



CFP2000 Result

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Hewlett-Packard Company
ProLiant DL380 G5 (1.86 GHz, Intel Xeon processor E5320)

SPECfp2000 = **2078**
SPECfp_base2000 = **1902**

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio
168.wupwise	1600	57.8	2769	57.8	2769
171.swim	3100	142	2190	136	2274
172.mgrid	1800	138	1302	106	1696
173.applu	2100	147	1432	111	1900
177.mesa	1400	71.2	1967	66.1	2119
178.galgel	2900	65.2	4446	65.2	4446
179.art	2600	34.6	7522	34.9	7455
183.quake	1300	74.5	1744	61.3	2119
187.facerec	1900	92.6	2052	66.7	2849
188.amp	2200	156	1412	156	1412
189.lucas	2000	122	1640	121	1650
191.fma3d	2100	138	1527	138	1527
200.sixtrack	1100	154	714	154	714
301.apsi	2600	215	1208	204	1277

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: 4x36 GB 10 K 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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SPECfp2000 = 2078
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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.ammmp: 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
Adjacent Sector Prefetch disabled

Other Configuration Notes

Taskset utility used to bind process to CPU(s)
"ulimit -s unlimited" set
Single processor kernel used