

TUNEL VPN

Un túnel es una ruta alternativa que permite llegar de un router a otro encapsulando los datos.
La función habitual es encriptar datos para que no sean visibles.
Otras razones que justifiquen el túnel, puede ser para ofrecer calidad de servicio.

Para crear debemos definir los interfaces sobre los que se habilitará.

El origen del túnel, será la salida del router origen.

El destino del túnel, será la entrada del router destino.

El túnel tendrá dos IP, una en cada interface

Pasos para crear el túnel:

1º) Definimos el túnel:

```
interface Tunnel0
```

```
ip address origen_del_tunel mascara
```

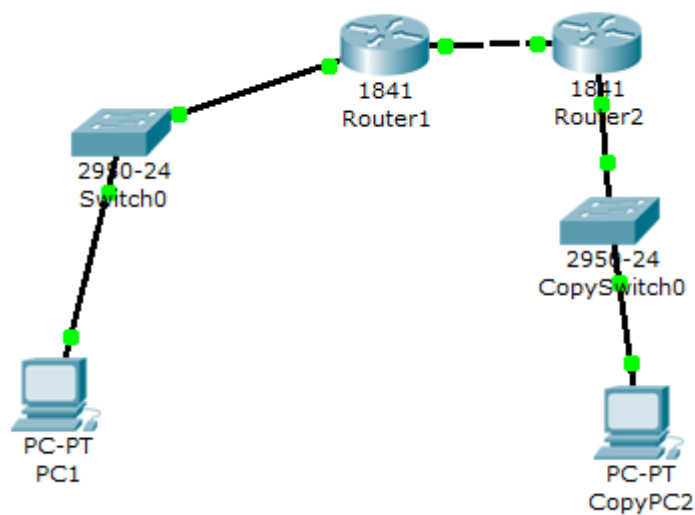
```
tunnel source interface_salida_router (el origen del túnel es el interface de salida del router)
```

```
tunnel destination ip_destino (salida del túnel, ip del interface destino en router destino)
```

2º) Asignamos una ruta estática que ofrezca el camino a través del túnel.

```
ip route red_destino mascara ip_tunel_otro_router
```

VPN tunel



ROUTER 1

```
interface Tunnel0
```

```
ip address 192.168.10.1 255.255.255.0
```

```
tunnel source FastEthernet0/1
```

```
tunnel destination 10.10.10.2
```

```
interface FastEthernet0/0
```

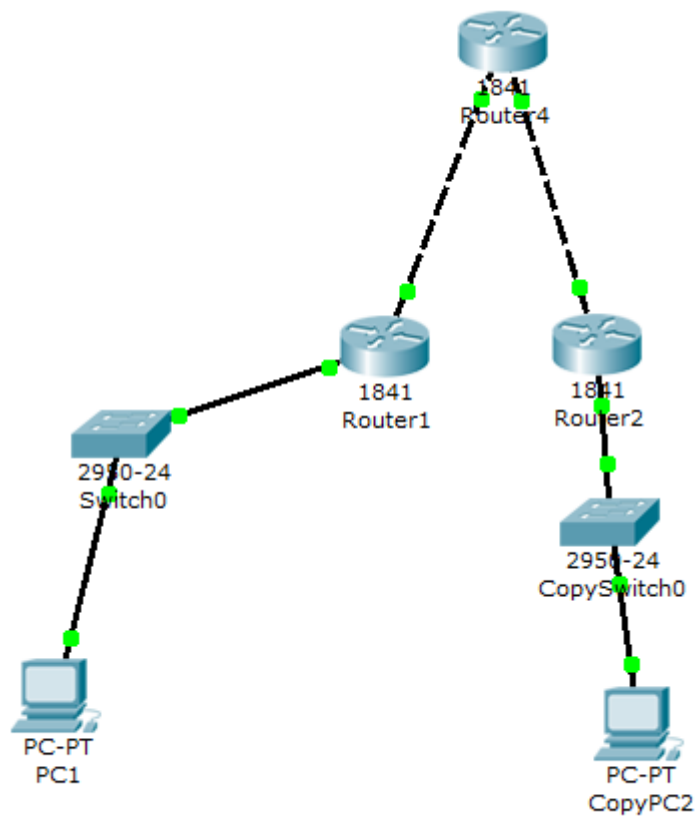
```
ip address 192.168.0.1 255.255.255.0
tx-ring-limit 2
duplex auto
speed auto
```

```
interface FastEthernet0/1
ip address 10.10.10.1 255.255.255.0
ip route 192.168.1.0 255.255.255.0 192.168.10.2
```

ROUTER 2

```
!
interface Tunnel0
ip address 192.168.10.2 255.255.255.0
tunnel source FastEthernet0/1
tunnel destination 10.10.10.1
!
!
interface FastEthernet0/0
ip address 192.168.1.1 255.255.255.0
duplex auto
speed auto
!
interface FastEthernet0/1
ip address 10.10.10.2 255.255.255.0
duplex auto
speed auto
!
ip route 192.168.0.0 255.255.255.0 192.168.10.1
end
```

COMPROBACION



ROUTER 1

```

interface Tunnel0
ip address 192.168.10.1 255.255.255.0
tunnel source FastEthernet0/1
tunnel destination 10.10.11.2
!
!
interface FastEthernet0/0
ip address 192.168.0.1 255.255.255.0
tx-ring-limit 2
duplex auto
speed auto
!
interface FastEthernet0/1
ip address 10.10.10.1 255.255.255.0
duplex auto
speed auto
!
interface Vlan1
no ip address
shutdown
!
ip classless
ip route 192.168.1.0 255.255.255.0 192.168.10.2
ip route 10.10.11.0 255.255.255.0 10.10.10.3

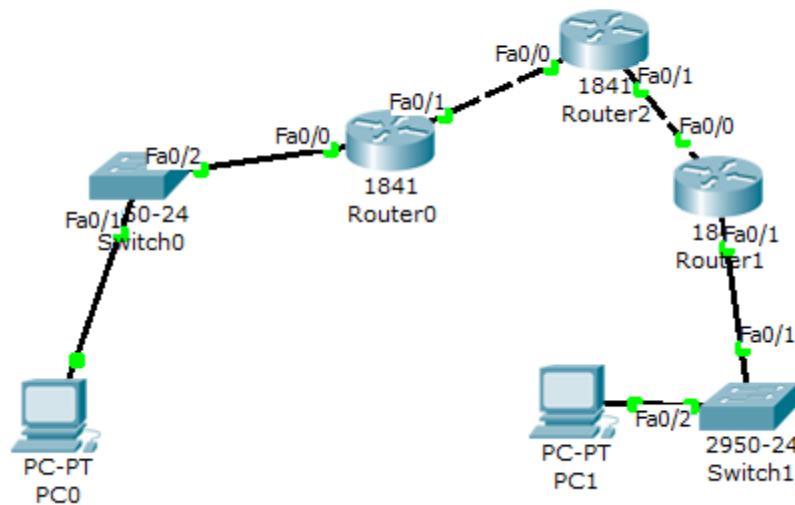
```

ROUTER 2

```
interface Tunnel0
ip address 192.168.10.1 255.255.255.0
tunnel source FastEthernet0/1
tunnel destination 10.10.11.2
!
!
interface FastEthernet0/0
ip address 192.168.0.1 255.255.255.0
tx-ring-limit 2
duplex auto
speed auto
!
interface FastEthernet0/1
ip address 10.10.10.1 255.255.255.0
duplex auto
speed auto
!
interface Vlan1
no ip address
shutdown
!
ip classless
ip route 192.168.1.0 255.255.255.0 192.168.10.2
ip route 10.10.11.0 255.255.255.0 10.10.10.3
```

ROUTER 4

```
interface FastEthernet0/0
ip address 10.10.10.3 255.255.255.0
duplex auto
speed auto
!
interface FastEthernet0/1
ip address 10.10.11.1 255.255.255.0
duplex auto
speed auto
!
interface Vlan1
no ip address
shutdown
!
router rip
```



Router 0	Router 1	Router 2
<pre> interface Tunnel0 ip address 10.10.10.1 255.255.255.0 tunnel source FastEthernet0/1 tunnel destination 192.168.3.2 ! ! interface FastEthernet0/0 ip address 192.168.1.1 255.255.255.0 duplex auto speed auto ! interface FastEthernet0/1 ip address 192.168.2.1 255.255.255.0 duplex auto speed auto ! interface Vlan1 no ip address shutdown ! router rip version 2 network 192.168.1.0 network 192.168.2.0 ! ip classless ip route 192.168.4.0 255.255.255.0 10.10.10.2 ! ! ! ! </pre>	<pre> interface Tunnel0 ip address 10.10.10.2 255.255.255.0 tunnel source FastEthernet0/0 tunnel destination 192.168.2.1 ! ! interface FastEthernet0/0 ip address 192.168.3.2 255.255.255.0 duplex auto speed auto ! interface FastEthernet0/1 ip address 192.168.4.1 255.255.255.0 duplex auto speed auto ! interface Vlan1 no ip address shutdown ! router rip version 2 network 192.168.3.0 network 192.168.4.0 ! ip classless ip route 192.168.1.0 255.255.255.0 10.10.10.1 ! ! ! ! </pre>	<pre> interface FastEthernet0/0 ip address 192.168.2.2 255.255.255.0 duplex auto speed auto ! interface FastEthernet0/1 ip address 192.168.3.1 255.255.255.0 duplex auto speed auto ! interface Vlan1 no ip address shutdown ! router rip version 2 network 192.168.2.0 network 192.168.3.0 ! </pre>