CFP2000 Result

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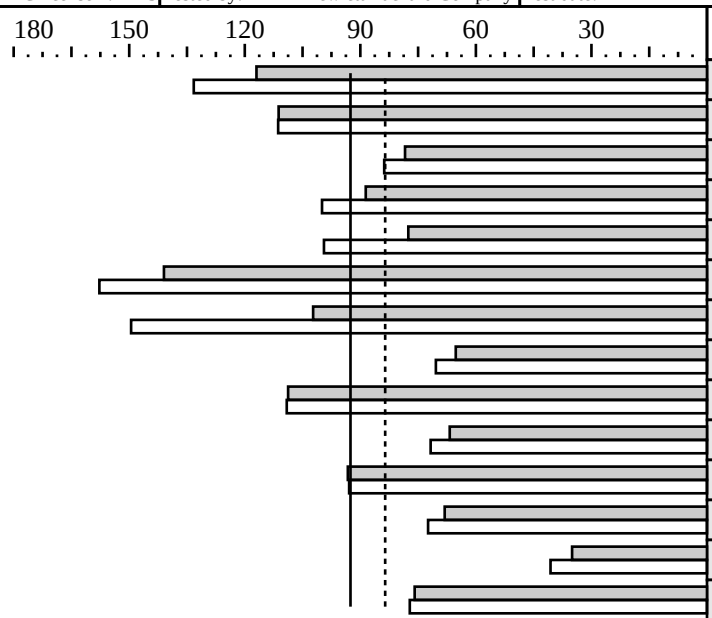
Hewlett-Packard Company

ProLiant BL45p (AMD Opteron (TM) 852)

SPECfp_rate2000 = 92.6

SPECfp_rate_base2000 = 83.5

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	4	63.5	117	4	55.7	133
171.swim	4	129	111	4	129	111
172.mgrid	4	107	78.4	4	99.7	83.8
173.applu	4	110	88.6	4	97.5	99.9
177.mesa	4	83.8	77.5	4	65.3	99.4
178.galgel	4	95.4	141	4	85.3	158
179.art	4	118	102	4	80.7	150
183.equake	4	92.5	65.2	4	85.7	70.4
187.facerec	4	81.1	109	4	80.8	109
188.ammp	4	153	66.8	4	142	71.7
189.lucas	4	99.5	93.2	4	99.9	92.9
191.fma3d	4	143	68.1	4	135	72.4
200.sixtrack	4	146	35.0	4	126	40.6
301.apsi	4	159	75.9	4	156	77.2

Hardware

CPU:	AMD Opteron (TM) 852
CPU MHz:	2600
FPU:	Integrated
CPU(s) enabled:	4 cores, 4 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:	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.equake:     -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
```