



# SPEC<sup>®</sup> CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Fujitsu

SPECfp<sup>®</sup>\_rate2006 = 218

PRIMERGY BX924 S3, Intel Xeon E5-2650, 2.0 GHz

SPECfp\_rate\_base2006 = 212

CPU2006 license: 19

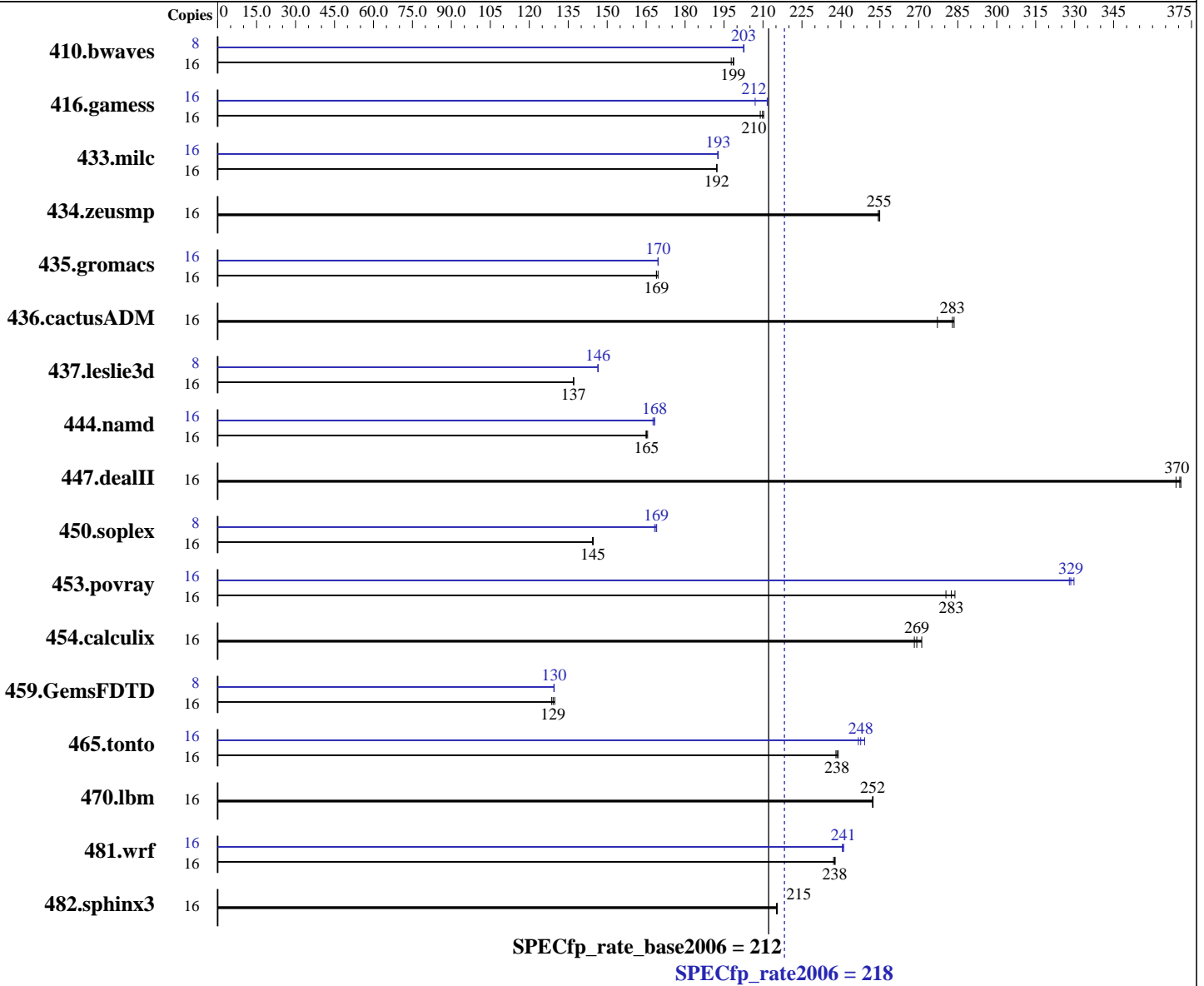
Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Mar-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 BX924 S3, Intel Xeon E5-2650, 2.0 GHz

SPECfp\_rate\_base2006 = 212

CPU2006 license: 19

Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Mar-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: PRIMERGY SX940 S1 for hw\_disk

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	1094	199	<b><u>1095</u></b>	<b><u>199</u></b>	1100	198	8	<b><u>537</u></b>	<b><u>203</u></b>	537	203	536	203
416.gamess	16	1490	210	<b><u>1493</u></b>	<b><u>210</u></b>	1499	209	16	1514	207	<b><u>1480</u></b>	<b><u>212</u></b>	1479	212
433.milc	16	764	192	<b><u>764</u></b>	<b><u>192</u></b>	764	192	16	762	193	763	193	<b><u>762</u></b>	<b><u>193</u></b>
434.zeusmp	16	571	255	572	254	<b><u>572</u></b>	<b><u>255</u></b>	16	571	255	572	254	<b><u>572</u></b>	<b><u>255</u></b>
435.gromacs	16	<b><u>676</u></b>	<b><u>169</u></b>	674	170	676	169	16	674	170	673	170	<b><u>674</u></b>	<b><u>170</u></b>
436.cactusADM	16	690	277	674	284	<b><u>676</u></b>	<b><u>283</u></b>	16	690	277	674	284	<b><u>676</u></b>	<b><u>283</u></b>
437.leslie3d	16	<b><u>1097</u></b>	<b><u>137</u></b>	1097	137	1098	137	8	<b><u>513</u></b>	<b><u>146</u></b>	513	147	514	146
444.namd	16	775	166	778	165	<b><u>777</u></b>	<b><u>165</u></b>	16	765	168	763	168	<b><u>763</u></b>	<b><u>168</u></b>
447.dealII	16	<b><u>494</u></b>	<b><u>370</u></b>	493	371	496	369	16	<b><u>494</u></b>	<b><u>370</u></b>	493	371	496	369
450.soplex	16	925	144	<b><u>923</u></b>	<b><u>145</u></b>	923	145	8	396	168	<b><u>395</u></b>	<b><u>169</u></b>	395	169
453.povray	16	300	284	<b><u>301</u></b>	<b><u>283</u></b>	304	280	16	<b><u>259</u></b>	<b><u>329</u></b>	258	330	260	328
454.calculix	16	487	271	<b><u>490</u></b>	<b><u>269</u></b>	492	268	16	487	271	<b><u>490</u></b>	<b><u>269</u></b>	492	268
459.GemsFDTD	16	1308	130	1320	129	<b><u>1314</u></b>	<b><u>129</u></b>	8	655	130	656	129	<b><u>655</u></b>	<b><u>130</u></b>
465.tonto	16	659	239	661	238	<b><u>660</u></b>	<b><u>238</u></b>	16	632	249	638	247	<b><u>636</u></b>	<b><u>248</u></b>
470.lbm	16	872	252	<b><u>872</u></b>	<b><u>252</u></b>	871	252	16	872	252	<b><u>872</u></b>	<b><u>252</u></b>	871	252
481.wrf	16	754	237	752	238	<b><u>752</u></b>	<b><u>238</u></b>	16	<b><u>742</u></b>	<b><u>241</u></b>	743	241	741	241
482.sphinx3	16	1447	216	1449	215	<b><u>1447</u></b>	<b><u>215</u></b>	16	1447	216	1449	215	<b><u>1447</u></b>	<b><u>215</u></b>

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 BX924 S3, Intel Xeon E5-2650, 2.0 GHz

**SPECfp\_rate\_base2006 = 212**

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

**Test date:** Mar-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>  
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.lelie3d: -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

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**Fujitsu**

**SPECfp\_rate2006 = 218**

PRIMERGY BX924 S3, Intel Xeon E5-2650, 2.0 GHz

**SPECfp\_rate\_base2006 = 212**

**CPU2006 license:** 19

**Test date:** Mar-2012

**Test sponsor:** Fujitsu

**Hardware Availability:** Mar-2012

**Tested by:** Fujitsu

**Software Availability:** Dec-2011

## Base Optimization Flags (Continued)

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  
470.lbm: -DSPEC\_CPU\_LP64  
481.wrf: -DSPEC\_CPU\_LP64 -DSPEC\_CPU\_CASE\_FLAG -DSPEC\_CPU\_LINUX

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Fujitsu

SPECfp\_rate2006 = 218

PRIMERGY BX924 S3, Intel Xeon E5-2650, 2.0 GHz

SPECfp\_rate\_base2006 = 212

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

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

## Peak Portability Flags (Continued)

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: -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



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**Fujitsu**

**SPECfp\_rate2006 = 218**

PRIMERGY BX924 S3, Intel Xeon E5-2650, 2.0 GHz

**SPECfp\_rate\_base2006 = 212**

**CPU2006 license:** 19

**Test sponsor:** Fujitsu

**Tested by:** Fujitsu

**Test date:** Mar-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/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 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 03:34:01 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 29 March 2012.