Assignment 02: Installation of FTP Server on CentOS

Configuration and Settings for FTP Server

Commands:

yum install ftp vsftpd* -y

The command yum install ftp vsftpd* -y is used to install FTP-related packages on a CentOS (or RHEL) system using the yum package manager. Here's a breakdown of each component of the command:

- **yum**: This is the package manager for CentOS and other RHEL-based distributions. It is used to install, update, and remove software packages.
- **install**: This is the action you want to perform with yum, indicating that you want to install packages.
- **ftp**: This is the name of a package. This could refer to the basic FTP client utilities that allow you to connect to FTP servers.
- **vsftpd***: This specifies a wildcard pattern.
  - vsftpd stands for **Very Secure FTP Daemon**, which is an FTP server for Unix-like systems.
  - The * means "match any characters that follow." So, vsftpd* will match not only vsftpd but also any other packages that start with vsftpd (e.g., vsftpd-devel, vsftpd-utils, etc.).
- **-y**: This option tells yum to automatically answer "yes" to any prompts during the installation process. This is useful for automating installations, as it allows the command to proceed without manual intervention.
- **systemctl enable vsftpd**
- **systemctl start vsftpd**
- **systemctl status vsftpd**

```
[root1@localhost ~]$ sudo yum install ftp vsftpd* -y
[sudo] password for root1:
Last metadata expiration check: 0:42:10 ago on Wednesday 25 September 2024 11:51:42 AM.
Dependencies resolved.
================================================================================
 Package              Architecture        Version                  Repository              Size
================================================================================
Installing:
 ftp                  x86_64              0.17-89.el9              appstream               62 k
 vsftpd               x86_64              3.0.5-6.el9              appstream              168 k

Transaction Summary
================================================================================
Install  2 Packages

Total download size: 230 k
Installed size: 459 k
Downloading Packages:
(1/2): vsftpd-3.0.5-6.el9.x86_64.rpm                            1.6 MB/s | 168 kB     00:00
(2/2): ftp-0.17-89.el9.x86_64.rpm                               402 kB/s |  62 kB     00:00
--------------------------------------------------------------------------------
Total                                                           153 kB/s | 230 kB     00:01
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
  Preparing        :                                                        1/1
  Installing       : vsftpd-3.0.5-6.el9.x86_64                              1/2
  Running scriptlet: vsftpd-3.0.5-6.el9.x86_64                              1/2
  Installing       : ftp-0.17-89.el9.x86_64                                 2/2
  Running scriptlet: ftp-0.17-89.el9.x86_64                                 2/2
  Verifying        : ftp-0.17-89.el9.x86_64                                 1/2
  Verifying        : vsftpd-3.0.5-6.el9.x86_64                              2/2

Installed:
  ftp-0.17-89.el9.x86_64                    vsftpd-3.0.5-6.el9.x86_64
```

The commands systemctl enable vsftpd, systemctl start vsftpd, and systemctl status vsftpd are used to manage the vsftpd (Very Secure FTP Daemon) service in a systemd-based Linux environment. Here's what each command does:

1. systemctl enable vsftpd

- **Meaning**: This command enables the vsftpd service to start automatically at boot time.
- **Function**: When you enable a service, it creates the necessary symlinks in the appropriate directories so that the service will be started automatically when the system boots up.

2. systemctl start vsftpd

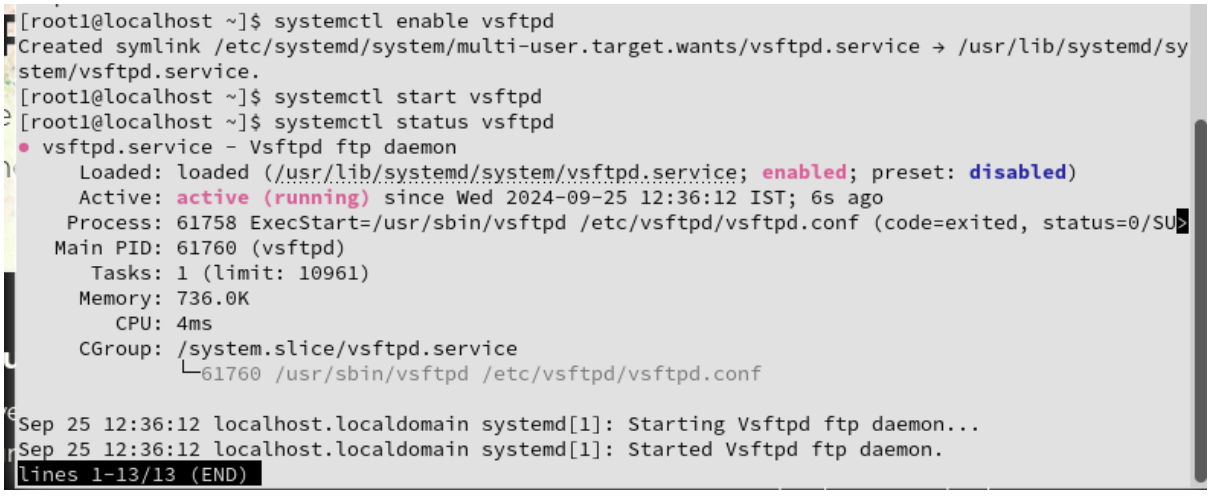
- **Meaning**: This command starts the vsftpd service immediately.
- **Function**: After running this command, the vsftpd FTP server will be active, allowing clients to connect to it. This does not enable the service for future boots; it only starts it for the current session.

3. systemctl status vsftpd

- **Meaning**: This command shows the current status of the vsftpd service.
- **Function**: It provides detailed information about the service, including:
  - Whether the service is currently active (running) or inactive (stopped).
  - Any error messages if the service failed to start.
  - Logs and timestamps related to the service's activity.

- **Enable**: Ensures the vsftpd service starts on boot.
- **Start**: Starts the vsftpd service immediately.
- **Status**: Displays the current status and logs of the vsftpd service.

These commands are essential for managing services on systems that use systemd, allowing you to control the behaviour of services efficiently.



cd /etc/vsftpd

The command cd /etc/vsftpd is used to change the current directory to /etc/vsftpd in a Linux terminal. Here's a breakdown of what this means:

Breakdown of the Command

- **cd**: This stands for "change directory." It is a command used in the terminal to navigate between directories in the filesystem.
- **/etc/vsftpd**: This is the path to the directory you want to navigate to.
  - **/etc**: This is a standard directory in Linux systems that contains configuration files for the system and installed applications.
  - **vsftpd**: This subdirectory typically contains configuration files specific to the vsftpd (Very Secure FTP Daemon) server.

ls:

The ls command in Linux is used to list the contents of a directory

```
[root1@localhost ~]$ cd /etc/vsftpd
[root1@localhost vsftpd]$ ls
ftpusers  user_list  vsftpd.conf  vsftpd_conf_migrate.sh
[root1@localhost vsftpd]$ vi vsftpd.conf
```

vi vsftpd.conf

The command vi vsftpd.conf is used to open the vsftpd.conf configuration file in the vi text editor.

This is the configuration file for the **Very Secure FTP Daemon (vsftpd)**. It contains various settings that control the behaviour of the FTP server.

```
# Example config file /etc/vsftpd/vsftpd.conf
#
# The default compiled in settings are fairly paranoid. This sample file
# loosens things up a bit, to make the ftp daemon more usable.
# Please see vsftpd.conf.5 for all compiled in defaults.
#
# READ THIS: This example file is NOT an exhaustive list of vsftpd options.
# Please read the vsftpd.conf.5 manual page to get a full idea of vsftpd's
# capabilities.
#
# Allow anonymous FTP? (Beware - allowed by default if you comment this out).
anonymous_enable=NO
pasv_enable=YES
pasv_min_port=10000
pasv_max_port=10100
#
# 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
#
# Uncomment this to allow the anonymous FTP user to upload files. This only
# has an effect if the above global write enable is activated. Also, you will
# obviously need to create a directory writable by the FTP user.
-- INSERT --                                                    15,20         Top
```

Ip a

This command is used to display the network interfaces and their IP addresses on the system.

When you run ip a, it provides information about all network interfaces, including their IP addresses, MAC addresses, and status (up or down).

```
[root1@localhost vsftpd]$ ip a
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
       valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host
       valid_lft forever preferred_lft forever
2: enp0s3: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen
 1000
    link/ether 08:00:27:17:b6:98 brd ff:ff:ff:ff:ff:ff
    inet 10.15.11.50/22 brd 10.15.11.255 scope global dynamic noprefixroute enp0s3
       valid_lft 81201sec preferred_lft 81201sec
    inet6 fe80::a00:27ff:fe17:b698/64 scope link noprefixroute
       valid_lft forever preferred_lft forever
[root1@localhost vsftpd]$
```

ftp ip_address (10.15.11.50):

This command is used to initiate a File Transfer Protocol (FTP) session to a specified IP address, allowing you to upload or download files.

Replace <ip_address> with the actual IP address of the FTP server. You will be prompted to enter your username and password.

```
[root1@localhost vsftpd]$ ftp 10.15.11.50
Connected to 10.15.11.50 (10.15.11.50).
220 (vsFTPd 3.0.5)
Name (10.15.11.50:root1): root1
331 Please specify the password.
Password:
230 Login successful.
Remote system type is UNIX.
Using binary mode to transfer files.
ftp> ls
227 Entering Passive Mode (10,15,11,50,229,53).
150 Here comes the directory listing.
drwxr-xr-x    2 1000     1000            6 Sep 24 10:02 Desktop
drwxr-xr-x    2 1000     1000            6 Sep 24 10:02 Documents
drwxr-xr-x    2 1000     1000            6 Sep 24 10:02 Downloads
drwxr-xr-x    2 1000     1000            6 Sep 24 10:02 Pictures
drwxr-xr-x    2 1000     1000            6 Sep 24 10:02 Public
drwxr-xr-x    2 1000     1000            6 Sep 24 10:02 Templates
drwxr-xr-x    2 1000     1000            6 Sep 24 10:02 Videos
-rw-r--r--    1 1000     1000           23 Sep 24 13:16 fileedit.txt
226 Directory send OK.
ftp>
```

mkdir dir_name:

The mkdir command in Linux is used to create new directories (folders) in the file system.

```
ftp> mkdir root1
257 "/home/root1/root1" created
ftp> ls
227 Entering Passive Mode (10,15,11,50,109,103).
150 Here comes the directory listing.
drwxr-xr-x    2 1000     1000            6 Sep 24 10:02 Desktop
drwxr-xr-x    2 1000     1000            6 Sep 24 10:02 Documents
drwxr-xr-x    2 1000     1000            6 Sep 24 10:02 Downloads
drwxr-xr-x    2 1000     1000            6 Sep 24 10:02 Pictures
drwxr-xr-x    2 1000     1000            6 Sep 24 10:02 Public
drwxr-xr-x    2 1000     1000            6 Sep 24 10:02 Templates
drwxr-xr-x    2 1000     1000            6 Sep 24 10:02 Videos
-rw-r--r--    1 1000     1000           23 Sep 24 13:16 fileedit.txt
drwxr-xr-x    2 1000     1000            6 Sep 25 07:20 root1
226 Directory send OK.
ftp> exit
221 Goodbye.
[root1@localhost vsftpd]$
```

exit