CFP2000 Result

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Hewlett-Packard Company

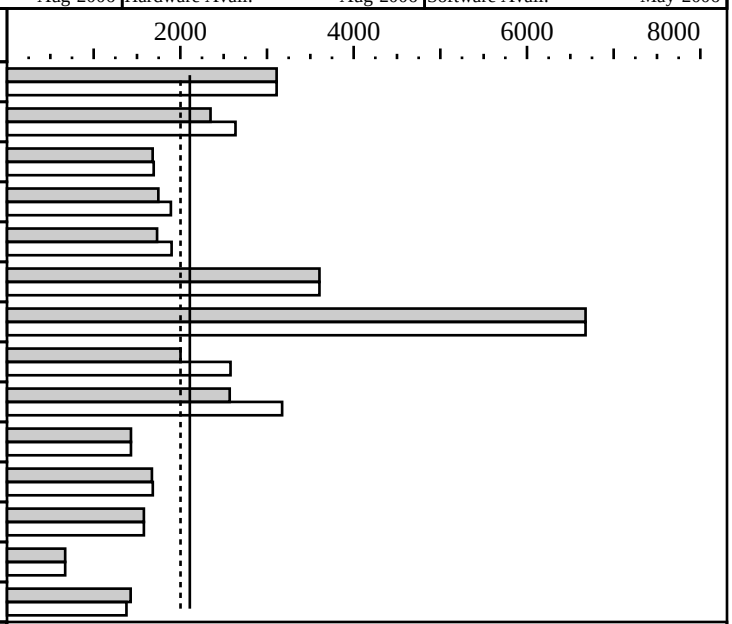
ProLiant DL580 G4 (3.4GHz, Intel Xeon processor 7140M)

SPECfp2000 = 2109

SPECfp_base2000 = 2002

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	51.4	3111	51.4	3111
171.swim	3100	132	2348	118	2637
172.mgrid	1800	107	1681	106	1693
173.applu	2100	120	1746	111	1891
177.mesa	1400	80.8	1732	73.7	1899
178.galgel	2900	80.4	3605	80.4	3605
179.art	2600	38.9	6676	38.9	6676
183.equake	1300	64.9	2002	50.4	2579
187.facerec	1900	73.9	2570	59.9	3175
188.ammp	2200	154	1430	154	1430
189.lucas	2000	120	1672	119	1682
191.fma3d	2100	133	1579	133	1579
200.sixtrack	1100	164	671	164	671
301.apsi	2600	182	1427	189	1378



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 enabled)
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 enabled
```