CFP2000 Result

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IBM

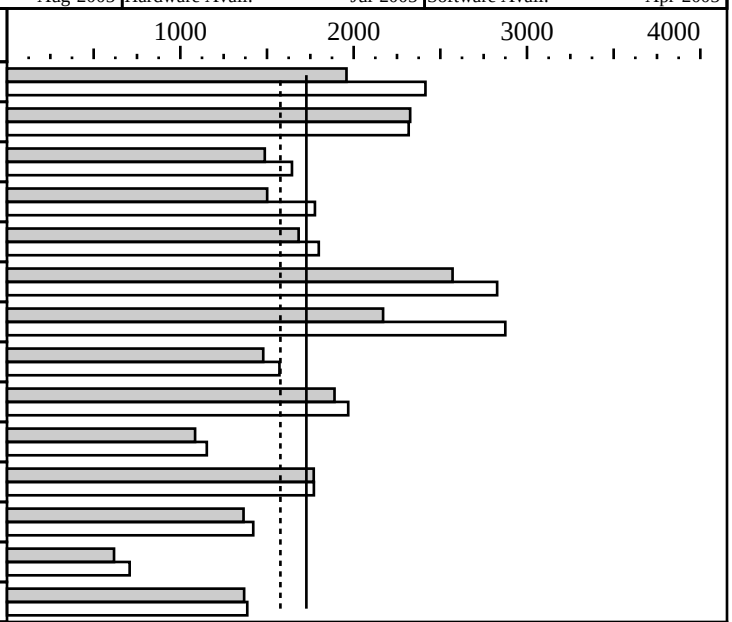
AMD Opteron LS20 for IBM eServer Blade Center

SPECfp2000 = 1727

SPECfp_base2000 = 1577

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

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio
168.wupwise	1600	81.7	1959	66.3	2414
171.swim	3100	133	2326	134	2317
172.mgrid	1800	121	1487	109	1644
173.applu	2100	140	1501	118	1777
177.mesa	1400	83.2	1682	77.8	1799
178.galgel	2900	113	2571	103	2828
179.art	2600	120	2170	90.4	2875
183.equake	1300	87.9	1478	82.7	1572
187.facerec	1900	101	1890	96.5	1969
188.ammp	2200	203	1085	191	1153
189.lucas	2000	113	1770	113	1770
191.fma3d	2100	154	1365	148	1421
200.sixtrack	1100	178	617	155	708
301.apsi	2600	190	1368	188	1386



Hardware

CPU:	AMD Opteron 275
CPU MHz:	2200
FPU:	Integrated
CPU(s) enabled:	2 cores, 1 chip, 2 cores/chip
CPU(s) orderable:	1,2
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:	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 AMD Core Math Library 2.5.1
File System:	Linux/reiserfs
System State:	Multi-user, run level 3

Notes/Tuning Information

```
Tested by IBM Corporation
 +ACML: Linked with AMD Core Math Library
 +FDO: PASS1= -fb_create fbdata  PASS2= -fb_opt fbdata
 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:space=1000:linear=on:plimit=50000:callee_limit=5000
                  -INLINE:aggressive=on
   171.swim:      -Ofast -LNO:fusion=2
   172.mgrid:     -O3 -LNO:fusion=2:blocking=off
                 -OPT:Ofast:unroll_times_max=8:unroll_size=256:ro=3 -CG:gcm=off:cflow=off
   173.applu:     -Ofast -CG:local_fwd_sched=on
                  -LNO:fusion=2:fission=2:full_unroll_size=10000:prefetch=3
```

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Notes/Tuning Information (Continued)

```
                -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 RM_SOURCES=lapak.f90 +ACML
  179.art:      -O3 -OPT:ro=2:div_split=on:alias=typed -fno-math-errno -m32 +FDO
  183.equake:   -Ofast -WOPT:mem_opnds=on -CG:local_fwd_sched=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 -LNO:prefetch=0 +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: -Ofast -CG:load_exe=1 +FDO
  301.apsi:     -Ofast -TENV:X=4 -LNO:fusion=2:prefetch=0
BIOS Configuration Notes
  Node Interleaving is Disabled
Other Configuration Notes
   Taskset utility used to bind process to CPU(s)
```