SPEC® CFP2006 Result

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Hewlett-Packard Company

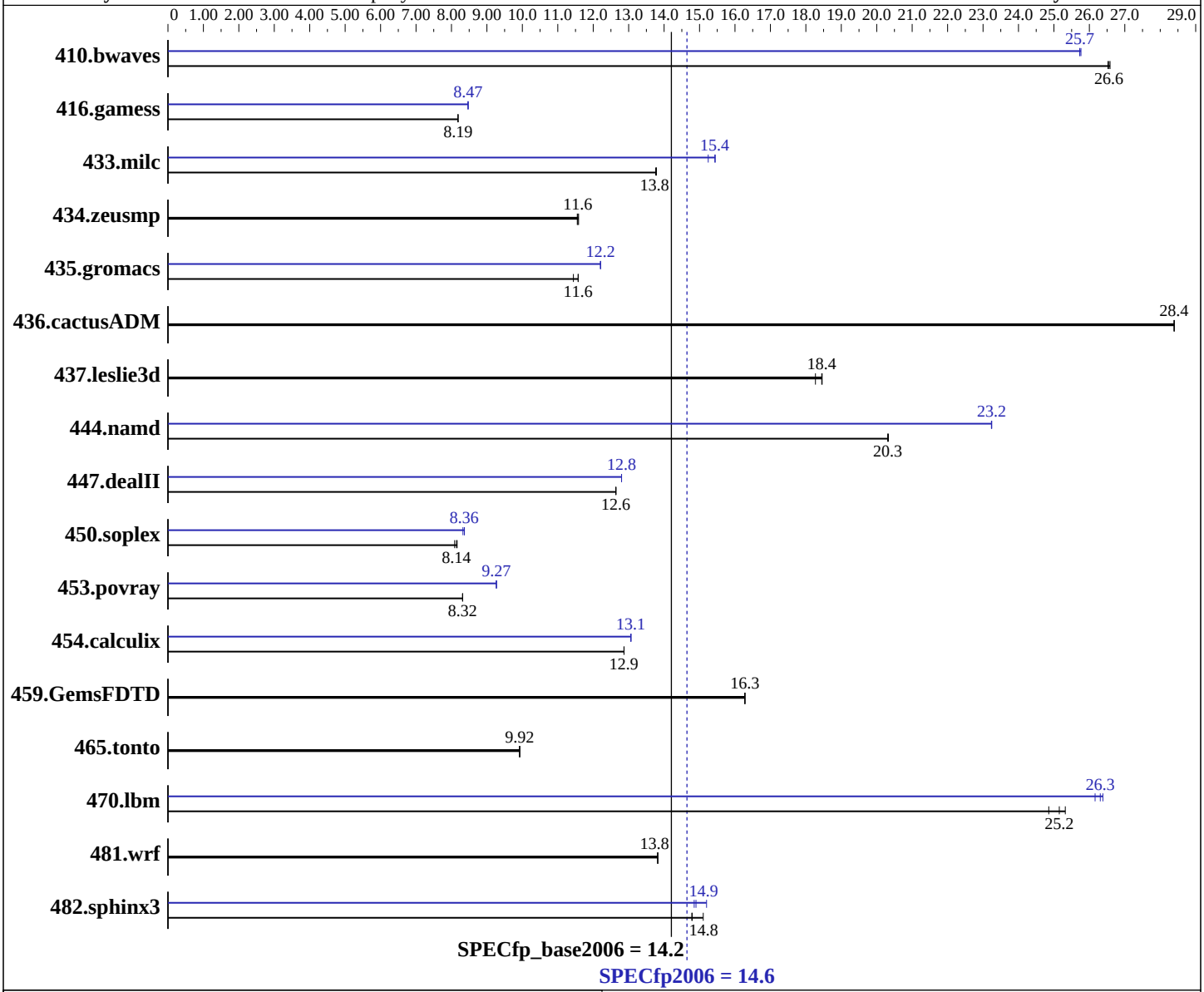
HP Integrity rx3600
(1.4GHz/12MB Dual-Core Intel Itanium 2)

SPECfp®2006 = 14.6

SPECfp_base2006 = 14.2

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

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



Hardware

CPU Name:	Dual-Core Intel Itanium 2 9020
CPU Characteristics:	1.4GHz/12MB, 533MHz FSB
CPU MHz:	1600
FPU:	Integrated
CPU(s) enabled:	1 core, 1 chip, 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					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	512	26.5	**512**	**26.6**	511	26.6	527	25.8	528	25.7	**528**	**25.7**
416.gamess	2392	8.19	**2392**	**8.19**	2393	8.18	2312	8.47	2312	8.47	**2312**	**8.47**
433.milc	**666**	**13.8**	666	13.8	667	13.8	594	15.4	602	15.2	**595**	**15.4**
434.zeusmp	788	11.6	**787**	**11.6**	785	11.6	788	11.6	**787**	**11.6**	785	11.6
435.gromacs	617	11.6	**617**	**11.6**	624	11.4	585	12.2	**585**	**12.2**	585	12.2
436.cactusADM	421	28.4	**421**	**28.4**	421	28.4	421	28.4	**421**	**28.4**	421	28.4
437.leslie3d	**510**	**18.4**	509	18.5	514	18.3	**510**	**18.4**	509	18.5	514	18.3
444.namd	**395**	**20.3**	395	20.3	395	20.3	**345**	**23.2**	345	23.2	345	23.2
447.dealII	905	12.6	**905**	**12.6**	905	12.6	894	12.8	894	12.8	**894**	**12.8**
450.soplex	1022	8.16	1031	8.09	**1024**	**8.14**	997	8.37	1002	8.32	**997**	**8.36**
453.povray	640	8.32	640	8.31	**640**	**8.32**	**574**	**9.27**	574	9.27	574	9.27
454.calculix	641	12.9	641	12.9	**641**	**12.9**	631	13.1	**631**	**13.1**	632	13.1
459.GemsFDTD	**652**	**16.3**	652	16.3	652	16.3	**652**	**16.3**	652	16.3	652	16.3
465.tonto	991	9.93	992	9.92	**991**	**9.92**	991	9.93	992	9.92	**991**	**9.92**
470.lbm	553	24.9	**546**	**25.2**	543	25.3	521	26.4	**522**	**26.3**	525	26.2
481.wrf	808	13.8	**808**	**13.8**	808	13.8	808	13.8	**808**	**13.8**	808	13.8
482.sphinx3	1290	15.1	1319	14.8	**1317**	**14.8**	1313	14.8	**1308**	**14.9**	1282	15.2

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

system was booted uniprocessor by setting "maxcpus=0"
kernel parameter in elilo.conf
```

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: -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

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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.

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