SPEC® CFP2006 Result

Bull SAS

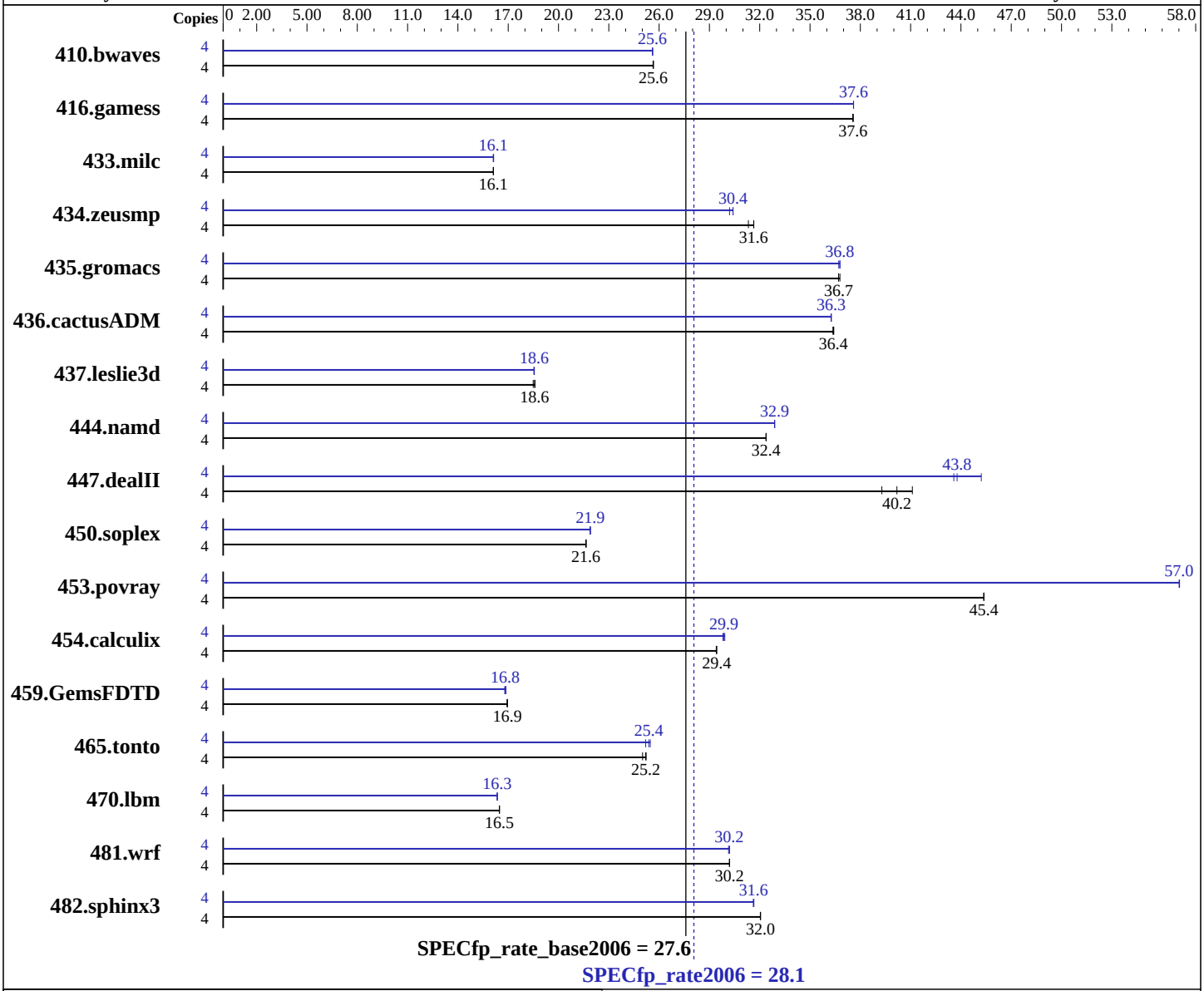
NovaScale T860 (1.60 GHz, Intel Xeon 5110)

SPECfp®_rate2006 = 28.1

SPECfp_rate_base2006 = 27.6

CPU2006 license: 20
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 5110
CPU Characteristics:	1.60 GHz, 1066MHz bus
CPU MHz:	1600
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:	4 MB I+D on chip per chip

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Software

Operating System:	Windows Server 2003 Enterprise X64 Edition
Compiler:	Intel C++ Compiler 9.1 for 32-bit app. Build 20061103Z Package ID: W_CC_C_9.1.033 Intel Fortran Compiler 9.1 for 32-bit app. 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: None
Other Cache: None
Memory: 12 GB (553 MHz ECC CL5 DDR2 FB-DIMM)
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						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	4	2118	25.7	2120	25.6	**2120**	**25.6**	4	2122	25.6	2123	25.6	**2123**	**25.6**
416.gamess	4	2084	37.6	**2085**	**37.6**	2086	37.6	4	2084	37.6	**2083**	**37.6**	2083	37.6
433.milc	4	**2279**	**16.1**	2278	16.1	2279	16.1	4	**2279**	**16.1**	2279	16.1	2276	16.1
434.zeusmp	4	1162	31.3	1150	31.6	**1150**	**31.6**	4	1197	30.4	**1197**	**30.4**	1205	30.2
435.gromacs	4	778	36.7	776	36.8	**778**	**36.7**	4	776	36.8	778	36.7	**777**	**36.8**
436.cactusADM	4	1313	36.4	**1313**	**36.4**	1314	36.4	4	**1318**	**36.3**	1318	36.3	1318	36.3
437.leslie3d	4	2033	18.5	2022	18.6	**2024**	**18.6**	4	2026	18.6	2029	18.5	**2026**	**18.6**
444.namd	4	991	32.4	991	32.4	**991**	**32.4**	4	975	32.9	**975**	**32.9**	975	32.9
447.dealII	4	1165	39.3	**1139**	**40.2**	1113	41.1	4	**1045**	**43.8**	1050	43.6	1012	45.2
450.soplex	4	1541	21.6	1542	21.6	**1542**	**21.6**	4	1524	21.9	**1524**	**21.9**	1523	21.9
453.povray	4	469	45.4	469	45.4	**469**	**45.4**	4	373	57.0	**373**	**57.0**	373	57.0
454.calculix	4	**1121**	**29.4**	1121	29.4	1122	29.4	4	1103	29.9	**1105**	**29.9**	1107	29.8
459.GemsFDTD	4	**2504**	**16.9**	2503	17.0	2506	16.9	4	2516	16.9	2527	16.8	**2522**	**16.8**
465.tonto	4	1560	25.2	**1562**	**25.2**	1574	25.0	4	**1550**	**25.4**	1562	25.2	1545	25.5
470.lbm	4	**3336**	**16.5**	3336	16.5	3336	16.5	4	3363	16.3	3362	16.3	**3362**	**16.3**
481.wrf	4	1480	30.2	1479	30.2	**1479**	**30.2**	4	**1480**	**30.2**	1480	30.2	1482	30.1
482.sphinx3	4	2434	32.0	2432	32.1	**2433**	**32.0**	4	2465	31.6	**2465**	**31.6**	2463	31.7

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

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`

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`

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Peak Portability Flags (Continued)

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

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

For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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