Cloud Computing in China

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For the proponents of cloud computing, China represents a vast landscape of potential, as well as a new, complex set of challenges. Its potential comes from the sheer number of Chinese companies and public sector entities who view cloud computing not merely as a cost-savings technique, but as a cornerstone to their business strategy and execution capability. For private companies, the promise of cloud computing lies in the unique opportunity to leapfrog the decades of IT evolution that took place in the West. Even the smallest private companies can immediately tap into the today's best-in-class computing resources and solutions, all while avoiding the cost burden of continuous hardware and software upgrades over the years. For the public sector, cloud computing is a transformative mechanism by which to link together citizen services with the "Internet of Things" - this integration of citizen data with smart devices allows China to serve its 1.3billion people as efficiently as possible.

This white paper discusses how cloud computing is a transformative force for innovation in both key market segments –private enterprise and public sector – in China.

The Public Sector: Citizen Services meets the Internet of Things

As part of China's 12th Five Year Plan, there are seven industries which are targeted to comprise 8% of China's GDP by 2015. Next-generation information technology is one of those seven target industries, and within the notion of next-gen IT, there are two top areas of focus: cloud computing and the Internet of Things (IOT). The IOT is a broad concept, and spans a wide range of different applications and use cases, but at its core is the ability for individual devices to relay data to one another in a concept known as Machine to Machine (M2M).

An important example of this concept at work is in the healthcare space, where sensor equipment onboard ambulances can transmit data directly to the receiving hospitals, and the hospital staff can review the data before the patient arrives. At which point, the staff at the hospital can relay life-saving instructions directly to the emergency workers onboard the ambulance, based on the data they are seeing. Because seconds and minutes can be the difference between life and death, this ability to extend medical care beyond the confines of the hospital building is fundamental to more efficiently serve citizens. Such innovation in citizen services is enabled by smart devices that act as real-time extensions of the hospital staff.

Since smart devices are not computers in the traditional sense, they hardly have the capacity for on-board applications. And since they are on-the-go, or otherwise in the field, they are not confined to a single server room that is accessible by an IT staff. So their infrastructure and applications must be in the cloud, thus paving the way for specialized private clouds that host the applications and transfer data. These specialized clouds are the cornerstone of greater efficiency in citizen services, both at the point of service in their support of rapid data exchange and decision-making, and also at a public policy level, through the rich dataset on which to base policy and resource allocation decisions.

The significance of cloud computing for the public sector goes beyond M2M, and touches on the more mainstream uses of cloud computing. In China – the process for wide-scale reform or change is gradual and usually starts with a pilot site, which serves as the template for the rest of China. Technological

change is no different; as such, cloud computing is an enabler of more rapid and widespread adoption of new technologies and innovations. With cloud computing, the pilot site's model (and applications) can be easily replicated across the rest of China, once the pilot has proven successful. The pilot site's core technologies are provisioned to the cloud, and then deployed to other regions in China.

Private Enterprises: Leapfrogging towards Best-in-Class Solutions

The evolution of IT throughout an enterprise stretches back at least four decades. With those years of IT evolution, there came a proliferation of older, legacy applications and systems that are either orphaned when the IT department shifts direction, or are maintained at significant cost to the organization. Since many Chinese companies are relatively new, or are relatively new to the world of enterprise solutions, cloud computing presents a unique opportunity to leapfrog over the baggage that other companies carry.

Cloud computing also can be a boost for companies in China that are not otherwise mature in their own processes. Many small and medium sized businesses – of which there are many hundreds of thousands – certainly can benefit from having robust processes and controls that come in the form with an out-of-the-box solution. And as is the case with cloud computing in general, the lower upfront costs can be a major benefit, especially to the small and medium sized businesses.

Despite the demand of private enterprises in China for cloud computing, the options are rather limited for customers interested in Platform-as-a-Service (PaaS). Many of the leading PaaS providers do not operate public cloud data centers in mainland China, requiring Chinese users to route their needs through other countries (thus facing latency issues). This could change in the future, but as of right now the vacuum of PaaS data centers in mainland China creates a challenge because of government restrictions that do not permit certain types of data to leave mainland China. Yet, this gap presents a very sizeable opportunity for a leader to emerge. Infrastructure-as-a-Service (IaaS), on the other hand, is readily available in China as there is no shortage of high performance data centers. Customers can easily tap into IaaS from a wide range of providers, ranging from traditional IT service providers to telecoms, and deploy their own private clouds as needed.

Conclusion

iSoftStone has been helping both public sector and private enterprise clients with their cloud computing needs for the past few years. We have a strong belief that cloud computing is paving the way for not only greater efficiency among Chinese entities, but also transformation for the very way in which business is done in China. During this unique time of transformation and rapid technological change, we are excited to work alongside these clients and support them throughout the journey.