



CFP2000 Result

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Hewlett-Packard Company
ProLiant BL465c (AMD Opteron (TM) 2218)

SPECfp2000 = 2281
SPECfp_base2000 = 2070

SPEC license #: 3 Tested by: Hewlett-Packard Company Test date: Aug-2006 Hardware Avail: Sep-2006 Software Avail: Apr-2006

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	1000 2000 3000 4000			
168.wupwise	1600	59.1	2705	49.9	3206	[Bar chart showing ratio bars for 168.wupwise]			
171.swim	3100	105	2964	97.5	3180	[Bar chart showing ratio bars for 171.swim]			
172.mgrid	1800	100.0	1801	88.5	2033	[Bar chart showing ratio bars for 172.mgrid]			
173.applu	2100	95.1	2209	86.0	2441	[Bar chart showing ratio bars for 173.applu]			
177.mesa	1400	68.7	2039	64.2	2182	[Bar chart showing ratio bars for 177.mesa]			
178.galgel	2900	84.6	3428	75.7	3832	[Bar chart showing ratio bars for 178.galgel]			
179.art	2600	91.4	2844	68.6	3791	[Bar chart showing ratio bars for 179.art]			
183.quake	1300	74.3	1750	68.9	1888	[Bar chart showing ratio bars for 183.quake]			
187.facerec	1900	70.0	2716	67.8	2801	[Bar chart showing ratio bars for 187.facerec]			
188.amp	2200	140	1572	135	1632	[Bar chart showing ratio bars for 188.amp]			
189.lucas	2000	90.9	2199	77.2	2590	[Bar chart showing ratio bars for 189.lucas]			
191.fma3d	2100	119	1764	120	1754	[Bar chart showing ratio bars for 191.fma3d]			
200.sixtrack	1100	127	863	121	911	[Bar chart showing ratio bars for 200.sixtrack]			
301.apsi	2600	155	1675	145	1798	[Bar chart showing ratio bars for 301.apsi]			

Hardware

CPU: AMD Opteron (TM) 2218
CPU MHz: 2600
FPU: Integrated
CPU(s) enabled: 1 core, 1 chip, 2 cores/chip
CPU(s) orderable: 1,2 chips
Parallel: No
Primary Cache: 64 KB I + 64 KB D on chip per core
Secondary Cache: 1 MB I+D on chip per core
L3 Cache: N/A
Other Cache: N/A
Memory: 8 GB (4x2048 MB PC2-5300P CL5.0)
Disk Subsystem: 1x36 GB 10 K SAS
Other Hardware:

Software

Operating System: SuSE Linux Enterprise Server 9 (x86_64) SP 3
SuSE kernel 2.6.5-7.244-default
Compiler: PathScale EKOPATH(TM) Compiler Suite, Release 2.4
AMD Core Math Library 3.5.0
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.quake: -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 used