



SPEC[®] CFP2006 Result

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Hewlett-Packard Company

SPECfp[®]_rate2006 = 40.4

HP Integrity rx3600
(1.4GHz/12MB Dual-Core Intel Itanium 2)

SPECfp_rate_base2006 = 39.4

CPU2006 license: 03

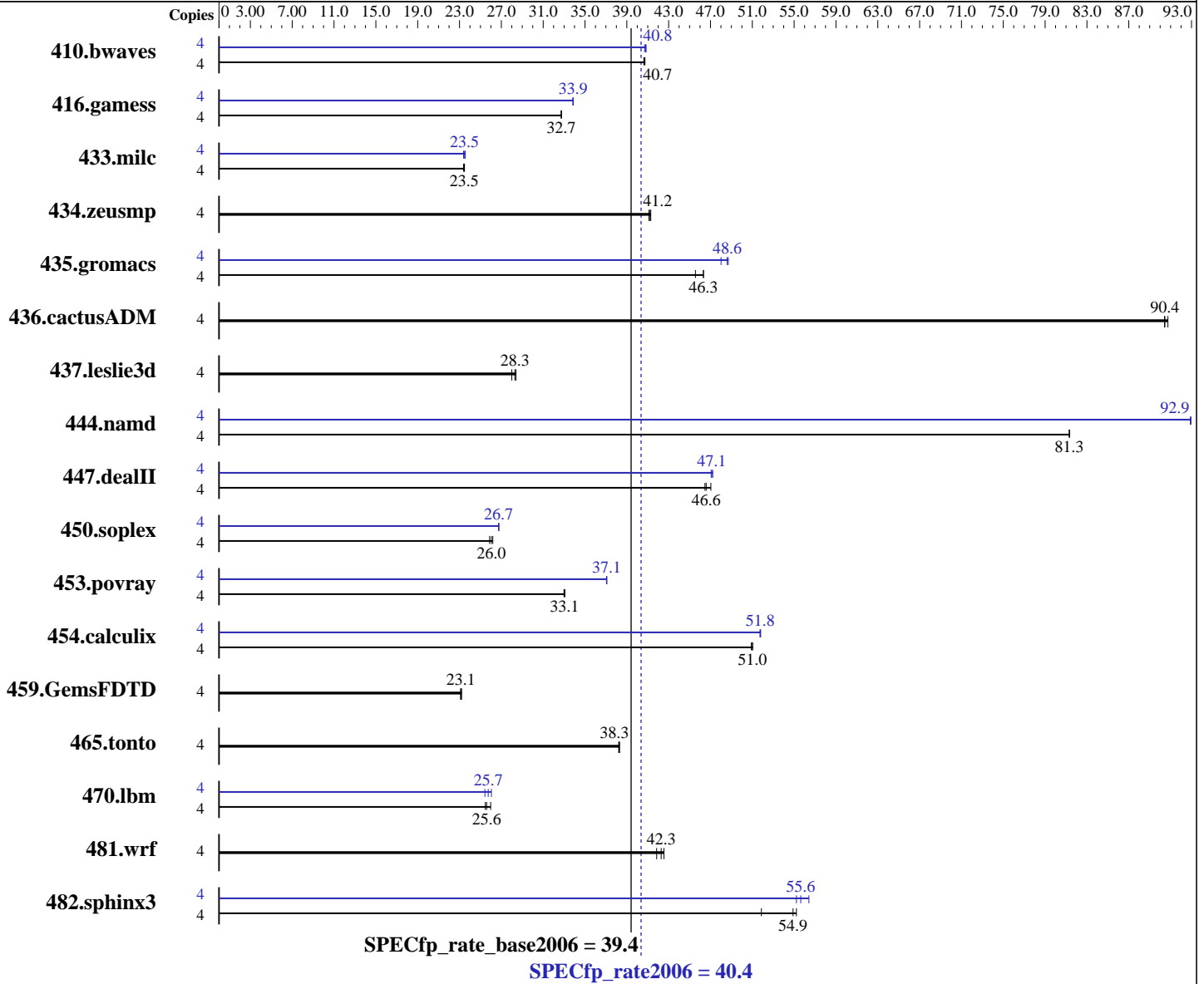
Test date: Dec-2006

Test sponsor: Hewlett-Packard Company

Hardware Availability: Nov-2006

Tested by: Hewlett-Packard Company

Software Availability: Nov-2006



Hardware

CPU Name: Dual-Core Intel Itanium 2 9020
 CPU Characteristics: 1.4GHz/12MB, 533MHz FSB
 CPU MHz: 1400
 FPU: Integrated
 CPU(s) enabled: 4 cores, 2 chips, 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 20060818)
 Intel Fortran Compiler 9.1 for Linux (Build 20060818)
 Auto Parallel: No
 File System: ext3
 System State: Multi-user

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L3 Cache: 6 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

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	4	1334	40.7	<u>1336</u>	<u>40.7</u>	1338	40.6	4	1336	40.7	1331	40.8	<u>1332</u>	<u>40.8</u>		
416.gamess	4	<u>2393</u>	<u>32.7</u>	2393	32.7	2392	32.7	4	2314	33.8	<u>2312</u>	<u>33.9</u>	2312	33.9		
433.milc	4	<u>1565</u>	<u>23.5</u>	1564	23.5	1570	23.4	4	<u>1563</u>	<u>23.5</u>	1560	23.5	1570	23.4		
434.zeusmp	4	882	41.3	885	41.1	<u>883</u>	<u>41.2</u>	4	882	41.3	885	41.1	<u>883</u>	<u>41.2</u>		
435.gromacs	4	<u>617</u>	<u>46.3</u>	627	45.6	616	46.3	4	586	48.7	<u>588</u>	<u>48.6</u>	595	48.0		
436.cactusADM	4	529	90.4	<u>528</u>	<u>90.4</u>	527	90.7	4	529	90.4	<u>528</u>	<u>90.4</u>	527	90.7		
437.leslie3d	4	1343	28.0	1324	28.4	<u>1329</u>	<u>28.3</u>	4	1343	28.0	1324	28.4	<u>1329</u>	<u>28.3</u>		
444.namd	4	<u>395</u>	<u>81.3</u>	394	81.3	395	81.3	4	345	92.9	345	92.9	<u>345</u>	<u>92.9</u>		
447.dealII	4	973	47.0	985	46.5	<u>982</u>	<u>46.6</u>	4	969	47.2	<u>971</u>	<u>47.1</u>	972	47.1		
450.soplex	4	1289	25.9	<u>1281</u>	<u>26.0</u>	1274	26.2	4	1246	26.8	<u>1248</u>	<u>26.7</u>	1248	26.7		
453.povray	4	<u>644</u>	<u>33.1</u>	644	33.1	645	33.0	4	574	37.1	574	37.1	<u>574</u>	<u>37.1</u>		
454.calculix	4	647	51.0	<u>647</u>	<u>51.0</u>	648	50.9	4	638	51.7	<u>638</u>	<u>51.8</u>	637	51.8		
459.GemsFDTD	4	1837	23.1	<u>1835</u>	<u>23.1</u>	1829	23.2	4	1837	23.1	<u>1835</u>	<u>23.1</u>	1829	23.2		
465.tonto	4	1027	38.3	1030	38.2	<u>1029</u>	<u>38.3</u>	4	1027	38.3	1030	38.2	<u>1029</u>	<u>38.3</u>		
470.lbm	4	<u>2147</u>	<u>25.6</u>	2158	25.5	2116	26.0	4	2162	25.4	<u>2135</u>	<u>25.7</u>	2110	26.1		
481.wrf	4	<u>1057</u>	<u>42.3</u>	1068	41.9	1050	42.6	4	<u>1057</u>	<u>42.3</u>	1068	41.9	1050	42.6		
482.sphinx3	4	1503	51.9	1412	55.2	<u>1420</u>	<u>54.9</u>	4	1412	55.2	1382	56.4	<u>1401</u>	<u>55.6</u>		

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

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.dealIII: -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

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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.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

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For other inquiries, please contact webmaster@spec.org.

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