



# SPEC<sup>®</sup> CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Bull SAS

NovaScale R440 E1  
(Intel Xeon E5205, 1.86GHz)

SPECfp<sup>®</sup>2006 = 15.4

SPECfp\_base2006 = 13.3

CPU2006 license: 20

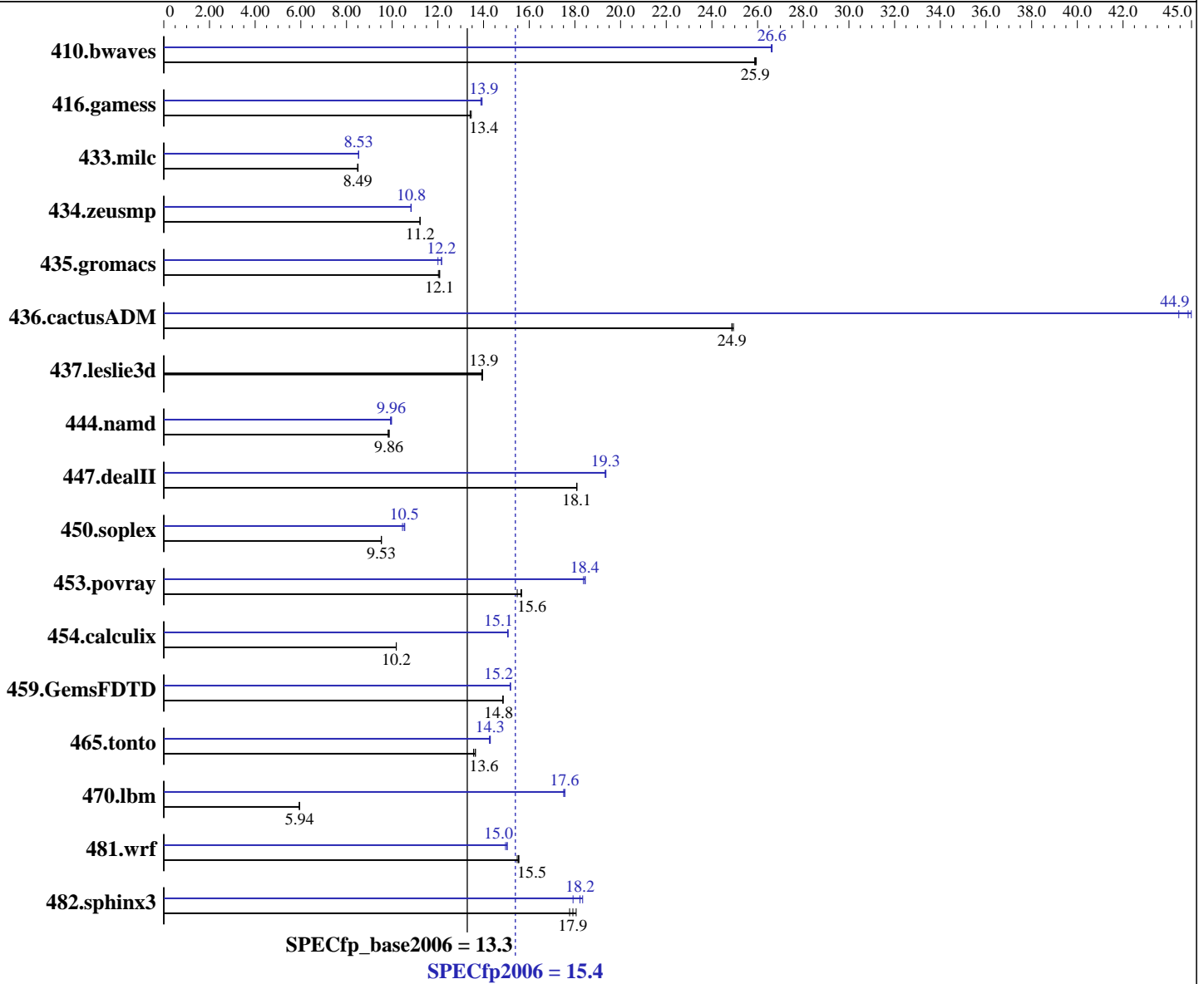
Test sponsor: Bull SAS

Tested by: NEC Corporation

Test date: Feb-2008

Hardware Availability: Jan-2008

Software Availability: Nov-2007



### Hardware

CPU Name: Intel Xeon E5205  
 CPU Characteristics: 1.86 GHz, 6 MB L2, 1066 MHz bus  
 CPU MHz: 1867  
 FPU: Integrated  
 CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip  
 CPU(s) orderable: 1,2 chips  
 Primary Cache: 32 KB I + 32 KB D on chip per core  
 Secondary Cache: 6 MB I+D on chip per chip

Continued on next page

### Software

Operating System: SUSE Linux Enterprise Server 10 (x86\_64) SP1, Kernel 2.6.16.46-0.12-smpp  
 Compiler: Intel C++ and Fortran Compiler for Linux32 and Linux64 version 10.1 Build 20070913 Package ID: l\_cc\_p\_10.1.008, l\_fc\_p\_10.1.008  
 Auto Parallel: Yes  
 File System: ext2

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Bull SAS

NovaScale R440 E1  
(Intel Xeon E5205, 1.86GHz)

SPECfp2006 = 15.4

SPECfp\_base2006 = 13.3

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

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

L3 Cache: None  
Other Cache: None  
Memory: 12 GB (12x1 GB PC2-5300F, 2 rank, CL5-5-5, ECC)  
Disk Subsystem: 1x73.2 GB SAS, 15000RPM  
Other Hardware: None

System State: Run level 3 (multi-user)  
Base Pointers: 64-bit  
Peak Pointers: 32/64-bit  
Other Software: binutils-2.17.tar.gz, Version 2.17

## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	<u>525</u>	<u>25.9</u>	524	25.9	525	25.9	<u>510</u>	<u>26.6</u>	511	26.6	510	26.6
416.gamess	<u>1459</u>	<u>13.4</u>	1454	13.5	1460	13.4	<u>1407</u>	<u>13.9</u>	1410	13.9	1405	13.9
433.milc	1082	8.49	<u>1081</u>	<u>8.49</u>	1079	8.51	1076	8.53	1076	8.53	<u>1076</u>	<u>8.53</u>
434.zeusmp	811	11.2	811	11.2	<u>811</u>	<u>11.2</u>	840	10.8	<u>840</u>	<u>10.8</u>	841	10.8
435.gromacs	<u>591</u>	<u>12.1</u>	591	12.1	594	12.0	595	12.0	587	12.2	<u>587</u>	<u>12.2</u>
436.cactusADM	480	24.9	479	24.9	<u>480</u>	<u>24.9</u>	266	45.0	<u>266</u>	<u>44.9</u>	269	44.4
437.leslie3d	675	13.9	673	14.0	<u>674</u>	<u>13.9</u>	675	13.9	673	14.0	<u>674</u>	<u>13.9</u>
444.namd	817	9.82	<u>814</u>	<u>9.86</u>	812	9.87	<u>805</u>	<u>9.96</u>	804	9.97	808	9.93
447.dealII	<u>633</u>	<u>18.1</u>	633	18.1	632	18.1	591	19.4	592	19.3	<u>591</u>	<u>19.3</u>
450.soplex	876	9.53	875	9.53	<u>875</u>	<u>9.53</u>	790	10.6	798	10.5	<u>792</u>	<u>10.5</u>
453.povray	344	15.5	<u>340</u>	<u>15.6</u>	339	15.7	288	18.5	<u>289</u>	<u>18.4</u>	290	18.4
454.calculix	810	10.2	<u>811</u>	<u>10.2</u>	811	10.2	<u>548</u>	<u>15.1</u>	548	15.1	547	15.1
459.GemsFDTD	715	14.8	<u>715</u>	<u>14.8</u>	714	14.9	<u>699</u>	<u>15.2</u>	700	15.2	699	15.2
465.tonto	726	13.6	<u>722</u>	<u>13.6</u>	721	13.6	690	14.3	688	14.3	<u>689</u>	<u>14.3</u>
470.lbm	2312	5.94	2317	5.93	<u>2313</u>	<u>5.94</u>	782	17.6	<u>783</u>	<u>17.6</u>	785	17.5
481.wrf	718	15.6	722	15.5	<u>719</u>	<u>15.5</u>	747	15.0	743	15.0	<u>743</u>	<u>15.0</u>
482.sphinx3	1079	18.1	1097	17.8	<u>1088</u>	<u>17.9</u>	1088	17.9	<u>1070</u>	<u>18.2</u>	1063	18.3

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

## Platform Notes

Bios settings:  
Intel SpeedStep Technology: Disabled

## General Notes

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

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Bull SAS

NovaScale R440 E1  
(Intel Xeon E5205,1.86GHz)

SPECfp2006 = 15.4

SPECfp\_base2006 = 13.3

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

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

### General Notes (Continued)

The NEC Express5800/120Rh-1(Intel Xeon Processor E5205), the NEC Express5800/120Rj-2(Intel Xeon Processor E5205), the Bull NovaScale R440 E1 (Intel Xeon E5205,1.86GHz) and the Bull NovaScale R460 E1 (Intel Xeon E5205,1.86GHz) models are electronically equivalent. The results have been measured on a NEC Express5800/120Rj-2(Intel Xeon Processor E5205) model.

### 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

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Bull SAS

NovaScale R440 E1  
(Intel Xeon E5205,1.86GHz)

SPECfp2006 = 15.4

SPECfp\_base2006 = 13.3

**CPU2006 license:** 20  
**Test sponsor:** Bull SAS  
**Tested by:** NEC Corporation

**Test date:** Feb-2008  
**Hardware Availability:** Jan-2008  
**Software Availability:** Nov-2007

## Base Optimization Flags (Continued)

C++ benchmarks:  
-fast -parallel

Fortran benchmarks:  
-fast -parallel

Benchmarks using both Fortran and C:  
-fast -parallel

## 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



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Bull SAS

NovaScale R440 E1  
(Intel Xeon E5205, 1.86GHz)

SPECfp2006 = 15.4

SPECfp\_base2006 = 13.3

**CPU2006 license:** 20  
**Test sponsor:** Bull SAS  
**Tested by:** NEC Corporation

**Test date:** Feb-2008  
**Hardware Availability:** Jan-2008  
**Software Availability:** Nov-2007

## 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

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 -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

Continued on next page



# SPEC CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

## Bull SAS

NovaScale R440 E1  
(Intel Xeon E5205,1.86GHz)

SPECfp2006 = 15.4

SPECfp\_base2006 = 13.3

**CPU2006 license:** 20  
**Test sponsor:** Bull SAS  
**Tested by:** NEC Corporation

**Test date:** Feb-2008  
**Hardware Availability:** Jan-2008  
**Software Availability:** Nov-2007

## Peak Optimization Flags (Continued)

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/NEC-Intel-ic10.1-FP-intel64-linux-flags.20090713.00.html>

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

<http://www.spec.org/cpu2006/flags/NEC-Intel-ic10.1-FP-intel64-linux-flags.20090713.00.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](mailto:webmaster@spec.org).

Tested with SPEC CPU2006 v1.0.  
Report generated on Tue Jul 22 18:03:48 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 17 April 2008.