SPEC® CFP2006 Result
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Bull SAS

NovaScale R460
(Intel Xeon processor E5310,1.60GHz)

$SPECfp^{®}2006 =$ 10.1
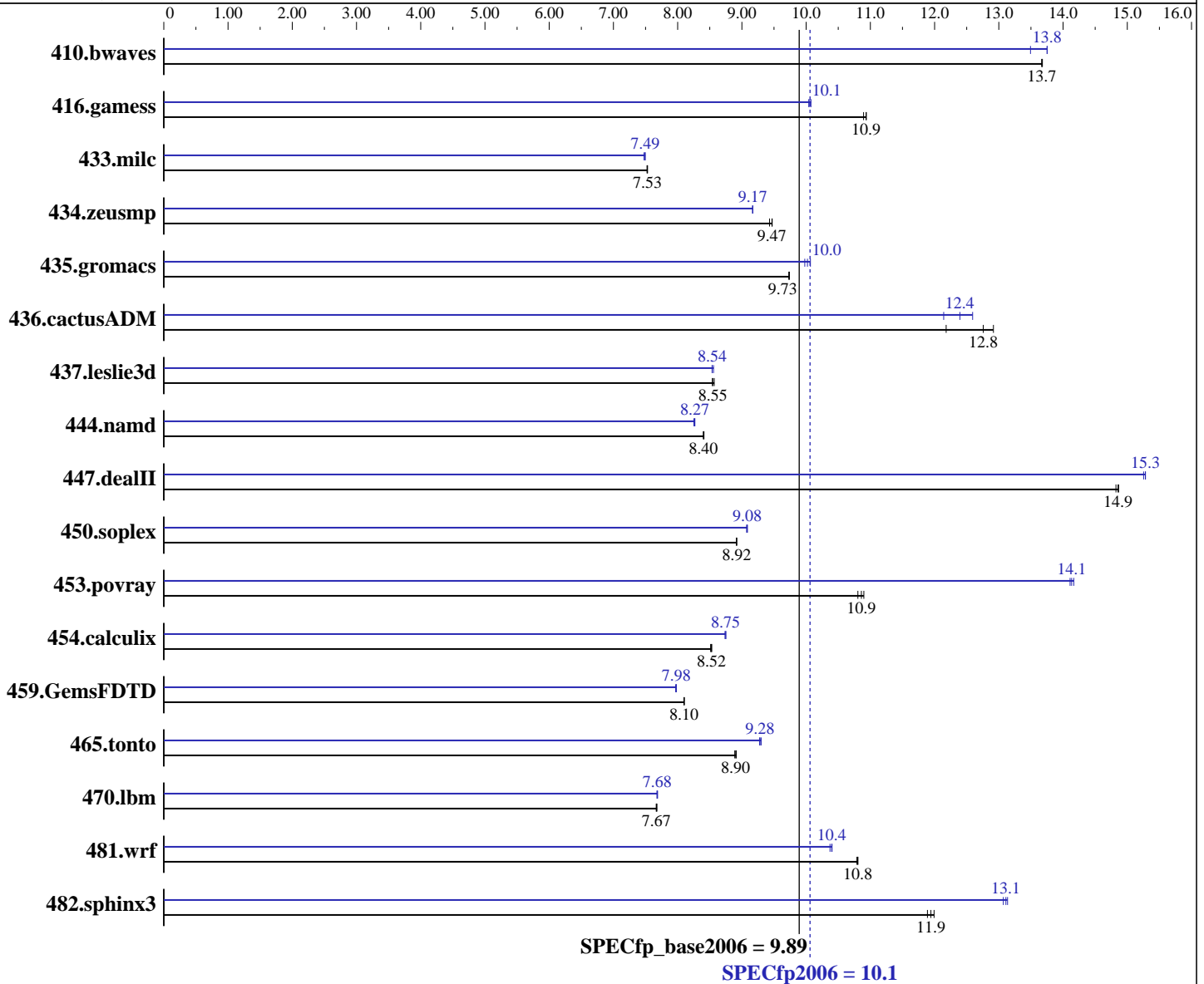
$SPECfp\_base2006 =$ 9.89

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

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

SPECfp_base2006 = 9.89

SPECfp2006 = 10.1

Benchmark	base	peak
410.bwaves	13.7	13.8
416.gamess	10.9	10.1
433.milc	7.53	7.49
434.zeusmp	9.47	9.17
435.gromacs	9.73	10.0
436.cactusADM	12.8	12.4
437.leslie3d	8.55	8.54
444.namd	8.40	8.27
447.dealII	14.9	15.3
450.soplex	8.92	9.08
453.povray	10.9	14.1
454.calculix	8.52	8.75
459.GemsFDTD	8.10	7.98
465.tonto	8.90	9.28
470.lbm	7.67	7.68
481.wrf	10.8	10.4
482.sphinx3	11.9	13.1

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

Continued on next page

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

Continued on next page

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L3 Cache:	None	File System:	ext2
Other Cache:	None	System State:	Multi-user run level 3
Memory:	12 GB (1GB DIMMx12, FB-DIMM PC2-5300F ECC CL5)	Base Pointers:	64-bit
Disk Subsystem:	73 GB SAS, 10000RPM	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	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.

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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

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

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