CFP2000 Result

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Hewlett-Packard Company

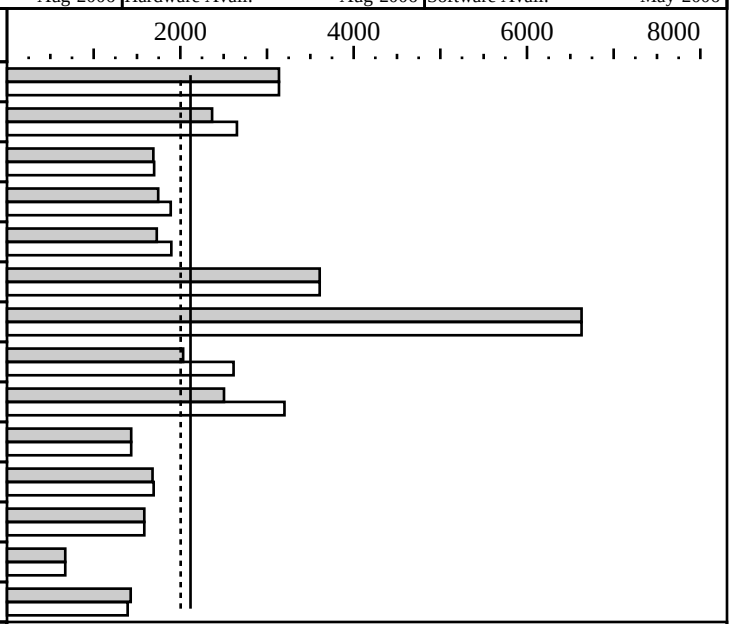
ProLiant ML570 G4 (3.4GHz, Intel Xeon processor 7140M)

SPECfp2000 = 2118

SPECfp_base2000 = 2004

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio
168.wupwise	1600	51.0	3138	51.0	3138
171.swim	3100	131	2366	117	2653
172.mgrid	1800	107	1689	106	1698
173.applu	2100	120	1745	111	1889
177.mesa	1400	81.0	1728	73.8	1896
178.galgel	2900	80.4	3608	80.4	3608
179.art	2600	39.2	6630	39.2	6630
183.equake	1300	64.0	2032	49.7	2614
187.facerec	1900	75.9	2504	59.3	3202
188.ammp	2200	154	1433	154	1433
189.lucas	2000	119	1679	118	1692
191.fma3d	2100	133	1584	133	1584
200.sixtrack	1100	164	672	164	672
301.apsi	2600	182	1427	187	1392



Hardware

CPU:	Intel Xeon processor 7140M (800MHz system bus)
CPU MHz:	3400
FPU:	Integrated
CPU(s) enabled:	1 core, 1 chip, 2 cores/chip (Hyper-Threading Technology disabled)
CPU(s) orderable:	1,2,4 chips
Parallel:	No
Primary Cache:	12 K I micro-ops + 16 KB D on chip per core
Secondary Cache:	1 MB I+D on chip per core
L3 Cache:	16 MB on chip per chip
Other Cache:	N/A
Memory:	32 GB (16x2048MB PC2-3200 dual-rank)
Disk Subsystem:	1x36 GB 10 K SAS
Other Hardware:	

Software

Operating System:	SuSE Linux Enterprise Server 9.0 for AMD64/EM64T, SP 3 Kernel 2.6.5-7.244-default
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:	Default

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 +FDO
    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
    Hyper-Threading Technology disabled
```