

Smart Home VLAN Network Simulation

This project simulates a smart home network using Cisco Packet Tracer. It demonstrates secure traffic segmentation through VLANs, along with inter-VLAN routing, DHCP, ACLs, and basic security mechanisms.

Technologies & Concepts Used:

- VLAN Configuration for segmentation (IoT, Security, Personal, Management)
- Inter-VLAN Routing via Layer 3 switch
- Access Control Lists to restrict unauthorized communication
- Port Security on switch interfaces
- DHCP pools for dynamic IP allocation per VLAN
- Basic QoS considerations for prioritizing CCTV traffic

GitHub Repository: <https://github.com/rashmijannu/smart-home-vlan-network-simulation>

Files included in the repository:

- CLI Configuration Scripts (Router, Switch, DHCP)
- Network Topology Diagram (PNG)
- Packet Tracer File (.pkt)
- This Report (PDF)

This simulation mirrors a modern smart home scenario and is aligned with CCNA-level skills. It demonstrates understanding of layered network design and practical Cisco CLI knowledge.