



CFP2000 Result

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IBM
eServer 326, 2.4 GHz AMD Opteron (TM)

SPECfp2000 = 1771
SPECfp_base2000 = 1648

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	
168.wupwise	1600	93.6	1710	79.0	2024	
171.swim	3100	123	2527	123	2518	
172.mgrid	1800	114	1574	106	1691	
173.applu	2100	136	1544	112	1870	
177.mesa	1400	78.4	1786	70.9	1975	
178.galgel	2900	109	2657	108	2695	
179.art	2600	118	2195	88.0	2954	
183.earthquake	1300	87.9	1479	87.1	1492	
187.facerec	1900	98.9	1920	96.8	1962	
188.ammmp	2200	157	1400	153	1435	
189.lucas	2000	115	1735	118	1695	
191.fma3d	2100	154	1364	148	1420	
200.sixtrack	1100	163	677	151	729	
301.apsi	2600	166	1564	163	1594	

Hardware

CPU: AMD Opteron 250
 CPU MHz: 2400
 FPU: Integrated
 CPU(s) enabled: 1 core, 1 chip, 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)

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-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