



CFP2000 Result

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Hewlett-Packard Company
ProLiant BL45p (AMD Opteron (TM) 852)

SPECfp_rate2000 = 48.4
SPECfp_rate_base2000 = 43.7

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 | 2 | 60.8 | 61.1 | 2 | 52.6 | 70.6 |
| 171.swim | 2 | 126 | 57.2 | 2 | 126 | 57.1 |
| 172.mgrid | 2 | 103 | 40.7 | 2 | 96.1 | 43.4 |
| 173.applu | 2 | 103 | 47.2 | 2 | 94.5 | 51.6 |
| 177.mesa | 2 | 83.4 | 38.9 | 2 | 64.8 | 50.1 |
| 178.galgel | 2 | 91.8 | 73.3 | 2 | 82.4 | 81.6 |
| 179.art | 2 | 105 | 57.3 | 2 | 73.3 | 82.2 |
| 183.quake | 2 | 81.4 | 37.1 | 2 | 76.0 | 39.7 |
| 187.facerec | 2 | 76.3 | 57.8 | 2 | 73.7 | 59.8 |
| 188.amp | 2 | 148 | 34.4 | 2 | 138 | 37.1 |
| 189.lucas | 2 | 96.6 | 48.0 | 2 | 97.4 | 47.6 |
| 191.fma3d | 2 | 136 | 35.8 | 2 | 128 | 38.1 |
| 200.sixtrack | 2 | 145 | 17.5 | 2 | 125 | 20.3 |
| 301.apsi | 2 | 157 | 38.4 | 2 | 154 | 39.1 |

Hardware

CPU: AMD Opteron (TM) 852
CPU MHz: 2600
FPU: Integrated
CPU(s) enabled: 2 cores, 2 chips, 1 core/chip
CPU(s) orderable: 2,4
Parallel: No
Primary Cache: 64KBI + 64KBD on chip
Secondary Cache: 1024KB(I+D) on chip
L3 Cache: N/A
Other Cache: N/A
Memory: 8x2048MB 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)

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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

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