SPEC® CFP2006 Result

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Bull SAS

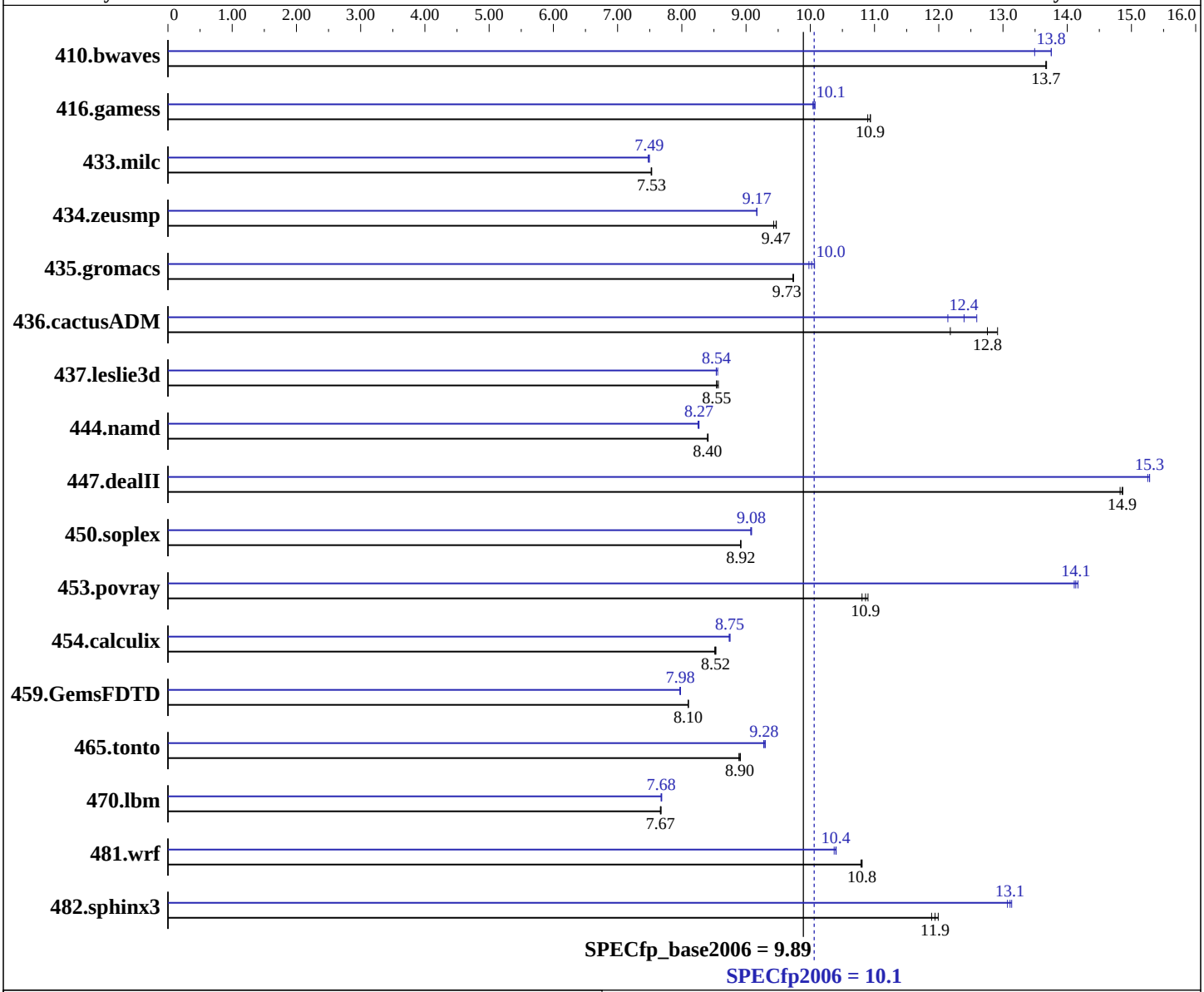
NovaScale R440
(Intel Xeon processor E5310,1.60GHz)

SPECfp®2006 = 10.1

SPECfp_base2006 = 9.89

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

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



Hardware

CPU Name:	Intel Xeon E5310
CPU Characteristics:	1.6 GHz, 8 MB L2, 1066 MHz system bus
CPU MHz:	1600
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:	SuSE Linux Enterprise Server 10 (EM64T) kernel 2.6.16.21-0.8-smp
Compiler:	Intel C++ Compiler for Intel EM64T-based applications, Version 9.1 Package ID l_cc_c_9.1.045 Build no 20061101 Intel Fortran Compiler for Intel EM64T-based applications, Version 9.1 Package ID l_fc_c_9.1.040 Build no 20061101
Auto Parallel:	No

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L3 Cache: None
Other Cache: None
Memory: 12 GB (1GB DIMMx12, FB-DIMM PC2-5300F ECC CL5)
Disk Subsystem: 73 GB SAS, 10000RPM
Other Hardware: None

File System: ext2
System State: Multi-user run level 3
Base Pointers: 64-bit
Peak Pointers: 32/64-bit
Other Software: None

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	994	13.7	994	13.7	**994**	**13.7**	1007	13.5	**988**	**13.8**	988	13.8
416.gamess	1797	10.9	**1791**	**10.9**	1790	10.9	1950	10.0	1943	10.1	**1947**	**10.1**
433.milc	1219	7.53	1220	7.52	**1219**	**7.53**	1228	7.48	**1225**	**7.49**	1225	7.49
434.zeusmp	965	9.43	**961**	**9.47**	961	9.47	993	9.17	992	9.17	**993**	**9.17**
435.gromacs	734	9.73	733	9.74	**733**	**9.73**	**713**	**10.0**	716	9.98	709	10.1
436.cactusADM	981	12.2	**937**	**12.8**	925	12.9	**964**	**12.4**	949	12.6	984	12.1
437.leslie3d	1101	8.54	**1100**	**8.55**	1097	8.57	1098	8.56	**1101**	**8.54**	1101	8.54
444.namd	**955**	**8.40**	954	8.41	955	8.40	972	8.25	**970**	**8.27**	970	8.27
447.dealII	**770**	**14.9**	770	14.9	772	14.8	750	15.3	**749**	**15.3**	749	15.3
450.soplex	935	8.92	**935**	**8.92**	935	8.92	919	9.07	918	9.08	**918**	**9.08**
453.povray	488	10.9	492	10.8	**490**	**10.9**	**376**	**14.1**	376	14.2	377	14.1
454.calculix	**968**	**8.52**	967	8.53	969	8.51	943	8.75	**943**	**8.75**	944	8.74
459.GemsFDTD	1310	8.10	**1310**	**8.10**	1309	8.10	1331	7.97	**1330**	**7.98**	1330	7.98
465.tonto	1104	8.91	**1105**	**8.90**	1107	8.89	**1060**	**9.28**	1061	9.27	1058	9.30
470.lbm	1790	7.68	1792	7.67	**1792**	**7.67**	1787	7.69	**1789**	**7.68**	1789	7.68
481.wrf	**1034**	**10.8**	1035	10.8	1034	10.8	1077	10.4	1074	10.4	**1074**	**10.4**
482.sphinx3	1625	12.0	**1632**	**11.9**	1639	11.9	1491	13.1	**1487**	**13.1**	1484	13.1

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

Operating System Notes

```
Environment stack size set to 'unlimited'

System was booted uniprocessor by setting "maxcpus=0"
kernel parameter in menu.lst
```

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:
icc

C++ benchmarks:
icpc

Fortran benchmarks:
ifort

Benchmarks using both Fortran and C:
icc ifort

Base Portability Flags

410.bwaves: -DSPEC_CPU_LP64
416.gamess: -DSPEC_CPU_LP64
433.milc: -DSPEC_CPU_LP64
434.zeusmp: -DSPEC_CPU_LP64
435.gromacs: -DSPEC_CPU_LP64 -nofor_main
436.cactusADM: -DSPEC_CPU_LP64 -nofor_main
437.leslie3d: -DSPEC_CPU_LP64
444.namd: -DSPEC_CPU_LP64
447.dealII: -DSPEC_CPU_LP64
450.soplex: -DSPEC_CPU_LP64
453.povray: -DSPEC_CPU_LP64
454.calculix: -DSPEC_CPU_LP64 -nofor_main
459.GemsFDTD: -DSPEC_CPU_LP64
465.tonto: -DSPEC_CPU_LP64
470.lbm: -DSPEC_CPU_LP64
481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
482.sphinx3: -DSPEC_CPU_LP64

Base Optimization Flags

C benchmarks:
-fast

C++ benchmarks:
-fast

Fortran benchmarks:
-fast

Benchmarks using both Fortran and C:
-fast

Peak Compiler Invocation

C benchmarks:
icc

C++ benchmarks:
icpc

Fortran benchmarks:
ifort

Benchmarks using both Fortran and C:
icc ifort

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:
-prof_gen(pass 1) -prof_use(pass 2) -fast -auto_ilp32

C++ benchmarks:
-prof_gen(pass 1) -prof_use(pass 2) -fast -auto_ilp32

Fortran benchmarks:
-prof_gen(pass 1) -prof_use(pass 2) -fast

Benchmarks using both Fortran and C:
-prof_gen(pass 1) -prof_use(pass 2) -fast -auto_ilp32

The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/EM64T_Intel91_flags.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/EM64T_Intel91_flags.xml

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For other inquiries, please contact webmaster@spec.org.

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