

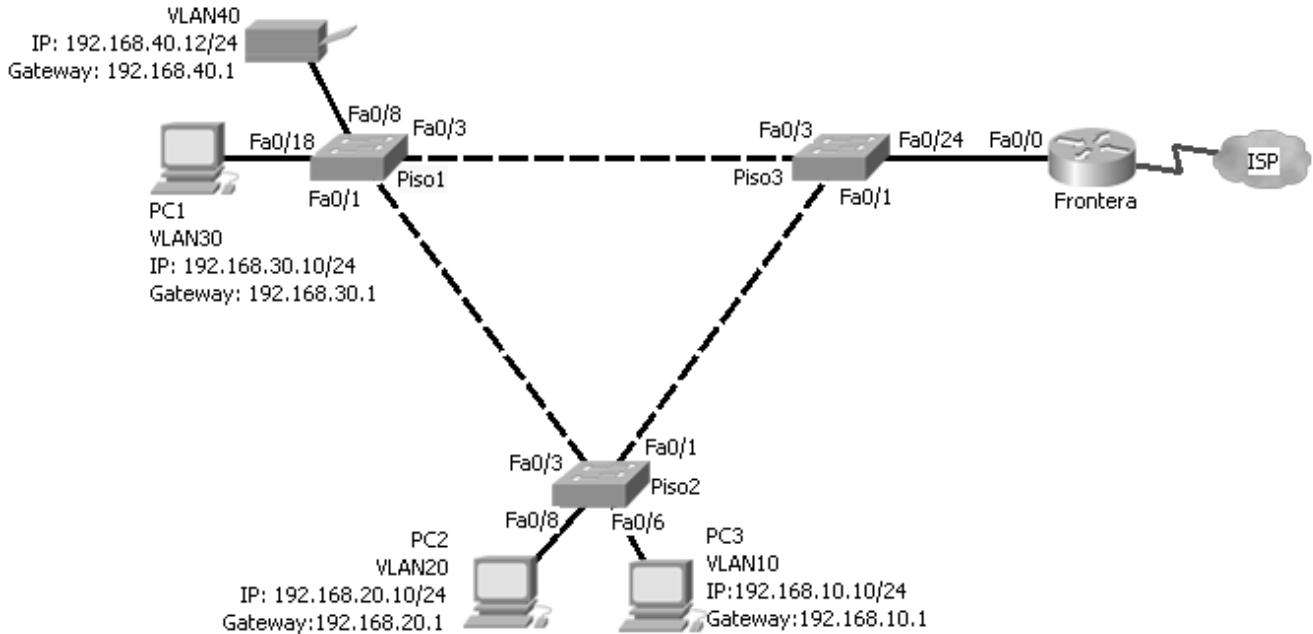
Conmutación y Enrutamiento II Tercera Evaluación

Nombre: _____

Calificación

Paralelo: _____

1. En base al diagrama mostrado y las salidas de los comandos “show interface trunk” y “show running-configuration” y “show vlan summary” determine porque PC3 no puede imprimir e indique como resolver el(los) problema(s) (30 puntos)



```

Frontera#show running-config
~~~~~
interface FastEthernet0/0
no ip address
duplex auto
speed auto
!
interface FastEthernet0/0.10
encapsulation dot1Q 10
ip address 192.168.10.1 255.255.255.0
!
interface FastEthernet0/0.20
encapsulation dot1Q 20
ip address 192.168.20.11 255.255.255.0
!
interface FastEthernet0/0.30
encapsulation dot1Q 30
ip address 192.168.30.1 255.255.255.0
!
interface FastEthernet0/0.40
encapsulation dot1Q 40
ip address 192.168.40.1 255.255.255.0
!
interface FastEthernet0/0.99
encapsulation dot1Q 99 native
ip address 192.168.98.1 255.255.255.0
~~~~~
end
    
```

```

Piso1#show interface trunk

Port      Mode      Encapsulation  Status        Native vlan
Fa0/1     on        802.1q         trunking     99
Fa0/2     on        802.1q         trunking     99
Port      Vlans allowed on trunk
Fa0/1     1,10,20,30,40,99
Fa0/2     1,10,20,30,40,99

Port      Vlans allowed and active in management domain
Fa0/1     1,10,20,30,40,99
Fa0/2     1,10,20,30,40,99
    
```

```

Port      Vlans in spanning tree forwarding state and not pruned
Fa0/1    1,10,20,30,40,99
Fa0/2    1,10,20,30,40,99

```

```
Piso1#show vlan brief
```

VLAN Name	Status	Ports
1 default	active	Fa0/2, Fa0/4, Fa0/5, Fa0/6 Fa0/7, Fa0/8, Fa0/10, Fa0/11 Fa0/12, Fa0/13, Fa0/14, Fa0/15 Fa0/16, Fa0/17, Fa0/19, Fa0/20 Fa0/21, Fa0/22, Fa0/23, Fa0/24
10 Ventas	active	
20 Tecnico	active	
30 Secretarias	active	Fa0/18
40 Servicios	active	Fa0/8
99 Administracion	active	

```
Piso2#show interface trunk
```

Port	Mode	Encapsulation	Status	Native vlan
Fa0/1	on	802.1q	trunking	99
Fa0/3	on	802.1q	trunking	99

```
Port      Vlans allowed on trunk
```

```

Fa0/1    1,20,30,40,99
Fa0/3    1,20,30,40,99

```

```
Port      Vlans allowed and active in management domain
```

```

Fa0/1    1,20,30,40,99
Fa0/3    1,20,30,40,99

```

```
Port      Vlans in spanning tree forwarding state and not pruned
```

```

Fa0/1    1,20,30,40,99
Fa0/3    1,20,30,40,99

```

```
Piso2#show vlan brief
```

VLAN Name	Status	Ports
1 default	active	Fa0/2, Fa0/4, Fa0/5, Fa0/7 Fa0/9, Fa0/10, Fa0/11, Fa0/12 Fa0/13, Fa0/14, Fa0/15, Fa0/16 Fa0/17, Fa0/18, Fa0/19, Fa0/20 Fa0/21, Fa0/22, Fa0/23, Fa0/24
10 Ventas	active	
20 Tecnico	active	Fa0/8
30 Secretarias	active	Fa0/6
40 Servicios	active	
99 Administracion	active	

```
Piso3#show interface trunk
```

Port	Mode	Encapsulation	Status	Native vlan
Fa0/1	on	802.1q	trunking	69
Fa0/3	on	802.1q	trunking	69

```
Port      Vlans allowed on trunk
```

```

Fa0/1    1-1005
Fa0/3    1-1005

```

```
Port      Vlans allowed and active in management domain
```

```

Fa0/1    1-1005
Fa0/3    1-1005

```

```
Port      Vlans in spanning tree forwarding state and not pruned
```

```

Fa0/1    1-1005
Fa0/3    1-1005

```

```
Piso3#show vlan brief
```

VLAN Name	Status	Ports
1 default	active	Fa0/2, Fa0/4, Fa0/5, Fa0/6 Fa0/7, Fa0/9, Fa0/10, Fa0/11 Fa0/12, Fa0/13, Fa0/14, Fa0/15 Fa0/16, Fa0/17, Fa0/19, Fa0/20 Fa0/21, Fa0/22, Fa0/23
10 Ventas	active	Fa0/10
20 Tecnico	active	
30 Secretarias	active	Fa0/18
40 Servicios	active	Fa0/8 Fa0/24
99 Administracion	active	

2. Defina brevemente los siguientes términos (10 puntos)

a) STP

b) Modo Transparente

c) VTP

d) Puente Raíz

e) Conmutación Asimétrica

3. Describa el proceso de conmutación "Store and Forward". Mencione sus ventajas, desventajas y dos posibles aplicaciones (10 puntos)

4. Describa los cuatro pasos para que un dispositivo se una a la red inalámbrica (20 puntos)

5. Usted ha sido contratada por PATITO SA para rediseñar su red. PATITO SA desea separar a nivel lógico los departamentos Administrativo (20 dispositivos repartidos en el Piso 1 y Piso 3), Ventas (40 dispositivos repartidos entre Piso 1 y Piso 2) y Técnico (20 dispositivos repartidos entre Piso 2 y Piso 3), para poder controlar el tráfico entre ellos. Se ha planificado incrementar el número de ingenieros en el departamento técnico (10 trabajadores que serán ubicados en el Piso 2). Adicionalmente se desea tener seguridad y redundancia. Provea la nueva topología, indique los cambios a nivel de configuración que se requerirían y mencione el tipo de seguridad que se deberá incluir en cada dispositivo. (30 puntos)

