CFP2000 Result

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Hewlett-Packard Company

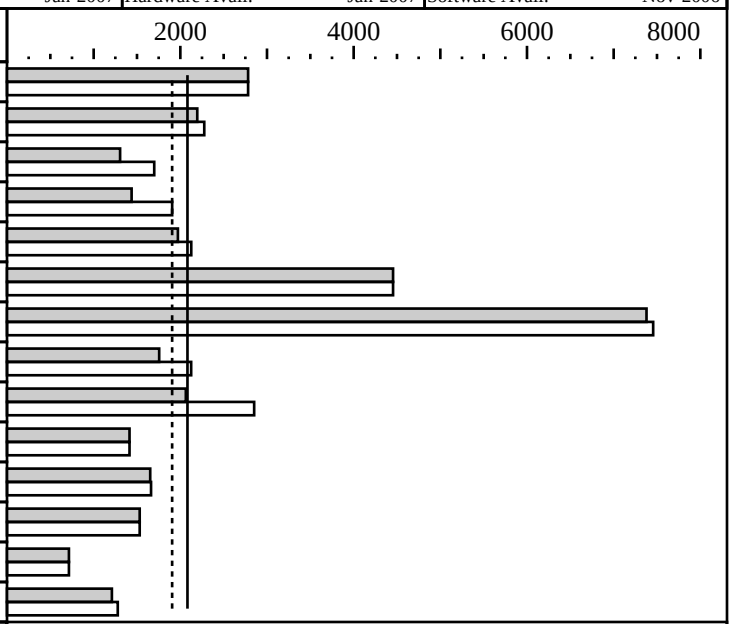
ProLiant DL360 G5 (1.86 GHz, Intel Xeon processor E5320)

SPECfp2000 = 2082

SPECfp_base2000 = 1906

SPEC license #: 3 | Tested by: Hewlett-Packard Company | Test date: Jan-2007 | Hardware Avail: Jan-2007 | Software Avail: Nov-2006

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio
168.wupwise	1600	57.5	2782	57.5	2782
171.swim	3100	141	2195	136	2276
172.mgrid	1800	138	1305	106	1699
173.applu	2100	146	1438	110	1906
177.mesa	1400	71.0	1972	65.9	2126
178.galgel	2900	65.1	4455	65.1	4455
179.art	2600	35.2	7379	34.9	7456
183.equake	1300	74.0	1756	61.2	2125
187.facerec	1900	92.1	2063	66.6	2852
188.ammp	2200	156	1414	156	1414
189.lucas	2000	121	1652	120	1662
191.fma3d	2100	137	1531	137	1531
200.sixtrack	1100	154	715	154	715
301.apsi	2600	215	1210	203	1278



Hardware

CPU:	Intel Xeon processor E5320 (1.86 GHz, 2x4 MB L2 shared, 1066 MHz bus)
CPU MHz:	1860
FPU:	Integrated
CPU(s) enabled:	1 core, 1 chip, 4 cores/chip
CPU(s) orderable:	1,2 chips
Parallel:	No
Primary Cache:	32 KB I + 32 KB D on chip per core
Secondary Cache:	8 MB I+D on chip per chip (4 MB shared per 2 cores)
L3 Cache:	N/A
Other Cache:	N/A
Memory:	16 GB (8x2 GB PC2-5300F CL5)
Disk Subsystem:	2x72 GB 10K SAS
Other Hardware:	

Software

Operating System:	SuSE Linux Enterprise Server 10 (x86_64) Kernel 2.6.16.21-0.8-default
Compiler:	Intel C++ Compiler for EM64T-based applications, (Version 9.1 Build 20061101) Intel Fortran Compiler for EM64T-based applications, (Version 9.1 Build 20061101) PathScale EKOPath(TM) Compiler Suite, Release 2.5
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:      icc -fast -auto_ilp32 +FDO
    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
  Power Regulator set to Static High Performance Mode
  Adjacent Sector Prefetch disabled
Other Configuration Notes
  Taskset utility used to bind process to CPU(s)
  "ulimit -s unlimited" set
  Single processor kernel used
```