

$SPECfp^®\_rate2006 =$ 675

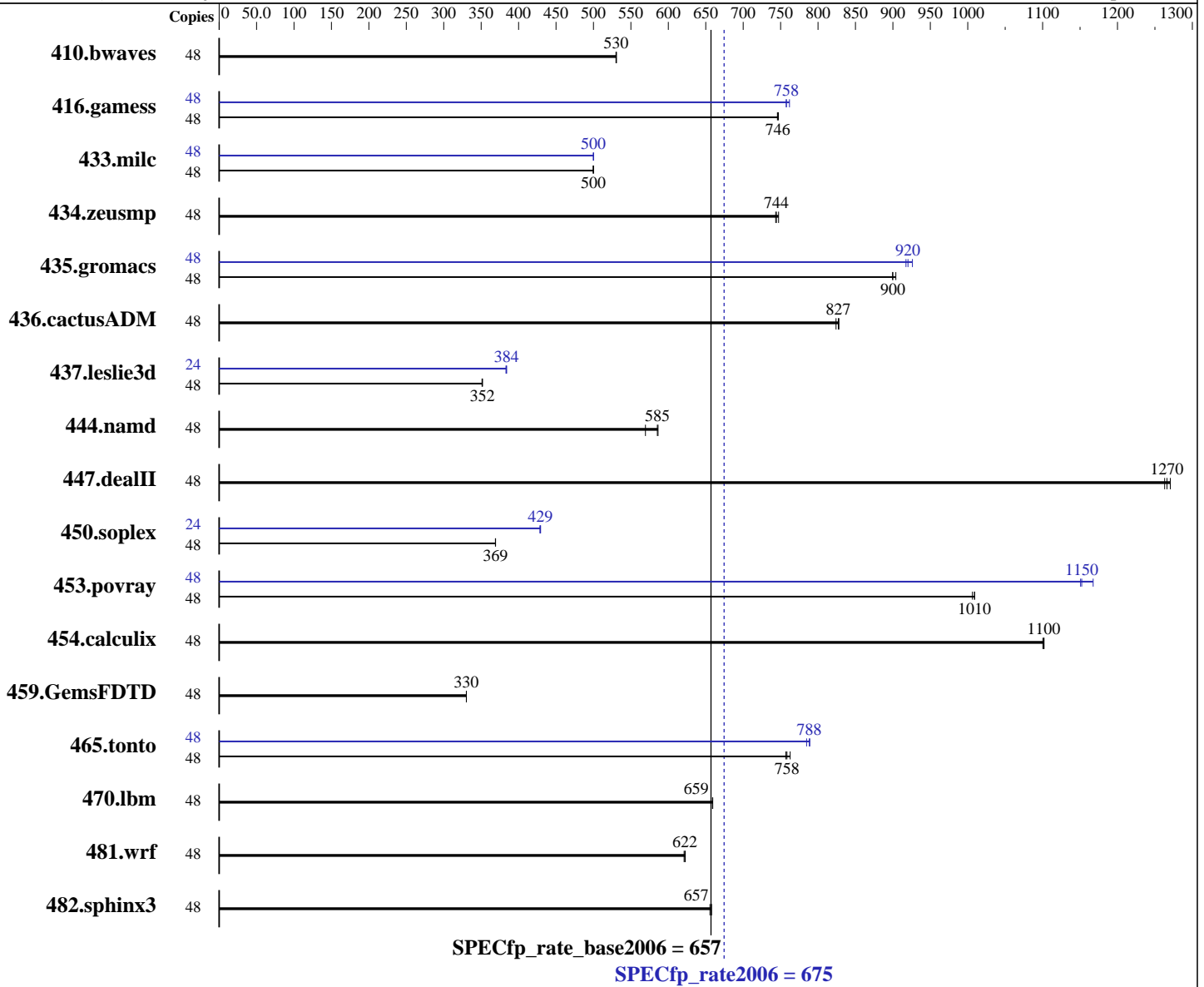$SPECfp\_rate\_base2006 =$ 657

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

Test date: Sep-2013
Hardware Availability: Oct-2013
Software Availability: Sep-2013

Benchmark	Copies	Result
410.bwaves	48	530
416.gamess	48	758
416.gamess	48	746
433.milc	48	500
433.milc	48	500
434.zeusmp	48	744
435.gromacs	48	920
435.gromacs	48	900
436.cactusADM	48	827
437.leslie3d	24	384
437.leslie3d	48	352
444.namd	48	585
447.dealII	48	1270
450.soplex	24	429
450.soplex	48	369
453.povray	48	1150
453.povray	48	1010
454.calculix	48	1100
459.GemsFDTD	48	330
465.tonto	48	788
465.tonto	48	758
470.lbm	48	659
481.wrf	48	622
482.sphinx3	48	657

SPECfp_rate_base2006 = 657

SPECfp_rate2006 = 675

Hardware

CPU Name: Intel Xeon E5-2695 v2
CPU Characteristics: Intel Turbo Boost Technology up to 3.20 GHz
CPU MHz: 2400
FPU: Integrated
CPU(s) enabled: 24 cores, 2 chips, 12 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: 256 KB I+D on chip per core
Continued on next page

Software

Operating System: Red Hat Enterprise Linux Server release 6.4 (Santiago)
2.6.32-358.11.1.el6.x86_64
Compiler: C/C++: Version 14.0.0.080 of Intel C++ Studio XE for Linux;
Fortran: Version 14.0.0.080 of Intel Fortran Studio XE for Linux
Auto Parallel: No
File System: ext4
Continued on next page

SPEC CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Fujitsu

PRIMERGY RX300 S8, Intel Xeon E5-2695 v2, 2.40 GHz

$SPECfp\_rate2006 =$ 675

$SPECfp\_rate\_base2006 =$ 657

CPU2006 license: 19		**Test date:** Sep-2013
Test sponsor: Fujitsu		**Hardware Availability:** Oct-2013
Tested by: Fujitsu		**Software Availability:** Sep-2013

L3 Cache:	30 MB I+D on chip per chip	System State:	Run level 3 (multi-user)
Other Cache:	None	Base Pointers:	32/64-bit
Memory:	256 GB (16 x 16 GB 2Rx4 PC3-14900R-13, ECC)	Peak Pointers:	32/64-bit
Disk Subsystem:	1 x SATA, 450 GB, 15000 RPM	Other Software:	None
Other Hardware:	None		

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	48	1231	530	**1230**	**530**	1229	531	48	1231	530	**1230**	**530**	1229	531
416.gamess	48	1260	746	**1259**	**746**	1258	747	48	1241	758	1234	762	**1240**	**758**
433.milc	48	882	500	**881**	**500**	881	500	48	**881**	**500**	881	500	881	500
434.zeusmp	48	585	747	**587**	**744**	588	743	48	585	747	**587**	**744**	588	743
435.gromacs	48	379	904	381	900	**381**	**900**	48	**372**	**920**	374	917	370	926
436.cactusADM	48	693	828	**694**	**827**	696	824	48	693	828	**694**	**827**	696	824
437.leslie3d	48	1285	351	1283	352	**1283**	**352**	24	589	383	588	384	**588**	**384**
444.namd	48	657	586	**658**	**585**	676	569	48	657	586	**658**	**585**	676	569
447.dealII	48	432	1270	435	1260	**434**	**1270**	48	432	1270	435	1260	**434**	**1270**
450.soplex	48	1084	369	**1084**	**369**	1085	369	24	**466**	**429**	466	429	467	428
453.povray	48	253	1010	254	1010	**253**	**1010**	48	222	1150	**222**	**1150**	219	1170
454.calculix	48	**359**	**1100**	360	1100	359	1100	48	**359**	**1100**	360	1100	359	1100
459.GemsFDTD	48	1542	330	1542	330	**1542**	**330**	48	1542	330	1542	330	**1542**	**330**
465.tonto	48	619	763	624	757	**623**	**758**	48	602	785	599	789	**599**	**788**
470.lbm	48	1000	659	**1001**	**659**	1001	659	48	1000	659	**1001**	**659**	1001	659
481.wrf	48	**862**	**622**	861	623	863	621	48	**862**	**622**	861	623	863	621
482.sphinx3	48	1423	658	1427	656	**1423**	**657**	48	1423	658	1427	656	**1423**	**657**

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"

Platform Notes

BIOS configuration:
Energy Performance = Performance

SPEC CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Fujitsu

PRIMERGY RX300 S8, Intel Xeon E5-2695 v2, 2.40 GHz

$SPECfp_rate2006 = $ 675

$SPECfp_rate_base2006 = $ 657

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

Test date: Sep-2013
Hardware Availability: Oct-2013
Software Availability: Sep-2013

General Notes

```
Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = "/SPECcpu2006/libs/32:/SPECcpu2006/libs/64:/SPECcpu2006/sh"

 Binaries compiled on a system with 1x Core i7-860 CPU + 8GB
 memory using RedHat EL 6.4
 Transparent Huge Pages enabled with:
 echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled
 Filesystem page cache cleared with:
 echo 1>        /proc/sys/vm/drop_caches
 runspec command invoked through numactl i.e.:
 numactl --interleave=all runspec <etc>

 For information about Fujitsu please visit: http://www.fujitsu.com
```

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.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
   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
```

SPEC CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Fujitsu

PRIMERGY RX300 S8, Intel Xeon E5-2695 v2, 2.40 GHz

$SPECfp_rate2006 = $ 675

$SPECfp_rate_base2006 = $ 657

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

Test date: Sep-2013
Hardware Availability: Oct-2013
Software Availability: Sep-2013

Base Optimization Flags

C benchmarks:
```
-xAVX -ipo -O3 -no-prec-div -opt-prefetch -auto-p32 -ansi-alias
-opt-mem-layout-trans=3
```

C++ benchmarks:
```
-xAVX -ipo -O3 -no-prec-div -opt-prefetch -auto-p32 -ansi-alias
-opt-mem-layout-trans=3
```

Fortran benchmarks:
```
-xAVX -ipo -O3 -no-prec-div -opt-prefetch
```

Benchmarks using both Fortran and C:
```
-xAVX -ipo -O3 -no-prec-div -opt-prefetch -auto-p32 -ansi-alias
-opt-mem-layout-trans=3
```

Peak Compiler Invocation

C benchmarks:
```
icc    -m64
```

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

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
```

Fujitsu

PRIMERGY RX300 S8, Intel Xeon E5-2695 v2, 2.40 GHz

$SPECfp_rate2006 = $ 675

$SPECfp_rate_base2006 = $ 657

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

Test date: Sep-2013
Hardware Availability: Oct-2013
Software Availability: Sep-2013

Peak Portability Flags (Continued)

```
   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
```

Peak Optimization Flags

C benchmarks:

```
    433.milc: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
              -no-prec-div(pass 2) -opt-mem-layout-trans=3(pass 2)
              -prof-use(pass 2) -auto-ilp32

     470.lbm: basepeak = yes

 482.sphinx3: basepeak = yes
```

C++ benchmarks:

```
    444.namd: basepeak = yes

   447.dealII: basepeak = yes

   450.soplex: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
              -no-prec-div(pass 2) -opt-mem-layout-trans=3(pass 2)
              -prof-use(pass 2) -opt-malloc-options=3

   453.povray: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
              -no-prec-div(pass 2) -opt-mem-layout-trans=3(pass 2)
              -prof-use(pass 2) -unroll4 -ansi-alias
```

Fortran benchmarks:

```
   410.bwaves: basepeak = yes

   416.gamess: -xAVX(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-

   434.zeusmp: basepeak = yes

   437.leslie3d: -xAVX -ipo -O3 -no-prec-div -opt-prefetch

 459.GemsFDTD: basepeak = yes

    465.tonto: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
              -no-prec-div(pass 2) -prof-use(pass 2) -unroll4 -auto
              -inline-calloc -opt-malloc-options=3
```

Fujitsu

PRIMERGY RX300 S8, Intel Xeon E5-2695 v2, 2.40 GHz

$SPECfp_rate2006 = $ 675

$SPECfp_rate_base2006 = $ 657

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

Test date: Sep-2013
Hardware Availability: Oct-2013
Software Availability: Sep-2013

Peak Optimization Flags (Continued)

Benchmarks using both Fortran and C:

435.gromacs: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
        -no-prec-div(pass 2) -opt-mem-layout-trans=3(pass 2)
        -prof-use(pass 2) -opt-prefetch -auto-ilp32

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-ic14.0-official-linux64.20140128.html
http://www.spec.org/cpu2006/flags/Fujitsu-Platform.20131009.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64.20140128.xml
http://www.spec.org/cpu2006/flags/Fujitsu-Platform.20131009.xml

SPEC and SPECfp are registered trademarks of the Standard Performance
Evaluation Corporation. All other brand and product names appearing in
this result are trademarks or registered trademarks of their respective
holders.

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

Tested with SPEC CPU2006 v1.2.
Report generated on Thu Jul 24 18:47:06 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 22 October 2013.