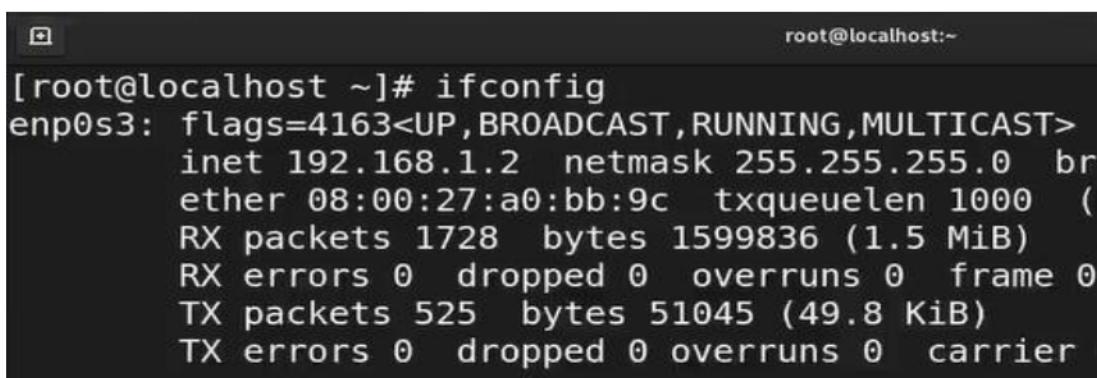


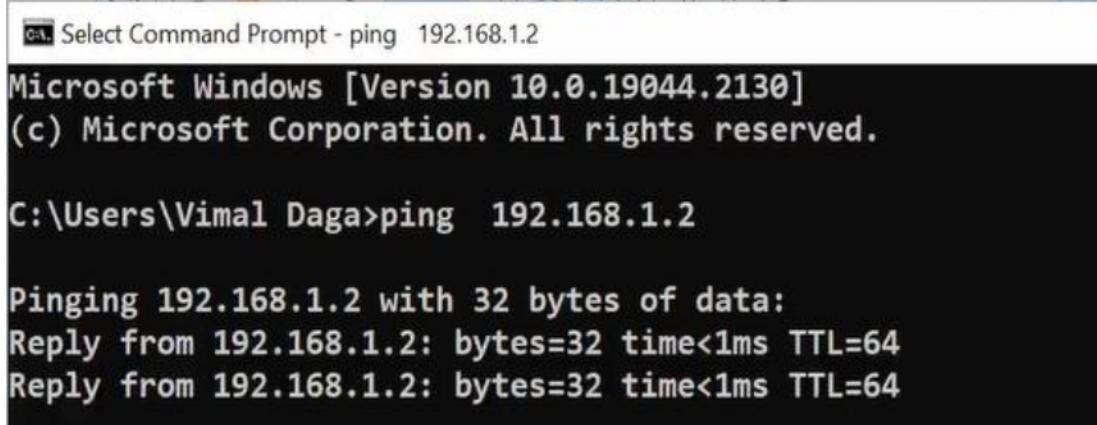
RHEL9

Session 5 – 29th October 2022 Summary

- To check connectivity between two systems-



```
root@localhost ~]# ifconfig
enp0s3: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>
        inet 192.168.1.2 netmask 255.255.255.0 br
          ether 08:00:27:a0:bb:9c txqueuelen 1000 (
            RX packets 1728 bytes 1599836 (1.5 MiB)
            RX errors 0 dropped 0 overruns 0 frame 0
            TX packets 525 bytes 51045 (49.8 KiB)
            TX errors 0 dropped 0 overruns 0 carrier
```

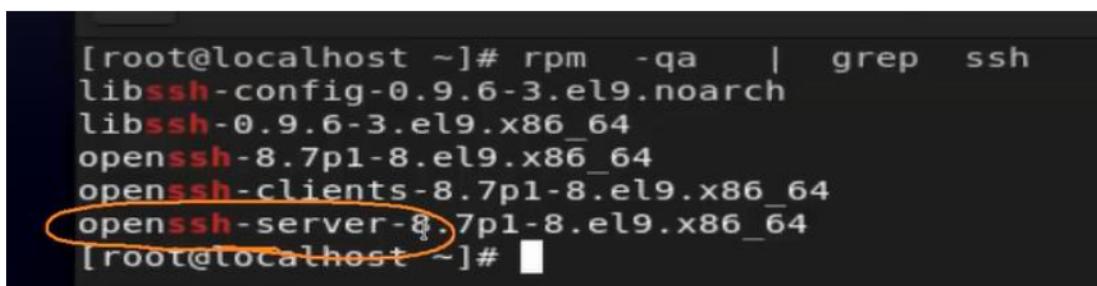


```
C:\ Select Command Prompt - ping 192.168.1.2
Microsoft Windows [Version 10.0.19044.2130]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Vimal Daga>ping 192.168.1.2

Pinging 192.168.1.2 with 32 bytes of data:
Reply from 192.168.1.2: bytes=32 time<1ms TTL=64
Reply from 192.168.1.2: bytes=32 time<1ms TTL=64
```

- To configure server as SSH Server- before installing the software, we can check software already installed



```
[root@localhost ~]# rpm -qa | grep ssh
libssh-config-0.9.6-3.el9.noarch
libssh-0.9.6-3.el9.x86_64
openssh-8.7p1-8.el9.x86_64
openssh-clients-8.7p1-8.el9.x86_64
openssh-server-8.7p1-8.el9.x86_64
[root@localhost ~]# █
```

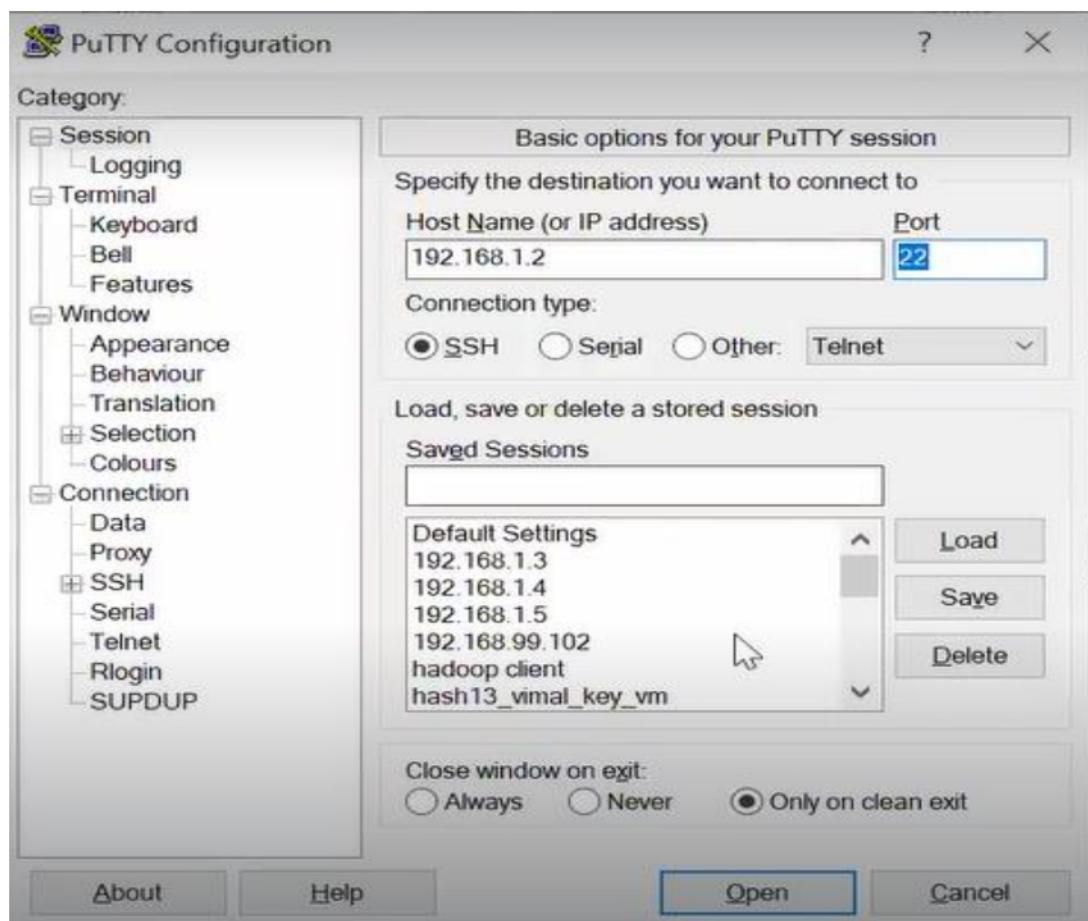
```
[root@localhost ~]#  
[root@localhost ~]# rpm -q openssh-server  
openssh-server-8.7p1-8.el9.x86_64  
[root@localhost ~]# yum install openssh-server
```

- To start the service-

```
[root@localhost ~]# systemctl start sshd  
[root@localhost ~]# systemctl status sshd  
● sshd.service - OpenSSH server daemon  
    Loaded: loaded (/usr/lib/systemd/system/sshd.service; enabled; vendor pres  
    Active: active (running) since Sat 2022-10-29 14:24:40 IST; 24min ago  
      Docs: man:sshd(8)  
            man:sshd_config(5)  
    Main PID: 821 (sshd)  
       Tasks: 1 (limit: 50436)  
     Memory: 3.7M  
        CPU: 30ms  
      CGroup: /system.slice/sshd.service  
              └─821 "sshd: /usr/sbin/sshd -D [listener] 0 of 10-100 startups"  
  
Oct 29 14:24:40 localhost systemd[1]: Starting OpenSSH server daemon...  
Oct 29 14:24:40 localhost sshd[821]: Server listening on 0.0.0.0 port 22.  
Oct 29 14:24:40 localhost sshd[821]: Server listening on :: port 22.  
Oct 29 14:24:40 localhost systemd[1]: Started OpenSSH server daemon.  
lines 1-16/16 (END)
```

- The sshd service is working on port no 22

```
[root@localhost ~]# ss -tnlp  
State      Recv-Q      Send-Q      Local Address:Port      Peer Address:Port  
Process  
LISTEN      0          4096          0.0.0.0:111          0.0.0.0:*  
users:((“rpcbind”,pid=735,fd=4), (“systemd”,pid=1,fd=42))  
LISTEN      0          511           0.0.0.0:8080          0.0.0.0:  
users:((“httpd”,pid=972,fd=4), (“httpd”,pid=971,fd=4), (“httpd”,pid=970,fd=4), (“  
httpd”,pid=934,fd=4))  
LISTEN      0          511           0.0.0.0:80          0.0.0.0:  
users:((“httpd”,pid=972,fd=3), (“httpd”,pid=971,fd=3), (“httpd”,pid=970,fd=3), (“  
httpd”,pid=934,fd=3))  
LISTEN      0          128           0.0.0.0:22          0.0.0.0:  
users:((“sshd”,pid=821,fd=3))  
LISTEN      0          128           127.0.0.1:631          0.0.0.0:  
users:((“cupsd”,pid=818,fd=7))  
LISTEN      0          4096          [:]:111           [:]:*  
users:((“rpcbind”,pid=735,fd=6), (“systemd”,pid=1,fd=44))  
LISTEN      0          128           [:]:22            [:]:*  
users:((“sshd”,pid=821,fd=4))  
LISTEN      0          128           [:]:631           [:]:*  
users:((“cupsd”,pid=818,fd=6))
```



- For remote login – we use login name and password

```
root@localhost:~$  
root@localhost:~$ login as: root  
root@192.168.1.2's password:  
Activate the web console with: systemctl enable --now cockpit.socket  
  
Register this system with Red Hat Insights: insights-client --register  
Create an account or view all your systems at https://red.ht/insights-dashboard  
Last login: Sat Oct 29 14:41:27 2022  
[root@localhost ~]#  
[root@localhost ~]#  
[root@localhost ~]#
```

- The shell is given by the ssh protocol

```
[root@localhost ~]#  
[root@localhost ~]#  
[root@localhost ~]# date  
Sat Oct 29 02:59:27 PM IST 2022  
[root@localhost ~]# cal  
    October 2022  
Su Mo Tu We Th Fr Sa  
                      1  
 2  3  4  5  6  7  8  
 9 10 11 12 13 14 15  
16 17 18 19 20 21 22  
23 24 25 26 27 28 29  
30 31  
[root@localhost ~]#
```

- From here we create a folder - remotely

```
[root@localhost:~  
[root@localhost ~]#  
[root@localhost ~]#  
[root@localhost ~]# pwd  
/root  
[root@localhost ~]# mkdir vimal  
[root@localhost ~]# ls  
aaa          a.txt      Documents  Music      Public      Videos  
anaconda-ks.cfg  Desktop  Downloads  Pictures  Templates  vimal  
[root@localhost ~]#
```

- We can see the same – locally

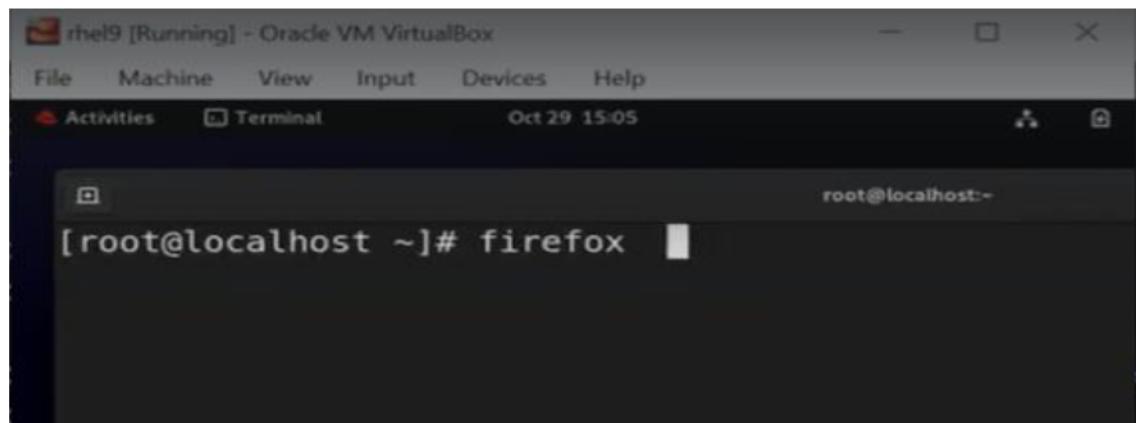
```
rhel9 [Running] - Oracle VM VirtualBox  
  
Red Hat Enterprise Linux 9.0 (Plow)  
Kernel 5.14.0-70.22.1.el9_0.x86_64 on an x86_64  
  
Activate the web console with: systemctl enable --now cockpit.socket  
  
localhost login: root  
Password:  
Last login: Sat Oct 29 14:58:38 from 192.168.1.12  
[root@localhost ~]#  
[root@localhost ~]#  
[root@localhost ~]#  
[root@localhost ~]#  
[root@localhost ~]#  
[root@localhost ~]#  
[root@localhost ~]# pwd  
/root  
[root@localhost ~]# ls  
aaa          a.txt      Documents  Music      Public      Videos  
anaconda-ks.cfg  Desktop  Downloads  Pictures  Templates  vimal
```

- If we remove the directory locally – the same thing is visible remotely

```
[root@localhost ~]# rmdir vimal/
[root@localhost ~]# ls
aaa          a.txt  Documents  Music    Public   Videos
anaconda-ks.cfg Desktop  Downloads  Pictures  Templates
[root@localhost ~]# _
```

```
[root@localhost:~]
[root@localhost ~]#
[root@localhost ~]# pwd
/root
[root@localhost ~]# mkdir vimal
[root@localhost ~]# ls
aaa          a.txt  Documents  Music    Public   Videos
anaconda-ks.cfg Desktop  Downloads  Pictures  Templates  vimal
[root@localhost ~]# ls
aaa          a.txt  Documents  Music    Public   Videos
anaconda-ks.cfg Desktop  Downloads  Pictures  Templates
[root@localhost ~]# _
```

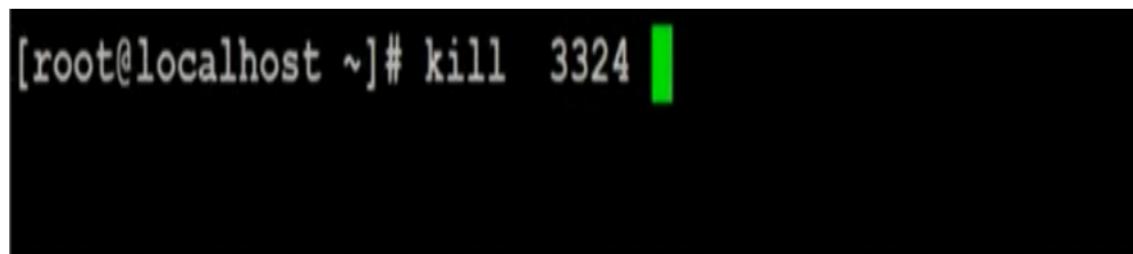
- Start the firefox locally- from GUI



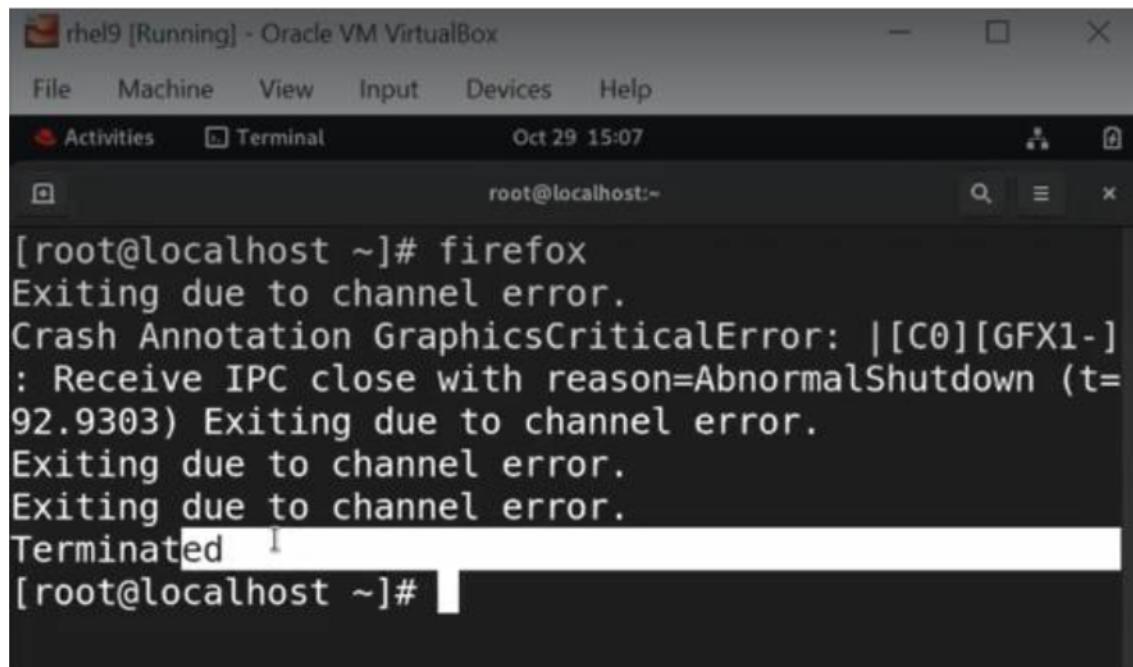
- The firefox is a graphical program, we cannot see from black screen but we can see the process using the command

```
[root@localhost ~]# pgrep    firefox
3324
[root@localhost ~]# _
```

- The command to stop the firefox –

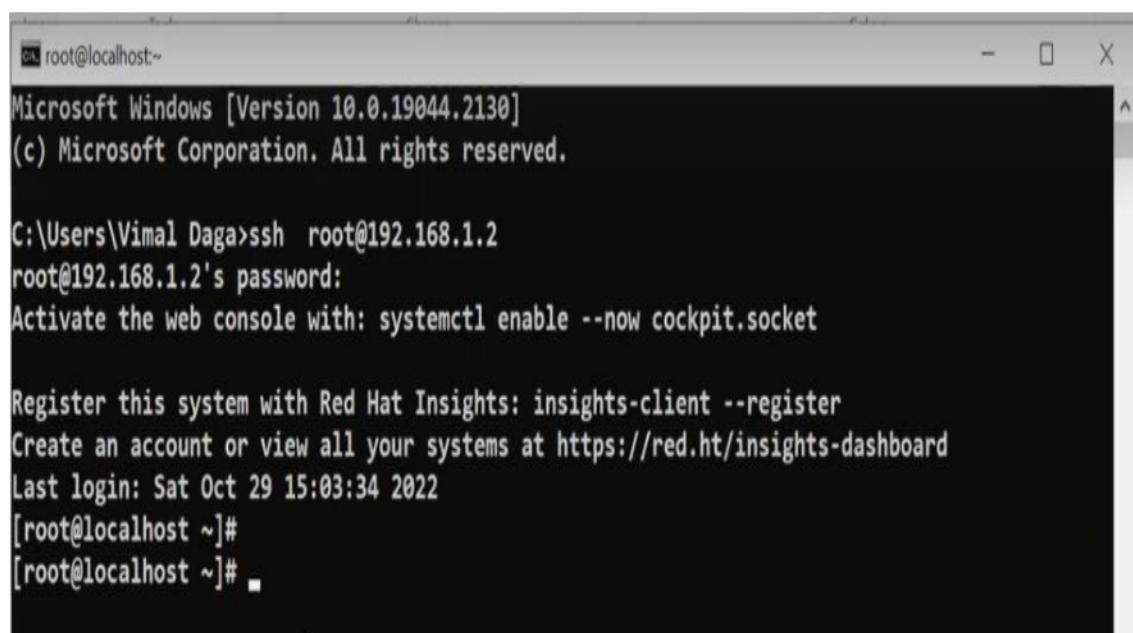


```
[root@localhost ~]# kill 3324
```



```
[root@localhost ~]# firefox
Exiting due to channel error.
Crash Annotation GraphicsCriticalError: |[C0][GFX1-]
: Receive IPC close with reason=AbnormalShutdown (t=
92.9303) Exiting due to channel error.
Exiting due to channel error.
Exiting due to channel error.
Terminated [root@localhost ~]#
```

- For remote login–



```
Microsoft Windows [Version 10.0.19044.2130]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Vimal Daga>ssh root@192.168.1.2
root@192.168.1.2's password:
Activate the web console with: systemctl enable --now cockpit.socket

Register this system with Red Hat Insights: insights-client --register
Create an account or view all your systems at https://red.ht/insights-dashboard
Last login: Sat Oct 29 15:03:34 2022
[root@localhost ~]#
[root@localhost ~]#
```

- The command to see the configuration file

```
root@localhost:~ [root@localhost ~]# rpm -q openssh-server
openssh-server-8.7p1-8.el9.x86_64
[root@localhost ~]# rpm -q /etc/pam.d/sshd
/etc/pam.d/sshd
[root@localhost ~]# vim /etc/ssh/sshd_config
```

```
# The strategy used for options in the default sshd_config shipped with
# OpenSSH is to specify options with their default value where
# possible, but leave them commented. Uncommented options override the
# default value.

# To modify the system-wide sshd configuration, create a *.conf file under
# /etc/ssh/sshd_config.d/ which will be automatically included below
Include /etc/ssh/sshd_config.d/*.conf

# If you want to change the port on a SELinux system, you have to tell
# SELinux about this change.
# semanage port -a -t ssh_port_t -p tcp #PORTNUMBER
#
#Port 22
#AddressFamily any
#ListenAddress 0.0.0.0
#ListenAddress ::

#HostKey /etc/ssh/ssh_host_rsa_key
#HostKey /etc/ssh/ssh_host_ecdsa_key
#HostKey /etc/ssh/ssh_host_ed25519_key

# Ciphers and keying
```

21,1 6%

```
# The strategy used for options in the default sshd_config shipped with
# OpenSSH is to specify options with their default value where
# possible, but leave them commented. Uncommented options override the
# default value.

# To modify the system-wide sshd configuration, create a *.conf file under
# /etc/ssh/sshd_config.d/ which will be automatically included below
Include /etc/ssh/sshd_config.d/*.conf

# If you want to change the port on a SELinux system, you have to tell
# SELinux about this change.
# semanage port -a -t ssh_port_t -p tcp #PORTNUMBER
#
Port 31
#AddressFamily any
#ListenAddress 0.0.0.0
#ListenAddress ::

#HostKey /etc/ssh/ssh_host_rsa_key
#HostKey /etc/ssh/ssh_host_ecdsa_key
#HostKey /etc/ssh/ssh_host_ed25519_key

# Ciphers and keying
```

INSERT

New SELinux security alert
AVC denial, click icon to view

```
[root@localhost ~]# rpm -q openssh-server
openssh-server-8.7p1-8.el9.x86_64
[root@localhost ~]# rpm -q -c openssh-server
/etc/pam.d/sshd
/etc/ssh/sshd_config
/etc/ssh/sshd_config.d/50-redhat.conf
/etc/sysconfig/sshd
[root@localhost ~]# vim /etc/ssh/sshd_config
[root@localhost ~]# systemctl reload sshd
[root@localhost ~]# systemctl status sshd
● sshd.service - OpenSSH server daemon
   Loaded: loaded (/usr/lib/systemd/system/sshd.service; enabled; vendor pres>
   Active: activating (auto-restart) (Result: exit-code) since Sat 2022-10-29>
     Docs: man:sshd(8)
           man:sshd_config(5)
   Process: 814 ExecStart=/usr/sbin/sshd -D $OPTIONS (code=exited, status=255/>
   Process: 2498 ExecReload=/bin/kill -HUP $MAINPID (code=exited, status=0/SUC>
 Main PID: 814 (code=exited, status=255/EXCEPTION)
    CPU: 175ms

Oct 29 15:17:24 localhost.localdomain systemd[1]: sshd.service: Main process ex>
Oct 29 15:17:24 localhost.localdomain systemd[1]: sshd.service: Failed with res>
lines 1-12/12 (END)
```

- Disable the SELinux and check the port no

```
[root@localhost ~]# getenforce
Enforcing
[root@localhost ~]# setenforce 0
[root@localhost ~]# systemctl restart sshd
[root@localhost ~]# systemctl status sshd
● sshd.service - OpenSSH server daemon
   Loaded: loaded (/usr/lib/systemd/system/sshd.service; enabled; vendor pres>
   Active: active (running) since Sat 2022-10-29 15:18:52 IST; 5s ago
     Docs: man:sshd(8)
           man:sshd_config(5)
   Main PID: 2592 (sshd)
      Tasks: 1 (limit: 50436)
     Memory: 1.7M
        CPU: 12ms
      CGroup: /system.slice/sshd.service
              └─2592 "sshd: /usr/sbin/sshd -D [listener] 0 of 10-100 startups"

Oct 29 15:18:52 localhost.localdomain systemd[1]: Starting OpenSSH server daemo>
Oct 29 15:18:52 localhost.localdomain sshd[2592]: Server listening on 0.0.0.0 p>
Oct 29 15:18:52 localhost.localdomain systemd[1]: Started OpenSSH server daemon.
Oct 29 15:18:52 localhost.localdomain sshd[2592]: Server listening on :: port 3>
lines 1-16/16 (END)
```

```
[root@localhost ~]# getenforce
Permissive
[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:*
1/systemd
tcp      0      0 0.0.0.0:8080             0.0.0.0:*
907/httpd
tcp      0      0 0.0.0.0:80               0.0.0.0:*
907/httpd
tcp      0      0 127.0.0.1:631            0.0.0.0:*
811/cupsd
tcp      0      0 0.0.0.0:31               0.0.0.0:*
2592/sshd: /usr/sbi
tcp6     0      0 ::1:111                 ::*:*
1/systemd
tcp6     0      0 ::1:631                 ::*:*
811/cupsd
tcp6     0      0 ::1:31                  ::*:*
2592/sshd: /usr/sbi
[root@localhost ~]#
```

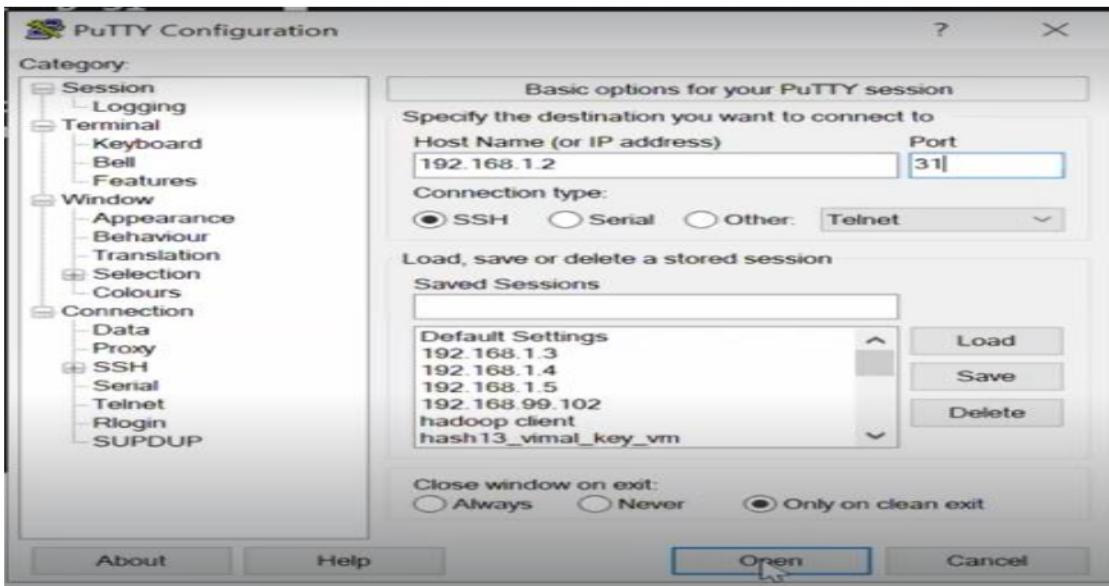
- From the client when we login, the connection refused-

```
root@localhost:~ 
C:\Users\Vimal Daga>ssh root@192.168.1.2
ssh: connect to host 192.168.1.2 port 22: Connection refused

C:\Users\Vimal Daga>ssh root@192.168.1.2 -p 31
root@192.168.1.2's password:
Activate the web console with: systemctl enable --now cockpit.socket

Register this system with Red Hat Insights: insights-client --register
Create an account or view all your systems at https://red.ht/insights-dashboard
Last login: Sat Oct 29 15:13:56 2022
[root@localhost ~]# date
Sat Oct 29 03:21:19 PM IST 2022
[root@localhost ~]# cal
    October 2022
Su Mo Tu We Th Fr Sa
                    1
 2  3  4  5  6  7  8
 9 10 11 12 13 14 15
16 17 18 19 20 21 22
23 24 25 26 27 28 29
30 31
[root@localhost ~]#
```

- Similarly with putty



- Create a user- locally

```
[root@localhost ~]# useradd yash
[root@localhost ~]# passwd yash
Changing password for user yash.
New password:
BAD PASSWORD: The password is a palindrome
Retype new password:
passwd: all authentication tokens updated successfully.
[root@localhost ~]#
```

- Login from windows

```
C:\Users\Vimal Daga>ssh yash@192.168.1.2 -p 31
yash@192.168.1.2's password:
Register this system with Red Hat Insights: insights-client --register
Create an account or view all your systems at https://red.ht/insights-dashboard
[yash@localhost ~]$
```

- Whatever done on ssh server will be recorded

```
[root@localhost ~]# cd /var/log/
[root@localhost log]# ls
anaconda      cups          maillog        secure-20221016
audit         dnf.librepo.log  maillog-20221016  secure-20221029
boot.log      dnf.log       maillog-20221029  speech-dispatcher
boot.log-20221015 dnf.rpm.log   messages       spooler
boot.log-20221016 firewalld    messages-20221016 spooler-20221016
boot.log-20221020 gdm        messages-20221029 spooler-20221029
boot.log-20221029 hawkey.log  private        sssd
btmp          hawkey.log-20221016 qemu-ga      tallylog
chrony        hawkey.log-20221029 README        wtmp
cron          httpd         rhsm           samba
cron-20221016 insights-client secure
cron-20221029 lastlog      
```

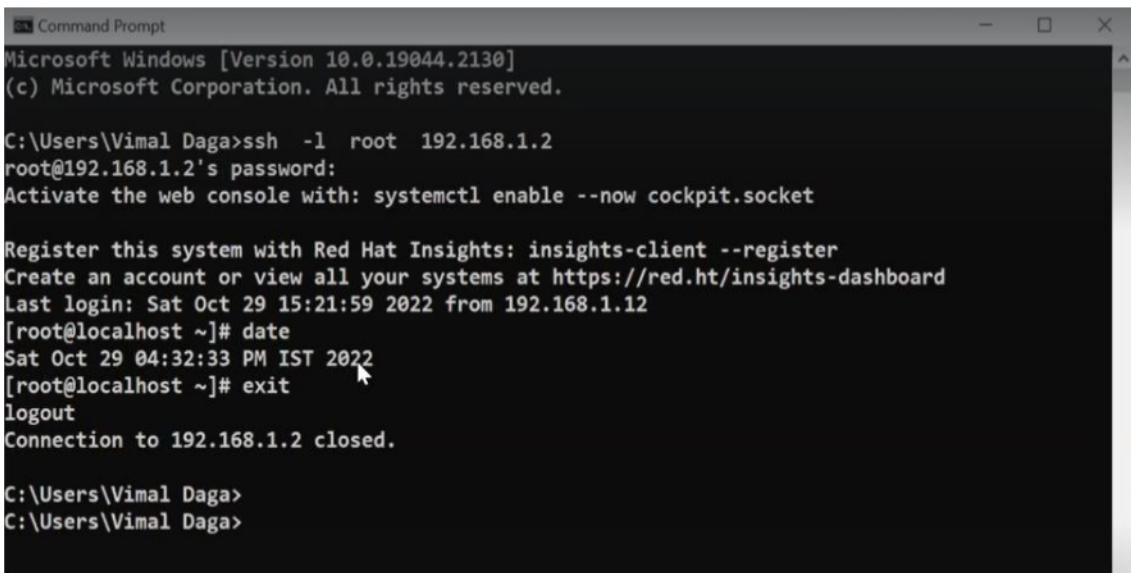
```
[root@localhost log]# cat secure
```

```
user root
Oct 29 15:23:08 localhost useradd[2676]: new group: name=yash, GID=1002
Oct 29 15:23:08 localhost useradd[2676]: new user: name=yash, UID=1002, GID=1002
, home=/home/yash, shell=/bin/bash, from=/dev/pts/0
Oct 29 15:23:11 localhost passwd[2687]: pam_unix(passwd:chauthtok): password changed for yash
Oct 29 15:23:11 localhost passwd[2687]: gkr-pam: couldn't update the login keyring password: no old password was entered
Oct 29 15:26:19 localhost sshd[2619]: Received disconnect from 192.168.1.12 port
58503:11: disconnected by user
Oct 29 15:26:19 localhost sshd[2619]: Disconnected from user root 192.168.1.12 p
ort 58503
Oct 29 15:26:19 localhost sshd[2615]: pam_unix(sshd:session): session closed for
user root
Oct 29 15:26:31 localhost sshd[2774]: Accepted password for yash from 192.168.1.
12 port 58534 ssh2
Oct 29 15:26:31 localhost systemd[2779]: pam_unix(systemd-user:session): session opened for user yash(uid=1002) by (uid=0)
Oct 29 15:26:31 localhost sshd[2774]: pam_unix(sshd:session): session opened for
user yash(uid=1002) by (uid=0)
[root@localhost log]#
[root@localhost log]#
[root@localhost log]#
```

- The “who” command gives more clear picture

```
[root@localhost log]# who
root      tty2          2022-10-29 15:13 (tty2)
yash     pts/1          2022-10-29 15:29 (192.168.1.12)
[root@localhost log]# date
Sat Oct 29 03:30:48 PM IST 2022
[root@localhost log]#
```

- The ssh protocol provides lots of facilities- by remote login we can run commands



A screenshot of a Windows Command Prompt window titled "Command Prompt". The window shows the following text:

```

Microsoft Windows [Version 10.0.19044.2130]
(c) Microsoft Corporation. All rights reserved.

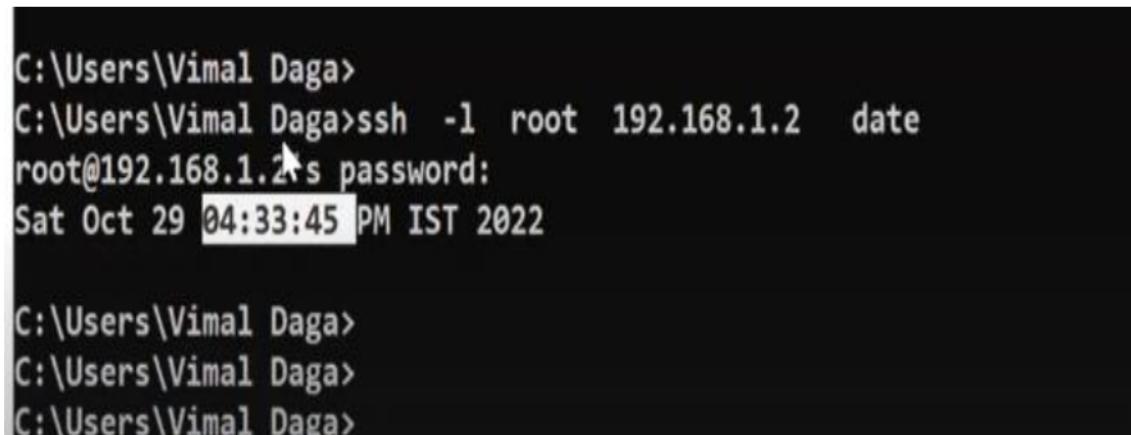
C:\Users\Vimal Daga>ssh -l root 192.168.1.2
root@192.168.1.2's password:
Activate the web console with: systemctl enable --now cockpit.socket

Register this system with Red Hat Insights: insights-client --register
Create an account or view all your systems at https://red.ht/insights-dashboard
Last login: Sat Oct 29 15:21:59 2022 from 192.168.1.12
[root@localhost ~]# date
Sat Oct 29 04:32:33 PM IST 2022
[root@localhost ~]# exit
logout
Connection to 192.168.1.2 closed.

C:\Users\Vimal Daga>
C:\Users\Vimal Daga>

```

- Without login we can perform remote program/command execution



A screenshot of a Windows Command Prompt window showing a remote command execution:

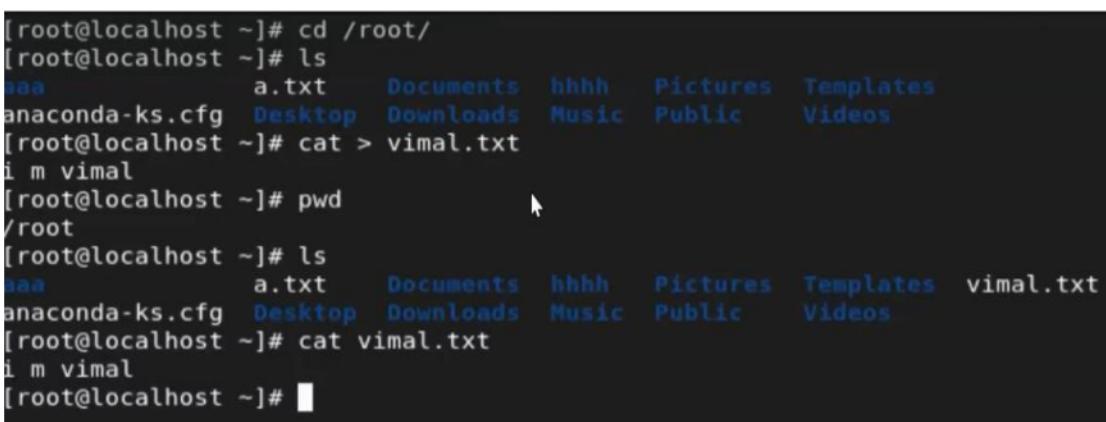
```

C:\Users\Vimal Daga>
C:\Users\Vimal Daga>ssh -l root 192.168.1.2 date
root@192.168.1.2's password:
Sat Oct 29 04:33:45 PM IST 2022

C:\Users\Vimal Daga>
C:\Users\Vimal Daga>
C:\Users\Vimal Daga>

```

- It also supports file transfer – “scp” command is used



A screenshot of a Linux terminal window showing file transfer using the "scp" command:

```

[root@localhost ~]# cd /root/
[root@localhost ~]# ls
aaa      a.txt  Documents  hhhh  Pictures  Templates
anaconda-ks.cfg  Desktop  Downloads  Music  Public    Videos
[root@localhost ~]# cat > vimal.txt
i m vimal
[root@localhost ~]# pwd
/root
[root@localhost ~]# ls
aaa      a.txt  Documents  hhhh  Pictures  Templates  vimal.txt
anaconda-ks.cfg  Desktop  Downloads  Music  Public    Videos
[root@localhost ~]# cat vimal.txt
i m vimal
[root@localhost ~]#

```

```
C:\Users\Vimal Daga>scp root@192.168.1.2:/root/vimal.txt "C:\Users\Vimal Daga\Desktop\icon"  
"  
root@192.168.1.2's password:  
vimal.txt                                         100%   10    10.0KB/s  00:00  
  
C:\Users\Vimal Daga>
```

```
C:\Users\Vimal Daga>scp "C:\Users\Vimal Daga\Desktop\icon\hello.txt" root@192.168.1.2:/root  
/yy.txt  
root@192.168.1.2's password:  
hello.txt                                         100%    9    3.0KB/s  00:00  
  
C:\Users\Vimal Daga>
```

- This can be verified locally

```
[root@localhost ~]# pwd  
/root  
[root@localhost ~]# ls  
anaconda-ks.cfg  Desktop  Downloads  Music  Public  Pictures  Templates  vimal.txt  
a.txt  Documents  hhhh  Pictures  Templates  vimal.txt  
yy.txt  
[root@localhost ~]# cat yy.txt  
i m hello[root@localhost ~]#
```

- If we want to transfer entire folder

```
[root@localhost ~]# mkdir code  
[root@localhost ~]# cd code/  
[root@localhost code]# ls  
[root@localhost code]# touch a b c  
[root@localhost code]# ls  
a  b  c  
[root@localhost code]# pwd  
/root/code  
[root@localhost code]# cd /root/  
[root@localhost ~]# lls  
bash: lls: command not found...  
Similar command is: 'ls'  
[root@localhost ~]# ls  
anaconda-ks.cfg  code  Downloads  Pictures  Videos  
a.txt  Desktop  hhhh  Public  Templates  vimal.txt  
yy.txt  
[root@localhost ~]# █
```

```
C:\Users\Vimal Daga>scp root@192.168.1.2:/root/code/ "C:\Users\Vimal Daga\Desktop\icon"
root@192.168.1.2's password:
scp: /root/code: not a regular file

C:\Users\Vimal Daga>scp -r root@192.168.1.2:/root/code/ "C:\Users\Vimal Daga\Desktop\icon"
"
root@192.168.1.2's password:
a          100%   0    0.0KB/s  00:00
b          100%   0    0.0KB/s  00:00
c          100%   0    0.0KB/s  00:00

C:\Users\Vimal Daga>
```

- The file transfer using GUI- winscp – graphical way to transfer files

Google search results for "winscp download". The first result is a link to the WinSCP official site.

winSCP download

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WinSCP 5.21 is a major application update. New ...

WinSCP 5.21 is a major application update. New features and enhancements include:

- SSH core upgraded to PuTTY 0.77. That includes support for rsa-sha2-256 and rsa-sha2-512 SSH public key algorithms and improved support for HTTP proxies with SSH.
- Support for ACL for S3 protocol.
- Support for file masks relative to the root of an operation.
- Streaming support in .NET assembly and scripting for FTP protocol.
- It is possible to import sessions from OpenSSH config file.
- List of all changes.

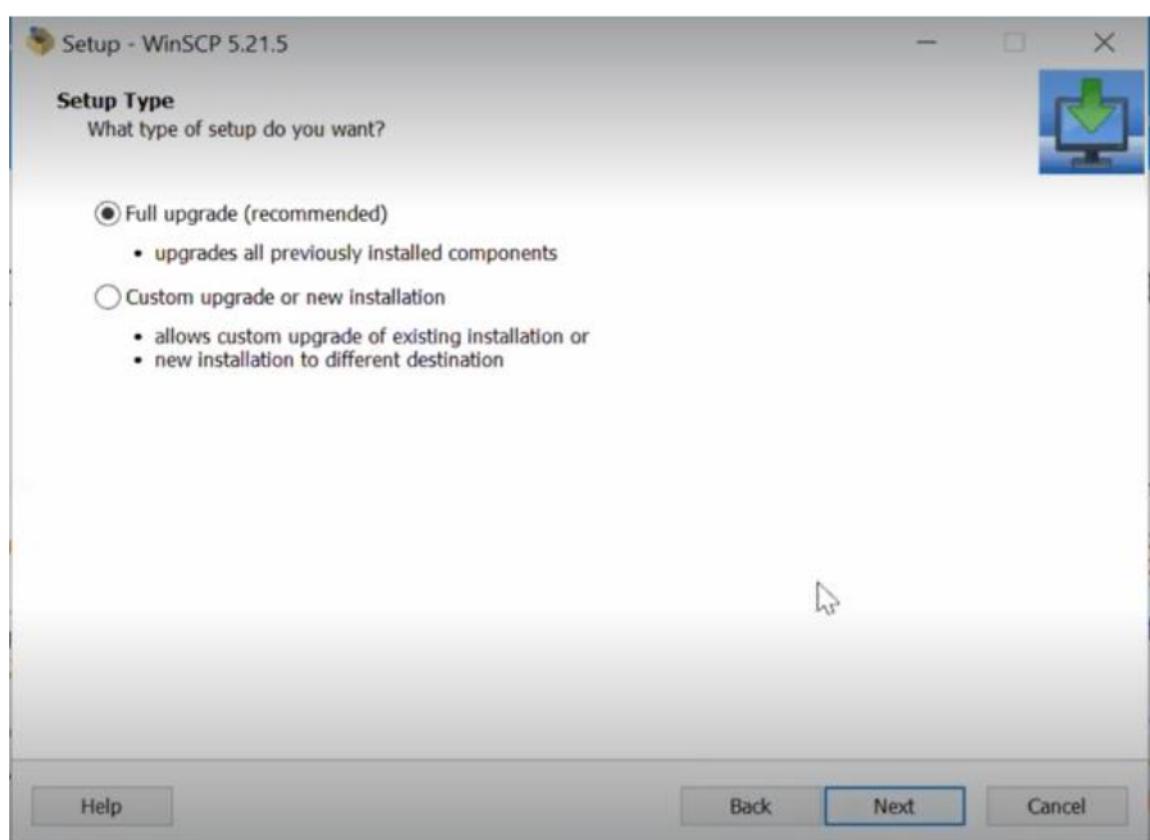
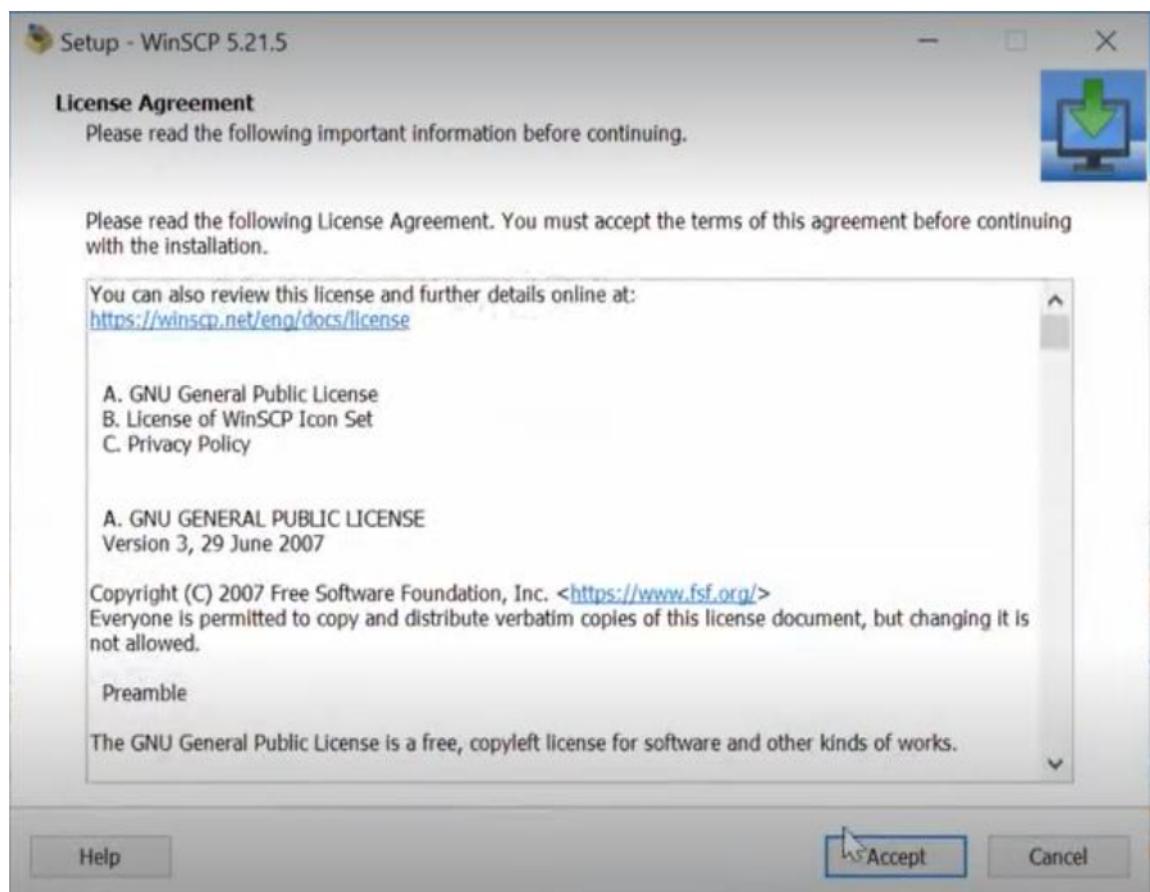
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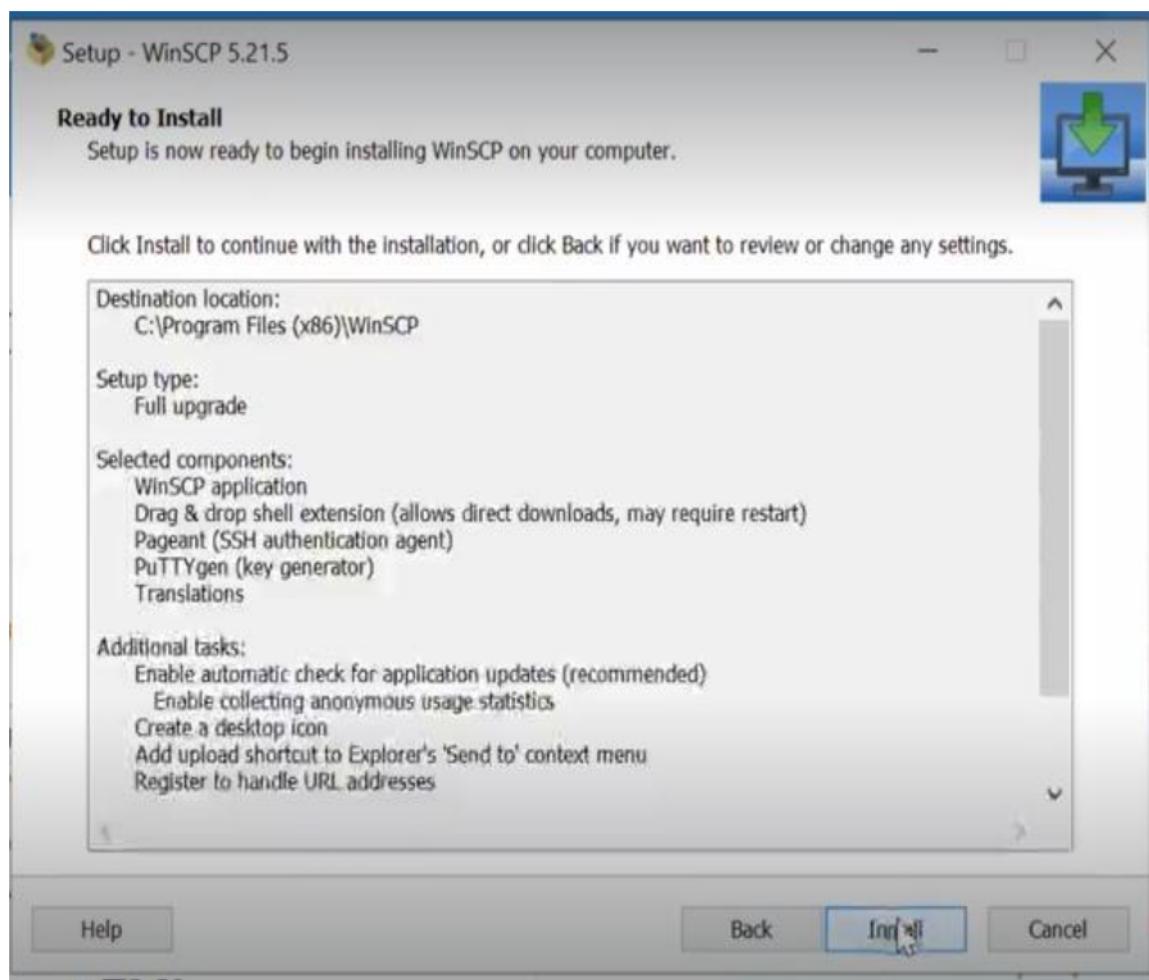
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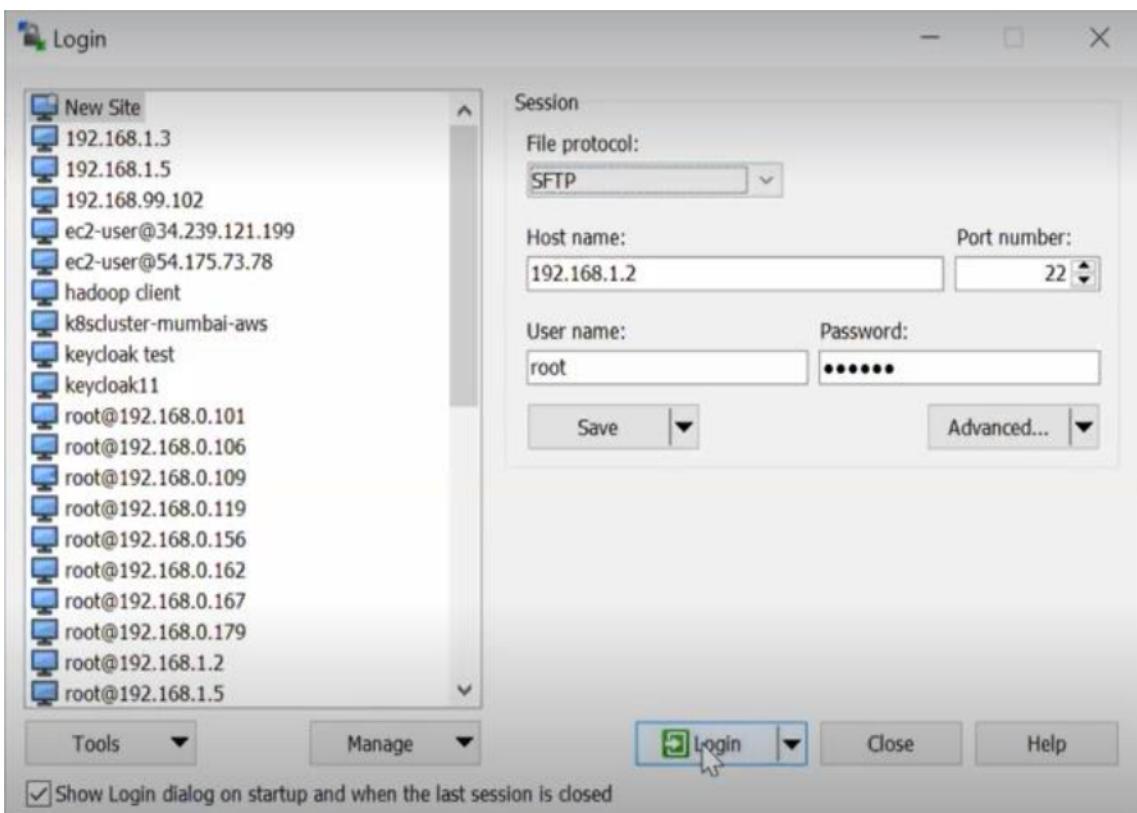
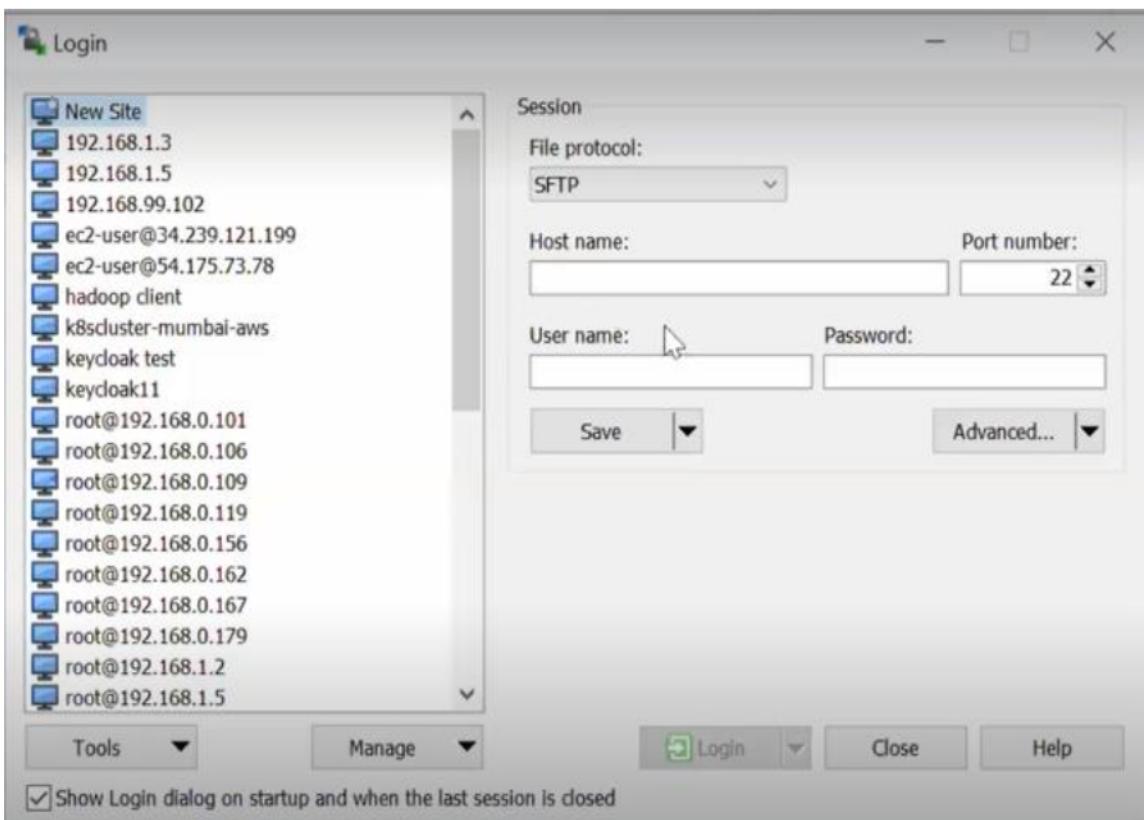
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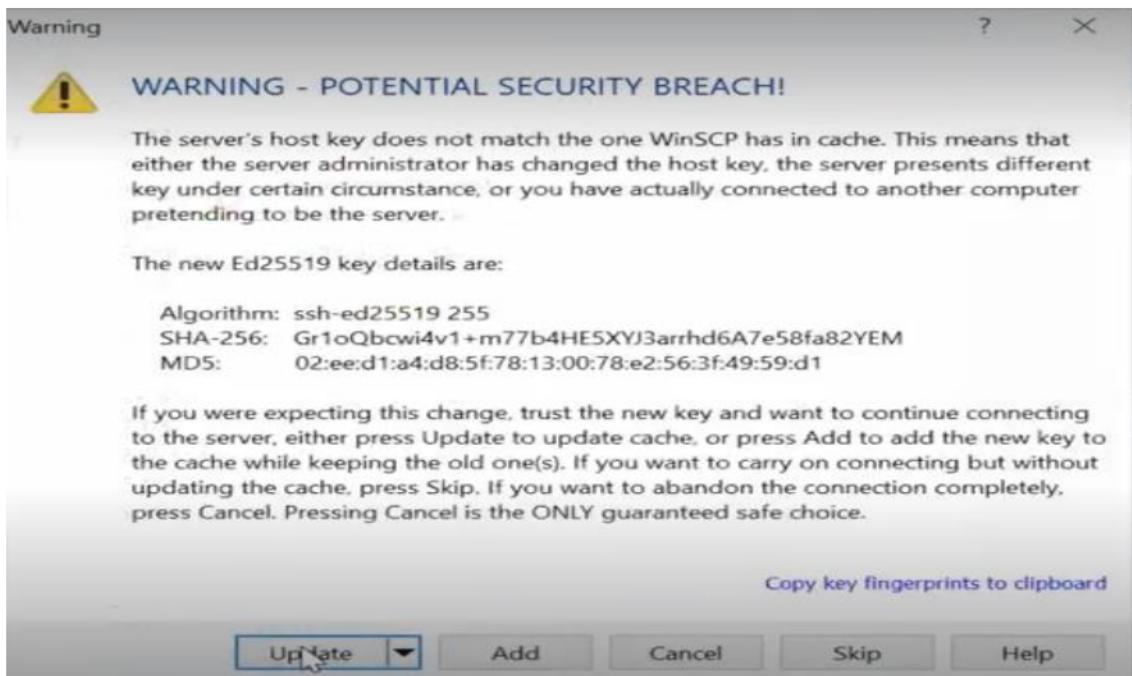
What is this?





➤ Click on New Site





C:\Users\Vimal Daga\Documents\DevOps Training 2022\ansible\vars			/root/		
Name	Size	Type	Name	Size	Changed
..		Parent directory	..		08-10-2022 16:05:28
network		File folder	aaa		09-10-2022 16:11:40
e.yml	1 KB	YML File	code		29-10-2022 16:46:26
m.yml	1 KB	YML File	Desktop		08-10-2022 17:15:54
pass.yml	1 KB	YML File	Documents		08-10-2022 17:15:54
web.yml	1 KB	YML File	Downloads		08-10-2022 17:15:54
first.html.j2	1 KB	J2 File	hhhh		29-10-2022 16:35:00
backup_first2.yml	1 KB	YML File	Music		08-10-2022 17:15:54
backup_web.yml	1 KB	YML File	Pictures		16-10-2022 16:13:41
backup.html.j2	1 KB	J2 File	Public		08-10-2022 17:15:54
webvar.yml	1 KB	YML File	Templates		08-10-2022 17:15:54
web.conf.j2	1 KB	J2 File	Videos		08-10-2022 17:15:54
dockercyml	1 KB	YML File	a.txt	0 KB	09-10-2022 16:11:47
myfacts.yml	1 KB	YML File	anaconda-ks.cfg	1 KB	08-10-2022 16:15:42
webserver.yml	1 KB	YML File	vimal.txt	1 KB	29-10-2022 16:38:17
mycmd.yml	1 KB	YML File	yy.txt	1 KB	29-10-2022 16:45:12
var3.yml	1 KB	YML File			
var2.yml	1 KB	YML File			
file1.yml	1 KB	YML File			

- The ssh protocol supports file transfer

```
#Compression delayed
#ClientAliveInterval 0
#ClientAliveCountMax 3
#UseDNS no
#PidFile /var/run/sshd.pid
#MaxStartups 10:30:100
#PermitTunnel no
#ChrootDirectory none
#VersionAddendum none

# no default banner path
#Banner none

# override default of no subsystems
Subsystem sftp /usr/libexec.openssh/sftp-server

# Example of overriding settings on a per-user basis
#Match User anoncvs
#    X11Forwarding no
#    AllowTcpForwarding no
#    PermitTTY no
#    ForceCommand cvs server
```

- The setting changes is made – in the secondary configuration file

```
[root@localhost sshd_config.d]# cd /etc/ssh/sshd_config.d/  
[root@localhost sshd_config.d]# ls  
01-permitrootlogin.conf 50-redhat.conf  
[root@localhost sshd config.d]# vim 01-permitrootlogin.conf
```

```
# This file has been generated by the Anaconda Installer.  
# Allow root to log in using ssh. Remove this file to opt-out.  
PermitRootLogin yes
```

```
[root@localhost sshd_config.d]# systemctl reload sshd
```

- To create an empty password

```
[root@localhost sshd_config.d]# useradd jack
[root@localhost sshd_config.d]#
[root@localhost sshd_config.d]# passwd -d jack
Removing password for user jack.
passwd: Note: deleting a password also unlocks the password.
passwd: Success
[root@localhost sshd_config.d]# █
```

- To login without password via ssh

```
# For this to work you will also need host keys in /etc/ssh/ssh_known_hosts
#HostbasedAuthentication no
# Change to yes if you don't trust ~/.ssh/known_hosts for
# HostbasedAuthentication
#IgnoreUserKnownHosts no
# Don't read the user's ~/.rhosts and ~/.shosts files
#IgnoreRhosts yes

# To disable tunneled clear text passwords, change to no here!
#PasswordAuthentication yes
PermitEmptyPasswords yes

# Change to no to disable s/key passwords
#KbdInteractiveAuthentication yes

# Kerberos options
#KerberosAuthentication no
#KerberosOrLocalPasswd yes
#KerberosTicketCleanup yes
#KerberosGetAFSToken no
#KerberosUseKuserok yes
```

```
[root@localhost sshd_config.d]# systemctl reload sshd
[root@localhost sshd_config.d]# █
```

```
C:\Users\Vimal Daga>
C:\Users\Vimal Daga>ssh jack@192.168.1.2
Register this system with Red Hat Insights: insights-client --register
Create an account or view all your systems at https://red.ht/insights-dashboard
Last failed login: Sat Oct 29 17:07:51 IST 2022 from 192.168.1.12 on ssh:notty
There were 2 failed login attempts since the last successful login.
Last login: Sat Oct 29 17:07:27 2022 █
```

- To set message of the day

```
[root@localhost sshd_config.d]# vim /etc/motd █
```

A screenshot of a terminal window titled "root@localhost:/etc/ssh/sshd_config.d — vim /etc/motd". The window shows the contents of the /etc/motd file, which includes a welcome message and a note about focusing on study. The bottom of the screen shows the Vim command line with ":wq" entered.

```
#####
##### Welcome Back from diwali festival #####
now focus on study.....
```

```
:wq
```

A screenshot of a terminal window showing a successful SSH login for user "tom". The session starts with a password prompt and displays the same welcome message and study note as the previous screenshot. The bottom of the screen shows the terminal prompt "[tom@localhost ~]\$".

```
localhost login: tom
Password:
Last login: Sat Oct 29 17:12:44 on tty4
#####
##### Welcome Back from diwali festival #####
now focus on study.....
```

```
[tom@localhost ~]$
```

```
[tom@localhost ~]$
```

```
[tom@localhost ~]$
```

- Any one login via ssh they will also get the message of the day

A screenshot of a terminal window titled "root@localhost:/etc/ssh/sshd_config.d — vim /etc/ssh/sshd_config". The window shows the configuration file for the SSH daemon. The "PrintMotd yes" line is highlighted with a red rectangle. The bottom of the screen shows the Vim status bar with "105,2" and "86%".

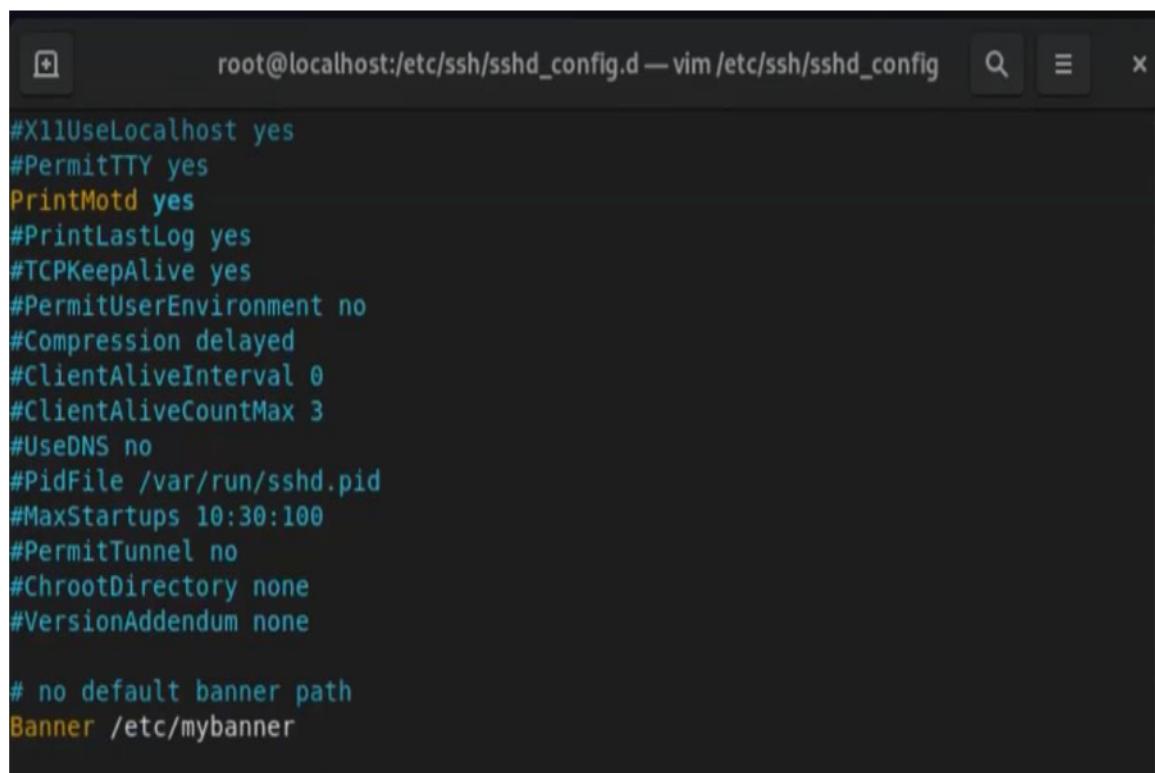
```
# WARNING: 'UsePAM no' is not supported in Fedora and may cause several
# problems.
#UsePAM no

#AllowAgentForwarding yes
#AllowTcpForwarding yes
#GatewayPorts no
#X11Forwarding no
#X11DisplayOffset 10
#X11UseLocalhost yes
#PermitTTY yes
PrintMotd yes
#PrintLastLog yes
#TCPKeepAlive yes
#PermitUserEnvironment no
#Compression delayed
#ClientAliveInterval 0
#ClientAliveCountMax 3
#UseDNS no
#PidFile /var/run/sshd.pid
#MaxStartups 10:30:100
#PermitTunnel no
#ChrootDirectory none
"/etc/ssh/sshd_config" 130L, 3650B
```

105,2 86%

```
C:\Users\Vimal Daga>
C:\Users\Vimal Daga>
C:\Users\Vimal Daga>ssh tom@192.168.1.2
tom@192.168.1.2's password:
#####
##### Welcome Back from diwali festival #####
now focus on study.....
█
Register this system with Red Hat Insights: insights-client --register
Create an account or view all your systems at https://red.ht/insights-dashboard
Last login: Sat Oct 29 17:14:30 2022
[tom@localhost ~]$
```

- To set message of the before the password



The screenshot shows a terminal window with the title "root@localhost:/etc/ssh/sshd_config.d — vim /etc/ssh/sshd_config". The file content is displayed in Vim:

```
#X11UseLocalhost yes
#PermitTTY yes
PrintMotd yes
#PrintLastLog yes
#TCPKeepAlive yes
#PermitUserEnvironment no
#Compression delayed
#ClientAliveInterval 0
#ClientAliveCountMax 3
#UseDNS no
#PidFile /var/run/sshd.pid
#MaxStartups 10:30:100
#PermitTunnel no
#ChrootDirectory none
#VersionAddendum none

# no default banner path
Banner /etc/mybanner
```

```
[root@localhost sshd_config.d]# vim /etc/mybanner
```

```
root@localhost:/etc/ssh/sshd_config.d — vim /etc/mybanner
hey thi s is LW server
not allowed ...
.....
:wq
```

```
Command Prompt - ssh tom@192.168.1.2

C:\Users\Vimal Daga>ssh tom@192.168.1.2
hey thi s is LW server
not allowed ...
.....          ^
tom@192.168.1.2's password:
```