



SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Supermicro

SPECfp®_rate2006 = 330

SuperServer 7047R-72RF (X9DRH-7F, Intel E5-2620)

SPECfp_rate_base2006 = 324

CPU2006 license: 001176

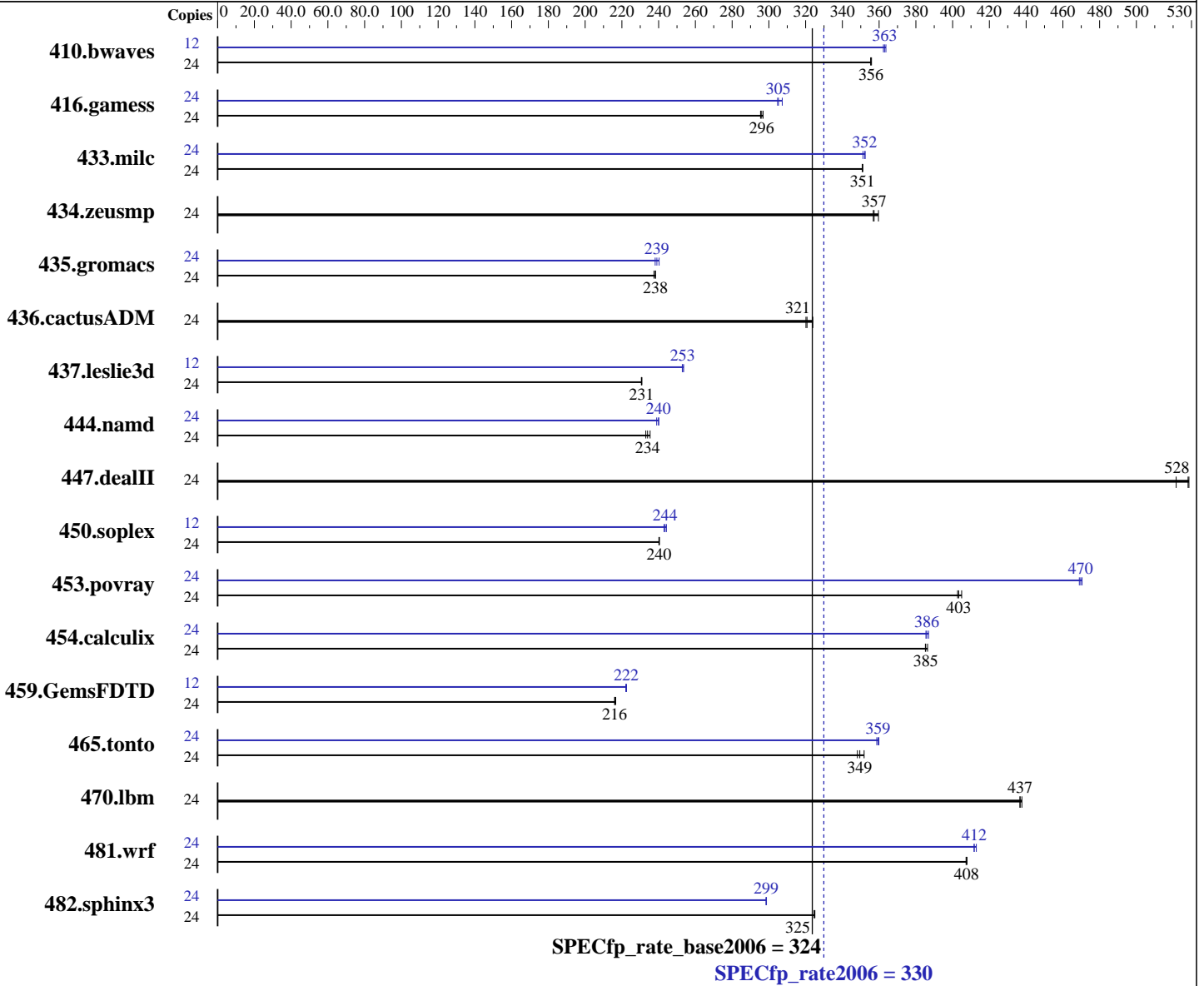
Test sponsor: Supermicro

Tested by: Supermicro

Test date: Jul-2012

Hardware Availability: May-2012

Software Availability: Dec-2011



Hardware

CPU Name: Intel Xeon E5-2620
 CPU Characteristics: Intel Turbo Boost Technology up to 2.50 GHz
 CPU MHz: 2000
 FPU: Integrated
 CPU(s) enabled: 12 cores, 2 chips, 6 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: Red Hat Enterprise Linux Server Release 6.2, Kernel 2.6.32-220.el6.x86_64
 Compiler: C/C++: Version 12.1.0.225 of Intel C++ Studio XE for Linux;
 Fortran: Version 12.1.0.225 of Intel Fortran Studio XE for Linux
 Auto Parallel: No
 File System: ext4
 System State: Run level 3 (multi-user)

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Supermicro

SPECfp_rate2006 = 330

SuperServer 7047R-72RF (X9DRH-7F, Intel E5-2620)

SPECfp_rate_base2006 = 324

CPU2006 license: 001176

Test date: Jul-2012

Test sponsor: Supermicro

Hardware Availability: May-2012

Tested by: Supermicro

Software Availability: Dec-2011

L3 Cache: 15 MB I+D on chip per chip
Other Cache: None
Memory: 128 GB (16 x 8 GB 2Rx4 PC3-12800R-11, ECC)
Disk Subsystem: 1 x 1 TB SATA II, 7200 RPM
Other Hardware: None

Base Pointers: 32/64-bit
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	24	<u>917</u>	<u>356</u>	918	355	917	356	12	450	362	448	364	<u>449</u>	<u>363</u>
416.gamess	24	1590	295	1583	297	<u>1587</u>	<u>296</u>	24	<u>1540</u>	<u>305</u>	1529	307	1542	305
433.milc	24	<u>628</u>	<u>351</u>	628	351	628	351	24	<u>626</u>	<u>352</u>	625	352	627	351
434.zeusmp	24	607	360	612	357	<u>611</u>	<u>357</u>	24	607	360	612	357	<u>611</u>	<u>357</u>
435.gromacs	24	722	237	<u>719</u>	<u>238</u>	719	238	24	713	240	720	238	<u>717</u>	<u>239</u>
436.cactusADM	24	<u>894</u>	<u>321</u>	885	324	896	320	24	<u>894</u>	<u>321</u>	885	324	896	320
437.leslie3d	24	<u>978</u>	<u>231</u>	978	231	977	231	12	<u>446</u>	<u>253</u>	446	253	445	254
444.namd	24	<u>823</u>	<u>234</u>	818	235	826	233	24	<u>802</u>	<u>240</u>	806	239	802	240
447.dealII	24	526	522	<u>520</u>	<u>528</u>	519	529	24	526	522	<u>520</u>	<u>528</u>	519	529
450.soplex	24	832	240	833	240	<u>833</u>	<u>240</u>	12	410	244	412	243	<u>411</u>	<u>244</u>
453.povray	24	315	405	<u>317</u>	<u>403</u>	317	403	24	<u>272</u>	<u>470</u>	272	469	271	470
454.calculix	24	<u>514</u>	<u>385</u>	512	386	514	385	24	512	387	<u>513</u>	<u>386</u>	514	385
459.GemsFDTD	24	<u>1178</u>	<u>216</u>	1178	216	1175	217	12	<u>573</u>	<u>222</u>	573	222	572	223
465.tonto	24	671	352	678	348	<u>676</u>	<u>349</u>	24	<u>657</u>	<u>359</u>	658	359	656	360
470.lbm	24	753	438	755	437	<u>755</u>	<u>437</u>	24	753	438	755	437	<u>755</u>	<u>437</u>
481.wrf	24	<u>658</u>	<u>408</u>	657	408	658	407	24	<u>651</u>	<u>412</u>	649	413	651	412
482.sphinx3	24	<u>1440</u>	<u>325</u>	1441	325	1439	325	24	<u>1567</u>	<u>299</u>	1567	298	1566	299

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

Submit Notes

The numactl mechanism was used to bind copies to processors. The config file option 'submit' was used to generate numactl commands to bind each copy to a specific processor. For details, please see the config file.

Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"

General Notes

Environment variables set by runspec before the start of the run:
LD_LIBRARY_PATH = "/home/cpu2006/libs/32:/home/cpu2006/libs/64"

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Supermicro

SPECfp_rate2006 = 330

SuperServer 7047R-72RF (X9DRH-7F, Intel E5-2620)

SPECfp_rate_base2006 = 324

CPU2006 license: 001176

Test date: Jul-2012

Test sponsor: Supermicro

Hardware Availability: May-2012

Tested by: Supermicro

Software Availability: Dec-2011

General Notes (Continued)

Binaries compiled on a system with 1x Core i7-860 CPU + 8GB memory using RHEL5.5
 Transparent Huge Pages disabled with:
 echo never > /sys/kernel/mm/redhat_transparent_hugepage/enabled
 Filesystem page cache cleared with:
 echo 1> /proc/sys/vm/drop_caches
 runspec command invoked through numactl i.e.:
 numactl --interleave=all runspec <etc>

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

Supermicro

SPECfp_rate2006 = 330

SuperServer 7047R-72RF (X9DRH-7F, Intel E5-2620)

SPECfp_rate_base2006 = 324

CPU2006 license: 001176

Test date: Jul-2012

Test sponsor: Supermicro

Hardware Availability: May-2012

Tested by: Supermicro

Software Availability: Dec-2011

Base Optimization Flags

C benchmarks:

-xAVX -ipo -O3 -no-prec-div -static -opt-prefetch -auto-p32
-ansi-alias -opt-mem-layout-trans=3

C++ benchmarks:

-xAVX -ipo -O3 -no-prec-div -static -opt-prefetch -auto-p32
-ansi-alias -opt-mem-layout-trans=3

Fortran benchmarks:

-xAVX -ipo -O3 -no-prec-div -static -opt-prefetch

Benchmarks using both Fortran and C:

-xAVX -ipo -O3 -no-prec-div -static -opt-prefetch -auto-p32
-ansi-alias -opt-mem-layout-trans=3

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.deallI: -DSPEC_CPU_LP64
453.povray: -DSPEC_CPU_LP64

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Supermicro

SPECfp_rate2006 = 330

SuperServer 7047R-72RF (X9DRH-7F, Intel E5-2620)

SPECfp_rate_base2006 = 324

CPU2006 license: 001176

Test date: Jul-2012

Test sponsor: Supermicro

Hardware Availability: May-2012

Tested by: Supermicro

Software Availability: Dec-2011

Peak Portability Flags (Continued)

454.calculix: -DSPEC_CPU_LP64 -nofor_main
 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: -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
 -opt-mem-layout-trans=3

470.lbm: basepeak = yes

482.sphinx3: -xAVX -ipo -O3 -no-prec-div -unroll2

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: basepeak = yes

450.soplex: -xAVX(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

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: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
 -no-prec-div(pass 2) -prof-use(pass 2) -static

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: -xAVX -ipo -O3 -no-prec-div -static -opt-prefetch

459.GemsFDTD: -xAVX(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

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Supermicro

SPECfp_rate2006 = 330

SuperServer 7047R-72RF (X9DRH-7F, Intel E5-2620)

SPECfp_rate_base2006 = 324

CPU2006 license: 001176

Test date: Jul-2012

Test sponsor: Supermicro

Hardware Availability: May-2012

Tested by: Supermicro

Software Availability: Dec-2011

Peak Optimization Flags (Continued)

465.tonto: -xAVX(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

Benchmarks using both Fortran and C:

435.gromacs: -xAVX(pass 2) -prof-gen(pass 1) -ipo(pass 2) -O3(pass 2)
-no-prec-div(pass 2) -prof-use(pass 2) -opt-prefetch
-static -auto-ilp32 -opt-mem-layout-trans=3

436.cactusADM: basepeak = yes

454.calculix: -xAVX -ipo -O3 -no-prec-div -static -auto-ilp32
-opt-mem-layout-trans=3

481.wrf: Same as 454.calculix

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/Supermicro-Platform-Settings-revA.html>

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/Supermicro-Platform-Settings-revA.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 Thu Jul 24 12:42:02 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 3 August 2012.