CFP2000 Result

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IBM

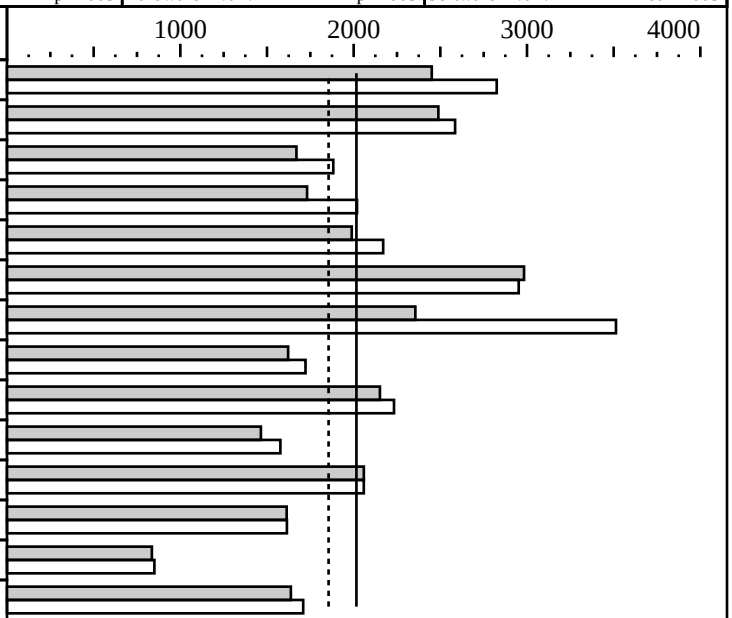
AMD Opteron LS20 for IBM eServer Blade Center (AMD Opteron (TM) 252)

SPECfp2000 = 2016

SPECfp_base2000 = 1855

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio
168.wupwise	1600	65.3	2451	56.6	2825
171.swim	3100	125	2489	120	2585
172.mgrid	1800	108	1670	95.6	1882
173.applu	2100	121	1731	104	2019
177.mesa	1400	70.4	1989	64.5	2170
178.galgel	2900	97.2	2983	98.2	2952
179.art	2600	110	2356	74.0	3513
183.equake	1300	80.2	1622	75.5	1722
187.facerec	1900	88.3	2151	85.1	2233
188.ammp	2200	150	1465	139	1577
189.lucas	2000	97.2	2059	97.2	2058
191.fma3d	2100	130	1614	130	1615
200.sixtrack	1100	132	836	129	850
301.apsi	2600	159	1638	152	1709



Hardware

CPU:	AMD Opteron 252
CPU MHz:	2600
FPU:	Integrated
CPU(s) enabled:	1 core, 1 chip, 1 core/chip
CPU(s) orderable:	1
Parallel:	No
Primary Cache:	64KBI + 64KBD on chip
Secondary Cache:	1024KB (I+D) on chip
L3 Cache:	N/A
Other Cache:	N/A
Memory:	4x2048MB, DDR400
Disk Subsystem:	SCSI, 36GB 10K RPM
Other Hardware:	None

Software

Operating System:	SuSE Linux 9.0 SLES 64 bit Kernel 2.6.5-7.139-smp (SP1)
Compiler:	PathScale EKO Compiler Suite, Release 2.0
File System:	Linux/reiserfs
System State:	Multi-user, run level 3

Notes/Tuning Information

```
Tested by IBM Corporation

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

 Baseline optimization
   C:              pathcc  -Ofast -WOPT:mem_opnds=on +FDO
   Fortran:        pathf90 -Ofast -LNO:fusion=2
 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
   171.swim:      -Ofast -LNO:fusion=2 -m3dnow
   172.mgrid:     -O3 -LNO:fusion=2:blocking=off
```

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Notes/Tuning Information (Continued)

```
                -OPT:Ofast:unroll_times_max=8:unroll_size=256:ro=3
                -CG:gcm=off:cflow=off -m3dnow
    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
    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 +FDO
    179.art:    -O3 -OPT:ro=2:div_split=on:alias=typed
                -fno-math-errno -m32
    183.equake: -Ofast -WOPT:mem_opnds=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 +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: -O3 -OPT:Ofast:Olimit=6000 -fno-math-errno
                -CG:load_exe=1 +FDO
    301.apsi:   -Ofast -TENV:X=4 -LNO:fusion=2:prefetch=0
```