Keyloggers

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Project Description

- What is a keylogger?
  - usually a monitoring type of software to record keystrokes made by a user.
  - Can be used for accessing private information/ confidential corporate data

Why the team was interested?

- Pros and Cons

Pros	• A legitimate use would be to log keystrokes for auditing purposes, eg: logging what people do in a sensitive environment. • Highlights weaknesses in IT security
Cons	• private information can be exposed if used in the wrong hands • can cause an organisation to breach major pieces of legislation

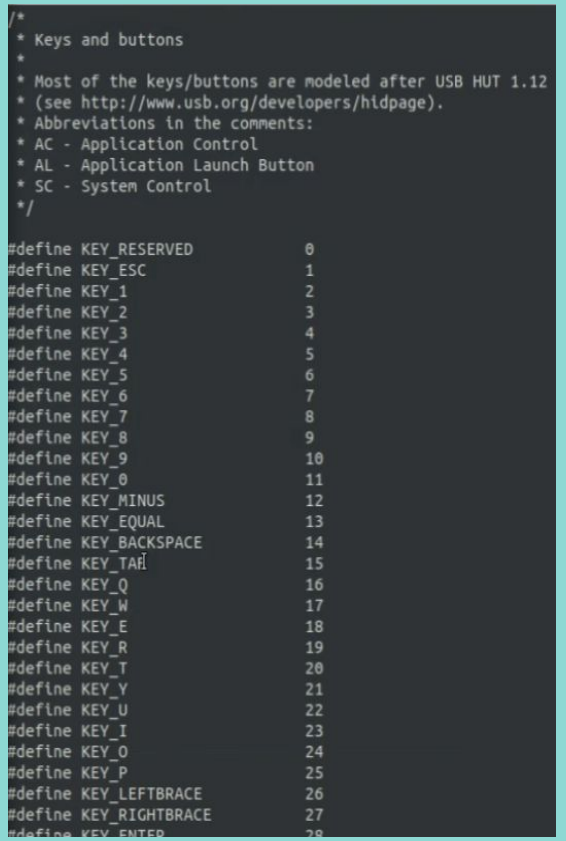
- Getting a taste of what hackers do on a small level
- Learning how a keylogger lives and works in your os
- What to look for and how to possibly identify a keylogger.

Building Kernel 1

- What research was done?
  - Online sources
    - Make a Linux Based Keylogger. Understand how keylogger works. How the… | by Nayan Das | Medium
    - https://www.bcs.org/content-hub/keyloggers-pros-and-cons/

Building Kernel 2

- What problems you experienced?
  - Conflicting Schedules
  - How keyboard events are handled
  - Figuring out which key code maps to what character.

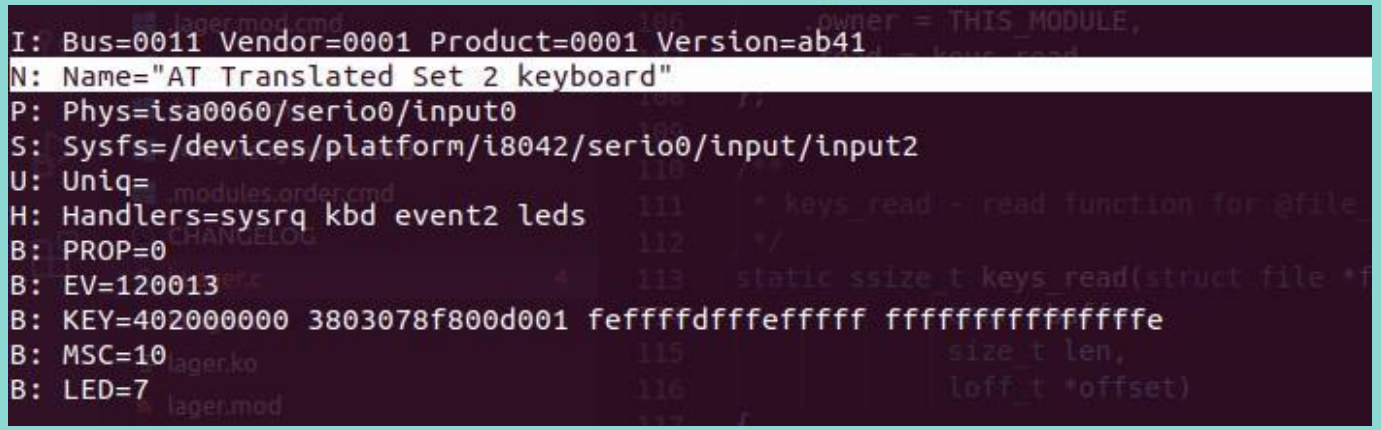


```
/*
 * Keys and buttons
 *
 * Most of the keys/buttons are modeled after USB HUT 1.12
 * (see http://www.usb.org/developers/hidpage).
 * Abbreviations in the comments:
 * AC - Application Control
 * AL - Application Launch Button
 * SC - System Control
 */

#define KEY_RESERVED            0
#define KEY_ESC                 1
#define KEY_1                   2
#define KEY_2                   3
#define KEY_3                   4
#define KEY_4                   5
#define KEY_5                   6
#define KEY_6                   7
#define KEY_7                   8
#define KEY_8                   9
#define KEY_9                   10
#define KEY_0                   11
#define KEY_MINUS               12
#define KEY_EQUAL               13
#define KEY_BACKSPACE           14
#define KEY_TAB                 15
#define KEY_Q                   16
#define KEY_W                   17
#define KEY_E                   18
#define KEY_R                   19
#define KEY_T                   20
#define KEY_Y                   21
#define KEY_U                   22
#define KEY_I                   23
#define KEY_O                   24
#define KEY_P                   25
#define KEY_LEFTBRACE           26
#define KEY_RIGHTBRACE          27
#define KEY_ENTER               28
```

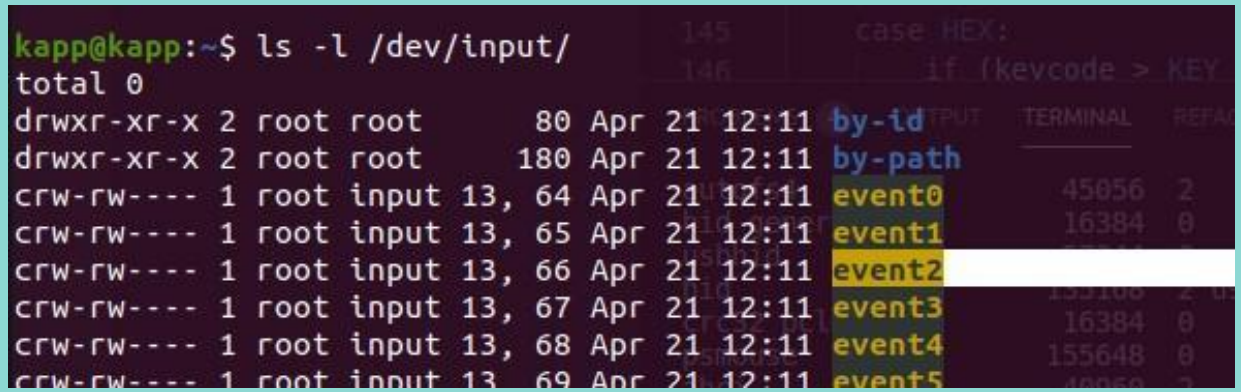
Building Kernel 3

- How were these problems mitigated?
  - Coordinated better
  - cat /proc/bus/input/devices



Building Kernel 3 cont.

- How problems were mitigated
  - ls -l /dev/input



- /usr/include/linux/
  - nano input-event-codes.h (for keys and buttons mapping)
- Adding </”linux”/..> to the file path

Demonstration

What we learned

- Chmod permission codes
- Input devices
- User events
    - Keyboards

Thank you and questions