



CFP2000 Result

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Hewlett-Packard Company
ProLiant BL45p (AMD Opteron (TM) 875)

SPECfp_rate2000 = 134
SPECfp_rate_base2000 = 123

SPEC license #: 3 Tested by: Hewlett-Packard Company Test date: Apr-2005 Hardware Avail: May-2005 Software Avail: Apr-2005

Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	8	79.6	187	8	72.7	204
171.swim	8	259	111	8	260	111
172.mgrid	8	168	99.2	8	165	101
173.applu	8	145	134	8	134	146
177.mesa	8	98.6	132	8	77.4	168
178.galgel	8	132	204	8	122	221
179.art	8	157	154	8	108	224
183.quake	8	132	91.2	8	122	98.6
187.facerec	8	108	164	8	108	163
188.amp	8	181	113	8	169	121
189.lucas	8	163	114	8	162	115
191.fma3d	8	182	107	8	179	109
200.sixtrack	8	172	59.3	8	149	68.5
301.apsi	8	194	124	8	190	127

Hardware

CPU: AMD Opteron (TM) 875
 CPU MHz: 2200
 FPU: Integrated
 CPU(s) enabled: 8 cores, 4 chips, 2 cores/chip
 CPU(s) orderable: 2,4
 Parallel: No
 Primary Cache: 64KBI + 64KBD (on chip) per core
 Secondary Cache: 1024KB(I+D) (on chip) per core
 L3 Cache: N/A
 Other Cache: N/A
 Memory: 16x2048MB PC3200 CL3.0
 Disk Subsystem: 1x36.4GB 15K Ultra320 SCSI
 Other Hardware:

Software

Operating System: SuSE Linux Enterprise Server 9 (x86_64) SP 1
 SuSE kernel 2.6.5-7.139-smp
 Compiler: PathScale EKO Compiler Suite, Release 2.1
 AMD Core Math Library 2.5.1
 File System: Linux/ext2
 System State: Multi-user run level 3

Notes/Tuning Information

+ACML: Linked with AMD Core Math Library
 Base tuning for C programs: -Ofast -WOPT:mem_opnds=on +FDO
 Base tuning for FORTRAN programs: -Ofast -LNO:fusion=2 -OPT:fast_complex
 Portability flags:
 178.galgel: -fixedform
 Peak tuning:
 168.wupwise: -Ofast -LNO:prefetch Ahead=5:prefetch=3
 -OPT:unroll_times_max=8:unroll_size=128:IEEE_NaN_Inf=off:ro=3 -TENV:X=4
 -IPA:space=1000:linear=on:plimit=50000:callee_limit=5000
 -INLINE:aggressive=on +FDO
 171.swim: -Ofast -LNO:fusion=2
 172.mgrid: -O3 -LNO:fusion=2:blocking=off
 -OPT:Ofast:unroll_times_max=8:unroll_size=256:ro=3 -CG:gcm=off:cflow=off
 173.applu: -Ofast -CG:local_fwd_sched=on
 -LNO:fusion=2:fission=2:full_unroll_size=10000:prefetch=3
 -OPT:ro=3 -TENV:X=3 -WOPT:val=2
 177.mesa: -O2 -ipa -OPT:Ofast -fno-math-errno -CG:local_fwd_sched=on +FDO



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Notes/Tuning Information (Continued)

178.galgel: -Ofast -OPT:fast_complex -CG:use_movlpd=on RM_SOURCES=lapak.f90 +ACML
179.art: -O3 -OPT:ro=2:div_split=on:alias=typed -fno-math-errno -m32 +FDO
183.quake: -Ofast -WOPT:mem_opnds=on -CG:local_fwd_sched=on -m32
187.facerec: -Ofast -OPT:treeheight=on:IEEE_NaN_Inf=off:ro=3 -CG:load_exe=0
-LNO:fusion=2 -IPA:plimit=1500 +FDO
188.ammp: -O3 -OPT:alias=disjoint:unroll_times_max=8:Ofast:ro=3
-fno-math-errno -TENV:X=4 -LNO:prefetch=0 +FDO
189.lucas: -Ofast -CG:local_fwd_sched=on -LNO:fusion=2 +FDO
191.fma3d: -O2 -ipa -CG:load_exe=1 -OPT:Ofast:IEEE_arith=3:ro=3
-WOPT:mem_opnds=on:retype_expr=on -IPA:pu_reorder=1 +FDO
200.sixtrack: -Ofast -CG:load_exe=1 +FDO
301.apsi: -Ofast -TENV:X=4 -LNO:fusion=2:prefetch=0

BIOS Configuration Notes
Node Interleaving is Disabled

Other Configuration Notes
Taskset utility used to bind process to CPU(s)