Application service provider: critical review on emergence, development, business...

Introduction

In recent years, business via the Internet has grown in an exponentially manner. The internet gave birth to a lot of new business because of its capacity to reach out millions around the world. Driven further by increasing competition in the global market, the internet became a tool for companies to deliver their products faster and more efficiently. Consequently, the need for the deployment and management of business application via the Internet is becoming more and more complex. This in turn gave birth to various business models that evolved from the new internet businesses. One of these new business models is the application service provider (ASP), which emerged in the late 1990's at the back of the internet boom.

Definition

As defined by the Application Service Provider Consortium, ASP is an organization that " manages and delivers application capabilities to multiple entities from a data centre across a wide area network (WAN)." Basically, an ASP is a business that provides computer-based services to customers over a network. ASP business model is a business that offers software solutions to businesses either as part of existing system or as a complete software solution which they connect to via the internet or a dedicated intranet connection, on a one-to-many basis. The business then pays for the software service either proportionate to the amount of use or as a fixed amount. According the WIKI encyclopedia (WIKIPEDIA, 2007), the most limited sense of this business is that of providing access to a particular application program (such as medical billing) using a standard protocol such as HTTP.

Emergence

There are many factors that lead to the emergence of application service provider (ASP). Primarily, the ASP model has emerged as a solution to the need for competing companies to deliver e-commerce applications quickly, efficiently and at low cost to the end user. It has been made possible because of the falling telecommunication cost, increased hardware processing speeds and the pervasiveness of internet. The global pressure for competition has been triggered by internet itself, due to the speed with whichtechnologyspreads around the world, the falling trade barriers and the ability of small or medium organization no matter where you are located in the world to partake in the world economy and trade.

There is a need for companies to focus on core competencies because of the growing complexities involve. Developing in house capabilities within the company has become more expensive and difficult to manage. The cycle time needed to learn and the need for maintenance is becoming more of a hindrance to a company. The company has to focus on core competencies in order to keep up with the fast phase of development and time to market brought about by competition. As a result many would opt to use application service providers to meet their needs of e-business.

The equalizing effect of global market has also pushed small and medium businesses (SMBs) to use the same application as the big company. On the other hand, large companies wants common application with small businesses to gain advantage on supply chain management (SCM) and the advantage of sales for greater compatibility with SMBs. This situation drives them to utilize third party application service providers because there is a

need to synchronize the SMBs application to the large companies existing application. Maintaining individual applications between large and SMBs would be extremely difficult to synchronize making the ASP model more appropriate.

Companies have also tried to reduce the cost of ownership of IT to lessen expenses and improve financial predictability. The growing complexity of IT has made it one of the most unpredictable financial considerations to plan. Also, there is a growing shortage of computerscienceand IT talents in relation to the growing complexity. This makes the ASP model more appropriate where in the best talents focus on providing application service for a number of client companies.

Finally there is a shortening depreciation cycle for technology due to the rapid increase of advancement. Just an example, Moore's law has predicted somehow accurately for the past few years that the increase in density (related to component/device size and or performance) in the aspect of technology will double every 18 months. This creates a financial incentive for ASPs to innovate through architectures that allows them to reuse a big part of their existing application when technology forces them to change it. If this requirement for innovation is put into the companies, it would be extremely difficult to manage loosing focus on their core competencies.

As a result of this, according to MERCER (2001), analysts predict explosive

growth, with the most aggressive forecasters envisioning the global market rising to $20 billion by 2003 from virtually nothing in 1999. Already, more

than 500 ASPs have emerged in the United States to stake their claim in this next Internet-driven gold rush.

Development Issues

The application service provider (ASP) business development is driven by the software engineering landscape. There is a trend to move from in-house to outsourcing and from full ownership to lesser ownership on the side of the companies. The ASP business plays a role in integrating the service firms, the network providers, and the application providers, into the software vendors and hardware vendors to bring products into a variety of distributors. Application service providers work closely with their clients to know their needs and requirements. At the beginning this would look perfectly okay but as time goes on, the gap between reality and promise widens. This is because requirements vary from one customer to another. Since there is no way for an ASP intended for one company to work 100% to another company without modification, the cost hidden within the monthly rentals for ASPs becomes difficult to manage. This can cause an ASP organization to loose business. For example the CIO magazine executive (2003) cited a case, where an ASP provider folded bringing the entire website. These problems are normally common for ASPs that provide full service applications. If ASPs handle everything from building the applications to maintaining them, they would end up just like creating a whole staff for every company. The key to survival lies in the business models of these ASPs.

Business Models

For an ASP to survive, the business model should allow them optimum reusability of their applications with minimal maintenance. The ASPs that survived the shakeout and industry consolidation have done so by focusing more on commodity services like Web-hosting, Internet access and e-mail, as opposed to hosting mission- critical applications like ERP systems (CIO Executive Summary, 2000).

The primary core values that define a successful business model over another is the ability of the model to scale for partner's inputs and contributions. The continual evolution of Linux and other open source technology, for example, shows a model of association, which drives the sum total of efforts to product a robust operating system. The most successful business models are capable of scaling to take into account a focused reciprocal approach to bringing new opportunities to each business participating (Columbus, 2000). The ability of a business model to create a win/win situation for each partner involved is important. On a consumer level, this model is the basis for Ebay. com, on which there are tens of thousands of partner sellers, which generate traffic in the millions of visits.

The surviving business models have responded to this core values and has evolved into a commodity centric model. One surviving ASP model are the " Build Your Own Site Online" type of webhosting. This is the class of company that provides all the necessary tools and web space for creating an e-marketing and e-commerce site online. The fastest growing of business models, this area has attracted many competitors, with BigStep. com and FreeMercahnt. com being two of the more recognized as market leaders (Columbus, 2000). The business model of these sites focuses on the

development of thousands of online customers, charging them nothing at the beginning for creating their sites and instead charging for completed transactions at the end. The larger click-and-build sites are increasingly looking to partnerships and collaboration for creating a comprehensive product suite. It is even possible in the near future that a business wanting a simple e-marketing site, a catalog, and even a click-together simplified HR application will be able to do it for free using the tools on these sites. The ability to generate customers for more expanded applications that have the capability to enable collaboration and cost savings throughout an organization is the key aspect of these click-and-sell sites. The strengths of a click-and-sell site is its being free, which draws thousands of users to the site for e-marketing and e-commerce tasks. The click-and-sell sites generate revenue by the costs per transactions fulfilled from online catalogs for customers and the advertising revenues generated by showing potential companies the size of the customer installed base (Columbus, 2000). Although there are limitations to this model, the limitation that it places on its customers. Customers cannot, for example, create customized templates; they cannot create a customized look that they prefer. The catalog is useful, yet it does not provide the necessary tools for creating a truly strong and in-depth application that is fit for their needs. These click-and-sell sites also require branding on their customers' sites and also have limited search engine optimization capabilities which deter users. Another surviving ASP model are Search Engine Optimization. Many companies who builds website finds out that only a few visits them. This is an area of ASPs whereby search engine companies inserts meta-tags on websites to increase their chances of

being found. These search engine services provides listing for companies that is accessible to the public through key word search in exchange for some fee. A good example for these is theGooglesearch engine. E-BusinessAccountabilityand Relationship Selling is another surviving ASP model. This model focuses on how to be a long-term asset to a customer. Questions like how can I trust the application, are my orders correct or not, are the prices cheap or not require a singular point of accountability for the businessperson. The point of having a trusted guide, a person to go to who will provide guidance and consultative advice, is invaluable for the businessperson looking at the ASP model. Relationships are what this model is all about, with the revenue stream being driven by both monthly lease fees and up-selling to customers as their needs change. Another very successful ASP model is the Community Model. This is the model being applied by eBay and other eBay's baby such as Half. com. Using a community-oriented concept of creating online sectors where people with similar interests can bid on items of interest, Ebay. com has risen to be a standard in B2C commerce. Half. com is slightly different it is does not operate on bidding but instead on trading products. On the other hand, the focus of Half. com is still on the same community level of business just like eBay. What's interesting about this two is that the business model initially focused on taking a percentage of the transaction for a processing fee, and it is now a model that includes revenue streams from advertising, partnerships, and international expansion. The strengths of this business model include the ability to quickly distance oneself from competitors through a loyal customer base. Furthermore, this type of model works well

from the standpoint of tailoring applications to specific audiences or segments. Ebay. com is branching into B2B commerce, like Half. com it provides a new way of creating a sales exchange in antiques for dealers to actively trade their items. Clearly, this model provides a direct connect into e-procurement and e-operations because these areas of the ASP product suite are focused on collaboratively working with departments within a company to drive down costs. The weakness of this model is due to the fact that it is very evolutionary, the chances of loosing customer through new emerging and more popular branch is a possibility. It also requires a strategic plan and guiding principles to make its future more predictable. Another successful and surviving ASP are the Distribution Model. These ASPs focuses on brining many applications from different companies to add values to customers. The distribution model in effect aggregates applications into a cohesive product strategy for customers to choose from. Just like other distribution-oriented models, this one looks at the velocity of transaction rentals and the breadth of products that can cover the chosen markets. A good aspect of Distribution model, is the strong partnership between distribution ASPs to the companies providing a solid supply chain management which is effective for business. The drawbacks of this model are the possible short-comings of internet based distribution and selling companies, the need for robust application to sustain the growth of sales. Another surviving ASP model is the Promotion and Advertising Model. There are a many companies on the Internet who have as their primary business model the development of a large viewership to drive up advertising prices. This model assumes that the products being sold have a relatively flat

demand curve that tends to trail off thus leading to more visitors once a " cliff" on the price has been reached. This happens on certain products that have limited supply, but with much competition in key areas of computing products, this doesn't tend to work all the time. There other models that are considered ASPs that are variants of the previous models mentioned but are less successful.

Performance

Security is the key aspect of the performance of application service providers. Due to its interoperability and connectivity to an immensely vast internet community, the gateways for security breach are also huge. There are emerging security standards that set the minimum security for ASPs. Evaluating an Application Service Provider security when moving to an ASP infrastructure will come at a high cost, as such a firm must assess the level of risk associated with the ASP itself. Failureto properly account for such risk can lead to disaster. This could include loss of control of corporate data, loss of control of corporate image, insufficient ASP security to counter risks, exposure of corporate data to other ASP customers, and compromise of corporate data . Some other risks include failure to account for the financial future of the ASP in general, i. e. how stable a company are they and do they have the resources to continue business into the foreseeable future. It is for these reasons that Cisco Systems have developed a comprehensive evaluation guideline (WIKEPEDIA, 2007). Since ASPs vary from model to model, the setting of standards would be difficult. Although, the emergence of open-source software developing has addressed the major security

problems by providing development levels free for enthusiast and experts within the internet community to test prior to its final implementation.

Conclusion: Future Trends

The recent trends in the application service provider arena are still promising. Despite the mergers, bankruptcies that have hit the industries, this is still a growing growth to the investments from major companies to existing ASPs. The competition will still drive companies to rely on ASPs to gain market leverage. The challenge for ASPs is to be able to provide the growing needs of companies to outsource their IT needs. Although, the shape of ASPs in the future will be difficult to predict because of its evolution brought about by the changes in the levels of software and hardware.

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