

**Computer Security (COM-301)**  
Network Security - Spoofing  
Practice Problem Set

# Noisy roommate

Alice subscribed to a digital diary site. She is worried that her roommate might try to read her diary. She went through the COM-301 material to learn what attacks her roommate could launch. She made a shortlist of worrisome attacks and asked you to confirm.

Which attack(s) would you remove from the list because they are not applicable in this scenario?

- A) BGP hijacking
- B) Looking over the shoulder
- C) ARP poisoning
- D) DNS hijacking

# MCQ

Which of the following statements are true:

- a) In ARP, the receiver can check the authenticity of a sender upon receiving a packet.
- b) In a DNS hijacking attack a malicious router A in AS1 tells routers in AS2 that it is the cheapest route.
- c) When IP is used (not IPSEC), source and destination IP addresses are in the clear in IP headers.
- d) ARP associates a MAC address to a given IP address.

# Stop John!

John Oliver has aired a new show to expose the evil nature of Evil corp, the owners of Evil Service Provider, a famous ISP with millions of users. Since watching this video may lead to loss of customers, Evil corp wants to block access to this content through its provider.

**Part I.** Describe one method that the Evil Service Provider can use to prevent its customers from watching this content without affecting its other services.

**Part II.** Can Evil Service Provider's users bypass the censoring which you designed in the previous part? Justify. Assume that Evil Service Provider is the only ISP available to the users.

# Hearing secret whispers

Suppose you are concerned that your browser has malicious code running within it, and sends information about your browsing activity to `www.badsite.com` though you are confident that your operating system has not been compromised. You type `www.twitter.com` into your browser's address bar to take you to the Twitter site.

Are there steps you could take (which could involve additional effort on your part) to check whether your browser sent any information to `www.badsite.com` via cookies as part of that request?