Welcome to CS 577-A Reverse Engineering & Application Analysis

Department of Computer Science, School of Engineering

Fall 2021 – Section A

Academic Calendar: https://www.stevens.edu/sites/stevens_edu/files/2021-2022_Academic_Calendar_07092021.pdf (Links to an external site.)

Lecture Time: Wed 06:30-09:00 PM

Lecture Location: Pierce 218

Instructor: Jun Xu

Contact Info: 246 Gateway South, jxu69@stevens.edu, 201-216-5484

Office Hours: Wed 4:00-6:00 pm and by appointment

Prerequisite(s): (CS 392 and CS 306) or CS 631

Syllabus

Please refer to the syllabus page

Course Materials

Textbook

- Reverse Engineering for Beginners (available at https://beginners.re (Links to an external site.) for free)

Suggested Readings (if you want to learn deeper and broader):

- https://github.com/wtsxDev/reverse-engineering#books (Links to an external site.)

Course Platform:

- REMnux (default option):

  https://docs.remnux.org (Links to an external site.)
  - Please run it as a Virtual Machine (you can run it with VirtualBox, the free VM hypervisor)
  - Please build the VM from scratch with a minimal Ubuntu (https://docs.remnux.org/install-distro/install-from-scratch (Links to an external site.)). Otherwise, the VM will be extremely slow
    - If you cannot find the minimal iso for ubuntu, download it here: https://drive.google.com/file/d/1_Psl_24_lQc1x47Ds1P7lV_nKxWY26z8/view?usp=sharing (Links to an external site.)

Tools:

- Disassembler and Decompiler:

  https://www.nsa.gov/resources/everyone/ghidra (Links to an external site.)
  - Please run it inside the VM
- BinWalk: https://github.com/ReFirmLabs/binwalk (Links to an external site.)
- vmlinux-to-elf: https://github.com/marin-m/vmlinux-to-elf (Links to an external site.)

CTF References:

https://docs.google.com/document/d/1AFwcP4kWBM8yNyZO1JA8AafREu3WGJDxilRIeA0Z_go/edit?usp=sharing

Teaching/Course Assistants

NA