E-Guide

The state of cloud adoption in India

The use cases, industry trends, business demands, and user expectations driving cloud adoption in Indian organizations

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IT Professionals at organizations based in India *have borne witness to a shift in the adoption of cloud computing. Government support, improved vendor offerings, and an emergence of proven best practices have all conspired to push cloud computing to the top of many organizations' priority lists. This e-guide focuses solely on identifying the trends driving cloud adoption across India — and offers IT pros based in India a glimpse into the motivations underlying cloud adoption.*

Public cloud adoption accelerates in India
By Dinesh Dhiman

Indian businesses will spend 36% more on public cloud services this year to lower costs and increase business flexibility, according to research.

Cloud-based IT, particularly public cloud services, reduces the upfront costs associated with hardware and software purchases and implementation. In addition, public cloud services make capacity planning less critical as a result of on-demand computing.

According to Gartner, public cloud services sales will be worth 24.54 billion INR this year, a 36% increase compared to the last year. Infrastructure as Service (IaaS) is the fastest-growing segment of the market. IaaS sales rose 22.7% in 2012 to reach 2.38 billion INR. Gartner expects sales to grow 39.6 % this year.

The biggest segment of the market is Software as a Service (SaaS), which has 36% of the total cloud service market. Out of the 233 billion INR that will be spent on cloud computing between 2013 and 2017, 89 billion INR will be spent on SaaS.

"The continued growth of the cloud services market will result from the adoption of cloud services for production systems and workloads, in addition to the development and testing scenarios that have led as the most prominent use case for public cloud services to date," said Ed Anderson,

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research director at Gartner. "Evidence of this growth is found in the increasing demand for cloud services from end-user organizations, met by an increased supply of cloud services from to the era of full-scale enterprise deployments.

The cloud service that mainstream software giant Microsoft offers is evidence of this. Curt Anderson, chief financial officer at Microsoft's server and tools division, recently said the company's Azure cloud service had made one billion in the last 12 months. Microsoft is aggressively targeting competitor Amazon in the IaaS market. It recently reduced the general availability prices on Linux and Windows Server virtual machines and cloud services by 21-33% to match Amazon's Elastic Compute Cloud prices.

According to research from India-based CIO Klub and Ernst & Young LLP, businesses are moving to the cloud to lower their IT infrastructure and administrative costs and to adopt a flexible and scalable model for IT.

The Enterprise IT trends and investment 2013 report from CIO Klub and Ernst & Young revealed that 38% of CIOs have cloud computing as a priority. More than 60% said the need for scalability and flexibility is driving this.

Cloud services have gained impetus in India but progress is slow. As stated in the report, "This is not surprising, as the number of risks and challenges identified by respondents have remained fairly consistent over the years."

According to the research, data security and lack of control in the IT environment are the key concerns of CIOs. As noted in the report, "Like any transformational initiative adoption of cloud also faces internal resistance as turning over control of the security of their IT infrastructure and data is an inherently uncomfortable situation for any senior corporate manager."

Another factor that CIOs say is slowing the progress of cloud computing is increased bandwidth and network costs. This can reduce the savings in internal infrastructure costs.

Cloud critical to e-governance in India
By Dinesh Dhiman

The Government of India is expanding e-governance throughout the country and is working on embracing cloud computing for it.

The concept of e-governance is aimed at reducing rampant corruption and providing government services to the people living on the margins of the society. E-governance optimizes the use of available resources and infrastructure. This results in faster delivery of services and removes middlemen that tend to take advantage of loopholes in the system to make a quick buck.

Per the latest report by specialist research and analyst company DCD Intelligence, India is one of the leading investors in the data center power sector. This means that the national government is serious about implementing cloud computing.

But there are challenges. Professor Sadagopan, chairman of the core committee meeting at the Center for e-Governance, Karnataka, told the Economic Times last year, "The IT department at center has been talking about setting up cloud computing-based services for a while now but what remains to be seen is how fast these services will be set up. Once established, it'll be big shift from our current PC culture but we also need greater understanding of the data security challenges that could arise out of this."

The Department of Electronics and Information Technology has rolled out an ambitious 18-point agenda regarding the creation of IT solutions for electronic, R&D, cybersecurity and IT policies. The department aims at providing a slew of services by the end of the current year.

This 18-point agenda includes:
1. National rollout of mobile service delivery gateway
2. National Information Infrastructure (NII 2.0)
3. National cloud computing initiative (Phase I)

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4. Setting up of a National e-Governance Academy
5. Scheme for IT mass literacy
6. Common man interface
7. Setting up 10 new Software Technology Parks of India centers
8. eGov App Store
9. National cybersecurity policy
10. Setting up semiconductor wafer fabrication manufacturing facilities
11. Scheme for financial assistance for setting up electronics and information and communication technology academies in states and union territories for faculty development.
12. Electronic system design manufacturing
13. Scheme to advance research in the areas of electronics system design and manufacturing and IT/IT-enabled services

Unique Identification project and the cloud

The Unique Identification project that the Indian government is rolling out should also be mentioned in this discussion about cloud computing. This project gives a unique identity to every citizen and removes any chance of abuse of resources. As part of the project, the government has already collected biometric and demographic information of about 20 million people.

All Indian citizens will receive an ID card that authenticates their identity through biometric checks. Enrollment will include 600 million people, and each person registered will have an estimated 5 megabytes of data. The data center that will hold the information will have 4 terabytes of data coming into it every day during peak enrollment periods, making it about the biggest non-commercial datacenter in the world.

IT services provider MindTree was awarded a software development and maintenance contract to support the complex software that will authenticate every Indian citizen using biometric technology.

Anjan Lahiri, president of IT services at MindTree, told Computer Weekly that the project will succeed in India, where the UK failed, because it is about alleviating poverty rather than privacy.

Cloud: Transforming the Indian IT industry
By Anuj Sharma

Businesses have adapted their priorities to the current economic climate, with more Indian enterprises changing how they view IT. Many of the big telecom providers are using their existing IT infrastructure to offer public cloud services such as Software as a Service (SaaS), Platform as a Service (PaaS) and Infrastructure as a Service (IaaS).

Small and medium-sized businesses (SMBs) are evaluating public cloud offerings to save on the cost of physical IT infrastructure, allowing these companies to focus on their main business. Enterprises are in the process of cloud transformation by consolidating computers, storage and network for optimal and efficient use of resources.

The latest cloud research by International Data Corporation (IDC), "India Cloud Market Overview, 2011-2016," estimates the Indian cloud market will grow more than 70% this year.

"We have definitely seen cloud cross the inflexion point at the end of 2011; use cases especially in IaaS and SaaS areas provide testimony to that. With proper messaging from key vendors and due diligence of opportunities that exist in the cloud delivery models, the market will grow much faster in the coming years" said Nirupam Chaudhuri, research manager of software and IT services at IDC India.

In addition, business revenue spurred by cloud innovation will reach $1.1 trillion by 2015, IDC said in its recent report "Cloud Computing's Role in Job Creation." IDC found that 6.8 million jobs will be created in India and China and 1.2 million will be created in the US. The rest of the Asia-Pacific region will see 2.9 million cloud jobs, while Europe, the Middle East and Africa will have 2.9 million jobs generated, according to the report.

Areas where cloud computing will affect (or is already affecting) the Indian IT industry include:

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- **Increase in demand for cross-domain skilled resources.** With the increase in adoption of public, private and hybrid cloud, the need for people with cloud skills will increase. Those involved in cloud infrastructure design, implementation and administration should have an understanding of server, network and storage area network technologies.

- **More IaaS public cloud offerings available.** The increase in IT companies and Internet service providers offering IaaS has helped SMEs realize economic benefits.

- **The software industry taking is taking advantage of PaaS.** With many Indian SME IT organizations developing software for enterprises across the globe, PaaS provides developers different development platforms with less capital expenditure involved.

- **SMEs and larger enterprises are taking advantage of SaaS.** With the SaaS providers such as Microsoft and Amazon entering the Indian market, more companies are considering SaaS. Applications such as Microsoft Office 365 and SAP Business by Design let companies avoid the hassles of managing the complex IT applications while helping them saving money .

The transformation to private cloud is gaining momentum, but at slower pace compared to public cloud offerings. Private cloud involves more initial cost for new hardware, software suites and cloud skills. It also takes time for companies to realize the ROI of private cloud transformations.

IT services in India driven by cloud, social and mobile
By Karl Flinders

The National Association of Software and Services Companies (NASSCOM) members is expected to sell more IT services and business process outsourcing to Indian businesses than export them in the next 12 months, but what is driving the demand?

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According to NASSCOM, sales within India will grow at between 13% and 15% to reach Rs 1.18 to Rs 1.20 lakh crore. This compares to an expected growth rate of between 12% and 14% for exports, mainly to Europe and the U.S. Exports will be worth up to $87 billion.

Manish Bahl, vice president and country manager India, at Forrester says according to the firm's "Forrsights Budget and Priorities Survey" for the final quarter of 2012, IT technical consulting is expected to be the highest growing part of the services market in in India. This is above the overall Asia Pacific average.

"The rapid rise of cloud computing, as well as social media and mobility in India has started to affect how organizations do business in the country and organizations will take help from vendors assess their current IT infrastructure, and develop technology road map to address consumerization of IT," Bahl said.

Cloud computing, for example, will engender consulting relationships, according to Bahl. He said that application portfolio rationalization, application modernization and cloud source assessments are three ways organizations could use consultants.

But according to Forrester's latest research, "Systems Integrators Are Failing To Meet The expectations Of Indian CIO," CIOs don't think they get much business value from their service providers.

According to the report, "CIOs feel that SIs [systems integrators] are overly focused on technology projects and do not understand changing business requirements." The authors continue, "CIOs want service providers to align their sales, delivery, and client service teams to the organization's business objectives to respond quickly to the changing business environment."

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