SPEC® CFP2006 Result

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Bull SAS

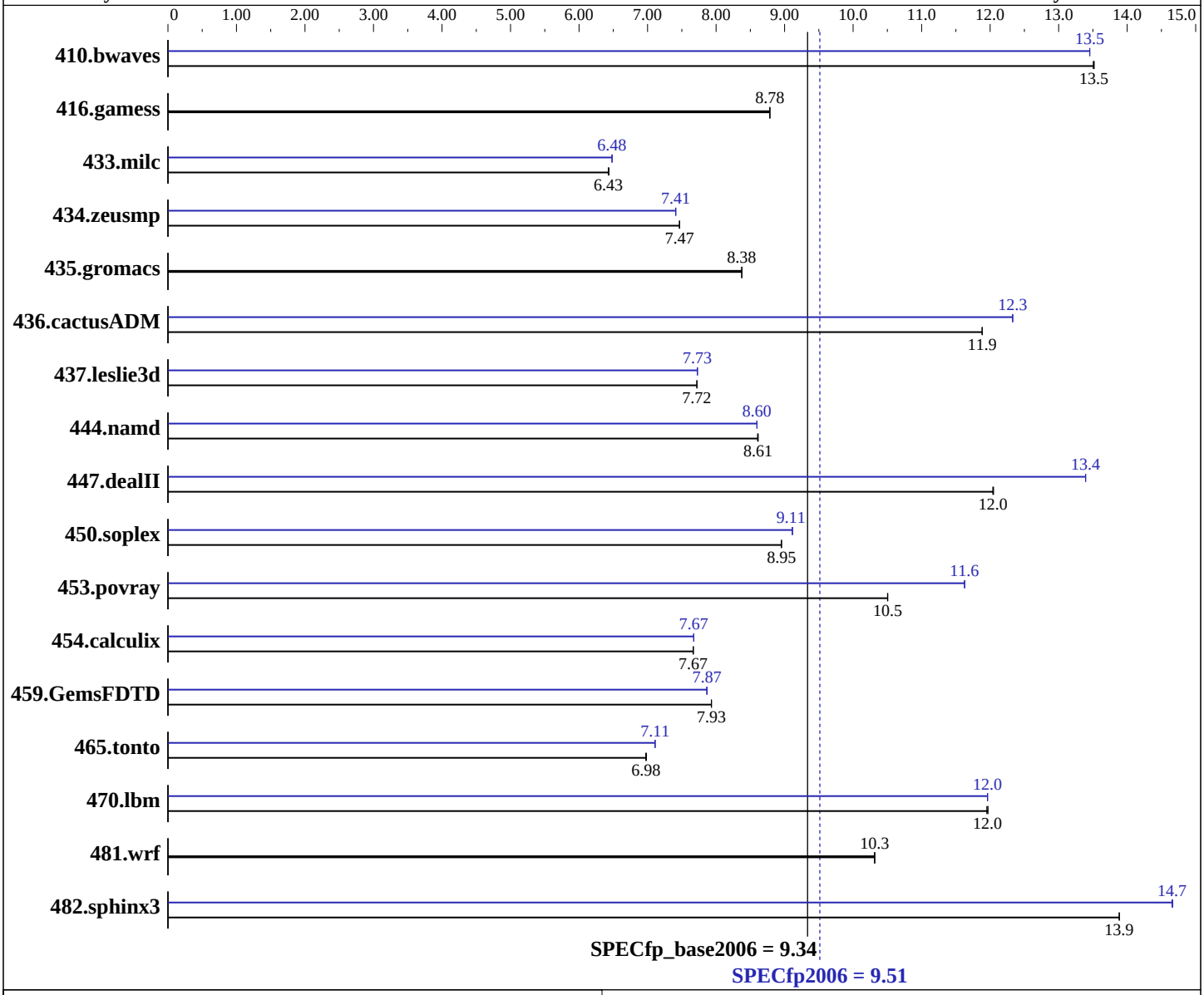
NovaScale T880 (3.0 GHz, Intel Xeon 7120M)

SPECfp®2006 = 9.51

SPECfp_base2006 = 9.34

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

Test date: May-2007
Hardware Availability: Sep-2006
Software Availability: Nov-2006



Hardware

CPU Name:	Intel Xeon 7120M
CPU Characteristics:	3.0 GHz, 800 MHz bus
CPU MHz:	3000
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 for IA32 version 9.1 Package ID W_CC_C_9.1.033 Build no 20061103Z Intel Fortran Compiler for IA32 version 9.1 Package ID W_FC_C_9.1.033 Build no 20061103Z Microsoft Visual Studio .NET 2003 (lib & linker)
Auto Parallel:	No
File System:	NTFS
System State:	Default

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L3 Cache: 4 MB I+D on chip per chip
Other Cache: None
Memory: 32 GB (16x2 GB) DDR2 400 PC2-3200R-333
Disk Subsystem: 2x36 GB 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	1005	13.5	1006	13.5	**1006**	**13.5**	1010	13.5	**1010**	**13.5**	1010	13.5
416.gamess	**2229**	**8.78**	2229	8.79	2229	8.78	**2229**	**8.78**	2229	8.79	2229	8.78
433.milc	1426	6.44	1428	6.43	**1428**	**6.43**	1416	6.48	**1416**	**6.48**	1417	6.48
434.zeusmp	1219	7.47	**1219**	**7.47**	1219	7.47	**1228**	**7.41**	1228	7.41	1228	7.41
435.gromacs	853	8.38	**853**	**8.38**	852	8.38	853	8.38	**853**	**8.38**	852	8.38
436.cactusADM	1006	11.9	1006	11.9	**1006**	**11.9**	969	12.3	**969**	**12.3**	969	12.3
437.leslie3d	**1218**	**7.72**	1217	7.72	1218	7.72	**1216**	**7.73**	1216	7.73	1216	7.73
444.namd	932	8.60	**931**	**8.61**	931	8.61	**933**	**8.60**	933	8.60	933	8.60
447.dealII	949	12.1	**950**	**12.0**	950	12.0	854	13.4	854	13.4	**854**	**13.4**
450.soplex	932	8.95	931	8.96	**931**	**8.95**	915	9.11	**915**	**9.11**	915	9.11
453.povray	506	10.5	**506**	**10.5**	507	10.5	458	11.6	**458**	**11.6**	458	11.6
454.calculix	1076	7.67	**1076**	**7.67**	1076	7.67	1075	7.67	**1075**	**7.67**	1075	7.67
459.GemsFDTD	1338	7.93	1338	7.93	**1338**	**7.93**	1349	7.87	**1349**	**7.87**	1349	7.87
465.tonto	1409	6.98	**1411**	**6.98**	1411	6.97	1384	7.11	1384	7.11	**1384**	**7.11**
470.lbm	1150	12.0	**1148**	**12.0**	1148	12.0	**1149**	**12.0**	1149	12.0	1149	12.0
481.wrf	1083	10.3	**1083**	**10.3**	1083	10.3	1083	10.3	**1083**	**10.3**	1083	10.3
482.sphinx3	1404	13.9	**1404**	**13.9**	1404	13.9	1330	14.7	1329	14.7	**1330**	**14.7**

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
Hyper-Threading technology was disabled in the Bios.

The NovaScale T880 and the NovaScale R480 models are
electronically equivalent.
The results have been measured on a NovaScale R480 model.
```

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

Continued on next page

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 other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.0.
Report generated on Tue Jul 22 11:48:21 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 29 May 2007.