CFP2000 Result

Copyright ©1999-2005, Standard Performance Evaluation Corporation

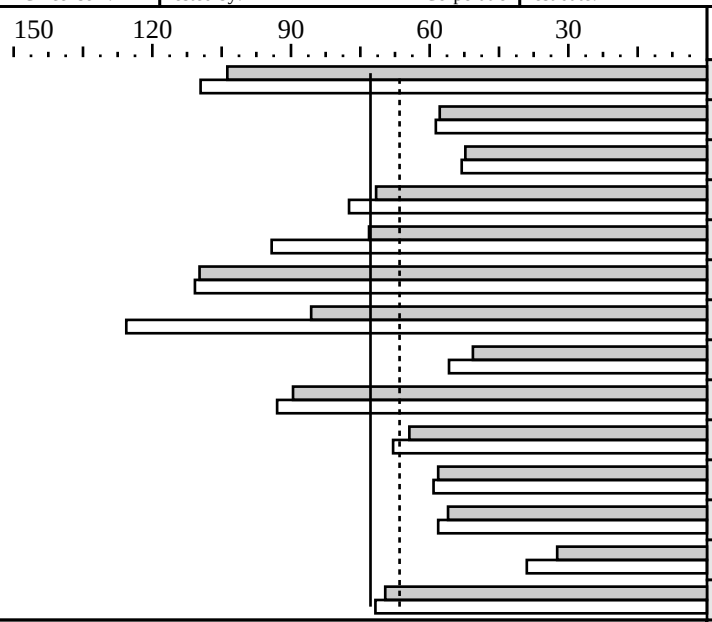
IBM

IBM eServer 326m, 2.4 GHz Dual Core AMD Opteron(tm) Processor 280

SPECfp_rate2000 = 72.8

SPECfp_rate_base2000 = 66.5

SPEC license #: 11 | Tested by: IBM Corporation | Test date: Nov-2005 | Hardware Avail: Nov-2005 | Software Avail: Nov-2005



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	4	71.5	104	4	67.8	110
171.swim	4	249	57.8	4	245	58.7
172.mgrid	4	160	52.3	4	157	53.1
173.applu	4	136	71.6	4	126	77.4
177.mesa	4	88.8	73.1	4	69.0	94.2
178.galgel	4	123	110	4	121	111
179.art	4	141	85.6	4	96.0	126
183.equake	4	119	50.6	4	108	55.8
187.facerec	4	98.4	89.6	4	94.8	93.0
188.ammp	4	159	64.4	4	150	67.9
189.lucas	4	160	58.2	4	157	59.2
191.fma3d	4	174	56.0	4	168	58.2
200.sixtrack	4	157	32.4	4	131	39.0
301.apsi	4	173	69.6	4	168	71.7

Hardware

CPU:	Dual Core AMD Opteron(tm) Processor 280
CPU MHz:	2400
FPU:	Integrated
CPU(s) enabled:	4 cores, 2 chips, 2 cores/chip
CPU(s) orderable:	1,2
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:	8 x 1024GB PC3200
Disk Subsystem:	SCSI, 36GB 15K RPM
Other Hardware:	None

Software

Operating System:	SuSE Linux 9.0 SP2 SLES 64 bit Kernel 2.6.5-7.191-smp (SP2)
Compiler:	PathScale EKO Compiler Suite, Release 2.2.1 AMD Core Math Library 2.5.1
File System:	Linux/reiserfs
System State:	Multi-user, run level 3

Notes/Tuning Information

```
Tested by IBM Corporation
 +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 +FDO
 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
                  -IPA:linear=on:plimit=50000:callee_limit=5000
                  -INLINE:aggressive=on
   171.swim:      -Ofast -CG:local_fwd_sched=on -LNO:fusion=2 -m3dnow
   172.mgrid:     -Ofast -CG:gcm=off:cflow=on -OPT:IEEE_a=3:unroll_size=200
                  -LNO:fusion=2:fission=1:blocking=off:prefetch_ahead=2
      -WOPT:memopnds=on:aggstr=0
   173.applu:     -Ofast -CG:local_fwd_sched=on -OPT:ro=3 -TENV:X=3
                  -LNO:fusion=2:fission=2:full_unroll_size=10000:prefetch=3 +FDO
```

Copyright ©1999-2005, Standard Performance Evaluation Corporation

Notes/Tuning Information (Continued)

```
   177.mesa:      -O2 -ipa -OPT:Ofast -fno-math-errno -CG:local_fwd_sched=on -WOPT:mem_opnds=on +FDO
    178.galgel:    -Ofast -OPT:fast_complex +ACML +FDO
    179.art:       -O3 -OPT:ofast -fno-math-errno -mno-sse2 -m32
    183.equake:    -Ofast -CG:load_exe=2 -WOPT:mem_opnds=on -m32 +FDO
    187.facerec:   -Ofast -LNO:fusion=2
                   -OPT:fast_complex=on:IEEE_NaN_Inf=off:unroll_size=0 +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 -OPT:ro=3:fast_nint=off:unroll_size=256 -WOPT:memopnds=on +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:  -O3 -OPT:Ofast:Olimit=60000:early_intrinsics=on
       -fno-math-errno -CG:load_exe=1 +FDO
    301.apsi:      -Ofast -CG:load_exe=0 -LNO:prefetch=0:simd=2
  BIOS Configuration Notes
    Node Interleaving is Disabled
  Other Configuration Notes
     Taskset utility used to bind process to CPU(s)
```