CFP2000 Result

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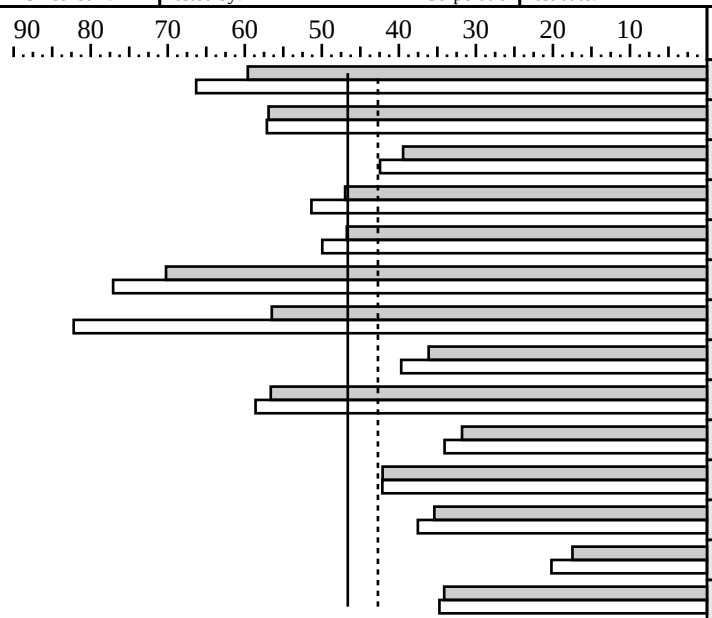
IBM

IBM eServer e326 (AMD Opteron (TM) 252)

SPECfp_rate2000 = 46.6

SPECfp_rate_base2000 = 42.7

SPEC license #: 11 | Tested by: IBM Corporation | Test date: Jun-2005 | Hardware Avail: Feb-2005 | Software Avail: Apr-2005



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	2	62.3	59.6	2	56.0	66.3
171.swim	2	126	56.9	2	126	57.1
172.mgrid	2	106	39.4	2	98.4	42.4
173.applu	2	104	47.0	2	94.9	51.3
177.mesa	2	69.5	46.8	2	65.0	49.9
178.galgel	2	95.8	70.2	2	87.3	77.1
179.art	2	107	56.5	2	73.4	82.2
183.equake	2	83.5	36.1	2	76.0	39.7
187.facerec	2	77.8	56.6	2	75.2	58.6
188.ammp	2	161	31.8	2	150	34.1
189.lucas	2	110	42.1	2	110	42.1
191.fma3d	2	138	35.4	2	130	37.5
200.sixtrack	2	146	17.5	2	126	20.2
301.apsi	2	177	34.1	2	174	34.7

Hardware

CPU:	AMD Opteron 252
CPU MHz:	2600
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:	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 2.6.5-7.139-smp
Compiler:	PathScale EKOPath(TM) Compiler Suite, Release 2.1 AMD Core Math Library 2.5.1
File System:	Linux/reiserfs
System State:	Multi-user, run level 3

Notes/Tuning Information

```
Tested by IBM Corporation
 +ACML: Linked with AMD Core Math Library
 Base tuning for C programs: -Ofast -WOPT:mem_opnds=on +FDO
 Base tuning for FORTRAN programs: -Ofast -LNO:fusion=2 -OPT:fast_complex
 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
                  -IPA:space=1000:linear=on:plimit=50000:callee_limit=5000
                  -INLINE:aggressive=on +FDO
   171.swim:      -Ofast -LNO:fusion=2
   172.mgrid:     -O3 -LNO:fusion=2:blocking=off
                 -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
```

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Notes/Tuning Information (Continued)

```
  177.mesa:      -O2 -ipa -OPT:Ofast -fno-math-errno -CG:local_fwd_sched=on +FDO
  178.galgel:    -Ofast -OPT:fast_complex -CG:use_movlpd=on RM_SOURCES=lapak.f90 +ACML
  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 -m32
  187.facerec:   -Ofast -OPT:treeheight=on:IEEE_NaN_Inf=off:ro=3 -CG:load_exe=0
                 -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 -LNO:prefetch=0 +FDO
  189.lucas:     -Ofast -CG:local_fwd_sched=on -LNO:fusion=2 +FDO
  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:  -Ofast -CG:load_exe=1 +FDO
  301.apsi:      -Ofast -TENV:X=4 -LNO:fusion=2:prefetch=0
BIOS Configuration Notes
  Node Interleaving is Disabled
Other Configuration Notes
   Taskset utility used to bind process to CPU(s)
```