

# 浙大校网VPN

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## 1. 配置必要的安装软件及安装包；

在<http://pan.baidu.com/share/link?shareid=335708&uk=2752223697>中下载我们必须的四个软件包，接下来我通过u盘挂载在树莓派上面，将下载的内容导入树莓派中；另外，其实我们可以利用wget命令来获得以上四个包，出于方面考虑，我选择使用u盘导入；获得的四个包内容更如下：

```
pi@raspberrypi1-wt ~/RaspberryPi $ ls
libpcap0.8_1.3.0-1_armhf.deb  xl2tpd_1.3.1_dfsg-1_armhf.deb
ppp_2.4.5-5.1_armhf.deb      zjuvpn-8.2.tar.gz
pi@raspberrypi1-wt ~/RaspberryPi $
```

浙大的VPN使用的l2tp协议，因此我们需要安装xl2tp来开启l2tp的接口，同时在本地树莓派上面搭建ppp协议的服务器来访问外网。zjuvpn这个包可以帮助我们实现一步连接浙大VPN（以前在linux下就是用的这个包）

安装上述软件，以此使用命令：

```
sudo dpkg -i libpcap0.8_1.3.0-1_armhf.deb
sudo dpkg -i ppp_2.4.5-5.1_armhf.deb
sudo dpkg -i xl2tpd_1.3.1+dfsg-1_armhf.deb
sudo tar -zxvf zjuvpn-8.2.tar.gz -C /
```

最后一个命令解压zjuvpn这个包然后将内容加入根目录中；

## 2. 配置树莓派上面的协议：

通过配置rc.local文件，我们配置树莓派的mac地址以及玉泉网络分给我们的固定的ip地址网关掩码等；

```
# Print the IP address
_IP=$(hostname -I) || true
if [ "$_IP" ]; then
    printf "My IP address is %s\n" "$_IP"
fi
/usr/bin/phddns -c /etc/phlinux.conf -d
sudo ifconfig eth0 down hw ether 5C:F9:DD:3D:90:A9
sudo ifconfig eth0 up
sudo ifconfig eth0 10.110.91.138
sudo route add default gw 10.110.91.1
sudo /etc/init.d/networking reload
exit 0
```

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Bot

## 3. 连接玉泉的VPN

使用命令zjuvpn -c（刚才解压好的包中的命令）

这里我使用的是室友的VPN，自己的VPN挂在宿舍路由器上

```

pi@raspberrypi-wt ~ $ zjuvpn -c
[ERR] You must be super user to run this utility!
pi@raspberrypi-wt ~ $ sudo zjuvpn -c
Configure L2TP VPN for ZJU.
Username: 3120103604@c
Password:
[MSG] Disconnecting VPN ... Done!
[MSG] Restarting l2tpd...
Restarting xl2tpd: xl2tpd.
[MSG] Done!
[MSG] Trying to bring up vpn... 3 secs... Done!
[MSG] Detected gateway: 192.168.1.1, PPP device: ppp0 .
[MSG] Setting up route table... Done!

```

完成连接后，可以尝试ping下内外网；  
ping fm结果如下：

```

pi@raspberrypi-wt ~ $ ping fm.zju.edu.cn
PING fm.zju.edu.cn (10.214.0.99) 56(84) bytes of data.
64 bytes from 10.214.0.99: icmp_req=1 ttl=60 time=1.81 ms
64 bytes from 10.214.0.99: icmp_req=2 ttl=60 time=2.12 ms
64 bytes from 10.214.0.99: icmp_req=3 ttl=60 time=2.15 ms
64 bytes from 10.214.0.99: icmp_req=4 ttl=60 time=2.04 ms
^C64 bytes from 10.214.0.99: icmp_req=5 ttl=60 time=1.65 ms

--- fm.zju.edu.cn ping statistics ---
5 packets transmitted, 5 received, 0% packet loss, time 20035ms
rtt min/avg/max/mdev = 1.654/1.958/2.155/0.196 ms

```

ping 百度结果如下：

```

pi@raspberrypi-wt ~ $ ping www.baidu.com
PING www.a.shifen.com (115.239.211.112) 56(84) bytes of data.
64 bytes from 115.239.211.112: icmp_req=1 ttl=54 time=6.02 ms
64 bytes from 115.239.211.112: icmp_req=2 ttl=54 time=5.73 ms
64 bytes from 115.239.211.112: icmp_req=3 ttl=54 time=5.68 ms
64 bytes from 115.239.211.112: icmp_req=4 ttl=54 time=6.75 ms
64 bytes from 115.239.211.112: icmp_req=6 ttl=54 time=7.10 ms
64 bytes from 115.239.211.112: icmp_req=7 ttl=54 time=5.32 ms
64 bytes from 115.239.211.112: icmp_req=8 ttl=54 time=6.05 ms
64 bytes from 115.239.211.112: icmp_req=9 ttl=54 time=5.40 ms
64 bytes from 115.239.211.112: icmp_req=10 ttl=54 time=6.30 ms
^C64 bytes from 115.239.211.112: icmp_req=11 ttl=54 time=5.92 ms

--- www.a.shifen.com ping statistics ---
11 packets transmitted, 10 received, 9% packet loss, time 56160ms
rtt min/avg/max/mdev = 5.323/6.031/7.105/0.536 ms

```

至此，浙大VPN的连接已经全部完成；