CFP2000 Result

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Hewlett-Packard Company

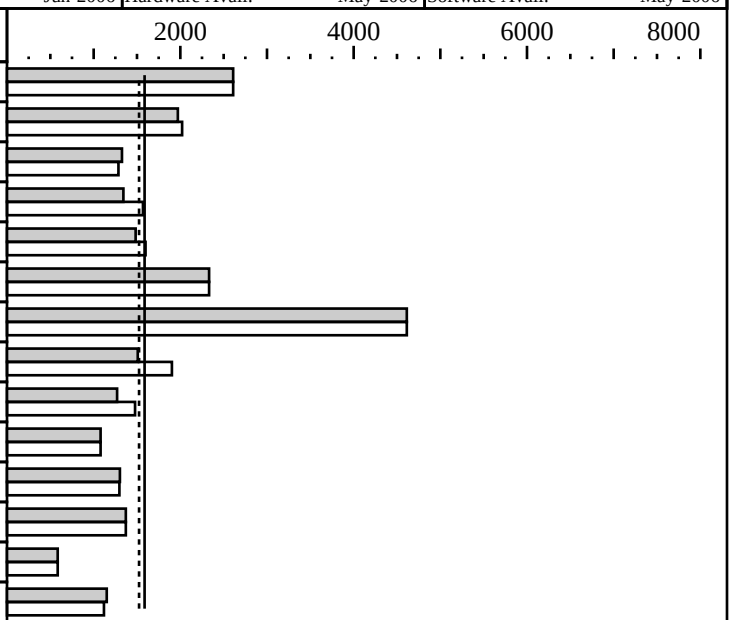
ProLiant DL580 G4 (3.0GHz, Intel Xeon processor 7041)

SPECfp2000 = 1588

SPECfp_base2000 = 1524

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio
168.wupwise	1600	61.3	2610	61.3	2610
171.swim	3100	157	1971	153	2021
172.mgrid	1800	136	1327	140	1286
173.applu	2100	156	1343	134	1569
177.mesa	1400	94.3	1484	87.6	1598
178.galgel	2900	124	2332	124	2332
179.art	2600	56.4	4613	56.4	4613
183.equake	1300	86.2	1509	68.3	1903
187.facerec	1900	150	1270	129	1478
188.ammp	2200	204	1080	204	1080
189.lucas	2000	154	1303	154	1297
191.fma3d	2100	153	1371	153	1371
200.sixtrack	1100	188	585	188	585
301.apsi	2600	226	1151	232	1119



Hardware

CPU:	Intel Xeon processor 7041 (3.0GHz, 2x2MB L2, 800MHz bus)
CPU MHz:	3000
FPU:	Integrated
CPU(s) enabled:	1 core, 1 chip, 2 cores/chip (Hyper-Threading Technology disabled)
CPU(s) orderable:	1,2,4
Parallel:	No
Primary Cache:	12K micro-ops I + 16KBD (on chip) per core
Secondary Cache:	2048KB(I+D) (on chip) per core
L3 Cache:	N/A
Other Cache:	N/A
Memory:	16x2048MB PC2-3200 ECC Dual-rank
Disk Subsystem:	1x36GB 10K SAS
Other Hardware:	

Software

Operating System:	SuSE Linux Enterprise Server 9 (x86_64) SP 3 SuSE 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:	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
    Hyper-Threading Technology disabled
    Adjacent Sector Prefetch disabled
```