SPEC® CFP2006 Result

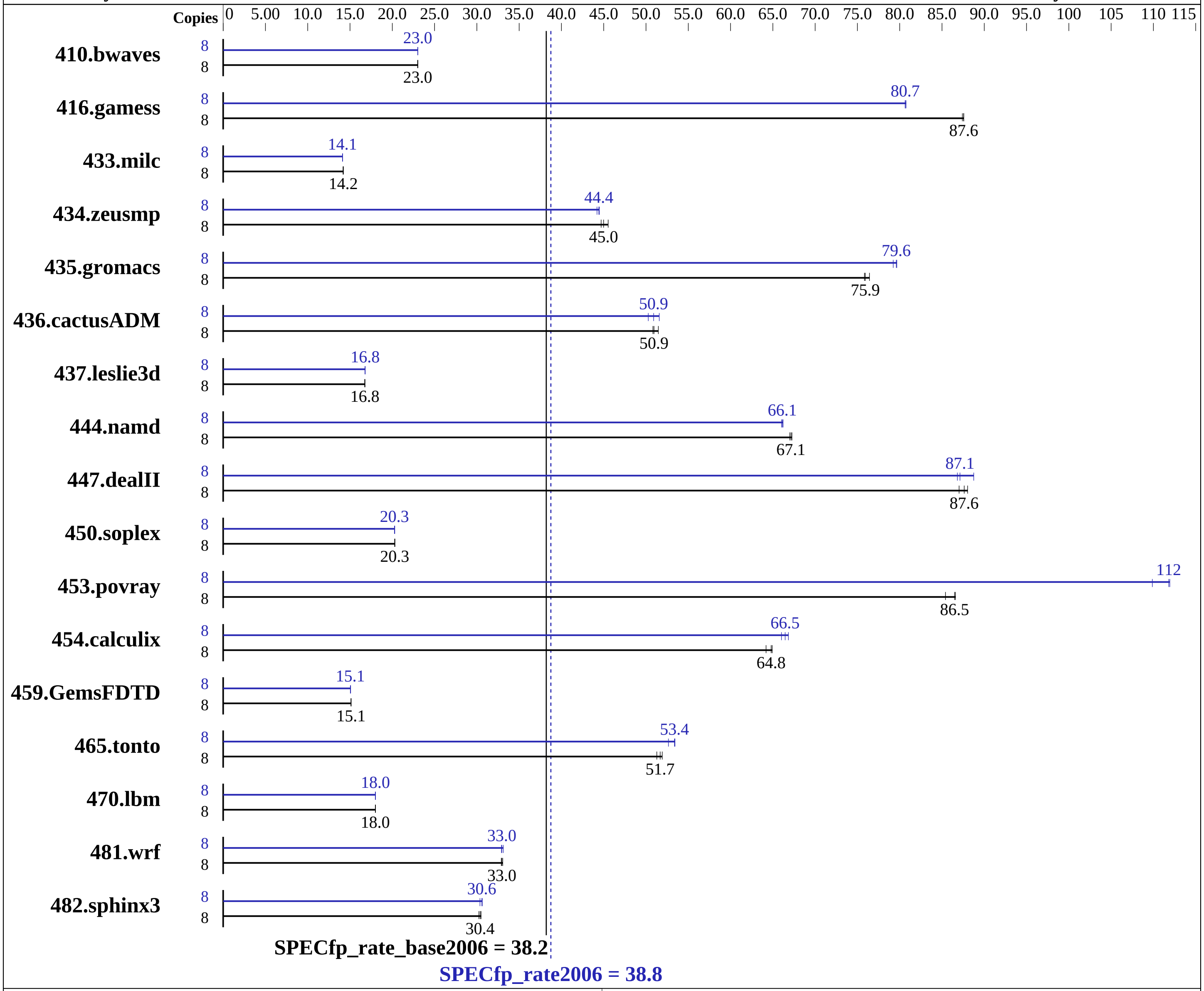
Bull SAS

NovaScale R440
(Intel Xeon processor E5310,1.60GHz)

SPECfp®_rate2006 = 38.8

SPECfp_rate_base2006 = 38.2

CPU2006 license: 20		**Test date:**	Apr-2007
Test sponsor:	Bull SAS	**Hardware Availability:**	Mar-2007
Tested by:	Bull SAS	**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:	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:	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:	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

	Base							Peak						
Benchmark	**Copies**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Copies**	**Seconds**	**Ratio**	**Seconds**	**Ratio**	**Seconds**	**Ratio**
410.bwaves	8	4729	23.0	4723	23.0	**4724**	**23.0**	8	**4726**	**23.0**	4726	23.0	4725	23.0
416.gamess	8	**1789**	**87.6**	1792	87.4	1789	87.6	8	**1942**	**80.7**	1940	80.8	1942	80.6
433.milc	8	5167	14.2	5182	14.2	**5169**	**14.2**	8	**5203**	**14.1**	5204	14.1	5202	14.1
434.zeusmp	8	1629	44.7	**1618**	**45.0**	1599	45.5	8	1637	44.5	**1639**	**44.4**	1647	44.2
435.gromacs	8	753	75.8	**752**	**75.9**	747	76.4	8	**718**	**79.6**	717	79.7	721	79.2
436.cactusADM	8	1858	51.5	**1876**	**50.9**	1881	50.8	8	1854	51.6	**1878**	**50.9**	1902	50.3
437.leslie3d	8	**4486**	**16.8**	4494	16.7	4484	16.8	8	4484	16.8	**4478**	**16.8**	4476	16.8
444.namd	8	954	67.3	958	67.0	**956**	**67.1**	8	**970**	**66.1**	972	66.0	969	66.2
447.dealII	8	1040	88.0	1052	87.0	**1044**	**87.6**	8	**1050**	**87.1**	1054	86.8	1031	88.8
450.soplex	8	3290	20.3	**3288**	**20.3**	3284	20.3	8	**3294**	**20.3**	3294	20.3	3288	20.3
453.povray	8	498	85.4	**492**	**86.5**	491	86.6	8	387	110	380	112	**381**	**112**
454.calculix	8	1017	64.9	**1019**	**64.8**	1028	64.2	8	1000	66.0	987	66.8	**993**	**66.5**
459.GemsFDTD	8	5618	15.1	**5610**	**15.1**	5609	15.1	8	5644	15.0	**5638**	**15.1**	5630	15.1
465.tonto	8	1535	51.3	**1523**	**51.7**	1516	51.9	8	1495	52.7	**1475**	**53.4**	1473	53.4
470.lbm	8	6105	18.0	6108	18.0	**6107**	**18.0**	8	**6105**	**18.0**	6111	18.0	6104	18.0
481.wrf	8	**2712**	**33.0**	2717	32.9	2703	33.1	8	**2711**	**33.0**	2698	33.1	2715	32.9
482.sphinx3	8	5156	30.2	5112	30.5	**5131**	**30.4**	8	5134	30.4	5088	30.6	**5097**	**30.6**

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'
```

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

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

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

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