

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:/etc/yum.repos.d — vim lw.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]# 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 server. You can use subscription-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                        Reposit
=====
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

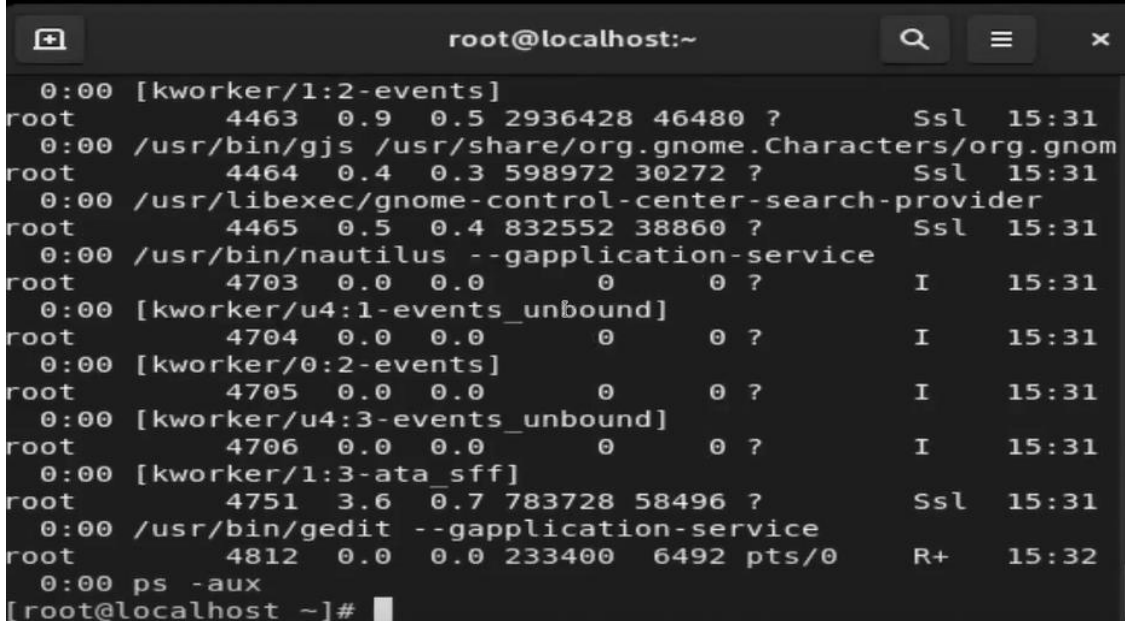
```
[root@localhost html]#  
[root@localhost html]# systemctl status httpd  
○ httpd.service - The Apache HTTP Server  
   Loaded: loaded (/usr/lib/systemd/system/httpd.service; vendor preset: enabled)  
   Active: inactive (dead)  
     Docs: man:httpd.service(8)  
lines 1-4/4 (END)
```

- 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	%MEM	VSZ	SSZ	TTY	TIME	COMMAND
root	4463	0.9	0.5	2936428	46480	?	0:00	[kworker/1:2-events]
root	4464	0.4	0.3	598972	30272	?	0:00	/usr/bin/gjs /usr/share/org.gnome.Characters/org.gnome.Characters
root	4465	0.5	0.4	832552	38860	?	0:00	/usr/libexec/gnome-control-center-search-provider
root	4703	0.0	0.0	0	0	?	0:00	/usr/bin/nautilus --gapplication-service
root	4704	0.0	0.0	0	0	?	0:00	[kworker/u4:1-events_unbound]
root	4705	0.0	0.0	0	0	?	0:00	[kworker/0:2-events]
root	4706	0.0	0.0	0	0	?	0:00	[kworker/u4:3-events_unbound]
root	4751	3.6	0.7	783728	58496	?	0:00	[kworker/1:3-ata_sff]
root	4812	0.0	0.0	233400	6492	pts/0	0:00	/usr/bin/gedit --gapplication-service
root							0:00	ps -aux

```
[root@localhost ~]#
```

- 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 :::111                 :::*                    LISTEN      1/systemd
tcp6       0      0 :::80                  :::*                    LISTEN      4184/httpd
tcp6       0      0 :::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:

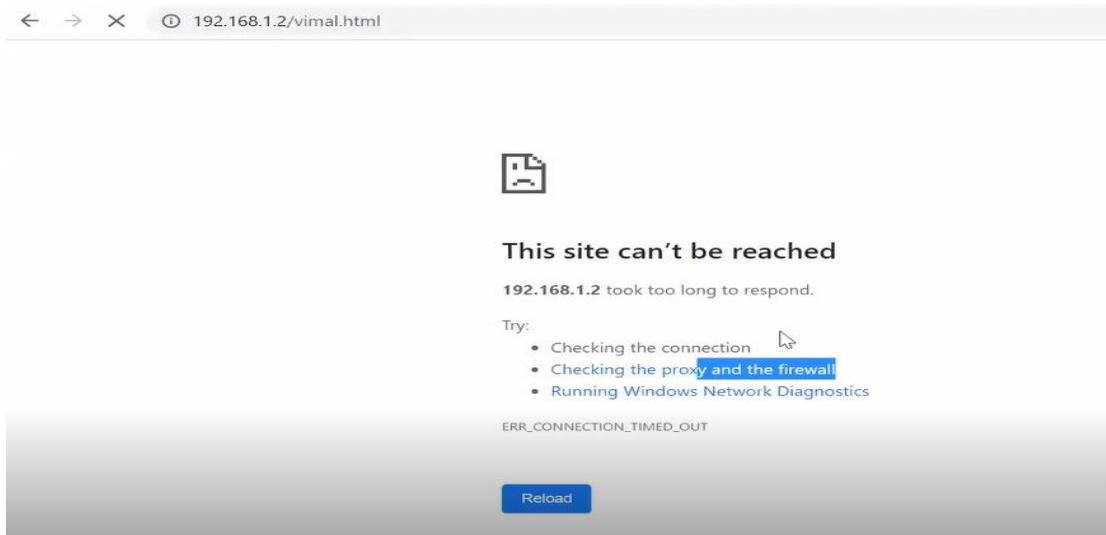
install software : web client

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.serv
   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 - d
[root@localhost ~]# systemctl stop firewalld
```

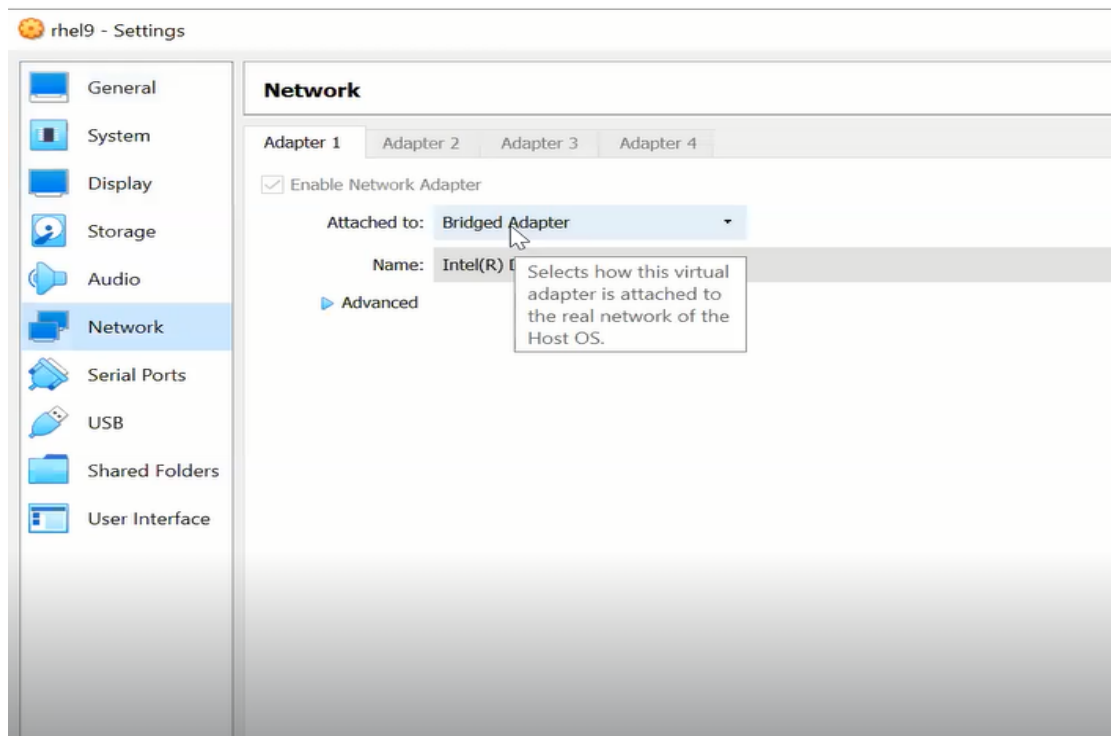
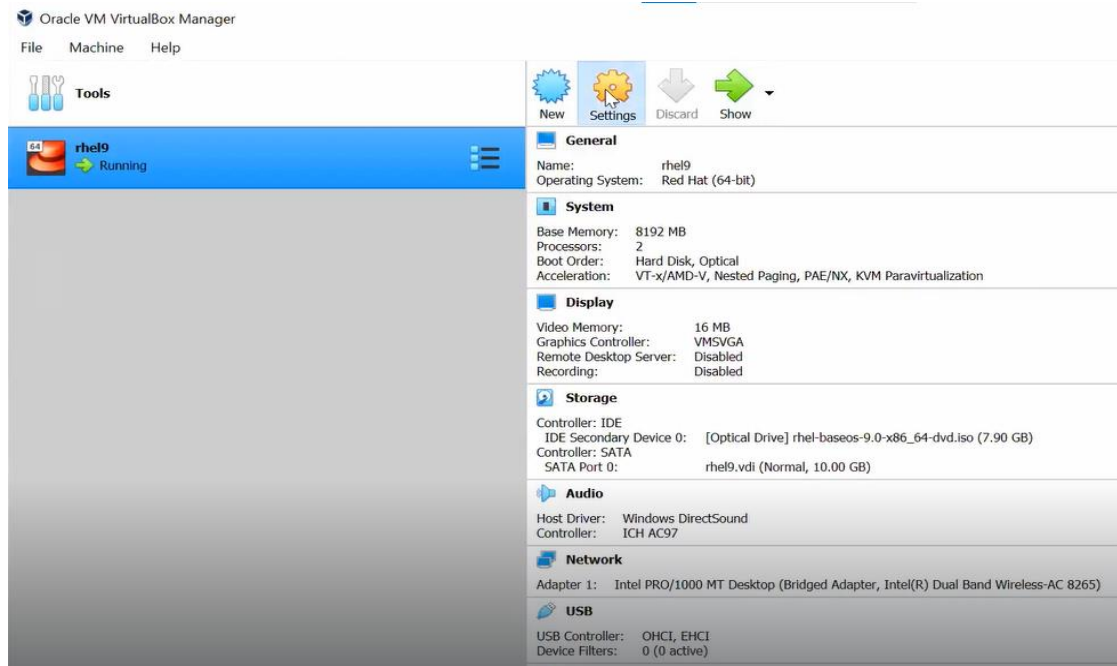
- Command to stop the firewall

```
[root@localhost ~]# systemctl stop firewalld
[root@localhost ~]# systemctl status firewalld
○ firewalld.service - firewalld - dynamic firewall daemon
   Loaded: loaded (/usr/lib/systemd/system/firewalld.serv
   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

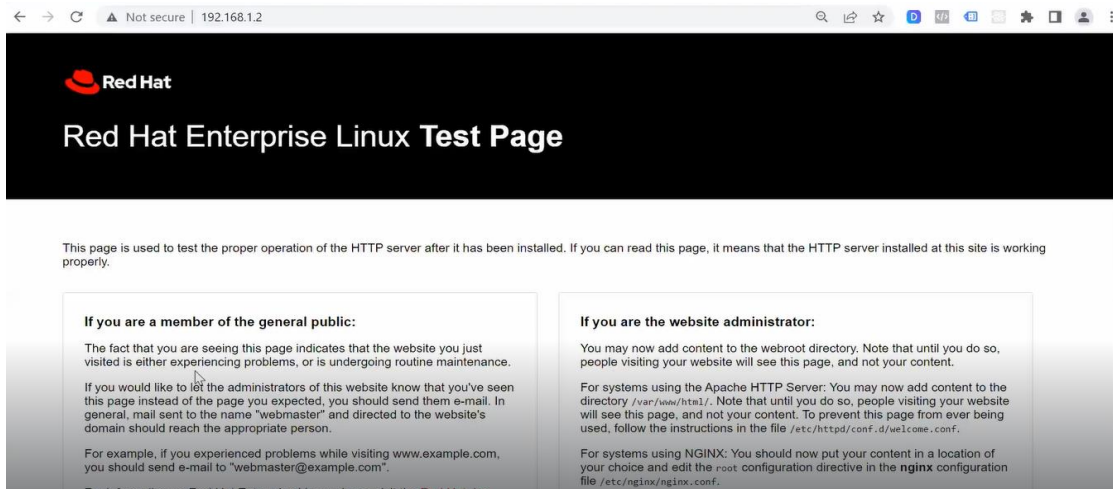
Oct 15 14:12:22 localhost systemd[1]: Starting firewalld -
Oct 15 14:12:24 localhost systemd[1]: Started firewalld - d
Oct 15 15:48:07 localhost.localdomain systemd[1]: Stopping
Oct 15 15:48:07 localhost.localdomain systemd[1]: firewalld
Oct 15 15:48:07 localhost.localdomain systemd[1]: Stopped f
Oct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




- For the base machine to connect to virtual machine –



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

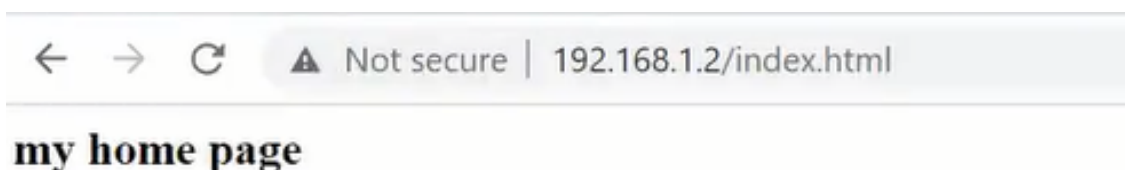


- In the document root – there is index.html

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

A screenshot of the vim editor window. The title bar shows "root@localhost:/var/www/html — vim index.html". The editor content shows the HTML code: `<h2>my home page</h2>` followed by two tilde characters (~) on separate lines, indicating the end of the file.

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



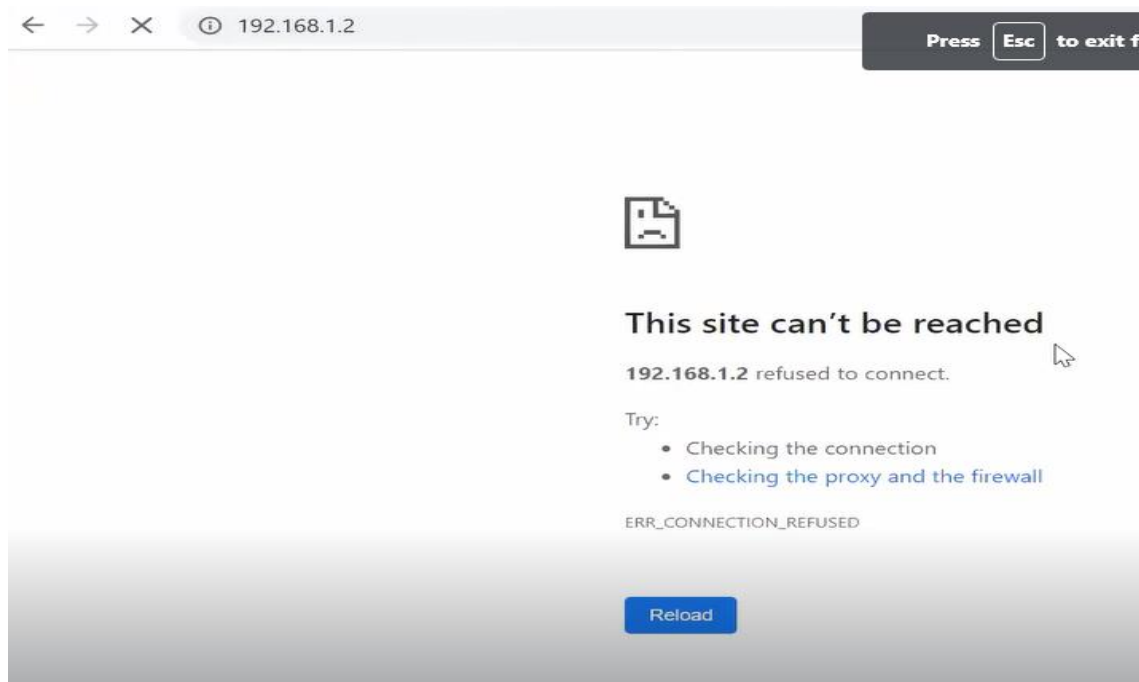
- By using the web client “curl” –we can access the webpage

```
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 >
```



- 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.service; disabled; vendor preset: enabled)
   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.service to /usr/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; vendor preset: enabled)
   Active: active (running) since Sat 2022-10-15 16:02:08 IST; 2min ago
     Docs: man:httpd.service(8)
  Main PID: 2186 (httpd)
   Status: "Total requests: 1; Idle/Busy workers 100/0; Requests/sec 0.00"
    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
```