SPEC® CFP2006 Result

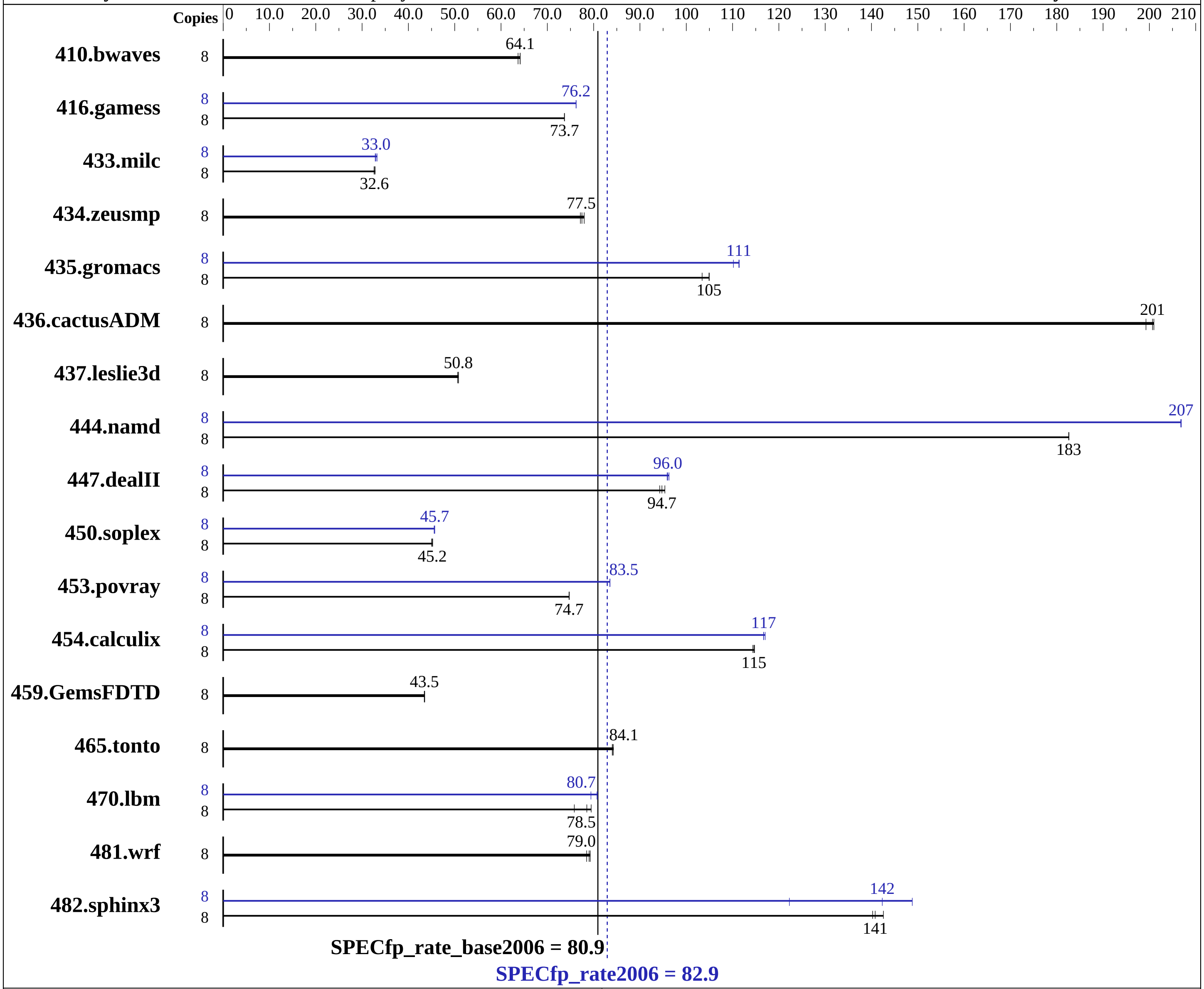
Hewlett-Packard Company

HP Integrity rx7640
(1.6GHz/18MB Dual-Core Intel Itanium 2)

SPECfp®_rate2006 = 82.9

SPECfp_rate_base2006 = 80.9

CPU2006 license: 03		**Test date:**	Dec-2006
Test sponsor:	Hewlett-Packard Company	**Hardware Availability:**	Sep-2006
Tested by:	Hewlett-Packard Company	**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:	8 cores, 4 chips, 2 cores/chip
CPU(s) orderable:	1-8 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: 32 GB (16x2GB DIMMs)
Disk Subsystem: 73GB 15K RPM SCSI
Other Hardware: None

Base Pointers: 64-bit
Peak Pointers: 64-bit
Other Software: None

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	8	1707	63.7	**1695**	**64.1**	1695	64.1	8	1707	63.7	**1695**	**64.1**	1695	64.1
416.gamess	8	2126	73.7	2125	73.7	**2126**	**73.7**	8	**2056**	**76.2**	2056	76.2	2055	76.2
433.milc	8	2253	32.6	2237	32.8	**2250**	**32.6**	8	2237	32.8	2209	33.2	**2225**	**33.0**
434.zeusmp	8	**940**	**77.5**	944	77.1	934	78.0	8	**940**	**77.5**	944	77.1	934	78.0
435.gromacs	8	552	103	**544**	**105**	544	105	8	513	111	518	110	**513**	**111**
436.cactusADM	8	480	199	**476**	**201**	476	201	8	480	199	**476**	**201**	476	201
437.leslie3d	8	1486	50.6	1480	50.8	**1480**	**50.8**	8	1486	50.6	1480	50.8	**1480**	**50.8**
444.namd	8	351	183	351	183	**351**	**183**	8	310	207	310	207	**310**	**207**
447.dealII	8	959	95.4	971	94.3	**966**	**94.7**	8	**953**	**96.0**	951	96.3	955	95.9
450.soplex	8	**1477**	**45.2**	1475	45.2	1482	45.0	8	1465	45.6	1460	45.7	**1461**	**45.7**
453.povray	8	**570**	**74.7**	569	74.7	570	74.7	8	510	83.5	**510**	**83.5**	510	83.5
454.calculix	8	575	115	**576**	**115**	577	114	8	**566**	**117**	564	117	566	117
459.GemsFDTD	8	1950	43.5	1955	43.4	**1953**	**43.5**	8	1950	43.5	1955	43.4	**1953**	**43.5**
465.tonto	8	**936**	**84.1**	934	84.3	937	84.0	8	**936**	**84.1**	934	84.3	937	84.0
470.lbm	8	1450	75.8	**1400**	**78.5**	1383	79.5	8	1384	79.4	**1362**	**80.7**	1360	80.8
481.wrf	8	1138	78.5	**1131**	**79.0**	1127	79.3	8	1138	78.5	**1131**	**79.0**	1127	79.3
482.sphinx3	8	1094	143	1112	140	**1107**	**141**	8	**1095**	**142**	1275	122	1048	149

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
```

Platform Notes

```
System was configured as a single partition with
1 cell and 4 processors (8 cores) per cell.
Memory was configured as 100% cell local.
```

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: basepeak = yes

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.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

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

Tested with SPEC CPU2006 v1.0.
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