

Task 8 Case Study Brief: High Value Domestic Network

Client Background

Your client owns or is considering a high value house. They want a reliable, secure and professionally planned domestic network before installation.

Instead of using a made-up floorplan, you will select a real house listing from realestate.com.au and use its floorplan as the basis for your design.

Client Priorities

The client wants the network to support:

- reliable internet access across the home
- strong Wi-Fi coverage in living areas, bedrooms, study spaces and outdoor entertaining areas where relevant
- wired connections for fixed high-demand devices
- smart home and Internet of Things devices
- home office work, cloud services and video conferencing
- guest internet access
- privacy and security for personal data, cameras, smart home devices and work information
- a professional network design that can be explained to a non-technical homeowner

People Who Use The Network

User group	Network needs
Homeowners	Reliable whole-home access, smart home control, privacy and secure admin access
Family members	Wi-Fi for laptops, phones, tablets, streaming, gaming and study
Guests	Internet access without access to private household devices
Home office user	Reliable wired or high-quality wireless access, video conferencing, cloud storage and email
Smart home devices	Controlled network access for cameras, doorbells, speakers, appliances or sensors

Devices And Resources

Your selected property will be different from other students' properties. Choose devices that suit the floorplan and client needs.

Possible device categories include:

Category	Examples
Network core	modem/ONT, gateway/router, firewall function, PoE switch
Wireless	ceiling or wall access points, outdoor access point where justified
Fixed devices	desktop, printer, NAS, media centre, smart TV, gaming console, home office dock
Security and IoT	cameras, doorbell, smart speakers, lighting, appliances,

	sensors
User devices	laptops, tablets and phones

Property Source Requirements

Record:

- listing title or short description
- suburb
- realestate.com.au listing URL
- date accessed
- floorplan screenshot or exported image used for classroom assessment evidence
- any scale assumption if the floorplan does not provide accurate dimensions

Use the floorplan respectfully. Do not publish the real estate floorplan or address outside the assessment submission.

Required Design Direction

Use UniFi Design Center to build the practical design evidence. Your design should show:

- the imported or recreated floorplan
- internet/WAN entry point
- modem/ONT and gateway/router
- firewall function or security gateway
- central switch or PoE switch
- wireless access point locations
- wired ethernet links for fixed devices where suitable
- wireless coverage evidence
- guest, IoT, family, home office or camera separation where suitable

Your written response should also include a logical topology explanation. A floorplan shows where equipment is placed; the topology explains how the network is connected.

Design Constraints

You must make reasonable assumptions. State them clearly.

Examples:

- Wall materials may be unknown, so coverage simulation is an estimate.
- Floorplan scale may be approximate if exact measurements are not shown.
- Some devices may be represented by category rather than exact model.
- Final installation would require a site visit and cable pathway check.