



# CFP2000 Result

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Hewlett-Packard Company  
ProLiant DL145 G2 (AMD Opteron (TM) 275)

SPECfp\_rate2000 = 63.9  
SPECfp\_rate\_base2000 = 59.9

SPEC license #: 3 Tested by: Hewlett-Packard Company Test date: Nov-2005 Hardware Avail: Sep-2005 Software Avail: Sep-2005

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	4	79.9	92.9	4	76.3	97.3
171.swim	4	297	48.4	4	298	48.3
172.mgrid	4	190	43.9	4	189	44.2
173.applu	4	158	61.8	4	149	65.5
177.mesa	4	78.9	82.3	4	75.2	86.3
178.galgel	4	142	95.1	4	137	98.5
179.art	4	161	74.8	4	112	108
183.quake	4	143	42.3	4	129	46.7
187.facerec	4	102	86.4	4	99.1	88.9
188.amp	4	174	58.8	4	164	62.1
189.lucas	4	194	47.8	4	188	49.3
191.fma3d	4	192	50.8	4	193	50.4
200.sixtrack	4	149	34.3	4	142	36.1
301.apsi	4	201	60.2	4	186	64.8

### Hardware

CPU: AMD Opteron (TM) 275  
 CPU MHz: 2200  
 FPU: Integrated  
 CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip  
 CPU(s) orderable: 1,2  
 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: 8x2048MB PC3200 CL3.0  
 Disk Subsystem: 1x36.4GB 15K Ultra320 SCSI  
 Other Hardware:

### Software

Operating System: SuSE Linux Enterprise Server 9 (x86\_64) SP 2  
 SuSE kernel 2.6.5-7.191-smp  
 Compiler: PathScale EKOPath(TM) Compiler Suite, Release 2.2.1  
 AMD Core Math Library 2.5.1  
 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)

```

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.ammp: -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  
Taskset utility used to bind process to CPU(s)