



SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Bull SAS

NovaScale R440 E1
(Intel Xeon E5430, 2.66 GHz)

SPECfp®2006 = 21.3

SPECfp_base2006 = 17.9

CPU2006 license: 20

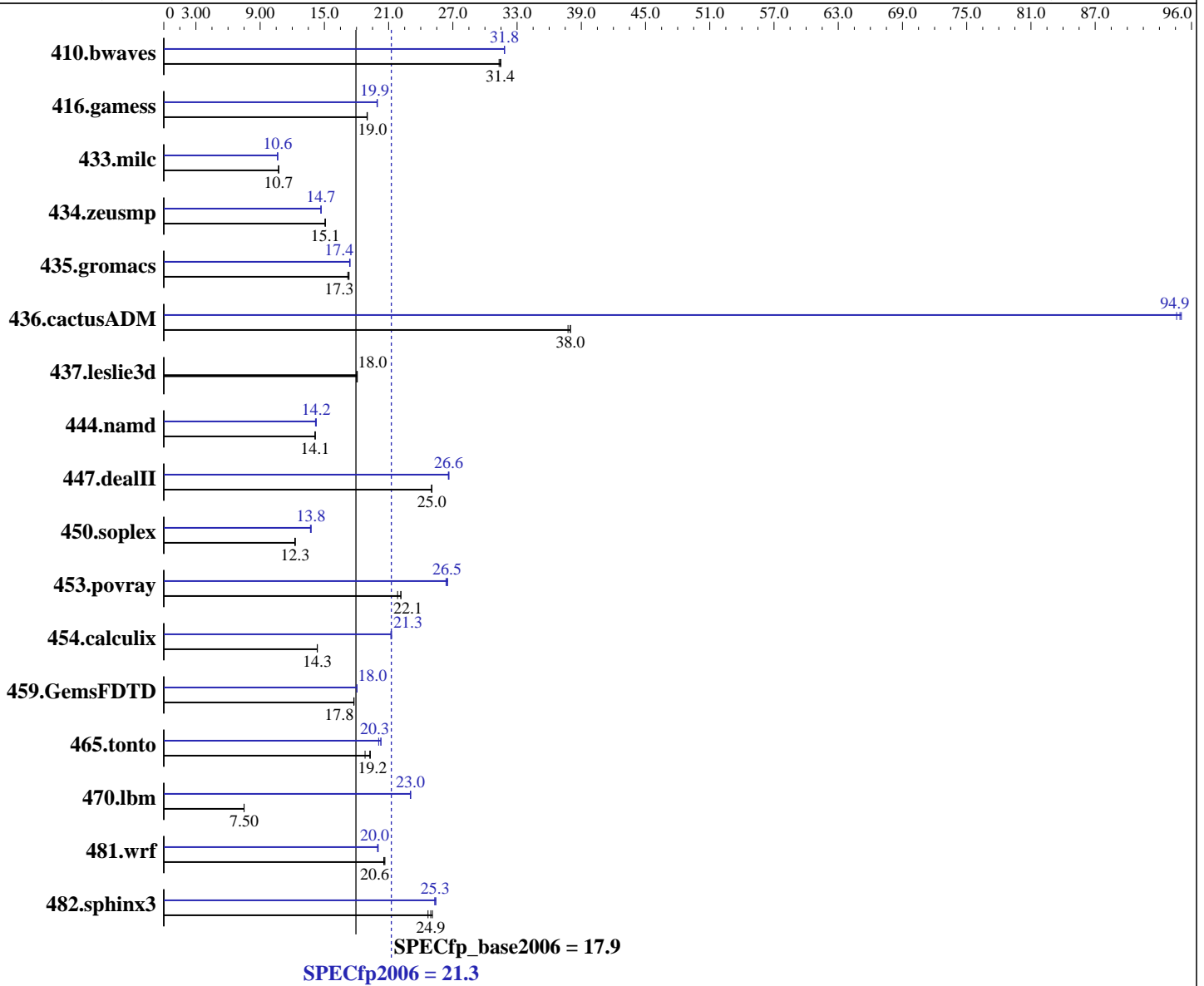
Test sponsor: Bull SAS

Tested by: Bull SAS

Test date: May-2008

Hardware Availability: Jan-2008

Software Availability: Nov-2007



Hardware

CPU Name: Intel Xeon E5430
 CPU Characteristics: 1333 MHz system bus
 CPU MHz: 2666
 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: 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 SP1
 Kernel 2.6.16.46-0.12-smp for x86_64
 Compiler: Intel C++ and Fortran Compiler 10.1 for Linux
 Build 20070913 Package ID: l_cc_p_10.1.008,
 l_fc_p_10.1.008
 Auto Parallel: Yes
 File System: ext2
 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

Bull SAS

NovaScale R440 E1
(Intel Xeon E5430, 2.66 GHz)

SPECfp2006 = 21.3

SPECfp_base2006 = 17.9

CPU2006 license: 20

Test sponsor: Bull SAS

Tested by: Bull SAS

Test date: May-2008

Hardware Availability: Jan-2008

Software Availability: Nov-2007

L3 Cache: None
Other Cache: None
Memory: 16 GB (8x2 GB) FB-DIMM PC2-5300F ECC CL5
Disk Subsystem: 1x73 GB SAS, 15000 RPM
Other Hardware: None

Peak Pointers: 32/64-bit
Other Software: Binutils 2.17.50.0.15

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	434	31.3	432	31.5	432	31.4	427	31.8	427	31.8	427	31.8
416.gamess	1030	19.0	1030	19.0	1031	19.0	981	20.0	983	19.9	983	19.9
433.milc	856	10.7	856	10.7	856	10.7	864	10.6	864	10.6	863	10.6
434.zeusmp	604	15.1	603	15.1	603	15.1	619	14.7	620	14.7	620	14.7
435.gromacs	413	17.3	413	17.3	415	17.2	411	17.4	411	17.4	411	17.4
436.cactusADM	315	38.0	316	37.8	315	38.0	126	94.6	126	95.1	126	94.9
437.leslie3d	520	18.1	521	18.0	522	18.0	520	18.1	521	18.0	522	18.0
444.namd	567	14.1	567	14.1	568	14.1	563	14.2	564	14.2	566	14.2
447.dealII	457	25.1	457	25.0	457	25.0	430	26.6	430	26.6	430	26.6
450.soplex	679	12.3	679	12.3	682	12.2	606	13.8	606	13.8	609	13.7
453.povray	244	21.8	240	22.2	240	22.1	202	26.4	201	26.5	201	26.5
454.calculix	575	14.3	575	14.3	576	14.3	389	21.2	388	21.3	388	21.3
459.GemsFDTD	597	17.8	598	17.7	597	17.8	588	18.1	588	18.0	588	18.0
465.tonto	510	19.3	523	18.8	511	19.2	490	20.1	485	20.3	485	20.3
470.lbm	1833	7.49	1832	7.50	1832	7.50	595	23.1	597	23.0	597	23.0
481.wrf	544	20.5	542	20.6	541	20.7	559	20.0	559	20.0	558	20.0
482.sphinx3	777	25.1	790	24.7	782	24.9	769	25.3	770	25.3	767	25.4

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
OMP_NUM_THREADS set to number of cores
KMP_AFFINITY set to physical,0
KMP_STACKSIZE set to 200M

General Notes

All benchmarks compiled in 64-bit mode except 450.soplex, 470.lbm and 482.sphinx3, at peak, are compiled in 32-bit mode
The Bull NovaScale R440 E1 (Intel Xeon E5430, 2.66 GHz) and the Bull NovaScale R460 E1 (Intel Xeon E5430, 2.66 GHz) models are electronically equivalent.
The results have been measured on a Bull NovaScale R460 E1 (Intel Xeon E5430, 2.66 GHz) model.



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Bull SAS

NovaScale R440 E1
(Intel Xeon E5430, 2.66 GHz)

SPECfp2006 = 21.3

SPECfp_base2006 = 17.9

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

Test date: May-2008
Hardware Availability: Jan-2008
Software Availability: Nov-2007

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 -parallel

C++ benchmarks:
-fast -parallel

Fortran benchmarks:
-fast -parallel

Benchmarks using both Fortran and C:
-fast -parallel



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Bull SAS

NovaScale R440 E1
(Intel Xeon E5430, 2.66 GHz)

SPECfp2006 = 21.3

SPECfp_base2006 = 17.9

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

Test date: May-2008
Hardware Availability: Jan-2008
Software Availability: Nov-2007

Peak Compiler Invocation

C benchmarks (except as noted below):

```
/opt/intel/cc/10.1.008/bin/icc -L/opt/intel/cc/10.1.008/lib  
-I/opt/intel/cc/10.1.008/include
```

433.milc: icc

C++ benchmarks (except as noted below):

icpc

```
450.soplex: /opt/intel/cc/10.1.008/bin/icpc -L/opt/intel/cc/10.1.008/lib  
-I/opt/intel/cc/10.1.008/include
```

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  
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
```

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

Continued on next page



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Bull SAS

NovaScale R440 E1
(Intel Xeon E5430, 2.66 GHz)

SPECfp2006 = 21.3

SPECfp_base2006 = 17.9

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

Test date: May-2008
Hardware Availability: Jan-2008
Software Availability: Nov-2007

Peak Optimization Flags (Continued)

482.sphinx3: -fast -unroll2

C++ benchmarks:

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

447.dealIII: -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 -parallel

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: basepeak = yes

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

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 -parallel -prefetch -auto-ilp32

The flags file that was used to format this result can be browsed at

http://www.spec.org/cpu2006/flags/EM64T_Intel101_fp_flags.20090713.00.html

You can also download the XML flags source by saving the following link:

http://www.spec.org/cpu2006/flags/EM64T_Intel101_fp_flags.20090713.00.xml



SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Bull SAS

NovaScale R440 E1
(Intel Xeon E5430, 2.66 GHz)

SPECfp2006 = 21.3

SPECfp_base2006 = 17.9

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

Test date: May-2008
Hardware Availability: Jan-2008
Software Availability: Nov-2007

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 19:58:00 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 8 July 2008.