//LAB-2.1 Inter VLAN Routing Configs

##SW01##

```
conf t
!
interface Vlan10
 no shut
 ip address 192.168.10.1 255.255.255.0
!
interface Vlan20
 no shut
 ip address 192.168.20.1 255.255.255.0
!
interface Vlan30
 no shut
 ip address 192.168.30.1 255.255.255.0
!
interface Vlan40
 no shut
 ip address 192.168.40.1 255.255.255.0
!
int vlan 24
 no shut
 ip address 192.168.24.11 255.255.255.0
!
ip route 192.168.136.0 255.255.255.0 192.168.24.254
ip route 192.168.45.0 255.255.255.0 192.168.24.254
!
end
```

##SW02##

```
conf t
!
interface Vlan20
 no shut
 ip address 192.168.20.2 255.255.255.0
!
ip route 0.0.0.0 0.0.0.0 192.168.20.1
!
interface Ethernet0/1
 no switchport access vlan 24
 switchport trunk encapsulation dot1q
 switchport mode trunk
!
end
```

##SW03##

```
conf t
!
interface Vlan30
 no shut
 ip address 192.168.30.3 255.255.255.0
!
ip route 0.0.0.0 0.0.0.0 192.168.30.1
!
end
```

##SW04##

```
conf t
!
interface Vlan40
 no shut
 ip address 192.168.40.4 255.255.255.0
!
ip route 0.0.0.0 0.0.0.0 192.168.40.1
!
end
```

##R01##

```
conf t

int e 0/0
no shut
ip add 192.168.136.1 255.255.255.0

int e 0/1
no shut
ip add 192.168.156.1 255.255.255.0

ip route 0.0.0.0 0.0.0.0 192.168.136.254

end
```

##R02##

```
conf t

interface Ethernet0/0
 no shut
!
interface Ethernet0/0.24
 encapsulation dot1Q 24
 ip address 192.168.24.254 255.255.255.0
!
interface Ethernet0/0.45
 encapsulation dot1Q 45
 ip address 192.168.45.254 255.255.255.0
!
interface Ethernet0/0.136
 encapsulation dot1Q 136
 ip address 192.168.136.254 255.255.255.0
!
interface Ethernet0/0.156
 encapsulation dot1Q 156
 ip address 192.168.156.254 255.255.255.0
!
!
ip route 192.168.40.0 255.255.255.0 192.168.24.11
!
end
```

##R03##

conf t

int e 0/0
no shut
ip add 192.168.136.3 255.255.255.0
!
ip route 0.0.0.0 0.0.0.0 192.168.136.254
!

end

##R04##

conf t

int e 0/1
no shut
ip add 192.168.45.4 255.255.255.0

int e 0/0
no shut
ip add 192.168.24.4 255.255.255.0

ip route 0.0.0.0 0.0.0.0 192.168.45.254

end

##R05##

conf t

int e 0/1
no shut
ip add 192.168.45.5 255.255.255.0

int e 0/0
no shut
ip add 192.168.156.5 255.255.255.0

ip route 0.0.0.0 0.0.0.0 192.168.156.254

end

##R06##

conf t

int e 0/0
no shut
ip add 192.168.136.6 255.255.255.0

int e 0/1
no shut
ip add 192.168.156.6 255.255.255.0

ip route 0.0.0.0 0.0.0.0 192.168.136.254

end

//LAB-2.2 DHCP Configs

##SW01##

```
conf t
!
interface Vlan24
 no shut
 ip address 192.168.24.11 255.255.255.0

interface Vlan 136
 no shut
 ip address 192.168.136.11 255.255.255.0
 ip helper-address 192.168.24.2

!
interface Ethernet0/1
 no switchport access vlan 136
 switchport trunk encapsulation dot1q
 switchport mode trunk

end
```

##SW02##

```
conf t

!
interface Ethernet0/1
no switchport mode trunk
switchport access vlan 24
!
interface Vlan24
 no shut
 ip address 192.168.24.22 255.255.255.0
!
interface Vlan 156
 no shut
 ip address 192.168.156.22 255.255.255.0
 ip helper-address 192.168.24.2
!
end
```

##SW03##

```
conf t

interface Vlan24
 no shut
 ip address 192.168.24.33 255.255.255.0

interface Vlan 45
 no shut
 ip address 192.168.45.33 255.255.255.0
 ip helper-address 192.168.24.2

interface Vlan 136
 no shut
 ip address 192.168.136.33 255.255.255.0
 ip helper-address 192.168.24.2

end
```

##SW04##

conf t

interface Vlan24
 no shut
 ip address 192.168.24.44 255.255.255.0

interface Vlan 45
 no shut
 ip address 192.168.45.44 255.255.255.0
 ip helper-address 192.168.24.2

interface Vlan 156
 no shut
 ip address 192.168.156.44 255.255.255.0
 ip helper-address 192.168.24.2

end

##R01##

conf t

ip domain lookup
ip name-server 8.8.8.8
!
int e 0/0
no shut
ip address dhcp client-id Ethernet0/0
!
int e 0/1
no shut
ip address dhcp client-id Ethernet0/1
!
end

##R02##

conf t

ip domain lookup
!
int loopback 0
ip address 8.8.8.8 255.255.255.255
!
!
interface Ethernet0/0
 no shut
 ip address 192.168.24.2 255.255.255.0
!
ip route 0.0.0.0 0.0.0.0 192.168.24.254
!
ip dns server
!
ip host R01.acme.org 192.168.156.1 192.168.136.1
ip host R02.acme.org 192.168.24.2
ip host R04.acme.org 192.168.45.4 192.168.24.4
ip host R05.acme.org 192.168.156.5 192.168.45.5
ip host R06.acme.org 192.168.136.6 192.168.156.6
!
ip domain round-robin
!
ip dhcp pool VLAN_24
 network 192.168.24.0 255.255.255.0
 domain-name acme.org

```
 dns-server 8.8.8.8
 default-router 192.168.24.254
!
!
ip dhcp pool VLAN_45
 network 192.168.45.0 255.255.255.0
 domain-name acme.org
 dns-server 8.8.8.8
 default-router 192.168.45.254
!
!
ip dhcp pool VLAN_136
 network 192.168.136.0 255.255.255.0
 domain-name acme.org
 dns-server 8.8.8.8
 default-router 192.168.136.254
!
!
ip dhcp pool VLAN_156
 network 192.168.156.0 255.255.255.0
 domain-name acme.org
 dns-server 8.8.8.8
 default-router 192.168.156.254
!
!
!
ip dhcp excluded-address 192.168.24.254
ip dhcp excluded-address 192.168.45.254
ip dhcp excluded-address 192.168.136.254
ip dhcp excluded-address 192.168.156.254
!
!
!
!
ip dhcp pool R01_e0/0
 host 192.168.136.1 255.255.255.0
 client-identifier 01aa.bbcc.0001.00
 domain-name acme.org
 dns-server 8.8.8.8
 default-router 192.168.136.254
!
!
ip dhcp pool R01_e0/1
 host 192.168.156.1 255.255.255.0
 client-identifier 01aa.bbcc.0001.10
 domain-name acme.org
 dns-server 8.8.8.8
 default-router 192.168.156.254
!
!
ip dhcp pool R04_e0/0
 host 192.168.24.4 255.255.255.0
 client-identifier 01aa.bbcc.0004.00
 domain-name acme.org
 dns-server 8.8.8.8
 default-router 192.168.24.254
!
!
ip dhcp pool R04_e0/1
 host 192.168.45.4 255.255.255.0
 client-identifier 01aa.bbcc.0004.10
 domain-name acme.org
 dns-server 8.8.8.8
 default-router 192.168.45.254
!
!
```

```
ip dhcp pool R05_e0/0
 host 192.168.156.5 255.255.255.0
 client-identifier 01aa.bbcc.0005.00
 domain-name acme.org
 dns-server 8.8.8.8
 default-router 192.168.156.254
!
!
ip dhcp pool R05_e0/1
 host 192.168.45.5 255.255.255.0
 client-identifier 01aa.bbcc.0005.10
 domain-name acme.org
 dns-server 8.8.8.8
 default-router 192.168.45.254
!
!
ip dhcp pool R06_e0/0
 host 192.168.136.6 255.255.255.0
 client-identifier 01aa.bbcc.0006.00
 domain-name acme.org
 dns-server 8.8.8.8
 default-router 192.168.136.254
!
!
ip dhcp pool R06_e0/1
 host 192.168.156.6 255.255.255.0
 client-identifier 01aa.bbcc.0006.10
 domain-name acme.org
 dns-server 8.8.8.8
 default-router 192.168.156.254
!
!
!
end


##R03##

conf t
!
ip domain lookup
ip name-server 8.8.8.8
!
ip route 8.8.8.8 255.255.255.255 192.168.24.2
!
!
interface Ethernet0/0
 no shut
!
interface Ethernet0/0.24
 encapsulation dot1Q 24
 ip address 192.168.24.254 255.255.255.0
!
interface Ethernet0/0.45
 encapsulation dot1Q 45
 ip address 192.168.45.254 255.255.255.0
!
interface Ethernet0/0.136
 encapsulation dot1Q 136
 ip address 192.168.136.254 255.255.255.0
!
interface Ethernet0/0.156
 encapsulation dot1Q 156
 ip address 192.168.156.254 255.255.255.0
!
end
```

##R04##

conf t

ip domain lookup
ip name-server 8.8.8.8
!
int e 0/0
no shut
ip address dhcp client-id Ethernet0/0

int e 0/1
no shut
ip address dhcp client-id Ethernet0/1

end

##R05##

conf t

ip domain lookup
ip name-server 8.8.8.8
!
int e 0/0
no shut
ip address dhcp client-id Ethernet0/0

int e 0/1
no shut
ip address dhcp client-id Ethernet0/1

end

##R06##

conf t

ip domain lookup
ip name-server 8.8.8.8
!
int e 0/0
no shut
ip address dhcp client-id Ethernet0/0

int e 0/1
no shut
ip address dhcp client-id Ethernet0/1

end

//LAB-2.3 VRRP HSRP Configs

##R01##

conf t

int e 0/0
no shut
ip add 192.168.136.1 255.255.255.0
vrrp 136 authentication md5 key-string CISCO
vrrp 136 description <VRRP VLAN-136 Primary Interface>
vrrp 136 ip 192.168.136.254
vrrp 136 preempt delay minimum 1
vrrp 136 priority 200
vrrp 136 timers advertise msec 300
!vrrp 136 track 1 decrement 150
!
int e 0/1
no shut
ip add 192.168.156.1 255.255.255.0
standby version 2
standby 156 authentication md5 key-string cisco
standby 156 name <HSRP-VLAN-156>
standby 156 ip 192.168.156.254
standby 156 preempt delay minimum 2
standby 156 priority 50
standby 156 timers msec 550 msec 900
!
end

##R03##

conf t

int e 0/0
no shut
ip add 192.168.136.3 255.255.255.0
ip route 0.0.0.0 0.0.0.0 192.168.136.254
!
end

##R05##

conf t

int e 0/0
no shut
ip add 192.168.156.5 255.255.255.0
ip route 0.0.0.0 0.0.0.0 192.168.156.254
!
end

##R06##

conf t

int e 0/0
no shut
ip add 192.168.136.6 255.255.255.0
vrrp 136 authentication md5 key-string CISCO
vrrp 136 description <VRRP VLAN-136 Secondary Interface>
vrrp 136 ip 192.168.136.254
vrrp 136 preempt delay minimum 1
vrrp 136 priority 50
vrrp 136 timers advertise msec 600
!
!
int e 0/1
no shut
ip add 192.168.156.6 255.255.255.0
standby version 2
standby 156 authentication md5 key-string cisco
standby 156 name <HSRP-VLAN-156>
standby 156 ip 192.168.156.254
standby 156 preempt delay minimum 2
standby 156 priority 200
standby 156 timers msec 550 msec 900
!
end

//LAB-2.4 GLBP Configs

##R01##

conf t

int e 0/0
no shut
ip add 192.168.136.1 255.255.255.0
glbp 136 authentication md5 key-string CISCO
glbp 136 name <GLBP-VLAN-136>
glbp 136 ip 192.168.136.254
glbp 136 preempt delay minimum 1
glbp 136 timers msec 350 msec 700
glbp 136 load-balancing round-robin
!
!
int e 0/1
no shut
ip add 192.168.156.1 255.255.255.0
glbp 156 authentication md5 key-string cisco
glbp 156 name <GLBP-VLAN-156>
glbp 156 ip 192.168.156.254
glbp 156 preempt delay minimum 1
glbp 156 timers msec 350 msec 700
glbp 156 load-balancing round-robin

end

##R03##

conf t

int e 0/0
no shut
ip add 192.168.136.3 255.255.255.0

ip route 0.0.0.0 0.0.0.0 192.168.136.254

end

##R05##

conf t

int e 0/0
no shut
ip add 192.168.156.5 255.255.255.0

ip route 0.0.0.0 0.0.0.0 192.168.156.254

end

##R06##

conf t

int e 0/0
no shut
ip add 192.168.136.6 255.255.255.0
glbp 136 authentication md5 key-string CISCO
glbp 136 name <GLBP-VLAN-136>
glbp 136 ip 192.168.136.254
glbp 136 preempt delay minimum 1
glbp 136 timers msec 350 msec 700
glbp 136 load-balancing round-robin
!
!
int e 0/1
no shut
ip add 192.168.156.6 255.255.255.0
glbp 156 authentication md5 key-string cisco
glbp 156 name <GLBP-VLAN-156>
glbp 156 ip 192.168.156.254
glbp 156 preempt delay minimum 1
glbp 156 timers msec 350 msec 700
glbp 156 load-balancing round-robin

end