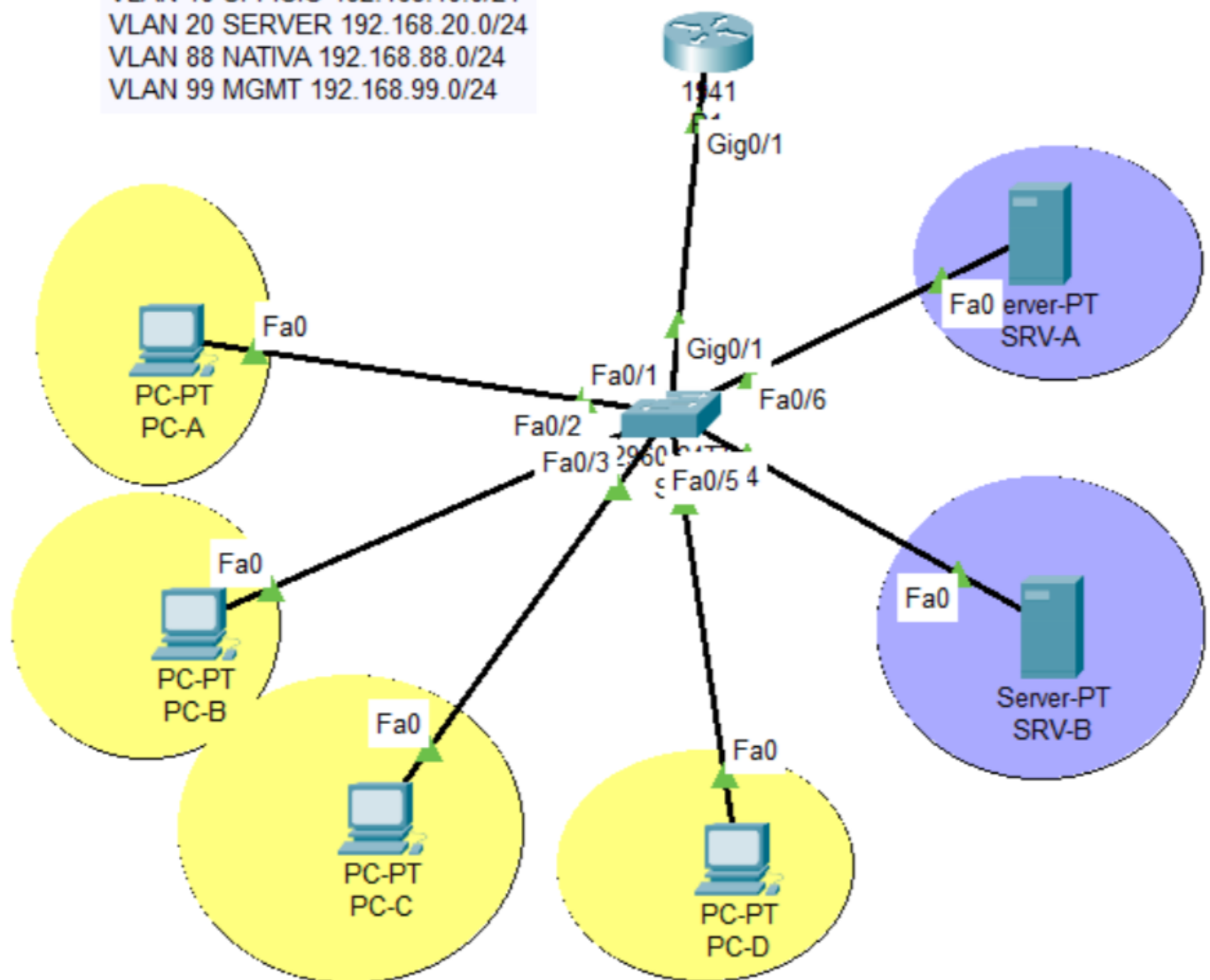


VLAN 10 UFFICIO 192.168.10.0/24
VLAN 20 SERVER 192.168.20.0/24
VLAN 88 NATIVA 192.168.88.0/24
VLAN 99 MGMT 192.168.99.0/24



CONFIGURAZIONE ROUTER

```
Router> enable
Router# configure terminal
R1(config)# hostname "R1"
R1(config)# enable secret "cisco"
R1(config)# service password-encryption
R1(config)# console line 0
R1(config-line)# logging synchronous
R1(config-line)# password "cisco"
R1(config-line)# login local
R1(config-line)# exit
R1(config)# banner motd \WARNING!\
R1(config)# ip domain-name "example.com"
R1(config)# ipv6 unicast-routing
R1(config)# crypto key generate rsa generate-keys modulus "1024"
R1(config)# username "admin" secret "cisco"
R1(config)# ip ssh version 2
R1(config)# line vty 0 15
R1(config-line)# transport input ssh
R1(config-line)# login local
R1(config-line)# exit
R1(config)# interface gigabitethernet 0/1.10
R1(config-subif)# encapsulation dot1q 10
R1(config-subif)# description DEFAULT GATEWAY of UFFICIO
R1(config-subif)# ip address 192.168.10.1 255.255.255.0
R1(config-subif)# no shutdown
R1(config-subif)# exit
R1(config)# interface gigabitethernet 0/1.20
R1(config-subif)# encapsulation dot1q 20
R1(config-subif)# description DEFAULT GATEWAY of SERVER
R1(config-subif)# ip address 192.168.20.1 255.255.255.0
R1(config-subif)# no shutdown
R1(config-subif)# exit
R1(config)# interface gigabitethernet 0/1.99
R1(config-subif)# encapsulation dot1q 99
R1(config-subif)# description DEFAULT GATEWAY of MANAGEMENT
R1(config-subif)# ip address 192.168.99.1 255.255.255.0
R1(config-subif)# no shutdown
R1(config-subif)# exit
R1(config)# interface gigabitethernet 0/1.88
R1(config-subif)# encapsulation dot1q 88 native
R1(config-subif)# description NATIVE VLAN
R1(config-subif)# no shutdown
R1(config-subif)# exit
```

```
// ESCLUDO IPv4 delle VLAN dal POOL DHCP //
R1(config)# ip dhcp excluded-address 192.168.10.1 192.168.10.9
R1(config)# ip dhcp excluded-address 192.168.10.254
R1(config)# ip dhcp excluded-address 192.168.20.1 192.168.20.9
R1(config)# ip dhcp excluded-address 192.168.20.254
R1(config)# ip dhcp excluded-address 192.168.20.50
R1(config)# ip dhcp excluded-address 192.168.20.100
// CREO POOL DHCP e ASSEGNO INFORMAZIONI
R1(config)# ip dhcp pool UFFICIO
R1(dhcp-config)# network 192.168.10.0 255.255.255.0
R1(dhcp-config)# default-router 192.168.10.1
R1(dhcp-config)# dns-server 192.168.10.1
R1(dhcp-config)# domain-name example.com
R1(dhcp-config)# exit
R1(config)# ip dhcp pool SERVER
R1(dhcp-config)# network 192.168.20.0 255.255.255.0
R1(dhcp-config)# default-router 192.168.20.1
R1(dhcp-config)# dns-server 192.168.20.1
R1(dhcp-config)# domain-name example.com
R1(dhcp-config)# exit
// CONFIGURAZIONE SNOOPING DHCP
R1(config)# ip dhcp relay information trust-all
R1(config)#
}
```

CONFIGURAZIONE SWITCH



```
Switch> enable
Switch> configure terminal
S1(config)# hostname "S1"
S1(config)# enable secret "cisco"
S1(config)# banner motd \WARNING!\
S1(config)# console line 0
S1(config-line)# logging synchronous
S1(config-line)# password "cisco"
S1(config-line)# login local
S1(config-line)# exit
S1(config)# vlan 10
S1(config-vlan)# name UFFICIO
S1(config-vlan)# exit
S1(config)# vlan 20
S1(config-vlan)# name SERVER
S1(config-vlan)# exit
S1(config)# vlan 88
S1(config-vlan)# name NATIVA
S1(config-vlan)# exit
S1(config)# vlan 99
S1(config-vlan)# name MANAGEMENT
S1(config-vlan)# exit
S1(config)# ip default-gateway 192.168.99.1
S1(config)# interface vlan 99
S1(config-if)# ip address 192.168.99.5 255.255.255.0
S1(config-if)# no shutdown
S1(config-if)# exit
S1(config)# interface range fastethernet 0/1-4
S1(config-if-range)# switchport mode access
S1(config-if-range)# switchport access vlan 10
S1(config-if-range)# no shutdown
S1(config-if-range)# exit
S1(config)# interface range fastethernet 0/5-6
S1(config-if-range)# switchport mode access
S1(config-if-range)# switchport access vlan 20
S1(config-if-range)# no shutdown
S1(config-if-range)# exit
S1(config)# interface range g0/1
S1(config-if-range)# switchport mode trunk
S1(config-if-range)# switchport trunk allowed 10,20,88,99
S1(config-if-range)# switchport trunk native vlan 88
S1(config-if-range)# no shutdown
S1(config-if-range)# exit
```

```
// PORT SECURITY PORTE UTILIZZATE
S1(config)# interface fastethernet 0/1
S1(config-if)# description LINK STICKY CON PC-A
S1(config-if)# switchport port-security
S1(config-if)# switchport port-security mac-address sticky
S1(config-if)# switchport port-security aging time 5
S1(config-if)# switchport port-security violation restrict
S1(config-if)# exit
S1(config)# interface fastethernet 0/2
S1(config-if)# description LINK con PC-B ABSOLUTE
S1(config-if)# switchport port-security
S1(config-if)# switchport port-security mac-address 0060.2FEC.9940
S1(config-if)# switchport port-security aging time 5
S1(config-if)# switchport port-security maximum 2
S1(config-if)# switchport port-security violation restrict
S1(config-if)# exit
// PORT SECURITY PER LE PORTE NON UTILIZZATE
S1(config)# vlan 999
S1(config-vlan)# name BLACK-HOLE
S1(config-vlan)# exit
S1(config)# interface fastethernet range 0/7-24, gigabitethernet 0/2
S1(config-if-range)# description DISABILITO PORTE NON USATE
S1(config-if-range)# shutdown
S1(config-if-range)# switchport mode access
S1(config-if-range)# switchport access vlan 999
S1(config-if-range)# exit
S1(config)# interface gigabitethernet 0/0
S1(config-if)# switchport nonegotiate
S1(config-if)# exit
// CONFIGURAZIONE DHCP SNOOPING
S1(config)# ip dhcp snooping
S1(config)# interface range fastethernet 0/5-6, gigabitethernet 0/1
S1(config-if-range)# ip dhcp snooping trust
S1(config-if-range)# exit
S1(config)# interface range fastethernet 0/1-4, fastethernet 0/7-25, gigabitethernet 0/2
S1(config-if-range)# ip dhcp snooping limit rate 6
S1(config-if-range)# exit
S1(config)# ip dhcp snooping vlan 10,20
S1(config)# ip arp inspection vlan 10,20
S1(config)# interface range fastethernet 0/4-5, gigabitethernet 0/1
// CONFIGURAZIONE ARP INSPECTION
S1(config-if-range)# ip arp inspection trust
S1(config-if-range)# exit
S1(config)# ip arp inspection validate src-mac dest-mac ip
```

```
// CONFIGURAZIONE POSTFAST
S1(config)# interface range f0/1-6
S1(config-if-range)# spanning-tree portfast
S1(config-if-range)# spanning-tree bpduguard enable
S1(config-if-range)# exit
S1(config)# spanning-tree portfast default
S1(config)# spanning-tree portfast bpduguard default
S1(config)#
}
```