SPEC® CFP2006 Result

Hewlett-Packard Company

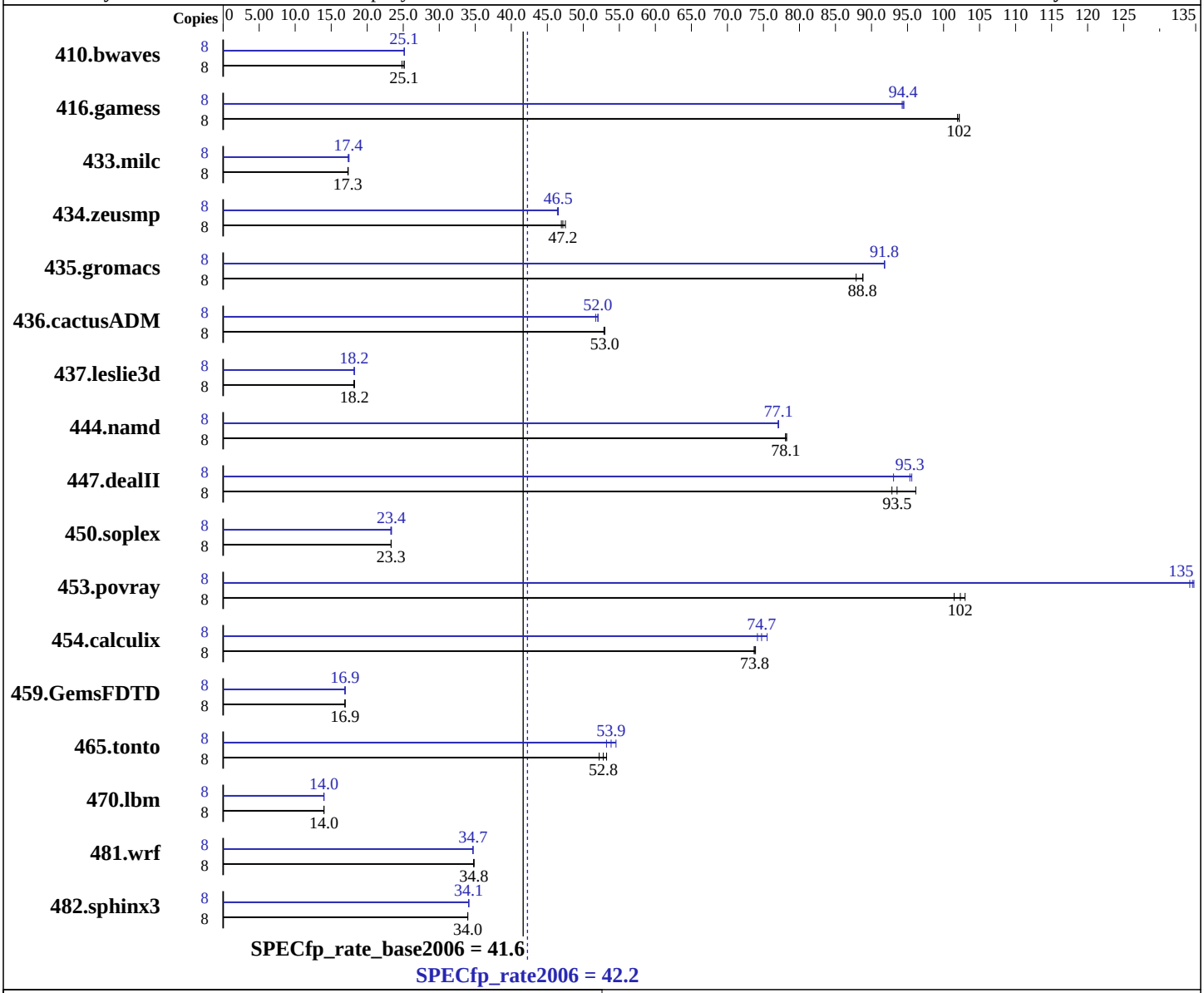
ProLiant ML350 G5
(1.86 GHz, Intel Xeon processor E5320)

SPECfp®_rate2006 = 42.2

SPECfp_rate_base2006 = 41.6

CPU2006 license: 3
Test sponsor: Hewlett-Packard Company
Tested by: Hewlett-Packard Company

Test date: Feb-2007
Hardware Availability: Nov-2006
Software Availability: Nov-2006



Hardware

CPU Name:	Intel Xeon E5320
CPU Characteristics:	1.86 GHz, 2x4 MB L2 shared, 1066MHz system bus
CPU MHz:	1860
FPU:	Integrated
CPU(s) enabled:	8 cores, 2 chips, 4 cores/chip
CPU(s) orderable:	1,2 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

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Software

Operating System:	SuSE Linux Enterprise Server 10 (x86_64) kernel 2.6.16.21-0.8-smp
Compiler:	Intel C++ Compiler for Intel EM64T-based applications, Version 9.1 Build 20061101, Package ID: l_cc_c_9.1.045 Intel Fortran Compiler for Intel EM64T-based applications, Version 9.1 Build 20061101, Package ID: l_fc_c_9.1.040
Auto Parallel:	No

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L3 Cache:	None	File System:	ext2
Other Cache:	None	System State:	Multi-user run level 3
Memory:	8 GB (4x2 GB PC2-5300F CL5)	Base Pointers:	64-bit
Disk Subsystem:	2x36 GB 10 K SAS	Peak Pointers:	32/64-bit
Other Hardware:	None	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	4380	24.8	**4327**	**25.1**	4327	25.1	8	4326	25.1	4320	25.2	**4326**	**25.1**
416.gamess	8	**1533**	**102**	1537	102	1533	102	8	1658	94.5	**1659**	**94.4**	1662	94.3
433.milc	8	4241	17.3	**4240**	**17.3**	4228	17.4	8	**4223**	**17.4**	4226	17.4	4201	17.5
434.zeusmp	8	1551	46.9	1532	47.5	**1544**	**47.2**	8	**1566**	**46.5**	1565	46.5	1569	46.4
435.gromacs	8	**643**	**88.8**	643	88.8	650	87.9	8	622	91.8	**622**	**91.8**	622	91.8
436.cactusADM	8	1809	52.9	**1805**	**53.0**	1804	53.0	8	1837	52.0	1849	51.7	**1838**	**52.0**
437.leslie3d	8	**4128**	**18.2**	4127	18.2	4144	18.1	8	4128	18.2	**4132**	**18.2**	4134	18.2
444.namd	8	822	78.1	820	78.2	**822**	**78.1**	8	833	77.0	**832**	**77.1**	832	77.1
447.dealII	8	**978**	**93.5**	952	96.1	986	92.8	8	957	95.6	983	93.1	**960**	**95.3**
450.soplex	8	**2861**	**23.3**	2862	23.3	2860	23.3	8	2867	23.3	**2857**	**23.4**	2856	23.4
453.povray	8	413	103	**416**	**102**	419	101	8	316	135	317	134	**316**	**135**
454.calculix	8	**894**	**73.8**	895	73.7	893	73.9	8	874	75.5	890	74.2	**883**	**74.7**
459.GemsFDTD	8	5019	16.9	5015	16.9	**5018**	**16.9**	8	5009	16.9	5028	16.9	**5012**	**16.9**
465.tonto	8	**1492**	**52.8**	1508	52.2	1479	53.2	8	**1462**	**53.9**	1479	53.2	1443	54.5
470.lbm	8	7856	14.0	**7856**	**14.0**	7854	14.0	8	**7852**	**14.0**	7868	14.0	7852	14.0
481.wrf	8	2571	34.8	2565	34.8	**2568**	**34.8**	8	2577	34.7	2576	34.7	**2577**	**34.7**
482.sphinx3	8	4593	33.9	**4591**	**34.0**	4591	34.0	8	4576	34.1	4571	34.1	**4573**	**34.1**

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

Platform Notes

```
Power Regulator set to Static High Performance Mode in BIOS.
Adjacent Sector Prefetch Disabled in BIOS.
"/usr/bin/taskset" used to bind processes to CPUs.
"ulimit -s unlimited" set
```

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_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

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:
-prof_gen(pass 1) -prof_use(pass 2) -fast -auto_ilp32

C++ benchmarks:
-prof_gen(pass 1) -prof_use(pass 2) -fast -auto_ilp32

Fortran benchmarks:
-prof_gen(pass 1) -prof_use(pass 2) -fast

Benchmarks using both Fortran and C:
-prof_gen(pass 1) -prof_use(pass 2) -fast -auto_ilp32

The flags file that was used to format this result can be browsed at
http://www.spec.org/cpu2006/flags/hp-ic91-flags.html

You can also download the XML flags source by saving the following link:
http://www.spec.org/cpu2006/flags/hp-ic91-flags.xml

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

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