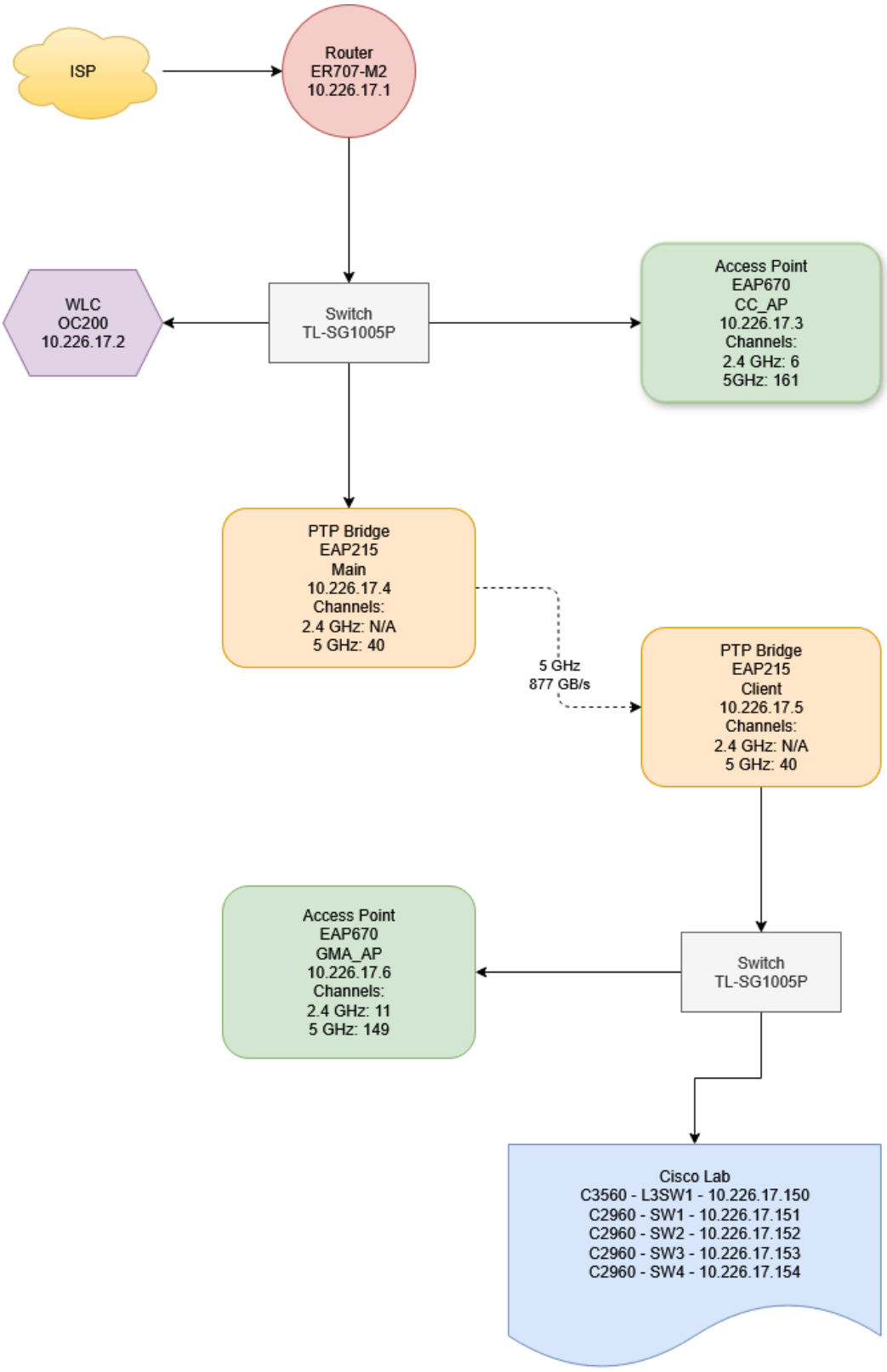
Network Portfolio

Introduction

This portfolio documents my home network details, built to extend Wi-Fi to an adjacent building using TP-Link Omada as well as a Cisco Lab for CCNA practice, showcasing my hands-on networking skills

Home Network Configuration Details

Figure 1: Home Network Diagram



Components

- **ER707-M2 Router (10.226.17.1)**
    - Model: ER707-M2 v1.20
    - Firmware Version: 1.2.3 Build 20240822 Rel.52946
    - Serial Number: Y24C119000488
    - Role: Primary router, ISP connection
    - Config: DHCP server, NAT enabled, 802.1r,
    - Network details:
        - 10.226.17.0/24
        - 10.226.17.1-50 reserved from DHCP pool
    - Connection: Ethernet to TL-SG1005P switch
- **OC200 WLC (10.226.17.2)**
    - Model: OC200
    - Firmware Version: 2.21.7 Build 20250707 Rel.72486
    - Serial Number: Y2490Q9000123
    - Role: Central controller for Omada SDN
    - Config: WLC managing 4 Access Points, 802.1r roaming, firmware auto-update enabled
    - Connection: Ethernet to TL-SG1005P(1) switch (PoE provided)
- **EAP670 CC_AP (10.226.17.3)**
    - Model: EAP670(US) v2.0
    - Firmware Version: 1.1.1 Build 20250326 Rel. 59884
    - Serial Number: Y24C0T5000189
    - Role: Access point for CC building
    - Config:
        - 2.4 GHz Channel: 6
        - 5GHz Channel: 161
    - Connection: Ethernet to TL-SG1005P(1) switch (PoE provided)
- **EAP215 Main PTP (10.226.17.4)**
    - Model: EAP215-Bridge(US) v2.0
    - Firmware Version: 1.0.2 Build 20241209 Rel. 43851
    - Serial Number: Y2491A1B00195
    - Role: Primary AP in PTP bridge (877 MB/s 5 GHz Link)
    - Config:
        - 2.4 GHz: Not Supported
        - 5GHz: 40
        - Config notes: AP configured to not broadcast SSID to prevent endpoint connection
    - Connection: Ethernet to TL-SG1005P(1) switch (PoE via injector)
- **EAP215 Client PTP (10.226.17.5)**
    - Model: EAP215-Bridge(US) v2.0
    - Firmware Version: 1.0.2 Build 20241209 Rel. 43851
    - Serial Number: Y2491A1A00610
    - Role: Client to Primary AP in PTP bridge (877 MB/s 5 GHz Link)

    - Config:
        - 2.4 GHz: Not Supported
        - 5 GHz: 40
        - Config notes: AP configured to not broadcast SSID to prevent endpoint connection
    - Connection: Uplink to Primary AP PTP bridge, downlink to TL-SG1005P(2), (PoE via injector)
- **EAP670 GMA_AP (10.226.17.6)**
    - Model: EAP670(US) v2.0
    - Firmware Version: 1.1.1 Build 20250326 Rel. 59884
    - Serial Number: Y2491P6001312
    - Role: Access point for building GMA
    - Config:
        - 2.4 GHz: 11
        - 5 GHz: 149
    - Connection: TL-SG1005P(2) switch (PoE provided)
- **Cisco Lab (10.226.17.150 - 10.226.17.154)**
    - Role: Home lab for CCNA practice
    - Config:
        - C3560
            - L3SW1 - 10.226.17.150
        - C2960
            - SW1 - 10.226.17.151
            - SW2 - 10.226.17.152
            - SW3 - 10.226.17.153
            - SW4 - 10.226.17.154
- Future Plans
    - Plan to change SG-1005P unmanaged switches for managed switches to allow tagged traffic to be sent throughout the LAN
        - Potential replacements:
            - TL-SG3210XHP-M2
            - TL-SG2008P
    - Implement Management VLAN once I can get tagged traffic across the switches
    - Add outdoor rated Access Points
        - One added to GMA building facing west
        - One added to CC building facing west
        - Purpose is to extend network coverage to outdoor spaces
        - Plan to change SSIDs to match a standard naming convention