

68. Configure and demonstrate the use of FTP and Telnet. (on CentOS/redhatcontainer)
Show the imp steps and file name of configurations. (on answer sheet)
Put the Pub folder available for access to all.
Telnet and FTP setup on Centos Container

Telnet configuration:

Run container:

`docker run --privileged -ti centos:centos6 bash` (MAKE SURE TO PULL centos:centos6 ONLY)

Inside container:

`cd /etc/yum.repos.d/`

`sed -i 's/mirrorlist/#mirrorlist/g' /etc/yum.repos.d/CentOS-*`

`sed -i 's|#baseurl=http://mirror.centos.org|baseurl=http://vault.centos.org|g' /etc/yum.repos.d/CentOS-*`

Install telnet packages: `yum install telnet telnet-server -y nano`

Install other useful packages: `yum install net-tools nano passwd -y`

Edit telnet config file: `nano /etc/xinetd.d/telnet`

The file will look like this:

default: on

description: The telnet server serves telnet sessions; it uses \n\nunencrypted username/password pairs for authentication.

service telnet

{

flags = REUSE

socket_type = stream

wait = no

user = root

server = /usr/sbin/in.telnetd

log_on_failure += USERID

disable = yes

}

By default it is disabled, so set disable = no

```
# default: on
# description: The telnet server serves telnet sessions; it uses \
#             unencrypted username/password pairs for authentication.
service telnet
{
    flags            = REUSE
    socket_type      = stream
    wait             = no
    user             = root
    server           = /usr/sbin/in.telnetd
    log_on_failure   += USERID
    disable          = no
}
```

Add a new user:

`useradd newuser`

`passwd newuser`

Set any password

```
[root@3b0024587ef9 /]# useradd test
[root@3b0024587ef9 /]# passwd test
Changing password for user test.
New password:
BAD PASSWORD: it is too short
BAD PASSWORD: is too simple
Retype new password:
passwd: all authentication tokens updated successfully.
```

Restart service: `service xinetd restart`

To view IP of server (centos container), use command: `ifconfig`

The IP will be something like 172.17.0.x.

From another machine, in command prompt, type `telnet <ip of server>`

```
aaditya@g14:~$ telnet 172.17.0.2
Trying 172.17.0.2...
Connected to 172.17.0.2.
Escape character is '^]'.
CentOS release 6.10 (Final)
Kernel 6.8.0-48-generic on an x86_64
3b0024587ef9 login: test
Password:
[test@3b0024587ef9 ~]$ ls
[test@3b0024587ef9 ~]$
```

FTP

`docker run --privileged -ti centos:centos6 bash`

Inside container:

`cd /etc/yum.repos.d/`

`sed -i 's/mirrorlist/#mirrorlist/g' /etc/yum.repos.d/CentOS-*`

`sed -i 's|#baseurl=http://mirror.centos.org|baseurl=http://vault.centos.org|g' /etc/yum.repos.d/CentOS-*`

Install vsftpd: `yum install vsftpd -y`

Install other useful packages: `yum install net-tools passwd nano -y`

Start vsftpd service: `service vsftpd start`

Edit config file: `nano /etc/vsftpd/vsftpd.conf`

In vsftpd.conf file, make following changes:

`anonymous_enable=NO`

`local_enable=YES`

`write_enable=YES`

chroot_local_user=YES

userlist_enable=YES

userlist_file=/etc/vsftpd/user_list

userlist_deny=NO

```
# Allow anonymous FTP? (Beware - allowed by default if you comment this out).
anonymous_enable=YES
#
# Uncomment this to allow local users to log in.
local_enable=YES
#
# Uncomment this to enable any form of FTP write command.
write_enable=YES
#
# Default umask for local users is 077. You may wish to change this to 022,
# if your users expect that (022 is used by most other ftpd's)
local_umask=022
#
```

Add new user for ftp access, execute below commands:

useradd testuser

passwd testuser

Set any password of your choice then confirm password

```
[root@3b0024587ef9 /]# useradd testuser
[root@3b0024587ef9 /]# passwd testuse
passwd: Unknown user name 'testuse'.
[root@3b0024587ef9 /]# passwd testuser
Changing password for user testuser.
New password:
BAD PASSWORD: it does not contain enough DIFFERENT characters
BAD PASSWORD: is too simple
Retype new password:
Sorry, passwords do not match.
New password:
BAD PASSWORD: it is based on a dictionary word
Retype new password:
passwd: all authentication tokens updated successfully.
[root@3b0024587ef9 /]#
```

Now open (or create) `/etc/vsftpd/user_list` and add your newly created user on a new line.

testuser

```
# vsftpd userlist
# If userlist_deny=NO, only allow users in this file
# If userlist_deny=YES (default), never allow users in this file, and
# do not even prompt for a password.
# Note that the default vsftpd pam config also checks /etc/vsftpd/ftpusers
# for users that are denied.
root
bin
daemon
adm
lp
sync
shutdown
halt
mail
news
uucp
operator
games
nobody
# ADD NEW USER ON SEPARATE LINE
test
```

Run below commands:

```
mkdir -p /home/testuser/ftp/upload
chmod 550 /home/testuser/ftp
chmod 750 /home/testuser/ftp/upload
chown -R testuser: /home/testuser/ftp
```

Also add some files in `home/testuser/ftp/upload` directory for sharing.

```
[root@3b0024587ef9 /]# mkdir -p /home/testuser/ftp/upload
[root@3b0024587ef9 /]# chmod 550 /home/testuser/ftp
[root@3b0024587ef9 /]# chmod 750 /home/testuser/ftp/upload/
[root@3b0024587ef9 /]# chown -R testuser: /home/testuser/ftp
[root@3b0024587ef9 /]# service vsftpd restart
Shutting down vsftpd: [FAILED]
Starting vsftpd for vsftpd: [ OK ]
[root@3b0024587ef9 /]# cd /home/testuser/ftp/upload
[root@3b0024587ef9 upload]# touch hello
[root@3b0024587ef9 upload]# vi hello
[root@3b0024587ef9 upload]# ls
hello
[root@3b0024587ef9 upload]#
```

Restart vsftpd service: `service vsftpd restart`

Now, from another machine, open command prompt and type:

`ftp <ip address of FTP server>`

To know IP address of FTP server (container), open command prompt in container and type:
`ifconfig | grep inet`

It will be something like 172.17.0.2. Use this IP address.

```
aaditya@g14:~$ ftp 172.17.0.2
Connected to 172.17.0.2.
220 (vsFTPd 2.2.2)
Name (172.17.0.2:aaditya): testuser
331 Please specify the password.
Password:
230 Login successful.
Remote system type is UNIX.
Using binary mode to transfer files.
ftp> ls
229 Entering Extended Passive Mode (|||20606|).
150 Here comes the directory listing.
dr-xr-x---  3 501      501          4096 Nov 09 07:26 ftp
226 Directory send OK.
ftp> 
```

Once connected, enter login and password of the 'testuser' created earlier.

Navigate to upload folder: `cd ftp/upload`

To download a file from FTP server, use command `get <filename>`

```
ftp> cd ftp/upload
250 Directory successfully changed.
ftp> ls
229 Entering Extended Passive Mode (|||40523|).
150 Here comes the directory listing.
-rw-r--r--  1 0      0              12 Nov 09 07:27 hello
226 Directory send OK.
ftp> get hello
local: hello remote: hello
229 Entering Extended Passive Mode (|||22734|).
150 Opening BINARY mode data connection for hello (12 bytes).
100% |*****| 12      92.27 KiB/s    00:00 ETA
226 Transfer complete.
12 bytes received in 00:00 (20.70 KiB/s)
ftp> 
```

That file will be downloaded in the terminal's default directory e.g. /home/it/

For more information, refer these articles:

<https://www.ucartz.com/clients/knowledgebase/1395/How-to-install-and-configure-telnet-CentOS-or-RHEL-7.html>

<https://phoenixnap.com/kb/how-to-setup-ftp-server-install-vsftpd-centos-7>