CFP2000 Result

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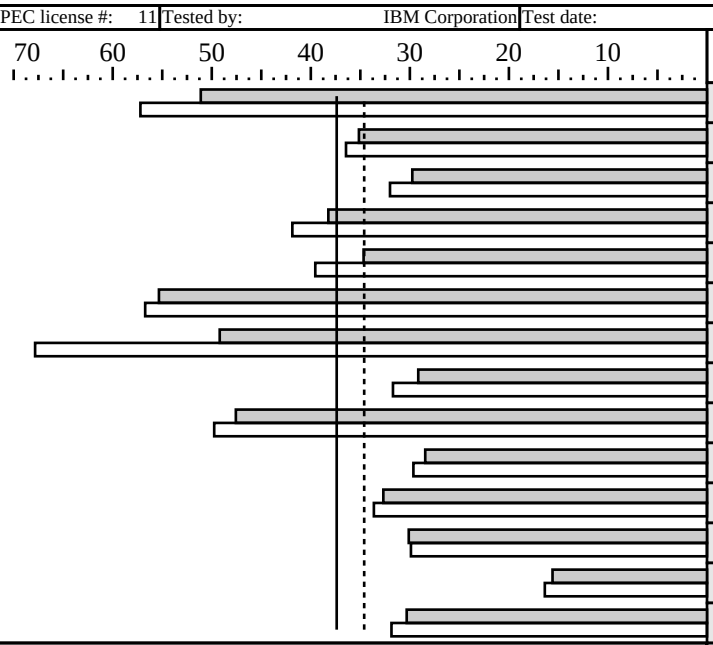
IBM Corporation

IBM System X 3105 (AMD Opteron (TM) 1212)

SPECfp_rate2000 = 37.4

SPECfp_rate_base2000 = 34.6

SPEC license #: 11 | Tested by: IBM Corporation | Test date: Sep-2006 | Hardware Avail: Sep-2006 | Software Avail: Mar-2006



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	2	72.6	51.1	2	64.9	57.2
171.swim	2	205	35.1	2	197	36.4
172.mgrid	2	140	29.8	2	130	32.0
173.applu	2	127	38.2	2	116	41.9
177.mesa	2	93.7	34.7	2	82.1	39.5
178.galgel	2	122	55.3	2	119	56.7
179.art	2	123	49.2	2	88.9	67.8
183.equake	2	103	29.2	2	95.1	31.7
187.facerec	2	92.7	47.6	2	88.6	49.8
188.ammp	2	179	28.4	2	172	29.6
189.lucas	2	142	32.7	2	138	33.6
191.fma3d	2	162	30.1	2	163	29.9
200.sixtrack	2	164	15.6	2	156	16.4
301.apsi	2	199	30.3	2	189	31.9

Hardware

CPU:	AMD Opteron 1212
CPU MHz:	2000
FPU:	Integrated
CPU(s) enabled:	2 cores, 1 chip, 2 cores/chip
CPU(s) orderable:	1 chip
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:	4x1GB, PC2-5300
Disk Subsystem:	SATA, 80GB 10K RPM
Other Hardware:	None

Software

Operating System:	SuSE Linux 9.0 SP3 SLES 64 bit Kernel 2.6.5-7.244-smp
Compiler:	PathScale EKO Compiler Suite, Release 2.4 PathScale EKOPath(TM) Compiler Suite, Release 2.4
File System:	Linux/reiserfs
System State:	Multi-user, run level 3

Notes/Tuning Information

```
  +FDO: PASS1= -fb_create fbdata  PASS2= -fb_opt fbdata

  Baseline optimization
    C programs:       -Ofast -WOPT:mem_opnds=on +FDO
    Fortran programs: -Ofast -LNO:fusion=2 -OPT:fast_complex=on +FDO
  Portability Flags:
    178.galgel: -fixedform

 Peak Tuning:
  168.wupwise:  -Ofast -IPA:linear=on -LNO:prefetch_ahead=5:prefetch=3
                -OPT:unroll_times_max=8:unroll_size=128:IEEE_NaN_Inf=off:ro=3
  171.swim:     -Ofast -CG:local_fwd_sched=on -LNO:fusion=2 -m3dnow
  172.mgrid:    -Ofast -CG:gcm=off -OPT:IEEE_arith=3:unroll_size=200
                -LNO:fusion=2:fission=1:blocking=off:prefetch_ahead=2
                -WOPT:mem_opnds=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 +FDO
```

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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=on +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 -IPA:plimit=1500 -LNO:fusion=2
              -OPT:IEEE_NaN_Inf=off:ro=3:unroll_size=0 +FDO
188.ammp:     -O3 -OPT:alias=disjoint:unroll_times_max=8:Ofast:ro=3
              -GRA:optimize_boundary=on -fno-math-errno -TENV:X=4 +FDO
189.lucas:    -Ofast -OPT:ro=3:fast_nint=off:unroll_size=256 -WOPT:mem_opnds=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:early_intrinsics=on
              -fno-math-errno -CG:load_exe=1 +FDO
301.apsi:     -Ofast -CG:load_exe=0 -LNO:prefetch=0:simd=2
```