SPEC® CFP2006 Result

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Bull SAS

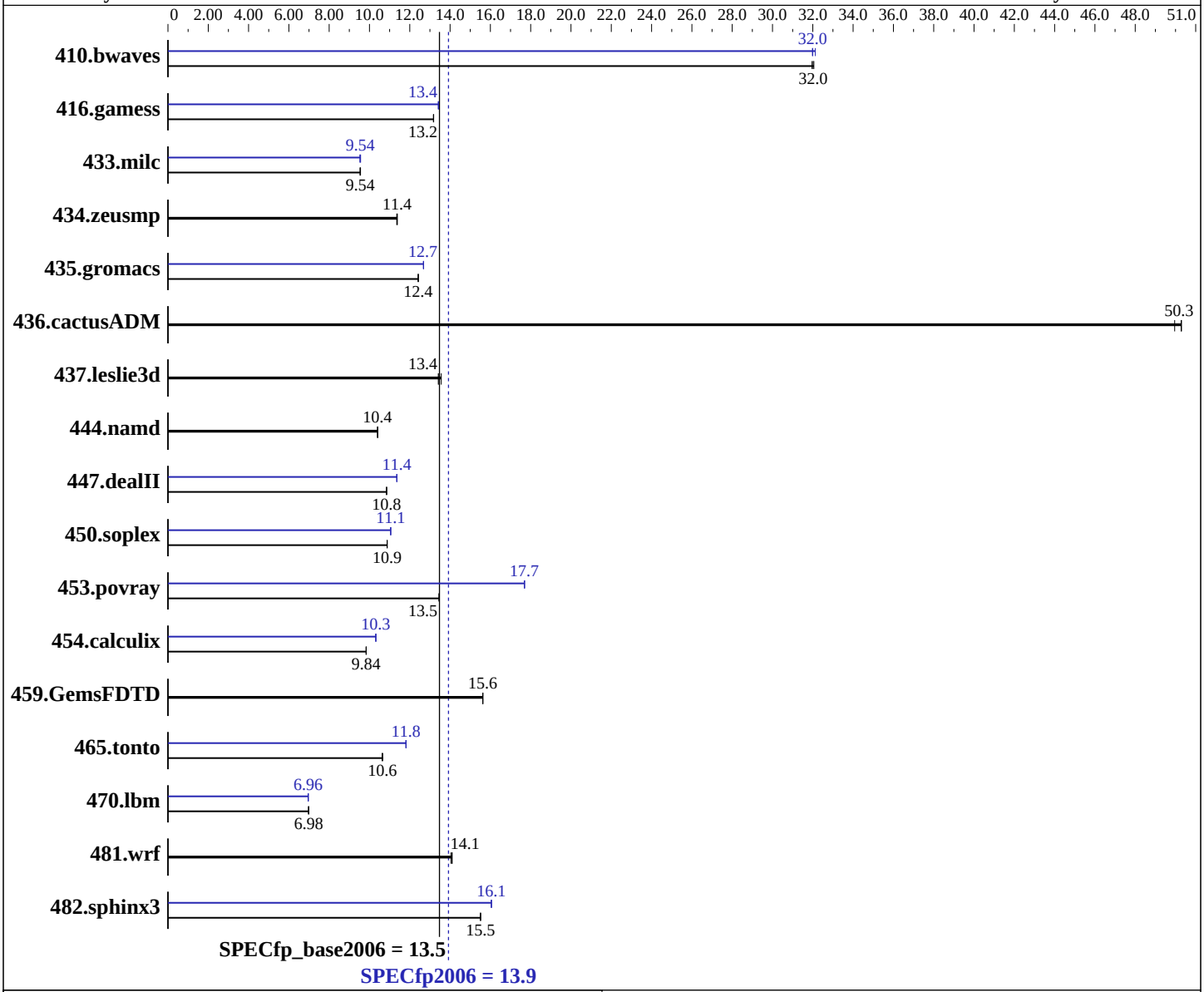
NovaScale R440
(Intel Xeon processor E5335,2.00GHz)

SPECfp®2006 = 13.9

SPECfp_base2006 = 13.5

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

Test date: Sep-2007
Hardware Availability: Mar-2007
Software Availability: Dec-2006



Hardware

CPU Name:	Intel Xeon E5335
CPU Characteristics:	2.00 GHz, 8 MB L2, 1333 MHz system bus
CPU MHz:	2000
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

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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: 16 GB (8x2 GB) FB-DIMM PC2-5300F ECC CL5
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	**424**	**32.0**	425	32.0	424	32.1	425	32.0	**425**	**32.0**	423	32.1
416.gamess	**1486**	**13.2**	1486	13.2	1485	13.2	1459	13.4	1459	13.4	**1459**	**13.4**
433.milc	961	9.56	**962**	**9.54**	963	9.53	964	9.53	**962**	**9.54**	960	9.56
434.zeusmp	800	11.4	801	11.4	**800**	**11.4**	800	11.4	801	11.4	**800**	**11.4**
435.gromacs	**575**	**12.4**	575	12.4	575	12.4	**563**	**12.7**	563	12.7	563	12.7
436.cactusADM	239	50.0	238	50.3	**238**	**50.3**	239	50.0	238	50.3	**238**	**50.3**
437.leslie3d	**699**	**13.4**	701	13.4	693	13.6	**699**	**13.4**	701	13.4	693	13.6
444.namd	**771**	**10.4**	771	10.4	771	10.4	**771**	**10.4**	771	10.4	771	10.4
447.dealII	1055	10.8	1054	10.9	**1054**	**10.8**	**1007**	**11.4**	1007	11.4	1007	11.4
450.soplex	767	10.9	**767**	**10.9**	767	10.9	755	11.1	**755**	**11.1**	754	11.1
453.povray	395	13.5	395	13.5	**395**	**13.5**	**301**	**17.7**	301	17.7	301	17.7
454.calculix	**839**	**9.84**	839	9.83	838	9.84	800	10.3	**800**	**10.3**	800	10.3
459.GemsFDTD	**679**	**15.6**	679	15.6	679	15.6	**679**	**15.6**	679	15.6	679	15.6
465.tonto	**925**	**10.6**	926	10.6	923	10.7	833	11.8	833	11.8	**833**	**11.8**
470.lbm	1971	6.97	**1967**	**6.98**	1967	6.99	**1974**	**6.96**	1974	6.96	1974	6.96
481.wrf	**792**	**14.1**	796	14.0	792	14.1	**792**	**14.1**	796	14.0	792	14.1
482.sphinx3	**1257**	**15.5**	1257	15.5	1256	15.5	1214	16.1	1215	16.0	**1214**	**16.1**

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

General Notes

```
The NovaScale R440 and the NovaScale R460 models are
electronically equivalent.
The results have been measured on a NovaScale R460 model.
```

Base Compiler Invocation

C benchmarks:

```
icl -Qvc8 -Qc99
```

C++ benchmarks:

```
icl -Qvc8
```

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Base Compiler Invocation (Continued)

Fortran benchmarks:
ifort

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

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

C++ benchmarks:
-fast -Qparallel -Qcxx-features

Fortran benchmarks:
-fast -Qparallel

Benchmarks using both Fortran and C:
-fast -Qparallel

Base Other Flags

C benchmarks:
`-F950000000`

C++ benchmarks:
`-F950000000`

Fortran benchmarks:
`-F950000000`

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`

C++ benchmarks:

444.namd: `basepeak = yes`

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

450.soplex: `Same as 447.dealII`

Continued on next page

Peak Optimization Flags (Continued)

453.povray: `Same as 447.dealII`

Fortran benchmarks:

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

416.gamess: `-fast`

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`

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 other inquiries, please contact webmaster@spec.org.

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