



A Guide to Open-Source Software

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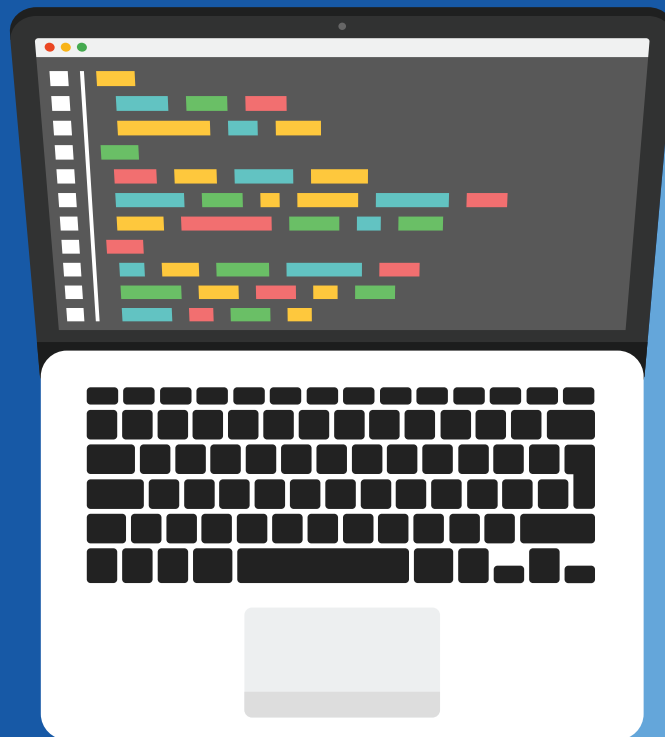


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Demystifying Open-Source Software for Business Use

What is Open-Source Software?

What makes it different?

Is Open-Source Software (OSS) free to use in my business?

Are there pitfalls to watch out for?

This document explores the world of open-source software and will give you confidence to begin using software in your business.

While this document does not constitute legal advice (you should ask your local lawyer for that) reading it will help. I am sure you will feel more confident in your choice to install and use software in your business, especially open-source software.



The Software License Spectrum

The first, and perhaps the most important thing to understand about software is, that all software is copyright by default. This is an important and crucial point to understand. Copyright laws are specific to a legal jurisdiction; however, most countries are signatories to the Berne Convention, so it is safe to assume copyright by default applies in your location.

Copyright works to protect the original work of authors. For software, that applies when the author writes a line of code, from there the author or their employer is immediately granted copyright over that software. This happens automatically at the time of creation.

So, what does that mean for you, a user of software?

It means that in order to use any software you have not written yourself, you must have some form of license from its author. Licenses for software fall somewhere along a spectrum from 'cannot use at all' to 'can use with some conditions'. The rest of this article explains the most common forms of software license you will likely encounter when licensing software for use in your business.

Proprietary Software

Proprietary software is at the restrictive extreme of the software licencing spectrum. You cannot use it without meeting the conditions specified in the license, which typically includes payment (possibly recurring) and other conditions, such as limited rights to copy or distribute the software.

You will be very familiar with Proprietary Software; it is a very common type of software license. Examples of this type of license include Microsoft's Windows and Office 365, Activision's Call of Duty, and SoftTech's V6.

Another proprietary licencing model that is becoming more common, especially with Software as a Service (SaaS), is called 'freemium'. Freemium software allows you to use software free for a limited period of time, or with a limited feature set. Typically, payment or wider promotion of the product is required to remove the restrictions. Netflix, Dropbox and Amazon Web Services are all well known examples of the freemium model.

In contrast to payment or promotion, Open-Source Software is always free to use and can therefore be an attractive alternative to proprietary alternatives. In the following sections I define Open-Source Software (OSS) and provide details of the restrictions these licenses have. Please note however, that these restrictions often only apply when the software is modified or distributed and that OSS is usually free to use in your business.

Open-Source Software (OSS) defined

The canonical definition of Open-Source Software is software that is licensed under an Open-Source Initiative (OSI) approved license.

By choosing an OSI approved license open-source, founders and their contributors can be confident they are protected by terms that have been developed by lawyers and tested in the courts. OSI approved licenses are the gold standard for OSS and they are also the most common.

Open-Source Software allows use of software without payment, however, does still impose legal restrictions in its license. For the most common types of license detailed later in the article, these restrictions only apply when you distribute the software, not when you use it. So, the executive summary is: for all the common OSS licenses detailed in this article, you are free to install and use open-source software in your business.

There are essentially three categories of license types that span a spectrum from restrictive to permissive. At the restrictive end, distribution for commercial purposes is banned under strict conditions. At the permissive end, distribution as a component of commercial products is allowed and encouraged with simple requirements. We begin by exploring the most restrictive OSS license types...

Restrictive OSS Licenses

It is common for software to be licensed under restrictive OSS licenses. The Linux operating system invented by Linus Torvalds is arguably the most common. Google and others operate vast server-farms that use Linux as their operating system, making Linux one of the most popular software on the planet. Linux originally shipped with the GNU General Public License (GPL) a restrictive license type that enforces a concept called 'copyleft'.

To really understand the restrictive OSS licenses, it is important to understand the concept of copyleft. While copyleft is an amusing play on the word copyright the important distinction is; the addition of a responsibility to continue the public availability of the source-code, including any modifications.

Pioneered by Richard Stallman and the Free Software Foundation, copyleft is at the heart of the restrictive license types, of which the GNU General Public License (GPL) is the most common.

GPL is one of a family of GNU licenses that are all copyleft. Other license types in this family are the GNU Affero General Public License (AGPL) and the GNU Lesser General Public License (LGPL).

The AGPL is newer and stronger than the GPL by containing specific conditions relating to server software. The LGPL, along with another common licence the Mozilla Public License (MPL), are considered weaker because they do not require disclosure of derived work.

As mentioned earlier, these copyleft provisions are triggered at the time of distributing software, or provision of it as a service, so do not apply when simply installing then using unmodified OSS software in your business.

The following are some examples of copyleft OSS license types:

- GNU Affero General Public License (AGPL)
- GNU General Public License (GPL)
- GNU Lesser General Public License (LGPL)
- Mozilla Public License (MPL)

Permissive OSS Licenses

Permissive Licenses types are less restrictive than their copyleft counterparts and typically allow commercial derivation of the original code. The conditions are easy to comply with and usually only require attribution of the original authors copyright be included with the distributed software.

Attribution often takes the form of an included text file or a pop-up inside the application that lists the original contributors and their assertion of copyright.

Permissive license types are responsible for contributing code to some of the most famous software in the world today. The Berkeley Source Distribution (BSD) license laid the foundation for Apple's Macintosh Operating System (MacOS) and Google's Android Operating System. Other examples of permissive licenses are the MIT license and Apache License 2.0 which are commonplace on popular source repositories such as Github.

The following is a list of some common permissive OSS license types:

- Apache 2.0
- Massachusetts Institute of Technology (MIT)
- Berkeley Software Distribution (BSD)

Other License Types

There are some licenses that aren't common or sit between permissive and restrictive categories, but all is not lost. Remember that licenses are relatively simple legal documents, so it may be reasonable to read the terms and adhere to the conditions stipulated.

Examples of less common OSS licenses are the Eclipse Public License and the European Union Public License. While these licenses are less common currently, government regulation is increasing their uptake by mandating their use.

One final point to note is that multiple or dual licencing is possible, though this case is simple. When there is more than one license available you are free to choose the license with the terms and conditions that best suit your requirements and preferences.

A good example of the multi-license model is the Linux Kernel which you can browse at Kernel.org. By looking in the LICENSES folder you will see many licenses from which you are free to choose the one that suits you best.

The following is a list of some of the OSS alternatives to popular software:

Software Category	Proprietary Software	OSS Alternative	OSS License(s)
Image editing	Photoshop	GIMP	GPL
Word Processing	Office 365	Open Office	LGPL
Graphics/Drawing	Illustrator	Inkscape	GPL/LGPL/MPL
Video Editing	Premier	Open Shot	GPL
Video Player	Real Player	VLC Media Player	GPL

OSS is good for business

In conclusion, there is plenty of great OSS online, and many of these programs are useful alternatives that could save you time and money.

It is worthwhile understanding what defines OSS, what the legal requirements are, and the restrictions that software licenses place on software use. Given that most of these restrictions apply at the time of modification or distribution for OSS, you can be reasonably confident in using OSS software in your business.



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