CNIT 581 (048) Project 2

Avigyan Mukherjee

October 2022

Nmap Frontend

1 Context for web-app

Nmap allows you to scan your network and discover not only everything connected to it, but also a wide variety of information about what's connected, what services each host is operating, and so on. This web-app aims to provide a front-end component to NMap, to make it easier for non technical staff in a small to medium sized enterprise to use NMap's functionality.

1.1 Overall Purpose

This app can be used to dynamically start an instance of NMap on any enterprise network, provided the pre-configuration instructions are followed properly, or it is automated to some degree (future work). This can also be used by a company hosting nmap on their webserver and allowing any employee to access nmap through the front end platform to gather data about the enterprise network.

1.2 Intended Audience

The intended audience would be (but is not limited to):

1. Network Engineers
2. Network Analysts
3. Technology Support Engineers
4. Security Analysts
5. Security Engineers
6. Business Analysts
7. Network Designers
8. Non-Technical Staff and so on...

1.3 Main Actions the User Can Do

In all the pages, the Navigation Bar remains constant, providing a way for the user to navigate easily and freely through the website.

1.3.1 Home Page:

The User can enter IP address and subnet mask (/32 for individual host IP), and click on the scan button. If the user has entered no IP, an error pop up is shown. Else, it takes the user to the 'Latest Scan' Page. The user can also see the previous scans list. The third link is clickable (for now), and it takes the user to the Previous Scans page, and shows the scan corresponding to the clicked IP. Along with that the user can play a help video sourced from youtube.com, and can also resize the window accordingly.

1.3.2 Previous Scan Reports:

User can access this page via the Navigation Bar. User is presented with two sets of tabs, one vertical depicting hosts and services scanned by the previous scan, and on the right side, three side by side tabs depiting ports, topology and the nmap output. User can scroll through the tabs and see corresponding outputs.

1.3.3 Latest Scan:

The User can access this page via clicking on the last IP scanned (by date) on the home page, or by clicking on the Latest Scan tab on the Navigation Bar. This Page is still under construction and it so far shows a simulation of user interaction for the user but the added text will be replaced by scan elements. The user is shown a network topology diagram of their scan as well.

1.3.4 ReadMe:

This is the first page the a new user should visit. This explains the working logic of the app in its current state and walks the user through the pre-configuration process. This page also provides the user a download link of the bash file (under construction), which can be used to run an instance of the app in the users local machine.

1.3.5 Help:

This page provides the overview of how nmap commands work, and presents them through accordions.

2 Changes from Project 1

2.1 Video player shifted from Right to Left

This has been done as the resize icon is only available for the bottom-right.

2.2 Navigation Bar added

The navigation bar has been added and as per previous feedback, the help button has been added to the navigation bar instead of a small icon.

2.3 Progress Bar NOT ADDED

The progress bar would go in the "Latest Scan" page after the user clicks on the scan button. As the value of the progress bar would depend on a still unfinished back end process, this UI feature has been skipped.

2.4 Images,Readme added

The extra pages of Readme has been added to improve user experience, and pictures have been sources as well.

2.5 User Interaction

Various UI elements are added: Video resizing, adding text, etc