

An issue of svld1_f64() and svld1_vnum_f64() in gcc10 with '-O0'

Recently I found an issue of SVE intrinsics (svld1_f64) when using gcc -O0 (optimization level 0). svld1_f64() is a function defined in Arm intrinsics for SVE (scalable vector extensions).

Changing -O0 to -O1 makes the issue disappear.

svld1_vnum_f64() has the same problem.

Code to show the issue:

Download the test source from here:

https://github.com/docularxu/sve-code-test/tree/working-svld1_f64 . And README for how to compile.

Expected vs. Actual:

In green, it is the expected result.

In red, it is the actual result when compiling with 'gcc -O0'.

```
docularxu@4c78a265f31e:~/sve-code-test.git$ make clean; OPTS=-O1 make;
gemu-aarch64 -cpu max,sve256=on ./test1
rm -f *.o *.os test1
gcc -c -o test1.o test1.c -O1 -I. -march=armv8.2-a+sve
gcc -o test1 test1.o -O1 -I. -march=armv8.2-a+sve
hello world
vector length (bytes): 32
Loaded by svld1_f64:
1.000000, 1.100000, 1.200000, 1.300000
Loaded by svld1_vnum_f64:
2.010000, 2.120000, 2.230000, 2.340000
docularxu@4c78a265f31e:~/sve-code-test.git$
docularxu@4c78a265f31e:~/sve-code-test.git$ make clean; OPTS=-O0 make;
gemu-aarch64 -cpu max,sve256=on ./test1
rm -f *.o *.os test1
gcc -c -o test1.o test1.c -O0 -I. -march=armv8.2-a+sve
gcc -o test1 test1.o -O0 -I. -march=armv8.2-a+sve
hello world
```

```
vector length (bytes): 32
Loaded by svld1_f64:
0.000000, 0.000000, 0.000000, 0.000000
Loaded by svld1_vnum_f64:
0.000000, 0.000000, -0.000000, -0.000000
docularxu@4c78a265f31e:~/sve-code-test.git$
docularxu@4c78a265f31e:~/sve-code-test.git$
```

GCC and QEMU versions:

```
docularxu@4c78a265f31e:~/sve-code-test.git$ gcc --version
gcc (Debian 10-20200411-1) 10.0.1 20200411 (experimental) [master revision
bb87d5cc77d:75961caccb7:f883c46b4877f637e0fa5025b4d6b5c9040ec566]
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warranty; not even for MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.

docularxu@4c78a265f31e:~/sve-code-test.git$ qemu-aarch64 --version
qemu-aarch64 version 4.2.50 (v4.2.0-1858-gdb736e0437-dirty)
Copyright (c) 2003-2019 Fabrice Bellard and the QEMU Project developers
docularxu@4c78a265f31e:~/sve-code-test.git$
```