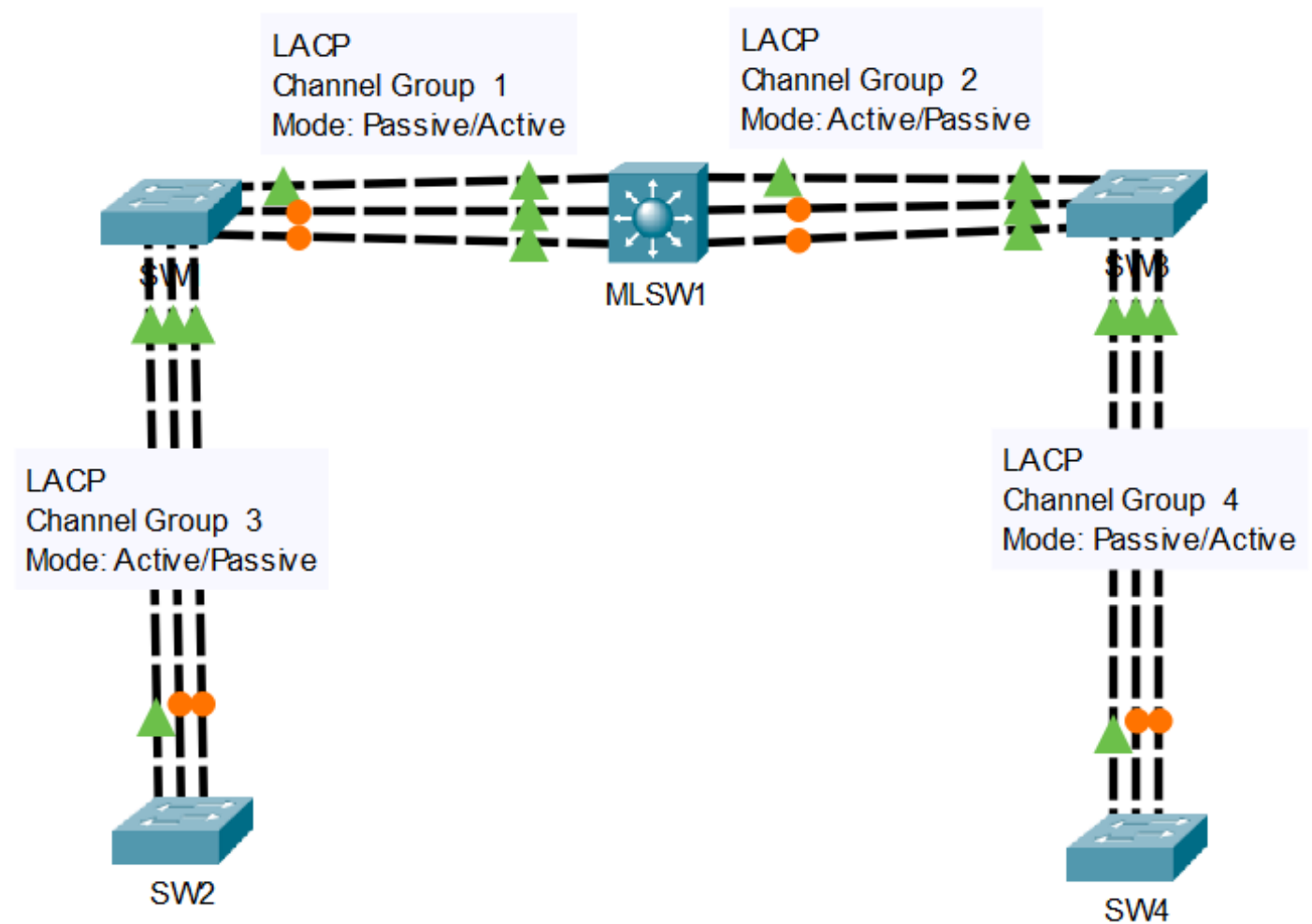


1- Draw necessary Topology

4 L2 Sw itches, 1 L3 sw icth

4 LACP Channel Group, Mode: Active/Passive or Passive/Active



2- Identify trunk links, and Configure LACP channel group number and mode

SW1

```
SW1(config)#
SW1(config)#
SW1(config)#int range f0/1-3
SW1(config-if-range)#
SW1(config-if-range)#channel-group 1 mode passive
SW1(config-if-range)#
Creating a port-channel interface Port-channel 1

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to down
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/2, changed state to down
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/2, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/3, changed state to down
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/3, changed state to up

SW1(config-if-range)#exit
SW1(config)#

SW1(config)#
SW1(config)#int range f0/4-6
SW1(config-if-range)#
SW1(config-if-range)#channel-group 3 mode active
SW1(config-if-range)#
Creating a port-channel interface Port-channel 3

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/4, changed state to down
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/4, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/5, changed state to down
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/5, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/6, changed state to down
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/6, changed state to up
%LINK-5-CHANGED: Interface Port-channel3, changed state to up
%LINEPROTO-5-UPDOWN: Line protocol on Interface Port-channel3, changed state to up

SW1(config-if-range)#exit
SW1(config)#
```

SW2

```
SW2(config)#
SW2(config)#int range f0/1-3
SW2(config-if-range)#
SW2(config-if-range)#channel-group 3 mode passive
SW2(config-if-range)#
%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/2, changed state to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/2, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/3, changed state to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/3, changed state to up

SW2(config-if-range)#exit
SW2(config)#
```

SW3

```
SW3(config)#
SW3(config)#int range f0/1-3
SW3(config-if-range)#
SW3(config-if-range)#channel-group 2 mode passive
SW3(config-if-range)#
Creating a port-channel interface Port-channel 2

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/2, changed state to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/2, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/3, changed state to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/3, changed state to up

SW3(config-if-range)#exit
SW3(config)#
```

```

SW3(config)#
SW3(config)#int range f0/4-6
SW3(config-if-range)#
SW3(config-if-range)#channel-group 4 mode passive
SW3(config-if-range)#
Creating a port-channel interface Port-channel 4

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/4, changed state to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/4, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/5, changed state to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/5, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/6, changed state to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/6, changed state to up

SW3(config-if-range)#exit
SW3(config)#

```

SW4

```

SW4(config)#
SW4(config)#int range f0/1-3
SW4(config-if-range)#
SW4(config-if-range)#channel-group 4 mode active
SW4(config-if-range)#
Creating a port-channel interface Port-channel 4

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/2, changed state to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/2, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/3, changed state to down

%LINEPROTO-5-UPDOWN: Line protocol on Interface FastEthernet0/3, changed state to up

%LINK-5-CHANGED: Interface Port-channel4, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Port-channel4, changed state to up

SW4(config-if-range)#exit
SW4(config)#

```

MLSW1

```
MLSW1(config)#
MLSW1(config)#int range g1/0/1-3
MLSW1(config-if-range)#
MLSW1(config-if-range)#channel-group 1 mode active
MLSW1(config-if-range)#
Creating a port-channel interface Port-channel 1

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet1/0/1, changed state to
down

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet1/0/1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet1/0/2, changed state to
down

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet1/0/2, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet1/0/3, changed state to
down

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet1/0/3, changed state to up

%LINK-5-CHANGED: Interface Port-channell, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Port-channell, changed state to up

MLSW1(config-if-range)#exit
MLSW1(config)#

MLSW1(config)#
MLSW1(config)#int range g1/0/4-6
MLSW1(config-if-range)#
MLSW1(config-if-range)#channel-group 2 mode active
MLSW1(config-if-range)#
Creating a port-channel interface Port-channel 2

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet1/0/4, changed state to
down

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet1/0/4, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet1/0/5, changed state to
down

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet1/0/5, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet1/0/6, changed state to
down

%LINEPROTO-5-UPDOWN: Line protocol on Interface GigabitEthernet1/0/6, changed state to up

MLSW1(config-if-range)#exit
MLSW1(config)#
```

3- Configure Port Channels as trunk Interfaces

SW1

```
SW1(config)#  
SW1(config)#int port-channel 1  
SW1(config-if)#switchport mode trunk  
SW1(config-if)#  
SW1(config-if)#exit  
SW1(config)#  
  
SW1(config)#  
SW1(config)#  
SW1(config)#int port-channel 3  
SW1(config-if)#  
SW1(config-if)#switchport mode trunk  
SW1(config-if)#  
SW1(config-if)#exit  
SW1(config)#
```

SW2

```
SW2(config)#  
SW2(config)#  
SW2(config)#int port-channel 3  
SW2(config-if)#  
SW2(config-if)#switchport mode trunk  
SW2(config-if)#  
SW2(config-if)#exit  
SW2(config)#
```

SW3

```
SW3(config)#  
SW3(config)#int port-channel 2  
SW3(config-if)#  
SW3(config-if)#switchport mode trunk  
SW3(config-if)#  
SW3(config-if)#exit  
SW3(config)#  
  
SW3(config)#  
SW3(config)#int port-channel 4  
SW3(config-if)#  
SW3(config-if)#switchport mode trunk  
SW3(config-if)#  
SW3(config-if)#exit  
SW3(config)#
```

SW4

```
SW4(config)#  
SW4(config)#int port-channel 4  
SW4(config-if)#  
SW4(config-if)#switchport mode trunk  
SW4(config-if)#  
SW4(config-if)#exit  
SW4(config)#
```

MLSW1

```
MLSW1(config)#  
MLSW1(config)#int port-channel 1  
MLSW1(config-if)#  
MLSW1(config-if)#switchport mode trunk  
MLSW1(config-if)#  
MLSW1(config-if)#exit  
MLSW1(config)#  
  
MLSW1(config)#  
MLSW1(config)#int port-channel 2  
MLSW1(config-if)#  
MLSW1(config-if)#switchport mode trunk  
MLSW1(config-if)#  
MLSW1(config-if)#exit  
MLSW1(config)#
```

4- Display EtherChannel Information

SW1

```
SW1(config)#  
SW1(config)#do show etherchannel  
Channel-group listing:  
-----  
  
Group: 1  
-----  
Group state = L2  
Ports: 3 Maxports = 16  
Port-channels: 1 Max Port-channels = 16  
Protocol: LACP  
  
Group: 3  
-----  
Group state = L2  
Ports: 3 Maxports = 16  
Port-channels: 1 Max Port-channels = 16  
Protocol: LACP  
SW1(config)#
```

SW2

```
SW2(config)#  
SW2(config)#do show etherChannel  
Channel-group listing:  
-----  
  
Group: 3  
-----  
Group state = L2  
Ports: 6 Maxports = 16  
Port-channels: 1 Max Port-channels = 16  
Protocol: LACP  
SW2(config)#
```


SW3

```
SW3(config)#
SW3(config)#do show etherchannel
                        Channel-group listing:
                        -----

Group: 2
-----
Group state = L2
Ports: 3 Maxports = 16
Port-channels: 1 Max Port-channels = 16
Protocol: LACP

Group: 4
-----
Group state = L2
Ports: 3 Maxports = 16
Port-channels: 1 Max Port-channels = 16
Protocol: LACP
SW3(config)#
```

SW4

```
SW4(config)#
SW4(config)#do show etherchannel
                        Channel-group listing:
                        -----

Group: 4
-----
Group state = L2
Ports: 3 Maxports = 16
Port-channels: 1 Max Port-channels = 16
Protocol: LACP
SW4(config)#
```

MLSW1

```
MLSW1(config)#
MLSW1(config)#do show etherchannel
                        Channel-group listing:
                        -----

Group: 1
-----
Group state = L2
Ports: 3 Maxports = 16
Port-channels: 1 Max Port-channels = 16
Protocol: LACP

Group: 2
-----
Group state = L2
Ports: 3 Maxports = 16
Port-channels: 1 Max Port-channels = 16
Protocol: LACP
MLSW1(config)#
```

