SPEC® CFP2006 Result

Fujitsu

PRIMERGY RX100 S7p, Intel Xeon E3-1240 v2, 3.40 GHz

$SPECfp^{®}2006 =$ 70.4

$SPECfp\_base2006 =$ 68.5

CPU2006 license:	19	**Test date:**	May-2012
Test sponsor:	Fujitsu	**Hardware Availability:**	May-2012
Tested by:	Fujitsu	**Software Availability:**	Feb-2012

Benchmark results (blue = peak, black = base):

- 410.bwaves: 112 / 112
- 416.gamess: 42.3 / 38.2
- 433.milc: 79.7 / 78.4
- 434.zeusmp: 124
- 435.gromacs: 39.2
- 436.cactusADM: 212
- 437.leslie3d: 79.1
- 444.namd: 27.0 / 26.5
- 447.dealII: 67.0 / 66.7
- 450.soplex: 44.6
- 453.povray: 58.9 / 50.4
- 454.calculix: 49.7 / 48.0
- 459.GemsFDTD: 65.4 / 62.5
- 465.tonto: 51.8 / 47.0
- 470.lbm: 133
- 481.wrf: 93.6
- 482.sphinx3: 83.5

SPECfp_base2006 = 68.5
SPECfp2006 = 70.4

Hardware

CPU Name:	Intel Xeon E3-1240 v2
CPU Characteristics:	Intel Turbo Boost Technology up to 3.8 GHz
CPU MHz:	3400
FPU:	Integrated
CPU(s) enabled:	4 cores, 1 chip, 4 cores/chip
CPU(s) orderable:	1 chip
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 12.1.0.293 of Intel C++ Studio XE for Linux; Fortran: Version 12.1.0.293 of Intel Fortran Studio XE for Linux
Auto Parallel:	Yes
File System:	ext4

Continued on next page

SPEC CFP2006 Result

Fujitsu

PRIMERGY RX100 S7p, Intel Xeon E3-1240 v2, 3.40 GHz

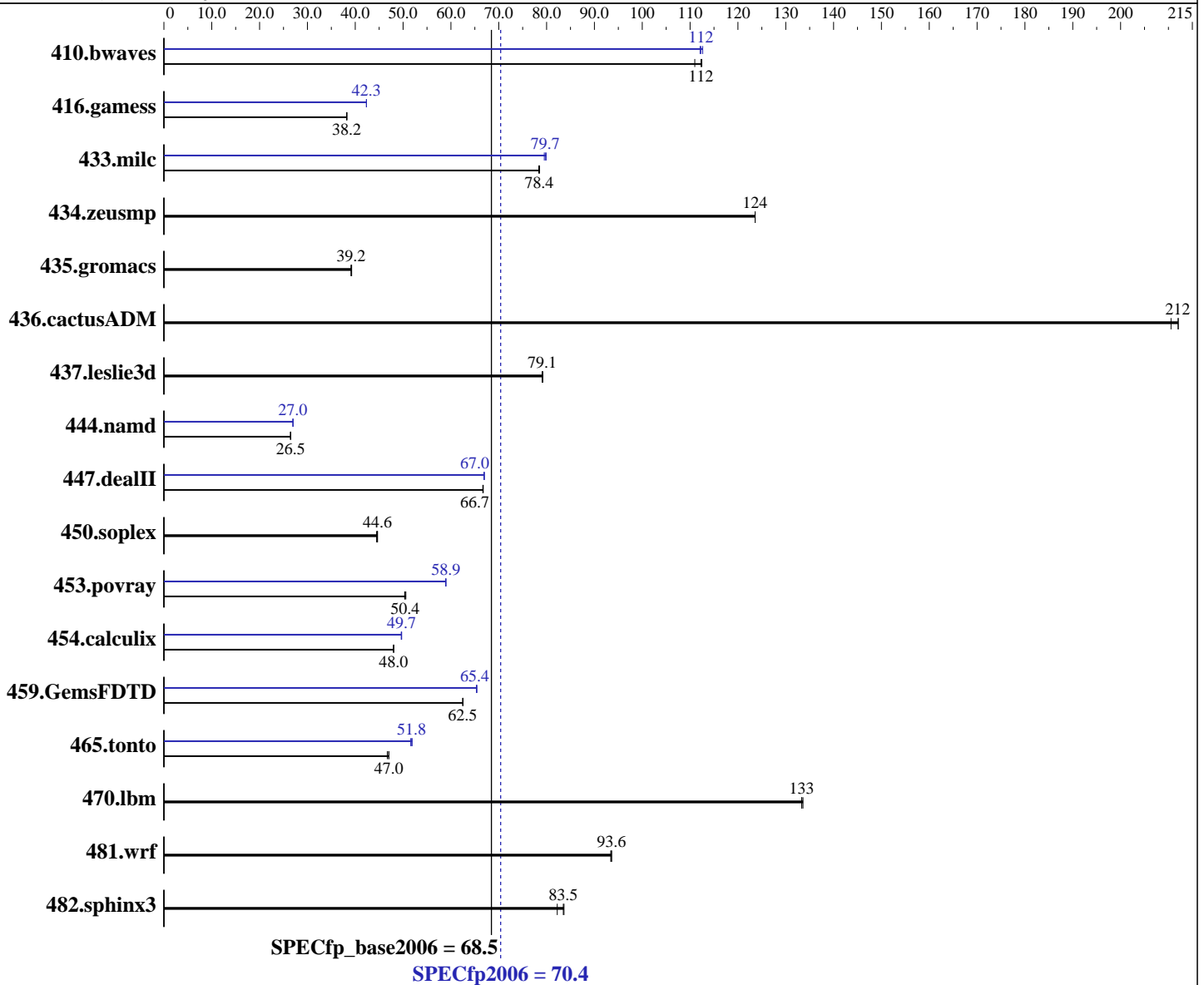|	
SPECfp2006 =	70.4
SPECfp_base2006 =	68.5

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

Test date: May-2012
Hardware Availability: May-2012
Software Availability: Feb-2012

L3 Cache:	8 MB I+D on chip per chip	System State:	Run level 3 (multi-user)
Other Cache:	None	Base Pointers:	64-bit
Memory:	16 GB (2 x 8 GB 2Rx8 PC3-12800E-11, ECC)	Peak Pointers:	32/64-bit
Disk Subsystem:	1 x SATA, 500 GB, 7200 RPM	Other Software:	None
Other Hardware:	None		

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	122	111	**121**	**112**	121	112	**121**	**112**	121	113	121	112
416.gamess	512	38.2	512	38.2	**512**	**38.2**	462	42.4	**462**	**42.3**	463	42.3
433.milc	**117**	**78.4**	117	78.5	117	78.4	**115**	**79.7**	115	79.9	115	79.5
434.zeusmp	**73.6**	**124**	73.6	124	73.6	124	**73.6**	**124**	73.6	124	73.6	124
435.gromacs	**182**	**39.2**	183	39.1	182	39.3	**182**	**39.2**	183	39.1	182	39.3
436.cactusADM	56.4	212	56.8	211	**56.4**	**212**	56.4	212	56.8	211	**56.4**	**212**
437.leslie3d	119	79.2	119	79.1	**119**	**79.1**	119	79.2	119	79.1	**119**	**79.1**
444.namd	303	26.5	**303**	**26.5**	303	26.5	297	27.0	**297**	**27.0**	297	27.0
447.dealII	171	66.8	172	66.7	**172**	**66.7**	171	67.0	171	66.9	**171**	**67.0**
450.soplex	188	44.5	**187**	**44.6**	187	44.7	188	44.5	**187**	**44.6**	187	44.7
453.povray	105	50.6	106	50.3	**106**	**50.4**	90.3	58.9	90.2	59.0	**90.3**	**58.9**
454.calculix	172	48.0	**172**	**48.0**	172	48.0	166	49.7	166	49.6	**166**	**49.7**
459.GemsFDTD	**170**	**62.5**	170	62.5	170	62.5	162	65.4	**162**	**65.4**	162	65.4
465.tonto	211	46.7	**209**	**47.0**	209	47.0	191	51.6	**190**	**51.8**	190	51.9
470.lbm	103	134	**103**	**133**	103	133	103	134	**103**	**133**	103	133
481.wrf	120	93.4	119	93.6	**119**	**93.6**	120	93.4	119	93.6	**119**	**93.6**
482.sphinx3	**233**	**83.5**	237	82.2	233	83.6	**233**	**83.5**	237	82.2	233	83.6

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

Operating System Notes

```
Stack size set to unlimited using "ulimit -s unlimited"
```

Platform Notes

```
BIOS configuration:
Intel HT Technology = Disable
```

General Notes

```
Environment variables set by runspec before the start of the run:
KMP_AFFINITY = "granularity=fine,scatter"
LD_LIBRARY_PATH = "/SPECcpu2006/libs/32:/SPECcpu2006/libs/64"
OMP_NUM_THREADS = "4"
```

SPEC CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Fujitsu

PRIMERGY RX100 S7p, Intel Xeon E3-1240 v2, 3.40 GHz

SPECfp2006 =	70.4
SPECfp_base2006 =	68.5

General Notes (Continued)

```
Binaries compiled on a system with 1x E3-1270V2 CPU + 32 GB
memory using RHEL6.2
Transparent Huge Pages enabled with:
echo always > /sys/kernel/mm/redhat_transparent_hugepage/enabled
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 -parallel -opt-prefetch
-ansi-alias
```

Continued on next page

SPEC CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Fujitsu

PRIMERGY RX100 S7p, Intel Xeon E3-1240 v2, 3.40 GHz

SPECfp2006 =   70.4

SPECfp_base2006 =   68.5

CPU2006 license: 19	**Test date:** May-2012
Test sponsor: Fujitsu	**Hardware Availability:** May-2012
Tested by: Fujitsu	**Software Availability:** Feb-2012

Base Optimization Flags (Continued)

C++ benchmarks:
```
-xAVX -ipo -O3 -no-prec-div -static -opt-prefetch -ansi-alias
```

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

Benchmarks using both Fortran and C:
```
-xAVX -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: -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
          -ansi-alias
```

```
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
```

Continued on next page

Fujitsu

PRIMERGY RX100 S7p, Intel Xeon E3-1240 v2, 3.40 GHz

SPECfp2006 =   70.4

SPECfp_base2006 =   68.5

CPU2006 license: 19

Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: May-2012

Hardware Availability: May-2012

Software Availability: Feb-2012

Peak Optimization Flags (Continued)

447.dealII: -xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch -ansi-alias

450.soplex: basepeak = yes

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 -ipo -O3 -no-prec-div -opt-prefetch -parallel -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: 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) -unroll2 -inline-level=0 -opt-prefetch -parallel

465.tonto: -xAVX(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 -unroll4

Benchmarks using both Fortran and C:

435.gromacs: basepeak = yes

436.cactusADM: basepeak = yes

454.calculix: -xAVX -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
http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.html
http://www.spec.org/cpu2006/flags/Fujitsu-Platform.20120320.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic12.1-official-linux64.20111122.xml
http://www.spec.org/cpu2006/flags/Fujitsu-Platform.20120320.xml

SPEC CFP2006 Result
Copyright 2006-2014 Standard Performance Evaluation Corporation

Fujitsu

PRIMERGY RX100 S7p, Intel Xeon E3-1240 v2, 3.40 GHz

$SPECfp2006 =$ 70.4

$SPECfp\_base2006 =$ 68.5

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 06:35:11 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 5 June 2012.