CFP2000 Result

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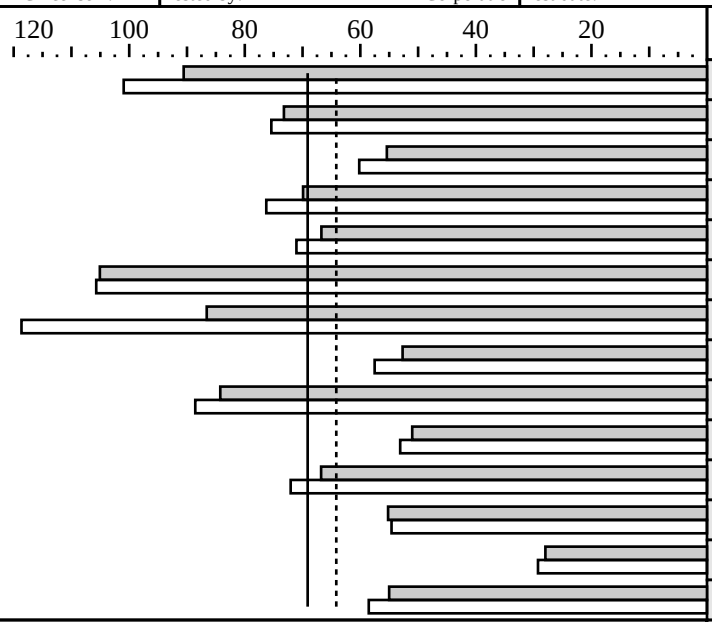
IBM Corporation

IBM System X 3455 (AMD Opteron (TM) 2210)

SPECfp_rate2000 = 69.1

SPECfp_rate_base2000 = 64.2

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



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	4	82.0	90.6	4	73.5	101
171.swim	4	196	73.2	4	191	75.4
172.mgrid	4	151	55.4	4	139	60.2
173.applu	4	139	69.9	4	128	76.3
177.mesa	4	97.3	66.7	4	91.4	71.1
178.galgel	4	128	105	4	127	106
179.art	4	139	86.6	4	102	119
183.equake	4	114	52.7	4	105	57.5
187.facerec	4	105	84.2	4	99.5	88.6
188.ammp	4	200	51.0	4	192	53.1
189.lucas	4	139	66.8	4	129	72.1
191.fma3d	4	177	55.2	4	178	54.6
200.sixtrack	4	182	28.0	4	174	29.3
301.apsi	4	219	55.0	4	206	58.5

Hardware

CPU:	AMD Opteron 2210
CPU MHz:	1800
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:	8x2GB, 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
```