



SE-4930: Developing Secure Software

Lab 5: Elevation of Privilege Game

Due by 23:59 October 15, 2014

Introduction

The battle for software security starts with an effective analysis of the threats facing a system. We have two options: knowing the threats and trying to mitigate them, and ignoring the threats and living in ignorance. The first is the better path; the latter is the more common path until recently.

Step 0 – Watch the video

In lab today, you will be playing a game. This game deals with analyzing a system for its security weaknesses. The video introduces the Microsoft Threat modeling game, and explains how it is played.

Step 1 – Sketching Your System

The first step to perform Threat modeling is to identify the structure of your system. We will start by sketching a project. It can be any project that any of you have worked on in the past. You just need to come to consensus on what the project will be. Construct a data flow diagram which represents the pieces of your system and the communications between system components. This does not have to be formal. It can be done on a whiteboard or a sheet of paper. Try to be neat, but do not necessarily aim for perfection.

Step 2 – Play the Game

As a group, play the game. One person should be designated the scorekeeper who logs the elevations that are found. As the game progresses, each person should readily identify threats against a system.

When the game is finished, the team should coalesce their results and review what was found for the system.

Deliverables

Each team shall submit a report in pdf format with the following information

1. *Title Page* - Name of all team members, course, and date details.
2. *Project Summary* - Summarize to the best of your ability in a paragraph or two the purpose for the given software application, what it does, and why someone would use the software.



3. *System Sketch* – Include a copy / scan / etc of the system sketch used for the game in electronic format.
4. *Scorecard* – Include a copy / scan / etc of the scorecard from the game.
5. *Things gone right / Things gone wrong* - Discuss the things which went well with this lab, as well as the problems you had, either with the tools, the process, etc.
6. *Conclusions* - What have you learned from this experience