CFP2000 Result

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IBM Corporation

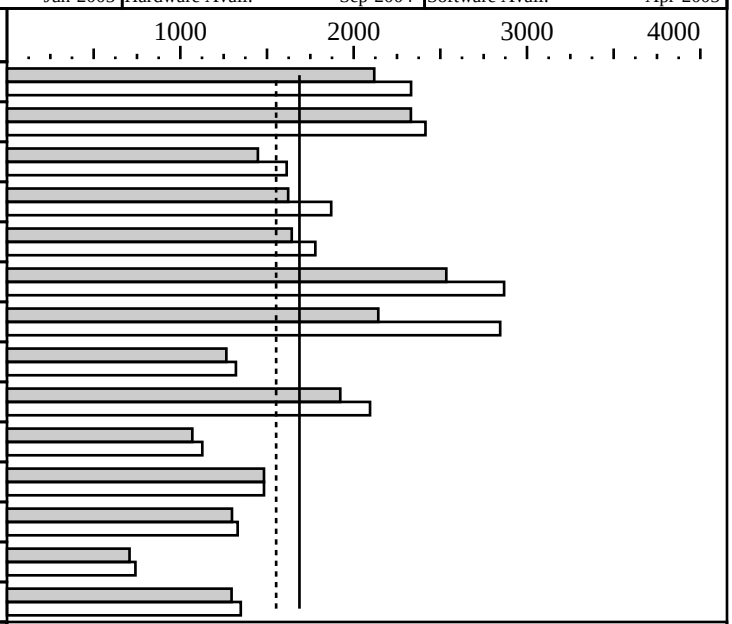
IBM eServer e326 (AMD Opteron (TM) 248)

SPECfp2000 = 1687

SPECfp_base2000 = 1553

SPEC license #: 11 | Tested by: IBM, Inc. | Test date: Jun-2005 | Hardware Avail: Sep-2004 | Software Avail: Apr-2005

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio
168.wupwise	1600	75.5	2119	68.6	2331
171.swim	3100	133	2330	128	2414
172.mgrid	1800	124	1447	112	1614
173.applu	2100	129	1622	112	1870
177.mesa	1400	85.2	1643	78.7	1779
178.galgel	2900	114	2534	101	2868
179.art	2600	121	2142	91.4	2845
183.equake	1300	103	1265	98.4	1321
187.facerec	1900	98.8	1923	90.7	2094
188.ammp	2200	206	1069	195	1127
189.lucas	2000	135	1483	135	1483
191.fma3d	2100	162	1298	158	1331
200.sixtrack	1100	156	707	148	741
301.apsi	2600	201	1296	193	1349



Hardware

CPU:	AMD Opteron 248
CPU MHz:	2200
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:	8 x 1GB, DDR400
Disk Subsystem:	SCSI, 36GB 10K RPM
Other Hardware:	None

Software

Operating System:	SuSE Linux 9.0 SP1 SLES 64 bit Kernel 2.6.5-7.151-smp (SP1)
Compiler:	PathScale EKOPath(TM) Compiler Suite, Release 2.1
File System:	Linux/reiserfs
System State:	Multi-user, run level 3

Notes/Tuning Information

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Tested by IBM, Inc.

 +FDO: PASS1= -fb_create fbdata  PASS2= -fb_opt fbdata
 +ACML  means -L/opt/acml2.5.1/pathscale64/lib -lacml,
        which causes linking with AMD Core Math Library V2.5.1

 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 -LNO:prefetch_ahead=5:prefetch=3
              -OPT:unroll_times_max=8:unroll_size=128:IEEE_NaN_Inf=off:ro=3
              -IPA:linear=on:plimit=50000:callee_limit=5000
              -INLINE:aggressive=on
```

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Notes/Tuning Information (Continued)

```
171.swim:    -Ofast -LNO:fusion=2 -m3dnow
172.mgrid:   -O3 -LNO:fusion=2:blocking=off
             -OPT:Ofast:unroll_times_max=8:unroll_size=256:ro=3
             -CG:gcm=off:cflow=off -m3dnow
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
177.mesa:    -O2 -ipa -OPT:Ofast -fno-math-errno -CG:local_fwd_sched=on +FDO
178.galgel:  -Ofast -OPT:fast_complex=on +ACML
179.art:     -O3 -OPT:ro=2:div_split=on:alias=typed -fno-math-errno -m32
183.equake:  -Ofast -CG:load_exe=2 -OPT:treeheight=on -WOPT:mem_opnds=on -m32
187.facerec:  -Ofast -OPT:IEEE_NaN_Inf=off:ro=3 -LNO:fusion=2
              -IPA:plimit=1500 +FDO
188.ammp: -O3 -OPT:alias=disjoint:unroll_times_max=8:Ofast:ro=3
          -fno-math-errno -TENV:X=4 +FDO
189.lucas: basepeak = true
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:Olimit=6000 -fno-math-errno -CG:load_exe=1 +FDO
301.apsi: -Ofast -TENV:X=4 -LNO:fusion=2:prefetch=0
```