

ITBU 443: Threats and Counter Measures, Homework 16

Chapter 22, *Computer Security, Principles and Practices*

Readings

Read chapter 22 in the *Computer Security, Principles and Practices* book.

Discussion Questions

Answer the discussion questions in writing.

1. What does MIME stand for? What does it do?
2. What is radix-64? What does it do?
3. What is an MUA? What does it do?
4. What is an MTA? What does it do?
5. List the differences between S/MIME and DKIM.
6. (Not in book). What are the seven layers of the OSI seven layer network model? What hardware is associated with the bottom four layers? What, generally, are the protocols associated with the Data Link, Network, and Transport layers?
7. Describe the four protocols that are TLS specific and used by the TLS Record Protocol.
8. How did the Heartbleed attack work?
9. What is the purpose of HTTPS? At what layer does it work?
10. What is the purpose of IPsec? At what layer does it work?
11. The book states that “IPsec in a firewall is resistant to bypass if all traffic from the outside must use IP[.]” Why is this so?
12. The book states that IPsec “is transparent to applications.” Why is this so?
13. Briefly discuss the difference between the AH header and the ESP header. What is the primary purpose of each one?
14. What is the difference between transport mode and tunnel mode? Please note that there is one, clear, critical difference in how these work.