SPEC® CFP2006 Result

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Hewlett-Packard Company

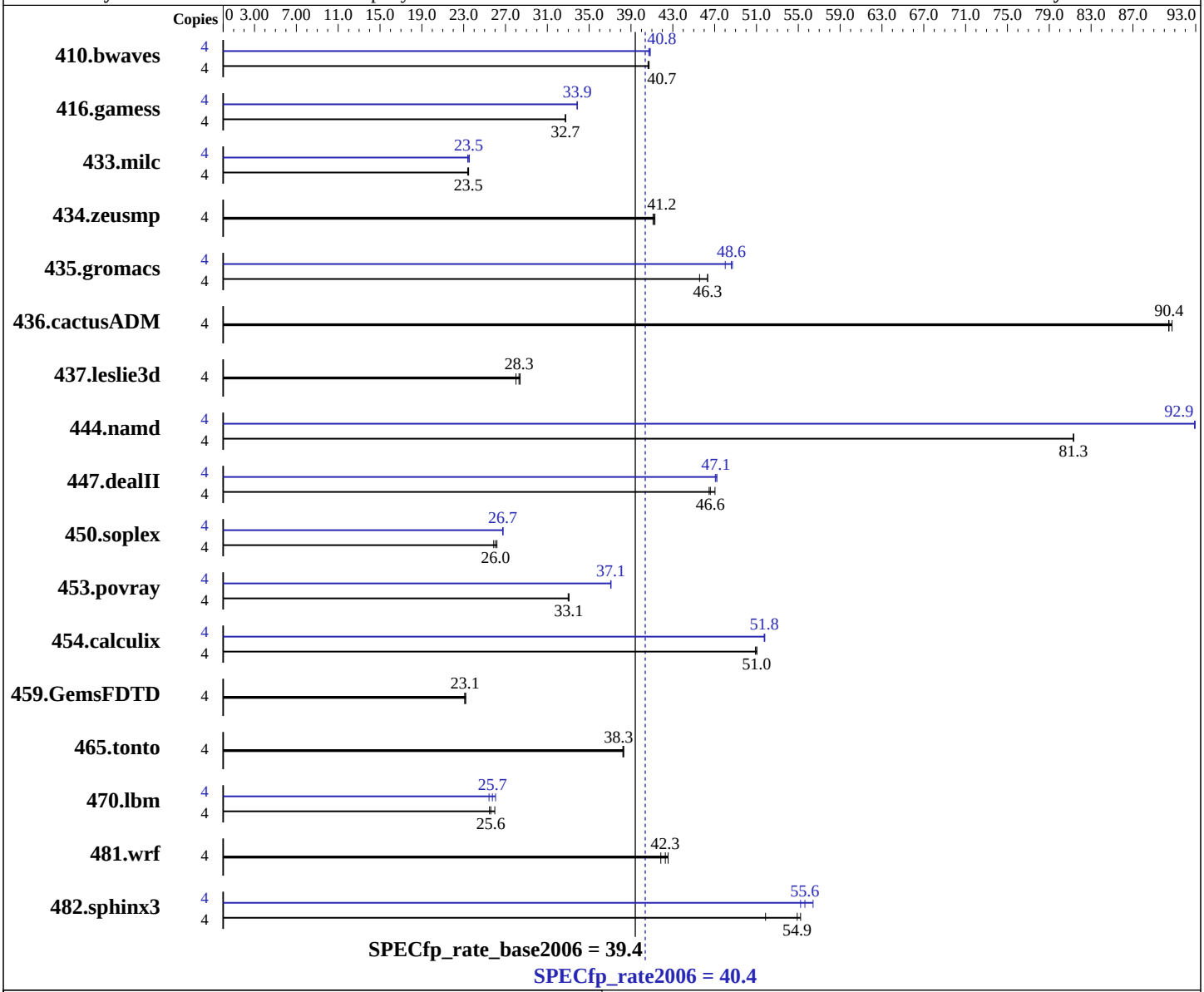
HP Integrity rx3600
(1.4GHz/12MB Dual-Core Intel Itanium 2)

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



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

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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 20060818) Intel Fortran Compiler 9.1 for Linux (Build 20060818)
Auto Parallel:	No
File System:	ext3
System State:	Multi-user

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L3 Cache: 6 MB I+D on chip per core
Other Cache: None
Memory: 16 GB (8x2GB DIMMs, AD124A 8-DIMM memory carrier)
Disk Subsystem: 2x73GB 10K RPM SAS (mirrored)
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	1334	40.7	**1336**	**40.7**	1338	40.6	4	1336	40.7	1331	40.8	**1332**	**40.8**
416.gamess	4	**2393**	**32.7**	2393	32.7	2392	32.7	4	2314	33.8	**2312**	**33.9**	2312	33.9
433.milc	4	**1565**	**23.5**	1564	23.5	1570	23.4	4	**1563**	**23.5**	1560	23.5	1570	23.4
434.zeusmp	4	882	41.3	885	41.1	**883**	**41.2**	4	882	41.3	885	41.1	**883**	**41.2**
435.gromacs	4	**617**	**46.3**	627	45.6	616	46.3	4	586	48.7	**588**	**48.6**	595	48.0
436.cactusADM	4	529	90.4	**528**	**90.4**	527	90.7	4	529	90.4	**528**	**90.4**	527	90.7
437.leslie3d	4	1343	28.0	1324	28.4	**1329**	**28.3**	4	1343	28.0	1324	28.4	**1329**	**28.3**
444.namd	4	**395**	**81.3**	394	81.3	395	81.3	4	345	92.9	345	92.9	**345**	**92.9**
447.dealII	4	973	47.0	985	46.5	**982**	**46.6**	4	969	47.2	**971**	**47.1**	972	47.1
450.soplex	4	1289	25.9	**1281**	**26.0**	1274	26.2	4	1246	26.8	**1248**	**26.7**	1248	26.7
453.povray	4	**644**	**33.1**	644	33.1	645	33.0	4	574	37.1	574	37.1	**574**	**37.1**
454.calculix	4	647	51.0	**647**	**51.0**	648	50.9	4	638	51.7	**638**	**51.8**	637	51.8
459.GemsFDTD	4	1837	23.1	**1835**	**23.1**	1829	23.2	4	1837	23.1	**1835**	**23.1**	1829	23.2
465.tonto	4	1027	38.3	1030	38.2	**1029**	**38.3**	4	1027	38.3	1030	38.2	**1029**	**38.3**
470.lbm	4	**2147**	**25.6**	2158	25.5	2116	26.0	4	2162	25.4	**2135**	**25.7**	2110	26.1
481.wrf	4	**1057**	**42.3**	1068	41.9	1050	42.6	4	**1057**	**42.3**	1068	41.9	1050	42.6
482.sphinx3	4	1503	51.9	1412	55.2	**1420**	**54.9**	4	1412	55.2	1382	56.4	**1401**	**55.6**

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.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 other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.0.
Report generated on Tue Jul 22 10:55:51 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 9 January 2007.