



CFP2000 Result

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

SPECfp2000 = **3049**
SPECfp_base2000 = **2797**

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio
168.wupwise	1600	38.8	4127	38.8	4127
171.swim	3100	107	2894	103	3004
172.mgrid	1800	92.0	1957	73.4	2454
173.applu	2100	96.0	2189	70.3	2989
177.mesa	1400	45.2	3097	41.5	3374
178.galgel	2900	41.2	7036	41.2	7036
179.art	2600	21.7	11983	21.7	11983
183.quake	1300	56.8	2288	45.8	2837
187.facerec	1900	62.8	3027	47.3	4020
188.amp	2200	101	2173	101	2173
189.lucas	2000	93.7	2135	93.1	2149
191.fma3d	2100	97.1	2162	97.1	2162
200.sixtrack	1100	95.9	1147	95.9	1147
301.apsi	2600	154	1689	148	1757

Hardware

CPU: Intel Xeon processor 5160 (3.0GHz, 4MB L2 shared, 1333MHz bus)
CPU MHz: 3000
FPU: Integrated
CPU(s) enabled: 1 core, 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.EL
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