CFP2000 Result

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IBM Corporation

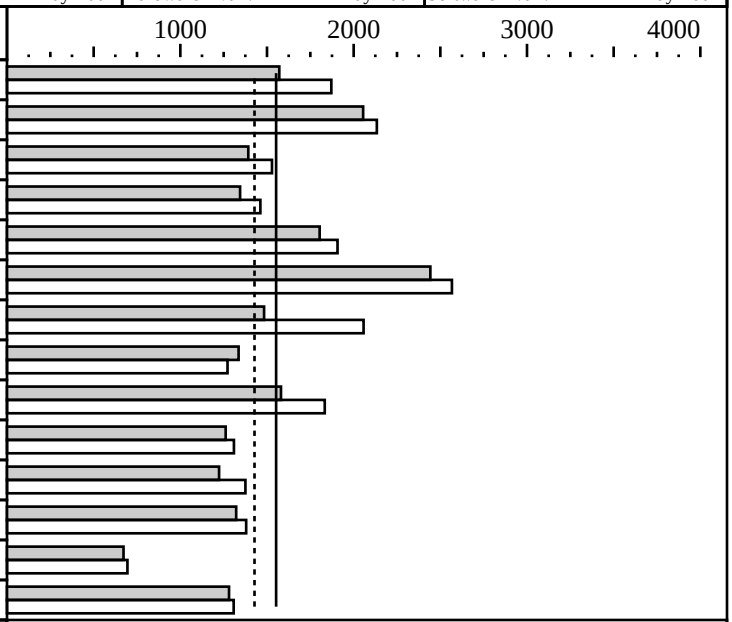
eServer 325, 2.4 GHz AMD Opteron (TM)

SPECfp2000 = 1553

SPECfp_base2000 = 1428

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio
168.wupwise	1600	102	1571	85.5	1871
171.swim	3100	151	2055	145	2134
172.mgrid	1800	129	1392	118	1529
173.applu	2100	156	1345	144	1462
177.mesa	1400	77.6	1804	73.4	1907
178.galgel	2900	119	2442	113	2567
179.art	2600	175	1483	126	2057
183.equake	1300	97.3	1336	102	1272
187.facerec	1900	120	1581	104	1833
188.ammp	2200	174	1262	168	1309
189.lucas	2000	163	1224	145	1376
191.fma3d	2100	159	1322	152	1380
200.sixtrack	1100	164	672	158	695
301.apsi	2600	203	1281	199	1308



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

Software

Operating System:	SUSE Linux SLES 8.0 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
  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.
```