BUSINESS MODELS FOR FREE AND OPEN SOURCE SOFTWARE.

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Abstract - Android Open Source Software has a great impact on how highly software dependent industry of today is developing products and delivering to the customers. The most common misconception about open source software is that, it is just enthusiastic developers who spend their time creating software as a hobby and free of cost.

In the past "open source software" was synonymous with "free software." Profit was not the primary aim of developing software with open code through group effort, but financial stability is a must for organizations to thrive in this competent world filled with proprietary software giants. [3]

Things have changed today and there are numerous ways in which open source software makes profit. Lately, developers have started thinking about how to monetize their product. We're going to highlight a few common ways and business models through which the open source software is making and can make profit.

Keywords--- Software, business, Open Source, Red Hat, SaaS.

I. INTRODUCTION

Open Sourcing Software has become an important area of research due to its fast-growing number of open source communities/forums and the availability of these software products in a big variety of domains.

Business models are abstract and conceptual models that are used to represent the business and money earning logic of a company in a structured way. The traditional business models for software are being challenged by the redistribution of open source software, and the fact that the user/customer does have several additional rights not usually allowed in the tightly coupled traditional models, the idea of free redistribution is a bit hard to understand for the traditional business models.

We will observe and study them within the context of the open source business models adopted by companies that are supporting sharing source code, and also how the model can be changed with respect to licenses and commercialization approaches.

II. UNDERSTANDING THE PROBLEM

There were glitches in the rise of open source. Even Though the corporate world is embracing open source culture, many independent or start-ups are yet to figure out how to make profit from this. One of the main issues that they face is that most of the time they are not financially stable to hire employees or to cover their costs.

Adequate funding is an essential, open source businesses won't be able to differentiate their products from the open source code on which products are based on. Due to which there's lesser incentive for potential customers to pay for their products rather than continue using the underlying code for nothing. This limits the amount that open source businesses can charge on their potential revenues.

A classical example is Microsoft's Office suite which is proprietary software under Microsoft, it can be replicated by an open source alternative like LibreOffice. But the cherry on top is Microsoft's cloud-based Office 365 product that takes the base Office functionality and provides extra services such as file storage, AD integration and mobile applications.

III. OPEN SOURCE TODAY

Cloud native technology companies are the first batch of institutions that have used open source software in such an efficient and strategic manner.

Open source programs have three core characteristics, they are:

1.   Executing and communicating the organization's open source software strategies,

2.   Maintaining license compliance, and, most of all,

3.   Foster the open source culture.

Despite broad interest in open source programs, almost half of the companies still do not have plans to operate one. Some haven't just not considered it before, for some it's time constraints. Thirdly, the explanation is that the organization is too small or does not see business value.

The real customers of open source are the developers who often comes to know about the software, and they integrate it into the prototype versions of the projects. Once introduced, these projects work their way through the development cycles of organizations from design, to prototyping, to development, to integration and testing, to staging, and finally to production.

By the time the open-source software gets to production it is rarely displaced. Minor changed may be added. Fundamentally, the software is never "sold off"; it is merely adopted by the developers who appreciate the software more because they can see it and used it first hand rather than being subjecting it to executive decisions.

IV. RHEL

The Linux operating system company, who pioneered the original open source business model. Red Hat is giving open source software for free of cost, but charges a support fee to those customers who rely on them for maintenance, support, and installations. As revenue began to flow into Red Hat, a race was set among start-ups to develop an open source offering for each proprietary software counterpart and then wrap it in a Red Hat-style service offering around it.[4]

Red Hat was forefront in commercializing open source. Other than Red Hat the effort has largely been a failure from a business standpoint. The "support" model has been around for a decent amount of time, and other than Red Hat there are no other public standalone companies that have been able to offer an alternative to their proprietary counterpart.
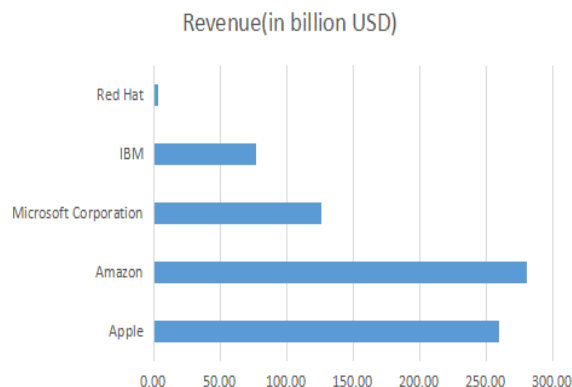

Fig - 1: Revenue of Red Hat compared to other tech giants.

When compared with the market cap and revenue of giants like Microsoft or Amazon or Oracle, even Red Hat looks much like a lukewarm success. Great for open source, a little disappointing for Red Hat.

V. PIVOTAL

This cloud software company is the first Cloud Native Business to go public, it was outcome of Dell EMC and VMware, filed for an IPO to raise around $100M. Pivotal is the initial cloud native business to file to go public and it closely resembles what RedHat had done, the most successful open source software-based business. Pivotal's IPO positively indicates cloud native businesses with open source offerings have the potential to go the distance.[1]

Modern cloud infrastructure software companies are highly driven by open source software, it helped developers and DevOps drive innovation at much higher speed. More DevOps-focused open source software-based companies are becoming unicorns. Pivotal's IPO is just the start.
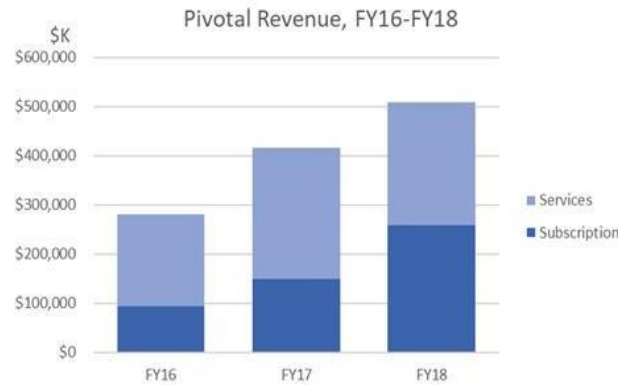

Fig - 2 Pivotal revenue.[1]

VI. IMPLEMENTATAION

RedHat and Pivotal Software Inc. exclusively focus on their open-source software services, but they are backed by their parent companies — IBM and Dell EMC. All of these tell us why going open-source in terms of software with services could have a tremendous impact.

Companies like Elastic and Docker have shown us that it's possible to be a good steward of open source and turn a profit without compromising the well-being of the open source community.

More code sharing and innovations happen because of the contributions made from developers in the open-source software communities. Companies have realized this, and are on the path to making software more tweakable for developers, and it can pull more users from their communities. This also helps to minimize costs. Smaller companies benefit more from this, and can attract more developers automatically with minimal spending.

VII. FUTURE OF OPEN SOURCE

1) Selling Open Source as a Service.

Making open source into a package service (as in cloud computing or software-as-a-service) or as a software or hardware appliance, companies can monetize open source with a better robust and flexible model, encourage innovations, and ongoing investment in software development. Companies who use these open source building blocks are please to contribute to their ongoing success journey. These open source software make the building blocks of all modern cloud and SaaS offerings, and they are being monetized with much better approaches in many cases.

Depending on the need, large companies mix open source components with their own proprietary code, and then sell the combination as a service. Combining open source with a service or appliance model is producing better outcomes across the software landscape. Cloud and SaaS adoption is boosting on-premise deployments, and open source has been the major player in this transformation.

2) GitHub Sponsors.

GitHub Sponsors, a new tool that lets you give financial support to open-source developers through repeated monthly payments. Developers will be able to choose to have a "Sponsor me" button on their GitHub repositories and open-source projects will also be able to highlight their funding models. The mission is to expand the opportunities to participate in and build on open source, says GitHub.[5]

Some open source developers don't want financial interests to influence what people will work on. And there may be some truth to that as this may drive open-source developers to focus on projects that are more likely to attract financial contributions over interesting and challenging projects.

3)   Ads and partnerships.

The Mozilla Firefox earns through creating partnerships with search engines which pays them to be included as built-in search options. Ad Block Plus, an open source extension has an advertisement-based business model. In exchange for a fee, they will white list them.

VIII.PROPOSED APPROACH

1) Licensed Add ins

Economic viability of free software is possible through focusing on monetizing licensed add-ins and extensions from the beginning, implementing effective service models and setting up the right sales team.

Apart from SaaS and sponsorship, creating licensed add-ins and extensions that enhance the performance of the application is also another way in which open source software can thrive. These add-ins will improve the performance, as well as the functionality and usability of the application.

If the customer chooses not to opt for add-ins and extensions they can work with the basic model. But if they choose to make their application more usable and functionally enhanced, they can pay for the licensed add-ins and extensions. This is also a way in which the open source software can remain in the market which is dominated by proprietary software who have unlimited accessibility and support.

Since the software is free, we can say that the software does uphold the values of open source software while if users prefer more usability and functionality, they can pay and obtain these add-ins and extensions.

IX. CONCLUSIONS

Adequate funding is a must, open source businesses can't differentiate their products significantly from the open source code their products are based on. Open source software companies have to move to the cloud and add proprietary code to their products in order to financially succeed. Nowadays, the proprietary companies makes the most use of the open source nature of the open source code, they tweak it according to their needs and add it to their package. The current business model is recipe for failure.

While free-to-download software makes it difficult for open source businesses to monetize the same software by adding support, maintenance and so on, it's also that these low-cost alternatives must make it more difficult than otherwise for proprietary vendors trying to sell their products into the same market. Pay-what-you-want or donationware model for generating revenue is a new trend. No big open source companies have successfully survived solely on donations. All of these are the proof that open source software can be at the heart of a sustainable and profitable business.

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