SPEC® CFP2006 Result

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Dell Inc.

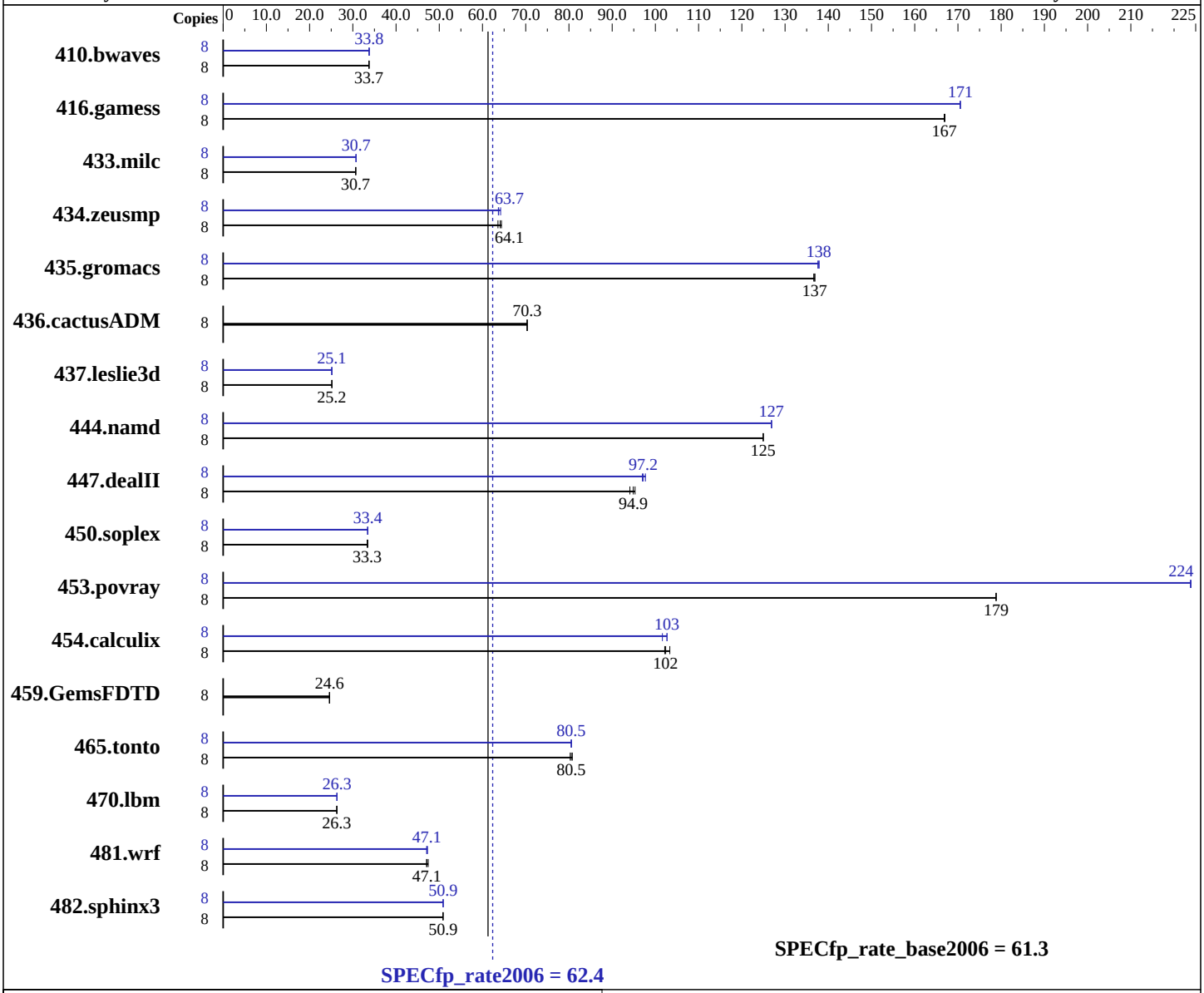
Dell Precision 690 (Intel Xeon X5365, 3.00 GHz)

SPECfp®_rate2006 = 62.4

SPECfp_rate_base2006 = 61.3

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

Test date: Aug-2007
Hardware Availability: Aug-2007
Software Availability: Jun-2007



Hardware

CPU Name:	Intel Xeon X5365
CPU Characteristics:	1333 MHz Bus Speed
CPU MHz:	3000
FPU:	Integrated
CPU(s) enabled:	8 cores, 2 chips, 4 cores/chip
CPU(s) orderable:	1,2 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 XP Professional x64 Edition SP2
Compiler:	Intel C++ Compiler for Intel 64, Version 10.0 Build 20070426 Package ID: W_CC_P_10.0.025 Intel Visual Fortran Compiler for Intel 64, Version 10.0 Build 20070426 Package ID: W_FC_P_10.0.025 Microsoft Visual Studio 2005 SP1
Auto Parallel:	No
File System:	NTFS

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L3 Cache: None
Other Cache: None
Memory: 16 GB (8x2 GB 667 MHz ECC CL5 FB-DIMM)
Disk Subsystem: 1 x 73GB SAS 10K RPM
Other Hardware: None

System State: Default
Base Pointers: 32/64-bit
Peak Pointers: 32/64-bit
Other Software: MicroQuill SmartHeap Library 8.0 for x64

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	8	3218	33.8	**3222**	**33.7**	3226	33.7	8	3214	33.8	**3221**	**33.8**	3222	33.7
416.gamess	8	**939**	**167**	939	167	938	167	8	919	170	918	171	**918**	**171**
433.milc	8	2393	30.7	2396	30.7	**2395**	**30.7**	8	2389	30.7	**2389**	**30.7**	2389	30.7
434.zeusmp	8	1131	64.4	**1136**	**64.1**	1145	63.6	8	**1142**	**63.7**	1143	63.7	1134	64.2
435.gromacs	8	418	137	417	137	**417**	**137**	8	414	138	415	138	**415**	**138**
436.cactusADM	8	1359	70.3	1359	70.3	**1359**	**70.3**	8	1359	70.3	1359	70.3	**1359**	**70.3**
437.leslie3d	8	2988	25.2	**2990**	**25.2**	2991	25.1	8	**2991**	**25.1**	2989	25.2	2993	25.1
444.namd	8	513	125	**514**	**125**	514	125	8	**506**	**127**	506	127	506	127
447.dealII	8	**965**	**94.9**	960	95.3	973	94.1	8	**941**	**97.2**	944	97.0	937	97.7
450.soplex	8	1994	33.5	**2001**	**33.3**	2002	33.3	8	1997	33.4	1994	33.5	**1996**	**33.4**
453.povray	8	238	179	**238**	**179**	238	179	8	190	224	**190**	**224**	190	224
454.calculix	8	639	103	**645**	**102**	646	102	8	649	102	**643**	**103**	643	103
459.GemsFDTD	8	3451	24.6	**3450**	**24.6**	3447	24.6	8	3451	24.6	**3450**	**24.6**	3447	24.6
465.tonto	8	980	80.3	**977**	**80.5**	974	80.8	8	977	80.6	978	80.5	**978**	**80.5**
470.lbm	8	**4181**	**26.3**	4174	26.3	4183	26.3	8	**4175**	**26.3**	4176	26.3	4175	26.3
481.wrf	8	1883	47.4	**1896**	**47.1**	1899	47.1	8	1890	47.3	**1897**	**47.1**	1897	47.1
482.sphinx3	8	3067	50.8	**3065**	**50.9**	3063	50.9	8	3063	50.9	**3063**	**50.9**	3064	50.9

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

General Notes

```
Binaries were built on Windows Vista Ultimate (64-bit)

BIOS Settings
  Snoop Filter                  : OFF
  Adjacent Cache Line Prefetch  : OFF
  Hardware Prefetcher           : OFF

  Snoop Filter
    Preserves cache coherency while minimizing snoops
    to remote nodes.

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

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General Notes (Continued)

```
    Optimization for high-frequency FSB applicatons: ON
```

Base Compiler Invocation

C benchmarks:
```
icl -Qstd=c99
```

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

Fortran benchmarks:
```
ifort
```

Benchmarks using both Fortran and C:
```
icl -Qstd=c99 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 -Qauto_ilp32 /F950000000 shlW64M.lib
                -link /FORCE:MULTIPLE
```

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Base Optimization Flags (Continued)

C++ benchmarks:
```
-fast -Qcxx_features -Qauto_ilp32 /F950000000 shlW64M.lib
            -link /FORCE:MULTIPLE
```

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

Benchmarks using both Fortran and C:
```
-fast -Qauto_ilp32 /F950000000            -link /FORCE:MULTIPLE
```

Peak Compiler Invocation

C benchmarks:
```
icl -Qstd=c99
```

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

Fortran benchmarks:
```
ifort
```

Benchmarks using both Fortran and C:
```
icl -Qstd=c99 ifort
```

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:

433.milc: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast
-Qunroll2 -Oa -Qauto_ilp32 /F950000000 shlW64M.lib
-link /FORCE:MULTIPLE

470.lbm: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast
-Qunroll2 -Qscalar-rep- -Qprefetch -Qauto_ilp32
/F950000000 shlW64M.lib -link /FORCE:MULTIPLE

482.sphinx3: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast
-Qunroll2 -Qauto_ilp32 /F950000000 shlW64M.lib
-link /FORCE:MULTIPLE

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Peak Optimization Flags (Continued)

C++ benchmarks:

444.namd: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Oa -Qcxx_features -Qauto_ilp32 /F950000000 shlW64M.lib -link /FORCE:MULTIPLE

447.dealII: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qprefetch -Qcxx_features -Qauto_ilp32 /F950000000 shlW64M.lib -link /FORCE:MULTIPLE

450.soplex: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qcxx_features -Qauto_ilp32 /F950000000 shlW64M.lib -link /FORCE:MULTIPLE

453.povray: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qansi-alias -Qcxx_features -Qauto_ilp32 /F950000000 shlW64M.lib -link /FORCE:MULTIPLE

Fortran benchmarks:

410.bwaves: ONESTEP -fast /F950000000 -link /FORCE:MULTIPLE

416.gamess: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qunroll2 -Ob0 -Qansi-alias -Qscalar-rep- /F950000000 -link /FORCE:MULTIPLE

434.zeusmp: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -QxT -O2 -Qprec-div- -Qunroll0 -Qscalar-rep- /F950000000 -link /FORCE:MULTIPLE

437.leslie3d: ONESTEP -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast /F950000000 -link /FORCE:MULTIPLE

459.GemsFDTD: basepeak = yes

465.tonto: Same as 437.leslie3d

Benchmarks using both Fortran and C:

435.gromacs: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Oa -Qauto_ilp32 /F950000000 -link /FORCE:MULTIPLE

436.cactusADM: basepeak = yes

454.calculix: -fast -Qauto_ilp32 /F950000000 -link /FORCE:MULTIPLE

481.wrf: Same as 454.calculix

The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/dell.ic10.windows.flags.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/dell.ic10.windows.flags.xml

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For questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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