



CFP2000 Result

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Hewlett-Packard Company

ProLiant DL140 G3 (3.0 GHz, Intel Xeon processor 5160)

SPECfp_rate2000 = 87.4

SPECfp_rate_base2000 = 82.4

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	4	67.5	110	4	67.5	110
171.swim	4	267	53.9	4	258	55.7
172.mgrid	4	197	42.4	4	192	43.5
173.applu	4	177	54.9	4	132	74.0
177.mesa	4	44.8	145	4	41.7	156
178.galgel	4	57.0	236	4	57.0	236
179.art	4	48.0	251	4	48.0	251
183.quake	4	133	45.3	4	107	56.3
187.facerec	4	76.5	115	4	67.5	131
188.amp	4	121	84.2	4	121	84.2
189.lucas	4	155	59.9	4	155	59.9
191.fma3d	4	155	62.9	4	155	62.9
200.sixtrack	4	97.6	52.3	4	97.6	52.3
301.apsi	4	185	65.1	4	177	68.0

Hardware

CPU: Intel Xeon processor 5160 (1333 MHz system bus)
CPU MHz: 3000
FPU: Integrated
CPU(s) enabled: 4 cores, 2 chips, 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
```