Windows Exploit Development

Books

• Modern Windows Exploit Development

16-week Study plan

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Contents

 WinDbg

2.
   Mona 2
Structure Exception Handling (SEH)
4.
    Heap
Windows Basics
6.
   Shellcode
Exploitme1 (ret eip overwrite)
Exploitme2 (Stack cookies & SEH)
Exploitme3 (DEP)
Exploitme4 (ASLR)
11. Exploitme5 (Heap Spraying & UAF)
12. EMET 5.2
13. Internet Explorer 10
    13.1. Reverse Engineering IE
    13.2.
            From one-byte-write to full process space read/write
    13.3.
            God Mode (1)
    13.4. God Mode (2)
    13.5.
            Use-After-Free bug
14. Internet Explorer 11
    14.1.
            Part 1
    14.2.
            Part 2
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Basically, rush through the first 6 chapters in 6 weeks. Then the next 10 weeks are doing the rest of the chapters. I will produce each type of exploit: stack, heap, and ones bypassing DEP&ASLR with detailed procedures to all of them. I can give an oral presentation on how you might go about doing these things at the end of the year. I will work on this course 2 hours per day during the week and have bi-weekly status reports with you. I'll explain: what i've learned, accomplished, and what I could be doing better.

Outcomes

- Proficient debugging skills in WinDBG and mona
- The ability to find and exploit following vulnerabilities: stack overflow, heap overflow, string, integer, and file vulnerabilities while bypassing DEP, ASLR, and SEH
- Use Sonarlint and sonarqube to see if these catch all vulnerabilities
- Strong oral/verbal communication skills in doing the above processes