National Taiwan Normal University Computer Science and Information Engineering

Information Security: A Hands-on Approach

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Due Date: 2025.06.15, PM 11:59

Assignment

Policies:

• Zero tolerance for late submission.

- Please pack all your submissions in one zip file. RAR is not allowed!!
- I only accept **PDF**. MS Word is not allowed.
- Hand-writing is not allowed.

7.1 VPN (100 pts)

Please use **tap** and **openssl** to develop your own VPN software. The scenario is in Fig. 7.1. Of course, the IP address can be changed as you wish. You need to provide two source codes in **C**, one is on the user side and the other is on the gateway side. You need to also prepare a tutorial for your lab, including screenshots to prove that your code works.

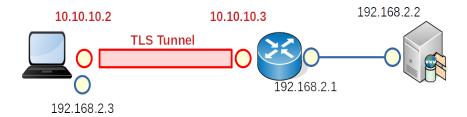


FIGURE 7.1: TLS VPN scenario.

You can see the following SeedLab for reference. https://seedsecuritylabs.org/Labs_20.04/Networking/VPN_Tunnel/However, it does not provide TLS protection and there is no C code.

- Q: Why tap, not tun?
- A: I think that you should get your private IP address from the other side, right?