CFP2000 Result

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Hewlett-Packard Company

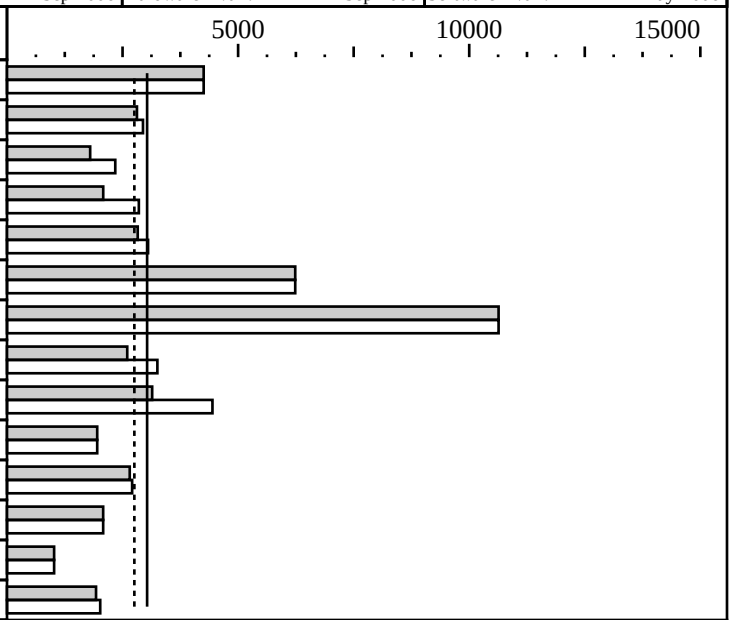
ProLiant ML310 G4 (2.66 GHz, Intel Xeon processor 3070)

SPECfp2000 = 3031

SPECfp_base2000 = 2755

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio
168.wupwise	1600	37.6	4255	37.6	4255
171.swim	3100	110	2811	105	2942
172.mgrid	1800	100	1799	76.8	2342
173.applu	2100	101	2082	73.6	2853
177.mesa	1400	49.5	2828	45.9	3052
178.galgel	2900	46.5	6236	46.5	6236
179.art	2600	24.4	10635	24.4	10635
183.equake	1300	50.0	2601	40.0	3253
187.facerec	1900	60.5	3141	42.7	4445
188.ammp	2200	113	1952	113	1952
189.lucas	2000	75.3	2655	73.9	2707
191.fma3d	2100	101	2081	101	2081
200.sixtrack	1100	108	1019	108	1019
301.apsi	2600	135	1926	129	2017



Hardware

CPU:	Intel Xeon processor 3070 (2.66GHz, 4MB L2 shared, 1066 MHz bus)
CPU MHz:	2660
FPU:	Integrated
CPU(s) enabled:	1 core, 1 chip, 2 cores/chip
CPU(s) orderable:	1 chip
Parallel:	No
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	4 MB I+D on chip per chip
L3 Cache:	N/A
Other Cache:	N/A
Memory:	4 GB (2x2 GB PC2-5300E)
Disk Subsystem:	1x160 GB SATA150
Other Hardware:	

Software

Operating System:	RedHat Enterprise Linux 4.0 Advanced Server 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 +FDO
              -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
    Power Regulator set to Static High Performance Mode
  Other Configuration Notes
    Single processor kernel used
```