



# SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Fujitsu

SPECfp®\_rate2006 = 218

PRIMERGY RX350 S7, Intel Xeon E5-2650, 2.0 GHz

SPECfp\_rate\_base2006 = 212

CPU2006 license: 19

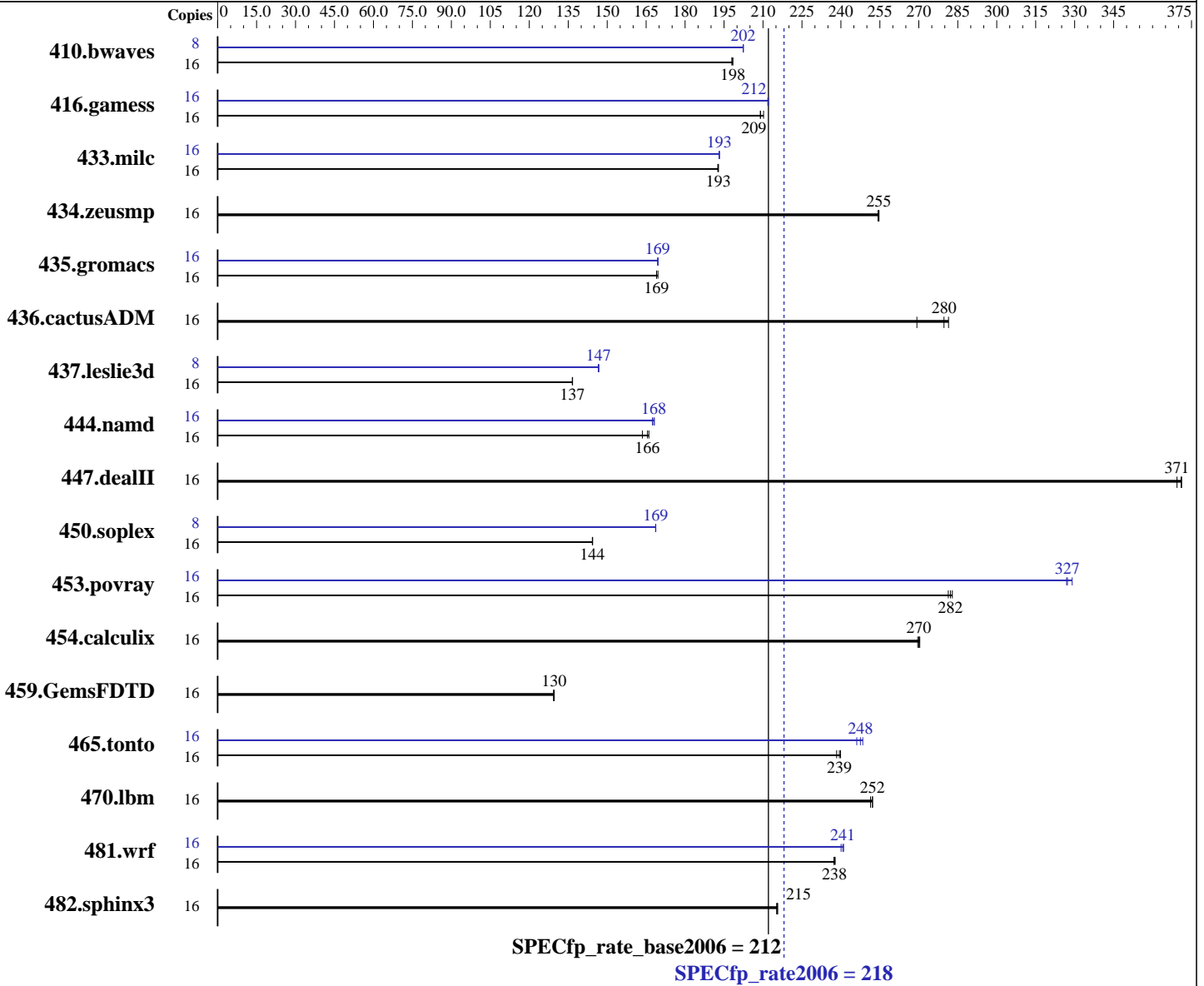
Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Feb-2012

Hardware Availability: Mar-2012

Software Availability: Dec-2011



### Hardware

CPU Name: Intel Xeon E5-2650  
 CPU Characteristics: Intel Turbo Boost Technology up to 2.80 GHz  
 CPU MHz: 2000  
 FPU: Integrated  
 CPU(s) enabled: 8 cores, 1 chip, 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: 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

SPECfp\_rate2006 = **218**

PRIMERGY RX350 S7, Intel Xeon E5-2650, 2.0 GHz

SPECfp\_rate\_base2006 = **212**

CPU2006 license: 19

Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Feb-2012

Hardware Availability: Mar-2012

Software Availability: Dec-2011

L3 Cache: 20 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 64 GB (8 x 8 GB 2Rx4 PC3L-12800R-11, ECC)  
 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	16	1096	198	1098	198	<b>1096</b>	<b>198</b>	8	<b>537</b>	<b>202</b>	537	202	537	202
416.gamess	16	1499	209	<b>1499</b>	<b>209</b>	1490	210	16	1477	212	1479	212	<b>1478</b>	<b>212</b>
433.milc	16	763	193	<b>762</b>	<b>193</b>	762	193	16	761	193	<b>761</b>	<b>193</b>	760	193
434.zeusmp	16	<b>572</b>	<b>255</b>	572	255	573	254	16	<b>572</b>	<b>255</b>	572	255	573	254
435.gromacs	16	674	170	<b>676</b>	<b>169</b>	676	169	16	674	169	<b>674</b>	<b>169</b>	674	170
436.cactusADM	16	710	269	679	281	<b>684</b>	<b>280</b>	16	710	269	679	281	<b>684</b>	<b>280</b>
437.leslie3d	16	1101	137	1101	137	<b>1101</b>	<b>137</b>	8	513	147	512	147	<b>513</b>	<b>147</b>
444.namd	16	<b>775</b>	<b>166</b>	785	164	773	166	16	763	168	767	167	<b>764</b>	<b>168</b>
447.dealII	16	<b>493</b>	<b>371</b>	495	369	493	371	16	<b>493</b>	<b>371</b>	495	369	493	371
450.soplex	16	<b>925</b>	<b>144</b>	925	144	924	144	8	<b>396</b>	<b>169</b>	395	169	396	169
453.povray	16	301	283	303	281	<b>302</b>	<b>282</b>	16	260	327	<b>260</b>	<b>327</b>	259	329
454.calculix	16	<b>489</b>	<b>270</b>	488	270	490	270	16	<b>489</b>	<b>270</b>	488	270	490	270
459.GemsFDTD	16	1313	129	<b>1310</b>	<b>130</b>	1310	130	16	1313	129	<b>1310</b>	<b>130</b>	1310	130
465.tonto	16	<b>658</b>	<b>239</b>	656	240	661	238	16	640	246	634	248	<b>636</b>	<b>248</b>
470.lbm	16	872	252	<b>872</b>	<b>252</b>	874	251	16	872	252	<b>872</b>	<b>252</b>	874	251
481.wrf	16	752	238	<b>752</b>	<b>238</b>	753	237	16	741	241	744	240	<b>742</b>	<b>241</b>
482.sphinx3	16	<b>1447</b>	<b>215</b>	1449	215	1446	216	16	<b>1447</b>	<b>215</b>	1449	215	1446	216

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"

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Fujitsu

SPECfp\_rate2006 = 218

PRIMERGY RX350 S7, Intel Xeon E5-2650, 2.0 GHz

SPECfp\_rate\_base2006 = 212

CPU2006 license: 19

Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Feb-2012

Hardware Availability: Mar-2012

Software Availability: Dec-2011

## General Notes (Continued)

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>

This result was measured on the PRIMERGY RX350 S7. The PRIMERGY RX350 S7 and the PRIMERGY TX300 S7 are electronically equivalent.

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**

**SPECfp\_rate2006 = 218**

PRIMERGY RX350 S7, Intel Xeon E5-2650, 2.0 GHz

**SPECfp\_rate\_base2006 = 212**

**CPU2006 license:** 19

**Test date:** Feb-2012

**Test sponsor:** Fujitsu

**Hardware Availability:** Mar-2012

**Tested by:** Fujitsu

**Software Availability:** Dec-2011

## 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
459.GemsFDTD: -DSPEC_CPU_LP64
```

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**Fujitsu**

**SPECfp\_rate2006 = 218**

PRIMERGY RX350 S7, Intel Xeon E5-2650, 2.0 GHz

**SPECfp\_rate\_base2006 = 212**

**CPU2006 license:** 19

**Test date:** Feb-2012

**Test sponsor:** Fujitsu

**Hardware Availability:** Mar-2012

**Tested by:** Fujitsu

**Software Availability:** Dec-2011

## 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) -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.dealIII: 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: 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

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**Fujitsu**

**SPECfp\_rate2006 = 218**

PRIMERGY RX350 S7, Intel Xeon E5-2650, 2.0 GHz

**SPECfp\_rate\_base2006 = 212**

**CPU2006 license:** 19

**Test sponsor:** Fujitsu

**Tested by:** Fujitsu

**Test date:** Feb-2012

**Hardware Availability:** Mar-2012

**Software Availability:** Dec-2011

## 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: basepeak = yes

481.wrf: -xAVX -ipo -O3 -no-prec-div -static -auto-ilp32  
-opt-mem-layout-trans=3

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](mailto:webmaster@spec.org).

Tested with SPEC CPU2006 v1.2.

Report generated on Thu Jul 24 06:36:12 2014 by SPEC CPU2006 PS/PDF formatter v6932.

Originally published on 10 April 2012.

Standard Performance Evaluation Corporation

[info@spec.org](mailto:info@spec.org)

<http://www.spec.org/>