Dell Inc.  
(Test Sponsor: The Portland Group)  

PowerEdge 1950  

CPU2006 license: 94  
Test sponsor: The Portland Group  
Tested by: The Portland Group  

SPECfp®2006 = 15.8  
SPECfp_base2006 = 15.8

Software
- Operating System: SLES 10 (Kernel 2.6.16.21-0.8-smp)
- Compiler: The Portland Group (PGI)
  - PGI pgf90 6.2-3 Fortran Compiler
  - PGI pgc++ 6.2-3 C++ Compiler
- Auto Parallel: Yes
- File System: ReiserFS
- System State: Multi-user

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

Test date: Sep-2006
Hardware Availability: Jul-2006
Software Availability: Sep-2006

Continued on next page
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L3 Cache: None  
Other Cache: None  
Memory: 4 GB (4x 1GB, Samsung M395T2953CZ4 DDR2 FBD 667 CL5-5-5)  
Disk Subsystem: Hitachi Deskstar SATA, 164 GB, 7200 RPM  
Other Hardware: None  

SPECfp2006 = 15.8  
SPECfp_base2006 = 15.8  

Results Table

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</table>

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

General Notes

Environment stack size set to 'unlimited'
For parallel runs (those compiled with "-Mconcur") the following environment variables were set:
  NCPUS = 2
  MP_BIND = yes
  MP_BLIST = 1,0

NCPUS=n sets the number of threads to use to "n".
MP_BIND=yes instructs the runtime to bind a thread to a core.
MP_BLIST defines the thread-core relationship.
The 4 1GB memory modules populated the first DIMM socket of each channel (0-3).
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Base Compiler Invocation

C benchmarks:
pgcc

C++ benchmarks:
pgCC

Fortran benchmarks:
pgf90

Benchmarks using both Fortran and C:
pgcc pgf90

Base Portability Flags

410.bwaves: -DSPEC_CPU_LP64
416.gamess: -DSPEC_CPU_LP64
433.milc: -DSPEC_CPU_LP64
434.zeusmp: -DSPEC_CPU_LP64
435.gromacs: -DSPEC_CPU_LP64 -Mnomain
436.cactusADM: -DSPEC_CPU_LP64 -Mnomain
437.leslie3d: -DSPEC_CPU_LP64
444.namd: -DSPEC_CPU_LP64
447.dealII: -DSPEC_CPU_LP64
450.soplex: -DSPEC_CPU_LP64
453.povray: -DSPEC_CPU_LP64
454.calculix: -DSPEC_CPU_LP64
459.GemsFDTD: -DSPEC_CPU_LP64 -Mnomain
465.tonto: -DSPEC_CPU_LP64
470.lbm: -DSPEC_CPU_LP64
481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
482.sphinx3: -DSPEC_CPU_LP64

Base Optimization Flags

C benchmarks:
-fastsse -Mconcur -Mipa=fast -Mipa=inline -Mfprelaxed=rsqrt
-Msmartalloc -Msignextend -tp core2-64

C++ benchmarks:
-fastsse -Mipa=fast -Mipa=inline -Mfprelaxed=rsqrt -Msmartalloc
-tp core2-64

Fortran benchmarks:
-fastsse -Mconcur -Mipa=fast -Mipa=inline -Mfprelaxed=rsqrt
-Msmartalloc -tp core2-64
SPEC CFP2006 Result

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Base Optimization Flags (Continued)

Benchmarks using both Fortran and C:
- fastsse -Mconcur -Mipa=fast -Mipa=inline -Mfprelaxed=rsqrt
- Msmartalloc -Msignextend -tp core2-64

Base Other Flags

C benchmarks:
- w
C++ benchmarks:
- w
Fortran benchmarks:
- w
Benchmarks using both Fortran and C:
- w

Peak Compiler Invocation

C benchmarks:
pgcc
C++ benchmarks:
pgCC
Fortran benchmarks:
pgf90
Benchmarks using both Fortran and C:
pgcc pgf90

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:
433.milc: basepeak = yes

Continued on next page
Peak Optimization Flags (Continued)

470.lbm: basepeak = yes
482.sphinx3: basepeak = yes

C++ benchmarks:
444.namd: basepeak = yes
447.dealII: basepeak = yes
450.soplex: basepeak = yes
453.povray: basepeak = yes

Fortran benchmarks:
410.bwaves: basepeak = yes
416.gamess: basepeak = yes
434.zeusmp: basepeak = yes
437.leslie3d: basepeak = yes
459.GemsFDTD: basepeak = yes
465.tonto: basepeak = yes

Benchmarks using both Fortran and C:
435.gromacs: basepeak = yes
436.cactusADM: basepeak = yes
454.calculix: basepeak = yes
481.wrf: basepeak = yes

Peak Other Flags

C benchmarks:
-w

C++ benchmarks:
-w

Fortran benchmarks:
-w
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Peak Other Flags (Continued)

Benchmarks using both Fortran and C:
-w

The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/pgi62_flags.20090715.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/pgi62_flags.20090715.xml

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

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Standard Performance Evaluation Corporation
info@spec.org
http://www.spec.org/