SPEC® CFP2006 Result

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Hewlett-Packard Company

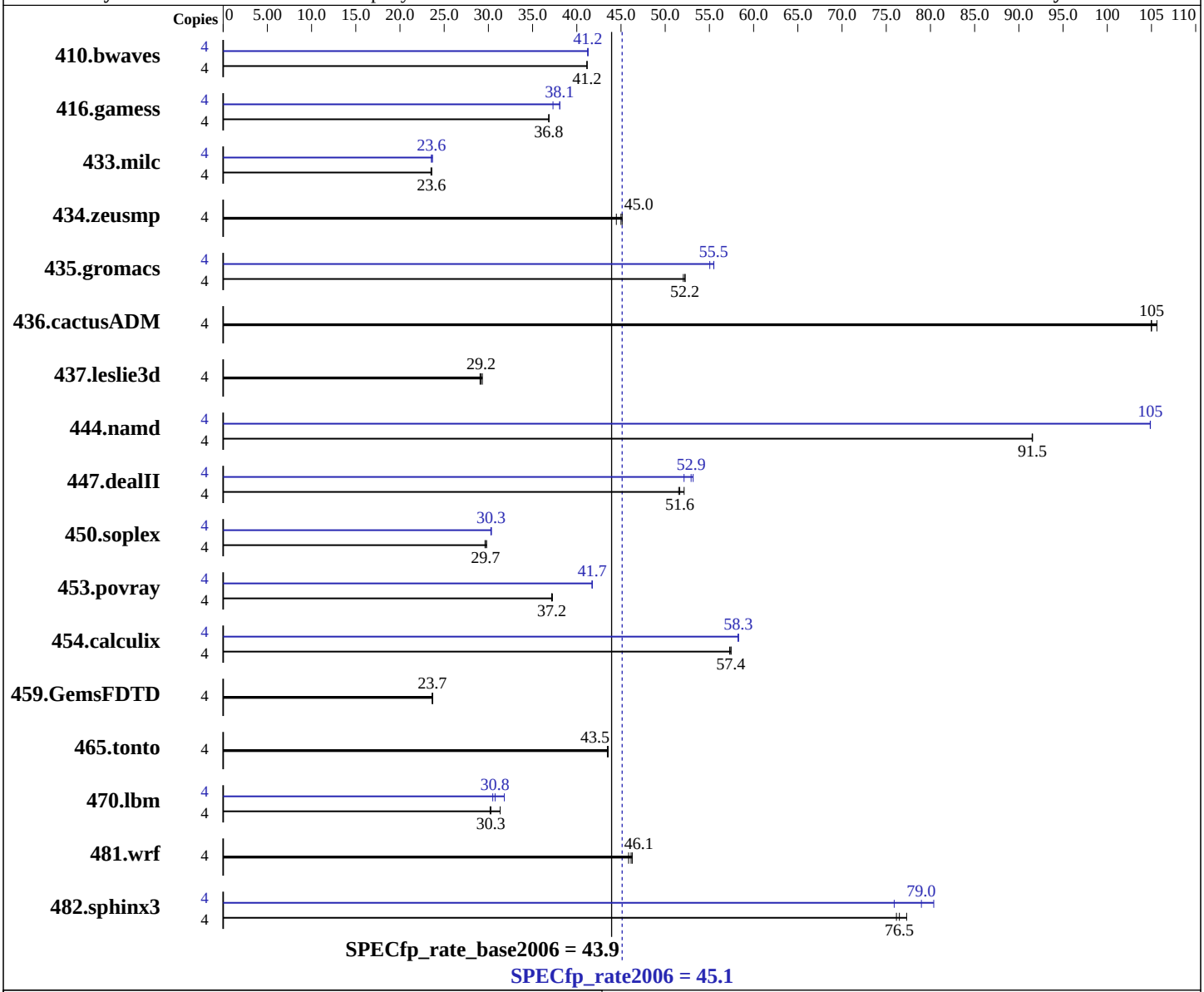
HP Integrity rx3600
(1.6GHz/18MB Dual-Core Intel Itanium 2)

SPECfp®_rate2006 = 45.1

SPECfp_rate_base2006 = 43.9

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

Test date: Nov-2006
Hardware Availability: Nov-2006
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 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: 16 GB (8x2GB DIMMs, AD124A 8-DIMM memory carrier)
Disk Subsystem: 2x73GB 10K RPM SAS (mirrored)
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	1321	41.2	**1321**	**41.2**	1321	41.2	4	**1318**	**41.2**	1318	41.2	1317	41.3
416.gamess	4	2126	36.8	**2126**	**36.8**	2126	36.8	4	2057	38.1	2099	37.3	**2058**	**38.1**
433.milc	4	1562	23.5	**1558**	**23.6**	1557	23.6	4	1558	23.6	**1558**	**23.6**	1550	23.7
434.zeusmp	4	806	45.1	**809**	**45.0**	818	44.5	4	806	45.1	**809**	**45.0**	818	44.5
435.gromacs	4	547	52.3	**547**	**52.2**	549	52.0	4	519	55.0	**515**	**55.5**	515	55.5
436.cactusADM	4	**455**	**105**	455	105	453	106	4	**455**	**105**	455	105	453	106
437.leslie3d	4	**1289**	**29.2**	1294	29.1	1282	29.3	4	**1289**	**29.2**	1294	29.1	1282	29.3
444.namd	4	351	91.5	**350**	**91.5**	350	91.5	4	**306**	**105**	306	105	306	105
447.dealII	4	878	52.1	**886**	**51.6**	888	51.5	4	**865**	**52.9**	878	52.1	861	53.2
450.soplex	4	1119	29.8	1126	29.6	**1124**	**29.7**	4	**1101**	**30.3**	1102	30.3	1099	30.3
453.povray	4	573	37.2	**573**	**37.2**	571	37.2	4	**510**	**41.7**	510	41.7	510	41.7
454.calculix	4	574	57.4	576	57.3	**575**	**57.4**	4	567	58.2	566	58.3	**566**	**58.3**
459.GemsFDTD	4	**1794**	**23.7**	1795	23.6	1791	23.7	4	**1794**	**23.7**	1795	23.6	1791	23.7
465.tonto	4	904	43.5	**905**	**43.5**	906	43.5	4	904	43.5	**905**	**43.5**	906	43.5
470.lbm	4	**1815**	**30.3**	1820	30.2	1754	31.3	4	1802	30.5	**1787**	**30.8**	1728	31.8
481.wrf	4	966	46.3	**968**	**46.1**	974	45.9	4	966	46.3	**968**	**46.1**	974	45.9
482.sphinx3	4	1024	76.2	**1019**	**76.5**	1008	77.3	4	1027	75.9	970	80.4	**987**	**79.0**

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

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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 other inquiries, please contact webmaster@spec.org.

Tested with SPEC CPU2006 v1.0.
Report generated on Tue Jul 22 10:03:05 2014 by SPEC CPU2006 PS/PDF formatter v6932.
Originally published on 28 November 2006.