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edit

THE BIG GETTING BIGGER

INTERNAL DATA CENTRES WILL CONTINUE TO EVOLVE, BUT A LOT MORE IS HAPPENING IN THE BIGGER, BETTER THIRD-PARTY FACILITIES

Certain things are true not only of business entities but technologies—or the facilities that house them—as well. Data centres, those jumbled piles of servers, wires and networking gear one often sees whirring in some gasping-for-space rooms, are getting bigger and bolder than ever before.

Previously limited in their role as providing the means to run a few business applications and supporting the day-to-day networking needs of employees, data centres of late have been coming into their own as hubs that increasingly drive business. Be it the growing number of devices in the organisation, the rising terabytes of structured and unstructured data, and the faster crunching of multiple applications, data centres have the spotlight turned on them like never before.

The reason for this can be understood in terms of the growing risks and costs associated with data centre downtime. According to Emerson Network Power's 2013 State of the Data Centre infographic, such costs have gone up 33% since 2011. Further, it says that the average cost of a complete data centre outage is $901,560, and businesses average one complete outage every year.

In India, too, with the growing reliance companies have on data centres for business operations, the costs and risks are sure to go up. All the same, CIOs and their lieutenants must make room for more racks and more application loads in their DCs in ever-shrinking time windows in order to support growth. All this while trying to keep energy costs in check and meeting the regulatory and compliance needs.

A couple of scenarios are emerging in this context. One, enterprises are consolidating and re-architecting their own data centres, using technologies such as virtualisation and DCIM (data centre infrastructure management); and two, farming out part or all of their IT infrastructure needs to independent data centres (IDCs) or cloud service providers (CSPs).

The first option takes their fight with server/storage sprawl to the next level, and is marred by challenges of attracting and retaining technical talent. The latter requires bolder (and sometimes riskier) thinking and new skill-sets on the part of the CIO and his (much leaner) team: defining and managing SLAs, monitoring the cloud service, optimising it, etc.

The second type of data centre activity is relatively new to India, which is witnessing some really big IDCs set up shop or expand presence (CtrlS, Tulip, Netmagic, to name a few).

While the wheel will keep turning for internal data centres for many more years, CIOs should brace themselves for more immediate action in hosting applications on the bigger, more efficient and (hopefully) more cost-effective facilities of third-party providers.

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47% THE ANNUAL GROWTH RATE OF DATA CENTRE INFRASTRUCTURE (DCIM) MARKET IN THE NEXT THREE YEARS.

77% OF IT DECISION MAKERS DEEM SERVER, STORAGE AND NETWORK VIRTUALISATION AND CONSOLIDATION A HIGH OR CRITICAL PRIORITY*

* FORRESTER'S Q3 2013 HARDWARE SURVEY

THE NEW DATA CENTRE

No longer their stodgy, sprawling selves, data centres continue to evolve in tune with the consolidation and agility efforts of enterprises

BY JASMINE DESAI

A number of Indian and global players are making strategic investments in building world-class data centres in India, accelerating the data centre transformation scenario in the country. Enterprises themselves cannot escape transformation of their data centres due to the new levels of services they are expected to provide.

According to 'Data Centre Landscape in India,' a recent report released by NASSCOM, current technological trends like DC consolidation, green computing, and virtualisation are impacting the landscape, while emerging trends like DC automation, DC-in-a-box and network convergence are expected to be game changers for the industry.

Says Chandrashekar Gangadhar, Country Manager - Network & Mobility, HP India, "Data centres will reach an unsustainable point in the next five years; the average enterprise will see data capacities grow more than 800%. Enterprises need to be able to manage this exponential growth in data while introducing new applications, such as big data and analytics, using delivery models such as virtualised infrastructure and the cloud."

The transformation landscape

There are myriad transformational opportunities available in the data centre space. According to Shaheen Meeran, Managing Director of Schnabel, a DC consulting firm, "Multi-tiering of data centres to address actual application availability needs, modular design for deferring or avoiding extra capex, industrialisation of data centres for pre-integrated and speedy deployment, use of Data Centre Infrastructure Management (DCIM), tracking and improvement of energy usage, responsible site selection, use of renewable energy, and data centre certifications are a few of them."

According to Forrsights Budgets And Priorities Survey, Q4 2013, 67% of the respondent interviewed in India (out of total 201) said that their hardware spending (including both operating and capital budget) will increase in the next 12 months. In the same period, 43% respondents said that their software-as-a-service spending will increase as well.

> Once cloud concerns go away, in the next 4 to 5 years, organisations like ours will not even think of owning any servers.

Girish Rao,
CIO, Marico India Pvt Ltd

> The company's growth demands new technology to be applied in the data centre, but the legacy environment makes this task for the CIO very hard to achieve.

Sony Anthony,
Director, KPMG India

The key business drivers in data centre spending include business continuity and disaster recovery, and the need to make businesses more agile.

CIOs are looking forward to new technologies to effectively manage data centre growth. They are also considering options like consolidation, colocation and even outsourcing data centres. According to Meeran, "There is a growing awareness of the importance of standards-compliance in data centre planning in India as an "insurance" towards business availability. Also, there is a growing need articulated to have a single-portal view of the operations and management of all layers of a data centre."

In addition, the Indian market has been a cost-savvy one that has believed in doing more with less. Enterprises have also begun to focus on optimising energy and other operational costs in the data centres.

Says Sony Anthony, Director, KPMG India, "While virtualisation plays a key role in all consolidation efforts, migration to the cloud is becoming one of the most important solutions. Most Indian CIOs are keeping a hybrid consolidation approach in their minds."

According to Girish Rao, CIO, Marico India Pvt Ltd, "There is no transparency when it comes to services in India. Most of the services are based outside India especially when it comes to cloud. Data centre service providers will eventually move onto cloud providers. From our perspective it is going to be about compute power, memory and disk. Organisations like ours are still adopting on-premise kind of servers."
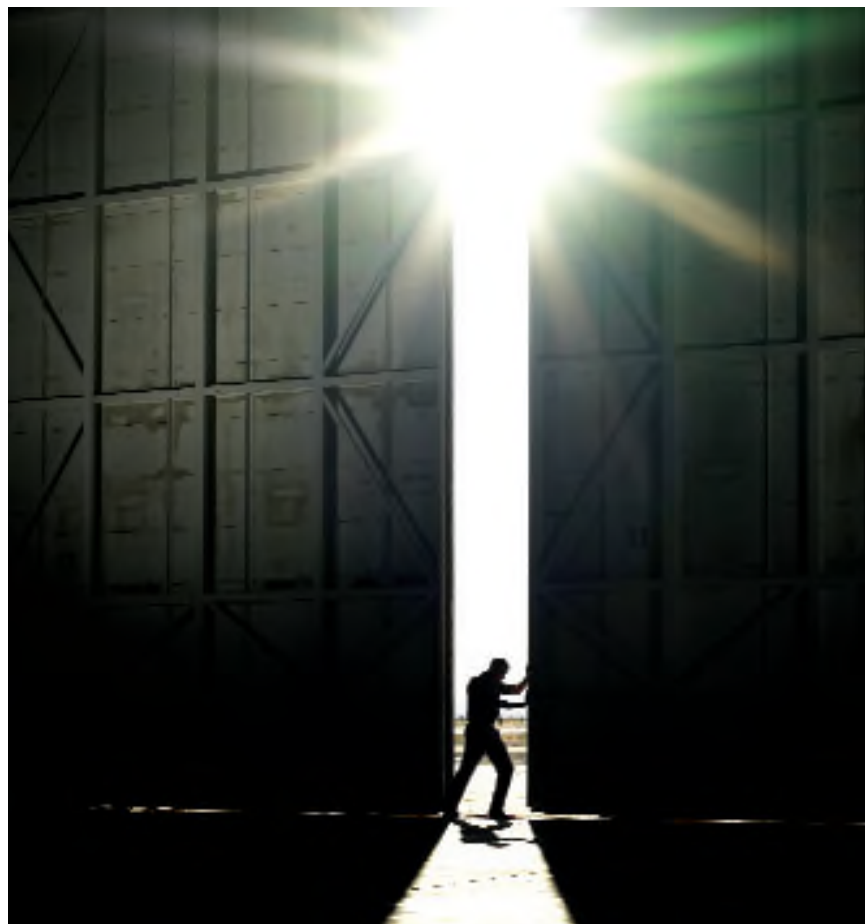
Marico has 20% of its applications on private cloud and 10% on public and the rest in its co-located data centre. Says Rao, "Once cloud concerns go away, in the next 4 to 5 years, organisations like ours will not even think of owning any servers. Basically, we would like to convert our capex into opex. By that time, technology would have matured and there would be a clear model for charging and monitoring these kinds of services."

Presently, Marico is undergoing the second phase of virtualisation. Marico's central data centre is located at Tata premises in Mumbai and the DR is in Hyderabad. Earlier, there were 60 servers—a number which was brought down to 18.

According to Rao, through virtualisation, the organisation wants to bring down the server number even further to 10, as the technology gives more value in terms of higher system utilisation. Around four to five years back, there were 4 to 5 racks of servers, but now it is just one-and-a-half rack. The aim is to bring it down to just a single rack.

What is more, the total utilisation of resources in terms of power, CPUs, etc., is well optimized compared to the situation earlier. Consolidation has definitely given the organisation more value in terms of usage of the systems and has in turn simplified their DR strategy as well.

Sudhanshu Bhandari, Senior Analyst, Forrester Research, says, "This year has already brought new server and CPU offerings from vendors like Intel, IBM, HP, Dell and Cisco. CIOs should plan server upgrades accordingly. For the same floor space, rack space, or power budget, organisations will be able to perform approximately 50% or more work than what they currently do."

They should also harness the benefits of converged infrastructure. Rather than purchasing technology infrastructure from various vendors and integrating these components, CIOs should use converged systems that deliver server, storage, network, and management tools in a box. This will enable them to show faster returns on investments and yet, at the same time, improve performance and

simplify the management of technology infrastructure, he says.

The transformation story is different for every organisation but there are several things in common when it comes to data centres. According to Arun Gupta, CIO, Cipla Ltd, "Data centres are the basic foundation for any business or industry using IT. The evolution is consistent with others and not in any way different." Cipla underwent data centre transformation last year when it decided to colocate the data centre with a third-party service provider (Netmagic). With change in the application landscape and increased use of IT, the company wanted higher efficiency and improved utilisation levels.

Since data is growing very rapidly, a lot of opportunity exists in the space of automation and application-aware storage. Says Amit Malhotra, Senior Director, Storage Sales, JAPAC, Systems Division, Oracle Corporation, "In a data centre, not all applications behave similarly and not all storage can be similar to the application. Organisations should focus on applications which are

TOP CONSIDERATIONS FOR CIOs

1 Data centre fabric is becoming a hot topic of discussion amidst Indian CIOs and IT architects, as the technology gives a new base to data centre operations and enhances performance. Using Ethernet Fabrics, one can achieve a flat, highly scalable layer 2 multipath with high switching capacity, high cross-sectional bandwidth and low predictable latency. By creating flat data centre switching, data centres spread across physically separate locations would appear to be a single virtual data centre.

2 As more and more data centres in India metamorphose into advanced, intelligent and efficient hubs for business apps, DCIM assumes great significance in bringing IT and facilities together. The goal of a DCIM initiative is to provide administrators with a holistic view of a data centre's performance so that energy, equipment and floor space are used as efficiently as possible.

3 The year 2014 has already brought new servers and CPU offerings from vendors like Intel, IBM, HP, Dell and Cisco. CIOs should plan server upgrades accordingly. For the same floor space, rack space, or power budget, organisations will be able to perform approximately 50% or more work than what they currently do.

4 Rather than purchasing technology infrastructure from various vendors and integrating these components, CIOs should use converged systems that deliver server, storage, network, and management tools in a box. This will enable them to show faster returns on investments and yet, at the same time, improve performance and simplify the management of technology infrastructure.

Source: KPMG, Forrester

> "I do not believe there is an 'ideal' state for a data centre; there will be continuous evolution.

Arun Gupta,
CIO, Cipla

> Enterprises need to be able to manage the exponential growth in data while introducing new applications using delivery models such as virtualised infrastructure and the cloud.

Chandrashekar Gangadhar,
Country Manager - Network & Mobility, HP India

storage-aware and storage which is application-aware."

One step at a time

Enterprise innovation is constrained by the complexities of outdated IT. Organisations must optimise and modernise infrastructure in order to deliver a new style of IT that accelerates revenue generation, drives innovation and reduces business risk—all while reducing overall costs. According to Anthony of KPMG, "Indian CIOs are hindered by legacy infrastructure. The company's growth demands new technology to be applied in the data centre, but the legacy environment makes this task for the CIO very hard to achieve. For example, running a legacy application may not be compatible to the new environment/technology and the cost of replacement of legacy applications may be high, forcing the CIO to stay with the legacy environment."

According to Bhandari of Forrester, "In order to support new business initiatives, companies will need to constantly optimise their existing technology landscape to maintain the budget balance." In order to do so, CIOs need to be on the right side of the equation and put these I&O technology-led initiatives into context of larger, organisational constraints and realities.

that the new IT platform, combined with HP's mission-critical support, increased network availability and reliability.

Says Bhandari of Forrester, "Vendors have strong maturity to do transformation that involves non-disruptive P2V (Physical to Virtual). However, there is more maturity needed on open standards and software defined environments in the Indian market."

According to Meeran of Schnabel, space and capex optimisation, as a part of the design and planning process, allows the company's clients to take a more compelling value proposition to their customers in turn. "For all clients, we help lower operational costs towards energy by making the energy efficiency metric PUE (Power Usage Effectiveness) a design outcome," she says.

In spite of consistent challenges and changes, is there a perfect state that can be reached in the data centre world? According to Rao, "The ideal data centre as I see it, will be in which physical space gets reduced further and further with consolidation. Once the limit has reached, then there could be a push towards private cloud, with better monitoring facilities within servers. Right now, even with virtualisation, resources are fixed within the virtual system. But once the private cloud is mature enough, organisations can get elasticity between servers also."

In the next two to three years, several constraints for data centres are expected to go away or be tackled more effectively, so that enterprises can take better advantage of new opportunities supported by mobility, cloud, and high-performance networking. According to Anthony of KPMG, "Data centres will no longer be constrained by one specific site. Instead, organisations will have multiple sites and stay connected by high-performance networks, with the ability to move workloads to where it is less risky and more secure for the business."

Gupta of Cipla does not believe that there is an 'ideal' state for a data centre. In fact, continuous evolution will continue to define the data centre space for many more years to come.

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Bhandari believes that by 2020, there will be a significant shift in the role of I&O professionals from the builders of systems from the ground up to "brokers of technology." And CIOs will face a big challenge in bringing about that cultural change.

According to Gangadhar of HP India, "To deliver real business outcomes, transformation requires a change in people, processes and infrastructure." He cites the example of telecom major Bharti Airtel, which migrated to HP's high-end Superdome servers for their entire network data centre infrastructure, to cope with increasing loads on data centre operation network backbones. He claims

> "Transformational opportunities in the DC space include multi-tiering to address actual application availability needs, modular design, use of DCIM, and data centre certifications, among others.

Shaheen Meeran,
Managing Director, Schnabel

THE KEY BUSINESS DRIVERS IN DATA CENTRE SPENDING INCLUDE BUSINESS CONTINUITY AND DISASTER RECOVERY, AND THE NEED TO MAKE BUSINESSES MORE AGILE

SHOW OVER FOR WINDOWS XP?

As the curtains come down on one of the most successful OSes, let's take a look at how the end-of-support scenario as enterprises have known it will play out

BY PUPUL DUTTA

Last November, Microsoft made the announcement that it will stop (service) support for its flagship professional operating system, Windows XP, starting April 8. Given that there's a large transactional IT infrastructure running on this OS, the announcement is of significance to both the IT and business managers.

So, what happens to customers who do not wish to migrate to other OSes? Answers Amrish Goyal, Manager, Windows Business Group, Microsoft Corporation (India), "Nothing exactly happens to these organisations who refuse to migrate to another OS; they can continue to use it. They would just not get any updates or patches and will become more vulnerable. So the next time the PC using an outdated OS logs on to the Internet, the risk of getting a virus attack will be higher as compared to any other PC using the latest OS."

While several organisations have started moving their mission-critical PCs to the Windows 7 or Windows 8 platform, IDC believes that a large number of enterprises have still not put a definite plan in place with stringent timelines for upgrade/replacement of their existing Windows XP systems. Based on data points gathered through multiple interactions with the enterprise market, IDC estimates that 50–60% of the installed base in the enterprise market is still running Windows XP.

While PCs purchased in the past year have been shipped with Windows 7 or Windows 8, enterprises usually have a replacement cycle of 3 to 4 years for systems.

So, what next?

Microsoft had originally launched Windows XP in 2001, which is also its most successful operating system till date. After revamping security and ridding its web browser, Internet Explorer, of bugs, the OS had evolved into a relatively stable platform with the Service Pack 2 release. Other Windows launches after that have met with partial success and a lot of enterprises have stuck to XP as their choice. Windows Vista failed miserably but Windows 7 saw

‘We will be offering paid support after April but the cost will be very steep. It will be close to $300 per computer per year’

Amrish Goyal,
Manager, Windows Business Group,
Microsoft India

‘The process of migration requires a planned, phased approach along with a clear roadmap which is in sync with an organisation's overall objective’

Girish V Gupta,
Country Manager,
Citrix Consulting India

good uptake; Windows 8 again has been slow to pick up.

According to Microsoft, the next most logical upgrade for companies would be Windows 8.1. Says Goyal, "Windows 8.1 is not very different from Windows 7; rather it is more efficient and modern. Basically, moving up from XP is the primary thing, and companies can do so on any OS of their choice."

However, there are companies, especially PSU banks, that have still not migrated and do not wish to do so for saving some bucks. They can in that case consider desktop virtualisation or opt for paid support that Microsoft plans to offer for another year. "We will be offering paid support after April but the cost will be very steep. It will be close to $300 per computer per year," informs Goyal.

Talking about desktop virtualisation, which is not only cost efficient but also supports smooth transition, Girish V. Gupta, Country Manager, Citrix Consulting India, explains, "Migrating from Windows XP is a mission critical task for several organisations and this can snowball into a larger concern, disrupting business continuity and incurring heavy expenses for maintenance. The process of migration requires a planned, phased approach along with a clear roadmap which is in sync with an organisation's overall objective. To make this happen, desktop virtualisation is one of the most preferred technologies which can not only support the transition seamlessly, but endorse mobility at the workplace, among many other benefits for both employees and employers."

Microsoft warns about security in case companies decide to continue to work on XP. The company has clearly stated that it will no longer offer service packs, security updates or hot fixes for Windows XP after April 8. Nonetheless, the company will provide updates for its anti-malware apps until July 14, 2015.

Fortunately, a number of vendors, including Avast, Sophos, ESET and Trend Micro, will continue to support Windows XP into the foreseeable future, and as long as they do, enterprises will get an important layer of protection.

Migrating XP data

To help organisations that do choose to migrate to another OS with a smooth transition, Microsoft has partnered with Laplink Software to provide a free tool called PCmover Express for Windows XP. It transfers XP data to Windows 7, Windows 8 and Windows 8.1 computers.

"According to our estimates, only 30% of enterprises are remaining for upgrade, out of which 20% are expected to let their computers die before they install new infrastructure," says Goyal.

Some of those who have migrated are happy with their choice and warn others against using an obsolete operating system.

"We migrated from Windows XP in order to have greater security for our 155 million customers' database across 23 circles in India. Post the migration, we have experienced a significant improvement in overall productivity and savings in our carbon footprint. We aim to update our entire computing base to Windows 8.1 before end of first quarter this year, as the utilisation of updated IT assets lowers down the security breach risks and also overcomes compatibility issues across devices," says Manish Israni, Vice President, IT Infrastructure and Data Centre, Vodafone India.

What it means for banking

For the banking segment, Indian Computer Emergency Response Team (CERT-In) has advised all the banks to take action as soon as possible.

In its advisory note, the security regulator of the country says, "It is recommended that all the users and organisations using Windows XP OS in their environment should immediately plan for upgradation to the latest available OS according to their requirement."

According to a study conducted by Ascentius Consulting, a large number of branches that rely on XP, especially in the rural and semi-urban areas, may go down and therefore deny service to customers completely. In metro and urban branches, the impact is expected to be as great as 55% of customers facing an extended waiting time of up to 30

HIGHLIGHTS OF THE ASCENTIUS RESEARCH

● There is a large segment of state owned banks that have embarked on the journey to move away from Windows XP, but may still be left with approximately 20% to 30% of their base on Windows XP even after April 2014. These banks may inadvertently take up considerable risk exposure.

● From a technology risk perspective, with no new patches, hot fixes, free support options, Windows XP will become zero day forever. Cyber criminals will focus on Windows XP to identify new sources of vulnerability and are likely to focus on targets with significant monetary potential.

● CERT India has written an advisory note for Windows XP users to immediately plan for upgradation to the latest available OS according to their requirement. Leading anti-virus software companies indicated that they cannot guarantee that they will be able to prevent threat activity involving unpatched exploits from their Windows XP PCs.

● The penetration of Windows XP is particularly higher in semi-urban and rural branches. Lacking support at these locations, there is a non-trivial likelihood for customers to face delays, service disruptions and denial of service in conducting banking transactions.

● New business opportunities such as financial inclusion and MGNREGA payments are becoming important source of income for banks in rural markets. Banks are likely to lose out on leveraging these emerging business opportunities because Windows XP PCs are unlikely to support the current edition of biometric hardware, card encoders and software that has been written for latest technology.

minutes for an average transaction.

"The fiscal impact of this could be as much as loss of business opportunity worth Rs 1,100 crore in a day and a loss of income of Rs 330 crore over a period of 3 days (assuming that a major incident may take 3 days for the systems to come up to normal functioning). Non-migration may also expose customers to greater risk of identity theft and fraud," the study states.

Unfortunately, for the global banking industry, Windows XP runs the vast majority of ATMs (80%) in the world. However, banks say they have put in place plans to mitigate against the issue, either by upgrading or putting their own

support services in place. As a result, they say they don't anticipate any problems. "We will continue to use XP as not all our systems in the bank are connected to the Internet. And for those that are (connected to the Internet) we will be using third-party security software to protect against any virus attack," explains a leading PSU bank's employee on conditions of anonymity.

Going by how different enterprises are taking to the Microsoft announcement and the large installed base of the OS, Windows XP is going to be around for many more years to come.

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Atul Bhatnagar, President and CEO, Cambium Networks, discusses with Pankaj Maru the idea behind the company's newly opened R&D facility at Bangalore, potential of the Indian market, and much more. Excerpts:

"We have maintained the strong heritage from Motorola"

Can you please share the rationale and strategy behind setting up the global wireless R&D hub at Bangalore?

Our goal is to connect the unconnected with product offerings. The success of our products is predicated on feedback and input we receive from the market. India presented a unique opportunity for Cambium Networks with a wealth of local engineering talent, and also by being a target market for our products and solutions.

With a number of key customers in the country, including Tata Communications and Gujarat State Government, Cambium Networks' establishment of this new R&D centre is a strategic move to service the rapidly growing Indian and Asia Pacific market.

Cambium Networks already has two R&D centres in London and Chicago. So what role does this new facility play for your company and its overall business?

The R&D center in Bangalore will play a complementary role to our Rolling Meadows, USA, and Ashburton, UK locations. We hope to benefit from the proximity to our deployments and applications in India to further enhance our roadmap and developments efforts.

With the new Bangalore facility, what are your hiring plans over the next year or so?

Over the next 12 – 18 months we hope to staff the centre with up to 100 people.

Besides the R&D activities, what potential do you see for Cambium in the Indian telecommunication market—both in infrastructure hardware and services?

With a population of over 1.2 billion, with over 50% under the age of 25, and only 15.19 million broadband connections at the end of June 2013 (according to the Telecom Regulatory Authority of India), India represents an incredible opportunity for us to deliver affordable broadband services. It is lofty but not impossible that we could connect the next half billion people in India alone.

> Our goal is to connect the under-connected or unconnected which represent approximately 4.4 billion people. Our solutions are ideally designed to meet this objective with microwave backhaul solutions that can connect communities over 150 km away from the nearest established network, and fixed broadband access solutions that offer high quality and reliable voice, video and data services for hospitals, businesses, government building and residences.

The telecom industry is going through a technology revolution with 3G, 4G and even 5G being tested and rolled out in many parts of the world. So in your view, what kind of changes are happening today on the networks and infrastructure side?

Cambium Networks is focused on developing fixed wireless access solutions that are complementary to mobile services (3G, 4G and 5G). Our goal is to connect the under-connected or unconnected which represent approximately 4.4 billion people. Our solutions are ideally designed to meet this objective with microwave backhaul solutions that can connect communities over 150 km away from the nearest established network, and fixed broadband access solutions that offer high quality and reliable voice, video and data services for hospitals, businesses, government building and residences.

Cambium Networks has its roots in Motorola: what impact does this have on the company's overall business and technology?

Our legacy from Motorola is of developing solutions that are resilient, scalable and secure. At Cambium Networks we have maintained this strong heritage from Motorola and added affordability and velocity to our strategy.

We design and engineer these qualities into all of our products, whether they are for defence applications or residential broadband. Under-served or under-connected areas should not have to sacrifice quality for performance. With the use of off-the-shelf chips, we have been able to lower the price barrier of our solutions, while maintaining the quality and reliability users have come to expect from Cambium Networks.

We have also significantly accelerated the pace of our product development process, and this velocity in new releases is something the market can come to expect from Cambium Networks.

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THE RIGHT
REVAMP

Bhavasara Kshatriya Co-op Bank revamps its old
IT infrastructure with NComputing's virtual desktop
solution to gain higher operational and cost efficiency
coupled with better manageability and security

BY PANKAJ MARU

Established in March 1916, Bhavasara Kshatriya Co-op Bank Limited (BKCB) started its journey as a co-operative society with a sum of Rs 813 and a 30-member team. Later it gained a co-operative bank status in 1966, with headquarters in Bengaluru and three branches in other cities.

Today, BKCB has over 1,50,000 customers served by 70-odd employees across the four offices.

With its gradually expanding operations and business, BKCB took the major step of computerisation in 1996. And in May 2012, it adopted a core banking solution for automating banking operations.

However, while these efforts helped, they were not sufficient for BKCB to do as well as it wanted in today's competitive and tech-savvy banking industry. The bank was struggling to cope up with the growing demands of higher operational efficiency and lower maintenance cost on IT.

Challenges with obsolete IT

Although BKCB had adopted total branch automation (TBA) in all its four offices, with each location running on individual local servers, the bank faced issues like frequent desktop and server downtime and technical glitches. Also, there were constant threats of malware and data leakage.

Besides that, the small, six-member IT team of the bank was finding it difficult to manage individual desktops, servers and networking systems at multiple locations.

"We were facing problems like frequent downtime, wear and tear and slow machines—resulting in slow operations, cumbersome management of individual PCs, virus threats and issues

related to data security. It is at this stage that we sought to deploy an agile technology that addressed these challenges squarely," says Gopinath TK, Head - IT, BKCB.

"Keeping a track of all users was also another issue. If any user made some mistake, we were not able to help them remotely. Moreover, the bigger problem was maintenance of all computers across the four sites by a small team. Resolving any breakdown of those individual computers with central processing units (CPUs) along with their own UPS systems was not easy," he adds.

He points out that if any failure happened, it was difficult to manage and required more resources to resolve the issue.

Right tech for aged infrastructure

Given those challenges of remote manageability, efficiency, data security and cost reduction on IT maintenance, BKCB evaluated a range of computing solutions and options that were affordable and competent to meet the bank's requirements.

After a detailed evaluation, BKCB opted for NComputing's L300 virtual desktop thin clients that run on vSpace operating system.

"First, we tested the NComputing solution from October to December 2011 at one of our branches. Then, by May 2012, we deployed the solution in other three offices as well," says Gopinath.

Before the solution was implemented across all locations, says Gopinath, it was thoroughly tested for its effectiveness, capabilities and compatibility in a wide area network (WAN) environment, along with different operating systems, browser applications and printing devices.

> The solution is easy to deploy and manage. It is easy to monitor each user's activity, control access to applications and ensure data security.

Gopinath TK,
Head – IT, Bhavasara Kshatriya
Co-op Bank Limited

In its evaluation process, BKCB tested thin client devices from other vendors as well, but they did not meet the bank's criteria. Says Gopinath, "We tested other client devices as well, but they had a problem related to upgrade time. However, that was not the case with NComputing."

The NComputing solution was implemented in phases. In the first phase, 10 seats of L300 virtual desktops were deployed and later, 35 more seats were added to revamp the bank's old IT infrastructure.

Today, all the locations are well-connected through a central server and individual users can be easily monitored remotely in terms of access to applications, data and devices in a more secure manner.

Benefits of deployment

"Power saving is the biggest benefit we have reaped, as it [L300] eliminates the usage of CPU and UPS for every user—all devices can run through a single CPU and UPS. Secondly, it has reduced the manageability cost, because now we only have to manage a single server CPU and all other systems are controlled remotely," says Gopinath. Also, unlike earlier, the bank does not have to pay for extra resources for managing the

> The implementation has helped the bank bring down the electricity bill by 30%. In addition, UPS procurement cost has been lowered by 30% and the overall management cost has been cut by 20%

systems.

"NComputing devices have extremely low footprint when it comes to energy consumption. We are observing significant reduction in power consumption and backup costs. So much so that we have reduced UPS size from 6kVA to 3kVA at each branch," says Gopinath.

Apart from manageability and energy benefits, the bank has been able to address the core issue of data security and malware threats to an extent.

"Data leakage has stopped, as the users don't have any access to the centralised server. Virus attacks have been reduced because the server is fully secured as it is centrally managed. Lastly, there is no need for upgrade in each and every system as we only need to upgrade the central CPU; all other systems get upgraded at the same time," explains Gopinath.

According to Gopinath, the implementation has helped the bank bring down the electricity bill by 30%. In addition, UPS procurement cost has been lowered by 30% and the overall management cost has been cut by 20%.

Besides the quantifiable benefits, the solution has had a positive impact on the bank's employees in general. Says Gopinath, "Users are very happy with NComputing devices, as everything is centralised and managed remotely as compared to regular desktops. Users are getting an experience similar to that of a desktop but at a minimum computing cost. Because we are working on WAN supported by the device, it is way faster than a normal PC. Besides, the login feature of this device allows the user to alter from Linux to Windows as per choice," says Gopinath.

He adds that NComputing has also
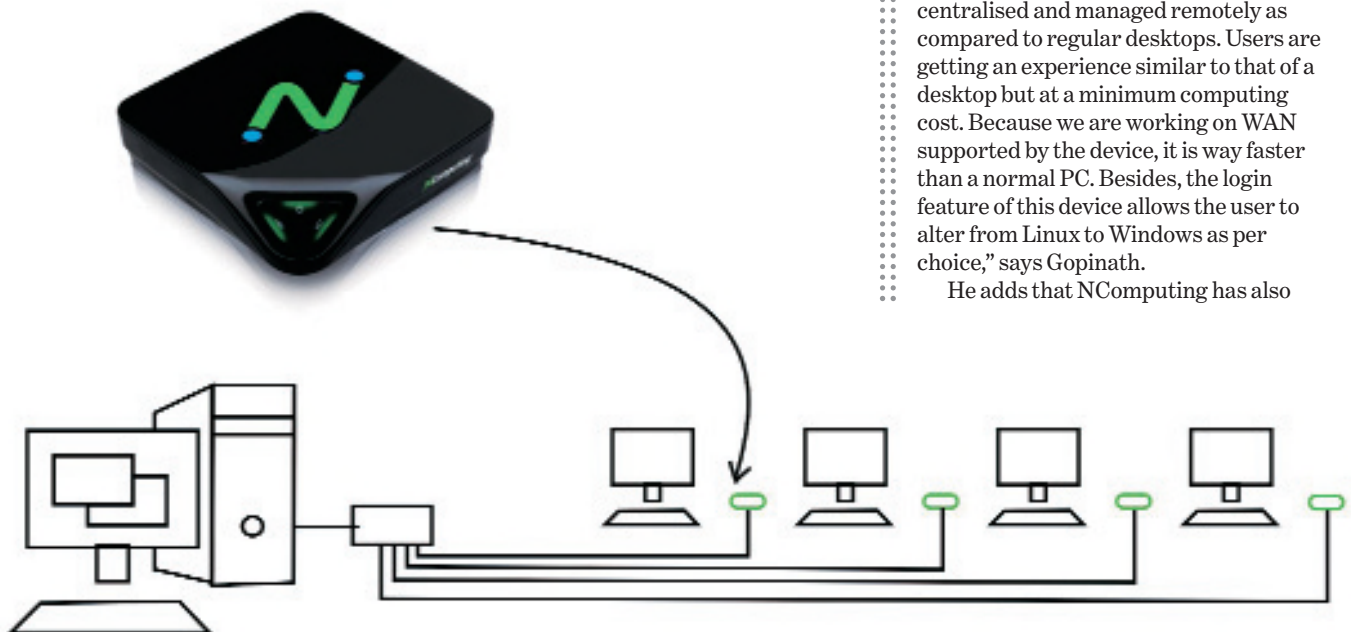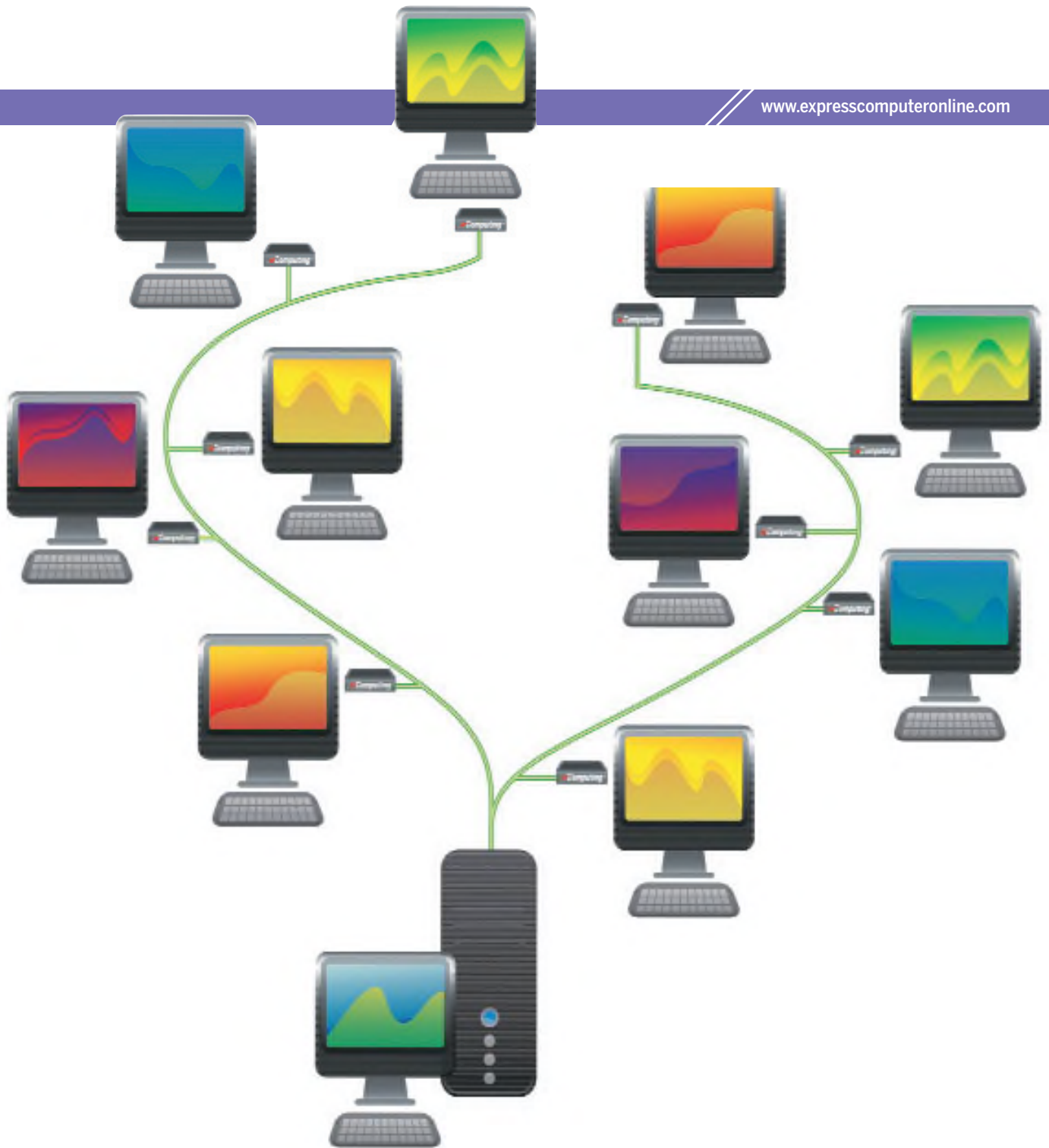
given BKCB a free software to manage all the desktops, relieving it of the need to buy a separate tool.

"The solution is easy to deploy and manage. It is easy to monitor each user's activity, control access to applications and ensure data security. There are virtually no failures or downtime," says Gopinath.

Overall, the implementation of NComputing software and devices has showed some positive impact on the bank—be it reduced operational costs, improved efficiency, user experience or business growth.

"Reduction in capex and opex always supports the business; post the deployment of NComputing solution, we

have gained 10 to 15% growth," says Gopinath.

Gopinath concludes by saying that other banks are amazed to see the quick and cost-effective manner in which BKCB has successfully revamped its computing infrastructure.

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BRINGING
Branches Closer

How Saraswat Infotech relied on Xpress VPN solution from
Tata Teleservices to offer remote branch connectivity to Saraswat Bank

BY HEENA JHINGAN

Saraswat Infotech Limited (SIL) is a wholly owned subsidiary of Saraswat Co-operative Bank Ltd, one of the largest co-operative banks in Asia. It provides IT solutions to the banking and financial services industry through a range of products and customised service offerings.

One of Saraswat Infotech's most popular solutions is core banking as a service, a managed service wherein co-operative banks can access Swift Core, its core banking application, hosted at its data centre in Navi Mumbai.

One of Saraswat Infotech's managed service customers is its own parent, Saraswat Bank. The bank has about 200 branches spread across six states—Maharashtra, Gujarat, Madhya Pradesh, Karnataka, Goa and Delhi.

Such a managed connectivity service for co-operative banks makes sense as the number of users and volume of business is not very high in these cases. In some cases, there are at the most 500 to 1000 transactions per day at the branch level, explains Devdatta Chandgadkar, Chief Domain Officer, Saraswat Infotech.

According to him, traditionally, most co-operative banks have used leased line connectivity from solution providers like Tulip Telecom and Reliance Communications. However, a leased line requires elaborate processes of taking permissions and clearances for laying cables. That makes setting up the system

a very long and time consuming process.

Saraswat Infotech needed a solution that could be easily deployed and integrated with the current network architecture and at the same time, it had to be cost-effective. They began evaluating various service providers that could provide a secured VPN connectivity solution with assured QoS and SLA for their co-operative bank locations.

Saraswat Infotech faced some specific challenges while offering the solution to its cooperative bank customers to access core banking applications from SIL's data centre. The solution required to not only offer continuous connectivity, but also needed to be a secured network as it would be carrying sensitive data of the banks.

Moreover, the biggest roadblock faced by such services is the task of providing terrestrial WAN connectivity to the customers due to geographical distance of their branch locations, Chandgadkar reasons.

Chandgadkar says backup connectivity was another key requirement, especially in case of critical and high revenue branches. "So, we needed to work with a service provider that could offer seamless and secure connectivity across geographical locations," he adds.

The Xpress way

Saraswat Infotech decided to go with Tata Telservices' Xpress VPN solution, which Vishal Rally, Regional Chief Operating Officer - Corporate Business at Tata Teleservices Ltd explains is a secure wireless connectivity solution that is ideal for quick deployment at new or remote locations like branches with few employees.

Rally elaborates that the solution is an ideal match for applications that have low bandwidth requirement and are latency tolerant. Enabled with security features suitable even for banking applications, the Xpress VPN solution seamlessly integrates with corporate MPLS networks.

What makes the Xpress VPN a good option for branch locations is the kind of flexibility it offers to the customer at the

> It is a kind of hybrid MPLS solution where connectivity over MPLS is done on a mesh model, while connectivity on the end point could be on any media—wireless or wireline.

Vishal Rally,
Regional COO - Corporate Business, Tata Teleservices Ltd

KEY FEATURES OF XPRESS VPN

● Low opex model with unlimited usage

● Faster deployment as no regulatory or right of way permissions required

● High service level agreement on throughput, latency and packet loss

● Network provides differentiated service to selected group of users over air interface, which results in secure wireless connectivity

● Offers choice of selection of routers

end point.

"It is a kind of hybrid MPLS solution where connectivity over MPLS is done on a mesh model, while connectivity on the end point could be on any media — wireless or wireline, this is good for remote location where fibre or copper penetration is low. In fact, it is a good option for VSAT replacement," Rally elucidates, adding that it is an end to end managed connectivity service that allows customers to focus more on their core business and have minimal engagement in building and managing their telecom network.

Since the connectivity on the end point can be on any media, Chandgadkar says, it helps connect mobile ATM vans of the co-operative bank in Raigadh district.

"This has revolutionised connectivity for cooperative banking as it offers flexibility and does not require a high cost modem. In fact, CDMA routers have been used at some branches to terminate Ethernet WAN link and Data-card (Photon Plus) connectivity," adds Rally of Tata Teleservices.

Talking of security, Rally explains, it is a secure ecosystem based on CAVE (Cellular Authentication and Voice Encryption) algorithm for data transaction on packet switched CDMA network. CAVE is one-way authentication mechanism, that always involves the network authenticating the mobile station.

It is an end-to-end secure solution based on standard tunnelling protocols.

He explains, using the solution, rollouts can happen in a week's time. "Before the solution was deployed, extensive testing activities were conducted in Mumbai and remote sites to make sure the core banking application worked seamlessly over the network. Small modifications were required, which were made at the bank's end."

Chandgadkar says that earlier the bank was using 64 kbps; however, it has scaled it up to 256 kbps bandwidth due to increased usage. "We are at present using this solution mainly for the core banking application, but we are still exploring how to further build on this," he signs off.

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Jeff Findlay, Senior Solutions Architect – APJ, Micro Focus, talks to Pankaj Maru about the new technology trends impacting the Internet. Excerpts:

"We are well on the road to one script, any device"

The Internet is witnessing remarkable changes, with a rising shift towards mobility. What key technology trends do you observe today?
In the past few years, AJAX or Web2.0 type frameworks are becoming much more significant. Applications from thick clients have moved to web browsers but still need to maintain functionality. And the only way they can really maintain functionality is to work with AJAX frameworks so that the user can only see a small amount of transactions between the browser and the web server.

For instance, when a user opens a website, selects a country and depending on the country, the site will show a list of states from that particular country. So from a user perspective, it's just one transaction but from the browser stand point, there are many transactions happening behind the scenes between the browser, web server and application server. And this behaviour varies from one browser to another.

We are addressing this change automatically by taking away the complexity of Web 2.0 frameworks, so people don't need to worry about computer or transactional layer, as we can provide one script that can run against any browser. This significantly cuts down the amount of scripting and the scripting load, which is estimated to be around 80%, can be reduced.

How is Micro Focus dealing with these technology trends and challenges today?
Because now we are getting into 'one browser many devices,' the browser needs to perform on desktop, Android, iOS and other devices; this is adding another type of complexity. Beside, HTML5 is adding one more complexity layer on the browser. Though it hasn't taken off well as per expectations, it is picking up now and we believe it to become much more pervasive.

We are looking at being able to identify 'one script any device' which allows creating one script for multiple functions and can run against any browser and device. But again, the native applications or apps on devices also adds a layer of complexity. Given this, native app developers for Android platform are adding HTML5 to some

> From the business perspective, all we want to have is a unified user experience, which from performance point is quiet difficult. Because earlier, people were only working on desktops and now they are comparing with their mobile devices and expect relative performance speed. Today, people have Android tablets or iPads, where they are clicking on all buttons and are online all the time, so they expect applications to have high response times. So users expect that their enterprise or corporate applications too respond at the same speed on mobile devices as well as in the browser

extent and making hybrid applications. However, it will need different client-compilers for Windows, Android and other OS phones. Hence, from a testing perspective, as a tools vendor we have to work very hard to be able to cope up with this new technology change. And we are certainly doing that actively with our goal of 'one script any device' and are well on the road to do that.

From the business perspective, all we want to have is a unified user experience, which from performance point is quiet difficult. Because earlier, people were only working on desktops and now they are comparing with their mobile devices and expect relative performance speed. Today, people have Android tablets or iPads, where they are clicking on all buttons and are online all the time, so they expect applications to have high response times. So users expect that their enterprise or corporate applications too respond at the same speed on mobile devices as well as in the browser.

Hence performance testing itself hasn't changed but the SLA for speed is continuously increasing which means the application architecture needs to be very finely tuned. And today, performance testing is no more just back end processes but is very integral and important part of software development cycle, that also includes testing for application, web-browser and mobile. With analytics coming in, performance testing has gone to a new level where its not how fast or slow the application is but it includes all other aspects of back-end processes.

With the Internet industry bracing for IPv6 standards, are you seeing any challenges for infrastructure, solutions and service providers as well as content creators?
Everybody is facing challenges and IPv6 is going to change things significantly. However, we are fortunate to use agile methodology for our development during the past 10-12 years. This allows us to release full updates, hot-keys and software releases of our products on regular time intervals, which is why we are able to adopt changes of today.

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WIRELESS RESORTS CLICK IN

BY **VIKRAM SALUJA**

When it comes to Wi-Fi connectivity, hospitality is one of the most dynamic and evolving sectors

Research has shown that hotels and restaurants that provide wireless connectivity not only increase the customer satisfaction and loyalty but also increase the productivity of their employees

Today, when one plans a holiday and chooses a hotel or a resort to stay in, there is a significant change in the priorities. The hotel is your home in a foreign land, where you can be at ease and have access to whatever and whenever you want: 24x7 access to food, fresh linen, spa, Internet, in-room entertainment, new services etc.

High speed wireless broadband connection is now on top of the list, with more people wanting to access the Internet using their smartphones and mobile devices, even when they're holidaying.

Wi-Fi is changing businesses, from retail and hospitality to healthcare and education. Out of these, hospitality has been the most dynamic vertical and ever-evolving in terms of the technology implementation. Over the last couple of decades, technology and its innovative usage has been the main driver of growth for the hospitality industry. Additionally, new technologies and applications like the ability to exchange information seamlessly, business intelligence and analysis to understand what the customers need, real-time access to inventory and other such inputs have been a major booster for the hospitality business. All these have definitely enhanced customer experience, which in turn has led better customer loyalty. Besides enabling the sector to provide improved customer service, it also allows the industry to cut cost by lowering the dependency on manpower and improving the quality of service. Hence technologies have made a positive impact to every function of the hospitality business be it customer service, inventory management, employee and guest monitoring, point-of-sales management, and daily operational management.

Enhanced customer experience

With the trend of mobile internet, most of the hotels and resorts see a total change in customer experience with offering Internet connectivity and customer services optimisations through wireless infrastructure. The top driver for mobility and wireless investments in the hospitality sector is enhanced guest experience. This technology can be used

to support customer-facing applications that improve and support customer experience. In fact, it is possible to lower down negative customer experience and provide services and amenities that are different from their competitors. Enabling the business as well as leisure customers to get easy internet access for surf, search and download goes a long way in enhancing their satisfaction.

Customer Experience Management is extremely crucial for the hospitality sector. For a hotel to understand what the customer requires, gathering and collating all the relevant customer data and analysing huge quantity of data are important. This not only helps them to know what their customers require but also provides them with features that they need. With Wi-Fi infrastructure, hotels can now streamline internal processes as well as provide an enhanced customer experience.

Improved workforce

Research has shown that hotels and restaurants that provide wireless connectivity not only increase the customer satisfaction and loyalty but also increase the productivity of their employees. Further building on this, making the staff equipped with handheld /Wi-Fi–enabled/wireless devices brings out an efficient customer service to the guest at the point of activity.

Technology has enabled the hospitality industry to build intelligent systems that enable them to make reservations as well get instant guest feedback. Additionally, for their internal management too, the sector is using technology for payroll and inventory for saving money and maximizing profits. The hospitality industry is highly competitive. Hence, it is imperative for them to use technology and solutions that are customised for their usage as well customers' benefits. If the sector is to ensure and secure growth, it is highly crucial for the hospitality players to align their strategic business and IT priorities.

Next-gen technologies

Modern hotels not only need diversified

and personal experience to increase customer loyalty, but also need technological measures to improve operational efficiency, in order to win out from the increasing competition. In a cut-throat competitive ecosystem, the organisation with the most sensible technological deployment leads the way.

That is not to say that the hospitality sector should blindly adopt technology on the basis of the next best available option. Like other businesses, it is crucial to understand the technology needs of the business, and thus plan the products and solutions to be adopted. Networking specifically plays a crucial role in the added profitability of the business. From a hotel room, to an entire hotel up to a chain of hotels — consistency is required in terms of connectivity for both internal operational purposes like management, security and wireless connectivity as well as for their customers, in order to be able to provide the best networking and communication facilities for a comfortable and convenient service experience. Customers who use a plethora of devices enabled with Wi-Fi are looking to be plugged into their remote universe at all times.

Further, the usage is no longer

restricted to a business traveller interested in checking his e-mail updates. It extends to vast multimedia usage, browsing and social networking activities — all of which result in extensive data consumption. It is to cater to this demand that major hospitality institutions are adopting the latest network technologies to deliver quality Wi-Fi service that is reliable and consistent.

High speed internet connectivity is one of the founding components of an efficient IT infrastructure. The concept of smart hotels is emerging — intriguing those who seek the best in terms of service. An increasing number of hotels – small, medium or large – are realizing the benefits that result from embracing the best in Wi-Fi services for guests. Directly, through greater customer satisfaction, and indirectly through reduced operational expenditure and capital expenditure which are results of IT vendors providing customised solutions, tailor made for the hospitality industry itself. When this service effect is magnified, it results directly in the increase in the business generated for an organisation.

Vikram Saluja is Head of Enterprise Networking Solutions, Huawei.

THE NEW DESIGN PARADIGM

With the new capabilities of cloud and mobile end points, architects and designers should think through any new solution thoroughly

Think about the usage of the solution: What time during the day will the solution will be used; where will it be used; what is the readiness and capabilities of the users

With the evolution of mobile devices and cloud computing, solution architects/designers now need to expand their thought process and at the same time, take care of new factors. Cloud computing provides new possibilities of capabilities that business solutions can provide. Mobile devices can now be end points and part of the solutions to make it more available and convenient to use.

Before jumping in to create various solutions in the new evolving paradigm, the solution architect/designer should consider the following :

Understand the organisation's policies and readiness: Cloud adoption is not universal. Various organisations have adopted the new paradigm at different levels. Even within a company, different departments may have different adoption and readiness levels because of various factors. Every organisation/IT has several policies regarding usage of various cloud and models devices. There are policies and requirements for public, private, and hybrid cloud use. There are various compliance and legal requirements for data access and security. A thorough understanding of the landscape is a must while designing any solution.

New opportunities and capabilities using public cloud services: The cloud not only provides alternatives for hosting but it also provides access to various capabilities and data that is not provided or hosted within your IT. This is where an architect needs to think beyond the boundaries. For example, a sales enablement or a marketing solution can make use of services and data provided by various social platforms like LinkedIn or Twitter. They can enhance the value of their solutions by providing intelligence about their customers/leads from the internet. Various business solutions can now make use of mapping and traffic services to enhance the value of solution. Consider the usage of these kind of services depending on the nature of solution being designed.

New opportunities and capabilities with mobile devices: Usage of mobile devices is not a new concept but the rapid adoption of smartphones and tablets by a majority, has transformed it to a platform that is very significant while designing any solution. With mobile end points, a solution can be made available where it is needed or used the most. Mobile devices not only makes the solution more available but can also provide new capabilities to your solution. For example, a fault reporting solution can make use of device's camera and GPS to provide better reporting of problems. So while architecting/designing a solution, consider using capabilities like location awareness and camera. The use of some new mobile peripherals like wearable(s), mobile printers and projectors can further enhance the value.

Think future: While designing any solution, think about not only how this solution can deliver the current needs but also how it can keep up with the future demands. The factors to consider while thinking about the future usage of the solution are scalability, extensibility, new capabilities and end points. With these considerations, the solution design may need to incorporate future migration or adoption of different kinds of cloud architectures. This may be due to change in policies or scalability requirements. The solution architecture may need to be open enough to add new capabilities or link it to any new or existing systems. Considering these at the time of architecting and designing the solution can increase the life and value of the solution.

Think cost: There is no doubt that cost is an important factor for any solution design. The availability of various cloud paradigms can alter the cost in either ways. So considering the cost implication of various cloud models can help in meeting the budgetary needs. Also consider different ways to deliver mobile solutions. For example, native
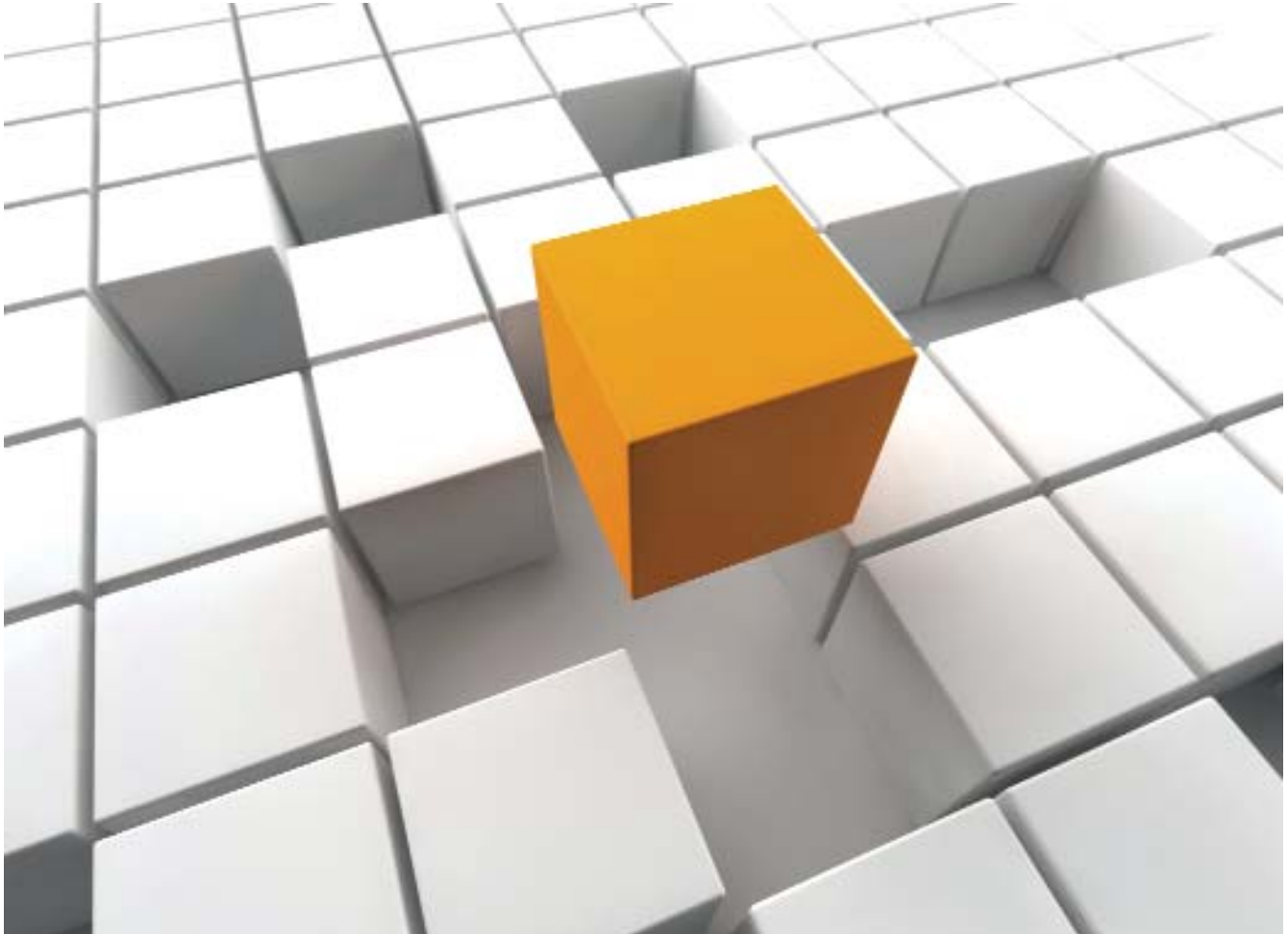
mobile apps can be replaced by mobile web applications to allow for lower cost solutions. Considering various options available financially can help control the cost of the solution to a desired level.

Think lifecycle: Application lifecycle elements are very important for a quality solution. Various architectural and design decisions should be made considering time available to develop and release. Sometimes a solution may not be valuable if not delivered within a certain time window. Also, considering the other lifecycle elements like testing, deployment process, user acceptance and training, the update process and sunset process, especially considering the cloud elements and mobile devices is very important while designing/architecting a solution.

Think boundaries and understand trade offs: Every architectural and design decision will affect various elements of the solution. Before making any architectural or design decision, consider the necessity of each feature. Sometimes, an important architectural decision is made for a not so real requirement. Consider the life of the solution. Consider the users of the applications. Consider the reliability and availability requirements. Consider the limits and availability of cloud based services being planned to be used. Consider the limit of online usage and offline capabilities with the mobile solution. Consider the compliance and security requirements with data capture and access. Not every solution needs to be on premise or on the cloud. Not every solution need a mobile end point. Think about the usage of the solution: What time during the day will the solution will be used; where will it be used; what is the readiness and capabilities of the users.

IT architects/designers should keep the magic of innovation alive with new solutions. With the new capabilities of cloud and mobile end points, a thorough thinking and analysis is required before finalising the design. Keeping in mind the boundaries and the above considerations, these capabilities can provide infinite value to business.

Dharmesh Godha is President and CTO, Advaiya Solutions.

SAFE SHOPPING: WHAT IT TAKES

Retail shops are frequent targets of cyber theft but a secured buying experience is attainable with the right planning and technology

Retailers need to define a security strategy that addresses the key pillars of their distributed environment and ensure that their security infrastructure is not only robust, but scalable, easy to manage and cost-effective.

Globally, the retail industry is among the top three industries to be targeted by cyber criminals. Due to the sheer number of merchants accepting payment cards, the relatively low level of security and the many attack vectors available, the number of breaches is large and continuously growing. The increasing use of mobile devices combined with the introduction of Near Field Communication (NFC) wireless technology and applications such as augmented reality only serve to exacerbate the problem.

Some of the most highly reported examples of cyber theft in the retail sector come from the US and include TJX, Subway and Barnes & Noble. The breaching of these merchants' in-store wireless networks, point-of-sale (POS) systems and credit card readers resulted in tens of millions of credit cards being compromised and the loss of personally identifiable information, in addition to financial losses for those merchants. These large-scale incidents of cyber theft highlight the need for retailers to better secure their operations.

Modern retail security

Traditionally, retailers have been securing their stores by using either store-based routers with basic security functionality, or an overlay point security solution plugged into the store network, or a private WAN to bring all traffic back to the data centre for inspection. Each of these methods have their drawbacks, either for lack of functionality, inability to scale or excessive costs.

Instead, retailers should take a closer look at each of the four primary building blocks of a secured distributed environment, and take steps to address the particular issues faced by their organization at each of these levels.

1. Access – As stores extend access to employees and consumers using mobile devices, ensuring secure access is critical. Secure access control through rogue access point detection, authentication, guest Wi-Fi services, rate limiting and load balancing is important.

2. Store – The individual store level requires security and connectivity for a wide variety of functions including Wi-Fi, voice and traditional network connectivity. With the addition of consumer connectivity, each store must also be able to provide security functions, such as anti-malware and application control.

3. Aggregation – This level is the destination for all data. Typically this is the retail headquarters. Core security functions such as firewall, application control and VPN termination take place here.

4. Management – Given the widely distributed nature of modern retail establishments, the ability to centrally manage and quickly modify the various security appliances guarding the organisation is essential. Having a security platform across the enterprise will allow this to be done effectively.

As part of this more in-depth security strategy, retailers should closely consider their options for implementing a network security solution that is both comprehensive and cost-effective. In order to address today's complex in-store security, the requirements of a strong IT security solution should include :

High performance to improve customer experience: With the growing number of endpoints and applications as well as higher data volumes, each in-store network must provide high performance for continuous credit card processing and POS connectivity to maximise the customer experience and interaction. High performance and low latency traffic flow is especially important during peak transaction periods.

In-depth defence for the in-store wireless LAN: In-store reps are increasingly being provided with wireless tablets to increase interactivity with customers, while some retailers are

looking to differentiate services with wireless kiosks, flexible wireless digital signage and customer access through their own devices. The security solution must thus be able to provide the same levels of security to the wireless and wired parts of the network.

Migration to lower-cost public networks: The adoption of low-cost superfast broadband connectivity to stores and/or the use of a secure VPN over the public networks provide lower-cost operational alternatives to private WAN networks. However, leveraging public networks for store connectivity can expose retailers to additional security threats, so it is important that such connections are secure and that the encrypted traffic does not succumb to performance degradation when passing through the security devices.

Adoption of innovative in-store services: The use of advanced technologies make the retail environment more vulnerable to threats. Support of cutting edge customer applications — such as the augmented reality applications used as customers move through the store and/or in-store Wi-Fi access to multi-channel retailing and loyalty schemes — will become commonplace in the next five years. Security systems will have to scale to hundreds if not thousands of endpoints without incurring significant costs.

PCI-DSS compliance support: With in-store networks carrying credit card transactions, PCI compliance requirements must be satisfied. Security monitoring and rogue detection are explicit requirements in the PCI standard, so it is imperative that retailers are able to analyse user and device behaviour on the in-store network and respond to any threat. Event logging, analysis and reporting capabilities are essential to enable firms to demonstrate compliance with PCI-DSS and other regulations.

In order to remain competitive in today's changing world, retailers will need to find innovative solutions to create value, fiercely reduce operating costs and mitigate risks throughout the business. For retailers with many geographically dispersed shops, secure network connectivity linking all sites to head office is critical to business operating processes. When the network is breached, IT services can become unavailable and data can be lost with serious consequences to the business.

Retailers therefore need to define a security strategy that addresses the key pillars of their distributed environment and ensure that their security infrastructure is not only robust, but scalable, easy to manage and cost-effective. Only then can the organisation support multi-channel operations and innovative services such as customer access — which will enhance user experience and drive the business - without increasing deployment costs or staff burdens.

Rajesh Maurya is Country Manager for India & SAARC, Fortinet.

SECURITY CHALLENGES IN DIGITAL COLLABORATION

In the backdrop of growing collaboration, CISOs and CIOs need to balance convenience against security

Collaboration today is becoming a necessity for every organisation, and it is no more a nice-to-do thing. Organisations implement social networking tools, to enable business users to tap in to the collective intelligence of the organisation, to get work done in a new and efficient manner to achieve better business outcomes.

The challenge every CISO faces is balancing Convenience versus Security: how to secure the information when the trend is towards collaboration and unified communication. Employees want to work from anywhere, anytime, and on any device. So, in a digital world, organisations are not having any boundaries and hence CISOs need to re-look at their controls to ensure information security.

The typical security challenges that need to be addressed by CISOs are:
● **Security concerns in Collaboration** – As employees start using the collaboration tool and to share their experiences, there is a challenge in protecting the client and restricted information from any security breach. Also, the collaboration tool will be at higher risk, as the information gets stored in one common repository.
● **Data Privacy** – Balancing surveillance and data privacy of individuals.
● **APTs** – Increased risk due to Advanced Persistent Threats and loss of data.
● **End point security** – As employees use multiple devices to connect to the corporate network, it has its associated challenges, and organisations need to implement necessary controls. The typical challenges are listed below:
◗ **Smartphone** – Information leakage through high resolution cameras, audio recorder, Near Field Communication (NFC) and hi-speed internet access.
◗ **Bring Your Own Device** - In BYOD, as

employees bring in different assets (different make, different configurations, different OS), it will be very difficult to ensure physical security and provide the required IT support.
◗ Enforcing organisational policies on BYOD assets.
◗ **Cost of managing the compliance** – software licensing, policy enforcing agents and remote wipes.

Some of the controls that need to be ensured by the organisation are:
◗ Make a detailed information protection plan — understand the information that is handled by the organisation, do a detailed risk assessment and evaluate the current controls. Implement additional controls as required to prevent security breaches, depending on the information type.
◗ Containerisation – have properly identified containers to store information based on classification levels.
◗ Have defined policies and procedures which cover collaboration process, data security and privacy concerns.
◗ Participate in cyber mock drills organized by central nodal agencies such as CERT-IN, DSCI etc.
◗ Ensure that the employees are given proper training on how to use a collaboration system effectively and how best to use it. They should be made aware of the vulnerabilities that exist in the social collaboration and the precautions that need to be exercised by them.
◗ Have scenario based awareness sessions to ensure that employees are aware of the typical security breaches, their impact and the measures to prevent/manage such breaches.
◗ Embrace best practices, follow security standards/frameworks and participate in industry meetings for knowledge sharing.

Madhu K is VP & CISO, Polaris Financial Technology Ltd.

Make a detailed information protection plan — understand the information that is handled by the organisation, do a detailed risk assessment and evaluate the current controls

IP-based networks are fast emerging as the popular choice of telcos. Vishant Vora, Director – Technology, Vodafone India, talks to Pupul Dutta about the company's network upgrade plan and the associated challenges

"IP-based networks are a question of survival in present times"

How does IP-fication help in dealing with increased data traffic? How long will it take for Vodafone to completely transform its network to all an IP-network?

The advantage of having an IP platform is that it is a much better technology to carry data traffic. With IP networks, you get better latency performance for data, and a much faster and flexible network that can be configured to grow with data volumes, and it can be reconfigured for traffic re-routing almost on an immediate basis versus TDM (time division multiplexing). All of this translates into customer benefit, as they are able to access the websites faster. It will also make it much more flexible for us to grow our business quickly whenever the traffic demand picks up in a specific geographic area. Therefore, customers should receive better quality faster in spite of the tremendous growth in capacities.

Given the size and legacy we carry in India, IP-fication is a huge challenge. The tremendous growth witnessed in the first decade of 2000 was through GSM, which works on TDM based networks. The transition to IP networks started even before the introduction of 3G. We started the transition about 5 to 6 years ago when we entered the business and it is a continuous process. We have 120 thousand sites today—all GSM and almost all of them connected with TDM. The effort required to get our network 100% IP-ready is massive and involves significant cost, which is why we want to do it in a way where it has minimum disturbance to our service. We are looking to migrate all of our networks to 100% IP over the next two to three years, but we need to make sure that we do it in a way that makes business sense.

What are the challenges you are facing while upgrading the networks to IP? How big a burden is cost, given the ROI will take some years to kick in?

The principal challenge in upgrading to IP network hinges around availability of skilled resources and the cost/effort associated with overhauling the entire network built up over the last couple of decades. The migration process is also quite complex as it entails no service disruptions to the existing customers. Availability of good quality and deeper fibre penetration is another major challenge. The existing infrastructure is just not capable of scaling up—hence IP-based networks are a question of survival, not an ROI discussion.

What are the key data consumption trends you are witnessing today?

A predominantly voice-driven prepaid market, India is being swept by the winds of change in the last two years. The country has seen an exponential growth in data volumes. 2G data volumes have almost doubled (3,363 TB to 6,440 TB) and 3G data volumes have more than tripled (1,078 TB to 3,579 TB) in the last 12 months. While managing these volumes is a challenge, adding to the complexity is the fact that in some markets the data growth is concentrated to specific areas. Thus, optimising the network is not easy. At 0.2 TB/site, the volumes in India in less than 4 years of 3G operations are comparable to some of the more mature markets of the world. The top three applications driving the data growth are web, streaming and messaging applications. They constitute 90% of the data traffic carried on our networks.

Could you please elaborate on the role of big data analytics for telcos and how Vodafone is using the same for enhancing customer experience?

Communications service providers (CSPs) are generating large volumes of data, including call detail records (CDR), network data and customer data. To analyse such a large volume of data, big data analytics is typically performed using specialised software tools and applications for predictive analytics, data mining, text mining, forecasting and data optimisation. For example, at Vodafone, we have solutions around network performance monitoring to get an updated view of network operations. The network operations centre (NOC) gets updated status of key metrics and can quickly see issues as they arise and proactively resolve them, before customers start calling.

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> With IP networks, you get better latency performance for data, and a much faster and flexible network that can be configured to grow with data volumes, and it can be reconfigured for traffic re-routing almost on an immediate basis versus TDM (time division multiplexing). All of this translates into customer benefit, as they are able to access the websites faster. It will also make it much more flexible for us to grow our business quickly whenever the traffic demand picks up in a specific geographic area.

Karan Bajwa, MD, Microsoft India (L) & Bhaskar Pramanik, Chairman, Microsoft India

MICROSOFT THINKS BIG ON CLOUD

The software behemoth's recent conference on Windows Azure aimed at gaining a larger foothold in the growing cloud market in India

BY PANKAJ MARU

For Microsoft, India has become a very attractive market for its cloud business. This is evident in the way it is aggressively engaging with the Indian IT community, including software and mobile app developers, system integrators (SIs), channel partners and enterprises of all sizes.

Recently, Microsoft organized its first major Windows Azure conference in Bengaluru. The two-day meet aimed to offer a deeper understanding around cloud technology and the numerous opportunities it provides today to businesses.

The cloud transition

"Microsoft is powering the cloud transition in India with Windows Azure and a set of comprehensive offerings across private, hybrid and public clouds. We are adding over 2,000 commercial cloud customers every month in India and they are across all industry segments and across large, mid-sized and small companies," Bhaskar Pramanik, Chairman, Microsoft India said in his opening address.

According to Pramanik, the popularity of Windows Azure among Indian enterprises is growing largely because of benefits it offers, including scalability, reduced cost, flexibility and business agility.

"Azure is a powerful platform for the entire Indian ecosystem of IT professionals, developers and start-ups to bring their applications to market worldwide. It helps Indian customers

leapfrog to the cloud and accrue significant cost savings. It provides a unique opportunity for our partners to scale their business. I believe the opportunities ahead for India with the Azure cloud platform are tremendous," Satya Nadella, CEO, Microsoft Corporation said in his video message to the audience at the conference.

The video message from company's top executive clearly show how significant India is to Microsoft and its cloud business. The Windows Azure cloud is not only getting popular in India but it bringing good business for the company.

"Our investments in improving the readiness of our partners and developers is enabling faster cloud adoption. We are in a mobile-first, cloud-first world and cloud is becoming an integral part of the IT infrastructure in Indian enterprises today," said Karan Bajwa, Managing Director, Microsoft India.

"Globally, our Azure cloud business is growing over 200 percent year on year but in India we are growing at even faster rate. We are adding more than 2,000 commercial cloud customers every month. These customers are across verticals and different sizes including small, mid market as well as large enterprises," Bajwa informed.

In the past 18 months or so, Microsoft India has been strategically working to give a big push to build a cloud ecosystem in the country involving system integrators (SIs), partners, independent software vendors (ISVs) along with startups.

In fact, the company has some 10,000 partners along with a strong base of 1.6 million developers in India that are involved in driving the cloud ecosystem here. Microsoft's cloud partner ecosystem grew 200 percent last year, while the count of ISV application on Azure cloud witnessed a 100 percent growth. Some 1,700 startups are using Azure cloud through Microsoft's BizSpark program.

To drive the Windows Azure cloud offerings that involves software as a service (SaaS), platform as a service (PaaS) and infrastructure as a service (IaaS), the company has made $15 billion investments in its global data centre infrastructure and networks. However, Microsoft, presently has no data centre in India.

> **Azure is a powerful platform for the entire Indian ecosystem of IT professionals, developers and start-ups to bring their applications to market worldwide.**
>
> **Satya Nadella,**
> CEO, Microsoft Corporation

To drive its Windows Azure offerings, Microsoft has invested $15 billion in its global data centre infrastructure; however, it does not have a data centre in India

According to Bajwa, India's top five SIs are using Azure cloud for their internal purpose as well as using it to build applications and roll out services to their customers. The cloud revenue is expected to jump from 5 to 15 percent over next few years.

Expanding the cloud

In a bid to attract more SMBs on the Windows Azure cloud, Microsoft announced a Trade-in Scheme for the Indian market on the second day of the conference. It's the first time that Microsoft has introduced a plan in India for a 3-month period between March 20 to June 30 this year.

As per Microsoft, through this scheme, any SMB with IT hardware of less 250 personal computers (PCs) can sell off its existing old IT with a cash value or can avail a monthly credit on Windows Azure subscription but on upfront initial commitment.

According to Bajwa, SMBs don't have large IT investments like big enterprises and organizations, but for them, even the small investments in IT remains big and substantial.

"For them (SMBs), cloud is a highly suitable and affordable way to get access to technology that is used by large enterprises and organizations. And Microsoft's Trade-in Scheme offers a good opportunity for them to get value for their old IT hardware and adopt Windows Azure cloud," said Bajwa.

According to Meetul Patel, General Manager – Small and Medium Businesses, Microsoft India, SMBs are very critical and important for the economy and with the new Trade-in Scheme, SMBs will now have the opportunity to jump start their transition to the cloud and reap significant benefits.

Microsoft has tied up with a Mumbai based recycling and asset recovery (buy-back) firm, Justdispose, for its Trade-in Scheme, where the firm is in-charge of evaluating old IT equipment like PCs and servers of SMBs and accordingly offer cash value.

With this scheme, Microsoft hopes that its Azure cloud will gain wider acceptance and penetration among SMBs in India.

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HITACHI'S
New Catch

The recent acquisition of Micro Clinic gives Hitachi Systems a strategic toehold in India's growing IT services market

BY PANKAJ MARU

The year 2014 has kicked off with some positive action in the Indian IT space. If some of the deals are anything to go by, Indian IT firms are hot property for global giants.

While Facebook acquired a Bangalore-based software startup, Little Eye Labs, it was followed up by another, bigger deal between Hitachi Systems Limited (a wholly owned subsidiary of the Japanese giant Hitachi Ltd) and Delhi-based IT services firm, Micro Clinic Private Limited.

Though the Facebook–Little Eye Labs deal grabbed much of the attention, from India's domestic IT market perspective, the Hitachi Systems–Micro Clinic deal is far more significant.

Hitachi Systems is heavily banking on this Indian buyout to make its entry into the Indian domestic IT services market—which is growing much faster than several advanced economies globally.

Decoding the deal

As per the deal, Hitachi Systems Limited has acquired approximately 76% of Micro Clinic shares and is renaming the entity as Hitachi Systems Micro Clinic Private Limited.

For Hitachi Systems, the deal is extremely strategic and is its second Indian buyout: last October, it acquired major stake in Chennai-based Prizm Payment Services, which provides payment services using ATMs and POS systems to banks and financial institutions across India.

Certainly, these two deals in different service areas does give some insight into how Hitachi Systems is slowly building up its portfolio of services to foray into the Indian domestic IT services market.

"Hitachi sees India as an important region in its global strategy. As a member of Hitachi Group, Hitachi Systems Limited will try to build and enhance IT service operations in India, where it expects significant economic growth," says Yoshinori Okami, Executive Officer, Hitachi Systems.

> By utilising the two entities' strengths, the new company will be able to provide comprehensive one-stop IT services

Yoshinori Okami,
Executive Officer,
Hitachi Systems Ltd

However, Okami doesn't see acquisitions as the only way to enter the Indian market but points to the M&A route as a way to reduce risk in new business areas.

"Certainly, acquisitions are not the only way to make our presence felt in the Indian market. However, it is very efficient because this acquisition is able to reduce the risk to get into the new business development area," observes Okami.

Market observers and analysts agree to Okami's view on the foray. According to Kavita Bhadauria, Research Manager – Software & IT Services, IDC India, if a large company has to grow organically in the domestic market, it would take a longer time; but inorganically, via acquisitions like that of Micro Clinic, the company can tap huge opportunities in the tier II and III cities in a shorter time.

"So going for acquisition makes more sense for a company like Hitachi Systems," she says.

Riding high on Micro Clinic

Micro Clinic offers a strong platform for Hitachi to tap the domestic market. Started in 1993, the company has 15 offices in main cities, over 150 satellite branches across India and a staff strength of 650. "By fusing such strengths and Hitachi Systems'

Micro Clinic's 150 satellite branches, 650 staff and business partnerships across India give Hitachi Systems a notable presence in the Indian IT space

> **With an acquisition like Micro Clinic, Hitachi can tap huge opportunities in the tier II and III cities in a shorter time**

Kavita Bhadauria,
Research Manager – Software & IT Services, IDC India

> **Micro Clinic expects sales enhancement by utilising the Hitachi brand and IT services that Hitachi Systems offers, such as virtualisation and managed services**

Tarun Seth,
Managing Director, Micro Clinic

continuous services in Japan, we will try to gain new customers," says Okami.

Besides, Micro Clinic's strong financial background fits easily with Okami's view of lowering risk in new business areas. The company has a capital base of Rs 1.25 crore; in fiscal 2013, it recorded net sales of Rs 76.9 crore. On the business side, Micro Clinic enjoys long-standing relationships with other IT vendors, the government sector as well as private organisations.

According to Tarun Seth, Managing Director, Micro Clinic, his company is in the market for the last 21 years and has always been profitable; this year it has grown by 100%.

"Micro Clinic has strengths in procurement and maintenance services and Hitachi Systems has strengths in system design, implementation and maintenance services. By utilising the two entities' strengths, the new company will be able to provide comprehensive one-stop IT services," explains Okami.

While Hitachi Systems is banking high on the buyout, it is also important to know what value it brings to Micro Clinic. "Micro Clinic expects sales enhancement by utilising the Hitachi brand and IT services that Hitachi Systems offers,

such as virtualisation and managed services," says Seth.

"With Hitachi coming in, we feel it will put an accelerator to the growth and it is the best choice for Micro Clinic," he says.

According to Bhadauria of IDC India, the deal is a win-win situation for both companies. She says that today margins on hardware equipment are declining and so companies like Hitachi Systems or hardware vendors are shifting focus to IT services and solutions.

At large, it is the channel partners and system integrators that drive business for hardware vendors, but with the falling margins on hardware, they need to look at other areas like enhancing capabilities and offerings to sustain their business and growth.

For established cash-rich tier I channel partners and large systems integrators like Wipro, TCS HCL, Infosys and others, it is easy to invest in building or adding new capabilities in new emerging technologies by training or hiring human resources.

But that's not the case with tier II or tier III channel partners and systems integrators (Micro Clinic is mid-tier player), who may not have the resources or the appetite to invest in new

capabilities. And this is where the M&A deals with large organisations become crucial, according to market analysts.

Hitachi's India business strategy

The Micro Clinic deal emanates from Hitachi's long term strategy in India. Says Okami, "Hitachi announced India Business Strategy 2015 in December 2012 and Hitachi Systems followed that strategy."

Hitachi calls this medium to long term strategy as Hitachi's Social Innovation Business. Under this strategy, Hitachi is targeting consolidated revenues of 300 billion yen (about Rs 20,000 crore) in India in fiscal 2016, an approximate three-fold rise from the consolidated revenues in fiscal 2011.

However, with the Indian domestic IT market growing 13–16% over the past three years, market analysts are sceptical whether Hitachi will able to achieve its ambitious 2016 target.

In addition, multinationals like HP, IBM, Dell and others have a strong hold in the Indian market, in hardware as well as services.

Bhadauria of IDC feels that meeting the 300 billion yen target will be a tall order for Hitachi. However, she points out two key areas which can help the company come near: one, continuing on the M&A route; and two, providing IT services for specific segments and large customers.

"Hitachi Systems needs to focus on its strengths in consultancy, design and implementation; and it has to utilise the capabilities of Micro Clinic to build up its service offerings," opines Bhadauria.

Hitachi executives, not unaware of the immensity of the challenge, are making aggressive plans. Okami says that key measures to push business include, increasing localisation supported by

production for consumption in India; strengthening partnerships with Indian firms; and expanding business bases that are strongly linked with the Indian market.

To meet the numbers, Hitachi further plans to expand businesses into Africa and the Middle East by employing India as a base.

Okami adds the business expansion includes promoting research and development activities closely tied to the region, reinforcing a human resource management system and executing the Hitachi Smart Transformation Project, a new cost structure reform project.

To execute the above measures, Okami informs that Hitachi will double the number of employees to 13,000 and will invest 70 billion yen (Rs 4700 crore) between 2012 and 2015 fiscal.

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Worldwide IT spending to grow 3.2 % in 2014: Gartner

WITH THE GLOBAL economy showing signs of a gradual recovery, worldwide IT spending is on pace to total $ 3.8 trillion in 2014, a 3.2% increase from 2013 spending, according to the latest forecast by Gartner.

"Globally, businesses are shaking off their malaise and returning to spending on IT to support the growth of their business," said Richard Gordon, Managing Vice President at Gartner. "Consumers will be purchasing many new devices in 2014; however, there is a greater substitution toward lower cost and more basic devices than we have seen in prior years."

According to the research firm, the devices market (including PCs, ultramobiles, mobile phones and tablets)

is forecast to return to growth in 2014, with worldwide spending of $689 billion, a 4.4% increase from 2013. However, in top-line spending, a shift in the product

mix continues to be seen in the marketplace. The research firm observes that demand for highly priced premium phones is slowing, with buyers in mature countries preferring mid-tier premium phones, while those in emerging countries favor low-end Android basic phones.

The number of traditional PC users is contracting to a set of fewer, albeit more engaged, users. In general, consumers are opting to buy premium ultramobiles as notebook replacements and purchasing tablets as additional devices. As market power shifts to the buyer, and key product innovations become ubiquitous, product pricing is becoming the primary differentiator.

Server market in APEJ shy of $10 billion mark in 2013: IDC

SERVER REVENUES IN Asia Pacific excluding Japan (APEJ) region grew a modest 1.3% to total $9,985 million in 2013, coming in just short of the magical $10 billion mark, according to IDC.

The slim growth in 2013 was in sharp contrast to the heady 17% growth recorded in 2010 and 2011, fuelled by massive infrastructure buildout by Web 2.0 and cloud service providers in the PRC.

Despite the sharp deceleration in growth in 2013 compared to the previous years, server market in APEJ continued to out perform other regional markets on a worldwide basis.

"Strong adoption of server virtualisation and cloud technologies in the enterprise segment, rapidly increasing appeal of public cloud providers for specific workloads, and growing interest in Integrated Systems were some of the key technology disruptions that impacted the server

spending growth in 2013," said Rajnish Arora, Associate Vice President - Enterprise Computing Research, IDC Asia Pacific.

"Global economic malaise, lack of aggressive economic reforms in emerging economies, and political turmoil coupled with upcoming federal elections in certain countries were some of the non-technology factors that stymied server spending growth in 2013," added Arora.

The PRC, which has increasingly become the bellwether and cornerstone of the APEJ server market since 2008, grew at a much more anemic pace in 2013. The Web 2.0 and public cloud services providers such as Tencent, Baidu and Alibaba building hyper-scale data centres, who were responsible for driving the heady demand for servers in the PRC for the past several years, took a breather in 2013 that impacted the spending growth.

"Server spending plunged more than 21% in Australia and New Zealand in 2013 because customers are aggressively adopting cloud and cloud technologies to help build a much more agile and flexible IT infrastructure that is much more responsive, adaptive and predictive to the dynamic needs of the business," opined Arora.

83% businesses are unprepared for an online security incident: study

AN ECONOMIST INTELLIGENCE Unit study on the issue of incident response preparedness sponsored by Arbor Networks found that 83% businesses are unprepared for an online security incident.

The Economist Intelligence Unit surveyed 360 senior business leaders, the majority of whom (73%) are C-level management or board members from across the world, with 31% based in North America, 36% in Europe and 29% in Asia-Pacific.

The report entitled "Cyber incident response: Are business leaders ready?" shows that despite 77% of companies suffering an incident in the past two years, over a third of firms (38%) still have no incident response plan in place should an incident occur. Only 17% of businesses globally are fully prepared for an online security incident.

More prepared firms that do have a response plan in place, typically rely on the IT department to lead this process,

but the majority also draw upon external resources – primarily IT forensic experts, specialist legal advisers and law enforcement experts.

"There is an encouraging trend towards formalising corporate incident response preparations. But with the source and impact of threats becoming harder to predict, executives should make sure that incident response becomes an organisational reflex rather than just a plan pulled down off the shelf," said James Chambers, a senior editor, The Economist Intelligence Unit.

Matthew Moynahan, President, Arbor Networks added, "As these findings show, when it comes to cyber-attacks, we live in a "when" not "if" world. In the wake of recent high profile targeted attacks in the retail sector, a company's ability to quickly identify and classify and incident, and execute a response plan, is critical to not only protecting corporate assets and customer data, but the brand, reputation and bottom line of the company."

KEY FINDINGS

Level of preparedness is being held back by lack of understanding about threats

● Only 17% of business leaders feel fully prepared for an incident.

● 41% of business leaders feel a better understanding of potential threats would help them be better prepared.

● Having a formal plan or team in place has a significant effect on feeling of preparedness among executives.

● 50% of all companies feel that they are unable to predict the business impact when a breach occurs.

Emphasis on reputation is driving formalisation of plans and processes

● Two-thirds of executives say that responding effectively to an incident can enhance their firm's reputation.

● The percentage of organisations that now have an incident response team and plan in place is set to rise above 80% in the next few years.

● Firms that have suffered an incident in the past 24 months are twice as likely to have an arrangement with a third party expert as firms that have not suffered an incident.

Firms remain reticent about disclosing incidents and sharing intelligence about threats

● 57% of organisations do not voluntarily report incidents where they are not legally required to do so.

● Only a third of companies share information about incidents with other organisations to spread best practice and benchmark their own response.

Airtel, IBM announce new services partnership

BHARTI AIRTEL, A global telecommunications services provider with operations in 20 countries across Asia and Africa, and IBM have signed a new agreement to manage Airtel's infrastructure and application services in India over the next five years. This agreement builds on the 10 year relationship between the two organisations which has driven the co-creation of industry leading telco solutions and customer-centric services.

The agreement is based on Airtel's new IT vision that defines the next generation of services for its ever-growing customer base and to offer best in class services to its customers through solutions leveraging cutting edge technology. As part of the new vision, Airtel is also building in-house capabilities and a strong partner eco-system, and has selected IBM to manage the IT infrastructure and applications for its operations in India.

Vanitha Narayanan, Managing Director, IBM India, said, "In the last decade, Bharti's customer base has increased from a few million to over 285 million. Airtel partnered with IBM to drive this growth, by using technology to respond with intuitive offers for customers, managing service delivery, and improving organisational efficiency. This pioneering partnership will continue to bring innovation to Airtel's customers, which is the foundation for long term strategy."

Harmeen Mehta, Chief Information Officer, Airtel said, "Our next generation sourcing model is all about creating a smarter IT – from the data centre to the end-user's experience with a view to ultimately offer new and innovative solutions to our customers. IBM's global expertise to manage large infrastructure operations and application management, coupled with the new IT capabilities we are developing in-house is the latest milestone in our strategy to build a world-class IT services platform as we enter into a new phase in our growth journey in both data and voice."

About 24% of online shopping traffic comes from mobile devices: eBay

EBAY INDIA RECENTLY said that about 24% of its traffic comes from mobile devices and over 92% of all eBay shoppers pay via an electronic payment method.

In its report titled Commerce 3.0, the online marketplace major said that e-commerce supports the domestic economy with domestic sellers on eBay India reaching out to an average of 19 states across the country.

According to the report, Delhi and Maharashtra dominate as the largest net exporters within India while Kerala, Karnataka and Andhra Pradesh are the largest consumers. The report further states that over 98% of eBay sellers export in contrast with only 10% of traditional firms.

eBay currently has 2.1 million active users originating from 4,306 cities in India. "Approximately 30,000 sellers sell on eBay India annually," said Nathani, adding that about 32% of eBay sales are made by newcomers whereas the corresponding figure for traditional sales is 5%.

The report further emphasises on internet-enabled trade that helps overcome the tyranny of distance and makes the world 'flatter' with fewer barriers to business.

"Internet enabled trade enhances competition and reduces prices because it offers businesses very low market entry barriers. Consumers in remote or rural areas benefit most in these markets, where competition is traditionally weaker because there are fewer suppliers," noted Nathani.

Netmagic opens a new data centre in Bangalore

NETMAGIC, AN NTT Communications company, recently announced the launch of its new data centre in Electronic City, Bangalore. This tier III certified data centre is spread over 100,000 sq. ft. area and was jointly developed and built by Mumbai based Netmagic and NTT Communications – part of Japanese NTT Group in a short span of 15 months. It has a capacity of 1,500 racks, however presently, 250 racks are already installed in the data centre.

"This is a moment of pride for us, as this new data centre will give Indian and multi-national enterprises an opportunity to experience the state-of-the-art data centres that NTT Communications operates across the world," said Akira Arima, President and CEO, NTT Communications.

According to Arima, the added advantage of Netmagic's excellence in IT infrastructure management and service delivery in the Indian enterprise space, gives this data centre the capability of becoming the new benchmark for data centres in India.

According to Sharad Sanghi, MD and CEO, Netmagic, Bangalore offers a strong growth potential and a supply-constrained market, making this the most opportune moment to launch the new data centre.

This new facility also marks the formal launch of the Nexcenter brand of data centre services in India. Under this brand, NTT Communications offers leading-edge data centre services across the globe. In India, these services are offered through all 8 Netmagic data centres.

The data centre will deliver Netmagic's entire suite of services including managed co-location, dedicated hosting, cloud computing, IT infrastructure monitoring and management and security. It will provide enterprises customizable hosting space with high power and cooling densities and offer not only individual racks, but also highly secure cages and enclosed server rooms to meet the requirements of large global enterprises.

Since Bangalore is least prone to natural calamities it makes ideal for large enterprises, across India and other geographies to establish their disaster recovery and business continuity sites. This second data centre of Netmagic in Bangalore and company will add one more data centre in Mumbai.

Skillsoft brings MS Office 2013 KnowledgeCenter

TO HELP PROFESSIONALS keep pace with the latest updates to the Microsoft offerings, Skillsoft recently announced the availability of the Microsoft Office 2013 KnowledgeCenter, an easy-to-use portal that incorporates Skillsoft's multi-modal Office 2013 resources in a single solution.

KnowledgeCenter will provide resources for all skill levels of Office 2013 users ranging from beginners to

intermediate to advanced. Designed to increase Office 2013 proficiency, the solution includes resources across multiple learning modalities, including videos, courses, online books, virtual practice labs and mentoring capabilities. Content within the portal is refreshed regularly to keep pace with the industry, including the addition of new resources as they become available. Through targeted content and learning road maps, organisations can customise learning options to match unique business needs.

The KnowledgeCenter highlights the most popular Microsoft platform products, including Word, Excel, PowerPoint, Outlook, SharePoint, Access and Project.

Oracle is No. 2 for first time in Gartner's software ranking

WORLDWIDE SOFTWARE REVENUE totalled a little over $407 billion in 2013, a 4.8 percent increase from 2012 revenue of about $388 billion, according to Gartner. The developed geographies were the primary growth drivers offsetting the relative sluggishness in emerging markets.

The software industry is in the middle of a mult-iyear cyclical transition as organisations are focusing investment on technologies to support existing system structure, in order to maintain competitiveness, while still taking advantage of cloud/subscription-based pricing where it makes sense to grow and advance the business.

"There is a shift in vendor rankings from 2013 at the top of the worldwide software market," said Chad Eschinger, research vice president at Gartner. "This is the first time in Gartner's global software market share research that Oracle has ranked second in terms of total software revenue with $29.6 billion and capturing 7.3 percent of the global market. Global trends around big data and analytics with business investment in database and cloud-based applications helped to drive Oracle's top-line growth."

"The software market has been changing shape over the past five years, and cloud is driving the bulk of this change as software vendors acquire and provide applications and infrastructure technology to support the cloud and the Internet of Things (IoT) movement," said Joanne Correia, research vice president at Gartner. "A clear indicator of this is that for the first time we have a pure cloud vendor in the top 10."

Salesforce.com, with more than $3.8 billion in revenue during 2013, climbed two positions to capture the No. 10 slot of the worldwide enterprise software market, and it achieved the highest growth among the top 10 vendors at 33.3 percent (see Table 1). Salesforce.com has also moved into the top five for overall application revenue.

"Investors continue to focus on revenue growth and market share gains as the primary criteria when evaluating vendors," said John Rizzuto, research vice president and Invest analyst at Gartner. "At this point, the new and emerging technology markets in software, such as digital marketing and public cloud computing, are so nascent that investors are favoring those companies that are early and aggressive in grabbing both market and mind share — in many cases dismissing progress on earnings and cash flow in hopes that they will one day follow."

Top 10 Worldwide Software Vendors, Worldwide, 2012-2013 (Billions of Dollars)

Rank 2013	Rank 2012	Vendor	2013 Revenue	2012 Revenue	2012-2013 Growth Rate (%)
1	1	Microsoft	65.7	62	6
2	3	Oracle	29.6	28.7	3.4
3	2	IBM	29.1	28.7	1.4
4	4	SAP	18.5	16.9	9.5
5	5	Symantec	6.4	6.4	-0.8
6	6	EMC	5.6	5.4	4.9
7	7	HP	4.9	5	-2.7
8	9	VMware	4.8	4.2	14.1
9	8	CA Technologies	4.2	4.3	-2.6
10	12	Salesforce.com	3.8	2.9	33.3
		Others	**234.6**	**224**	**4.7**
		Total	**407.3**	**388.5**	**4.8**

Microsoft adding 2,000 commercial cloud customers each month in India, says exec

MICROSOFT INDIA RECENTLY announced that a significant portion of its growth in India in the last 12 months has come from its cloud businesses. "Microsoft is powering the cloud transition in India with Windows Azure and a set of comprehensive offerings across private, hybrid and public clouds," said Bhaskar Pramanik, Chairman, Microsoft India, at the Windows Azure Conference in Bengaluru.

"We are adding over 2,000 commercial cloud customers every month in India and these are customers across all industry sectors – banking, manufacturing, healthcare and media, and across large, mid-sized and small companies," Pramanik added.

Scalability, reduced costs, flexibility, business agility and speed in new service roll-out are some of the reasons enterprises in India are attracted to cloud services. With its large partner and developer eco-system, Microsoft is helping Indian organisations assess and transition to the cloud easily. Microsoft has 10,000 partners and engages with an ecosystem of 1.6 million developers in the country, he said.

"Our investments in improving the readiness of our partners and developers is enabling faster cloud adoption. We are in a mobile-first, cloud-first world and cloud is becoming an integral part of the IT infrastructure in Indian enterprises today," said Karan Bajwa, Managing Director, Microsoft India.

According to the company, it has been investing significantly to improve cloud capabilities among partners and developers. In the last year, the company has grown the number of its cloud solution

partners by 200%, has seen a 100% growth in the number of independent software vendor (ISV) applications on Windows Azure and helped 1,700 start-ups adopt Windows Azure.

Microsoft is also partnering with academic institutions to create Microsoft Innovation Centres – of which 39 are now operational. The company has conducted 2,000 training sessions for over 200,000 developers and IT professionals in the last year.

"Azure is a powerful platform for the entire Indian ecosystem of IT professionals, developers and start-ups to bring their applications to market worldwide. It helps Indian customers leapfrog to the cloud, and accrue significant cost savings. It provides a unique opportunity for our partners to scale their business. I believe the opportunities ahead for India with the Azure cloud platform are tremendous," said Satya Nadella, CEO, Microsoft Corporation in his address via a video message to the participants of the conference.

Pitney Bowes, IBM tieup for hybrid cloud location services

PITNEY BOWES AND IBM today announced a collaboration on IBM's codename "BlueMix" platform-as-a-service to develop new hybrid cloud location services that help businesses unearth deeper connections between their customers, their geography, and their networks to deliver more personalised services and contextually relevant experiences.

BlueMix provides DevOps in the cloud – an open, integrated development experience that scales to any level. Pitney Bowes is among the first third-party solutions now available to developers and companies on the new IBM BlueMix Platform-as-a-Service (PaaS).

Pitney Bowes' location intelligence suite of products offers the most comprehensive capabilities to provide businesses with the ability to visualize spatial data and understand relationships between specific locations.

Using advanced, hyper-accurate location data, insurers can improve underwriting decisions, telecommunications providers can better analyse network coverage and retailers can deliver more targeted promotions to consumers, based on when and where they are most likely to buy.

For Pitney Bowes, the partnership provides the opportunity to expose key solutions, such as location - based services, e-commerce fulfilment, Internet postage, and parcel management, through IBM's API Management to an extended ecosystem of innovators and developers. It will also speed up the availability of new services from Pitney Bowes to vast new markets globally.