SPEC® CFP2006 Result

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Hewlett-Packard Company

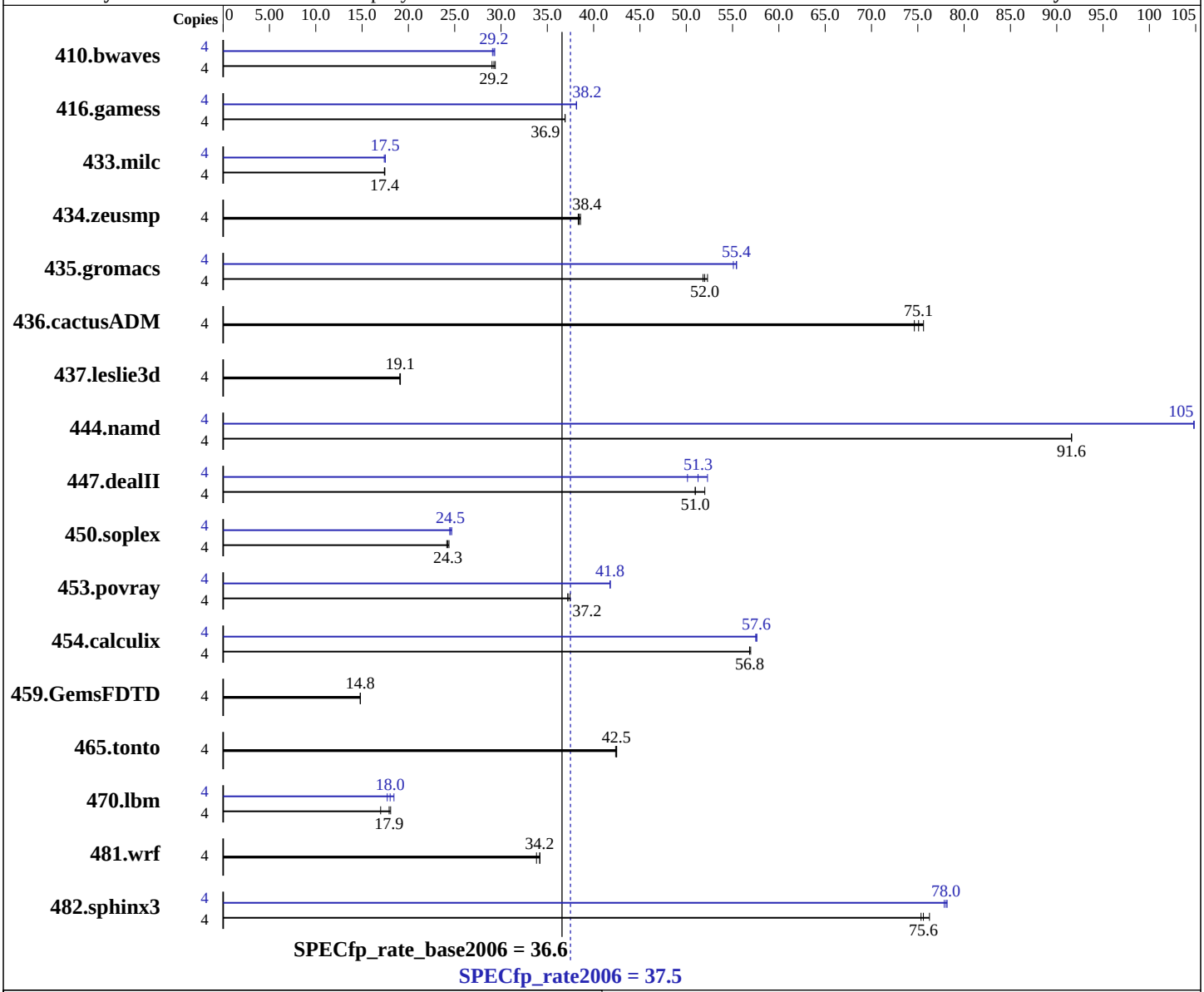
HP Integrity rx2620
(1.6GHz/18MB Dual-Core Intel Itanium 2)

SPECfp®_rate2006 = 37.5

SPECfp_rate_base2006 = 36.6

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

Test date: Oct-2006
Hardware Availability: Sep-2006
Software Availability: Nov-2006



Hardware

CPU Name:	Dual-Core Intel Itanium 2 9040
CPU Characteristics:	1.6GHz/18MB, 400MHz FSB
CPU MHz:	1600
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

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Software

Operating System:	Red Hat Enterprise Linux AS release 4 (Update 4)
Compiler:	Intel C++ Compiler for Itanium version 9.1 (Build 20060818) Intel Fortran90 Compiler for Itanium version 9.1 (Build 20060818)
Auto Parallel:	No
File System:	ext3
System State:	Multi-user
Base Pointers:	64-bit

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L3 Cache: 9 MB I+D on chip per core
Other Cache: None
Memory: 24 GB (12x2GB DIMMs)
Disk Subsystem: 36GB 15K RPM SCSI
Other Hardware: None

Peak Pointers: 64-bit
Other Software: None

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	4	1873	29.0	**1860**	**29.2**	1850	29.4	4	1854	29.3	**1860**	**29.2**	1869	29.1
416.gamess	4	**2122**	**36.9**	2122	36.9	2121	36.9	4	2053	38.2	2053	38.1	**2053**	**38.2**
433.milc	4	2104	17.5	**2106**	**17.4**	2110	17.4	4	2111	17.4	2097	17.5	**2098**	**17.5**
434.zeusmp	4	950	38.3	943	38.6	**947**	**38.4**	4	950	38.3	943	38.6	**947**	**38.4**
435.gromacs	4	546	52.3	551	51.8	**549**	**52.0**	4	518	55.1	**515**	**55.4**	515	55.4
436.cactusADM	4	632	75.6	**637**	**75.1**	641	74.6	4	632	75.6	**637**	**75.1**	641	74.6
437.leslie3d	4	1972	19.1	**1966**	**19.1**	1965	19.1	4	1972	19.1	**1966**	**19.1**	1965	19.1
444.namd	4	350	91.6	**350**	**91.6**	350	91.6	4	**306**	**105**	306	105	306	105
447.dealII	4	880	52.0	898	51.0	**898**	**51.0**	4	875	52.3	**892**	**51.3**	913	50.1
450.soplex	4	1368	24.4	**1375**	**24.3**	1382	24.1	4	1352	24.7	**1359**	**24.5**	1364	24.5
453.povray	4	568	37.4	572	37.2	**572**	**37.2**	4	509	41.8	**509**	**41.8**	509	41.8
454.calculix	4	**581**	**56.8**	581	56.8	579	57.0	4	574	57.5	**573**	**57.6**	573	57.6
459.GemsFDTD	4	**2866**	**14.8**	2863	14.8	2867	14.8	4	**2866**	**14.8**	2863	14.8	2867	14.8
465.tonto	4	**927**	**42.5**	926	42.5	929	42.4	4	**927**	**42.5**	926	42.5	929	42.4
470.lbm	4	3232	17.0	**3067**	**17.9**	3040	18.1	4	3102	17.7	**3048**	**18.0**	2980	18.4
481.wrf	4	**1307**	**34.2**	1321	33.8	1307	34.2	4	**1307**	**34.2**	1321	33.8	1307	34.2
482.sphinx3	4	1035	75.3	1022	76.3	**1031**	**75.6**	4	997	78.2	1001	77.9	**999**	**78.0**

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`

Fortran benchmarks:
`ifort`

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Base Compiler Invocation (Continued)

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

C++ benchmarks:
icpc

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Peak Compiler Invocation (Continued)

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

459.GemsFDTD: basepeak = yes

Continued on next page

Peak Optimization Flags (Continued)

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`

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

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