



CFP2000 Result

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Hewlett-Packard Company
ProLiant BL460c (1.60 GHz, Intel Xeon processor 5110)

SPECfp_rate2000 = **59.1**
SPECfp_rate_base2000 = **55.7**

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

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	4	88.3	84.0	4	88.3	84.0
171.swim	4	342	42.1	4	339	42.5
172.mgrid	4	230	36.4	4	225	37.0
173.applu	4	233	41.8	4	175	55.8
177.mesa	4	86.0	75.5	4	77.6	83.7
178.galgel	4	99.1	136	4	99.1	136
179.art	4	75.4	160	4	75.4	160
183.quake	4	168	36.0	4	130	46.3
187.facerec	4	123	71.8	4	108	81.4
188.amp	4	200	51.1	4	200	51.1
189.lucas	4	217	42.7	4	216	43.0
191.fma3d	4	229	42.5	4	229	42.5
200.sixtrack	4	182	28.1	4	182	28.1
301.apsi	4	261	46.2	4	252	47.8

Hardware

CPU: Intel Xeon processor 5110 (1.60 GHz, 4 MB L2 shared, 1066 MHz bus)
CPU MHz: 1600
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: 16 GB (8x2048 MB PC2-5300F)
Disk Subsystem: 2x36 GB 10 K SAS
Other Hardware:

Software

Operating System: RedHat Enterprise Linux 4.0 Advanced Server for AMD64/EM64T, Update 3 Kernel 2.6.9-34.ELsmp
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



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Notes/Tuning Information (Continued)

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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
Power Regulator set to Static High Performance Mode

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