1- Draw necessary Topology
L2 2 Swicthes, 1 L3 Switch, 2 PAgP Channel Group and Mode: Auto/Desirable

PAgP Channel Group 1
Mode: auto/desirable

PAgP Channel Group 2
Mode: desirable/auto

SW1

MLSW1

SW2
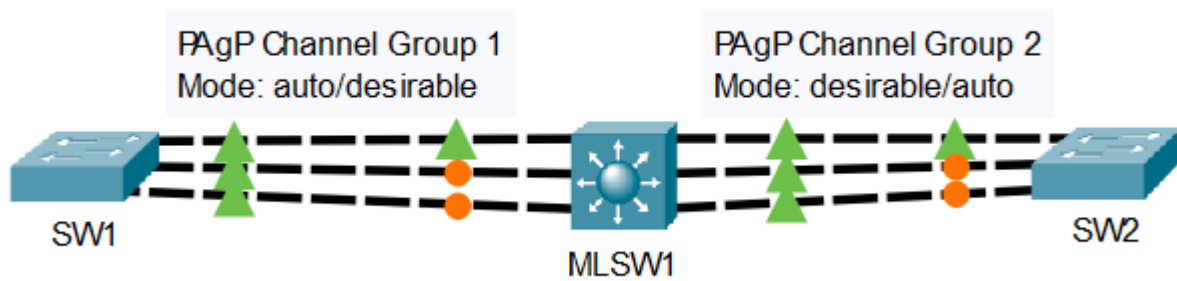
2- Identify trunk Links, and configure PAgP channel group number and mode

MODULES
AC-POWER-SUPPLY
POWER-COVER-PLATE
GLC-LH-SMD
GLC-T
GLC-TE

Physical Device View

Zoom In	Original Size	Zoom Out

| Customize Icon in Physical View | | Customize Icon in Logical View | |

AC Power Supply

SW1
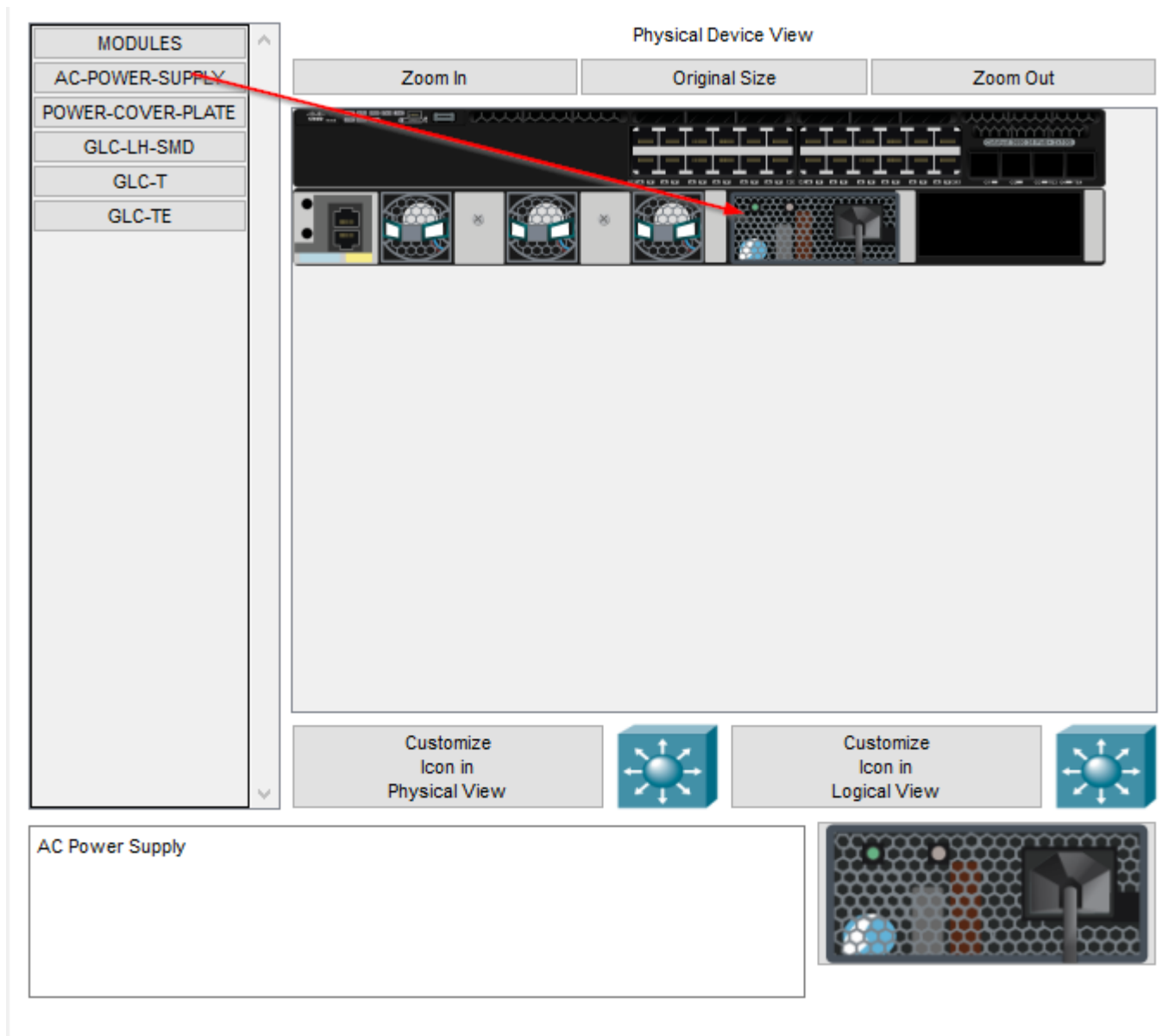
```
SW1(config)#
SW1(config)#int range fa0/1-3
SW1(config-if-range)#
SW1(config-if-range)#channel-group 1 mode auto
SW1(config-if-range)#
Creating a port-channel interface Port-channel 1

%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)#
```

SW2

```
SW2(config)#
SW2(config)#int range fa0/1-3
SW2(config-if-range)#
SW2(config-if-range)#channel-group 2 mode auto
SW2(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

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

SW3

```
MLSW1(config)#
MLSW1(config)#int range g1/0/1-3
MLSW1(config-if-range)#
MLSW1(config-if-range)#channel-group 1 mode desirable
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-channel1, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Port-channel1, 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 desirable
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

%LINK-5-CHANGED: Interface Port-channel2, changed state to up

%LINEPROTO-5-UPDOWN: Line protocol on Interface Port-channel2, changed state to up

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

3- Enter the Port channel number created and configure it as trunk interface

SW1

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

SW2

```
SW2(config)#
SW2(config)#int port-channel 2
SW2(config-if)#switchport mode trunk
SW2(config-if)#exit
SW2(config)#
```

SW3

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

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

4- Display EtherChannel information

SW1

```
SW1#show ether
SW1#show etherchannel
            Channel-group listing:
            ----------------------

Group: 1
----------
Group state = L2
Ports: 3 Maxports = 8
Port-channels: 1 Max Portchannels = 1
Protocol:    PAGP
SW1#
```

SW2

```
SW2#
SW2#show etherchannel
            Channel-group listing:
            ----------------------

Group: 2
----------
Group state = L2
Ports: 3 Maxports = 8
Port-channels: 1 Max Portchannels = 1
Protocol:    PAGP
SW2#
```

SW3

```
MLSW1#
MLSW1#show etherchannel
            Channel-group listing:
            ----------------------

Group: 1
----------
Group state = L2
Ports: 3 Maxports = 8
Port-channels: 1 Max Portchannels = 1
Protocol:    PAGP

Group: 2
----------
Group state = L2
Ports: 3 Maxports = 8
Port-channels: 1 Max Portchannels = 1
Protocol:    PAGP
MLSW1#
```