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Why Enterprises Adopt Open Source Software

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Enterprises are leaning in when it comes to adopting open source software (OSS). Large, well-known enterprises now routinely rely on distributions of Linux, Kubernetes, and TensorFlow. When it comes to databases, often you'll find MySQL, MongoDB, PostgreSQL, and other variants of the same used to support applications services — or a combination of one or more of these databases.

The number of companies offering open source solutions to these large enterprises is also growing. Percona founder Peter Zaitsev recently outlined that in 2019, there are over 40 public companies that have an open source product as part of their enterprise product solutions (versus 20 in 2016 and five in 2014).

Further evidence can be seen in the number of newsworthy business stories around open source software:

- Red Hat acquired by IBM for $34 billion
- Elastic and Pivotal IPOs
- Mulesoft and GitHub acquisitions
- MongoDB triples its market value
- Cloudera and Hortonworks merge

Even commercial companies, once hostile to the idea of open source stealing customers from them, are recognizing the trend. Microsoft, long a vocal opponent of Linux (CEO Steve Balmer called it a "cancer") is now one of the biggest open source contributors.

Clearly, open source is not only here to stay as part of enterprise IT and business strategies, but it is a growing option as well. But why?

Percona recently conducted a survey of companies about their open source database "footprint." In that survey, roughly 69% of companies that responded say open source is an important part of their business operations. There are several reasons why it is a crucial factor:

Cost savings

80% of respondents in the survey say cost savings is a big factor in adopting open source software. This makes sense, as almost all open source software has at least some free or "community" version available with little to no capital or operating costs associated with the software itself.

No vendor lock-in

62% of our survey respondents say that preventing long term contracts with vendors is an important reason to adopt open source software. This helps businesses remain agile and respond quickly to changing customer needs or development plans.

Community resources

53% of the survey respondents cite the community as a big reason to adopt open source software. The open source community provides insights, fixes, workarounds, and general software knowledge to anybody who participates, allowing companies to crowd-source issues and development ideas.

Let's look at some of these areas in more detail.

Cost Savings

The clearest and most obvious advantage to open source software is that it is free. Almost all open source software has some "community" version that is completely available for use without cost. There isn't (for the most part) licensing or purchasing fees to reuse and distribute the software.

Even in the popular "open core" models, where some features require a contract to access (also generally known as "enterprise" versions), the cost of the paid features is significantly lower than regular commercial software. And unless a support contract is purchased, there are no maintenance or license renewal costs. Annual renewal costs for commercial can go up as much as 20 to 30 percent per year. Not to mention that the software subscription a company purchases for one year can change or be eliminated from year to year as the commercial software company changes its roadmap.

A reduced operational cost has a huge impact on a company's agility. With reduced risk, adopting open source software requires less upfront investment from a large enterprise. This means that enterprises can afford to take more risks as they develop new applications and services.

Companies are increasingly resistant to paying annual licensing fees. Adopting open source technology allows them to avoid these pitfalls, and to experiment with different technologies until they find the perfect match for their business. In Percona's recent survey of companies, 53% say they are increasing their adoption of open source databases.

Flexibility and Lack of Vendor Lock-in

The second biggest plus for companies adopting open source software is the flexibility afforded by the lack of vendor lock-in. Proprietary software often requires users to accept the terms and conditions of use, which restrict the ways in which developers and programmers can use a given product. However, with OSS, companies have open access to the source code and are able to use it in any way that meets business needs.

Commercial companies create and distribute software as they must, to fit in with their plans. While they often develop and release software in tandem with the general state of the market they sell to, they are rarely going to modify their roadmap for individual companies. They kill features and products as needed, regardless of the desires of one company. They can also limit support and updates to previous versions in order to force customers to move to a new version.

Open source eliminates much of this by taking away the financial incentives for new development. Development is mostly powered by the community through requests and contributions. Companies using open source software are free to examine the code and make changes as suits their needs. They are encouraged to submit these code bits back into the main fork for a permanent addition.

This message is getting through to company leadership as well. In Percona's survey, there is an 8% uptick in responses from management on avoiding vendor lock-in. As the company gets larger, management is even more concerned about vendor lock-in: large company management was 16% more concerned with vendor lock-in versus technical respondents in the survey.

More OSS, More Innovation

Open source software allows for more innovation. Since downloading and running open source doesn't require a license, contract, or payment, it's simple to use OSS for experimentation. Developers can try out different flavors of OSS to see what works best for their projects. For example, an application must get data from a database. But different applications may work better with different databases. An application developer can download and try different OSS databases to see which one works best for the application under development (without having to pay for a license).

Enterprises are clearly realizing that the culture and working methodology that quickly creates innovation in the open source community can contribute to faster innovation within their enterprises.

How Do You Want Your OSS?

Since open source software provides access to the code, detailed code customization is possible — even with limited developer resources. Generally speaking, open source software code developers are available for questions and comments via community forums. If the OSS project is popular, there is most likely a strong community that can provide feedback and configuration advice.

Any OSS user, backed by a strong community and supporting vendors, can easily absorb new features, customizations, or security enhancements. These can be deployed to production environments and scaled easily (without extra costs).

OSS users can write new code for the software to meet the needs of their specific business requirements. This customization can then be pushed back into the community and submitted for inclusion in the "standard" codebase.

Code can be adopted or not as desired, so long-term projects that need stability aren't in any danger: the software relies on a user and developer community devoted to supporting the technology in the long run. Any issues with older code versions can be put to a wide community and resolved through crowdsourcing.

Community Involvement

Most open source software has a strong and active community that not only provides code but also provides a vast resource of support and expertise.

In Percona's open source software survey, the second biggest concern is bugs. 32% of management and non-management responders said bugs were a concern in adopting OSS. It is interesting that in Percona's survey, large enterprise management seemed slightly less concerned (9% less) — perhaps because management feels that fixing bugs is "somebody else's" problem!

OSS is built by a dedicated group of developers that value the community and the open exchange of information. Crowdsourcing code means a constant process of peer review. Without proprietary software restrictions, developers in the open-source community are constantly reviewing code, building improvements, and fixing code. The community keeps members accountable for their contributions, and streamlines updates, features additions, and new releases.

Since the software is written by humans, even commercial software is highly unlikely to be perfect. Even if it is bugless, it likely doesn't satisfy every use case. Additions to OSS code that are contributed back to the community get sent through the community QA process quickly. Beyond that, the community will provide upstream improvements and comments. Communities can drive projects towards radically improved quality relative to their purely commercial counterparts.

Commercial companies may take time to strategize on the best way to address and announce a bug. And if there is a specific bug that affects your business, unless you are a very large company that contributes millions to a software company, the change they will address your specific bug or request is fairly small. Since there is no financial motivation tied to OSS, there is no disincentive to announce and address bugs.

As Linus Tovald (the creator of Linux) has said: "***Given enough eyeballs, all bugs are shallow***."

Greater Security

Open source software tends to expose vulnerabilities for all to see, so there are many people looking out for risks. OSS is more secure. While that may seem counterintuitive, it goes back to another one of Linus Torvald's core tenets: there is wisdom in crowds. Having more eyes on software means more testing, bug fixing, and better code. OSS solutions benefit from a degree of security rigor that most companies can't match – either with software developed in-house or purchased proprietary offerings.

Generally speaking, it isn't in a software company's best interests to expose the fact that there is a security flaw in their code. At least, not until they have a solution and fix. The open source community, however, has no such restrictions. They will quickly (and often gleefully) point out security flaws as soon as they are found. This means that code that isn't secure is more rapidly dealt with — and the security hole is closed more quickly.

Conclusion

More companies are adopting open source software, including open source databases, as part of their general business IT architecture. When it comes to their database infrastructures, they are often mixing and matching many different types of technologies: different databases on-premises and in the cloud, using different deployment strategies that include things like containers and Kubernetes. The database landscape has become very complex.

Percona is a leading provider of unbiased open source database solutions that allow organizations to easily, securely and affordably maintain business agility, minimize risks, and stay competitive. We fill the gaps in support that cloud providers don't cover.

Percona experts get the most out of an open source database environment, and optimizes, secures, and tunes databases to a specific application workload. Percona helps scale, build, and manage many of the databases that power today's internet ecosystem. Percona is uniquely capable of helping organizations optimize business performance by ensuring a dependable and secure database uptime. Our best practices for MySQL, MongoDB, MariaDB, PostgreSQL, and other open source database software on-premises or in the cloud help companies of any size meet high availability and business continuity requirements so the user experience is never interrupted or delayed.

Percona is the trusted partner for finding the best cloud database deployment strategy. If a company is currently using a DBaaS, IaaS, PaaS, or needs assistance with migrating an open source database to the cloud, we provide unbiased, in-depth experience with multiple open source databases and cloud platforms. Percona is cloud-agnostic, we partner and support all major cloud providers. We can help get the most out of the systems in a single provider or across multiple clouds.

Percona helps keep our customers' costs low — companies save more with us than without us. Percona has over a decade of experience supporting multi-vendor cloud environments which translates into better performance and availability, improved cost savings, and higher ROI for every customer.

To learn more about how Percona can help you, contact us or email us at sales@percona.com.