

How to Setup VyOS (Virtual Router Pentest Lab)

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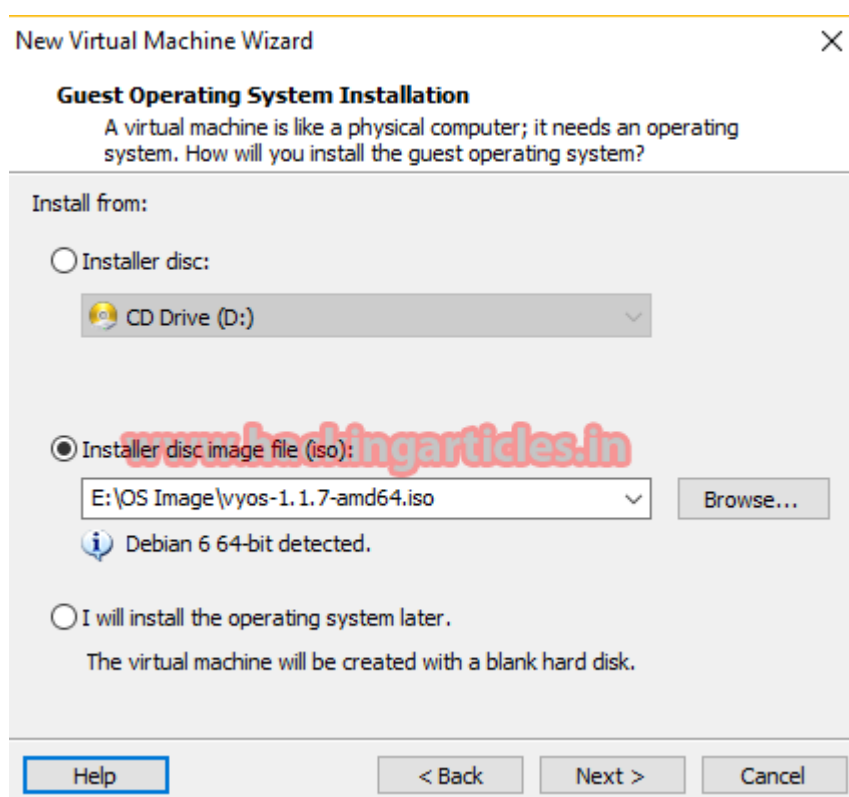
Raj

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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**.

New Virtual Machine Wizard ✕

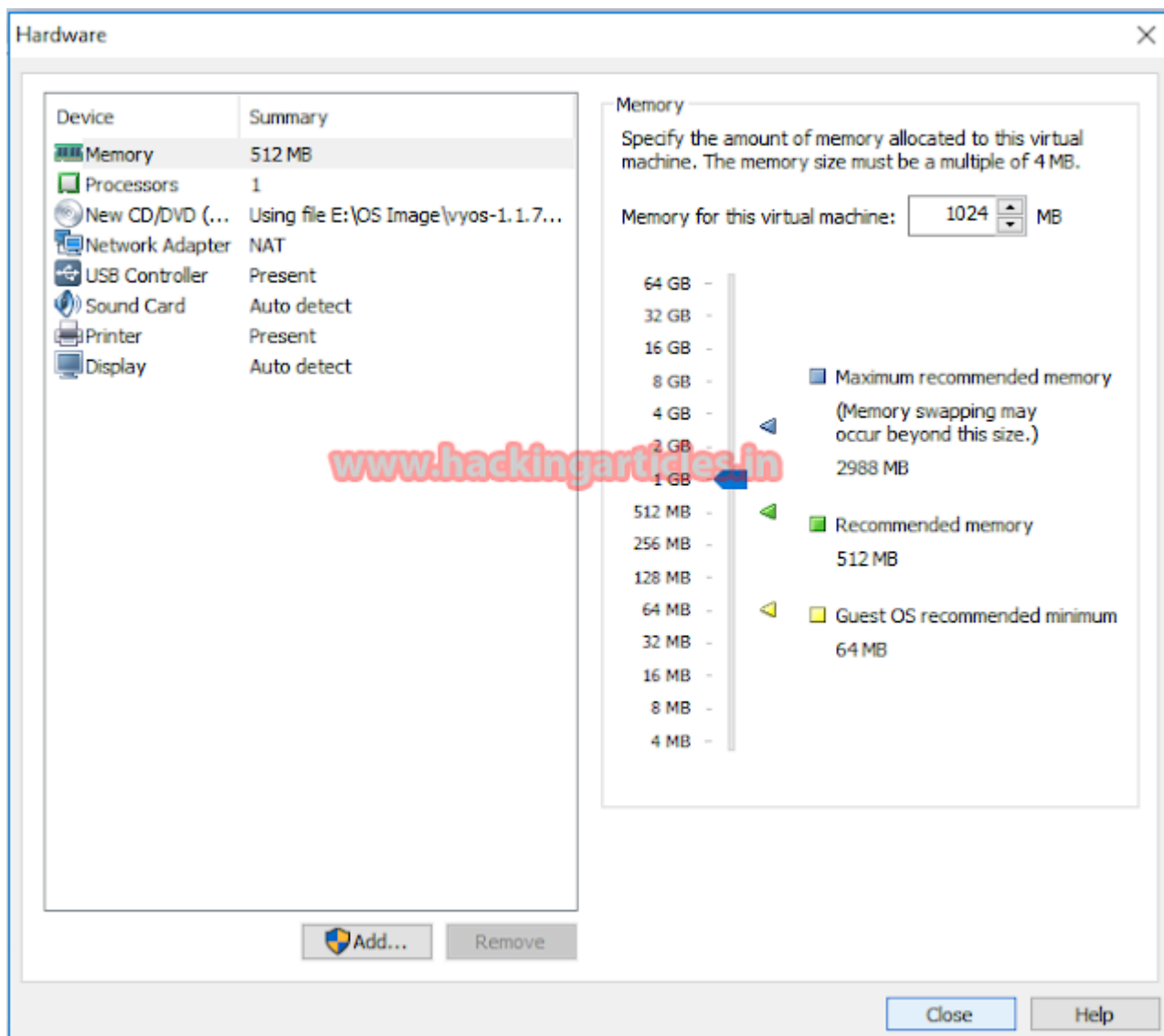
Name the Virtual Machine
What name would you like to use for this virtual machine?

Virtual machine name:

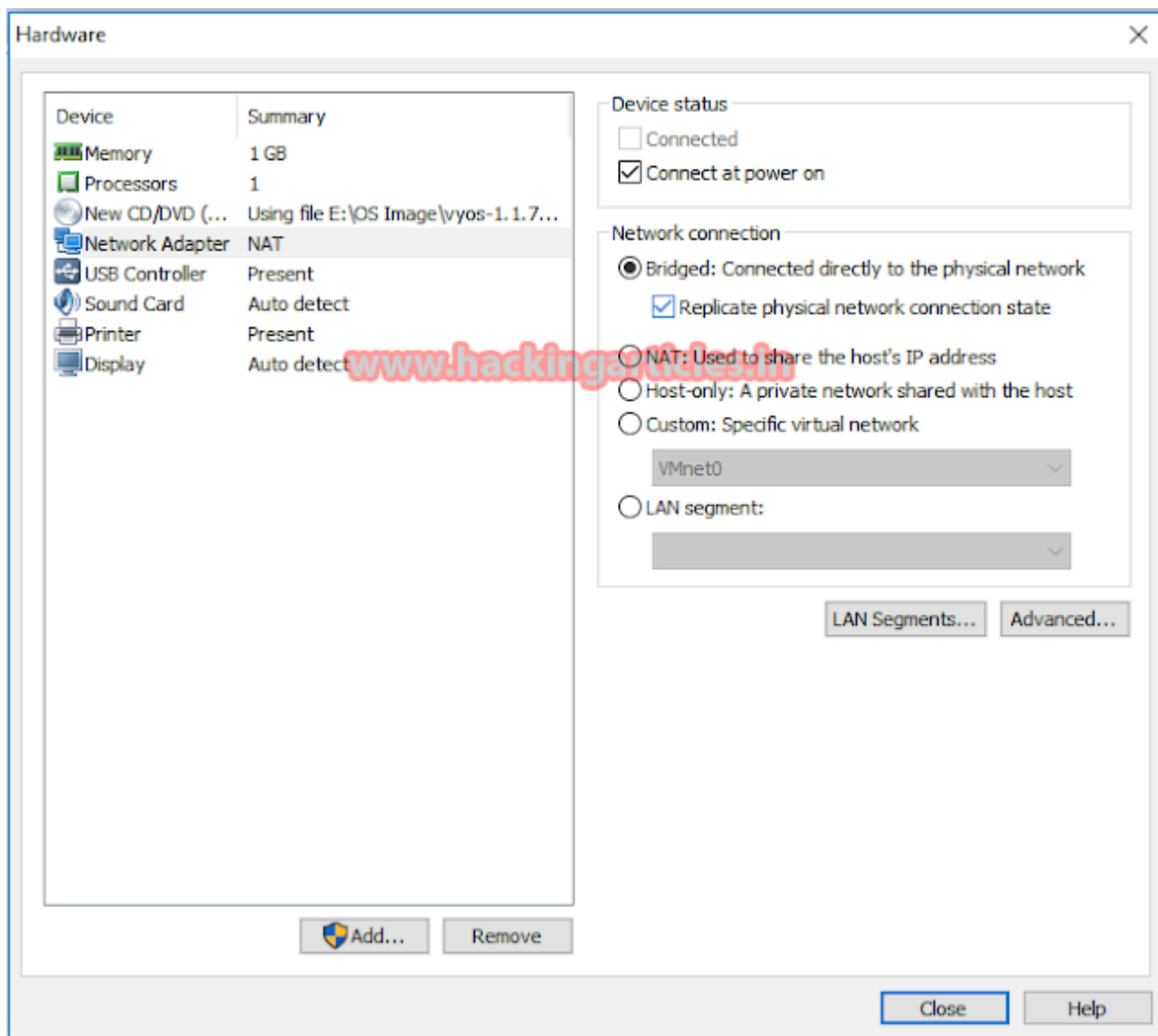
Location: www.hackingarticles.in

The default location can be changed at Edit > Preferences.

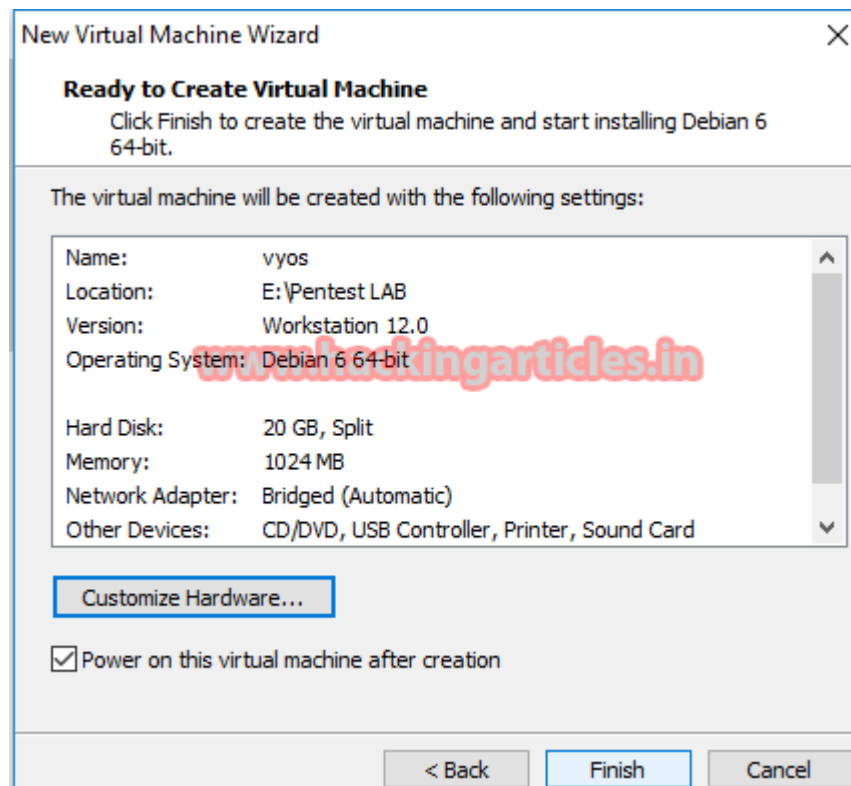
Set Ram up to 1 GB for vyos and click to the network adapter



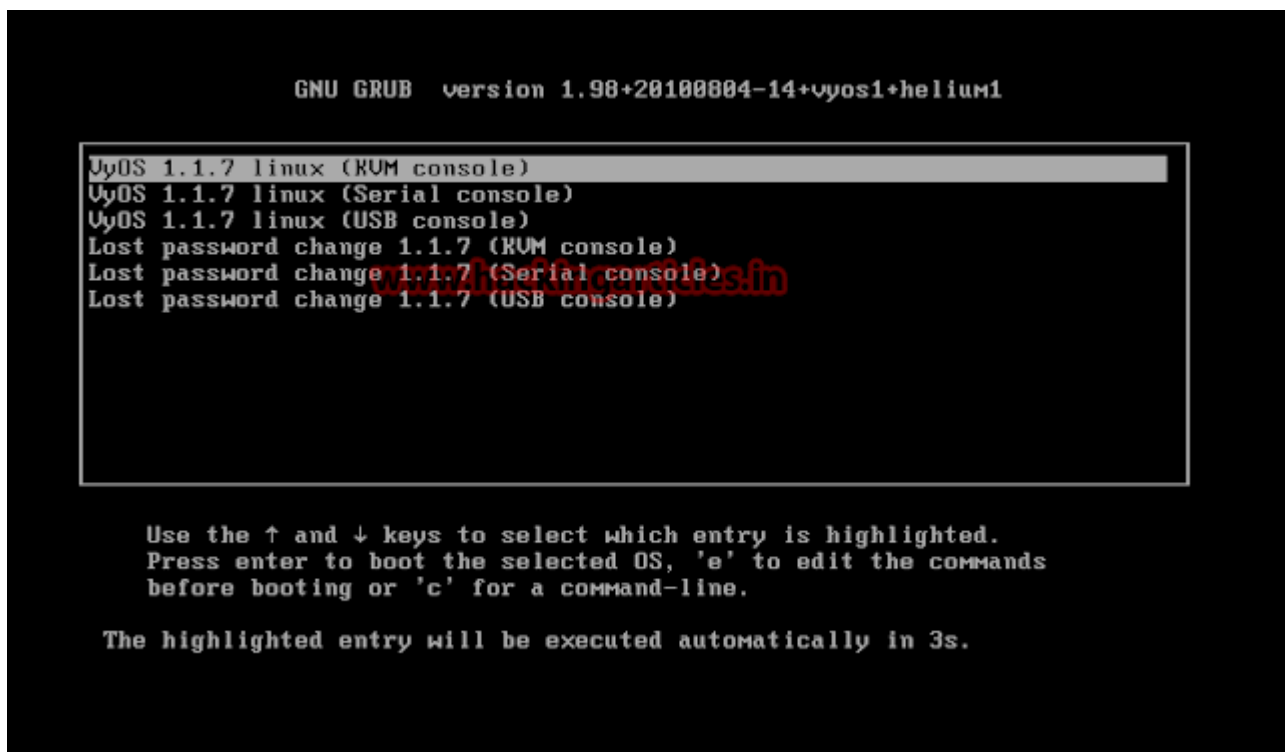
Next, we are choosing our first network adapter. Connect it to the Bridge Adapter and click on **close**.



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

[edit]
vyos@vyos# show service
ssh {
}
telnet {
}
[edit]
vyos@vyos# _

```

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