CFP2000 Result

Copyright ©1999-2005, Standard Performance Evaluation Corporation

IBM

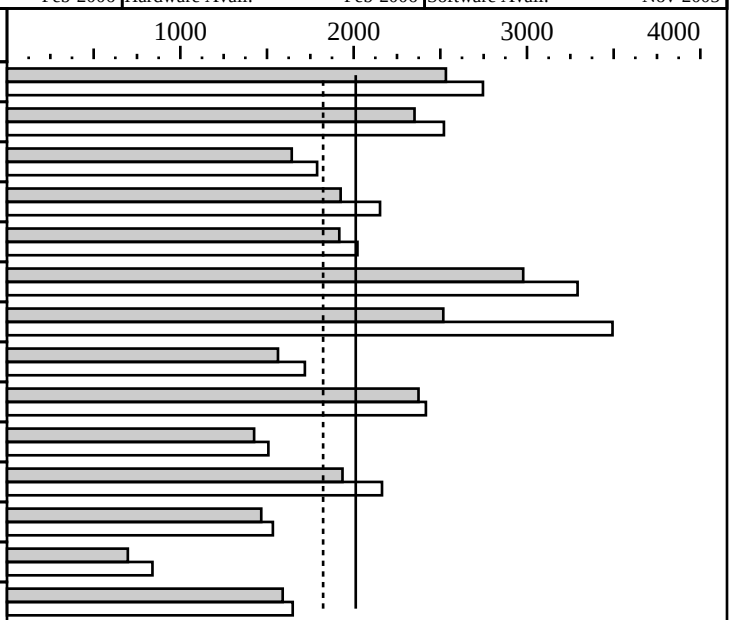
AMD Opteron LS20 for IBM eServer Blade Center (Opteron(tm) 280)

SPECfp2000 = 2012

SPECfp_base2000 = 1824

SPEC license #: 11 | Tested by: IBM Corporation | Test date: Feb-2006 | Hardware Avail: Feb-2006 | Software Avail: Nov-2005

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio
168.wupwise	1600	63.2	2532	58.3	2746
171.swim	3100	132	2351	123	2521
172.mgrid	1800	110	1643	101	1789
173.applu	2100	109	1925	97.6	2152
177.mesa	1400	73.0	1917	69.2	2022
178.galgel	2900	97.4	2978	88.1	3292
179.art	2600	103	2517	74.4	3493
183.equake	1300	83.2	1563	75.6	1718
187.facerec	1900	80.0	2374	78.6	2417
188.ammp	2200	154	1426	146	1508
189.lucas	2000	103	1936	92.4	2164
191.fma3d	2100	143	1467	137	1534
200.sixtrack	1100	158	697	131	839
301.apsi	2600	163	1591	158	1648



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
```

Copyright ©1999-2005, Standard Performance Evaluation Corporation

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)
```