SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

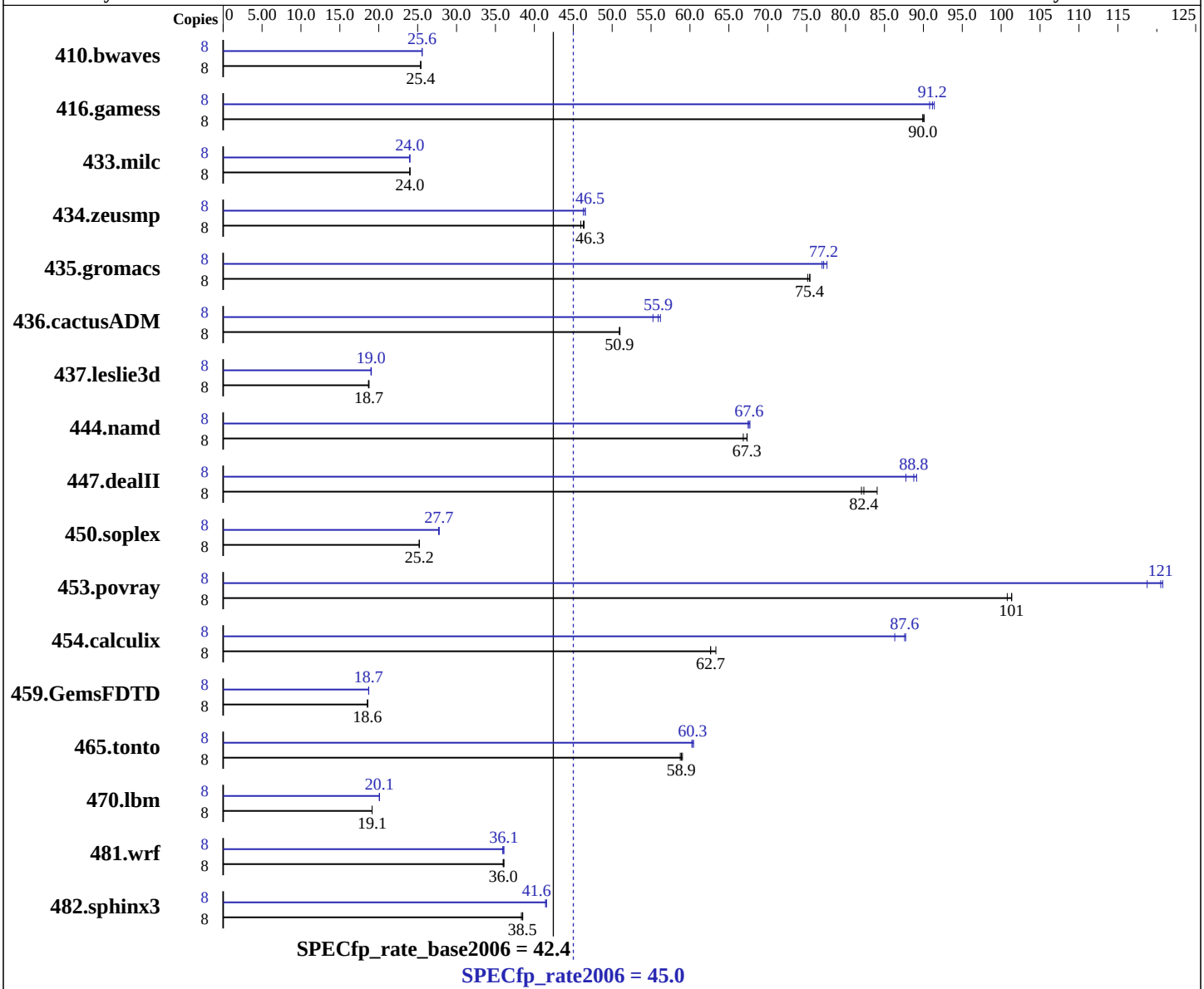
PowerEdge 1950 (Intel Xeon E5310, 1.60 GHz)

SPECfp®_rate2006 = 45.0

SPECfp_rate_base2006 = 42.4

CPU2006 license: 55
Test sponsor: Dell Inc.
Tested by: Dell Inc.

Test date: Oct-2007
Hardware Availability: Dec-2006
Software Availability: Nov-2007



Hardware

CPU Name:	Intel Xeon E5310
CPU Characteristics:	1066 MHz system bus
CPU MHz:	1666
FPU:	Integrated
CPU(s) enabled:	8 cores, 2 chips, 4 cores/chip
CPU(s) orderable:	1,2 chips
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	8 MB I+D on chip per chip, 4 MB shared / 2 cores

Continued on next page

Software

Operating System:	64-Bit SUSE LINUX Enterprise Server 10 SP1
Compiler:	Intel C++ and Fortran Compiler for Linux32 and Linux64 version 10.1 Build 20070725
Auto Parallel:	No
File System:	ReiserFS
System State:	Multi-user, run level 3
Base Pointers:	32/64-bit
Peak Pointers:	32/64-bit

Continued on next page

SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

PowerEdge 1950 (Intel Xeon E5310, 1.60 GHz)

SPECfp_rate2006 = 45.0

SPECfp_rate_base2006 = 42.4

CPU2006 license: 55
Test sponsor: Dell Inc.
Tested by: Dell Inc.

Test date: Oct-2007
Hardware Availability: Dec-2006
Software Availability: Nov-2007

L3 Cache: None
Other Cache: None
Memory: 8 GB (8x1 GB 667 Mhz ECC CL5 FB-DIMM)
Disk Subsystem: 1 x 73 GB SAS 15k RPM
Other Hardware: None

Other Software: SmartHeap library V8.1

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	8	4280	25.4	**4282**	**25.4**	4282	25.4	8	4251	25.6	4252	25.6	**4251**	**25.6**
416.gamess	8	1739	90.1	**1741**	**90.0**	1742	89.9	8	1714	91.4	**1718**	**91.2**	1725	90.8
433.milc	8	**3060**	**24.0**	3061	24.0	3058	24.0	8	3064	24.0	3060	24.0	**3061**	**24.0**
434.zeusmp	8	**1572**	**46.3**	1569	46.4	1584	46.0	8	1564	46.5	**1565**	**46.5**	1573	46.3
435.gromacs	8	**758**	**75.4**	760	75.1	757	75.4	8	742	77.0	736	77.6	**740**	**77.2**
436.cactusADM	8	1877	50.9	**1877**	**50.9**	1874	51.0	8	1701	56.2	1731	55.2	**1710**	**55.9**
437.leslie3d	8	4010	18.8	**4017**	**18.7**	4027	18.7	8	3959	19.0	3947	19.1	**3951**	**19.0**
444.namd	8	953	67.4	960	66.9	**953**	**67.3**	8	951	67.5	948	67.7	**949**	**67.6**
447.dealII	8	1115	82.0	1089	84.1	**1111**	**82.4**	8	1027	89.1	**1031**	**88.8**	1043	87.8
450.soplex	8	2646	25.2	**2646**	**25.2**	2647	25.2	8	2403	27.8	2409	27.7	**2405**	**27.7**
453.povray	8	420	101	**420**	**101**	422	101	8	358	119	**353**	**121**	352	121
454.calculix	8	**1053**	**62.7**	1042	63.3	1054	62.6	8	**753**	**87.6**	752	87.7	765	86.3
459.GemsFDTD	8	4568	18.6	4576	18.5	**4575**	**18.6**	8	4534	18.7	**4537**	**18.7**	4540	18.7
465.tonto	8	1340	58.8	**1337**	**58.9**	1333	59.0	8	1307	60.2	1302	60.5	**1305**	**60.3**
470.lbm	8	5742	19.1	**5742**	**19.1**	5741	19.1	8	5472	20.1	**5472**	**20.1**	5472	20.1
481.wrf	8	2482	36.0	**2481**	**36.0**	2475	36.1	8	2477	36.1	**2478**	**36.1**	2487	35.9
482.sphinx3	8	**4053**	**38.5**	4067	38.3	4049	38.5	8	**3753**	**41.6**	3764	41.4	3752	41.6

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

Operating System Notes

```
'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run
'/usr/bin/taskset' used to bind processes to CPUs
```

Platform Notes

```
BIOS Settings:
Adjacent Cache Line Prefetch = Disabled (default Enabled)
Hardware Prefetcher = Disabled (default Enabled)
```

Base Compiler Invocation

C benchmarks:
icc

C++ benchmarks:
icpc

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:
-fast

C++ benchmarks:
-fast

Fortran benchmarks:
-fast

Benchmarks using both Fortran and C:
-fast

Peak Compiler Invocation

C benchmarks (except as noted below):
```
/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/bin/icc
-L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/lib
-I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/include
```

433.milc: `icc`

C++ benchmarks (except as noted below):
```
icpc
```

450.soplex: `/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/bin/icpc -L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/lib -I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/include`

Fortran benchmarks (except as noted below):
```
ifort
```

437.leslie3d: `/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/bin/ifort -L/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/lib -I/home/cmplr/usr3/alrahate/compilers/ic10.1mainline/20070725/Linux32/include`

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`
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`
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) `-fast -fno-alias -auto-ilp32`

Continued on next page

Peak Optimization Flags (Continued)

470.lbm: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -unroll2 -scalar-rep- -prefetch -opt-malloc-options=3`

482.sphinx3: `-fast -unroll2`

C++ benchmarks:

444.namd: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -fno-alias -auto-ilp32`

447.dealII: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -unroll2 -ansi-alias -scalar-rep-`

450.soplex: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -opt-malloc-options=3`

453.povray: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -unroll4 -ansi-alias`

Fortran benchmarks:

410.bwaves: `-fast -prefetch`

416.gamess: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -unroll2 -Ob0 -ansi-alias -scalar-rep-`

434.zeusmp: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast`

437.leslie3d: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -prefetch -opt-malloc-options=3`

459.GemsFDTD: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -unroll2 -Ob0 -prefetch`

465.tonto: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -unroll4 -auto`

Benchmarks using both Fortran and C:

435.gromacs: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -prefetch -auto-ilp32`

436.cactusADM: `-prof-gen`(pass 1) `-prof-use`(pass 2) `-fast -unroll2 -prefetch -auto-ilp32`

454.calculix: `-fast -unroll-aggressive -auto-ilp32`

481.wrf: `-fast -auto-ilp32`

The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/Intel-ic10.1-FP-intel64-linux-flags.20090714.17.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/Intel-ic10.1-FP-intel64-linux-flags.20090714.17.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 v1.0.
Report generated on Tue Jul 22 14:15:39 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 30 October 2007.