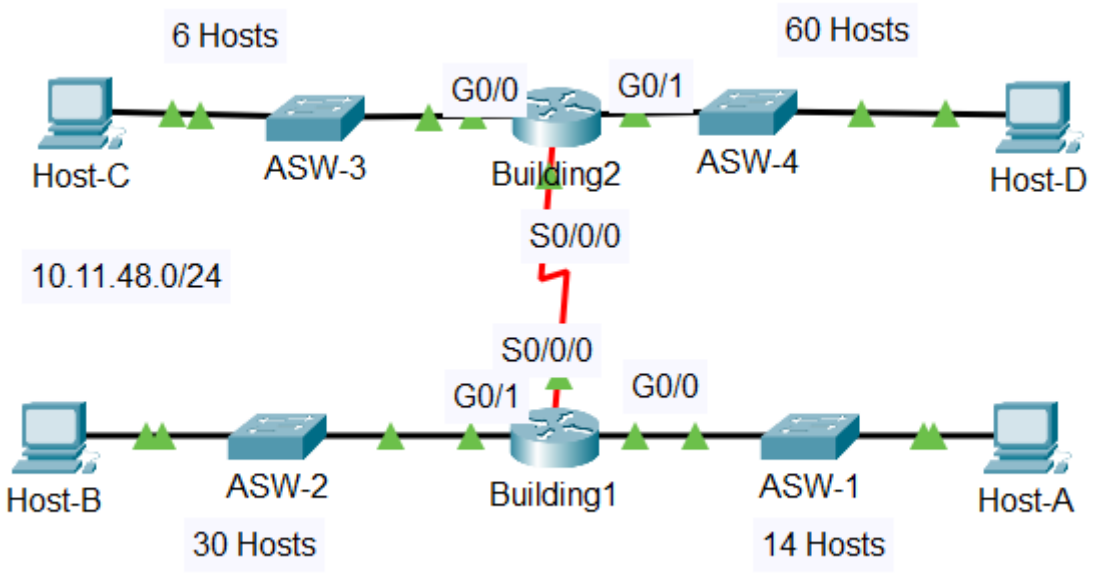
Quiz on VLSM

Topology



In this activity, you are given a /24 network address to use to design a VLSM addressing scheme. Based on a set of requirements, you will assign subnets and addressing.

1. Determine the number of subnets needed. You will subnet the network address 10.11.48.0/24. The network has the following requirements:
   - ASW-1 LAN will require 14 host IP addresses
   - ASW-2 LAN will require 30 host IP addresses
   - ASW-3 LAN will require 6 host IP addresses
   - ASW-4 LAN will require 60 host IP addresses

2. Divide the 10.11.48.0/24 network based on the number of hosts per subnet.
   a. Use the first subnet to accommodate the largest LAN.
   b. Use the second subnet to accommodate the second largest LAN.
   c. Use the third subnet to accommodate the third largest LAN.
   d. Use the fourth subnet to accommodate the fourth largest LAN.
   e. Use the fifth subnet to accommodate the connection between Building1 and Building2.

3. Complete the Subnet Table below:

Subnet Description	Number of Hosts Needed	Network Address/CIDR	First Usable Host Address	Last Usable Host Address	Broadcast Address
Host-D LAN					
Host-B LAN					
Host-A LAN					
Host-C LAN					
WAN Link					

4. Document the addressing scheme.
   a. Assign the first usable IP addresses to Building1 for the two LAN links and the WAN link.
   b. Assign the first usable IP addresses to Building2 for the two LAN links. Assign the last usable IP address for the WAN link.
   c. Assign the second usable IP addresses to the switches.
   d. Assign the last usable IP addresses to the hosts.

Fill out the table below according to the specified addressing scheme stated above.

Device	Interface	Address	Subnet Mask	Default Gateway
Building 1	G0/0			N/A
	G0/1			N/A
	S0/0/0			N/A
Building 2	G0/0			N/A
	G0/1			N/A
	S0/0/0			N/A
ASW1	VLAN 1			
ASW2	VLAN 1			
ASW3	VLAN 1			
ASW4	VLAN 1			
Host A	NIC			
Host B	NIC			
Host C	NIC			
Host D	NIC			