SPEC® CFP2006 Result

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Bull SAS

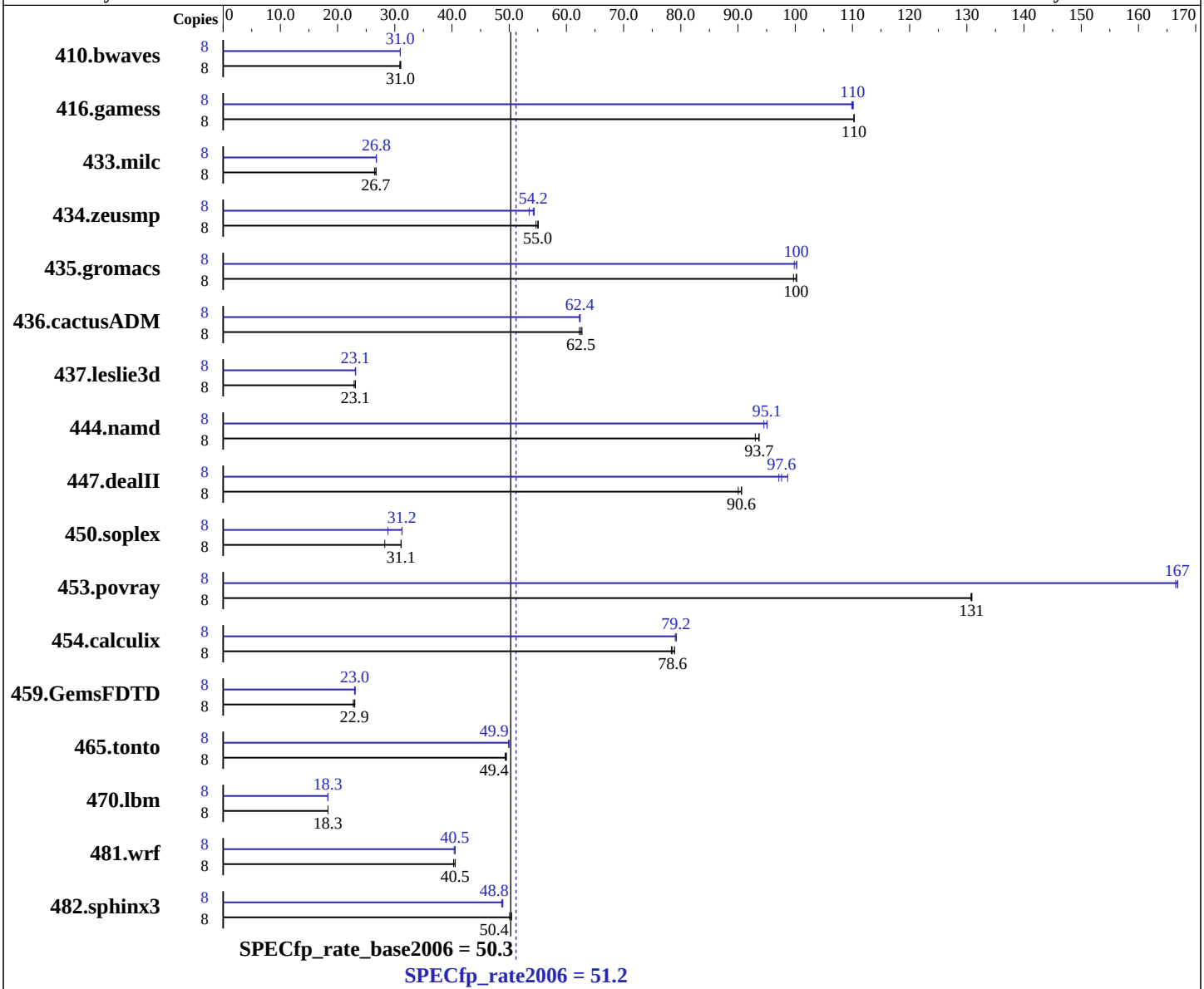
NovaScale T840
(Intel Xeon processor E5345,2.33GHz)

SPECfp®_rate2006 = 51.2

SPECfp_rate_base2006 = 50.3

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

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



Hardware

CPU Name:	Intel Xeon E5345
CPU Characteristics:	2.33 GHz, 8 MB L2, 1333 MHz 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

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Software

Operating System:	Windows Server 2003 Enterprise X64 Edition
Compiler:	Intel C++ Compiler 9.1.037 for 32-bit apps. Build 20070322Z Package ID: W_CC_C_9.1.037 Intel Fortran Compiler 9.1.037 for 32-bit app. Build 20070322Z Package ID: W_FC_C_9.1.037 Microsoft Visual Studio .NET 2003 (libraries)
Auto Parallel:	No
File System:	NTFS
System State:	Default

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L3 Cache: None
Other Cache: None
Memory: 16 GB (2x8 GB) FB-DIMM PC2-5300F ECC CL5
Disk Subsystem: 3x73 GB SCSI, 15000 RPM
Other Hardware: None

Base Pointers: 32-bit
Peak Pointers: 32-bit
Other Software: MicroQuill SmartHeap Library 8.0 (shlW32M.lib)

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	8	3521	30.9	**3505**	**31.0**	3503	31.0	8	3512	31.0	3509	31.0	**3512**	**31.0**
416.gamess	8	1421	110	**1420**	**110**	1420	110	8	1426	110	**1423**	**110**	1422	110
433.milc	8	2776	26.5	**2751**	**26.7**	2747	26.7	8	2744	26.8	**2743**	**26.8**	2741	26.8
434.zeusmp	8	**1323**	**55.0**	1322	55.1	1331	54.7	8	1339	54.4	1361	53.5	**1343**	**54.2**
435.gromacs	8	573	99.7	570	100	**570**	**100**	8	572	99.8	570	100	**570**	**100**
436.cactusADM	8	1535	62.3	**1528**	**62.5**	1524	62.7	8	1535	62.3	1532	62.4	**1533**	**62.4**
437.leslie3d	8	3284	22.9	3252	23.1	**3254**	**23.1**	8	**3252**	**23.1**	3254	23.1	3246	23.2
444.namd	8	690	93.0	**685**	**93.7**	685	93.7	8	679	94.5	**675**	**95.1**	675	95.1
447.dealII	8	**1010**	**90.6**	1010	90.6	1016	90.0	8	**938**	**97.6**	942	97.1	927	98.7
450.soplex	8	2362	28.2	2143	31.1	**2147**	**31.1**	8	2315	28.8	**2135**	**31.2**	2133	31.3
453.povray	8	326	131	325	131	**325**	**131**	8	256	166	**255**	**167**	255	167
454.calculix	8	836	78.9	842	78.3	**840**	**78.6**	8	835	79.0	**834**	**79.2**	833	79.2
459.GemsFDTD	8	3687	23.0	**3700**	**22.9**	3731	22.8	8	3675	23.1	3695	23.0	**3693**	**23.0**
465.tonto	8	**1593**	**49.4**	1589	49.5	1596	49.3	8	**1576**	**49.9**	1576	50.0	1577	49.9
470.lbm	8	**5997**	**18.3**	5996	18.3	5998	18.3	8	5999	18.3	6002	18.3	**6000**	**18.3**
481.wrf	8	2219	40.3	**2205**	**40.5**	2203	40.6	8	2213	40.4	**2206**	**40.5**	2202	40.6
482.sphinx3	8	3114	50.1	**3096**	**50.4**	3094	50.4	8	3203	48.7	3189	48.9	**3192**	**48.8**

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

General Notes

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 /F950000000 shlw32m.lib            -link /FORCE:MULTIPLE
```

C++ benchmarks:
```
-fast -Qcxx_features /F950000000 shlw32m.lib
           -link /FORCE:MULTIPLE
```

Fortran benchmarks:
```
-fast /F950000000           -link /FORCE:MULTIPLE
```

Benchmarks using both Fortran and C:
```
-fast /F950000000           -link /FORCE:MULTIPLE
```

Peak Compiler Invocation

C benchmarks:
```
icl -Qvc7.1 -Qc99
```

C++ benchmarks:
```
icl -Qvc7.1
```

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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 /F950000000 shlw32m.lib
-link /FORCE:MULTIPLE

C++ benchmarks:
-Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qcxx_features
/F950000000 shlw32m.lib -link /FORCE:MULTIPLE

Fortran benchmarks:

410.bwaves: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast /F950000000
-link /FORCE:MULTIPLE

416.gamess: -fast /F950000000 -link /FORCE:MULTIPLE

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: -fast /F950000000 -link /FORCE:MULTIPLE

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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: `Same as 435.gromacs`

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

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Tested with SPEC CPU2006 v1.0.
Report generated on Tue Jul 22 11:19:20 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 26 June 2007.