SPEC® CFP2006 Result

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Bull SAS

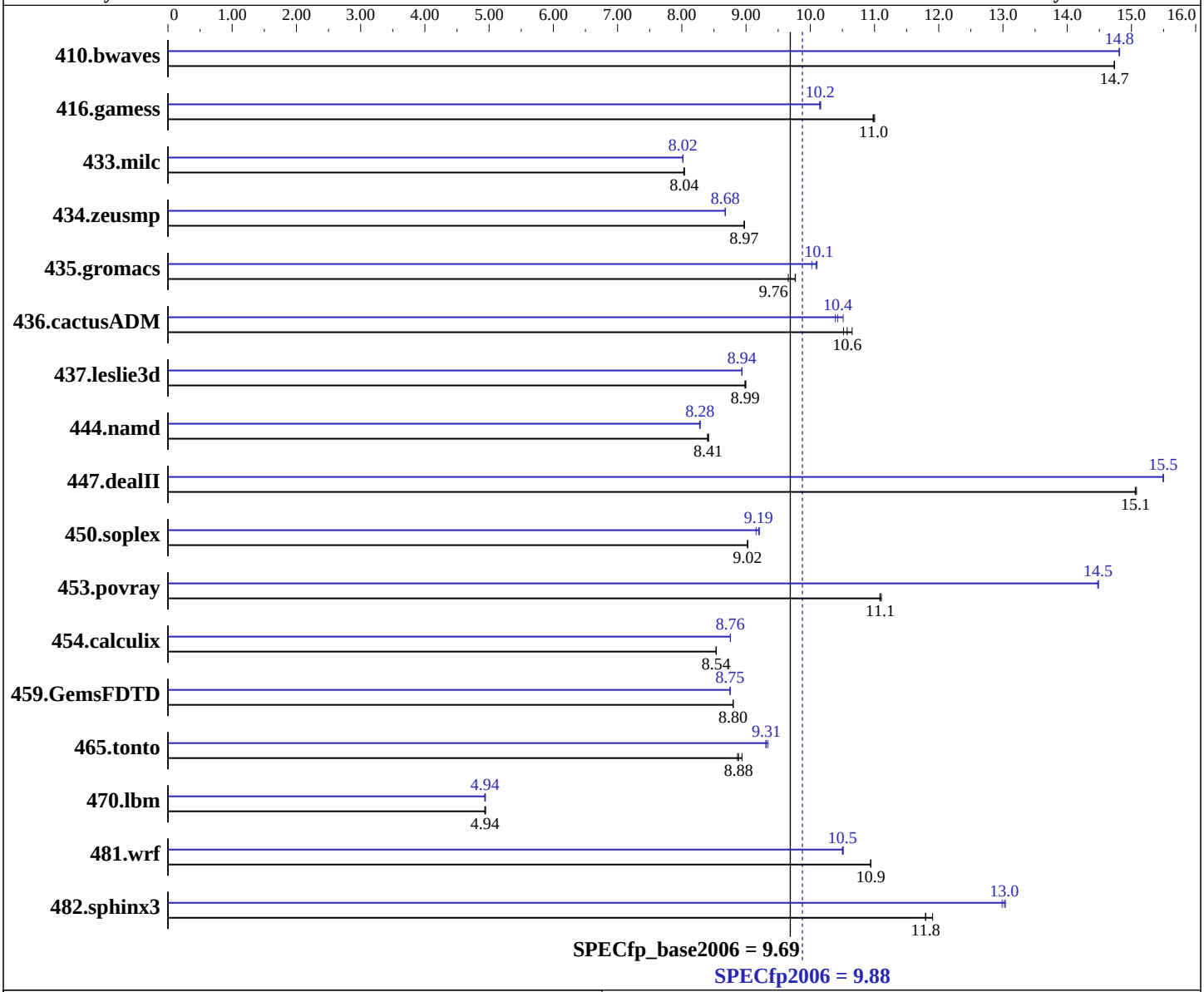
NovaScale R440
(Intel Xeon processor 5110,1.60GHz)

SPECfp®2006 = 9.88

SPECfp_base2006 = 9.69

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

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



Hardware

CPU Name:	Intel Xeon 5110
CPU Characteristics:	1.60 GHz, 4 MB L2, 1066 MHz system bus
CPU MHz:	1600
FPU:	Integrated
CPU(s) enabled:	1 core, 1 chip, 2 cores/chip
CPU(s) orderable:	1 to 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:	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	File System:	ext2
Other Cache:	None	System State:	Multi-user run level 3
Memory:	24 GB (12x2 GB) FB-DIMM PC2-5300F ECC CL5	Base Pointers:	64-bit
Disk Subsystem:	1x73 GB SAS, 15000 RPM	Peak Pointers:	32/64-bit
Other Hardware:	None	Other Software:	None

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	**922**	**14.7**	923	14.7	922	14.7	**917**	**14.8**	918	14.8	917	14.8
416.gamess	1780	11.0	**1782**	**11.0**	1784	11.0	1930	10.1	**1929**	**10.2**	1927	10.2
433.milc	1142	8.04	**1142**	**8.04**	1143	8.03	**1145**	**8.02**	1145	8.02	1145	8.01
434.zeusmp	1014	8.97	1014	8.97	**1014**	**8.97**	1049	8.67	1049	8.68	**1049**	**8.68**
435.gromacs	739	9.66	731	9.77	**731**	**9.76**	712	10.0	706	10.1	**708**	**10.1**
436.cactusADM	1122	10.7	1136	10.5	**1130**	**10.6**	1137	10.5	**1146**	**10.4**	1150	10.4
437.leslie3d	1046	8.98	1045	9.00	**1046**	**8.99**	**1052**	**8.94**	1052	8.93	1052	8.94
444.namd	953	8.42	**954**	**8.41**	955	8.40	969	8.28	**968**	**8.28**	968	8.29
447.dealII	**759**	**15.1**	759	15.1	760	15.1	**738**	**15.5**	739	15.5	738	15.5
450.soplex	**924**	**9.02**	924	9.02	924	9.03	906	9.21	**907**	**9.19**	911	9.16
453.povray	479	11.1	480	11.1	**480**	**11.1**	**367**	**14.5**	368	14.5	367	14.5
454.calculix	966	8.54	**966**	**8.54**	967	8.53	**942**	**8.76**	942	8.75	942	8.76
459.GemsFDTD	**1206**	**8.80**	1206	8.80	1206	8.80	1212	8.75	**1212**	**8.75**	1212	8.75
465.tonto	1101	8.94	**1108**	**8.88**	1110	8.87	1053	9.34	1057	9.31	**1056**	**9.31**
470.lbm	2778	4.95	**2783**	**4.94**	2785	4.93	**2783**	**4.94**	2780	4.94	2785	4.93
481.wrf	1021	10.9	1021	10.9	**1021**	**10.9**	**1063**	**10.5**	1064	10.5	1062	10.5
482.sphinx3	1637	11.9	**1652**	**11.8**	1653	11.8	1495	13.0	**1497**	**13.0**	1501	13.0

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

/usr/bin/taskset utility used to bind CPU(s) to processes
```

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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