

Daryl Kim M. Sambito

TN28 (Netcoms) Technical IPV6

11.5.5 – Subnet an IPv4 Network

Packet Tracer – Subnet an IPv4 Network

Addressing Table

Device	Interface	IP Address	Subnet Mask	Default Gateway
CustomerRouter	G0/0			N/A
	G0/1			
	S0/1/0	209.165.201.2	255.255.255.252	
LAN-A Switch	VLAN1			
LAN-B Switch	VLAN1			
PC-A	NIC			
PC-B	NIC			
ISPRouter	G0/0	209.165.200.225	255.255.255.224	N/A
	S0/1/0	209.165.201.1	255.255.255.252	
ISPSwitch	VLAN1	209.165.200.226	255.255.255.224	209.165.200.225
ISP Workstation	NIC	209.165.200.235	255.255.255.224	209.165.200.225
ISP Server	NIC	209.165.200.240	255.255.255.224	209.165.200.225

Objectives

Part 1: Design an IPv4 Network Subnetting Scheme
Part 2: Configure the Devices
Part 3: Test and Troubleshoot the Network

Background / Scenario

In this activity, you will subnet the Customer network into multiple subnets. The subnet scheme should be based on the number of host computers required in each subnet, as well as other network considerations, like future network host expansion.

After you have created a subnetting scheme and completed the table by filling in the missing host and interface IP addresses, you will configure the host PCs, switches and router interfaces.

After the network devices and host PCs have been configured, you will use the ping command to test for network connectivity.

Instructions

Part 1: Subnet the Assigned Network

Step 1: Create a subnetting scheme that meets the required number of subnets and required number of host addresses.

11.7.5 Subnetting Scenario

Packet Tracer - Subnetting Scenario

Addressing Table

Device	Interface	IP Address	Subnet Mask	Default Gat
R1	G0/0			
	G0/1			
	S0/0/0			
R2	G0/0			
	G0/1			
	S0/0/0			
S1	VLAN 1			
S2	VLAN 1			
S3	VLAN 1			
S4	VLAN 1			
PC1	NIC			
PC2	NIC			

11.9.3 – VLSM DESIGN AND IMPLEMENTATION

Cisco Packet Tracer - C:\Users\Bito\Downloads\11.9.3 Packet Tracer - VLSM Design and Implementation Practice.pka - Daryl Kim Sambito - 2024-06-27 22:18:45

File Edit Options View Tools Extensions Window Help

Logical Physical = 1420, y: 288

14 Hosts 8 Hosts

User-3 SW3 Remote-Site2 SW4 User-4

172.31.103.0/24

User-2 SW2 Remote-Site1 SW1 User-1

25 Hosts 27 Hosts

User Profile

Name: Daryl Kim Sambito

E-Mail: dbtkoo34@gmail.com

Additional Info:

OK Cancel

PT Activity: 00:07:55

Packet Tracer - VLSM Design and Implementation Practice

Topology

You will receive one of three possible topologies.

Addressing Table

Device	Interface	IP Address	Subnet Mask	Default Gateway
Remote-Site1	G0/0			N/A
	G0/1			N/A
	S0/0/0			N/A
Remote-Site2	G0/0			N/A
	G0/1			N/A
	S0/0/0			N/A
Sw1	VLAN 1			
Sw2	VLAN 1			
Sw3	VLAN 1			
Sw4	VLAN 1			
User-1	NIC			
User-2	NIC			
User-3	NIC			
User-4	NIC			

Objectives

Part 1: Examine the Network Requirements

Part 2: Design the VLSM Addressing Scheme

Part 3: Assign IP Addresses to Devices and Verify Connectivity

Background

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, configure devices and verify connectivity.

Time Elapsed: 00:07:55 Completion: 100%

Top Dock Check Results Back 1/1 Next

Scenario 0

New Delete

Toggle PDU List Window

Fire Last Status Source Destination Type Color Time(sec) Periodic Num Edit Delete

11.10.1 – DESIGN AND IMPLEMENTATION VLSM ADDRESSING SCHEME

Logical Physical = 818, y: 18

14 Hosts 19 Hosts

WS145 Remote-2 WS234

WS118 Remote-1 WS203

21 Hosts 32 Hosts

192.168.203.0/24

User Profile

Name: Daryl Kim Sambito

E-Mail: dbtkoo34@gmail.com

Additional Info:

OK Cancel

PT Activity: 00:23:58

Packet Tracer - Design and Implement a VLSM Addressing Scheme

Addressing Table

Device	Interface	IP Address	Subnet Mask	Default Gateway
	G0/0			N/A
	G0/1			N/A
	S0/0/0			N/A
	G0/0			N/A
	G0/1			N/A
	S0/0/0			N/A
VLAN 1				
	VLAN 1			
	VLAN 1			
NIC				
	NIC			
	NIC			

Objectives

In this lab you will design a VLSM addressing scheme given a network address and host requirements. You will configure addressing on routers, switches, and network hosts.

- Design a VLSM IP addressing scheme given requirements.
- Configure addressing on network devices and hosts.
- Verify IP connectivity.
- Troubleshoot connectivity issues as required.

Background / Scenario

You have been asked to design, implement, and test an addressing scheme for a customer. The customer has given you the network address that is suitable for the network, the topology, and the host requirements. You will implement and test your design.

Time Elapsed: 00:23:58 Completion: 43%

Top Dock Check Results Back 1/1 Next

Scenario 0

Fire Last Status Source Destination Type Color Time(sec) Periodic Num Edit Delete

12.6.6 Configure IPv6

Cisco Packet Tracer - C:\Users\Elito\Downloads\12.6.6 Packet Tracer - Configure IPv6 Addressing.pka - Daryl Kim Sambito - 2024-06-27 23:41:38

File Edit Options View Tools Extensions Window Help

Logical Physical = 296, y: 0

2001:db8:1:1::/64 R1 2001:db8:1:2::/64 2001:db8:1:a001::/64

Sales Billing Accounting Design Engineering CAD

User Profile

Name: Daryl Kim Sambito
E-Mail: dbtkoc34@gmail.com
Additional Info:

OK Cancel

PT Activity: 00:10:01

Packet Tracer - Configure IPv6 Addressing

Addressing Table

Device	Interface	IPv6 Address/Prefix	Default Gateway
R1	G0/0	2001:db8:1:1::1/64 fe80::1	N/A
	G0/1	2001:db8:1:2::1/64 fe80::1	N/A
	S0/0/0	2001:db8:1:a001::2/64	N/A
		fe80::1	
Sales	NIC	2001:db8:1:1:2::/64	fe80::1
Billing	NIC	2001:db8:1:1:3::/64	fe80::1
Accounting	NIC	2001:db8:1:1:4::/64	fe80::1
Design	NIC	2001:db8:1:2:2::/64	fe80::1
Engineering	NIC	2001:db8:1:2:3::/64	fe80::1
CAD	NIC	2001:db8:1:2:4::/64	fe80::1

Time Elapsed: 00:10:01 Completion: 100%

☐ Top ☐ Deck 1/1

12.9.1 – Implement a Subnetted ipv6

Cisco Packet Tracer - C:\Users\Elito\Downloads\12.9.1 Packet Tracer - Implement a Subnetted IPv6 Addressing Scheme.pka - Daryl Kim Sambito - 2024-06-27 23:53:50

File Edit Options View Tools Extensions Window Help

Logical Physical = 355, y: 0

2001:db8:acad:00c8::/64 R1 R2

PC1 PC2 PC3 PC4

User Profile

Name: Daryl Kim Sambito
E-Mail: dbtkoc34@gmail.com
Additional Info:

OK Cancel

PT Activity: 00:05:45

Packet Tracer - Implement a Subnetted IPv6 Addressing Scheme

Addressing Table

Device	Interface	IPv6 Address	Link-local Address
R1	G0/0	2001:db8:acad:00c8::1/64	fe80::1
	G0/1		fe80::1
	S0/0/0		fe80::1
			fe80::1
R2	G0/0		fe80::2
	G0/1		fe80::2
	S0/0/0		fe80::2
			fe80::2
PC1	NIC	Auto Config	
PC2	NIC	Auto Config	
PC3	NIC	Auto Config	
PC4	NIC	Auto Config	

Time Elapsed: 00:05:45 Completion: 100%

☐ Top ☐ Deck 1/1