



# SPEC<sup>®</sup> CFP2006 Result

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## Bull SAS

SPECfp<sup>®</sup>2006 = **11.3**

NovaScale R480 (3.40 GHz, Intel Xeon 7140M)

SPECfp\_base2006 = **11.1**

CPU2006 license: 3

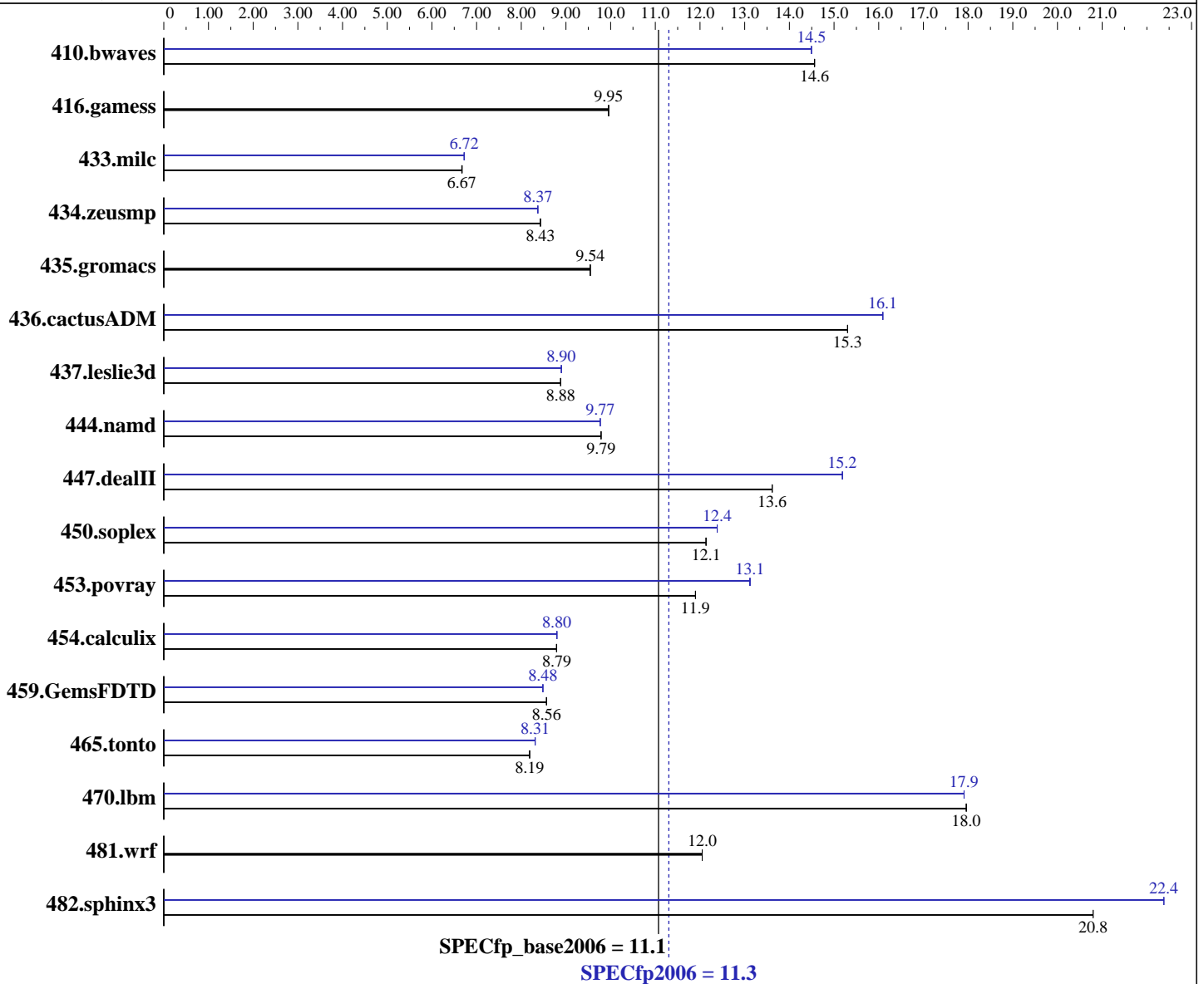
Test sponsor: Bull SAS

Tested by: Bull SAS

Test date: Mar-2007

Hardware Availability: Sep-2006

Software Availability: Nov-2006



**Hardware**

CPU Name: Intel Xeon 7140M  
 CPU Characteristics: 3.4GHz, 800MHz bus  
 CPU MHz: 3400  
 FPU: Integrated  
 CPU(s) enabled: 1 core, 1 chip, 2 cores/chip  
 CPU(s) orderable: 1,2,4 chips  
 Primary Cache: 12 K micro-ops I + 16 KB D on chip per core  
 Secondary Cache: 1 MB I+D on chip per core

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**Software**

Operating System: Windows Server 2003 Enterprise X64 Edition  
 Compiler: Intel C++ Compiler 9.1 for 32-bit  
 Build 20061103Z Package ID: W\_CC\_C\_9.1.033  
 Intel Fortran Compiler 9.1 for 32-bit  
 Build 20061103Z Package ID: W\_FC\_C\_9.1.033  
 Microsoft Visual Studio .NET 2003 (libraries)

Auto Parallel: No  
 File System: NTFS  
 System State: Default

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L3 Cache: 16 MB I+D on chip per chip  
 Other Cache: None  
 Memory: 16 GB (16X1GB 1Rx4 PC2-3200R-333 400MHz DDR2)  
 Disk Subsystem: 2x36GB SAS 15000 rpm  
 Other Hardware: None

Base Pointers: 32-bit  
 Peak Pointers: 32-bit  
 Other Software: MicroQuill SmartHeap Library 8.0 (shlW32M.lib)

## Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	933	14.6	<b>933</b>	<b>14.6</b>	933	14.6	938	14.5	938	14.5	<b>938</b>	<b>14.5</b>
416.gamess	<b>1967</b>	<b>9.95</b>	1967	9.95	1967	9.96	<b>1967</b>	<b>9.95</b>	1967	9.95	1967	9.96
433.milc	1375	6.68	1376	6.67	<b>1376</b>	<b>6.67</b>	1366	6.72	1365	6.72	<b>1366</b>	<b>6.72</b>
434.zeusmp	<b>1080</b>	<b>8.43</b>	1080	8.43	1080	8.43	<b>1087</b>	<b>8.37</b>	1087	8.37	1087	8.37
435.gromacs	748	9.54	748	9.55	<b>748</b>	<b>9.54</b>	748	9.54	748	9.55	<b>748</b>	<b>9.54</b>
436.cactusADM	781	15.3	<b>781</b>	<b>15.3</b>	781	15.3	<b>743</b>	<b>16.1</b>	743	16.1	743	16.1
437.leslie3d	1058	8.88	1058	8.88	<b>1058</b>	<b>8.88</b>	1057	8.90	1056	8.90	<b>1056</b>	<b>8.90</b>
444.namd	820	9.79	820	9.79	<b>820</b>	<b>9.79</b>	821	9.77	<b>821</b>	<b>9.77</b>	821	9.77
447.dealII	840	13.6	<b>840</b>	<b>13.6</b>	840	13.6	753	15.2	<b>753</b>	<b>15.2</b>	753	15.2
450.soplex	687	12.1	687	12.1	<b>687</b>	<b>12.1</b>	<b>673</b>	<b>12.4</b>	673	12.4	673	12.4
453.povray	447	11.9	<b>447</b>	<b>11.9</b>	447	11.9	406	13.1	405	13.1	<b>405</b>	<b>13.1</b>
454.calculix	938	8.79	<b>938</b>	<b>8.79</b>	939	8.79	938	8.80	938	8.80	<b>938</b>	<b>8.80</b>
459.GemsFDTD	1239	8.57	1239	8.56	<b>1239</b>	<b>8.56</b>	1251	8.48	<b>1251</b>	<b>8.48</b>	1251	8.48
465.tonto	1202	8.19	1202	8.19	<b>1202</b>	<b>8.19</b>	1184	8.31	<b>1184</b>	<b>8.31</b>	1184	8.31
470.lbm	<b>765</b>	<b>18.0</b>	765	18.0	765	18.0	767	17.9	<b>767</b>	<b>17.9</b>	767	17.9
481.wrf	<b>927</b>	<b>12.0</b>	927	12.0	927	12.0	<b>927</b>	<b>12.0</b>	927	12.0	927	12.0
482.sphinx3	<b>937</b>	<b>20.8</b>	937	20.8	937	20.8	871	22.4	<b>871</b>	<b>22.4</b>	871	22.4

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

## General Notes

### Other Configuration Notes

/NUMPROC=1 flag was added to boot.ini to invoke uniprocessor environment

The NovaScale T880 and the NovaScale R480 models are electronically equivalent.

The results have been measured on a NovaScale R480 model.



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## Base Compiler Invocation

C benchmarks:

icl -Qvc7.1 -Qc99

C++ benchmarks:

icl -Qvc7.1

Fortran benchmarks:

ifort

Benchmarks using both Fortran and C:

icl -Qvc7.1 -Qc99 ifort

## Base Portability Flags

436.cactusADM: -Qlowercase /assume:underscore

444.namd: -TP

447.dealII: -DDEAL\_II\_MEMBER\_VAR\_SPECIALIZATION\_BUG

-DBOOST\_NO\_INTRINSIC\_WCHAR\_T

453.povray: -DSPEC\_CPU\_WINDOWS\_ICL

454.calculix: -DSPEC\_CPU\_NOZMODIFIER -Qlowercase

481.wrf: -DSPEC\_CPU\_WINDOWS\_ICL

## Base Optimization Flags

C benchmarks:

-fast /F950000000 shlw32m.lib -link /FORCE:MULTIPLE

C++ benchmarks:

-fast -Qcxx\_features /F950000000 shlw32m.lib

-link /FORCE:MULTIPLE

Fortran benchmarks:

-fast /F950000000 -link /FORCE:MULTIPLE

Benchmarks using both Fortran and C:

-fast /F950000000 -link /FORCE:MULTIPLE

## Peak Compiler Invocation

C benchmarks:

icl -Qvc7.1 -Qc99

C++ benchmarks:

icl -Qvc7.1

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## Peak Compiler Invocation (Continued)

Fortran benchmarks:  
ifort

Benchmarks using both Fortran and C:  
icl -Qvc7.1 -Qc99 ifort

## Peak Portability Flags

436.cactusADM: -Qlowercase /assume:underscore  
444.namd: -TP  
447.dealII: -DDEAL\_II\_MEMBER\_VAR\_SPECIALIZATION\_BUG  
-DBOOST\_NO\_INTRINSIC\_WCHAR\_T  
453.povray: -DSPEC\_CPU\_WINDOWS\_ICL  
454.calculix: -DSPEC\_CPU\_NOZMODIFIER -Qlowercase  
481.wrf: -DSPEC\_CPU\_WINDOWS\_ICL

## Peak Optimization Flags

C benchmarks:  
-Qprof\_gen(pass 1) -Qprof\_use(pass 2) -fast /F950000000 shlw32m.lib  
-link /FORCE:MULTIPLE

C++ benchmarks:  
-Qprof\_gen(pass 1) -Qprof\_use(pass 2) -fast -Qcxx\_features  
/F950000000 shlw32m.lib -link /FORCE:MULTIPLE

Fortran benchmarks:

410.bwaves: -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -fast /F950000000  
-link /FORCE:MULTIPLE

416.gamess: basepeak = yes

434.zeusmp: Same as 410.bwaves

437.leslie3d: Same as 410.bwaves

459.GemsFDTD: Same as 410.bwaves

465.tonto: Same as 410.bwaves

Benchmarks using both Fortran and C:

435.gromacs: basepeak = yes

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## Peak Optimization Flags (Continued)

436.cactusADM: -Qprof\_gen(pass 1) -Qprof\_use(pass 2) -fast /F950000000  
-link /FORCE:MULTIPLE

454.calculix: Same as 436.cactusADM

481.wrf: basepeak = yes

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

<http://www.spec.org/cpu2006/flags/flags.20090714.00.html>

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

<http://www.spec.org/cpu2006/flags/flags.20090714.00.xml>

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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 12:03:15 2014 by SPEC CPU2006 PS/PDF formatter v6932.  
Originally published on 17 April 2007.