



SPEC® CFP2006 Result

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Hewlett-Packard Company

ProLiant DL140 G3
(3.0 GHz, Intel Xeon processor X5365)

SPECfp®_rate2006 = 38.5

SPECfp_rate_base2006 = 36.1

CPU2006 license: 3

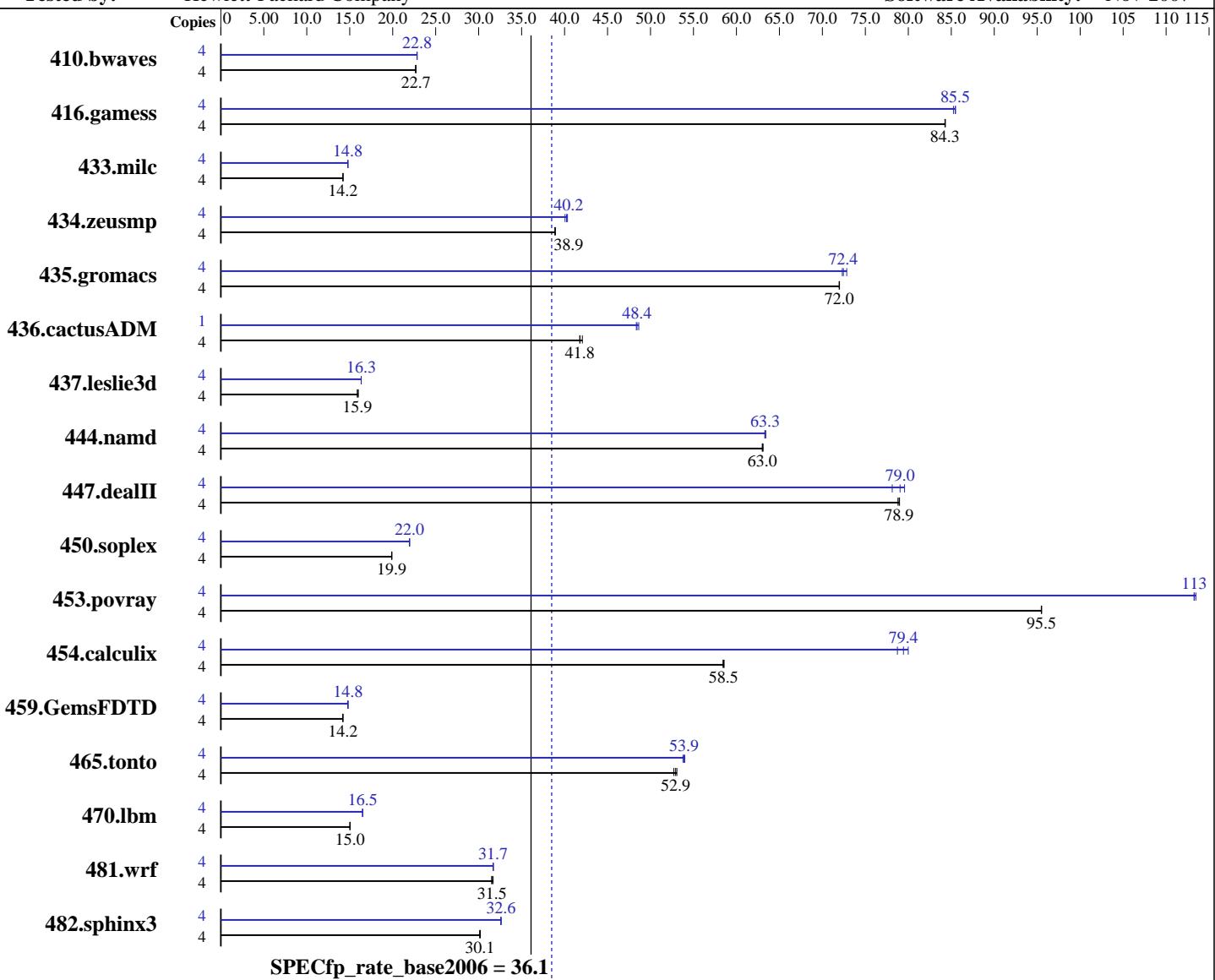
Test sponsor: Hewlett-Packard Company

Tested by: Hewlett-Packard Company

Test date: Nov-2007

Hardware Availability: Sep-2007

Software Availability: Nov-2007



Hardware

CPU Name: Intel Xeon X5365
CPU Characteristics: 3.0 GHz, 2x4 MB L2 shared, 1333 MHz system bus
CPU MHz: 3000
FPU: Integrated
CPU(s) enabled: 4 cores, 1 chip, 4 cores/chip
CPU(s) orderable: 1 or 2 chips
Primary Cache: 32 KB I + 32 KB D on chip per core
Secondary Cache: 8 MB I+D on chip per chip, 4 MB shared / 2 cores

Software

Operating System: SUSE Linux Enterprise Server 10 (x86_64) SP1 kernel 2.6.16.46-0.12-smp
Compiler: Intel C++ and Fortran Compiler for Linux32 and Linux64 version 10.1 Build 20070725
Auto Parallel: Yes
File System: ext2
System State: Multi-user run level 3
Base Pointers: 64-bit

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L3 Cache: None
Other Cache: None
Memory: 16 GB (8x2 GB PC2-5300F CL5)
Disk Subsystem: 1x160 GB 7.2 K SATA
Other Hardware: None

Peak Pointers: 32/64-bit
Other Software: binutils-2.17.50

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
410.bwaves	4	2400	22.7	<u>2395</u>	<u>22.7</u>	2394	22.7	4	2380	22.8	2381	22.8	<u>2381</u>	<u>22.8</u>
416.gamess	4	929	84.3	929	84.3	<u>929</u>	<u>84.3</u>	4	919	85.3	916	85.5	<u>916</u>	<u>85.5</u>
433.milc	4	2583	14.2	<u>2584</u>	<u>14.2</u>	2584	14.2	4	2484	14.8	2483	14.8	<u>2484</u>	<u>14.8</u>
434.zeusmp	4	935	38.9	<u>936</u>	<u>38.9</u>	936	38.9	4	902	40.3	<u>905</u>	<u>40.2</u>	909	40.1
435.gromacs	4	<u>397</u>	<u>72.0</u>	397	71.9	397	72.0	4	395	72.3	<u>394</u>	<u>72.4</u>	392	72.8
436.cactusADM	4	1144	41.8	<u>1144</u>	<u>41.8</u>	1136	42.1	1	<u>247</u>	<u>48.4</u>	247	48.4	246	48.6
437.leslie3d	4	2350	16.0	<u>2365</u>	<u>15.9</u>	2366	15.9	4	<u>2302</u>	<u>16.3</u>	2303	16.3	2301	16.3
444.namd	4	508	63.1	509	63.0	<u>509</u>	<u>63.0</u>	4	507	63.3	<u>506</u>	<u>63.3</u>	506	63.4
447.dealII	4	<u>580</u>	<u>78.9</u>	579	79.0	581	78.8	4	<u>575</u>	79.6	<u>579</u>	<u>79.0</u>	586	78.1
450.soplex	4	1679	19.9	1676	19.9	<u>1677</u>	<u>19.9</u>	4	1518	22.0	1520	21.9	<u>1519</u>	<u>22.0</u>
453.povray	4	223	95.5	223	95.5	<u>223</u>	<u>95.5</u>	4	188	113	<u>188</u>	<u>113</u>	188	113
454.calculix	4	563	58.6	565	58.4	<u>564</u>	<u>58.5</u>	4	413	80.0	419	78.7	<u>415</u>	<u>79.4</u>
459.GemsFDTD	4	2986	14.2	2993	14.2	<u>2987</u>	<u>14.2</u>	4	2876	14.8	2865	14.8	<u>2867</u>	<u>14.8</u>
465.tonto	4	742	53.1	<u>744</u>	<u>52.9</u>	747	52.7	4	729	54.0	<u>730</u>	<u>53.9</u>	732	53.8
470.lbm	4	3657	15.0	<u>3657</u>	<u>15.0</u>	3657	15.0	4	3332	16.5	3331	16.5	<u>3331</u>	<u>16.5</u>
481.wrf	4	1418	31.5	<u>1416</u>	<u>31.5</u>	1410	31.7	4	<u>1409</u>	<u>31.7</u>	1409	31.7	1410	31.7
482.sphinx3	4	2588	30.1	2581	30.2	<u>2586</u>	<u>30.1</u>	4	<u>2391</u>	<u>32.6</u>	2393	32.6	2390	32.6

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Operating System Notes

'ulimit -s unlimited' was used to set the stacksize to unlimited prior to run
'/usr/bin/taskset' used to bind processes to CPUs

Platform Notes

BIOS configuration:

Power Regulator set to Static High Performance Mode
Adjacent Sector Prefetch Disabled
Hardware Prefetcher Disabled



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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_CASE_FLAG -DSPEC_CPU_LINUX
482.sphinx3: -DSPEC_CPU_LP64
```

Base Optimization Flags

C benchmarks:
-fast

C++ benchmarks:
-fast

Fortran benchmarks:
-fast

Benchmarks using both Fortran and C:
-fast



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Peak Compiler Invocation

C benchmarks (except as noted below):

```
/home/cmpllr/usr3/alrahate/compilers/icl0.1mainline/20070725/Linux32/bin/icc
-L/home/cmpllr/usr3/alrahate/compilers/icl0.1mainline/20070725/Linux32/lib
-I/home/cmpllr/usr3/alrahate/compilers/icl0.1mainline/20070725/Linux32/include
```

433.milc: icc

C++ benchmarks (except as noted below):

icpc

```
450.soplex: /home/cmpllr/usr3/alrahate/compilers/icl0.1mainline/20070725/Linux32/bin/icpc
-L/home/cmpllr/usr3/alrahate/compilers/icl0.1mainline/20070725/Linux32/lib
-I/home/cmpllr/usr3/alrahate/compilers/icl0.1mainline/20070725/Linux32/include
```

Fortran benchmarks (except as noted below):

ifort

```
437.leslie3d: /home/cmpllr/usr3/alrahate/compilers/icl0.1mainline/20070725/Linux32/bin/ifort
-L/home/cmpllr/usr3/alrahate/compilers/icl0.1mainline/20070725/Linux32/lib
-I/home/cmpllr/usr3/alrahate/compilers/icl0.1mainline/20070725/Linux32/include
```

Benchmarks using both Fortran and C:

icc ifort

Peak 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
    444.namd: -DSPEC_CPU_LP64
    447.dealII: -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
    481.wrf: -DSPEC_CPU_LP64 -DSPEC_CPU_CASE_FLAG -DSPEC_CPU_LINUX
```

Peak Optimization Flags

C benchmarks:

```
433.milc: -prof-gen(pass 1) -prof-use(pass 2) -fast -fno-alias
    -auto-ilp32
```

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Peak Optimization Flags (Continued)

470.lbm: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll12
-scalar-rep- -prefetch -opt-malloc-options=3

482.sphinx3: -fast -unroll12

C++ benchmarks:

444.namd: -prof-gen(pass 1) -prof-use(pass 2) -fast -fno-alias
-auto-ilp32

447.dealII: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll12
-ansi-alias -scalar-rep-

450.soplex: -prof-gen(pass 1) -prof-use(pass 2) -fast
-opt-malloc-options=3

453.povray: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll14
-ansi-alias

Fortran benchmarks:

410.bwaves: -fast -prefetch

416.gamess: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll12 -O0
-ansi-alias -scalar-rep-

434.zeusmp: -prof-gen(pass 1) -prof-use(pass 2) -fast

437.leslie3d: -prof-gen(pass 1) -prof-use(pass 2) -fast -prefetch
-opt-malloc-options=3

459.GemsFDTD: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll12 -O0
-prefetch

465.tonto: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll14 -auto

Benchmarks using both Fortran and C:

435.gromacs: -prof-gen(pass 1) -prof-use(pass 2) -fast -prefetch
-auto-ilp32

436.cactusADM: -prof-gen(pass 1) -prof-use(pass 2) -fast -unroll12
-prefetch -parallel -auto-ilp32

454.calculix: -fast -unroll-aggressive -auto-ilp32

481.wrf: -fast -auto-ilp32



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The flags file that was used to format this result can be browsed at

<http://www.spec.org/cpu2006/flags/HP-Intel-ic10.1-linux-fp-flags.20090714.02.html>

You can also download the XML flags source by saving the following link:

<http://www.spec.org/cpu2006/flags/HP-Intel-ic10.1-linux-fp-flags.20090714.02.xml>

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