SPEC® CFP2006 Result

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Dell Inc.

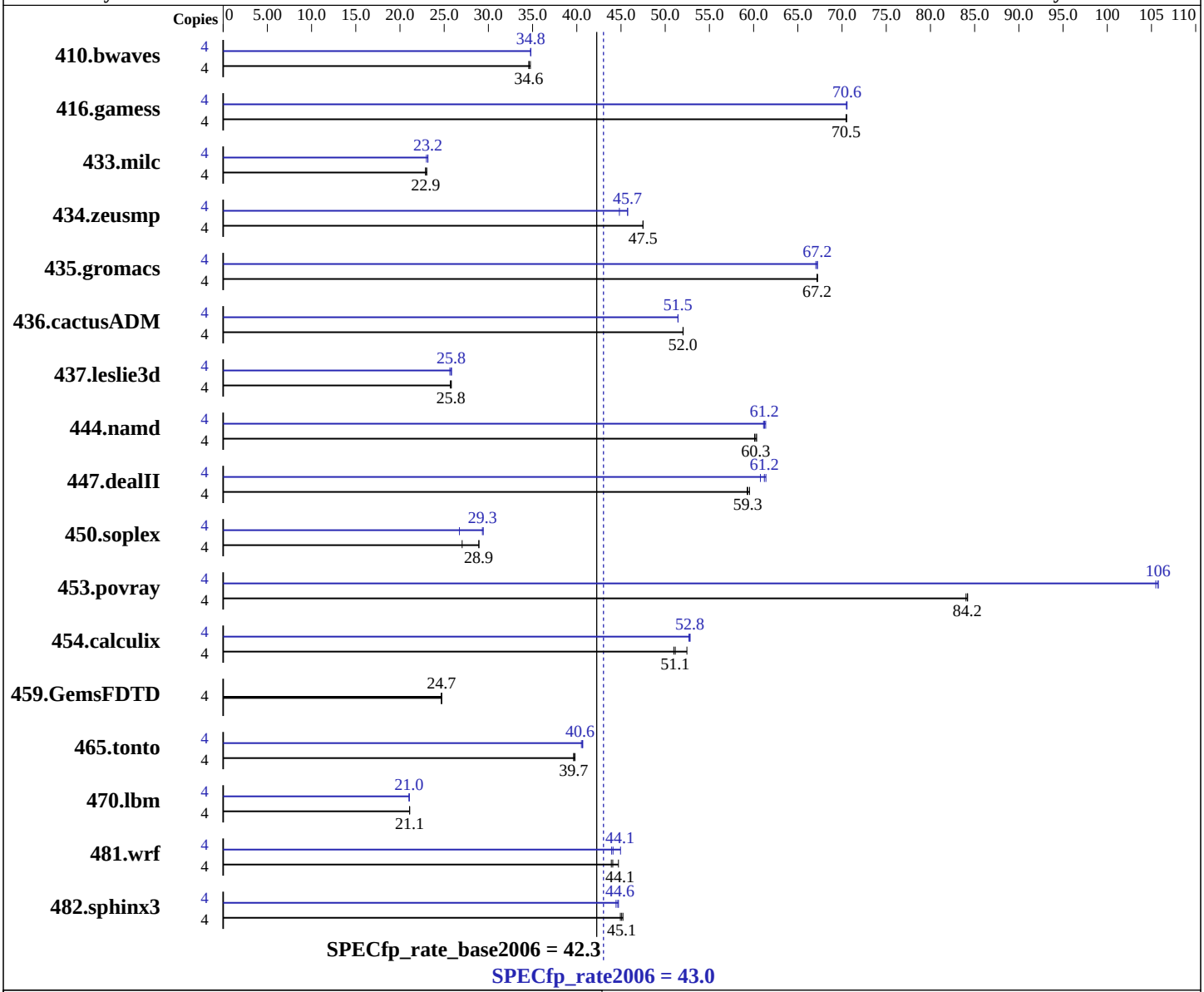
Dell Precision 690 (Intel Xeon 5160, 3.00 GHz)

SPECfp®_rate2006 = 43.0

SPECfp_rate_base2006 = 42.3

CPU2006 license: 55
Test sponsor: Dell Inc.
Tested by: Dell Inc.

Test date: Jan-2007
Hardware Availability: May-2006
Software Availability: Jan-2007



Hardware

CPU Name:	Intel Xeon 5160
CPU Characteristics:	1333 MHz Bus Speed
CPU MHz:	3000
FPU:	Integrated
CPU(s) enabled:	4 cores, 2 chips, 2 cores/chip
CPU(s) orderable:	1,2 chips
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	4 MB I+D on chip per chip

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Software

Operating System:	Windows XP Professional x64 Edition
Compiler:	Intel C++ Compiler 9.1 for IA32 (20061103Z) Intel FORTRAN Compiler 9.1 for IA32 (20061103Z) Microsoft Visual Studio 2005
Auto Parallel:	No
File System:	NTFS
System State:	Default
Base Pointers:	32-bit
Peak Pointers:	32-bit

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L3 Cache: None
Other Cache: None
Memory: 8 GB (8x1 GB 667 MHz ECC CL5 DDR2 FB-DIMM)
Disk Subsystem: 1 x 72 GB SAS 10K RPM
Other Hardware: None

Other Software: MicroQuill SmartHeap Library 8.0

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	4	1572	34.6	1564	34.8	**1572**	**34.6**	4	**1562**	**34.8**	1563	34.8	1562	34.8
416.gamess	4	**1111**	**70.5**	1111	70.5	1110	70.5	4	1111	70.5	1110	70.6	**1110**	**70.6**
433.milc	4	1594	23.0	1604	22.9	**1602**	**22.9**	4	**1586**	**23.2**	1586	23.2	1597	23.0
434.zeusmp	4	767	47.5	766	47.5	**766**	**47.5**	4	812	44.8	**796**	**45.7**	796	45.7
435.gromacs	4	**425**	**67.2**	425	67.2	425	67.2	4	426	67.0	425	67.2	**425**	**67.2**
436.cactusADM	4	**919**	**52.0**	919	52.0	919	52.0	4	929	51.5	**929**	**51.5**	929	51.4
437.leslie3d	4	**1459**	**25.8**	1463	25.7	1457	25.8	4	**1457**	**25.8**	1456	25.8	1466	25.6
444.namd	4	534	60.1	**532**	**60.3**	532	60.3	4	525	61.1	**524**	**61.2**	523	61.4
447.dealII	4	772	59.3	769	59.5	**771**	**59.3**	4	**748**	**61.2**	753	60.8	745	61.4
450.soplex	4	1234	27.0	1153	28.9	**1154**	**28.9**	4	1248	26.7	**1138**	**29.3**	1134	29.4
453.povray	4	253	84.0	**253**	**84.2**	253	84.2	4	202	105	**201**	**106**	201	106
454.calculix	4	629	52.5	**645**	**51.1**	647	51.0	4	626	52.7	**625**	**52.8**	625	52.8
459.GemsFDTD	4	1717	24.7	**1719**	**24.7**	1719	24.7	4	1717	24.7	**1719**	**24.7**	1719	24.7
465.tonto	4	**992**	**39.7**	993	39.6	989	39.8	4	968	40.7	**968**	**40.6**	971	40.5
470.lbm	4	2607	21.1	**2606**	**21.1**	2606	21.1	4	2611	21.0	2613	21.0	**2612**	**21.0**
481.wrf	4	999	44.7	**1014**	**44.1**	1018	43.9	4	994	44.9	1017	43.9	**1013**	**44.1**
482.sphinx3	4	1735	44.9	1724	45.2	**1730**	**45.1**	4	1754	44.4	**1746**	**44.6**	1743	44.7

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

General Notes

```
BIOS Settings
  Adjacent Cache Line Prefetch set to ON
    Prefetch data in order to shorten execution cycles
    and maximize data processing efficiency.

  Optimization for high-frequency FSB applicatons set to ON

32-bit binaries were built on Windows XP Professional x64 Edition
```

Base Compiler Invocation

C benchmarks:
```
icl -Qc99
```

C++ benchmarks:
```
icl
```

Fortran benchmarks:
```
ifort
```

Benchmarks using both Fortran and C:
```
icl -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 /F512000000 shlW32M.lib            -link /FORCE:MULTIPLE
```

C++ benchmarks:
```
-fast -Qcxx_features /F512000000 shlW32M.lib
            -link /FORCE:MULTIPLE
```

Fortran benchmarks:
```
-fast /F1000000000           -link /FORCE:MULTIPLE
```

Benchmarks using both Fortran and C:
```
-fast /F1000000000           -link /FORCE:MULTIPLE
```

Peak Compiler Invocation

C benchmarks:
```
icl -Qc99
```

C++ benchmarks:
```
icl
```

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Peak Compiler Invocation (Continued)

Fortran benchmarks:
ifort

Benchmarks using both Fortran and C:
icl -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:
ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast /F512000000 shlW32M.lib -link /FORCE:MULTIPLE

C++ benchmarks:
ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qcxx_features /F512000000 shlW32M.lib -link /FORCE:MULTIPLE

Fortran benchmarks:

410.bwaves: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast /F1000000000 -link /FORCE:MULTIPLE

416.gamess: ONESTEP -fast /F1000000000 -link /FORCE:MULTIPLE

434.zeusmp: Same as 410.bwaves

437.leslie3d: Same as 410.bwaves

459.GemsFDTD: basepeak = yes

465.tonto: Same as 410.bwaves

Benchmarks using both Fortran and C:

435.gromacs: -fast /F1000000000 -link /FORCE:MULTIPLE

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Peak Optimization Flags (Continued)

436.cactusADM: `-Qprof_gen`(pass 1) `-Qprof_use`(pass 2) `-fast /F1000000000 -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/dell.cpu2006.ic91.flags.20090715.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/dell.cpu2006.ic91.flags.20090715.xml`

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For other inquiries, please contact webmaster@spec.org.

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