

# SSD20X 双网口转发数据测试方法

## 1、内核配置支持 netfilter

(1) 输入指令: make menuconfig, 以下选项选择 build-in

```
Linux Kernel Configuration
-> Networking support
  -> Networking options
    -> Network packet filtering framework(netfilter)
      -> Core netfilter configuration
        -> Netfilter connection tracking support
        -> NetBIOS name service protocol support
        -> Netfilter Xtables support (required for ip_tables)

Linux Kernel Configuration
-> Networking support
  -> Networking options
    -> Network packet filtering framework(netfilter)
      -> IP: Netfilter Configuration
        -> IPv4 connection tracking support (require for NAT)
        -> IPv4 NAT
        -> IP tables support (required for filtering/masq/NAT)
        -> iptables NAT support
          -> MASQUERADE target support
          -> NETMAP target support
          -> REDIRECT target support
        -> raw table support (required for NOTRACK/TRACE)
```

(2) make clean;make -j8

## 2、下载和编译 iptables

(1) 下载路径: git://git.netfilter.org/iptables 或者

<https://www.netfilter.org/projects/iptables/downloads.html>

(2) 编译 iptables

- A. 在运行 autogen.sh 之前先确认一下安装了 autoconf、automake、libtool
- B. 执行 autogen.sh 脚本生成 configure 文件
- C. 执行 ./configure --enable-static --disable-shared --prefix=\$PWD/bin CC=/opt/gcc-arm-8.2-2018.08-x86\_64-arm-linux-gnueabi/bin/arm-linux-gnueabi-gcc --host=arm-linux-gnueabi --disable-nftables
- D. make
- E. make install
- F. mv bin/sbin/xtables-legacy-multi bin/sbin/iptables

configure 参数简单说明一下:

- 1) --enable-static --disable-shared : 指定静态编译
- 2) --prefix=\$PWD/bin : 指定 make install 后的安装目录
- 3) CC: 指定 toolchain 的路径, 配置时只需要修改此选项, 其他的选项直接复制上面的配置

## 3、iptables 应用

- (1) 配置 eth0(连接路由器): ifconfig eth0 192.168.1.100 netmask 255.255.255.0  
route add default gw 192.168.1.1
- (2) 测试 eth0 是否能访问外网: ping 14.215.117.38 -I eth0
- (3) 配置 eth1(连接电脑): ifconfig eth0 192.168.24.2 netmask 255.255.255.0
- (4) 配置电脑网卡静态 IP 为: 192.168.24.100
- (5) 配置电脑网卡网关 (至关重要): 192.168.24.2 (与 eth1 的 ip 一致)

- (6) 将编译生成的 iptables 执行文件复制到板子的 customer 目录，修改权限
- (7) 打开 IP 转发：echo 1 > /proc/sys/net/ipv4/ip\_forward
- (8) 在板子根目录创建文件夹：mkdir -p run
- (9) cd /customer; ./iptables -t nat -A POSTROUTING -s 192.168.24.0/24 -j MASQUERADE
- (10) 查询配置规则：./iptables -t nat -L，如下则配置成功

```
/customer # ./iptables -t nat -L
Chain PREROUTING (policy ACCEPT)
target          prot opt source          destination

Chain INPUT (policy ACCEPT)
target          prot opt source          destination

Chain OUTPUT (policy ACCEPT)
target          prot opt source          destination

Chain POSTROUTING (policy ACCEPT)
target          prot opt source          destination
MASQUERADE     all  --  192.168.24.0/24  anywhere
/customer #
```

- (11) 此时，配置已完成，电脑端可以直接访问因特网。