CFP2000 Result

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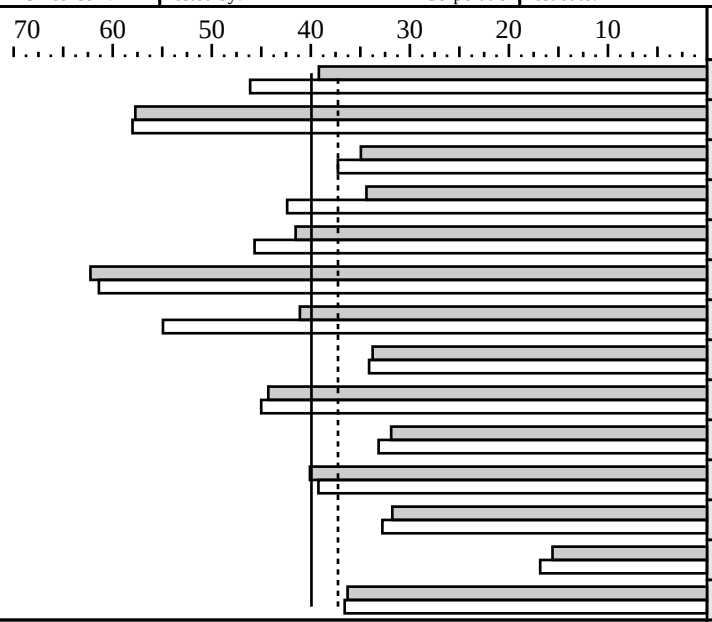
IBM
eServer 326, 2.4 GHz AMD Opteron (TM)

SPECfp_rate2000 = 39.9

SPECfp_rate_base2000 = 37.3

SPEC license #: 11 | Tested by: IBM Corporation | Test date: Oct-2004 | Hardware Avail: Oct-2004 | Software Avail: Oct-2004



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	2	94.7	39.2	2	80.5	46.1
171.swim	2	125	57.7	2	124	58.0
172.mgrid	2	119	34.9	2	112	37.3
173.applu	2	142	34.4	2	115	42.4
177.mesa	2	78.2	41.5	2	71.1	45.7
178.galgel	2	108	62.2	2	110	61.4
179.art	2	147	41.1	2	110	54.9
183.equake	2	89.3	33.8	2	88.4	34.1
187.facerec	2	99.5	44.3	2	97.9	45.0
188.ammp	2	160	31.9	2	154	33.2
189.lucas	2	116	40.1	2	118	39.2
191.fma3d	2	153	31.8	2	149	32.8
200.sixtrack	2	164	15.6	2	152	16.8
301.apsi	2	166	36.3	2	165	36.6

Hardware

CPU:	AMD Opteron 250
CPU MHz:	2400
FPU:	Integrated
CPU(s) enabled:	2 cores, 2 chips, 1 core/chip
CPU(s) orderable:	1,2
Parallel:	No
Primary Cache:	64KBI + 64KBD on chip
Secondary Cache:	1024KB (I+D) on chip
L3 Cache:	N/A
Other Cache:	N/A
Memory:	8x512MB, DDR400
Disk Subsystem:	SCSI, 36GB 10K RPM
Other Hardware:	None

Software

Operating System:	SuSE Linux 8.0 SLES 64 bit Kernel 2.4.21-143-smp (SP3)
Compiler:	PathScale EKO Compiler Suite, Release 1.4
File System:	Linux/reiserfs
System State:	Multi-user, run level 3

Notes/Tuning Information

```
Tested by IBM Corporation

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

 Baseline optimization:
   C:              pathcc  -Ofast -WOPT:mem_opnds=on +FDO
   Fortran:        pathf90 -Ofast -LNO:fusion=2
 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
     loader:     -IPA:space=1000:linear=on:plimit=50000:callee_limit=5000
                 -INLINE:aggressive=on
   171.swim:     -Ofast -LNO:fusion=2
   172.mgrid:    -O3 -LNO:fusion=2:blocking=off
```

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Notes/Tuning Information (Continued)

```
                  -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
    178.galgel:   -Ofast -OPT:fast_complex
                  -CG:load_exe=0:use_movlpd=on
    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
    187.facerec:  -Ofast -OPT:treeheight=on:IEEE_NaN_Inf=off:ro=3
                  -CG:load_exe=0 -LNO:fusion=2 +FDO -IPA:plimit=1800
    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:load_exe=2:local_fwd_sched=on -LNO:fusion=2
                  -TENV:X=4 -WOPT:retype_expr=on +FDO
    191.fma3d:    -O2 -ipa -WOPT:mem_opnds=on:retype_expr=on -OPT:Ofast:IEEE_arith=3:ro=3
                  -LANG:short_circuit_conditionals=on +FDO -IPA:pu_reorder=on
    200.sixtrack: -Ofast -CG:load_exe=1 +FDO
    301.apsi:     -Ofast -TENV:X=4 -LNO:fusion=2:prefetch=0

  BIOS Settings:
    ChipKill was DISABLED

  Compiler Flags File:
    IBM-PathScale-20041025
```