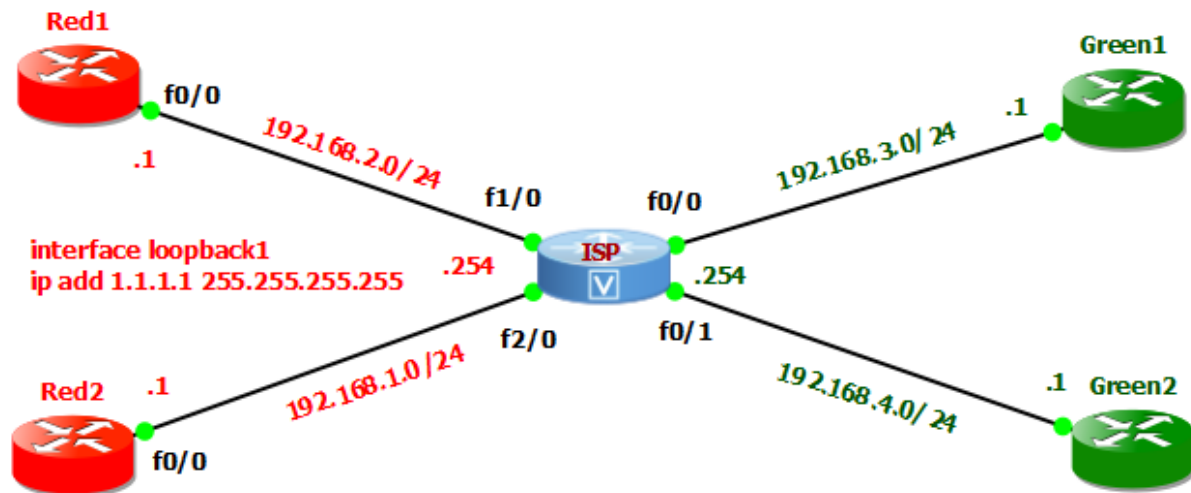


Configure VRF Lite:

- o VRF is a term which stands for Virtual Routing and Forwarding.
- o By default, a Cisco router uses a single global routing table only.
- o VRF allows a router to run more than one routing table at the same time.
- o VRFs are used to create multiple virtual routers from one physical router.
- o Every VRF is creating his own Routing table & Cisco Express Forwarding table.
- o VRF basically virtualize multiple Cisco routers on a single physical router.
- o VRFs are like Switch VLANs (Virtual Local Area Network) for Cisco routers.
- o VRFs Instead of using single global routing table, use multiple virtual routing tables.
- o Each interface of the router is assigned to different Virtual Routing and Forwarding.
- o Virtual Routing and Forwarding (VRF) are commonly used for MPLS deployments.
- o In Cisco terminology, deployment of VRFs without MPLS is known as **VRF Lite**.
- o When assigning an interface to a VRF, the IOS deletes preconfigured IP address.
- o When assigning an interface to a VRF, IOS also remove route from the global table.



Router Red1 Configuration	Router Red2 Configuration
<pre>Red1(config)#interface f0/0 Red1(config-if)#ip address 192.168.2.1 255.255.255.0 Red1(config-if)# no shutdown</pre>	<pre>Red2(config)#interface f0/0 Red2(config-if)#ip address 192.168.1.1 255.255.255.0 Red2(config-if)# no shutdown</pre>
Router Green1 Configuration	Router Green2 Configuration
<pre>Green1(config)#interface f0/0 Green1(config-if)#ip address 192.168.3.1 255.255.255.0 Green1(config-if)# no shutdown</pre>	<pre>Green2(config)#interface f0/0 Green2(config-if)#ip address 192.168.4.1 255.255.255.0 Green2(config-if)# no shutdown</pre>

Router ISP Configuration	
ISP(config)#ip vrf Green ISP(config-vrf)#exit	ISP(config)#ip vrf Red ISP(config-vrf)#exit
ISP(config)#interface FastEthernet0/0 ISP(config-if)#ip vrf forwarding Green ISP(config-if)#ip address 192.168.3.254 255.255.255.0 ISP(config-if)#no shutdown	ISP(config)#interface FastEthernet0/1 ISP(config-if)#ip vrf forwarding Green ISP(config-if)#ip address 192.168.4.254 255.255.255.0 ISP(config-if)#no shutdown
ISP(config)#interface FastEthernet1/0 ISP(config-if)#ip vrf forwarding Red ISP(config-if)#ip address 192.168.2.254 255.255.255.0 ISP(config-if)#no shutdown	ISP(config-if)#interface FastEthernet2/0 ISP(config-if)#ip vrf forwarding Red ISP(config-if)#ip address 192.168.1.254 255.255.255.0 ISP(config-if)#no shutdown
ISP# show ip route connected	ISP# show ip route vrf Red connected
ISP# show ip route vrf Green connected	ISP# ping vrf Red 192.168.2.1
ISP# ping vrf Red 192.168.1.1	ISP# ping vrf Green 192.168.3.1
ISP# ping vrf Green 192.168.4.1	

Static Route Configuration	
ISP(config)# ip route vrf Red 1.1.1.1 255.255.255.255 192.168.2.1	ISP(config)# ip route vrf Green 2.2.2.2 255.255.255.255 192.168.3.1
EIGRP Configuration	
ISP(config)#router eigrp 1 ISP(config-router)#address-family ipv4 vrf Red ISP(config-router-af)#network 192.168.1.0 ISP(config-router-af)#network 192.168.2.0	ISP(config)#router eigrp 2 ISP(config-router)#address-family ipv4 vrf Green ISP(config-router-af)#network 192.168.3.0 ISP(config-router-af)#network 192.168.4.0
RIP Configuration	
ISP(config)#router rip ISP(config-router)#address-family ipv4 vrf Red ISP(config-router-af)#network 192.168.1.0 ISP(config-router-af)#network 192.168.2.0	ISP(config)#router rip ISP(config-router)#address-family ipv4 vrf Green ISP(config-router-af)#network 192.168.3.0 ISP(config-router-af)#network 192.168.4.0
OSPF Configuration	
ISP(config)#router ospf 1 vrf Red ISP(config-router)#network 192.168.1.0 0.0.0.255 area 0 ISP(config-router)#network 192.168.2.0 0.0.0.255 area 0	ISP(config)#router ospf 1 vrf Green ISP(config-router)#network 192.168.3.0 0.0.0.255 area 0 ISP(config-router)#network 192.168.4.0 0.0.0.255 area 0
ISP# show ip vrf Red	ISP# show ip route vrf Green
ISP# show ip protocols vrf Red	ISP# show ip eigrp vrf Green neighbors

