

Learning Guide Unit 4

Reading Assignment

As you read through the learning resource consider the following:

- How can filtering packets in Wireshark help troubleshoot network issues?
- What are the main differences between IPv4 and IPv6, and why are public or temporary addresses used in each protocol?
- How do ZigBee and Bluetooth differ in terms of functionality, performance, and suitability for IoT applications?

Read

1. [Wireshark display filter syntax and reference](#). Wireshark .

- Read this document to learn how to write an expression to filter packets in Wireshark.

2. Digi International. (2021, March 5). [Zigbee vs. Bluetooth: Choosing the right protocol for your IoT application](#).

- Read the article for a detailed comparison between ZigBee and Bluetooth wireless protocols

3. [IPv4 vs IPv6 - Understanding the differences](#). (n.d.). NetworkAcademy.io.

- Read this article to understand why and when an IPv4 or IPv6's public or temporary addresses exist or are used.

4. [IPv6 on Windows](#). (n.d.). NetworkAcademy.io.

- Read this article to understand why IPv6's public or temporary addresses are used.

5. Noworatzky, D. (2021, July 14). [What's so great about WiMAX](#). TeleDynamics.

- Read the article for an overview of WiMAX and its use cases.

6. Oliveira, L., Rodrigues, J. J. P.C., Kozlov, S. A., Rabêlo, R. A. L., & de Albuquerque, V. H. (2019). [MAC layer protocols for internet of things: A survey](#). *Future Internet 2019*, 11(1), 16.

- Read the document for an extensive review of wireless link layer protocols classified into three major groups namely: short-range protocols, near-field communications protocols, and long-range protocols. Focus reading on IEEE 802.11n (MIMO Wi-Fi), IEEE 802.16 (WiMAX), IEEE 802.15.4 (ZigBee), and Bluetooth.

7. Ray, B. (2019, November 11). [Examining 5 IEEE protocols - ZigBee, WiFi, Bluetooth, BLE, and WiMax](#). iot for all.

- Read the article for a brief overview of wireless link-layer protocols including ZigBee, WiFi, Bluetooth, BLE, and WiMax.

