

I. Project Title:

- **Testing Various Attacks Against Host-based and Network-based Firewalls**

II. Team Members:

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III. Project Description:

In this project, we will compare the effectiveness of network-based versus host-based firewalls in a series of scenarios. The firewalls that will be utilized in this project are the Linux kernel firewall, to serve as our host-based firewall, and a generic router, for our network-based firewall. To analyze the effectiveness of these firewalls, we will be using the Wireshark program to monitor packet communications between the host and attacker. Some scenarios we will be testing include DoS attacks, spyware (preventing the software from communicating back to the attacker), and site filtering (preventing users from accessing known malicious sites).

IV. Objectives:

- Implement network-based firewall
- Implement host-based firewall
- Learn about firewalls, their capabilities, the different types, and when to use the different types
- Learning how to use various tools for analyzing
- Learn basic hacking skills, attempt DoS/ MitM attacks

V. Scope:

- Firewalls
- DoS/MitM

VI. Deliverables:

- Reports
- Firewall logs