SPEC® CFP2006 Result

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Hewlett-Packard Company

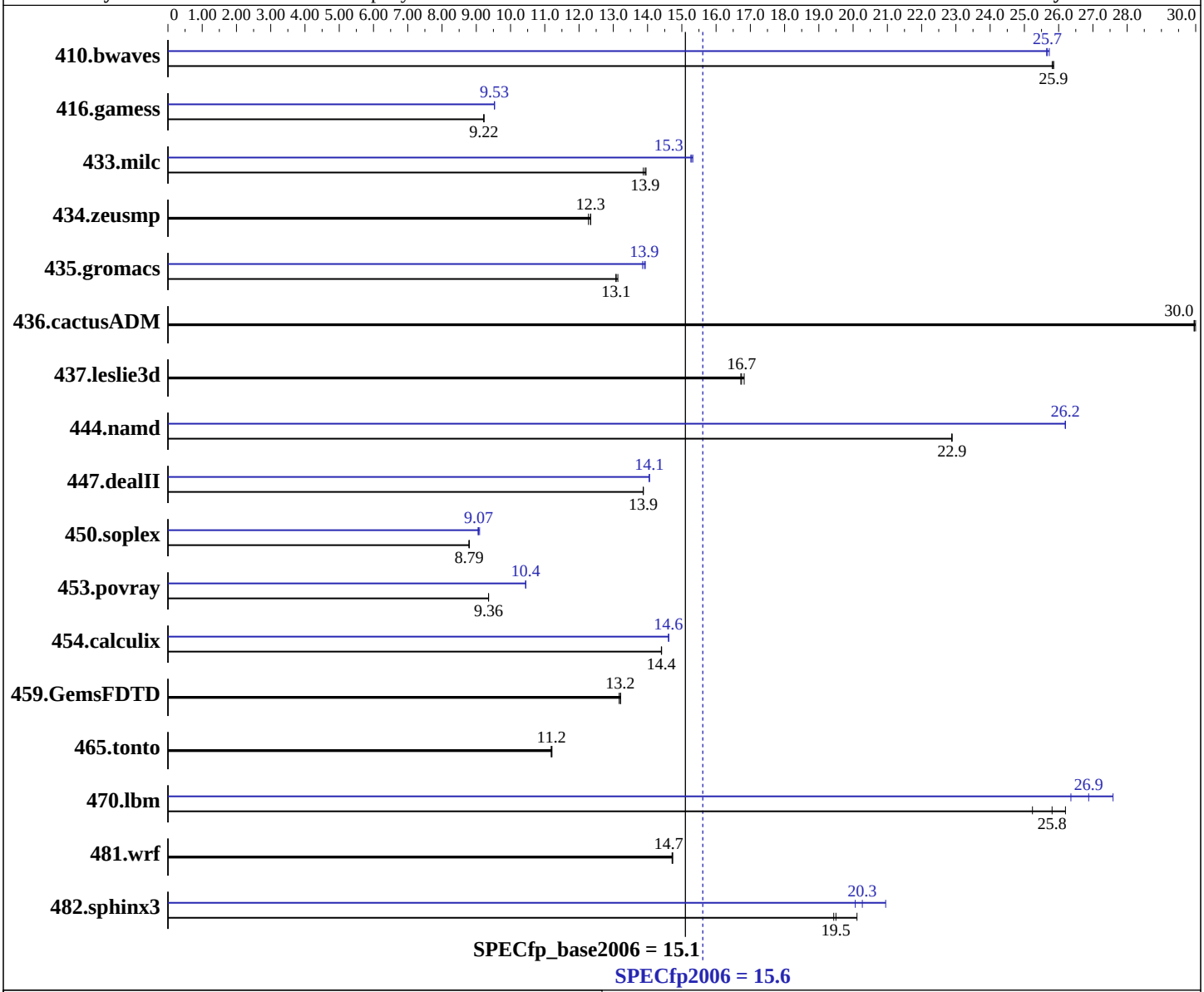
HP Integrity rx2620
(1.6GHz/18MB Dual-Core Intel Itanium 2)

SPECfp®2006 = 15.6

SPECfp_base2006 = 15.1

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 9040
CPU Characteristics:	1.6GHz/18MB, 400MHz 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: 24 GB (12x2GB DIMMs)
Disk Subsystem: 36GB 15K RPM SCSI
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	527	25.8	**526**	**25.9**	526	25.9	530	25.6	528	25.7	**529**	**25.7**
416.gamess	2123	9.22	2123	9.22	**2123**	**9.22**	2054	9.53	2055	9.53	**2054**	**9.53**
433.milc	662	13.9	658	14.0	**659**	**13.9**	599	15.3	601	15.3	**600**	**15.3**
434.zeusmp	741	12.3	737	12.3	**738**	**12.3**	741	12.3	737	12.3	**738**	**12.3**
435.gromacs	**546**	**13.1**	544	13.1	546	13.1	**513**	**13.9**	512	13.9	515	13.9
436.cactusADM	**399**	**30.0**	399	30.0	398	30.0	**399**	**30.0**	399	30.0	398	30.0
437.leslie3d	**561**	**16.7**	559	16.8	562	16.7	**561**	**16.7**	559	16.8	562	16.7
444.namd	351	22.9	**350**	**22.9**	350	22.9	306	26.2	306	26.2	**306**	**26.2**
447.dealII	**825**	**13.9**	825	13.9	824	13.9	814	14.1	**814**	**14.1**	814	14.0
450.soplex	948	8.80	**949**	**8.79**	949	8.79	917	9.10	**920**	**9.07**	921	9.05
453.povray	568	9.36	569	9.36	**568**	**9.36**	510	10.4	509	10.4	**509**	**10.4**
454.calculix	572	14.4	573	14.4	**573**	**14.4**	564	14.6	**564**	**14.6**	565	14.6
459.GemsFDTD	806	13.2	**803**	**13.2**	803	13.2	806	13.2	**803**	**13.2**	803	13.2
465.tonto	878	11.2	879	11.2	**879**	**11.2**	878	11.2	879	11.2	**879**	**11.2**
470.lbm	544	25.2	**532**	**25.8**	524	26.2	521	26.4	498	27.6	**511**	**26.9**
481.wrf	**758**	**14.7**	758	14.7	759	14.7	**758**	**14.7**	758	14.7	759	14.7
482.sphinx3	969	20.1	**1000**	**19.5**	1003	19.4	930	21.0	972	20.1	**962**	**20.3**

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

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 questions about this result, please contact the tester.
For other inquiries, please contact webmaster@spec.org.

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