SPEC® CFP2006 Result

Fujitsu

PRIMERGY RX4770 M1, Intel Xeon E7-8857 v2, 3.00 GHz

$SPECfp®_rate2006 = $ 733

$SPECfp_rate_base2006 = $ 720

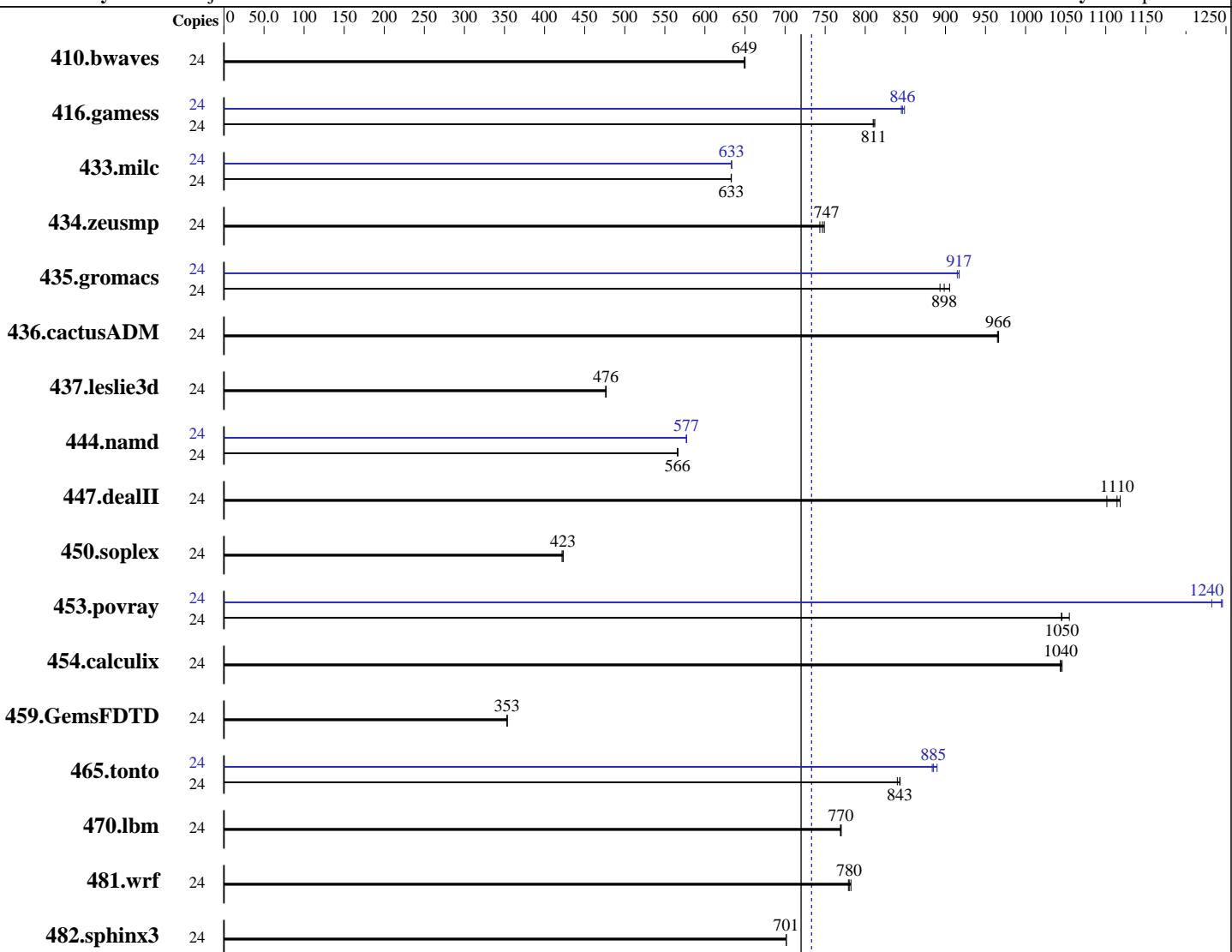|			
CPU2006 license:	19	**Test date:**	May-2014
Test sponsor:	Fujitsu	**Hardware Availability:**	Jun-2014
Tested by:	Fujitsu	**Software Availability:**	Sep-2013

Copies

Benchmark	Copies	Result
410.bwaves	24	649
416.gamess	24	846
416.gamess	24	811
433.milc	24	633
433.milc	24	633
434.zeusmp	24	747
435.gromacs	24	917
435.gromacs	24	898
436.cactusADM	24	966
437.leslie3d	24	476
444.namd	24	577
444.namd	24	566
447.dealII	24	1110
450.soplex	24	423
453.povray	24	1240
453.povray	24	1050
454.calculix	24	1040
459.GemsFDTD	24	353
465.tonto	24	885
465.tonto	24	843
470.lbm	24	770
481.wrf	24	780
482.sphinx3	24	701

SPECfp_rate_base2006 = 720

SPECfp_rate2006 = 733

Hardware

CPU Name:	Intel Xeon E7-8857 v2
CPU Characteristics:	Intel Turbo Boost Technology up to 3.60 GHz
CPU MHz:	3000
FPU:	Integrated
CPU(s) enabled:	24 cores, 2 chips, 12 cores/chip
CPU(s) orderable:	2,4 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 6.5 (Santiago) 2.6.32-431.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

Fujitsu

PRIMERGY RX4770 M1, Intel Xeon E7-8857 v2, 3.00 GHz

SPECfp_rate2006 =	733
SPECfp_rate_base2006 =	720

CPU2006 license: 19		**Test date:**	May-2014
Test sponsor: Fujitsu		**Hardware Availability:**	Jun-2014
Tested by: Fujitsu		**Software Availability:**	Sep-2013

L3 Cache:	30 MB I+D on chip per chip	System State:	Run level 5 (multi-user)
Other Cache:	None	Base Pointers:	32/64-bit
Memory:	512 GB (32 x 16 GB 2Rx4 PC3L-12800R-11, ECC, running at 1333 MHz and CL9)	Peak Pointers:	32/64-bit
		Other Software:	None
Disk Subsystem:	1 x SATA, 500 GB, 7200 RPM		
Other Hardware:	None		

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	24	502	649	502	650	**502**	**649**	24	502	649	502	650	**502**	**649**
416.gamess	24	579	812	**580**	**811**	580	810	24	**555**	**846**	556	845	554	849
433.milc	24	348	633	348	633	**348**	**633**	24	348	633	**348**	**633**	348	633
434.zeusmp	24	292	749	**293**	**747**	294	743	24	292	749	**293**	**747**	294	743
435.gromacs	24	189	905	**191**	**898**	192	893	24	**187**	**917**	187	915	187	917
436.cactusADM	24	297	965	**297**	**966**	297	966	24	297	965	**297**	**966**	297	966
437.leslie3d	24	**474**	**476**	473	477	474	476	24	**474**	**476**	473	477	474	476
444.namd	24	340	566	**340**	**566**	340	566	24	**334**	**577**	334	577	334	577
447.dealII	24	249	1100	246	1120	**246**	**1110**	24	249	1100	246	1120	**246**	**1110**
450.soplex	24	473	423	475	422	**473**	**423**	24	473	423	475	422	**473**	**423**
453.povray	24	121	1050	122	1040	**122**	**1050**	24	104	1230	**103**	**1240**	103	1250
454.calculix	24	189	1050	**190**	**1040**	190	1040	24	189	1050	**190**	**1040**	190	1040
459.GemsFDTD	24	721	353	721	353	**721**	**353**	24	721	353	721	353	**721**	**353**
465.tonto	24	**280**	**843**	281	840	280	843	24	267	884	265	890	**267**	**885**
470.lbm	24	428	770	**428**	**770**	429	769	24	428	770	**428**	**770**	429	769
481.wrf	24	343	782	**344**	**780**	344	779	24	343	782	**344**	**780**	344	779
482.sphinx3	24	667	701	**667**	**701**	667	701	24	667	701	**667**	**701**	667	701

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 RX4770 M1, Intel Xeon E7-8857 v2, 3.00 GHz

$SPECfp\_rate2006 = 733$

$SPECfp\_rate\_base2006 = 720$

CPU2006 license:	19	**Test date:**	May-2014
Test sponsor:	Fujitsu	**Hardware Availability:**	Jun-2014
Tested by:	Fujitsu	**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
```

Fujitsu

PRIMERGY RX4770 M1, Intel Xeon E7-8857 v2, 3.00 GHz

SPECfp_rate2006 =   733

SPECfp_rate_base2006 =   720

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

Test date: May-2014
Hardware Availability: Jun-2014
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:
```
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: -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
```

Fujitsu

PRIMERGY RX4770 M1, Intel Xeon E7-8857 v2, 3.00 GHz

$SPECfp\_rate2006 = \quad 733$

$SPECfp\_rate\_base2006 = \quad 720$

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

Test date: May-2014
Hardware Availability: Jun-2014
Software Availability: Sep-2013

Peak Optimization Flags (Continued)

482.sphinx3: basepeak = yes

C++ benchmarks:

```
444.namd: -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) -fno-alias -auto-ilp32
```

447.dealII: basepeak = yes

450.soplex: basepeak = yes

```
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: basepeak = yes

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
```

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-revB.html
http://www.spec.org/cpu2006/flags/Fujitsu-Platform.20131009.html

SPEC CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Fujitsu

PRIMERGY RX4770 M1, Intel Xeon E7-8857 v2, 3.00 GHz

$SPECfp\_rate2006 = \quad 733$

$SPECfp\_rate\_base2006 = \quad 720$

You can also download the XML flags sources by saving the following links:

http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64-revB.xml
http://www.spec.org/cpu2006/flags/Fujitsu-Platform.20131009.xml

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 23:39:40 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 18 June 2014.