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SURVEILLANCE 2.0

CLOUD-BASED
SURVEILLANCE
SOLUTIONS MAY
BE CHEAPER,
MORE FLEXIBLE
AND QUICK TO
DEPLOY

There have been several terror attacks in India in recent times. But one of them stands out: the Mumbai attacks of November 2008 in which the massacre of innocent lives went on for three days across places as varied as a bustling railway station, a roadside cafe and a couple of five-star hotels.

After condemnations and consolations in the wake of this attack began a large-scale rollout of surveillance cameras on public and private property. These were boosted by an equally large number of metal detectors and X-ray scanners.

Coupled with growing instances of terror and sabotage all over the globe, all these security contraptions now seem to have become an inconvenient truth for us. We must allow ourselves to be frisked, searched, X-rayed and monitored as much as the security agencies feel necessary. (It is another matter that in some of the budget-starved and intelligence-challenged situations—Delhi Police road checks, for instance—we must also bear the grossly irritating physical barriers put up with the intention of culling out culprits but which end up choking the already crawling traffic.)

On the face of it, these measures give us some assurance that security is being taken care of. But there is a bigger challenge that the agencies and CISOs face behind the scenes: What happens to all those images and impressions captured while people or vehicles were moving or passing through? How to store, retrieve, archive and mine all that humongous amount of data? Who looks at that data and when?

These and many more questions need to be answered by each organization aiming to make itself secure against unwanted intrusions and attacks. As the next step, organizations must invest in storage, archival and analytical systems. After making their own assessment for requirements (I could not find any Indian legal guidelines for organizations on keeping surveillance data), they will need to acquire, install, maintain and use those systems.

One emerging possibility is to use cloud-based solutions, which may not only be cheaper but also be more flexible and quick to deploy. What is more, going the cloud way and partnering with a hosted solution provider can help solve the skill and support issues that several companies face.

Another challenge, especially for the government, will be to keep the installed base of cameras maintained and running. Vandalism and technical support problems continue to dog several installations. Also, with higher resolution and more efficient cameras now available, there would be a need for constant upgrade—at least in the more sensitive places where the quality of images is critical.

The first thing, of course, is to install the equipment: for one, as per a media report, the CST station in Mumbai is still awaiting those CCTV cameras even five years after the attacks.

sanjay.g@expressindia.com

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MANAGING
SURVEILLANCE

Surveillance tools have become the need of the hour for every CIO. A look at the challenges and issues enterprises face in securing and monitoring the premises and how they can do so effectively

By Jasmine Desai

Located in the Indian state of Gujarat, Junagadh attracts a large number of tourists and pilgrims who visit various historical locations as well as places of religious importance in the city. While there are more than 2000 police personnel deployed in the Junagadh district, the city law enforcement authorities wanted to install a video surveillance solution as an additional monitoring tool to assist police teams. The solution was intended to help monitor and keep track of suspicious vehicular movement at the entry/exit points of the city as well as other critical locations.

The solution was to be implemented in phases. The first phase of the project was to cover all major entry and exit points as well as other critical areas of the city of Junagadh. The solution consisted of network cameras (XIS P1343 and 215 PTZ-E) from Axis Communications, which were installed at eight different locations spread all over the city. The solution also included the implementation of a complete wireless monitoring and storage facility at the Superintendent of Police (SP) headquarters in Junagadh that helps to monitor strategic places such as a dam and places of religious importance which are potential terrorist targets. The Director General of Police of the State of Gujarat has sanctioned funds to be utilized in further upgrades of this initiative.

"We were looking to execute a surveillance system across Junagadh city to help supplement the police personnel's efforts in monitoring the critical city areas. It was prohibitively costly to use fiber connectivity or connectivity offered by telecom or ISP companies. We did not have the budget to pay the recurrent

Surveillance market in India

2013 $272 mn

$76.2 mn is estimated to be networked video

2016 $463 mn

$223.8 mn is estimated to be networked video

> **There should be a proper integration of the camera with video and access control.**
>
> **Sridhar Pinnapureddy,**
> Founder & CEO, CtrlS Datacenters

> **Analytics is also coming into the picture wherein organizations can have the facility to record only what is needed.**
>
> **Sudhindra Holla,**
> Country Manager, Axis Communications

amount year on year for data usage. Esec brought in their own wireless solution along with the Axis network cameras," says Dipankar Trivedi, Superintendent of Police, Junagadh. (Esec Technologies is a Maharashtra-based supplier of security solutions.)

Once implemented, the control room set up at the SP office enables round-the-clock, centralized and remote monitoring of all these locations instead of relying only on conventional methods of patrolling and local intelligence. The solution is designed to allow easy scalability in the future, complying with the Junagadh police's requirement for scaling up the first phase of installation. The department foresees deployment of a minimum of 20-25 cameras in the next two phases. The department is also looking at integrating other functions of city surveillance such as the possibility of integrating Automatic Number Plate Recognition System (ANPRS) and video analytics.

Junagadh is not alone in its attempt to deploy surveillance solutions for heightened security. More and more police forces, government organizations and enterprises are supplementing their security efforts with video surveillance equipment and solutions, especially in

the aftermath of growing incidents of terror attacks, sabotage and theft. As per an IMS report, in 2013 the video surveillance market in India is pegged at $272 million out of which $76.2 million is estimated to be just networked video. By 2016, the market is estimated to grow to $463 million and networked video will be $223.8 million. Overall, the video surveillance market is growing at 20% annually. Also, in 2016, IP-based surveillance will overtake analog-based surveillance in terms of revenue.

One cannot underestimate the importance of security surveillance in our day and age. However, while organizations and cities at large have invested hugely in surveillance tools, the big challenge lies in post-implementation and lack of knowledge on utilizing these tools optimally.

Mentions Ashish Raina, Principal Analyst, Gartner, "India is still an evolving market. We were not even automated, the cost of developing this solution earlier was quite high and the civic sense was very low. Thus, it was limited only to some large enterprises and certain units like IT, R&D, where there was confidential data." Even from IT service perspective, compliance issues makes it necessary that there is no data

theft, thereby leading to installations of these tools. From compliance driven usage it escalated later, into commercial spaces when large retail outlets started deploying surveillance. Presently, more than ever we are required to manage it in a much more formal and organized way.

The best practices

Surveillance management and its surrounding best practices is not as tricky as organizations might assume. Scalability and reliability are extremely essential when it comes to it. According to Sharmila Saha, Vice President and Head of IVSS at Mindtree Limited, "The surveillance management software should be standards compatible so that it is future proof. It should support cameras from multiple vendors and be ONVIF ready so that customers are not tied to a particular brand of camera."

Says Sridhar Pinnapureddy, Founder & CEO, CtrlS Datacenters, "There should be a proper integration of the camera with video and access control. An ideal network with sufficient bandwidth and compression capabilities to transfer dynamic images captured in high-resolution, is critical to optimized performance."

C.G. Prasad, Director - Information Systems, Premier Inn India Pvt Ltd, says, "If an organization is very mature in its outlook of surveillance systems, it will try to have a DR system for the backup storage. They store backup data and replicate it both on-premise and off-premise so that business continuity is not affected. The end-point devices should be tamper-proof, but that is not often the case in India as there are no rules or regulations around it." Premier Inn has installed Cisco and Honeywell surveillance tools, using IP and analog CCTV devices, covering the entry and exit points and the entire property. They also keep a backup of these recordings.

According to Trimax IT Infrastructure and Services Ltd, organizations have to put a lot of effort in continual monitoring of surveillance. 24X7 multiple trained staff needs to be deployed for monitoring. They also need to train specifically toward disaster management as they need to take the

VIZAG SEAPORT GOES FOR IP-BASED SURVEILLANCE

The Vizag Seaport terminal is part of Visakhapatnam Port, which is one of the 12 major ports in India. The terminal was part of an expansion project under PPP (Public Private Partnership) scheme of Government of India. The port carries out bulk handling of cargo on a 24/7 basis, with 25 vessels on average visiting the terminal per month. Vizag Seaport Terminal as a part of Visakhapatnam Port and with the International Ship & Port Security (ISPS) code coming into effect, the port authorities were looking for a way to enhance their monitoring and surveillance capabilities.

The Vizag Seaport, which had a completely manual security system with guards patrolling the port, decided to go in for a greenfield IP-based surveillance solution. In the first phase, the port installed 17 cameras to monitor the cargo handling operations and allied activities at the Vizag Seaport. The implementation team had to take utmost care while installing the system at all critical locations due to the nature of the weather and applications sensitivity.

The implementation of Axis network-based surveillance system enabled authorities to supervise port activities on a 24/7 basis with minimal manual intervention. Additionally, the recorded data also serves as a powerful training tool to help new employees understand port functioning. While upgrading security was an important objective, the authorities were also keen on improving operational alertness.

In the first phase, the team installed a total of 17 cameras, including Axis 215 PTZ-E and Axis P1343 cameras (that are suitable for outdoor locations), Axis 233D and Axis Q6032-E PTZ network cameras. The factors that were given the highest priority during planning and implementation were environment, usage demand and the ruggedness to withstand all these elements.

Footage for 90 days is backed up and maintained by the port authorities. This allows the port authorities, unprecedented insight into the port's activities; thereby helping to streamline processes and identify redundancies. The solution allows the monitoring of sensitive and non-sensitive areas selectively. It has also reduced a lot of unnecessary disputes with the contractors and sub-contractors and with the external entities that work at the terminal.

In addition, the surveillance system acts as a deterrent for any possible thefts or security and protocol violation. The surveillance solution also facilitates random remote inspection of the port by share holders spread over three different countries.

Apart from better surveillance, the system provides data that can serve as a training tool for new employees. For example, existing videos of key events can be used to educate new employees on the procedures for handling such events.

> Our civic sense is very low. [Surveillance] is taken as a secondary thing. It should have a legal impetus.

Ashish Raina,
Principal Analyst, Gartner

> An organization with a organization with a mature outlook will try to have a DR system for the backup storage.

C.G. Prasad,
Director - Information Systems,
Premier Inn India Pvt Ltd

corrective action if they see any threat. Nowadays, organizations have also been investing in static IP-based monitoring to view the footage from anywhere, any time.

Mentions Sudhindra Holla, Country Manager, Axis Communications, "Integration of access control and video surveillance is one of the latest trends. It is better to go with open standards. Traditionally, they are proprietary in nature. Analytics is also coming into the picture wherein organizations can have the facility to record only what is needed. This helps in saving the storage as well as bandwidth."

A single breach can lead to major

disaster and that is why ensuring best practices is extremely vital. Organizations should do regular internal audits and keep on upgrading these tools. Organizations should check if they [tools] are strategically placed. Also, organizations need not lax in this area just because no offenders have been caught in months.

The hurdles

Lack of awareness and planning can bring unforeseen challenges in dealing with surveillance tools. One of the major challenges that organizations face is that they require huge bandwidth. The

network needs to be designed properly or else it would get choked. There is also knowledge related issues in terms of end-customers that do not have lot of knowledge in handling these equipments. People need to be educated when they are shifting from analogue to IP based surveillance.

Mentions Pinnapureddy of CtrlS, "The growing need for organizations to stretch the retention period of captured data from 30 days to 90 days and in some cases, even 365 days is creating demand for high capacity storage systems and even high performance computing and memory. The correlation between

different events and cameras is becoming challenging." Predicting the needs (HD, higher bandwidth, etc.) of various users in the organization is turning more complex due to rapid growth and ever evolving dynamics of the office environment.

According to Saha of MindTree, "The network is the heart of the system and it is imperative to ensure it is up all the time. Another important aspect is the storage infrastructure for easy management and retrieval of stored videos."

India is a very different country and our use cases are very different from other countries. Our requirements are different from Europe and US. Says Raina of Gartner, "Our civic sense is very low. It is taken as a secondary thing. It should have a legal impetus. The requirement has to be in sync with local requirements. Here it is polluted, there is lot of dust, lot of smog. The cameras need to be dust resistant. They also need to be made cheaper."

More challenges lie in terms of organizations' lack of awareness in optimally utilizing these tools. Sometimes, organizations put these tools in place and do not use it. They do not utilize the data. If you have these systems then there should be a dedicated security department and a security team.

In the India context, the legal department should write down strong measures in terms of what should organizations follow and be legally bound to have effective surveillance in place. Mentions Prasad of Premier Inn, "Organizations should have a system where it is mandatory to store data of particular days. In India, the security system has been a precarious thing and it has not been given much attention. There have to be strict measures to implement it."

India is a diverse market with diverse needs. Organizations and vendors need to work more on spreading awareness and training to make surveillance management hassle-free. How many incidents do we need before the lesson—that security cannot be compromised—is driven home?

jasmine.desai@expressindia.com

GUIDELINES FOR SURVEILLANCE

To control physical access to video surveillance components, consider the following guidelines:

● If possible, place components in areas where you can control who can access the areas. For example, consider placing servers in locked cages or rooms.

● Lock components in racks.

● Lock cameras in their locations or use vandal-resistant devices.

● Protect network cables and other infrastructure components.

Scalable storage for video surveillance

With the increasing popularity of IP video surveillance systems, data storage in video surveillance is undergoing a major revolution. Today's video surveillance systems require storage that can:

● Scale to larger capacities

● Record higher frame rates without dropping frames

● Add cost-effective storage for longer retention periods

● Handle higher resolution video from megapixel and multi-megapixel cameras

● Store and manage videos centrally from a distributed implementation

● Scale to accommodate future growth.

Courtesy: Trimax IT Infrastructure and Services Ltd

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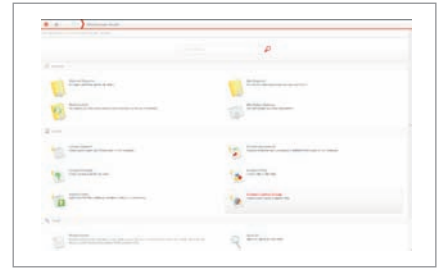
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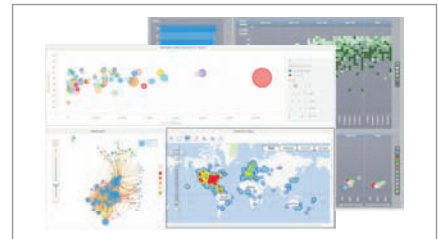
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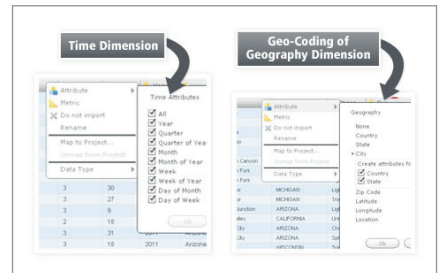
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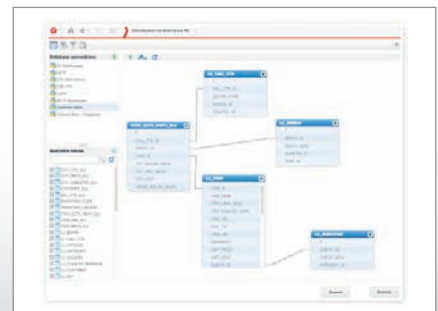
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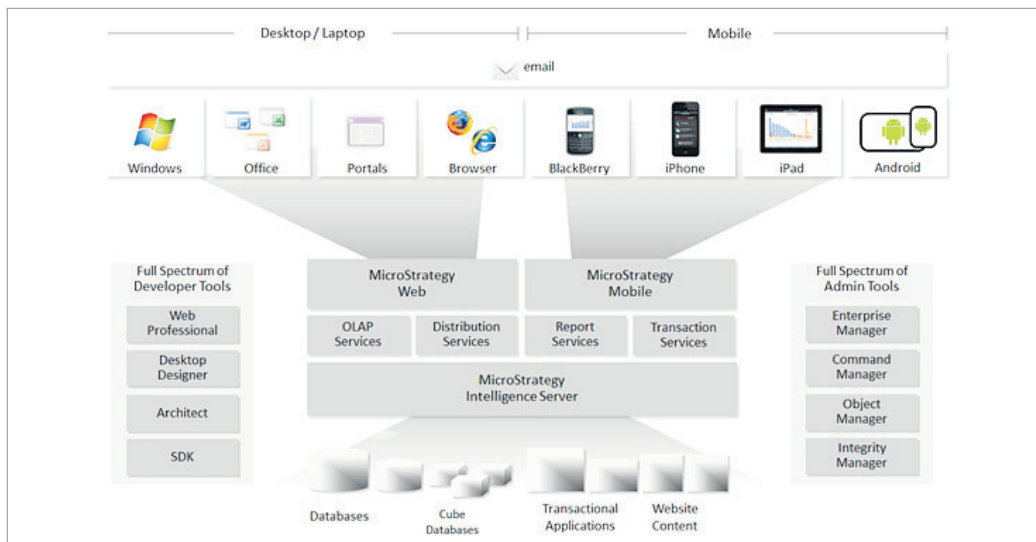
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OPEN MEANS
BUSINESS

Providing modular architecture, better security and enhanced customization,
open source ERP and CRM are set to grab more market share in the next few years

BY KTP RADHIKA

Coimbatore based Trident Pneumatics is into manufacturing critical compressed air solutions. One of the largest exporters of air treatment products in India, the company was using an Indian accounting software to manage its business operations. However, streamlining business turned out to be a problem. The management wanted to automate the interlinked business processes and to get real-time and accurate management information. Trident also required better inventory management and optimized production planning and control.

The management felt that only open source solutions were capable of offering high levels of customization, and decided to use an open source alternative for ERP. It implemented OpenERP 5.0.14, an open source product from the vendor OpenERP, which solved all their problems.

Like Trident, a whole lot of companies are now entering the open world of business software. From the reliable, secure Linux operating system, to the unsurpassed LAMP platform (a platform consisting of Linux, Apache, MySQL and Perl/PHP/Python), open source has quite a lot to offer for enterprise business systems. In recent years, open source software has begun to move into the mainstream business application marketplace, and are increasingly deployed in mission critical scenarios.

According to IDC, the global software market is worth close to $300 billion, with open source growing at an average yearly growth of 22% and expected to exceed $8 billion by this year. In 2012, Gartner reported that on average, 29% of deployed code was open source. The research firm also predicts that by 2015 at least 95% of mainstream IT organizations will leverage open source solutions within mission-critical software deployments.

Specific figures for India may not be available at the moment, but experts say the industry is maturing faster. Another report from Gartner in 2012 said open source software would continue to broaden its presence and create pressure on market leaders during the next three to five years, especially when open source becomes a key element of the software quality landscape beyond the developer level. It forecast that nearly 70% new enterprise Java applications will be deployed on open source Java application servers by the end of 2017.

It all started with Linux going into data centers, comments Arun Kumar, General Manager, Red Hat India. "From analytics to business applications, interests in open source is getting high because Linux data centers have received a lot of credibility in the past 10 years. Linux data centers have grown from virtually zero to around 20% during this period. It is poised to grow from 25% to 30% in next 2-3 years," he says.

> People who are invested in Linux have moved up in the stack since they have experienced that open source is as good or even better.

Arun Kumar,
General Manager,
Red Hat India

Open source software are widely adopted by companies for asserting control over their IT infrastructure, feels Sumit Misra, General Manager and Head - Competency Process, RS Software. "An open source model for an ERP or CRM allows companies to access the system's code and customize it using their own IT department instead of paying extra for vendor customization services and licensing, as is typically the case with closed source programs." RS Software started using open source tools from 2011 for its analytics and mobile application development (Android).

Typically, organizations adopt the open source software stack bottom-up. That is, they start on the system infrastructure level (e.g. Linux) and then move up the stack to application infrastructure (like applications servers) and then to business applications. "Thus people who are invested in Linux have moved up in the stack since they have experienced that open source is as good or even better in certain aspects compared to the proprietary alternative. Their next option is middleware. After that core applications will be their choice," explains Kumar.

Not just cost

Free and open source software (FOSS) holds many compelling advantages for businesses. There is a common view that price is the motivating factor for adopting open source software since it is relatively cheap. But open source is much more than that. The results of a survey on 'Future of Open Source' conducted by Black Duck Software, a leading open source software partner, and North Bridge Ventures this year shows that freedom from vendor lock-in and better quality software are the prominent factors in choosing open source software. Atul Saini, Founder and CEO, T3 Edutainment, a company that provides technology solutions and a range of quality educational programs, states that freedom is one of his major criteria while choosing open source. The company is using open source tools for their inventory management, project management and sales management for the past two years.

> Last year, we saw several clients adopting open source in the business application space on a large scale

Mantavya Gajjar,
Director, Tiny ERP

CHECK THEM OUT

Some popular open source business applications:

ERP: OpenERP, Fedena, ERPnext (for SMB space), Openbravo, Apache OfBiz

CRM: Sugar CRM, OpenERP's CRM and sales solution

HRM: Orange HRM, Waypoint HR, Simple HRM (SMBs)

Point of Sale: Apache OfBiz, OpenERP

According to Rushabh Mehta, Founder, ERPnext, a cloud-based open source ERP vendor, in an open source ERP or CRM, it is up to the user company – not the vendor – to decide what is the time to upgrade.

Fine architecture is another advantage open source software offers. Open source applications are coming with zero legacy. Thus developers can build applications with latest tools. Kumar of Red Hat states, "In open source applications, the architecture is far superior since they do not have the burden of legacy to take along with. So they have a whole lot scope for innovation. Open source applications, hence, will be more modular, architected with latest framework, developed using latest best practices and much more secure. With all these features, open source developers can bring out completely new breed of applications for enterprise users."

Secure and flexible

Bugs in open source software also tend to get fixed immediately. "Open source codes are available publicly. And open source communities globally contribute and analyze the code, making it more secure and constantly increasing the quality. So they are rich in features, excellent in design and more secure. Also,

open source tools provide us with the much needed customization and agility," says T3 Edutainment's Saini.

Another major benefit, obviously, is customization. Open source solutions can be easily customized for diverse businesses involving no additional costs. Open source applications offer a framework which can further be customized to build an application to suit various individual requirements. So, more number of businesses are embracing the open source development technology. Mantavya Gajjar, Director, Tiny ERP, a division of OpenERP, says, "Open source solutions in the business application space have helped companies set up their online identity in an easier and cost effective manner. It is very easy to customize open source software if you are familiar with the code. You can also change work flows as per requirement." OpenERP is a global vendor of open source ERP.

Flexibility is a major factor that attracts adoption. Mahesh K. Malani,

IN 2012, GARTNER REPORTED THAT ON AVERAGE, 29% OF DEPLOYED CODE WAS OPEN SOURCE

Head (Operations), Mahesh Engineering Services, a company that supplies industrial electrical products, states that flexibility was one of the main attraction for choosing open source solution for his business. The company currently uses ERPnext for its business purposes. "Whenever there was a scenario of a considerable change in our product offering, pricing, specification, terms and demanding customer expectations requirements, open source solutions provided us all the flexibility and scalability where proprietary solutions

> Flexibility was one of the main attractions for choosing open source solution for our business.

Mahesh K. Malani,
Head (Operations),
Mahesh Engineering Services

> An open source model for an ERP or CRM allows companies to access the system's code and customize it using their own IT department.

Sumit Misra,
General Manager and Head - Competency
Process, RS Software

failed," he says.

Reduction in the total cost of ownership is indeed attracting companies to open source business applications. "ERP is a valuable tool that allows businesses to realize improved performance and better financial management. Even with its benefits, the high cost of proprietary ERP causes many executives to question their return on investment in these products. However, the costs for proprietary and open source systems vary widely and scales with the size of the business. With open source solutions, the system is free to download and there are no user licenses. No licensing fees means businesses are able to create as many user accounts as they need without worrying about the cost," explains Gajjar.

Adoption gearing up

Obviously, all these benefits are boosting adoption of open source applications among businesses, especially in the small and medium (SME) sector. Technological innovations such as cloud computing and mobile-based solutions are driving adoption for open source business applications.

In the past few years, many open source based software have become popular in areas such as ERP, CRM, HRM, POS. Gajjar says, "Last year, we saw several clients adopting open source in the business application space on a large scale, and we saw an increase in proposal work related to open source."

In the SME space too, open source adoption is on the rise. "In India, people are still stuck with Tally. But things are changing. The industry is slowly moving up. There are many companies now offering open source ERP services which will drive innovation in this space and drive adoption," feels Mehta.

An open future

Despite their new-found popularity in the business application space, open source tools still have a long way to go to catch up with their proprietary counterparts. One challenge is that open source solutions may require additional development to enable them to integrate with an existing proprietary

> OPEN SOURCE APPLICATIONS ARE COMING WITH ZERO LEGACY. THUS DEVELOPERS CAN BUILD APPLICATIONS WITH THE LATEST TOOLS

environment. Some open source solutions may never work well with established proprietary products. Another challenge is training the internal staff. States Gajjar, "In many enterprises, the staff are traditionally trained and practiced using proprietary software programs. Introduction of new programs and software may require re-training in order to enable the crew to use open source solutions. This may be a challenge for many organizations."

Scarcity of vendors with adequate support is also posing a challenge for the user community in business application space. Kumar feels, "ERP and CRM are business critical applications. If anything goes wrong, it will affect the entire business." So if companies are not able to find out a proper vendor or system integrator to step up and provide adequate support, there wont be a major rise in the adoption rate. "But all these challenges are a question of time. People will see this as an opportunity and will start coming up with proper solutions, support and will monetize it in coming few years," he visualizes.

While proprietary software laid most of the foundation for computing since the beginning, open source has proven to be just as useful and valuable as proprietary software has been. With advancements in technologies emerging everyday, open source solutions will become very powerful and continue to advance and contribute to computing and software development. They will start managing the critical needs of the enterprise community. Experts feel that in the near future many more open source tools, which can be integrated with core business applications, will emerge and will enhance the functions of core business applications. These solutions, rather than replacing the entire system, will help increase the functionalities of the existing systems and boost the value proposition of the entire business.

radhika.ktp@expressindia.com

In a conversation with Heena Jhingan, Nitin Hiranandani, Director - Printing, PPS, HP India, throws light on the kind of metamorphosis the print industry is undergoing.

"Printing anything, anywhere from any device is the new big thing"

This year's first quarter hasn't been very good for the printer industry in India. Going forward how do you see the market perform at the end of the fiscal?

The first quarter might not have been great for the industry, but HP continues to maintain the lead. Over the years, we have been driving the overall printing market in India. We continue to drive technology leadership and innovation both from a vendor and consumer perspective, building into our products what customers want. The entire IT industry is going through a huge transformation—both application and expectations have now changed. I believe in these testing times, innovation will be critical to move ahead.

Earlier, the customers needed a printer to which they could simply fire a job and get done, which is no more the case. We recently launched a web-connected, cloud ready printer, on demands of the customers asking for a printer that they could connect with on the network and on the web. We launched a new range of printers that don't require a computing device to be connected to the web, you can connect through the printer, download the content and print it directly on the printer. In addition to that, our printers now have things like a front panel and touch.

What is really changing and evolving is the customer needs. Being leaders in this space, it is very important for us to take the technology to consumer. A revolution is brewing up in the form of e-print technology. Printing anything, anywhere from any device is the new big thing. When we look at our enterprise portfolio, we have the product range for MFS with retractable keyboard, for adding meta tags and adding the document to the workflow.

How does the market look like as of now? Do we still see the single function printers going strong?

The printer market is at a very interesting stage as of now with a wide range of products. The multi-function printers can be further be broken into two categories. One is AIO (all-in-one), which is an entry level thing up to 20 ppm (prints per minute) and then we have the high end MFPs – 30 ppm and above, which are meant for

> The All in One (AIO) printer market has been growing over 100% for last 6 to 8 quarters. As per IDC, the market size of single function laser and all in one is almost 50-50 (in units) in value terms the market for AIO is much higher. So very clearly, there is a distinctive shift or transformation to an all-in-one kind of a market that is primarily driven by the fact that features like scan and copy are again a part of every customer's life, be it SOHO or SMB — affordability, definitely is another factor for inflexion.

enterprise customers. The AIO market has been growing over 100% for last 6 to 8 quarters. As per IDC, the market size of single function laser and all in one is almost 50-50 (in units) in value terms the market for AIO is much higher. So very clearly, there is a distinctive shift or transformation to an all-in-one kind of a market that is primarily driven by the fact that features like scan and copy are again a part of every customer's life, be it SOHO or SMB — affordability, definitely is another factor for inflexion.

Software is now becoming a critical part in the printing business. How does HP plan to leverage its software hold in the market?

Software definitely an important piece and now we see it well knitted in our strategy. We have a three pillar Managed Print Services (MPS) strategy. Optimize infrastructure, manage the environment and improve workflow. Software plays a central role in all the three stages of the MPS offering. I think our MPS offering is an excellent example of HP's software integration into the hardware. Our expertise and knowledge in the software domain helps us understand the customer needs better and equips us to develop the right application to meet the requirements of the customers. We are now extending MPS to the SME through a channels led model. We understand the ambition of these small and medium enterprises to grow in a structured manner.

In times of color and MFP adoption, HP recently announced mono laser printers. What is the thought behind this?

Clearly, the thought behind is the customer's need. It's not that we will not sell color (printers). These mono lasers are targeted at SMEs and enterprises. We know the printing scenario in the office, a majority of it is mono. These solutions are for customers for whom larger bulk of printing is mono and they want a product that is as robust and stable as a laser printer— 90 ppm and 12000 duty cycle, at an affordable CPP (cost per page).

heena.jhingan@expressindia.com

Thank You

The Express Technology Senate, held in Abu Dhabi, brought together the brightest and the biggest names in IT deployment within India Inc. as they shared their knowledge and insights on the latest technological trends that are poised to reinvent enterprise IT. The event this year focussed on how innovation can help bridge technology and business strategy, for corporate agility and growth. A distinguished panel of speakers and jury members made the Express Technology Senate a truly enriching experience.

We thank all our delegates and partners for their continuing support in making the event a success.

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GAMING ON

Playblazer sets a new score by providing cloud hosted services to game developers and enabling them to launch new games quickly

BY HEENA JHINGAN

With the rising popularity of all sorts of games, the gaming industry is on a roll. The FICCI-KPMG Indian Media and Entertainment Industry Report 2013 estimates that the games industry in India (console, mobile, PC and online games) to grow at a 22% CAGR to reach $776 million by 2017. In such times of rapid growth and stiff competition, Playblazer, a software-as-a-service provider, puts game makers on the fast track and is enabling them to reach the market quickly with its 'ready-to-use' back-end services for game studios.

In an era of social and multi-player gaming for multiple devices, Playblazer offers about 15 pre-built middleware game services and components, such as player management, social network integration, social publishing, lobby systems and session management via a cloud-hosted service that game developers can include into their game clients (mobile apps) via a web API.

So, the game developer has to do the least on the server side. When implemented in this way, every user of the game connects to Playblazer's backend for the respective capabilities integrated into the game.

The SaaS provider has a simple revenue model, based on the total number of active users on a daily basis (all unique users that log in on any given day).

"Besides, a fixed monthly fee is charged for access to the Playblazer platform during development phase, as well as for staging and sandbox infrastructure that provides a continuously updated trail environment without affecting live services," explains Nikhil Soman, Founder, Playblazer.

The best of cloud

Availability of games on powerful yet portable personal devices bundled with 3G connectivity (on smartphones) has caused a major shift in the industry. This requires the industry to respond with custom game mechanics that leveraged things like accelerometers, and capacitive touch displays. It isn't just about the physical changes — consumers are changing too. Players demand multiplayer gameplay — powered by

'AWS wins on key factors like geographical reach of the platform, quality of management tools, ease of integration, flexibility, granularity of pricing, etc.

Nikhil Soman,
Founder, Playblazer

Most other cloud platforms had a very rigid technology stack that hid away a lot of things that Playblazer wanted in its control

their Facebook friend lists and email address books. This has resulted into some successes like Draw Something, Words with Friends, etc.

With an experience in publishing and studio side of the game Industry, Soman believes they understand the primary pain points and the associated need gaps. "These insights combined with meeting and discussions with many developers gave us a very good idea of the solution required. This also gave us an early insight into the key trends shaping the industry," he says.

Soman says that building multiplayer games is incredibly challenging, and that is because of how rapidly these games can scale. A simple word game can fetch millions of users in a couple of weeks from launch, and for studios, that can be a tough situation to handle. They not only need to think about the game logic, device specific issues and creative aspects, but also need to worry about building a scalable backend for the game. The backend is the game. That is where the business challenge of delivering a scalable product meets technology challenges.

"We thus built a modular system that leverages the best of cloud computing using the various capabilities of Amazon Web Services (AWS) to create a flexible set of game services that can scale up and down on demand. We also worked on creating a multi-tenanted architecture for our service. The intent was to quickly be in a position to leverage economies of scale across many games. This provides a cost effective solution to individual games/studios while also giving us the ability to use resources efficiently," he reasons, adding that committing huge budgets to building game specific backends and infrastructure is simply unviable, given the risk of a failed game.

So, when they set out developing the platform in August 2012, they evaluated a number of solutions, including the possibility of building their own dedicated infrastructure, using traditional data centers, as well as using other cloud platforms like Google App Engine or Heroku etc.

Soman recalls, "However, each of the options considered had a number of challenges that made them unviable.

Building our own infrastructure had the same disadvantages that studios had suffered – high capital requirement, high operating costs incurred on human resources, power, cooling etc. – besides none of these activities were core to our product. We needed to use a platform that let us focus on more important issues related to enabling new game mechanics, rather than reinventing the wheel of data center operations."

They found that most other cloud platforms had a very rigid technology stack that hid away a lot of things that they wanted in their control. Most of them were restricted to certain operating systems, specific languages or proprietary services. These factors would have been contrary to their goal of building a platform agnostic solution that could work on 'any' infrastructure provider.

Playblazer is Soman's second entrepreneurial venture using AWS after Dialify (a pioneer in audio gaming), which also was on AWS, hence it was his first choice as a cloud vendor given this association with them since 2007.

Getting on to the business was hardly a task. So, Playblazer, a team of two, built the platform in-house in about six months and is already working with studios like Jump Games and Khelega Games. As Soman puts it, "Learning and integrating AWS services was perhaps only about a 5% effort."

The winning bout

Over the past few years, a number of other options have emerged viz Softlayer, Rackspace for building one's own virtualization platform using tools like OpenStack or Eucalyptus. That does not move the Amazon fan in Soman. In his opinion, AWS still remains the category leader in terms of geographic distribution of its infrastructure, and its pace of providing new and more relevant services. "Of course the excellent management tools that AWS provides are also one of the key factors in making the choice between various cloud providers," he adds.

In fact, he views AWS as the strategic partner to grow the company's gaming business. AWS wins on key factors like geographical reach of the platform,

A LEVEL UP WITH AMAZON

How Playblazer benefited from its choice of Amazon Web Services

- Multi-tenancy
- Highly secured platform
- Application agnostic
- Flexibility to auto-scale and load-balance.

quality of management tools, ease of integration, flexibility, granularity of pricing, billing, security and scalability, data storage coupled with finely tuned, high-speed read and write operations over a web service.

Another feature that Playblazer offers, thanks to the AWS cloud is "Multi-tenancy". Soman elaborates, "This means that each game does not need to be run on separate servers (though it is possible to do so if a particular game gets too big). Instead, we provision multiple tenant games on the same infrastructure at the same time, while providing each game its own secure area, invisible to other games co-existing in the same space. This ability lets us dramatically bring down the cost of infrastructure for tenant games. This efficiency of infrastructure is only possible in the cloud."

He is of the opinion that using AWS has enabled Playblazer to significantly shorten their time-to-market, from idea conception to implementation and delivery to customers - in less than 5 months. The same benefits are also passed on to game studios.

Soman thinks the primary value of AWS is that it lets them focus on core capabilities, while taking away a lot of the operations processes that otherwise would require a very large team. This gives him the reason to boast of his two-man team today that delivered a platform of about 15 component services, used by games each of which drives over 100 million API calls per month.

There is nothing he wants to change about AWS services that the company is using, instead he wants to build on the system and keep adding components and capabilities for small and large studios to rapidly build more and more complex gameplay and game logic. He says, "We also plan to start work on a set of extensions that integrate directly into Front-end Game Design tools like Unity, GameSalad, Corona, etc.

He sums up, saying that he plans to provide a Publisher Suite of Measurement & Monitoring services, along with the capability to cross-promote games within the community of Playblazer hosted games leading to the creation of a full-service game delivery and game distribution platform for social and multiplayer games.

heena.jhingan@expressindia.com

Gerald Attia, Deputy CEO, Alten Group, and Ramandeep Singh, CEO, Alten Calsoft Labs, in a conversation with Pankaj Maru talk about the group's overall business, Indian operations post the Calsoft Labs acquisition and more...

"Concentrating on different sectors enables us to balance growth"

Which are the verticals that are driving your company's overall business?

Gerald Attia: There are 16,000 people in the Alten Group that help us in serving large customers across geographies in the areas of project management as well as global R&D support. Aerospace, automotive, telecom, information systems, and energy and life sciences are the five key verticals we focus on. Each contributes around 20% to the company's revenue.

However, in the past few months the automotive sector has underperformed due to the crisis in Europe that has brought the vertical's contribution under 20%. We are witnessing enough scope for growth in the energy and life sciences space. Our concentration on different sectors enables us to balance our growth. Our skill diversification strategy helps us expand from one geography to another and plays well with our organic and inorganic business plan and execution.

Can you elaborate on your India business and operations?

Gerald Attia: Post our acquisition of Calsoft Labs in India, we are pursuing two types of business opportunities. One, we are doing projects for clients like Airbus and other companies in Europe by using India as the delivery center. And the second business opportunity is to focus on the Indian market doing projects with the captives of MNCs or their international clients in India. However, bringing business from Europe to India is more challenging compared to bringing business from the U.S. This is largely due to factors like mindset, culture and cost, so it remains a daunting task.

Besides, there is competition from near-shore countries like Romania, Ireland and others. We have 1000 people in India and as per our strategic plan we want to increase it to 2000 by 2016. We are looking at inorganic as well as organic growth.

Ramandeep Singh: We have a definite road

GERALD ATTIA

RAMANDEEP SINGH

What are your expansion plans in India?

Gerald Attia: We don't come to India for low cost or pricing but for the talent pool that's available in abundance when compared to Europe and the U.S. Earlier, India was only a testing ground for IT projects. But today, Indian teams are driving the entire project, which is a positive trend.

map that includes organic and inorganic growth fueled by the U.S. and European markets. The year 2013 has been a good year so far and as per our projection, the rest of the year also looks positive. We don't see any major impact of the U.S. legislation on visa.

What kind of challenges are you witnessing in terms of talent given the new technology trends?

Gerald Attia: Recruiting talent remains a key part of our business. There's a big demand for talent in the cloud and big data.

Ramandeep Singh: Technology changes every day and staying updated is essential for a business to survive. We are investing in cloud, big data, and in certain emerging areas in networking such as SDN (software defined networking) and NFV (network functions virtualization) to train our teams with the help of experts and engage them in new proof of concepts. So we need a mix of experience and new talent.

Recently, Calsoft Labs joined the Network Intelligence (NI) Alliance. Can you please elaborate on the significance of this move?

Ramandeep Singh: The telecom sector is changing rapidly and more intelligence is now getting onto networks. The network should be aware of what is going on. To implement better security, and improve reliability and quality of service, networks are required to be upgraded with new technologies. We have been in the business of making networks intelligent for a number of years. By joining the NI Alliance, we will be able to offer next-generation network architecture and services to telcos and service providers. We have built a center of competence in India, which will be useful for testing and development, and will be helpful in serving global clients and markets.

pankaj.maru@expressindia.com

Michel Riva, CEO of Swiss cable maker R&M, discusses with Pankaj Maru the company's business, the impact of slowdown, new technologies used in cabling products, plans for the Indian market and much more. Excerpts...

"R&M has invested time and money into innovation even during this sluggish growth"

Please brief us about the company's overall global business in the past year or so.
R&M has been able to grow steadily over the last couple of years. We have been able to see a double digit growth for the organization and win key global accounts across various regions. The future of the cabling industry looks bright and we are making strides in the right direction. The organization will continue to bring innovative, technologically superior products to the market. We invest heavily on R&D to ensure that the products we develop and launch are ready to meet requirements that arise in the future.

Given the sluggish economy, how much impact are you seeing in demand of cabling products?
The perception that global recession has had its effects on the best of economies is true. India has not been insulated from this effect, but there's predominantly been a slowdown. This can be seen in the way the markets have performed and the cautious steps that are being taken by investors too. From the industry standpoint, we have seen many expansion plans that were stalled and recruitment frozen.

Today, the market has recovered and there are many positives toward growth. We witness this positivity as companies previously hit by recession have moved into expansion mode with hiring of new staff, and infrastructure. Through these companies, we foresee larger volumes of business transactions and with it higher data and voice transmission requirements emerging. R&M has invested time and money into innovation even during this sluggish growth. We have seen positives through our unique differentiation in product design and we believe we will continue to see this in the future too.

Over the past few years, there's been a rapid growth in telecom networks like 3G and 4G, evolution in enterprise mobility along with cloud computing. How do these developments go with cabling products and technologies?
The telecom sector is experiencing a revolution with relatively new market entrants and services like 3G being introduced in the India. The next technological wave coming into India is the 4G network and we can see that India is now getting onto that bandwagon. The telecom growth will require better networks which will have a direct impact on structured cabling. Telecom along with key sectors such as retail, automotive, manufacturing, IT/ITES as well as the public sector will need more stable, reliable networks and R&M will continue to provide newer, robust solutions for networking requirements of these sectors.

We can see cloud computing in enterprises requires higher bandwidths that can be effectively met by deploying fiber-optic based solutions. As these services gather more momentum, it will increase the demand for fiber-optic solutions. Requirements set by business customers are becoming tougher and tougher. In this dynamic scenario, R&M sees its role as ensuring that the physical layer of next generation networks is reliable and allows for high-performance networks.

R&M has been a late entrant in the India market, so how are you trying to make your space among the customers and competitors as India is a price-sensitive market?
R&M has entered the Indian market relatively late in comparison to our competitors but this has in no way hampered our growth over the years. R&M's innovative, Swiss-quality cabling products and solutions have really gathered momentum. The product quality and technical features help the market to offer a greater degree of differentiation and value to the end customers. R&M will continue to focus on developing our presence in all the sectors across India and also have a focus on the channel market, especially in Tier 2 and Tier 3 cities. Through the R&M Qualified Partner Program (QPP), we continue to train and certify partners and system integrators. We will continue to offer innovative products and solutions for office cabling, data center and FTTH (fiber-to-the-premises) markets, with

How strategic is India as a market for R&M compared to other regions or countries?

India as a market has a huge amount of potential. R&M feels that India at the moment is one of their main markets mainly due to the reason that the country has shown positive signs over the last few years. India as compared to other markets holds a huge importance. It is surely one of our important markets for business.

the introduction of new products that help achieve higher performance and reliability to our enterprise customers.

What challenges are you facing in the Indian market?

R&M faces the same challenges in India as in any other market across the globe. The challenges of such an ever-changing market are of higher speeds, reliability of networks, their expandability, and offering a greater value proposition. But at present, the main challenge has been the currency fluctuations of the Indian economy.

How has the company performed in the Indian market despite being a late entrant here? What are your expectations from the India unit in terms of sales, revenues and overall growth?

We have been gaining key accounts even if we arrived late into India. R&M products and solutions are used across a myriad of sectors like IT/ITES, manufacturing, BFSI, healthcare, education, automotive, telecom, etc., to name a few. Each market has its own distinct set of requirements and given our portfolio of end-to-end cabling solutions, we are able to cater to those requirements. In 2012-13, the demand in Tier 1 cities and from major enterprises functioning in these cities contributed the highest. However, the emerging Tier 2 and Tier 3 cities also attracted demand and contributed significantly to our growth. R&M grew consistently year on year at a rate of over 20% and we would like

Structured cabling forms the foundation for any communication or data network. This makes it an almost ubiquitous requirement in any sector. IT/ITES continues to be a major vertical which has the highest demand of structured cabling. The growth of data centers has also fueled demand for faster, high performance and high density structured cabling (Cat.6A) solutions.

to achieve this once again as we look to strive to success.

Which segments of the Indian market are you focusing on?

We as an organization would like to do business in all segments. Structured cabling forms the foundation for any communication or data network. This makes it an almost ubiquitous requirement in any sector. IT/ITES continues to be a major vertical which has the highest demand of structured cabling. The growth of data centers has also fueled demand for faster, high performance and high density structured cabling (Cat.6A) solutions. Manufacturing and automotive sectors also require an industrial grade of structured cabling that can shield the networks from foreign particles and water splashes.

Other sectors that we see growing are telecom, healthcare, hospitality and retail. R&M's specialized portfolio of cabling solutions enables us to offer solutions that best suit each sector's different requirements. For instance, with R&M's end-to-end solution for data centers and FTTH networks facilitates organizations and system integrators for greater flexibility while designing their solutions such that they are future proof and can be administered with ease. R&M's Swiss quality products and solutions facilitate the creation of higher performance and reliable IT infrastructure.

pankaj.maru@expressindia.com

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TOWARD
A WIRELESS CAMPUS

Deploying networking solutions from Allied Telesis has enabled Assam Valley School to experience a hassle free network across its residential campus

BY KTP RADHIKA

The Assam Valley School (AVS) is one of the exclusive coeducational boarding schools in the North East of India. Spread over 203 acres at Balipara in Sonitpur district of Assam, AVS is affiliated to the Council for Indian School Certificate Examination (CISCE). The school has about 900 students, and features state-of-the-art infrastructure to cater to the growing needs of the students. It also has the latest IT infrastructure to facilitate all educational needs. All of the 900 students and the teachers use laptops and access the Internet. The residential school sees high demand for Internet consumption as the students and faculty need huge amounts of Internet bandwidth for their academic activities.

In its initial days, the school was using solutions from a popular networking gear maker for all their network infrastructure needs. However, the management soon found out that the solutions were not suitable for their expansion plans. Rupjyoti Das, System Administrator at Assam Valley School, states, "Those products are very entry level. We used to give students online assignments and when all the 900 students start accessing Internet, we would experience a network drop and disconnection of devices." And when it rains with lighting and thunder, these devices would get damaged.

With these difficulties, AVS started using products of an American multinational company for quite a while. But support was a major issue with this networking solutions provider. Describes Das, "It provided good products, but the problem was support." Moreover, its products were very costly too.

The school needed a solution that offers them high availability for data network on a wireless media. They also needed fiber-oriented backbone for a secure, highly resilient and scalable network for future expansion. AVS also looked out for a solution that can provide interoperability with existing products and also can keep the legacy network intact without degradation of services. Thus, in 2011, after a rigorous market research, the management decided to go for Allied Telesis networking solutions.

The solution

Allied Telesis offered four switches to cater to the school's needs. Subhasish Gupta, Country Manager – India & SAARC at Allied Telesis, says, "AVS required high availability of bandwidth with sufficient coverage and anticipated further expansion. Conceiving this, Allied Telesis catered the suitable product from our product portfolio. In this network, we used the x900 series switch, which is an advanced Layer 3 switch with built-in radius server for user authentication, which is appreciable for a wireless network."

This switch supports Ethernet Protected Switching Ring (EPSR) technology that provides true carrier-class network for a highly resilient network topology. Virtual Chassis Stacking (VCSTACK), a unique technology for the Allied Telesis' switch, provides high density bandwidth for all users simultaneously instead of keeping the standby resource absolutely unused. With stacking capability, the requirement of scaling further can be met seamlessly without disturbing the network operation. They also installed other switches like AT-8000S/24 series that run on the same open software platform. Another AT-8000/8 POE – Fast Ethernet switch was installed along with. "The 8000 series POE enabled switch provides the option to put the access

> Addressing all our network issues, Allied Telesis has provided us with a hassle free, reliable and scalable network.

Rupjyoti Das,
System Administrator,
Assam Valley School

> The 8000 series POE enabled switch provides the option to put the access points properly as the building aesthetics are also taken into account.

Subhasish Gupta,
Country Manager – India & SAARC,
Allied Telesis

AVS wanted a solution that could provide interoperability with existing products and also keep the legacy network intact without degradation of services

points properly as the building aesthetics are also taken into the account," says Gupta. Allied Telesis fiber-supported switches minimize the need for multiple distribution boxes or patch panels which require extra space and attention from a maintenance perspective. The switches have built-in fiber ports to provide an end-to-end solution. For providing high quality and efficient coverage to all users, several access points of Allied Telesis have been successfully deployed inside the campus. The company's media converters were also used to incorporate the existing network.

The benefits

"Now all our hostels are getting individual fiber for connectivity. Students are not complaining about connectivity issues anymore," says Das. AVS is also

> Allied Telesis fiber-supported switches minimize the need for multiple distribution boxes or patch panels which require extra space and attention from a maintenance perspective.

getting good support from Allied Telesis. "Allied products are very cost effective. We are getting three year warranty and support from them for Layer 3 switches and 10 year warranty for our Layer 2 switches," adds Das. All the switches have stacking capacity to expand further. "Addressing all our network issues, Allied Telesis has provided us with a hassle free, reliable and a scalable network which will help us in further expansion whenever needed," comments Das. AVS is planning to go with Allied Telesis for its future networking initiatives too. As its next venture, the school is planning to enable Wi-Fi connectivity in the entire campus. "Right now, all our connections are wired. We are removing them and will create a wireless campus by next year," says Das.

radhika.ktp@expressindia.com

MAXIMIZING CUSTOMER SATISFACTION

The trick is to do it while optimizing performance at the same time

Companies today are facing a struggle to balance critical, often conflicting business objectives: maximize customer satisfaction and increase revenue, while minimizing the cost of delivering an outstanding customer experience.

Managing this balance at the highest level is difficult enough, yet it is complicated further by the fact that it takes many different functions and supporting processes (e.g., back office claims processing, order fulfillment, etc.) within the enterprise to service the customer. Through the contact center, marketing, customer experience owners/managers, branch stores, and back offices, organizations are striving to optimize the performance of their people, processes and technologies to increase service effectiveness and efficiency, and to help build customer loyalty and an improved customer experience.

That customer experience now goes far beyond the realm of traditional service channels and has expanded into the back office, social media and even into service channels the enterprise doesn't manage or control, such as social community destinations. In fact, some multi-channel customer interactions that happen today didn't even exist as little as five years ago (no social media, twitter, etc.), which has made understanding what customers are saying and their sentiment more challenging than ever.

To speed up and improve the customer experience, companies must break down organizational silos. Customers are expecting immediate responses or at least faster customer service, having been influenced by instant gratification from the leading Web and social companies.

Increasingly, companies are adopting a customer-centric management strategy through which customer wants and needs drive a company's business processes. Workforce optimization and voice of the customer analytics technologies, including software for speech analysis, text analytics and enterprise feedback management, workforce management, quality monitoring/recording, e-learning/coaching, and performance management are often implemented to deliver on the promise of organizational performance improvement and compliance, as well as an improved customer experience. However, these technologies traditionally support specific functions, creating a siloed environment that forces each part of the customer service value chain to act independently. This is especially true in the banking environment, in which each functional area of service delivery (branch stores, contact center, marketing/customer experience, Web, etc.) is making independent decisions to drive performance, rather than the result of a holistic business strategy.

Further complicating matters, the customer experience value chain is ever-widening across the enterprise and the underlying processes to service customers are unproductive, ineffective, or in some cases, non-existent. Companies seek to streamline these customer experience processes however possible.

The solution is a customer-centric workforce optimization offering that breaks down the barriers between siloed functions across the customer service value chain so organizations can capture, analyze and act on cross-functional information concerning workforce performance, customer interactions and customer experience processes. An end-to-end offering helps companies uncover trends and discover why certain employee and customer behavior is occurring, while also deploying the right solutions to manage to excellence and achieve continuous performance improvement.

Ryan Hollenbeck is SVP of Global Marketing at Verint Systems.

Increasingly, companies are adopting a customer-centric management strategy through which customer wants and needs drive a company's business processes.

FOR A WIDER CLOUD

A peek into the evolutionary idea of service aware path computation to improve the cloud supporting wide area networks

Service parameters should guide the path selection process optimizing the network based on the QoE of user rather than some arbitrary cost metric.

Cloud is all the buzz these days and it's often said to be the next big thing. In fact cloud is almost here, right at your doorstep. More and more enterprises are cutting their IT budgets and exploring moving their applications to the cloud. So how does "cloud" impact our routers?

Applications which were available over the LAN would now need connectivity over a WAN, making the distance between the user and the application to drastically increase. Routers providing this WAN connectivity would be a key to deliver the cloud functionality to the enterprise.

To improve the cloud supporting WAN networks, there are some revolutionary ideas (software defined network or SDN) and then there are some evolutionary ideas (service aware path computation using PCE – Path Computation Element). Software Driven Network aims to improve network behavior by controlling the network devices using a central orchestrator; it opens up the control of data flows through the network to customizable software that is independent of the hardware that forwards the flows. OpenFlow is one such revolutionary approach to program the dummy box replacing the decades old control plane function of the router. Another evolutionary approach is to make the current control plane service aware — where the network elements (routers) are fully aware of delay (latency), jitter (latency variation) and packet loss.

There existed many mechanisms to measure these parameters after the path has been established (ex VOIP), but this is inefficient — these service parameters should be considered during the path selection process itself.

Concern for quality

Quality of Experience (QoE) is essential for all users and can only be achieved if these service parameters are met to best optimize the network. There exist mechanisms in MPLS (Multiprotocol Label Switching) based network to reserve some bandwidth with a mechanism to add more bandwidth when service disrupts. This way of providing a best path and hoping the service parameters would be okay, and taking action only when these parameters are not satisfied is unacceptable. Service parameters should guide the path selection process optimizing the network based on the QoE of user rather than some arbitrary cost metric.

Different applications have different service requirements; some may want high bandwidth, some low jitter, some minimal packet loss and its various combinations.

The network should be aware of the service parameters, and the routers should measure and make these available to the PCE. The PCE server would use these parameters in path selection process, optimizing the paths and overall network, thus guaranteeing better QoE.

Other major technology trends include big data (large complex data set used by business intelligence) and real-time data analytics. Hadoop is a framework for distributed processing of such complex unstructured data in a cluster set. Big data has unique service-parameters which should be considered in path calculation.

Thus, we can assure traffic that is delay-sensitive. For instance, in financial stock trading, data may follow a different path in the network than regular data backup. The best effort connectivity or just reserving some basic bandwidth is not efficient. It's a must to differentiate traffic from enterprise to cloud to be well aware of the application and its inherent service requirements.

More evolved

PCE-based service aware path computation is more evolutionary as it retains much of the investment in widely

deployed technologies, migrating only the key service aware path computation/selection function to a centralized PCE server. The path computation process is key in managing the network behavior by control traffic engineering policies with service –aware parameters. The PCE architecture delivers this crucial piece without modifying every network element. This is a gradual mechanism to a complete centralized application aware software driven network.

We along with other vendors and operators, have been leading this effort in the Internet Engineering Task Force (IETF) PCE Working Group (WG) with WG adoption toward RFC standardization. The work is aimed at allowing the PCE to provide path optimizing new service parameters (provide a path with minimum delay) or to set boundary conditions (provide a path with minimum jitter and max packet loss allowed 0.001%). Close co-operation with multiple WGs is planned to achieve a standard complete service aware path

PCE-based service aware path computation retains much of the investment in widely deployed technologies, migrating only the key service aware path computation/selection function to a centralized PCE server.

computation – OSPF (Open Shortest Path First) & IS-IS (Intermediate System – Intermediate System) Routing Protocol extension to carry link service aware properties to populate the TEDB (Traffic Engineering Data Base); MPLS (Multiprotocol Label Switching) for framework and use of these service parameters along with CSPF (Constrained Shortest Path First) algorithm updates for the new constraints.

Cloud Service Optimization (CSO) is an area with key requirement for service awareness. This is because cloud balancing (geographically dispersed data centers) puts pressure on the service provider network. As more and more organizations move toward the cloud, there is a need for communication and joint optimization of network (bandwidth, latency, etc.) and data center application IT (server, memory, CPU...) resources. Service aware PCE is a key component of such optimization.

Dhruv Dhody is a System Architect with Huawei India R&D.

DO YOU HAVE ENOUGH SAFEGUARDS?

In the wake of trends like BYOD and third-party hosting, it has become critical for enterprises to have adequate security measures

I n the current environment, information is considered as currency. Information in any enterprise involves its consumers, operations, business relationships, work force, brand image, and financial status, to name a few. Protection of this information is turning complex and enterprises are necessarily being required to be careful of the growing threats. It has become extremely critical to leverage adequate security measures to safeguard an enterprise business.

Cyber criminals leave no stone unturned when targeting any organization. The enterprise mobility wave, coupled with emerging public cloud computing solutions and rise in the usage of social media consumption has unfolded the traditional, closed on-premise enterprise IT infrastructure and is making it more vulnerable to different kinds of security threat vectors.

Modern security breach market has a peculiar behavior. While breaching an organization, cyber criminals, basement hackers, etc. work in an organized way and have enough smarter tools that are often difficult to trace. The easy prey are diverse: from large sectors such as government, financial services and telcos to small retailers and medium businesses who do not have sophisticated security measures. About 85% of the breaches in the enterprise segment today come from the mass market. Newer technologies such as cloud, mobility and big data initiatives are the other pet avenues for cyber criminals.

While the current situation has brought in enough worry, CIOs and CTOs are busy filtering ways to combat issues of enterprise security which involves various layers of this bigger issue. Some may stress on the need to take a multi-layered security approach like employing gateway protection and end point security solutions. While some may give more preference to educating employees about what's threatening their enterprise's information security, and how can they mitigate such risks. However, it is the combination of both these measures that must go into the making of the ultimate defense strategy for enterprise security.

Today, organizations are highly reliable on technologies such as cloud with help of third party vendors and solution integrators. The very recent $45 million global ATM heist, in 27 countries is believed to have occurred due to lax security practices at third party vendors. Therefore, while it becomes important for organizations to keep a continuous check on duration vendor contacts, organizations must practice constant checks and time to time due diligence tests on vendors. It is also important to keep the data back-up strategies in place while being compliant to security certifications such ISO 27001, SSAE 16, SAS 70, SOC 2, ISO 22301 etc.

The stronger adoption of BYOD is now leading towards BYOX for social networking on the go. As a result, IT resources are moving outside the firewall. Therefore, it is important to set clear guidelines on defamation, data protection and privacy. Additionally, encouraging direct forms of communication will help in restricting access to data loss. There is a strong need to educate the staff on organizational IT policies.

While mobile computing is being promoted to be able to have real time data and information access, organizations must ensure that devices are hardened and updated to handle malware. Considering SoCloMo trends, CIOs should be abreast of technologies that can help organizations better manage security threats. As the security landscape is getting complex than ever before, CIOs need to leverage sufficient security solutions to safeguard the information at each and every level.

Risks from third party hosting

Of late, CIOs have been debating the data

There should be stronger identity and access control for information protection. There should be better control for information movement as well.

Federated identity and access management platforms are being integrated with cloud providers to ensure tighter control over access along with enterprises also integrating security controls to secure sensitive data that is co-located

security risks associated with hosting enterprise data on a third-party server while availing cloud services. There is a need to make an intelligent decision where enterprises design an arrangement for themselves that fulfills the whole transaction over the public cloud, but is also secure through appropriate security solutions present on-ground. Enterprises are looking at means to extend typical security controls such as firewalls, IDS/IPS, anti-virus, web filtering, privilege user management, integrated logging and event correlation, etc. into infrastructure of the cloud providers and ensure grounds-up security. In addition, (federated) identity and access management platforms are being integrated with cloud providers to ensure tighter control over access along with enterprises also integrating security controls such as data tokenization to secure sensitive data co-located even at the SaaS provider's end.

In the next few years, there will be increased connectivity: everything will be connected to everything over time, and networks will expand. There will be a

10-fold increase in the number of things that are going to be connected in next few years. However, security measures for this are insufficient. There should be better understanding about the network and there should be much more visibility to provide better security. Also, there should be stronger identity and access control for information protection. There should be better control for information movement as well.

Thus, CIOs shall partner with solution providers who can help them build a multi-layer, end-to-end information security process consulting as well as a technology solution with tight integration of all components right from process improvement to technology solutions. Moreover, they will need to provide solutions that will monitor and prevent unauthorized activities from outside and insider threats and solutions that will ensure compliance policies are met and user access is granted as per privilege levels.

Atul Khatavkar is VP, IT Governance Risk Compliance, AGC Networks Ltd.

WORKING FOR BIG DATA

It is high time aspirants readied themselves for the multifarious jobs coming up in the domain of big data

As per McKinsey Global Institute, data scientists are so much in demand that there won't be enough of them to fill every position by 2018

Big data is creating a buzz in the world today. Google Trends shows that interest in the term "big data" has been consistently increasing for the last 3 years and has been regularly reaching new peaks. A search for "big data" on Google throws more than 30 million results and over 100,000 news items.

Digital companies like Google, Yahoo, Facebook and Amazon are already leveraging the potential of big data and other enterprises are moving toward it. According to Gartner, by 2015 nearly 4.4 million new jobs will be created globally by big data demand and only one-third of them will be filled. There is already a demand-supply gap in the market and employers are willing to pay higher salaries to qualified professionals. All this is making big data an attractive career option.

A search for the keywords "big data" on a major US job portal shows over 8000 jobs in USA (with hundreds of different titles) from companies such as Intuit, Microsoft, Amazon and eBay. A closer analysis of these jobs shows majority of the jobs belongs to three primary categories of jobs: data scientists, big data architects, and big data engineers.

Data scientists

Data scientist has been termed as the sexiest job of the 21st century. As per McKinsey Global Institute, data scientists are so much in demand that there won't be enough of them to fill every position by 2018. A data scientist is not exclusively tied to big data but demand for data scientists has grown exponentially with growth of big data.

Data scientists are professionals typically having a degree in STEM (Science, Technology, Engineering, and Mathematics) field, preferably with advanced degree in statistics, mathematics, analytics or machine language. Those with PhD, have further advantage. Data Scientists have deep analytical skills and are capable of analysing large volumes of data to derive business insights. To work with big data, they should also have an overview of the various big data technologies (Such as Hadoop, NoSQL, etc.).

The data scientist role can also be seen as an evolution of roles such as data analyst or business analyst. While a data analyst will typically collect data, look it from one dimension and publish reports, data scientist will look at enormous sets of data from all dimensions and publish insights which would have otherwise remain hidden. Data scientists should have strong business acumen to act as bridge between business and IT. Good data scientists will not just find the right solution to a business problem; they will also find the right problem to be addressed.

Typically, a data scientist will analyse the data to spot business opportunities, create a mathematical model and then convert that mathematical model into a pseudo algorithm for computerization.

A variety of trainings are available for those interested in making a career in data science, starting from short term courses in big data/ data science/ predictive analytics to M.S. In India, ISB provides a one year part-time course in predictive analytics. There are short to medium term courses available from IITs and IIMs also. Universities and institutes in the U.S. provide options for online and on-campus MS in predictive analytics.

Big data architects

Big data architects are solution architects specializing in big data technologies. They convert the vision of a data scientist into a technical blueprint. They are responsible for implementation of complete big data solutions, including platform selection, solution architecture, data acquisition, storage, transformation, and analysis. They should have a solid understanding of infrastructure planning, scaling, and administration considerations that are unique to big data products.

A big data architect generally comes with minimum 10 years of experience in the field of normal solutions architecture followed by training and experience in a variety of big data technologies and solutions like Hadoop, MapReduce, Oozie, Mahout, ZooKeeper, Hive, HBase, MongoDB, PIG, Ambari and Chukwa, NoSQL, etc. In addition, a big data architect should have experience in designing large data warehouse solutions and in-depth understanding of programming and scripting languages like Java, PHP, Ruby, Phyton and R. BI architects having experience in distributed RDBMS and ETL tools such as Informatica Microstrategy and Pentaho, etc. have an advantage. They should also be (at least) aware of cloud computing technologies.

Good solution and technical architects can switch over to big data with training in big data technologies. Big data engineers can also become big data

architects with training in technical and solution architecture frameworks such as TOGAF. There are institutes and universities offering technical courses in big data. One such source, BigDataUniversity.com, can be a good starting point.

Big data engineers

Big data engineers develop computer programs based on the 'solution blueprint' prepared by big data architects. They implement, test and maintain the big data solution. They may also assist architects during the solution architecture and design phase. They should have experience in big data technologies being used by the organization e.g., Hadoop, MangoDB, NoSQL, etc. They also need to have experience in implementation of data warehouse solutions. They also need to optimize the solution to provide best performance.

Software engineers with 4-5 years of experience in object-oriented design and coding can move to big data with training in relevant technologies. Those with background in Java, PHP, Python, C++, SQL, NoSQL, ETL tools and data warehousing may have an edge. An engineering degree in computers provides an advantage.

Big data engineer aspirants can also go for similar training as specified for big data architects above. Organizations such as Hortonworks and Cloudera specialize in providing training on big data technologies.

Besides these three role categories, other role categories such as product managers and data visualizers are also in demand. The field of big data is wide and open; if you want to play the game, it is the time to put your socks on.

Sukhvinder Pal Singh is Director of Competencies at Fujitsu Consulting India.

TAKING THE APP ROUTE

The rollout of a mobile booking app is helping radio taxi major Meru stay ahead in the race

BY MEHAK CHAWLA

Innovation often becomes a necessity for a company trying to balance growth with its infrastructural upgrades. Similar was the case of Meru Cabs, the much renowned operator of the olive green vehicles. With over 6,000 cabs in 5 cities, Meru is the largest radio taxi operator in the country today. Over the years, the company has been devising fresh and hassle free ways for customer bookings. Be it their in-house developed GPS system or handing over PDAs to drivers, the focus on travel technology has been a given for Meru. The most recent technology addition to their arsenal is their mobile application.

Nilesh Sangoi, CTO, Meru Cabs, details the tech gene of the company. "Our key aim behind launching the phone application was facilitating easy bookings. When Meru started operations, we became pioneers in the call center booking mechanism. However, as volumes grew, we realized that customers had to face long and cumbersome call queues for booking a cab. And since it was impossible for us to scale our call center so quickly, we started evaluating other options."

It was back in 2010 that Meru began taking online bookings through their 'real-time' website. "We integrated the site with our back-end systems, so we were the first ones in the industry checking availability and taking bookings in real-time," explains Sangoi.

A couple of years back, Meru started contemplating on how they could use the mobility wave that has gripped India. As a result, they started thinking about taking their first steps in the mobility space. However, at that point in time, it was difficult to ascertain any leaders in the mobile handset and Operating System (OS) space. Nokia had begun its decline, and Android was catching up, while iOS remained for the elite. "So back then, we decided to work on something that worked across platforms. We figured that different solutions for different handsets will result in support and cost issues at our end," says Sangoi.

As a result, about a year and a half back, Meru came up with a mobile site based on HTML5. The site would work for any phone with Wireless Access Protocol (WAP) capability as well as on smart phones. "It was tightly integrated with our core system which could detect whether the request was coming from a feature phone or a smart phone and respond accordingly," elaborates Sangoi.

However, some time later, clear winners started emerging in the mobility space, both in terms of market share as well as stability. It was then that Meru started thinking about building native applications for different platforms. Native applications are not only lighter, but can also inculcate more features and provide quick and easy booking options to customers.

The app journey

Since Meru already knew, through device fingerprinting, what OS were their customers primarily using, they decided to start with mobile applications for iOS and Android. Meru's core systems like dispatch, GPS and GPRS based maps have all been built in-house. For their mobile applications, they adopted a hybrid approach where their in-house tech team worked with their IT partners for building, testing and deploying the application on both the platforms.

The application development process, which began early in 2013, scaled several

levels like coding, design, quality assurance, testing and finally implementation and integration. While they had separate teams for coding for both the platforms, given their distinct requirements, Sangoi says they decided to have common teams for design to give a unifying experience across platforms. "While we adhered to all guidelines and design standardizations, we worked on providing an identifying and integrated experience for all customers across all platforms." The quality assurance and implementation teams also remained common.

"Apart from enabling quick booking through maps, home/office tags or previous trips, the app also allows customers to track the cab on the map while it is approaching the customer or while reaching the destination. The customers can also get e-receipts and rate the services," explains Sangoi.

Meru has also inculcated a feature called "Ice", which is short form for 'In case of an emergency' in its mobile app to distinguish itself and also enhance security for travelers. According to Sangoi "Ice Alert option that one can avail in an emergency situation is a value added service offered by Meru, specially designed keeping in mind the safety of Meru customers. Through this service one can alert family members or friends in case of an emergency and receive help as soon as possible." A customer who wishes to avail this service would have to feed in two contact numbers of family or friends, who will be alerted as soon as the 'Alert' option is selected. They will also be able to view the exact location of the person for 30 minutes. This service can be used by anyone, and is not restricted to customers traveling by Meru.

Challenges en route

The coding process for these mobile applications, according to Sangoi, was relatively hassle free. It was in the testing and deployment stage that the surprises sprung up. "Even though Apple has more stringent standards for applications on its App store, and the application also takes longer to go live, we found testing relatively smooth since we had to test only for 2-3 devices," he reveals.

> While we adhered to all guidelines and design standardizations, we worked on providing an identifying and integrated experience for all customers across all platforms.

Nilesh Sangoi,
CTO, Meru Cabs

After seeing over 80,000 downloads in a relatively short time span, Meru is now planning to enhance its mobile applications portfolio

Testing on Android, on the other hand, proved to be a huge challenge, even though the process for getting the application online is simpler on Android. However, Android encompasses a huge gamut of devices by several OEMs, having different features and functionality. "For the Android app, a lot of customers gave us feedback about things that were not working on a particular handset etc. We fixed some problems via subsequent updates based on customer feedback," Sangoi says. It were the intermittent errors that took longer to identify and then fix, he adds.

Meru first released their Android app and followed it up with the iOS app a couple of weeks later. The Android app is currently running in its 1.0.7 version while the iOS is in 1.0.3 version. The application seen over 80,000 downloads within the first month of its launch.

As far as the load on their back-end infrastructure is concerned, Sangoi explains that the beauty of native apps is that most of the stuff remains on the consumer device itself. The mobile applications are hosted in the public cloud that also hosts the Meru website. Needless to say, there is a very tight integration between their web and application platforms, in order to provide real-time bookings to customers.

Also, as per Sangoi, a great benefit of these mobile platforms are that they send crash reports to application developers. "So we know how many times has our application crashed, on what platform and device and we can fix it accordingly."

After seeing a fair number of downloads in a relatively short time-span, Meru is now planning to enhance its mobile applications portfolio. "We are planning to come up with additional features and also developing an app for Windows phones, which are gaining popularity. We are also optimizing our application for iPad," says Sangoi.

"As of now, about 14% of our bookings are coming through the mobile. However, it's only been a month and we expect this number to increase in the coming few months," he sums up.

mehak.chawla@expressindia.com

IT fuels revenue & job growth for Indian SMEs: BCG report

TECH-SAVVY SMALL and medium-sized enterprises (SMEs) created more new jobs and drove more revenue gains over the past three years than SMEs using little technology, according to new research commissioned by Microsoft Corp. and conducted by The Boston Consulting Group (BCG).

The BCG report, Ahead of the Curve: Lessons on Technology and Growth from Small Business Leaders, found if more SMEs in India adopted the latest IT tools there is potential for SME revenue to grow by $56 billion and create 1.1 million new jobs.

The study argued that the latest wave of technological advancement, such as cloud services, brings potential for the most far-reaching innovation and business growth ever, creating an opportunity for more SMEs to achieve the growth rates of technology leaders by leveraging technology to fuel productivity and growth.

The research revealed that high-performing SMEs stayed ahead of mainstream IT adoption, riding new waves of advancement to improve productivity, connect with new customers and markets, particularly outside their own region or country, and compete with much larger players. These companies employ the full range of available tools — from productivity software to Internet connectivity and cloud-based services.

But at the same time, the research revealed a risk, because SMEs' adoption of IT is decidedly uneven. Across the world, many SMEs and their customers don't have access to modern broadband networks, and many lack the skills to get the most out of IT. Many SMEs are also still using large amounts of old and less efficient hardware and software.

New devices are also sometimes very expensive due to high import duties, and SMEs are concerned about online security and privacy. But the growth prospects described in the study are too important for governments and the IT industry to ignore.

Tata Communications links Asia's top stock exchanges

TATA COMMUNICATIONS, a leading communication provider recently announced the extension of its low latency network in Asia with direct connections to the National Stock Exchange of India Limited (NSE), the Singapore Exchange Limited (SGX) and the Hong Kong Stock Exchange (HKEx).

The low latency network further extends the company's global financial trading connectivity network. As a result, it will support mission critical, real-time trading applications by seamlessly connecting the exchanges with major financial capitals in Asia, the United Kingdom and the United States.

According to the company, its network is faster than traditional point-to-point systems. The global network will integrate exchanges with low latency connectivity to Europe and beyond, enabling firms to reach major financial centres, such as in Chicago and London in milliseconds, through a single network and single supplier model.

The company claims that its network is the only multipoint Ethernet service offering on a single network underpinned by 802.1ah, Provider Backbone Bridging (PBB) technology. The underlying core Ethernet technology is said to provides the lowest possible latency as it is native Ethernet with no mapping to other protocols like SDH.

According to the company, it also adds an additional layer of security by separating the customer's traffic with each customer benefitting from dedicated bandwidth.

Public-Private Partnerships help to address vocational training challenges

A NEW STUDY from the National Skill Development Corporation (NSDC) and Accenture has found that private funding and public-private partnerships are helping India overcome two of the largest challenges to vocational education training: an inadequate infrastructure and a shortage of job offers. The study identifies five steps business and government can take to better support vocational trainees and helps meet India's goal of engaging 500 million trained youth by 2022.

Vocational education training (VET) must provide prospective employees with the skills required to support the next generation of economic growth in manufacturing, retail, construction and tourism, according to the study. Addressing the rise in the number of VET trainees who do not accept job offers or leave jobs within one month of employment is critical, the research shows.

"This action plan dovetails with India's Five Year Plan targets. By tapping younger candidates for training from rural, low-income locations, empowering them with employable skills and building their careers in important growth sectors such as manufacturing can help India meets its goals of inclusive, accelerated

and sustainable growth," said Nilaya Varma, managing director, Accenture's Health & Public Service practice in India.

According to the research:

● Initiatives funded by NSDC and private-sector organizations have achieved high placement rates for trainees. About 50% of those who complete training receive job offers within three months.

● These schemes recorded higher placement rates than similar initiatives.

● Those who leave a job within a month of their hiring cited disappointment with the job profile or pay.

● Pre-placement support services provided to trainees needs to be improved. For example, about 50% of trainees interviewed said resume writing was very important, but only 21% reported receiving such training.

Action Plan

The research identifies five steps VET stakeholders need to take to reduce dropout rates and help VET trainees develop careers.

● Attract people from rural, low-income geographically dispersed locations at a young age – Young people, preferably

between 15 and 18 years old, are eager to learn, but they also want to start earning as soon as possible.

● Develop an alternating training-apprenticeship model; with a special focus on manufacturing - Training providers should break their courses into shorter semesters. At the end of the each semester, trainees should be given an opportunity to work for a company as part of an apprenticeship program, which will help them learn on the job and build a better understanding of work life.

● Empower trainees with general skills required for employability – Providing useful skills and education, such as computer skills, English-speaking skills and civic knowledge could enhance trainees' employability. People from rural, low-income locations who are placed in companies that operate in urban locales often lack these skill sets. Coupling basic courses that help improve overall employability with job-specific skills training can help address this challenge.

● Collaborate with the government and small businesses to fund and operate apprenticeships — Stipends paid to trainees provide an incentive to continue training and set expectations regarding compensation in a trainee's chosen career. Providing paid apprenticeship opportunities to new trainees, helping them through the apprenticeship phase and creating a career path after they complete training can help set trainee expectations and keep employees motivated to stay on the job.

● Build a career ecosystem of lifelong learning — Stakeholders are shaping the future together. It is time for the skilling system to become a career system that will increase the number of trainees while building value for trainees and employers alike. Vocational training needs to shift from providing standalone transactional services to supporting lifelong learning and career growth for trainees.
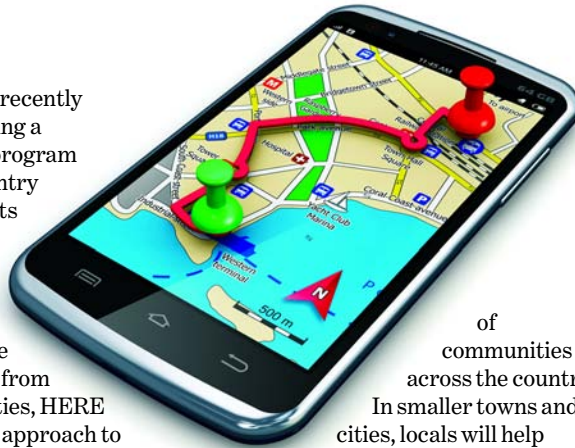
Nokia's HERE launches community mapping in India

HERE, A NOKIA business, recently announced that it is launching a community mapping pilot program in India, the first major country where HERE will combine its industrial data collection methods with a crowd mapping initiative. By balancing both its highly advanced industrial capture methods and contributions from residents of local communities, HERE takes a best-of-both-worlds approach to ensuring that its maps consistently provide the freshest, most precise and locally relevant information.

With a team of more than 1000 people in India, the regional HERE will work directly with local experts from more than a dozen universities around the country, such as Mount Carmel College in Bangalore and the SAL Institute of Technology in Ahmedabad. Using Map Creator, a HERE tool that allows people to add missing streets, bridges, points of interests (POIs) and other information to the map, these local experts can share insider knowledge of the areas they know like the back of their hand and, in turn, put their communities on the map.

To maintain accuracy and ensure map quality, HERE has built a community map moderation system that allows both our HERE team as well as the community at large to verify edits before integrating them into the base map. Once integrated, these changes will become available within days to all users across the wide range of HERE customers, including automakers, personal navigation device manufactures, mobile device makers and web and enterprise clients.

Given India's diverse urbanization patterns, HERE will work with a variety of communities across the country. In smaller towns and cities, locals will help HERE build out road networks, while in densely populated areas contributors will provide information about points of interest and capture changes. HERE has already rolled out industrial capture methods in some of these areas, but local communities can further improve and humanize HERE Maps.

The project in India is part of an ongoing series of pilot programs that HERE is using to enhance its community mapping capabilities and tap the knowledge of local experts.

"Sophisticated mapmaking is already a human and capital-intensive business. Add to this the fact that the world around us is constantly evolving with the addition of new roads, new infrastructure and even new names, and cartographers simply can't keep up," said Michael Halbherr, EVP,HERE.

"In vibrant, fast-growing countries like India a community mapping approach, paired with input from the right experts, means HERE can keep pace with the ever-evolving landscape so that our maps are never obsolete. Equally important, however, is not just the pure number of people contributing to our map-making community, but that we work with the right experts," he added.

VMware expands its operations in Pune

VMWARE RECENTLY ANNOUNCED the expansion of its operations in Pune. The company has leased an additional area of 26,391 square feet at the Bajaj Brandview building in Wakdewadi, Pune, where it already has a presence. The expansion will allow VMware to accommodate an additional 185 employees who will contribute to VMware's innovations in R&D. The Pune centre currently employs 200 employees who according to the company, play a key role in supporting VMware's global operations.

VMware's India-based R&D and support operations are second in size and scale only to those at the company's headquarters located in Palo Alto, California, U.S. Its R&D operations in India are said to make a significant contribution to the company's portfolio of virtualization and cloud computing products. According to VMware, developers in Bangalore and Pune contribute important components of VMware's key technologies — the software-defined data center, hybrid cloud and end-user computing.

The company's center in Pune has seen consistent growth through both hiring and acquisitions and has emerged as a key hub for innovation in the areas of network and security virtualization for VMware globally.

91% Indian businesses say big data leads to better decision making: study

EMC HAS RELEASED the findings of a survey that asked IT decision makers in India for their perspective on the challenges and opportunities that Big Data and IT transformation — and related skills — can present to their companies. The survey found that 91% percent Indian businesses agree that big data will lead to better decision making.

According to the company, in India, big data is giving rise to marked improved decision making and is having a significant impact on companies' competitive differentiation and ability to avert risk.

The survey estimates that 91 % of Indian businesses reported that better uses of big data will lead to better decision making. 68% of the respondents believe that big data will be a key factor in determining winners and losers in their industry. 35% have already achieved a competitive advantage as a result of big data analytics technology.

68% respondents believe that those industries that succeed will be the same ones using big data tools. 62% of respondents also agree that big data technology will prove vital in identifying and protecting against cyber attacks. 89% respondents agreed that data center automation will be crucial to innovation and agility over the next three years.

"Businesses in India are increasingly seeing transformative benefits of using analytics to enable better resource management, gain competitive and market insights and enable truly transformational business decisions. While there is consensus in the business community that data would enable better decision making culture seems to be the biggest issue that businesses will need to overcome as India continues its journey as a progressive economy," said Rajesh Janey, President, EMC India & SAARC.

According to Janey, despite the negativity in the market, there are opportunities of growth as there are IT investments happening in telecom, BFSI, education and government sectors; and these investments were on hold last year have actually started to be done now. The IT investments are happening on two

fronts laregly, on cost reduction through IT transformation projects and improving profitability and customer satisfaction driven by big data analytics.

"Economy has started to stablize in the second half and organizations are looking to deploy IT. The freezed IT investments of 2012 and now started to roll out and we expect good traction this year and coming year as well," said Venu Reddy, Director, IDC.

Key Findings of the India-specific study include:

● 26% of companies surveyed have no current plans for implementing big data technology.

● Culture (35%) followed by no clear business case or proven ROI (28%) are cited as the most common inhibitors to big data adoption.

Companies in India continue to look to IT innovation to compete locally and on the global stage:

● 92% of companies in India agreed that their business sees technology investment as a strategic way of achieving its goals.

● The top three drivers for the transformation of IT systems and infrastructure in India are: Business process/operational efficiencies (61%), improved governance and compliance (46%), and enhancing customer experience/engagement/communications (45%).

● 79% of respondents report that they have the correct level of skills and knowledge in place to complete their business priorities successfully.

● 82% of respondents in India report that ensuring skills keep pace with the rate of IT innovation will be a challenge for their organizations over the next three years.

● 80% of respondents agree that IT is now equipped to handle the most essential business priorities – and that now, the biggest barrier is cultural.

Social media new tool of cyber attack: Trend Micro

CYBERCRIMINALS TARGETED SMBs and marketers who were trying to increase their online presence in second quarter of the year, revealed Trend Micro Q2 2013 Threat round-up report. According to the compay, influence in social media depends largely on the number of followers an entity has. Cybercriminals created sites which lured users by the idea of acquiring a huge number of followers in a very short amount of time, and with almost no effort at all.

"These sites offer not only followers, but also retweets and likes for particular posts indicated by the customer. The required payment would depend on the number of followers, retweets, or likes preferred. The payment process requires the customer to transact via payment sites like interkassa.com and ligpay.com (for mobile users). In the end, no followers, retweets, or likes is provided to the customer, only the risk of information and money theft," said Dhanya Thakkar, Managing Director, India & SAARC, Trend Micro.

It is important to note to those who are interested in employing such services that doing so leads to more harm than good. These services either just scam their customers by not delivering their promised service, or actually deliver, but

do so through dubious means (usage of malicious scripts or botnets).

Also, as more users manage multiple online accounts, cybercriminals explored means to use this trend to their advantage. They abused popular blogging sites like Tumblr, WordPress, and Blogger to host fake streaming sites of popular summer movies, including Man of Steel, Fast and Furious 6, and Iron Man 3. These attacks abused the use of the SSO approach, which should serve as a reminder to protect online accounts and avoid using weak passwords.

In response to compromised incidents, LinkedIn, Evernote, and Twitter rolled out additional security measures, which notably included two-step verification measures. Instagram scams showed that cybercriminals are targeting SMBs and marketers who wish to increase their online presence. Such scams offer "free followers" or use professional looking sites where they can supposedly buy followers in bulk. The tactic of selling followers is not new though. Cybercriminals simply turned to different avenues outside Twitter and Facebook. Interestingly, this threat appeared while social media sites found ways to monetize the services they offered.

Infor launches cloud based e-commerce platform

INFOR HAS ANNOUNCED Infor Rhythm, a cloud-based e-commerce platform. The solution is built on a complete and proven e-commerce platform and complemented with designs from the Hook & Loop creative agency.

Rhythm includes software for storefronts, product configuration, recommendations, upsell and cross sell, pre-packaged ION integrations to order management, natural language search, content management, layout,

and predictive analytics - all available in the cloud for a monthly subscription and rendered in beautiful design. According to the company, these applications are proven at major customers like Tommy Bahama, Microsoft, Mohegan Sun, and Navy Federal Credit Union.

"It's time to modernize e-commerce sites. Companies have been hiring creative agencies to spruce up dated storefronts; however, without deeper customer engagement on their sites, the sales conversion rate doesn't improve as much as they'd like," said Charles Phillips, CEO of Infor.

The first suite, Infor Rhythm for Commerce, is available now. Infor plans to release additional suites in 2014, including Infor Rhythm for Civics (public sector), Patients (healthcare), and Hospitality.

IBM, Tata Power Delhi Distribution join hands to propel Smart Grid in India

IBM RECENTLY ANNOUNCED that it has been selected by Tata Power Delhi Distribution to conceptualize, design and deliver an Advanced Smart Grid solution that will collect and analyze real-time information from smart meters and data from the communication and management infrastructure. This will enable Tata Power Delhi Distribution to better manage energy output and further reduce outages.

As a joint venture between Tata Power and the Delhi Government, Tata Power Delhi Distribution sought a solution that would enhance the reliability and efficiency of energy distribution across the Northern and North western part of Delhi. Additionally, the solution would also help empower its over 1.3 million electric consumers to manage their own energy usage.

"TPDDL is committed to accelerate the smart grid deployment which will give customers more visibility and control in managing their energy usage and transform the electric network into a robust, secure and intelligent system.

This is an important milestone for the energy distribution in India as we intensify our efforts to empower consumers and provide them choices of usage of their electrical appliances and manage their load efficiently." said Praveer Sinha, Chief Executive Officer and Executive Director, Tata Power Delhi Distribution.

In India, aggregated technical and commercial losses that occur due to electricity transmission and energy theft are estimated at about 26.4 per cent on a national average. The Government of India has launched the Restructured-Accelerated Power Development and Reforms Program (R-APDRP) with the aim to reduce these losses in the country and to improve the power distribution sector of state utilities, during the 11th centralized and integrated national economic programs Five-Year Plan period, 2007-2012.

As a part of its smart grid initiative, Tata Power Delhi Distribution will collaborate with IBM to develop an advanced metering infrastructure and demand response pilot program that will automate and regulate supply of electricity to consumers in sync with the fluctuating demand.

This project will help add a layer of digital intelligence to the grid and ensure reliability when the demand rises exponentially and the supply falls due to heavy consumption. In addition, this will provide customer service improvements including new digital meters, enhanced self-service options and access to a customer portal to manage energy use.

IBM will support Tata Power Delhi Distribution to create the system architecture, ensure adherence to international smart grid standards, optimize business process and incorporate dynamic business analytics function to offer actionable insights. In addition, Tata Power Delhi Distribution will leverage IBM expertise to integrate new advanced metering, meter data management, and demand response systems with existing applications including customer and geographic information systems.

According to the news release, an advanced infrastructure based demand response is a complex exercise and has not been done in India before, and this engagement is the first step in creating an end-to-end intelligent utility system to manage generation short fall by peak shaving of actual load. Peak shaving is a technique that is used to reduce electrical power consumption during periods of maximum demand on the power utility and enable consumer to redistribute loads to different period of the day, thus saving substantial amounts of money due to peaking charges.

When complete, the multi-phased engagement is expected to enhance the relationship between Tata Power Delhi Distribution and its consumers thereby enabling more efficient consumption of electricity.

SAP announces HANA based solution for retail

SAP HAS ANNOUNCED the SAP Customer Activity Repository application, a new retail data repository powered by the SAP HANA platform. SAP Customer Activity Repository is intended to support retailers in becoming more customer-centric by bringing together customer, sales and inventory information from siloed applications. A unified view of the customer will help retailers drive consistent experiences across all channels and improve business efficiencies, profitability and brand perception. The announcement was made at the SAP Retail Forum North America, held between October 7 to 9 in Dallas, Texas.

SAP Customer Activity Repository aims to empower retailers with consumer insights by consolidating customer interactions from stores, online and mobile channels with insight from social media feedback such as Twitter or Facebook posts. The information will act as the basis for a "single source of truth" to help retailers optimize branding, marketing, promotions, pricing, merchandising, inventory management

processes and more.

"As consumers expand their shopping experiences across multiple purchase channels, retailers have an opportunity to engage more fully and provide more personal interactions," said Lori Mitchell-Keller, global head, Industry Business Unit Retail, SAP. "This is a daunting task, requiring access to multiple databases and tools. With SAP Customer Activity Repository, retailers will have access to powerful consumer insights, be able to centralize critical business data and run reports instantly, and make better business decisions that support both sales and the customer experience."

As the backbone of SAP Customer Activity Repository, SAP HANA is intended to deliver lightning-fast insight at a user-determined level of detail, to help eliminate the time needed to handle multiple data transactions in the point-of-sale (POS) transaction log, other sales channels and reporting systems.

The solution is also intended to help retailers establish the foundational data that can be used to better understand customer demand and predict future buying behavior. Features such as real-time visibility into consumer sales data down to the transaction level are intended to enable retailers better understand what, when and where customers will make purchases. One consolidated data pool for all customer transactions across channels will support ease-of use and accessibility to the right information. Further, SAP plans to design better access to inventory levels, predictive models and analytics in the application for improved operational management. General availability of SAP Customer Activity Repository is planned for the first quarter of 2014.

EMC unveils its Transformation Coach

AT THE RECENTLY held EMC Forum in Mumbai, the company unveiled its new Transformation Coach, a bus as a mobile lounge that would showcase the company's solutions and product demonstrations targeted specifically towards the SMB market.

Rajesh Janey, President India & SAARC, EMC talking at the launch explained that SMBs constitute a large part of EMC's business and that the company sees tremendous opportunity to grow this market further.

EMC typically demonstrates and showcases its solutions at its Executive Briefing Center (EBC) in Bangalore. However, not everyone would be willing to travel, and therefore the company came up with the idea of having an EBC on the road such that they could reach out to every customer better.

The coach will go around the country reaching out to mid-market customers spread across seven cities that include Mumbai, Pune, Ahmedabad, Kolkata, Chennai, Hyderabad, and Delhi from October 3, 2013 to March 31, 2014. The company aims to tap over 500 customers with this intiative.

The coach would showcase the company's recently unveiled VSPEX, VNX, and other products related to cloud, big data and trust, and also focus on solutions for storage management, software defined data center, and the availability of mission critical applications — targeted at the mid market, through its Virtual Lab and some actual demonstrations.

The EBC program is customized to a specific customer, while the product demos will be customized for across a certain vertical. Customers and partners will be able to register for the coach through a mobile app and online.

HP brings advanced, data-driven security solutions for organizations

HP RECENTLY ANNOUNCED new and enhanced solutions that are designed to help organizations disrupt the life cycle of a cyber-attack and improve the overall effectiveness of security operation teams through accelerated big data analytics and real-time, application-level threat detection.

The company has introduced new ArcSight solutions that can identify and prioritize threats faster, combine security intelligence with business intelligence, and close potential blind spots at the application layer, giving customers greater control over their security environments.

According to the company, while security spending continues to focus on the perimeter, 84% of business security breaches originate at the application layer and mobile vulnerabilities have grown by 68%. The new portfolio includes the HP ArcSight Application View solution that closes this gap by integrating the HP ArcSight Security Information and Event Management (SIEM) platforms—HP ArcSight ESM and HP ArcSight Express—with HP Fortify Runtime to automatically detect and log application security events.

The portfolio also includes ArcSight Risk Insight. Incorporating key elements originally implemented in the HP ArcSight EnterpriseView product, HP ArcSight Risk Insight is delivered as an add-on to HP ArcSight ESM. The new solution is designed to help security operations teams identify advanced attack targets, analyze current security technology deployments and weigh emerging risk to determine where to focus mitigation efforts.

Also launched is the new ArcSight Management Center an enterprise-grade, centralized security management hub that will enable ArcSight customers to effectively and efficiently manage large deployments of HP ArcSight Logger, ArcSight SmartConnectors and ArcSight Connector Appliance from a single console. The HP ArcSight Management Center is designed to help streamline centralized configuration management and compliance, while reducing the time it takes to alter the system or implement a policy change.

The HP Haven platform consists of Hadoop for raw data storage and batch mode analysis, HP Autonomy for human generated information processing, the HP Vertica Analytics Platform for broader big data analytics, and HP ArcSight ESM for real-time security monitoring and analytics, with applications running over the platform. The Haven platform enables security operations teams to use the updated HP ArcSight Enterprise Security Manager (ESM) v6.5c to analyze security events in a broader context when used in conjunction with Hadoop, HP Autonomy or HP Vertica Analytics Platform data stores.

It allows customers to benefit from an accurate prioritization of risks and anomalies as well as advanced insider threat patterns. The HP ArcSight ESM solution operates in real-time, sifting through millions of log records, correlating the data at a rate of two million events per second to find the critical events.

HP ArcSight ESM v6.5c incorporates the latest iteration of the highly optimized back-end storage engine that allows faster querying to enable real-time alerts during complex searches, accelerates algorithm performance for correlation event processing and significantly improves data storage efficiency.

ArcSight Application View is available immediately worldwide. A 30-day free trial offer is available, with pricing starting at $2,000 per application following the conclusion of the trial period. HP ArcSight Risk Insight is expected to be available this fall. ArcSight Management Center is expected to be available in October. A free trial version will be available for evaluation of full capabilities. ArcSight Enterprise Security Manager (ESM) v6.5c is available as hardware or software, providing flexible deployment options for any environment and is expected to be available in October.

ING Vysya Bank selects IBM MobileFirst to support business growth

ING VYSYA BANK has selected IBM MobileFirst solutions for the development of its ING Vysya Mobile, a cost effective, secure and scalable mobile banking app. Launched in July, the new app will effectively enhance the bank's reach into untapped markets, such as remote cities and rural areas. Additionally, the app will improve engagement with the bank's customers through new personalized features that provide greater availability and convenience to its services.

For instance, using the app, thye bank's customers can use their mobile devices to pay utility bills, transfer funds to other accounts, view mini-statements, request check books, stop payment of checks, and locate the nearest ATM and branches, among many other features. As a result, the customers will able to manage their accounts and financial performance more efficiently.

The bank selected IBM Worklight, an integral part of the IBM MobileFirst solutions portfolio, to help create cross-platform apps, as well as manage the whole app development life cycle. According to the company, using this technology, the bank has been able to reduce the time to market and cost for product development. Worklight also provides secure connectivity with the client's back-end systems, allowing it to efficiently manage version upgrades, user data and audit data. With data capture capabilities, the bank will be able to analyze patterns and trends of customer usage.

"As the mobile revolution continues to change the way we interact with customers, transforming our services to meet these demands and deliver a consistent customer experience, regardless of the device or operating system, has become critical to our growth," said Aniruddha Paul, chief information officer, ING Vysya Bank. "With the IBM mobile solution, we are now able to quickly and easily roll out new mobile services to support our business growth strategies."

According to IBM, the bank is the first Worklight client in India to go live with a publicly downloadable app. Currently available on the Apple iOS mobile platform, ING Vysya Mobile apps will soon be extended to other platforms such as Android, BlackBerry and Windows Phone.

"It has become mission-critical for organizations to have a mobile presence, given increasing customer demands," said Naveen Gupta, business unit executive, IBM India/South Asia. "Many companies want to build mobile apps with the same features as their web counterparts, without compromising on user experience. IBM MobileFirst helps clients dramatically reduce mobile app time to market and ensure cost effectiveness."

Take control.

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