

Workshop 8 – File transfer protocol (FTP)

Part 1: Installation:

Step 1: Install the vsftpd package via yum command:
`# yum install vsftpd`

Step 2: Start the service
`# service vsftpd start`

Step 3: Permanent the service
`# chkconfig vsftpd on`
`# netstat -ant | grep 21`

Step 4: Check the service
`# chkconfig --list`
`# chkconfig --list vsftpd`

Part 2: Configure Vsftpd

Step 1: Explore users that are not allowed to login via ftp
`# cd /etc/vsftpd`
`# cat ftpusers`

Step 2: Configure Vsftpd Server
`# rpm -qc vsftpd`
`# vim /etc/vsftpd/vsftpd.conf`

Step 3: Disable anonymous FTP
anonymous_enable=NO

Step 4: Allow anonymous FTP (default)
anonymous_enable=YES

Step 5: Restrict Access to Anonymous User Only
local_enable=NO

Step 6: Disable FTP Uploads
write_enable=NO

Step 7: Disable logging of upload/download
To enable Xfer_log_enable=YES (default)
To disable Xfer_log_enable=NO

Tip: the log file is /var/log/xferlog

Step 8: Modify FTP banner
Uncomment line 85

Part 3: Configure FTP Server for TLS

```
# cd /etc/vsftpd/  
# /usr/bin/openssl req -x509 -nodes -days 365 \  
-newkey rsa:1024 -keyout vsftpd.pem -out vsftpd.pem
```

Tip:

```
Country Name: IR  
State or Province Name: Tehran  
Locality Name: Tehran  
Organization Name: Anisa  
Organizational Unit Name: IT  
Common Name: centos5.lpir.org  
Email Address: root@centos5.lpir.org
```

```
# Turn on SSL  
ssl_enable=YES  
# Allow anonymous users to use secured SSL connections  
allow_anon_ssl=YES  
# All non-anonymous logins are forced to use a secure SSL connection in order to  
# send and receive data on data connections.  
force_local_data_ssl=YES  
# All non-anonymous logins are forced to use a secure SSL connection in order to send the password.  
force_local_logins_ssl=YES  
# Permit TLS v1 protocol connections. TLS v1 connections are preferred  
ssl_tlsv1=YES  
# Permit SSL v2 protocol connections. TLS v1 connections are preferred  
ssl_sslv2=NO  
# permit SSL v3 protocol connections. TLS v1 connections are preferred  
ssl_sslv3=NO  
# Specifies the location of the RSA certificate to use for SSL encrypted connections  
rsa_cert_file=/etc/vsftpd/vsftpd.pem
```

Restart the ftp server:

```
# service vsftpd restart
```

```
# lftp -u anonymous -e 'set ftp:ssl-force true' centos5.lpir.org
```

Part 4: Limit file transfer rate for anonymous user

Step1: Put a sample file for download on /var/ftp/pub

```
# cp /boot/vmlinuz* /var/ftp/pub
```

Step 2: Add below parameter to vsftpd.conf

```
# echo "anon_max_rate=10000" >> /etc/vsftpd/vsftpd.conf
```

Step 3: restart the service

```
# /etc/init.d/vsftpd restart
```

Step 4: Try the download rate as below

```
# wget ftp://localhost/pub/vmlinuz-2-6.18-238.el5
```

Part 5: Limit file transfer rate for local user

Step1: Put a sample file for download on /home/mehdi

```
# cp /boot/vmlinuz* /home/mehdi
```

Step 2: Add below parameter to vsftpd.conf

```
# echo "local_max_rate=20000" >> /etc/vsftpd/vsftpd.conf
```

Step 3: restart the service

```
# /etc/init.d/vsftpd restart
```

Step 4: Try the download rate as below

```
# firefox ftp://mehdi@localhost
```

Part 6: Limit the number of users to ftp server

Step 1: Add below parameter to vsftpd.conf

```
# echo "max_clients=2" >> /etc/vsftpd/vsftpd.conf
```

Step 2: restart the service

```
# /etc/init.d/vsftpd restart
```

Step 3: Try with 3 ftp requests to the server.