



# VM & Mininet demo

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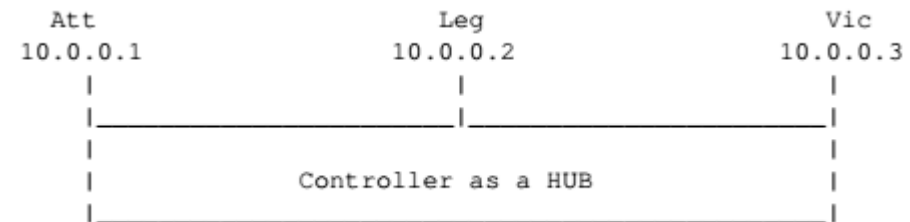
Winter 2021

# Security Lab Scenario

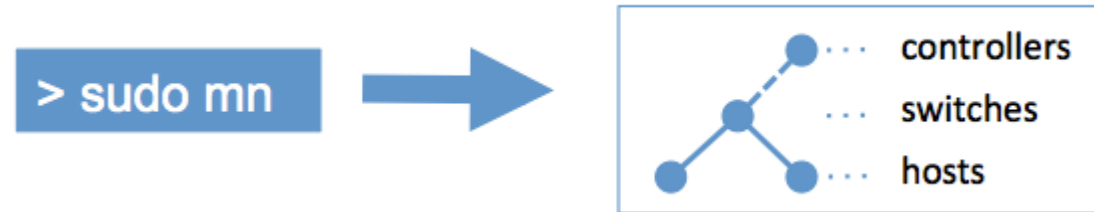


# Lab Environment

- A network of three nodes: *Leg*, *Att*, *Vic*
- The nodes are required to be connected through which device:
  - Switch?
  - Or Hub?
- Since providing three machine and a hub for each student seems exhausting and expensive task!! ☹️ We have used Mininet to emulate the network 😊



# Mininet



- Mininet creates a **realistic virtual network**, running **real kernel, switch and application code**, on a single machine
- You can define your network architecture as a Python code using Mininet package
- Mininet is based on SDN
- The SDN controller in Mininet can configure the network switch in such a way that act as a hub

# Software Defined Network (SDN)

- SDN entails the decoupling of the control plane from the forwarding plane and offloads its functions to a centralized controller
- SDN-enabled nodes don't need to run control protocols among themselves and instead rely upon the controller
- "Controller-defined" or "Centralized Control" may be more appropriate

