



# SPEC<sup>®</sup> CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Fujitsu

### SPECfp<sup>®</sup>\_rate2006 = 117

PRIMERGY RX300 S6, Intel Xeon E5645, 2.40 GHz

### SPECfp\_rate\_base2006 = 114

CPU2006 license: 19

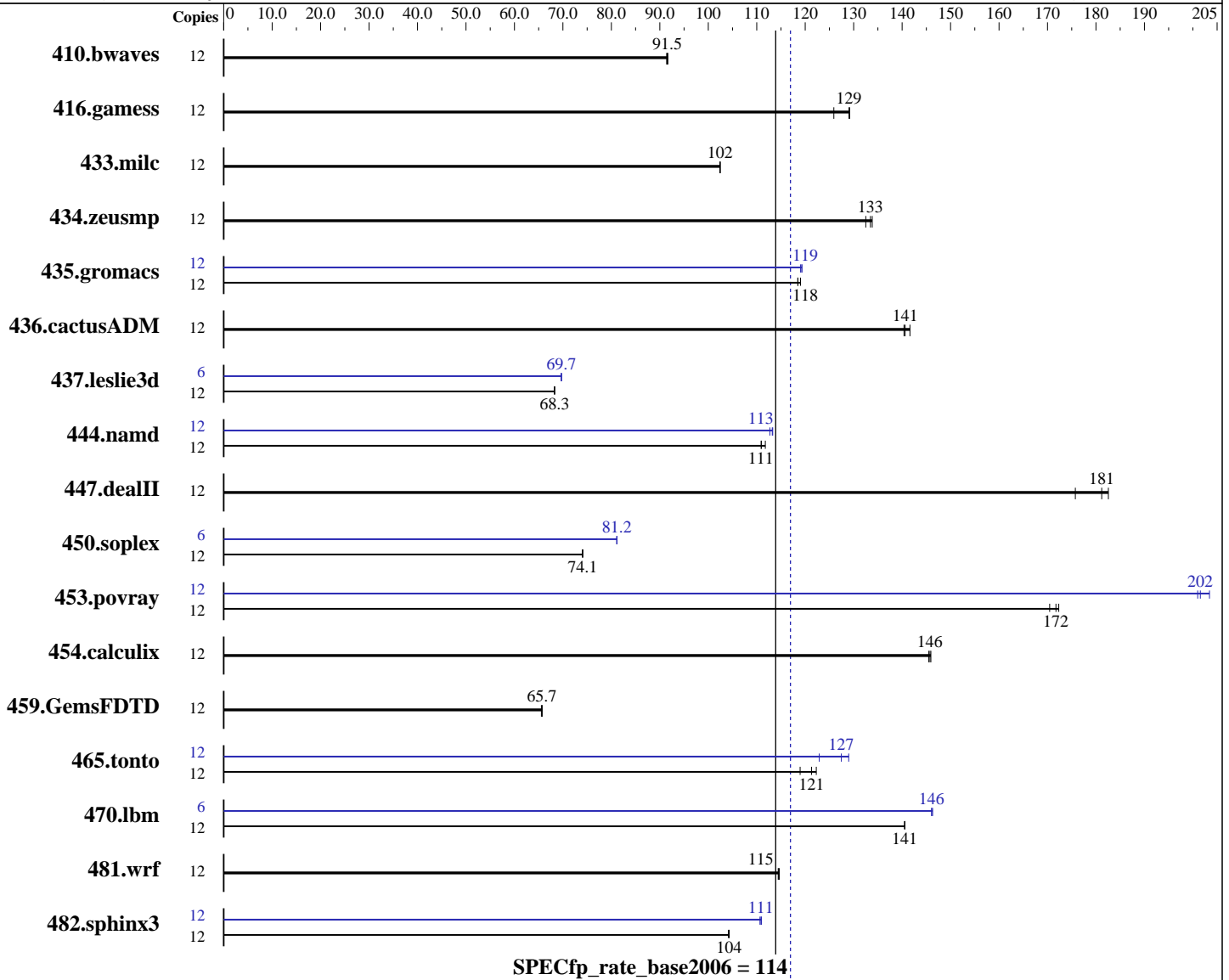
Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Jan-2011

Hardware Availability: Feb-2011

Software Availability: Nov-2010



### Hardware

CPU Name: Intel Xeon E5645  
 CPU Characteristics: Intel Turbo Boost Technology up to 2.80 GHz  
 CPU MHz: 2400  
 FPU: Integrated  
 CPU(s) enabled: 6 cores, 1 chip, 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: SUSE Linux Enterprise Server 11 (x86\_64) with SP1, Kernel 2.6.32.12-0.7-default  
 Compiler: Intel C++ and Fortran Intel 64 Compiler XE for applications running on Intel 64, Version 12.0.0.082 Build 20101006  
 Auto Parallel: No  
 File System: ext3  
 System State: Run level 3 (multi-user)  
 Base Pointers: 64-bit

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Fujitsu

SPECfp\_rate2006 = 117

PRIMERGY RX300 S6, Intel Xeon E5645, 2.40 GHz

SPECfp\_rate\_base2006 = 114

CPU2006 license: 19

Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Jan-2011

Hardware Availability: Feb-2011

Software Availability: Nov-2010

L3 Cache: 12 MB I+D on chip per chip  
Other Cache: None  
Memory: 24 GB (6 x 4 GB 2Rx4 PC3-10600R-9, ECC)  
Disk Subsystem: 1 x SAS, 300 GB, 10000 RPM  
Other Hardware: --

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	12	1779	91.7	<u>1782</u>	<u>91.5</u>	1784	91.4	12	1779	91.7	<u>1782</u>	<u>91.5</u>	1784	91.4
416.gamess	12	<u>1821</u>	<u>129</u>	1819	129	1866	126	12	<u>1821</u>	<u>129</u>	1819	129	1866	126
433.milc	12	1076	102	1075	102	<u>1075</u>	<u>102</u>	12	1076	102	1075	102	<u>1075</u>	<u>102</u>
434.zeusmp	12	824	133	816	134	<u>818</u>	<u>133</u>	12	824	133	816	134	<u>818</u>	<u>133</u>
435.gromacs	12	723	118	<u>723</u>	<u>118</u>	720	119	12	720	119	718	119	<u>718</u>	<u>119</u>
436.cactusADM	12	<u>1020</u>	<u>141</u>	1013	142	1021	140	12	<u>1020</u>	<u>141</u>	1013	142	1021	140
437.leslie3d	12	<u>1652</u>	<u>68.3</u>	1653	68.3	1652	68.3	6	809	69.7	810	69.6	<u>809</u>	<u>69.7</u>
444.namd	12	<u>867</u>	<u>111</u>	868	111	861	112	12	854	113	849	113	<u>850</u>	<u>113</u>
447.dealII	12	781	176	752	183	<u>758</u>	<u>181</u>	12	781	176	752	183	<u>758</u>	<u>181</u>
450.soplex	12	1351	74.1	1352	74.0	<u>1351</u>	<u>74.1</u>	6	617	81.2	617	81.1	<u>617</u>	<u>81.2</u>
453.povray	12	370	172	<u>372</u>	<u>172</u>	375	170	12	318	201	314	203	<u>317</u>	<u>202</u>
454.calculix	12	<u>679</u>	<u>146</u>	678	146	681	145	12	<u>679</u>	<u>146</u>	678	146	681	145
459.GemsFDTD	12	1938	65.7	<u>1938</u>	<u>65.7</u>	1942	65.6	12	1938	65.7	<u>1938</u>	<u>65.7</u>	1942	65.6
465.tonto	12	<u>973</u>	<u>121</u>	966	122	993	119	12	916	129	<u>926</u>	<u>127</u>	961	123
470.lbm	12	1173	141	<u>1173</u>	<u>141</u>	1173	141	6	564	146	<u>564</u>	<u>146</u>	564	146
481.wrf	12	1169	115	1171	114	<u>1170</u>	<u>115</u>	12	1169	115	1171	114	<u>1170</u>	<u>115</u>
482.sphinx3	12	2242	104	2246	104	<u>2243</u>	<u>104</u>	12	2108	111	<u>2110</u>	<u>111</u>	2113	111

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

## Submit Notes

The config file option 'submit' was used.  
numactl was used to bind copies to the cores

## Operating System Notes

'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run  
Hugepages were not configured on the system

## Platform Notes

BIOS configuration:  
Data Reuse Optimization = Disable



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**Fujitsu**

**SPECfp\_rate2006 = 117**

**PRIMERGY RX300 S6, Intel Xeon E5645, 2.40 GHz**

**SPECfp\_rate\_base2006 = 114**

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

**Test date:** Jan-2011  
**Hardware Availability:** Feb-2011  
**Software Availability:** Nov-2010

## General Notes

This result was measured on the PRIMERGY RX300 S6. The PRIMERGY RX300 S6 and the PRIMERGY TX300 S6 are electronically equivalent.

For information about Fujitsu please visit: <http://www.fujitsu.com>  
Binaries were compiled on SLES 10 SP1 with Binutils 2.18.50.0.7.20080502

## 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.deallI: -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:  
-xSSE4.2 -ipo -O3 -no-prec-div -ansi-alias

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**Fujitsu**

**SPECfp\_rate2006 = 117**

PRIMERGY RX300 S6, Intel Xeon E5645, 2.40 GHz

**SPECfp\_rate\_base2006 = 114**

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

**Test date:** Jan-2011  
**Hardware Availability:** Feb-2011  
**Software Availability:** Nov-2010

## Base Optimization Flags (Continued)

C++ benchmarks:  
-xSSE4.2 -ipo -O3 -no-prec-div -ansi-alias

Fortran benchmarks:  
-xSSE4.2 -ipo -O3 -no-prec-div

Benchmarks using both Fortran and C:  
-xSSE4.2 -ipo -O3 -no-prec-div -ansi-alias

## Peak Compiler Invocation

C benchmarks (except as noted below):  
icc -m64

482.sphinx3: icc -m32

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.deallI: -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



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**Fujitsu**

**SPECfp\_rate2006 = 117**

PRIMERGY RX300 S6, Intel Xeon E5645, 2.40 GHz

**SPECfp\_rate\_base2006 = 114**

**CPU2006 license:** 19

**Test sponsor:** Fujitsu

**Tested by:** Fujitsu

**Test date:** Jan-2011

**Hardware Availability:** Feb-2011

**Software Availability:** Nov-2010

## Peak Optimization Flags

### C benchmarks:

433.milc: basepeak = yes

470.lbm: -xSSE4.2(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  
-ansi-alias -opt-prefetch -auto-ilp32

482.sphinx3: -xSSE4.2 -ipo -O3 -no-prec-div -unroll2

### C++ benchmarks:

444.namd: -xSSE4.2(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: -xSSE4.2(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: -xSSE4.2(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: basepeak = yes

416.gamess: basepeak = yes

434.zeusmp: basepeak = yes

437.leslie3d: -xSSE4.2 -ipo -O3 -no-prec-div  
-B /usr/share/libhugetlbfs/ -Wl,-melf\_x86\_64 -Wl,-hugetlbfs-link=BDT

459.GemsFDTD: basepeak = yes

465.tonto: -xSSE4.2(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: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -opt-prefetch  
-auto-ilp32

436.cactusADM: basepeak = yes

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Fujitsu

SPECfp\_rate2006 = 117

PRIMERGY RX300 S6, Intel Xeon E5645, 2.40 GHz

SPECfp\_rate\_base2006 = 114

CPU2006 license: 19

Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Jan-2011

Hardware Availability: Feb-2011

Software Availability: Nov-2010

## Peak Optimization Flags (Continued)

454.calculix: basepeak = yes

481.wrf: basepeak = yes

The flags file that was used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revA.20110222.00.html>

You can also download the XML flags source by saving the following link:

<http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revA.20110222.00.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 v1.1.  
Report generated on Wed Jul 23 15:27:43 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 15 March 2011.