AGH University of Science and Technology

Faculty of Computer Science, Electronics and Telecommunications

Design Laboratory

Cybersecurity, Reliability and Risk

Topic: Instruction for the decoder of the covert channel using TTL variance.

Date : 27.01.2021

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1. Requirements

At first, all requirements must be fulfilled:

1. Installed Python 3.8 IDE (preferably PyCharm 2020).
2. Npcap 1.10
3. ScaPy 2.4.4 installed
4. Have the packet capture file(.pcap) created by the encoder.
5. Having source code or project of the decoder.

2. In the IDE

In case of opening a ready PyCharm project step 1 should not be necessary, you can check if that is true, by looking up errors shown by the IDE, if any scapy related errors occur, that means scapy is not attached correctly.

1. In case of source code make sure to attach Scapy to the project, in PyCharm it is done by:
    1. Go to **File** -> **Settings**(Ctl+Alt+S)
    2. On the left side unfold **Project:**
    3. Press on **Python Interpreter**
    4. Press on a cross saying **Install**(Alt+Instert)
    5. A new window will pop up, insert **scapy** into the search field and click **Install Package**
2. Now there should be no error in the file. Please in line 6 insert the location of the pcap file with its name as in the example:
    ```
    pcap = rdpcap("C:/Users/tomas/Downloads/pcap (15).pcap")
    ```
3. Run the program. You can use from the top bar **Run->Run ‘main’**(Shift+F10)
4. On the bottom, a subwindow will appear with the output of the program. It should indicate the end of the transmission along with the message. You can scroll up to see the live progress of decoding that happened.