



# SPEC<sup>®</sup> CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Fujitsu

### SPECfp<sup>®</sup>\_rate2006 = 1030

PRIMERGY RX900 S2, Intel Xeon E7-8850, 2.00 GHz

### SPECfp\_rate\_base2006 = 981

CPU2006 license: 19

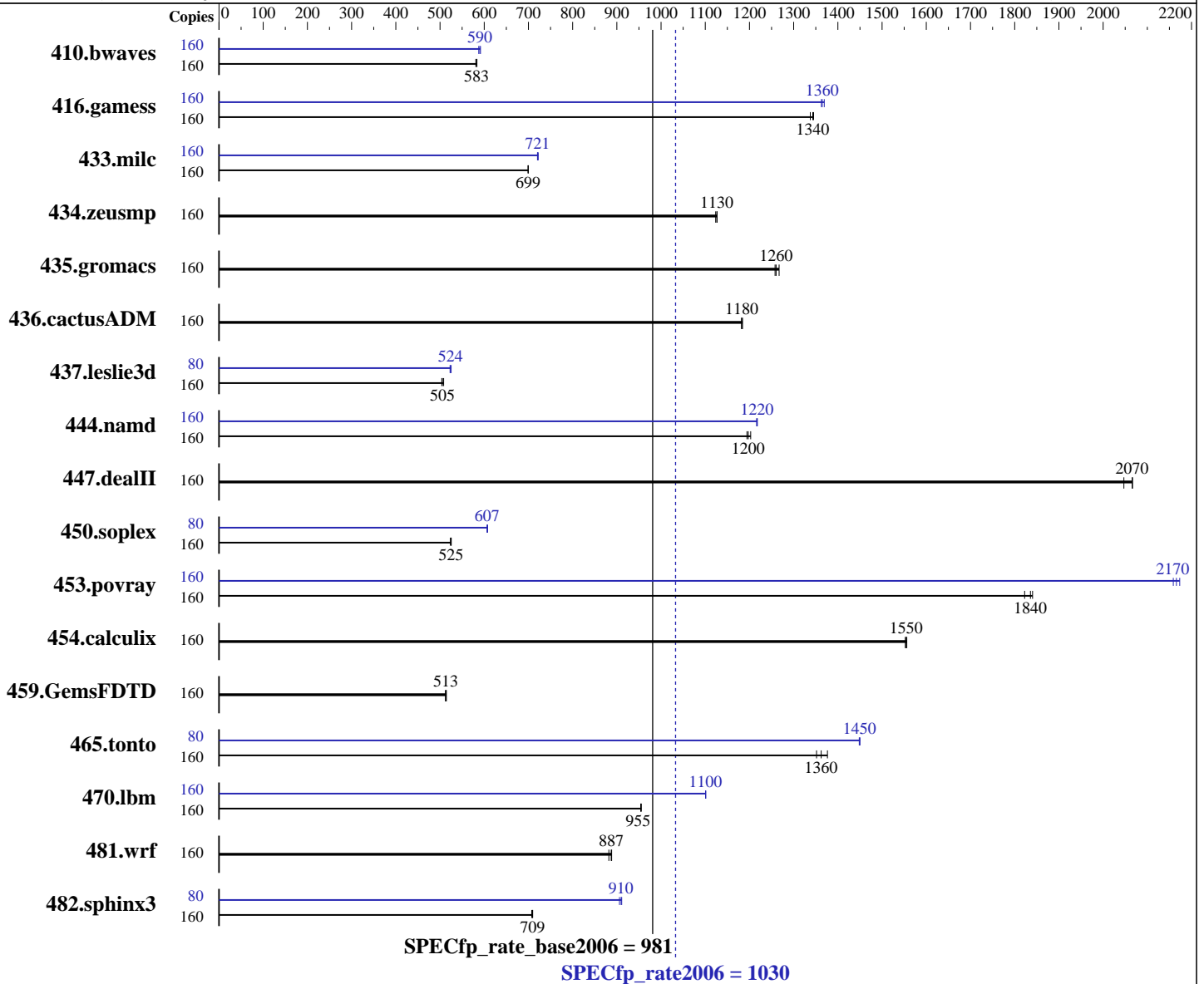
Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Apr-2011

Hardware Availability: Jun-2011

Software Availability: Jan-2011



### Hardware

CPU Name: Intel Xeon E7-8850  
 CPU Characteristics: Intel Turbo Boost Technology up to 2.40 GHz  
 CPU MHz: 2000  
 FPU: Integrated  
 CPU(s) enabled: 80 cores, 8 chips, 10 cores/chip, 2 threads/core  
 CPU(s) orderable: 4,6,8 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 SP1(x86\_64), Kernel 2.6.32.12-0.7-default  
 Compiler: Intel C++ and Fortran Intel 64 Compiler XE for applications running on Intel 64 Version 12.0.1.116 Build 20101116  
 Auto Parallel: No  
 File System: ext2  
 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 = 1030

PRIMERGY RX900 S2, Intel Xeon E7-8850, 2.00 GHz

SPECfp\_rate\_base2006 = 981

CPU2006 license: 19

Test sponsor: Fujitsu

Tested by: Fujitsu

Test date: Apr-2011

Hardware Availability: Jun-2011

Software Availability: Jan-2011

L3 Cache: 24 MB I+D on chip per chip  
Other Cache: None  
Memory: 1 TB (128 x 8 GB 4Rx8 PC3-10600R-9, ECC, running at 1066 MHz)  
Disk Subsystem: 2 x 147 GB (SAS, 15000RPM, RAID0)  
Other Hardware: None

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	160	<b>3733</b>	<b>583</b>	3743	581	3726	584	160	<b>3686</b>	<b>590</b>	3701	588	3676	592
416.gamess	160	2329	1350	2342	1340	<b>2332</b>	<b>1340</b>	160	2299	1360	<b>2296</b>	<b>1360</b>	2288	1370
433.milc	160	<b>2100</b>	<b>699</b>	2100	700	2100	699	160	<b>2038</b>	<b>721</b>	2039	720	2034	722
434.zeusmp	160	<b>1293</b>	<b>1130</b>	1292	1130	1296	1120	160	<b>1293</b>	<b>1130</b>	1292	1130	1296	1120
435.gromacs	160	908	1260	902	1270	<b>906</b>	<b>1260</b>	160	908	1260	902	1270	<b>906</b>	<b>1260</b>
436.cactusADM	160	<b>1617</b>	<b>1180</b>	1618	1180	1614	1180	160	<b>1617</b>	<b>1180</b>	1618	1180	1614	1180
437.leslie3d	160	2959	508	2984	504	<b>2976</b>	<b>505</b>	80	1439	523	1432	525	<b>1436</b>	<b>524</b>
444.namd	160	1067	1200	<b>1072</b>	<b>1200</b>	1074	1190	160	1055	1220	1054	1220	<b>1054</b>	<b>1220</b>
447.dealII	160	894	2050	<b>886</b>	<b>2070</b>	886	2070	160	894	2050	<b>886</b>	<b>2070</b>	886	2070
450.soplex	160	2550	523	<b>2542</b>	<b>525</b>	2540	525	80	1098	608	1100	606	<b>1100</b>	<b>607</b>
453.povray	160	<b>464</b>	<b>1840</b>	462	1840	467	1820	160	394	2160	392	2170	<b>393</b>	<b>2170</b>
454.calculix	160	848	1560	<b>849</b>	<b>1550</b>	850	1550	160	848	1560	<b>849</b>	<b>1550</b>	850	1550
459.GemsFDTD	160	3300	514	<b>3307</b>	<b>513</b>	3314	512	160	3300	514	<b>3307</b>	<b>513</b>	3314	512
465.tonto	160	1165	1350	1144	1380	<b>1156</b>	<b>1360</b>	80	543	1450	<b>543</b>	<b>1450</b>	544	1450
470.lbm	160	2302	955	2304	954	<b>2303</b>	<b>955</b>	160	1997	1100	<b>1997</b>	<b>1100</b>	1996	1100
481.wrf	160	2026	882	<b>2014</b>	<b>887</b>	2012	888	160	2026	882	<b>2014</b>	<b>887</b>	2012	888
482.sphinx3	160	4408	707	<b>4396</b>	<b>709</b>	4394	710	80	<b>1714</b>	<b>910</b>	1721	906	1712	911

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

Large pages were not enabled for this run

The following command was used prior to run  
ulimit -s unlimited  
echo 1 > /proc/sys/vm/zone\_reclaim\_mode



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**Fujitsu**

**SPECfp\_rate2006 = 1030**

PRIMERGY RX900 S2, Intel Xeon E7-8850, 2.00 GHz

**SPECfp\_rate\_base2006 = 981**

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

**Test date:** Apr-2011  
**Hardware Availability:** Jun-2011  
**Software Availability:** Jan-2011

## General Notes

Binaries were compiled on RHEL5.5

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

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

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**Fujitsu**

**SPECfp\_rate2006 = 1030**

PRIMERGY RX900 S2, Intel Xeon E7-8850, 2.00 GHz

**SPECfp\_rate\_base2006 = 981**

**CPU2006 license:** 19

**Test sponsor:** Fujitsu

**Tested by:** Fujitsu

**Test date:** Apr-2011

**Hardware Availability:** Jun-2011

**Software Availability:** Jan-2011

## Base Optimization Flags (Continued)

Fortran benchmarks:

`-xSSE4.2 -ipo -O3 -no-prec-div -static`

Benchmarks using both Fortran and C:

`-xSSE4.2 -ipo -O3 -no-prec-div -static -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.dealII: `-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 = 1030**

PRIMERGY RX900 S2, Intel Xeon E7-8850, 2.00 GHz

**SPECfp\_rate\_base2006 = 981**

**CPU2006 license:** 19

**Test date:** Apr-2011

**Test sponsor:** Fujitsu

**Hardware Availability:** Jun-2011

**Tested by:** Fujitsu

**Software Availability:** Jan-2011

## Peak Optimization Flags

C benchmarks:

433.milc: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -static -auto-ilp32

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 -static -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  
-B /usr/share/libhugetlbfs/ -Wl,-hugetlbfs-link=BDT

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  
-B /usr/share/libhugetlbfs/ -Wl,-melf\_x86\_64 -Wl,-hugetlbfs-link=BDT

Fortran benchmarks:

410.bwaves: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)  
-no-prec-div(pass 2) -prof-use(pass 2) -static

416.gamess: -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 -scalar-rep- -static

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  
-B /usr/share/libhugetlbfs/ -Wl,-melf\_x86\_64 -Wl,-hugetlbfs-link=BDT

Benchmarks using both Fortran and C:

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

**Fujitsu**

**SPECfp\_rate2006 = 1030**

PRIMERGY RX900 S2, Intel Xeon E7-8850, 2.00 GHz

**SPECfp\_rate\_base2006 = 981**

**CPU2006 license:** 19

**Test sponsor:** Fujitsu

**Tested by:** Fujitsu

**Test date:** Apr-2011

**Hardware Availability:** Jun-2011

**Software Availability:** Jan-2011

## Peak Optimization Flags (Continued)

435.gromacs: basepeak = yes

436.cactusADM: basepeak = yes

454.calculix: basepeak = yes

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-ic12.0-linux64-revB.html>

[http://www.spec.org/cpu2006/flags/RX900S2\\_Platform.html](http://www.spec.org/cpu2006/flags/RX900S2_Platform.html)

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2006/flags/Intel-ic12.0-linux64-revB.xml>

[http://www.spec.org/cpu2006/flags/RX900S2\\_Platform.xml](http://www.spec.org/cpu2006/flags/RX900S2_Platform.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 20:35:00 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 24 May 2011.