

Lab 14: 花生壳客户端

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实验目的

1. 了解花生壳客户端的概念及其基本实现方法
2. 掌握Acadia或RPI或WRTnode上建立花生壳客户端的方式

实验器材

硬件

- pcDuino LinkSprite Acadia主板
- 5V/1A电源一个
- microUSB线一根
- 网线一根
- MAC OS X

软件

- PC上的SSH软件

实验步骤

1. 在花生壳的官网上了解到花生壳的主要功能是实现域名的动态绑定，可以将路由器上的网站发布到公网上，由于路由器每次得到的是一个动态的IP，就需要使用花生壳的功能。花生壳的实现原理其实是DDNS，Dynamic Domain Name Server是动态域名服务的缩写。它的实现方法是将用户的动态IP地址映射到固定的域名解析服务器，用户每次连接网络的时候客户端程序就会通过信息传递把该主机的动态IP地址传送给位于服务商主机上的服务器程序，服务器程序负责提供DNS服务并实现动态域名解析，从而实现动态域名绑定的功能。
2. 在Acadia上安装花生壳客户端

将Acadia的网线与路由器连接，成功连接以太网

下载花生壳客户端

```
wget http://download.oray.com/peanuthull/phddns-2.0.2.16556.tar.gz
```

解压花生壳客户端

```
tar zxvf phddns-2.0.2.16556.tar.gz
```

编译安装

```
aclocal
```

 此时出现问题setting locale failed 查资料后，使用locale gen命令解决了此处not support问题

```
root@Acadia:~/phddns-2.0.2.16556# automake
perl: warning: Setting locale failed.
perl: warning: Please check that your locale settings:
    LANGUAGE = "en_US:en",
    LC_ALL = "en_US.UTF-8",
    LC_CTYPE = "UTF-8",
    LANG = "C.UTF-8"
are supported and installed on your system.
perl: warning: Falling back to the standard locale ("C").
perl: warning: Setting locale failed.
perl: warning: Please check that your locale settings:
    LANGUAGE = "en_US:en",
    LC_ALL = "en_US.UTF-8",
    LC_CTYPE = "UTF-8",
    LANG = "C.UTF-8"
are supported and installed on your system.
perl: warning: Falling back to the standard locale ("C").
root@Acadia:~/phddns-2.0.2.16556# sudo locale-gen en_US.UTF-8
/bin/bash: warning: setlocale: LC_ALL: cannot change locale (en_US.UTF-8)
Generating locales...
  en_US.UTF-8... /usr/sbin/locale-gen: line 177: warning: setlocale: LC_ALL: can
not change locale (en_US.UTF-8)
done
```

autoconf

automake

./configure

```
root@Acadia:~/phddns-2.0.2.16556# aclocal
root@Acadia:~/phddns-2.0.2.16556# automake
root@Acadia:~/phddns-2.0.2.16556# ./configure
checking for a BSD-compatible install... /usr/bin/install -c
checking whether build environment is sane... yes
/root/phddns-2.0.2.16556/missing: Unknown `--run' option
Try `./root/phddns-2.0.2.16556/missing --help' for more information
configure: WARNING: `missing' script is too old or missing
checking for a thread-safe mkdir -p... /bin/mkdir -p
checking for gawk... no
checking for mawk... mawk
checking whether make sets $(MAKE)... yes
checking for g++... g++
checking whether the C++ compiler works... yes
checking for C++ compiler default output file name... a.out
checking for suffix of executables...
checking whether we are cross compiling... no
checking for suffix of object files... o
```

make (忘记截图了，这里补一张已经make成功后再次make的图，显示所有文件都已编译)

```

root@Acadia:~/phddns-2.0.2.16556# make
Making all in src
make[1]: Entering directory `/root/phddns-2.0.2.16556/src'
make[1]: Nothing to be done for `all'.
make[1]: Leaving directory `/root/phddns-2.0.2.16556/src'
make[1]: Entering directory `/root/phddns-2.0.2.16556'
make[1]: Nothing to be done for `all-am'.
make[1]: Leaving directory `/root/phddns-2.0.2.16556'

```

3. 配置和启动花生壳客户端phddns

在src文件夹中输入./phddns进行初次配置，全部使用默认配置后，如下图所示，花生壳客户端启动完毕

```

root@Acadia:~/phddns-2.0.2.16556/src# ./phddns
Enter server address(press ENTER use phlinux3.oray.net):
Enter your Oray account:BranZhu
Password:
Network interface(s):
[eth0] = [IP:192.168.1.17][MAC:7eae2922:7eae2923:7eae2924:7eae2925:7eae2926:7eae2927]
[lo] = [IP:127.0.0.1][MAC:7eae2902:7eae2903:7eae2904:7eae2905:7eae2906:7eae2907]
Choose one(default eth0):
Log to use(default /var/log/phddns.log):
/var/log/phddns.log
Save to configuration file (/etc/phlinux.conf)?(yes/no/other):
Save to configuration file (/etc/phlinux.conf)?(yes/no/other):yes
192.168.1.17
NIC bind success
defOnStatusChanged okConnecting
defOnStatusChanged okRedirecting
defOnStatusChanged okConnecting
defOnStatusChanged okDomainListed
defOnDomainRegistered branzhu.oicp.net
defOnDomainRegistered branzhu.wicp.net
defOnUserInfo <userInfo account='BranZhu' login='BranZhu'><ID>13141821</ID><Account>BranZhu</Account><Password></Password><Email>544524199@qq.com</Email><RegDate>1428548574</RegDate><Credit>0.0</Credit><Largess>0.0</Largess><IsEnable></IsEnable><IsEnterprise>0</IsEnterprise><Contactor>诸祺</Contactor><IsMale>1</IsMale>

```

后台运行花生壳客户端(默认读取/etc/phlinux.conf配置文件) `./phddns -d`

```

root@Acadia:~/phddns-2.0.2.16556/src# ./phddns -d
192.168.1.17
NIC bind success
phddns started as daemon!

```

使用 `tail /var/log/phddns.log` 查看运行情况

```

root@Acadia:~/phddns-2.0.2.16556/src# tail /var/log/phddns.log
<domainInfo account='BranZhu' login='BranZhu'><domains><domain><DomainName>branzhu.oicp.net</DomainName><RegDate>1428548580</RegDate><Account>BranZhu</Account><StatusCode>1689</StatusCode><RootName>oicp.net</RootName><IsFree>1</IsFree></domain><domain><DomainName>branzhu.wicp.net</DomainName><RegDate>1428553445</RegDate><Account>BranZhu</Account><StatusCode>1689</StatusCode><RootName>wicp.net</RootName><IsFree>1</IsFree></domain></domains></domainInfo>
Thu Apr 9 20:42:15 2015| SEND QUIT COMMAND...Thu Apr 9 20:42:15 2015| OK.
Thu Apr 9 20:42:15 2015| 221 Good bye
Thu Apr 9 20:42:15 2015| ExecuteUpdate OK, BeginKeepAlive!
Thu Apr 9 20:43:16 2015| SendKeepAlive() 8208
Thu Apr 9 20:43:17 2015| RecvKeepaliveResponse() Data comes, OPCODE:8272
Thu Apr 9 20:43:17 2015| Keepalive response received, client ip: 183.157.160.40
Thu Apr 9 20:44:17 2015| SendKeepAlive() 8208
Thu Apr 9 20:44:18 2015| RecvKeepaliveResponse() Data comes, OPCODE:8272
Thu Apr 9 20:44:18 2015| Keepalive response received, client ip: 183.157.160.40

```

通过 `phddns -h` 查看各个命令参数的具体含义

```

root@Acadia:~/phddns-2.0.2.16556/src# ./phddns -h
Peanuthull Linux-core 2.0 by oray.com, copyright 2011
Peanuthull Linux-core Help
--first-run
  -f, run for the first time
--interact
  -i, run as interactive mode
  program will request for necessary parameters.
  this mode will automatically enabled at first running,
  or your configuration file has been lost.
--daemon
  -d, run as a daemon
  program will quit after put itself to background,
  and continue running even you logout,
  you can use kill -9 <PID> to terminate.
--config
  -c, run with configuration file
  program will run with the file
--user
  -u, run as the user
  program will run as the user
--help
  -h, print this screen.
Please visit http://www.oray.com for detail.
root@Acadia:~/phddns-2.0.2.16556/src#

```