

# Technical Report Title

Your Name

March 9, 2025

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# Chapter 1

## Description of Project

### 1.1 Project Idea

This proposal is for a home security system that is a hardware and software solution. Our company will offer installation services for the system, which is a base station and various POE IP cameras. The storage for the system will be through AWS and there will be a web interface to access the recorded feeds. The monetization will be through a hardware and install fee, and a monthly subscription fee for the AWS storage and web interface.

The hardware will be based of a Raspberry Pie 5, with a Corral Accelerator, and a POE switch. It will all be contained within a custom case that will be mounted to the wall. The cameras will be POE IP cameras that will be connected to the switch and powered by it. The customer will be able to pick various numbers and variations of indoor and outdoor cameras.

The Pie will be running the default version of Raspbian. The open source software Frigate will be used to manage the cameras, feeds, recordings, and detection. The storage will be through AWS S3 mounted locally using Rclone. Frigate will handle the web interface, but there will be a tunnel to the AWS instance so the customer can access the recordings on the web.

The install service will be done by in house contractors. They will visit the customer's home, advise them on number of cameras and camera placement. They will then install the hardware, connect it to the internet, and show the customer how to use the system.

## Chapter 2

# Likely Marketing Efforts

### 2.1 Target Audience

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### 2.2 Cost Expectations

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## Chapter 3

# Technical Details / Technical Research

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Department Director — 180k—200k/yr

Software Team:

Business analyst/scrum master — 115k—130k/yr

Software Dev Lead Team 1: Senior dev — 110k—160k/yr Junior dev — 75k—90k/yr Junior dev — 75k—90k/yr

Team 2: Senior dev — 110k—160k/yr Junior dev — 75k—90k/yr Junior dev — 75k—90k/yr

Systems Team:

Systems Administrator — 68k—120k/yr

Network and Security Lead — 120k—140k/yr Network and Security Specialist — 100k—120k/yr

Helpdesk Lead/External liaison — 50k—60k/yr Helpdesk Specialist — 30k—40k/yr

Helpdesk Specialist — 30k—40k/yr Helpdesk Specialist — 30k—40k/yr

## Chapter 4

# Defined Goals / MVP

The end product is a home security system and hardware solution that we offer install services for. The package to the user will be home base station that has a POE switch, and varying IP cameras to connect to it. The storage for the system will be through AWS and there will be a web interface to access the recorded feeds. The monetization is through a hardware and install fee, and a monthly subscription fee for the AWS storage and web interface.

## Chapter 5

# Testing to be Performed

### 5.1 Test Suite

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## Chapter 6

# Summary of Proposal

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## Chapter 7

# Timeline and Budget

### 7.1 Timeline

### 7.2 Budget Estimates

Item	Cost
Hardware	Each unit with the average number of cameras (4), cabling, and the computers \$1,200,0
Software	\$0 AWS bills to the customer for storage and interface.
Licensing	\$200 electrical contractor licenses for 3 installers. \$600
Human Resources	\$60,000 for the year.
Developer Labor	\$ for the year.
Total	\$

# Bibliography

[1] Author, *Title*, Journal, Year.

[2] Author, *Title*, Journal, Year.