

RHEL9

Session 3 – 15th October 2022 Summary

- Steps to configure yum – Copy the path of the software

```
[root@localhost ~]# df -h
Filesystem           Size  Used Avail Use% Mounted on
devtmpfs              3.9G   0    3.9G  0% /dev
tmpfs                 3.9G   0    3.9G  0% /dev/shm
tmpfs                 1.6G  9.2M  1.6G  1% /run
/dev/mapper/rhel-root  8.0G  4.4G  3.7G  54% /
/dev/sda1             1014M 232M  783M  23% /boot
tmpfs                 795M  108K  795M  1% /run/user/0
/dev/sr0               8.0G  8.0G    0 100% /run/media/roo
86 64[
```

- The configuration file of yum – “/etc/yum.repos.d” – create a file with extension .repo

```
[root@localhost ~]# cd /etc/yum.repos.d/
[root@localhost yum.repos.d]# ls
redhat.repo
[root@localhost yum.repos.d]# vim lw.repo
```

```
[root@localhost ~]# vim /etc/yum.repos.d/w.repo
[dvd1]
baseurl=file:///run/media/root/RHEL-9-0-0-BaseOS-x86_64/BaseOS
gpgcheck=0

[dvd2]
baseurl=file:///run/media/root/RHEL-9-0-0-BaseOS-x86_64/AppStream
gpgcheck=0
```

- Command to verify that yum has been configured

```
[root@localhost yum.repos.d]#
[root@localhost yum.repos.d]# yum repolist
Updating Subscription Management repositories.
Unable to read consumer identity

This system is not registered with an entitlement server. You can use subscription-manager to register.

Repository 'dvd1' is missing name in configuration, using id.
Repository 'dvd2' is missing name in configuration, using id.
repo id                      repo name
dvd1                          dvd1
dvd2                          dvd2
[root@localhost yum.repos.d]#
```

```
[root@localhost yum.repos.d]# cd
[root@localhost ~]#
```

- Yum is one time set-up – now you can install any software

```
[root@localhost ~]# rpm -q httpd
package httpd is not installed
[root@localhost ~]# yum install httpd
Updating Subscription Management repositories.
Unable to read consumer identity

This system is not registered with an entitlement s
on-manager to register. →

Repository 'dvd1' is missing name in configuration,
Repository 'dvd2' is missing name in configuration,
dvd1                                         60
dvd2                                         100
```

```
root@localhost:~ — /usr/bin/python3 /usr/bin/yum install httpd
=====
Package           Architecture Version      Repository
=====
Installing:
httpd            x86_64      2.4.51-7.el9_0      dvd2
Installing dependencies:
apr              x86_64      1.7.0-11.el9      dvd2
apr-util          x86_64      1.6.1-20.el9      dvd2
apr-util-bdb      x86_64      1.6.1-20.el9      dvd2
httpd-filesystem noarch      2.4.51-7.el9_0      dvd2
httpd-tools       x86_64      2.4.51-7.el9_0      dvd2
redhat-logos-httpd noarch      90.4-1.el9      dvd2
Installing weak dependencies:
apr-util-openssl x86_64      1.6.1-20.el9      dvd2
mod_http2         x86_64      1.15.19-2.el9      dvd2
mod_lua           x86_64      2.4.51-7.el9_0      dvd2
=====
Transaction Summary
=====
Install 10 Packages
```

- Command to check software installed

```
[root@localhost ~]# rpm -q httpd
httpd-2.4.51-7.el9_0.x86_64
[root@localhost ~]#
```

- To refer the manual of yum

```
root@localhost:~ — man yum
=====
YUM(8)                                     DNF                                     YUM(8)
NAME
    yum - redirecting to DNF Command Reference
SYNOPSIS
    dnf [options] <command> [<args>...]
DESCRIPTION
    DNF is the next upcoming major version of YUM, a package manager for
    RPM-based Linux distributions. It roughly maintains CLI compatibility
    with YUM and defines a strict API for extensions and plugins.

    Plugins can modify or extend features of DNF or provide additional CLI
    commands on top of those mentioned below. If you know the name of such
    a command (including commands mentioned below), you may find/install
    the package which provides it using the appropriate virtual provide in
    the form of dnf-command(<alias>), where <alias> is the name of the com-
    mand; e.g. ``dnf install 'dnf-command(versionlock)'' installs a ver-
    sionlock plugin. This approach also applies to specifying dependencies
    of packages that require a particular DNF command.

    Return values:
Manual page yum(8) line 1 (press h for help or q to quit)
```

- Command to uninstall the software

```
[root@localhost ~]# yum remove httpd
Updating Subscription Management repositories.
Unable to read consumer identity

This system is not registered with an entitlement server. You can use subscription-manager to register.

Repository 'dvd1' is missing name in configuration, using id.
Repository 'dvd2' is missing name in configuration, using id.
```

```
[root@localhost ~]# rpm -q httpd
package httpd is not installed
[root@localhost ~]#
```

- In terms of performance –we can use dnf command

```
[root@localhost ~]# dnf install httpd
Updating Subscription Management repositories.
Unable to read consumer identity

This system is not registered with an entitlement server. You can use subscription-manager to register.

Repository 'dvd1' is missing name in configuration, using id.
Repository 'dvd2' is missing name in configuration, using id.
Last metadata expiration check: 0:03:47 ago on Sat 15 Oct 2022 02:38:38 PM IST.
```

- Steps to configure any Server

```
setup / configure web server:  
-----  
  
step 1:  
install software  
# yum install httpd  
  
step 2:  
configure / setup : the way u want to use  
# cd /var/www/html  
# cat > vimal.html  
  
step 3:  
execute / run  
start service  
# systemctl start httpd
```

- The steps to configure Apache HTTPD Webserver – Install the software

```
[root@localhost ~]# yum install httpd
```

- Configure the Server-

```
[root@localhost ~]# cd /var/www/html/  
[root@localhost html]# ls  
[root@localhost html]# ls  
[root@localhost html]# ls  
[root@localhost html]# cat > vimal.html  
i m vimal  
welcome to my website  
[root@localhost html]# ls  
vimal.html  
[root@localhost html]# cat vimal.html  
i m vimal  
welcome to my website  
[root@localhost html]#
```

- Command to check the status of the service

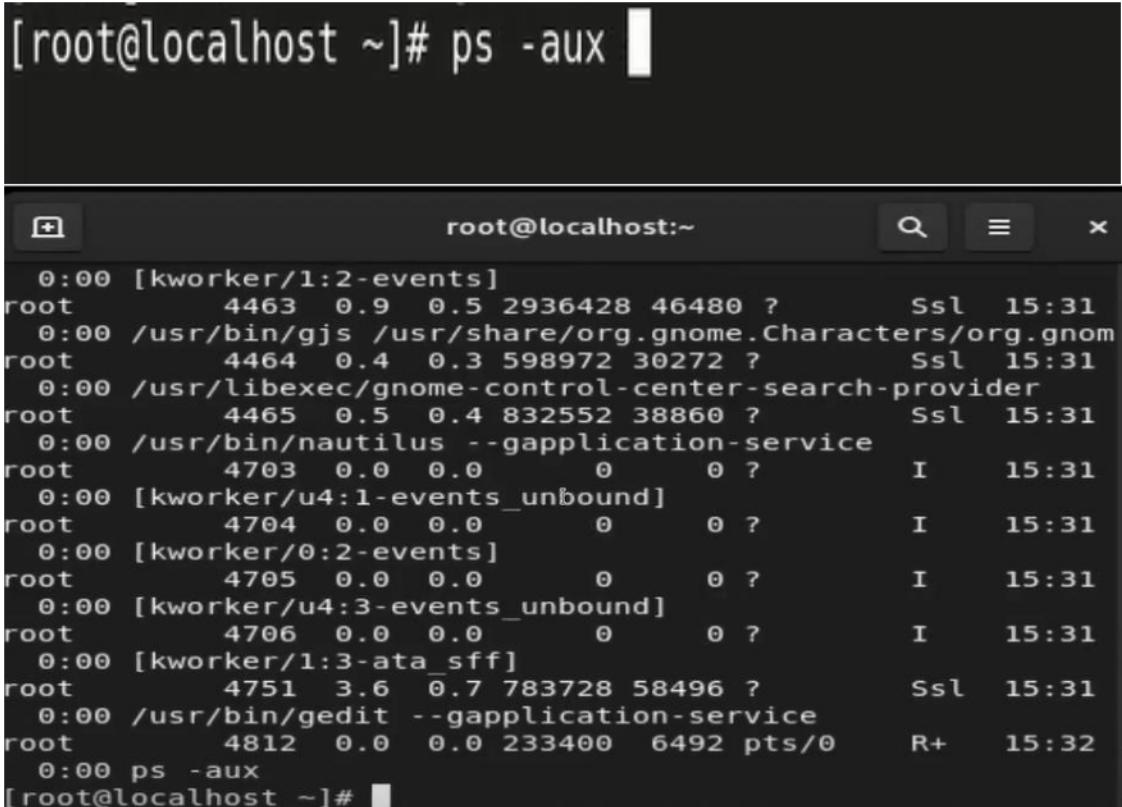
```
[root@localhost html]#  
[root@localhost html]# systemctl status httpd  
○ httpd.service - The Apache HTTP Server  
    Loaded: loaded (/usr/lib/systemd/system/httpd.se  
    Active: inactive (dead)  
      Docs: man:httpd.service(8)  
lines 1-4/4 (END)
```

- Command to start the service

```
[root@localhost html]# systemctl start httpd  
[root@localhost html]#
```

- Command to list all the process in the system – gedit cannot be interacted from outside world

```
[root@localhost ~]# ps -aux
```



User	PID	CPU	Memory	Command	Time
root	4463	0.9	0.5	/usr/bin/gjs /usr/share/org.gnome.Characters/org.gnom	Ssl 15:31
root	4464	0.4	0.3	/usr/libexec/gnome-control-center-search-provider	Ssl 15:31
root	4465	0.5	0.4	/usr/bin/nautilus --gapplication-service	Ssl 15:31
root	4703	0.0	0.0	[kworker/u4:1-events_unbound]	I 15:31
root	4704	0.0	0.0	[kworker/0:2-events]	I 15:31
root	4705	0.0	0.0	[kworker/u4:3-events_unbound]	I 15:31
root	4706	0.0	0.0	[kworker/1:3-ata_sff]	I 15:31
root	4751	3.6	0.7	/usr/bin/gedit --gapplication-service	Ssl 15:31
root	4812	0.0	0.0	ps -aux	R+ 15:32

- Command to check the port number

```
[root@localhost ~]# netstat -tnlp
Active Internet connections (only servers)
Proto Recv-Q Send-Q Local Address          Foreign Address
          State      PID/Program name
tcp        0      0 0.0.0.0:111              0.0.0.0:*
          LISTEN     1/systemd
tcp        0      0 0.0.0.0:22               0.0.0.0:*
          LISTEN     894/sshd: /usr/sbin
tcp        0      0 127.0.0.1:631             0.0.0.0:*
          LISTEN     891/cupsd
tcp6       0      0 ::1:111                 :::*
          LISTEN     1/systemd
tcp6       0      0 ::1:80                  :::*
          LISTEN     4184/httpd
tcp6       0      0 ::1:22                  :::*
          LISTEN     894/sshd: /usr/sbin
tcp6       0      0 ::1:631                 :::*
          LISTEN     891/cupsd
[root@localhost ~]#
```

- The steps to configure the client

setup client:

step 1:

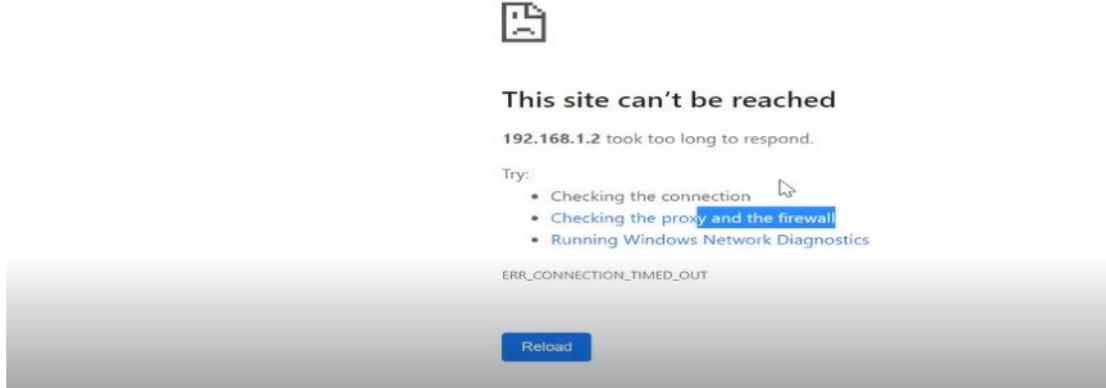
install software : web client

chrome

step 2:

connect : server : ip

URL: http://ip:port/page



- Command to check the status of firewall

```
[root@localhost ~]# systemctl status firewalld
● firewalld.service - firewalld - dynamic firewall daemon
  Loaded: loaded (/usr/lib/systemd/system/firewalld.service)
  Active: active (running) since Sat 2022-10-15 14:12:24
    Docs: man:firewalld(1)
   Main PID: 814 (firewalld)
     Tasks: 2 (limit: 50436)
    Memory: 42.9M
      CPU: 2.722s
     CGroup: /system.slice/firewalld.service
             └─814 /usr/bin/python3 -s /usr/sbin/firewalld

Oct 15 14:12:22 localhost systemd[1]: Starting firewalld ->
Oct 15 14:12:24 localhost systemd[1]: Started firewalld ->
[root@localhost ~]# systemctl stop firewalld
```

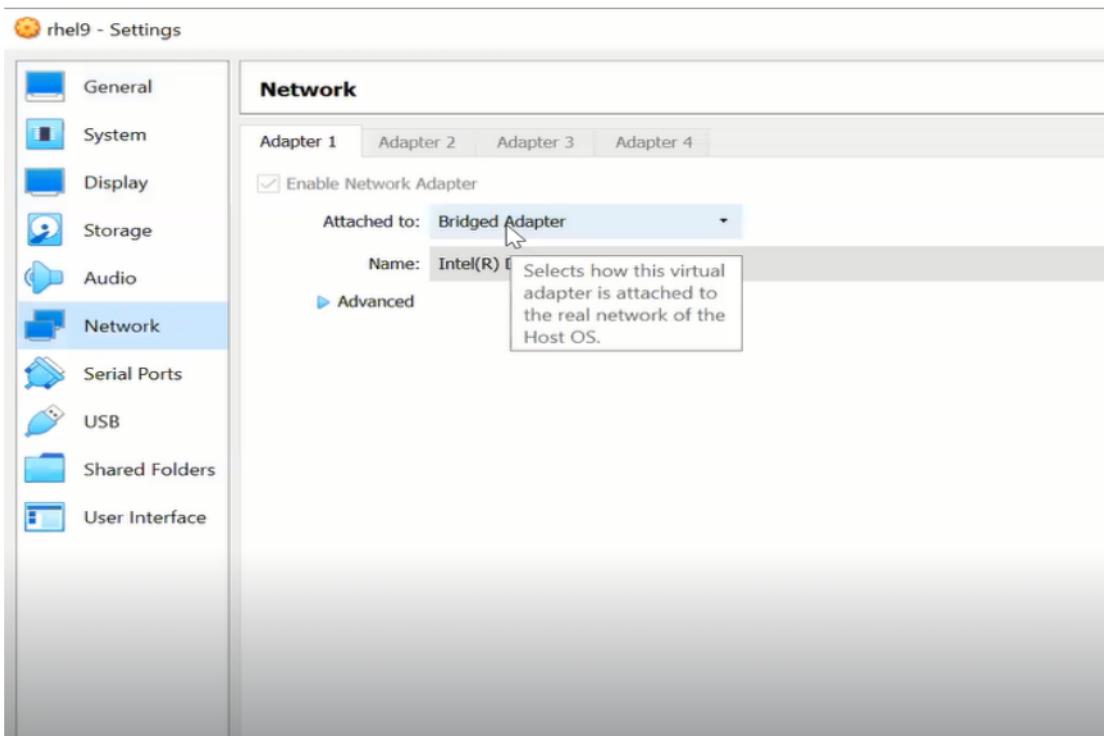
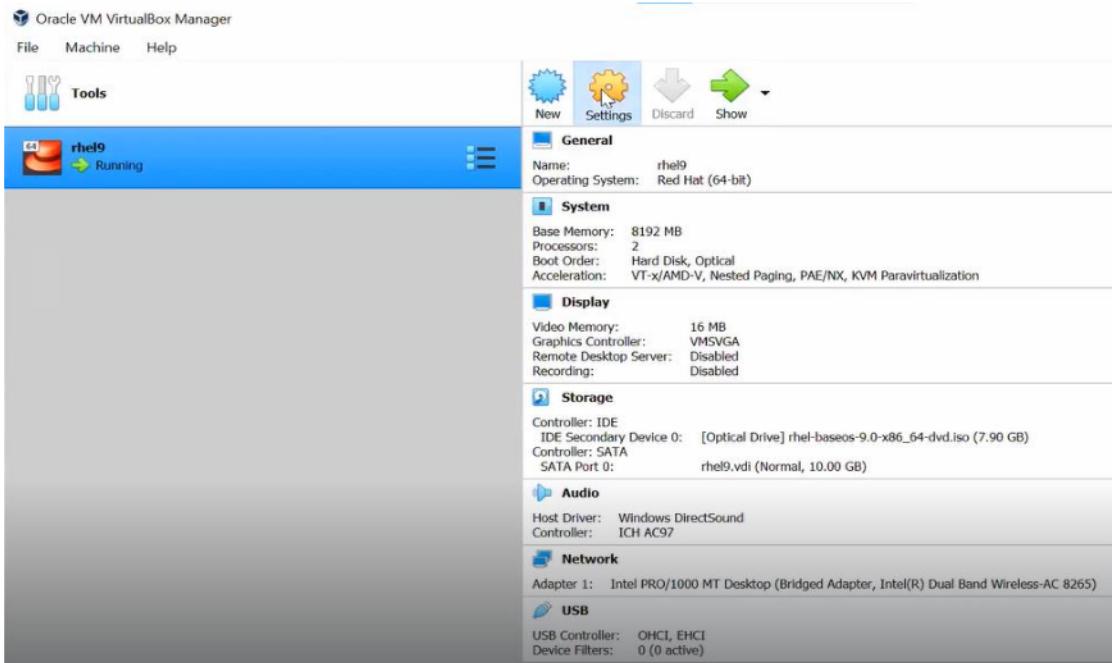
- Command to stop the firewall

```
[root@localhost ~]# systemctl stop firewalld
[root@localhost ~]# systemctl status firewalld
● firewalld.service - firewalld - dynamic firewall daemon
  Loaded: loaded (/usr/lib/systemd/system/firewalld.service)
  Active: inactive (dead) since Sat 2022-10-15 15:48:07
    Docs: man:firewalld(1)
   Process: 814 ExecStart=/usr/sbin/firewalld --nofork --n>
   Main PID: 814 (code=exited, status=0/SUCCESS)
     CPU: 2.845s

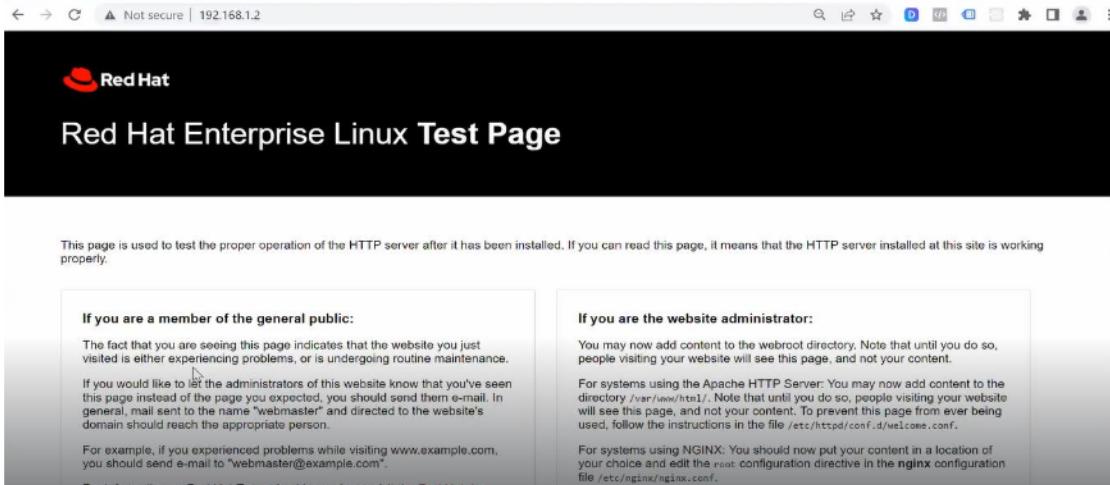
Oct 15 14:12:22 localhost systemd[1]: Starting firewalld ->
Oct 15 14:12:24 localhost systemd[1]: Started firewalld ->
Oct 15 15:48:07 localhost.localdomain systemd[1]: Stopping >
Oct 15 15:48:07 localhost.localdomain systemd[1]: firewalld>
Oct 15 15:48:07 localhost.localdomain systemd[1]: Stopped f>
Oct 15 15:48:07 localhost.localdomain systemd[1]: firewalld>
[root@localhost ~]#
```

i m vimal welcome to my website

- For the base machine to connect to virtual machine –

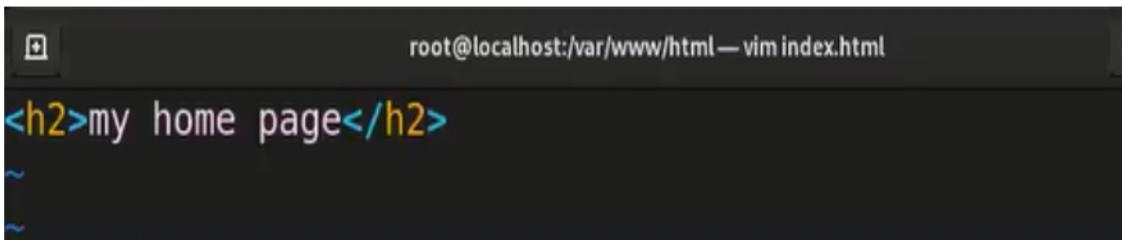


- If we do not specify the page in the URL –the home page is displayed

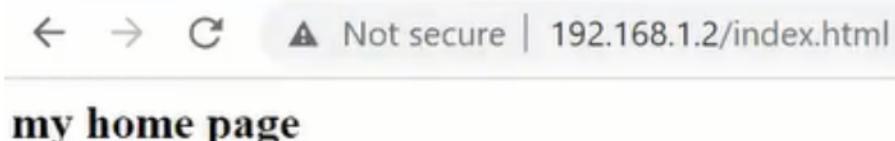


- In the document root – there is index.html

```
[root@localhost html]# pwd
/var/www/html
[root@localhost html]# ls
lw.html pop.html vimal.html
[root@localhost html]# vim index.html
```



```
[root@localhost html]# pwd
/var/www/html
[root@localhost html]# ls
index.html lw.html pop.html vimal.html
[root@localhost html]#
```



- By using the web client “curl” –we can access the webpage

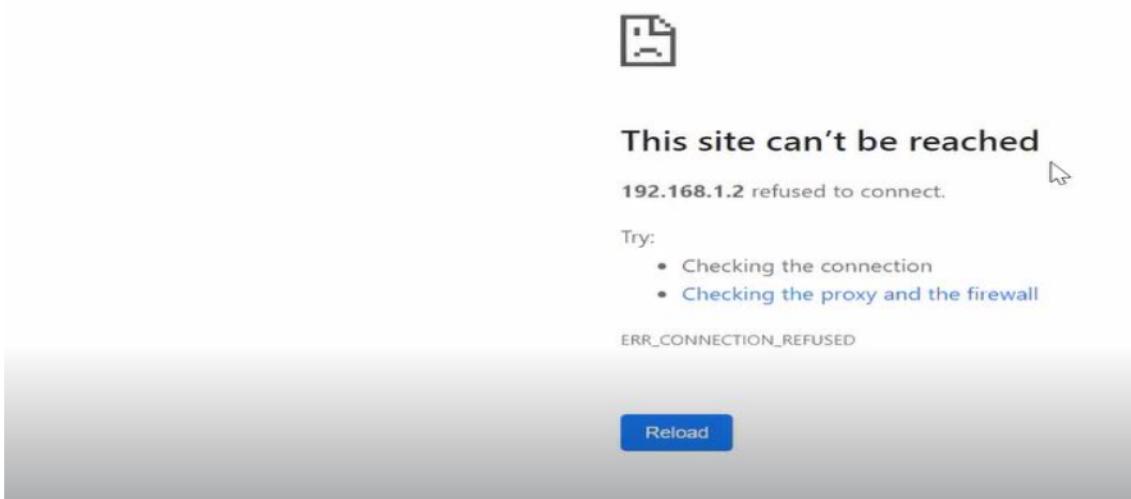
```
C:\Users\Vimal Daga>curl http://192.168.1.2:80/vimal.html
i m vimal
welcome to my website
C:\Users\Vimal Daga>
```

- If the httpd service is stopped – we cannot access the webpage

```
[root@localhost html]#
[root@localhost html]# systemctl stop httpd
[root@localhost html]# systemctl status httpd
● httpd.service - The Apache HTTP Server
    Loaded: loaded (/usr/lib/systemd/system/httpd.service;>
    Active: inactive (dead)
      Docs: man:httpd.service(8)

Oct 15 15:24:57 localhost.localdomain systemd[1]: Starting >
Oct 15 15:24:57 localhost.localdomain httpd[4184]: AH00558:>
Oct 15 15:24:57 localhost.localdomain httpd[4184]: Server c>
Oct 15 15:24:57 localhost.localdomain systemd[1]: Started T>
Oct 15 15:58:24 localhost.localdomain systemd[1]: Stopping >
```

← → × ⓘ 192.168.1.2 Press Esc to exit f



- Command to shut down the OS “init 0”
- After your start the system – service is not started automatically

```
[root@localhost ~]# systemctl status httpd
● httpd.service - The Apache HTTP Server
  Loaded: loaded (/usr/lib/systemd/system/httpd...
  Active: inactive (dead)
    Docs: man:httpd.service(8)
lines 1-4/4 (END)
```

- To start the service at boot time – service persistent

```
[root@localhost ~]# systemctl enable httpd
Created symlink /etc/systemd/system/multi-user.target.wants/httpd.serv
/lib/systemd/system/httpd.service.
[root@localhost ~]#
```

```
[root@localhost ~]# systemctl status httpd
● httpd.service - The Apache HTTP Server
  Loaded: loaded (/usr/lib/systemd/system/httpd.service; enabled; v
  Active: active (running) since Sat 2022-10-15 16:02:08 IST; 2min
    Docs: man:httpd.service(8)
   Main PID: 2186 (httpd)
     Status: "Total requests: 1; Idle/Busy workers 100/0; Requests/sec:
      Tasks: 213 (limit: 50436)  ▾
     Memory: 33.4M
        CPU: 196ms
      CGroup: /system.slice/httpd.service
              └─2186 /usr/sbin/httpd -DFOREGROUND
                  ├─2187 /usr/sbin/httpd -DFOREGROUND
                  ├─2188 /usr/sbin/httpd -DFOREGROUND
                  ├─2189 /usr/sbin/httpd -DFOREGROUND
                  ├─2191 /usr/sbin/httpd -DFOREGROUND
```