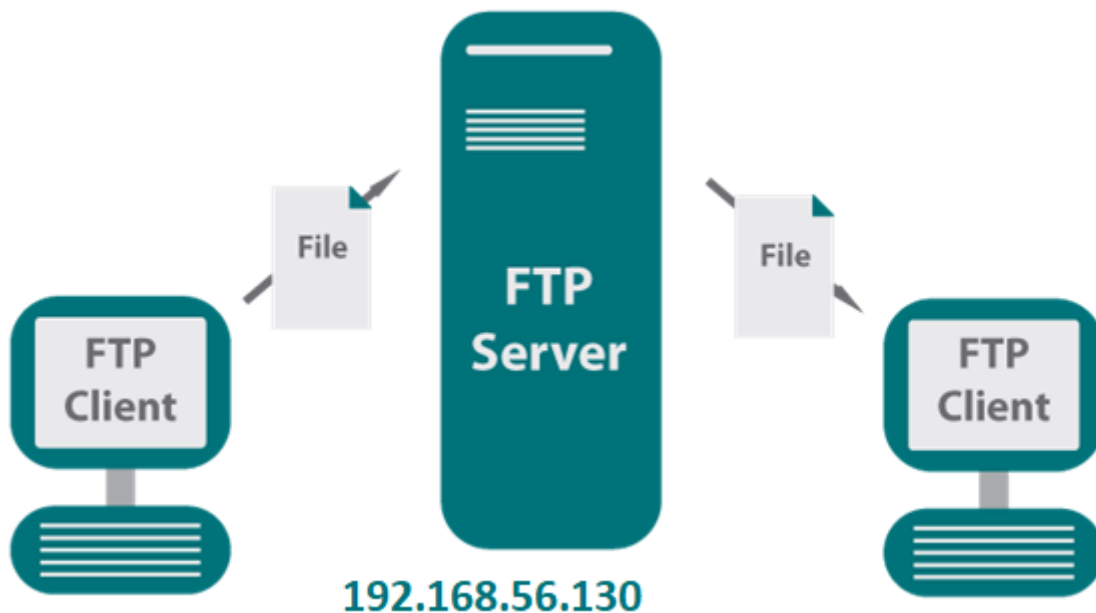01-30-2021
https://youtu.be/cEL7MmeOSic

02-13-2021
https://youtu.be/4LTNixANuoU

VSFTP – Very Secure File Tranfer Protocol

Directory:
Config file: /etc/vsftpd/user_list, /etc/vsftpd/vsdtpd.conf,
Port #: 20, 21, 30000- 31000,
Package: vsftpd, openssl
Services: vsftpd, firewalld
Protocol: tcp, udp
Command: yum, systemctl, lvm, openssl, firewall-cmd, selinux,
URL:

Rhel 8

Installed the package

[root@vsftp01 ~]# yum install vsftpd

Start vsftpd

```
[root@rhel08 ~]# systemctl start vsftpd
[root@rhel08 ~]# systemctl enable vsftpd
Created symlink /etc/systemd/system/multi-user.target.wants/vsftpd.service →
/usr/lib/systemd/system/vsftpd.service.
```

```
[root@rhel08 ~]# systemctl status vsftpd
● vsftpd.service - Vsftpd ftp daemon
   Loaded: loaded (/usr/lib/systemd/system/vsftpd.se>
   Active: active (running) since Sat 2021-02-13 14:>
 Main PID: 25275 (vsftpd)
    Tasks: 1 (limit: 11251)
   Memory: 576.0K
   CGroup: /system.slice/vsftpd.service
       └─25275 /usr/sbin/vsftpd /etc/vsftpd/vsft>

Feb 13 14:33:07 rhel08.zmpt.com systemd[1]: Starting>
Feb 13 14:33:07 rhel08.zmpt.com systemd[1]: Started >
```

Create the user for FTP

```
[root@rhel08 ~]# id zafar
uid=1000(zafar) gid=1000(zafar) groups=1000(zafar)
```

Create LVM for ftp users

```
[root@rhel08 ~]# pvcreate /dev/sdb
  Physical volume "/dev/sdb" successfully created.
[root@rhel08 ~]# vgcreate FTP_Volume /dev/sdb
  Volume group "FTP_Volume" successfully created
[root@rhel08 ~]# lvcreate -n FTP-DATA -L 10G FTP_Volume
  Logical volume "FTP-DATA" created.

[root@rhel08 ~]# mkdir /FTP-USER-DATA

[root@rhel08 ~]# mkfs.xfs /dev/FTP_Volume/FTP-DATA

[root@rhel08 ~]# mount /dev/FTP_Volume/FTP-DATA /FTP-USER-DATA

[root@rhel08 ~]# df –h
```

/dev/mapper/FTP_Volume-FTP--DATA 10G 104M 9.9G 2% /FTP-USER-DATA

[root@rhel08 ~]# vi /etc/fstab

[root@rhel08 ~]# /dev/mapper/FTP_Volume-FTP--DATA   /FTP-USER-DATA   xfs   defaults   0 0

Set the permissions and ownership

[root@rhel08 ~]# ls -ld /FTP-USER-DATA/
drwxr-xr-x. 2 root root 6 Feb 13 14:42 /FTP-USER-DATA/
[root@rhel08 ~]# chmod -R 750 /FTP-USER-DATA/
[root@rhel08 ~]# ls -ld /FTP-USER-DATA/
drwxr-x---. 2 root root 6 Feb 13 14:42 /FTP-USER-DATA/
[root@rhel08 ~]# chown -R zafar: /FTP-USER-DATA
[root@rhel08 ~]# ls -ld /FTP-USER-DATA
drwxr-x---. 2 zafar zafar 6 Feb 13 14:42 /FTP-USER-DATA

Change FTP user default directory

[root@rhel08 ~]# vi /etc/passwd
zafar:x:1000:1000:zafar:/FTP-USER-DATA:/bin/bash

[zafar@rhel08 ~]$ pwd
/FTP-USER-DATA

Add user to allow list

[root@rhel08 ~]# vi /etc/vsftpd/user_list

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
zafar

Create the .pem key – encryption keys

[root@rhel08 ~]# openssl req -x509 -nodes -days 99999 -newkey rsa:2048 -keyout /etc/vsftpd.pem -out /etc/vsftpd/vsftpd.pem
Generating a RSA private key
....+++++
.......................+++++
writing new private key to '/etc/vsftpd.pem'

You are about to be asked to enter information that will be incorporated
into your certificate request.
What you are about to enter is what is called a Distinguished Name or a DN.
There are quite a few fields but you can leave some blank
For some fields there will be a default value,
If you enter '.', the field will be left blank.

Country Name (2 letter code) [XX]:US
State or Province Name (full name) []:IL
Locality Name (eg, city) [Default City]:SKOKIE
Organization Name (eg, company) [Default Company Ltd]:ZMPT
Organizational Unit Name (eg, section) []:IT
Common Name (eg, your name or your server's hostname) []:FTP-SERVER
Email Address []:linux@zmprotech.com

Open firewall for the ports

Port 20 – to allow FTP traffic
Port 21 – to allow DATA transfer

Port 30000 – 31000 – vairable port that is used ramdomly each time

[root@rhel08 ~]# firewall-cmd --permanent --add-port=20-21/tcp
success
[root@rhel08 ~]# firewall-cmd --permanent --add-port=30000-31000/tcp

success
[root@rhel08 ~]# firewall-cmd --reload
success
[root@rhel08 ~]# firewall-cmd --list-port
20-21/tcp 30000-31000/tcp

Enable through SELinux

[root@FTP-SERVER ~]# setsebool -P allow_ftpd_full_access on

Configure VSFTPD config file – add or edit as needed - /etc/vsftpd/vsdtpd.conf

anonymous_enable=NO
local_enable=YES

write_enable=YES

chroot_local_user=YES

listen_ipv6=YES

pam_service_name=vsftpd
userlist_enable=YES
userlist_file=/etc/vsftpd/user_list
userlist_deny=NO

allow_writeable_chroot=YES

pasv_min_port=30000
pasv_max_port=31000

rsa_cert_file=/etc/vsftpd/vsftpd.pem
rsa_private_key_file=/etc/vsftpd.pem
ssl_enable=YES

[root@rhel08 ~]# systemctl status vsftpd
● vsftpd.service - Vsftpd ftp daemon
  Loaded: loaded (/usr/lib/systemd/system/vsftpd.service; enabled; vendor >
  Active: active (running) since Sat 2021-02-13 15:26:39 EST; 13s ago
 Process: 32347 ExecStart=/usr/sbin/vsftpd /etc/vsftpd/vsftpd.conf (code=e>
 Main PID: 32348 (vsftpd)

Tasks: 1 (limit: 11251)
Memory: 780.0K
CGroup: /system.slice/vsftpd.service
└─32348 /usr/sbin/vsftpd /etc/vsftpd/vsftpd.conf

Feb 13 15:26:39 rhel08.zmpt.com systemd[1]: Starting Vsftpd ftp daemon...
Feb 13 15:26:39 rhel08.zmpt.com systemd[1]: Started Vsftpd ftp daemon.

Connect using File-Zilla

[root@FTP-SERVER FTP-USER-DATA]# pwd

```
/FTP-USER-DATA
[root@FTP-SERVER FTP-USER-DATA]# ls
'New Microsoft Access Database.accdb'
'New Microsoft Excel Worksheet (2).xlsx'
'New Microsoft Excel Worksheet.xlsx'
'New Microsoft Word Document.docx'
```