SPEC® CFP2006 Result
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Bull SAS

NovaScale R460
(Intel Xeon processor E5345,2.33GHz)

$SPECfp®\_rate2006 = \quad 54.0$

$SPECfp\_rate\_base2006 = \quad 53.3$

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

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

	Copies	value
410.bwaves	8	31.5
	8	31.5
416.gamess	8	118
	8	128
433.milc	8	20.8
	8	20.9
434.zeusmp	8	60.2
	8	60.9
435.gromacs	8	115
	8	111
436.cactusADM	8	67.3
	8	67.9
437.leslie3d	8	22.9
	8	22.9
444.namd	8	96.3
	8	97.8
447.dealII	8	119
	8	118
450.soplex	8	28.2
	8	28.3
453.povray	8	164
	8	128
454.calculix	8	94.2
	8	92.5
459.GemsFDTD	8	20.6
	8	20.7
465.tonto	8	74.0
	8	72.3
470.lbm	8	23.7
	8	23.7
481.wrf	8	45.2
	8	45.1
482.sphinx3	8	41.7
	8	41.5

SPECfp_rate_base2006 = 53.3

SPECfp_rate2006 = 54.0

Hardware

CPU Name:	Intel Xeon E5345
CPU Characteristics:	2.33GHz, 2x4 MB L2 shared, 1333 MHz system bus
CPU MHz:	2330
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

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

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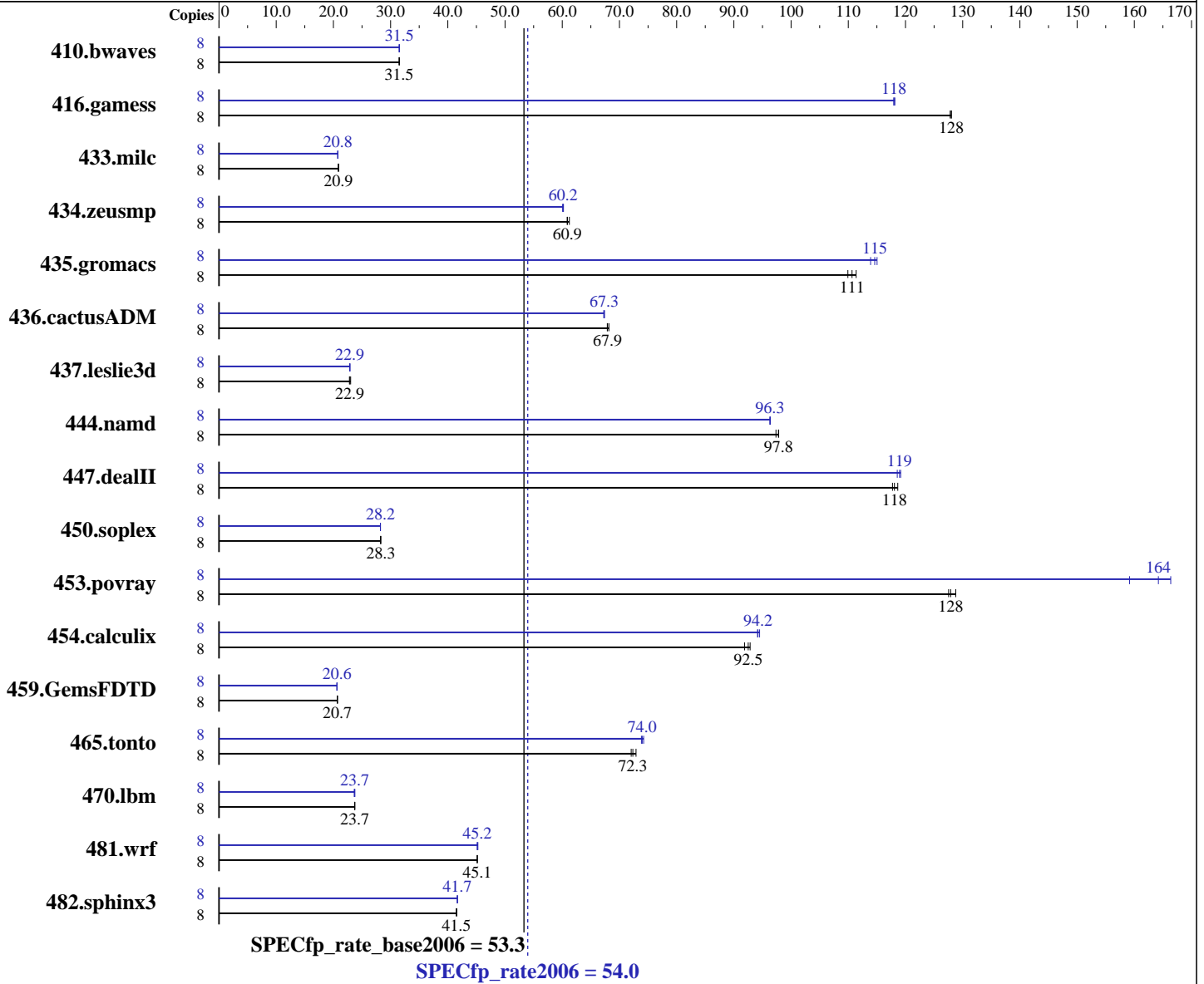$SPECfp\_rate2006 =$ 54.0

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L3 Cache:	None
Other Cache:	None
Memory:	24 GB (2GB 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						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	8	3449	31.5	3451	31.5	**3451**	**31.5**	8	3448	31.5	**3450**	**31.5**	3450	31.5
416.gamess	8	1224	128	**1224**	**128**	1226	128	8	**1327**	**118**	1326	118	1328	118
433.milc	8	**3518**	**20.9**	3515	20.9	3519	20.9	8	3533	20.8	3538	20.8	**3537**	**20.8**
434.zeusmp	8	1189	61.2	**1195**	**60.9**	1196	60.9	8	1209	60.2	**1210**	**60.2**	1212	60.1
435.gromacs	8	520	110	513	111	**516**	**111**	8	**498**	**115**	501	114	497	115
436.cactusADM	8	**1408**	**67.9**	1403	68.2	1408	67.9	8	1419	67.4	**1420**	**67.3**	1421	67.3
437.leslie3d	8	3267	23.0	3298	22.8	**3287**	**22.9**	8	3293	22.8	**3287**	**22.9**	3283	22.9
444.namd	8	659	97.4	**656**	**97.8**	656	97.8	8	666	96.4	666	96.3	**666**	**96.3**
447.dealII	8	771	119	777	118	**775**	**118**	8	**769**	**119**	768	119	772	119
450.soplex	8	**2360**	**28.3**	2362	28.2	2360	28.3	8	**2364**	**28.2**	2365	28.2	2363	28.2
453.povray	8	334	128	**333**	**128**	330	129	8	267	159	256	166	**259**	**164**
454.calculix	8	**713**	**92.5**	718	91.9	711	92.8	8	698	94.5	**700**	**94.2**	701	94.1
459.GemsFDTD	8	4106	20.7	**4103**	**20.7**	4097	20.7	8	4124	20.6	4110	20.7	**4111**	**20.6**
465.tonto	8	**1088**	**72.3**	1093	72.1	1080	72.9	8	**1064**	**74.0**	1061	74.2	1066	73.8
470.lbm	8	4632	23.7	**4632**	**23.7**	4631	23.7	8	**4631**	**23.7**	4651	23.6	4631	23.7
481.wrf	8	**1979**	**45.1**	1980	45.1	1979	45.2	8	**1978**	**45.2**	1974	45.3	1980	45.1
482.sphinx3	8	3751	41.6	3758	41.5	**3755**	**41.5**	8	**3743**	**41.7**	3740	41.7	3743	41.7

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'
    '/usr/bin/taskset' used to bind processes to CPUs

General Notes

    The NovaScale R440 and the NovaScale R460 models are
    electronically equivalent.
    The results have been measured on a NovaScale R440 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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