Cloud – A view on why it's still overcast in CIOs' minds

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CLOUD – The Reality of present world!

Many organizations want to adopt Software as a Service or rather Anything as a Service for known benefits, but the reality is that decision making is very slow. CIOs are thinking and talking about cloud, but are very slow in deciding on implementation. What can be the reasons? Is it that companies have suffered in the past by investing in silos and then struggled to manage the complexity? Is it that companies do not feel secure with their data being exposed? Is it the resistance to change? The reasons can be any of these or more than these. This paper will discuss some of the reasons that prevented broad adoption of cloud at the business/technical level and will provide ways to extend the cloud to meet or exceed the expectations.

SaaS solutions have seen some resonance with the big enterprise customers but the penetration is minimal. The packaged cloud solutions are great and have a market potential, but Enterprises will adopt cloud only if it's an integrated solution. The solution should tightly fit into their existing IT echo-system. A solution for cloud based Email, CRM, Workflow, Storage, and Server etc. can be useful as point solutions, but when it comes to production environment implementation, these solutions need to work together with the existing systems and investments of an organization. Only those solutions will survive in the market, which have extendibility and are based on standards supported by interfaces/APIs. These solutions will be able to form consortium with the complementing products/services and will offer to customers an out-of-the-box, but still customizable implementation of integrated solutions for their requirements.

As an organization deciding about the cloud transformation and looking at the solutions available in the market, CIOs realize that there are gaps in what is being offered and what is actually required. This can be solved by looking at ways to extending cloud offerings. The seven ways that we can extend cloud are:

I.   Extensions for the core offering

II.   Integration framework and services

III.   Supporting Mobile Devices (BYOD)

IV.   Provisions for social computing

V.   MDM, Big Data & Analytics

VI.   Cloud Service Broker

VII.   Governance

I plan to discuss them in detail in the subsequent white-papers, but for now let's take them up one by one and summarize on the reasons why you should consider these extensions and the offerings readily available in the market that can cater to the required functionality.

I.   Extensions for the core offering: Vendors offering SaaS service in the cloud marketplace are also offering extendibility of their solutions. It will be prudent for customers to look at the 3rd party solutions being offered by the partner framework of these vendors.

We have learned from our IT application portfolios that no IT solution can exist as a Silo. The traditional solutions were required to work with each other and the expectations from the SaaS services are going to be no different.
So even in the selection of a SaaS service, importance should be given to the APIs and Web interfaces support for these solutions. Weightage should be given to the additional extensions offered by the partner network.

Many organizations are enriching their portfolio of SaaS services either organically by in-house or external development of extensions to their platforms or inorganically by acquisition. Let's take example of salesforce.com, what started as a CRM as a service, now has Sales Cloud, Service Cloud, Marketing Cloud, Salesforce chatter and SalesWork.com etc. The base platform is Force.com with AppExchange. The extensions created are a mix of homegrown development and acquired functionality by acquisition of companies.

II.   Integration framework and Services: Once we have given a serious look to the extendibility of the SaaS solutions and if the gap still exists, then there are solutions and services available in the market that will integrate any standards based solutions. Services like Boomi and Informatica Cloud can integrate any kind of SaaS services, on-premise applications, databases, flat files, file feeds and social messaging sites etc.

The end result is a cohesive system that is free from data entry errors and manages the relationships either interdepartmental or business partner without installing additional applications or paying fees.

True Hybrid cloud systems are only realized with a strong Integration framework and supporting services that will switch from on-premise to cloud and vice versa seamlessly, efficiently and without any effect on Quality of service.

III.   Supporting Mobile Devices (BYOD): Bring your own Device is an accepted policy in most organizations. The IT department is measured by the devices it supports and manages to extend the same stringent security policy to mobile devices as to in-house desktops.

The SaaS services are faced with increasing demand to be device aware. The SaaS service can be accessed from a desktop, laptop, Mac, iPad, iPhone, Android phone, windows phone or Symbian device. IT applications are expected to be aware of which device and browser it is being accessed from and

render accordingly. It is also the application responsibility to be aware of the device and browser limitations, but still provide the same level of Quality of Service. A SaaS application should be rated by the number of devices, stringent security standards and compliance standards supported by the application.

IV. <u>Provisions for Social Computing</u>: When we are going to provide services from the web and we are going to consume services from the web, then it will be a fair assumption that the providers will like to promote the services and users will like to provide feedback. The customers looking to buy these services will look for referrals and ratings for these services online.

SaaS services will need to provide a platform for the users to form a community. Either the platform should be part of the service or there should be provisions to use the social platforms already available.

Integration of social computing will help both the providers and users. The users will feel more comfortable using a service, which is supported by User Groups to discuss tips and tricks, platform to discuss issues and how to queries. The user will also choose the platform to complement or provide feedback for the new release of the service. The user will also use the platform to showcase the unique way they have implemented and benefitted from the service. The platform will help in creating an environment of easy adoption for the service by the users. The providers on the other hand can get a lot of information to plan the next release of the service. The providers will have a clear idea of the features liked and features requested by the users to update in the next release. The providers will also be able to use the data for marketing and targeting of these services to the new users.

The mutual benefit to both providers and users will help to create meaningful services for the users and will end up increasing the user-base and revenue for the service.

V. <u>MDM, Big Data & Analytics</u>Depending on the popularity of application, these cloud applications and users in result can churn out Terabytes of data. As stated by many researches only 20% of data is structured in current IT environments. This means that most of the decisions are made on this available 20% data, leaving out 80% unstructured data. This data is available within the organization and exists in various other sources like direct or indirect channel network, customer data existing due to customer interactions outside of organization, employee data existing due to employee interactions outside of organization and various other channels. The unstructured data once consolidated and analyzed can shape the future of the organization in terms of shaping their products, messaging and delivery in the market to bring them closer to the needs of the consumer and innovative ways of packaging and flexibility, which can provide an edge in the competitive landscape.

For the issues that will come into existence due to cloud services should be solved by Big Data as a service. Big Data cloud services with Analytics should be able to make use of structured and unstructured data to give out meaningful reports to better understand and have 360 degrees view of consumers and providers.

Investments made to develop the complete solution supported by consolidation of data and fast dynamic analytics are a onetime investment with rich benefits for all the partners involved i.e. the service providers, channel partners, service brokers and sub-brokers. We should learn from the rewarding experiences of consolidation in other industries. For example Telecom, where companies came together for Telecom towers. In fact it gave rise to another service provider to provide exactly the service of Towers with all the facilities and at a lesser cost. Many issues of location, real estate, power backup, support and maintenance got resolved. Similar to this cloud solution with added functionality of Master Data Management, Big Data and fast Analytics will be well received by the Enterprise customers.

Hence all the benefits of MDM and Big data in service creation, service promotion, customer service, loyalty Programs, shelf displays and customer retention will be available to cloud services providers.

VI. Cloud Service Broker:So far we have established that Enterprises will have a gamut of services and hence an orchestration layer is inevitable. But hold on, the complexity is deep, as this collage of services is built on top of an aggregated and preferably virtualized infrastructure. The challenges are for the IT administration team to manage this complexity. IT team will like to work with a platform to aggregate these services from different vendors, to provision and de-provision services for all the users, manage the licenses, raise support tickets and track these to resolution form a single window. IT team will administer accountability and resource optimization with the help of features of chargeback. One single bill for all the services to a department and consolidation of licenses at the organization level will bring in a lot of clarity and simplicity to finance department.

Hence, we are talking about a collection of service expectations and the term used for this cloud service orchestrator is Cloud Service Broker. A broker will provide you service for Consolidation of Services form one portal (internal/external) with Single Sign On, provision for on-boarding of new SaaS, PaaS and IaaS services in a few days rather than weeks, Monetization of these services with capability to handle margins for sub-brokers. The Cloud Broker Service provides a robust reporting and analysis engine for providing consumable data on subscription and real time usage of cloud services.
The Cloud broking platform is extremely useful when it comes equipped with a configurable catalogue. A catalogue, which not only provides information about the service with the help of whitepapers, Self-help manuals and configuration utilities but also have features for upsell, cross – sell and volume based discounts. Integration of Catalogue with a modern Shopping cart, security features to separate out genuine buyers and integration with major payment gateways are useful for easy adoption by Enterprises. A versatile solution will offer capabilities of localization in terms of time zones, currencies, languages and local laws for taxation.

VII. Governance:At the outset, I will stress that Governance is of paramount importance for cloud service. A cloud service without Governance is like software without testing.

Enterprise organizations are going to be hybrid cloud adopters. The core systems for the organization are going to be on premise either physical, virtual, private or hybrid cloud systems. The peripheral and supporting systems are going to be hybrid or public cloud. This hybrid system needs to be a part of the IT Service Delivery eco-system and be governed by the corporate policies and compliance standards.

A cloud service will only provide maximum value once it becomes a part of the IT service delivery tied to business goals and objectives of the organization. This is essential not only for highest levels of service delivery to be maintained but also because of security and compliance requirements. Organizations adopting processes for Service Strategy, service Design, Service Transition and Service Operation will be able to tie in the services to the business goals. The processes for Supplier Management, Service Level Management, Service Catalogue

Management and Availability Management will provide greater monitoring and controls necessary for running the service to expected levels of Quality of Service (QOS). All the other processes for Change, Release, Incident, knowledge, Configuration and Testing will make these services part of the administration and control required by the IT department to deliver these services successfully.

Summary

To summarize cloud adoption is at a critical inflection point and as solution providers spearheading this change, we should make the transition as comfortable as we can for diverse customers. We have moved ahead of the initial skepticism and understand the benefits, but to make it easier for the enterprises already with a large complex IT environment to adopt cloud services we need to provide a well-integrated cohesive solution with all the components so that it becomes an integral part of organization growth and roadmap for achieving success.

About Happiest Minds Technologies:

Happiest Minds, the Mindful IT Company, applies agile methodologies to enable digital transformation for enterprises and technology providers by delivering seamless customer experience, business efficiency and actionable insights. We leverage a spectrum of disruptive technologies such as: Big Data Analytics, AI & Cognitive Computing, Internet of Things, Cloud, Security, SDN-NFV, RPA, Blockchain, etc. Positioned as "Born Digital . Born Agile", our capabilities spans across product engineering, digital business solutions, infrastructure management and security services. We deliver these services across industry sectors such as retail, consumer packaged goods, edutech, e-commerce, banking, insurance, hi-tech, engineering R&D, manufacturing, automotive and travel/transportation/hospitality.
Headquartered in Bangalore, India; Happiest Minds has operations in USA, UK, The Netherlands, Australia and Middle East.

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