



SPEC[®] CFP2006 Result

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Dell Inc.

DELL Precision T7600 (Intel Xeon E5-2687W, 3.10GHz)

SPECfp[®]2006 = **81.7**

SPECfp_base2006 = **78.9**

CPU2006 license: 55

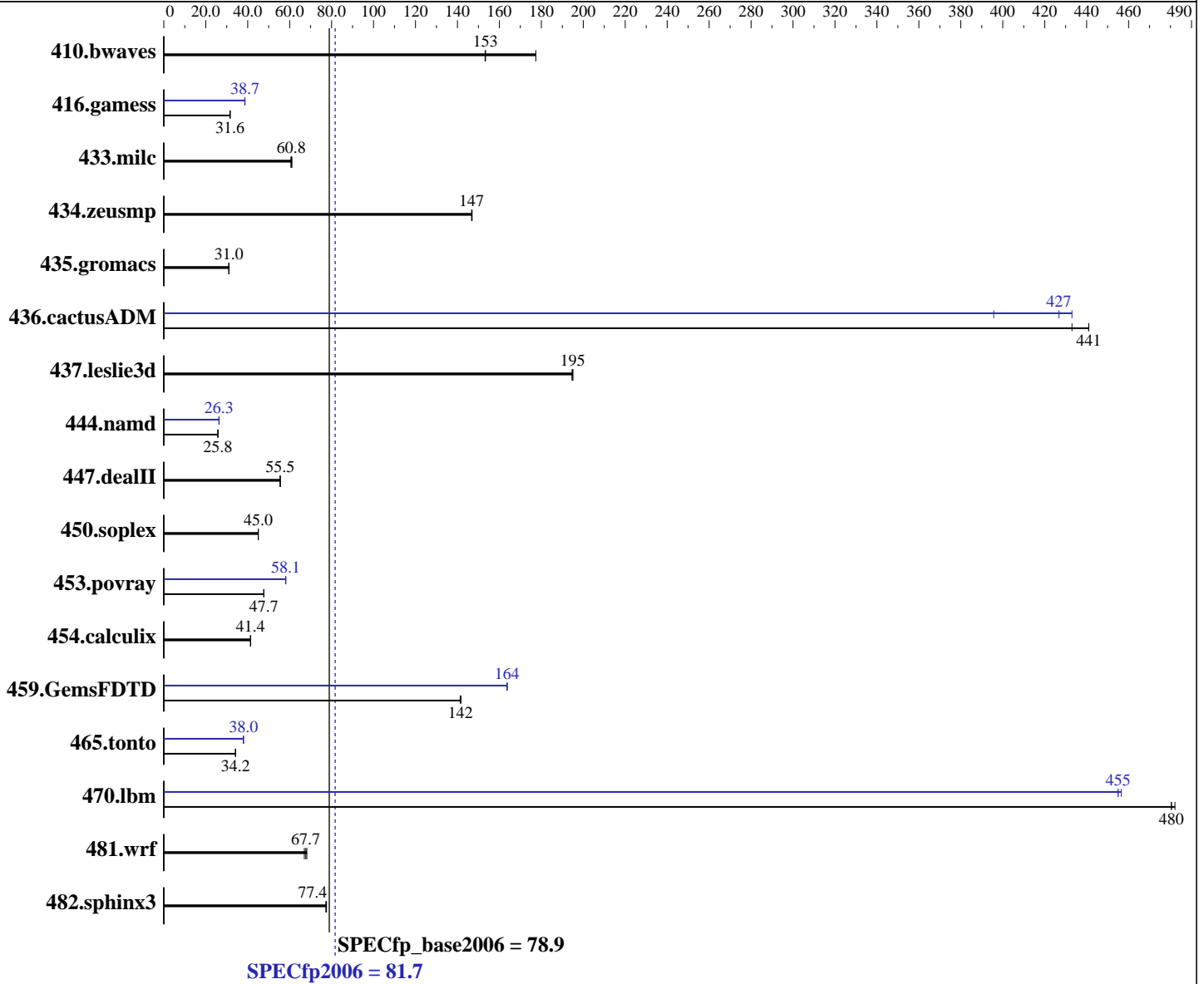
Test sponsor: Dell Inc.

Tested by: Dell Inc.

Test date: Jan-2013

Hardware Availability: Aug-2012

Software Availability: Aug-2011



Hardware

CPU Name: Intel Xeon E5-2687W
 CPU Characteristics: Intel Turbo Boost Technology up to 3.80 GHz
 CPU MHz: 3100
 FPU: Integrated
 CPU(s) enabled: 16 cores, 2 chips, 8 cores/chip, 2 threads/core
 CPU(s) orderable: 1,2 chips
 Primary Cache: 32 KB I + 32 KB D on chip per core
 Secondary Cache: 256 KB I+D on chip per core

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Software

Operating System: Windows 7 Professional (64-bit)
 Compiler: C/C++: Version 12.1.0.233 of Intel C++ Studio XE for Windows
 Fortran: Version 12.1.0.233 of Intel Visual Fortran Compiler for Intel64
 C/C++: Version 2010 of Microsoft Visual Studio
 Auto Parallel: Yes
 File System: NTFS
 System State: Default

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L3 Cache: 20 MB I+D on chip per chip
Other Cache: None
Memory: 64 GB (8 x 8 GB 2Rx4 PC3-12800R-9, ECC)
Disk Subsystem: 1 x 250 GB SATAIII 7200 RPM
Other Hardware: None

Base Pointers: 32/64-bit
Peak Pointers: 32/64-bit
Other Software: MicroQuill SmartHeap Library 10.0

Results Table

Benchmark	Base						Peak					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	88.7	153	76.6	177	88.6	153	88.7	153	76.6	177	88.6	153
416.gamess	618	31.7	621	31.5	620	31.6	508	38.6	506	38.7	506	38.7
433.milc	150	61.1	152	60.6	151	60.8	150	61.1	152	60.6	151	60.8
434.zeusmp	62.0	147	62.0	147	61.9	147	62.0	147	62.0	147	61.9	147
435.gromacs	230	31.0	229	31.1	230	31.0	230	31.0	229	31.1	230	31.0
436.cactusADM	27.1	441	27.1	441	27.6	433	30.2	396	27.6	433	28.0	427
437.leslie3d	48.2	195	48.3	195	48.2	195	48.2	195	48.3	195	48.2	195
444.namd	311	25.8	311	25.8	311	25.8	304	26.4	304	26.3	304	26.3
447.dealII	206	55.5	206	55.5	206	55.5	206	55.5	206	55.5	206	55.5
450.soplex	186	45.0	185	45.1	185	45.0	186	45.0	185	45.1	185	45.0
453.povray	112	47.7	112	47.7	112	47.7	91.6	58.1	91.4	58.2	91.6	58.1
454.calculix	199	41.4	199	41.4	200	41.3	199	41.4	199	41.4	200	41.3
459.GemsFDTD	75.0	142	74.9	142	75.1	141	64.8	164	64.8	164	64.8	164
465.tonto	288	34.2	288	34.2	288	34.2	259	38.0	260	37.9	259	38.0
470.lbm	28.6	480	28.6	480	28.5	482	30.1	457	30.2	455	30.2	455
481.wrf	164	68.2	165	67.7	167	67.0	164	68.2	165	67.7	167	67.0
482.sphinx3	251	77.6	252	77.4	252	77.3	251	77.6	252	77.4	252	77.3

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

Operating System Notes

OMP_NUM_THREADS=16 (number of cores)
KMP_AFFINITY=granularity=fine,scatter

Platform Notes

Sysinfo program C:\cpu2006.v1.2/Docs/sysinfo
\$Rev: 6775 \$ \$Date:: 2011-08-16 #\$ \8787f7622badcf24e01c368b1db4377c
running on Spec-PC Fri Jan 18 23:58:19 2013

This section contains SUT (System Under Test) info as seen by some common utilities. To remove or add to this section, see:
<http://www.spec.org/cpu2006/Docs/config.html#sysinfo>

Trying 'systeminfo'

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Platform Notes (Continued)

```

OS Name       : Microsoft Windows 7 Professional
OS Version    : 6.1.7601 Service Pack 1 Build 7601
System Manufacturer: Dell Inc.
System Model   : Precision T7600
Processor(s)   : 2 Processor(s) Installed.
                 [01]: Intel64 Family 6 Model 45 Stepping 6 GenuineIntel ~2294 Mhz
                 [02]: Intel64 Family 6 Model 45 Stepping 6 GenuineIntel ~3101 Mhz
BIOS Version   : Dell Inc. A05, 11/8/2012
Total Physical Memory: 65,462 MB

```

```

Trying 'wmic cpu get /value'
DeviceID      : CPU0
L2CacheSize   : 2048
L3CacheSize   : 4096
MaxClockSpeed : 3101
Name          : Intel(R) Xeon(R) CPU E5-2687W 0 @ 3.10GHz
NumberOfCores : 8
NumberOfLogicalProcessors: 16
DeviceID      : CPU1
L2CacheSize   : 2048
L3CacheSize   : 4096
MaxClockSpeed : 3101
Name          : Intel(R) Xeon(R) CPU E5-2687W 0 @ 3.10GHz
NumberOfCores : 8
NumberOfLogicalProcessors: 16

```

(End of data from sysinfo program)

General Notes

Binaries were built on Windows 7 Professional (64-bit)

Submitted_by: <Alex_Shows@DELL.com>
 Submitted: Mon Feb 11 17:38:59 EST 2013
 Submission: cpu2006-20130211-25516.sub

Base Compiler Invocation

C benchmarks:
 icl -Qvc10 -Qstd=c99

C++ benchmarks:
 icl -Qvc10

Fortran benchmarks:
 ifort

Benchmarks using both Fortran and C:
 icl -Qvc10 -Qstd=c99 ifort



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Base Portability Flags

```

410.bwaves: -DSPEC_CPU_P64 -names:lowercase
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 -names:lowercase /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_NEED_INVHYP -DNEED_INVHYP
454.calculix: -DSPEC_CPU_P64 -DSPEC_CPU_NOZMODIFIER -names:lowercase
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:
-QxAVX -Qipo -O3 -Qprec-div- -Qparallel -Qansi-alias -Qopt-prefetch
-Qauto-ilp32 /F512000000

C++ benchmarks:
-QxAVX -Qipo -O3 -Qprec-div- -Qparallel -Qansi-alias -Qopt-prefetch
-Qcxx-features -Qauto-ilp32 /F512000000 shlw64m.lib
-link /FORCE:MULTIPLE

Fortran benchmarks:
-QxAVX -Qipo -O3 -Qprec-div- -Qparallel -Qansi-alias -Qopt-prefetch
/F1000000000

Benchmarks using both Fortran and C:
-QxAVX -Qipo -O3 -Qprec-div- -Qparallel -Qansi-alias -Qopt-prefetch
-Qauto-ilp32 /F1000000000

```

Peak Compiler Invocation

```

C benchmarks:
icl -Qvc10 -Qstd=c99

C++ benchmarks:
icl -Qvc10

```

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Software Availability: Aug-2011

Peak Compiler Invocation (Continued)

Fortran benchmarks:

ifort

Benchmarks using both Fortran and C:

icl -Qvc10 -Qstd=c99 ifort

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:

433.milc: basepeak = yes

470.lbm: -Qprof_gen(pass 1) -QxAVX(pass 2) -Qprof_use(pass 2) -Qipo
-O3 -Qprec-div- -Qansi-alias -Qparallel -Qauto-ilp32
/F512000000

482.sphinx3: basepeak = yes

C++ benchmarks:

444.namd: -Qprof_gen(pass 1) -QxAVX(pass 2) -Qprof_use(pass 2) -Qipo
-O3 -Qprec-div- -Oa -Qauto-ilp32 /F512000000 shlw64m.lib
-link /FORCE:MULTIPLE

447.dealII: basepeak = yes

450.soplex: basepeak = yes

453.povray: -Qprof_gen(pass 1) -QxAVX(pass 2) -Qprof_use(pass 2) -Qipo
-O3 -Qprec-div- -Qunroll4 -Qansi-alias -Qauto-ilp32
/F512000000 shlw64m.lib -link /FORCE:MULTIPLE

Fortran benchmarks:

410.bwaves: basepeak = yes

416.gamess: -Qprof_gen(pass 1) -QxAVX(pass 2) -Qprof_use(pass 2) -Qipo
-O3 -Qprec-div- -Qunroll2 -Ob0 -Qansi-alias -Qscalar-rep-
/F1000000000

434.zeusmp: basepeak = yes

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Peak Optimization Flags (Continued)

437.leslie3d: basepeak = yes

459.GemsFDTD: -Qprof_gen(pass 1) -QxAVX(pass 2) -Qprof_use(pass 2) -Qipo
-O3 -Qprec-div- -Qunroll2 -Qopt-prefetch -Qparallel
/F1000000000

465.tonto: -Qprof_gen(pass 1) -QxAVX(pass 2) -Qprof_use(pass 2) -Qipo
-O3 -Qprec-div- -Qunroll4 -Qauto -Qinline-alloc
/F1000000000

Benchmarks using both Fortran and C:

435.gromacs: basepeak = yes

436.cactusADM: -Qprof_gen(pass 1) -QxAVX(pass 2) -Qprof_use(pass 2) -Qipo
-O3 -Qprec-div- -Qopt-prefetch -Qparallel -Qunroll2
-Qauto-ilp32 /F1000000000

454.calculix: basepeak = yes

481.wrf: basepeak = yes

The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/Dell-ic12.1-Windows.html>

<http://www.spec.org/cpu2006/flags/Dell-platform-Precision.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2006/flags/Dell-ic12.1-Windows.xml>

<http://www.spec.org/cpu2006/flags/Dell-platform-Precision.xml>

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

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