Sustainability is the Key: Cloud Computing Business Models

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Executive Summary

A sustainable cloud computing business model should have the capability of translating new technologies into a service value proposition. The mediating construct should define appropriate pricing and cost accounting mechanisms of the service and should position the service provider's business at the appropriate point in the cloud computing value chain. The resulting business logic must clearly demonstrate the interaction between the business model, its position in the value chain and all the associated elements, and the cost model must show how costs are aggregated and distributed across customers. Pricing can be pay per use or subscription based and must balance risk sharing between the customer and the service provider.

Backup and recovery options in the cloud are being touted as the panacea for storing the burgeoning data volumes of modern-day businesses. Scalability, reliability, security and cost effectiveness are the parameters on which the available cloud storage services are being evaluated. Yet, the past decade has shown that scalability and reliability of the storage systems, is not enough. Some of these businesses have crashed so catastrophically that they have dragged down those businesses that placed their entire reliance on their storage service provider in the cloud. They have undeniably proved the point that even the most secure, reliable, scalable cloud storage option may be rendered useless if the cloud vendor's business model is unsustainable. Customers will find that their data still vanishes into cyberspace if their cloud partner's business construct does not define meaningful pricing and cost accounting mechanisms or position itself appropriately in the cloud computing value chain.

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The Bottom Line Matters

The bottom line matters. The fundamental question looms large: Does the business generate enough revenue to cover costs and meet future expansion plans? If the answer is negative, alternate questions must be asked: Does the business have other sources of revenue? Can that revenue be used to cover the costs and is that source a perennial? Can the business expect to be funded in perpetuity by this alternate source? If the answer is again negative, the business fundamentals are weak and it is not a business with which any enterprise can partner without risk to their own continuity!

Businesses that can generate sufficient revenue to meet the cost of operations can be considered reasonably stable with a capability to assure continued service to its customers—at least for the immediate short term. If the business has funds left over for investing in expansion plans, it can be considered to be healthy and even robust enough to guarantee customers' long term continuity. So, one test of stability of a cloud business is the profitability of operations.

It follows, that enterprises aspiring to the cloud should study the financial health of the company with specific reference to the viability of the revenue model that has been adopted. Does the model provide the company with the necessary cash flow for operations and profits for future expansion? To this end, there is a need to understand the different revenue models being adopted by cloud vendors and how the type of model adopted will have an impact on the sustainability of the vendor's business over time.

Evolution of Cloud Computing Business Models

The infancy of cloud computing was marked by some amount of confusion and misunderstanding. It was believed that revenue constructs would have to take into consideration the following factors:

1. The number of people to be serviced by the provider.
2. The size of the system to be deployed in terms of the power of its processor or the number of processors that would be required to service the needs of the customers.
3. The number of specific components to be managed such as interface servers, application servers or storage servers.
4. The types of applications that will have to be deployed.
5. The amount of data that will be generated and stored in the system and so on.

However, it was found that the above concepts—which were perfect business constructs for a world tied down to physical infrastructures, did not translate well in the virtual environment. In a virtualized world, it was very hard to tie down any of the above factors. Any number of persons could use a software tool or application from anywhere, any time. The abstracted environment could be scaled up hugely or shrunk to a bare minimum instantly. The amount of data generated and stored could vary from time to time and new applications could be deployed from any point in the globe with expectation that infrastructure would be provided on demand. Consequently, cloud computing business models could not be constructed on the lines of physical computing business models. It was evident that multiple licensing models were needed to service the requirements of the customers and the revenue construct must evolve untrammeled by past experiences.

What should be the basic unit of charge? This was a question that exercised the minds of the cloud vendors and two robust revenue models have emerged:

- The subscription based model, and
- The pay per use model

The Subscription Model

The subscription business model is ideal where business growth is linear and fairly predictable.

The subscription based revenue model could be a per-user; per-device or per-enterprise model.

The per-user subscription is a tried and tested model. The customer may be a single user logging into and using a single account or the account may be shared by concurrent users of the account. The charge is determined on the number of concurrent users or on total users.

Per-device subscriptions vary across vendors. The subscription may take into consideration pre-concurrent or total device usage or may be based on the "pre-processor" model. The license to use is based on the total number of processors or processor cores that are made available on the host system. For instance, an eight core processor SQL server may service 20 or 25000 users and permit access to a single large database. The user will be charged for all the 8 processors that are being used on the server.

Per enterprise license to use charges the enterprise as a whole for use of the service. The enterprise may permit 10 or 100 users avail themselves of the services provided by the cloud service provider under the single enterprise license. The license may be for use of a storage account or for use of software.

Subscription based licensing models will have to be designed with precision to be profitable. If the cloud vendor has designed the software with open source products, software license costs are bound to be negligible. On the other hand, if the software has been designed with licensed software, there is a definite cost to the software that must be factored into the service cost. The cloud vendor may also have to maintain a certain buffer in hardware and storage to scale up to sudden demands that may be made by customers experiencing a peak in their data generation or business. The buffer so maintained will have to be divided equally or pro-rata between customers subscribing to the service. An omnibus subscription price of $50 for unlimited storage would indicate that the vendor has not allocated costs appropriately and is on the fast track to bankruptcy.

Pay Per use Business Model

Where business growth is expected to be non linear and unpredictable, the pay per use business model is ideal. The logic behind this model construct is that demand for services is experienced in peaks and valleys. The average of all the peaks and valley in demand will cancel each other out, resulting in a "statistics of scale". This is beneficial to the cloud vendor as the service can be marketed to segments with similar degrees of variability in demand. These customers can be banded together using different pricing tranches with incentive compatibilities and scalable service level agreements. Consequently average fixed costs get distributed across customers and unit costs get reduced.

Additional factors come into play when comparing one cloud service vendor with another vendor using the pay per use model. A large service provider may provider deeper discounts, while a smaller vendor may offer lower discounts. Tooling costs may be distributed over a large base or a small base and staffing costs will increase or decrease according to the size of the business.

KineticD™ Business Model

KineticD™ was ranked as the 19th fastest growing company in Canada by Deloitte Technology Fast 50™ 2011. The revenues of this company increased 1,114% from 2005 to 2009, making it eligible for the ranking. The company provides secure online storage, disaster recovery and remote access solutions using a hybrid business model that has been highly successful.

The company has set new standards for protection of information held by small and medium sized businesses with an avowed mission of providing these businesses with the levels of data security enjoyed by large enterprises. The 60,000 customers of this company are supported with state-of-the-art data centers and an extensive partner network.

The pay per use business construct is integrated with a license fee collection system that is simple to understand. The company delivers value for money by offering a convenient storage package to its customers.

For backup of desktops/laptops users pay a license fee of $3.95 per system per month. A license of $6.95 per month is collected for servers. Thereafter, the user pays only $0.50 per GB of use per month. Any number of desktops/laptops or servers can be backed up into a single user account.

For more information, please contact the KineticD™ team — http://www.kineticd.com