Popa & Weaver Spring 2019

CS 161 Computer Security

Discussion 11

Instructions. We will break into groups to discuss the following questions. Please think of as many solutions as you can. Be original! Maybe you will come up with something no one has thought of yet. Be prepared to talk about your solutions with the rest of the section.

Question 1 Clickjacking

 $(10 \min)$

In this question we'll investigate some of the click-jacking methods that have been used to target smartphone users.

(a) In many smartphone browsers, the address bar containing the page's URL can be hidden when the user scrolls. What types of problems can this cause?

(b) Smartphone users are used to notifications popping up over their browsers as texts and calls arrive. How can attackers use this to their advantage?

(c) QR codes haven't taken off and become ubiquitous like some thought they would. Can you think of any security reasons why this might be the case? (If you aren't familiar with QR codes, ask another group!)

Question 2 Phishing

(10 min)

Phishing tries to gain sensitive user information by tricking users into going to a fake version of a website they trust. The attacker might convince the user to go to what appears to be their bank and to enter their username and password.

(a) What are some ways that attackers try to fool users about the site they are going to? How do they convince people to click on links to sites?

(b) What are some defenses you should employ against phishing?

Question 3 Web tracking

(15 min)

Sites use information about us to better display information, but also to sell us services, or to sell access to our screen views to advertisers.

- (a) What kind of information do sites gain about you when you visit them?
- (b) What other information could a site learn about you? How could a business learn about many of the sites you visit and construct a detailed profile of you based on your web habits.

(c) What measures do you have to restrict this tracking?