



CFP2000 Result

Copyright ©1999-2005, Standard Performance Evaluation Corporation

Hewlett-Packard Company
ProLiant ML570 G4 (3.4GHz, Intel Xeon processor 7140M)

SPECfp_rate2000 = 46.0
SPECfp_rate_base2000 = 44.0

SPEC license #: 3 Tested by: Hewlett-Packard Company Test date: Aug-2006 Hardware Avail: Aug-2006 Software Avail: May-2006

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	4	101	73.4	4	101	73.4
171.swim	4	379	38.0	4	375	38.3
172.mgrid	4	235	35.5	4	236	35.4
173.applu	4	294	33.1	4	236	41.3
177.mesa	4	163	39.9	4	148	44.0
178.galgel	4	146	91.9	4	146	91.9
179.art	4	88.5	136	4	88.5	136
183.quake	4	149	40.4	4	115	52.6
187.facerec	4	193	45.6	4	181	48.7
188.amp	4	287	35.5	4	287	35.5
189.lucas	4	265	35.0	4	266	34.9
191.fma3d	4	268	36.4	4	268	36.4
200.sixtrack	4	248	20.6	4	248	20.6
301.apsi	4	332	36.3	4	345	35.0

Hardware

CPU: Intel Xeon processor 7140M (800MHz system bus)
CPU MHz: 3400
FPU: Integrated
CPU(s) enabled: 2 cores, 1 chip, 2 cores/chip (Hyper-Threading Technology enabled)
CPU(s) orderable: 1,2,4 chips
Parallel: No
Primary Cache: 12 K I micro-ops + 16 KB D on chip per core
Secondary Cache: 1 MB I+D on chip per core
L3 Cache: 16 MB on chip per chip
Other Cache: N/A
Memory: 32 GB (16x2048MB PC2-3200 dual-rank)
Disk Subsystem: 1x36 GB 10 K SAS
Other Hardware:

Software

Operating System: SuSE Linux Enterprise Server 9.0 for AMD64/EM64T, SP 3
Kernel 2.6.5-7.244-smp
Compiler: Intel C++ Compiler for EM64T-based applications, (Version 9.1 Build 20060323)
Intel Fortran Compiler for EM64T-based applications, (Version 9.1 Build 20060323)
PathScale EKOPath(TM) Compiler Suite, Release 2.4
File System: ext2
System State: Default

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



CFP2000 Result

Copyright ©1999-2005, Standard Performance Evaluation Corporation

Hewlett-Packard Company
ProLiant ML570 G4 (3.4GHz, Intel Xeon processor 7140M)

SPECfp_rate2000 = 46.0
SPECfp_rate_base2000 = 44.0

SPEC license #: 3 | Tested by: Hewlett-Packard Company | Test date: Aug-2006 | Hardware Avail: Aug-2006 | Software Avail: May-2006

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.ammpp: 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
Hyper-Threading Technology enabled