SPEC® CFP2006 Result

Bull SAS

$SPECfp®\_rate2006 = \quad 29.2$

NovaScale R440
(Intel Xeon processor 5110,1.60GHz)

$SPECfp\_rate\_base2006 = \quad 28.8$

CPU2006 license:	20	**Test date:**	May-2007
Test sponsor:	Bull SAS	**Hardware Availability:**	Mar-2007
Tested by:	Bull SAS	**Software Availability:**	Dec-2006

SPECfp_rate_base2006 = 28.8

SPECfp_rate2006 = 29.2

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:	4 cores, 2 chips, 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

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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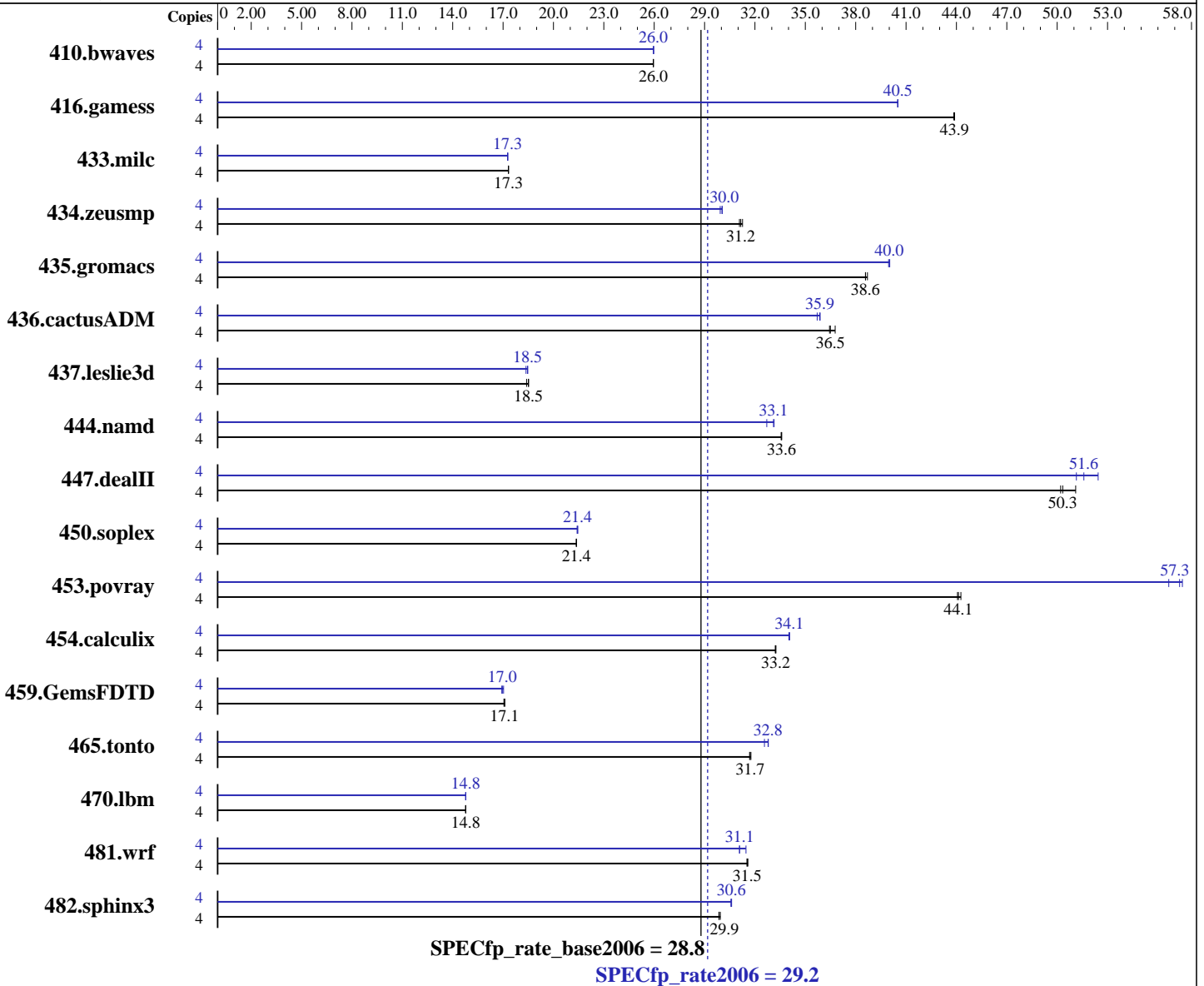|	
CPU2006 license: 20	**Test date:** May-2007
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L3 Cache:	None	File System:	ext2
Other Cache:	None	System State:	Multi-user run level 3
Memory:	24 GB (12x2 GB) FB-DIMM PC2-5300F ECC CL5	Base Pointers:	64-bit
Disk Subsystem:	1x73 GB SAS, 15000 RPM	Peak Pointers:	32/64-bit
Other Hardware:	None	Other Software:	None

Results Table

Benchmark	Base						Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	4	**2095**	**26.0**	2095	26.0	2095	25.9	4	2093	26.0	**2094**	**26.0**	2094	26.0
416.gamess	4	1785	43.9	1787	43.8	**1785**	**43.9**	4	1933	40.5	1934	40.5	**1933**	**40.5**
433.milc	4	2121	17.3	2120	17.3	**2120**	**17.3**	4	**2125**	**17.3**	2125	17.3	2127	17.3
434.zeusmp	4	1164	31.3	**1168**	**31.2**	1171	31.1	4	**1212**	**30.0**	1211	30.1	1216	29.9
435.gromacs	4	740	38.6	**740**	**38.6**	738	38.7	4	713	40.0	**714**	**40.0**	715	40.0
436.cactusADM	4	1312	36.4	**1310**	**36.5**	1300	36.8	4	**1333**	**35.9**	1339	35.7	1332	35.9
437.leslie3d	4	**2032**	**18.5**	2030	18.5	2044	18.4	4	2047	18.4	2036	18.5	**2037**	**18.5**
444.namd	4	**955**	**33.6**	955	33.6	956	33.6	4	968	33.1	981	32.7	**969**	**33.1**
447.dealII	4	**909**	**50.3**	911	50.2	895	51.1	4	895	51.1	**887**	**51.6**	873	52.4
450.soplex	4	1562	21.4	**1561**	**21.4**	1561	21.4	4	1558	21.4	**1556**	**21.4**	1556	21.4
453.povray	4	483	44.1	481	44.3	**482**	**44.1**	4	**371**	**57.3**	376	56.6	370	57.5
454.calculix	4	**993**	**33.2**	993	33.2	994	33.2	4	970	34.0	**969**	**34.1**	969	34.1
459.GemsFDTD	4	2482	17.1	2489	17.0	**2483**	**17.1**	4	**2503**	**17.0**	2492	17.0	2508	16.9
465.tonto	4	1239	31.8	**1241**	**31.7**	1242	31.7	4	1200	32.8	**1201**	**32.8**	1209	32.6
470.lbm	4	3719	14.8	3721	14.8	**3720**	**14.8**	4	**3719**	**14.8**	3721	14.8	3718	14.8
481.wrf	4	1415	31.6	**1417**	**31.5**	1417	31.5	4	1420	31.5	**1437**	**31.1**	1438	31.1
482.sphinx3	4	2611	29.9	2604	29.9	**2610**	**29.9**	4	2550	30.6	2547	30.6	**2548**	**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'
'/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 R460 model.
```

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Test date: May-2007
Hardware Availability: Mar-2007
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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
```

Bull SAS

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Test sponsor: Bull SAS		**Hardware Availability:**	Mar-2007
Tested by: Bull SAS		**Software Availability:**	Dec-2006

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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