SPEC® CFP2006 Result

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Hewlett-Packard Company

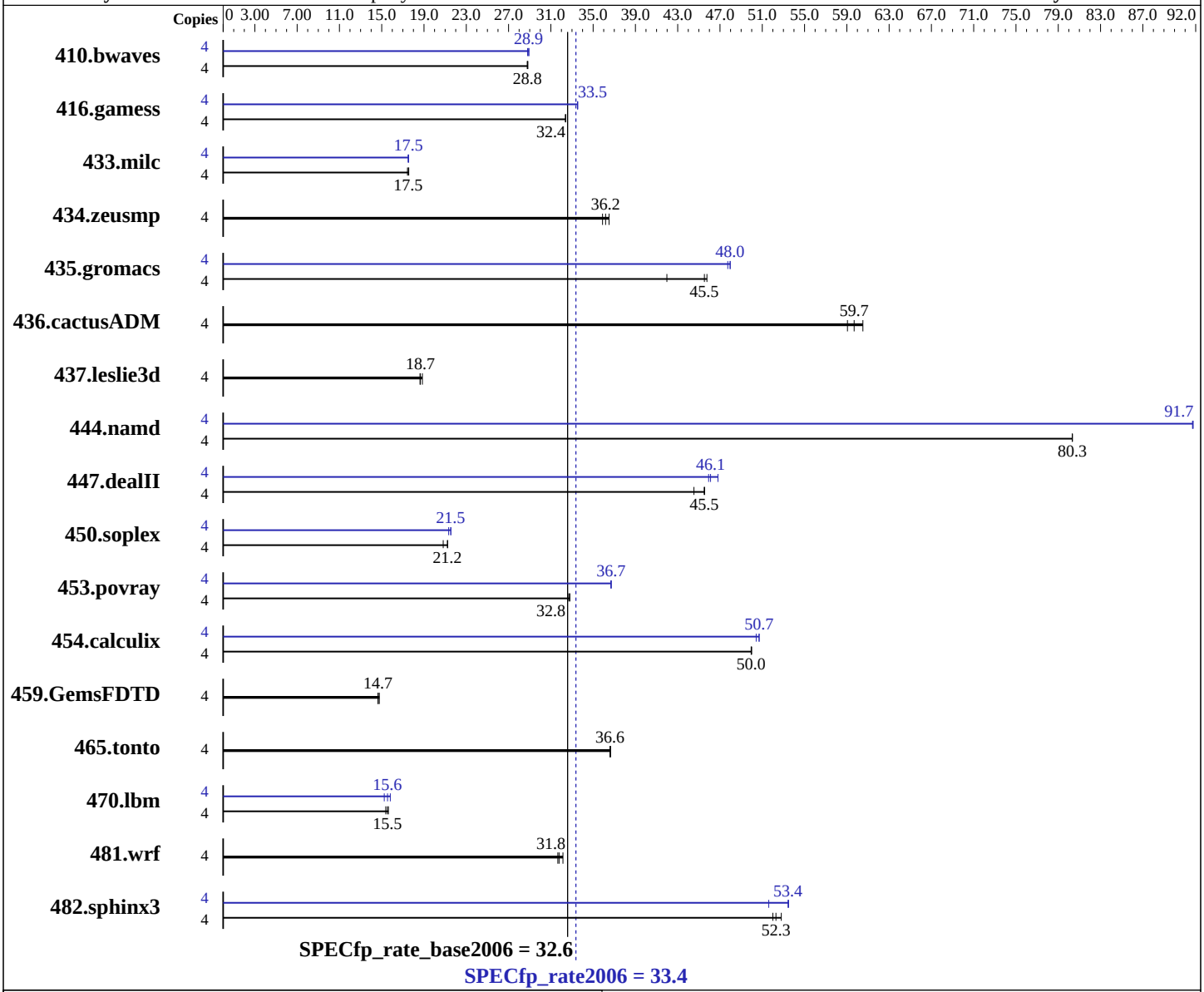
HP Integrity rx2620
(1.4GHz/12MB Dual-Core Intel Itanium 2)

SPECfp®_rate2006 = 33.4

SPECfp_rate_base2006 = 32.6

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

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



Hardware

CPU Name:	Dual-Core Intel Itanium 2 9015
CPU Characteristics:	1.4GHz/12MB, 400MHz 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

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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: 6 MB I+D on chip per core
Other Cache: None
Memory: 24 GB (12x2GB DIMMs)
Disk Subsystem: 146GB 10K 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	1886	28.8	1889	28.8	**1889**	**28.8**	4	1888	28.8	1879	28.9	**1881**	**28.9**
416.gamess	4	**2418**	**32.4**	2418	32.4	2418	32.4	4	**2336**	**33.5**	2336	33.5	2335	33.5
433.milc	4	2091	17.6	2106	17.4	**2096**	**17.5**	4	2094	17.5	**2094**	**17.5**	2098	17.5
434.zeusmp	4	1014	35.9	**1006**	**36.2**	997	36.5	4	1014	35.9	**1006**	**36.2**	997	36.5
435.gromacs	4	**627**	**45.5**	624	45.8	680	42.0	4	**596**	**48.0**	595	48.0	598	47.7
436.cactusADM	4	809	59.1	790	60.5	**801**	**59.7**	4	809	59.1	790	60.5	**801**	**59.7**
437.leslie3d	4	1995	18.8	**2016**	**18.7**	2019	18.6	4	1995	18.8	**2016**	**18.7**	2019	18.6
444.namd	4	**399**	**80.3**	399	80.3	399	80.3	4	350	91.7	350	91.7	**350**	**91.7**
447.dealII	4	1005	45.6	1027	44.5	**1006**	**45.5**	4	978	46.8	**992**	**46.1**	996	45.9
450.soplex	4	1571	21.2	**1573**	**21.2**	1603	20.8	4	**1549**	**21.5**	1564	21.3	1549	21.5
453.povray	4	**649**	**32.8**	649	32.8	651	32.7	4	580	36.7	580	36.7	**580**	**36.7**
454.calculix	4	660	50.0	661	49.9	**661**	**50.0**	4	651	50.7	**651**	**50.7**	654	50.4
459.GemsFDTD	4	2896	14.7	2873	14.8	**2895**	**14.7**	4	2896	14.7	2873	14.8	**2895**	**14.7**
465.tonto	4	**1075**	**36.6**	1074	36.6	1075	36.6	4	**1075**	**36.6**	1074	36.6	1075	36.6
470.lbm	4	3573	15.4	**3537**	**15.5**	3516	15.6	4	3606	15.2	**3534**	**15.6**	3476	15.8
481.wrf	4	1411	31.7	1390	32.1	**1406**	**31.8**	4	1411	31.7	1390	32.1	**1406**	**31.8**
482.sphinx3	4	**1491**	**52.3**	1499	52.0	1477	52.8	4	1510	51.6	1457	53.5	**1459**	**53.4**

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

Continued on next page

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

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`

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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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