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ARQUITETURA DE COMUNICAÇÕES

INTRODUCTION TO VYOS DEPLOYMENT

Linux VyOS Deployment

After the first boot, load the default configuration and reboot:

```
sudo cp /opt/vyatta/etc/config.boot.default /config/config.boot
reboot
```

Check network interface names: `ip addr`

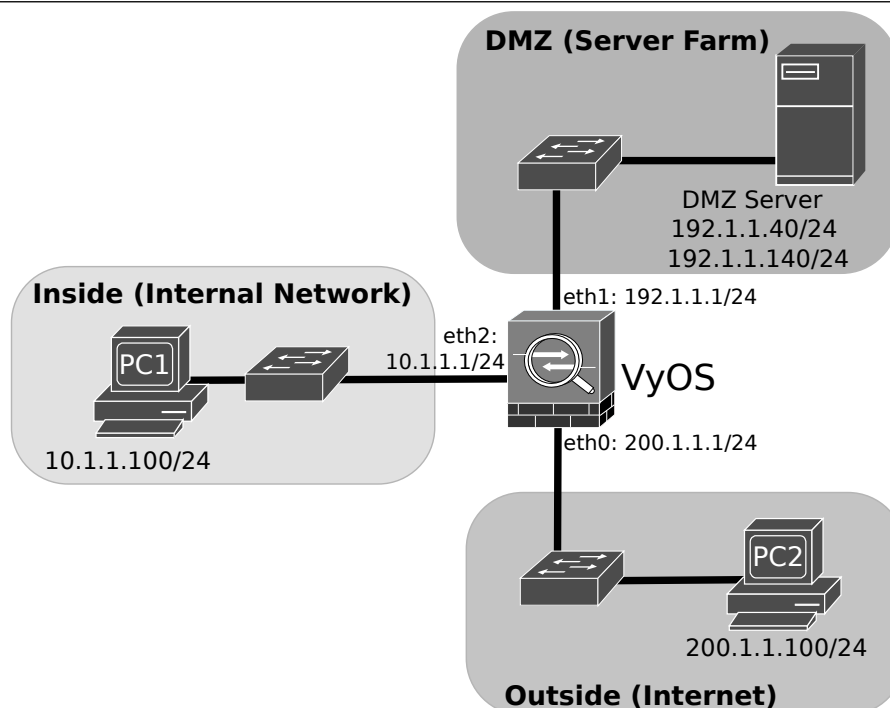
To change the keyboard layout: `set console keymap`

For QEMU GNS3 template use the following parameters: RAM: 512M, Console type: telnet (or none with auto start console checked), HDD Disk interface: ide, Network Adapters: 6, Network Name format: eth{0}.

For VirtualBox GNS3 template use the following parameters: RAM: 512M, Console type: telnet (or none with auto start console checked), Network Adapters: 6, Network Name format: eth{0}, check Network option "Allow GNS3 to use any ... adapter".

VyOS user guide: <https://docs.vyos.io/en/latest/>

1. Configure the network depicted in the following figure using GNS3 with PC1 and PC2 as VPCS, the DMZ server as a QEMU Linux server, and the VyOS device as a QEMU VM. Configure PCs and Server addresses and gateways.



2. Configure VyOS IPv4 addresses using the following commands.

Enter into configuration mode:

```
$ configure
```

Configure the interfaces IPv4 addresses, commit the configurations and exit the configuration mode:

```
# set interfaces ethernet eth0 address 200.1.1.1/24
# set interfaces ethernet eth1 address 192.1.1.1/24
# set interfaces ethernet eth2 address 10.1.1.1/24
# commit
# exit
```

>> Verify the configured addresses with: `$ show interfaces`

>> Test the full connectivity between all network equipment.

If working as expect save the configuration:

```
$ configure
# save
```

Note: the VyOS device, by default, has a blank configuration so it allows all traffic and performs all routing mechanisms.

Note2: The “\$” prompt denotes the standard/bash mode and the “#” denotes the configuration mode.

3. Configure VyOS NAT/PAT mechanisms. Assume that the network will use the IPv4 public address 192.1.0.1 to 192.1.0.10:

```
# set nat source rule 100 outbound-interface eth0
# set nat source rule 100 source address 10.1.1.0/24
# set nat source rule 100 translation address 192.1.0.1-192.1.0.10
```

>> Use the following command to verify the configured NAT rules: \$ show nat source rules

>> Start a capture on the link between the VyOS (eth0) and the OUTSIDE switch. Ping PC2 from PC1 and verify the correct translation of the source IPv4 addresses.

>> Use the following command to verify the active NAT translations: \$ show nat source translations