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DEFENDING THE DIGITAL LIFE

As hackers target the cellphone, the need is growing for better mobile security

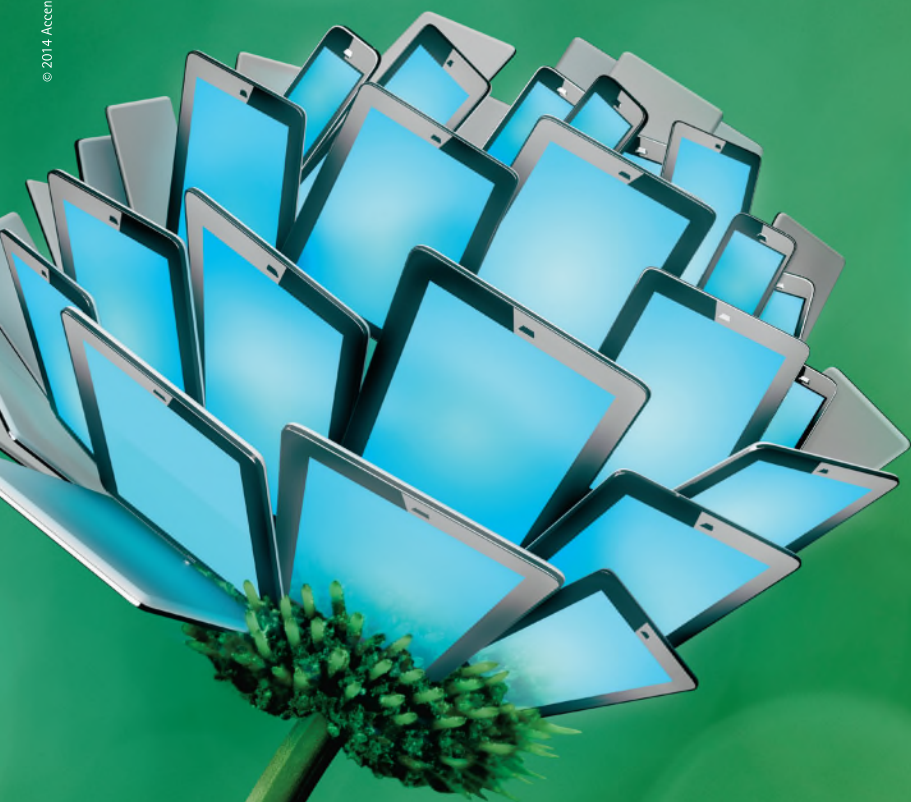
BI: WHEN TO START

Should a company wait for the ERP rollout to be complete before initiating a BI project?



DATA RULES THE ROOST

With voice revenue stagnating or diminishing, Indian telcos are riding the smartphone wave with data streams



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DATA, DATA EVERYWHERE



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THE ROLE OF IT IS
GOING TO BE
MORE AND MORE
EMBEDDED INTO
THE OPERATIONS
OF TELCOS

Not too far into the past, most people in most places on Earth would crib: not enough bandwidth, not enough bandwidth, not enough bandwidth...

Those were the days when the big daddies of telecom were either laying down fibre or in the process of provisioning services for next-gen networks. But users had already begun to be impatient with bandwidth.

So, one change I have noticed in the past few months is that nobody mouths the much-reviled B-word: that bandwidth is available is a given. No wonder, then, that data is increasingly filling up the pipes and bringing in pesos for telcos.

In the US, mobile data service revenue reached \$90 billion last year, accounting for over 50% of revenues for wireless companies in the QND quarter of 2013, as per a Reuters report.

Even in 'poor' India, the average data consumption is growing like the potatoes for McDonald's fries. As per industry estimates, the average 3G subscriber consumed about 530MB of data during 2013, a 23% increase over 2012.

India is not going to see data revenues overtaking voice anytime soon. But given that neither the talk times nor the monetary returns from voice are growing, it is data that will drive business for telcos.

This shift in focus from voice to data requires certain key changes at the telcos too.

For one, telcos will need to ramp up their 3G networks and improve coverage (too many flip-flops between 2G, 2.5G and 3G when users move around). Unfortunately, not many are talking about 4G yet in India.

Another thing will be to revamp their IT systems (at both Operations Support System and Business Support System levels) for better overall control and agility.

Here, the role of analytics and convergent billing solutions is of prime importance. With increasingly intelligent and real-time analytics, telcos can come up with personalised solutions at ever-greater speeds. And convergent billing will allow them to reduce the hassles for those who subscribe to various plans and make life easier for them (and tougher for competitors that continue to use separate solutions for pre-paid and post-paid).

The role of IT is going to be more and more embedded into the operations of telcos if they are to successfully ride the data wave.

PS: Just like the telcos and the IT world, *Express Computer* is set to change, too: we are going monthly from June. While the idea is to put more focus online, our engagement with you is only going to increase—and so will our commitment to deliver value. Do stay tuned...

sanjay.g@expressindia.com

DATA RULES THE ROOST

With voice revenue stagnating or diminishing, Indian telcos are riding the smartphone wave with data streams



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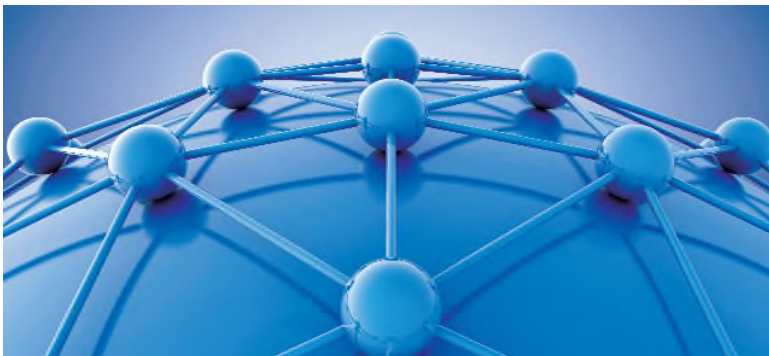
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DATA RULES THE ROOST

With voice revenue stagnating or diminishing, Indian telcos are riding the smartphone wave with data streams

BY PUPUL DUTTA

The poster boy of the country's growth story—the Indian telecom sector—has seen a lot of positives in the last decade, led mostly by the surge in subscriber numbers. It seemed that Indians couldn't get enough of cellphones and mobile talk.

However, of late, there have been concerns in the telecom industry. While some of these concerns relate to the fluctuating policy environment and high debts taken by telcos to finance their needs, equally important concerns include stagnating or falling talk times as well as revenue and growing subscriber saturation.

That's where the entry of smartphones and data services (2G and 3G) seems to

have come as a saviour. The operators are now looking for ways to increase their revenue through data, given voice is delivering stagnant ARPU (average revenue per user) which has not risen much since the past few years. According to some estimates, the data ARPU in India is at Rs 90 which is almost 44% of the national (overall) ARPU of Rs 203.

The rising data revenues are being driven by India's 3G subscribers who consumed on an average 532 megabytes (MB) of data during 2013, a 23% increase over 430MB during 2012 (source: Telecom Regulatory Authority of India). The 3G data consumption is almost 3.6 times the 146MB of data that 2G users consumed on an average during the year.

According to a report from Nokia

Solutions and Networks (NSN), data traffic on India's mobile networks rose 87% during 2013. While it is slightly lower than the 92% recorded in 2012 (over 2011), the increase is based on a number of 40 million smartphones as opposed to 19 million in 2012.

Now the question that arises is: How do operators manage such huge traffic and are they managing it well? Also, is there anything they can do on the infrastructure side that can not only improve their network but also bring in more revenue?

"Basically, operators need to invest in business and service management systems that can support new revenue stream generators such as vertical industry M2M applications, collaborations with OTT (Over The Top)





IT is supporting data and internet segment of our business through providing intelligent analytics to derive quick and effective business insights.

Anthony Thomas,
CIO, Vodafone India



If the ecosystem knows what device the video is being streamed to, then it can accordingly standardise the resolution.

Purushottam Kaushik,
Director - Service Provider,
Cisco India & SAARC



Data traffic on India's mobile networks rose 87% during 2013. While it is slightly lower than the 92% recorded in 2012 (over 2011), the increase is based on a number of 40 million smartphones as opposed to 19 million in 2012

providers, monetisation of big data insights, etc.," says Raghu Prasad, Head of Communications and Media Industry Solutions – Asia-Pacific, Oracle.

While the foundational BSS/OSS (Business Support System/Operations Support System) and enterprise applications that telcos use are still relevant, there needs to be additional investments for real-time charging and settlements, dynamic information discovery for insight, unstructured data analysis, large volume data storage and analysis, etc.

The technological hitches

Traditionally, telecom operators' businesses were "minutes factories" where revenue was in line with usage and the key to generating more revenue was

monetising the network more effectively. While service providers have been targeting additional revenue growth from data as voice subscriptions plateau off, the rate of growth of data revenue currently is far less than the growth of data traffic on networks.

Given the current scenario, managing revenue or rather creating new streams of revenue is a huge challenge for any operator. The challenge is further exacerbated by the large investments that need to be made on enhancing the network to support large volumes of data traffic over 3G networks.

Beyond technological challenges, there are other hurdles like lack of applications and content in local languages that prevent adoption of 3G by consumers.

Hence it is important that service providers are able to embrace multi-directional business models that involve a variety of non-traditional partners whose services will facilitate the revenue flows for the telco. This would enable them to move beyond just providing data connectivity services to value-added lifestyle services that their customers would pay more for.

Says Anthony Thomas, CIO, Vodafone India, "The customer focus has definitely shifted from voice/SMS packs to data and internet service plans. IT is supporting this segment of our business by providing intelligent analytics to derive quick and effective business insights that lead to the launch of strong products in the competitive market. A host of new applications are being introduced in the market by our enterprise business where IT plays a key role."

"Also, with exciting services like online streaming, videos on demand, mobile

gaming, there will be pressure on networks to deliver the consistent customer experience by optimising the resource usage. Now, to offer a variety of these services, we need to enable our IT system architecture to support integration with systems on diverse platforms not only within our own ecosystem but also a large number of external VAS providers who offer certain niche value added services to our end customers," adds Thomas.

So, while there are many challenges, IT plays a key role in meeting them. For example, Oracle offers a suite of telco-specific solutions that help enhance data services monetisation as well as data monetisation. "Some of the tools offered by Oracle are tailor made to suit operator's demands. Intelligent policy management (PCRF) that manages network utilisation in real-time and enables appropriate QoS (quality of service) and pricing for end-users is one

such tool. Complete business management platform as well as embedded Java technology for devices for M2M and IoT (Internet of Things) services is another," explains Prasad.

Managing lifecycle, OSS/BSS

Given the increasing competition and the pressure to improve the bottomlines, telecom operators are looking at a variety of tools that would make their lives easier and businesses lucrative. Initially, telcos preferred in-house solutions for these services (OSS/BSS, lifecycle) but with the complexity that often accompanies customised solutions, they now prefer the same from seasoned vendors, allowing themselves more time to focus on core services.

Also, in-house legacy applications aren't agile and do not support rapidly changing technologies. By getting commercial off-the-shelf (COTS) solutions, telcos ensure they adopt the

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From the outset, Reliance's network monitoring and management is automated and the same is true for the OSS.

Alpna Doshi,
CIO, Reliance Communications



Converged billing solutions deliver better RoI as the need for two different platforms to be maintained is eliminated.

Jagdish Mitra,
Head – Mobility, Tech Mahindra

latest technologies, tried and tested in the market. This also reduces their overheads in management of large development teams, and helps them focus on key business functions.

"Telcos adopt COTS to get an industry-standard solution with best practices built-in. Taking this one step further, many telcos in India have outsourced their operations, including several critical functions. Examples include Bharti Airtel, Idea Cellular and Vodafone India," says Amit Goenka, Senior Solutions Manager, TEOCO, a global provider of assurance and analytics solutions to telcos.

COTS enables telcos to streamline their business functions, and heavily simplifies vendor management as they now have to deal with one vendor—which, in turn, manages several third-party BSS/OSS vendors.

Currently, there are a variety of solutions available in the market from companies like TCS, Oracle, Wipro, TEOCO, etc. Most of these solutions are integrated with the workflow using various tools, and no single tool serves all lifecycle requirements. Lifecycle management solutions provide insights of customer behaviour and help customer-facing agents address service related problems, or offer customised services.

Such solutions also create opportunities for up/cross sell. As an example, a loyal high ARPU corporate subscriber may be offered a discount on voice roaming if he signs up for a CUG (closed user group) plan at his workplace.

Explains Thomas of Vodafone, "Traditionally, OSS platforms focussed on the technical control and management of network nodes. However, IP-based networks need end-to-end control of networks, services, and the customer experience, and this means OSS needs to be far more evolved. Similarly, legacy BSS platforms were built to deal with voice and simple data, but they now need to process rich and complex real-time data. The BSS stack needs to account for a range of new services and the associated network signalling traffic, as well as multiple, concurrent data sessions running from single or multiple devices."



For most telecom operators, seamless customer experience is always a priority and both OSS and BSS are equally business-critical in assuring data network capacity, service quality, and enforcing charging parameters for data services. "Ensuring real-time service delivery requires agility, flexibility and greater levels of automation. Hence, we have our focus equally laid across network monitoring, fault management, product management, and real-time accurate billing," adds Thomas.

Among the vendors that offer lifecycle tools to enhance customer experience is Cisco. For example, the company offers a



tool that can customise the video offering according to the device being used by the customer. "We have tools for video optimisation according to the device being used like phone, tablet or a larger laptop. If the ecosystem knows what device the video is being streamed to, then it can accordingly standardise the resolution. This is device or network intelligence at the core. If the network knows a user is inside a campus, then it can decide to stream data from service provider Wi-Fi, helping save the company on broadband," says Purushottam Kaushik, Director - Service Provider, Cisco India & SAARC.

Cisco recently acquired a company called Intucell, whose technology facilitates rapid network densification through plug-and-play capabilities. Using OSS data, the company's technology detects coverage, overload and other issues in real time and automatically adjusts the network to answer them. For example, when too many users are connected to a single cell tower, Cisco's system automatically adjusts the coverage by looping in assistance from nearby towers. The result is a "breathing network" that responds to actual changes in RF conditions.

"These solutions can help maximise

2014: IN THE AIRWAVES

- Launch of 4G LTE services by Reliance Jio Infocomm
- Consolidation and, therefore, lower circle- or region-specific focus
- Fresh investments due to clarity in regulatory issues; though new players unlikely
- Data consumption to grow across 2G, 3G and 4G, but localised content may remain an issue
- Operators likely to integrate services closely with social platforms and start introducing advanced analytics
- Focus on enterprise business to grow
- Nationwide mobile number portability on cards; free roaming unlikely

(compiled from various sources)

In-house legacy applications aren't agile and do not support rapidly changing technologies. More and more telcos are likely to adopt commercial off-the-shelf (COTS) solutions



usage with complete automation and improve quality of service. This reduces network opex, and the burden of managing the network manually is reduced largely,” notes Kaushik.

Network monitoring

In order to deliver a delightful customer experience, telcos have to ensure that there is no service disruption at any point in time. “To ensure this we have set up a Super NOC (SNOC) which provides a consolidated view of cross-domain network and services. The facility provides a unified view of the entire network infrastructure mapped to offered services, which results in proactive monitoring leading to early detection of any issue even before the customers can realise and complain. Any deviation from the KPI threshold value is tapped and action is taken on priority, ensuring continuous improvement in our services,” explains Thomas.

Reliance Communications, on the other hand, has been using automated solutions for network monitoring and management as well as for OSS and BSS.

Says Alpna Doshi, CIO, Reliance Communications, “From the outset, Reliance’s network monitoring and management is automated and the same is true for the OSS. We are successfully using the powerful Clarity Assurance suite and Clarity OSS suite of products. The Assurance suite is implemented to automate important areas such as alarm management, trouble ticket management, etc., and the OSS suite is implemented to automate areas like service manager and inventory manager. This practice has helped us mitigate the risks present in OSS and network assurance has helped us reap the benefits of automation.”

Billing

With a complicated product mix and bundled pricing strategies, the billing process is getting more and more complex with each passing day. This complexity poses multiple challenges in a telco billing environment.

Some of these challenges include maintaining the billing accuracy, ensuring real-time billing, avoiding

revenue leakage, keeping up with the offers and plans needed in the market, dynamic discounting, and accurate data volume processing. Further, billing of bundled services, enterprise billing, billing of new services like cloud, and machine-to-machine also pose greater operational challenges. Also, the large volumes of calls and data interactions pose additional challenges for service providers.

In any case, billing solutions have come a long way from maintaining two databases, about prepaid and postpaid, to a converged platform wherein both are integrated. But very little initiative has been taken by telcos to derive benefits through this convergence. It’s a fact that telcos in India have gained more from consolidating customer management (CRM) systems wherein data of both prepaid and postpaid customers has been consolidated and managed through a common platform.

However, it would be wrong to say that telecom service providers are doing absolutely nothing to bring in more innovation in this segment. IT teams of

most telcos are driving a billing transformation program which not only offers richer features like dynamic discounting to customers across different segments like pre-paid, post-paid, wireline, data, etc., but also provides capability to offer one common bill to customers availing services across these segments—thereby simplifying life for them.

Some popular billing solution vendors include Amdocs, BSCS and Kenan for postpaid and Ericsson and Comverse for prepaid.

Dependence on IT for telecom operations differs from service to service. “While traditional services such as voice mail and short-messaging services are mainly network-based and require minimal IT involvement, newer services such as mobile email, download portals, unified messaging, social networking platforms, application stores and online billing is infinitely more IT-intensive. In the case of billing, managing two different platforms for prepaid and postpaid means double IT costs for operations, management and maintenance of systems too. Converged billing solutions deliver better RoI as the need for two different platforms to be maintained is eliminated. A single billing platform also enables the telcos to launch hybrid products and other innovative products and services in the market,” says Jagdish Mitra, Head – Mobility, Tech Mahindra.

The next chapter of growth

Clearly, data is going to be the next chapter of growth, given voice revenues will remain stagnant for years to come. There will be stabilisation in voice consumption/minutes, while data consumption is only going to increase by 100% at least for the next few years. Additionally, eGov apps powered on regional and vernacular platforms can increase data consumption.

With the number of data subscribers growing, revenue from data has also leapt up. Data revenue accounted for 7% of telecom operators' overall revenue in 2012-13, and is expected to go up to 21.7% in 2017-18, according to equity research firm Phillip Capital India.



Bharti Airtel has almost doubled its 3G subscribers to about seven million, taking its data customers to 47 million, and data usage per customer has gone up 81% in the past one year. Aditya Birla Group-owned Idea Cellular's data users rose to 31 million in the June quarter from 18 million in the previous year while data usage doubled in the same period. By the end of June, Vodafone had 41.2 million data customers with about 3.7 million 3G subscribers. Reliance Communications' data users grew by half a million in the quarter ending June last year (source: Tech Mahindra).

Video accounts for the largest chunk of India's mobile data usage today. Across the country, people are watching everything from reality shows and soap operas to cricket matches and music programmes on their handsets. At last count, Vuclip (initiative behind Re 1 videos from Airtel) had 37 million minutes of video streaming spread over 20 million mobile users under its belt.

“The mobile phone has emerged as a strong alternative to traditional entertainment media like television, as most of the users surveyed, regardless of region, watch videos from home (72%). The most popular genres among participants were movies and music, though in non-metro areas, the popularity

of TV shows and lifestyle entertainment videos spiked. It's notable that there is a growing interest in longer videos on mobile, with most metro users (59%) opting for videos over five minutes in length,” a latest report from Vuclip states.

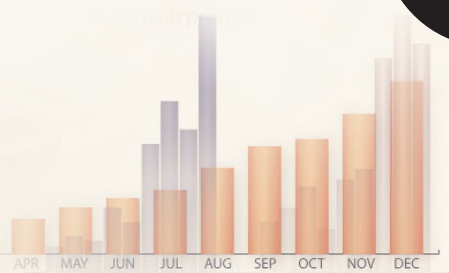
It is also expected that telecom operators will see huge increase in data services usage as 4G/LTE networks roll out across the country. As in other countries, video and video-related services will consume a major chunk of the additional bandwidth available. However, only the smarter service providers will actually be able to correspondingly increase data services revenues even as the data traffic grows. Voice revenues are likely to continue their downward spiral even as absolute data services revenues increase.

Kamlesh Bhatia, Research Director at Gartner, notes, “Data remains the big growth focus for all service providers currently. More availability of content, smarter devices, etc., have contributed to this tremendous growth. This, however, also means that service providers can expect their networks to be heavily loaded and emphasis will have to shift on how they optimise this heavy traffic and, at the same time, on monetising this opportunity.”

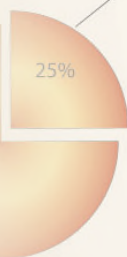
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Distribution of market share among the major industry players

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of market activity



Changes in the activity of the active and passive trends in the market.



t share



market.



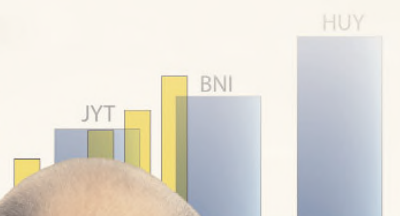
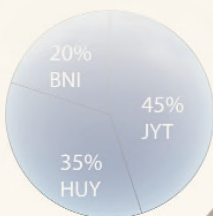
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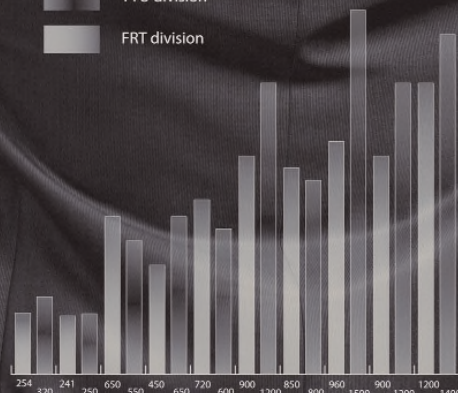
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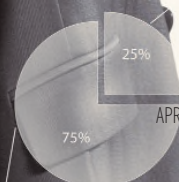
Revenue growth divisions.

TYU division
FRT division



TYU division			
GHT	254	550	25
RDW	650	320	75
TRG	241	450	14
RTG	254	650	87
WEF	784	145	12
HRT	453	78	95

Share of market



APRIL 16-30, 2014

Passive market share

Should a company wait for the ERP rollout to be complete before initiating a business intelligence project? Of what significance is the timing of such deployments? Here are some clues

BY SANJAY SHAH

ABC Corporation is a conglomerate of several types of businesses operating under one single legal entity. Growth in the past couple of years has been good. The MD firmly believes the continued growth and profitability will depend on taking the right decisions at the right time and based on data rather than on gut feelings. For this he feels that the time has come to invest in BI technologies and applications. He has engaged Mr. Waghmare, who is a BI strategist, for guidance. Internally, the initiative is driven by the MD himself and Mr. Basu, the IT head of BI in the company.

Mr. Basu has some doubts on the BI strategy and has asked for a meeting with the MD. The MD usually has such meetings late in the evening after the regular work of the company is done.

Lata (MD's Secretary): Good evening, Mr. Basu. MD and Mr. Waghmare are waiting for you. The quarter ending results are out, and due to a good jump in the top line the MD is in a good mood.

Basu: Thanks, Lata.
Basu enters the MD's room.

Basu: Good evening, Sir. Good evening, Mr. Waghmare.

MD: Good evening, Basu. I thought we had agreed to the BI strategy and so I am a bit puzzled that you asked me for some time to resolve some of your doubts.

The MD's secretary rolls in a tray of tea and digestive biscuits. The tea flavour today is Earl Grey.

Basu: Sir, I have been checking with many of my counterparts in the industry. All are of the opinion that we should start the BI solution only after the ERP is fully implemented.

Basu listens for an instant reaction but there is none. So he continues after a pause.

Basu: And in our case, some of our modules are still under implementation. Should we wait for some time?

MD: Mr. Waghmare, what do you have to say on this?

Waghmare: Mr. Basu, what you are saying is theoretically correct. Unless there is good data in the ERP system, what use would the BI tool be?

Basu is relieved that at least someone agrees with him.

Basu: So, shall we delay...

Waghmare (cutting him short): But that is a very traditional approach. A few years back, especially in the 1990s when ERP became popular, BI systems were just coming up. Those BI systems were so expensive that generally only the Fortune 500 could really afford the same. So most of the other companies did not invest in BI. All they did for reporting was do a massive amount of report customisation.

Mr. Waghmare sips some tea and then continues.

Waghmare: Later, when the BI systems came into general use, more companies started experimenting with them. So the general perception is that the ERP should first be implemented and then BI should begin.

Basu: So, should we not do what all others are doing?

Waghmare (addressing the MD): One of my observations is that an ERP implementation never ends. Once one module gets done, the other one starts. Once all the required modules get done, the ERP vendor pushes for a version upgrade or sometimes a reimplementation. It is a perennial job.

Waghmare (to Basu): Meanwhile, what does the user do for his regular MIS reporting? He asks the technical

600 900 1200 850 950 1500 200 1200

	FRT division		
4	274	154	415
4	273	825	154
4	364	954	174
4	657	125	274
4	752	741	254
4	241	731	254

team to customise reports according to his needs. Then he takes such reports into Excel, somehow extracts the data out of the same, makes a summary and sends the reports to the end users. This is a repetitive and monotonous task. The report also loses its flexibility.

MD: This is a very valid point. Let me give you an example. I know the chairperson of a large energy solutions company. Before we started our implementation, I had gone and met him to ask about their experiences. He said that most of the reports coming to him are in Excel, just as they were coming before the ERP implementation.

I asked him to show me his Accounts Receivable report. He opened an email which showed the status of account receivable by SBU. He opened another report which showed the AR by customer, etc. I was a little surprised so he called his person who makes these reports for him. That person mentioned that the technical team has customised almost 15 reports in the area of AR alone. Each report shows a different view of the same data. Some reports are by SBU, some by branch, some by customer, etc. However, if one needs the invoice-level details, then they have to go through the ERP system. I found the whole thing very rigid.

Waghmare: Exactly. In fact if they had started their BI initiative before the report customisation, they would have saved the huge cost of the customisation and, instead, in one single BI report they could have got all the views they were looking for.

Basu recalls that the ERP implementing agency has also asked them for a substantial report customisation budget.

Basu: But, Sir, the masters, etc. are not yet fully updated. The report may show garbage. And if MD sees such a report, he will be most dissatisfied!

Waghmare: I agree with you, Mr Basu, that if the master data is not filled in correctly, there will be a lot of mistakes in the data. In order to meet the target of ERP implementation, many of master



fields are not entered.

MD (listening intently and feeling that Basu has a point): Then what are we supposed to do?

Waghmare: In my opinion, master updation is always an ongoing task. As new requirements come in, new fields of the master data are opened up for data entry. So waiting for the perfect master data is not worth the wait.

Here, I would like to share with you one of my observations. The BI report initially will be the perfect place for the users to spot errors/inconsistencies in

master data. The BI tool automatically marks as 'Unknown' if some master data is not available. So in order to make the report correct, there is no real need to go through thousands of masters. You could just set a filter to the 'Unknown' member and drill down. You will immediately get those master records which you need to rectify. Using this, you could go to the ERP master maintenance form and correct the appropriate master. There is no need for you to wade through so many masters and so many master fields on so many tab pages.

MD: That's a valid point. The ERP is a



highly generalised product and it serves the needs of thousands of customers. All the fields may not be useful to us. So if we are able to quickly spot the miss outs, we could correct them faster.

Waghmare: So you see, when you first publish the BI reports there would be many miss outs, especially in master data. You would need to send a note saying that the users need to give feedback on which fields are important to them and such fields need to be checked quickly. Over the period of a month the report will mature. It will be much faster than trying to customised reports and

getting only a text output of such reports.

MD: I agree. In fact the best time to have started thinking of BI was when we had started the ERP implementation process. That time we would have ensured that all the data we needed was in fact in place.

Waghmare: True. But even now it is not too late. The ERP system should be used only for transaction capture and for operational reports and document printing. Operational reports like General Ledger or Inventory ledger are OK for the ERP system to handle. But any informative report like AR reports,

Inventory Ageing, etc, it is better to work with the BI tool.

MD: Basu, I hope you are convinced. You can now remove the budget for report customisation from the ERP budget and add it to the BI budget.

Basu was hoping that the MD would not notice the budget part of it.

Basu: Y.Yes Sir, of course, Sir!

Lata watches Mr. Basu come out of the MD's cabin wiping his forehead.

Observations

BI or MIS automation initiatives should be started well in advance, preferably along with the ERP implementation. It will ensure that all the data is in place. BI reports could be used to filter out areas where data is not fully available. In this manner, after a few iterations, the report would be ready. This is a much better and a more cost-effective alternative to the traditional way of first implementing the full ERP, customising all the ERP reports, and going in for BI much later.

Design Principles

- Design the BI reports in such a way that the Unknown attributes are immediately highlighted.
- Create a single error report; identify all the miss outs between the fact data and the dimension data. Group these errors appropriately and send to the key users.
- Also set up a control report for each domain which would show the summary of all BI reports on one page. That way, it is easy to check if all the controls are in place, e.g. the report should show the AR balance as per the AR module and as per the Trial Balance. There should be no difference.
- For highly sensitive reports, create a mechanism by which such reports will not be published unless and until all underlying controls are matching.

This article by Sanjay Shah builds further on the article titled 'BI: What Counts' published in Feb. 1-15, 2014 issue. Sanjay Shah is the CEO of Pune-based Prosys Infotech, which specialises in developing BI solutions on the Microsoft BI platform. He can be contacted at sanjay@prosysinfotech.com.



DEFENDING THE DIGITAL LIFE

There has been a sizeable increase in both volume and sophistication of mobile threats, as PC-based threats have transitioned to mobile platforms

BY SUDHIR CHOWDHARY

Mobile devices have taken the world by storm. But there's a catch: The way mobile phones, laptops and tablets interconnect work life and personal life raises serious security challenges for individuals and enterprises—and the stakes are high. Threat researchers at some of the big IT security firms are concerned that the new devices will give more opportunities for criminals to thrive, as they evolve their cyber attacks, endanger business, including online banks and retailers, while moving closer to homes and individuals through mobile technology.

"Last year saw major security breaches, increased malware, and mobile threats that impacted people from all walks of life around the world," says Maxim Goncharov, senior threat researcher at Trend Micro. "Now more than ever, consumers and enterprises alike must be diligent in understanding their vulnerabilities, and what should be done from a security perspective to better protect personal data and guard against compromised privacy."

There is no doubt that mobile devices offer well-established benefits in terms of productivity and efficiency gains for employees and enhanced services for consumers, stresses Goncharov, responsible for security consulting to business partners (internal, external), creation of security frameworks, designing technical security architecture and overseeing the build out of an enterprise incident response process. "But the reality is that the spread of mobile devices and bring-your-own-device policies have opened up a variety of security issues for enterprises across the globe. By allowing employees to

access company networks with their personal devices, businesses are vulnerable to attack from hackers who would exploit those entry points."

According to Trend Micro's 2013 annual threat round up report, "Cashing in on Digital Information," security breaches, cyber criminals and organised attacks made it nearly impossible to keep personal and financial data private. The report reveals that there was a sizeable increase in both volume and sophistication of mobile threats, as PC-based threats transitioned to mobile platforms. "By the end of 2013, we saw a total of 1.4 million malicious and high-risk Android apps being identified. And Apple users are not immune; last year saw an increase in phishing attacks specifically targeting Apple users as cyber thieves recognise the potential revenue from this install base," Goncharov informs.

Trend Micro's annual report provides insight into the vulnerabilities of today's technology that is rapidly becoming interconnected and "smart." Further, it reveals that as online banking malware that directly target victims' finances intensified globally last year, prolific ransomware increased and evolved into Cryptolocker throughout the year. High profile incidents of infrastructure being targeted by cyber attacks became a reality in South Korea, demonstrating how critical operations can be impacted on a broad scale.

But let us keep our focus on the onslaught on mobile devices, more so in India—which is the world's fastest rising smartphone market, slated to have 185 million mobile internet users by June 2014 (IAMAI), and the second biggest user base for Android accounting for



With India placed on the tip of mobile device explosion, there is an overwhelming need of adoption of security and privacy protection in our digital lives.

Jagdish Mahapatra,
MD, India and SAARC, McAfee

1.4
MILLION

malicious and high-risk Android apps identified by the end of 2013, according to a Trend Micro 2013 annual threat round up report

over 93% market share (IDC). Device proliferation and the resultant application explosion has increased potential vulnerabilities and made 'mobile' a significant threat vector. This is validated by McAfee Labs that has collected 2.47 million new Android samples in 2013, with 744,000 in the fourth quarter alone, an astounding increase of 197% from the end of 2012. "With India placed on the tip of mobile device explosion, there is an overwhelming need of adoption of security and privacy protection in our digital lives," says Jagdish Mahapatra, managing director, India and SAARC, McAfee.

The latest mobile security trends report by the wholly-owned subsidiary of Intel (McAfee) found that around 82% of apps track users and 80% of apps collect location information—invading our privacy successfully! Additionally, another McAfee survey on Indian mobile consumption behaviour revealed threats arising out of indiscriminate usage of mobile phones and sharing of private content on mobile devices. It unveils that 98% of polled Indian respondents use smartphones to take pictures and more than 66% of polled respondents claimed to share their mobile content.

McAfee Labs' ongoing research into underground 'dark web' markets identified the attempted sale of stolen credit card numbers and personal information known to have been compromised in the Q4 retail breaches. The researchers found the thieves offering for sale some of the 40 million credit card numbers reported stolen in batches of between 1 million and 4 million at a time.

"The fourth quarter of 2013 will be remembered as the period when cybercrime became 'real' for more people than ever before," said Vincent Weafer, senior vice-president for McAfee Labs. "These cyber thefts occurred at a time when most people were focused on their holiday shopping and when the industry wanted people to feel secure and confident in their purchases. The impact of these attacks will be felt both at the kitchen table as well as the boardroom table."



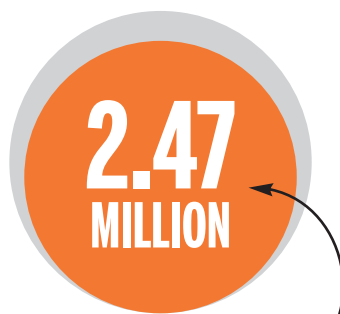
So, what do we have to look forward to in 2014 and beyond? "We expect mobile malware to not just keep growing, but to indirectly affect other platforms and devices as well," says Goncharov. "Consider how we are using our mobile phones not just for banking, but for authentication (using either apps or text

messages). It's a logical step forward that cyber criminals will systematically go after these as well. 2014 will be about mobile banking. Two-factor authentication is not a cure at all—while it can improve IT security, it also introduces new attack vectors that have to be considered and made secure as well."

On the PC front, what is going to see threats are old systems—specifically those running Windows XP. By the time Microsoft stops supporting Windows XP next year, more than twelve and a half years will have passed since it was released. In the world of technology, that is an eternity. Unfortunately, however, many businesses are still using Windows XP. Once the patches stop being released, they will have no protection from Microsoft against zero-day exploits. "We just saw a new zero-day target only Windows XP and Server 2003; there are certainly more that haven't been used or discovered yet."

In short, cyber threats and attacks have become more complex and criminals are using every avenue available to break into mobile devices.

(Courtesy: The Financial Express)



new Android (threat) samples collected by McAfee Labs in 2013, with 744,000 in the fourth quarter alone, an astounding increase of 197% from the end of 2012.

BRYAN SHEPPECK
ASPECT SOFTWARE

Bryan Sheppeck, Senior VP, Worldwide Sales, Aspect Software, talks to Jasmine Desai about the sea change in the customer service industry and the need for a holistic approach to it. Excerpts:

“Consumer taking charge of the interaction is a relationship revolution”

Can you shed light on Aspect's acquisition of Voxeo and the product Zipwire? What will it mean for your customers?

Zipwire's parent company, Voxeo, has ten years of experience in hosting applications for multi-channel self-service. They are well-known for IVR, but they do many other channels as well. They have six data centres around the world. Based on the partnership we launched a new product called Zipwire. It is Aspect created product based on Voxeo knowledge and experience. It scales down a bit more cost effectively than our traditional portfolio. The unified IP is the foundation of most of our interaction management. It is however, not cost-effective for smaller contact centres, wherein Zipwire will be more cost-effective. It is hosted and ITS operational benefits are state-of-the-art and it is very easy to provision.

Large enterprises that have seasonal demands can definitely take advantage of it. For example, an accounting firm that has peak demand during tax season. Because of Voxeo acquisition, there is lot of room for expansion of self-service strategies by our clients. The more of this happen, the more the agent is free to take up sophisticated interactions perhaps to do cross-selling, problem solving etc.

What will the next-gen customer service experience include?

Customers are looking to being more creative about self-service strategy. It is about giving customers lot of choices of how they interact. It continues with all details of awareness of the interaction of how they interact, but also adding lot of creativity to those interactions. A younger consumer has different expectation than older consumer about channel choice. When the consumer takes charge of the interaction it is a relationship revolution. For example, an airline in Europe before check-in gives the option to travellers to share their LinkedIn or FB profile. Once this information is given, the travellers are allowed to see profiles of even other people who have selected to share and based on that can sit next to someone of choice. Basically it is self-selecting the neighbour on airplane.



Be it BFSI, healthcare or retail, their core business is not operating a contact centre. If they can outsource it cost-effectively with high level of operational skill and not have to sacrifice in terms of control and influence of how application works, there are many who would like to opt for it, especially smaller contact centres.

Another airline in the Mideast which is owned by the government, also owns the duty-free. They have integrated the frequent flyer information. Thus, if they know the shopping pattern and what the customer bought on previous flying trips at the duty-free, they ask if the customer would like to have a bottle of perfume ready when they board etc. It is all about getting creative with the customer experience and not just great customer service.

Be it BFSI, healthcare or retail, their core business is not operating a contact centre. If they can outsource it cost-effectively with high level of operational skill and not have to sacrifice in terms of control and influence of how application works, there are many who would like to opt for it, especially smaller contact centres. The promise of cloud can be over-stated, but there is real value in these models. When businesses move past through some of the challenges of moving in the cloud, the actual benefit of cost-savings, technology becoming available much quicker cannot be negated. They will also be willing to move other applications onto the cloud.

Aspect is known to charge premium prices on its services and that considerably increases the TCO. Your comments?

In the last couple of years, we have spent lot of energy to reduce TCO of our products. There are lot of components there. The way you charge for training, maintenance, amount of servers that the software requires and scale to a certain level etc. We work on all those pieces, and have made dramatic improvement. The contact centre is a very demanding space. It is life and blood of customer's organisations. They have very high expectation of vendors' responsiveness strategically available 24/7. As a result, there is charge associated with that. When we benchmark ourselves against our competitors for maintenance and cost we are very competitive. We always work around SLAs, especially in certain cases we suggest areas in which they can be self-sufficient and thus reduce the cost.

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ANDREW PITCHER
SAP

Andrew Pitcher, Senior VP & GM, Financial Services and Strategic Industries, SAP APJ, shares insights into SAP's commitment to the BFSI sector and the latest customer trends in adopting HANA in an interview to Jasmine Desai.

“By mid 2015, all applications in BFSI will be running on HANA”

BFSI is a risk-prone industry. How comfortable are organisations in this sector shifting their database to HANA in this region?

HANA real-time data is most important to financial services, because the protection of data is the most important thing. Through this, they can detect fraud very quickly. The need for real-time is very critical in BFSI. There are two scenarios in big data in terms of what banks know about their customers and what banks know about themselves. If a bank wants to grow, knowing in real-time what offers to put, is the best way to move ahead. BFSI has been slower than we anticipated in adopting some of these technologies. It is not very difficult for existing customers to move to HANA because we are porting all of their applications to HANA. By middle of next year, all applications in BFSI from channel to core to analytics will be running on HANA. For new customers, they are coming to us because they see value here, in terms of real-time decision making.

How can database be an advantage in terms of TCO?

Presently, there are multiple applications in an environment from multiple vendors running on multiple databases, sitting on very different infrastructure. It is a very complex environment. The whole story is that we move to standard applications with a single database i.e. HANA running on a simple infrastructure and probably hosted on cloud. It is going from very complicated on three levels to very simple on one level. That draws significant advantage to the TCO. The other part of data specifically is real-time nature and configurability of it. One can get real-time reporting through standard queries, which adds lot of value.

How can organisations make data consumable for risk management officers through BI?

BO (BusinessObjects) is run by at least 50 clients in BFSI in India. The entire hierarchy



Is finding skill for SAP implementation still a challenge in India?

Skill is not a challenge in India; scale is. One of the challenges of cloud is that it changes the economics for partners because the idea of cloud is to move to standard solutions typically implemented in half the time that it used to be. The available pie for partners is less. Some partners are not quick enough to move to that model. They need to be more than implementers and look at more volume business and becoming a re-seller or different type of partner.

of an organisation runs from this platform and that gets exposed on the mobility layer we have. It also depends on the extent to which an organisation uses SAP technology. The ones who use it extensively, we pretty much become the data management layer. The provision of real-time helps the risk officer, through real-time fraud detection and real-time geography and risk algorithms. There is a risk engine at business level pre-configured, which can be used for risk detection as well.

How is customer demand in BFSI changing in terms of CEM?

The focus has moved too much to customer experience. Omni-channel can be done with single platform or multiple platforms. Some organisations have developed very complex technology landscapes with good or not-so-good customer experience, but over time, it builds a massive legacy that as the market moves, has to unpeel and [they have to] rebuild it or start it again. We focus on building excellent customer experience with single or multi-channel experience. That is the macro context across the region.

The proliferation of devices and OS complexity is something that no client wants to handle. Our platform supports any application at the back-end. It ensures we can cater to both kind of customers, i.e., people can do mobile banking and unbanked population. For the latter, it is made possible to do three simple transactions like cashing, withdrawal and transfer. We have simplified that for financial inclusion in India. We have also connected the mobility platform to Aadhaar. We can provide financial inclusion services where the beneficiary may not be a bank account holder and money can be directly transferred to their Aadhar account.

Organisations in APJ are going cross-industry with their customer experience and that is an extremely interesting area for us. It is not as yet a trend in India.

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The 16th edition of the Express Technology Sabha is here. With the theme “**e-Services to e-Participation**” this edition will highlight how wider participation and greater transparency mean that e-governance is much more effective and trustworthy. As India’s premier e-governance forum, Express Technology Sabha will see practitioners of ICT within the government get together to exchange ideas, assimilate concepts and share knowledge on varied technology issues so as to deliver a better governance mechanism.

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Tweaking the Cloud

How Hungama Digital uses Amazon's cloud optimisation tool to significantly improve resource utilisation and save costs

BY HARSHAL KALLYANPUR

Hungama Digital Media Entertainment is a leading content aggregator, developer, publisher and distributor of Bollywood and South Asian entertainment content to consumers across the globe. The company also designs and builds mobile entertainment products for various telcos in India.

This means that the company hosts a vast amount of digital content that needs to be available 24x7—something that can only happen if the company has an IT infrastructure that is always up and running and can scale according to the dynamic requirements of the market.

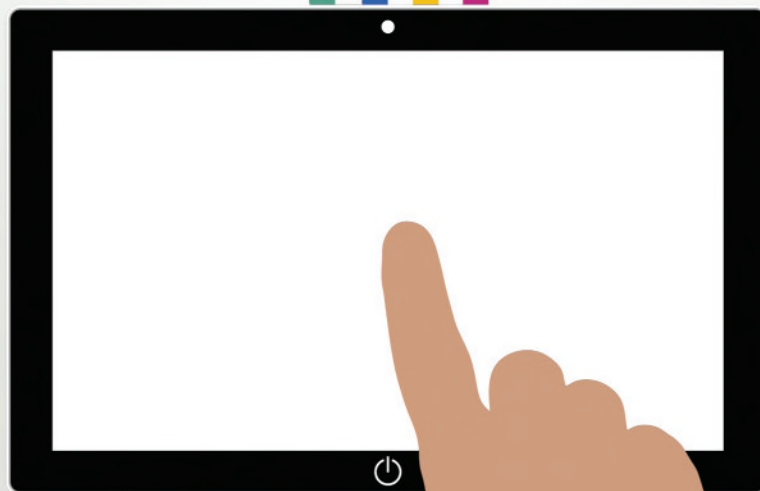
That is precisely where Hungama Digital was facing a challenge—and that

is where its move to the cloud comes into the picture.

Explains Amit Vora, CTO, Hungama Digital Media Entertainment Pvt Ltd, “Prior to migrating to the cloud, we ran our servers in local data centres. This was time-consuming and extremely expensive. We required quick turnaround times, but the old equipment and local



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With AWS Trusted Advisor service, we have been able to save 33% of our costs in addition to the savings we already enjoy.

Amit Vora,
CTO, Hungama Digital Media
Entertainment Pvt Ltd

The audit revealed that the development and test servers used for special projects were not shut down once the projects were finished. The audit team used this information to select the right instance size for oversized instances

servers caused delays in implementation and service launches.”

As an answer to its infrastructure woes, Hungama adopted Amazon Web Services (AWS) in 2008. The aim was to take advantage of the cloud’s cost effectiveness, flexibility and improved time-to-market.

Sailing through

According to Vora, migrating to AWS has helped the company experience several benefits. The cloud service allows Hungama to quickly ramp up its enterprise server, computing power and storage resources with just a few clicks.

Says Vora, “This means we are able to provision for unexpected traffic and do away with any excess idle capacity. Being able to support sudden spurts in traffic means that our servers are never down and we are able to provide quality service to our customers.”

“The freed up resources also allow us to accelerate our innovation process and reduce our time to market for services. We are also able to focus more on growing our business,” he adds.

Vora explains that the pay-as-you-go model has been extremely helpful in reducing costs. Adopting the cloud has driven down the company’s IT costs considerably, and helped Hungama achieve upto 35% cost savings.

Today, Hungama Digital uses AWS for all its direct-to-customer services. The company has partnerships with hundreds of content creators, record labels, studios, broadcasters, and game publishers, and has licensed digital rights to nearly one-and-a-half million music and video titles.

As such, the company needs a large amount of scalable storage. It uses Amazon Elastic Compute Cloud (Amazon EC2) and Amazon Relational Database Service (Amazon RDS) with Amazon Simple Storage Service (Amazon S3). Amazon S3 hosts more than 60 terabytes of the company’s content.

Fine tuning the infrastructure

Having reaped the benefits of the cloud, Hungama Digital was looking to optimise its cloud usage. Its growing content

storage requirements and the need to ensure optimum utilisation, prompted an introspection into its infrastructure on the cloud and the way it was being monitored and managed. One challenge was that the management tools it had in place in the beginning, did not meet its requirements after a point. Therefore, looking for a more granular way of monitoring and managing the infrastructure, the company moved to Amazon’s AWS Trusted Advisor tool.

Talking about the migration to this tool, Vora says, “Before using AWS Trusted Advisor, we monitored our infrastructure through an open source tool, Nagios. But Nagios did not support computation of costs that would help us perform our cost analysis and estimation. However, this is available in AWS Trusted Advisor.”

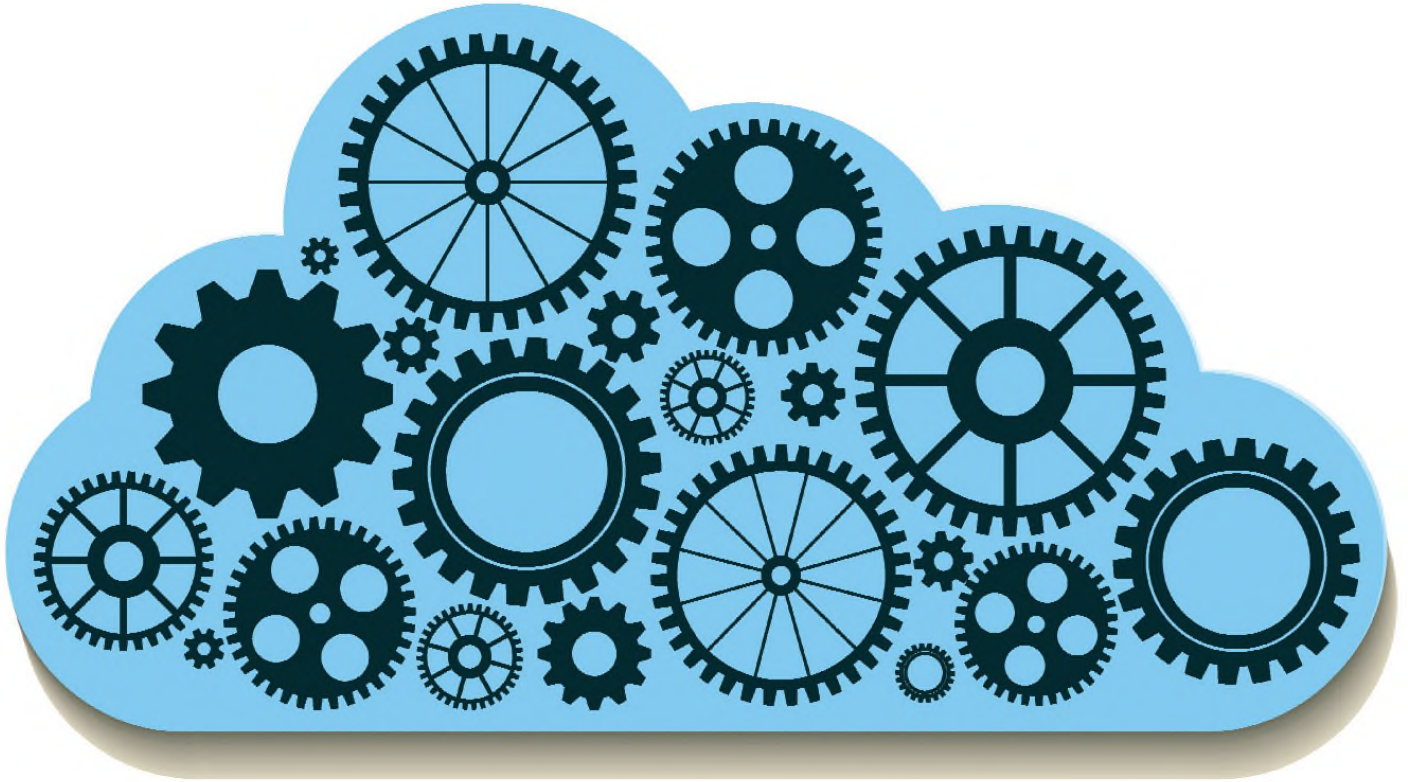
The AWS Asia Pacific team introduced Hungama Digital to the AWS Trusted Advisor service as part of a package Amazon offers to its enterprise-level customers. Looking at the features and benefits it promises, Hungama decided to go ahead and use the service.

Explaining how the service has made a difference, Vora says, “The AWS Trusted Advisor service helps us assess our AWS environment and make recommendations when opportunities exist to save money, improve system performance, or close security gaps.”

“It gives a dashboard view of our AWS cloud platform usage and provides our management, complete visibility into the usage of hardware, helping us make quicker and better decisions on hardware requirements. We have been able to save 33% of our costs in addition to the savings we already enjoy.”

Drilling down into how the service helps Hungama manage its infrastructure better, Vora says that the AWS Trusted Advisor looked at the instance utilisation history and recommended optimisation strategies based on instance type. The company realised that its development teams were over-provisioning instance sizes, which were running at very low utilisation levels.

Additionally, the audit revealed that the development and test servers used



for special projects were not shut down once the projects were finished. The audit team used this information to select the right instance size for oversized instances. They also categorised production and development servers and automated the process of shutting down development servers during non-business hours.

There were other benefits as well. Prior to running AWS Trusted Advisor, Hungama Digital had purchased Amazon EC2 Reserved Instances. The Reserved Instance Optimisation check feature from the service, which looks at billing and instance utilisation history, helped the company identify additional opportunities for optimisation. After reviewing this data, says Vora, his team decided to reserve production and development servers for heavy and medium utilisation based on instance.

“We also used the underutilised Amazon Elastic Block Store (Amazon

EBS) Volumes check to review utilisation history for Amazon EBS volumes. The check identified a number of unused or underutilised EBS volumes that were often left over from previous test projects. It highlighted volumes that we were paying for but not accessing regularly. As a result, the audit team created snapshots, which they stored on Amazon S3, and then deleted the volumes. This action also resulted in a reduction of over 90% on the number of snapshots generated weekly,” says Vora.

Looking beyond optimisation

Besides the efficiency and cost-effectiveness of a cloud service, what concerns most enterprises is how the service aligns with their governance, regulation and compliance requirements. This aspect can, in fact, make or break deals between cloud service providers and enterprises. Vora explains that using AWS Identity & Access Management

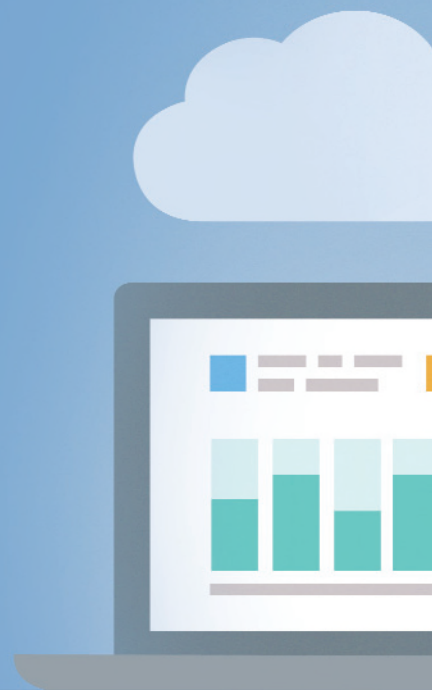
(IAM), Hungama Digital is able to align all its user management policies with AWS and thereby manage and control the cloud infrastructure based on its governance policies.

“Also, using Amazon Virtual Private Cloud (Amazon VPC), we are managing our infrastructure on AWS cloud and connect with them over a secure channel, thereby implementing our governance policies without any issues,” he says.

He concludes by saying, “We will continue leveraging the features and checks of the AWS Trusted Advisor to further optimise our infrastructure and costs. With the cost savings realised from the initial audit, we plan to continue to implement the AWS Trusted Advisor recommendations for hardening, extending fault tolerance and improving the performance of our environment.”

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THE GOOD



MONITOR

By switching its site monitoring tool from Monitor.us to Site24x7, Sastra Technologies got a better handle on latency the way it wanted

BY KTP RADHIKA



A startup founded by two partners in 2010 in Chennai, Sastra Technologies Pvt Ltd provides web solutions and enterprise data integration on the cloud. It has two solutions: one for the hospitality industry and the other a generic document display and payment collection application; both are being sold as a service.

Being a cloud-based solution provider, Sastra uses hosting services predominantly from Rackspace, DigitalOcean and Amazon.

Sastra has close to 20 clients most of which are looking at actually collecting payments. “So apparently any recurring payments that you would want to collect, you want to put your existing debtors on the web so that the debtors can log in and pay up,” says Sridhar Pandurangiah, Director of Engineering at Sastra Technologies.

Unlike a payment aggregator such as PayPal, Sastra’s focus is to provide solutions so that even a small company or an SME can afford it. “We provide a gateway to the aggregator,” explains Pandurangiah.

According to Pandurangiah, for its IT needs, the company follows DevOps, as it doesn’t have a large IT team. “Most of our servers are either on Rackspace or DigitalOcean and some on Amazon. We predominantly write Shell Scripts in Unix or we use one of the provisioning software like Vagrant so that things are automated. At the fastest, we put up a site in 7½ minutes from the time we get an order. From URL registration to the time, the solution is up is just about 7½ minutes because it’s automated,” he says.

The challenges and the solution

So, what were the challenges Sastra was

facing that made it choose ManageEngine’s Site24x7 solution?

“We don’t do a simple website,” says Pandurangiah. “If you see our site, it might appear a simple website, but the site itself carries a lot of functionality, in terms of displaying the documents, collecting payments, changing addresses, displaying loan details. We don’t call it a site; we call it a web solution. So when you have large functionalities residing on the cloud, the biggest challenge is the response time at the last mile. The biggest response time happens only if the latency between the last mile connectivity and the server is very low. Our challenge was to keep the latency figures as low as possible and to do that, we needed to measure the latency in the first place.”

Before using Site24x7, initially, Sastra used simple tools such as Pingdom. “It’s a



Site24x7 supports various protocols like HTTPS, SMTP, Mail Server RTT, SSL, Ping, etc. The web application monitoring capability simplifies multi-step web transactions.

Srinivasa Raghavan,
Product Manager for Site24x7,
ManageEngine



Our challenge was to keep the latency figures as low as possible and to do that we needed to measure the latency in the first place.

Sridhar Pandurangiah,
Director of Engineering at Sastra
Technologies

tool that gives you a waterfall of where your delay lies but very little information about the network; it talks more about the page that is being served. We actually wanted a solution that talked about the connectivity between the servers and the last mile. Then we moved to Monitor.us, which gave us some information on the last mile connectivity but the way they presented the information was very confusing; it was not an absolute figure. We didn't want a trend analysis but an absolute figure. Then we saw a Site24x7 ad and clicked it and looked at it. They offered us an absolute figure that would pop up right next to the server to what is the latency of the page load and so we signed up," says Pandurangiah.

Site24x7 gives Sastra the information about exactly where the bottlenecks are, he avers.

Talking about the other features and capabilities of the solution, Srinivasa Raghavan, Product Manager for Site24x7, ManageEngine, says that Site24x7 offers cloud infrastructure

monitoring for IT, which includes unified website monitoring from a user's perspective, application performance monitoring, server monitoring and public and private cloud monitoring.

"Site24x7 supports various protocols like HTTP, HTTPS, SMTP, POP, DNS, TCP, Mail Server RTT, IMAP, SSL, Ping, etc. The web application monitoring capability simplifies multi-step web transactions," says Raghavan.

Sastra shifted from Monitor.us to Site24x7 in April 2013. Talking about the implementation, Pandurangiah says that it's been quite straightforward. "You just sign up and then start creating the monitors that you want on the site. It's the most cost-effective solution that I have come across."

The benefits

The solution from ManageEngine is very cost-effective, according to Pandurangiah. "It's probably about 10% of the cost of a similar solution. If





you look at WebTrek or NewRelic, we can call them the Rolls-Royce of pricing, offering the same services. In terms of the performance to price ratio, I would rate Site24x7 very very high," he says.

Pandurangiah says that the solution did improve site performance—though he adds that the tricky thing about performance is that "you cannot optimise a site before you actually build it."

"First we build it, load the users on a live environment and then keep making changes to the various components so that the performance actually improves," he says.

To do that, he says, one first needs to measure the performance from the time the visitor actually loads the URL on their browser. "Site24x7 tells you the performance figures that you are getting from a location, in this case, India," he says. "So let us say I have a performance of 5214 ms on one of my sites; I can go and figure out why it's taking such a long time. I can check the server logs and go on to reduce the time. So to do any optimisation, first I need to know the figures and Site24x7 gives me that, which is critical for me."

On quantifying the benefit,

Site24x7 offers cloud infrastructure monitoring for IT, which includes unified website monitoring from a user's perspective, application performance monitoring, server monitoring and public and private cloud monitoring

Pandurangiah says, "We had two servers in the US hosted at Rackspace. For half the amount of memory, we got better performance out of the Netherlands than from the US. So we moved all our sites from the US to the Netherlands. The performance is actually a key decision maker. In the US I had 3800 ms for one of my heavy sites and when moved to the Netherlands, it became 802ms without any changes in the site.

So, did it improve Sastra's business? Pandurangiah says that anybody who loads a site would like to see it appearing immediately. "Though we do all these measurements, it's finally the perspective of the visitor which matters and these figures actually help improve that perspective. So when we have a scientific measurement, we always show the customer how fast we load a page in such

a short time, and we compare it with the other competitors."

Going forward, Sastra's goal is to reduce the cost of honing an IT solution. "The main aim is to reduce the capital expenditure and make it an operational expenditure. Today, we have got two products; the third one might be for the financial industry wherein we offer it on a subscription model and we are targeting the lending industry, because they have a lot of pressure considering their margins—and the fact that interest rates are rising very high," says Pandurangiah.

So Sastra is looking at a business intelligence solution that could be offered as a service on a subscription model to financial institutions using which they will be able to predict the probability of default for each customer.



COLUMN

SOWRI S. KRISHNAN

MOBILITY IS KEY TO SUCCESS

Companies that leverage enterprise mobility well can successfully create viable new business models

Mobile devices have become the centrepiece of our work and personal lives. Add cloud-enabled social tools and predictive analytics and you have a business environment that is always on the move. This new IT landscape is profoundly changing the way companies relate to their customers, interact with employees, and bring products and services to market. Enterprise mobility is not only a pathway to convenience and efficiency in this new world of work, but also a key driver of business innovation.

Enterprise mobility isn't just another IT project; nor is it about a single app or mobile web site. The most successful enterprise mobility strategies are built on a strong collaboration between business and IT. This approach allows the business the freedom to innovate while providing IT the control to do it securely.

Mobility is one important component of a new master IT architecture—social, mobile, analytics and cloud (the SMAC stack)—that is emerging to help organisations shift from old-world industrial models to more digitally powered ways of working. Mobility is providing reach, ubiquitous connectivity and new ways of interacting with employees, partners, customers, consumers and prospects. Innovative mobile solutions can radically increase convenience and productivity for various constituencies and provide them with a superior experience.

Today, mobility is about using smart devices and tablets to spur technological innovations that power disruptive change. Competitive advantage is being achieved by companies that leverage enterprise mobility to create viable new business models.

At the first level of enterprise mobility, or Mobility 1.0, companies seek to mobile-enable or mobile-optimize their Web sites, existing Web apps and digital assets to increase productivity for employees and customers. The challenge is to keep

ahead of the proliferation and constant state of flux within smart devices, development platforms and mobile operating systems.

With Mobility 2.0, organisations typically look to transform business processes via mobility. For example, expense account reporting has always been a cumbersome process for employees, requiring them to save paper receipts, fill out forms and then send everything to corporate accounts payable for payment. By contrast, a mobile-enabled expense-submitting process is much quicker and easier. Employees need to only take pictures of their receipts with their smart device, categorise them with a simple pull-down menu, and click a “submit” button to send them to accounting for reimbursement.

To be sure, at this early stage of the smart mobility era, most companies are still at mobility levels 1.0 and 2.0. Few have yet ventured into the Mobility 3.0 territory, in which organisations leverage mobile technology to create entirely new business models and revenue streams. In Mobility 3.0, both B2B and B2C companies have greater opportunities to reach their target markets directly to improve profitability or add new customers. Mobile payments on feature phones, as well as smartphones, are enabling access to whole new continents of consumers.

Therefore enterprise mobility is no longer an option, but rather a critical business requirement. Winning the future will require companies across industries to embrace mobility platforms that unlock productivity and competitive advantage and optimise ongoing process changes that span the core operating model.

The use of mobile computing in business today goes far beyond e-mail access, messaging services and horizontal applications. The ecosystem now includes access to core enterprise

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The most successful enterprise mobility strategies are built on a strong collaboration between business and IT. This approach allows the business the freedom to innovate while providing IT the control to do it securely



applications, both services and data. Today's computationally powerful and smart devices with high-resolution screens allow employees to query, access and view business data in an engaging format in real-time, even when they are off-premises. Similarly, operational and field workforces now have the ability to capture and share corporate data in real-time, using smart devices with built-in sensors, thereby improving the ability of employees to collaborate among themselves and with customer and partners.

Businesses constantly face the challenge of increasing efficiency and reducing costs. Increasing visibility into existing processes and activities provides a way to improve performance. To

At the first level of enterprise mobility, or Mobility 1.0, companies seek to mobile-enable or mobile-optimize their Web sites, existing Web apps and digital assets to increase productivity for employees and customers

improve visibility, businesses require collecting and disseminating detailed information about their fleets and delivery activities, and gaining control over the productivity of their resources and assets. Enabling critical applications onto mobile devices will extend the reach of the enterprise and provide visibility to improve processes where the real cost savings exist. From receiving information on current status of deliveries to allowing boundary-free access to corporate information, enterprise mobility applications have the potential to unlock new competitive advantages.

Sowri S. Krishnan is Vice President – Mobility, Cognizant.



COLUMN

AMANDEEP SINGH

4 MAJOR DISRUPTORS IN NETWORKING

Disruption in technologies has always led to innovation and it's high time we looked at innovations in networking architecture

Today there is a major shift taking place in the networking space that cannot be ignored. An organisation's network has the potential to transform today's data centres. Innovative technologies such as SDN, network resource pooling, overlays, east-west traffic and cloud computing have changed how networks have to perform. Factors such as SDN, resource pooling, etc., require new methods of networking from the traditional architectures of the past.

Disruption in technologies has always led to innovation and it's high time we looked at innovations in networking architecture. New and open technologies are emerging, and with them choice is now becoming an option. CIOs today are beginning to look at developing their networking strategy to benefit from new and innovative approaches. And while IT budgets continue to be flat, CIOs being more conscious than ever before, some of the major disruptors in the networking space that have the ability to reduce costs and make networking more efficient for an organisation are as follows:

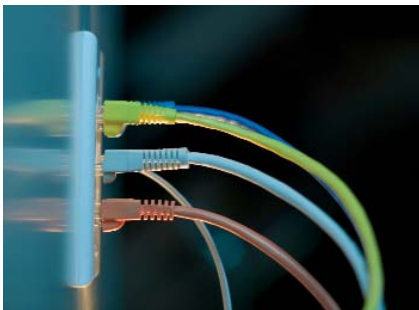
1. Shift from monolithic chassis switches to active fabric: Previously in the data centre, the conventional networking architecture was followed where monolithic chassis switches prevailed. These typically were expensive to use and maintain and were not scalable. However, over a period of time, the development of spine and leaf architectures using smaller, fixed-form factor switches gained pace. The new switches removes the traditional three tier networking and at the same time offers efficient, economical and scalable solutions. The new form of switches will enable network managers to overcome performance, reliability and scalability differences, compared with chassis-based switches.

2. Intelligent fabric management: Intelligent fabric management software

has the potential to bring server-like programming to the network with scripting and other commonly used tools. It has an intuitive interface that guides customers from network design through the wiring plan to finally configure and commission the fabric. It also has the ability to streamline and automate repetitious and time-consuming manual tasks and provides a single-pane of glass to give administrators a bird's eye view of their entire network.

3. Decoupling control and data planes: It is important to give customers options for how they choose to architect and deploy their data centre networks. Hence making switches OpenFlow – enabled, the very seed of SDN in order to decouple the control plane and data plane elements is not enough. Customers are looking at other options to get similar functionality such as network overlays. Many vendors today support multiple interoperable approaches to SDN which gives customers a wider choice.

4. Decoupling data hardware plane and software plane: Opening up networking stimulates rapid innovation that drives the network ecosystem to achieve a level of power and efficiency never before seen in this industry. In an open ecosystem, customers can choose among various industry-standard networking gear, network applications and network operating systems they need to meet their business needs. Decoupling the data hardware plane and software plane is one step towards 'ultimate openness'. This gives customers choice where they can mix and match data plane software from various vendors with physical switches, thus transforming the value chain from networking solutions acquisition, deployment, management, growth and global support with our totally disaggregated networking architectures and switches.



Innovative technologies such as SDN, network resource pooling, overlays, east-west traffic and cloud computing have changed how networks have to perform



Organisations across verticals have benefited greatly from making use of networking innovations in their data centre. For instance IIHT, which delivers a range of courses within their 200 India-based training centres and provides outsourced e-learning programs to enterprise customers located across 19 countries, faced a critical challenge like any IT training organisation, of keeping pace with latest software versions and the required infrastructure. With the cloud model based training system requiring a 1,000 servers in the data centre, reducing port density was critical. As a result, the company designed a software defined networking approach to their cloud services.

The results were instantaneous. IIHT Cloud Solutions can now provide

In an open ecosystem, customers can choose among various industry-standard networking gear, network applications and network operating systems they need to meet their business needs. Decoupling the data hardware plane and software plane is one step towards 'ultimate openness'

e-learning courses at any location, and provide hands-on experience for virtualisation and cloud professionals through delivering a capacity of 40 Gbps network throughput.

Networking stimulates rapid innovation that drives the network ecosystem to achieve a high level of power and efficiency. The pace of change in networking is exciting and is creating opportunity for transformation. For too long, end-users have been locked into technologies and cost cycles which have stifled innovation. New open source technologies enable end users to a path of reduced costs and a greater ability to innovate.

Amandeep Singh is Country Manager – Networking, Dell India.

PRAYSON PATE
OVERTURE NETWORKS

Prayson Pate, Chief Technology Officer, Overture Networks, talks to Pankaj Maru about the company's new development facility in India and changes in the networking space, among other things. Excerpts:

“We are helping service providers by bringing the power of cloud to the network edge”

Recently Overture opened its R&D facility in Bangalore. What role will this centre play for the company?

We opened the Bangalore R&D facility to help augment our overall engineering force and also have opened an office in Massachusetts. Both are contributing to our growth and engineering workforce. Sunil Menon has joined Overture as General Manager for India office; he has done a great job and has given us some genius staff. At present, this centre has a staff of around 35 and over the next 2 years, we will grow twice that count, which would be roughly 25% of our company's total staff at that time. This centre will be doing some key technology contributions to our new Ensemble OSS architecture.

What expectations do you have from this new facility?

As I said, the team here will be engaged in some key technology developments and contribution to our new Ensemble OSS architecture. The functions from the centre will be very strategic to our the new architecture that includes traditional carrier Ethernet elements, software and professional services. So the team here will be focusing on some of those network elements including Gigabit Ethernet access, as well as some of key software elements that includes Ensemble OSS controllers. These are strategic to our overall direction.

On the enterprise side there's an increasing adoption of mobility today. How much change are you seeing in the networks?

We are seeing tremendous change in the networks. Our customers are service providers and they have the real problem now as the demand of bandwidth keeps going up. But at the same time, their costs are also going up and it's very expensive now to lay the fibre underground and equipment in the networks. They are also getting less revenue for services so they have to find a way to change what they are doing. And that's why we are helping them by bringing some power of the cloud to the network edge. By leveraging the power of the cloud, we are going to enable them deliver new services much more



There's been lot of focus on making low cost boxes go into the network, but what we are doing is providing a complete solution to our customers combining the networking elements we make with aspect of data centre like storage and compute along with advance software services — all combined together focused on their delivery of new services. So we are not talking to them about a cheaper box, but about how our offering with their existing OSS and BSS systems, can be used to roll out services more quickly

quickly and at lower costs. So saving cost is important, but more importantly is being able to roll out new services much more quickly.

As a vendor what kind of competition do you see from other players in the market?

We are seeing some competition but really what we are offering is different from what our traditional competitors have been offering. There's been lot of focus on making low cost boxes go into the network, but what we are doing is providing a complete solution to our customers combining the networking elements we make with aspect of data centre like storage and compute along with advance software services — all combined together focused on their delivery of new services. So we are not talking to them about a cheaper box, but about how our offering with their existing OSS and BSS systems, can be used to roll out services more quickly.

One of our customer said that it takes them today 18 months and \$25 million to roll out a new service. That's not for the equipment but it's just for doing the IT work and to tie the services with the back offices. Compared that with Google, which rolls out many new services, many times a year and many times a month. They innovate much more quickly because they are using more modern technology and we are helping them bring that modern cloud technology to our traditional telco customers.

Who are your customers globally?

We sell to tier I and tier II carriers worldwide, including companies likes Verizon, AT&T, British Telecom, Telemex, AAPT, Magyar Telekom (part of Deutsche Telekom) and others.

India is among the emerging telecom markets. Are you not looking at it?

We are not currently selling in the India market, but we would consider doing that in future. And we are well positioned to do that with our Bangalore development office; we are also doing some production in India but we are not quite there yet.

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Canon Business Services launched in India



CANON INDIA RECENTLY announced the launch of Canon Business Services (CBS). With the launch of this new service, Canon's Office Imaging Solution Division (OIS) is expanding its offering, becoming a provider of digital document management services and print room services.

According to the company, organisations around the world face the same challenge daily of adopting technologies that can help improve operational performance, gain a competitive advantage and meet growing service demands without compromising on the existing infrastructure. Canon Business Services aims to address current needs of India-based organisations by enabling them to outsource information intensive processes, communications and administrative functions. CBS will help companies streamline their printing infrastructure and enhance their processes.

"With an increasing demand for faster decision making, organisations are aiming for business efficiency, cost reduction, improved turnaround time and serviceability. They are looking for value driven solutions for continuous process improvements within business and government; there is a high demand for managed integration of office functions," said Alok Bharadwaj, Executive Vice President, Canon India.

"Also, the transition from CapEx (Capital Expenditure) to OpEx (Operational Expenditure) has been so well embraced by the Indian Industry that Canon visions the entire B2B imaging market shifting towards it. Bridging this gap, is where Canon Business Service acts as an integral part to the industry and will play a vital role in the Government and Corporate sector in India."

In the first year of its operations, Canon Business Services is expected to generate Rs. 10 crore revenue and aims

to take this number to Rs. 100 crore in the next five years as it builds a strong ecosystem of delivery as well as partners.

"For large organisations, printing and digitisation is a non-core capability and shifting it to experts like Canon can help them streamline, be efficient, reduce administration, IT work and cost overheads. Canon Business Services plays an important role in getting secure, confidential digitised results and eco-friendly printing. With Managed Documentation Services becoming inherent a number of companies today are looking at more futuristic consolidated solutions. Canon's CBS will create breakthrough architecture for imaging requirements," he added.

The launch of this new division marks Canon's foray into outsourcing, enabling companies to leverage Canon's expertise in managing processes like mailroom operations and document digitisation and management as a service. According to the company, its entry into this market is a reflection of the changing nature of the office technology market and the increasing importance placed on effective design and management of critical business processes and related workflow by growing Indian companies.

The company has already added four leading organisations from Pharmaceutical, BFSI, and Life Sciences to its client list for the new services and aims to take this number to 100 clients by end of 2015.

Canon's OIS division focuses on offering unparalleled document management solutions to the large enterprise, SME and government sectors. The division witnessed a year-on-year growth of 8% in 2013. Canon's managed document services (MDS) represent approximately 25% of the OIS division's business returns. According to the company release, managed print services' contracts are expected to represent 40% of revenues by end of 2014. Canon MDS is currently managing end-to-end printing infrastructure of 100 large customers in India.



Canara Bank upgrades, moves off Windows XP

CANARA BANK, ONE of India's largest and oldest state-owned banks, has completely migrated from Windows XP, moving around 33,000 PCs to modern versions of Windows operating system. Realizing the potential security vulnerabilities and monetary hazards of staying on Windows XP after the end of support, the bank switched to modern Windows before support ended on April 8.

Though security was the biggest reason for the switch over, other reasons that contributed to the decision included unavailability of drivers for external devices like printers, scanners and biometric machines if they remained on XP.

Until a month ago about 35% of PCs in BFSI sector were on Windows XP, a huge number considering this sector is amongst the most vulnerable. Realising the seriousness of the issue, industry associations representing the BFSI sector like Indian Banks' Association (IBA) and even the Reserve Bank of India

(RBI) had sent out advisories recommending immediate migration from Windows XP highlighting various security threats.

"We want to ensure a smooth and streamlined customer experience without any stoppage in day-to-day banking operations. In addition, by migrating our entire base of around 33,000 PCs to modern Windows, we have overcome potential challenges of compatibility with modern hardware, software and applications. The upgrade will also allow our employees to transition to modern applications leveraging latest work processes and mobility," said RK Dubey, Chairman, Canara Bank.

In addition to the newer version of Windows, Canara Bank also uses various other Microsoft products like Exchange 2010 (email), SCCM 2007 R2 (patch management system) for desktop monitoring and management and Office 2013.

HP introduces converged system for SAP HANA environments

HP HAS UNVEILED a new portfolio of integrated systems that are purpose-built to deliver clients a fast path to value when using the SAP HANA platform.

"Organisations are making long-term, strategic architectural bets for their data centres and data management platforms," said Vikram K, director, Servers, HP India. "SAP HANA provides a catalyst for business transformation and HP has the architecture, expertise and vision to meet its infrastructure needs. HP is investing in delivering the infrastructure that clients need to meet requirements of environments running SAP HANA."

The HP ConvergedSystem portfolio for SAP HANA is designed to deliver the architecture to quickly deploy these next-generation data management platforms with systems that can easily scale to meet evolving business needs—from managing analytics and data warehousing workloads to running mission-critical business applications.

Unifying the servers, storage, networking, software and services clients need to run their SAP HANA environment, these all-in-one systems, according to HP, are quick and easy to install, accelerating time to value. In addition, the systems are optimised with the goal to deliver the highest possible levels of performance and availability for in-memory computing initiatives at analytics processing speeds up to twice as fast as other solutions.

Akamai powers FashionAndYou.com to drive faster shopping experience

AKAMAI TECHNOLOGIES, A provider of cloud services for delivering, optimising and securing online content and business applications recently announced that FashionAndYou.com has selected its Web Experience Solutions and Kona Web Application Firewall technology to enhance the consumer experience on its website.

According to the company, post the implementation of the solution, the fashion portal has seen a reduction in site download rate from 8.5 seconds to 5.35 seconds, with a 37% improvement in page load time resulting in improved site performance and leading to increased sales conversion.

The solution has also helped FashionAndYou.com offload 80% of its static content, thus ensuring faster download of images on the website. Akamai's Web Application Firewall service has enabled the portal to further enhance web security and block malicious content and other potential online threats.

"Today's consumers expect their Web



experience to be quick and uninterrupted, which is the most important factor for the success of any e-commerce site. This is especially true with FashionAndYou as every sale on our site depends on how fast and securely a customer is able to make a purchase. With the help of Akamai's solutions, we have been able to ensure a fast, secure and consistent user experience at all times, leading to higher customer satisfaction and subsequently sales," said Aasheesh Mediratta, CEO, FashionAndYou.com.

"In today's environment e-retailers are constantly challenged in retaining

customers on their websites. The key to a successful online business is attracting the promising buyers and ensuring that they have a smooth, reliable and quick experience across all devices. For FashionAndYou.com, we have been able to help the company successfully address these issues as well as enable the portal to deliver an enhanced, reliable user experience," said Sidharth Malik, Managing Director and Vice President, India, Akamai Technologies.

"Providing customers an experience that is equivalent to visiting a physical store is a huge challenge for e-Commerce enterprises. With online, a site such as ours, we have to ensure that high quality images do not adversely impact the web experience of the customers as this could lead to higher site abandonment rates. No matter how much time you spend on the aesthetics, the product images and the optimisation of landing pages is an important aspect followed by, download speed, to enhance the overall customer experience," said Prashant Shivankutty, CTO, FashionAndYou.com.

SUSE offers special enterprise Linux training for SAP applications administrators

SUSE HAS INTRODUCED a training course for administrators and consultants, called Administration of SUSE Linux Enterprise Server 11 for SAP Applications. The four-day course teaches administrators to better administer and maintain SUSE Linux Enterprise Server for SAP applications, which is the SUSE operating system optimised for mission-critical software solutions and appliances running on the SAP HANA platform and the SAP

NetWeaver technology platform.

"Customers and partners will see tremendous benefit from participating in this specific training for enterprise Linux in SAP solution environments," said Naji Almahmoud, Senior Director of Global Business Development at SUSE. "The training covers Linux administration and information about running SAP applications on SUSE Linux Enterprise Server. Participating in this course can help save customers time and money and

increase the value they gain from their investments in SUSE and SAP solutions."

According to the company release, following the course, SAP administrators will have increased knowledge of administering SAP applications on enterprise Linux, the ability to more quickly deploy and configure SUSE Linux Enterprise Server, and access to support options from both SAP and SUSE along with a wide array of technical information.



Close to 1 million online retailers in India: IAMAI

THE INTERNET & MOBILE Association of India (IAMAI) has released industry figures that indicate robust growth in the online retail business in India estimating the number of online retailers as close to 1 million as of date.

Dr Subho Ray, President IAMAI said, "Nearly one million large and small retailers make use of online marketplaces to reach out to their customers in India today. These online retailers represent a very wide range of categories including electronics, books, apparel, accessories, footwear and jewellery."

"The presence of such a large number of online sellers testifies to the efficiencies, disintermediation, lower capital costs and deep outreach that online marketplace provides to the retailers," he added.

The association has estimated that online retail accounted for Rs. 62,967 crore showing a year-on-year CAGR of 34% since 2009 and is expected to escalate further as policy and FDI issues are addressed and delivery logistics come of age.

Industry experts have pointed out that growth in the online retail space in India

is following a global trajectory and is proving to be sustainable and profitable marketing and distribution model. Agglomeration and consolidation in the online retail business is also a strong indicator of the robust fundamentals of the business model.

The association has identified key segment drivers such as, apparel and jewellery brands which are marketing and selling their products increasingly through the online channel. IAMAI reports that increasingly OEMs have begun launching their products exclusively through online marketplaces and investing in their own brand marketing. This has led to market expansion, pricing competition which is leading to better products at cheaper prices for consumers.

IAMAI has noted that while technology platforms tend to be run from city centres, the bulk of logistical management such as storage, godowns and deliveries are being handled from Tier 2 or Tier 3 cities. "This is leading to more equitable employment generation and bridging the urban rural divide. said Dr. Ray.

Hike messenger to use MongoDB to manage its database server

MONGODB, A LEADING NoSQL database company, has announced its association with BSB's Hike Messenger, one of India's fastest growing cross-platform messaging applications.

Through this engagement in India, Hike messenger will utilise MongoDB management services to manage its database servers.

Commenting on this partnership, Kamal Brar, General Manager, Asia



Pacific at MongoDB, said, "This partnership comes at a crucial time as BSB's Hike messenger recently crossed the 15 million user mark from just 5 million in a span of 9 months only, making it one of the leading messaging applications in the country. With its natural development model, MongoDB will provide Hike App with the platform to cater and scale its operations across a variety of applications."

MongoDB has collaborated with organisations worldwide and currently has a global community with more than 7 million downloads of its open-source database, 1,000 customers, 150,000 online education registrations, 30,000 user group members and 20,000 MongoDB Days attendees. Some of the commonly used cases include operational and analytical big data, content management and delivery, mobile and social infrastructure, user data management and data hub.



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Arbor Networks integrates global attack intelligence feed into Pravail products

ARBOR NETWORKS, ANNOUNCED a new reputation-based threat feed as part of its ATLAS Intelligence Feed (AIF) service. AIF is a research-driven feed of security policies designed to update Arbor's Pravail products by identifying threats based on real-world attack activity, reputation and behaviour.

According to the company, AIF comes at a time when organisations are feeling ill-prepared for the variety of threats targeting their networks. According to a recently-released global survey of CISOs and senior IT executives that was sponsored by Arbor and conducted by the Economist Intelligence Unit, only 17 % of business leaders feel fully prepared for an incident.

Arbor Networks has built a massive, global intelligence network centred around ATLAS, a unique collaboration with nearly three hundred service provider customers who have agreed to share anonymous traffic data with Arbor. This massive traffic data set, totalling 80Tbps, is combined with information from a global honeypot network of sensors in dark IP address space as well as strategic partnerships, such as the Red Sky Alliance.

This data set is then turned into actionable intelligence from ongoing research and analysis performed by Arbor's Security Engineering & Response Team (ASERT). "Many vendors can identify attacks and create signatures that can recognise and block these attacks but this is an outdated and reactive approach. What ASERT does is not only identify attacks, but analyse and catalogue attack infrastructures and methods so that more proactive security



policies can be deployed by customers. Context matters. We're not just looking at a botnet or piece of malware, but reverse engineering entire botnets and malware families," said Arbor Networks Director of Security Research, Dan Holden.

In addition to updating security policies in Arbor's products, ASERT shares this operational intelligence with hundreds of international CERTs and with thousands of network operators around the world. On a daily basis, ASERT gathers approximately over 100,000 malware samples from ATLAS and other sources, with a focus on Advanced Persistent Threats, geopolitical campaigns, financial fraud and DDoS. The malware samples are then run through an automated threat analysis system where they are classified. Unique attacks are stored in a database with millions of such analyses. When a new botnet or application-layer attack is detected, an attack policy is created, distributed and installed in Arbor's Pravail products via the ATLAS Intelligence Feed.

SAP appoints Ravi Chauhan as Managing Director for India

SAP HAS APPOINTED Ravi Chauhan as Managing Director for SAP India, further strengthening the senior management team of SAP Asia Pacific Japan. Effective immediately, Ravi will be responsible for driving SAP India's growth strategy and operations across the country. Based in Bangalore, Ravi Chauhan reports directly to Adaire Fox-Martin, President of SAP Asia Pacific Japan.

"As a technology hub and with its vast network of enterprises, entrepreneurs and users, India is undoubtedly a key market for SAP in the region and globally," said Adaire Fox-Martin, President of SAP Asia Pacific Japan. "We are confident that Ravi brings the right set of skills and experience to lead SAP India to continued success, as we increasingly address the needs of India's rising millennial workforce."

According to the company, Chauhan brings close to three decades of wide-ranging IT industry and management experience to SAP, with a track record of increasing market share, winning key customers and leading effective teams. He joins SAP after four years at Juniper Networks, where he last served as Managing Director, India and South Asia. From 2000 to 2009, Ravi held leadership roles at Nortel Networks such as General Manager (Global), Contact Center and Unified Communications Software; Managing Director, India; and Vice President, Enterprise Business, India.

"SAP plays an important role as a global leader in cloud and innovation," said Chauhan "I am excited to work closely with Indian customers to help them leverage the latest technology innovations that will drive successful business outcomes."

Software revenue in India touched \$4.7 billion in 2013, says Gartner

INDIA SOFTWARE REVENUE totalled \$4.765 billion in 2013, a 10 percent increase from 2012 revenue of \$4.334 billion, according to Gartner, Inc.

“The Indian software industry is in the middle of a multi-year cyclical transition as organisations are focusing investments on technologies to support existing system structure,” said Bhavish Sood, research director at Gartner. “Organisations are doing this in order to maintain competitiveness, while still taking advantage of cloud/subscription-based pricing where it makes sense to grow and advance the business.”

There is a shift in vendor rankings from 2013 at the top of the worldwide and India software market. This is the first time in Gartner’s India software market share research that Oracle has ranked second in terms of total software revenue with approximately \$505 million in 2013, capturing 7.3 percent of the market.

“Trends around business intelligence and analytics, with increasing customer investments in database management systems, helped to drive Oracle’s top-line growth,” Sood said.

The research firm also observed that



among the BRICS (Brazil, Russia, India, China and South Africa), the India software market experienced the highest growth rate. It estimated that while software spending between 2012 to 2013 grew 10% in India and 8.9% in Russia, Brazil and China showed growth rates of 7.8% and 7% respectively. South Africa saw a growth rate of 6.3%.

According to Gartner, besides large

enterprises, the Indian market also boasts a large potential small and midsize business (SMB) segment that is playing a crucial role in changing the consumption patterns of technology. SMBs are on the threshold of leveraging ICT, but they currently lack the scale, and in some cases experience, which is inevitable in understanding and handling technology-related issues.

“India is growing faster than other emerging countries, which can be attributed to an export-oriented focus over the last decade. However, recent advances in IT communications infrastructure in the country has opened up new avenues for local consumption of IT software and associated services,” said Sood. “Although there is an economic slowdown, Indian enterprises are still judiciously investing in technology that can be tied to the business objectives and impact their bottom line. Indian enterprises are generally more price-sensitive compared with enterprises in mature markets, but now they are spending on technology that offers a significant upside in terms of agility or productivity gains with diligent planning.”

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

2013 Rank	2012 Rank	Vendor	2013 Revenue	2012 Revenue	2012-2013 Growth (%)
1	1	Microsoft	957.3	865.9	10.6
2	3	Oracle	504.6	415.2	21.5
3	2	IBM	446.6	417.9	6.8
4	4	SAP	324.3	326	-0.5
5	5	VMware	94.4	82.4	2
6	6	CA Technologies	52.7	57.2	-8
7	7	Adobe	42.5	43.8	-2.9
8	8	SAS	23.6	22.9	3
9	9	HP	48	48	1
10	10	Other	2271.4	2054.6	10.6
		Total	4765.4	4334	10

WebSense 2014 threat report analyses emerging trends in cyber-attack methodology

WEBSense, INC. RELEASED the Websense Security Labs 2014 Threat Report, documenting the latest shift in complex attack trends, evolution in the threat ecosystem and shifting motivation of cyber-attacks.

“Cybercriminals continue to evolve their attack planning and execution to stay ahead of most existing security measures,” said Charles Renert, vice president of security research for Websense. “While the determined, persistent attackers continue to have success in advanced, strategic attacks using zero-day exploits and advanced malware, there has also been a boom in cybercriminal activity on a massive scale. Even these more ‘common’ forms of attack are easily slipping past organisations without real-time defences.”

The report details the growing global criminal-infrastructure-as-a-service economy through exploit kits and compromised websites redirection chains. Through an analysis of the latest attack methodology, Websense security researchers analyse the seven threat stages of advanced attacks. In addition, outcomes include the modification and repurposing of existing malware source code.

The report finds that 85% of malicious links used in web or email attacks were located on compromised legitimate websites. 3.3% of all spam contained malicious links and other malicious content. The average number of website redirects used per attack in 2013 was four while the maximum number of redirects used in a fully documented attack was 20. Websites classified as Business and Economy, Information Technology,

Shopping and Travel made the top 10 list of compromised redirect destination categories.

It also observes that the Magnitude and Neutrino Exploit Kits experienced the largest surge in adoption following the arrest of Blackhole’s creator. Furthermore, 30% of malicious executable files sampled included custom encryption of command and control communication or data exfiltration.

The report also documents how the infrastructure of an attack campaign is constantly developed, enhanced and reused throughout the entire threat lifecycle. To avoid detection when reusing components in subsequent attacks, criminals are increasingly taking an approach that involves modification and modulation of existing attack tools. Often, this means choosing to take advantage of a specific strength of a particular piece of malware to target new industries.

In addition, Websense security researchers observed the Zeus malware, which was originally designed as a financial threat and keylogging Trojan, dramatically increased in use as it was repurposed for other vertical markets. In the last year, the government and the communications industry joined financial firms among the top five verticals targeted with Zeus malware. The top two industries hit hardest with Zeus attacks were the services and manufacturing sectors. The Websense Security Labs 2014 Threat Report research was conducted using the Websense ThreatSeeker Intelligence Cloud, which unites more than 900 million endpoints.

Digisol introduces its compact 3G Mi-Fi router

DIGISOL, THE NETWORKING brand of Smartlink Network Systems Ltd. has recently introduced its 150Mbps wireless 3G Mi-Fi broadband router. The DG-HR1060MS is a portable 3G Mi-Fi Router with Compact Design, Internet Access and Media Sharing.

The HSPA+ mobile router is designed to provide high-speed access to the internet wherever user is and lets him share it on the go. The built-in 3G antenna promises to offer a reliable connection to user’s 3G



service provider. It uses the IEEE802.11n wireless technology to stream data at 150Mbps to its wireless clients.

The router features a compact design and is designed to be an ideal device to carry and connect to Internet instantly. Its 2000mAh battery makes it an ideal portable device with battery backup. The Micro SD card slot on the router can be used for storage using SD cards up to 32GB.

The DG-HR1060MS is plug and play, with drivers built right into the router so the user can connect without the need to install anything.



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