Virtual Routing and Forwarding Lite Lab

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**Purpose:**

In this lab we learned how to set up VRF and how it worked, and we set it up with 3 routers and used EIGRP as our protocol of choice.

**Background:**

VRF Lite (Virtual Routing and Forwarding lite) is used in networking to create multiple virtual routing tables on a single physical device. Each virtual routing table can be associated with one or more network interfaces and can have its own routing table, forwarding table, and set of routing protocols. In VRF lite a single physical router is divided into multiple routes while maintaining its own set of routing tables and forwarding tables. Each VRF instance is assigned a unique identifier, which is used to differentiate it from other VRF instances n the same physical router. VRF’s main purpose is so that network administrators can create separate, isolated virtual networks within a physical network infrastructure. This provides, improved network security, increased scalability, and more efficient use of network resources. To set VRF lite they network administrators must configure he router to support multiple VRF instances and assign each network interface with the right VRF instance. And traffic entering a router is then assigned to the corresponding VRF instance based on the interface it arrives on and is forwarded according to the routing table associated with that VRF instance. Some benefits of VRF are that it can be used for different customers meaning that each customer network can be completely isolated from other customer networks, providing improved security and privacy. Overall VRF lite is a good tool for networking administrators who need to partition a single physical network into multiple virtual networks with unique routing requirements and security policies by providing isolation and separation between different networks VRL lite allows network administrators to optimize network resources and improve security and privacy.

**Lab Commands:**

Ip VRF forwarding <vrf-name> – associates a VRF instance with an interface or sub-interface

router <protocol> <process-id> vrf <VRF-name> - identifies the VRF instance

**Topology:** Diagram

Description automatically generated

**Configurations:**

**R1:**

hostname R1

boot-start-marker

boot-end-marker

vrf definition Mgmt-intf

address-family ipv4

exit-address-family

address-family ipv6

exit-address-family

no aaa new-model

ip vrf OSPF10

ip vrf OSPF20

ipv6 unicast-routing

subscriber templating

multilink bundle-name authenticated

license udi pid ISR4321/K9 sn FDO21491LXV

license accept end user agreement

license boot level securityk9

spanning-tree extend system-id

redundancy

mode none

vlan internal allocation policy ascending

interface GigabitEthernet0/0/0

no ip address

negotiation auto

no shutdown

interface GigabitEthernet0/0/0.10

encapsulation dot1Q 10

ip vrf forwarding OSPF10

ip address 10.1.1.1 255.255.255.252

interface GigabitEthernet0/0/0.20

encapsulation dot1Q 20

ip vrf forwarding OSPF20

ip address 10.1.1.1 255.255.255.252

interface GigabitEthernet0/0/1

no ip address

negotiation auto

no shutdown

interface GigabitEthernet0/0/1.10

encapsulation dot1Q 10

ip vrf forwarding OSPF10

ip address 10.0.0.2 255.255.255.252

interface GigabitEthernet0/0/1.20

encapsulation dot1Q 20

ip vrf forwarding OSPF20

ip address 10.0.0.6 255.255.255.252

interface Serial0/1/0

no ip address

shutdown

interface Serial0/1/1

no ip address

shutdown

interface GigabitEthernet0

vrf forwarding Mgmt-intf

no ip address

shutdown

negotiation auto

interface Vlan1

no ip address

shutdown

router ospf 10 vrf OSPF10

router-id 1.1.1.10

network 10.0.0.0 0.0.0.3 area 0

network 10.1.1.0 0.0.0.3 area 0

router ospf 20 vrf OSPF20

router-id 1.1.1.20

network 10.0.0.4 0.0.0.3 area 0

network 10.1.1.0 0.0.0.3 area 0

ip forward-protocol nd

no ip http server

no ip http secure-server

ip tftp source-interface GigabitEthernet0

control-plane

line con 0

stopbits 1

line aux 0

stopbits 1

line vty 0 4

login

end

**R2:**

hostname R2

boot-start-marker

boot-end-marker

vrf definition Mgmt-intf

address-family ipv4

exit-address-family

address-family ipv6

exit-address-family

no aaa new-model

ip vrf OSPF10

ip vrf OSPF20

ipv6 unicast-routing

subscriber templating

multilink bundle-name authenticated

license udi pid ISR4321/K9 sn FDO214420QQ

license accept end user agreement

license boot level securityk9

spanning-tree extend system-id

redundancy

mode none

vlan internal allocation policy ascending

interface GigabitEthernet0/0/0

no ip address

negotiation auto

no shutdown

interface GigabitEthernet0/0/0.10

encapsulation dot1Q 10

ip vrf forwarding OSPF10

ip address 10.1.1.5 255.255.255.252

interface GigabitEthernet0/0/0.20

encapsulation dot1Q 20

ip vrf forwarding OSPF20

ip address 10.1.1.5 255.255.255.252

interface GigabitEthernet0/0/1

no ip address

negotiation auto

no shutdown

interface GigabitEthernet0/0/1.10

encapsulation dot1Q 10

ip vrf forwarding OSPF10

ip address 10.1.1.2 255.255.255.252

interface GigabitEthernet0/0/1.20

encapsulation dot1Q 20

ip vrf forwarding OSPF20

ip address 10.1.1.2 255.255.255.252

interface Serial0/1/0

no ip address

shutdown

interface Serial0/1/1

no ip address

shutdown

interface GigabitEthernet0

vrf forwarding Mgmt-intf

no ip address

shutdown

negotiation auto

interface Vlan1

no ip address

shutdown

router ospf 10 vrf OSPF10

router-id 2.2.2.10

network 10.1.1.0 0.0.0.3 area 0

network 10.1.1.4 0.0.0.3 area 0

router ospf 20 vrf OSPF20

router-id 2.2.2.20

network 10.1.1.0 0.0.0.3 area 0

network 10.1.1.4 0.0.0.3 area 0

ip forward-protocol nd

no ip http server

no ip http secure-server

ip tftp source-interface GigabitEthernet0

control-plane

line con 0

stopbits 1

line aux 0

stopbits 1

line vty 0 4

login

end

**R3:**

hostname R3

boot-start-marker

boot-end-marker

vrf definition Mgmt-intf

address-family ipv4

exit-address-family

address-family ipv6

exit-address-family

no aaa new-model

ip vrf OSPF10

ip vrf OSPF20

ipv6 unicast-routing

subscriber templating

vtp domain cisco

vtp mode transparent

multilink bundle-name authenticated

license udi pid ISR4321/K9 sn FDO214420HY

license boot level securityk9

spanning-tree extend system-id

redundancy

mode none

vlan internal allocation policy ascending

vlan 10,20

interface GigabitEthernet0/0/0

no ip address

negotiation auto

no shutdown

interface GigabitEthernet0/0/0.10

encapsulation dot1Q 10

ip vrf forwarding OSPF10

ip address 10.0.1.2 255.255.255.252

interface GigabitEthernet0/0/0.20

encapsulation dot1Q 20

ip vrf forwarding OSPF20

ip address 10.0.1.6 255.255.255.252

interface GigabitEthernet0/0/1

no ip address

negotiation auto

no shutdown

interface GigabitEthernet0/0/1.10

encapsulation dot1Q 10

ip vrf forwarding OSPF10

ip address 10.1.1.6 255.255.255.252

interface GigabitEthernet0/0/1.20

encapsulation dot1Q 20

ip vrf forwarding OSPF20

ip address 10.1.1.6 255.255.255.252

interface Serial0/1/0

no ip address

interface Serial0/1/1

no ip address

interface GigabitEthernet0

vrf forwarding Mgmt-intf

no ip address

negotiation auto

interface Vlan1

no ip address

router ospf 10 vrf OSPF10

router-id 3.3.3.10

network 10.0.1.0 0.0.0.3 area 0

network 10.1.1.4 0.0.0.3 area 0

router ospf 20 vrf OSPF20

router-id 3.3.3.20

network 10.0.1.4 0.0.0.3 area 0

network 10.1.1.4 0.0.0.3 area 0

ip forward-protocol nd

no ip http server

no ip http secure-server

control-plane

line con 0

stopbits 1

line aux 0

stopbits 1

line vty 0 4

login

end

**Sw1:**

hostname S2

boot-start-marker

boot-end-marker

no aaa new-model

system mtu routing 1500

vtp domain CCNP

vtp mode transparent

crypto pki trustpoint TP-self-signed-3474976128

enrollment selfsigned

subject-name cn=IOS-Self-Signed-Certificate-3474976128

revocation-check none

rsakeypair TP-self-signed-3474976128

crypto pki certificate chain TP-self-signed-3474976128

certificate self-signed 01

3082023A 308201A3 A0030201 02020101 300D0609 2A864886 F70D0101 04050030

31312F30 2D060355 04031326 494F532D 53656C66 2D536967 6E65642D 43657274

69666963 6174652D 33343734 39373631 3238301E 170D3933 30333031 30323534

30365A17 0D323030 31303130 30303030 305A3031 312F302D 06035504 03132649

4F532D53 656C662D 5369676E 65642D43 65727469 66696361 74652D33 34373439

37363132 3830819F 300D0609 2A864886 F70D0101 01050003 818D0030 81890281

81009632 607EC766 6C2DA728 E40B3AC5 4C5A1138 AE556209 7A06B3CC 0F26A42B

06D628BD 613D95FC 9C3C380D 5C4B0310 08FEBC04 5C88458D F11549BF EBC3068A

8C5E6062 15CD0511 740F656F 4DFE7ED0 FE1418E6 5A8A0B8E 41D9C208 E0D05DC6

4677FFB0 7E1AC7E6 F795432F 2A751C83 02997861 3A000977 95AFC064 13774BAB

CE430203 010001A3 62306030 0F060355 1D130101 FF040530 030101FF 300D0603

551D1104 06300482 02533230 1F060355 1D230418 30168014 EB7DAAC1 7B917559

D6C5C334 BCC14E18 BC0039FD 301D0603 551D0E04 160414EB 7DAAC17B 917559D6

C5C334BC C14E18BC 0039FD30 0D06092A 864886F7 0D010104 05000381 810052AC

1CD8C15E CAC21000 99A9900C 963FDCEF 6C003A63 110A2DA7 7C8509CA 1BD51E00

44D4B251 62298C33 DAD38EA1 74EF477D 4EE2EFD9 666CDF89 B8592E40 2E0E86E8

423A1F34 D1DCD5F1 AF6676E3 12B7012D 724AF516 ACFD79DF FAA66072 E1DA58D4

F3EEB185 1EB027C6 14B0B38C 862D4415 D4DDEA5D 11EE18C2 02285533 699F

quit

spanning-tree mode pvst

spanning-tree extend system-id

vlan internal allocation policy ascending

vlan 2

vlan 10

name apple

vlan 20

name samsung

vlan 100,200,500-501,693

vlan 694

name pog

vlan 996

name CUSTOMER\_NATIVE

interface FastEthernet1/0/1

switchport access vlan 20

switchport mode access

interface FastEthernet1/0/2

switchport access vlan 10

switchport mode access

interface FastEthernet1/0/3

switchport trunk encapsulation dot1q

switchport mode trunk

interface FastEthernet1/0/4

interface FastEthernet1/0/5

interface FastEthernet1/0/6

interface FastEthernet1/0/7

interface FastEthernet1/0/8

interface FastEthernet1/0/9

interface FastEthernet1/0/10

interface FastEthernet1/0/11

interface FastEthernet1/0/12

interface FastEthernet1/0/13

interface FastEthernet1/0/14

interface FastEthernet1/0/15

interface FastEthernet1/0/16

interface FastEthernet1/0/17

interface FastEthernet1/0/18

interface FastEthernet1/0/19

interface FastEthernet1/0/20

interface FastEthernet1/0/21

interface FastEthernet1/0/22

interface FastEthernet1/0/23

interface FastEthernet1/0/24

interface GigabitEthernet1/0/1

interface GigabitEthernet1/0/2

interface GigabitEthernet1/1/1

interface GigabitEthernet1/1/2

interface Vlan1

no ip address

interface Vlan20

ip address 10.0.0.5 255.255.255.252

ip http server

ip http secure-server

logging esm config

line con 0

line vty 0 4

login

line vty 5 15

login

end

**Sw2:**

hostname S2

boot-start-marker

boot-end-marker

no aaa new-model

system mtu routing 1500

vtp domain CCNP

vtp mode transparent

crypto pki trustpoint TP-self-signed-3474976128

enrollment selfsigned

subject-name cn=IOS-Self-Signed-Certificate-3474976128

revocation-check none

rsakeypair TP-self-signed-3474976128

crypto pki certificate chain TP-self-signed-3474976128

certificate self-signed 01

3082023A 308201A3 A0030201 02020101 300D0609 2A864886 F70D0101 04050030

31312F30 2D060355 04031326 494F532D 53656C66 2D536967 6E65642D 43657274

69666963 6174652D 33343734 39373631 3238301E 170D3933 30333031 30323534

30365A17 0D323030 31303130 30303030 305A3031 312F302D 06035504 03132649

4F532D53 656C662D 5369676E 65642D43 65727469 66696361 74652D33 34373439

37363132 3830819F 300D0609 2A864886 F70D0101 01050003 818D0030 81890281

81009632 607EC766 6C2DA728 E40B3AC5 4C5A1138 AE556209 7A06B3CC 0F26A42B

06D628BD 613D95FC 9C3C380D 5C4B0310 08FEBC04 5C88458D F11549BF EBC3068A

8C5E6062 15CD0511 740F656F 4DFE7ED0 FE1418E6 5A8A0B8E 41D9C208 E0D05DC6

4677FFB0 7E1AC7E6 F795432F 2A751C83 02997861 3A000977 95AFC064 13774BAB

CE430203 010001A3 62306030 0F060355 1D130101 FF040530 030101FF 300D0603

551D1104 06300482 02533230 1F060355 1D230418 30168014 EB7DAAC1 7B917559

D6C5C334 BCC14E18 BC0039FD 301D0603 551D0E04 160414EB 7DAAC17B 917559D6

C5C334BC C14E18BC 0039FD30 0D06092A 864886F7 0D010104 05000381 810052AC

1CD8C15E CAC21000 99A9900C 963FDCEF 6C003A63 110A2DA7 7C8509CA 1BD51E00

44D4B251 62298C33 DAD38EA1 74EF477D 4EE2EFD9 666CDF89 B8592E40 2E0E86E8

423A1F34 D1DCD5F1 AF6676E3 12B7012D 724AF516 ACFD79DF FAA66072 E1DA58D4

F3EEB185 1EB027C6 14B0B38C 862D4415 D4DDEA5D 11EE18C2 02285533 699F

quit

spanning-tree mode pvst

spanning-tree extend system-id

vlan internal allocation policy ascending

vlan 2

vlan 10

name apple

vlan 20

name samsung

vlan 100,200,500-501,693

vlan 694

name pog

vlan 996

name CUSTOMER\_NATIVE

interface FastEthernet1/0/1

switchport access vlan 20

switchport mode access

interface FastEthernet1/0/2

switchport access vlan 10

switchport mode access

interface FastEthernet1/0/3

switchport trunk encapsulation dot1q

switchport mode trunk

interface FastEthernet1/0/4

interface FastEthernet1/0/5

interface FastEthernet1/0/6

interface FastEthernet1/0/7

interface FastEthernet1/0/8

interface FastEthernet1/0/9

interface FastEthernet1/0/10

interface FastEthernet1/0/11

interface FastEthernet1/0/12

interface FastEthernet1/0/13

interface FastEthernet1/0/14

interface FastEthernet1/0/15

interface FastEthernet1/0/16

interface FastEthernet1/0/17

interface FastEthernet1/0/18

interface FastEthernet1/0/19

interface FastEthernet1/0/20

interface FastEthernet1/0/21

interface FastEthernet1/0/22

interface FastEthernet1/0/23

interface FastEthernet1/0/24

interface GigabitEthernet1/0/1

interface GigabitEthernet1/0/2

interface GigabitEthernet1/1/1

interface GigabitEthernet1/1/2

interface Vlan1

no ip address

interface Vlan20

ip address 10.0.1.5 255.255.255.252

ip http server

ip http secure-server

logging esm config

line con 0

line vty 0 4

login

line vty 5 15

login

end

**Ip routes:**

R1:

Routing Table: OSPF10

Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP

D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area

N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2

E1 - OSPF external type 1, E2 - OSPF external type 2

i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2

ia - IS-IS inter area, \* - candidate default, U - per-user static route

o - ODR, P - periodic downloaded static route, H - NHRP, l - LISP

a - application route

+ - replicated route, % - next hop override, p - overrides from PfR

Gateway of last resort is not set

10.0.0.0/8 is variably subnetted, 6 subnets, 2 masks

C 10.0.0.0/30 is directly connected, GigabitEthernet0/0/1.10

L 10.0.0.2/32 is directly connected, GigabitEthernet0/0/1.10

O 10.0.1.0/30 [110/3] via 10.1.1.2, 00:02:25, GigabitEthernet0/0/0.10

C 10.1.1.0/30 is directly connected, GigabitEthernet0/0/0.10

L 10.1.1.1/32 is directly connected, GigabitEthernet0/0/0.10

O 10.1.1.4/30 [110/2] via 10.1.1.2, 00:02:35, GigabitEthernet0/0/0.10

Routing Table: OSPF20

Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP

D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area

N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2

E1 - OSPF external type 1, E2 - OSPF external type 2

i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2

ia - IS-IS inter area, \* - candidate default, U - per-user static route

o - ODR, P - periodic downloaded static route, H - NHRP, l - LISP

a - application route

+ - replicated route, % - next hop override, p - overrides from PfR

Gateway of last resort is not set

10.0.0.0/8 is variably subnetted, 6 subnets, 2 masks

C 10.0.0.4/30 is directly connected, GigabitEthernet0/0/1.20

L 10.0.0.6/32 is directly connected, GigabitEthernet0/0/1.20

O 10.0.1.4/30 [110/3] via 10.1.1.2, 00:03:19, GigabitEthernet0/0/0.20

C 10.1.1.0/30 is directly connected, GigabitEthernet0/0/0.20

L 10.1.1.1/32 is directly connected, GigabitEthernet0/0/0.20

O 10.1.1.4/30 [110/2] via 10.1.1.2, 00:03:29, GigabitEthernet0/0/0.20

R2:

Routing Table: OSPF10

Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP

D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area

N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2

E1 - OSPF external type 1, E2 - OSPF external type 2

i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2

ia - IS-IS inter area, \* - candidate default, U - per-user static route

o - ODR, P - periodic downloaded static route, H - NHRP, l - LISP

a - application route

+ - replicated route, % - next hop override, p - overrides from PfR

Gateway of last resort is not set

10.0.0.0/8 is variably subnetted, 6 subnets, 2 masks

O 10.0.0.0/30 [110/2] via 10.1.1.1, 00:03:55, GigabitEthernet0/0/1.10

O 10.0.1.0/30 [110/2] via 10.1.1.6, 00:03:23, GigabitEthernet0/0/0.10

C 10.1.1.0/30 is directly connected, GigabitEthernet0/0/1.10

L 10.1.1.2/32 is directly connected, GigabitEthernet0/0/1.10

C 10.1.1.4/30 is directly connected, GigabitEthernet0/0/0.10

L 10.1.1.5/32 is directly connected, GigabitEthernet0/0/0.10

Routing Table: OSPF20

Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP

D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area

N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2

E1 - OSPF external type 1, E2 - OSPF external type 2

i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2

ia - IS-IS inter area, \* - candidate default, U - per-user static route

o - ODR, P - periodic downloaded static route, H - NHRP, l - LISP

a - application route

+ - replicated route, % - next hop override, p - overrides from PfR

Gateway of last resort is not set

10.0.0.0/8 is variably subnetted, 6 subnets, 2 masks

O 10.0.0.4/30 [110/2] via 10.1.1.1, 00:04:09, GigabitEthernet0/0/1.20

O 10.0.1.4/30 [110/2] via 10.1.1.6, 00:03:59, GigabitEthernet0/0/0.20

C 10.1.1.0/30 is directly connected, GigabitEthernet0/0/1.20

L 10.1.1.2/32 is directly connected, GigabitEthernet0/0/1.20

C 10.1.1.4/30 is directly connected, GigabitEthernet0/0/0.20

L 10.1.1.5/32 is directly connected, GigabitEthernet0/0/0.20

R3:

Routing Table: OSPF10

Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP

D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area

N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2

E1 - OSPF external type 1, E2 - OSPF external type 2

i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2

ia - IS-IS inter area, \* - candidate default, U - per-user static route

o - ODR, P - periodic downloaded static route, H - NHRP, l - LISP

a - application route

+ - replicated route, % - next hop override, p - overrides from PfR

Gateway of last resort is not set

10.0.0.0/8 is variably subnetted, 6 subnets, 2 masks

O 10.0.0.0/30 [110/3] via 10.1.1.5, 00:04:09, GigabitEthernet0/0/1.10

C 10.0.1.0/30 is directly connected, GigabitEthernet0/0/0.10

L 10.0.1.2/32 is directly connected, GigabitEthernet0/0/0.10

O 10.1.1.0/30 [110/2] via 10.1.1.5, 00:04:09, GigabitEthernet0/0/1.10

C 10.1.1.4/30 is directly connected, GigabitEthernet0/0/1.10

L 10.1.1.6/32 is directly connected, GigabitEthernet0/0/1.10

Routing Table: OSPF20

Codes: L - local, C - connected, S - static, R - RIP, M - mobile, B - BGP

D - EIGRP, EX - EIGRP external, O - OSPF, IA - OSPF inter area

N1 - OSPF NSSA external type 1, N2 - OSPF NSSA external type 2

E1 - OSPF external type 1, E2 - OSPF external type 2

i - IS-IS, su - IS-IS summary, L1 - IS-IS level-1, L2 - IS-IS level-2

ia - IS-IS inter area, \* - candidate default, U - per-user static route

o - ODR, P - periodic downloaded static route, H - NHRP, l - LISP

a - application route

+ - replicated route, % - next hop override, p - overrides from PfR

Gateway of last resort is not set

10.0.0.0/8 is variably subnetted, 6 subnets, 2 masks

O 10.0.0.4/30 [110/3] via 10.1.1.5, 00:04:44, GigabitEthernet0/0/1.20

C 10.0.1.4/30 is directly connected, GigabitEthernet0/0/0.20

L 10.0.1.6/32 is directly connected, GigabitEthernet0/0/0.20

O 10.1.1.0/30 [110/2] via 10.1.1.5, 00:04:44, GigabitEthernet0/0/1.20

C 10.1.1.4/30 is directly connected, GigabitEthernet0/0/1.20

L 10.1.1.6/32 is directly connected, GigabitEthernet0/0/1.20

**Pings:**

From PC0(1)

C:\Users\user>ping 10.0.0.2

Pinging 10.0.0.2 with 32 bytes of data:

Reply from 10.0.0.2: bytes=32 time<1ms TTL=255

Reply from 10.0.0.2: bytes=32 time<1ms TTL=255

Reply from 10.0.0.2: bytes=32 time<1ms TTL=255

Reply from 10.0.0.2: bytes=32 time<1ms TTL=255

Ping statistics for 10.0.0.2:

Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),

Approximate round trip times in milli-seconds:

Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Users\user>ping 10.1.1.1

Pinging 10.1.1.1 with 32 bytes of data:

Reply from 10.1.1.1: bytes=32 time<1ms TTL=255

Reply from 10.1.1.1: bytes=32 time<1ms TTL=255

Reply from 10.1.1.1: bytes=32 time<1ms TTL=255

Reply from 10.1.1.1: bytes=32 time<1ms TTL=255

Ping statistics for 10.1.1.1:

Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),

Approximate round trip times in milli-seconds:

Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Users\user>ping 10.1.1.2

Pinging 10.1.1.2 with 32 bytes of data:

Reply from 10.1.1.2: bytes=32 time<1ms TTL=254

Reply from 10.1.1.2: bytes=32 time<1ms TTL=254

Reply from 10.1.1.2: bytes=32 time<1ms TTL=254

Reply from 10.1.1.2: bytes=32 time<1ms TTL=254

Ping statistics for 10.1.1.2:

Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),

Approximate round trip times in milli-seconds:

Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Users\user>ping 10.1.1.5

Pinging 10.1.1.5 with 32 bytes of data:

Reply from 10.1.1.5: bytes=32 time<1ms TTL=254

Reply from 10.1.1.5: bytes=32 time<1ms TTL=254

Reply from 10.1.1.5: bytes=32 time=1ms TTL=254

Reply from 10.1.1.5: bytes=32 time<1ms TTL=254

Ping statistics for 10.1.1.5:

Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),

Approximate round trip times in milli-seconds:

Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\Users\user>ping 10.1.1.6

Pinging 10.1.1.6 with 32 bytes of data:

Reply from 10.1.1.6: bytes=32 time<1ms TTL=253

Reply from 10.1.1.6: bytes=32 time<1ms TTL=253

Reply from 10.1.1.6: bytes=32 time=1ms TTL=253

Reply from 10.1.1.6: bytes=32 time<1ms TTL=253

Ping statistics for 10.1.1.6:

Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),

Approximate round trip times in milli-seconds:

Minimum = 0ms, Maximum = 1ms, Average = 0ms

C:\Users\user>ping 10.0.1.2

Pinging 10.0.1.2 with 32 bytes of data:

Reply from 10.0.1.2: bytes=32 time<1ms TTL=253

Reply from 10.0.1.2: bytes=32 time<1ms TTL=253

Reply from 10.0.1.2: bytes=32 time<1ms TTL=253

Reply from 10.0.1.2: bytes=32 time<1ms TTL=253

Ping statistics for 10.0.1.2:

Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),

Approximate round trip times in milli-seconds:

Minimum = 0ms, Maximum = 0ms, Average = 0ms

C:\Users\user>ping 10.0.1.1

Pinging 10.0.1.1 with 32 bytes of data:

Reply from 10.0.1.1: bytes=32 time=1ms TTL=125

Reply from 10.0.1.1: bytes=32 time=1ms TTL=125

Reply from 10.0.1.1: bytes=32 time=1ms TTL=125

Reply from 10.0.1.1: bytes=32 time=1ms TTL=125

Ping statistics for 10.0.1.1:

Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),

Approximate round trip times in milli-seconds:

Minimum = 1ms, Maximum = 1ms, Average = 1ms

**Problems:**

None

**Conclusion:**

In this lab we learned how to set up VRF Lite and learned how VRF Lite works