

Report week 1

Switch1:

```
configure terminal      (Create and name the vlans)
vlan 10
name HR
exit
vlan 20
name IT
exit
interface Ethernet0/0   (Moves to the configuration mode of interface E0/0)
  switchport access vlan 10 (Assigns E0/0 to VLAN 10)
  switchport mode access (Forces the interface to operate as an access port (not
trunk))

interface Ethernet0/1   (Opens configuration of port E0/1)
  switchport access vlan 20 (Assigns E0/1 to VLAN 20)
  switchport mode access (Sets this interface as an access port)

interface Ethernet0/2   (Selects the interface used to connect switches)
  switchport trunk allowed vlan 1,10,20 (Allows only VLANs 1, 10, and 20 to pass
through this trunk link)
  switchport trunk encapsulation dot1q (Uses 802.1Q encapsulation, the standard
method to carry multiple VLANs between switches)
  switchport mode trunk (Sets the interface to operate as a trunk port, allowing
multiple VLANs over the link)
```

Switch2:

```
configure terminal      (Create and name the vlans)
vlan 10
name HR
exit
vlan 20
name IT
exit
interface Ethernet0/0   (Moves to the configuration mode of interface E0/0)
  switchport access vlan 10 (Assigns E0/0 to VLAN 10)
  switchport mode access (Forces the interface to operate as an access port (not
trunk))

interface Ethernet0/1   (Opens configuration of port E0/1)
  switchport access vlan 20 (Assigns E0/1 to VLAN 20)
  switchport mode access (Sets this interface as an access port)

interface Ethernet0/2   (Selects the interface used to connect switches)
  switchport trunk allowed vlan 1,10,20 (Allows only VLANs 1, 10, and 20 to pass
through this trunk link)
```

switchport trunk encapsulation dot1q (Uses 802.1Q encapsulation, the standard method to carry multiple VLANs between switches)
switchport mode trunk (Sets the interface to operate as a trunk port, allowing multiple VLANs over the link)

Switch3:

```
configure terminal (Create and name the vlans)
vlan 10
name HR
exit
vlan 20
name IT
exit
interface Ethernet0/0 (Enters the configuration mode of port E0/0, which will
serve as a trunk uplink)
switchport trunk allowed vlan 1,10,20 (Only VLAN 1 (native), VLAN 10, and VLAN 20
can pass through this link)
switchport trunk encapsulation dot1q (Sets the trunk tagging method to IEEE 802.1Q,
the standard for VLAN tagging used with routers)
switchport mode trunk (Forces the interface to operate as a trunk port,
allowing multiple VLANs to be transported through it)

interface Ethernet0/1
switchport trunk allowed vlan 1,10,20 (Allows VLANs 1, 10, and 20)
switchport trunk encapsulation dot1q (Uses 802.1Q encapsulation)
switchport mode trunk (Operates as a trunk port)

interface Ethernet0/2 (intervlan)
no switchport (as a router)
ip address 10.10.10.2 255.255.255.252

interface vlan10
ip address 192.168.10.1 255.255.255.0
no shutdown
interface vlan20
ip address 192.168.20.1 255.255.255.0
no shutdown
```

