CFP2000 Result

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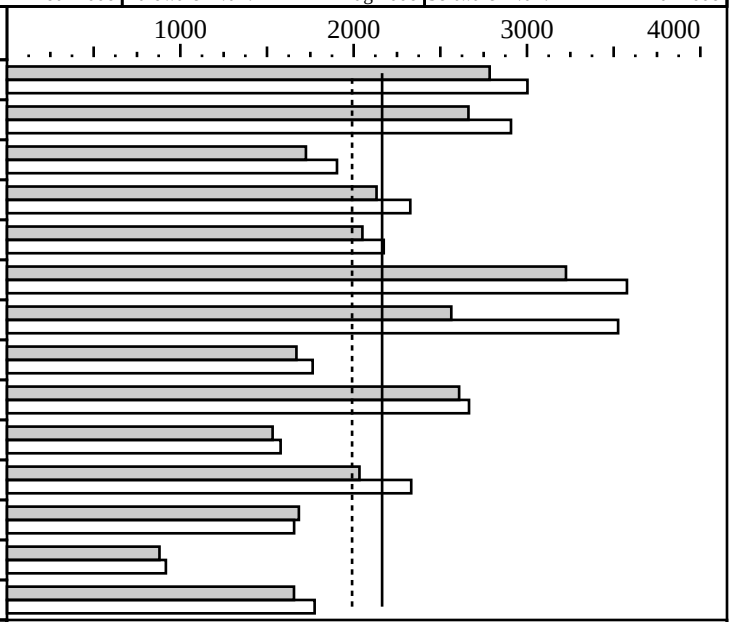
Rackable Systems
C1000-A03-25F26 (AMD Opteron 2218)

SPECfp2000 = 2164

SPECfp_base2000 = 1991

SPEC license #: 64 | Tested by: Rackable Systems | Test date: Jul-2006 | Hardware Avail: Aug-2006 | Software Avail: Mar-2006

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio
168.wupwise	1600	57.5	2785	53.3	3003
171.swim	3100	116	2662	107	2908
172.mgrid	1800	104	1725	94.5	1904
173.applu	2100	98.5	2132	90.3	2327
177.mesa	1400	68.3	2050	64.4	2173
178.galgel	2900	89.9	3225	81.1	3577
179.art	2600	101	2563	73.7	3526
183.equake	1300	77.9	1670	73.7	1763
187.facerec	1900	72.8	2608	71.3	2666
188.ammp	2200	144	1532	139	1579
189.lucas	2000	98.4	2033	85.8	2332
191.fma3d	2100	125	1684	127	1656
200.sixtrack	1100	125	880	120	917
301.apsi	2600	157	1656	146	1775



Hardware

CPU:	AMD Opteron 2218
CPU MHz:	2600
FPU:	Integrated
CPU(s) enabled:	4 cores, 2 chips, 2 cores/chip
CPU(s) orderable:	1,2 chip(s)
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:	4x1024MB, DDR2 5300
Disk Subsystem:	1 x 250GB SATA
Other Hardware:	None

Software

Operating System:	Red Hat Enterprise Linux 4 Update 2 x86_64
Compiler:	PathScale EKOPath(TM) Compiler Suite, Release 2.4 (for C and Fortran) AMD Core Mathematical Library (ACML), Version 3.1.0
File System:	Linux/ext3
System State:	Multi-user, run level 3

Notes/Tuning Information

```
Portability flags:
   178.galgel: -fixedform

Feedback Optimization:
 +FDO: PASS1=-fb_create fbdata   PASS2=-fb_opt fbdata

AMD Core Math Library
+ACML  means -L<acml-install-dir>/pathscale64/lib -lacml,
        which causes linking with AMD Core Math Library

Baseline Optimization Flags:
   C programs:       -Ofast -WOPT:mem_opnds=on +FDO
   Fortran programs: -Ofast -LNO:fusion=2 -OPT:fast_complex=on +FDO

Peak Tuning Flags:
 168.wupwise:  -Ofast -LNO:prefetch_ahead=5:prefetch=3
               -OPT:unroll_times_max=8:unroll_size=128:IEEE_NaN_Inf=off:ro=3
```

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Notes/Tuning Information (Continued)

```
                -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 -OPT:IEEE_a=3:unroll_size=200
                -LNO:fusion=2:fission=1:blocking=off:prefetch_ahead=2
                -WOPT:mem_opnds=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
                +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
 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 -LNO:fusion=2
                -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 +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:Olimit=6000:early_intrinsics=on
                -fno-math-errno -CG:load_exe=1 +FDO
 301.apsi:      -Ofast -CG:load_exe=0 -LNO:prefetch=0:simd=2
Taskset utility used to bind process to CPU(s)
```