SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Fujitsu

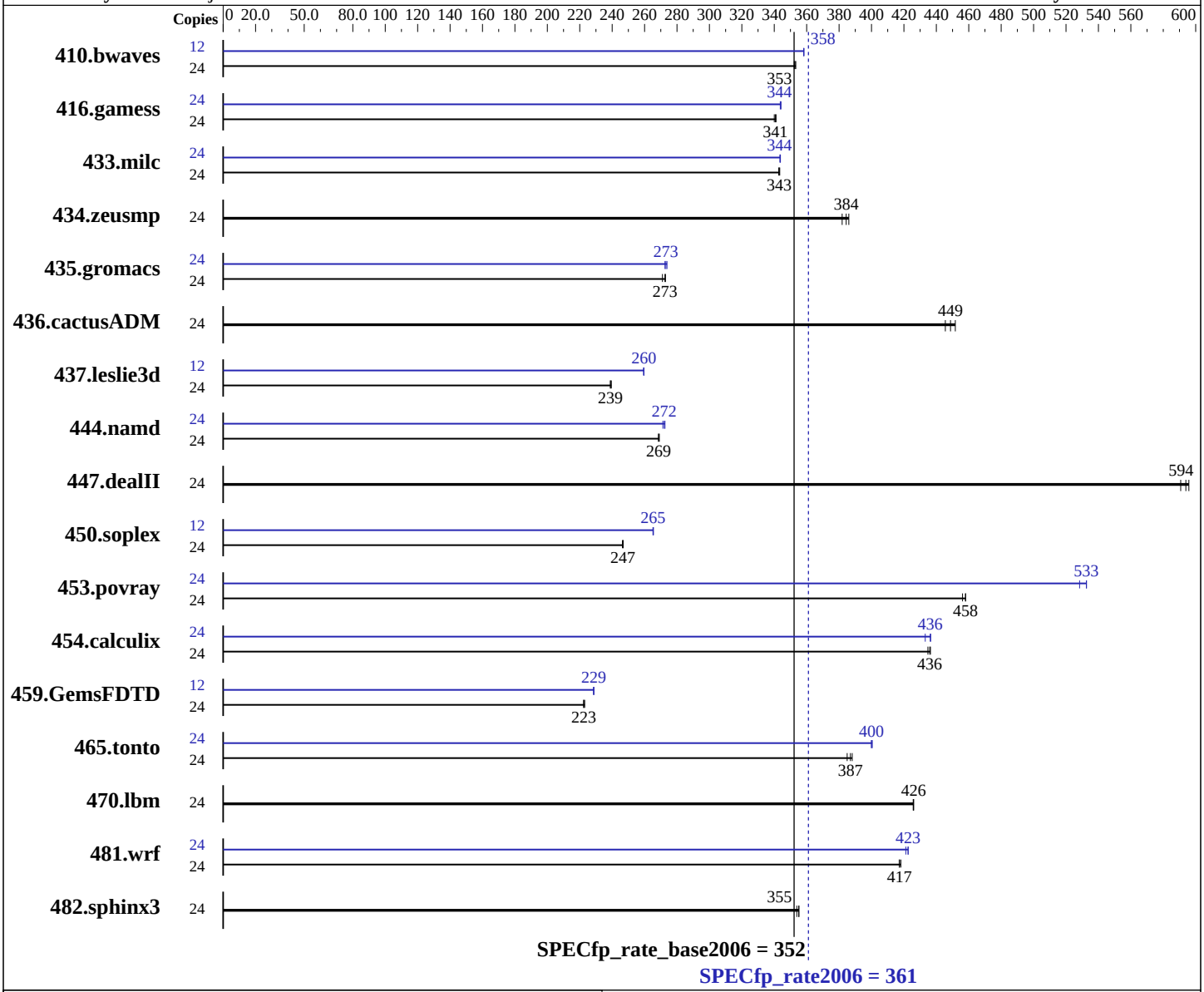
PRIMERGY RX200 S7, Intel Xeon E5-2630, 2.30 GHz

SPECfp®_rate2006 = 361

SPECfp_rate_base2006 = 352

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

Test date: Jan-2012
Hardware Availability: Mar-2012
Software Availability: Dec-2011



Hardware

CPU Name:	Intel Xeon E5-2630
CPU Characteristics:	Intel Turbo Boost Technology up to 2.80 GHz
CPU MHz:	2300
FPU:	Integrated
CPU(s) enabled:	12 cores, 2 chips, 6 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 6.2 (Santiago) 2.6.32-220.el6.x86_64
Compiler:	C/C++: Version 12.1.0.225 of Intel C++ Studio XE for Linux; Fortran: Version 12.1.0.225 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 RX200 S7, Intel Xeon E5-2630, 2.30 GHz

SPECfp_rate2006 = 361

SPECfp_rate_base2006 = 352

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

Test date: Jan-2012
Hardware Availability: Mar-2012
Software Availability: Dec-2011

L3 Cache: 15 MB I+D on chip per chip
Other Cache: None
Memory: 128 GB (16 x 8 GB 2Rx4 PC3L-12800R-11, ECC, running at 1333 MHz and CL9)
Disk Subsystem: 1 x SATA, 500 GB, 7200 RPM
Other Hardware: None

System State: Run level 3 (multi-user)
Base Pointers: 32/64-bit
Peak Pointers: 32/64-bit
Other Software: None

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	24	**924**	**353**	926	352	923	353	12	455	358	**455**	**358**	455	358
416.gamess	24	**1379**	**341**	1378	341	1382	340	24	1366	344	1367	344	**1366**	**344**
433.milc	24	643	343	**642**	**343**	642	343	24	**641**	**344**	641	344	641	344
434.zeusmp	24	566	386	572	382	**568**	**384**	24	566	386	572	382	**568**	**384**
435.gromacs	24	628	273	632	271	**629**	**273**	24	626	274	**627**	**273**	629	273
436.cactusADM	24	644	446	**639**	**449**	635	452	24	644	446	**639**	**449**	635	452
437.leslie3d	24	942	239	**944**	**239**	944	239	12	434	260	435	259	**435**	**260**
444.namd	24	717	269	715	269	**716**	**269**	24	710	271	**707**	**272**	706	273
447.dealII	24	461	596	465	591	**462**	**594**	24	461	596	465	591	**462**	**594**
450.soplex	24	811	247	**812**	**247**	812	246	12	377	265	**377**	**265**	377	265
453.povray	24	280	456	279	458	**279**	**458**	24	240	533	**240**	**533**	242	528
454.calculix	24	454	436	455	435	**454**	**436**	24	457	433	454	437	**454**	**436**
459.GemsFDTD	24	1145	222	**1144**	**223**	1142	223	12	557	229	**557**	**229**	557	229
465.tonto	24	**610**	**387**	613	385	609	388	24	**590**	**400**	590	400	590	400
470.lbm	24	775	426	**774**	**426**	774	426	24	775	426	**774**	**426**	774	426
481.wrf	24	641	418	**642**	**417**	643	417	24	634	423	637	421	**634**	**423**
482.sphinx3	24	**1317**	**355**	1317	355	1322	354	24	**1317**	**355**	1317	355	1322	354

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"
```

General Notes

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

 Binaries compiled on a system with 1x Core i7-860 CPU + 8GB
 memory using RHEL5.5
 Transparent Huge Pages enabled with:
 echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled
 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
```

Base Optimization Flags

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

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

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

Benchmarks using both Fortran and C:
```
-xAVX -ipo -O3 -no-prec-div -static -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`
465.tonto: `-DSPEC_CPU_LP64`

Continued on next page

Peak Portability Flags (Continued)

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) -prof-use(pass 2) -static -auto-ilp32 -opt-mem-layout-trans=3

470.lbm: basepeak = yes

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) -prof-use(pass 2) -fno-alias -auto-ilp32

447.dealII: basepeak = yes

450.soplex: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(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) -prof-use(pass 2) -unroll4 -ansi-alias

Fortran benchmarks:

410.bwaves: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -static

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- -static

434.zeusmp: basepeak = yes

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

459.GemsFDTD: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -prof-use(pass 2) -opt-malloc-options=3

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

Continued on next page

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) `-prof-use`(pass 2) `-opt-prefetch -static -auto-ilp32 -opt-mem-layout-trans=3`

436.cactusADM: `basepeak = yes`

454.calculix: `-xAVX -ipo -O3 -no-prec-div -static -auto-ilp32 -opt-mem-layout-trans=3`

481.wrf: `Same as 454.calculix`

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Fujitsu-Platform.20120320.html
http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Fujitsu-Platform.20120320.xml
http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.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 07:34:39 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 10 April 2012.