SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Fujitsu

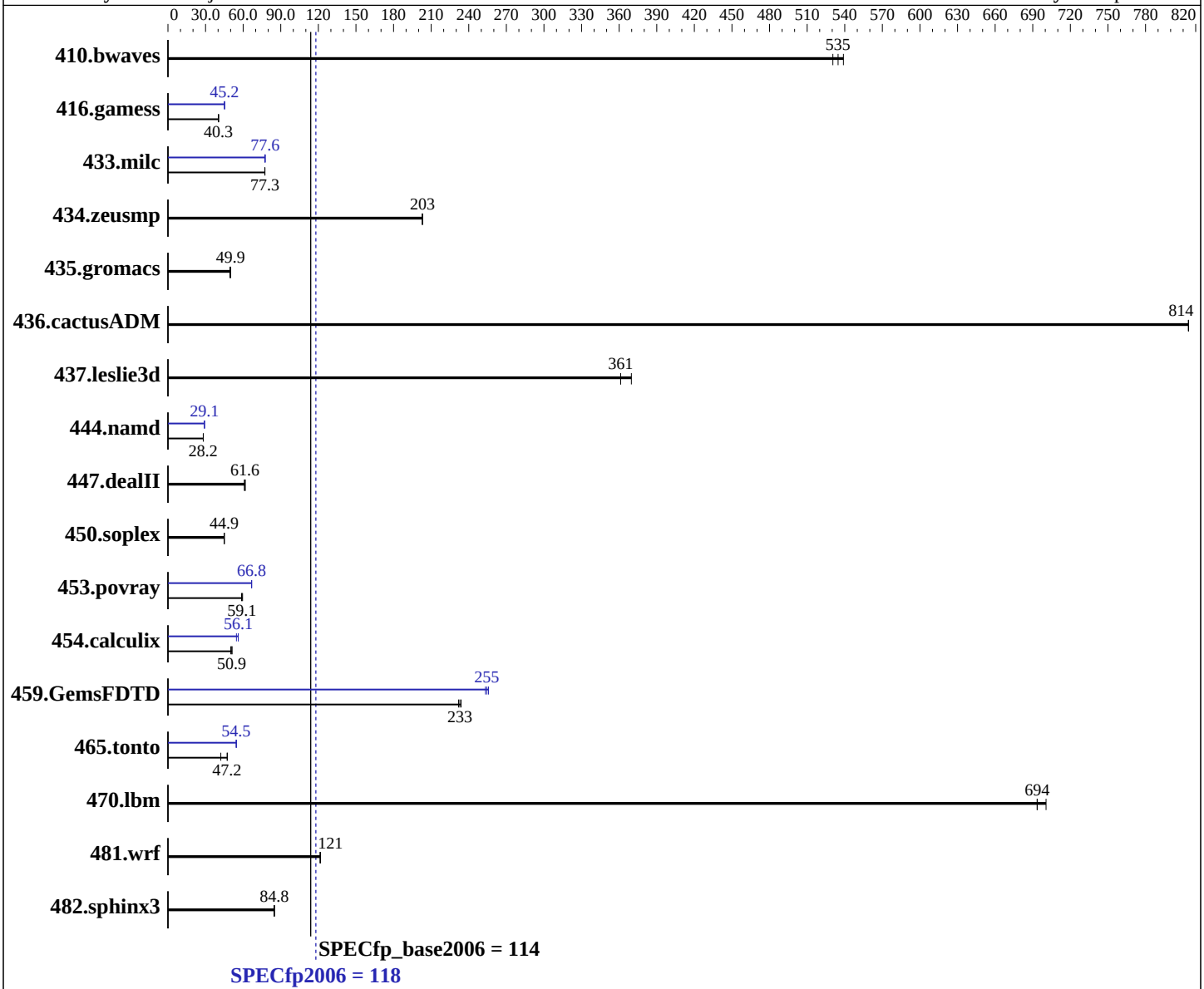
PRIMERGY RX2540 M1, Intel Xeon E5-2667 v3, 3.20 GHz

SPECfp®2006 = 118

SPECfp_base2006 = 114

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

Test date: Aug-2014
Hardware Availability: Sep-2014
Software Availability: Sep-2013



Hardware

CPU Name:	Intel Xeon E5-2667 v3
CPU Characteristics:	Intel Turbo Boost Technology up to 3.60 GHz
CPU MHz:	3200
FPU:	Integrated
CPU(s) enabled:	16 cores, 2 chips, 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:	SLES11 Linux Enterprise Server SP3 (x86_64) 3.0.76-0.11-default
Compiler:	C/C++: Version 14.0.0.080 of Intel C++ Studio XE for Linux; Fortran: Version 14.0.0.080 of Intel Fortran Studio XE for Linux
Auto Parallel:	Yes
File System:	ext4
System State:	Run level 3 (multi-user)

Continued on next page

SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Fujitsu

PRIMERGY RX2540 M1, Intel Xeon E5-2667 v3, 3.20 GHz

SPECfp2006 = 118

SPECfp_base2006 = 114

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

Test date: Aug-2014
Hardware Availability: Sep-2014
Software Availability: Sep-2013

L3 Cache: 20 MB I+D on chip per chip
Other Cache: None
Memory: 256 GB (16 x 16 GB 2Rx4 PC4-2133P-R)
Disk Subsystem: 1 x SATA, 500 GB, 7200 RPM
Other Hardware: None

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	25.6	531	25.2	539	**25.4**	**535**	25.6	531	25.2	539	**25.4**	**535**
416.gamess	**485**	**40.3**	485	40.4	487	40.2	**433**	**45.2**	433	45.2	435	45.0
433.milc	119	77.3	119	77.4	**119**	**77.3**	119	77.2	**118**	**77.6**	118	77.6
434.zeusmp	44.8	203	44.8	203	**44.8**	**203**	44.8	203	44.8	203	**44.8**	**203**
435.gromacs	**143**	**49.9**	143	50.0	144	49.4	**143**	**49.9**	143	50.0	144	49.4
436.cactusADM	**14.7**	**814**	14.7	814	14.7	814	**14.7**	**814**	14.7	814	14.7	814
437.leslie3d	**26.0**	**361**	25.4	370	26.0	361	**26.0**	**361**	25.4	370	26.0	361
444.namd	**285**	**28.2**	285	28.2	285	28.2	275	29.1	276	29.1	**276**	**29.1**
447.dealII	186	61.6	**186**	**61.6**	188	60.9	186	61.6	**186**	**61.6**	188	60.9
450.soplex	186	44.9	**186**	**44.9**	186	44.9	186	44.9	**186**	**44.9**	186	44.9
453.povray	89.4	59.5	**90.0**	**59.1**	90.6	58.7	**79.7**	**66.8**	79.6	66.8	79.8	66.7
454.calculix	**162**	**50.9**	161	51.1	165	50.1	**147**	**56.1**	147	56.1	151	54.6
459.GemsFDTD	45.8	232	45.4	234	**45.6**	**233**	41.5	256	41.9	253	**41.7**	**255**
465.tonto	**208**	**47.2**	233	42.2	208	47.4	180	54.6	**181**	**54.5**	181	54.5
470.lbm	19.8	694	19.6	701	**19.8**	**694**	19.8	694	19.6	701	**19.8**	**694**
481.wrf	**92.0**	**121**	92.0	121	91.8	122	**92.0**	**121**	92.0	121	91.8	122
482.sphinx3	229	85.0	230	84.7	**230**	**84.8**	229	85.0	230	84.7	**230**	**84.8**

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"
```

Platform Notes

```
BIOS configuration:
Energy Performance = Performance
Utilization Profile = Unbalanced
QPI snoop mode: Home Snoop
    COD Enable = Disabled, Early Snoop = Disabled
CPU C1E Support = Disabled
QPI Link Frequency Select = 6.4 GT/s
```

General Notes

```
Environment variables set by runspec before the start of the run:
KMP_AFFINITY = "granularity=fine,compact,1,0"
LD_LIBRARY_PATH = "/SPECcpu2006/libs/32:/SPECcpu2006/libs/64:/SPECcpu2006/sh"
OMP_NUM_THREADS = "16"

 Binaries compiled on a system with 1x Core i7-860 CPU + 8GB
 memory using RedHat EL 6.4
 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.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:
`-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -opt-prefetch -ansi-alias`

C++ benchmarks:
`-xCORE-AVX2 -ipo -O3 -no-prec-div -opt-prefetch -ansi-alias`

Fortran benchmarks:
`-xCORE-AVX2 -ipo -O3 -no-prec-div -parallel -opt-prefetch`

Benchmarks using both Fortran and C:
`-xCORE-AVX2 -ipo -O3 -no-prec-div -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: `-xCORE-AVX2`(pass 2) `-prof-gen`(pass 1) `-ipo`(pass 2) `-O3`(pass 2) `-no-prec-div`(pass 2) `-prof-use`(pass 2) `-auto-ilp32 -ansi-alias`

470.lbm: `basepeak = yes`

482.sphinx3: `basepeak = yes`

Continued on next page

Peak Optimization Flags (Continued)

C++ benchmarks:

444.namd: -xCORE-AVX2(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: basepeak = yes

453.povray: -xCORE-AVX2(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: -xCORE-AVX2(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-

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

459.GemsFDTD: -xCORE-AVX2(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: -xCORE-AVX2(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: -xCORE-AVX2 -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/Fujitsu-Platform-Settings-V1.2-HSW-RevA.html
http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64-revB.html

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

http://www.spec.org/cpu2006/flags/Fujitsu-Platform-Settings-V1.2-HSW-RevA.xml
http://www.spec.org/cpu2006/flags/Intel-ic14.0-official-linux64-revB.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 v1.2.
Report generated on Fri Oct 31 14:53:33 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 31 October 2014.