



SPEC® CFP2006 Result

Copyright 2006-2014 Standard Performance Evaluation Corporation

Dell Inc.

SPECfp®2006 = 22.1

Dell Precision T7400 (Intel Xeon X5482, 3.20 GHz)

SPECfp_base2006 = 20.1

CPU2006 license: 55

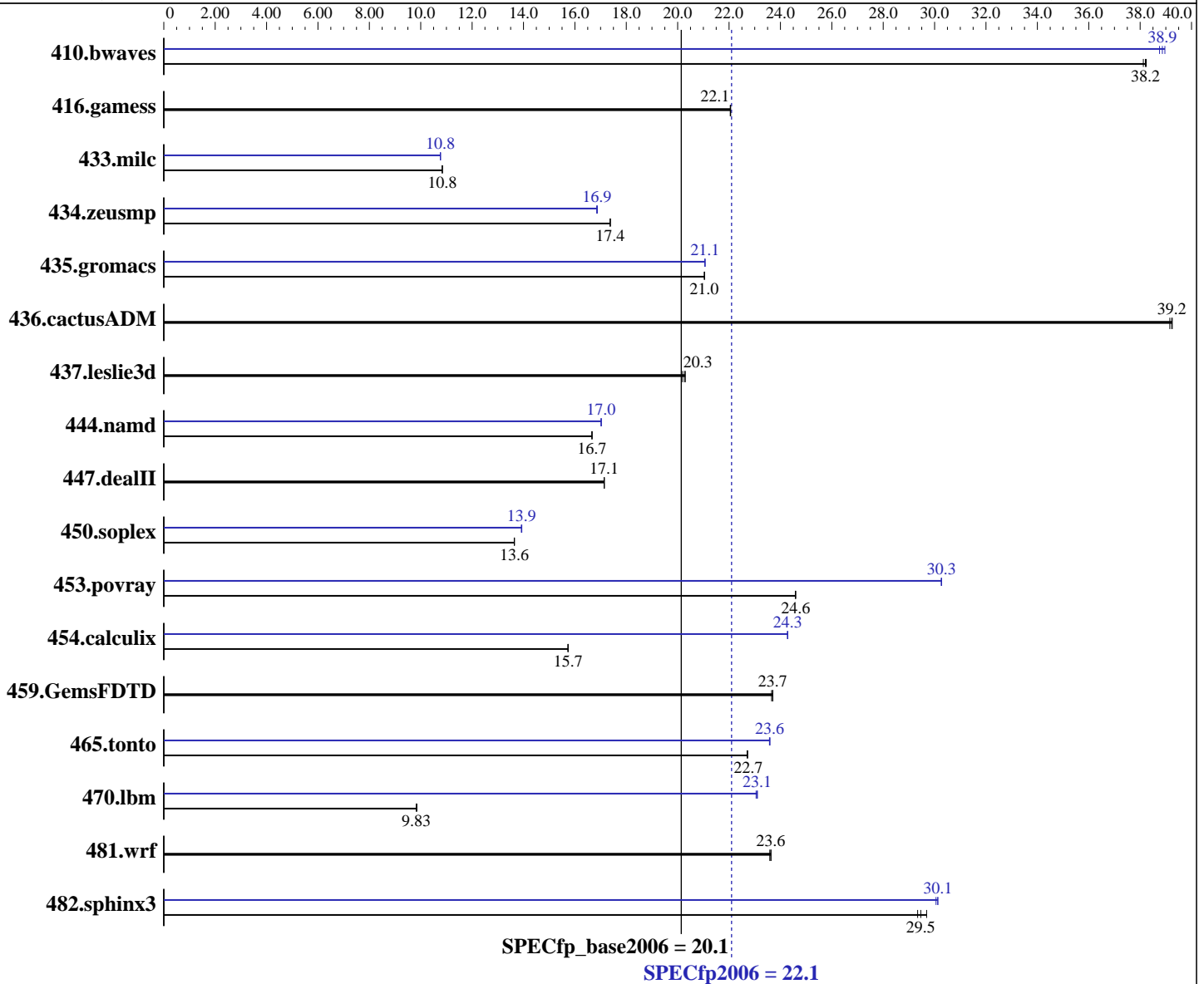
Test date: Apr-2008

Test sponsor: Dell Inc.

Hardware Availability: Jan-2008

Tested by: Dell Inc.

Software Availability: Mar-2008



Hardware

CPU Name: Intel Xeon X5482
 CPU Characteristics: 1600 MHz Bus Speed
 CPU MHz: 3200
 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: 12 MB I+D on chip per chip, 6 MB shared / 2 cores

Continued on next page

Software

Operating System: Windows Vista Ultimate (64-bit)
 Compiler: Intel C++ Compiler for Intel 64, Version 10.1
 Build 20080312 Package ID: w_cc_p_10.1.021
 Intel Visual Fortran Compiler for Intel 64, Version 10.0
 Build 20080312 Package ID: w_fc_p_10.1.021
 Microsoft Visual Studio 2005 SP1

Auto Parallel: Yes
File System: NTFS

Continued on next page



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L3 Cache: None
 Other Cache: None
 Memory: 16 GB (8x2 GB 800 MHz CL5 FB-DIMM)
 Disk Subsystem: 1 x 160 GB SATA 7200 RPM
 Other Hardware: None

System State: Default
 Base Pointers: 32/64-bit
 Peak Pointers: 32/64-bit
 Other Software: MicroQuill SmartHeap Library 8.1 for x64

Results Table

| Benchmark | Base | | | | | | Peak | | | | | |
|---------------|------------|-------------|-------------|-------------|------------|-------------|------------|-------------|------------|-------------|------------|-------------|
| | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio | Seconds | Ratio |
| 410.bwaves | 356 | 38.2 | 355 | 38.2 | 356 | 38.1 | 351 | 38.8 | 349 | 39.0 | 350 | 38.9 |
| 416.gamess | 887 | 22.1 | 888 | 22.1 | 888 | 22.0 | 887 | 22.1 | 888 | 22.1 | 888 | 22.0 |
| 433.milc | 847 | 10.8 | 847 | 10.8 | 847 | 10.8 | 853 | 10.8 | 852 | 10.8 | 853 | 10.8 |
| 434.zeusmp | 524 | 17.4 | 524 | 17.4 | 524 | 17.4 | 539 | 16.9 | 540 | 16.9 | 540 | 16.9 |
| 435.gromacs | 339 | 21.0 | 339 | 21.0 | 339 | 21.0 | 339 | 21.1 | 339 | 21.1 | 339 | 21.1 |
| 436.cactusADM | 304 | 39.3 | 305 | 39.2 | 305 | 39.2 | 304 | 39.3 | 305 | 39.2 | 305 | 39.2 |
| 437.leslie3d | 463 | 20.3 | 466 | 20.2 | 464 | 20.3 | 463 | 20.3 | 466 | 20.2 | 464 | 20.3 |
| 444.namd | 481 | 16.7 | 481 | 16.7 | 481 | 16.7 | 471 | 17.0 | 471 | 17.0 | 471 | 17.0 |
| 447.dealII | 668 | 17.1 | 667 | 17.2 | 668 | 17.1 | 668 | 17.1 | 667 | 17.2 | 668 | 17.1 |
| 450.soplex | 611 | 13.6 | 611 | 13.6 | 611 | 13.6 | 599 | 13.9 | 599 | 13.9 | 598 | 13.9 |
| 453.povray | 216 | 24.6 | 216 | 24.6 | 216 | 24.6 | 176 | 30.3 | 176 | 30.3 | 176 | 30.3 |
| 454.calculix | 524 | 15.7 | 524 | 15.7 | 524 | 15.7 | 340 | 24.3 | 340 | 24.3 | 340 | 24.3 |
| 459.GemsFDTD | 449 | 23.7 | 448 | 23.7 | 448 | 23.7 | 449 | 23.7 | 448 | 23.7 | 448 | 23.7 |
| 465.tonto | 433 | 22.7 | 433 | 22.7 | 433 | 22.7 | 417 | 23.6 | 417 | 23.6 | 417 | 23.6 |
| 470.lbm | 1399 | 9.82 | 1397 | 9.83 | 1395 | 9.85 | 595 | 23.1 | 596 | 23.1 | 595 | 23.1 |
| 481.wrf | 474 | 23.6 | 473 | 23.6 | 473 | 23.6 | 474 | 23.6 | 473 | 23.6 | 473 | 23.6 |
| 482.sphinx3 | 662 | 29.5 | 664 | 29.3 | 656 | 29.7 | 647 | 30.1 | 648 | 30.1 | 647 | 30.1 |

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

Base Compiler Invocation

C benchmarks:
icl -Qstd=c99

C++ benchmarks:
icl

Fortran benchmarks:
ifort

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



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Base Portability Flags

```

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

```

Base Optimization Flags

C benchmarks:

```

-fast -Qauto-ilp32 -Qparallel /F1000000000 libguide40.lib
-link /FORCE:MULTIPLE

```

C++ benchmarks:

```

-fast -Qauto-ilp32 -Qparallel -Qcxx_features /F1000000000
shlw64m.lib libguide40.lib -link /FORCE:MULTIPLE

```

Fortran benchmarks:

```

-fast -Qparallel /F1000000000 libguide40.lib
-link /FORCE:MULTIPLE

```

Benchmarks using both Fortran and C:

```

-fast -Qauto-ilp32 -Qparallel /F1000000000 libguide40.lib
-link /FORCE:MULTIPLE

```

Peak Compiler Invocation

C benchmarks:

```
icl -Qstd=c99
```

C++ benchmarks:

```
icl
```

Fortran benchmarks:

```
ifort
```

Continued on next page



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Peak Compiler Invocation (Continued)

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: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qauto-ilp32
-Qunroll2 -Oa /F1000000000 libguide40.lib
-link /FORCE:MULTIPLE

470.lbm: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qauto-ilp32
-Qunroll2 -Qscalar-rep- -Qprefetch /F1000000000
libguide40.lib -link /FORCE:MULTIPLE

482.sphinx3: -fast -Qauto-ilp32 -Qunroll2 /F1000000000 libguide40.lib
-link /FORCE:MULTIPLE

C++ benchmarks:

444.namd: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qauto-ilp32
-Oa -Qcxx_features /F1000000000 shlw64m.lib libguide40.lib
-link /FORCE:MULTIPLE

447.dealII: basepeak = yes

450.soplex: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qauto-ilp32
-Qparallel -Qcxx_features /F1000000000 shlw64m.lib
libguide40.lib -link /FORCE:MULTIPLE

453.povray: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qauto-ilp32
-Qunroll4 -Qansi-alias -Qcxx_features /F1000000000
shlw64m.lib libguide40.lib -link /FORCE:MULTIPLE

Fortran benchmarks:

410.bwaves: -fast -Qauto-ilp32 -Qparallel -Qprefetch /F1000000000
libguide40.lib -link /FORCE:MULTIPLE

416.gamess: basepeak = yes

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Peak Optimization Flags (Continued)

434.zeusmp: -Qprof_gen(pass 1) -Qprof_use(pass 2) -QxT -O2 -Qprec-div-
-Qunroll10 -Qscalar-rep- /F1000000000 libguide40.lib
-link /FORCE:MULTIPLE

437.leslie3d: basepeak = yes

459.GemsFDTD: basepeak = yes

465.tonto: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qauto-ilp32
-Qunroll14 -Qauto /F1000000000 libguide40.lib
-link /FORCE:MULTIPLE

Benchmarks using both Fortran and C:

435.gromacs: -Qprof_gen(pass 1) -Qprof_use(pass 2) -fast -Qauto-ilp32
-Oa -Qprefetch /F1000000000 libguide40.lib
-link /FORCE:MULTIPLE

436.cactusADM: basepeak = yes

454.calculix: -fast -Qauto-ilp32 -Qunroll-aggressive /F1000000000
libguide40.lib -link /FORCE:MULTIPLE

481.wrf: basepeak = yes

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

<http://www.spec.org/cpu2006/flags/dell.ic10.1.windows.flags.20090714.html>

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

<http://www.spec.org/cpu2006/flags/dell.ic10.1.windows.flags.20090714.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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