Government of Western Australia
North Metropolitan TAFE

Lab 5

Qualification national code and title	AE780 Transition to Cyber Security Skillset
Unit/s national code/s and title/s	VU23214: Configure and secure networked end points

Assessment type (þ):

☐ Questioning (Oral/Written)
☐ Practical Demonstration
☐ 3rd Party Report
☒ Other – Project/Portfolio (*Part of assessment task 2)*

Assessment Resources:

- PC
- Google
- Computer components PowerPoint
- Linux Virtual Machine

Assessment Instructions:

Instructions to the assessor:
This lab is a part of Assessment Task 2 portfolio, it is a practical lab based on the performance criteria requirements of the unit. Each student should be given a copy of this lab to complete either in class or out of class. As the student completes each section of this lab you should verify, check off and sign off the section (Use this document as the observation checklist). Use the assessor section at the bottom to provide feedback to the student if required.
See the instructions to the student section for the remainder of the instructions.

Instructions to the student:
This lab consists of activities that you perform on the hardware and software nominated concerning preventative maintenance and base level troubleshooting procedures.
There are several short answer questions where you will be asked to research and answer questions relating to these topics. You are encouraged to use the documentation in the resource section to help you work on the requirements.

Time:
Nominally 180 mins

Due date:
This lab is part of assessment 2 and inherits its due date.

Submission instructions:
When the lab is complete, submit the assessment via Blackboard.

Reasonable adjustment:
Should there be difficulty with reading technical manuals relating to disability of language and literacy levels you are encouraged to use online video tutorials similar to the following:

- https://www.youtube.com/watch?v=HBP8_LqBj44

Your Student ID:	Your Name:

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Lab: Configuring and Troubleshooting Wired and Wireless Networks

Learning Objectives

By the end of this lab, students will be able to:

- Configure IP addresses on end devices.
- Configure and Test Wired LAN Connectivity

Objective:

1. Connect two PCs using a crossover cable.
2. Connect two PCs using a switch.
3. Configure IP addresses, subnet mask, and default gateway.
4. Verify connectivity using ipconfig and ping commands.
5. Share screenshots of the connected topology and command results.

Equipment:

- Cisco Packet Tracer software
- 2 PCs (PC0 and PC1)
- 1 Switch
- 1 Crossover Cable
- 2 Straight-Through Cables

Instructions:

Part 1: Connecting PCs via Crossover Cable

1. **Open Cisco Packet Tracer** and create a new project.
2. **Add two PCs** to the workspace:
   - Click on the **End Devices** icon.
   - Drag and drop **PC0** and **PC1** onto the workspace.
3. **Connect the PCs** using a crossover cable:
   - Click on the **Connections** icon.
   - Select the **Crossover Cable** (represented by a red line).
   - Click on **PC0**, select the **FastEthernet0** port.
   - Click on **PC1**, select the **FastEthernet0** port.
4. **Configure IP addresses** on both PCs:
   - Click on **PC0**, go to the **Desktop** tab, and open **IP Configuration**.
     - Set the IP address to 192.168.0.10.
     - Set the Subnet Mask to 255.255.255.0.
     - Set the Default Gateway to 192.168.0.1.
   - Repeat the same steps for **PC1** with the IP address 192.168.0.11.

Screenshot of Network Topology:

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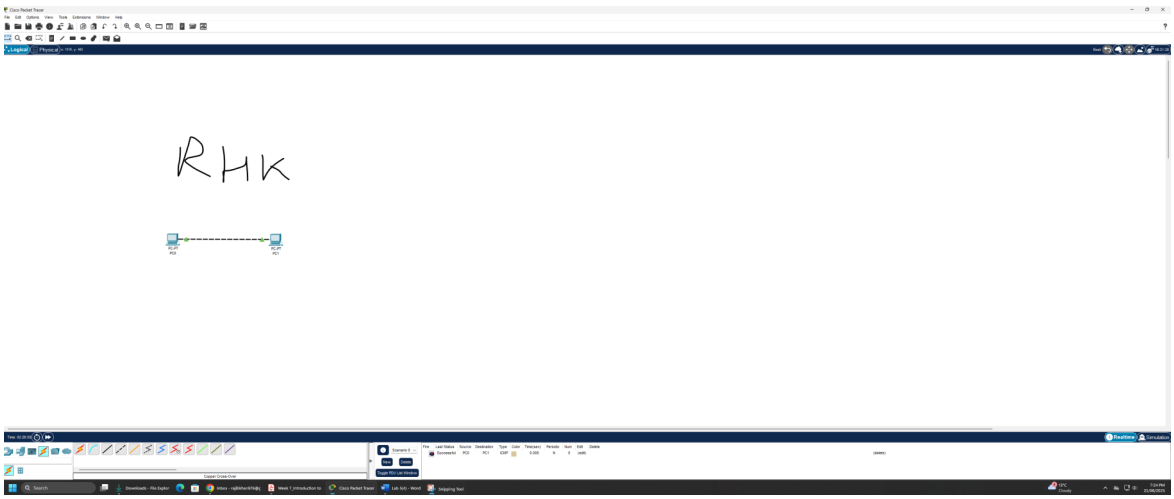
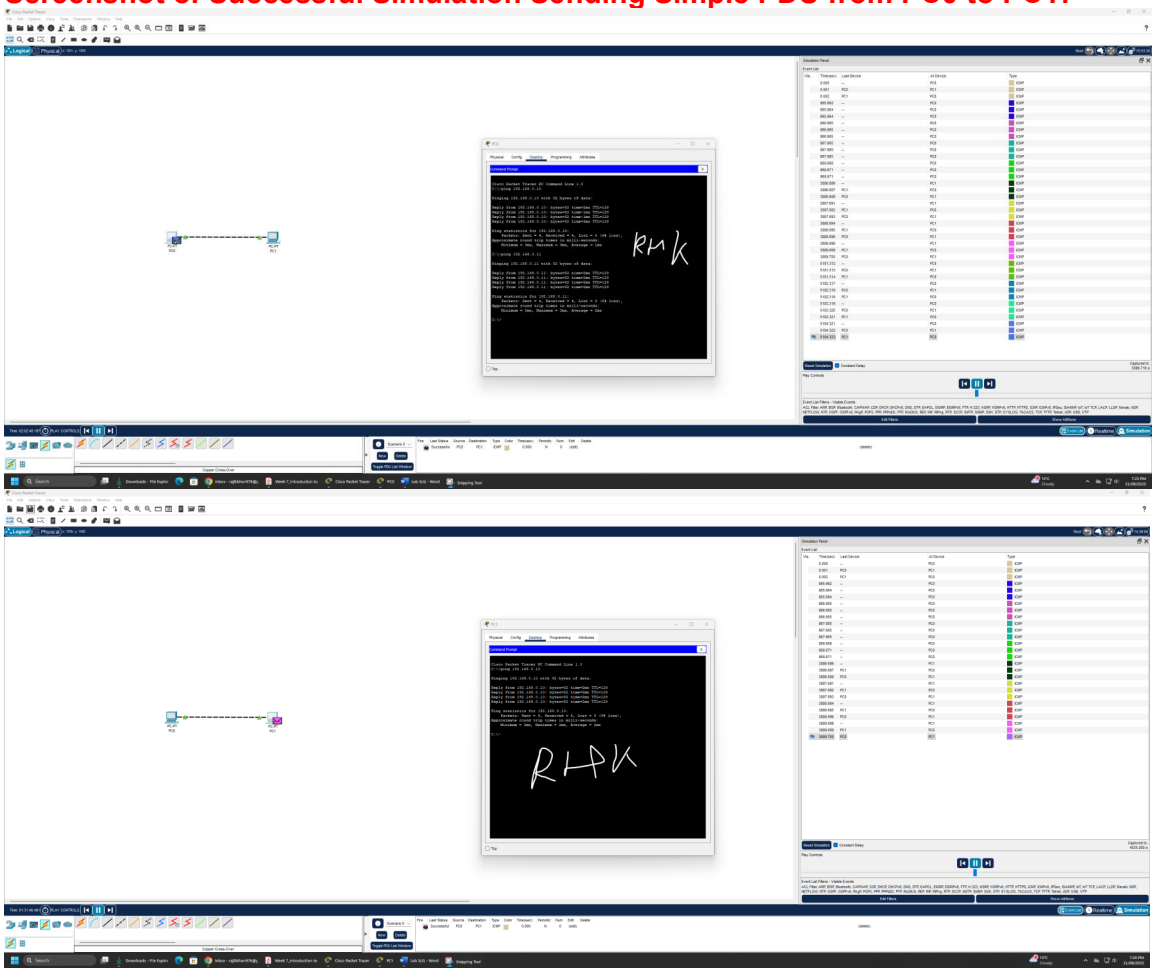


Screenshot of Successful Simulation Sending Simple PDU from PC0 to PC1:



Part 2: Connecting PCs via Switch

1. **Add a Switch** to the workspace:
   - Click on the **Switches** icon.

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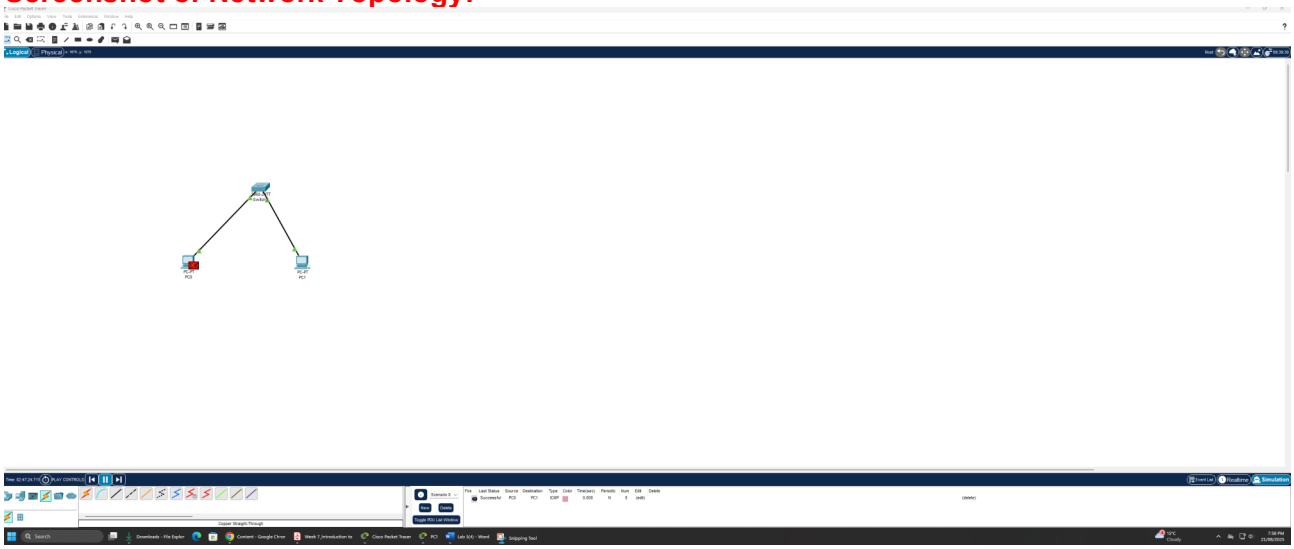
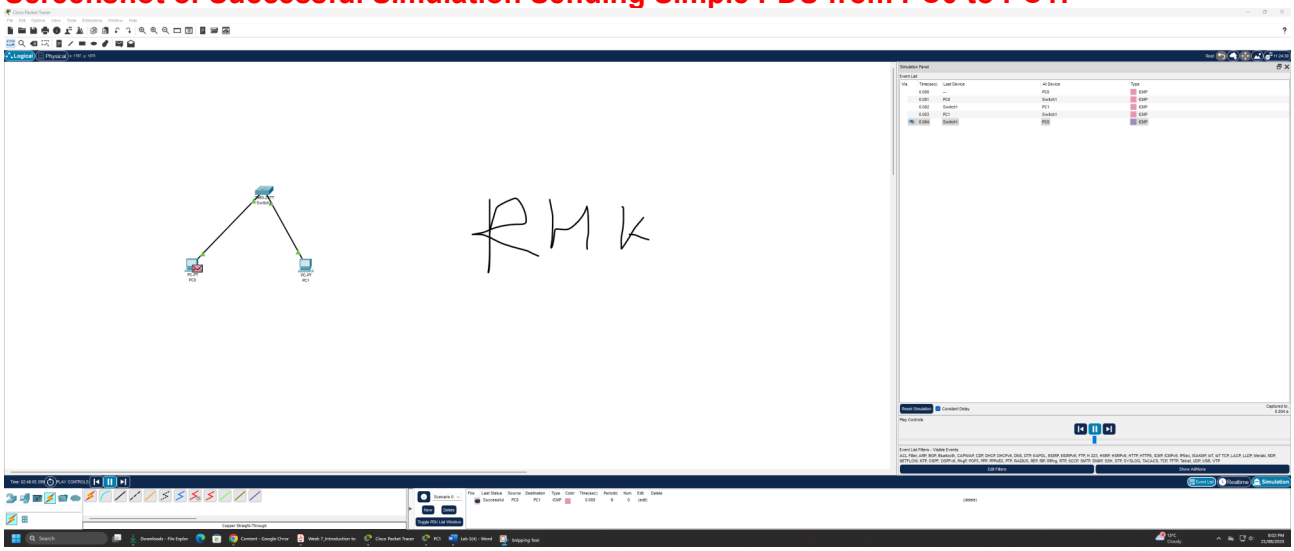
- Drag and drop a **Switch** (e.g., 2960) onto the workspace.

2. **Connect the PCs to the Switch** using straight-through cables:
   - Click on the **Connections** icon.
   - Select the **Straight-Through Cable** (represented by a black line).
   - Connect **PC0** to **FastEthernet0/1** on the Switch.
   - Connect **PC1** to **FastEthernet0/2** on the Switch.
3. **Verify IP Configuration** on both PCs (should already be configured from Part 1).

Screenshot of Network Topology:



Screenshot of Successful Simulation Sending Simple PDU from PC0 to PC1:



Part 3: Testing Connectivity

1. **Open the Command Prompt** on **PC0**:
   - Go to the **Desktop** tab and open **Command Prompt**.
   - Type ipconfig and press Enter. Take a screenshot of the result.
   - Type ping 192.168.0.11 and press Enter. Take a screenshot of the result.
2. **Open the Command Prompt** on **PC1**:
   - Go to the **Desktop** tab and open **Command Prompt**.

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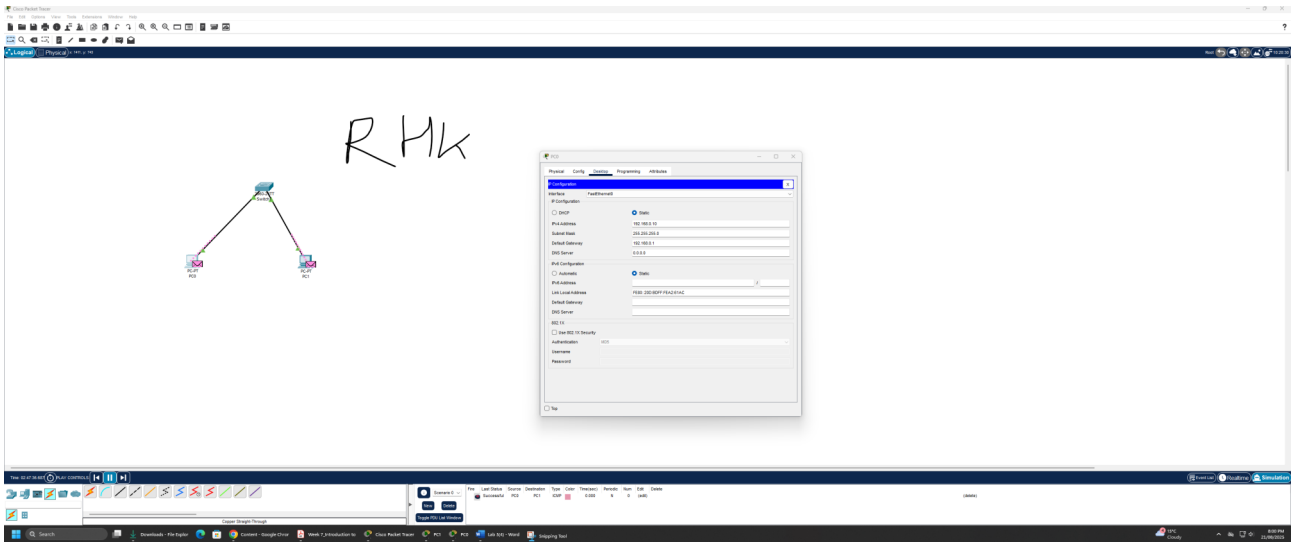
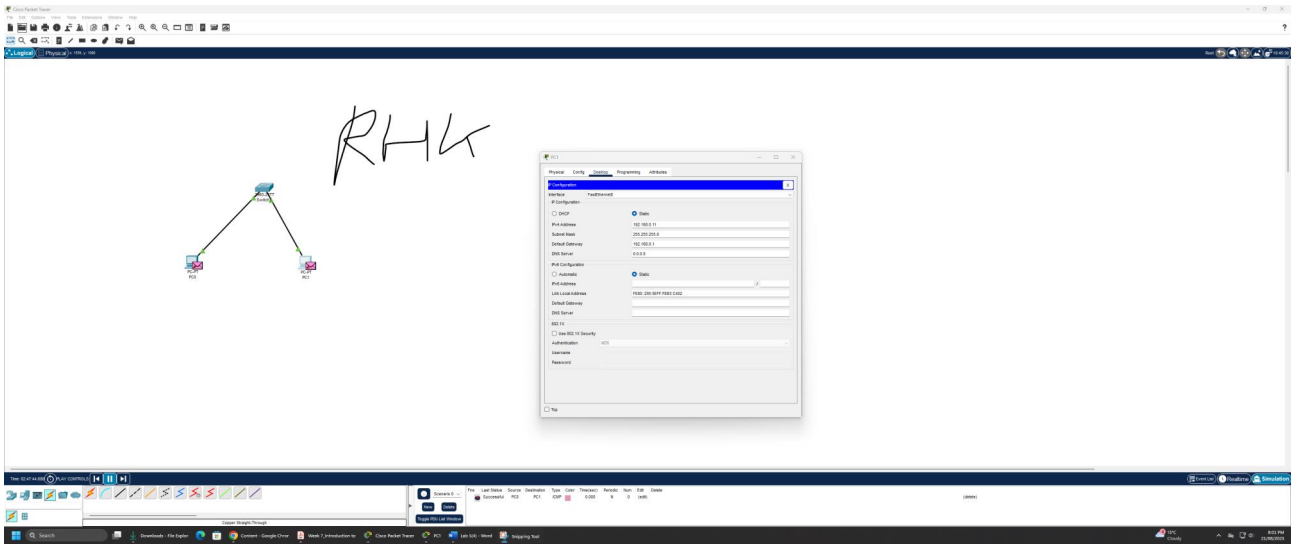
- Type ipconfig and press Enter. Take a screenshot of the result.
- Type ping 192.168.0.10 and press Enter. Take a screenshot of the result.

Screenshot of Ipconfig Command:





Screenshot of ping Command:

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