Computer Science, Florida Tech Dr. Abdullah Aydeger

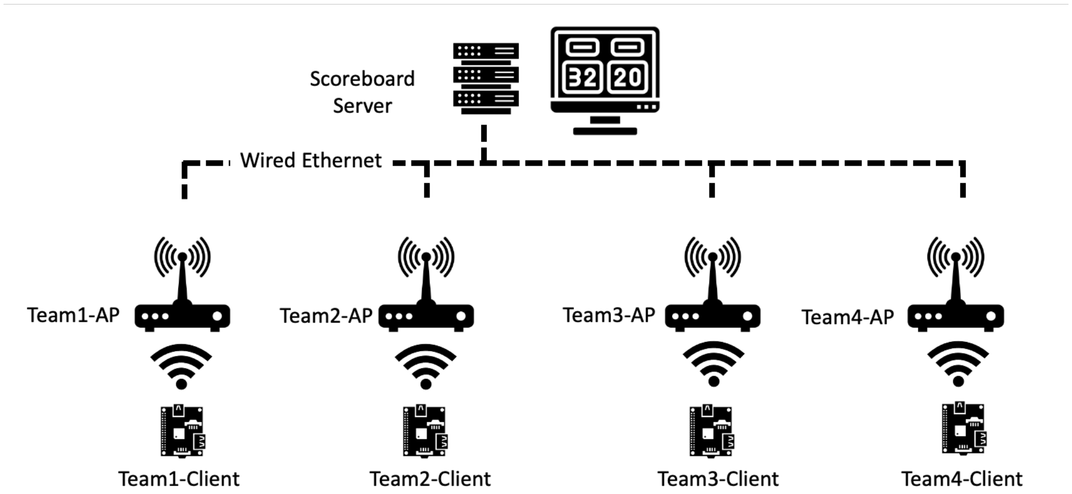
CS 4820 – Fall 2022

Wireless and Mobile Security

Lab #1

Due: 09/08 11:30PM

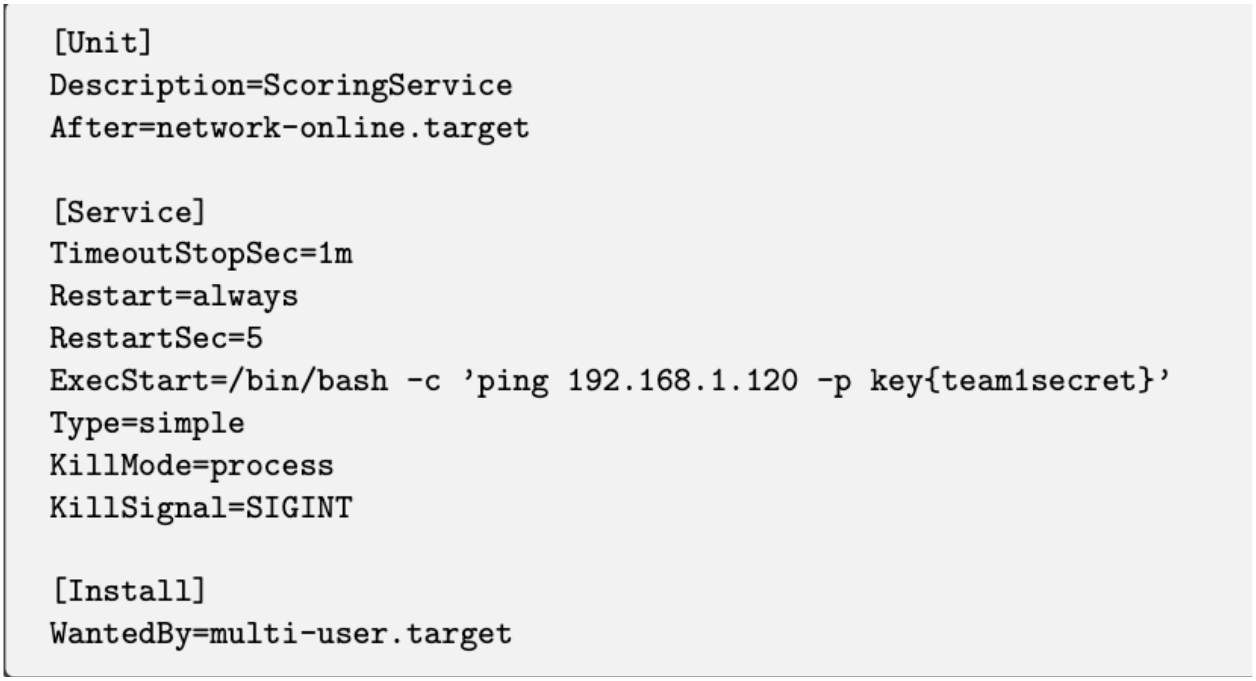
In the class, we have learned about some of the problems with the IEEE 802.11. Attacks such as spoofing de-authentication frames, can abuse the authentication and association methods for 802.11 devices. In this lab, you will have an opportunity to attempt these attack methods in a controlled environment.



For this lab, there will be four teams. Each team is assigned a raspberry pi computer and a wireless access point. The raspberry pi is configured with a script to automatically connect to the open access point and ping the scoreboard server.

Your team's job is to prevent the other teams' raspberry pis from pinging the server. You may use any methods (other than physical contact with the access point or the raspberry pi) to affect your teams score or another teams' score. You may not perform broad spectrum jamming attacks that would be in violation of FCC guidelines. You also may introduce additional hardware into the environment.

For further understanding, the raspberry pi scoring script is provided below.



```
[Unit]
Description=ScoringService
After=network-online.target

[Service]
TimeoutStopSec=1m
Restart=always
RestartSec=5
ExecStart=/bin/bash -c ’ping 192.168.1.120 -p key{team1secret}’
Type=simple
KillMode=process
KillSignal=SIGINT

[Install]
WantedBy=multi-user.target
```

Report Submission:

Your report should include following:

Display available WiFi Access Points and Stations in the classroom. Explain what method/tool you used for this purpose.

Sniff the WiFi interface and provide some screenshots of packets transmitted.

How did you send the de-authentication packets? How did you confirm it worked?

What procedure (if any) did you follow to beat the game? Has it worked? If not, what went wrong? Explain in short.

Who did what in the project/report?

Extra Credit

1. (+10) Be the team with the highest score on the scoreboard at the end of the lab.