Cabrillo College

Final Project

You will create an educational step-by-step lab for VLab that demonstrates a complete hacking attack scenario. You may exploit one or more vulnerabilities using Metasploit, a bot, custom code, social engineering and/or other hacking tools. You will document the preventative measures an organization could take to prevent your attack and help one or more classmates test their project.

Warning and Permission

Unauthorized hacking can result in prison terms, large fines, lawsuits and being dropped from this course!

For this project, you have authorization to hack any of the VMs in your VLab pod. Contact the instructor if you need additional VMs.

Steps

1. Research and identify one or more interesting vulnerabilities and related exploits.
2. Using VLAB, create a secure test bed, identifying attacker and victim systems, to run the lab in.
3. Develop step-by-step instructions on how to set up the test bed.
4. Develop step-by-step instructions on how to carry out the attack.
5. Develop a list of preventative measures the victim could block future attacks.
6. Have another student test your lab and verify the results can be duplicated.
7. Do a presentation and demo to the class.

Publishing project documents and testing coordination

- Use this spreadsheet to request and signup for testing: link
- You may use this Google Docs folder to publish projects for testing: link

Testing another classmate's lab

1. Find a lab that hasn't been tested yet and sign up on the testing spreadsheet (see link above).
2. Run through their entire lab and verify that it works properly.
3. Provide the lab developer with a written test report on:
    - Your name and the date & time testing was done.
    - Validation that the lab worked or not.
    - Any typos.
    - Any portions of the lab that need clarification.
    - Any portions of the lab that need to be fixed.
    - Any other feedback on ways to improve the lab.

Submit your work

1) The lab you create should contain the following sections:
    a. Title, your name, date and course number.
    b. Overview - short introductory paragraph summarizing the lab.
    c. Admonition - a warning to the reader against unauthorized hacking.
    d. Requirements - everything needed to create a secure test bed and demonstrate the attack.
    e. The vulnerability(ies) - description and history including reference citations.
    f. The exploit(s) - description of the exploit and how it works including reference citations.
    g. Setup - step-by-step instructions with screen shots demonstrating how to set up the test bed, configure systems and networks including reference citations.
    h. Attack - step-by-step instructions with screen shots on how to carry out the attack including reference citations.
    i. Prevention - list of preventative measures for preventing the attack including reference citations.
    j. Appendix A - List of references for each citation.
    k. Appendix B - Test reports you received from classmates that tested your lab.
    l. Appendix C - Other classmate's labs you tested.

2) Email your lab to: **risimms@cabrillo.edu**

Remember **late work is not accepted.** If you run out of time submit what you have completed for partial credit.

Grading Rubric (60 points + 30 points extra credit)

Up to 5 points - Professional quality document containing all sections mentioned above.
Up to 3 points - Description and history of vulnerability.
Up to 3 points - Description of exploit and how it works.
Up to 3 points - Document all equipment, software and materials required.
Up to 10 points - Document step-by-step instructions to set up the test bed.
Up to 15 points - Document step-by-step instructions to carry out the attack.
Up to 3 points - List of best practices to prevent future attacks.
Up to 15 points - Testing another student's lab (see below).
Up to 3 points - Presentation and demo to class (10 minutes max).

Extra credit (up 30 points)
15 points each for testing additional student labs. You must use the testing spreadsheet above so that all projects get tested equally.

Document update history
11/29/2016 - updated Google Docs links so access requires Canvas authentication.