Examen Primer Parcial

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I. Examen Practico

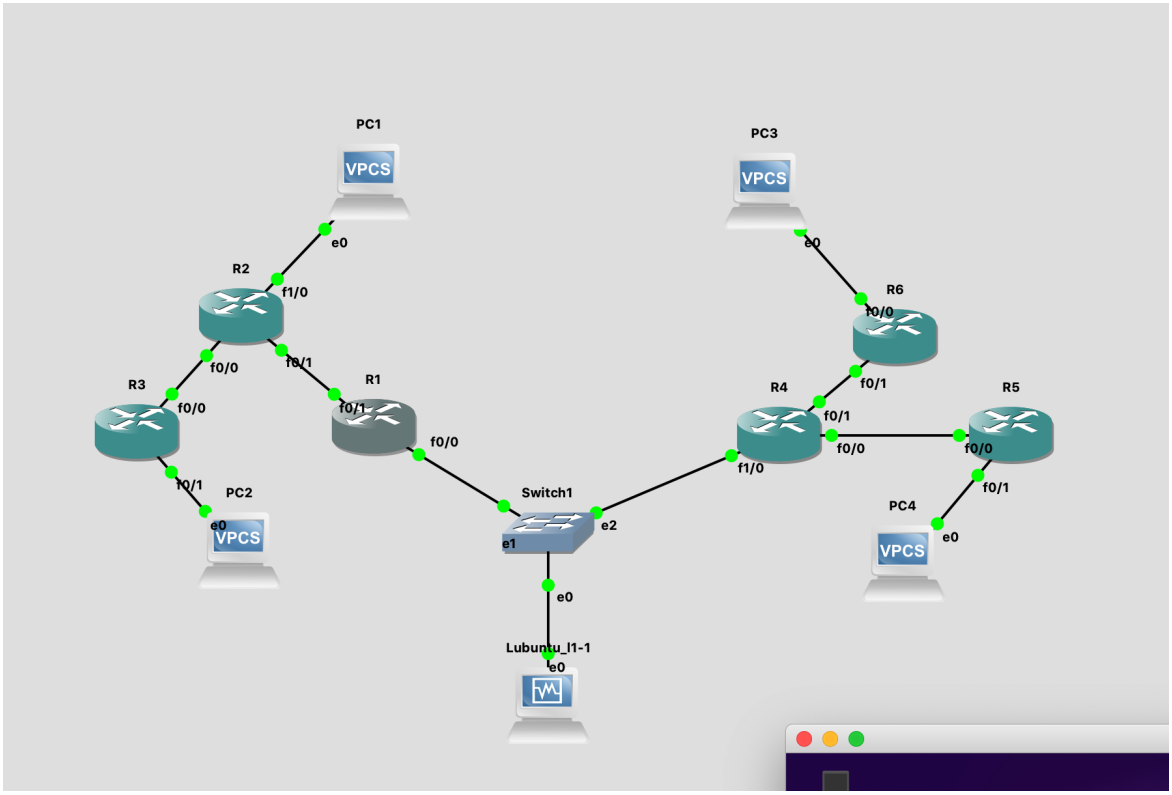
Lista de pasos realizados:

```
CONFIGURACION INTERFACES
            RED  A
Ruter 1
interface f0/0  -->Computadora MV
ip addr 148.204.56.1 255.255.255.0
interface f0/1 --> Router 2
ip addr 8.8.8.1 255.255.255.252

Router 2
interface f0/0 --> router3
ip addr 8.8.8.5 255.255.255.252
interface f0/1 -->Router1
ip addr 8.8.8.2 255.255.255.252
interface f1/0 -->PC1
ip addr 148.204.57.1 255.255.255.0

Route  3
interface f0/0 --> router2
ip addr 8.8.8.6 255.255.255.252
interface f0/01--> PC2
ip addr 148.204.58.1 255.255.255.0

            RED  B
Router 6
interface f0/0 --> PC3
ip addr 148.204.57.1 255.255.255.0
interface f0/1 --> R4
ip addr 8.8.8.2 255.255.255.252

Router 4
interface f0/1 --> R6
ip addr 8.8.8.1 255.255.255.252
interface f1/0 --> MV
ip addr 148.204.56.1 255.255.255.0
interface f0/0--> Router 5
ip addr 8.8.8.5 255.255.255.252

Router 5
interface f0/0 --> router 4
ip addr 8.8.8.6 255.255.255.252
interface f0/1 --> PC4
ip addr 148.204.58.1 255.255.255.0




CONFIGURACION Computadora
PC 1
ip 148.204.57.10 /24 148.204.57.1

PC2
ip 148.204.58.10 /24 148.204.58.1




PC3
ip 148.204.57.10 /24 148.204.57.1

PC4
ip 148.204.58.10 /24 148.204.58.1
```

```
MV
ip addr 148.204.56.10 255.255.255.0
Gateway 148.204.56.1




RUTAS
          RED  A
Router1
ip route 148.204.57.0 255.255.255.0 f0/1
ip route 148.204.58.0 255.255.255.0 f0/1
ip route 8.8.8.4 255.255.255.252 f0/1

router2
ip route 148.204.58.0 255.255.255.0 f0/0
ip route 148.204.56.0 255.255.255.0 f0/1

router 3
ip route 8.8.8.0 255.255.255.252 8.8.8.5
ip route 148.204.57.0 255.255.255.0 8.8.8.5
ip route 148.204.56.0 255.255.255.0 8.8.8.5



           RED  B
Router 6
ip route 148.204.56.0 255.255.255.0 f0/1 8.8.8.1
ip route 148.204.58.0 255.255.255.0 f0/1 8.8.8.1
ip route 8.8.8.4 255.255.255.252 f0/1 8.8.8.1

Router 4
ip route 148.204.57.0 255.255.255.0 8.8.8.2
ip route 148.204.58.0 255.255.255.0 8.8.8.6

Router 5
ip route 148.204.56.0 255.255.255.0 f0/0 8.8.8.5
ip route 8.8.8.0 255.255.255.252 f0/0 8.8.8.5
ip route 148.204.57.0 255.255.255.0 f0/0 8.8.8.5




enable
configure terminal
username admin priv 0 password firulais
enable password firulais
enable secret 12345678
service password-encryption
line console 0
login local
exit
line vty 0 4
transport input ssh
password firulais
login
exit
hostname Rn
ip domain-name Rn.LOCAL
crypto key generate rsa
ip ssh time-out 10
ip ssh authentication-retries 3
ip ssh version 2
line vty 0 4
transport input ssh
login local
exit
exit


Router 1: 8.8.8.1
```

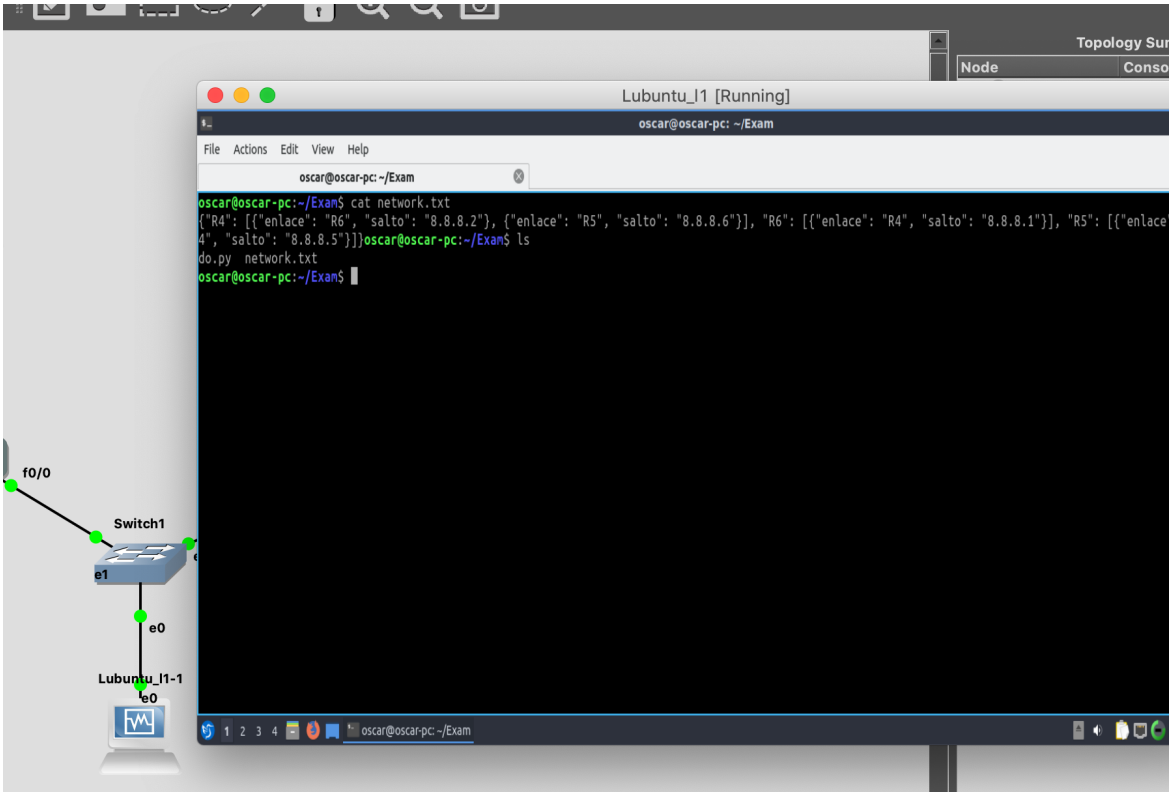
```
Router 2: 8.8.8.2
Router 3: 8.8.8.6


Router 4: 8.8.8.1
Router 5: 8.8.8.6
Router 6: 8.8.8.2
```

Evidencias



Script realizado:

```
import pexpect
from pexpect import pxssh
import json

username = "admin"
password = "firulais"

Routers = {}


def get_info_from_ip(ip):
    child = pexpect.spawn(f"ssh -l {username} {ip}")
    child.sendline("yes")

    child = pxssh.pxssh()
    print("\nLogging in...")
    child.login(ip, username, password, auto_prompt_reset=False)
    print("Logged in")

    name = child.before[-3: -1].decode("UTF-8")

    if Routers.get(name, "NEW") != "NEW": return

    child.sendline("enable")
    child.expect("Password:")

    child.sendline("12345678")
    child.expect(f"{name}#")

    child.sendline("conf t")
    child.sendline("username pirata priv 15 password pirata")
    child.sendline("end")
    child.expect(f"{name}#")

    child.sendline("show cdp neighbors")
    child.expect(f"{name}#")

    data = child.before
```




```
    data = data.decode("UTF-8")
    data = data.split("\n")
    data = data[5: len(data) - 1]
    connections = {}

    for line in data:
        line = line.split()
        con_line = line[0].split(".")[0]
        interface = line[2]
        connections[interface] = con_line

    print(name)
    print(connections)

    child.sendline("show ip route")
    child.expect(f"{name}#")

    data = child.before

    data = data.decode("UTF-8")
    data = data.split("\r\n")
    data = [x.split() for x in data]

    real_data = []
    seen = []
    for index, line in enumerate(data):
        if len(line) == 0 or line[0] != "is": continue

        interface = line[-1][-3:]
        real_ip = data[index -1][-1]

        if "NO" == connections.get(interface, "NO") or interface in seen:
            continue

        seen.append(interface)
        real_data.append({"enlace": connections.get(interface), "salto": real_ip})

    Routers[name] = real_data
    print(Routers)

    for element in real_data:
```

```
        print(element)
        if Routers.get(element["enlace"], "NEW") != "NEW": continue
        get_info_from_ip(element["salto"])

get_info_from_ip("148.204.56.1")

print(Routers)

with open("network.txt", "w") as text_file:
    text_file.write(json.dumps(Routers))
```