

Лабораторная работа № 7.

Адресация IPv4 и IPv6.

Настройка DHCP

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Группа: НПИбд02-20

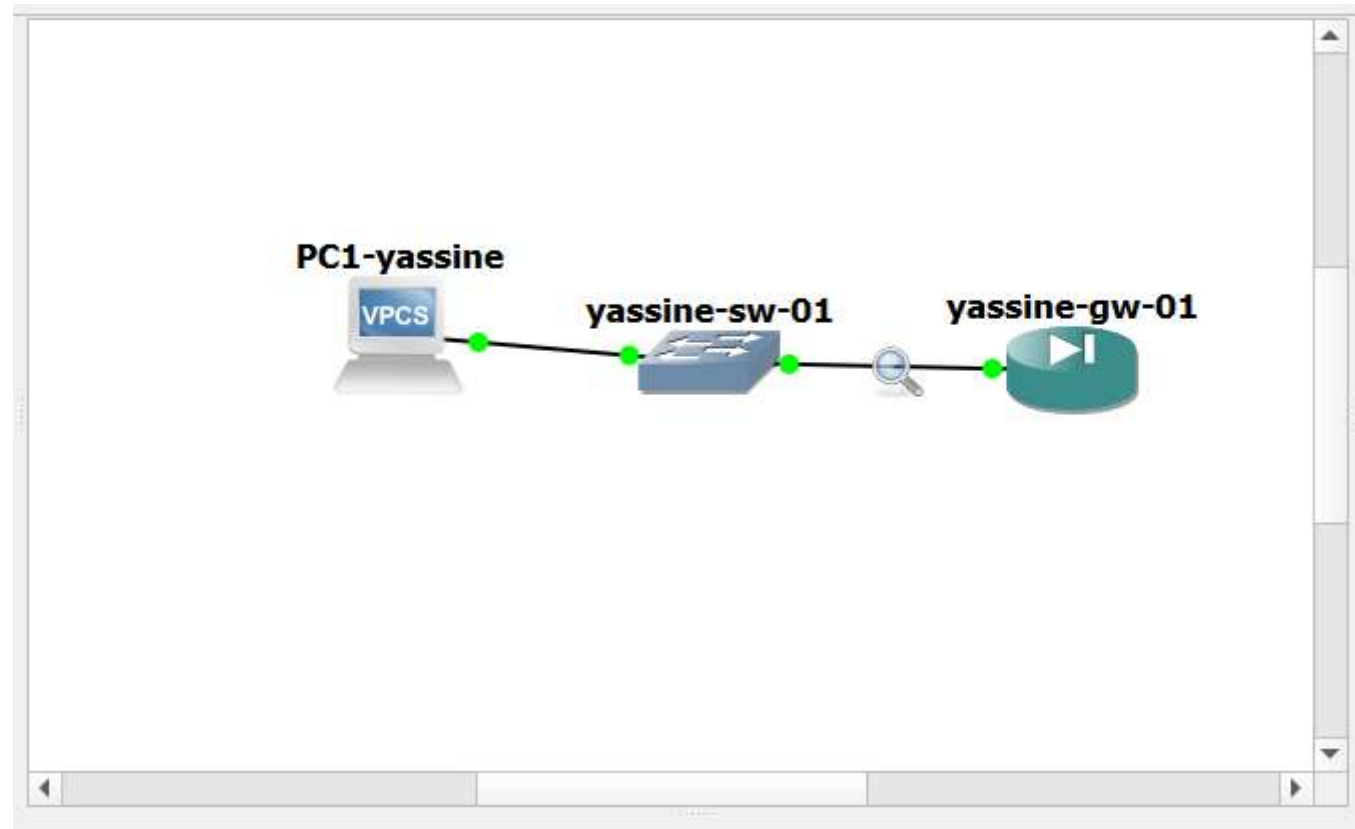
Цель работы

- Получение навыков настройки службы DHCP на сетевом оборудовании для распределения адресов IPv4 и IPv6.

Задания для выполнения

- Настройка DHCP в случае IPv4
- Настройка DHCP в случае IPv6

Настройка DHCP в случае IPv4



```
yassine-gw-01 - PuTTY
K. This image will be named: yassine
copying squashfs image...
copying kernel and initrd images...
done!
found the following configuration files:
  /opt/vyatta/etc/config/config.boot
  /opt/vyatta/etc/config.boot.default
which one should I copy to sda? [/opt/vyatta/etc/config/config.boot]:

copying /opt/vyatta/etc/config/config.boot to sda.
enter password for administrator account
enter password for user 'vyos':
setype password for user 'vyos':
need to install the GRUB boot loader.
found the following drives on your system:
sda  8589MB
sdb  1MB

which drive should GRUB modify the boot partition on? [sda]:

setting up grub: OK
done!
```

```
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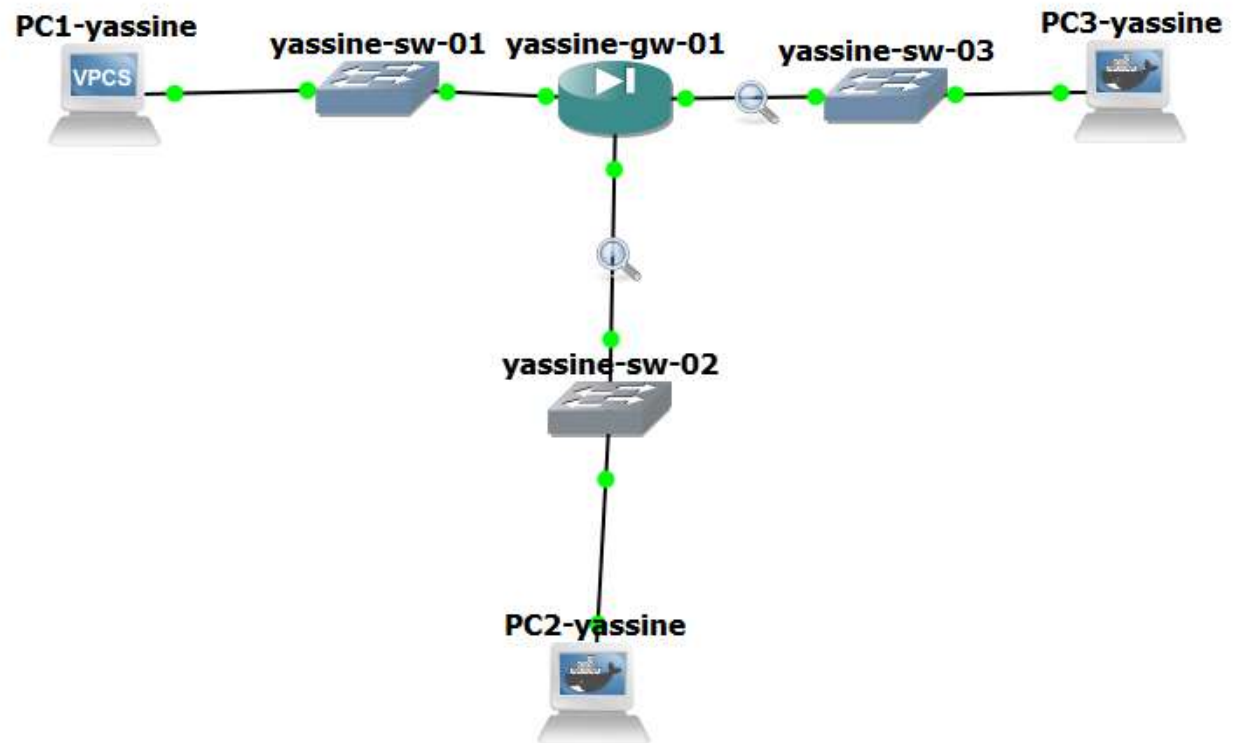
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which drive should GRUB modify the boot partition on? [sda]:

setting up grub: OK
done!
```

```
yassine@yassine-gw-01:~$ show dhcp server statistics
Pool      Size    Leases    Available  Usage
-----
yassine    252      0         252      0%
yassine@yassine-gw-01:~$ show dhcp server leases
IP address  Hardware address  State    Lease start    Lease expiration  Remaining  Pool
l  Hostname
-----
yassine@yassine-gw-01:~$
```

Настройка DHCP в случае IPv6



```

PC2-yassine console is now available... Press RETURN to get started.
root@PC2-yassine:~# ifconfig
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 2000::d8ca:daff:fe25:3768 prefixlen 64 scopeid 0x0<global>
    inet6 fe80::d8ca:daff:fe25:3768 prefixlen 64 scopeid 0x20<link>
    ether da:ca:da:25:37:68 txqueuelen 1000 (Ethernet)
    RX packets 0 bytes 0 (0.0 B)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 14 bytes 1092 (1.0 KiB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

eth1: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet6 fe80::7034:44ff:fed6:27c1 prefixlen 64 scopeid 0x20<link>
    ether 72:34:44:d6:27:c1 txqueuelen 1000 (Ethernet)
    RX packets 0 bytes 0 (0.0 B)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 0 bytes 0 (0.0 B)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
    inet6 ::1 prefixlen 128 scopeid 0x10<host>
    loop txqueuelen 1000 (Local loopback)
    RX packets 0 bytes 0 (0.0 B)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 0 bytes 0 (0.0 B)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

root@PC2-yassine:~# route -n -A inet6
Kernel IPv6 routing table

```

Destination	Next Hop	Flag	Met	Ref	Use	If
2000::/64	::	UAe	256	1	0	eth0
fe80::/64	::	U	256	1	0	eth0
fe80::/64	::	U	256	1	0	eth1
::0	fe80::fda:beff:fed6:1	DNWA	1024	1	0	eth0
::1/128	::	Un	0	3	0	lo
2000::d8ca:daff:fe25:3768/128	::	Un	0	2	0	eth0
fe80::7034:44ff:fed6:27c1/128	::	Un	0	3	0	eth1
fe80::d8ca:daff:fe25:3768/128	::	Un	0	2	0	eth0
ff00::/8	::	U	256	3	0	eth0
ff00::/8	::	U	256	1	0	eth1
::0	::	Un	-1	1	0	lo

```

root@PC2-yassine:~#

```

```

Configuration path: [service router-advert] already exists
[edit]
yassine@yassine-gw-01# set service router-advert interfaces eth1 prefix 2000::/64

Configuration path: service router-advert [interfaces] is not valid
Set failed

[edit]
yassine@yassine-gw-01# set service router-advert interface eth1 prefix 2000::/64

Configuration path: [service router-advert interface eth1 prefix 2000::/64] already exists
[edit]
yassine@yassine-gw-01# set service router-advert interface eth1 other-conf-iflag 1

Configuration path: [service router-advert interface eth1 other-conf-iflag] already exists
[edit]
yassine@yassine-gw-01# set service dhcpv6-server shared-network-name yassine-statele

Configuration path: [Service] is not valid
Set failed

[edit]
yassine@yassine-gw-01# set service dhcpv6-server shared-network-name yassine-statele

Configuration path: [service dhcpv6-server shared-network-name yassine-statele] already exists
[edit]
yassine@yassine-gw-01# set service dhcpv6-server shared-network-name yassine-statele subnet 2000::0/64

Configuration path: [service dhcpv6-server shared-network-name yassine-statele subnet 2000::0/64] already exists
[edit]
yassine@yassine-gw-01# set service dhcpv6-server shared-network-name yassine-statele common-options name-server 2000::1
[edit]

```

```

yassine@yassine-gw-01# configure
[edit]
yassine@yassine-gw-01# set interfaces ethernet eth1 address 2000::1/64
[edit]
yassine@yassine-gw-01# set interfaces ethernet eth2 address 2001::1/64
[edit]
yassine@yassine-gw-01# show interfaces
ethernet eth0 {
    address 10.0.0.1/24
    hw-id 0c:6a:be:b6:00:00
}
ethernet eth1 {
+   address 2000::1/64
    hw-id 0c:6a:be:b6:00:01
}
ethernet eth2 {
+   address 2001::1/64
    hw-id 0c:6a:be:b6:00:02
}
loopback lo {
}
[edit]
yassine@yassine-gw-01# commit
[edit]
yassine@yassine-gw-01# save

Invalid command: [save]

[edit]
yassine@yassine-gw-01# save
Saving configuration to '/config/config.boot'...
Done
[edit]
yassine@yassine-gw-01#

```

ВЫВОД

- Я получил навыков настройки службы DHCP на сетевом оборудовании для распределения адресов IPv4 и IPv6.