Final Project Proposal – Milestone 1

Project Title: Personal VLAN

Team Members:

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Chosen Category: Practical

Suggested Subcategory: Networking/Systems Administration

1. Introduction & Motivation

(Brief background and motivation for the chosen project. Why this topic is important/relevant.)

This project is intended to demonstrate the benefits that logical network segmentation provides which are improving security and manageability. This topic is important to us because we are interested in testing how segmenting a network will help prevent the spread of attacks and where it is practical to apply this configuration.

2. Project Scope & Objectives

Define what your project will and will not cover
List specific objectives as bullet points.

What our project will cover:

- Creating a VLAN and documenting the process
- Testing a VLAN against a regular network
    - Speed
    - Security
    - Manageability
    - Ease of Configuration

What our project is not directed at:

- Large scale VLAN deployments

- Integration with firewalls or VPNs
- Full automation of the VLAN

3. Approach / Initial Plan

(Describe your methodology, tools, datasets, frameworks, or platforms you plan to use.)

First, we plan to break down the roles for the different parts of the project and assign them to team members. We will need a router that supports a vlan setup – which is mostly a hardware requirement. We will need firmware that enables vlans – sometimes preconfigured, but occasionally requiring open-source software such as openWRT. As well, the router will need to be able to connect to the internet to test devices on the network. Lastly, devices will be needed to be added to the network to test connection and segmentation – likely IoT devices and personal devices.

4. Expected Outcomes

(What deliverables do you expect? How will success be measured?)

We expect to produce a working VLAN, documentation of the process of creating and configuring it, and test comparisons between our VLAN and a regular network. It is considered successful if devices within the VLAN can communicate with each other and outside the network and the project is reproducible through our documentation.

5. Timeline

(Provide a short week-by-week plan leading to Milestones 2 & 3.)

Milestone 2: October 2nd (4 weeks)

1. List the steps we need to take to complete the project and divide up the roles.
2. Research and select a router with hardware to support a vlan
3. Set up a network and test baseline.
4. Tentative: test OEM firmware vs opensource

Milestone 3: December 2nd (9 weeks)

1. Set up vlan and test against baseline

2 – 4. implement different features of the vlan/router and test efficacy

5. Refine documentation
6. Begin reports
7. Finalize reports
8. Practice presentation
9. Present

6. References

None yet