SPEC® CFP2006 Result

Hewlett-Packard Company

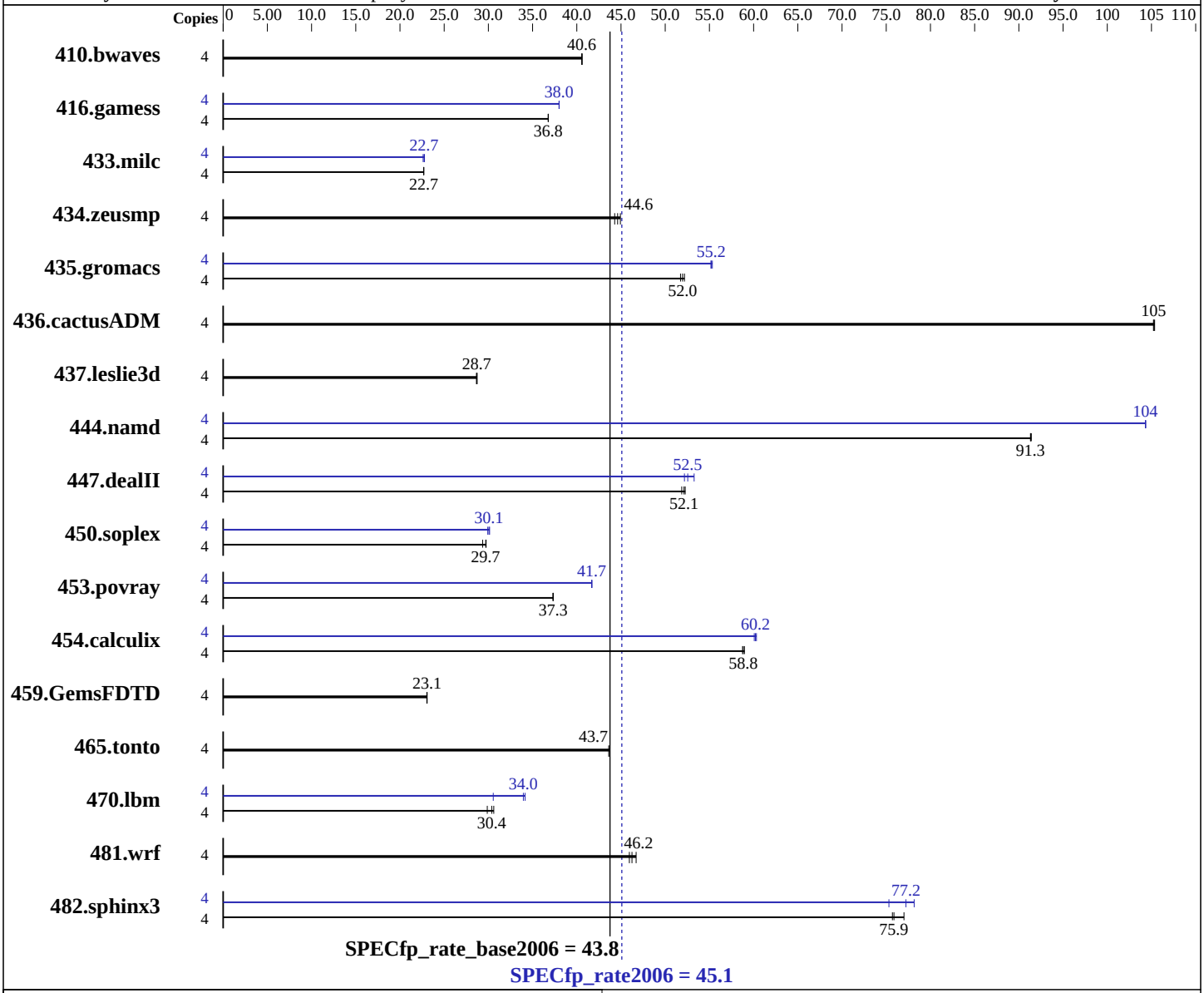
HP Integrity rx2660
(1.6GHz/18MB Dual-Core Intel Itanium 2)

SPECfp®_rate2006 = 45.1

SPECfp_rate_base2006 = 43.8

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

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



Hardware

CPU Name:	Dual-Core Intel Itanium 2 9040
CPU Characteristics:	1.6GHz/18MB, 533MHz 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 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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L3 Cache: 9 MB I+D on chip per core
Other Cache: None
Memory: 8 GB (4x2GB DIMMs)
Disk Subsystem: 73GB 10K RPM SAS
Other Hardware: None

Base Pointers: 64-bit
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	1339	40.6	**1340**	**40.6**	1340	40.6	4	1339	40.6	**1340**	**40.6**	1340	40.6
416.gamess	4	2129	36.8	**2129**	**36.8**	2131	36.8	4	2062	38.0	2061	38.0	**2061**	**38.0**
433.milc	4	**1619**	**22.7**	1620	22.7	1617	22.7	4	1612	22.8	**1616**	**22.7**	1623	22.6
434.zeusmp	4	**816**	**44.6**	810	44.9	822	44.3	4	**816**	**44.6**	810	44.9	822	44.3
435.gromacs	4	547	52.2	**550**	**52.0**	552	51.7	4	518	55.2	516	55.3	**517**	**55.2**
436.cactusADM	4	454	105	**454**	**105**	454	105	4	454	105	**454**	**105**	454	105
437.leslie3d	4	1312	28.7	1309	28.7	**1311**	**28.7**	4	1312	28.7	1309	28.7	**1311**	**28.7**
444.namd	4	351	91.4	**351**	**91.3**	351	91.3	4	307	104	308	104	**308**	**104**
447.dealII	4	882	51.9	876	52.3	**878**	**52.1**	4	**871**	**52.5**	859	53.3	877	52.2
450.soplex	4	1121	29.7	**1123**	**29.7**	1136	29.4	4	1107	30.1	1115	29.9	**1110**	**30.1**
453.povray	4	570	37.3	**570**	**37.3**	570	37.3	4	**510**	**41.7**	510	41.7	511	41.7
454.calculix	4	560	59.0	**561**	**58.8**	562	58.7	4	549	60.1	547	60.3	**548**	**60.2**
459.GemsFDTD	4	1839	23.1	1842	23.0	**1841**	**23.1**	4	1839	23.1	1842	23.0	**1841**	**23.1**
465.tonto	4	900	43.7	903	43.6	**900**	**43.7**	4	900	43.7	903	43.6	**900**	**43.7**
470.lbm	4	**1809**	**30.4**	1840	29.9	1796	30.6	4	1799	30.6	**1619**	**34.0**	1610	34.1
481.wrf	4	**966**	**46.2**	957	46.7	972	45.9	4	**966**	**46.2**	957	46.7	972	45.9
482.sphinx3	4	1012	77.0	**1028**	**75.9**	1030	75.7	4	997	78.2	1035	75.3	**1009**	**77.2**

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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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

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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

Continued on next page

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`

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

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