



SPEC[®] CFP2006 Result

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Bull SAS

NovaScale R460
(Intel Xeon processor E5320,1.86GHz)

SPECfp[®]2006 = 12.4

SPECfp_base2006 = 12.0

CPU2006 license: 20

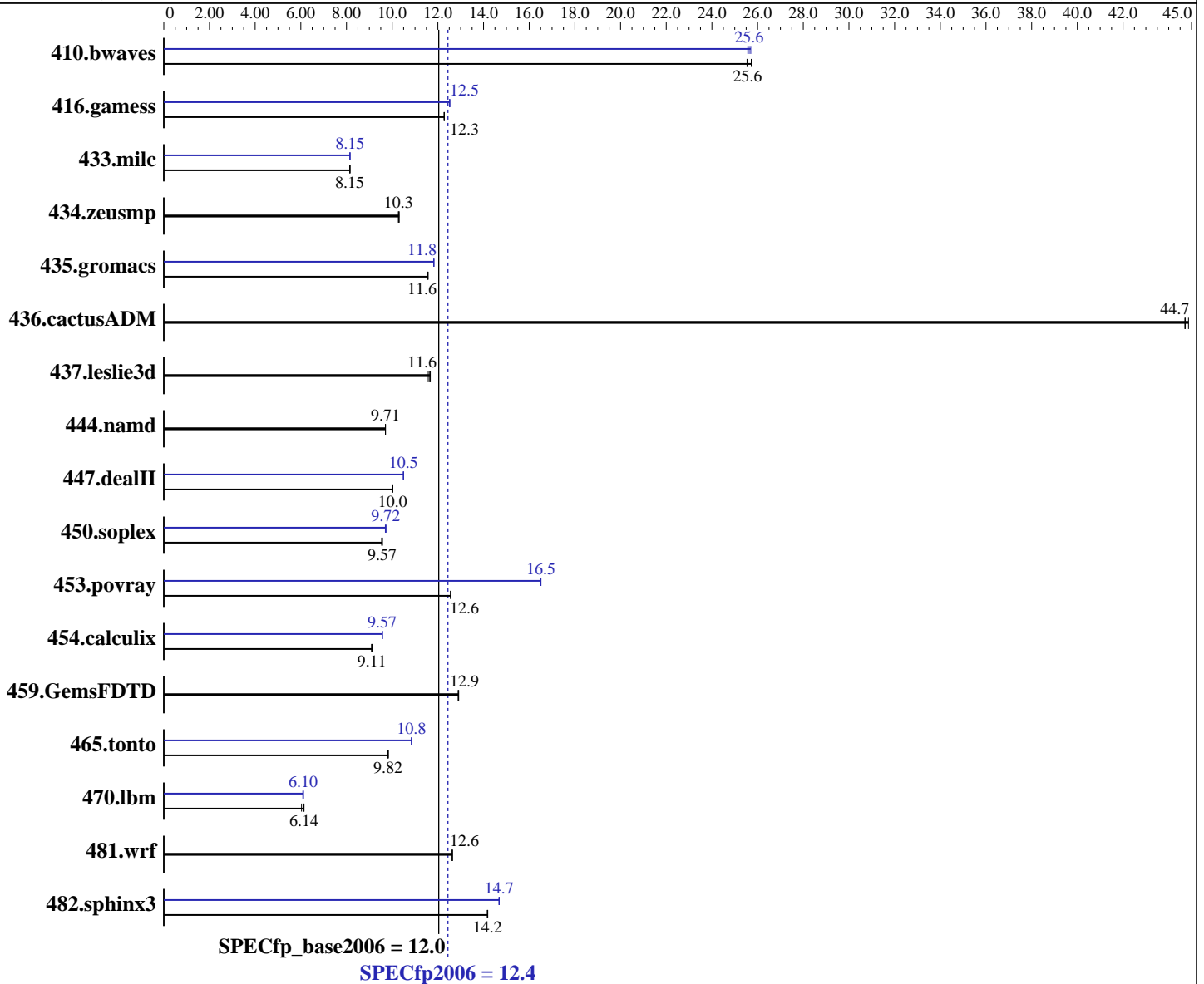
Test sponsor: Bull SAS

Tested by: Bull SAS

Test date: Jul-2007

Hardware Availability: Feb-2007

Software Availability: Dec-2006



Hardware

CPU Name: Intel Xeon E5320
 CPU Characteristics: 1.86 GHz, 8 MB L2, 1066 MHz system bus
 CPU MHz: 1860
 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: Windows Server 2003 Enterprise Edition X64 Edition Service Pack 1
 Compiler: Intel C++ Compiler for EM64T version 9.1
 Package ID W_CC_C_9.1.033 Build no 20061104
 Intel Fortran Compiler for EM64T version 9.1
 Package ID W_FC_C_9.1.033 Build no 20061104
 Microsoft Visual Studio 2005 (lib & linker)
 Auto Parallel: Yes
 File System: NTFS
 System State: Default

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L3 Cache: None
Other Cache: None
Memory: 12 GB (12x1 GB) FB-DIMM PC2-4200F ECC CL4
Disk Subsystem: 1x73 GB SAS, 15000 RPM
Other Hardware: None

Base Pointers: 64-bit
Peak Pointers: 64-bit
Other Software: None

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	528	25.7	532	25.6	532	25.5	530	25.6	531	25.6	529	25.7
416.gamess	1594	12.3	1594	12.3	1595	12.3	1564	12.5	1564	12.5	1564	12.5
433.milc	1127	8.15	1128	8.14	1125	8.16	1126	8.16	1126	8.15	1127	8.15
434.zeusmp	886	10.3	885	10.3	883	10.3	886	10.3	885	10.3	883	10.3
435.gromacs	617	11.6	618	11.6	618	11.5	604	11.8	604	11.8	604	11.8
436.cactusADM	267	44.7	267	44.7	266	44.9	267	44.7	267	44.7	266	44.9
437.leslie3d	805	11.7	807	11.6	812	11.6	805	11.7	807	11.6	812	11.6
444.namd	826	9.71	826	9.71	826	9.71	826	9.71	826	9.71	826	9.71
447.dealII	1141	10.0	1141	10.0	1141	10.0	1090	10.5	1090	10.5	1090	10.5
450.soplex	874	9.54	872	9.57	871	9.57	860	9.70	858	9.72	858	9.73
453.povray	424	12.6	423	12.6	423	12.6	322	16.5	322	16.5	322	16.5
454.calculix	907	9.10	905	9.12	906	9.11	862	9.57	862	9.57	862	9.57
459.GemsFDTD	823	12.9	822	12.9	823	12.9	823	12.9	822	12.9	823	12.9
465.tonto	1001	9.83	1002	9.82	1003	9.81	907	10.8	907	10.8	907	10.8
470.lbm	2278	6.03	2239	6.14	2238	6.14	2257	6.09	2251	6.10	2247	6.12
481.wrf	884	12.6	885	12.6	884	12.6	884	12.6	885	12.6	884	12.6
482.sphinx3	1376	14.2	1374	14.2	1375	14.2	1328	14.7	1327	14.7	1328	14.7

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

General Notes

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

Base Compiler Invocation

C benchmarks:
icl -Qvc8 -Qc99

C++ benchmarks:
icl -Qvc8

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Base Compiler Invocation (Continued)

Fortran benchmarks:
ifort

Benchmarks using both Fortran and C:
icl -Qvc8 -Qc99 ifort

Base Portability Flags

410.bwaves: -DSPEC_CPU_P64
416.gamess: -DSPEC_CPU_P64
433.milc: -D_Complex= -DSPEC_CPU_P64
434.zeusmp: -DSPEC_CPU_P64
435.gromacs: -D_Complex= -DSPEC_CPU_P64
436.cactusADM: -D_Complex= -DSPEC_CPU_P64 -Qlowercase /assume:underscore
437.leslie3d: -DSPEC_CPU_P64
444.namd: -DSPEC_CPU_P64 /TP
447.dealII: -D_Complex= -DSPEC_CPU_P64 -DBOOST_NO_INTRINSIC_WCHAR_T
-DDEAL_II_MEMBER_VAR_SPECIALIZATION_BUG
450.soplex: -DSPEC_CPU_P64
453.povray: -DSPEC_CPU_P64 -DSPEC_CPU_WINDOWS_ICL
454.calculix: -D_Complex= -DSPEC_CPU_P64 -DSPEC_CPU_NOZMODIFIER
-Qlowercase
459.GemsFDTD: -DSPEC_CPU_P64
465.tonto: -DSPEC_CPU_P64
470.lbm: -D_Complex= -DSPEC_CPU_P64
481.wrf: -DSPEC_CPU_P64 -DSPEC_CPU_WINDOWS_ICL
482.sphinx3: -D_Complex= -DSPEC_CPU_P64

Base Optimization Flags

C benchmarks:
-fast -Qparallel

C++ benchmarks:
-fast -Qparallel -Qcxx-features

Fortran benchmarks:
-fast -Qparallel

Benchmarks using both Fortran and C:
-fast -Qparallel



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Base Other Flags

C benchmarks:
-F950000000

C++ benchmarks:
-F950000000

Fortran benchmarks:
-F950000000

Benchmarks using both Fortran and C:
-F950000000

Peak Compiler Invocation

C benchmarks:
icl -Qvc8 -Qc99

C++ benchmarks:
icl -Qvc8

Fortran benchmarks:
ifort

Benchmarks using both Fortran and C:
icl -Qvc8 -Qc99 ifort

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:
-Qprof_gen(pass 1) -Qprof_use(pass 2) -fast

C++ benchmarks:

444.namd: basepeak = yes

447.dealII: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qcxx-features

450.soplex: Same as 447.dealII

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Peak Optimization Flags (Continued)

453.povray: Same as 447.dealII

Fortran benchmarks:

410.bwaves: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qparallel

416.gamess: -fast

434.zeusmp: basepeak = yes

437.leslie3d: basepeak = yes

459.GemsFDTD: basepeak = yes

465.tonto: Same as 410.bwaves

Benchmarks using both Fortran and C:

435.gromacs: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast

436.cactusADM: basepeak = yes

454.calculix: Same as 435.gromacs

481.wrf: basepeak = yes

Peak Other Flags

C benchmarks:
-F950000000

C++ benchmarks:
-F950000000

Fortran benchmarks:
-F950000000

Benchmarks using both Fortran and C:
-F950000000

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

<http://www.spec.org/cpu2006/flags/flags.html>

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

<http://www.spec.org/cpu2006/flags/flags.xml>



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