Software :

Virtual Machine: VMware Player/VMware Workstation/VirtualBox

OS : Linux Debian 10/9, KaliLinux, Windows XP

all applications can be downloaded at : http://202.180.21.17/download/

Hardware Minimal :

Processor : Laptop i5

RAM : 4 GB

HOST OS : Windows 7

Internet

Work Steps

- 1. Install Virtual Machine
- 2. Create PC host, scheme :



No	Steps	Information	
1.	Install Debian	Version: 10 Codename : Buster	
	Boot :	DVD/CD : ISO	
	Type installation	Install text	
	Instalasi language	English	
	your location	Other > Asia > Indonesia	
	keyboard	American English.	
	Network	Do not configure thenetwork at this time	
	Hostname	debian1	
	Root password	root123 * case sensitive	
	Full name for new user	guru tkj * case sensitive	
	Username for your account	guru * case sensitive	
	Password new user	guru123 * case sensitive	
	Time Zone	based on your location exp : Jakarta	
	Partisi hardisk (partisi hardisk)	Guide Partition. Sparate /home partition (recommend new users)	
	Configuration Packet manager. Scan Another CD or DVD	No Survey : no	
	Software Selection	1. Standar System Utility	
		2. ssh	
	install GRUB boot loader on Hardisk :	Yes /dev/sda	
configu	uration		
2.	Login	Root , password: root	
3.	show interfaces	ls /sys/class/net	

4.	Configure network .	nano /etc/network/interfaces #allow-hotplug ens33 auto ens33 iface ens33 inet static address 192.168.1.11 netmask 255.255.255.0 gateway 192.168.1.1 dns-nameservers 192.168.1.1 auto ens34 iface ens34 inet static address 192.168.100.254 netmask 255.255.255.0	
		Note: all ip address adapted with your condition	
		network.	
		The configuration above is just an example	
		Resolv conf	
		nano /etc/resolv.conf	
		nameserver 172 16 116 1	
		nameserver 1 1 1 1	
		nameserver 1 0 0 1	
		nameserver 114 129 23 33	
		(disesuaikan jaringan masing)	
		Ctr x	
		Save : Y	
5.	Check	Ip addr	
6.	Repository file	nano /etc/apt/sources.list	
		Deactive all repository with #	
		add configure below :	
		deb http://kartolo.sby.datautama.net.id/debian/	
		buster main contrib non-free	
		deb http://kartolo.sby.datautama.net.id/debian/ buster-updates main contrib non-free	
		deb http://kartolo.sby.datautama.net.id/debian-security/ buster/updates main contrib non-free	
7.	Update debian	apt-get update	
8.	Install ifconfig	apt-get install net-tools	
9.	Install iptables	apt-get install iptables-persistent apt-get install netfilter-persistent	

10.	Router Configuration	nano /etc/sysctl.conf	
11.		Change line :	
		net.ipv4.ip_forward=0	
		to	
		net.ipv4.ip_forward=1	
12.		nano /proc/sys/net/ipv4/ip_forward	
13.		Change	
		То	
		1	
14.	Iptables command	iptables -t nat -A POSTROUTING -o ens33 -j MASQUERADE	
15.	Save iptable	iptables-save	
		or	
		netfilter-persistent save	
16.	Show location iptables save	nano /etc/iptables/rules.v4	
17.	Install Debian 10	PC Guest 2 : server, do as steps 1	
	Confifuration	1	
18.	Login	Root , password: root	
19.	show interfaces	ls /sys/class/net	
20.	Configure network file	nano /etc/network/interfaces	
		#allow-hotplug ens33	
		auto ens33	
		iface ens33 inet static	
		address 192.168.100.1	
		netmask 255.255.255.0	
		aateway 192.168.100.254	
		dns-nameservers 192.168.1.1	
		Ctr y	
		Save · V	
		Note: all in address adapted with your condition	
		network	
		The configuration above is just an example	
21.	Check	lp addr	
22.	Repository file	nano /etc/apt/sources.list	
		Deactive all repository with #	
		add configure below :	
		deb http://kartolo.sby.datautama.net.id/debian/	
		buster main contrib non-free	

		deb http://kartolo.sby.datautama.net.id/debian/ buster-updates main contrib non-free
		deb http://kartolo.sby.datautama.net.id/debian-security/ buster/updates main contrib non-free
23.	Udate debian	apt-get update
24.	Install ifconfig	ipip
25.	Install http	apt-get install apache2 * configuration and testing later
26.	Install FTP	apt-get install proftpd * configuration and testing later
27.	Install Windows XP/windows 7	PC Guest 3 : client,
28.	Boot	DVD/CD : ISO
	Computer Name	Client XP
	Partition	NTFS single partition, drive C:
	Username	Client
	Password	Admin
	Ip address	192.168.100.2 netmask 255.255.255.0 Gateway : 192.168.100.254 Dns : 192.168.1.1 (sesuaikan dengan internet dns , bisa dengan 8.8.8.8)
29.	Install 10 Kalilinux	PC Guest 3 : testing NMAP, do as steps 1
	Confifuration	
30.	Login	Root , password: root
	show interfaces	ls /sys/class/net
	Configure network file	nano /etc/network/interfaces
	Note: all ip address adapted with your	#allow-hotplug ens33
	condition network.	auto ens33
	The configuration above is just an example	iface ens33 inet static
		adaress 192.168.100.3
		neunusk 255.255.255.0 aateway 192 168 100 254
		dns-nameservers 192 168 1 1
31	Testing NMAP and canture screen your	nman -sP 192 168 100 1-254
51.	results	

	All testing adapted with your ip address condition	nmap –sS –A -O 192.168.100.254 nmap –sS –A -O 192.168.100.1 nmap –sS –A -O 192.168.100.2
32.	Paste capture screen in tables belows	Table 2
33.	Upload this file	LMS your account

Tabel 2 your result

No	Nmap	explanation	capture screen
1	nmap –sP 192.168.100.1-254		
2	nmap –sS –A -O 192.168.100.254		
	nmap —sS —A -O 192.168.100.1		
	nmap –sS –A -O 192.168.100.2		
2	nmap –sS –A -O 192.168.100.254 nmap –sS –A -O 192.168.100.1 nmap –sS –A -O 192.168.100.2		

**Note change with your ip address condition

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	7.	Update debian	apt-get update
	8.	Install ifconfig	apt-get install net-tools
	9.	Install iptables	apt-get install iptables-persistent
	10	Bouter Configuration	nano /etc/sysctl.conf
root@router:~₩ iptables -t nat -A POSTROUTING -o ens33 -j MASQUERADE root@router:^₩ iptables-save ₩ Componend by ytables cave ut 0.2 on Wad Son 22 15:20:52 2021	11.		Change line : net.ipv4.ip_forward=0 to net.ipv4.ip_forward=1
#filter	12.		nano /proc/sys/net/ipv4/ip_forward
:INPUT ACCEPT [0:0] :FORMARO ACCEPT [0:0] :BUTPUT ACCEPT [0:0] COMMIT	13.		Change O To 1
# Completed on Wed Sep 22 15:38:52 2021 # Generated by xtables–save v1.8.2 on Wed Sep 22 15:38:52 2021	14.	Iptables command	iptables -t ngt -A POSTROUTING -o ens33 -j MASQUERADE
*nat :PRERQUTING_ACCEPT_[0:0]	15.	Save iptable	iptables-save or
TINFUT ACCEPT [0:0] :OUTPUT ACCEPT [0:0] :OUTPUT ACCEPT [0:0] -A POSTROUTING -o ens33 -j MASQUERADE COMMIT # Completed on Wed Sep 22 15:38:52 2021 FootBrouter: "# _			
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