CFP2000 Result

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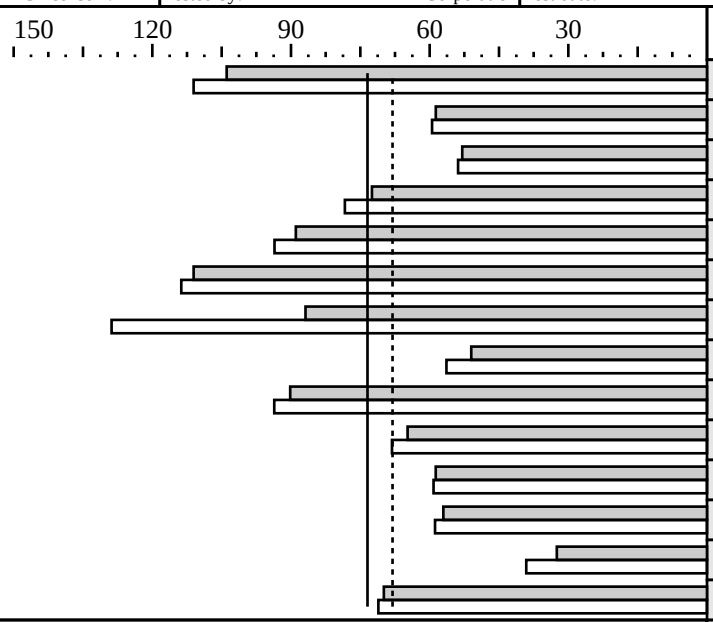
IBM

AMD Opteron LS20 for IBM eServer Blade Center (Opteron(tm) 280)

SPECfp_rate2000 = 73.4

SPECfp_rate_base2000 = 68.0

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	4	71.4	104	4	66.8	111
171.swim	4	245	58.7	4	242	59.5
172.mgrid	4	158	53.0	4	155	53.9
173.applu	4	134	72.5	4	124	78.3
177.mesa	4	73.0	89.0	4	69.4	93.6
178.galgel	4	121	111	4	118	114
179.art	4	139	86.9	4	93.7	129
183.equake	4	118	51.0	4	107	56.4
187.facerec	4	97.8	90.2	4	94.2	93.6
188.ammp	4	158	64.8	4	150	68.2
189.lucas	4	158	58.7	4	157	59.2
191.fma3d	4	171	57.0	4	166	58.8
200.sixtrack	4	157	32.5	4	131	39.1
301.apsi	4	173	69.9	4	170	71.1

Hardware

CPU:	AMD Opteron(tm) Processor 280
CPU MHz:	2400
FPU:	Integrated
CPU(s) enabled:	4 cores, 2 chips, 2 cores/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

```
+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: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 -LNO:fusion=2:fission=1:blocking=off:prefetch_ahead=2
                 -OPT:IEEE_a=3:unroll_size=200 -CG:gcm=off:cflow=off
          -WOPT:memopnds=on:aggstr=0
  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 -WOPT:mem_opnds=on +FDO
```

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Notes/Tuning Information (Continued)

```
  178.galgel:    -Ofast -OPT:fast_complex +ACML
  179.art:       -O3 -OPT:ofast -fno-math-errno -mno-sse2 -m32 +FDO
  183.equake:    -Ofast-WOPT:mem_opnds=on -CG:load_exe=2  -m32
  187.facerec:   -Ofast -OPT:fast_complex=on:IEEE_NaN_Inf=off:unroll_size=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 +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)
```