CS5331 Web Security - Assignment 0

Due : Monday, 27 January 2014

1   Background

The objective of this assignment is to give you a hands-on experience of setting up a virtual machine. This is an INDIVIDUAL assignment and it will count 5% towards your final grade.

2   Requirements

2.1   Step I: Setup

In this assignment, we will give you a virtual machine (VM) disk image file. The virtual machine has the following software installed within for web hosting.

- Ubuntu 10.04 64-bit version

- Apache Web Server

- PHP module

- MySQL Database

- Web application package

First, you should download this VM image (See Section 3). After that, you should run it using a virtualization software. We suggest you to use VirtualBox. Go to this page to download the software.

Note: We will not provide laptops / desktops for you. You are expected to have your own laptop / desktop for the course, or some machine where you can run VMs for course assignments.

2.2   Step II: Go Find the Secret!

After setting up the guest virtual machine, you are supposed to find a secret string located on a secret PHP page. The secret PHP page is located on the guest VM somewhere under `/home/student/public_html` folder. The user interface

Figure 1: UI of secret page

of the secret page is shown in Figure 1. Once you locate the secret PHP page, enter your name and matriculation number. Then, click on the button to reveal the secret string.

2.3 Step III: Access from Host Machine

Do make sure that the web application hosted inside your guest VM is accessible simply by web browser running on your host machine. Please take a look at file `vm-access.pdf` on IVLE to configure your guest VM for host access.

2.4 STEP IV: Pick your teammate

This assignment is to be done individually. Find *one* teammate for subsequent assignments and send an email to the TAs (ta2014.cs5331@gmail.com) informing about your choice. The email subject should be '[CS5331] Team MAT1, MAT2', where MAT1 and MAT2 are the team members' matriculation numbers. Only one teammate needs to send this. Teammates are final and course-long, and can't be changed after Assignment 0. This step is worth *2 points*.

3 Resources

You will be assigned one web application for this assignment. All resources for this particular application are stored on the course server. You will also be given a user account to access your own resources.

You are required to download your VM disk image file, credential information, and configuration files from the course server. We have enabled FTP on

the course server so that you will be able to access these files. To access the resources via FTP, use this URL: ftp://group0@andromeda.d2.comp.nus.edu.sg. The username is `group0` and password for the account is `group0@CS5331`

The size of the resource that you are going to download is around 5-10 GB. Thus, you are advised to download them from within SOC network. If you still want to download from outside SOC network, you might want to check this to set up SOC-VPN and this to do SSH tunnelling.

Important! Off-campus (and even on-campus) download takes excessive time to complete. Do not wait until last minute to finish your assignment.

4   Deliverable and Submission

Once you obtain your secret string, take a screenshot of the string. Your screenshot MUST display both your guest VM and web browser accessing the secret PHP page on your host machine. Figure 2 shows a valid example of a screenshot, except that you don't have to conceal the URL address.

Deadline for uploading your screenshot to IVLE is Monday, 27 January 2014, 11:59pm. Use the following format for your file name : **[MAT-NR]_Assignment0**.[PDF or JPG or PNG]. For example, **A4878822_Assignment0.JPG** is a valid one.

Deadline for picking your teammate and emailing the names to TAs is IVLE is Monday, 27 January 2014, 11:59pm. See Section 2.4 for details.

5   Contact

- TAs : Enrico Budianto & Shweta Shinde (ta2014.cs5331@gmail.com)

6   FAQ

1. How to download the files from FTP?

   The simplest way to do it would be to use your web browser. Go to ftp://group0@andromeda.d2.comp.nus.edu.sg. After you reach the page, you will be asked for credential information. Use password information that you have got to log into the system. Once you log in, you will be redirected to a folder which contains all resources that you need. Finally, save all those files on your machine.

   You can also consider trying free FTP client software. FileZilla is one of popular tools for transferring file using FTP. You can download the tool here. Once you run this software, you need to specify the host name (ftp://andromeda.d2.comp.nus.edu.sg) and credential information as well.
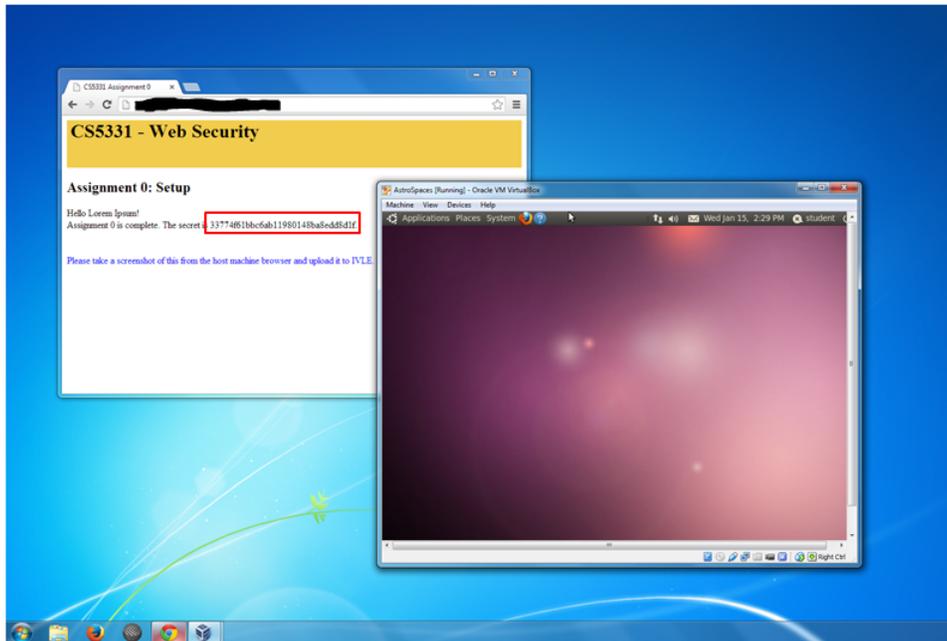
Figure 2: Sample Screenshot

FileZilla has GUI tool on which you can easily drag files from the server to your machine. It also has versions running on Windows, Linux, and MAC OS.

2. Is the server accessible from outside SOC network?

No, it is not.

3. How to download the files from outside SOC network?

First, you need to make a VPN connection to SOC network. VPN enables a computer to send and receive data that supposedly be accessible within private network. It extends the private network by giving you a private IP address even when you are not directly connected to the network. Read through this, this, and this on how to set up a VPN connection to SOC network.

Once you connected to SOC network using VPN, it should be easier by now. You could just refer back to first FAQ question on how to download the files from `andromeda`.

4. I cannot access my guest VM's web server from host machine, what should I do?

Go to IVLE and read `vm-access.pdf` on how to configure you guest VM for host access. If you are still unable to access VM's web server, you

might need to configure the IP address of your web application. Some applications provide an interface to change web application's base URL. Some others might not have such feature, so you might need to modify it directly on their PHP file.

5. Can I choose a team of more than 2 members?

No. You can choose only 1 teammate. The instructor will pair your team with another one for subsequent assignments. Note that this assignment is individual.