Bull SAS

NovaScale R480 (3.20 GHz, Intel Xeon 7130M)

SPECfp®_rate2006 = 49.6
SPECfp_rate_base2006 = 48.7

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

Test date: Mar-2007
Hardware Availability: Sep-2006
Software Availability: Nov-2006

Hardware

CPU Name: Intel Xeon 7130M
CPU Characteristics: 3.2GHz, 800MHz bus
CPU MHz: 3200
FPU: Integrated
CPU(s) enabled: 8 cores, 4 chips, 2 cores/chip
CPU(s) orderable: 1,2,4 chips
Primary Cache: 12 K micro-ops I + 16 KB D on chip per core
Secondary Cache: 1 MB I+D on chip per core

Software

Compiler: Intel C++ Compiler 9.1 for 32-bit
Auto Parallel: No
File System: NTFS
System State: Default

Software Availability: March 2007
Hardware Availability: September 2006
Software Availability: November 2006

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## SPEC CFP2006 Result

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| L3 Cache: | 8 MB I+D on chip per chip |
| Other Cache: | None |
| Memory: | 32 GB (667 MHz ECC CL5 DDR2 FB-DIMM) |
| Disk Subsystem: | 2x36GB SAS 15000 rpm |
| Other Hardware: | None |

**Base Pointers:** 32-bit

**Peak Pointers:** 32-bit

**Other Software:** MicroQuill SmartHeap Library 8.0 (shlW32M.lib)

### Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Copies</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Copies</th>
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<td>76.1</td>
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</table>

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

### General Notes

Other Configuration Notes

The NovaScale T880 and the NovaScale R480 models are electronically equivalent. The results have been measured on a NovaScale R480 model.

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Base Compiler Invocation

C benchmarks:
icl -Qvc7.1 -Qc99

C++ benchmarks:
icl -Qvc7.1

Fortran benchmarks:
ifort

Benchmarks using both Fortran and C:
icl -Qvc7.1 -Qc99 ifort

Base Portability Flags

436.cactusADM: -Qlowercase /assume:underscore
444.namd: -TP
447.dealII: -DDEAL_II_MEMBER_VAR_SPECIALIZATION_BUG
            -DBOOST_NO_INTRINSIC_WCHAR_T
453.povray: -DSPEC_CPU_WINDOWS_ICL
454.calculix: -DSPEC_CPU_NOZMODIFIER -Qlowercase
            481.wrf: -DSPEC_CPU_WINDOWS_ICL

Base Optimization Flags

C benchmarks:
-fast /F9500000000 shlw32m.lib
-link /FORCE:MULTIPLE

C++ benchmarks:
-fast -Qcxx_features /F9500000000 shlw32m.lib
-link /FORCE:MULTIPLE

Fortran benchmarks:
-fast /F9500000000
-link /FORCE:MULTIPLE

Benchmarks using both Fortran and C:
-fast /F9500000000
-link /FORCE:MULTIPLE

Peak Compiler Invocation

C benchmarks:
icl -Qvc7.1 -Qc99

C++ benchmarks:
icl -Qvc7.1
Peak Compiler Invocation (Continued)

Fortran benchmarks:
  ifort

Benchmarks using both Fortran and C:
  icl -Qvc7.1 -Qc99 ifort

Peak Portability Flags

436.cactusADM: -Qlowercase /assume:underscore
  444.namd: -TP
  447.dealII: -DDEAL_II_MEMBER_VAR_SPECIALIZATION_BUG -DBOOST_NO_INTRINSIC_WCHAR_T
  453.povray: -DSPEC_CPU_WINDOWS_ICL
  454.calculix: -DSPEC_CPU_NOZMODIFIER -Qlowercase
  481.wrf: -DSPEC_CPU_WINDOWS_ICL

Peak Optimization Flags

C benchmarks:
  -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast /F9500000000 shlw32m.lib
    -link /FORCE:MULTIPLE

C++ benchmarks:
  -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qcxx_features
    /F9500000000 shlw32m.lib
    -link /FORCE:MULTIPLE

Fortran benchmarks:

410.bwaves: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast /F9500000000
    -link /FORCE:MULTIPLE

416.gamess: basepeak = yes

434.zeusmp: Same as 410.bwaves

437.leslie3d: Same as 410.bwaves

459.GemsFDTD: Same as 410.bwaves

465.tonto: Same as 410.bwaves

Benchmarks using both Fortran and C:

435.gromacs: basepeak = yes

Continued on next page
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**Peak Optimization Flags (Continued)**

- **436.cactusADM**: `-Qprof_gen(pass 1) -Qprof_use(pass 2) -fast /F950000000 -link /FORCE:MULTIPLE`
- **454.calculix**: Same as 436.cactusADM
- **481.wrf**: `basepeak = yes`

---

The flags file that was used to format this result can be browsed at

[http://www.spec.org/cpu2006/flags/flags.20090714.00.html](http://www.spec.org/cpu2006/flags/flags.20090714.00.html)

You can also download the XML flags source by saving the following link:

[http://www.spec.org/cpu2006/flags/flags.20090714.00.xml](http://www.spec.org/cpu2006/flags/flags.20090714.00.xml)

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