

任务 14：花生壳客户端

课程名称： 嵌入式 实验类型： 综合

实验项目名称： 任务 14：花生壳客户端

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实验地点： 寝室 实验日期： 2015 年 3 月 27 日

花生壳客户端

在 Acadia 或 RPi 或 WRTnode 上实现一个花生壳（oray.com）的客户端，可以实现 3322.org 等免费域名的指向

实现目的

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

- Acadia 或 RPi 或 WRTnode 板一块；
- 5V/1A 电源一个；
- microUSB 线一根；
- USB-TTL 串口线一根（FT232RL 芯片或 PL2303 芯片）。
- PC（Windows/Mac OS/Linux）一台；
- 以太网线一根（可能还需要路由器等）。

软件

- PC 上的 USB-TTL 串口线配套的驱动程序；
- PC 上的串口终端软件，如 minicom、picocom、putty 等；

- PC 上的 SSH 软件，如 putty 等。

实验步骤

1、安装必要的开发包

apt-get install gcc g++ autoconf automake

2、下载 phddns-2.0.2.16556.tar.gz 到某一个目录

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

```
root@Acadia:/home/lwy/刘婉颐# wget http://download.oray.com/peanuthull/phddns-2.0.2.16556.tar.gz
--2015-03-27 16:29:03-- http://download.oray.com/peanuthull/phddns-2.0.2.16556.tar.gz
Resolving download.oray.com (download.oray.com)... 61.152.96.115
Connecting to download.oray.com (download.oray.com)|61.152.96.115|:80... connected.
HTTP request sent, awaiting response... 200 OK
Length: 104718 (102K) [application/octet-stream]
Saving to: `phddns-2.0.2.16556.tar.gz'

100%[=====>] 104,718      67.3K/s   in 1.5s

2015-03-27 16:29:04 (67.3 KB/s) - `phddns-2.0.2.16556.tar.gz' saved [104718/104718]

root@Acadia:/home/lwy/刘婉颐#
```

3、解压所有文件

tar zxvf phddns-2.0.2.16556.tar.gz

```
root@Acadia:/home/lwy/刘婉颐# tar zxvf phddns-2.0.2.16556.tar.gz
phddns-2.0.2.16556/
phddns-2.0.2.16556/Makefile.in
phddns-2.0.2.16556/NEWS
phddns-2.0.2.16556/AUTHORS
phddns-2.0.2.16556/src/
phddns-2.0.2.16556/src/Makefile.in
phddns-2.0.2.16556/src/phglobal.h
phddns-2.0.2.16556/src/md5.c
phddns-2.0.2.16556/src/phsocket.h
```

4、进入目录并编译

cd phddns-2.0.2.16556

aclocal

```
root@Acadia:/home/lwy/刘婉颐# cd phddns-2.0.2.16556
root@Acadia:/home/lwy/刘婉颐/phddns-2.0.2.16556# aclocal
```

autoconf

automake

```
root@Acadia:/home/lwy/刘婉颐/phddns-2.0.2.16556# autoconf
root@Acadia:/home/lwy/刘婉颐/phddns-2.0.2.16556# automake
```

./configure

```
root@Acadia:/home/lwy/刘婉颐/phddns-2.0.2.16556# ./configure
checking for a BSD-compatible install... /usr/bin/install -c
checking whether build environment is sane... yes
/home/lwy/刘婉颐/phddns-2.0.2.16556/missing: Unknown '--run' option
Try `/home/lwy/刘婉颐/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
```

make

```
root@Acadia:/home/lwy/刘婉颐/phddns-2.0.2.16556# make
Making all in src
make[1]: Entering directory `/home/lwy/刘婉颐/phddns-2.0.2.16556/src'
gcc -DPACKAGE_NAME=\"FULL-PACKAGE-NAME\" -DPACKAGE_TARNAME=\"full-package-name\"
-DPACKAGE_VERSION=\"VERSION\" -DPACKAGE_STRING=\"FULL-PACKAGE-NAME VERSION\" -
DPACKAGE_BUGREPORT=\"BUG-REPORT-ADDRESS\" -DPACKAGE_URL=\"\" -DPACKAGE=\"phddns\
```

cd src

ls -l phddns

```
root@Acadia:/home/lwy/刘婉颐/phddns-2.0.2.16556# cd src
root@Acadia:/home/lwy/刘婉颐/phddns-2.0.2.16556/src# ls -l phddns
-rwxr-xr-x 1 root root 30834 Mar 27 16:32 phddns
```

5、执行编译好的程序并配置（默认使用/etc/phlinux.conf，如果不存在这个文件则自动进入交互配置）

./phddns

```

root@Acadia:/home/lwy/刘婉颐/phddns-2.0.2.16556/src# ./phddns
Enter server address (press ENTER use phlinux3.oray.net):
Enter your Oray account:Ganjingdedamao
Password:
Network interface(s):
[eth0] = [IP:192.168.137.150] [MAC:7ec59412:7ec59413:7ec59414:7ec59415:7ec59416:7ec59417]
[lo] = [IP:127.0.0.1] [MAC:7ec593f2:7ec593f3:7ec593f4:7ec593f5:7ec593f6:7ec593f7]
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): yes
192.168.137.150
NIC bind success
defOnStatusChanged okConnecting
defOnStatusChanged okRedirecting
defOnStatusChanged okConnecting
defOnStatusChanged okDomainListed
defOnDomainRegistered ganjingdedamao.vicp.cc
defOnUserInfo <userInfo account='Ganjingdedamao' login='Ganjingdedamao'><ID>13073922</ID><Account>Ganjingdedamao</Account><Password></Password><Email>1696099543@qq.com</Email><RegDate>1427201191</RegDate><Credit>0.0</Credit><Largess>0.0</Largess><IsEnable></IsEnable><IsEnterprise>0</IsEnterprise><IsMale>1</IsMale><AccountUserType>1</AccountUserType><RegDate>1427201191</RegDate><ProExpireDate>0</ProExpireDate><ServiceType>0</ServiceType><ClientIP>950050231</ClientIP></userInfo>
defOnAccountDomainInfo <domainInfo account='Ganjingdedamao' login='Ganjingdedamao'><domains><domain><DomainName>ganjingdedamao.vicp.cc</DomainName><RegDate>1427201197</RegDate><Account>Ganjingdedamao</Account><StatusCode>665</StatusCode><RootName>vicp.cc</RootName><IsFree>1</IsFree></domain></domains><domainInfo>
defOnStatusChanged okDomainsRegistered, UserType: 0
^Csignal = SIGINT
root@Acadia:/home/lwy/刘婉颐/phddns-2.0.2.16556/src#

```

登陆成功，ctrl+c 退出。

6、将 phddns 拷贝到/usr/bin

```
cp phddns /usr/bin/
```

```
root@Acadia:/home/lwy/刘婉颐/phddns-2.0.2.16556/src# cp phddns /usr/bin/
```

7、以后台模式启动花生壳并检查运行情况

```
/usr/bin/phddns -c /etc/phlinux.conf -d
```

```

root@Acadia:/home/lwy/刘婉颐/phddns-2.0.2.16556/src# /usr/bin/phddns -c /etc/phlinux.conf -d
192.168.137.150
NIC bind success
phddns started as daemon!

```

tail /var/log/phddns.log: 查看运行情况

```

root@Acadia:/home/lwy/刘婉颐/phddns-2.0.2.16556/src# tail /var/log/phddns.log
Fri Mar 27 16:42:00 2015| ExecuteUpdate 250 Register successfully
Fri Mar 27 16:42:00 2015| 250 13073922 151462906
Fri Mar 27 16:42:00 2015| ExecuteUpdate nChatID:13073922, nStartID:151462906
Fri Mar 27 16:42:00 2015| userinfo:
<userInfo account='Ganjingdedamao' login='Ganjingdedamao'><ID>13073922</ID><A
unt>Ganjingdedamao</Account><Password></Password><Email>1696099543@qq.com</En
><RegDate>1427201191</RegDate><Credit>0.0</Credit><Largess>0.0</Largess><IsEr
e></IsEnable><IsEnterprise>0</IsEnterprise><IsMale>1</IsMale><AccountUserType
/AccountUserType><RegDate>1427201191</RegDate><ProExpireDate>0</ProExpireDate
erviceType>0</ServiceType><ClientIP>950050231</ClientIP></userInfo>
Fri Mar 27 16:42:00 2015| domaininfo:
<domainInfo account='Ganjingdedamao' login='Ganjingdedamao'><domains><domain>
mainName>ganjingdedamao.vicp.cc</DomainName><RegDate>1427201197</RegDate><Acco
t>Ganjingdedamao</Account><StatusCode>665</StatusCode><RootName>vicp.cc</Root
e><IsFree>1</IsFree></domain></domains></domainInfo>
Fri Mar 27 16:42:00 2015| SEND QUIT COMMAND...Fri Mar 27 16:42:00 2015| OK.
Fri Mar 27 16:42:01 2015| 221 Good bye
Fri Mar 27 16:42:01 2015| ExecuteUpdate OK, BeginKeepAlive!
root@Acadia:/home/lwy/刘婉颐/phddns-2.0.2.16556/src#

```

8、退出花生壳

查看进程 ID

ps -A | grep phddns

```

root@Acadia:/home/lwy/刘婉颐/phddns-2.0.2.16556/src# ps -A|grep phddns
8849 ?        00:00:00 phddns

```

让后台进程退出

```

root@Acadia:/home/lwy/刘婉颐/phddns-2.0.2.16556/src# kill -9 8849
root@Acadia:/home/lwy/刘婉颐/phddns-2.0.2.16556/src#

```

9、从外网登录 pcDuino（补）

后台运行花生壳，打开 httpd:

```

root@Acadia:~# /etc/init.d/apache2 start
* Starting web server apache2
apache2: Could not reliably determine the server's fully qualified domain name,
using 127.0.1.1 for ServerName
httpd (pid 4389) already running

[ OK ]

```

在 PC 浏览器输入域名，可以登录到 pcDuino 的主机:



It works!

This is the default web page for this server.

The web server software is running but no content has been added, yet.