Computer Network Attacks and Defense Mechanisms: Simulation and Analysis

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Exam assignment

Task: Using INET Framework Demo or INET Framework create the real-world LAN with various interacting clients and servers

Requirements:
- The network topology should be as seen in small or medium sized LANs
- Topology should be parameterized (i.e. various network fragments, clients or servers count)
- Use various device models, found in the "INET Framework Demo/NED" folder (e.g., StandardHost, Router, EtherSwitch, WirelessAP etc.)
- Network should be alive, e.g. with various server and client applications (HTTP, UDP etc.)
- Applications should be parameterized (i.e. transmission with various network load, e.g. normal and DoS)

Output: "NED" file with network, "INI" file with network configuration and BAT/SH file with run script. The files should be named as your last name. The mentioned files should be sent zipped in one archive to ulanov@iias.spb.su till the 23th of April.

Hints:
- To start use "NClients" example
- To make UDP client and server applications see how it was made in "video.ini"
- There are several examples of networks with different devices
- To run the network with the corresponding configuration use, e.g. "..\..\bin\INET -f video.ini"
- Learn how to make different "Run" in configuration files from OMNeT User's Manual