



CFP2000 Result

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Hewlett-Packard Company
ProLiant DL140 G3 (3.0 GHz, Intel Xeon processor 5160)

SPECfp_rate2000 = 47.7
SPECfp_rate_base2000 = 44.7

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

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	2	58.0	64.0	2	58.0	64.0
171.swim	2	236	30.5	2	228	31.5
172.mgrid	2	173	24.2	2	155	26.9
173.applu	2	155	31.4	2	117	41.6
177.mesa	2	44.7	72.7	2	41.9	77.6
178.galgel	2	54.8	123	2	54.8	123
179.art	2	43.5	139	2	43.5	139
183.quake	2	117	25.7	2	94.9	31.8
187.facerec	2	70.4	62.6	2	60.7	72.6
188.amp	2	119	43.0	2	119	43.0
189.lucas	2	135	34.5	2	134	34.5
191.fma3d	2	147	33.1	2	147	33.1
200.sixtrack	2	97.7	26.1	2	97.7	26.1
301.apsi	2	178	33.9	2	169	35.7

Hardware

CPU: Intel Xeon processor 5160 (1333 MHz system bus)
 CPU MHz: 3000
 FPU: Integrated
 CPU(s) enabled: 2 cores, 1 chip, 2 cores/chip
 CPU(s) orderable: 1,2 chips
 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: 8 GB (8 x 1 GB PC2-5300F)
 Disk Subsystem: 1 x 36 GB 15 K SAS
 Other Hardware:

Software

Operating System: RedHat Enterprise Linux 4.0 Advanced Server for AMD64/EM64T, Update 4 Kernel 2.6.9-42.ELsmp
 Compiler: Intel C++ Compiler for EM64T-based applications, (Version 9.1 Build 20060925)
 Intel Fortran Compiler for EM64T-based applications, (Version 9.1 Build 20060925)
 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: 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 +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
```