SPEC® CFP2006 Result

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Bull SAS

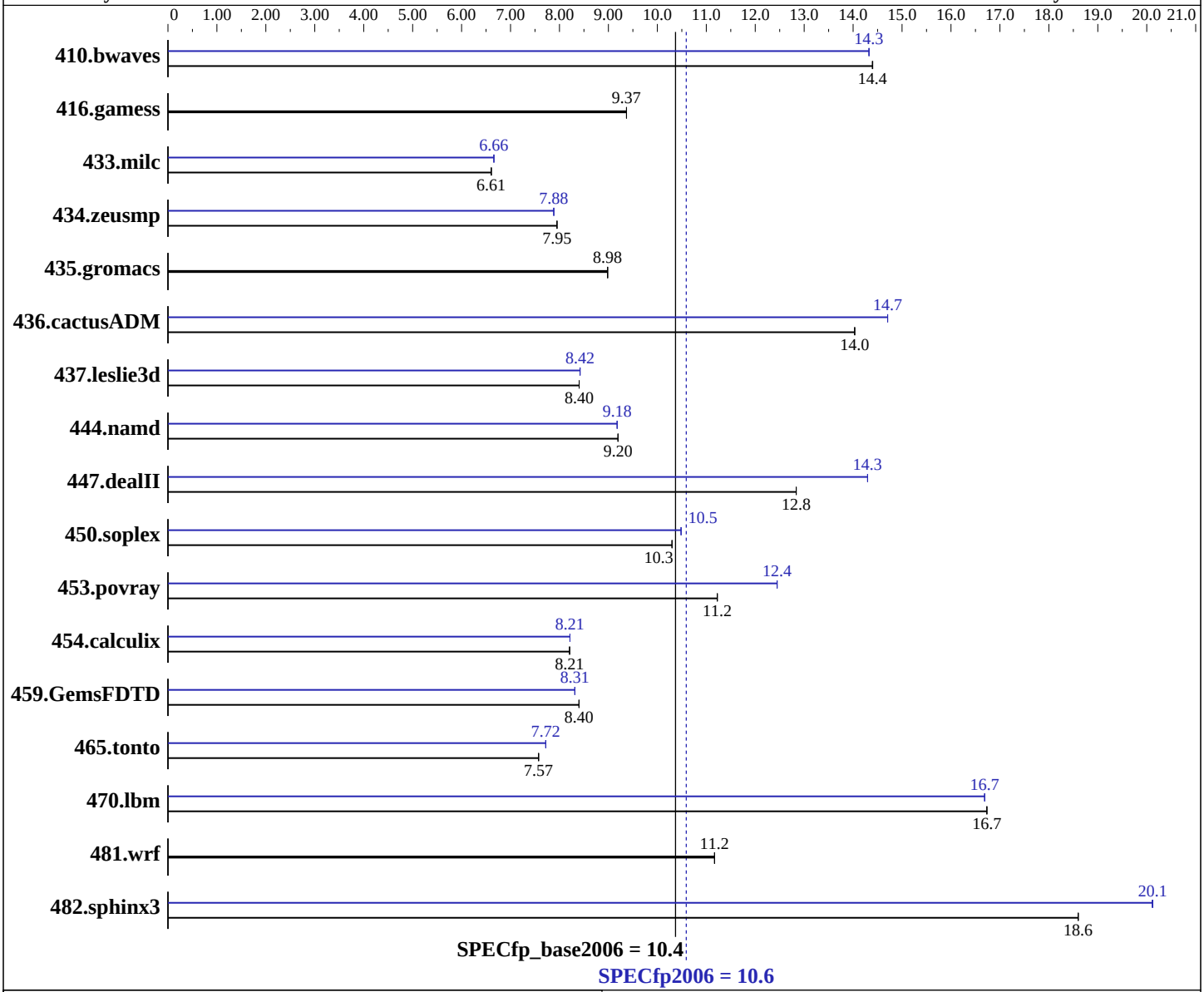
NovaScale R480 (3.20 GHz, Intel Xeon 7130M)

SPECfp®2006 = 10.6

SPECfp_base2006 = 10.4

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 7130M
CPU Characteristics:	3.2GHz, 800MHz bus
CPU MHz:	3200
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 9.1 for 32-bit Build 20061103Z Package ID: W_CC_C_9.1.033 Intel Fortran Compiler 9.1 for 32-bit 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: 8 MB I+D on chip per chip
Other Cache: None
Memory: 32 GB (667 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					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	944	14.4	944	14.4	**944**	**14.4**	949	14.3	949	14.3	**949**	**14.3**
416.gamess	**2090**	**9.37**	2090	9.37	2090	9.37	**2090**	**9.37**	2090	9.37	2090	9.37
433.milc	1389	6.61	1390	6.61	**1390**	**6.61**	**1378**	**6.66**	1378	6.66	1379	6.66
434.zeusmp	1145	7.95	1145	7.95	**1145**	**7.95**	1154	7.88	1154	7.88	**1154**	**7.88**
435.gromacs	795	8.98	795	8.98	**795**	**8.98**	795	8.98	795	8.98	**795**	**8.98**
436.cactusADM	**852**	**14.0**	852	14.0	852	14.0	813	14.7	813	14.7	**813**	**14.7**
437.leslie3d	1119	8.40	1119	8.40	**1119**	**8.40**	**1116**	**8.42**	1116	8.42	1116	8.42
444.namd	872	9.20	872	9.20	**872**	**9.20**	**874**	**9.18**	874	9.18	874	9.18
447.dealII	891	12.8	**891**	**12.8**	891	12.8	800	14.3	800	14.3	**800**	**14.3**
450.soplex	**810**	**10.3**	810	10.3	810	10.3	795	10.5	795	10.5	**795**	**10.5**
453.povray	**474**	**11.2**	474	11.2	474	11.2	**427**	**12.4**	427	12.4	427	12.4
454.calculix	1005	8.21	**1005**	**8.21**	1005	8.21	1004	8.21	1004	8.21	**1004**	**8.21**
459.GemsFDTD	**1263**	**8.40**	1263	8.40	1263	8.40	1276	8.31	1276	8.31	**1276**	**8.31**
465.tonto	1299	7.57	**1299**	**7.57**	1299	7.57	1275	7.72	**1275**	**7.72**	1274	7.72
470.lbm	**821**	**16.7**	821	16.7	821	16.7	823	16.7	823	16.7	**823**	**16.7**
481.wrf	**1000**	**11.2**	1000	11.2	1000	11.2	**1000**	**11.2**	1000	11.2	1000	11.2
482.sphinx3	**1048**	**18.6**	1048	18.6	1048	18.6	968	20.1	**969**	**20.1**	969	20.1

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

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

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