CFP2000 Result

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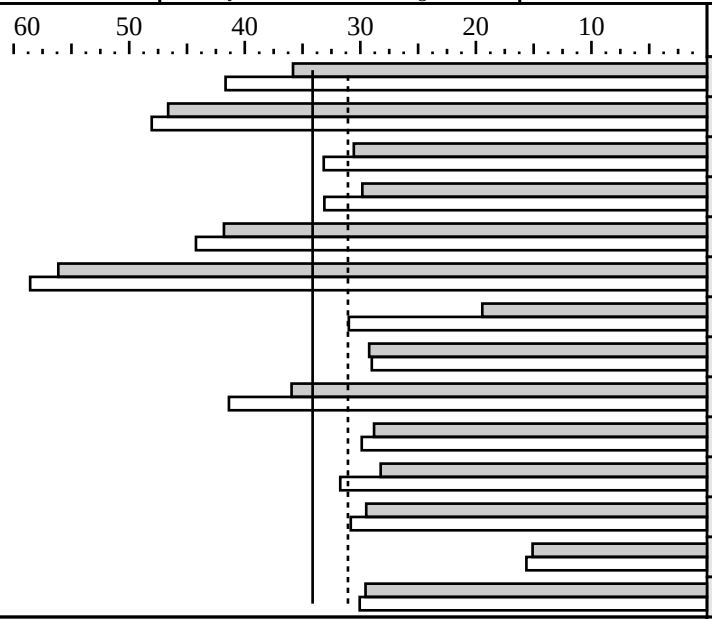
IBM Corporation

eServer 325, 2.4 GHz AMD Opteron (TM)

SPECfp_rate2000 = 34.1

SPECfp_rate_base2000 = 31.1

SPEC license #: 11 | Tested by: IBM, Research Triangle Park, NC | Test date: May-2004 | Hardware Avail: May-2004 | Software Avail: May-2004



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	2	104	35.8	2	89.1	41.7
171.swim	2	154	46.6	2	150	48.1
172.mgrid	2	137	30.6	2	126	33.2
173.applu	2	163	29.8	2	147	33.1
177.mesa	2	77.7	41.8	2	73.4	44.2
178.galgel	2	120	56.1	2	115	58.6
179.art	2	310	19.4	2	195	31.0
183.equake	2	103	29.2	2	104	29.0
187.facerec	2	123	36.0	2	107	41.4
188.ammp	2	177	28.8	2	171	29.9
189.lucas	2	164	28.2	2	146	31.7
191.fma3d	2	165	29.5	2	158	30.8
200.sixtrack	2	169	15.1	2	163	15.6
301.apsi	2	204	29.5	2	201	30.1

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:	4x512MB+2x1024MB, DDR333
Disk Subsystem:	SCSI, 36GB 10K RPM
Other Hardware:	None

Software

Operating System:	SUSE Linux 8.0 SLES 64-bit Kernel 2.4.19-249 (SP2)
Compiler:	PathScale EKO Compiler Suite, Release 1.0
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:         pathcc  -Ofast -WOPT:mem_opnds=on +FDO
    Fortran:   pathf90 -Ofast -LNO:fusion=2
  Portability Flags:
    178.galgel: -fixedform

 Peak Tuning:
  168.wupwise: -Ofast -LNO:fusion=2:prefetch_ahead=5
               -OPT:unroll_times=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 -OPT:ro=3 -LNO:fusion=2:prefetch=2
  172.mgrid: -O3 -LNO:fusion=2:blocking=off:ou_max=5:sclrze=off:prefetch=2
             -OPT:Ofast:unroll_times=8:unroll_size=256:ro=3
```

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Notes/Tuning Information (Continued)

```
            -CG:gcm=off:cflow=off -GRA:home=off
 173.applu: -O3 -ipa -OPT:IEEE_arith=1:ro=3:unroll_size=0
     -LNO:fusion=2:interchange=OFF:blocking=OFF:ou_prod_max=10:ou_max=5:prefetch=2
     -TENV:X=4 -WOPT:mem_opnds=on:retype_expr=on:val=0
 177.mesa: -O2 -ipa -OPT:Ofast -fno-math-errno +FDO
 178.galgel: -Ofast -OPT:treeheight=on:unroll_times=8:unroll_size=512:ro=3
             -CG:load_exe=0:use_movlpd=on
             -LNO:fusion=2:prefetch=0 +FDO
 179.art: -O3 -OPT:Ofast -fno-math-errno -m32 +FDO
 183.equake: -Ofast -OPT:unroll_size=0:alias=disjoint:treeheight=on
             -WOPT:val=0
     loader: -IPA:plimit=1125:small_pu=43
 187.facerec: -Ofast -OPT:treeheight=on:IEEE_NaN_Inf=off:ro=3 -CG:load_exe=0
            -LNO:fusion=2:prefetch=0 -LANG:short_circuit_conditionals=on +FDO -IPA:plimit=1800
 188.ammp: -O3 -OPT:alias=disjoint:unroll_times=8:Ofast:ro=3 -fno-math-errno -TENV:X=4 +FDO
189.lucas: -Ofast -CG:prefetch=off:load_exe=2:local_fwd_sched
           -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:prefetch=off +FDO
 301.apsi: -Ofast -TENV:X=4 -LNO:fusion=2:prefetch=0:blocking=off
   loader: -IPA:linear=on:plimit=525

Notes
   BIOS build level M1E127AUS, date, May-2004.
```