Chapter 5.11

Enterprise Resource Planning Under Open Source Software

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ABSTRACT

Open source software is becoming more prevalent in businesses today, and while still a relatively immature offering, open source enterprise resource planning (OS-ERP) systems are becoming more common. However, whether or not an OS-ERP package is the right software for a given organization is a little researched question. Building on the current real options thinking about platform acquisitions, this chapter proposes the five most critical factors to consider when evaluating an OS-ERP package. To adequately do this, a great deal of detail about the current offerings in OS-ERP software is presented, followed by a review of the real options theory and thinking behind using these factors to evaluate OS-ERP options. The international implications of OS-ERP are presented in the "Future Trends" section.

INTRODUCTION

Open source software (OSS) is becoming a prominent part of the business infrastructure landscape. However, open source application software is still in its infancy. Success of open source enterprise resource planning (OS-ERP) systems will signify a coming of age of open source applications. There are many factors that will determine if OS-ERP systems are a valuable option for corporations, and thus whether OS-ERP systems will become as prominent as other open source offerings like Linux or JBOSS. This chapter will inform the reader of the current state of OS-ERP in the global context,

and explain to potential adopters of OS-ERP the important factors to consider in evaluating an OS-ERP option.

First, a common language for defining OS-ERP systems will be developed. Second, the current state of OS-ERP software will be explored. Third, the business models of OS-ERP vendors will be exposed. Fourth, the advantages and disadvantages of customization of OS-ERP software will be explained. Fifth, the factors for valuing OS-ERP options using real options theory (Fichman, 2004) are defined. Finally, the global adoption of ERP software is explored.

BACKGROUND

The first necessary requisite for understanding OS-ERP systems is to define a common language for talking about OS-ERP applications. This includes defining exactly what an OS-ERP application entails and whether the software meets the definition of open source software. There is much ambiguity in the popular press about what is and is not OSS; this is only confounded when ERP systems claim to be open source. To clarify these issues, the next section will explain historical context of OSS. Secondly, open source licensing issues are explained. Then, the issue of open source ERP functionality is addressed. Lastly some examples of OS-ERP software are provided.

History of Open Source Software

Open source software has a rich history, from an initial chaotic beginning out of a hacker culture (Raymond, 1999) to its current manifestation as a foundation for profit-seeking corporations such as JBOSS (Watson, Wynn, & Boudreau, 2005), Compiere Inc., and Red-Hat Linux. As open source has evolved, the definition of open source software has changed and the open source ecosystem has grown. Previously, open source software was defined in terms of two characteristics: (1)

licenses that give programmers the ability to view, change, enhance open source code, and distribute the source code without discrimination (Feller & Fitzgerald, 2000; Open Source Initiative, 2005); and (2) the software is free of cost. While this definition was sufficient, for pure open source initiatives of the past, it does not adequately cover all that "open source" includes today. This is in contrast to proprietary software where the license generally does not allow for distribution of the source code and is not free of cost. Evolution and commercialization of OSS have led to many products being labeled "open source" that are not free of cost. As well, proprietary software (software controlled and offered by vendors for a price) that give access to the code are termed open source, while there is no licensing to support the open source model of software development. Proprietary software that allows access to the source code still leaves the control of the source code, what is included in the source code in future versions, in the hands of the vendor, who may be less accepting of contributions of code than an open source community.

However, even under the most stringent of open source (OS) definitions, there have been many great open source successes. For example, MySQL is an open source database server that has grown phenomenally since its inception in 1995. MySQL AB is the company that supports the MySQL product. This product is free and the source code is available to everyone under the GNU General Public License (GPL). Licensing will be discussed in more detail in the next section.

MySQL is currently backed by several venture capitalists and is without debt (MySQL, 2007). There were over 12 million downloads of MySQL in 2006, and 2,500 new customers started using MySQL to power Web sites, critical applications, packaged software, and telecommunications infrastructure. MySQL is just one example of the success of OS software in the infrastructure space. Other examples in infrastructure offerings include JBOSS and Linux.

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