DEPARTMENT OF INFORMATION ENGINEERING AND COMPUTER SCIENCE (DISI)
UNIVERSITY OF TRENTO, ITALY

NETWORK SECURITY - AY 2017/2018

Lab Activity Report

Man in the Middle attacks

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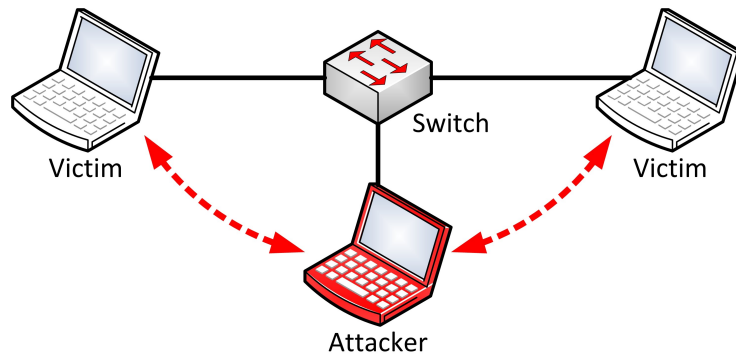Lorenzo Brugnera [000000]

1 Introduction

Figure 1: Diagram of a MitM attack

What are Man in the Middle (MitM) attacks

1.1 Network attacks

1.2 Service attacks

1.2.1 ARP Poisoning

Countermeasures

1.2.2 DHCP Poisoning

Countermeasures
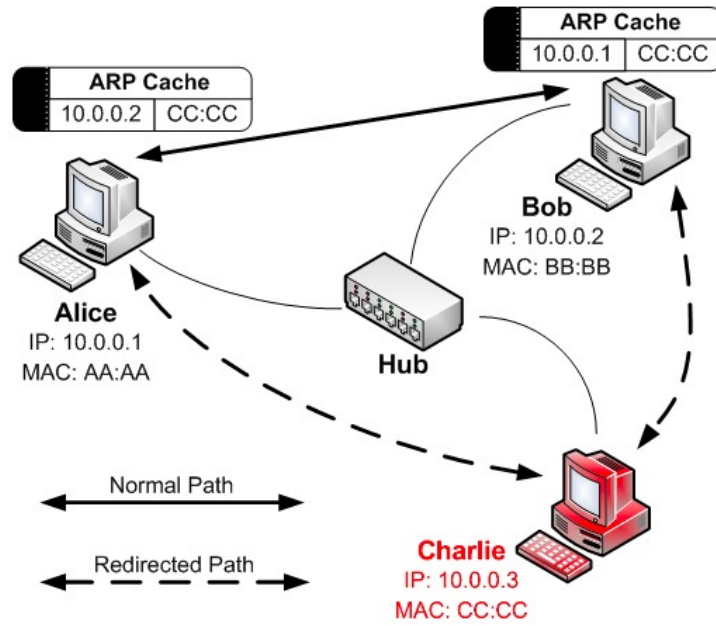
1.2.3 Evil Twin

Countermeasures

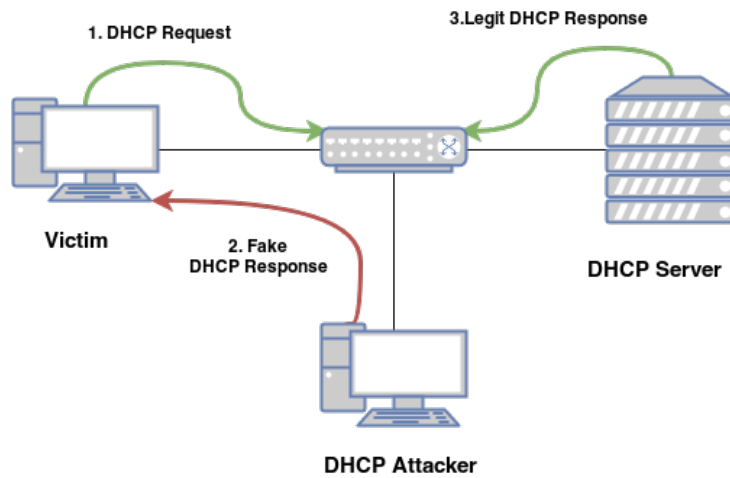Figure 2: ARP Spoofing attack diagram

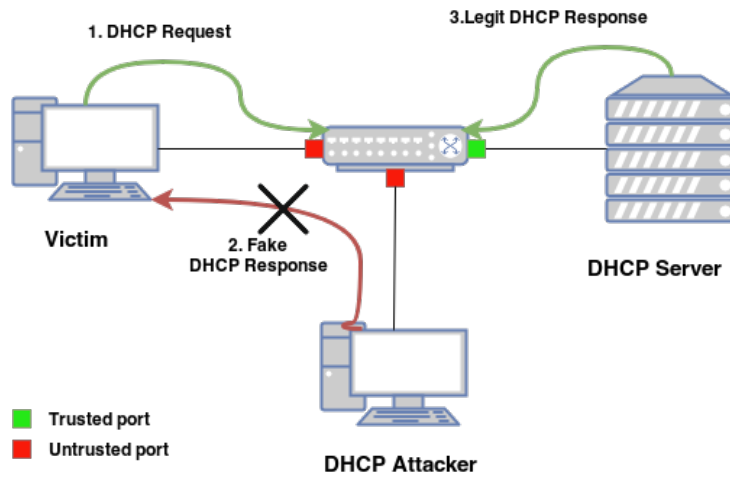
Figure 3: DHCP poisoning attack diagram
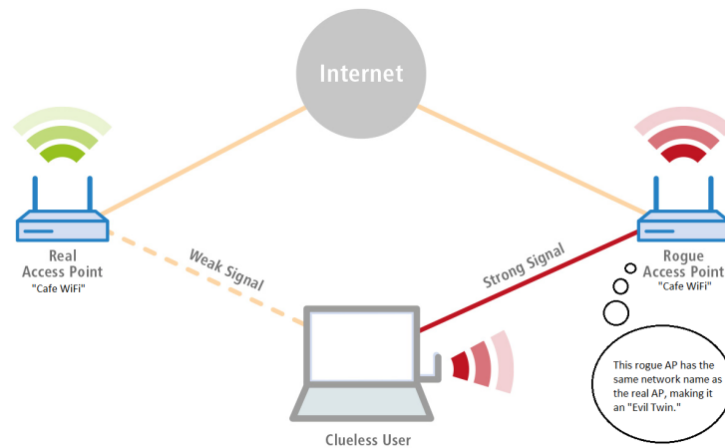
Figure 4: DHCP snooping diagram

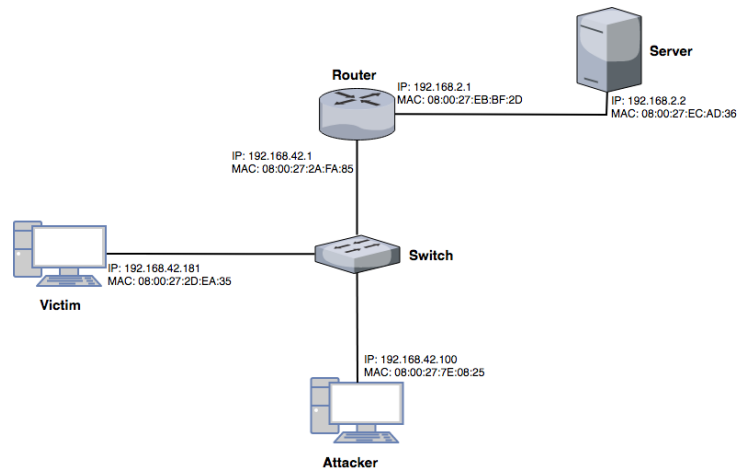Figure 5: Evil Twin attack diagram

2 Laboratory activity overview

Figure 6: Topology of the VMs network

3 Exercises

3.1 Exercise 1 - SSL Stripping
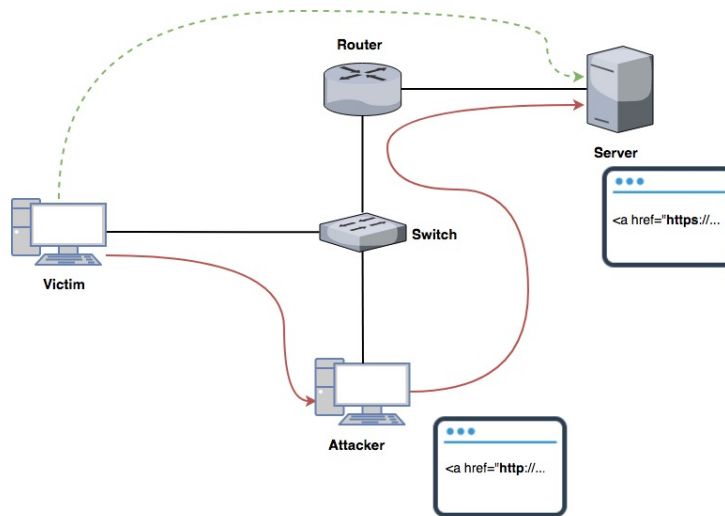
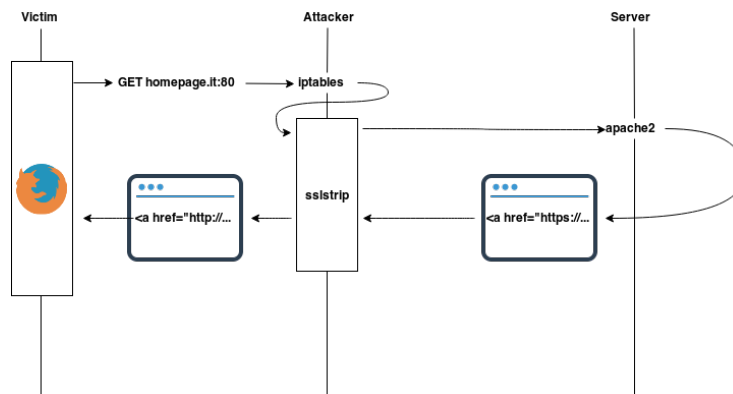## 3.2 Exercise 2 - HSTS Bypassing

Figure 7: SSL Stripping attack diagram
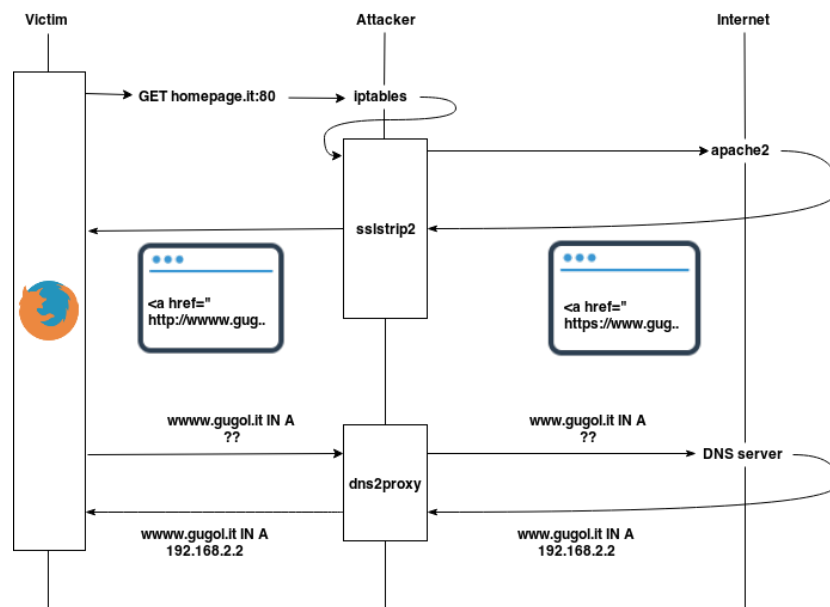

Figure 8: SSL Stripping attack diagram

Figure 9