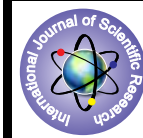


The Open Source Software (OSS) Utilization in Project Scattered Computing Environments



Information Technology

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ABSTRACT

Firm progressively more rely on open source software for working out business problems and to construct mission-critical IT solutions. However, there are many issues linked with OSS, including its control on the total cost of possession (TCP) and support capability and upgrade capability risks. While savings from achieving a free copy of the software can be important, software accounts for a typical of 10% of TCP, while the bulk of the costs are linked with project staffing. OSS needs important investment into staffing because it requires be cautiously selecting, modifying, and installing. In addition, worldwide communities may group and dissolve at their will, so promises of support, amendment, and bug fixes are negligible. Yet companies can grow competitive benefit through an aptitude to modify software to address particular business issues and applying control over development, review schedules, and changes. OSS is not a panacea from the growing software costs. Instead, it is a good and serious proposal that has benefits, disadvantages, and risks associated with it.

1. Introduction

The open source market has changed into a influential force that is progressively more present in several areas of the industry, together with web development, e-commerce, financial application, infrastructure management, operations management, ERP, and more. Open source software (OSS) has recognized a strong occurrence among technology way out that involve building client/server and composite distributed systems. Open source is not just an approach to save money on the straight software acquisition cost. It allows individuals and companies to modify the base release to their requirements, follow their own upgrade plans (if needed), and organize development activities without any merchant involvement. While various early releases of OSS were somewhat unstable, the most modern releases can efficiently fight against the best products sell by monster like Microsoft, Sun, and Oracle, both in terms of functionality and protection.

Several firms become gradually more dependent on software vendors' liberate schedules, support, prices, and business models. Lengthy project preparation, development, and implementation cycles, along with complication of the systems and addition of the complete firm's operations, have made changing vendors a expensive and unwanted process. Businesses move violently to manage with increasing costs and products that do not completely speak to their desires. Some business see a actual opportunity to acquire a long-wanted autonomy from their merchant's plans and objectives through OSS, while others are careful and favor to keep away from doubt of the unsupported products. Forrester's survey of 120 large North American businesses demonstrates remarkable statistics: 46% of them previously use OSS, while 14% have short-term plans to integrate it into their presented computing surroundings. The same research has also exposed that European corporations are not far away: 31% of the surveyed 35 large firms make use of OSS, while only 17% do not have any plans for employing the free software code [3].

Is this an excellent time for your association to attain OSS and have the benefit of its uses? Do not acquire returns gained through the use of OSS for established. Certainty, OSS is not open. For corporations it means faith on the global society for additional upgrades, trouble resolution, and support; insecurity about software stability and consistency; the need to employ and pay further talent to change and preserve software, along with other requirements [2]. The dilemma is whether OSS symbolizes a real developer's vision and a solution against increasing software costs or a risky project for companies wrongly thinking OSS can assist them to save IT dollars.

2. Total Cost of Possession (TCP) and OSS: Benefits vs. Risks

Many IT project managers think only hardware, software, and infrastructure overheads while preparing for budgeting for new proposals. However, there are other significant components

concerned in the expenditure consideration. TCP refers to all costs acquired all through system gaining and full life cycle function until its retirement. Possession costs include the methods of product selection, system design, purchasing, installation, deployment, and user training. The price of system operation consist of system management, preservation, repair, user support, data center atmosphere, and other aspects that are highly exact to each individual atmosphere [6].

TCP may also contain other surprising components, such as cost of reduced performance, surprising competence considerations, acceptable functionality, system accessibility, user friend interface, and security. When these significant components fail or do not remain to the end-user necessities, the cost of the project goes high, thus keeping a direct control on the TCP formula. It is not almost sufficient to project all the costs linked with system attainment and function in order to precisely forecast the total cost. The small price of an obtained system does not essentially direct to cost savings, unless the system achieves as expected, gratifies the users, and is obtainable according to service level concurrences.

The cost of software itself is small comparatively to TCP. It may correspond to about 10% of the TCP, with staffing expenses adding a massive 50% to 70% part [8]. This means that in spite of a universal legend that software notably reduces the overall existing IT budget, its cost has comparatively low significance when evaluate to tasks subsequent acquisition. This is where OSS may not heap up well beside proprietary software. The myth of giant savings, therefore, loses its significance relative to the full-cycle development process. Moreover, TCP is hard to compute in the circumstances of uncertainty linked with lack of maintenance and bug fix assurance.

It is obliging to identify what inspires companies to come across for different software and doing away with conventional IT pay for habits. The Emerald Hill Group - the company that runs pubs in Singapore - was intelligent to modify its open source software, tailor it to its requirements, and run on a consistent Linux sharing [10]. Gartner's research concludes that Windows XP expenses on an average 15% to 20% less to have and operate contrast to Linux. But besides higher operational price, the firm derived paybacks from modification and running its own software under the company's control and on the firm's own revision schedule.

Many firms discover it easier to put together what they want out of OSS besides living with unacceptable set of features offered by commercial suppliers. For instance, greatly individual knowledge management (KM) functions that depend on the users' requirements are good applicants for OSS projects. As KM applications alter and develop together with an association, frequent alterations are necessary in order to sustain an application the latest [4]. Such kind of services may not either be available from

a vendor or carry excessive expenses. Education is another part where OSS is an extremely attractive choice. Low straight acquisition price, capability to keep away from forced upgrades, flexible platform, and a possibility to provide students real tools to conduct test with making OSS more attractive to school fixed IT operating financial plans, the long-term expenses might be too far above the ground, so it is significant to consider the pay-backs against capability to sustain the least level of staffing required to have the systems up and running.

There is a threat that firms and particularly non-profit organizations may acquire too animated about low price opportunities offered by OSS and fail to remember about TCP thoughts. This locates several organizations at risk of effectively implementing projects they cannot sustain. Firms in view of switching to OSS atmosphere from more conventional supported systems should also think the risk of losing key staff during serious project segments, expenses linked with migration, and retraining users and maintain people on the Linux or alike system, along with when the system is down required to achieve the goals [7]. Slighter businesses lack both project management proficiency required to calculate TCO accurately and the budget required to support their preferred systems [9].

3. OSS Selection and Conclusion

The discussion about benefits and drawbacks of OSS can be briefed in two categories: TCP and freedom of selection for product development and preservation. Some firms implementing OSS will save funds, others will be intelligent to implement the precise type of system they require to go about their commerce, and the rest of the businesses will probably lose money or run into technical supportability problems [2]. IT managers must appreciate the reserves model when it approaches to financial plan technology projects.

Many large organizations do not want to acknowledge responsibility for sudden problems and choose tapered software to the tools and applications approaching from the community. Certainty may be significance the additional operating cost in serious corporate business atmospheres. This is just one of the causes why commercial software's price will not reduce in the near future. It will still scratch a sense of comparative reliability, accountability, confidence, assuming that the software merchant is economically steady to continue in business. However, we may also examine a fast growth of OSS use. Some of it is associated with business's desire to control their IT fate, one of the best and enhanced justified reasons to use OSS. Other reasons contain savings, and many organizations are on their approach to dissatisfaction in this case.

The Use of Open Source Software in Enterprise Distributed Computing 281 Environments

Based on this synopsis, we may get the following general conclusion for software selection:

1. The project goals should be clear and understandable.
2. These goals should be discussed with your end-users; concluding system necessities and make sure obligation to the project, including decision-making sponsorship.
3. Concluding the criticality of the project, system accessibility and consistency requirements, and addition of business operations on this scrupulous software application.
4. Examine whether there are any profit-making software products available in the market that will deal with the requirements of the project. Seek requests for proposal (RFP) and decide the opening costs.
5. If your project is long-standing critical, needs high system accessibility and consistent support, and its requirements can be satisfied by profitable software, you may consider about buying the product. OSS should still be measured if commercial product's cost is high-priced, you wait for future justified customization requirements, or its features do not speak to the core project goals. In other words, guarantee that all or any of the common factors positioning to probable OSS application are present.
6. If additional investigation is decided on, team up with senior architects and/or developers to run a little pilot project of OSS choice.
7. Find out if the selected software speaks to the wants of the project, can competitor or go above commercial software's functionality and safety, and stands for preliminary financial savings.
8. Find out what responsibilities will be concerned in the research of the selected OSS for final level and arise with a cost schedule for these responsibilities.
9. Find out the payback of ownership and manage over OSS comparative to need on the vendor. The consequences will represent the insubstantial OSS project profits.
10. Consider the cost savings (if any) alongside the threat and conclude the significance of insubstantial reimbursement discovered in the earlier step.
11. Consider technical, supportability, equipped, and financial risks linked with your software options.
12. Make an educated concluding decision concerning software choice and architecture.

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