

How and why contributing to FOSS can benefit your organization

At first glance, the ecosystem in the Free and Open Source Software (FOSS) world can seem a bit complicated. There are several ways to get software: project websites where you can download it directly, use a software management tool that your Linux distribution provides, or you may also be able to install a Linux distribution that includes everything you need right out of the box! Once you understand this ecosystem, you can find where your contributions would be most useful, and why contributing is beneficial to your organization and the FOSS community.

So, where does this all begin? FOSS often originates with a project which maintains the [source code](#) for the software and provides its own development and support infrastructure.

A [Linux distribution](#) is a carefully culled collection of software from these upstream projects which makes a complete [operating system](#) and even includes a lot of application software. This collection of software is tested and prepared to run securely and maintainably together. [Debian](#) is built upon this model.

Some distributions of Linux use Debian as a source project unto itself. There are a number of Linux [distributions based on Debian](#), including the popular [KNOPPIX](#) and [Ubuntu](#) distributions. Being “based on Debian” can mean several things, but it primarily means they draw from the software repository at some point in the [release cycle](#), and they use the [Advanced Packaging Tool](#) (apt) to manage this software. In these cases Debian is an intermediary between the original FOSS project and the “children” distributions which may also pull from original software projects to expand upon what Debian provides to target their particular focus.

So where in this software ecosystem should your organization contribute? Why would your organization choose to contribute to Debian rather than to the original project (“upstream” of Debian) or a project like Ubuntu (“downstream” of Debian)? It really depends on your goals.

If your organization is interested in using FOSS in a way which requires rapid development, new and diverse features released quickly, or specializations that the distribution may not easily support, you will probably want to work directly on the upstream project. Frequently this requires programming experience, but many projects need other kinds of help such as bug reports in the form of feature requests which they may be able to satisfy in later releases. In these cases, contributing to development in these projects directly is the best way to meet your needs in using and building upon the software.

If your organization needs to use FOSS in a stable, maintainable and secure way, you should probably work directly with Debian. The primary duty of most developers within the Debian community is working on the “packages” which make up the operating system: creating, updating, patching, tracking their security and handling bugs, forwarding details and patches to the upstream projects when applicable. This is what maintains the solid, core operating system that makes up not only Debian, but the child distributions which depend on it, and which could not exist without it. By contributing to Debian you’re also contributing to Ubuntu, Knoppix, and dozens more, improving

the tool shelf for everyone (related: [Given 250,000 tools on the shelf, how do you manage them?](#)). Contributing to Debian also helps the upstream projects, taking the burden off of them to provide installation documents and support on Debian and placing that upon you, plus making their software more readily available to users through a simple search through the Debian repository.

If the target of one of Debian's children better meets your organization's needs which cannot be achieved through Debian directly, then by all means contribute directly to it. Child distributions already exist which focus on everything from being an Open Source LiveCD toolbox (like KNOPPIX) to being a polished desktop operating system (like Ubuntu). As an example, even within Ubuntu's family there are targeted projects, like [Edubuntu](#), focused on education by packaging and shipping a collection of educational software and a project devoted to making your computer a [PVR](#) like TiVo called [Mythbuntu](#) which works with the [MythTV](#) project to easily deliver their software on a platform. Contributing to projects like these also expands the open source ecosystem and may be the preferred method to reach your organization's goals.

Understanding the way in which these projects and distributions work together and selecting a place in the workflow for your organization to contribute is the first step. But perhaps a more important question is why you'd want to work on a FOSS project instead of doing in-house development. The benefits for the FOSS community are obvious, they will reap the benefits of having your expertise, from having the packages in Debian and beyond, but are there benefits for your organization?

I believe there are big benefits, which include:

- Peer review of packages and software now and in the future
- Processes for asking the community for assistance
- Bug reporting infrastructure, which may include patches submitted by community members
- Procedures to become informed about security problems and policy changes
- Free collaborative resources provided for FOSS projects ([Alioth](#) for Debian, [SourceForge](#), [LaunchPad](#) or the [Apache Foundation](#), etc) for development, including development mailing lists and hosted revision control systems like git, bazaar, svn.
- Opportunity to learn key FOSS development strategies and industry "best practices" via freely available documentation, chat rooms, forums and mailing lists

In short, by putting the time in to releasing software, packaging for Debian or work in children distributions, you not only are doing good for the FOSS community, you get to take advantage of the plethora of tools, resources and people available to assist in the development process.

Posted by Elizabeth Krumbach in Debian, FOSS Community, Ubuntu, 0 comments