SPEC® CFP2006 Result

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Hewlett-Packard Company

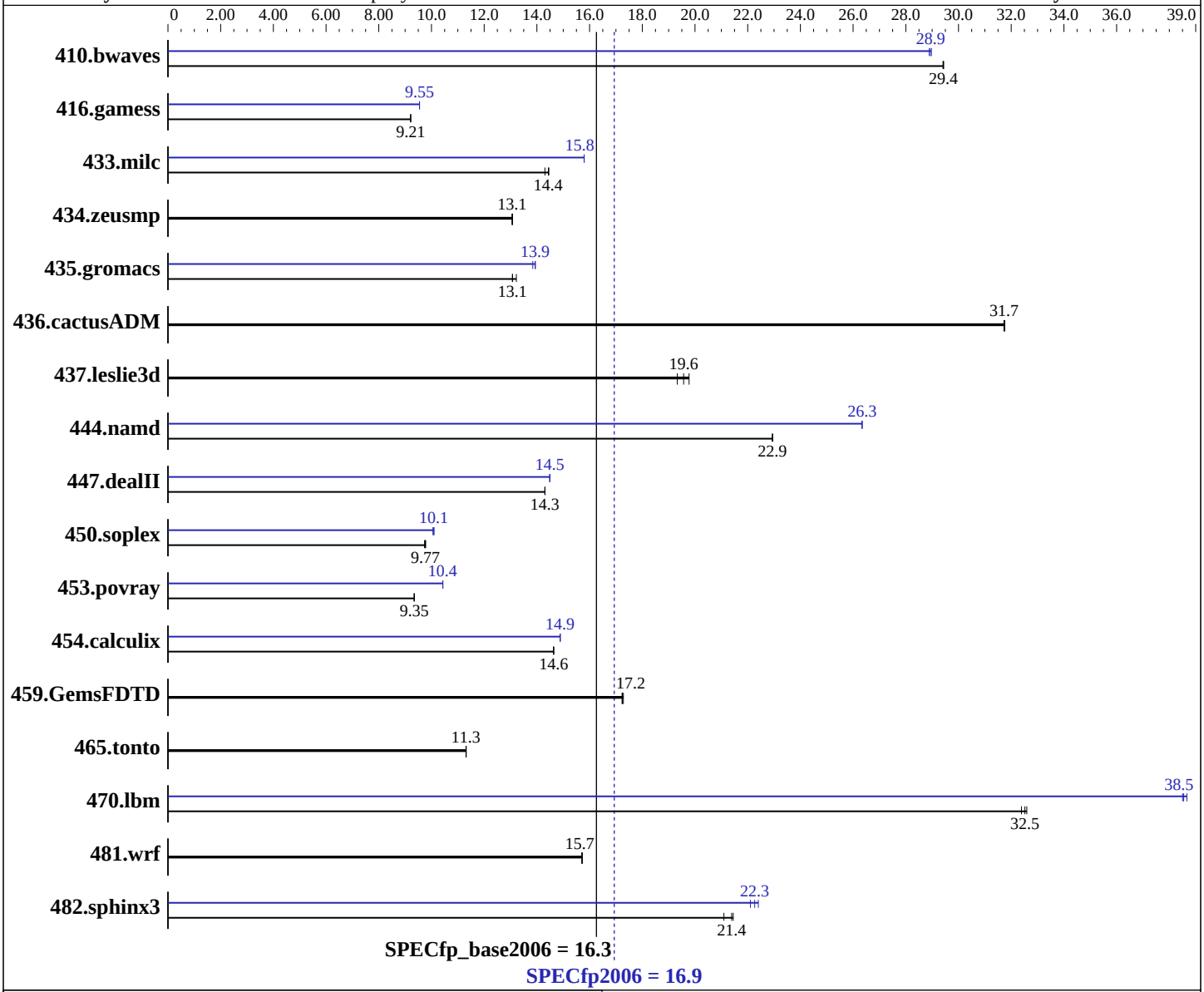
HP Integrity rx6600
(1.6GHz/24MB Dual-Core Intel Itanium 2)

SPECfp®2006 = 16.9

SPECfp_base2006 = 16.3

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

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



Hardware

CPU Name:	Dual-Core Intel Itanium 2 9050
CPU Characteristics:	1.6GHz/24MB, 533MHz FSB
CPU MHz:	1600
FPU:	Integrated
CPU(s) enabled:	1 core, 1 chip, 2 cores/chip
CPU(s) orderable:	1-4 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: 12 MB I+D on chip per core
Other Cache: None
Memory: 24 GB (24x1GB DIMMs)
Disk Subsystem: 2x73GB 10K RPM SAS (mirrored)
Other Hardware: None

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	462	29.4	462	29.4	**462**	**29.4**	469	29.0	**470**	**28.9**	470	28.9
416.gamess	**2126**	**9.21**	2126	9.21	2126	9.21	2051	9.55	**2051**	**9.55**	2051	9.55
433.milc	642	14.3	**636**	**14.4**	635	14.5	581	15.8	581	15.8	**581**	**15.8**
434.zeusmp	697	13.1	**697**	**13.1**	696	13.1	697	13.1	**697**	**13.1**	696	13.1
435.gromacs	**546**	**13.1**	546	13.1	540	13.2	512	13.9	516	13.8	**512**	**13.9**
436.cactusADM	**377**	**31.7**	376	31.8	377	31.7	**377**	**31.7**	376	31.8	377	31.7
437.leslie3d	486	19.3	**480**	**19.6**	475	19.8	486	19.3	**480**	**19.6**	475	19.8
444.namd	350	22.9	350	22.9	**350**	**22.9**	**304**	**26.3**	304	26.3	305	26.3
447.dealII	800	14.3	**800**	**14.3**	799	14.3	**789**	**14.5**	789	14.5	789	14.5
450.soplex	857	9.74	853	9.78	**854**	**9.77**	829	10.1	826	10.1	**827**	**10.1**
453.povray	569	9.35	569	9.35	**569**	**9.35**	510	10.4	**510**	**10.4**	510	10.4
454.calculix	564	14.6	564	14.6	**564**	**14.6**	554	14.9	**554**	**14.9**	554	14.9
459.GemsFDTD	616	17.2	**615**	**17.2**	614	17.3	616	17.2	**615**	**17.2**	614	17.3
465.tonto	869	11.3	**870**	**11.3**	870	11.3	869	11.3	**870**	**11.3**	870	11.3
470.lbm	424	32.4	422	32.6	**423**	**32.5**	**356**	**38.5**	355	38.7	357	38.5
481.wrf	710	15.7	**711**	**15.7**	711	15.7	710	15.7	**711**	**15.7**	711	15.7
482.sphinx3	909	21.5	924	21.1	**911**	**21.4**	**875**	**22.3**	882	22.1	870	22.4

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

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

General Notes

```
Submitted_by: "Kirby Collins" <kirby.collins@hp.com>
Submitted: Wed Nov  1 13:19:17 2006
Submission: cpu2006-20061016-00116.sub
```

Base Compiler Invocation

C benchmarks:
icc

C++ benchmarks:
icpc

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

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

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Peak Optimization Flags (Continued)

434.zeusmp: `basepeak = yes`

437.leslie3d: `basepeak = yes`

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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