



CFP2000 Result

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Hewlett-Packard Company
ProLiant DL360 G5 (2.66 GHz, Intel Xeon processor X5355)

SPECfp2000 = **2775**
SPECfp_base2000 = **2539**

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	44.9	3567	44.9	3567	
171.swim	3100	114	2710	110	2816	
172.mgrid	1800	101	1778	79.6	2261	
173.applu	2100	114	1844	82.1	2557	
177.mesa	1400	50.2	2786	46.6	3003	
178.galgel	2900	45.8	6335	45.8	6335	
179.art	2600	24.4	10663	24.3	10705	
183.quake	1300	60.1	2163	49.5	2629	
187.facerec	1900	68.3	2780	50.5	3759	
188.amp	2200	111	1986	111	1986	
189.lucas	2000	97.4	2053	96.9	2063	
191.fma3d	2100	104	2028	104	2028	
200.sixtrack	1100	108	1022	108	1022	
301.apsi	2600	170	1529	161	1614	

Hardware

CPU: Intel Xeon processor X5355 (2.66 GHz, 2x4 MB L2 shared, 1333 MHz bus)
CPU MHz: 2666
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.quake: 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 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