

Assignment Submission

Assessment Details

1.1 Description

1.2 Rubric

Attempt 1 of 1

Overdue

Start Date
May 29, 2023, 12:00 AM

Due Date
Jun 4, 2023, 11:59 PM

Points
54

Assessment Description

As you know, your company has added five new locations. Each location has its own wireless network and a switched network, similar to the Manufacturing and Shipping locations in the network diagram.

You will add a serial port to Main-Office-Router for each location and address them according to the /30 schema you already used for the first two remote locations.

The switched network workstations should be numbered 192.168.x.0/24, where x = 1,2,3,4,5 for each location and the wireless network workstations should be numbered 254, 253, 252, 251, 250 (255 - x for that location).

The final result should look something like the image "Visio Update Example," provided in the topic Resources.

Steps:

1. In Packet Tracer, open the **ITT-116 Final Project.pkr File** (provided in Topic resources) and save it as **firstInitialLastNameT1AddLocations**.
2. Turn off the power in Main-Office-Router and add 5 NM-155 serial modules to slots s2/0-s6/0.
3. Configure the slots as follows:
 - The IP address should be 162.168.255.x for each serial port, where x = the previous serial port address +4 and the mask is 255.255.255.252 (/3, 4 addresses per subnet).
 - Make sure the ports are active (no shutdown).
4. Add a router (PT-Empty is the easiest).
 - Configure it so it has a serial module in S0/0 and a gigabit module in G9/0.
 - S0/0 should have the next address corresponding to its counterpart in Main-Office-Router.
 - G9/0 should have the address 192.168.x.1, where x = the number of the new location. Number the wired workstations from 2 upwards and the wireless stations from 253 downwards.
 - Be sure to configure WPA2 security with a passphrase.
 - Repeat these steps for each location.
 - Select a workstation in the home office network. Clear the ARP table and ping at least 4 different workstations on 4 different segments on the new part of the network. Then show the ARP table and take a screenshot.
5. Document all the changes and rationales to the network as a summary for management. Include information explaining how networks transfer data, how network protocols (e.g., ARP) work to enable communication, and how the lower-level network layers support the upper ones.
6. From a workstation on Switch-02 in the main location, ping each of the ports of each location. Copy the pings from the workstation's window and take a screenshot to turn in with the Packet Tracer file. Copy both into the Microsoft Word document saved as **firstInitialLastNameT1AddLocations**. Also, copy-paste all the new router, Main-Office-Router, and new switch configurations into the Word document.

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 - Configure it so it has a serial module in S0/0 and a gigabit module in G9/0.
 - S0/0 should have the next address corresponding to its counterpart in Main-Office-Router.
 - G9/0 should have the address 192.168.x.1, where x = the number of the new location. Number the wired workstations from 2 upwards and the wireless stations from 253 downwards.
 - Be sure to configure WPA2 security with a passphrase.
 - Repeat these steps for each location.
 - Select a workstation in the home office network. Clear the ARP table and ping at least 4 different workstations on 4 different segments on the new part of the network. Then show the ARP table and take a screenshot.
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Deliverables:

In a zipped folder named **firstInitialLastNameT1AddLocations**, include the following items to turn in through the digital classroom.

1. The completed Visio drawn network with the new locations.
2. A Word document containing a summary for management, the list of pings, configurations, a screenshot of the workstation window doing the pings and the screenshot of Packet Tracer showing the completed network, along with the documentation of the changes and test report.
3. The Packet Tracer file.

APA style is not required, but solid academic writing is expected.

This assignment uses a rubric. Review the rubric prior to beginning the assignment to become familiar with the expectations for successful completion.

You are not required to submit this assignment to LopesWrite.

Rubric Criteria

Expand All