SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Fujitsu

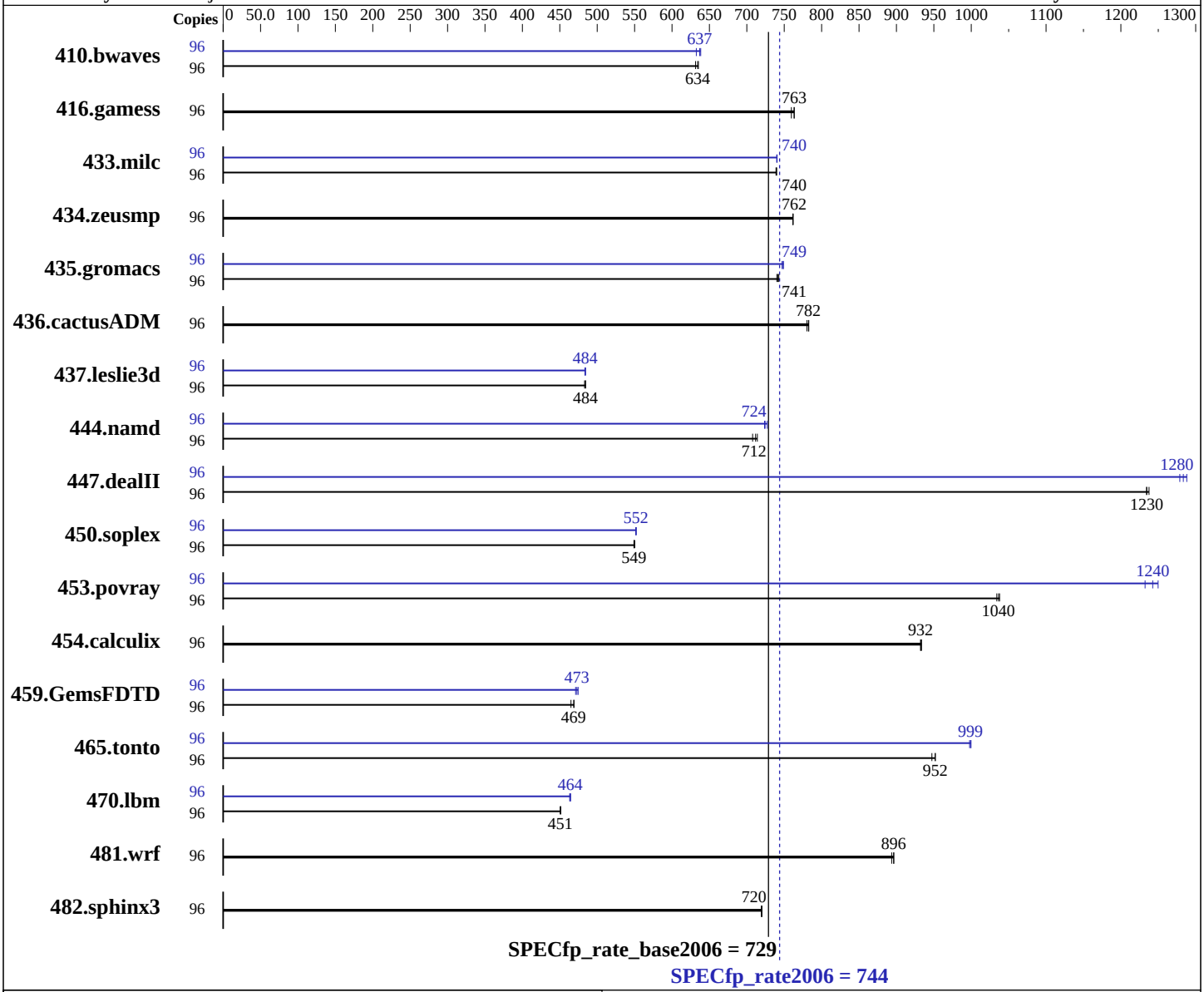
PRIMERGY RX900 S1, Intel Xeon E7540, 2.00 GHz

SPECfp®_rate2006 = 744

SPECfp_rate_base2006 = 729

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

Test date: Aug-2010
Hardware Availability: Aug-2010
Software Availability: Feb-2010



Hardware

CPU Name:	Intel Xeon E7540
CPU Characteristics:	Intel Turbo Boost Technology up to 2.26 GHz
CPU MHz:	2000
FPU:	Integrated
CPU(s) enabled:	48 cores, 8 chips, 6 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 (x86_64), Kernel 2.6.27.19-5-default
Compiler:	Intel C++ and Fortran Professional Compiler for IA32 and Intel 64, Version 11.1 Build 20100203 Package ID: l_cproc_p_11.1.069
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

PRIMERGY RX900 S1, Intel Xeon E7540, 2.00 GHz

SPECfp_rate2006 = 744

SPECfp_rate_base2006 = 729

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

Test date: Aug-2010
Hardware Availability: Aug-2010
Software Availability: Feb-2010

L3 Cache: 18 MB I+D on chip per chip
Other Cache: None
Memory: 1 TB (128 x 8 GB DDR3-1066 DIMMs)
Disk Subsystem: 2 x 147 GB (SAS, 15000 RPM, RAID0)
Other Hardware: None

Peak Pointers: 64-bit
Other Software: N/A

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	96	**2057**	**634**	2054	635	2066	631	96	2063	632	**2048**	**637**	2044	638
416.gamess	96	**2463**	**763**	2475	760	2463	763	96	**2463**	**763**	2475	760	2463	763
433.milc	96	1191	740	**1192**	**740**	1193	739	96	**1191**	**740**	1190	741	1191	740
434.zeusmp	96	**1147**	**762**	1147	762	1147	762	96	**1147**	**762**	1147	762	1147	762
435.gromacs	96	**925**	**741**	926	740	923	743	96	**915**	**749**	917	747	915	749
436.cactusADM	96	**1466**	**782**	1465	783	1470	780	96	**1466**	**782**	1465	783	1470	780
437.leslie3d	96	**1863**	**484**	1868	483	1863	484	96	1866	484	1863	484	**1864**	**484**
444.namd	96	1088	708	**1082**	**712**	1078	714	96	**1063**	**724**	1064	724	1059	727
447.dealII	96	890	1230	**890**	**1230**	887	1240	96	853	1290	**856**	**1280**	859	1280
450.soplex	96	**1458**	**549**	1458	549	1455	550	96	1450	552	1452	552	**1451**	**552**
453.povray	96	**493**	**1040**	494	1030	492	1040	96	409	1250	**411**	**1240**	414	1230
454.calculix	96	849	932	**849**	**932**	848	934	96	849	932	**849**	**932**	848	934
459.GemsFDTD	96	2191	465	**2174**	**469**	2172	469	96	**2154**	**473**	2162	471	2147	475
465.tonto	96	992	952	997	947	**992**	**952**	96	945	1000	947	998	**946**	**999**
470.lbm	96	2927	451	**2927**	**451**	2922	451	96	2840	465	**2844**	**464**	2848	463
481.wrf	96	**1196**	**896**	1196	896	1200	894	96	**1196**	**896**	1196	896	1200	894
482.sphinx3	96	**2600**	**720**	2598	720	2600	720	96	**2600**	**720**	2598	720	2600	720

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

```
The following command was used prior to run

   ulimit -s unlimited
   echo 1 > /proc/sys/vm/zone_reclaim_mode
```

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

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

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

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

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: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2) -fno-alias -opt-prefetch

470.lbm: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2) -opt-malloc-options=3 -ansi-alias -auto-ilp32

482.sphinx3: basepeak = yes

C++ benchmarks:

444.namd: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2) -fno-alias -auto-ilp32

447.dealII: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -static(pass 2) -prof-use(pass 2) -unroll2 -ansi-alias -scalar-rep-

450.soplex: -xSSE4.2(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2) -no-prec-div(pass 2) -static(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) -static(pass 2) -prof-use(pass 2) -unroll4 -ansi-alias

Continued on next page

Peak Optimization Flags (Continued)

Fortran benchmarks:

410.bwaves: `-xSSE4.2 -ipo -O3 -no-prec-div -static -opt-prefetch`

416.gamess: `basepeak = yes`

434.zeusmp: `basepeak = yes`

437.leslie3d: `-xSSE4.2 -ipo -O3 -no-prec-div -static`

459.GemsFDTD: `-xSSE4.2`(pass 2) `-prof-gen`(pass 1) `-ipo`(pass 2) `-O3`(pass 2) `-no-prec-div`(pass 2) `-static`(pass 2) `-prof-use`(pass 2) `-unroll2 -Ob0`

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

436.cactusADM: `basepeak = yes`

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/Fujitsu.RX900.ic11.1-linux64.20100901.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/Fujitsu.RX900.ic11.1-linux64.20100901.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.

Tested with SPEC CPU2006 v1.1.
Report generated on Wed Jul 23 12:26:53 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 31 August 2010.