Lab 10: FTP Server

Objective:

To help students understand how FTP works and setup a FTP Server.

[1] Installation: on www

[root@www /root]# **yum -y install vsftpd**

[2] FTP Configuration:

[root@www /root]# vi /etc/vsftpd/vsftpd.conf

- **Check following entries form /etc/vsftpd/vsftpd.conf**

anonymous_enable=YES
local_enable=YES
wrie_enable=YES
local_umask=022
dirmessgae_enable=YES
xferlog_enable=YES
connect_from_port_20=YES
xferlog_std_format=YES
ftpd_banner=Welcome to ftp.coyote365.net
chroot_local_user=YES
chroot_list_enable=YES
chroot_list_file=/etc/vsftpd/chroot_list
ls_recurse_enable=YES
listen=YES
pam_service_name=vsftpd
userlist_enable=YES
tcp_wrappers=YES
banner_file=/etc/vsftpd/issue

- **Start FTP Service:**
  [root@www /root]# **service vsftpd start**

- **Register to start FTP Service on booting time:**
  [root@www /root]# **chkconfig vsftpd on**

[3] Firewall Configuration:

[root@www /root]# **vi /etc/sysconfig/iptables**
Add following rule on the file:

```
-A INPUT -m state -state NEW -p tcp -dport 21 -j ACCEPT
```

[root@www /root]# **vi /etc/sysconfig/iptables-config**

Change the line with `#IPTABLES_MODULES=""`
Change it to: `IPTABLES_MODULES="ip_conntrack_ftp"`

Restart the firewall:
[root@www /root]# **service iptables restart**

Check the current firewall rule:
[root@www /root]# **iptables -L**

[4] Check Open Ports:

[root@www /root]# **yum -y install nmap**

[root@www /root]# **nmap localhost**
If you see, **"21/tcp open ftp"** you are good to go.

[5] Create Downloadable directories and files:

[root@www /root]# **cd /var/ftp/pub**

[root@www /root]# **mkdir cse360 cse365 cse366**

[root@www /root]# **ls -l;tree**

[root@www /root]# **for i in $(seq 1 10);do touch cse365/lab$i.txt;done**
[root@www /root]# **for i in $(seq 1 10);do touch cse365/hw$i.txt;done**
[root@www /root]# **echo "This is a test file" >> /var/ftp/pub/cse365/lab10.txt**

[6] Add ftp.coyote365.net (192.168.1.4) as canonical name on your DNS server.

[7] Test FTP server:

1. Test from ns.coyote365.net:

```
[root@ns /root]# ftp ftp.coyote365.net
Name (ftp.coyote365.net:root): anonymous
331 Please specify the password.
Password: anonymous
ftp> ls
ftp> cs pub
ftp> ls
ftp> cd cse365
ftp> ls
ftp> get lab10.txt
ftp> quit

[root@ns /root]# ls -l lab10.txt
[root@ns /root]# cat lab10.txt

[root@ns /root]# echo "Hello world!" >> lab10.txt
[root@ns /root]# cat lab10.txt
```

Anonymous download:

```
[root@ns /root]# ftp ftp.coyote365.net
Name (ftp.coyote365.net:root): anonymous
331 Please specify the password.
Password: anonymous
ftp> ls
ftp> cs pub/cse365
ftp> ls
ftp> put lab10.txt
550 Permission denied.
ftp> bye
```

Try to upload anonymously: will be failed

```
[root@ns /root]# ftp ftp.coyote365.net
Name (ftp.coyote365.net:root): anonymous
331 Please specify the password.
Password: anonymous
ftp> ls
ftp> cs pub/cse365
ftp> ls
ftp> put lab10.txt
550 Permission denied.
ftp> bye
```

Create an user ken on ftp.coyote365.net(192.168.1.4): www
[root@www /root]# user**add ken**
[root@www /root]# passwd **ken**

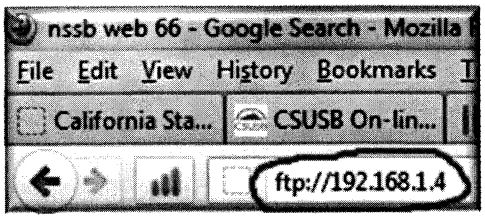
Change ownership of /var/ftp/pub/cse365 to ken:
[root@www /root]# **chown -R ken.ken /var/ftp/pub/cse365**
[root@www /root]# **ls -l /var/ftp/pub/cse365**

Back to ns.coyote365.net:
[root@ns /root]# **ftp ftp.coyote365.net**
Name (ftp.coyote365.net:root): **ken**
331 Please specify the password.
Password: **************
ftp> pwd
ftp> cs /var/ftp/pub/cse365
ftp> ls
ftp> put lab10.txt
226 File receive OK.
ftp> ls -l
ftp> by
(Note that size of file lab10.txt is changed)

Download multiple files:
[root@ns /root]# **ftp ftp.coyote365.net**
Name (ftp.coyote365.net:root): **anonymous**
331 Please specify the password.
Password: **anonymous**
ftp> ls
ftp> cs pub/cse365
ftp> ls
ftp> prompt
ftp> mget *.txt
ftp> quit

[root@ns /root]# **ls -l *.txt**

2. **From Windows XP machines, create ssh tunnel to connect 192.168.1.4 (ftp.coyote365.net) and use web browser to connect it.**



Lab 10: FTP Server Report

Name: _____ Team Member:_____

[1] What is purpose of FTP Server?

[2] Which port is used for ftp?

[3] What is passive mode?

[4] How to upload multiple files to ftp server? (Show step-by-step procedure)

[5] What was the difficult part of this lab?

[6] What did you learn from this lab?