



CFP2000 Result

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Hewlett-Packard Company
ProLiant BL45p (AMD Opteron (TM) 885)

SPECfp2000 = 2125
SPECfp_base2000 = 1939

SPEC license #: 3 Tested by: Hewlett-Packard Company Test date: Feb-2006 Hardware Avail: Mar-2006 Software Avail: Feb-2006

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	1000 2000 3000 4000			
168.wupwise	1600	59.5	2689	55.0	2911	[Bar chart showing ratio 2911]			
171.swim	3100	127	2445	122	2533	[Bar chart showing ratio 2533]			
172.mgrid	1800	105	1718	95.9	1878	[Bar chart showing ratio 1878]			
173.applu	2100	104	2014	91.8	2287	[Bar chart showing ratio 2287]			
177.mesa	1400	66.5	2107	61.5	2278	[Bar chart showing ratio 2278]			
178.galgel	2900	90.1	3217	80.5	3601	[Bar chart showing ratio 3601]			
179.art	2600	103	2520	71.8	3623	[Bar chart showing ratio 3623]			
183.earth	1300	81.2	1601	73.6	1767	[Bar chart showing ratio 1767]			
187.facerec	1900	74.7	2542	75.3	2523	[Bar chart showing ratio 2523]			
188.amp	2200	146	1509	135	1626	[Bar chart showing ratio 1626]			
189.lucas	2000	104	1928	91.6	2184	[Bar chart showing ratio 2184]			
191.fma3d	2100	130	1617	129	1632	[Bar chart showing ratio 1632]			
200.sixtrack	1100	126	871	121	911	[Bar chart showing ratio 911]			
301.apsi	2600	158	1643	150	1733	[Bar chart showing ratio 1733]			

Hardware

CPU: AMD Opteron (TM) 885
CPU MHz: 2600
FPU: Integrated
CPU(s) enabled: 1 core, 1 chip, 2 cores/chip
CPU(s) orderable: 1,2,4
Parallel: No
Primary Cache: 64KBI + 64KBD (on chip) per core
Secondary Cache: 1024KB(I+D) (on chip) per core
L3 Cache: N/A
Other Cache: N/A
Memory: 4x2048MB PC3200 CL3.0
Disk Subsystem: 1x36.4GB 15K Ultra320 SCSI
Other Hardware:

Software

Operating System: SuSE Linux Enterprise Server 9 (x86_64) SP3
SuSE kernel 2.6.5-7.244-default
Compiler: PathScale EKOPATH(TM) Compiler Suite, Release 2.3
AMD Core Math Library 3.0.0
File System: Linux/ext2
System State: Multi-user run level 3

Notes/Tuning Information

```
+FDO: PASS1= -fb_create fbdata PASS2= -fb_opt fbdata
+ACML: Linked with AMD Core Math Library
Base tuning for C programs: -Ofast -WOPT:mem_opnds=on +FDO
Base tuning for FORTRAN programs: -Ofast -LNO:fusion=2 -OPT:fast_complex=on +FDO
Portability flags:
 178.galgel: -fixedform
Peak tuning:
 168.wupwise: -Ofast -LNO:prefetch Ahead=5:prefetch=3
              -OPT:unroll_times_max=8:unroll_size=128:IEEE NaN_Inf=off:ro=3
              -IPA:linear=on:plimit=50000:callee_limit=5000 -INLINE:aggressive=on
 171.swim: -Ofast -CG:local_fwd_sched=on -LNO:fusion=2 -m3dnow
 172.mgrid: -Ofast -CG:gcm=off -OPT:IEEE_a=3:unroll_size=200
              -LNO:fusion=2:fission=1:blocking=off:prefetch Ahead=2 -WOPT:mem_opnds=on:aggstr=0
 173.applu: -Ofast -CG:local_fwd_sched=on -OPT:ro=3 -TENV:X=3
              -LNO:fusion=2:fission=2:full_unroll_size=10000 +FDO
 177.mesa: -O2 -ipa -OPT:Ofast -fno-math-errno -CG:local_fwd_sched=on
              -WOPT:mem_opnds=on +FDO
```



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Notes/Tuning Information (Continued)

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178.galgel: -Ofast -OPT:fast_complex-on RM_SOURCES=lapak.f90 +ACML +FDO
179.art: -O3 -OPT:Ofast -fno-math-errno -mno-sse2 -m32
183.equake: -Ofast -CG:load_exe=2 -WOPT:mem_opnds=on -m32 +FDO
187.facerec: -Ofast -LNO:fusion=2 -OPT:fast_complex=on:IEEE_NaN_Inf=off:unroll_size=0 +FDO
188.ammmp: -O3 -OPT:alias=disjoint:unroll_times_max=8:Ofast:ro=3
           -fno-math-errno -TENV:X=4 +FDO
189.lucas: -Ofast -OPT:ro=3:fast_nint=off:unroll_size=256 -WOPT:mem_opnds=on +FDO
191.fma3d: -O2 -ipa -CG:load_exe=1 -OPT:Ofast:IEEE_arith=3:ro=3
           -WOPT:mem_opnds=on:retype_expr=on -IPA:pu_reorder=1 +FDO
200.sixtrack: -O3 -OPT:Ofast:Olimit=6000:early_intrinsics=on -fno-math-errno
           -CG:load_exe=1 +FDO
301.apsi: -Ofast -CG:load_exe=0 -LNO:prefetch=0:simd=2

```

BIOS Configuration Notes
Node Interleaving is Disabled

Other Configuration Notes
Single-processor kernel was used