

# SecurityTube Linux Assembly Expert (SLAE<sup>64</sup>)



## SecurityTube Linux Assembly Expert

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# Module 2: Introduction to Shellcoding

## 1. Shellcoding Basics

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# What is Shellcode?

- Machine code with a specific purpose
  - spawn a local shell
  - Bind to port and spawn shell
  - create a new account
- Can be executed by the CPU directly – no further assembling / linking or separate compiling required

# How is Shellcode delivered?

- Part of an exploit
  - Size of shellcode important (smaller size = better)
  - Bad characters a concern
    - 0x00 most common one
- Added into an executable
  - run as separate thread
  - replace executable functionality
  - Size of shellcode not a concern

# Shellcode Resources

- <http://www.shell-storm.org/>
- <http://exploit-db.com>
- <http://www.projectshellcode.com/>

# Testing Shellcode

```
#include<stdio.h>
#include<string.h>

unsigned char code[] = \
"HELLCODE ";

main()
{

    printf("Shellcode Length: %d\n", strlen(code));

    int (*ret)() = (int(*)())code;

    ret();

}
```

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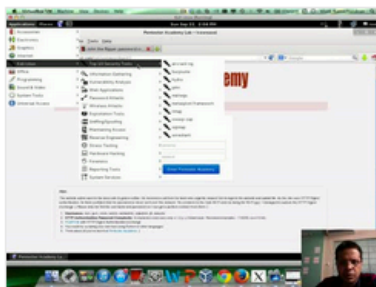
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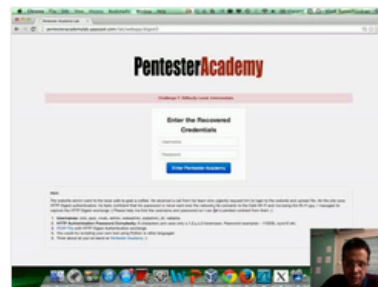
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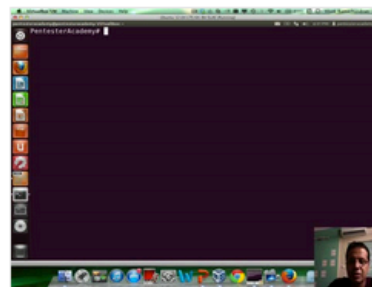
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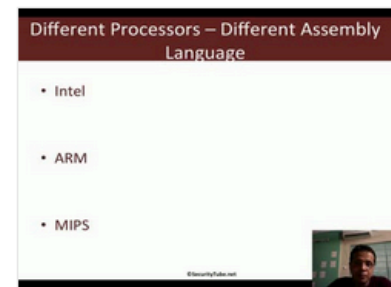
Challenge 7: Cracking Digest Authentication Solution in WAP Challenges



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Module 1: GDB Test Solution in x86\_64 Assembly Language and Shellcoding on Linux



Module 1: CPU Information in x86\_64 Assembly Language and Shellcoding on Linux