



# CFP2000 Result

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**Hewlett-Packard Company**  
ProLiant BL480c (3.0GHz, Intel Xeon processor 5160)

SPECfp\_rate2000 = 49.3  
SPECfp\_rate\_base2000 = 46.2

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

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	2	52.1	71.3	2	52.1	71.3
171.swim	2	207	34.8	2	204	35.3
172.mgrid	2	136	30.7	2	134	31.1
173.applu	2	145	33.6	2	106	46.0
177.mesa	2	46.2	70.3	2	43.1	75.3
178.galgel	2	59.7	113	2	59.7	113
179.art	2	45.8	132	2	45.8	132
183.quake	2	93.3	32.3	2	74.5	40.5
187.facerec	2	83.1	53.0	2	69.1	63.8
188.amp	2	119	42.8	2	119	42.8
189.lucas	2	146	31.7	2	140	33.3
191.fma3d	2	137	35.5	2	137	35.5
200.sixtrack	2	100	25.5	2	100	25.5
301.apsi	2	169	35.7	2	162	37.2

### Hardware

CPU: Intel Xeon processor 5160 (3.0GHz, 4MB L2 shared, 1333MHz bus)  
 CPU MHz: 3000  
 FPU: Integrated  
 CPU(s) enabled: 2 cores, 1 chip, 2 cores/chip  
 CPU(s) orderable: 1,2 chips  
 Parallel: No  
 Primary Cache: 32KB (I) + 32KB (D) (on chip) per core  
 Secondary Cache: 4096KB(I+D) (on chip) shared  
 L3 Cache: N/A  
 Other Cache: N/A  
 Memory: 8x1024MB PC2-5300F  
 Disk Subsystem: 2x36GB 10K SAS  
 Other Hardware:

### Software

Operating System: RedHat Enterprise Linux 4.0 Advanced Server for AMD64/EM64T, Update 3  
 Kernel 2.6.9-34.ELsmp  
 Compiler: Intel C++ Compiler for EM64T-based applications, (Version 9.1 Build 20060323)  
 Intel Fortran Compiler for EM64T-based applications, (Version 9.1 Build 20060323)  
 PathScale EKOPATH(TM) Compiler Suite, Release 2.4  
 File System: ext2  
 System State: Multi-user run level 3

## Notes/Tuning Information

```
+FDO: PASS1= -prof_gen PASS2=-prof_use (Intel Compiler)
+FDO: PASS1= -fb_create fbdata PASS2=-fb_opt fbdata (PathScale Compiler)
ifort is the Intel Fortran compiler, icc is the Intel C++ compiler; and
pathf95 is PathScale Fortran compiler, pathcc is the PathScale C compiler.
Base tuning for C programs: icc -fast -auto_ilp32 +FDO
Base tuning for FORTRAN programs: ifort -fast +FDO
Portability:
-DSPEC_CPU2000_LP64 applied to all benchmarks
178.galgel: -FI
Peak tuning:
168.wupwise: basepeak=1
171.swim: pathf95 -Ofast -LNO:fusion=2:simd=0 -WOPT:val=0 -march=em64t
172.mgrid: pathf95 -Ofast -CG:load_exe=0 -LNO:blocking=off:prefetch_ahead=5
-OPT:ro=3:unroll_size=256 -WOPT:mem_opnds=on -march=em64t
173.applu: pathf95 -O3 -ipa -CG:load_exe=0
-LNO:fission=1:fusion=2:blocking=off:full_unroll_size=9000
-OPT:IEEE_a=3:ro=3 -TENV:X=3 -march=em64t
```



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## Notes/Tuning Information (Continued)

```

177.mesa: pathcc -O2 -ipa -OPT:Ofast -fno-math-errno -CG:local_fwd_sched=on
          -GRA:optimize_boundary=on -march=em64t +FDO
178.galgel: basepeak=1
179.art: basepeak=1
183.equake: icc -fast +FDO ONESTEP=yes -rcd -auto-ilp32
187.facerec: pathf95 -Ofast -IPA:plimit=1500 -LNO:fusion=2
            -OPT:IEEE_NaN_Inf=off:ro=3:unroll_size=0 -march=em64t
188.ammp: basepeak=1
189.lucas: ifort -fast ONESTEP=yes
191.fma3d: basepeak=1
200.sixtrack: basepeak=1
301.apsi: pathf95 -Ofast -CG:load_exe=0 -LNO:opt=0:prefetch=1 -march=em64t

```

### BIOS Configuration Notes

Power Regulator set to Static High