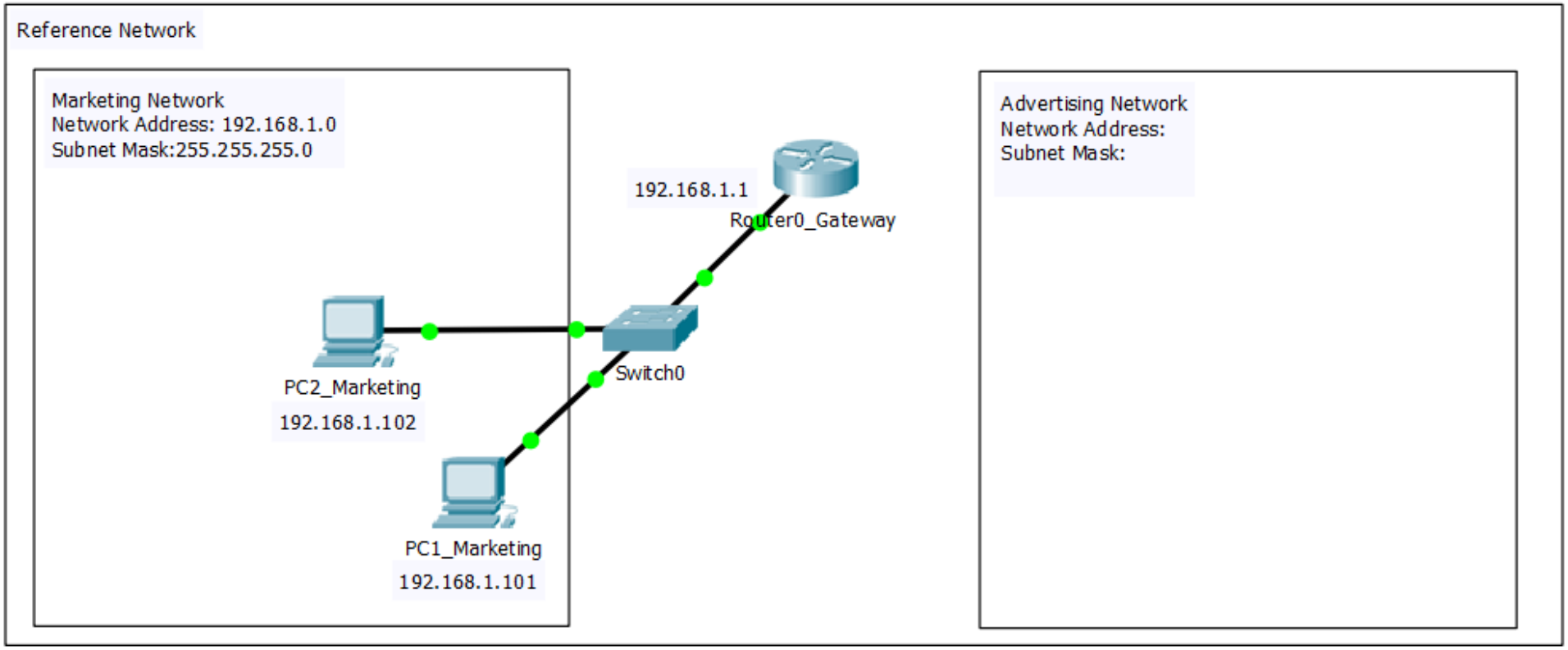
Southern New Hampshire University

CYB 210 Module Two Packet Tracer Activity Guidelines and Rubric

Overview

The application of fundamental networking concepts provides the foundation for the increasingly complex task of designing and implementing networks that meet a wide variety of communication needs. In this activity, you will use Packet Tracer to perform the basic tasks of adding, connecting, and configuring devices in a reference network. To complete this activity, you will need to modify an existing network by creating a new subnetwork and then add new systems to the reference network.

The image below is a logical diagram of the network for this activity.



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The network topology details for this lab are located in the table below.

Device	Interface	IP Address	Subnet Mask	Gateway Address
Marketing subnetwork	—	192.168.1.0	255.255.255.0	—
PC1_Marketing	FastEthernet0	192.168.1.101	255.255.255.0	192.168.1.1
PC2_Marketing	FastEthernet0	192.168.1.102	255.255.255.0	192.168.1.1
PC3_Marketing	FastEthernet0	192.168.1.103	255.255.255.0	192.168.1.1
Printer1_Marketing				
Router0_Gateway	FastEthernet0/0	192.168.1.1	255.255.255.0	—
Advertising subnetwork	—			—
PC1_Advertising	FastEthernet0			
Router0_Gateway				—

Prompt

Submit a Microsoft Word document with screenshots of your completed topology and ping tests. Your topology should identify the modifications described below:

I. Modify the **Marketing subnetwork**.
   A. Add a **new generic PC** (labeled PC3_Marketing) and assign an IP address as indicated in the table above.
   B. Add a **new printer** (labeled Printer1_Marketing) and assign an IP address as indicated in the table above.

II. Create and populate the **Advertising subnetwork**.
   A. Identify a **valid network IP address** with a correct subnet mask for the Advertising subnetwork. Indicate this on your topology.
   B. Add a **new generic PC** (labeled PC1_Advertising) to the Advertising subnetwork. The method of connection is up to you, but communication across the subnetworks must pass through the router (Router0_Gateway).

III. Test connections between devices in the Marketing and Advertising subnetworks. Submit three screenshots of **ping tests** between devices on the network:
   A. Screenshot showing the result of executing the ping command from PC1_Marketing to PC3_Marketing
   B. Screenshot showing the result of executing the ping command from PC2_Marketing to Printer1_Marketing
   C. Screenshot showing the result of executing the ping command from PC1_Advertising to PC1_Marketing

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Rubric

Guidelines for Submission: Your submission should include two files. Your **network modification** will be in the form of a Microsoft Word document containing four screenshots: a network diagram and three ping test results. Use a filename that includes the course code, the assignment title, and your name—for example, CYB_100_Project_One_Neo_Anderson.docx. You should also submit your **Packet Tracer file** using the same naming convention.

Critical Elements	Proficient (100%)	Needs Improvement (70%)	Not Evident (0%)	Value
Marketing Subnetwork: New Generic PC	Modifies the Marketing subnetwork by adding a new PC with a valid IP address within the Marketing subnetwork	Modifies the Marketing subnetwork by adding a new PC, but the connection is incorrect or not labeled	Does not modify the Marketing subnetwork by adding a new PC	20
Marketing Subnetwork: New Printer	Modifies the Marketing subnetwork by adding a new printer with a valid IP address within the Marketing subnetwork	Modifies the Marketing subnetwork by adding a new printer, but the connection is incorrect or not labeled	Does not modify the Marketing subnetwork by adding a new printer	20
Advertising Subnetwork: Valid Network IP Address	Identifies a valid network IP address with a correct subnet mask for the Advertising subnetwork	Identifies an invalid network IP address and/or subnet mask, or omits either the network address or the subnet mask	Does not Identify a network IP address and subnet mask for the Advertising subnetwork	20
Advertising Subnetwork: New Generic PC	Populates the Advertising subnetwork by adding a new PC with a valid IP address within the Advertising subnetwork	Populates the Advertising subnetwork by adding a new PC, but the connection is incorrect or not labeled	Does not modify the Advertising subnetwork by adding a new PC	20
Ping Tests	Tests connections with ping tests, and three screenshots are submitted showing the proper connectivity for the network requirements	Tests connections with ping tests, but fewer than three screenshots are submitted, or results are not consistent with the network requirements	Does not submit screenshots of ping tests	20
			Total	**100%**