Practical 7

Configuring FTP

Anonymous FTP server configuration

1) Check IP address of your machine on which ftp is to be deployed.

```
[root@localhost ~]# ifconfig
ens33: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
        inet 10.0.0.100  netmask 255.0.0.0  broadcast 10.255.255.255
        inet6 fe80::20c:29ff:feaf:d3cb  prefixlen 64  scopeid 0x20<link>
        ether 00:0c:29:af:d3:cb  txqueuelen 1000  (Ethernet)
        RX packets 6113  bytes 413059 (403.3 KiB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 125  bytes 18956 (18.5 KiB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0
```

2) Check for the vsftpd package for FTP, if not found install it.

```
[root@localhost ~]# rpm -q vsftpd
vsftpd-3.0.2-22.el7.x86_64
```

3) If installed create few files in pub. It is shown below.

```
[root@localhost ~]# cd /var/ftp
[root@localhost ftp]# ls
pub
[root@localhost ftp]# cd pub
[root@localhost pub]# touch file1
[root@localhost pub]# touch file2
```

4) Main configuration file of ftp is vsftpd.conf which is in /etc/vsftpd directory. Since it is preconfigured file, create a backup of it and open vsftpd.conf in vi editor and add following parameters.

```
[root@localhost pub]# cd /etc/vsftpd
[root@localhost vsftpd]# ls
ftpusers  user_list  vsftpd.conf  vsftpd_conf_migrate.sh
[root@localhost vsftpd]# mv vsftpd.conf vsftpd.conf.sample
[root@localhost vsftpd]# vi vsftpd.conf
```

```
listen=yes
write_enable=yes
anon_upload_enable=yes

~
~
```

Press **esc :wq** to save and exit from vi editor.

5) Restart the vsftpd service, check its status and disable firewall.

```
[root@localhost vsftpd]# systemctl restart vsftpd
[root@localhost vsftpd]# systemctl status vsftpd
● vsftpd.service - Vsftpd ftp daemon
   Loaded: loaded (/usr/lib/systemd/system/vsftpd.service; disabled; vendor preset: disabled)
   Active: active (running) since Mon 2024-09-16 09:54:04 IST; 13s ago
  Process: 10268 ExecStart=/usr/sbin/vsftpd /etc/vsftpd/vsftpd.conf (code=exited, status=0/SUCCESS)
 Main PID: 10271 (vsftpd)
   CGroup: /system.slice/vsftpd.service
           └─10271 /usr/sbin/vsftpd /etc/vsftpd/vsftpd.conf

Sep 16 09:54:04 localhost.localdomain systemd[1]: Starting Vsftpd ftp daemon...
Sep 16 09:54:04 localhost.localdomain systemd[1]: Started Vsftpd ftp daemon.
Hint: Some lines were ellipsized, use -l to show in full.
[root@localhost vsftpd]# systemctl stop firewalld
```

6) Disable SeLinux and give write permission to /var/ftp/pub directory.

#setenforce 0

```
[root@localhost vsftpd]# setenforce 0
[root@localhost vsftpd]# chmod 777 /var/ftp/pub
```

FTP Client Configuration

1) Check IP address of your client machine.

```
[root@localhost ~]# ifconfig
ens33: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
        inet 192.168.42.128  netmask 255.255.255.0  broadcast 192.168.42.255
        inet6 fe80::20c:29ff:fe06:60f7  prefixlen 64  scopeid 0x20<link>
        ether 00:0c:29:06:60:f7  txqueuelen 1000  (Ethernet)
        RX packets 1990  bytes 2032537 (1.9 MiB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 228  bytes 21895 (21.3 KiB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0
```

2) In client's machine if network is not configured, we need to configure it. Following should be the output after network configuration.

```
ens33: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
        inet 10.0.0.51  netmask 255.0.0.0  broadcast 10.255.255.255
        inet6 fe80::20c:29ff:fe06:60f7  prefixlen 64  scopeid 0x20<link>
        ether 00:0c:29:06:60:f7  txqueuelen 1000  (Ethernet)
        RX packets 2437  bytes 2060952 (1.9 MiB)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 272  bytes 27115 (26.4 KiB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0
```

3) On client machine we require ftp package. Check for it if not found install it using yum.

```
[root@localhost network-scripts]# rpm -q ftp
package ftp is not installed
```

```
[root@localhost network-scripts]# yum install ftp
Loaded plugins: langpacks, product-id, search-disabled-repos, subscription-
              : manager
This system is not registered with an entitlement server. You can use subscripti
on-manager to register.
Resolving Dependencies
--> Running transaction check
---> Package ftp.x86_64 0:0.17-67.el7 will be installed
--> Finished Dependency Resolution

Dependencies Resolved

================================================================================
 Package       Arch             Version                  Repository        Size
================================================================================
Installing:
 ftp           x86_64           0.17-67.el7              myrepo            61 k
```

```
[root@localhost ~]# rpm -q vsftpd
vsftpd-3.0.2-22.el7.x86_64
```

4) Login with anonymous user. Login with ftp 10.0.0.100 Type the username and password by default ftp takes login in its root directory. Change the directory to pub. Use ls command to list down files in the directory.

```
[root@localhost network-scripts]# ftp 10.0.0.100
Connected to 10.0.0.100 (10.0.0.100).
220 (vsFTPd 3.0.2)
Name (10.0.0.100:root): ftp
331 Please specify the password.
Password:
230 Login successful.
Remote system type is UNIX.
Using binary mode to transfer files.
ftp> cd pub
250 Directory successfully changed.
ftp> ls
227 Entering Passive Mode (10,0,0,100,131,37).
150 Here comes the directory listing.
-rw-r--r--    1 0        0               0 Sep 16 04:19 file1
-rw-r--r--    1 0        0               0 Sep 16 04:19 file2
226 Directory send OK.
```

5) Use get command to download files from server.

```
ftp> get file1
local: file1 remote: file1
227 Entering Passive Mode (10,0,0,100,226,190).
150 Opening BINARY mode data connection for file1 (0 bytes).
226 Transfer complete.
```

6) Use put command to upload files on the server.

```
ftp> put demo.txt
local: demo.txt remote: demo.txt
227 Entering Passive Mode (10,0,0,100,249,68).
150 Ok to send data.
226 Transfer complete.
```

In ftp, files get downloaded from /var/ftp/pub and files get uploaded in /var/ftp/pub.

7) To close a connection on ftp use ‘bye’ command. You will get reply from server as goodbye.

```
ftp> exit
221 Goodbye.
[root@localhost ~]#
```