

## Playing with SIP, NMAP and NSE, now writing a SIP library...

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Since my last post, I finally decided to start writing a SIP library for nmap. This lib will be minimalist and be largely based on the http.lua library taken from Nmap 5.0

It will be used by two NSE scripts:

- sip-extscan.nse: a script which try to list (find) valid SIP extensions on a SIP register
  - sip-brute.nse: a script that try to bruteforce SIP extensions password on a register
- Here are the first result:

The target used for the test is a Tribox based host (Asterisk PBX 1.6.0.26-FONCORE-r78)

With actually four extensions:

Actualy, sip-brute is not a weak password scanner against the password and use the unpwdb library

```
sudo nmap -sU -p U:5060 -T5 --script
sip-map2,sip-extscan3,sip-brute2 --script-args
exten_range="5000-5010" 172.17.0.53
```

```
Starting Nmap 5.00 ( http://nmap.org ) at 2010-08-23 23:20 CEST
```

```
Interesting ports on 172.17.0.53:
```

```
PORT STATE SERVICE
```

```
5060/udp open sip
```

```
|_ sip-map2: SIP 2.0 device detected
```

```
| sip-extscan3:
```

```
| Unprotected Extensions
```

```
| 5003
```

```
| Protected Extensions
```

```
| 5000
```

```
| 5001
```

```
|_ 5002
```

```
| sip-brute2:
```

```
| exten: 5001 Password: 1234
```

```
|_ exten: 5002 Password: 1234
```

Nmap done: 1 IP address (1 host up) scanned in 107.24 seconds  
It seems that the work is in the good way, however, a lot of testing must still be done.

## Playing with SIP, NMAP and NSE

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In the last [Honeynet Project's Forensic Challenge \(FC4\)](#), one question (Section 1, question 2) caught my attention.

It was about the possibility that the given log file could have been generated using a simple Nmap UDP scan.

In the challenge, the answer was : No.

Because a simple Nmap's UDP scan uses UDP packets without any payload and thus could not generate valid SIP requests.

But, Nmap offers a powerful scripting engine: [Nmap Scripting Engine](#) or NSE.

With NSE it is possible to interact with the targetted host using simple to complex communication exchanges.

After having read the NSE part of the [Nmap book](#), I decided to give a try at NSE.

My first NSE script (modestly) behaves like the [SIPvicious](#) tool: svmap.py.

This script, named sip-map.nse tries to find valid SIP server by sending a SIP OPTIONS request using the UDP protocol.

### Usage:

```
# Without version (User-Agent) information
sudo nmap -sU -p U:5060 -script sip-map.nse
# With version information
sudo nmap -sU -p U:5060 -sV -script sip-map.nse
```

### Output:

```
Interesting ports on X.X.X.X:
PORT STATE SERVICE VERSION
```

```
5060/udp open sip Asterisk PBX 1.6.0.26-FONCORE-r78
|_ sip-map: SIP 2.0 compliant device detected
```

sip-map.nse is the first script from a series of scripts I wish to write. These scripts will be about SIP scanning with a behaviour close to the SIPvicious tools but using Nmap.

You can download it here: [sip-map.nse](#)

Feel free to leave a comment !

## Honeynet Project's FC4 "VoIP": my submission

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The Honeynet Project's team has published the results for [the 4th Forensic Challenge 2010 VoIP](#).

### My official results:

Thank you for participating in the 4th Honeynet Project Forensic Challenge 2010: VoIP.

Sjur, Ben, Jianwei, Roland, and Julia finished evaluating your submission. You have received a total of 62 of 63 points.

Below you will find your score per answer:

- Answer 1: 25 (40 points) / 40 points

A sample solution as well as the submissions of the winners has been posted to the challenge web page at [http://honeynet.org/challenges/2010\\_4\\_voip](http://honeynet.org/challenges/2010_4_voip). Sjur, Ben, Jianwei, Roland, and Julia will be summarizing highlights from various submissions in a blog post shortly.

We are still finalizing our next challenge. Please subscribe to our RSS feed or check our web sites for announcements.

For this 4th challenge, we received a total of 21 submissions. With your score of 62, you came into position 1. Congratulations!!!!

You could find [my submission for FC4](#) on the Honeynet Project's site. For this one, I've used a great visualization tool named [PicViz](#) written by Sébastien Tricaud from the French Chapter.

You should read his paper about his tool: [Know Your Tools: use Picviz to find attacks](#)

Feel free to leave a comment !