CFP2000 Result

Copyright ©1999-2005, Standard Performance Evaluation Corporation

IBM Corporation

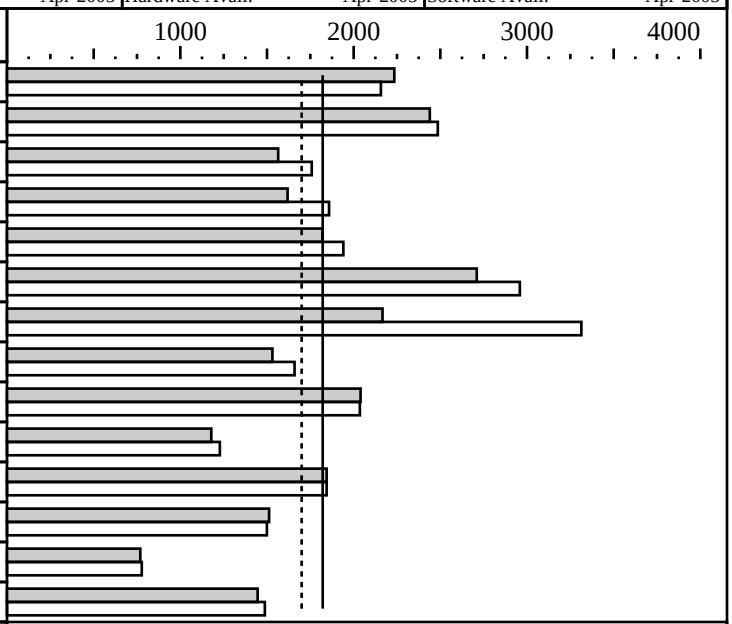
AMD Opteron LS20 for IBM eServer Blade Center (AMD Opteron (TM) 250)

SPECfp2000 = 1821

SPECfp_base2000 = 1700

SPEC license #: 11 | Tested by: IBM, Inc. | Test date: Apr-2005 | Hardware Avail: Apr-2005 | Software Avail: Apr-2005

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio
168.wupwise	1600	71.6	2234	74.2	2157
171.swim	3100	127	2439	125	2485
172.mgrid	1800	115	1565	102	1758
173.applu	2100	130	1619	113	1858
177.mesa	1400	76.9	1820	72.1	1941
178.galgel	2900	107	2710	98.0	2959
179.art	2600	120	2166	78.5	3314
183.equake	1300	84.9	1531	78.4	1659
187.facerec	1900	93.1	2040	93.3	2036
188.ammp	2200	187	1179	179	1228
189.lucas	2000	108	1844	108	1844
191.fma3d	2100	139	1512	140	1499
200.sixtrack	1100	143	769	141	778
301.apsi	2600	180	1446	175	1488



Hardware

CPU:	AMD Opteron 250
CPU MHz:	2400
FPU:	Integrated
CPU(s) enabled:	1 core, 1 chip, 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 2048MB, DDR400
Disk Subsystem:	SCSI, 36GB 10K RPM
Other Hardware:	None

Software

Operating System:	SuSE Linux 9.0 SLES 64 bit Kernel 2.6.5-7.151-smp (SP1)
Compiler:	PathScale EKOPath(TM) Compiler Suite, Release 2.1
File System:	Linux/reiserfs
System State:	Multi-user, run level 3

Notes/Tuning Information

```
Tested by IBM, Inc.

 +FDO: PASS1= -fb_create fbdata  PASS2= -fb_opt fbdata
 +ACML  means -L/opt/acml2.5.1/pathscale64/lib -lacml,
        which causes linking with AMD Core Math Library V2.5.1

 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 -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
```

Copyright ©1999-2005, Standard Performance Evaluation Corporation

Notes/Tuning Information (Continued)

```
171.swim:    -Ofast -LNO:fusion=2 -m3dnow
172.mgrid:   -O3 -LNO:fusion=2:blocking=off
             -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
177.mesa:    -O2 -ipa -OPT:Ofast -fno-math-errno -CG:local_fwd_sched=on +FDO
178.galgel:  -Ofast -OPT:fast_complex=on +ACML
179.art:     -O3 -OPT:ro=2:div_split=on:alias=typed -fno-math-errno -m32
183.equake:  -Ofast -CG:load_exe=2 -OPT:treeheight=on -WOPT:mem_opnds=on -m32
187.facerec:  -Ofast -OPT:IEEE_NaN_Inf=off:ro=3 -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: basepeak = true
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
```