SPEC® CFP2006 Result

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Bull SAS

NovaScale T860
(Intel Xeon processor E5320,1.86GHz)

$SPECfp^{®}2006 =$ 12.5
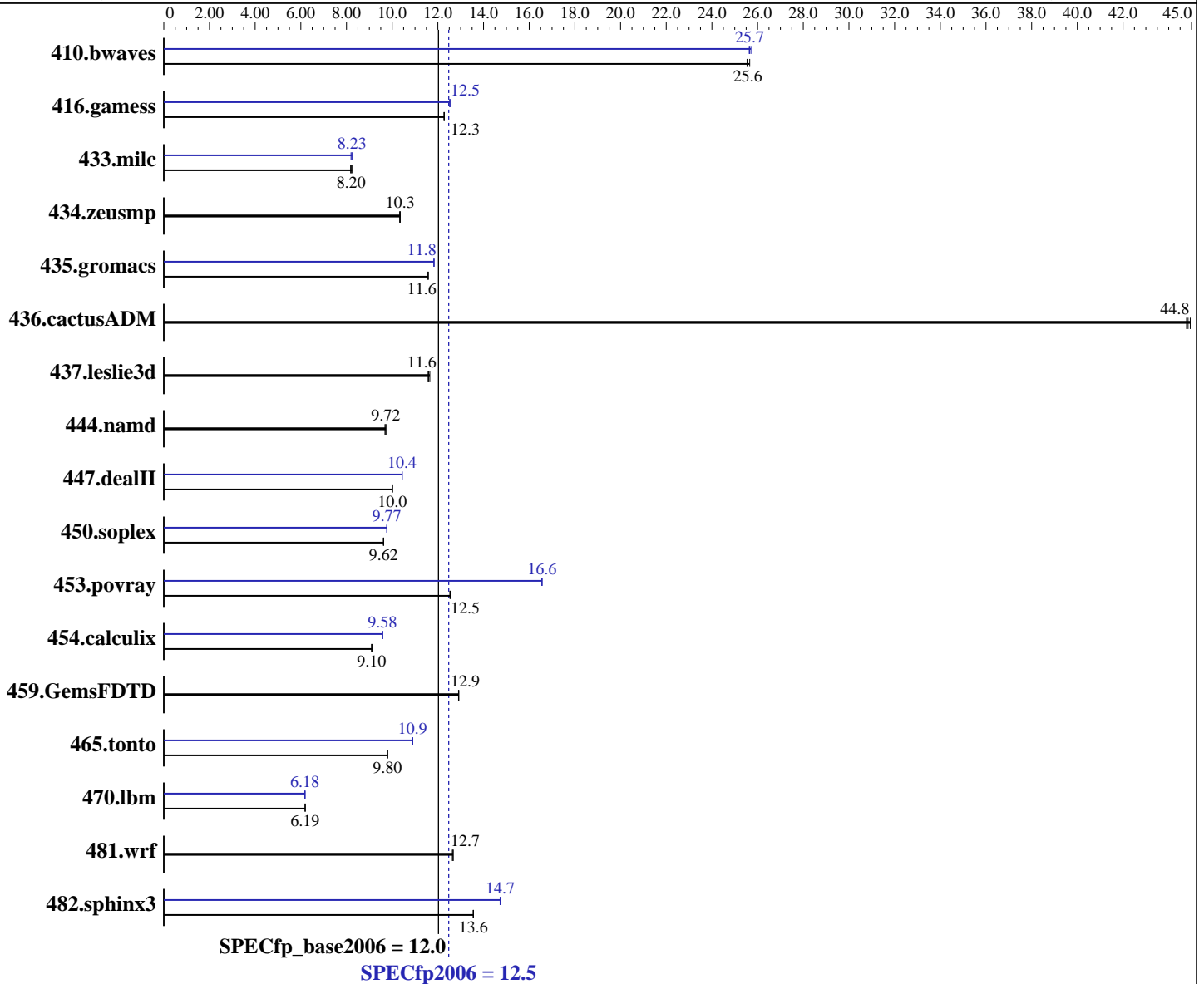
$SPECfp\_base2006 =$ 12.0

CPU2006 license: 20

Test sponsor: Bull SAS

Tested by: Bull SAS

Test date: Sep-2007

Hardware Availability: Mar-2007

Software Availability: Dec-2006

SPECfp_base2006 = 12.0

SPECfp2006 = 12.5

Hardware

CPU Name:	Intel Xeon E5320
CPU Characteristics:	1.86 GHz, 8 MB L2, 1066 MHz system bus
CPU MHz:	1860
FPU:	Integrated
CPU(s) enabled:	8 cores, 2 chips, 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

Continued on next page

Software

Operating System:	Windows Server 2003 Enterprise Edition X64 Edition Service Pack1
Compiler:	Intel C++ Compiler for EM64T version 9.1 Package ID W_CC_C_9.1.033 Build no 20061104 Intel Fortran Compiler for EM64T version 9.1 Package ID W_FC_C_9.1.033 Build no 20061104 Microsoft Visual Studio 2005 (lib & linker)
Auto Parallel:	Yes
File System:	NTFS
System State:	Default

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L3 Cache:	None
Other Cache:	None
Memory:	8 GB (8x1 GB) FB-DIMM PC2-4200F ECC CL4
Disk Subsystem:	1x73 GB SAS, 15000 RPM
Other Hardware:	None

Base Pointers:	64-bit
Peak Pointers:	64-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	530	25.7	**531**	**25.6**	532	25.5	**530**	**25.7**	529	25.7	530	25.6
416.gamess	1596	12.3	**1595**	**12.3**	1595	12.3	1563	12.5	1563	12.5	**1563**	**12.5**
433.milc	**1119**	**8.20**	1114	8.24	1122	8.18	1120	8.20	**1115**	**8.23**	1115	8.23
434.zeusmp	881	10.3	**879**	**10.3**	879	10.3	881	10.3	**879**	**10.3**	879	10.3
435.gromacs	617	11.6	**617**	**11.6**	617	11.6	604	11.8	604	11.8	**604**	**11.8**
436.cactusADM	267	44.8	**266**	**44.8**	266	44.9	267	44.8	**266**	**44.8**	266	44.9
437.leslie3d	**811**	**11.6**	812	11.6	807	11.6	**811**	**11.6**	812	11.6	807	11.6
444.namd	828	9.68	825	9.72	**825**	**9.72**	828	9.68	825	9.72	**825**	**9.72**
447.dealII	1143	10.0	**1143**	**10.0**	1143	10.0	**1096**	**10.4**	1096	10.4	1096	10.4
450.soplex	867	9.62	**867**	**9.62**	867	9.62	**854**	**9.77**	854	9.77	854	9.77
453.povray	**424**	**12.5**	425	12.5	424	12.5	321	16.6	321	16.6	**321**	**16.6**
454.calculix	905	9.11	906	9.10	**906**	**9.10**	861	9.58	861	9.58	**861**	**9.58**
459.GemsFDTD	821	12.9	**822**	**12.9**	822	12.9	821	12.9	**822**	**12.9**	822	12.9
465.tonto	1006	9.78	1004	9.80	**1005**	**9.80**	903	10.9	**903**	**10.9**	903	10.9
470.lbm	2220	6.19	2220	6.19	**2220**	**6.19**	2223	6.18	2223	6.18	**2223**	**6.18**
481.wrf	882	12.7	884	12.6	**882**	**12.7**	882	12.7	884	12.6	**882**	**12.7**
482.sphinx3	1438	13.6	**1438**	**13.6**	1438	13.6	**1323**	**14.7**	1324	14.7	1322	14.7

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

Base Compiler Invocation

C benchmarks:
```
icl -Qvc8 -Qc99
```

C++ benchmarks:
```
icl -Qvc8
```

Fortran benchmarks:
```
ifort
```

Benchmarks using both Fortran and C:
```
icl -Qvc8 -Qc99 ifort
```

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Hardware Availability: Mar-2007

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Base Portability Flags

```
      410.bwaves: -DSPEC_CPU_P64
      416.gamess: -DSPEC_CPU_P64
        433.milc: -D_Complex= -DSPEC_CPU_P64
      434.zeusmp: -DSPEC_CPU_P64
     435.gromacs: -D_Complex= -DSPEC_CPU_P64
    436.cactusADM: -D_Complex= -DSPEC_CPU_P64 -Qlowercase /assume:underscore
     437.leslie3d: -DSPEC_CPU_P64
       444.namd: -DSPEC_CPU_P64 /TP
      447.dealII: -D_Complex= -DSPEC_CPU_P64 -DBOOST_NO_INTRINSIC_WCHAR_T
                  -DDEAL_II_MEMBER_VAR_SPECIALIZATION_BUG
      450.soplex: -DSPEC_CPU_P64
      453.povray: -DSPEC_CPU_P64 -DSPEC_CPU_WINDOWS_ICL
     454.calculix: -D_Complex= -DSPEC_CPU_P64 -DSPEC_CPU_NOZMODIFIER
                  -Qlowercase
    459.GemsFDTD: -DSPEC_CPU_P64
       465.tonto: -DSPEC_CPU_P64
        470.lbm: -D_Complex= -DSPEC_CPU_P64
         481.wrf: -DSPEC_CPU_P64 -DSPEC_CPU_WINDOWS_ICL
     482.sphinx3: -D_Complex= -DSPEC_CPU_P64
```

Base Optimization Flags

C benchmarks:
```
    -fast -Qparallel shlw32m.lib            -link -FORCE:MULTIPLE
```

C++ benchmarks:
```
    -fast -Qparallel -Qcxx-features shlw32m.lib
              -link -FORCE:MULTIPLE
```

Fortran benchmarks:
```
    -fast -Qparallel            -link -FORCE:MULTIPLE
```

Benchmarks using both Fortran and C:
```
    -fast -Qparallel            -link -FORCE:MULTIPLE
```

Base Other Flags

C benchmarks:
```
    -F950000000
```

C++ benchmarks:
```
    -F950000000
```

Fortran benchmarks:
```
    -F950000000
```

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Software Availability: Dec-2006

Base Other Flags (Continued)

Benchmarks using both Fortran and C:
```
-F950000000
```

Peak Compiler Invocation

C benchmarks:
```
icl -Qvc8 -Qc99
```

C++ benchmarks:
```
icl -Qvc8
```

Fortran benchmarks:
```
ifort
```

Benchmarks using both Fortran and C:
```
icl -Qvc8 -Qc99 ifort
```

Peak Portability Flags

```
Same as Base Portability Flags
```

Peak Optimization Flags

C benchmarks:
```
-Qprof_gen(pass 1) -Qprof_use(pass 2) -fast
          -link -FORCE:MULTIPLE
```

C++ benchmarks:

    444.namd: `basepeak = yes`

    447.dealII: `-Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qcxx-features`
                 `-link -FORCE:MULTIPLE`

   450.soplex: `Same as 447.dealII`

   453.povray: `Same as 447.dealII`

Fortran benchmarks:

    410.bwaves: `-Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qparallel`
                 `-link -FORCE:MULTIPLE`

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Peak Optimization Flags (Continued)

416.gamess: `-fast`   `-link -FORCE:MULTIPLE`

434.zeusmp: `basepeak = yes`

437.leslie3d: `basepeak = yes`

459.GemsFDTD: `basepeak = yes`

465.tonto: `Same as 410.bwaves`

Benchmarks using both Fortran and C:

435.gromacs: `-Qprof_gen`(pass 1) `-Qprof_use`(pass 2) `-fast`
             `-link -FORCE:MULTIPLE`

436.cactusADM: `basepeak = yes`

454.calculix: `Same as 435.gromacs`

481.wrf: `basepeak = yes`

Peak Other Flags

C benchmarks:
`-F950000000`

C++ benchmarks:
`-F950000000`

Fortran benchmarks:
`-F950000000`

Benchmarks using both Fortran and C:
`-F950000000`

The flags file that was used to format this result can be browsed at
`http://www.spec.org/cpu2006/flags/flags.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/flags.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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