

How to Setup VyOS (Virtual Router Pentest Lab)

 hackingarticles.in/setup-vyos-virtual-router-pentest-lab

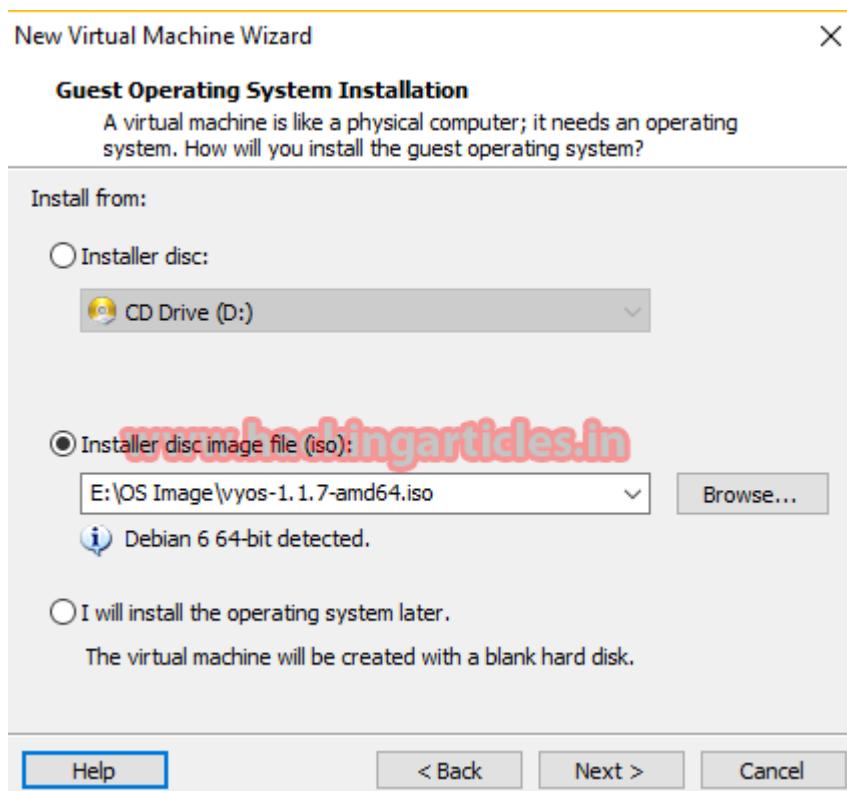
Raj

March 7, 2016

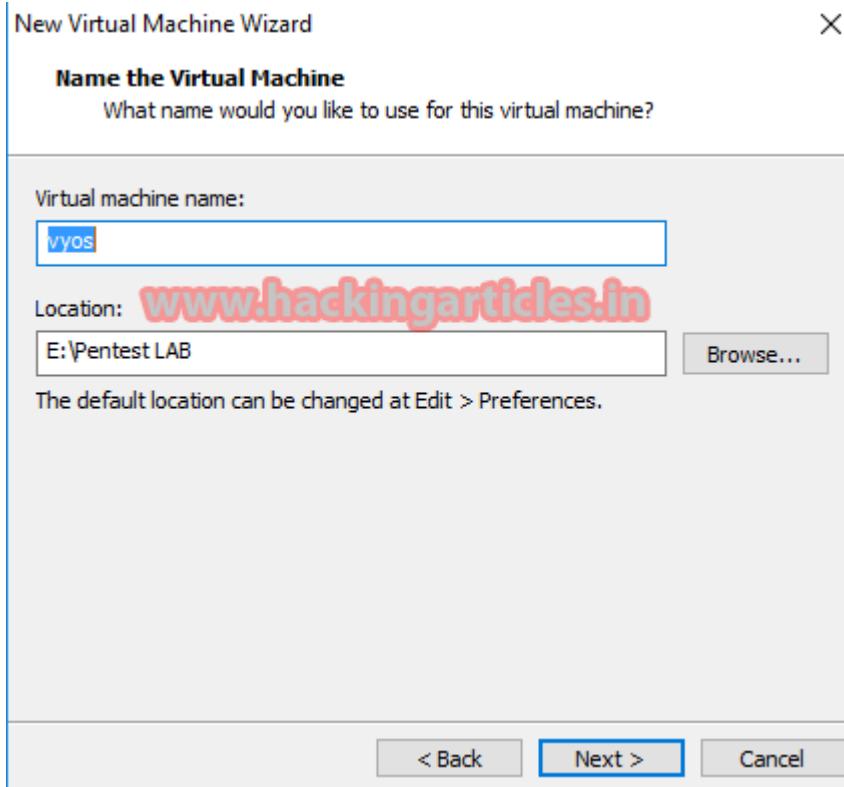
VyOS is a Linux-based network operating system that provides software-based network routing, firewall, and VPN functionality. Its configuration syntax and command-line interface are loosely derived from Juniper JUNOS as modeled by the XORP project.

First Download Vyos iso image from [here](#)

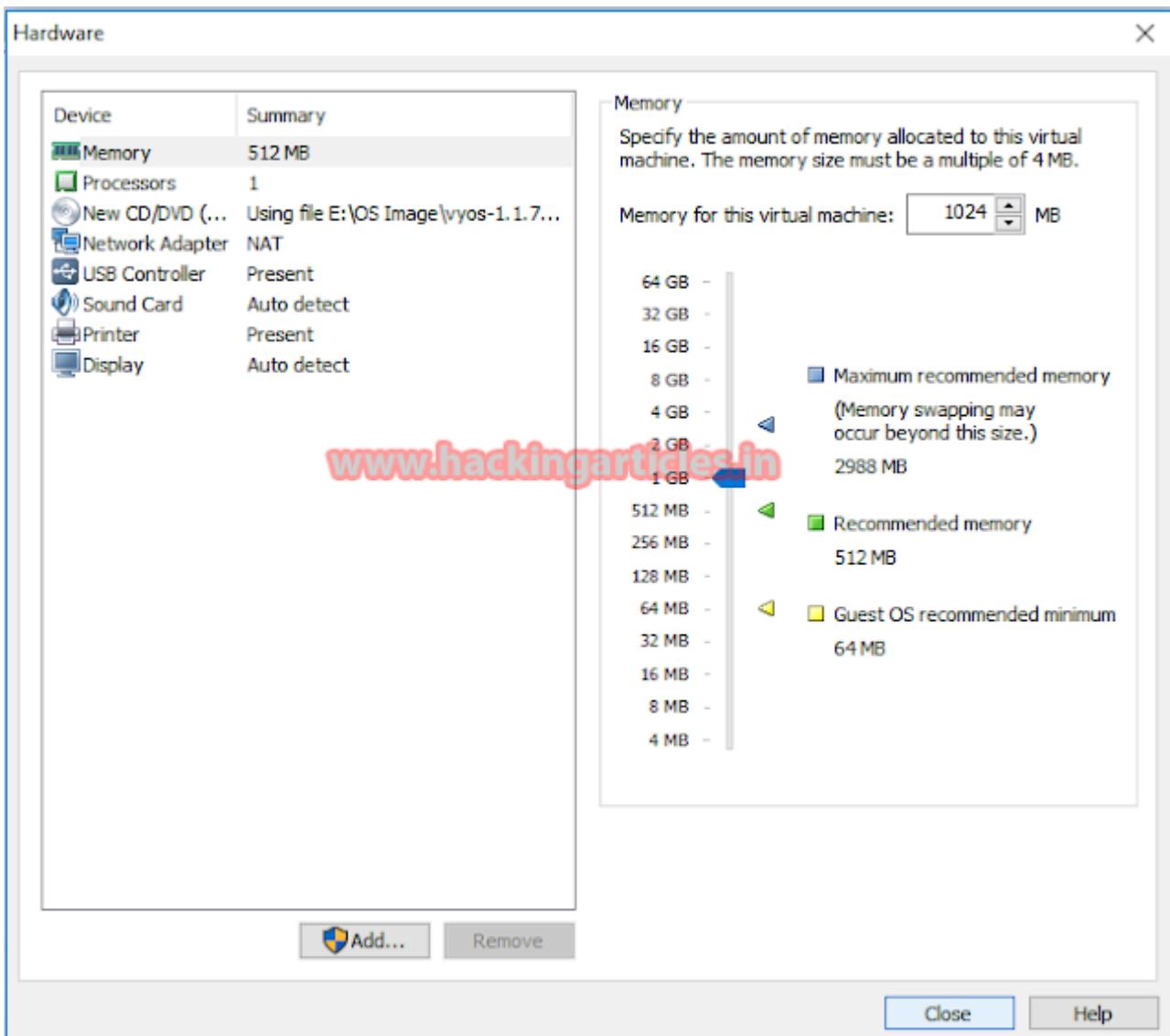
Open **VMWARE** tool, create a new virtual machine. Select **Installer disc image file** and select the OS image of **vyos** and click on **next**.



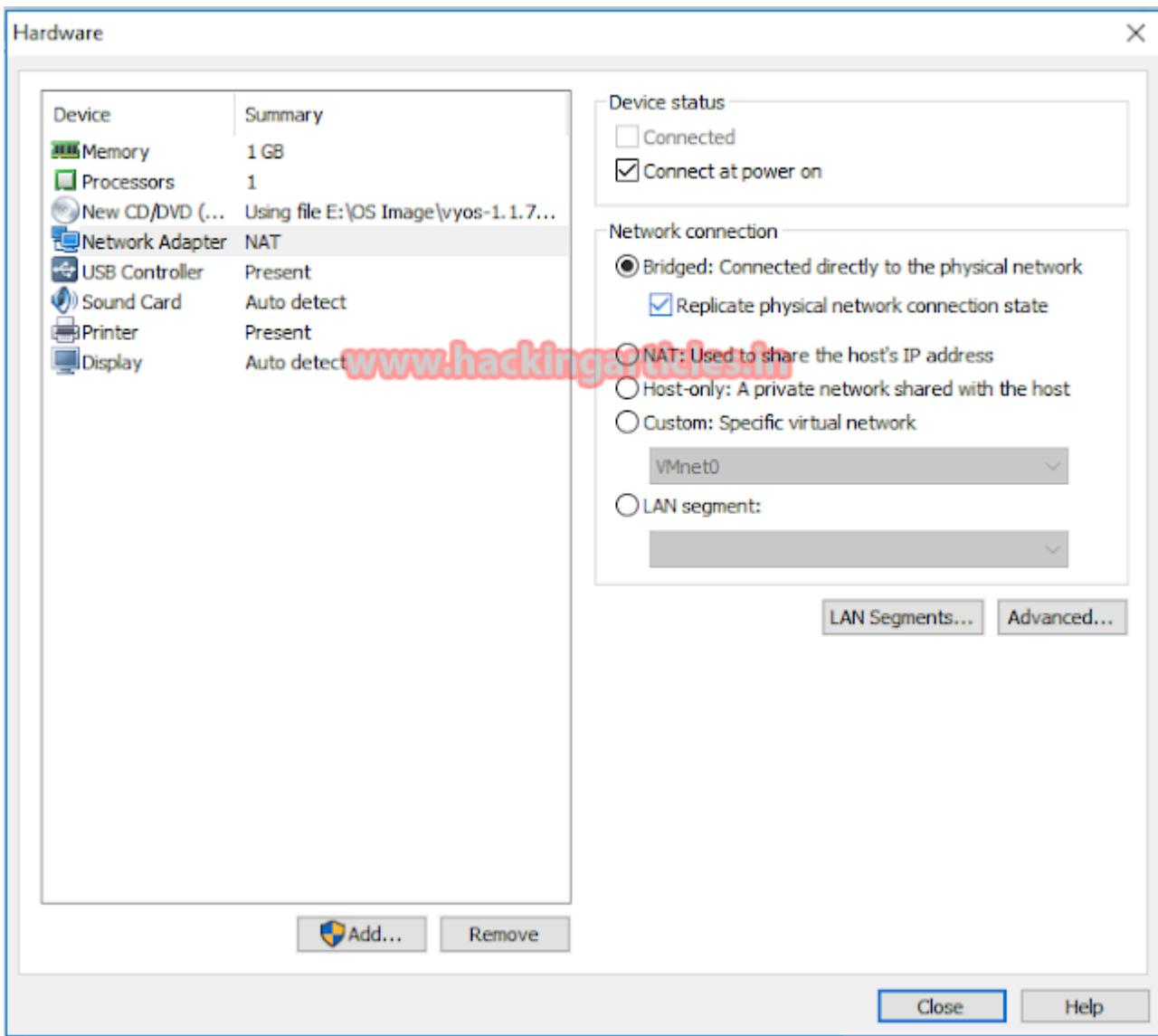
Enter your **virtual machine name** and **location**. Click **next**.



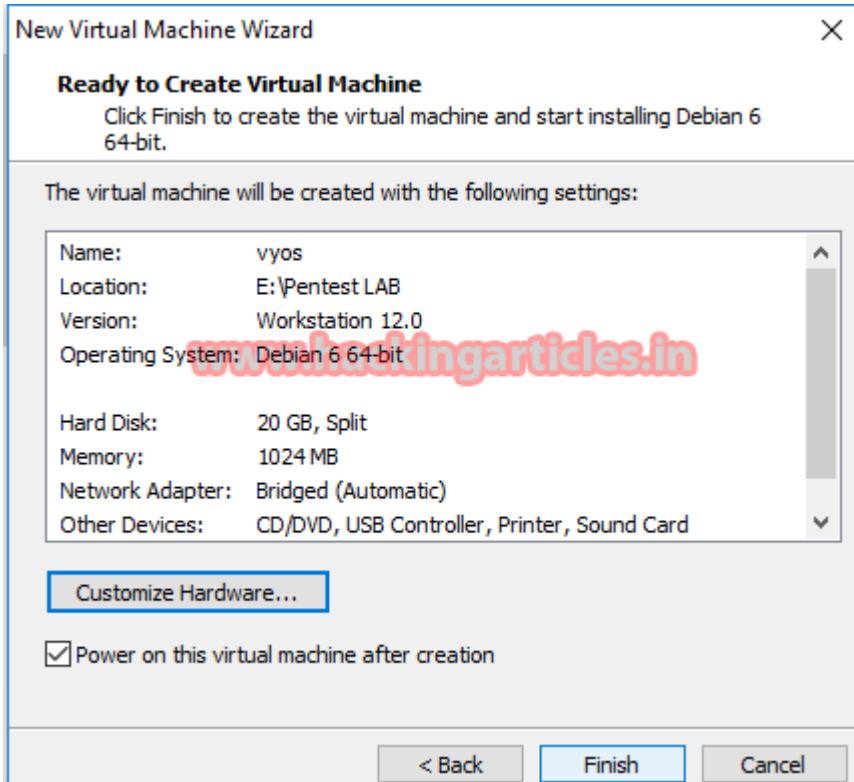
Set Ram up to 1 GB for vyos and click to the network adapter



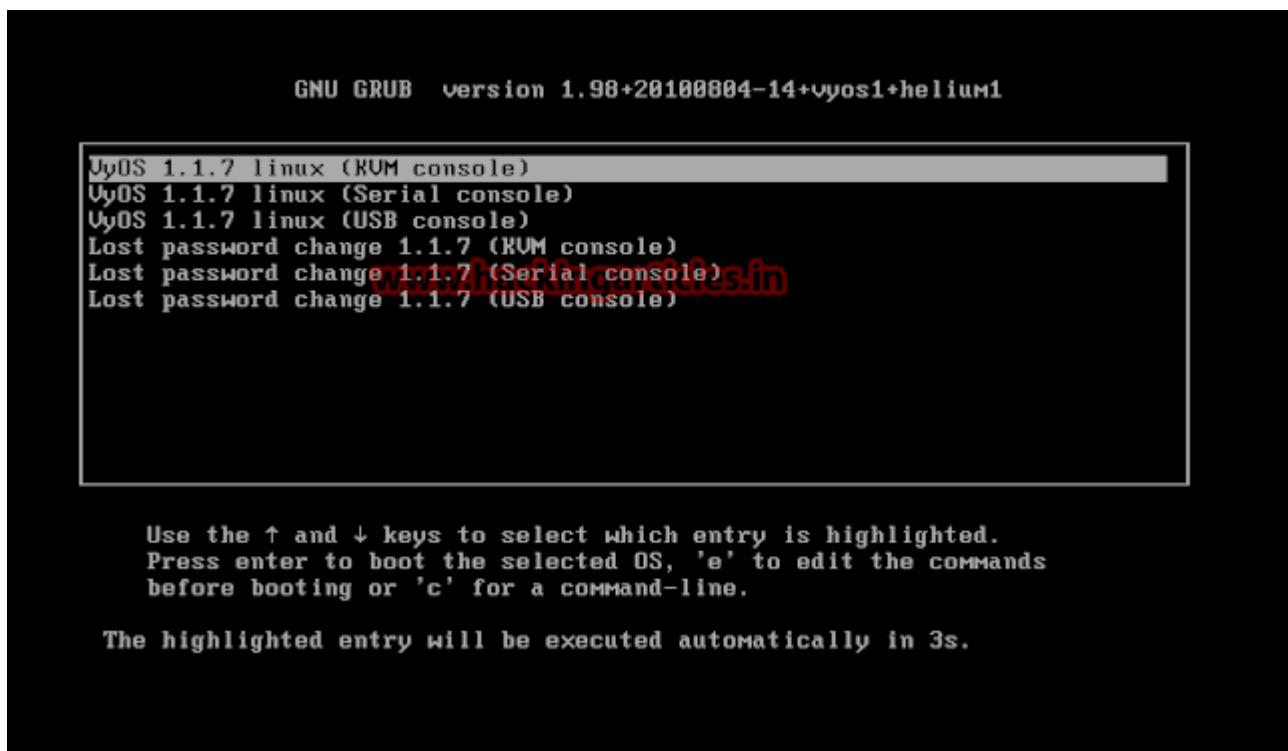
Next, we are choosing our first network adapter. Connect it to the Bridge Adapter and click on **close**.



Then click on **finish**.



Now the installation process will start automatically. It takes a few seconds for the VM to boot and VyOS to load.



After boot screen hit enter and login to **vyos** using the following credentials:

Username: vyos

Password: vyos

```
Welcome to VyOS - vyos tty1  
vyos login: vyos ←  
Password:  
Linux vyos 3.13.11-1-amd64-vyos #1 SMP Wed Aug 12 02:08:05 UTC 2015 x86_64  
Welcome to VyOS  
This system is open-source software. The exact distribution terms for  
each module comprising the full system are described in the individual  
files in /usr/share/doc/*/*copyright.  
vyos@vyos:~$ _
```

Installation of Vyos on local disk. In order to do that simply execute the command: **install image** and press **enter**

Now type **yes** and press **enter** in next option Select **auto** partition press **enter**

```
vyos@vyos:~$ install image ←  
Welcome to the VyOS install program. This script  
will walk you through the process of installing the  
VyOS image to a local hard drive.  
Would you like to continue? (Yes/No) [Yes]: yes ←  
Probing drives: OK  
Looking for pre-existing RAID groups...none found.  
The VyOS image will require a minimum 1000MB root.  
Would you like me to try to partition a drive automatically  
or would you rather partition it manually with parted? If  
you have already setup your partitions, you may skip this step  
Partition (Auto/Parted/Skip) [Auto]: auto ←  
  
I found the following drives on your system:  
sda 21474MB
```

In next option type **yes** to continue press **enter**

```
Install the image on? [sda]:  
  
This will destroy all data on /dev/sda.  
Continue? (Yes/No) [No]: yes ←  
  
How big of a root partition should I create? (1000MB - 21474MB) [21474]MB:  
  
Creating filesystem on /dev/sda1: OK  
Done!  
Mounting /dev/sda1...  
What would you like to name this image? [1.1.7]:  
OK. This image will be named: 1.1.7  
Copying squashfs image...  
Copying kernel and initrd images...  
Done!  
I found the following configuration files:  
  /config/config.boot  
  /opt/vyatta/etc/config.boot.default  
Which one should I copy to sda? [/config/config.boot]: _ ←
```

After the installation is complete Issue the **reboot** command Again type: **yes** press **enter**

```
Enter password for user 'vyos': ←  
Retype password for user 'vyos':  
I need to install the GRUB boot loader.  
I found the following drives on your system:  
sda    21474MB  
  
Which drive should GRUB modify the boot partition on? [sda]:  
Setting up grub: OK  
Done!  
vyos@vyos:~$ reboot  
Proceed with reboot? (Yes/No) [No] yes←
```

Login again to **vyos** and we will start with setting

Now we will check network interfaces using **show interfaces** command

Now Enter configuration mode by typing “**conf**” and have a look at the current interfaces:

```
Welcome to VyOS - vyos tty1  
  
vyos login: vyos ←  
Password:  
Linux vyatta 3.13.11-1-amd64-vyos #1 SMP Wed Aug 12 02:08:05 UTC 2015 x86_64  
Welcome to VyOS.  
This system is open-source software. The exact distribution terms for  
each module comprising the full system are described in the individual  
files in /usr/share/doc/**/copyright.  
vyos@vyos:~$ show interface ←  
Codes: S - State, L - Link, u - Up, D - Down, A - Admin Down  
Interface      IP Address          S/L Description  
----  
eth0           -                 u/u  
lo            127.0.0.1/8        u/u  
              ::1/128  
vyos@vyos:~$ conf_ ←
```

After you made some changes, you need to enter the “**commit**” and “**save**” commands.

Now we will setup network interfaces:

```
set interfaces ethernet eth0 address dhcp
```

Now again you need to enter the “**commit**” and “**save**” commands. Now we will check network interfaces using run **show interfaces** command.

```

[edit]
vyos@vyos# set interfaces ethernet eth0 address dhcp
[edit]
vyos@vyos# commit ←
[ interfaces ethernet eth0 address dhcp ]
Starting DHCP client on eth0...
[edit]
vyos@vyos# save ←
Saving configuration to '/config/config.boot'...
Done
[edit]
vyos@vyos# run show interfaces ←
Codes: S - State, L - Link, u - Up, D - Down, A - Admin Down
Interface      IP Address          S/L  Description
-----
eth0           192.168.1.102/24    u/u
lo             127.0.0.1/8        u/u
              ::1/128
[edit]
vyos@vyos# _

```

Now before we are able to connect to our router with SSH, we will enable SSH In order to do it execute the following commands:

```

set service ssh
commit
save

```

Now before we are able to connect to our router with **TELNET**, we need to enable that. To do so, issue the following commands

```

set service telnet
commit
save

```

```
[edit]
vyos@vyos# save ←
Saving configuration to '/config/config.boot'...
Done
[edit]
vyos@vyos# set service ssh ←
[edit]
vyos@vyos# commit ←
[ service ssh ]
Restarting OpenBSD Secure Shell server: sshd.

[edit]
vyos@vyos# save ←
Saving configuration to '/config/config.boot'...
Done
[edit]
vyos@vyos# set service telnet ←
[edit]
vyos@vyos# commit ←
[edit]
vyos@vyos# save ←
Saving configuration to '/config/config.boot'...
Done
[edit]
vyos@vyos# _
```

To check all enable service type the following command

```
show service
```

```
[edit]
vyos@vyos# show ←
Possible completions:
> interfaces Network interfaces
> service Services
> system System parameters
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[edit]
vyos@vyos# show service ←
ssh {
}
telnet {
}
[edit]
vyos@vyos# _
```

Author: Aarti Singh is a Researcher and Technical Writer at Hacking Articles an Information Security Consultant Social Media Lover and Gadgets [Here](#).