**1. Previous Setting:**

Before setting the environment you have to set this environment on ubuntu 16.04.

**2. Download VM on ubuntu(follow the exact direction of below website):**

<https://websiteforstudents.com/install-virtualbox-latest-on-ubuntu-16-04-lts-17-04-17-10/>

**3.** **Enable “Virtualization” with Bios(vary by PC)**

**4. Download image file of ubuntu 16.04 on Desktop from site below:**

<http://releases.ubuntu.com/16.04/>

**5. Install ubuntu on VM with image file(follow the exact direction of below website):**

<https://medium.com/@tushar0618/install-ubuntu-16-04-lts-on-virtual-box-desktop-version-30dc6f1958d0>

(Create Two VM, one naming as “Victim” one naming as “Attacker”)

**6. Make Sharing folder between the host and the two VM(follow the exact direction of below website):(for both VM)**

[**https://www.youtube.com/watch?v=h8cA3pIAeZQ**](https://www.youtube.com/watch?v=h8cA3pIAeZQ)

**7. (Optional) Enable sharing clipboard for both VM and host(for both VM)**

1. Run the VM
2. click “Devices” option on the top of the VM screen
3. click “Sharing Clipboard” and click “Bidirectional”
4. and reboot the VM

**8. Set the OVS environment for both VMfollow the exact direction of below website)**

[**https://docs.google.com/document/d/1PRGsvbfbgun1da5--d9WG9KMb22f64ORb1hjNZE2mA4/edit?usp=sharing**](https://docs.google.com/document/d/1PRGsvbfbgun1da5--d9WG9KMb22f64ORb1hjNZE2mA4/edit?usp=sharing)

(here VM1 is victim, and VM2 is attacker)

**9. Download Git on host**

1. sudo apt-get install git
2. git config --global user.name "user\_name"
3. git config --global user.email "email\_id"

**10. Pull the repository of CONFUNDO(Must get git invitation from Muoi)**

git clone <https://github.com/muoitranduc/confundo>

**11. Setting victim as bitcoin node**

1. Copy the /confundo/bitcoin-core file to Sharing folder with VM
2. paste the bitcoin-core file into victim VM
3. build the bitcoin node by the bitcoin-core folder(while building you need to change the VM’s network configuration to NAT from bridge tap1 to download library needed to build bitcoin node) follow the direction of /bitcoin-core/doc/build-unix.md

**12. RUNNING POX(controller) INSTRUCTION**

1. Download the Pox folder from the git
2. Go into the pox-eel folder and type this command:  
   Command:   
   ./pox.py --verbose forwarding.confundo

**13. (FINAL STEP)Filling the Newtable:**

1. NEED TO OPEN TAP1 AND TAP2 BEFORE  
   1. sudo ip link set tap1 up  
   2. sudo ip link set tap2 up
2. Download two folders: *config* and *decoy-as* from raichu (/home/muoi/partitioning-bitcoin/) then paste them on the *attacker\_scripts* folder
3. Modify *config.py* file. Important variables:
   1. Victim\_mac: check the MAC address in Victim VM: ifconfig
   2. Attacker\_mac: check the MAC address in Attacker VM: ifconfig
4. On Host, execute command: *python3 run.py* to prepare IPs and add OVS rules (remember to enter the password if asked because OVS rules must be added under sudo privilege). (**Verify:** a new sub-directory is created inside the folder *attack\_resource* and OVS rules are successfully created).
5. On Victim VM, start bitcoin: bitcoind -daemon -debug=confundo (remember to clear *.bitcoin* folder first)
6. On Attacker VM, execute command: *python fill\_new\_table.py 10.0.0.1*
7. Check the result located in: .*bitcoin/debug.log*

**14. (FINAL STEP)Moving IP from New to Tried (after filling the Newtable):**

1. NEED TO OPEN TAP1 AND TAP2 BEFORE  
   1. sudo ip link set tap1 up  
   2. sudo ip link set tap2 up
2. Open Victim VM
3. Go into the pox-eel folder in host and type this command:

Command:

./pox.py --verbose forwarding.confundo

4. Make victim to reach to other nodes: (run this code on VM)  
 sudo route add default gw 10.0.0.2 enp0s3

5. start the bitcoin code on Victim VM