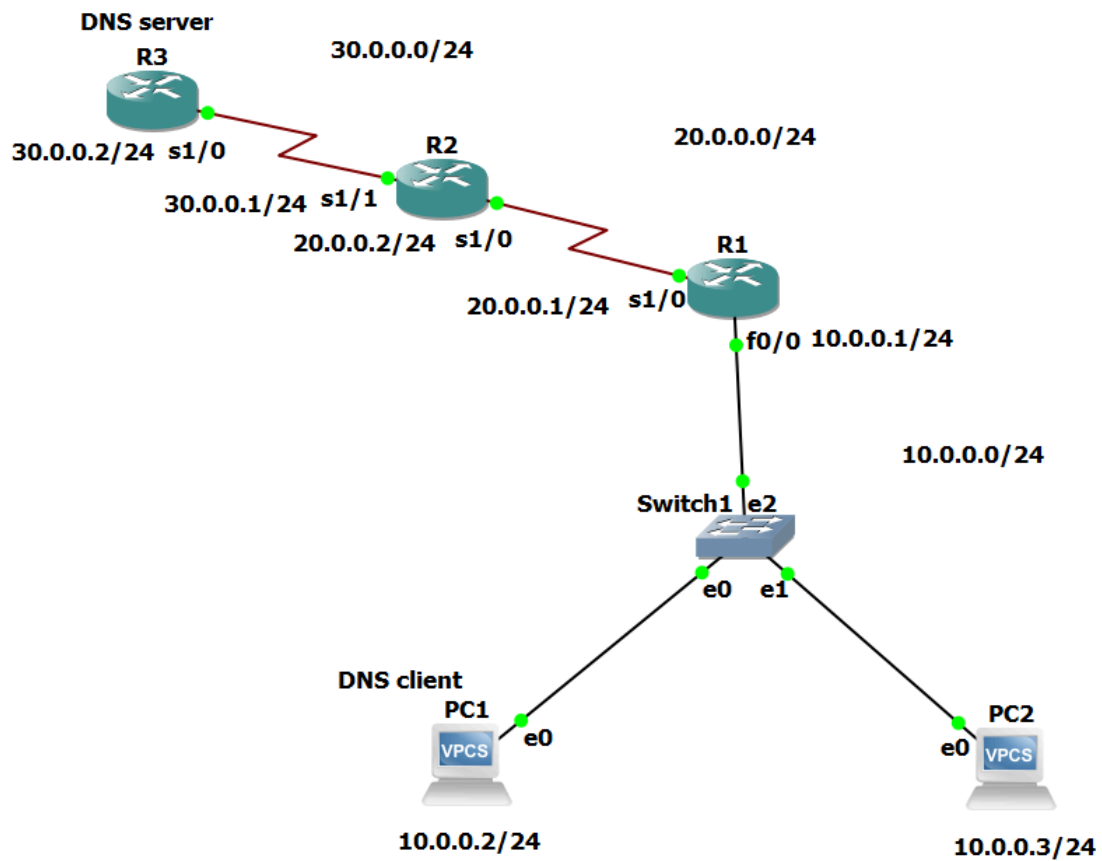


## LAB 7: DNS

1.



**R1:**  
conf t  
inter f0/0  
ip addr 10.0.0.1 255.255.255.0  
no shut  
exit  
inter s1/0  
ip address 20.0.0.1 255.255.255.0  
clock rate 64000  
encapsulation ppp  
no shut  
exit  
ip route 30.0.0.0 255.255.255.0 20.0.0.2  
ip route 0.0.0.0 0.0.0.0 20.0.0.2  
ip domain lookup  
ip name-server 30.0.0.2

**R2:**

```
conf t
inter s1/0
ip addr 20.0.0.2 255.255.255.0
clock rate 64000
encapsulation ppp
no shut
exit
inter s1/1
ip addr 30.0.0.1 255.255.255.0
clock rate 64000
encapsulation ppp
no shut
exit
ip domain lookup
ip name-server 30.0.0.2
ip route 0.0.0.0 0.0.0.0 30.0.0.2
ip route 10.0.0.0 255.255.255.0 20.0.0.1
```

**R3:**

```
conf t
inter s1/0
ip addr 30.0.0.2 255.255.255.0
clock rate 64000
encapsulation ppp
no shut
exit
ip route 20.0.0.0 255.255.255.0 30.0.0.1
ip route 10.0.0.0 255.255.255.0 30.0.0.1
ip dns server
ip host www.siri.com 2.2.2.2
interface loopback 1
ip address 2.2.2.2 255.255.255.255
exit
```

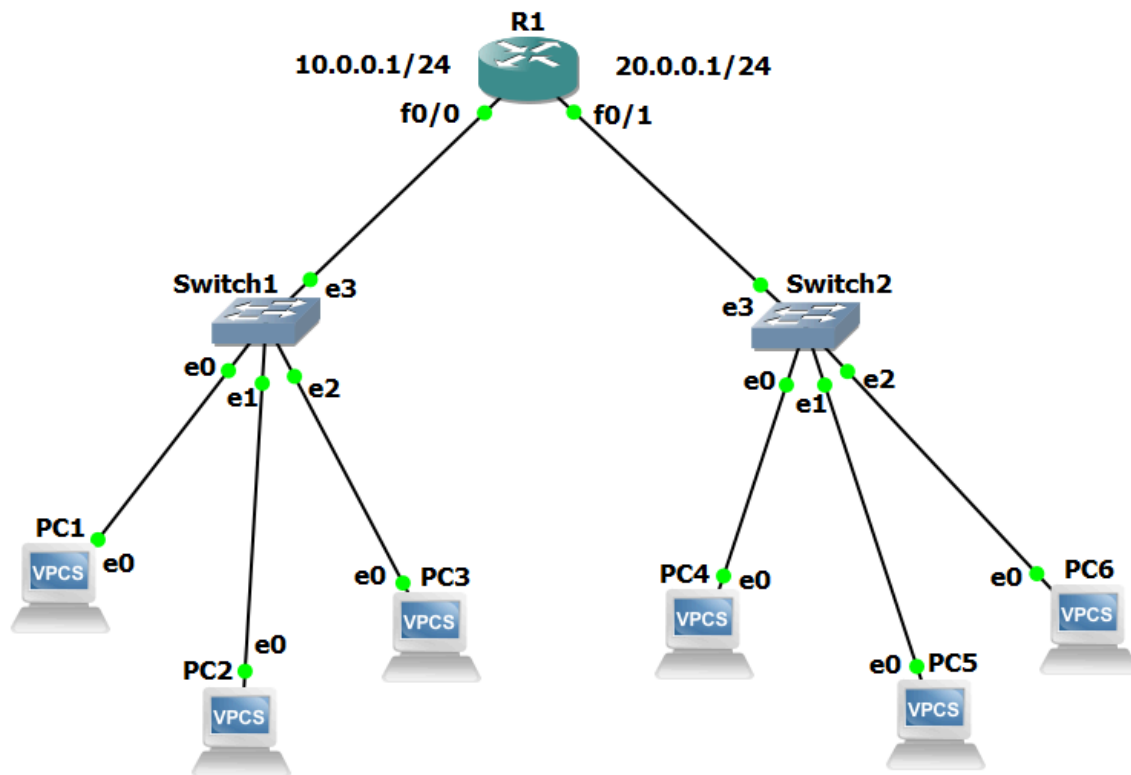
**PC1:**

```
ip 10.0.0.2 255.255.255.0 10.0.0.1
ip dns 30.0.0.2
ping www.siri.com
```

**PC2:**

```
ip 10.0.0.3 255.255.255.0 10.0.0.1
ip dns 30.0.0.2
ping www.siri.com
```

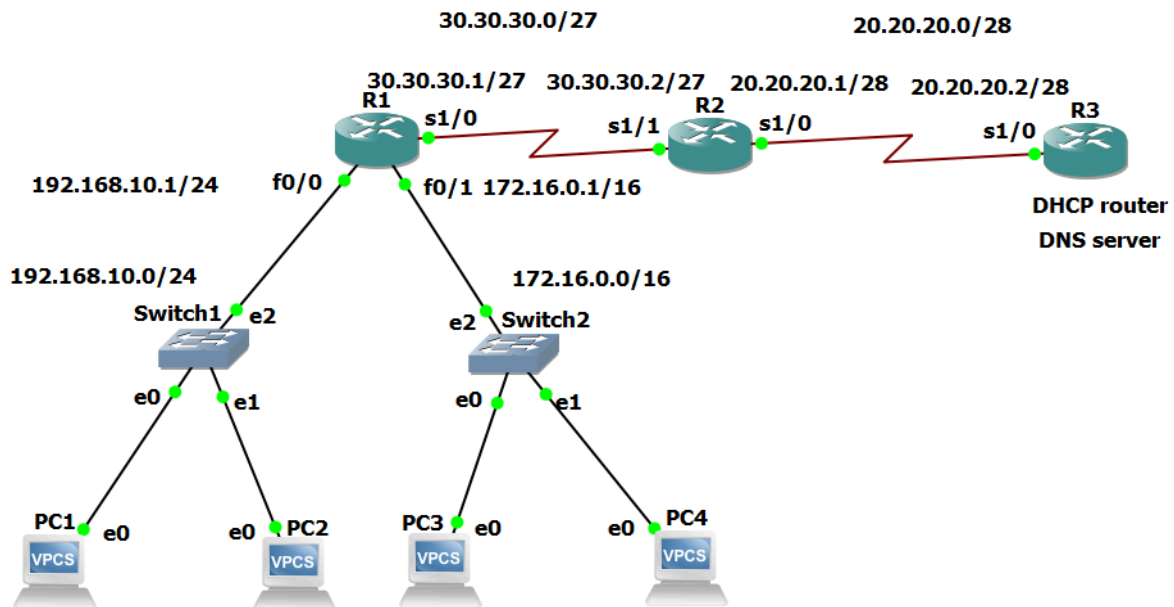
## LAB 8: DHCP



```
R1:
conf t
ip dhcp pool pool1
network 10.0.0.0 255.255.255.0
default-router 10.0.0.1 255.255.255.0
exit
inter f0/0
ip addr 10.0.0.1 255.255.255.0
no shut
exit
ip dhcp pool pool2
network 20.0.0.0 255.255.255.0
default-router 20.0.0.1 255.255.255.0
inter f0/1
ip addr 20.0.0.1 255.255.255.0
no shut
exit
```

PC1:  
dhcp

## DHCP AND DNS



```
R1:
conf t
hostname SIRI-1
inter f0/0
ip address 192.168.10.1 255.255.255.0
ip helper 20.20.20.2
no shut
exit
inter f0/1
ip address 172.16.0.1 255.255.0.0
ip helper 20.20.20.2
no shut
exit
inter s1/0
ip address 30.30.30.1 255.255.255.224
no shut
exit
ip route 20.20.20.0 255.255.255.240 30.30.30.2
```

R2:  
conf t

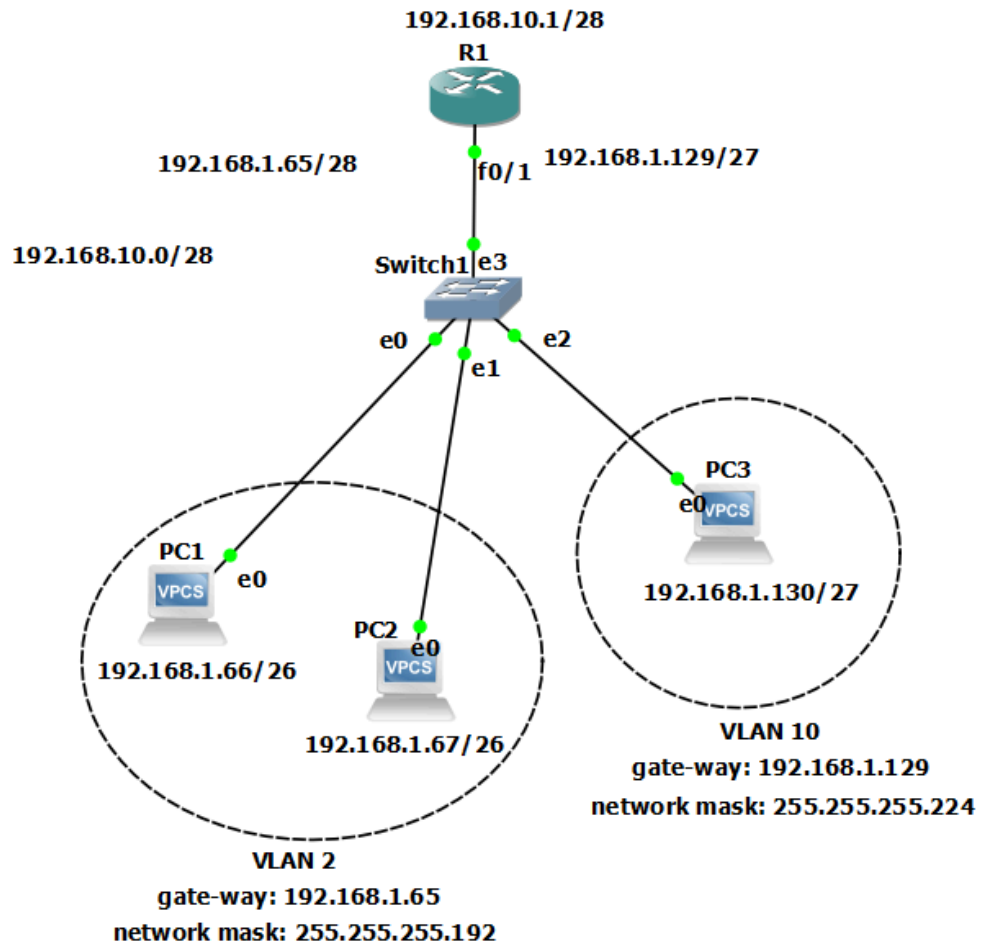
```
hostname SIRI-2
inter s1/0
ip address 30.30.30.2 255.255.255.224
no shut
exit
inter s1/1
ip address 20.20.20.1 255.255.255.240
no shut
exit
ip route 192.168.10.0 255.255.255.0 30.30.30.1
ip route 172.16.0.0 255.255.0.0 30.30.30.1
```

```
R3:
conf t
hostname SIRI-3
inter s1/0
ip address 20.20.20.2 255.255.255.240
no shut
exit
ip route 30.30.30.0 255.255.255.24 20.20.20.1
ip route 192.168.10.0 255.255.255.0 20.20.20.1
ip route 172.16.0.0 255.255.0.0 20.20.20.1
ip dns server
ip host www.siri.com 20.20.20.2
ip dhcp excluded-address 192.168.10.1
ip dhcp excluded-address 192.168.10.254
ip dhcp excluded-address 172.168.0.1
ip dhcp excluded-address 172.168.0.254
ip dhcp pool POOL-CLASS-C
network 192.168.10.0 255.255.255.0
default-router 192.168.10.1
exit
ip dhcp pool POOL-CLASS-B
network 172.16.0.0 255.255.0.0
default-router 172.16.0.1
exit
```

```
PC1:
dhcp
ip dns 20.20.20.2
ping www.siri.com
```

## LAB 9: VLAN

1.



R1:  
conf t  
inter f0/1  
ip address 192.168.10.1 255.255.255.240  
no shut  
exit  
inter f0/1.2  
encapsulation dot1q 2  
ip address 192.168.1.65 255.255.255.192  
no shut  
exit  
inter f0/1.10  
encapsulation dot1q 10

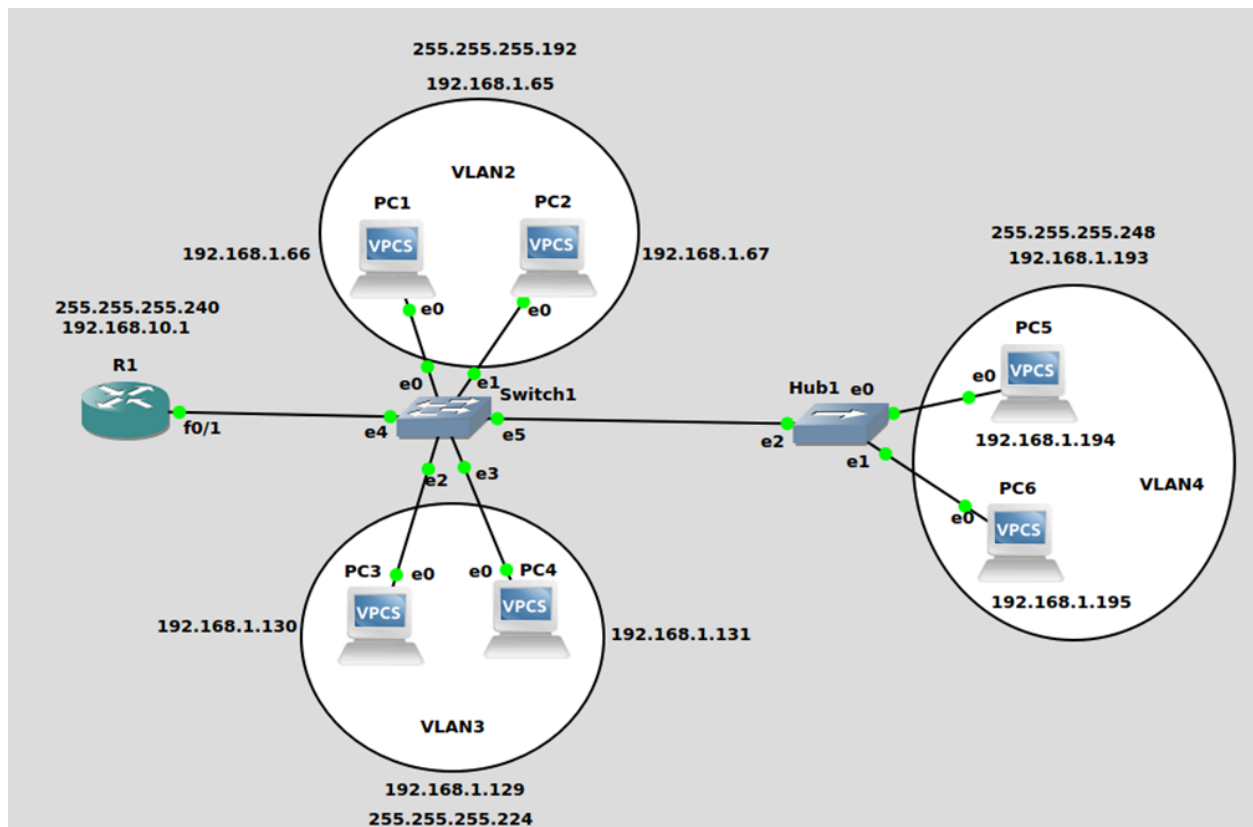
ip address 192.168.1.129 255.255.255.224  
no shut  
exit

PC1:  
ip 192.168.1.66 255.255.255.192 192.168.1.65

PC2:  
ip 192.168.1.67 255.255.255.192 192.168.1.65

PC3:  
ip 192.168.1.130 255.255.255.224 192.168.1.129

2.



R1:  
conf t  
inter f0/1  
ip address 192.168.10.1 255.255.255.240  
no shut  
exit

```
inter f0/1.2
encapsulation dot1q 2
ip address 192.168.1.65 255.255.255.192
no shut
exit
inter f0/1.3
encapsulation dot1q 3
ip address 192.168.1.129 255.255.255.224
no shut
exit
inter f0/1.4
encapsulation dot1q 4
ip address 192.168.1.193 255.255.255.248
no shut
exit
```

PC1:  
ip 192.168.1.66 255.255.255.192 192.168.1.65

PC2:  
ip 192.168.1.67 255.255.255.192 192.168.1.65

PC3:  
ip 192.168.1.130 255.255.255.224 192.168.1.129

PC4:  
ip 192.168.1.131 255.255.255.224 192.168.1.129

PC5:  
ip 192.168.1.194 255.255.255.248 192.168.1.193

PC6:  
ip 192.168.1.195 255.255.255.248 192.168.1.193

## **LAB 10: DYNAMIC ROUTING PROTOCOLS**

1.

RIP:

R1:  
conf t



```
inter s1/0
ip address 100.1.1.2 255.255.255.0
no shut
exit
inter s1/1
ip address 20.1.1.1 255.255.255.0
no shut
exit
router rip
version 2
network 100.1.1.0
network 20.1.1.0
```

```
R2:
conf t
inter f0/0
ip address 172.16.2.1 255.255.0.0
no shut
exit
inter s1/0
ip address 100.1.1.1 255.255.255.0
no shut
exit
router rip
version 2
network 172.16.2.0
network 100.1.1.0
```

```
R3:
conf t
inter f0/0
ip address 10.2.2.1 255.255.255.0
no shut
exit
inter s1/0
ip address 20.1.1.2 255.255.255.0
no shut
exit
router rip
version 2
network 10.2.2.0
network 20.1.1.0
```

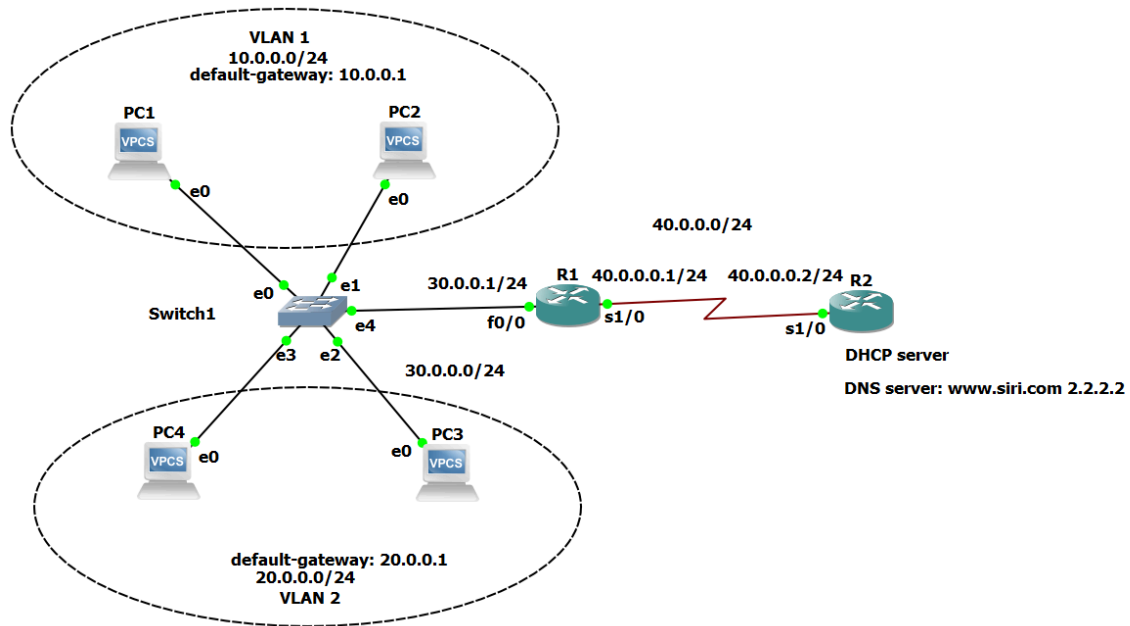
PC1:

ip 172.16.2.10 255.255.0.0 172.16.2.1

PC2:

ip 10.2.2.10 255.255.255.0 10.2.2.1

### VLAN+DHCP+DNS



Node properties

## Switch1 configuration

General

Name:

Console type:

Settings

Port:

VLAN:

Type:

QinQ EtherType:

Ports

Port	VLAN	Type
0	1	access
1	1	access
2	2	access
3	2	access
4	1	dot1q
5	1	access

```

R1:
conf t
inter f0/0
ip address 30.0.0.1 255.255.255.0
no shut
exit
inter s1/0
ip address 40.0.0.1 255.255.255.0
no shut
exit
inter f0/0.1
encapsulation dot1q 1
ip address 10.0.0.1 255.255.255.0
ip helper 40.0.0.2
no shut
exit
inter f0/0.2
encapsulation dot1q 2
ip address 20.0.0.1 255.255.255.0
ip helper 40.0.0.2

```

```
no shut
exit
ip route 0.0.0.0 0.0.0.0 40.0.0.2
ip domain lookup
ip name-server 40.0.0.2
```

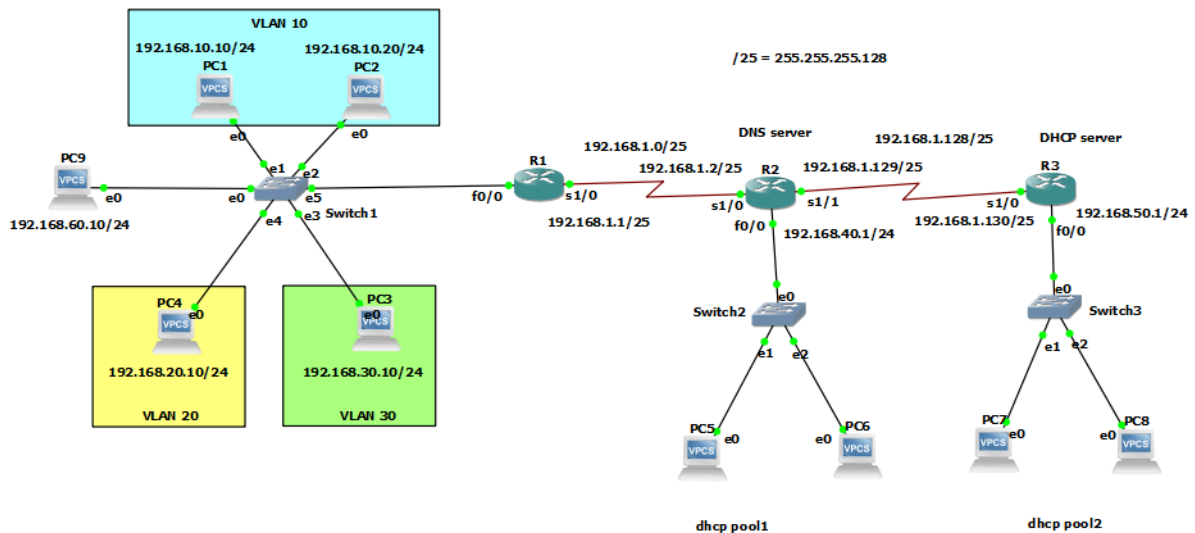
```
R2:
conf t
inter s1/0
ip address 40.0.0.2 255.255.255.0
no shut
exit
interface loopback1
ip address 2.2.2.2 255.255.255.255
exit
ip dhcp pool vlan1
network 10.0.0.0 255.255.255.0
default-router 10.0.0.1
exit
ip dhcp pool vlan2
network 20.0.0.0 255.255.255.0
default-router 20.0.0.1
exit
ip dns server
ip host www.siri.com 2.2.2.2
ip route 10.0.0.0 255.255.255.0 40.0.0.1
ip route 20.0.0.0 255.255.255.0 40.0.0.1
```

```
PCs:
dhcp
```

```
ip dns 40.0.0.2
```

## VLAN+DHCP+DNS+RIP

using RIP for dynamic routing



```
R1:
conf t
inter f0/0
ip address 192.168.60.1 255.255.255.0
no shut
exit
inter f0/0.10
encapsulation dot1q 10
ip address 192.168.10.1 255.255.255.0
no shut
exit
inter f0/0.30
encapsulation dot1q 30
ip address 192.168.30.1 255.255.255.0
no shut
exit
inter f0/0.20
encapsulation dot1q 20
ip address 192.168.20.1 255.255.255.0
no shut
exit
inter s1/0
```

```
ip address 192.168.1.1 255.255.255.128
no shut
exit
```

```
ip domain lookup
ip name-server 192.168.1.2
ip route 0.0.0.0 0.0.0.0 192.168.1.2
router rip
version 2
network 192.168.60.0
network 192.168.10.0
network 192.168.20.0
network 192.168.30.0
network 192.168.1.0
exit
```

```
R2:
conf t
inter s1/0
ip address 192.168.1.2 255.255.255.128
no shut
exit
inter f0/0
ip address 192.168.40.1 255.255.255.0
ip helper 192.168.1.130
no shut
exit
inter s1/1
ip address 192.168.1.129 255.255.255.128
no shut
exit
ip dns server
ip host www.siri.com 2.2.2.2
interface loopback1
ip address 2.2.2.2 255.255.255.255
exit
router rip
version 2
network 192.168.1.0
network 192.168.1.128
network 192.168.40.0
exit
```

**R3:**

```
conf t
inter s1/0
ip address 192.168.1.130 255.255.255.128
no shut
exit
inter f0/0
ip address 192.168.50.1 255.255.255.0
no shut
exit
ip dhcp pool pool1
network 192.168.40.0 255.255.255.0
default-router 192.168.40.1
exit
ip dhcp pool pool2
network 192.168.50.0 255.255.255.0
default-router 192.168.50.1
exit
ip domain lookup
ip name-server 192.168.1.2
ip route 0.0.0.0 0.0.0.0 192.168.1.2
router rip
version 2
network 192.168.1.128
network 192.168.50.0
exit
```

**PC1:**

```
ip 192.168.10.10 255.255.255.0 192.168.10.1
ip dns 192.168.1.2
```

**PC3:**

```
ip 192.168.30.10 255.255.255.0 192.168.30.1
ip dns 192.168.1.2
```

**PC4:**

```
ip 192.168.20.10 255.255.255.0 192.168.20.1
ip dns 192.168.1.2
```

**PC5:**

```
dhcp
ip dns 192.168.1.2
```

**PC7:**

**dhcp**

**ip dns 192.168.1.2**