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CheckoutCrypto Canada

Introduction to Linux

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Introduction

A quick, efficient, easy to use, environment, is essential for your development on any coding related project. This ensures you accomplish the most, in the shortest amount of time, leaving you more time for actual creation!

The preferred choice by most developers, Linux is primarily used because of the open: philosophies, licensing, tools, everything required for an operating system, fully customizable for each individual project i.e. you aren't stuck with the same looking desktop, your desktop can be customized and developed on easily! The fact it comes ready, in just a few short commands (which I will get into in a moment), with all the necessary tools one would need to develop an enormous variety of software, is the primary reason for this tutorial.

A brief lesson on Linux history would be beneficial to hear.
https://www.youtube.com/watch?v=5ocq6_3-nEw

Preparation

1) Time, you will need to ensure you have a few hours to spare, you could potentially lose any previous data on your harddrives if you aren't careful.

2) A blank DVD and Burner + HardDrive space OR an external drive. In other words, you will need to install on your main hard drive OR utilize an additional hard drive to boot to linux.

3) The preferred linux distribution for CheckoutCrypto is Ubuntu 14.04 64 bit. If you're more familiar with another flavor of Linux you're open to utilizing it, we will only provide support for debian based distributions internally and publicly. You can download the latest version of ubuntu for your processor at ubuntu.com

4) their is a possibility your hardware may be incompatible with ubuntu, for one, make sure you have the compatible video driver (not covered) and last make sure your wireless card is compatible(most if not all usually are, this was a problem in the past). Bluetooth may require some fiddling depending on the make, model, brand. Google is your friend. A phone or another computer is handy if you run into issues.

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Ubuntu 14.04 Installation

Option 1:

1.Download Ubuntu Image and burn image to disc.
2.Start up computer, boot to disc.
3.Run the installer setup (it will take a bit to start, needs to load liveCD into RAM)
4. Skip To Step 5 from Option 2 below.

Option 2:

1. Format external drive (backup contents elsewhere if need be)
2. Download image and extract it to the external drive. It will need to format and create 2 partitions (ext4 and swap).
3.Restart the computer, boot to external hard drive.
4.Run the installer setup (it will take a bit to start, needs to load liveCD into RAM)

5. If you want to install along side windows, make sure you set that option when it asks you.
6. If you want to install on a blank drive, click that option when asked.
7. When asked how much for swap, set it to double the size of the computer's RAM. So if you have 4 G of RAM set the swap size to 8 G
8. Make sure you allow proprietary codecs, and updates like mp3 etc.
9. When ready hit install, set your timezone and user account settings, as it installs and updates.

don't forget your root password, don't make it to easy or to long, you will use it constantly!

Success! You have entered the world of Linux.

Restart, make sure you can login. Explore your new desktop. Download additional software from the Ubuntu Software Centre.

Ubuntu also offers the ability to signin with different environments such as CairoDock. You may wish to click the ubuntu logo next to your login name, when you first boot it up (before you enter password), if you want to change your desktop environment. CairoDock is what I prefer, but you may prefer the default Ubuntu Unity, to each their own.

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Basic Linux Commands

If you don't need admin, the syntax is:
youruser@yourmachine:~$ anycommand -anyargument

Any command that requires admin permissions must start with sudo.
The syntax is: youruser@yourmachine:~$ sudo anycommand -anyargument

~	- means relative to the current user's home directory
sudo	- super user(root) do something
su	- super user
cd	- change directory
chmod	- set a file or directories user/group permissions (read, write, execute)
chown	- set a file or directory user/group owner
mkdir	- create a directory
rm	- delete file
rmdir	- remove directory
touch	- create blank file
tail	- read the end of a file (-n 200 will give you last 200 lines)
ls	- list files (-li gives permission info)
cp	- copy files (cp onefile ./somedirectory/onefile)
scp	- copy files across network to a specific user (scp onefile
ps	- list processes (-aux list verbose user, permissions, path)
--help	- add this argument to any(most) commands and receive a list of assisting information, examples and arguments.

Paths

skynet@somewhere:/home/skynet/somedirectory/onefile)
Absolute Paths
skynet@skynet:~$ cd /home/skynet/Pictures ----------|
|
Relative Paths | Same Path
skynet@skynet:~$ cd ./Pictures --------- |
skynet@skynet:~$ cd ~/Pictures --------- |

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Google search “Linux Cheat Sheets” for more detailed linux shell syntax, many programmers have this memorized. Don't be intimidated, eventually, with practise, so will you.

LAMP(Linux,Apache,Mysql,PHP) Server Installation

Open a Terminal (ctrl+ alt + t)
sudo apt-get install tasksel
sudo tasksel install lamp-server

enter your current root password
set a root password for your MySQL database

You can visit your apache folder at /etc/apache2/sites-enabled to add additional sites.
To add files to your site's root, create a folder for your site in /var/www/
To view the running apache sites, open a browser and visit http://127.0.0.1/yoursite

Phpmyadmin setup and usage

sudo apt-get install phpmyadmin
enter your current root MySQL database password (set in LAMP step)
connect to phpmyadmin by opening a browser and going to http://127.0.0.1/phpmyadmin
login with user: root password: (the mysql pass you entered in LAMP setup).

Additional Software – Optional

note: Most of these can be installed via terminal: sudo apt-get install SomeApplication
The rest can be found in the ubuntu software centre.

Eye Candy/Efficiency

Synapse(set to a start on boot, set activate hotkey to something you will use constantly), CairoDock, Compiz Config Settings Manager(careful, test everything you modify)

Video Drivers

Nvidia/ATI proprietary drivers - check the additional drivers section of your ubuntu software centre, if not nvidia.com or ati.com

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Development IDEs (interface development environment)

Eclipse (develop for everything, install additional plugins, eclipse.org)
VIM, gedit, nano

2D/3D Image Edit/Create/Animate

Gimp, Blender, Inkscape
gimp-gap (animation plugin)
gimp paint studio (https://code.google.com/p/gps-gimp-paint-studio/)
Browser (firefox is already included), chrome recommended