Hewlett-Packard Company
HP Integrity rx3600
(1.4GHz/12MB Dual-Core Intel Itanium 2)

SPECfp®_rate2006 = 40.4
SPECfp_rate_base2006 = 39.4

Hardware

- CPU Name: Dual-Core Intel Itanium 2 9020
- CPU Characteristics: 1.4GHz/12MB, 533MHz FSB
- CPU MHz: 1400
- FPU: Integrated
- CPU(s) enabled: 4 cores, 2 chips, 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

Continued on next page

Software

- Operating System: Red Hat Enterprise Linux AS release 4 (Update 4)
- Compiler: Intel C++ Compiler 9.1 for Linux (Build 20060818)
- Intel Fortran Compiler 9.1 for Linux (Build 20060818)
- Auto Parallel: No
- File System: ext3
- System State: Multi-user

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(1.4GHz/12MB Dual-Core Intel Itanium 2)

CPU2006 license: 03
Test sponsor: Hewlett-Packard Company
Tested by: Hewlett-Packard Company
L3 Cache: 6 MB I+D on chip per core
Other Cache: None
Memory: 16GB (6x2GB DIMMs, AD124A 8-DIMM memory carrier)
Disk Subsystem: 2x73GB 10K RPM SAS (mirrored)
Other Hardware: None
Base Pointers: 64-bit
Peak Pointers: 64-bit
Software Availability: Nov-2006

Results Table

<table>
<thead>
<tr>
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<th>Copies</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
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<th>Ratio</th>
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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

Base Compiler Invocation

C benchmarks:
  icc

C++ benchmarks:
  icpc
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SPECfp_rate_base2006 = 39.4

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

Test date: Dec-2006
Hardware Availability: Nov-2006
Software Availability: Nov-2006

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

Continued on next page
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HP Integrity rx3600
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SPEC CFP2006 Result

Hewlett-Packard Company

SPECfp\_rate2006 = 40.4
SPECfp\_rate\_base2006 = 39.4

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

Test date: Dec-2006
Hardware Availability: Nov-2006
Software Availability: Nov-2006

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

Continued on next page
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SPECfp_rate2006 = 40.4
SPECfp_rate_base2006 = 39.4

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.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/IPF_intel91_flags.20090715.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.