Benjamin Dewey

The application is a wifi sniffer. It will listen for outgoing and incoming packets over wifi and display an evolving report of interesting information that can be gleaned from the data. Information in the report may be purely statistical, such as total number of connections or frequency of connections, or it may be for the purpose of deanonymizing end hosts, such as a list of source ip addresses accessed by a specific end host. Information from any unencrypted traffic should be especially important. The application should also allow for spoofing against a specific end host based on their traffic, and recording the results if any.

The application will be written in python and make use of the Scapy library. It should support a couple of different modes, such as focusing on a particular end host or a more generic analysis of the overall traffic. In this way multiple instances of the app can run simultaneously and display their own unique reports rather than relying on one instance of the app to handle all use cases. If possible, the app should also avoid revealing itself for what it is - either through obfuscation or some other means. This means that one sniffer should not be able to identify another one, unless for some reason we want or need them to be aware of each other's presence.

In addition to displaying a live report, the application should also support logging when certain conditions are met, as specified by the user, as well as the ability to log a snapshot of the current report to be saved for later. This ensures that anything the users wants to remember does not get lost as the report evolves over time.

Scapy library: https://scapy.net/

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