SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Bull SAS

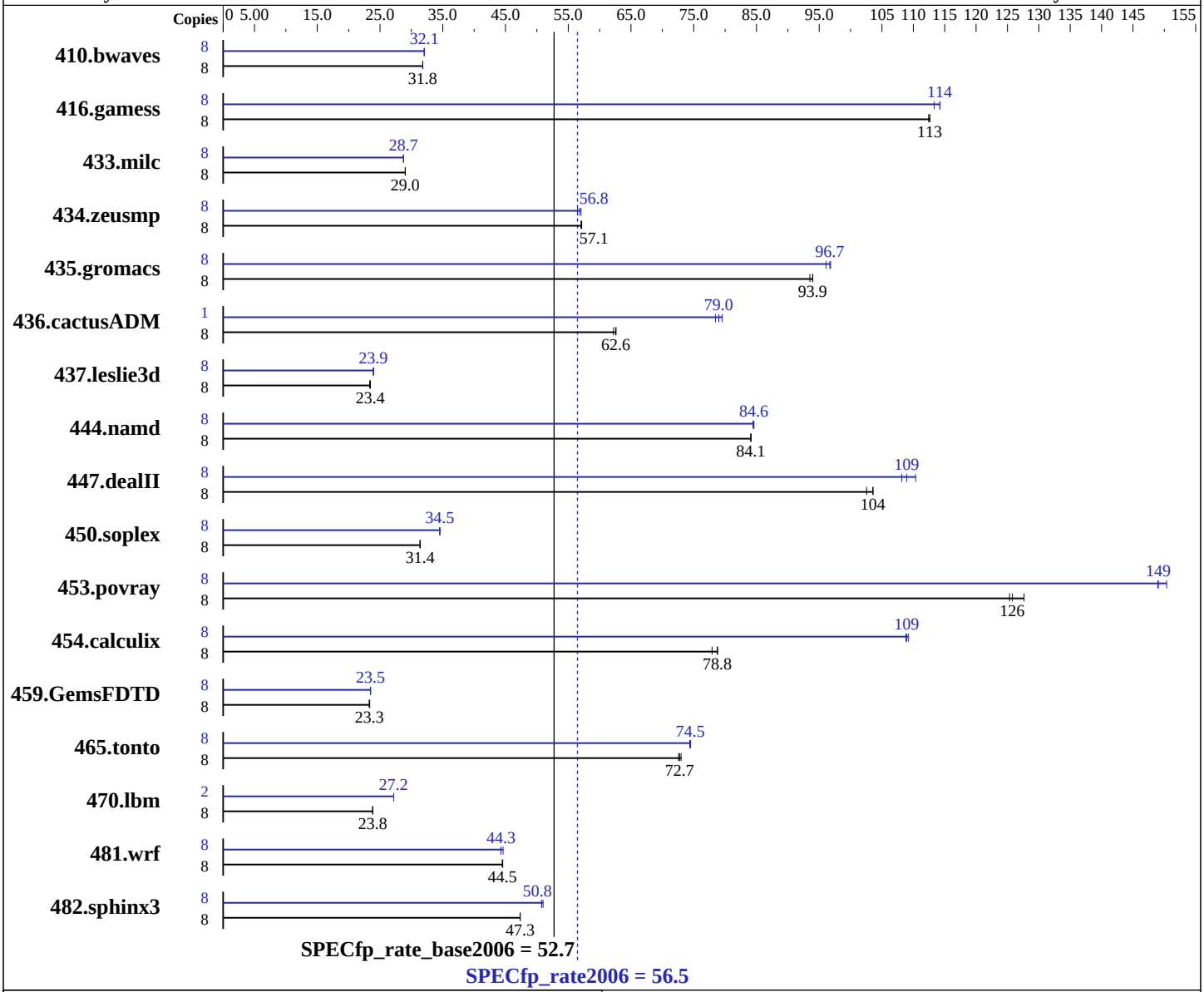
NovaScale T860
(Intel Xeon processor E5335,2.00GHz)

SPECfp®_rate2006 = 56.5

SPECfp_rate_base2006 = 52.7

CPU2006 license: 20
Test sponsor: Bull SAS
Tested by: Bull SAS

Test date: Oct-2007
Hardware Availability: Mar-2007
Software Availability: Nov-2007



Hardware

CPU Name:	Intel Xeon E5335
CPU Characteristics:	2.00 GHz, 8 MB L2, 1333 MHz system bus
CPU MHz:	2000
FPU:	Integrated
CPU(s) enabled:	8 cores, 2 chips, 4 cores/chip
CPU(s) orderable:	1 to 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:	SUSE LINUX Enterprise Server 10 Kernel 2.6.16.21-0.8-smp for x86_64
Compiler:	Intel C++ Compiler for Linux32 and Linux64 version 10.1 Build 20070725
Auto Parallel:	Yes
File System:	ext2
System State:	Multi-user run level 3
Base Pointers:	64-bit

Continued on next page

SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Bull SAS

NovaScale T860
(Intel Xeon processor E5335,2.00GHz)

SPECfp_rate2006 = 56.5

SPECfp_rate_base2006 = 52.7

CPU2006 license: 20
Test sponsor: Bull SAS
Tested by: Bull SAS

Test date: Oct-2007
Hardware Availability: Mar-2007
Software Availability: Nov-2007

L3 Cache: None
Other Cache: None
Memory: 16 GB (8x2 GB) FB-DIMM PC2-5300F ECC CL5
Disk Subsystem: 1x147 GB SAS, 15000 RPM
Other Hardware: None

Peak Pointers: 32/64-bit
Other Software: SmartHeap library V8.1
Binutils 2.17.50.0.15

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	8	3417	31.8	3417	31.8	**3417**	**31.8**	8	**3392**	**32.1**	3391	32.1	3392	32.1
416.gamess	8	1391	113	1393	112	**1391**	**113**	8	1371	114	1382	113	**1371**	**114**
433.milc	8	**2530**	**29.0**	2529	29.0	2530	29.0	8	**2555**	**28.7**	2554	28.8	2556	28.7
434.zeusmp	8	1274	57.1	1276	57.0	**1275**	**57.1**	8	1276	57.0	**1281**	**56.8**	1289	56.5
435.gromacs	8	611	93.5	608	94.0	**608**	**93.9**	8	**591**	**96.7**	590	96.8	594	96.1
436.cactusADM	8	1536	62.2	**1528**	**62.6**	1527	62.6	1	150	79.5	152	78.5	**151**	**79.0**
437.leslie3d	8	3204	23.5	**3209**	**23.4**	3219	23.4	8	3144	23.9	3134	24.0	**3142**	**23.9**
444.namd	8	**763**	**84.1**	763	84.1	763	84.1	8	760	84.4	759	84.6	**759**	**84.6**
447.dealII	8	**884**	**104**	884	104	892	103	8	846	108	**840**	**109**	829	110
450.soplex	8	2124	31.4	2127	31.4	**2126**	**31.4**	8	**1932**	**34.5**	1933	34.5	1932	34.5
453.povray	8	333	128	**338**	**126**	340	125	8	283	150	**286**	**149**	286	149
454.calculix	8	847	77.9	837	78.8	**838**	**78.8**	8	604	109	**606**	**109**	607	109
459.GemsFDTD	8	3633	23.4	3647	23.3	**3638**	**23.3**	8	**3614**	**23.5**	3611	23.5	3617	23.5
465.tonto	8	1084	72.6	**1082**	**72.7**	1079	73.0	8	1057	74.5	**1057**	**74.5**	1059	74.4
470.lbm	8	4612	23.8	**4610**	**23.8**	4610	23.8	2	1011	27.2	1011	27.2	**1011**	**27.2**
481.wrf	8	2005	44.6	2009	44.5	**2007**	**44.5**	8	2002	44.6	**2018**	**44.3**	2018	44.3
482.sphinx3	8	3293	47.3	**3294**	**47.3**	3295	47.3	8	3058	51.0	**3070**	**50.8**	3073	50.7

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

All benchmarks compiled in 64-bit mode except 437.leslie3d, 450.soplex, 470.lbm and 482.sphinx3 for peak, are compiled in 32-bit mode

/usr/bin/taskset utility used to bind CPU(s) to processes

Base Compiler Invocation

C benchmarks:
icc

Continued on next page

Base Compiler Invocation (Continued)

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 -parallel -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/EM64T_Intel101_flags.20090714.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/EM64T_Intel101_flags.20090714.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 14:44:25 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 13 November 2007.