Hewlett-Packard Company
HP Integrity rx4640
(1.6GHz/24MB Dual-Core Intel Itanium 2)

SPECfp®2006 = 16.0
SPECfp_base2006 = 15.4

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

Hardware
CPU Name: Dual-Core Intel Itanium 2 9050
CPU Characteristics: 1.6GHz/24MB, 400MHz FSB
CPU MHz: 1600
FPU: Integrated
CPU(s) enabled: 1 core, 1 chip, 2 cores/chip
CPU(s) orderable: 1-4 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 for Itanium version 9.1
Auto Parallel: No
File System: ext3
System State: Multi-user
Base Pointers: 64-bit

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SPEC CFP2006 Result
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Test date: Oct-2006
Hardware Availability: Sep-2006
Software Availability: Nov-2006

L3 Cache: 12 MB I+D on chip per core
Other Cache: None
Memory: 32 GB (16x2GB DIMMs)
Disk Subsystem: 36GB 15K RPM SCSI
Other Hardware: None
Peak Pointers: 64-bit
Other Software: None

Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Base</th>
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<th>Peak</th>
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<td>482.sphinx3</td>
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</tbody>
</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 (Continued)

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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Test sponsor: Hewlett-Packard Company
Tested by: Hewlett-Packard Company

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: -prof_gen(pass 1) -prof_use(pass 2) -fast -IPF_fp_relaxed
416.gamess: -fast -IPF_fp_relaxed -inline-factor=150
434.zeusmp: basepeak = yes
437.leslie3d: basepeak = yes

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