SPEC® CFP2006 Result

Bull SAS
NovaScale R440
(Intel Xeon processor X5355, 2.66GHz)

<table>
<thead>
<tr>
<th>SPECfp®2006</th>
<th>= 14.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECfp_base2006</td>
<td>= 14.3</td>
</tr>
</tbody>
</table>

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

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

### 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

### Hardware
- CPU Name: Intel Xeon X5355
- CPU Characteristics: 2.66 GHz, 8 MB L2, 1333 MHz system bus
- CPU MHz: 2666
- 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

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>410.bwaves</td>
<td>18.0</td>
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<tr>
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<td>16.9</td>
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<td>433.milc</td>
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### Table Notes
- SPECfp_base2006 = 14.3
- SPECfp2006 = 14.5

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CPU2006 license: 20
Test sponsor: Bull SAS
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L3 Cache: None
Other Cache: None
Memory: 24 GB (12x2 GB) FB-DIMM PC2-5300F ECC CL5
Disk Subsystem: 1x73 GB SAS, 10000 RPM
Other Hardware: None

Results Table

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<tr>
<th>Benchmark</th>
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<th>Ratio</th>
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</table>

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.
## SPEC CFP2006 Result

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**SPECfp2006 =** 14.5  
**SPECfp_base2006 =** 14.3

### 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.gamess: `-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 other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.0.  