SPEC® CFP2006 Result

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Hewlett-Packard Company

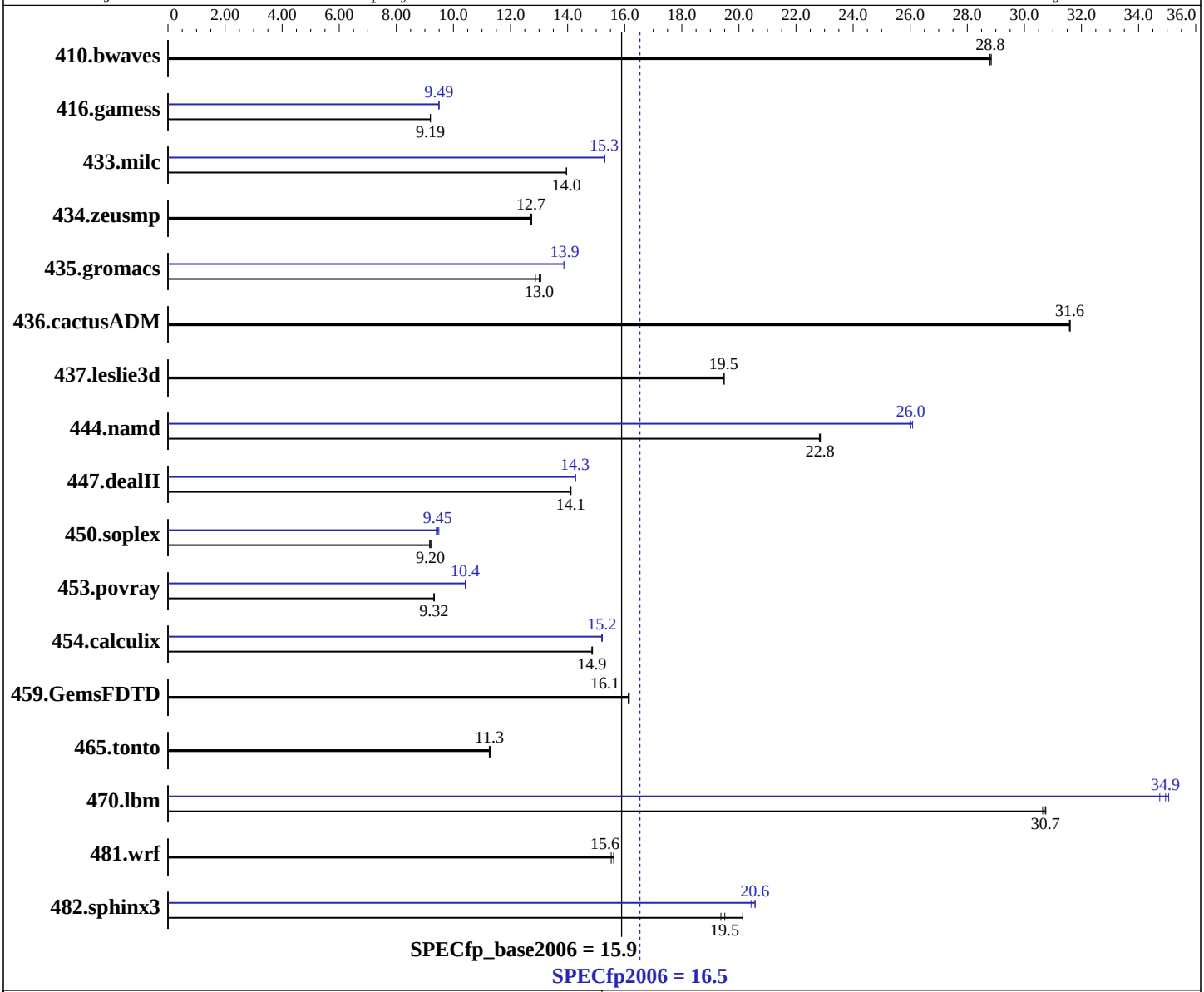
HP Integrity rx2660
(1.6GHz/18MB Dual-Core Intel Itanium 2)

SPECfp®2006 = 16.5

SPECfp_base2006 = 15.9

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

Test date: Jan-2007
Hardware Availability: Feb-2007
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 9.1 for Linux (Build 20061105) Intel Fortran Compiler 9.1 for Linux (Build 20061105)
Auto Parallel:	No
File System:	ext3
System State:	Multi-user

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L3 Cache: 9 MB I+D on chip per core
Other Cache: None
Memory: 8 GB (4x2GB DIMMs)
Disk Subsystem: 73GB 10K RPM SAS
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	471	28.8	472	28.8	**472**	**28.8**	471	28.8	472	28.8	**472**	**28.8**
416.gamess	2129	9.19	2131	9.19	**2130**	**9.19**	2063	9.49	**2063**	**9.49**	2062	9.49
433.milc	657	14.0	660	13.9	**658**	**14.0**	600	15.3	**601**	**15.3**	601	15.3
434.zeusmp	**715**	**12.7**	714	12.7	716	12.7	**715**	**12.7**	714	12.7	716	12.7
435.gromacs	547	13.1	**549**	**13.0**	555	12.9	515	13.9	514	13.9	**514**	**13.9**
436.cactusADM	378	31.6	378	31.6	**378**	**31.6**	378	31.6	378	31.6	**378**	**31.6**
437.leslie3d	**483**	**19.5**	482	19.5	483	19.4	**483**	**19.5**	482	19.5	483	19.4
444.namd	351	22.8	**351**	**22.8**	351	22.9	**308**	**26.0**	307	26.1	308	26.0
447.dealII	811	14.1	810	14.1	**811**	**14.1**	**802**	**14.3**	802	14.3	801	14.3
450.soplex	906	9.21	**907**	**9.20**	910	9.16	**883**	**9.45**	879	9.49	887	9.40
453.povray	**571**	**9.32**	570	9.33	571	9.31	511	10.4	510	10.4	**511**	**10.4**
454.calculix	555	14.9	**555**	**14.9**	556	14.8	**543**	**15.2**	542	15.2	543	15.2
459.GemsFDTD	658	16.1	**658**	**16.1**	657	16.2	658	16.1	**658**	**16.1**	657	16.2
465.tonto	872	11.3	**873**	**11.3**	874	11.3	872	11.3	**873**	**11.3**	874	11.3
470.lbm	**447**	**30.7**	447	30.8	448	30.6	392	35.1	**393**	**34.9**	395	34.7
481.wrf	719	15.5	715	15.6	**715**	**15.6**	719	15.5	715	15.6	**715**	**15.6**
482.sphinx3	968	20.1	**999**	**19.5**	1006	19.4	**948**	**20.6**	948	20.6	954	20.4

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
```

Base Compiler Invocation

C benchmarks:
`icc`

C++ benchmarks:
`icpc`

Continued on next page

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: basepeak = yes

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.20090715.00.html`

You can also download the XML flags source by saving the following link:
`http://www.spec.org/cpu2006/flags/IPF_intel91_flags.20090715.00.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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