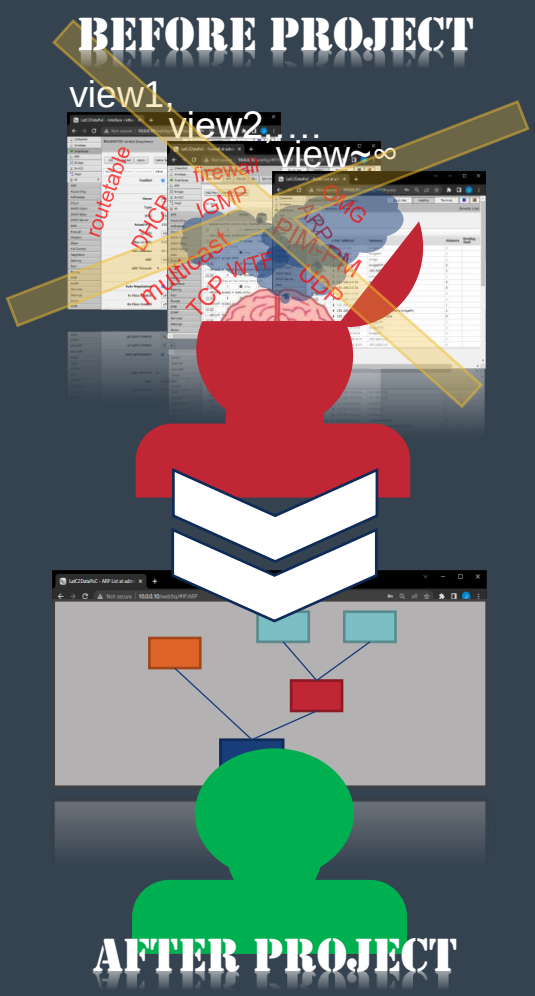
Project Proposal – Smart route management

1. Introduction

Operation on the field may be quite hectic and decisions must be made quickly. To implement these decisions, systems needs to be simply enough, quick to use and easy to understand. Only most relevant points must be shown for the users while boring and repetitive tasks and tasks requiring high precision must be automated for avoiding mistakes.

In addition to Savox Systems, many other third party's systems are linked together. All these systems are operating in multiple networks that are required to manage smartly. Different kind of network configurations must be able to create, store and restore.

A Person who have to manage networks, may not have deep understanding of networks and technology.



2. Project goals

There are tools for managing network routers, but typically they are offering almost endless possibilities, features and options with countless menus that can prevent figuring out the big picture.

Project goal is to develop application for manage network router. Application needs to be clear looking, very simplified UI and it should make visualization of networks. Technology behind should be hidden, only showing the logical presentation of instances that are part of network. Application needs to analyze network with the help of the router and present limited amount of configuration possibilities for the user. Application should hide technology orientated terminology so users with low network skills won't be confused.

3. Technologies

Application will control the router by scripts over SSH connection. During the project different kind of network skills are learned if they are not familiar. For example, routing IP packages (UDP, TCP, ARP, ICMP), exploring unicast/multicast related handshaking and package delivery. Defining firewall rules and so on.

Application should not be tied to specific operation system, Windows and Linux versions are required.

We prefer Python and/or C++ for coding, Qt could be used for user interface development.

Savox will arrange router system for development and testing that is accessible remotely for all the team members.

4. Requirements for the students

Preferring application programming skills from majority of the group.

Difficulty of backend programming.....Easy

Difficulty of frontend programming.....Moderate

Difficulty of user experience design.....Moderate

Difficulty of network scripting.....Moderate+

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5. Legal Issues

Students participating in the project must sign a non-disclosure agreement (NDA) with Savox Communications Oy Ab.

Savox Communications Oy Ab will share some confidential information with the students.

Savox Communications Oy Ab gets all Intellectual Property Rights (IPR) to the results.

6. Client

Savox expertise is based on improving and saving lives by providing safety, rescue and communication solutions for professionals working in demanding environments. The product and service portfolio are extended and strengthened with industrial, rugged and security computers and displays. Savox has offices in Espoo, Savonlinna, Tampere and Jyväskylä in Finland.

Veli-Matti is available for sprint planning meetings, backlog grooming and sprint review meetings. And he is ready during the sprint few hours per week to have small talks and share the pain.

Joona will attend all necessary meetings.

Client representatives

Software Manager

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Product Owner / Tactical Systems

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Savox does not have any preselected team members.

7. Additional information

All documentation in English.

Check Savox on YouTube!

https://bit.ly/3CGeAqA

https://bit.ly/3wDKGz8

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