SPEC® CFP2006 Result

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Hewlett-Packard Company

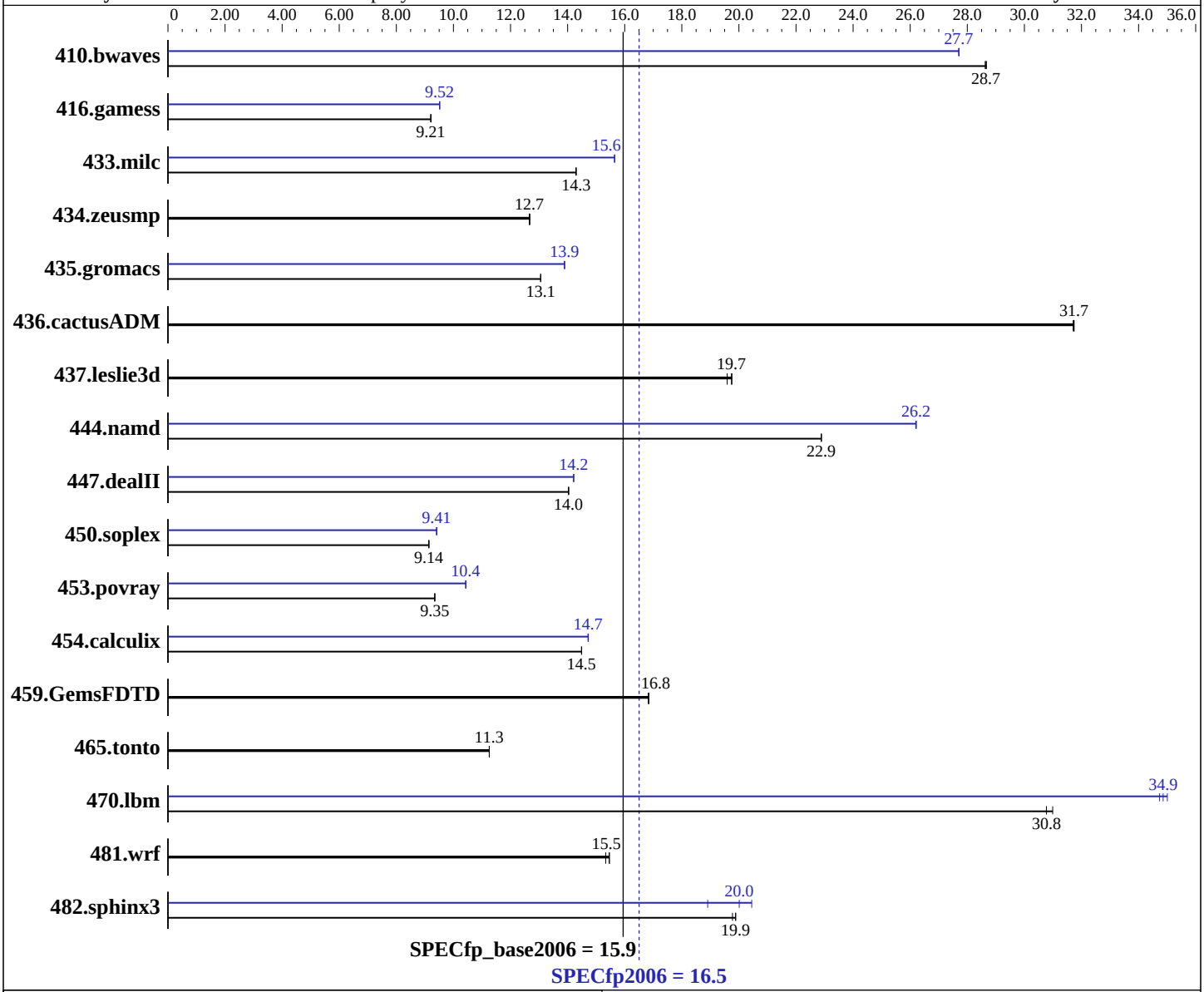
HP Integrity rx3600
(1.6GHz/18MB Dual-Core Intel Itanium 2)

SPECfp®2006 = 16.5

SPECfp_base2006 = 15.9

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:	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 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					
	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	475	28.6	**474**	**28.7**	474	28.7	490	27.7	491	27.7	**491**	**27.7**
416.gamess	2126	9.21	**2126**	**9.21**	2127	9.21	**2058**	**9.52**	2057	9.52	2058	9.52
433.milc	642	14.3	642	14.3	**642**	**14.3**	587	15.6	587	15.6	**587**	**15.6**
434.zeusmp	719	12.7	718	12.7	**719**	**12.7**	719	12.7	718	12.7	**719**	**12.7**
435.gromacs	547	13.1	547	13.1	**547**	**13.1**	514	13.9	**514**	**13.9**	514	13.9
436.cactusADM	377	31.7	377	31.7	**377**	**31.7**	377	31.7	377	31.7	**377**	**31.7**
437.leslie3d	476	19.8	**476**	**19.7**	480	19.6	476	19.8	**476**	**19.7**	480	19.6
444.namd	350	22.9	350	22.9	**350**	**22.9**	**306**	**26.2**	306	26.2	306	26.2
447.dealII	**815**	**14.0**	815	14.0	815	14.0	805	14.2	805	14.2	**805**	**14.2**
450.soplex	912	9.15	914	9.13	**913**	**9.14**	886	9.41	886	9.41	**886**	**9.41**
453.povray	**569**	**9.35**	569	9.34	569	9.35	510	10.4	510	10.4	**510**	**10.4**
454.calculix	569	14.5	**569**	**14.5**	569	14.5	560	14.7	561	14.7	**561**	**14.7**
459.GemsFDTD	**630**	**16.8**	630	16.8	630	16.8	**630**	**16.8**	630	16.8	630	16.8
465.tonto	874	11.3	874	11.3	**874**	**11.3**	874	11.3	874	11.3	**874**	**11.3**
470.lbm	**446**	**30.8**	447	30.8	443	31.0	396	34.7	**394**	**34.9**	392	35.0
481.wrf	**723**	**15.5**	722	15.5	728	15.3	**723**	**15.5**	722	15.5	728	15.3
482.sphinx3	980	19.9	986	19.8	**980**	**19.9**	953	20.4	1031	18.9	**974**	**20.0**

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

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

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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