CFP2000 Result

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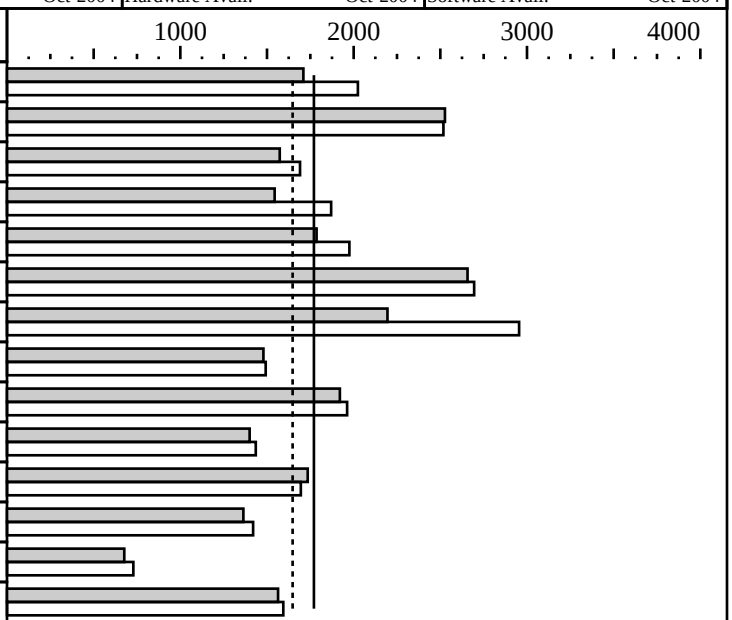
IBM
eServer 326, 2.4 GHz AMD Opteron (TM)

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.equake	1300	87.9	1479	87.1	1492
187.facerec	1900	98.9	1920	96.8	1962
188.ammp	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

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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
```