CFP2000 Result

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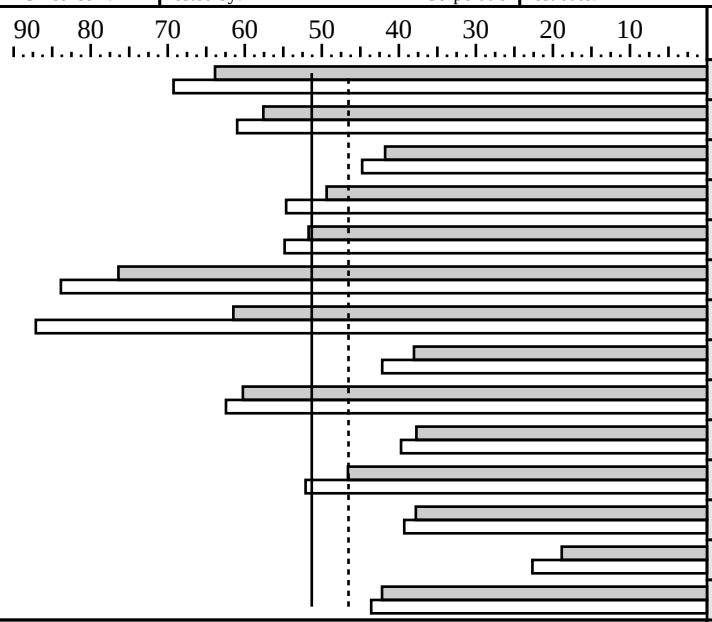
IBM

AMD Opteron LS20 for IBM eServer Blade Center (Opteron(tm) 254)

SPECfp_rate2000 = 51.3

SPECfp_rate_base2000 = 46.5

SPEC license #: 11 | Tested by: IBM Corporation | Test date: Feb-2006 | Hardware Avail: Feb-2006 | Software Avail: Nov-2005



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	2	58.1	63.9	2	53.6	69.2
171.swim	2	125	57.6	2	118	61.0
172.mgrid	2	99.9	41.8	2	93.3	44.8
173.applu	2	98.7	49.4	2	89.2	54.6
177.mesa	2	62.8	51.7	2	59.2	54.8
178.galgel	2	88.1	76.4	2	80.2	83.9
179.art	2	98.1	61.5	2	69.2	87.1
183.equake	2	79.3	38.0	2	71.5	42.2
187.facerec	2	73.2	60.2	2	70.6	62.4
188.ammp	2	135	37.7	2	129	39.7
189.lucas	2	99.5	46.6	2	89.0	52.1
191.fma3d	2	129	37.8	2	124	39.3
200.sixtrack	2	135	18.9	2	113	22.7
301.apsi	2	143	42.2	2	138	43.6

Hardware

CPU:	AMD Opteron(tm) Processor 254
CPU MHz:	2800
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:	4 x 2048GB PC3200
Disk Subsystem:	SCSI, 36GB 10K RPM
Other Hardware:	None

Software

Operating System:	SuSE Linux 9.0 SP2 SLES 64 bit Kernel 2.6.5-7.191-smp (SP2)
Compiler:	PathScale EKO Compiler Suite, Release 2.2.1 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
                  -IPA:linear=on:plimit=50000:callee_limit=5000
                  -INLINE:aggressive=on
   171.swim:      -Ofast -CG:local_fwd_sched=on -LNO:fusion=2 -m3dnow
   172.mgrid:     -Ofast -CG:gcm=off:cflow=on -OPT:IEEE_a=3:unroll_size=200
                  -LNO:fusion=2:fission=1:blocking=off:prefetch_ahead=2
      -WOPT:memopnds=on:aggstr=0
   173.applu:     -Ofast -CG:local_fwd_sched=on -OPT:ro=3 -TENV:X=3
                  -LNO:fusion=2:fission=2:full_unroll_size=10000:prefetch=3
```

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Notes/Tuning Information (Continued)

```
  177.mesa:      -O2 -ipa -OPT:Ofast -fno-math-errno -CG:local_fwd_sched=on -WOPT:mem_opnds=on +FDO
   178.galgel:    -Ofast -OPT:fast_complex +ACML
   179.art:       -O3 -OPT:ofast -fno-math-errno -mno-sse2 -m32 +FDO
   183.equake:    -Ofast -CG:load_exe=2 -WOPT:mem_opnds=on -m32
   187.facerec:   -Ofast -LNO:fusion=2 -IPA:plimit=1500
                  -OPT:fast_complex=on:IEEE_NaN_Inf=off:unroll_size=0 +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 -OPT:ro=3:fast_nint=off:unroll_size=256 -WOPT:memopnds=on +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:  -O3 -OPT:Ofast:Olimit=60000:early_intrinsics=on
      -fno-math-errno -CG:load_exe=1 +FDO
   301.apsi:      -Ofast -CG:load_exe=0 -LNO:prefetch=0:simd=2
BIOS Configuration Notes
  Node Interleaving is Disabled
Other Configuration Notes
   Taskset utility used to bind process to CPU(s)
```