



## Tunnels

A variety of different types of tunnels are used in today's networks to support many different topologies. Tonight we will be focusing on two types of tunnels. Layer 2 tunnels and IPv6 tunnels. Layer 2 tunnels are used to bridge two LAN segments across a layer 3 network, whether this is in the same building or across the world. IPv6 tunnels are used when there are two IPv6 networks with only an IPv4 network in the middle (to route traffic between the two IPv6 networks).

### **Before You Begin:**

Find a partner. You should each build one side of the topology.

### **Equipment Required per Team:**

- 2 - 2811 or 2911 routers (you can check out extras from cage)
- 2 - 3550 switches
- 2 - computers

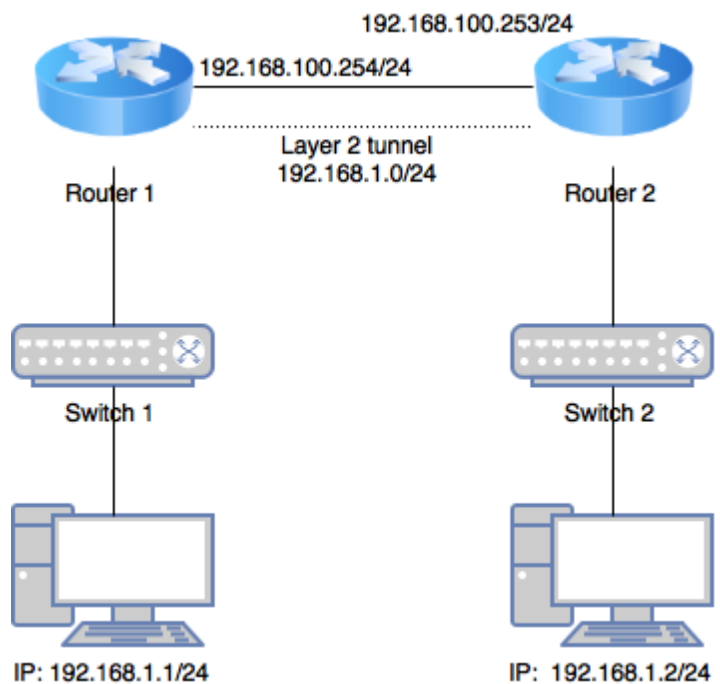
### Layer 2 Tunnel:

Create a layer 2 tunnel between the routers, allowing the 192.168.1.0/24 network to exist on both sides.

#### Hints:

Pseudo-wire  
Xconnect  
Show license

**Bonus:** Ping 192.168.100.254 from your PC



### IPv6 Tunnel:

Create an IPv6 over IPv4 tunnel. You should be able to ping the IPv6 host on the opposite network.

#### Hints:

ipv6 unicast-routing  
tunnel mode  
ipv6 enable

