lab 2 Vlsm

Scenario 1

1-Calculating VLSM Subnets Objective Use variable-length subnet mask (VLSM) to support more efficient use of the assigned IP addresses and to reduce the amount of routing information at the top level. Background/Preparation A class C address of 192.168.10.0/24 has been allocated.

Perth, Sydney, and Singapore have a WAN connection to Kuala Lumpur.

• Perth requires 60 hosts.

• Kuala Lumpur requires 28 hosts.

• Sydney and Singapore each require 12 hosts.

To calculate VLSM subnets and the respective hosts allocate the largest requirements first from the address range. Requirements levels should be listed from the largest to the smallest.

Scenario 2 – Network Address: 172.31.103.0/24

Examine the Network Requirements

Step 1: Determine the number of subnets needed.

· Sw1 LAN will require 7 host IP addresses

· Sw2 LAN will require 15 host IP addresses

· Sw3 LAN will require 29 host IP addresses

· Sw4 LAN will require 58 host IP addresses

Step 2: Determine the subnet mask information for each subnet.

a. Which subnet mask will accommodate the number of IP addresses required for Sw1?

How many usable host addresses will this subnet support and type First usable IP?

b. Which subnet mask will accommodate the number of IP addresses required for Sw2?

How many usable host addresses will this subnet support and type First usable IP?

c. Which subnet mask will accommodate the number of IP addresses required for Sw3?

How many usable host addresses will this subnet support and type last usable IP?

d. Which subnet mask will accommodate the number of IP addresses required for Sw4?

How many usable host addresses will this subnet support and type last usable IP?