CFP2000 Result

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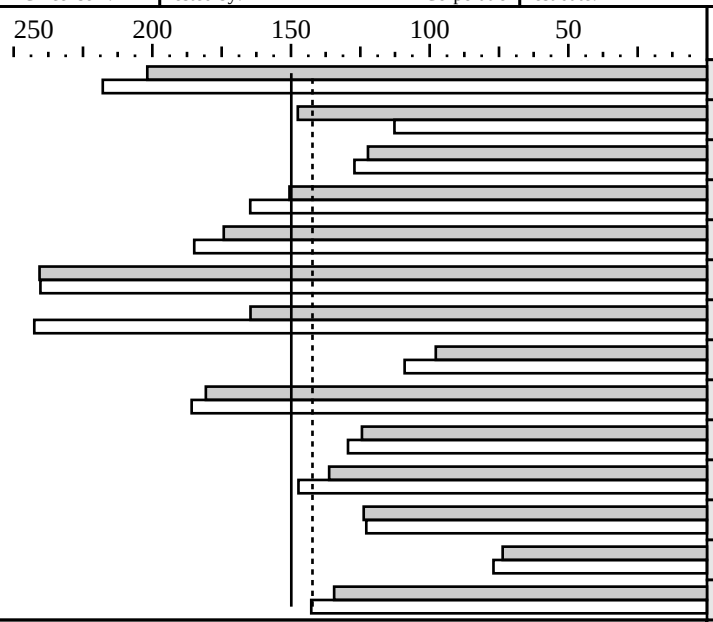
IBM Corporation

AMD Opteron LS41 for IBM BladeCenter (AMD Opteron (TM) 8216)

SPECfp_rate2000 = 150

SPECfp_rate_base2000 = 142

SPEC license #: 11 | Tested by: IBM Corporation | Test date: Aug-2006 | Hardware Avail: Aug-2006 | Software Avail: Mar-2006



Benchmark	Base Copies	Base Runtime	Base Ratio	Copies	Runtime	Ratio
168.wupwise	8	73.6	202	8	68.2	218
171.swim	8	195	148	8	255	113
172.mgrid	8	137	122	8	131	127
173.applu	8	129	151	8	118	165
177.mesa	8	74.6	174	8	70.3	185
178.galgel	8	112	241	8	112	240
179.art	8	147	165	8	99.5	243
183.equake	8	123	97.8	8	111	109
187.facerec	8	97.6	181	8	94.9	186
188.ammp	8	164	124	8	158	129
189.lucas	8	136	136	8	126	147
191.fma3d	8	157	124	8	159	123
200.sixtrack	8	139	73.7	8	133	77.0
301.apsi	8	179	134	8	169	143

Hardware

CPU:	AMD Opteron 8216
CPU MHz:	2400
FPU:	Integrated
CPU(s) enabled:	8 cores, 4 chips, 2 cores/chip
CPU(s) orderable:	1,2,3,4
Parallel:	No
Primary Cache:	64KBI + 64KBD (on chip) per core
Secondary Cache:	1024KB (I+D) (on chip) per core
L3 Cache:	N/A
Other Cache:	N/A
Memory:	16x2GB, PC2-5300
Disk Subsystem:	SAS, 36GB 10K RPM
Other Hardware:	None

Software

Operating System:	SuSE Linux 9.0 SP3 SLES 64 bit Kernel 2.6.5-7.244-smp
Compiler:	PathScale EKO Compiler Suite, Release 2.4 PathScale EKOPath(TM) Compiler Suite, Release 2.4
File System:	Linux/reiserfs
System State:	Multi-user, run level 3

Notes/Tuning Information

```
  +FDO: PASS1= -fb_create fbdata  PASS2= -fb_opt fbdata
  +ACML  means -L<acml3.0.0-install-dir>/pathscale64/lib -lacml,
         which causes linking with AMD Core Math Library V3.0.0

  Baseline optimization
    C programs:       -Ofast -WOPT:mem_opnds=on +FDO
    Fortran programs: -Ofast -LNO:fusion=2 -OPT:fast_complex=on +FDO
  Portability Flags:
    178.galgel: -fixedform

 Peak Tuning:
  168.wupwise:  -Ofast -IPA:linear=on -LNO:prefetch_ahead=5:prefetch=3
                -OPT:unroll_times_max=8:unroll_size=128:IEEE_NaN_Inf=off:ro=3
  171.swim:     -Ofast -CG:local_fwd_sched=on -LNO:fusion=2 -m3dnow
  172.mgrid:    -Ofast -CG:gcm=off -OPT:IEEE_arith=3:unroll_size=200
                -LNO:fusion=2:fission=1:blocking=off:prefetch_ahead=2
                -WOPT:mem_opnds=on:aggstr=0
```

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Notes/Tuning Information (Continued)

```
173.applu:     -Ofast -CG:local_fwd_sched=on -OPT:ro=3 -TENV:X=3
               -LNO:fusion=2:fission=2:full_unroll_size=10000 +FDO
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=on +ACML +FDO
               RM_SOURCES=lapak.f90
179.art:       -O3 -OPT:Ofast -fno-math-errno -mno-sse2 -m32
183.equake:    -Ofast -CG:load_exe=2 -WOPT:mem_opnds=on -m32 +FDO
187.facerec:   -Ofast -IPA:plimit=1500 -LNO:fusion=2
               -OPT:IEEE_NaN_Inf=off:ro=3:unroll_size=0 +FDO
188.ammp:      -O3 -OPT:alias=disjoint:unroll_times_max=8:Ofast:ro=3
               -GRA:optimize_boundary=on -fno-math-errno -TENV:X=4 +FDO
189.lucas:     -Ofast -OPT:ro=3:fast_nint=off:unroll_size=256 -WOPT:mem_opnds=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:early_intrinsics=on
               -fno-math-errno -CG:load_exe=1 +FDO
301.apsi:      -Ofast -CG:load_exe=0 -LNO:prefetch=0:simd=2
```