SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

NTT System S. A.

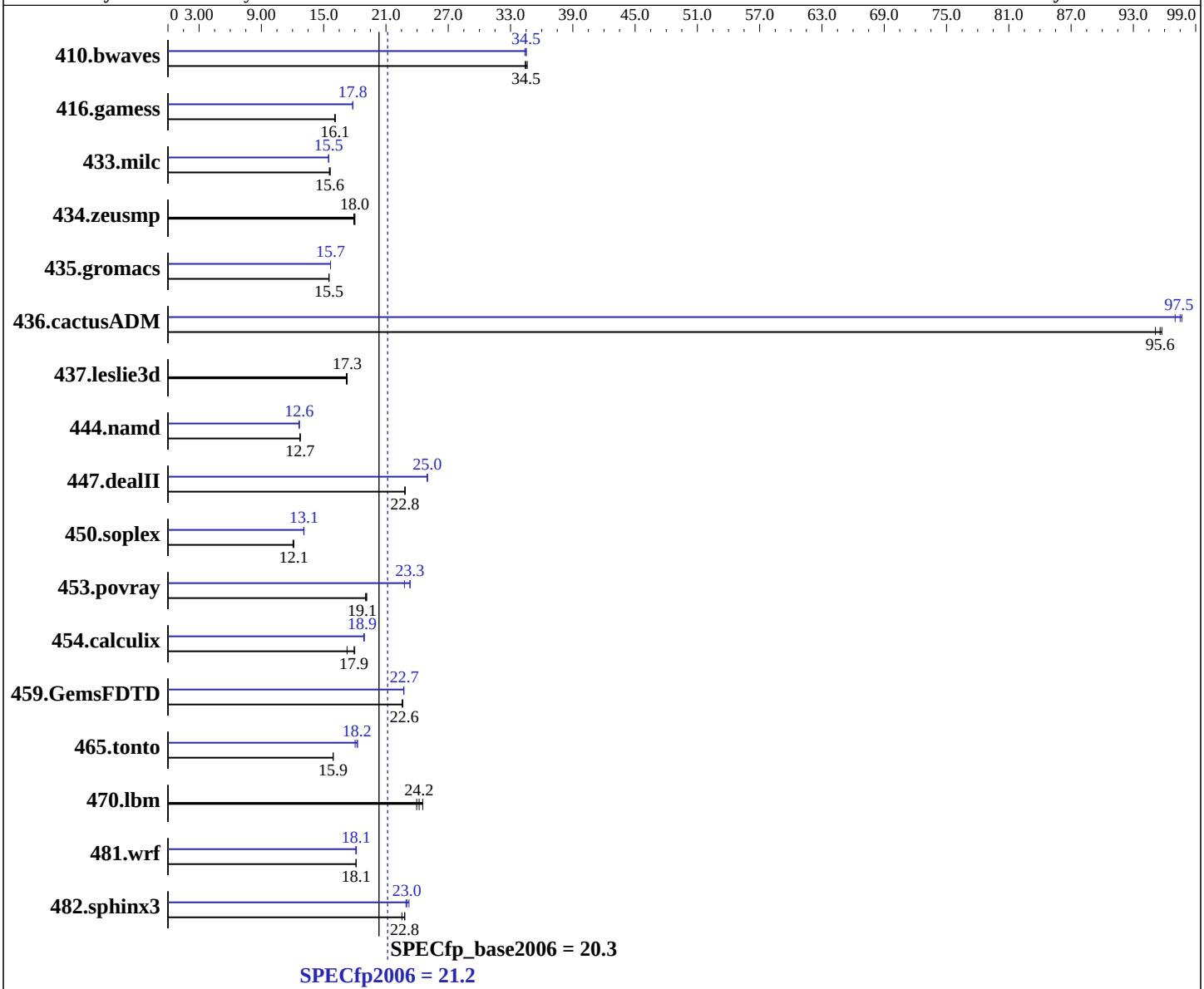
NTT Tytan S8 Series (Intel Xeon E5410)

SPECfp®2006 = 21.2

SPECfp_base2006 = 20.3

CPU2006 license: 9013
Test sponsor: NTT System S. A.
Tested by: NTT System S. A.

Test date: Jan-2009
Hardware Availability: Dec-2008
Software Availability: Dec-2008



Hardware

CPU Name:	Intel Xeon E5410
CPU Characteristics:	2.33 GHz, 2x6 MB P2 shared, 1333 MHz System Bus
CPU MHz:	2333
FPU:	Integrated
CPU(s) enabled:	8 cores, 2 chips, 4 cores/chip
CPU(s) orderable:	2 chips
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	12 MB I+D on chip per chip, 6 MB shared / 2 cores

Continued on next page

Software

Operating System:	SuSe Linux Enterprise Server 10 SP2, Kernel 2.6.16.60-0.21-smp
Compiler:	Intel C++ and Fortran Compiler 11.0 for Linux Build 20080930 Package ID: l_cproc_p_11.0.066, l_cprof_p_11.0.066
Auto Parallel:	Yes
File System:	ReiserFS
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

NTT System S. A.

NTT Tytan S8 Series (Intel Xeon E5410)

SPECfp2006 = 21.2

SPECfp_base2006 = 20.3

CPU2006 license: 9013
Test sponsor: NTT System S. A.
Tested by: NTT System S. A.

Test date: Jan-2009
Hardware Availability: Dec-2008
Software Availability: Dec-2008

L3 Cache: None
Other Cache: None
Memory: 16 GB (4 x 4GB DDR2-667 FBDIMM)
Disk Subsystem: 300 GB SATA, 7200RPM
Other Hardware: None

Peak Pointers: 32/64-bit
Other Software: Binutils 2.18.50.0.7.20080502

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	**394**	**34.5**	395	34.4	393	34.6	395	34.4	394	34.5	**394**	**34.5**
416.gamess	1215	16.1	1219	16.1	**1216**	**16.1**	1099	17.8	**1100**	**17.8**	1100	17.8
433.milc	590	15.5	587	15.6	**589**	**15.6**	593	15.5	593	15.5	**593**	**15.5**
434.zeusmp	508	17.9	506	18.0	**506**	**18.0**	508	17.9	506	18.0	**506**	**18.0**
435.gromacs	460	15.5	461	15.5	**460**	**15.5**	456	15.7	**456**	**15.7**	456	15.7
436.cactusADM	126	95.1	125	95.7	**125**	**95.6**	**123**	**97.5**	123	97.0	122	97.7
437.leslie3d	547	17.2	**544**	**17.3**	544	17.3	547	17.2	**544**	**17.3**	544	17.3
444.namd	630	12.7	630	12.7	**630**	**12.7**	**634**	**12.6**	635	12.6	633	12.7
447.dealII	501	22.8	500	22.9	**501**	**22.8**	458	25.0	458	25.0	**458**	**25.0**
450.soplex	693	12.0	688	12.1	**689**	**12.1**	636	13.1	638	13.1	**637**	**13.1**
453.povray	278	19.1	279	19.0	**278**	**19.1**	234	22.8	228	23.3	**228**	**23.3**
454.calculix	458	18.0	478	17.3	**460**	**17.9**	436	18.9	437	18.9	**437**	**18.9**
459.GemsFDTD	470	22.6	**470**	**22.6**	469	22.6	**467**	**22.7**	467	22.7	467	22.7
465.tonto	619	15.9	618	15.9	**618**	**15.9**	546	18.0	539	18.3	**541**	**18.2**
470.lbm	573	24.0	**568**	**24.2**	560	24.5	573	24.0	**568**	**24.2**	560	24.5
481.wrf	616	18.1	616	18.1	**616**	**18.1**	**616**	**18.1**	615	18.2	617	18.1
482.sphinx3	865	22.5	854	22.8	**855**	**22.8**	839	23.2	850	22.9	**847**	**23.0**

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

Operating System Notes

```
OMP_NUM_THREADS set to number of processors
KMP_AFFINITY set to "physical,0"
KMP_STACKSIZE set to 200M
```

Base Compiler Invocation

C benchmarks:
`icc`

C++ benchmarks:
`icpc`

Continued on next page

Base Compiler Invocation (Continued)

Fortran benchmarks:
ifort

Benchmarks using both Fortran and C:
icc ifort

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:
-xSSE4.1 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch

C++ benchmarks:
-xSSE4.1 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch

Fortran benchmarks:
-xSSE4.1 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch

Benchmarks using both Fortran and C:
-xSSE4.1 -ipo -O3 -no-prec-div -static -parallel -opt-prefetch

Peak Compiler Invocation

C benchmarks:
icc

Continued on next page

Peak Compiler Invocation (Continued)

C++ benchmarks:
icpc

Fortran benchmarks:
ifort

Benchmarks using both Fortran and C:
icc ifort

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

Peak Optimization Flags

C benchmarks:

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

470.lbm: basepeak = yes

482.sphinx3: -m32 -xSSE4.1 -ipo -O3 -no-prec-div -static -unroll2

C++ benchmarks:

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

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

Continued on next page

Peak Optimization Flags (Continued)

450.soplex: -m32 -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3 -no-prec-div -static -opt-malloc-options=3

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

Fortran benchmarks:

410.bwaves: -xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch -parallel

416.gamess: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3 -no-prec-div -static -unroll2 -Ob0 -ansi-alias -scalar-rep-

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

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

465.tonto: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3 -no-prec-div -static -unroll4 -auto

Benchmarks using both Fortran and C:

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

436.cactusADM: -prof-gen(pass 1) -prof-use(pass 2) -xSSE4.1 -ipo -O3 -no-prec-div -static -unroll2 -opt-prefetch -parallel -auto-ilp32

454.calculix: -xSSE4.1 -ipo -O3 -no-prec-div -static -auto-ilp32

481.wrf: -xSSE4.1 -ipo -O3 -no-prec-div -static -opt-prefetch -parallel -auto-ilp32

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic11.0-fp-linux64-revA.20090710.03.html
http://www.spec.org/cpu2006/flags/Intel-Linux64-Platform.20090710.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2006/flags/Intel-ic11.0-fp-linux64-revA.20090710.03.xml
http://www.spec.org/cpu2006/flags/Intel-Linux64-Platform.20090710.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 01:42:07 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 24 April 2009.