Introduction to Free and Open Source Software

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Agenda

- Philosophy and terms relating to Free and Open Source Software (F/OSS)
- GPL
- What is Linux?
- Pros and Cons of F/OSS

It's Free as in Speech!

One of the most common misconceptions about free software stems from a dual meaning of the word "free". There is free, as in "protected rights", like freedom of speech, and then there is free, as in "at no cost", for example if you went over to a friend's house and they gave you a beer.

Free Speech

F/OSS is described by the freedom of speech analogy. You are free to use the code as you wish, you are free to modify the code as you wish, etc.

By nature, most F/ OSS is distributed for no cost, but this is not always the case. You are also free to charge as much as you want for distributing F/OSS.

Definition of Open Source

"Generically, open source refers to a program in which the source code is available to the general public for use and/or modification from its original design free of charge, i.e., open...."

-http://www.pcwebopaedia.com/TERM/O/open_source.html

More Specifically

Open Source is a certification standard issued by the Open Source Initiative (OSI). In order for a software license to meet this standard, it must meet a set of criteria...

OSI Criteria for Open Source

- Free Redistribution
- The distributed program must make the source code accessible to the user
- The author must allow modifications and derivations of the work under the program's original license
- No person, group or field of endeavor can be denied access to the program
- The rights attached to the program must not depend on the program's being part of a particular software distribution
- The licensed software cannot place restrictions on other software that is distributed with it.

GNU General Public License

The GNU GPL is a specific Open Source License promoted by the Free Software Foundation.

A main difference compared to other Open Source Licenses is that the GNU GPL requires that all the released improved versions be free software.

How do these licenses work?

Copyleft: Most people incorrectly assume that Copyleft is somehow the opposite of Copyright

The Free Software Foundation (FSF) defines Copyleft as "a copyright notice that permits unrestricted redistribution and modification, provided that all copies and derivatives retain the same permissions"

Copyleft vs. Copyright

The fundamental difference between copyright and copyleft lies in the fact that developers of proprietary software use copyright to **restrict** your rights with respect to the software, while developers of open software use copyleft to **guarantee** your rights

What is Linux?

- Linux is an open source operating system, and to date the most dramatically successful open source platform.
- Linux is usually used to refer to a free Unix-like operating system and has been developed [mostly] under the GNU General Public License.
- This is not entirely accurate, because Linux is more accurately the kernel of the Operating System.
- Many people think a more appropriate name of operating system should be called **GNU/Linux**.

Common Questions about Linux

- Is Linux difficult?
- Is Linux (and Open Source Software) trustworthy?
- Who Uses Linux (is it just a bunch of hippie-loving computer geeks)?
- Where do I get support?
- What applications are available for Linux?
- Is Linux hard to install?

Pros and Cons

- First the Cons:
  - The number of distributions can be intimidating
  - Beginners, esp. those who are familiar with another O/S, may finding Linux to not be as user friendly
  - Beginners may find Linux confusing
  - The application you want to run may not be available (i.e. many computer games)

Pros and Cons

- The Pros:
  - Stability and Reliability
  - Security
  - Linux is Very Versatile
  - It is Easy to Evaluate Open Source Software
  - Free as in Speech
  - Open Source Software can be modified to suit your needs
  - Price: Free as in Beer

Thank You!

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