



Instituto Politécnico Nacional

Escuela Superior de Cómputo



Practica 1.3 ruteo estático y VLSM

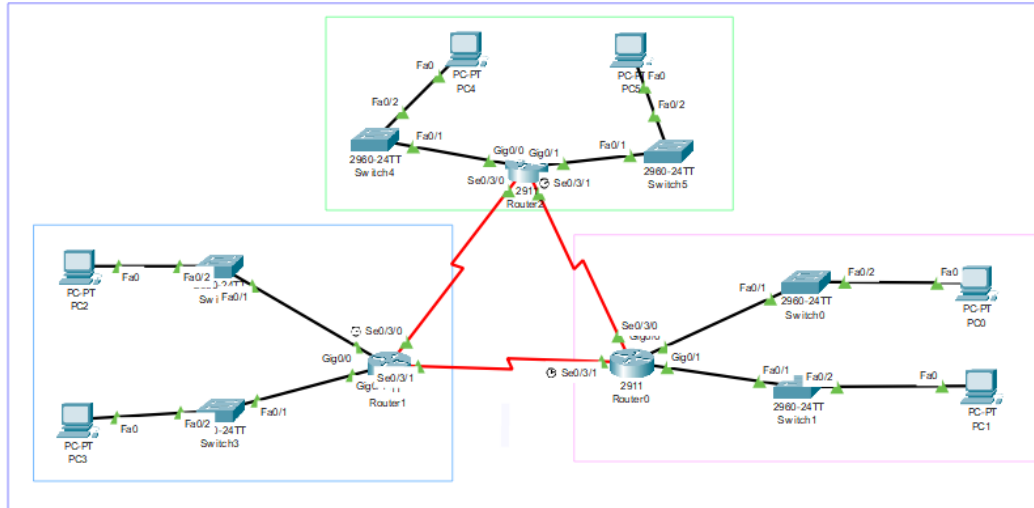
Administración de servicios en Red

4CV13

Maximiliano Cazares Martínez

Profa.: Leticia Henestrosa Carrasco

Routero estático



Time: 00:02:02

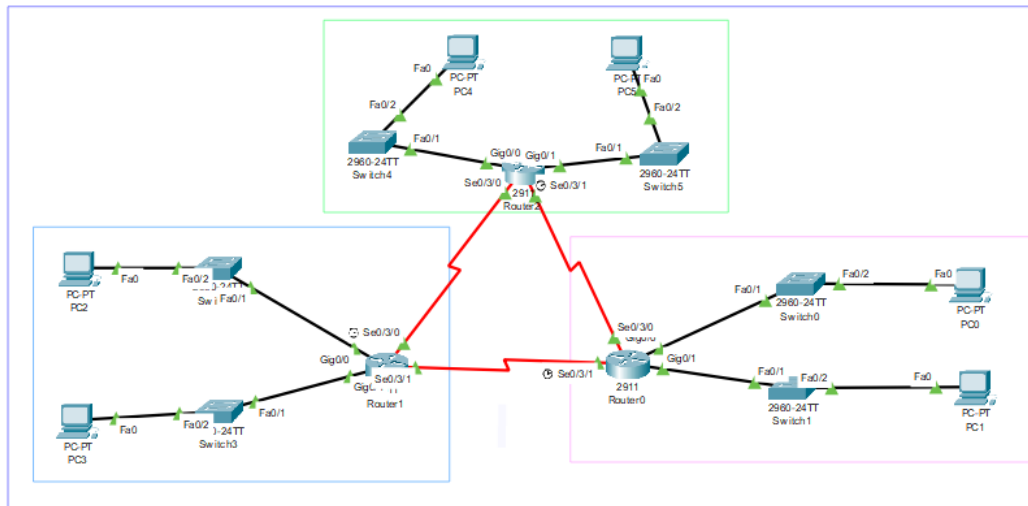
Scenario 0

New Delete

Toggle PDU List Window

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
	Successful	PC4	PC2	ICMP		0.000	N	0	(edit)	(delete)
	Successful	PC4	PC3	ICMP		0.000	N	1	(edit)	(delete)
	Successful	PC4	PC0	ICMP		0.000	N	2	(edit)	(delete)
	Successful	PC4	PC1	ICMP		0.000	N	3	(edit)	(delete)

Routero estático



Time: 00:02:40

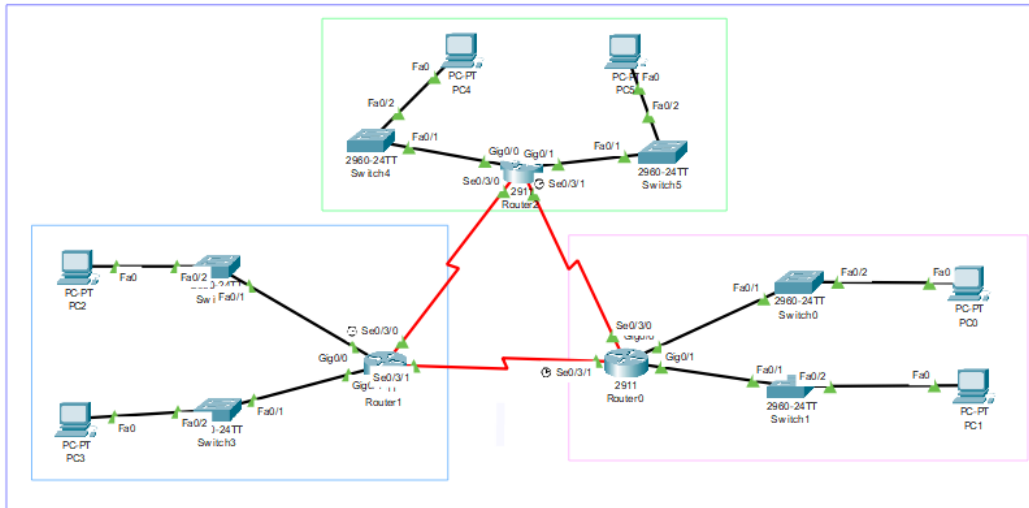
Scenario 0

New Delete

Toggle PDU List Window

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
	Successful	PC2	PC4	ICMP		0.000	N	0	(edit)	(delete)
	Successful	PC2	PC5	ICMP		0.000	N	1	(edit)	(delete)
	Successful	PC2	PC0	ICMP		0.000	N	2	(edit)	(delete)
	Successful	PC2	PC1	ICMP		0.000	N	3	(edit)	(delete)

Roteo estático



Time: 00:03:19

Realtime

Simulation

Scenario 0

New

Delete

Toggle PDU List Window

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
<div></div>	Successful	PC0	PC5	ICMP	<div></div>	0.000	N	0	(edit)	(delete)
<div></div>	Successful	PC0	PC4	ICMP	<div></div>	0.000	N	1	(edit)	(delete)
<div></div>	Successful	PC0	PC2	ICMP	<div></div>	0.000	N	2	(edit)	(delete)
<div></div>	Successful	PC0	PC3	ICMP	<div></div>	0.000	N	3	(edit)	(delete)

```

Router2
Physical Config CLI Attributes
IOS Command Line Interface

%LINEPROTO-5-UPDOWN: Line protocol on Interface Serial0/3/0, changed state to up

Router>en
Router#show ip route
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter
area
* - candidate default, U - per-user static route, o - ODR
P - periodic downloaded static route

Gateway of last resort is not set

192.168.1.0/24 is variably subnetted, 12 subnets, 5 masks
C 192.168.1.0/26 is directly connected, GigabitEthernet0/0
L 192.168.1.1/32 is directly connected, GigabitEthernet0/0
C 192.168.1.64/26 is directly connected, GigabitEthernet0/1
L 192.168.1.65/32 is directly connected, GigabitEthernet0/1
S 192.168.1.128/27 [1/0] via 192.168.1.226
S 192.168.1.160/27 [1/0] via 192.168.1.226
S 192.168.1.192/28 [1/0] via 192.168.1.234
S 192.168.1.208/28 [1/0] via 192.168.1.234
C 192.168.1.224/30 is directly connected, Serial0/3/0
L 192.168.1.225/32 is directly connected, Serial0/3/0
C 192.168.1.232/30 is directly connected, Serial0/3/1
--More--
Ctrl+F6 to exit CLI focus
Copy Paste

```

Router1

Physical Config CLI Attributes

IOS Command Line Interface

```
Router>en
Router#show ip route
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter
       area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

    192.168.1.0/24 is variably subnetted, 12 subnets, 5 masks
S       192.168.1.0/26 [1/0] via 192.168.1.225
S       192.168.1.64/26 [1/0] via 192.168.1.225
C       192.168.1.128/27 is directly connected, GigabitEthernet0/0
L       192.168.1.129/32 is directly connected, GigabitEthernet0/0
C       192.168.1.160/27 is directly connected, GigabitEthernet0/1
L       192.168.1.161/32 is directly connected, GigabitEthernet0/1
S       192.168.1.192/28 [1/0] via 192.168.1.230
S       192.168.1.208/28 [1/0] via 192.168.1.230
C       192.168.1.224/30 is directly connected, Serial0/3/0
L       192.168.1.226/32 is directly connected, Serial0/3/0
C       192.168.1.228/30 is directly connected, Serial0/3/1
L       192.168.1.229/32 is directly connected, Serial0/3/1

Router#
Router#
```

Ctrl+F6 to exit CLI focus

Copy Paste

☐ Top

Router0

Physical Config CLI Attributes

IOS Command Line Interface

```
Router>en
Router#show ip route
Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP
       D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area
       N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2
       E1 - OSPF external type 1, E2 - OSPF external type 2, E - EGP
       i - IS-IS, L1 - IS-IS level-1, L2 - IS-IS level-2, ia - IS-IS inter
       area
       * - candidate default, U - per-user static route, o - ODR
       P - periodic downloaded static route

Gateway of last resort is not set

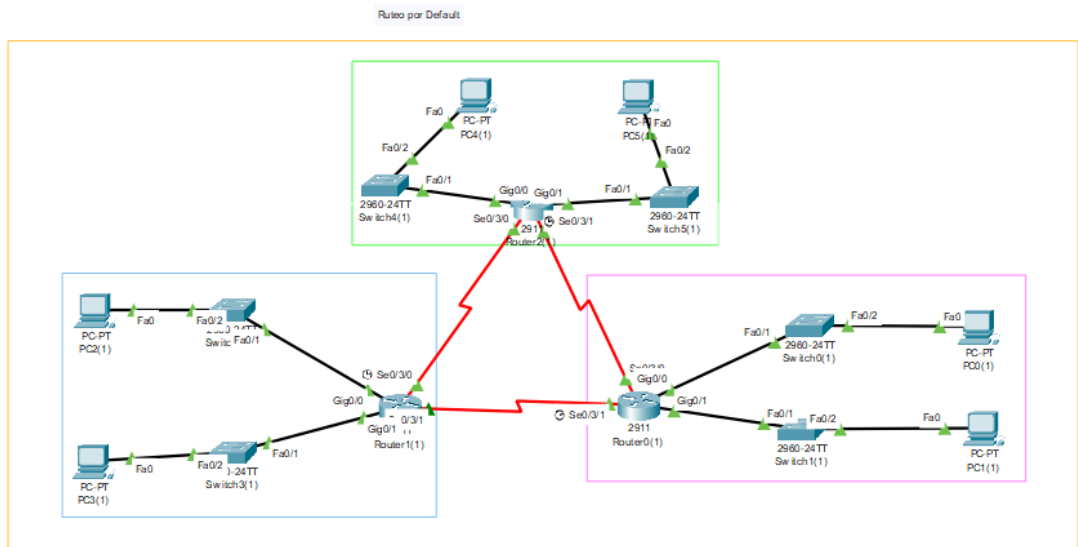
    192.168.1.0/24 is variably subnetted, 12 subnets, 5 masks
S       192.168.1.0/26 [1/0] via 192.168.1.233
S       192.168.1.64/26 [1/0] via 192.168.1.233
S       192.168.1.128/27 [1/0] via 192.168.1.229
S       192.168.1.160/27 [1/0] via 192.168.1.229
C       192.168.1.192/28 is directly connected, GigabitEthernet0/0
L       192.168.1.193/32 is directly connected, GigabitEthernet0/0
C       192.168.1.208/28 is directly connected, GigabitEthernet0/1
L       192.168.1.209/32 is directly connected, GigabitEthernet0/1
C       192.168.1.228/30 is directly connected, Serial0/3/1
L       192.168.1.230/32 is directly connected, Serial0/3/1
C       192.168.1.232/30 is directly connected, Serial0/3/0
L       192.168.1.234/32 is directly connected, Serial0/3/0

Router#
```

Ctrl+F6 to exit CLI focus

Copy Paste

☐ Top



Time: 00:06:25

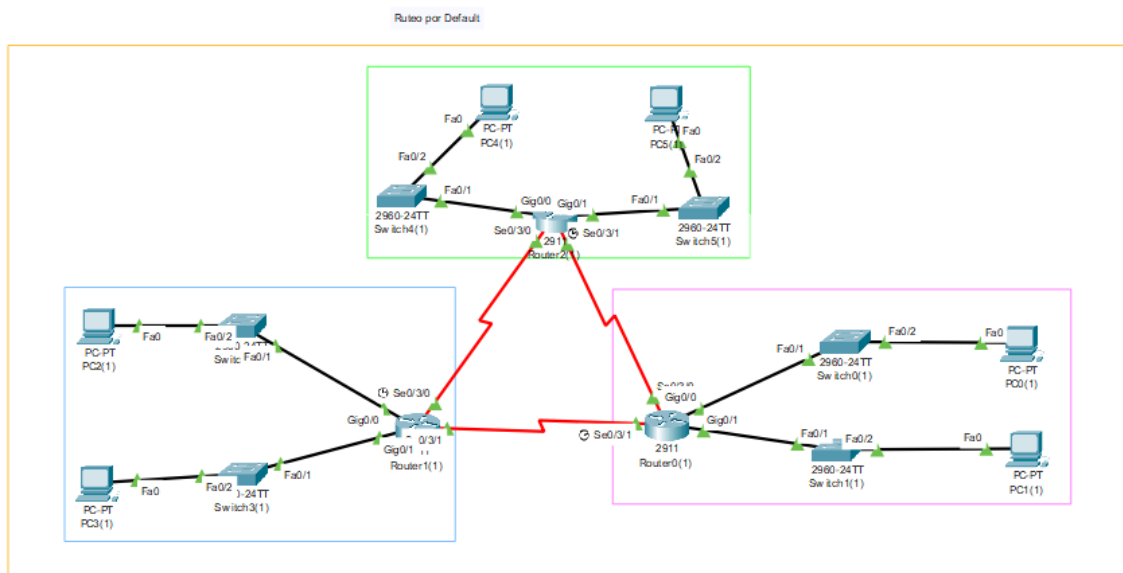
Scenario 0

New Delete

Toggle PDU List Window

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
●	Successful	PC1(1)	PC5(1)	ICMP		0.000	N	0	(edit)	(delete)
●	Successful	PC1(1)	PC4(1)	ICMP		0.000	N	1	(edit)	(delete)
●	Successful	PC1(1)	PC2(1)	ICMP		0.000	N	2	(edit)	(delete)
●	Successful	PC1(1)	PC3(1)	ICMP		0.000	N	3	(edit)	(delete)

Realtime Simulation



Time: 00:04:41

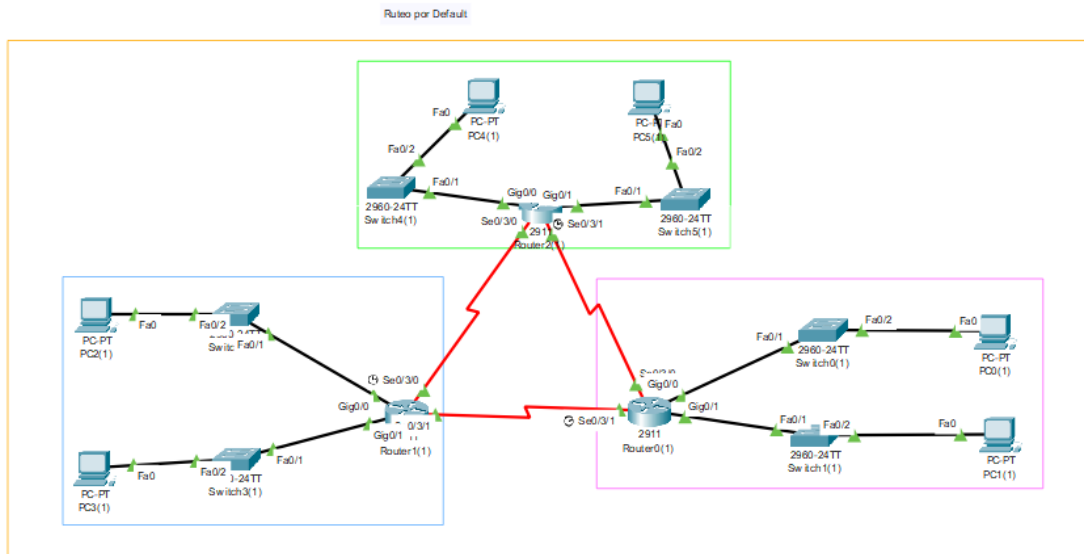
Scenario 0

New Delete

Toggle PDU List Window

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
●	Successful	PC4(1)	PC2(1)	ICMP		0.000	N	0	(edit)	(delete)
●	Successful	PC4(1)	PC3(1)	ICMP		0.000	N	1	(edit)	(delete)
●	Successful	PC4(1)	PC0(1)	ICMP		0.000	N	2	(edit)	(delete)
●	Successful	PC4(1)	PC1(1)	ICMP		0.000	N	3	(edit)	(delete)

Realtime Simulation



Time: 00:05:48 Realtime Simulation

Fire	Last Status	Source	Destination	Type	Color	Time(sec)	Periodic	Num	Edit	Delete
	Successful	PC3(1)	PC5(1)	ICMP		0.000	N	0	(edit)	(delete)
	Successful	PC3(1)	PC4(1)	ICMP		0.000	N	1	(edit)	(delete)
	Successful	PC3(1)	PC0(1)	ICMP		0.000	N	2	(edit)	(delete)
	Successful	PC3(1)	PC1(1)	ICMP		0.000	N	3	(edit)	(delete)

New Delete Toggle PDU List Window

Router2(1)

Physical **Config** CLI Attributes

GLOBAL

- Settings
- Algorithm Settings

ROUTING

- Static**
- RIP

SWITCHING

- VLAN Database

INTERFACE

- GigabitEthernet0/0
- GigabitEthernet0/1
- GigabitEthernet0/2
- Serial0/3/0
- Serial0/3/1

Static Routes

Network:

Mask:

Next Hop:

Network Address

0.0.0.0/0 via Serial0/3/0

0.0.0.0/0 via Serial0/3/1

Equivalent IOS Commands

```

Router(config)#router rip
Router(config-router)#
Router(config-router)#end
Router#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Router(config)#
Router(config)#
$SYS-5-CONFIG_I: Configured from console by console
  
```

☐ Top

Router1(1)

Physical

Config

CLI

Attributes

GLOBAL

Settings

Algorithm Settings

ROUTING

Static

RIP

SWITCHING

VLAN Database

INTERFACE

GigabitEthernet0/0

GigabitEthernet0/1

GigabitEthernet0/2

Serial0/3/0

Serial0/3/1

Static Routes

Network

Mask

Next Hop

Add

Network Address

0.0.0.0/0 via Serial0/3/0

0.0.0.0/0 via Serial0/3/1

Remove

Equivalent IOS Commands

up

Router>enable

Router#

Router#configure terminal

Enter configuration commands, one per line. End with CNTL/Z.

Router(config)#

Router(config)#

Top

Router0(1)

Physical

Config

CLI

Attributes

GLOBAL

Settings

Algorithm Settings

ROUTING

Static

RIP

SWITCHING

VLAN Database

INTERFACE

GigabitEthernet0/0

GigabitEthernet0/1

GigabitEthernet0/2

Serial0/3/0

Serial0/3/1

Static Routes

Network

Mask

Next Hop

Add

Network Address

0.0.0.0/0 via Serial0/3/0

0.0.0.0/0 via Serial0/3/1

Remove

Equivalent IOS Commands

Router(config)#router rip

Router(config-router)#

Router(config-router)#end

Router#configure terminal

Enter configuration commands, one per line. End with CNTL/Z.

Router(config)#

Router(config)#

%SYS-5-CONFIG_I: Configured from console by console

Top