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PROG. KEAHLIAN : TKJ		MULAI TGL	: 15/01/2025
TINGKAT : XII	JOB SHEET : Mengkonfigurasi Asterisk (VoIP)	SELESAI TGL	: 15/01/2025
SEMESTER : 6 (genap)		NILAI	:

I. TUJUAN

1. Siswa dapat menjelaskan Asterisk (VoIP)
2. Siswa dapat mendeskripsikan cara instalasi Asterisk (VoIP)
3. Siswa dapat mengkonfigurasi Asterisk (VoIP)

II. ALAT DAN BAHAN

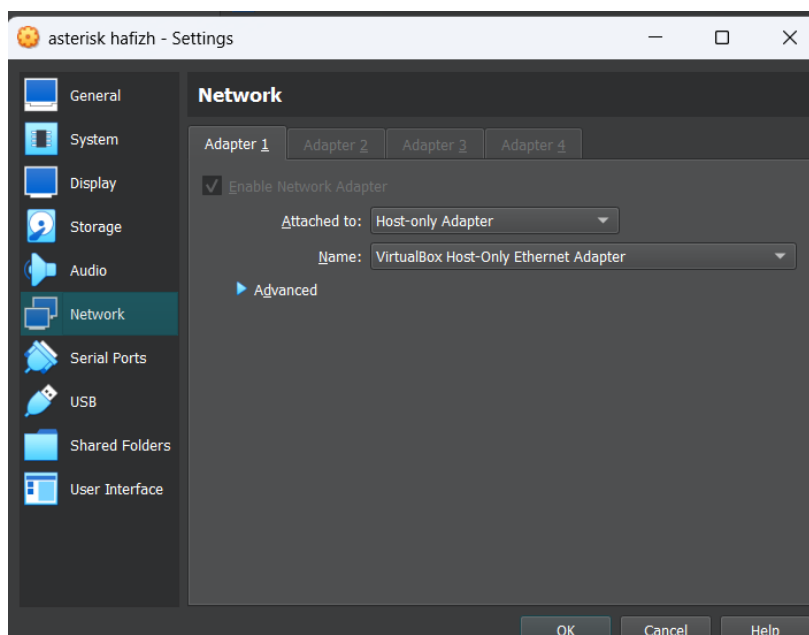
1. PC atau Laptop
2. VirtualBox
3. CD 1 dan 2 debian 8.5
4. Software Zoiper 5 dan 3cx Phone

III. KESELAMATAN KERJA

1. Menghidupkan PC atau Laptop sesuai dengan aturan yang telah ditetapkan
2. Mengatur kabel power serapi mungkin
3. Menggunakan kaca mata pelindung radiasi
4. Menggunakan screen monitor untuk keamanan mata
5. Membackup data data penting ke memori eksternal
6. Mematikan komputer sesuai dengan aturan yang telah ditetapkan

IV. LANGKAH KERJA

1. Atur network menjadi *host-only* pada virtualbox debian;



2. Login sebagai **root** di debian;

```
Debian GNU/Linux 8 hafizh tty1

hafizh login: root
Password:
Last login: Wed Jan 15 16:31:55 WIB 2025 on tty1
Linux hafizh 3.16.0-4-686-pae #1 SMP Debian 3.16.7-ckt25-2 (2016-04-08) i686

The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
root@hafizh:~#
```

3. Konfigurasi IP pada debian menggunakan command **nano /etc/network/interfaces**;

```
GNU nano 2.2.6      File: /etc/network/interfaces

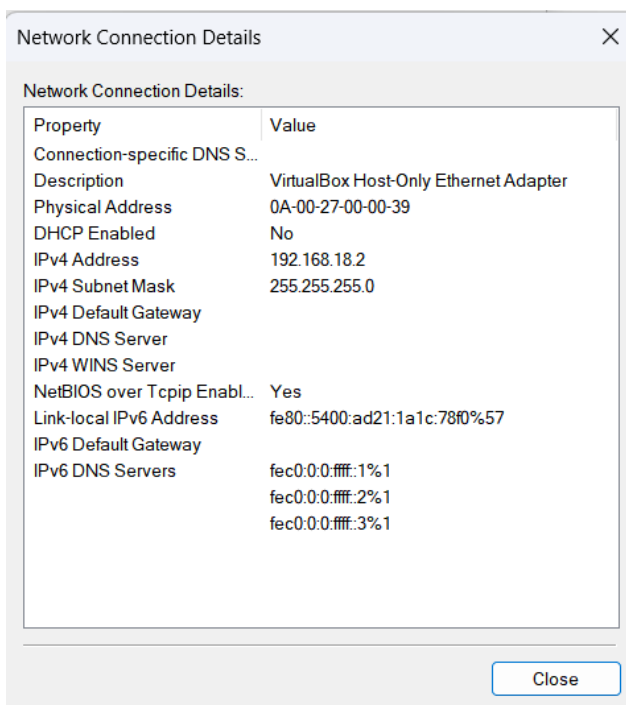
# This file describes the network interfaces available on your system
# and how to activate them. For more information, see interfaces(5).

source /etc/network/interfaces.d/*

# The loopback network interface
auto lo
iface lo inet loopback

# The primary network interface
auto eth0
iface eth0 inet static
    address 192.168.18.1
    netmask 255.255.255.0
```

4. Konfigurasi IP pada control panel;



5. Lakukan restart menggunakan command */etc/init.d/networking restart* kemudian lakukan pengetestan dengan ping IP client dari debian;

```
root@hafizh:~# /etc/init.d/networking restart
[ ok ] Restarting networking (via systemctl): networking.service.
root@hafizh:~# ping 192.168.18.2
PING 192.168.18.2 (192.168.18.2) 56(84) bytes of data.
64 bytes from 192.168.18.2: icmp_seq=1 ttl=128 time=1.62 ms
64 bytes from 192.168.18.2: icmp_seq=2 ttl=128 time=2.42 ms
64 bytes from 192.168.18.2: icmp_seq=3 ttl=128 time=1.85 ms
^C
--- 192.168.18.2 ping statistics ---
3 packets transmitted, 3 received, 0% packet loss, time 2003ms
rtt min/avg/max/mdev = 1.624/1.968/2.429/0.342 ms
root@hafizh:~# _
```

6. Install server asterisk menggunakan command *apt-get install asterisk*;

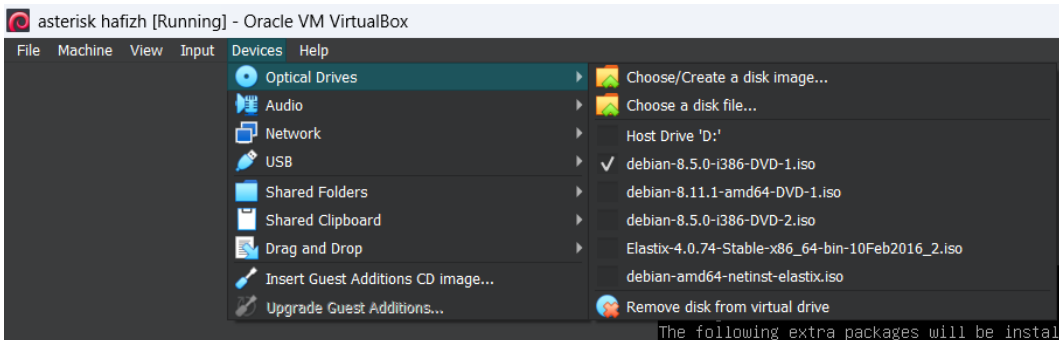
```
root@hafizh:~# apt-get install asterisk
```

7. Pilih y;

```
Do you want to continue? [Y/n] y_
```

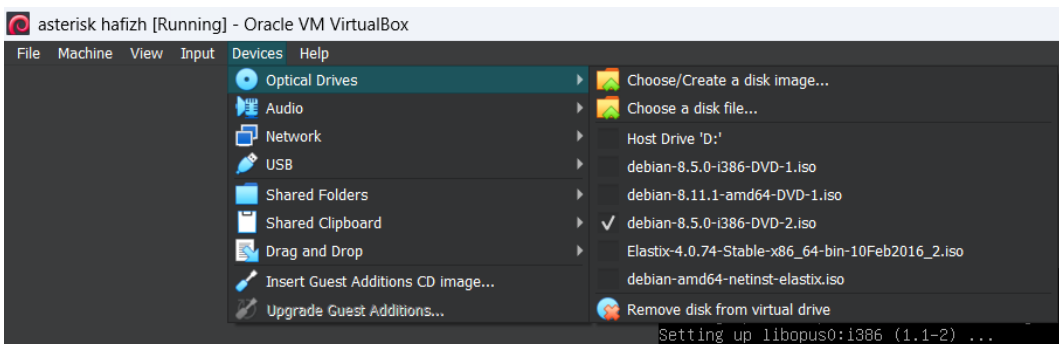
8. Masukkan CD 1 kemudian tekan enter;

```
media change: please insert the disc labeled
'Debian GNU/Linux 8.5.0 _Jessie_ - Official i386 DVD Binary-1 20160604-14:09'
in the drive '/media/cdrom/' and press enter
```



9. Masukkan CD 2 kemudian tekan enter;

```
media change: please insert the disc labeled
'Debian GNU/Linux 8.5.0 _Jessie_ - Official i386 DVD Binary-2 20160604-14:09'
in the drive '/media/cdrom/' and press enter
```



10. Setelah instalasi selesai, kemudian ketikkan command *nano /etc/asterisk/sip.conf*;

```
root@hafizh:~# nano /etc/asterisk/sip.conf_
```

11. Kemudian scroll kebawah, lalu buat 2 akun yang akan digunakan untuk berkomunikasi dengan mengetikkan seperti difoto;

```
GNU nano 2.2.6      File: /etc/asterisk/sip.conf

;type=friend
;secret=digium
;host=dynamic
;rfc2833compensate=yes      ; Compensate for pre-1.4 DTMF transmissi
; You must have this turned on or DTMF r
;t38pt_usertpsource=yes    ; Use the source IP address of RTP as th
; if the nat option is enabled. If a sir
; external IP address of the remote dev
; then UDPTL will flow to the remote dev

[111]
context=telp
type=friend
username=111
secret=111
host=dynamic

[222]
context=telp
type=friend
username=222
secret=222
host=dynamic
```

12. Kemudian ketikkan command ***nano /etc/asterisk/extensions.conf;***

```
root@hafizh:~# nano /etc/asterisk/extension.conf_
```

13. Scroll ke bawah kemudian buat seperti difoto berdasarkan akun yang telah dibuat sebelumnya;

```
[telp]
exten => 111,1,Dial(SIP/111)
exten -> 222,1,Dial(SIP/222)
```

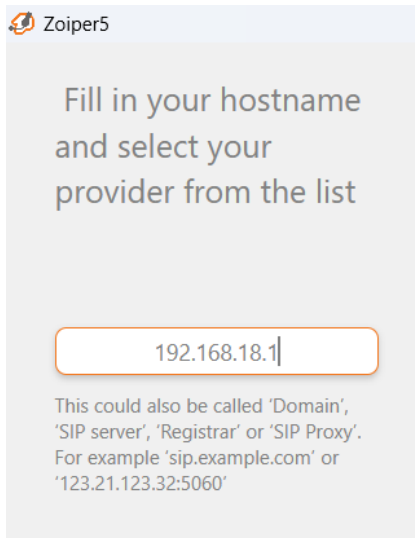
14. Lakukan restart dengan menggunakan command ***/etc/init.d/asterisk restart;***

```
root@hafizh:~# /etc/init.d/asterisk restart
[ ok ] Restarting asterisk (via systemctl): asterisk.service.
root@hafizh:~# _
```

15. Masuk ke software zoiper5 kemudian masukkan akun dan ip yang telah dibuat sebelumnya;



16. Masukkan IP.debian;



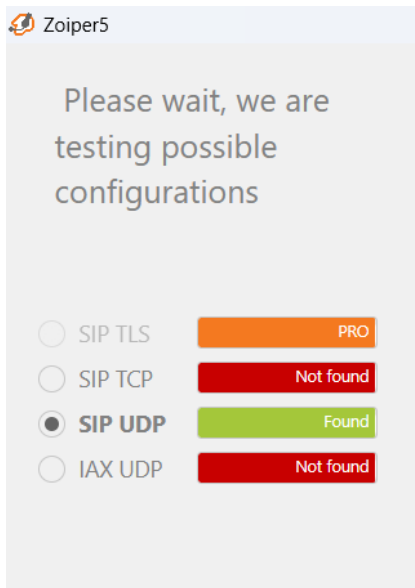
Zoiper5

Fill in your hostname
and select your
provider from the list

192.168.18.1

This could also be called 'Domain',
'SIP server', 'Registrar' or 'SIP Proxy'.
For example 'sip.example.com' or
'123.21.123.32:5060'

17. Kemudian pilih SIP UDP lalu next;

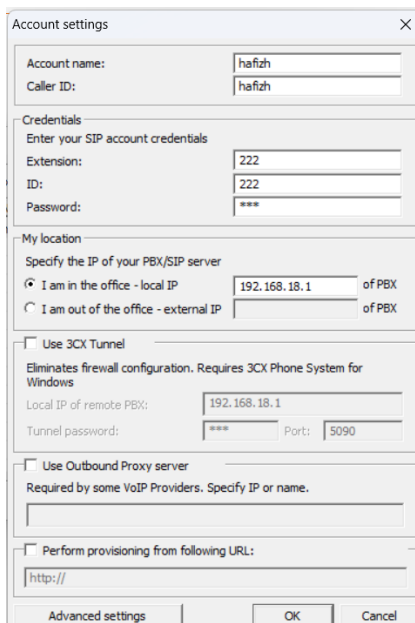


Zoiper5

Please wait, we are
testing possible
configurations

<input type="radio"/> SIP TLS	PRO
<input type="radio"/> SIP TCP	Not found
<input checked="" type="radio"/> SIP UDP	Found
<input type="radio"/> IAX UDP	Not found

18. Masuk ke software 3cx phone kemudian tambahkan akun yang telah dibuat sebelumnya;



Account settings

Account name: hafizh
Caller ID: hafizh

Credentials
Enter your SIP account credentials
Extension: 222
ID: 222
Password: ****

My location
Specify the IP of your PBX/SIP server
☒ I am in the office - local IP 192.168.18.1 of PBX
☐ I am out of the office - external IP of PBX

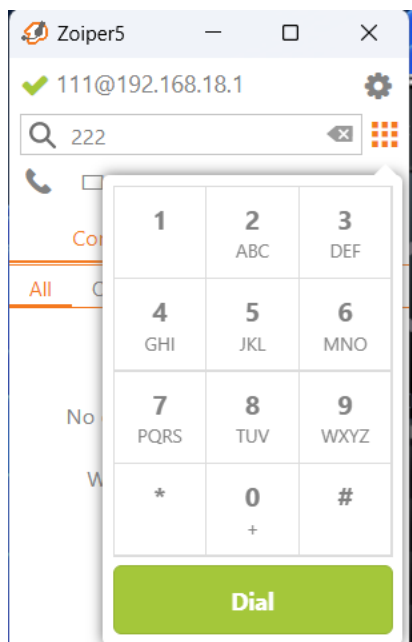
☐ Use 3CX Tunnel
Eliminates firewall configuration. Requires 3CX Phone System for Windows
Local IP of remote PBX: 192.168.18.1
Tunnel password: **** Port: 5090

☐ Use Outbound Proxy server
Required by some VoIP Providers. Specify IP or name.

☐ Perform provisioning from following URL:
http://

Advanced settings OK Cancel

19. Lakukan test dengan menelpon nomor di software 3cx dari software Zoiper 5;



20. Berhasil mendapatkan telpon, dengan demikian konfigurasi Asterisk (VoIP) di debian telah selesai.

