OSINT PLATFORM CONFIGURATION

Extract from book “Open Source Intelligence Techniques written by Michael Bazzell

Before starting the OSINT activity, it is essential to create a safe working environment. So, the first step is to install a virtual machine that is a virtualized computing environment functioning as a traditional physical computer with its own CPU, memory, storage, and network interface.
We suggest installing VirtualBox because it is free and compatible with all operating systems, except for the new Apple M1.
We then proceed to install VirtualBox

Install Virtualbox

1. Navigate to virtualbox.org/wiki/Downloads
2. Click the first appropriate link for your OS, such as “Windows Hosts” or “OS X Host”
3. If required, selected the highest version NOT including “Beta”
4. Download the appropriate “dmg” file for Mac or “exe” file for Windows
5. Download the Extension Pack for your version
6. Install the exe or dmg file with all default settings
7. Double click Extension Pack and add it to VirtualBox

Install Ubuntu

Ubuntu is one of the most popular Linux distributions and it is the product of a corporation called Canonical.
To date the current stable release of Ubuntu is 20.04 LTS. LTS refers to Long-Term Support and this version will receive updates and patches until April 2025 and we suggest to use this version.

First, we need to download an ISO file containing the installation files for UBUNTU that can be reached at https://ubuntu.com/download/desktop . Clicking the “Download” button should prompt you to download the ISO

file required to install UBUNTU. The 64-bit version should apply to most readers and their computers. If you know you need a 32-bit version for an older computer, you will find in the “Alternative Downloads” section of the site. Choose a folder to save the file (approximate of 2.GB). Next, open VirtualBox and click on the button labeled “New”. The next step allows you to create a VM adapted to your needs.

1. Provide a name to your VM, for example OSINT
2. Choose your desired folder to save the machine on your host
3. Select Linux as type, “Ubuntu (64-bit) as version, and click “Continue” (or “Next”)
4. In the memory size window, move the slider to select 50% of your system memory
5. Click “Continue” and then “Create”
6. Leave the hard disk type as VDI (that is the image of a VirtualBox virtual hard disk) and click “Continue” (or “Next”)
7. Select the default option of “Dinamically allocated” and click “Continue” (or “next”)
8. Choose the desired size of your virtual hard drive. If you have a large internal drive, 40 GB should be sufficient. If you are limited, you may need to decrease that number
9. Click create.

Now we must tell VM to boot from the ISO file which we downloaded previously. Select your new machine in the menu to left and complete the following steps.

1. Click the Setting icon
2. Click the Storage icon
3. Click the CD icon which displays “Empty” in the left menu
4. Click the small blue circle to the far right in the “Optical Drive” option
5. Select “Choose a disk file”
6. Select the Ubuntu ISO previously downloaded then click “Open”
7. Click “OK” and then Start in the main menu
8. If prompted, confirm your choice by clicking “Start”

Now our VM is running. If the window is too small, click “View”, “Virtual Screen”, then “Scale to 200%” within the VirtualBox menu.
We can now finish the installation of UBUNTU with the following steps within VirtualBox.

1. Select “Install Ubuntu”, select your desired language and location, then click “Continue”
2. Select “Normal Installation”, “Download Updates, and “Install third party”
3. Click “Continue”
4. Select “Erase disk and Install Ubuntu”, then “Install Now”. Confirm with “Continue”
5. Choose your desired time zone and click “Continue”
6. Enter a name, username, computer name, and password
7. Choose “Log in to automatically” and click “Continue”
8. Allow Ubuntu to complete the installation and choose “Restart Now”, then press Enter

Your device should now boot directly to the Ubuntu Desktop.
The following will finish the default configuration

1. Click “Skip” then “Next”
2. Select “No” and then “Next” when asked to help improve Ubuntu
3. Click “Next” then “Done” to remove the welcome screen
4. If prompted to install updates, click “Remind me later”

You now have a functioning virtual machine which contains the basic programs we need to use internet. By default, it is using your host computer’s internet connection, and taking advantage of your host’s VPN if you have it connected. Technically, we could start using this machine right away, but we need to take some additional steps to configure the device for optimum usage. The first step should be to install VirtualBox’s Guest Additions software. This will allow us to take advantage of better screen resolution and other conveniences. Conduct the following steps

1. In the VirtualBox Menu, select “Devices” then “Insert Guest Additions CD Image”
2. Click “Run” when the dialogue box pops up
3. Provide your password when prompted
4. Allow the process to complete, press Return, and restart the VM (upper-right menu)

You should now have VirtualBox Guest Additions installed. You can test this by resizing the screen. If you changed the scaling of the window previously, change it back to 100%. If all appears to be functioning, you can right-click the CD icon in the left Dock and choose “Eject”. If not, double-click the CD icon and choose “Run Software” in the upper right corner to repeat the process. Next, we should make some modifications within the VirtualBox program in order to experience better functionality. Shut down the Ubuntu VM by cliking on the down arrow in the upper right and choosing the power button, followed by “Shut down”. In Virtualbox, select your Ubuntu VM and click the “Setting” icon. Next, conduct the followings steps.

1. In the “General” icon, click on the “Advanced” tab
2. Change “Shared clipboard” and “Drag n’ Drop” to “Bidirectional”
3. In the “Display” icon, change the Video Memory to the maximum
4. In the “Shared Folders” icon, click the green “+”
5. Click the dropdown menu under “Folder Path” and select “Other”
6. Choose a desired folder on your host to share data back and forth
7. Select the “Auto-mount” option and then “Ok”
8. Click “OK” to close the settings window
9. Restart your Ubuntu VM
10. Click the nine dots in lower-left to open the “Applications” menu. Search “Terminal” and open the application. In it, type *sudo adduser osint vboxsf*
11. **If you didn’t call your VM osint replace it with the name you gave**
12. When prompted, provide your password, which is not revelead in the window as you type, and press enter.

You should now have a mote robust diplay, copy and paste capabilities, and a new shared folder connecting your VM to your host on the Desktop. You

can copy files from your VM directly to your host and vice versa. This has improved a lot of function, and now it is time to personalize the privacy and security settings within Ubuntu. First, we type two commands that disable Ubuntu's crash reporting and usage statistics:
sudo apt purge -y apport
sudo apt remove -y popularity-contest

Finally, the remaining steps within Ubuntu's operating system harden our overall privacy and security

1. Launch "Settings from the Applications Menu
2. Click "Notifications" and disable both options
3. Click the "Privacy" option, then click "Screen Lock" and disable all options
4. Click "File History & Trash", then disable any options
5. Click "Diagnostic" then change to "Never"
6. Click the back arrow and click "Power" changing "Blank Screen" to "Never"
7. Click "Automatic Suspend" and disable the feature
8. Close all Settings windows

Now it is important to keep the software updated. There are different ways to do this, but the easiest is to conduct the following steps.

1. Launch the Applications menu (nine dots in lower-left)
2. Type terminal into the search field
3. Right-click on the application and select "Add to Favorites"
4. Type Software into the search field and right-click on "Software Updater"
5. Select "Add to Favorites"
6. Press escape until all windows are gone
7. Launch the Software Updater icon from the Dock; click "Install now"; and update all options

We now have our VM ready e we can use the feature of snapshots that allow us to freeze this initial configuration so if our virtual machine

eventually becomes contaminated, or we accidentally remove or break a feature, we can simply revert to the previously created snapshot and eliminate the need to ever reinstall.

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