CAPSTONE PROJECT PROPOSAL

IS OPEN SOURCE SOFTWARE READY FOR THE ENTERPRISE MESSAGING AND COLLABORATION NEEDS?

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1. INTRODUCTION

DESCRIPTION

Organizations all over the world are faced with increasing pressure to perform in an environment that is characterized by new challenges like:

-Decreasing profits.
-More players/competitors in the field.
-New products every day with increasing competition to existing products.
-Increasing customer knowledge, sophistication and customization requirements.

While an organization is facing these and many more challenges, it needs to stay competitive and moving continuously looking for new products and revenue streams, carefully monitoring its competition as well as its customers.

At the same time technology investment costs continue to increase in a diminishing revenue atmosphere. What can organizations do to respond to these and many other challenges, while investing in technology needs for the business in a sensible and efficient manner? Many organizations around the world are turning to Open Source Software solutions as their answer to an era of increased overheads and diminishing profits.

One of the reasons behind this is that proprietary software solutions are tightly controlled by the developer and they charge more or less whatever they want for upgrades and support. In contrast Open Source Software solutions are not controlled by a single organization, and obtaining support is possible from various sources, since the source code is open for review and modifications in order to maintain and modify such applications as needed.

There are other reasons that go beyond the cost and support but are closely related, reasons related to reliability and robustness. It is broadly agreed that Open Source Software solutions, due to their broad support and openness, are a more reliable and robust alternative than proprietary equivalents. A quick look at some of the major Internet sites reveal that key players rely on Open Source Software solutions for mission critical applications.

But how this trend affects our organization or any organization today? What organizations are looking for is a tangible and reasonable return on investment (ROI) from their technology investments. After many years in a spending spree, organizations are being very careful in what they invest their funds on, and are evaluating every possible alternative before committing their resources.

The above stated points are just a few of the reasons why I selected Open Source Software as the area of research for the capstone project.

PURPOSE

The purpose of my capstone project is to research the readiness of Open Source Software alternatives, specifically in the area of messaging and collaboration as an alternative for a modern organization, when compared with traditional proprietary software. How? By first learning what it is, how it has evolved and how it can benefit the organization needs.

PROFESSIONAL INTEREST

Besides the reasons already stated for the selection of this topic I would like to add that my intention to select this area has to do also with the fact that I see a lot of benefits from learning more about Open Source Software. It is an area related directly to my study program at ASPEN University as well as an area where there is a lack of knowledge among most IT Managers.

As an IT Consultant myself, being able to help my team or other IT organizations with such issues makes me more valuable as a professional.

2. LITERATURE SEARCH

While researching the Open Source Software topic I found a wealth of information in the internet as well as many technical periodicals but, was most intrigued by the work of Richard M. Stallman in the book *Free Software Free Society: Selected Essays of Richard M. Stallman,* which will be used as on of the references in this research. An interesting point found in Mr. Stallman book is that most people hear the work Open Source Software and they immediately think Linux. While the two of them are related, they are different in many ways and Free Software is not necessarily equivalent to Open Source Software.

Some of the initial references already identified to be used in this research, with their respective URL's, are:

EWeek: Hey, CIOs: Open Up!
http://www.eweek.com/print_article/0,3048,a=49434,00.asp

Gay, J., Buckman, R.E., Free Software Free Society: Selected Essays of Richard M. Stallman
Free Software Foundation, Inc. 2002, First Edition
http://www.gnupress.org/

Godfrey, M.W., Tu, Q. Evolution in Open Source Software: A Case Study
Department of Computer Science, University of Waterloo
http://plg.uwaterloo.ca/~migod/papers/icsm00.pdf

IBM White Paper: Linux is Ready for the Enterprise:
http://www-8.ibm.com/linux/sg/white_papers/enterpriseready_linux.html

InternetNews: Open Source Takes on Exchange
http://www.internetnews.com/ent-news/article.php/2233471

ServerWatch: Making an Open Source Server Enterprise Ready
http://www.serverwatch.com/sreviews/article.php/2235031

Sirius: Want lower overheads? Run Open Source Software
http://www.siriusit.co.uk/

The Open Enterprise: Open and Shut Weblog
http://www.theopenenterprise.com

The Open Source Definition, Open Source Initiative
http://www.opensource.org/docs/definition.php

Why Opens Source Software/Free Software (OOS/FS)? Look at the Numbers!
http://www.dwheeler.com/oos_fs_why.html

3. RESEARCH QUESTION

Is Open Source Software Ready for the Enterprise Messaging and Collaboration Needs?

Due to the increasing popularity of Open Source Software solutions used in many organizations around the world, it will benefit any IT professional to analyze the state of readiness and capabilities of these solutions to fulfill the enterprise needs.

There are many areas in which Open Source Software is changing the IT landscape but one area that is critical for any organizations success is the capability of communicating and collaborating. E-mail and groupware applications are, in my opinion, the major IT infrastructure services that allow communication and collaboration to take place among the organization members, internal as well as external, regardless of distance or time barriers.

It is the intention of this research project to investigate not only the technological aspects of the Open Source Software when applied to messaging and collaboration, but also to discuss how it has impacted long established business models.

But why is this issue being addressed? The competitiveness of a modern organization is often determined by how fast it responds to the needs of their customers, internal or external, as well as the challenges of the markets in which they operate. It is agreed, almost without argument, that IT is a strategic weapon in the operation and growth of any organization. Being a critical element of the organization, individual and team collaboration are necessary elements to allow a flow of information and ideas that keep the organization running.

It is also generally agreed that rising cost of IT solutions have encouraged organizations all over the world to re-think their IT strategy, in order to see how it fits into the organizations goals, and to look at alternatives of how to do more with less. While there are many robust messaging and collaboration solutions in the market, these are proprietary and their rising costs are causing many IT organizations to look elsewhere for alternatives.

Based upon the research question, Is Open Source Software Ready for the Enterprise Messaging and Collaboration Needs? what outcome can we expect? While we can identify many Open Source Software messaging and collaboration alternatives, we can not determine their enterprise readiness with certainty. There are many issues that need investigation and clarification and areas that need to be analyzed in order to be able to determine the outcome with more certainty. I see continuous movement in the Open Source Software area and see organizations that are developing Open Source Software plans while others are staying still but watching what other are doing as a reference. One of the purposes of this research is to analyze the feasibility of adopting Open Source Software alternatives to message and collaboration, as well as its benefits, if any. Not only for the effects that this trend may have in IT infrastructure now and in the future but, also to identify the limitations of such technology.

4. FORMAT AND RESEARCH DESIGN

FORMAT

The capstone project format will be divided in two parts. The first part will research and describe the basics of Open Source Software covering areas like:

- What is Open Source Software, its origins and evolution.
- Difference between Free Software and Open Source Software.
- How GNU, BSD and Linux are related.
- Licensing and code freedom issues. (Proprietary/GPL/LGPL)
- Technological and societal changes Open Source Software has caused.
- Support and business continuity concerns.
- Free is not equal to free (open is not equal to no cost)

After the initial introductory foundation necessary to understand Open Source Software is built, the second section will present a comparison between Open Source Software and proprietary software messaging and collaboration solutions. In order to do so, the messaging and collaboration needs of a representative organization will be identified, in order to have a baseline for comparison. Some of the areas to be discussed are:

- E-Mail
- Group Calendaring
- Notes and Tasks sharing

These are some of the messaging and collaboration areas needed by a modern organization. The feasibility, or lack thereof, of each of the components to substitute proprietary solutions will be analyzed.

RESEARCH DESIGN

The research will mostly be descriptive, based on various sources of information from the Internet as well as published books, magazines and technical periodicals in the area of Open Source Software. The technical periodicals will include ACM, Business 2.0, IEEE Computer Society, PC Magazine, LINUX Format, LINUX Magazine, and others.

Some of the Internet references to be used are the web sites of the Apache Software foundation, the Open Groupware organization, the Open Source Initiative, the W3C Open Source Software, the GNU organization, as well as information from vendors like Red Hat, SuSE, Mandrake, SUN, HP, IBM and others. As part of section two of the capstone project, I will identify and survey a group of IT professionals about their plans to use Open Source Software messaging and collaboration solutions in their organizations.

5. EVALUATION

Since the capstone project purpose is to evaluate the feasibility of a given technology solution, it is very important to have the project evaluated by those who may benefit from such technology. Several IT professionals that could provide very valuable feedback, regarding the project research and its conclusions, have already been identified.

I intend to develop a questionnaire that addresses the areas of the research that are most critical for these organizations. Another aspect of the evaluation that I consider important is the evaluator organization. There are organizations open to changes and opportunities while others want to stay with has been proven and accepted in the market. For that reason I intend to have the project evaluated by IT professionals from diverse organizational backgrounds, organizations willing to consider Open Source alternatives as well as those that do not consider Open Source and alternative or feel uneasy about deploying them.

The value and usefulness of the findings of this research, from an IT professional perspective, will be primarily based on how the findings may help select or avoid the technology being researched. As a source of information for decision makers, this research and its findings are in my opinion, and important element when evaluating the deployment of Open Source technologies in any modern organization.

6. EXPECTED OUTCOME

How do I believe this is going to benefit me as a student and organizations that I work or may work for in the future?

As a result of this research work I expect to obtain the following benefits:

-Blueprint of an Open Source Software driven messaging and collaboration solution
By studying and learning about Open Source Software we can learn how it has evolved and how it can be used to fulfill the e-mail and groupware needs of a modern organization.

-Limitations
This research will also help identify limitations of the Open Source Software, as a messaging and groupware platform, that may not be apparent or easily identifiable. It is important to clearly define what is possible and what is not possible to be achieved with Open Source Software. By knowing the limitations we can make better use of what is available without wasting time in futile efforts.

-Future
Learning about limitations will help define a plan for the future. How can we prepare the organization to use Open Source Software and obtain benefits is an added value that we can obtain by researching this area.

I consider this topic of outmost importance due to the fact that IT professionals need to address this issue one way or the other. Open Source Software projects are not geek things any longer and do require organizational attention either to support them or to avoid them but, can not be ignored.

7. CONCLUSION

I believe that the success of this project will be based on various aspects including, the proper identifications of the communications and collaboration needs of a modern organization, the proper research of alternative solutions and a fair and unbiased comparison of both alternatives. If we are researching if Open Source Software alternatives are ready for the enterprise, we need to clearly state what is the enterprise looking for. Also we need to be realistic and honestly define where and when Open Source Software can be used and when it should not be used.