



# SPEC<sup>®</sup> CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Fujitsu

SPECfp<sup>®</sup>2006 = **71.5**

PRIMERGY RX500 S7, Intel Xeon E5-4610, 2.40 GHz

SPECfp\_base2006 = **68.1**

CPU2006 license: 19

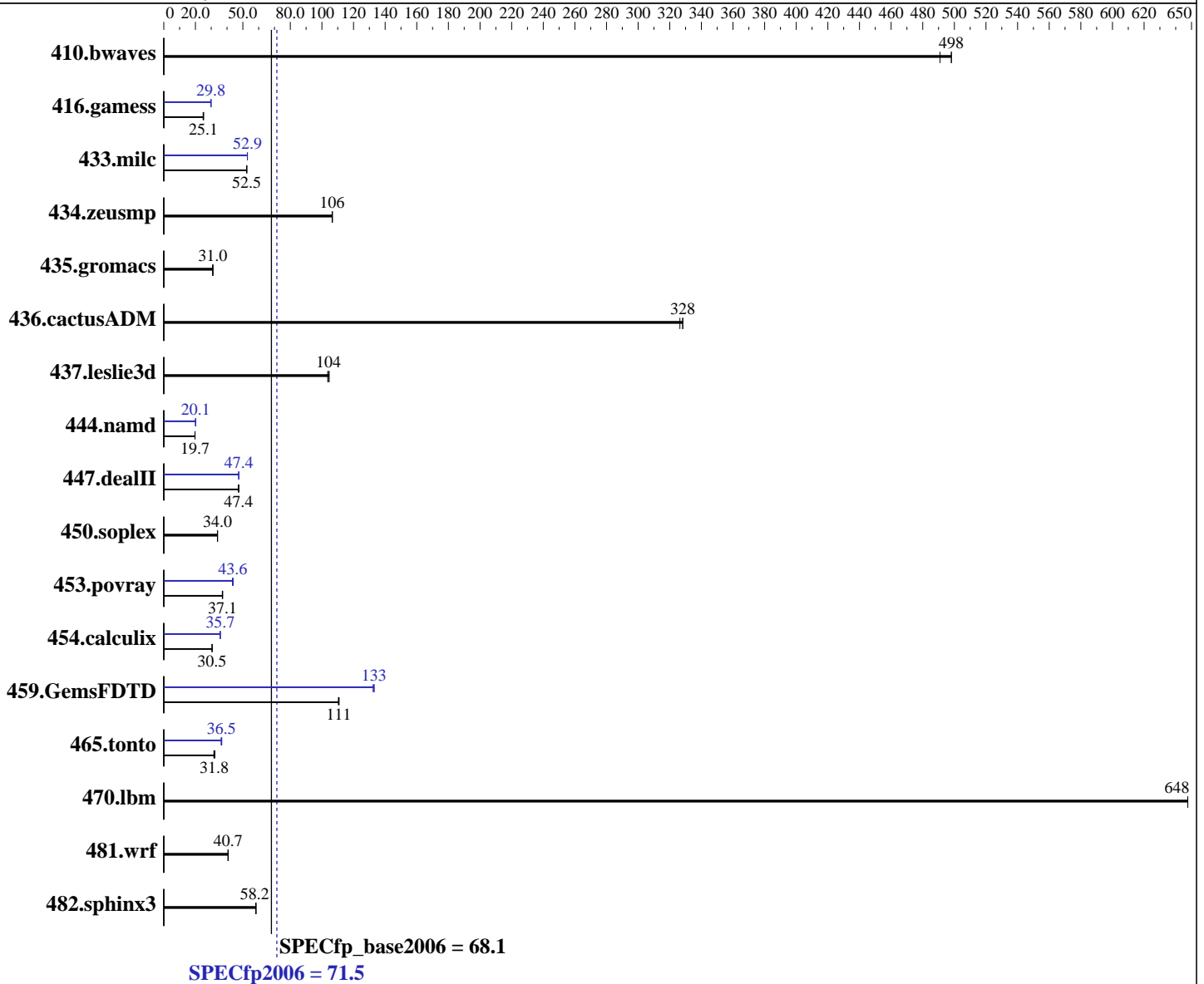
Test date: Jun-2012

Test sponsor: Fujitsu

Hardware Availability: Jul-2012

Tested by: Fujitsu

Software Availability: Feb-2012



### Hardware

CPU Name: Intel Xeon E5-4610  
 CPU Characteristics: Intel Turbo Boost Technology up to 2.90 GHz  
 CPU MHz: 2400  
 FPU: Integrated  
 CPU(s) enabled: 24 cores, 4 chips, 6 cores/chip  
 CPU(s) orderable: 2,4 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 12.1.0.293 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

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Fujitsu

SPECfp2006 = **71.5**

PRIMERGY RX500 S7, Intel Xeon E5-4610, 2.40 GHz

SPECfp\_base2006 = **68.1**

CPU2006 license: 19

Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Jun-2012

Hardware Availability: Jul-2012

Software Availability: Feb-2012

L3 Cache: 15 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 256 GB (32 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: 64-bit  
 Peak Pointers: 32/64-bit  
 Other Software: None

## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	27.7	491	27.3	498	<b><u>27.3</u></b>	<b><u>498</u></b>	27.7	491	27.3	498	<b><u>27.3</u></b>	<b><u>498</u></b>
416.gamess	787	24.9	779	25.1	<b><u>779</u></b>	<b><u>25.1</u></b>	<b><u>656</u></b>	<b><u>29.8</u></b>	657	29.8	655	29.9
433.milc	<b><u>175</u></b>	<b><u>52.5</u></b>	175	52.5	175	52.4	<b><u>174</u></b>	<b><u>52.9</u></b>	174	52.9	174	52.9
434.zeusmp	85.5	106	<b><u>85.5</u></b>	<b><u>106</u></b>	85.3	107	85.5	106	<b><u>85.5</u></b>	<b><u>106</u></b>	85.3	107
435.gromacs	<b><u>230</u></b>	<b><u>31.0</u></b>	231	30.9	230	31.1	<b><u>230</u></b>	<b><u>31.0</u></b>	231	30.9	230	31.1
436.cactusADM	36.6	326	36.4	328	<b><u>36.4</u></b>	<b><u>328</u></b>	36.6	326	36.4	328	<b><u>36.4</u></b>	<b><u>328</u></b>
437.leslie3d	90.7	104	89.9	105	<b><u>90.3</u></b>	<b><u>104</u></b>	90.7	104	89.9	105	<b><u>90.3</u></b>	<b><u>104</u></b>
444.namd	406	19.7	<b><u>406</u></b>	<b><u>19.7</u></b>	406	19.7	399	20.1	399	20.1	<b><u>399</u></b>	<b><u>20.1</u></b>
447.dealII	241	47.4	242	47.2	<b><u>241</u></b>	<b><u>47.4</u></b>	241	47.5	242	47.4	<b><u>241</u></b>	<b><u>47.4</u></b>
450.soplex	245	34.0	<b><u>246</u></b>	<b><u>34.0</u></b>	246	33.9	245	34.0	<b><u>246</u></b>	<b><u>34.0</u></b>	246	33.9
453.povray	143	37.3	144	37.0	<b><u>143</u></b>	<b><u>37.1</u></b>	<b><u>122</u></b>	<b><u>43.6</u></b>	121	43.9	123	43.4
454.calculix	<b><u>270</u></b>	<b><u>30.5</u></b>	269	30.6	271	30.5	232	35.5	<b><u>231</u></b>	<b><u>35.7</u></b>	231	35.8
459.GemsFDTD	96.1	110	95.7	111	<b><u>95.9</u></b>	<b><u>111</u></b>	79.8	133	<b><u>79.8</u></b>	<b><u>133</u></b>	80.2	132
465.tonto	311	31.7	304	32.3	<b><u>309</u></b>	<b><u>31.8</u></b>	268	36.7	<b><u>270</u></b>	<b><u>36.5</u></b>	271	36.2
470.lbm	21.2	648	21.2	648	<b><u>21.2</u></b>	<b><u>648</u></b>	21.2	648	21.2	648	<b><u>21.2</u></b>	<b><u>648</u></b>
481.wrf	<b><u>275</u></b>	<b><u>40.7</u></b>	274	40.8	275	40.6	<b><u>275</u></b>	<b><u>40.7</u></b>	274	40.8	275	40.6
482.sphinx3	<b><u>335</u></b>	<b><u>58.2</u></b>	334	58.4	335	58.2	<b><u>335</u></b>	<b><u>58.2</u></b>	334	58.4	335	58.2

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"  
 Transparent Huge Pages disabled with:  
 echo never > /sys/kernel/mm/redhat\_transparent\_hugepage/enabled

## Platform Notes

BIOS configuration:  
 Intel HT Technology = Disable  
 Frequency Floor Override = Enable



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**Fujitsu**

**SPECfp2006 = 71.5**

PRIMERGY RX500 S7, Intel Xeon E5-4610, 2.40 GHz

**SPECfp\_base2006 = 68.1**

**CPU2006 license:** 19

**Test date:** Jun-2012

**Test sponsor:** Fujitsu

**Hardware Availability:** Jul-2012

**Tested by:** Fujitsu

**Software Availability:** Feb-2012

## 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 = "24"
```

Binaries compiled on a system with 1x E3-1270v2 CPU + 32 GB memory using RHEL6.2

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.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
```



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**Fujitsu**

**SPECfp2006 = 71.5**

PRIMERGY RX500 S7, Intel Xeon E5-4610, 2.40 GHz

**SPECfp\_base2006 = 68.1**

CPU2006 license: 19

Test date: Jun-2012

Test sponsor: Fujitsu

Hardware Availability: Jul-2012

Tested by: Fujitsu

Software Availability: Feb-2012

## Base Optimization Flags

C benchmarks:

`-xAVX -ipo -O3 -no-prec-div -static -parallel -opt-prefetch  
-ansi-alias`

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`

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**Fujitsu**

**SPECfp2006 = 71.5**

PRIMERGY RX500 S7, Intel Xeon E5-4610, 2.40 GHz

**SPECfp\_base2006 = 68.1**

**CPU2006 license:** 19

**Test date:** Jun-2012

**Test sponsor:** Fujitsu

**Hardware Availability:** Jul-2012

**Tested by:** Fujitsu

**Software Availability:** Feb-2012

## Peak Optimization Flags (Continued)

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: -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: basepeak = yes

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>



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Fujitsu

SPECfp2006 = 71.5

PRIMERGY RX500 S7, Intel Xeon E5-4610, 2.40 GHz

SPECfp\_base2006 = 68.1

CPU2006 license: 19

Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Jun-2012

Hardware Availability: Jul-2012

Software Availability: Feb-2012

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 12:11:31 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 14 August 2012.