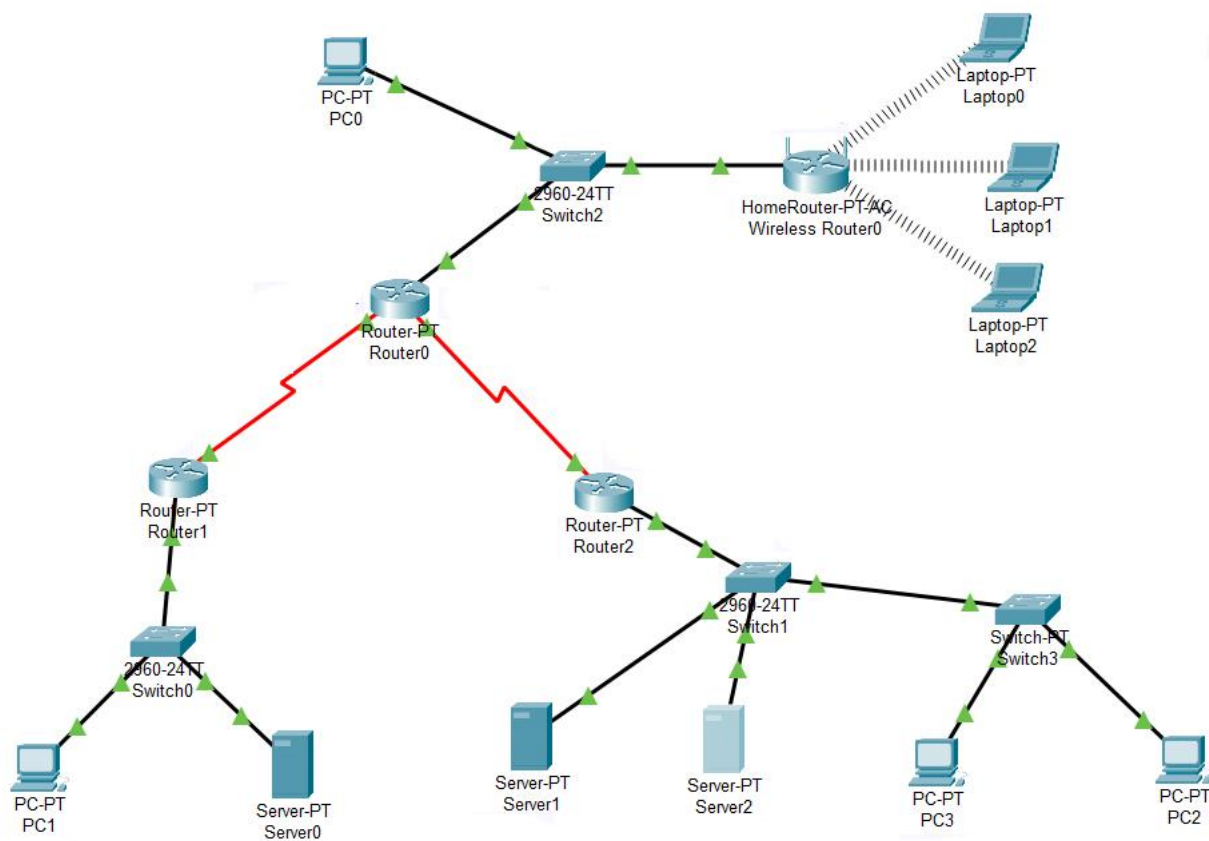




Nombre: Josué Merino

NRC: 14575

Diseño Físico



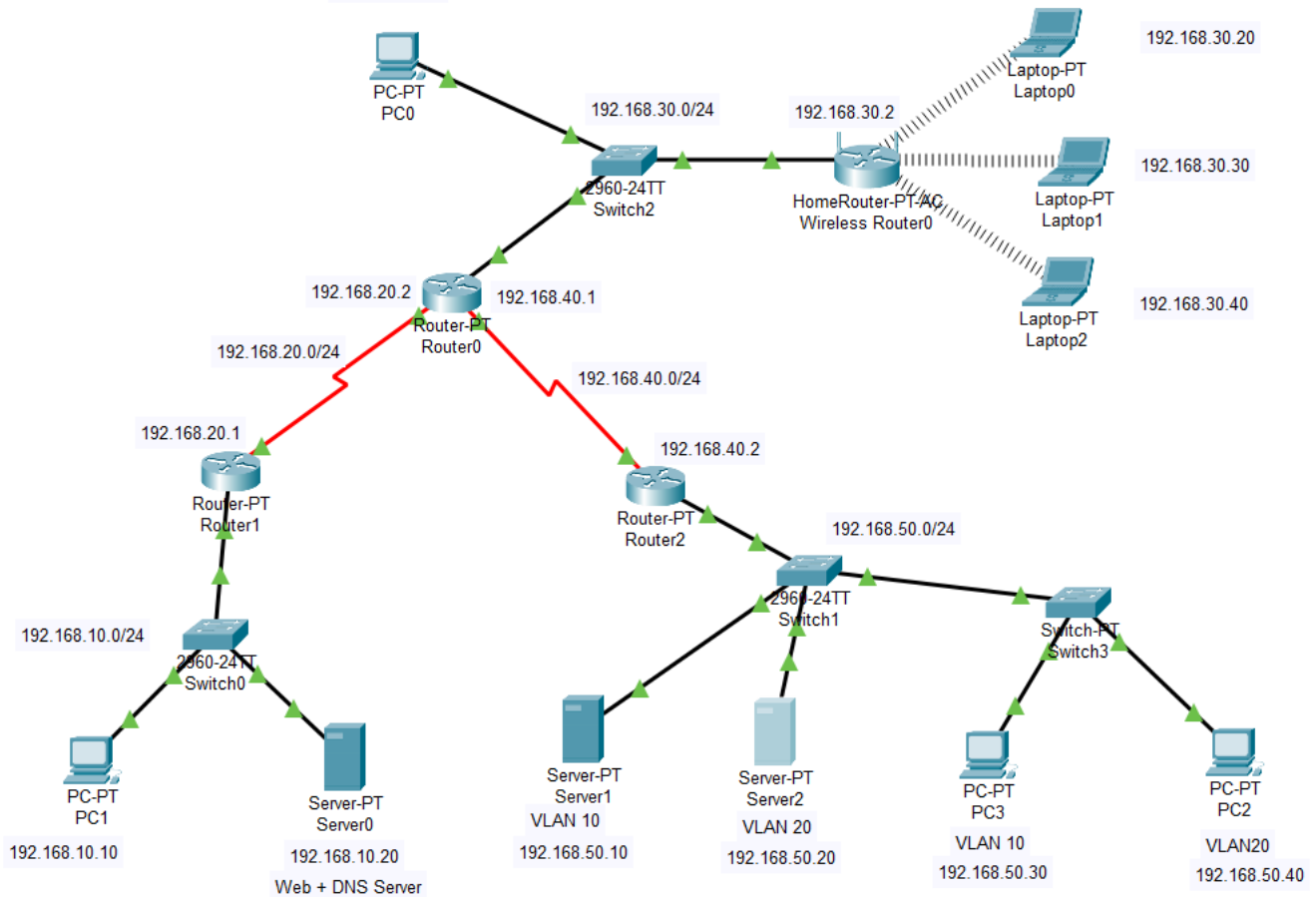
Diseño Lógico



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Configuración de Enrutamiento Estático (Next Hop)

Router0

Physical Config CLI Attributes

GLOBAL

Settings

Algorithm Settings

ROUTING

Static

RIP

INTERFACE

FastEthernet0/0

FastEthernet1/0

Serial2/0

Serial3/0

FastEthernet4/0

FastEthernet5/0

Static Routes

Network

Mask

Next Hop

Add

Network Address

192.168.10.0/24 via 192.168.20.2

192.168.50.0/24 via 192.168.40.2

Remove



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Diagram showing a network topology with a router (Router0) connected to a switch (Switch0) and a laptop (Laptop0). The router is labeled with IP addresses 192.168.20.2 and 192.168.40.1. The switch is labeled with IP address 192.168.30.40. The laptop is labeled with IP address 192.168.30.40. A red arrow points to the router's Serial2/0 interface.

Device Name: Router0
Device Model: Router-PT
Hostname: Router

Port	Link	IP Address	IPv6 Address	MAC Address
FastEthernet0/0	Up	<not set>	<not set>	0050.0F10.90A5
FastEthernet1/0	Up	<not set>	<not set>	00D0.BACE.48B7
Serial2/0	Up	192.168.20.2/24	<not set>	<not set>
Serial3/0	Up	192.168.40.1/24	<not set>	<not set>
FastEthernet4/0	Down	<not set>	<not set>	0001.4312.C02A
FastEthernet5/0	Down	<not set>	<not set>	0050.0F0E.D992

Physical Location: Intercity > Home City > Corporate Office > Main Wiring Closet > Rack > Router0

Router1

Physical Config CLI Attributes

Static Routes

Network

Mask

Next Hop

Add

Remove

Network Address

192.168.30.0/24 via 192.168.20.1

192.168.50.0/24 via 192.168.20.1

Diagram showing a network topology with a router (Router1) connected to a switch (Switch0) and a laptop (Laptop0). The router is labeled with IP addresses 192.168.20.1 and 192.168.40.2. The switch is labeled with IP address 192.168.30.40. The laptop is labeled with IP address 192.168.30.40. A red arrow points to the router's Serial2/0 interface.

Device Name: Router1
Device Model: Router-PT
Hostname: Router

Port	Link	IP Address	IPv6 Address	MAC Address
FastEthernet0/0	Up	<not set>	<not set>	00D0.FFC5.166B
FastEthernet1/0	Up	<not set>	<not set>	0006.2AC7.7162
Serial2/0	Up	192.168.20.1/24	<not set>	<not set>
Serial3/0	Down	<not set>	<not set>	<not set>
FastEthernet4/0	Down	<not set>	<not set>	0060.5CD0.BB74
FastEthernet5/0	Down	<not set>	<not set>	0060.476C.0E3C

Physical Location: Intercity > Home City > Corporate Office > Main Wiring Closet > Rack > Router1



Router2

Physical Config CLI Attributes

GLOBAL

Settings

Algorithm Settings

ROUTING

Static

RIP

INTERFACE

FastEthernet0/0

FastEthernet1/0

Serial2/0

Serial3/0

FastEthernet4/0

FastEthernet5/0

Static Routes

Network

Mask

Next Hop

Add

Network Address

192.168.10.0/24 via 192.168.40.1

192.168.30.0/24 via 192.168.40.1

Remove

192.168.40.2

Conectividad Extremo

Router2

Device Name: Router2

Device Model: Router-PT

Hostname: Router

Port	Link	IP Address	IPv6 Address	MAC Address
FastEthernet0/0	Up	<not set>	<not set>	0040.0B33.49C1
FastEthernet1/0	Up	<not set>	<not set>	0090.21D1.47B4
Serial2/0	Up	192.168.40.2/24	<not set>	<not set>
Serial3/0	Down	<not set>	<not set>	<not set>
FastEthernet4/0	Down	<not set>	<not set>	0040.0BC5.BDCC
FastEthernet5/0	Down	<not set>	<not set>	0030.F233.7AAD

Physical Location: Intercity > Home City > Corporate Office > Main Wiring Closet > Rack > Router2

Server2 PC3 PC2

Configuración de Servicios

Configuración de Server DNS:



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Server0

Physical Config **Services** Desktop Programming Attributes

SERVICES

- HTTP
- DHCP
- DHCPv6
- TFTP
- DNS**
- SYSLOG
- AAA
- NTP
- EMAIL
- FTP
- IoT
- VM Management
- Radius EAP

DNS

DNS Service ☒ On ☐ Off

Resource Records

Name Type

Address

No.	Name	Type	Detail
-----	------	------	--------

☐ Top

Configuración Server Web:



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Server0

Physical Config **Services** Desktop Programming Attributes

SERVICES

- HTTP
- DHCP
- DHCPv6
- TFTP
- DNS
- SYSLOG
- AAA
- NTP
- EMAIL
- FTP
- IoT
- VM Management
- Radius EAP

HTTP

HTTP ☒ On ☐ Off

HTTPS ☒ On ☐ Off

File Manager

	File Name	Edit	Delete
1	copyrights.html	(edit)	(delete)
2	cscoptlogo177x111.jpg		(delete)
3	helloworld.html	(edit)	(delete)
4	image.html	(edit)	(delete)
5	index.html	(edit)	(delete)

New File Import

☐ Top

Configuración de WLAN

Se cambia el SSID del Router y se agrega una clave con Autenticación WPA2-PSK



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Wireless Router0

Physical Config GUI Attributes

GLOBAL

Settings

Algorithm Settings

INTERFACE

Internet

LAN

Wireless 2.4G

Wireless 5G(1)

Wireless 5G(2)

Wireless Guest 2.4G

Wireless Guest 5G(1)

Wireless Guest 5G(2)

Wireless 2.4G Settings

SSID: JOSUE-RED

2.4 GHz Channel: 6 - 2.437GHz

Coverage Range (meters): 250,00

Authentication:

☐ Disabled

☐ WPA-PSK

☒ WPA2-PSK

☐ WPA

☐ WPA2

WEP Key:

PSK Pass Phrase: PruebaRedes2024

RADIUS Server Settings

IP Address:

Shared Secret:

Encryption Type: AES

Se conecta cada Laptop a la red agregando la contraseña previamente configurada



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Laptop0

Physical Config **Desktop** Programming Attributes

WPA2-Personal Needed for Connection

This wireless network has WPA2-Personal enabled. To connect to this network, enter the required passphrase in the appropriate field below. Then click the **Connect** button.

Security: **WPA2-Personal** Please select the wireless security method used by your existing wireless network.

Pre-shared Key: **PruebaRedes2024** Please enter a Pre-shared Key that is 8 to 63 characters in length.

Cancel **Connect**

Wireless-N Notebook Adapter Wireless Network Monitor v1.0 Model No. WPC300N

Laptop1

Physical Config **Desktop** Programming Attributes

WPA2-Personal Needed for Connection

This wireless network has WPA2-Personal enabled. To connect to this network, enter the required passphrase in the appropriate field below. Then click the **Connect** button.

Security: **WPA2-Personal** Please select the wireless security method used by your existing wireless network.

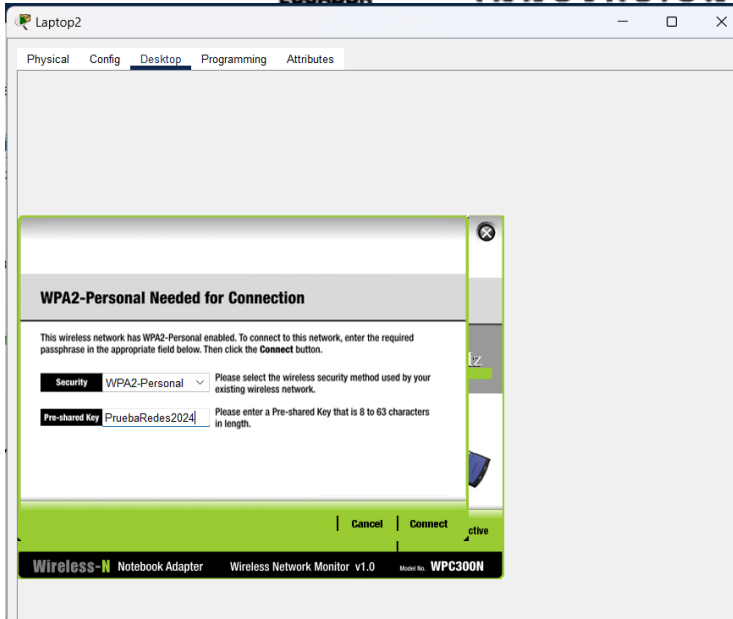
Pre-shared Key: **PruebaRedes2024** Please enter a Pre-shared Key that is 8 to 63 characters in length.

Cancel **Connect**

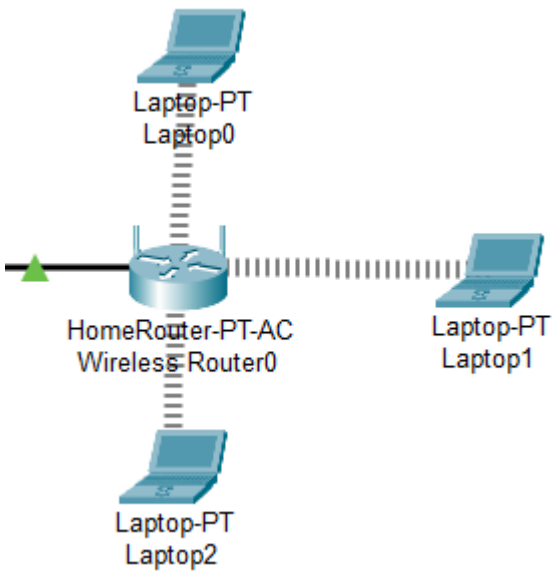
Wireless-N Notebook Adapter Wireless Network Monitor v1.0 Model No. WPC300N



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Se evidencia la conectividad que existe:



Configuración de VLANS



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Switch1



Physical Config CLI Attributes

IOS Command Line Interface

Switch con0 is now available

Press RETURN to get started.

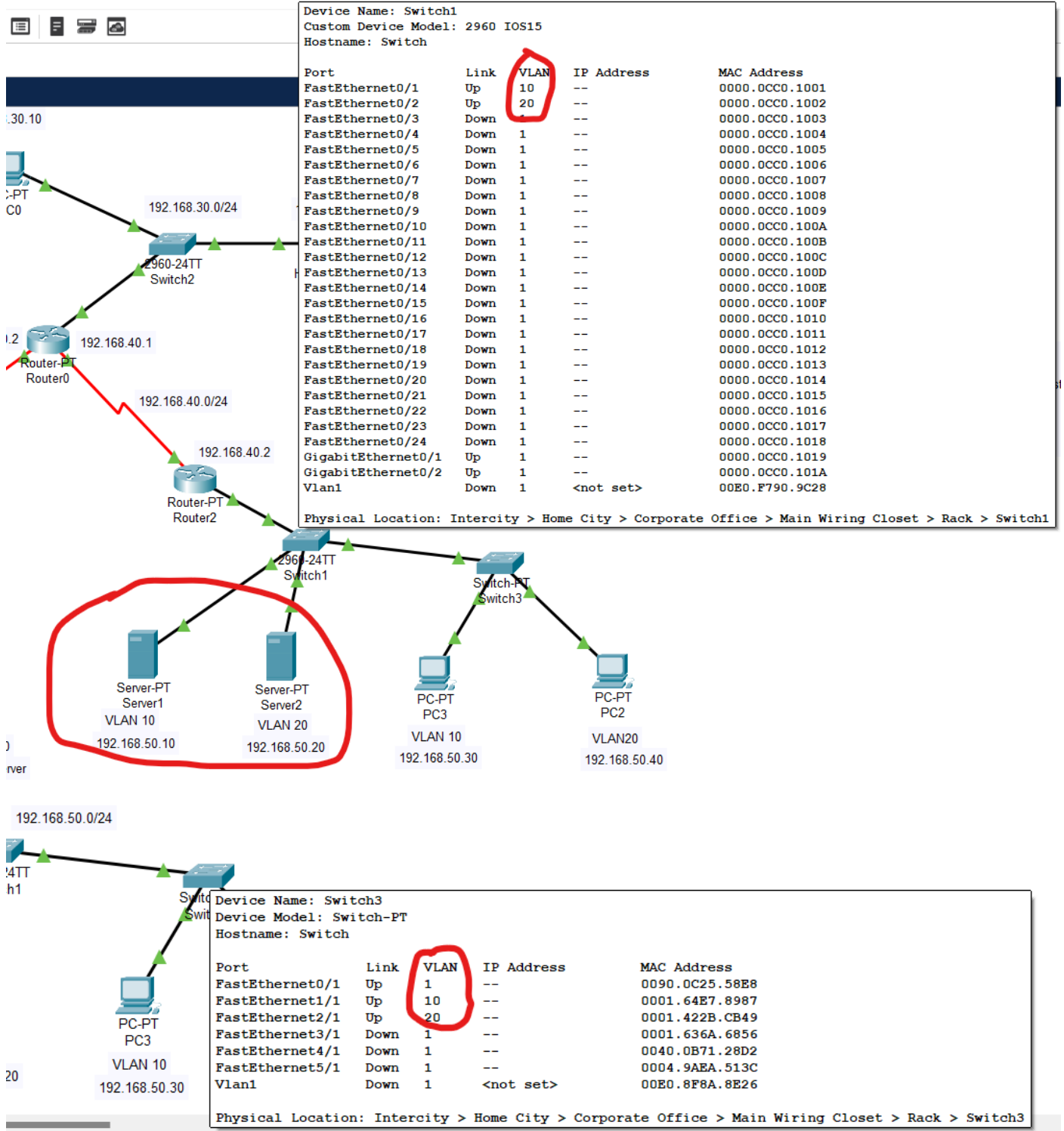
```
Switch>enable
Switch#
Switch#configure terminal
Enter configuration commands, one per line. End with CNTL/Z.
Switch(config)#
Switch(config)#vlan 10
Switch(config-vlan)#name VLAN10
Switch(config-vlan)#exit
Switch(config)#vlan 20
Switch(config-vlan)#name VLAN20
Switch(config-vlan)#exit
Switch(config)#interface fastEthernet 0/1
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 10
Switch(config-if)#exit
Switch(config)#interface fastEthernet 0/2
Switch(config-if)#switchport mode access
Switch(config-if)#switchport access vlan 20
Switch(config-if)#exit
```



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Conectividad Extremo a Extremo



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Laptop2

Physical Config Desktop Programming Attributes

Command Prompt

```
Cisco Packet Tracer PC Command Line 1.0
C:\>
ping 192.168.30.10

Pinging 192.168.30.10 with 32 bytes of data:

Reply from 192.168.30.10: bytes=32 time=33ms TTL=128
Reply from 192.168.30.10: bytes=32 time=17ms TTL=128
Reply from 192.168.30.10: bytes=32 time=17ms TTL=128
Reply from 192.168.30.10: bytes=32 time=17ms TTL=128

Ping statistics for 192.168.30.10:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 17ms, Maximum = 33ms, Average = 21ms

C:\>
```