Network Security Audit Report

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1. Introduction

Objective:

The objective of this audit is to evaluate and enhance the security of the home network by reviewing router settings, connected devices, and overall network configuration.

Scope:

The audit covers the following aspects:

- Discovery and documentation of connected devices.
- Review and configuration of router settings.
- Security observations and recommendations.

2. Network Diagram
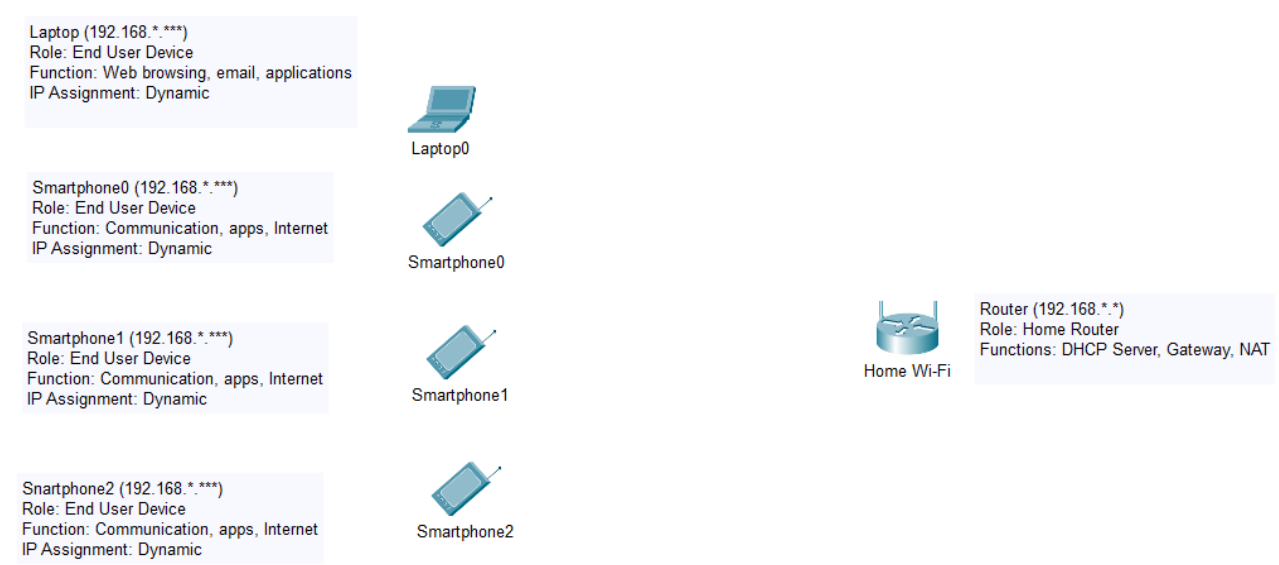
Explanation:

The network diagram illustrates the connections and roles of various devices on the network, including the router, laptops, and phones.

3. Discovered Devices

Device Name	IP Address	MAC Address	Role/Function
Laptop	192.168.*.***	48:2C:A0:1D:**:**	End User Device
Smartphone 0	192.168.*.***	58:CF:81:2E:**:**	End User Device
Smartphone 1	192.168.*.***	AC:DE:48:7B:**:**	End User Device
Smartphone 2	192.168.*.***	1C:69:7E:3A:**:**	End User Device
Router	192.168.*.*	E4:5F:6D:7A:**:**	Home Router, DHCP Server

4. Router Settings

General Configuration:

- **Router IP:** 192.168.*.*
- **Subnet Mask:** 255.255.255.0
- **Gateway:** 192.168.*.*

DHCP Settings:

- **Range:** 192.168.*.100 - 192.168.*.199
- **Lease Time:** 1440 Minutes

Security Settings:

- **WPS:** Disabled
- **Encryption:** WPA2
- **Firewall:** Enabled
- **DoS Protection:** Enabled

5. Findings and Recommendations

Security Observations:

- **Device Discovery:** The connected devices were identified and categorized. The router is effectively managing DHCP assignments.

- **Router Configuration:** The router is configured with WPA2 encryption and has firewall and DoS protection enabled. However, the router's WPS feature is disabled for added security.
- **Outdated Router:** The router has been labeled "end of life" by the manufacturer and is no longer receiving security updates. This poses a potential risk as new vulnerabilities may not be patched.

Improvement Suggestions:

- **Upgrade Router:** Given that the router is no longer receiving security updates, it is recommended to replace it with a newer model that receives regular updates and has improved security features.
- **Regular Audits:** Perform regular network security audits to ensure ongoing protection and address any emerging vulnerabilities.

6. Conclusion

The audit revealed that while the current router configuration provides a reasonable level of security, the device's end-of-life status poses a significant risk. To maintain a secure network environment, it is essential to upgrade the router to a model that receives regular security updates. Regular network security practices, including monitoring and updates, should be part of the ongoing maintenance of the home network.

7. Appendices

1. **Network diagram**

Laptop (192.168.*.***)
Role: End User Device
Function: Web browsing, email, applications
IP Assignment: Dynamic

Laptop0

Smartphone0 (192.168.*.***)
Role: End User Device
Function: Communication, apps, Internet
IP Assignment: Dynamic

Smartphone0

Smartphone1 (192.168.*.***)
Role: End User Device
Function: Communication, apps, Internet
IP Assignment: Dynamic

Smartphone1

Snartphone2 (192.168.*.***)
Role: End User Device
Function: Communication, apps, Internet
IP Assignment: Dynamic

Smartphone2

Router (192.168.*.***)
Role: Home Router
Functions: DHCP Server, Gateway, NAT

Home Wi-Fi
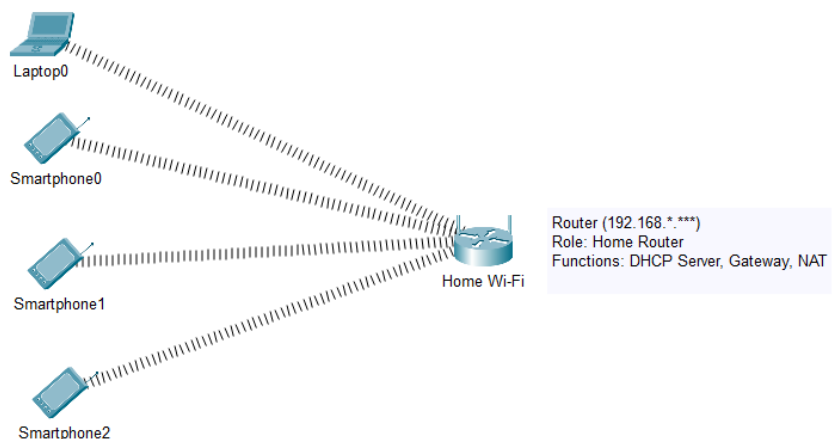
2. **Router Settings**

| IP Address Pool: | 192 . 168 . ███ . 100 | - | 192 . 168 . ███ . 199 |

| Address Lease Time: | 1440 | minutes. (1-2880. The default value is 1440.) |

WPS

WPS: ☐ Enable

Firewall

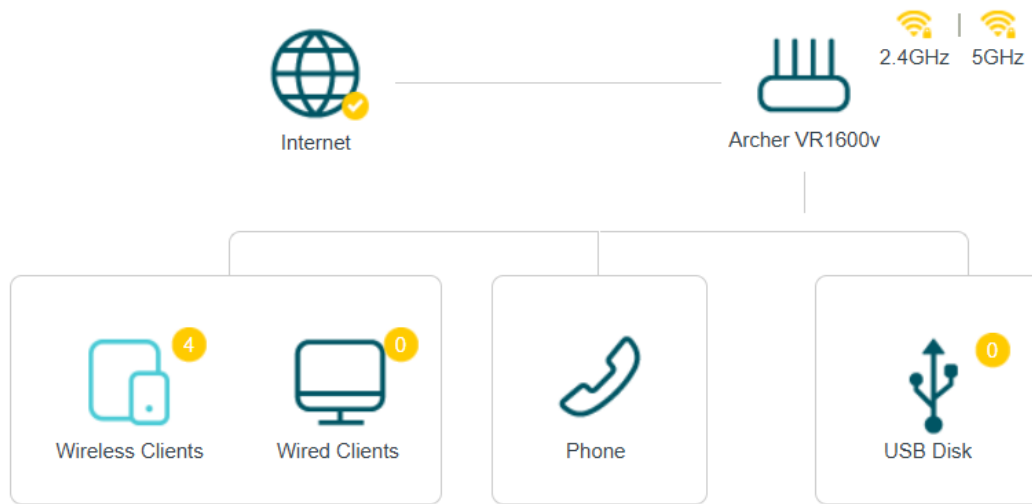IPv4 SPI Firewall: ⬤

IPv6 SPI Firewall: ⬤

DoS Protection:

DoS Protection ⬤

3. **Device List:**

Wireless Clients

ID	Name	IP Address	MAC Address
1	Arsema iPhone	192.168.▮	C6-17-▮
2	Yonase Laptop	192.168▮	10-5B-▮
3	Aranshi iPhone	192.168.▮	36-26-▮
4	Yonase iPhone 13	192.168▮	B6-AD-▮