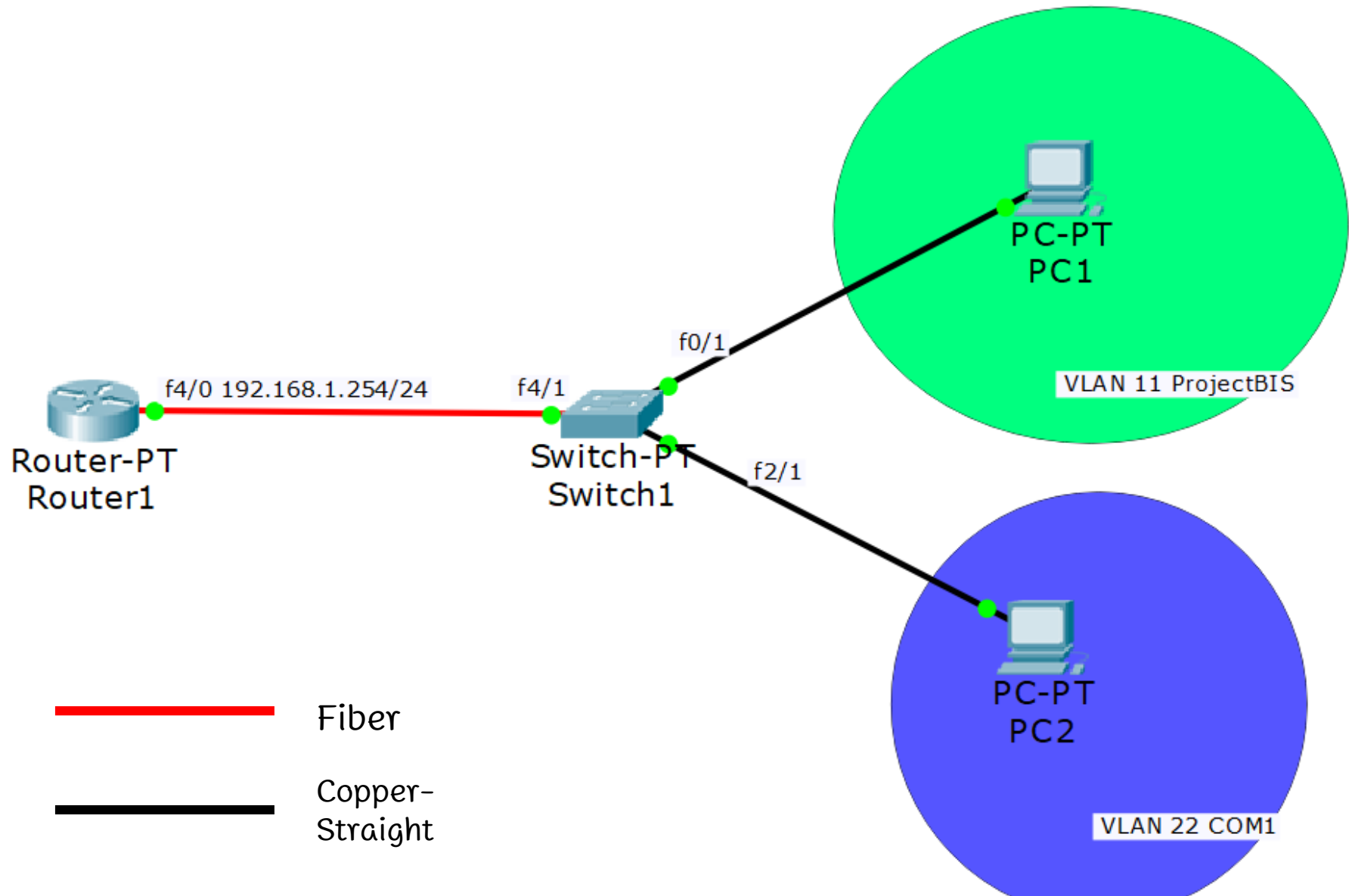


Lab05 DHCP & VLAN

BS313 Data Communication and Computer Network for Business

Aj. Apipong Pingyod

Network Map



Router 1 DHCP

```
Router>enable
```

```
Router#config terminal
```

```
Router(config)#hostname Router1
```

```
Router1(config)#ip dhcp excluded-address 192.168.1.1 192.168.1.10 (เว้นไว้ 10 IP)
```

```
Router1(config)#ip dhcp pool BIS (ตั้งชื่อ DHCP pool ว่า BIS)
```

```
Router1(dhcp-config)#network 192.168.1.0 255.255.255.0 (ประกาศ IP ที่จะแจก)
```

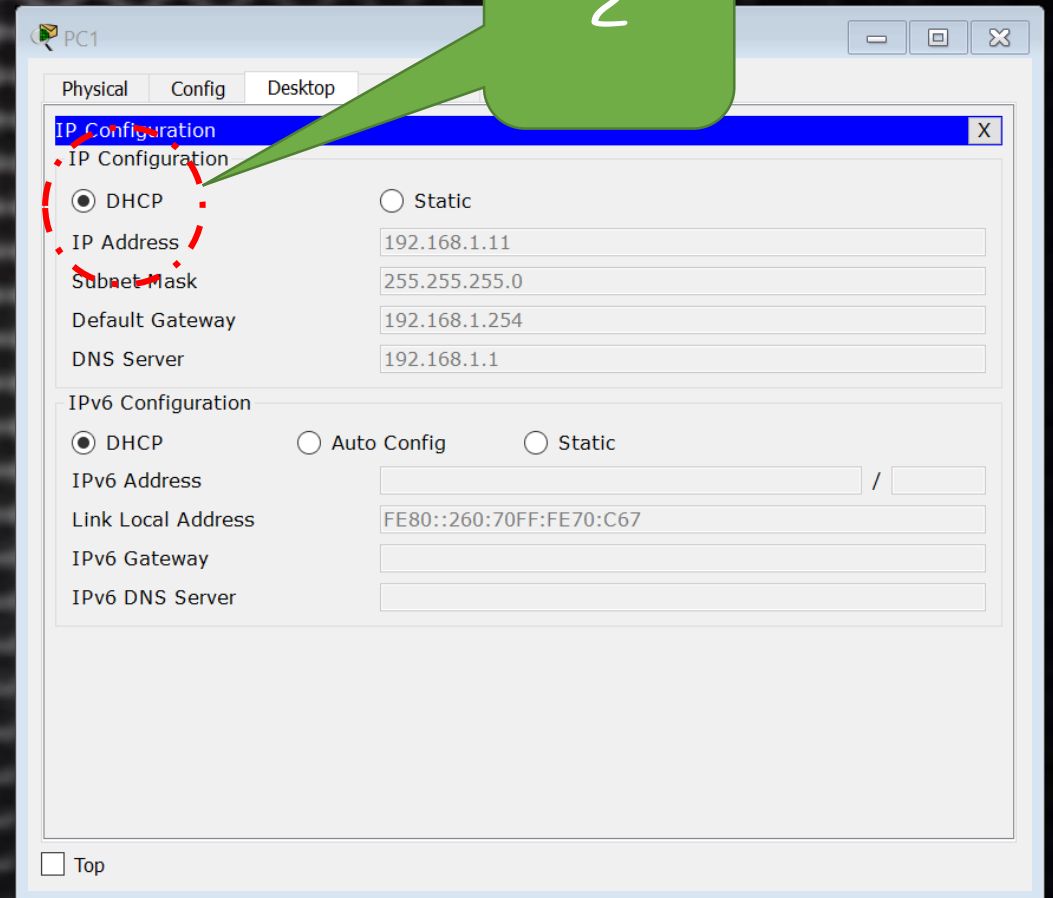
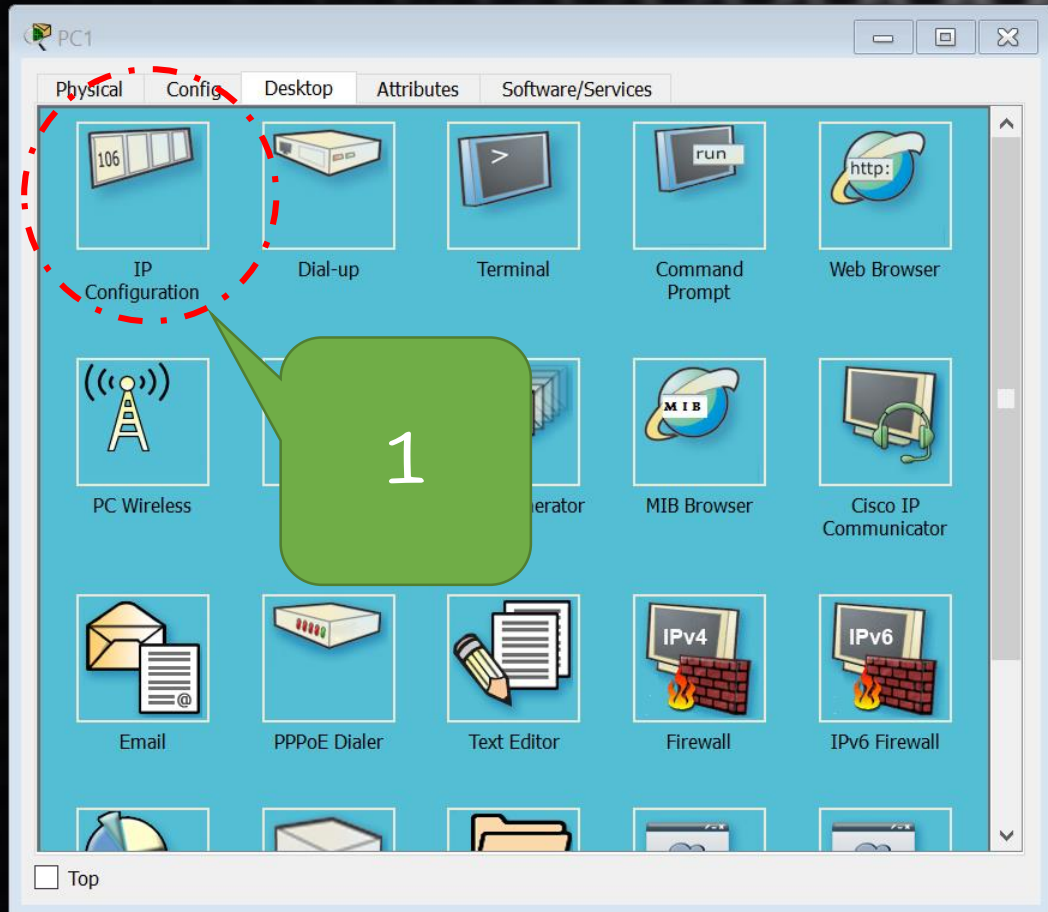
```
Router1(dhcp-config)#default-router 192.168.1.254 (กำหนด Default Route ให้กับ DHCP นี้)
```

```
Router1(dhcp-config)#exit
```

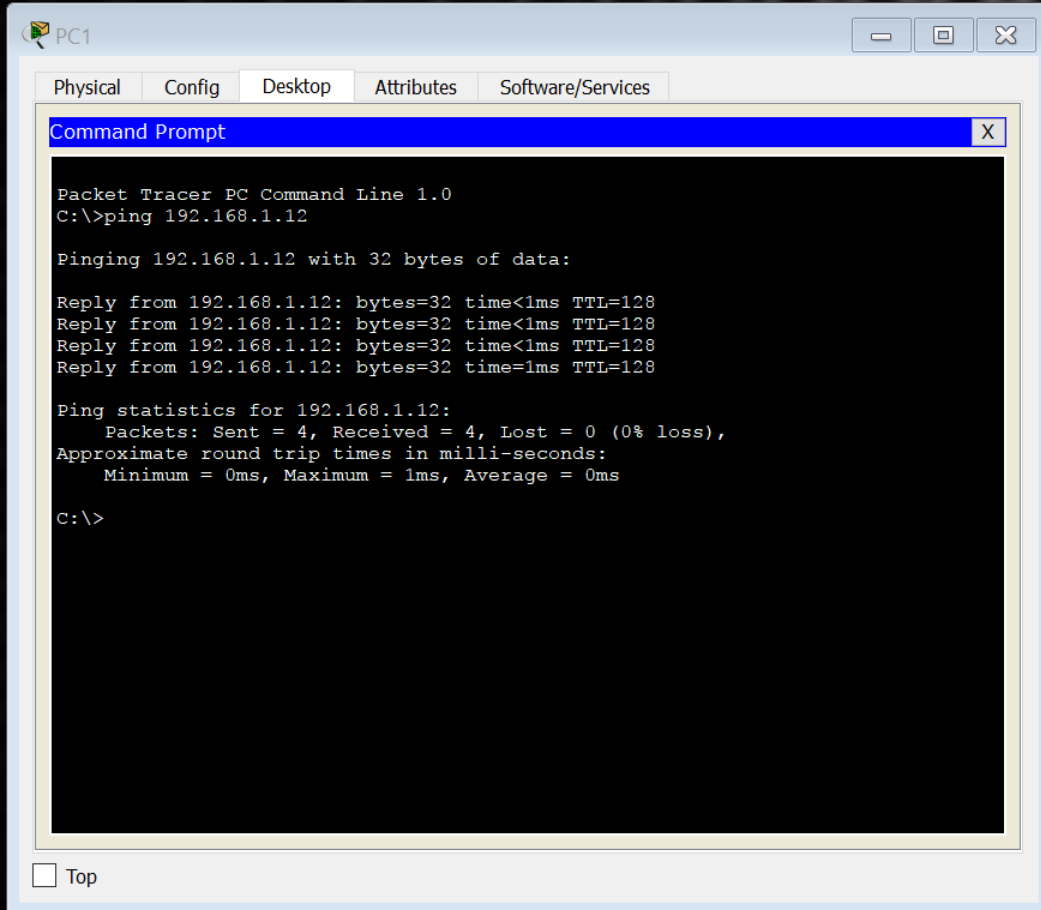

Router1 set IP

```
Router1(config)#interface fastEthernet 4/0  
Router1(config-if)#ip address 192.168.1.254  
255.255.255.0  
Router1(config-if)#no shutdown  
Router1(config-if)#end  
Router1#copy running-config startup-config
```

PC1, PC2 เปิดการทำงาน DHCP เพื่อรับ IP



ทดสอบการ Ping ระหว่าง PC1 และ PC2



```
PC1
Physical Config Desktop Attributes Software/Services
Command Prompt X
Packet Tracer PC Command Line 1.0
C:\>ping 192.168.1.12

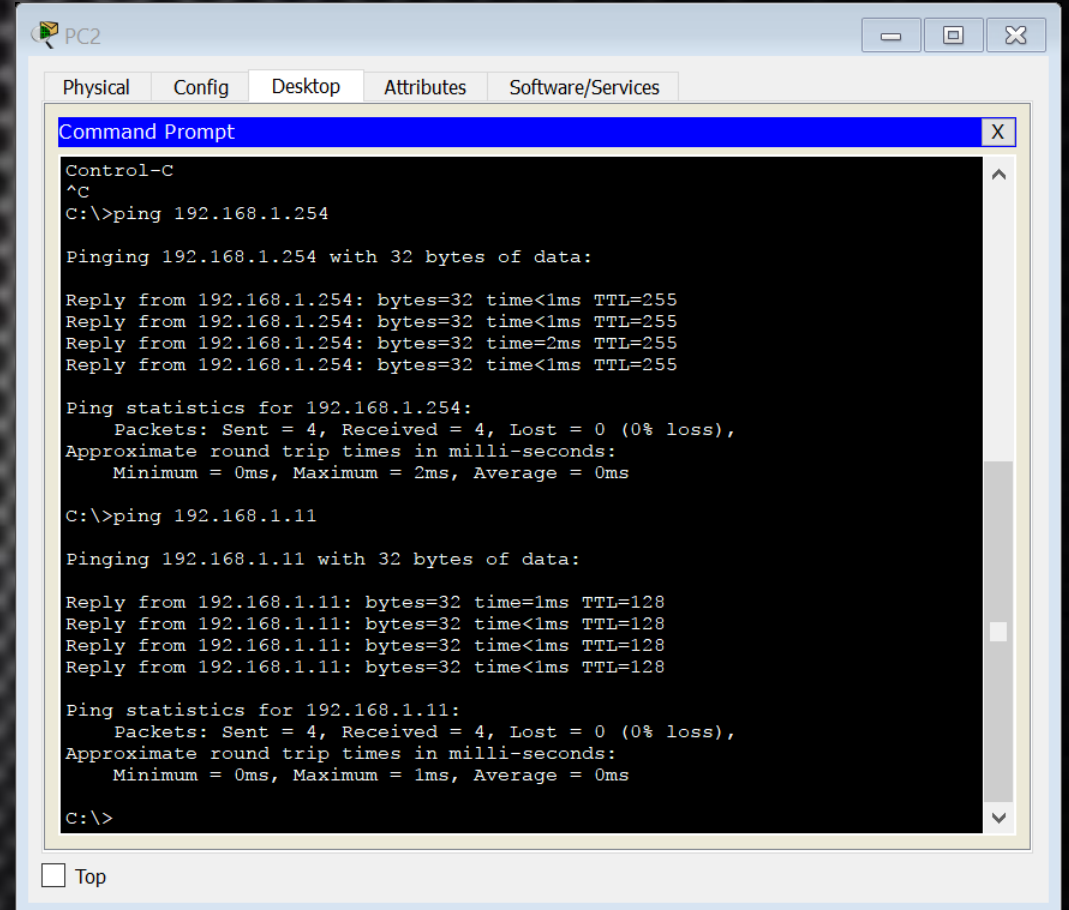
Pinging 192.168.1.12 with 32 bytes of data:

Reply from 192.168.1.12: bytes=32 time<1ms TTL=128
Reply from 192.168.1.12: bytes=32 time<1ms TTL=128
Reply from 192.168.1.12: bytes=32 time<1ms TTL=128
Reply from 192.168.1.12: bytes=32 time=1ms TTL=128

Ping statistics for 192.168.1.12:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>
```

Top



```
PC2
Physical Config Desktop Attributes Software/Services
Command Prompt X
Control-C
^C
C:\>ping 192.168.1.254

Pinging 192.168.1.254 with 32 bytes of data:

Reply from 192.168.1.254: bytes=32 time<1ms TTL=255
Reply from 192.168.1.254: bytes=32 time<1ms TTL=255
Reply from 192.168.1.254: bytes=32 time=2ms TTL=255
Reply from 192.168.1.254: bytes=32 time<1ms TTL=255

Ping statistics for 192.168.1.254:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 2ms, Average = 0ms

C:\>ping 192.168.1.11

Pinging 192.168.1.11 with 32 bytes of data:

Reply from 192.168.1.11: bytes=32 time=1ms TTL=128
Reply from 192.168.1.11: bytes=32 time<1ms TTL=128
Reply from 192.168.1.11: bytes=32 time<1ms TTL=128
Reply from 192.168.1.11: bytes=32 time<1ms TTL=128

Ping statistics for 192.168.1.11:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\>
```

Top

Switch1 สร้าง VLAN 11 ชื่อ ProjectBIS

```
Switch>enable
```

```
Switch#config terminal
```

```
Switch(config)#vlan 11 (สร้าง vlan หมายเลข 11)
```

```
Switch(config-vlan)#name ProjectBIS  
(ตั้งชื่อ vlan หมายเลข 11 ว่า ProjectBIS)
```

```
Switch(config-vlan)#exit
```

Switch1

กำหนด Interface ของ PC1 ให้อยู่ใน VLAN11

```
Switch(config)#interface fastEthernet 0/1
```

```
Switch(config-if)#switchport mode access
```

(กำหนดให้อินเตอร์เฟซ f0/1 ใช้โหมด access)

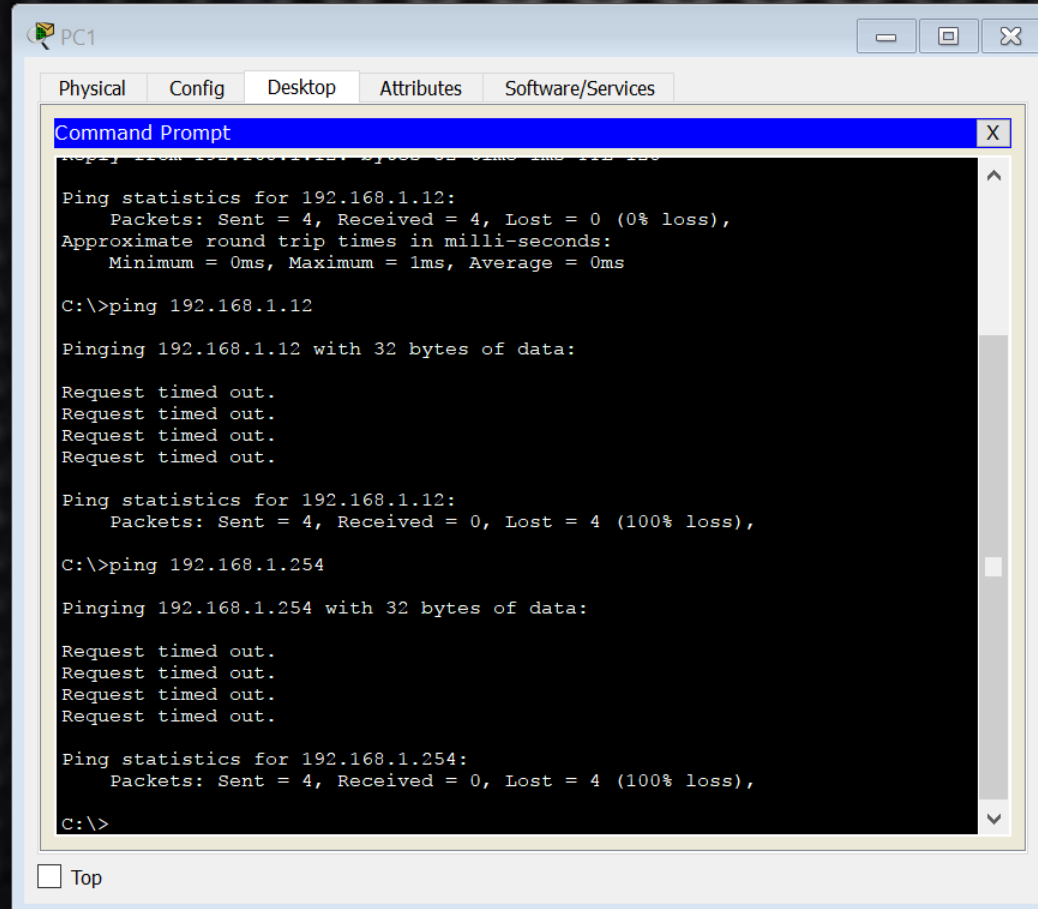
```
Switch(config-if)#switchport access vlan 11
```

(กำหนดให้อินเตอร์เฟซนี้อยู่ใน vlan 11)

```
Switch(config-if)#end
```

```
Switch#show vlan (ตรวจสอบ vlan ที่สร้างขึ้น)
```


ทดสอบ PC1, PC2 ลอง Ping ฝากัน



The screenshot shows a Windows Command Prompt window titled "PC1" with tabs for Physical, Config, Desktop, Attributes, and Software/Services. The Command Prompt displays the following text:

```
Command Prompt X
Copy from 192.168.1.12: 21000 bytes sent 112 ms 112 ms
Ping statistics for 192.168.1.12:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 0ms, Maximum = 1ms, Average = 0ms
C:\>ping 192.168.1.12

Pinging 192.168.1.12 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 192.168.1.12:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
C:\>ping 192.168.1.254

Pinging 192.168.1.254 with 32 bytes of data:

Request timed out.
Request timed out.
Request timed out.
Request timed out.

Ping statistics for 192.168.1.254:
    Packets: Sent = 4, Received = 0, Lost = 4 (100% loss),
C:\>
```

At the bottom of the window, there is a checkbox labeled "Top" which is currently unchecked.

Switch1 สร้าง VLAN 22 ชื่อ COM1

Switch#config terminal

Switch(config)#vlan 22 (สร้าง vlan หมายเลข 22)

Switch(config-vlan)#name COM1
(ตั้งชื่อ vlan หมายเลข 22 ว่า COM1)

Switch(config-vlan)#exit

Switch1

กำหนด Interface ของ PC2 ให้อยู่ใน VLAN22

```
Switch(config)#interface fastEthernet 2/1
```

```
Switch(config-if)#switchport mode access
```

(กำหนดให้อินเตอร์เฟซ f2/1 ใช้โหมด access)

```
Switch(config-if)#switchport access vlan 22
```

(กำหนดให้อินเตอร์เฟซ f2/1 อยู่ใน vlan 22)

```
Switch(config-if)#end
```

```
Switch#show vlan (ตรวจสอบ vlan ที่สร้างขึ้น)
```


ตรวจสอบ vlan

Switch1

Physical Config CLI Attributes

IOS Command Line Interface

```
Switch#show vlan
```

| VLAN Name | Status | Ports |
|-------------------------|--------|---------------------|
| 1 default | active | Fa1/1, Fa3/1, Fa5/1 |
| 11 ProjectBIS | active | Fa0/1 |
| 22 Com1 | active | Fa2/1 |
| 1002 fddi-default | active | |
| 1003 token-ring-default | active | |
| 1004 fddinet-default | active | |
| 1005 trnet-default | active | |

| VLAN | Type | SAID | MTU | Parent | RingNo | BridgeNo | Stp | BrdgMode | Trans1 | Trans2 |
|------|-------|--------|------|--------|--------|----------|------|----------|--------|--------|
| 1 | enet | 100001 | 1500 | - | - | - | - | - | 0 | 0 |
| 11 | enet | 100011 | 1500 | - | - | - | - | - | 0 | 0 |
| 22 | enet | 100022 | 1500 | - | - | - | - | - | 0 | 0 |
| 1002 | fddi | 101002 | 1500 | - | - | - | - | - | 0 | 0 |
| 1003 | tr | 101003 | 1500 | - | - | - | - | - | 0 | 0 |
| 1004 | fdnet | 101004 | 1500 | - | - | - | ieee | - | 0 | 0 |
| 1005 | trnet | 101005 | 1500 | - | - | - | ibm | - | 0 | 0 |

Remote SPAN VLANs

--More--

Copy Paste

Top

โจทย์ท้าทายเพิ่มเติม



- เพิ่ม PC3 ใน vlan 11
- เพิ่ม PC4 ใน vlan 22
- แล้วลองคอนฟิกให้ ping
เสากันให้ได้ภายใน vlan
เดียวกัน