Hewlett-Packard Company
HP Integrity BL860c
(1.6GHz/18MB Dual-Core Intel Itanium 2)

SPECfp®2006 = 16.6

SPECfp_base2006 = 16.0

CPU2006 license: 03
Test sponsor: Hewlett-Packard Company
Tested by: Hewlett-Packard Company

Hardware
CPU Name: Dual-Core Intel Itanium 2 9040
CPU Characteristics: 1.6GHz/18MB, 533MHz FSB
CPU MHz: 1600
FPU: Integrated
CPU(s) enabled: 1 core, 1 chip, 2 cores/chip
CPU(s) orderable: 1-2 chips
Primary Cache: 16 KB I + 16 KB D on chip per core
Secondary Cache: 1 MB I + 256 KB D on chip per core

Software
Operating System: Red Hat Enterprise Linux AS release 4 (Update 4)
Compiler: Intel C++ Compiler 9.1 for Linux (Build 20061105)
Intel Fortran Compiler 9.1 for Linux (Build 20061105)
Auto Parallel: No
File System: ext3
System State: Multi-user

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Test date: Feb-2007
Hardware Availability: Feb-2007
Software Availability: Nov-2006

L3 Cache: 9 MB I+D on chip per core
Other Cache: None
Memory: 12 GB (12x1GB DIMMs)
Disk Subsystem: 36GB 10K RPM SAS
Other Hardware: None
Base Pointers: 64-bit
Peak Pointers: 64-bit
Other Software: None

Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Base Seconds</th>
<th>Base Ratio</th>
<th>Base Seconds</th>
<th>Base Ratio</th>
<th>Base Seconds</th>
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</table>

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

Operating System Notes

- stacksize set to unlimited prior to run
- system was booted uniprocessor by setting "maxcpus=0"
  kernel parameter in elilo.conf

Base Compiler Invocation

C benchmarks:
  icc

C++ benchmarks:
  icpc

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Base Compiler Invocation

Fortran benchmarks:
ifort

Benchmarks using both Fortran and C:
icc ifort

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 -nofor_main
436.cactusADM: -DSPEC_CPU_LP64 -nofor_main
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 -nofor_main
459.GemsFDTD: -DSPEC_CPU_LP64
465.tonto: -DSPEC_CPU_LP64
470.lbm: -DSPEC_CPU_LP64
481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_LINUX -DSPEC_CPU_CASE_FLAG
482.sphinx3: -DSPEC_CPU_LP64

Base Optimization Flags

C benchmarks:
-fast -IPF_fp_relaxed -ansi-alias

C++ benchmarks:
-fast -IPF_fp_relaxed -ansi-alias

Fortran benchmarks:
-fast -IPF_fp_relaxed

Benchmarks using both Fortran and C:
-fast -IPF_fp_relaxed -ansi-alias

Peak Compiler Invocation

C benchmarks:
icc
Hewlett-Packard Company
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Peak Compiler Invocation (Continued)

C++ benchmarks:
   icpc

Fortran benchmarks:
   ifort

Benchmarks using both Fortran and C:
   icc ifort

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:
   433.milc: -fast -IPF_fp_relaxed -ansi-alias -fno-alias
   470.lbm: -prof_gen(pass 1) -prof_use(pass 2) -fast -IPF_fp_relaxed
            -ansi-alias
   482.sphinx3: Same as 470.lbm

C++ benchmarks:
   444.namd: -prof_gen(pass 1) -prof_use(pass 2) -fast -IPF_fp_relaxed
            -no-prefetch -fno-alias
   447.dealII: -fast -IPF_fp_relaxed -ansi-alias -no-alias-args
   450.soplex: -fast -IPF_fp_relaxed -ansi-alias -inline-factor=150
   453.povray: -prof_gen(pass 1) -prof_use(pass 2) -fast -IPF_fp_relaxed
                -ansi-alias

Fortran benchmarks:
   410.bwaves: basepeak = yes
   416.gamess: -fast -IPF_fp_relaxed -inline-factor=150
   434.zeusmp: basepeak = yes
   437.leslie3d: basepeak = yes

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SPEC CFP2006 Result

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Peak Optimization Flags (Continued)

459.GemsFDTD: basepeak = yes

465.tonto: basepeak = yes

Benchmarks using both Fortran and C:

435.gromacs: -prof_gen(pass 1) -prof_use(pass 2) -fast -IPF_fp_relaxed -fno-alias -inline-factor=150

436.cactusADM: basepeak = yes

454.calculix: -fast -IPF_fp_relaxed -fno-alias

481.wrf: basepeak = yes

The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/IPF_intel91_flags.20090715.00.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/IPF_intel91_flags.20090715.00.xml

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

Tested with SPEC CPU2006 v1.0.
Originally published on 20 February 2007.