SPEC® CFP2006 Result

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Bull SAS

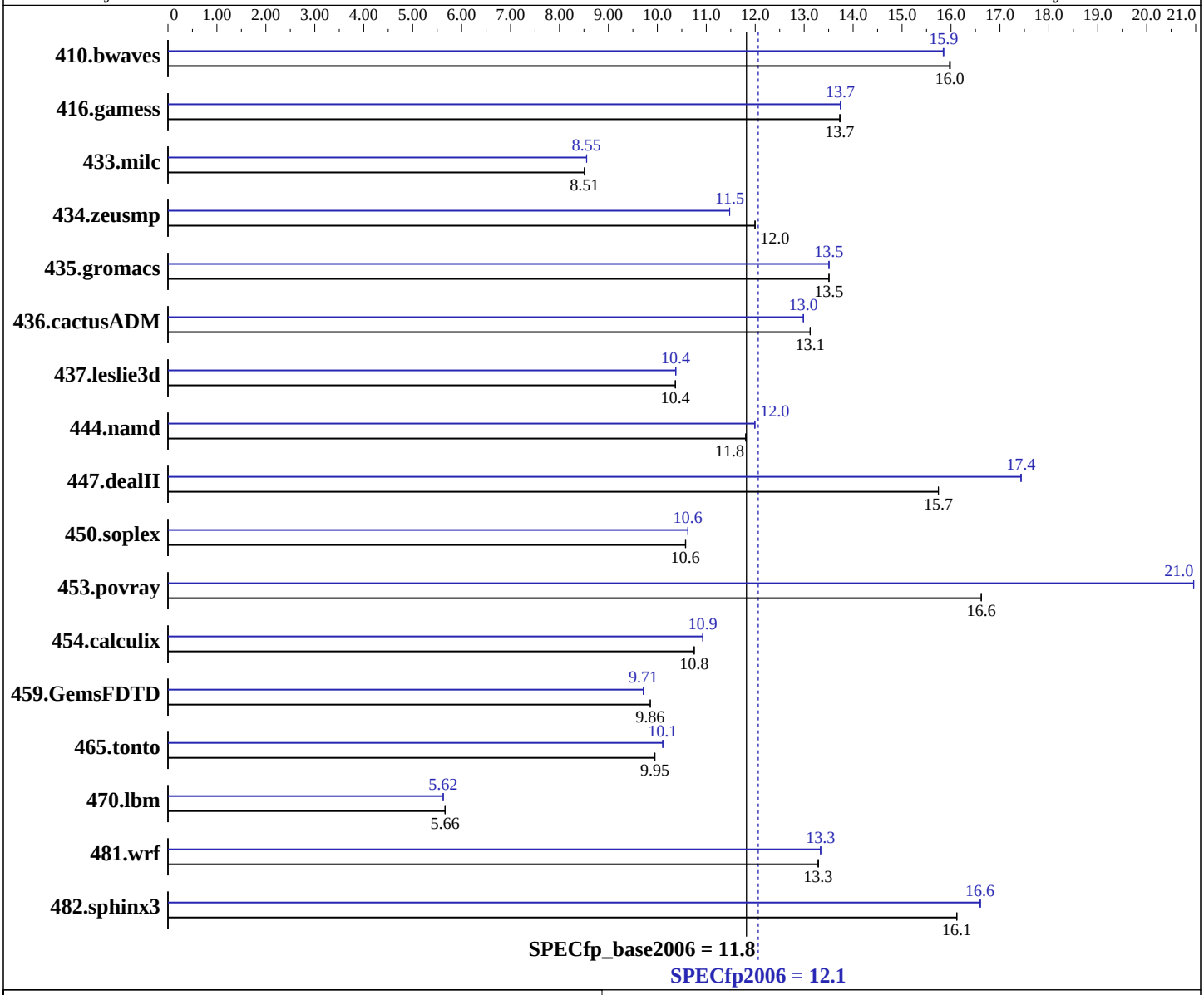
NovaScale T840
(Intel Xeon processor E5345,2.33GHz)

SPECfp®2006 = 12.1

SPECfp_base2006 = 11.8

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

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



Hardware

CPU Name:	Intel Xeon E5345
CPU Characteristics:	2.33 GHz, 8 MB L2, 1333 MHz bus
CPU MHz:	2330
FPU:	Integrated
CPU(s) enabled:	1 core, 1 chip, 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

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Software

Operating System:	Windows Server 2003 Enterprise X64 Edition
Compiler:	Intel C++ Compiler for IA32 version 9.1 Build 20070322Z Package ID: W_CC_C_9.1.037 Intel Fortran Compiler for IA32 version 9.1 Build 20070322Z Package ID: W_FC_C_9.1.037 Microsoft Visual Studio .NET 2003 (libraries)
Auto Parallel:	No
File System:	NTFS
System State:	Default

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L3 Cache: None
Other Cache: None
Memory: 16 GB (2x8 GB) FB-DIMM PC2-5300F ECC CL5
Disk Subsystem: 3x73 GB SCSI, 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	850	16.0	**851**	**16.0**	851	16.0	857	15.9	858	15.8	**857**	**15.9**
416.gamess	**1426**	**13.7**	1426	13.7	1426	13.7	1425	13.7	**1425**	**13.7**	1424	13.7
433.milc	1078	8.51	**1079**	**8.51**	1079	8.51	1073	8.56	1073	8.55	**1073**	**8.55**
434.zeusmp	759	12.0	**759**	**12.0**	759	12.0	793	11.5	793	11.5	**793**	**11.5**
435.gromacs	529	13.5	529	13.5	**529**	**13.5**	529	13.5	529	13.5	**529**	**13.5**
436.cactusADM	910	13.1	911	13.1	**911**	**13.1**	920	13.0	**920**	**13.0**	921	13.0
437.leslie3d	907	10.4	**907**	**10.4**	906	10.4	906	10.4	906	10.4	**906**	**10.4**
444.namd	679	11.8	**679**	**11.8**	679	11.8	669	12.0	669	12.0	**669**	**12.0**
447.dealII	727	15.7	727	15.7	**727**	**15.7**	656	17.4	**656**	**17.4**	656	17.4
450.soplex	788	10.6	**789**	**10.6**	789	10.6	785	10.6	785	10.6	**785**	**10.6**
453.povray	**320**	**16.6**	320	16.6	320	16.6	254	21.0	**254**	**21.0**	254	21.0
454.calculix	**767**	**10.8**	767	10.8	768	10.7	755	10.9	755	10.9	**755**	**10.9**
459.GemsFDTD	1079	9.84	1076	9.86	**1076**	**9.86**	**1093**	**9.71**	1093	9.71	1093	9.71
465.tonto	989	9.95	989	9.95	**989**	**9.95**	**973**	**10.1**	973	10.1	973	10.1
470.lbm	2426	5.66	**2426**	**5.66**	2426	5.66	2443	5.62	**2443**	**5.62**	2444	5.62
481.wrf	841	13.3	**841**	**13.3**	840	13.3	837	13.3	**838**	**13.3**	838	13.3
482.sphinx3	**1209**	**16.1**	1209	16.1	1209	16.1	1174	16.6	**1174**	**16.6**	1175	16.6

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

Operating System Notes

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

General Notes

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: -fast /F950000000 -link /FORCE:MULTIPLE

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: -fast /F950000000 -link /FORCE:MULTIPLE

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: `Same as 435.gromacs`

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.

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