

EXPRESS COMPUTER

INDIA'S FOREMOST ENTERPRISE IT MAGAZINE

16-30 SEPTEMBER, 2013, ₹75



WALLETS GOING DIGITAL

Digital wallets
are bringing
about sweeping
changes in how
we pay

STARTING SMALL FOR BIG

Meet the new crop of big data startups

BIG DATA HADOOP

The open source framework that supports data-intensive distributed apps looks set to save enterprises from the oncoming data deluge

Taru
Email

Sharad
Documents

Rashi
Meetings

Work has gone Google.

“Going Google” means running your business on Google Apps, a suite of online tools including email, calendar, meetings and documents.



edit
////////

A NEW RINGTONE FOR NOKIA



IBM EMERGED AS
A STRONGER
COMPANY AFTER
SHEDDING ITS PC
SKIN. CAN SOME-
THING SIMILAR
BE SAID ABOUT
NOKIA?

When Microsoft bought the mobile devices business of Nokia for \$7.2 billion early September, there was hardly any surprise. If anything, people wondered why the two companies, who had been close partners since 2011, “did not do it” earlier.

Never mind. They have chosen to do it now, and that is what is important.

One of the surprising parts of the deal, in my opinion, is that Microsoft has not acquired the Nokia brand, which continues to be owned by the Finnish company. What the Redmond giant has in its fold are Lumia and Asha smartphone brands, though under the deal Microsoft can continue to sell Nokia feature phones as well for 10 years (and most likely will).

If the Nokia brand were involved, the deal would of course have been more expensive. Besides, Nokia is not merely about making mobile phones just as IBM was not just about making PCs. I know the comparison is not completely apt but the current outcry of the death of a once-beloved mobile brand brings back memories of the hubbub following IBM's sale of its personal computing business to Lenovo.

We all know that IBM emerged as a stronger company after shedding its PC skin. But can something similar be said about Nokia? And what about Microsoft? Will it become a potent force in mobiles?

As per the agreement, Nokia cannot use the Nokia brand on its own devices until December 31, 2015. But few would quarrel with the guess that it may not launch its own mobile handsets at all. (It has lost the battle in overall mobile sales, losing share from 39% of the global business five years ago to a lowly 15%.)


Nevertheless, the company is hopeful of the other 50% of its business still under its wing: comprising the NSN network infrastructure and services business, Here mapping and location platform, and the Advanced Technologies unit. The last one, per a company statement, “will explore new business opportunities through advanced research, development and concept products in areas such as connectivity, sensing and material technologies, as well as web and cloud technologies.”

From the looks of it, Nokia is going to collect the cash from Microsoft and carry on in life with the attitude: “Let it be mobility, if not mobiles!”

And as for Microsoft, on the surface it seems to be a relatively cheaper buy to bolster its weak position in the mobile space. But the hard question—Will the acquisition be able to soften the barrage of Android and iOS blows on the Windows Phone platform and devices?—will continue to haunt the firm long after CEO Steve Ballmer's impending retirement.

sanjay.g@expressindia.com

contents



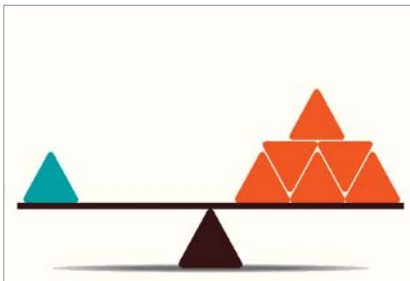
8

COVER STORY

BIG DATA HADOOP

The open source framework that supports data-intensive distributed apps looks set to save enterprises from the oncoming data deluge

feature



STARTING SMALL FOR BIG

A new crop of startups is emerging in the mushrooming market for big data analytics. Let us meet some of them

20



SEE THE DATA

Data visualization tools can help most organizations tackle their big data woes. Here is a look into what makes them attractive

30

column

CLUSTERED STORAGE: RAMPING UP

Santhosh D'souza

28

5 REASONS TO GO CONVERGED

S. Sridhar

41

WALLETS GOING DIGITAL

Anand Shrivastav



SEPTEMBER 16-30, 2013

case study

34

FROM COWS TO CLOUD



Chitale Dairy has utilized the power of technology for some rather unusual purposes. So, what is the connect between cows and cloud computing?



38

KEEPING STORAGE HEALTHY



How Rajiv Gandhi Cancer Institute and Research Center solved its picture archival challenges with an effective storage architecture

in the news

46

» Juniper, VMware to unify virtual and physical networks

47

» Sophos releases server protection solution

48

» Avaya announces software-defined data center framework

49

» Panasonic strengthens its display solutions portfolio

» WatchGuard brings UTM solution for Windows Azure

» Microsoft targets SMBs with Dynamics NAV

50

» Brocade, VMware partner to provide better SAN management

51

» Unistal's new antivirus and Internet security solutions

» Amdocs to acquire Actix

» And more...

interviews

33



DARIN BARTIK

VP & GM, Database Management,
Dell

The gap is between
the push and pull
[of data]

37



SAM FENG

Director, Unified Communications,
Logitech

Our strategy is to ensure that
our peripherals work well with
all platforms

44



GREGORY J. DUKAT

Chairman & CEO,
Campus Management Corporation

The explosive growth in
education in India is very
appealing to us

EXPRESS COMPUTER

INDIA'S FOREMOST ENTERPRISE IT MAGAZINE

Vol 24. No. 14. 16-30 September 2013

Chairman of the Board

Viveck Goenka

Editor

Sanjay Gupta*

Delhi

Heena Jhingan, Mehak Chawla,
Pupul Dutta, KTP Radhika

Mumbai

Jasmine Desai, Harshal Kallyanpur

Bengaluru

Pankaj Maru

DESIGN

National Art Director

Bivash Barua

Deputy Art Director

Surajit Patro

Chief Designer

Pravin Temble

Senior Graphic Designer

Rushikesh Konka

Layout

Vinayak Mestry, Rajesh Jadhav

Photo Editor

Sandeep Patil

MARKETING

General Manager

Dr. Raghu Pillai

Deputy General Manager

Harit Mohanty

Circulation

Mohan Varadkar

Scheduling

Arvind Mane

PRODUCTION

General Manager

B R Tipnis

Manager

Bhadresh Valia

MUMBAI

Harit Mohanty
Business Publications Division
The Indian Express Ltd.,
1st Floor, Express Towers
Nariman Point
Mumbai 400021, India.
Phone: (91-22) 6744 0000/ 22022627
Fax: (91-22) 2288 5831
Email: harit.mohanty@expressindia.com

NEW DELHI

Prabhas Jha
The Indian Express Ltd.,
Business Publications Division
Express Building (Basement),
9 & 10 Bahadur Shah Zafar Marg,
New Delhi - 110 002
Tel: 011 - 23465670, 011-23465665
Cell Phone : +91-9899707440
Fax: 011 - 23702161
prabhas.jha@expressindia.com

CHENNAI

Johnson Rajkumar
Business Publications Division
The Indian Express Ltd.
New No.37/C (Old No.16/C)
2nd Floor, Whites Road,
Royapettah, Chennai - 600 014
Phone: Board : 044 - 28543031 - 34
Fax : 044 - 28543035
Direct : 044 - 42285520, 42285518,
42285534
E-mail: johnson.rajkumar@expressindia.com

BANGALORE

Pradeep Kumar
Business Publications Division
The Indian Express Ltd.
502 Devatha Plaza, 5th Floor
131 Residency Road
Bangalore - 560025
Tel: 22231923, 24, 41, 60
Fax: 22231925
E-mail: pradeepkumar.u@expressindia.com

HYDERABAD

E. Mujahid
The Indian Express Ltd.
Business Publications Division
6-3-885/7/B, Ground Floor,
V.V Mansion Somaji Guda,
Hyderabad- 500 082

Tel: 23418673, 674,
Fax: 23418675, 66631457
E-mail: e.mujahid@expressindia.com

KOLKATA

Prasenjit Basu
The Indian Express Ltd.,
Business Publications Division,
National Highway-6 (NH 6)
Mouza- Prasastha & Ankurhati,
P.S Domjur, Dist Howrah - 711409. Kolkata.
Cell 09830130965
E-mail: prasenjit.basu@expressindia.com

KOCHI

Dr. Raghu Pillai
Business Publications Division
The Indian Express Ltd.,
Sankoorikal Building
36/2248, Kaloorkadavanthara
Road, Opp. Kaloork Private Bus Stand
Kaloork 682 017
Tel. Nos.: (0484) 2343152, 2343328
Fax.: 2343153.
E-mail: raghu.pillai@expressindia.com

JAIPUR

The Indian Express Ltd.,
C-7, Dwarka Puri, Jamna Lal Bajaj Marg,
C-Scheme, Jaipur 302001
Tel: 370002/371272, Fax: 376606

BHOPAL

The Indian Express Ltd.
6, Vidya Vihar, Professors Colony,
Bhopal - 462002 Madhya Pradesh
Tel: 0755 - 2661988

AHMEDABAD

The Indian Express Ltd.,
3rd Floor, Sambhav House,
Nr, Judges Bungalow, Bodakdev,
Ahmedabad 380 015
Tel: (91-79) 26872481 / 82 / 83
Fax: (91-79) 26873950

Important E-mail contacts:

bpd.subscription@expressindia.com
(for all subscription-related queries)
sanjay.g@expressindia.com
(for editorial-related matters only)

IMPORTANT

Whilst care is taken prior to acceptance of advertising copy, it is not possible to verify its contents. The Indian Express Limited cannot be held responsible for such contents, nor for any loss or damages incurred as a result of transactions with companies, associations or individuals advertising in its newspapers or publications. We therefore recommend that readers make necessary inquiries before sending any monies or entering into any agreements with advertisers or otherwise acting on an advertisement in any manner whatsoever.

Express Computer

Reg. No. MH/MR/SOUTH-132/2012-14 RNI Regn. No. MAHENG/49926/90

Printed for the proprietors, The Indian Express Limited by Ms. Vaidehi Thakar at Indigo Press, (India) Pvt. Ltd. Plot No. 1c/716, off Dadoji Konddeo Cross Road, Byculla (E), Mumbai 400027 and Published from Express Towers, 2nd Floor, Nariman Point, Mumbai - 400021. (Editorial & Administrative Offices: Express Towers, 1st Floor, Nariman Point, Mumbai - 400021) Editor : Sanjay Gupta (*Responsible for selection of News under the PRB Act.) Copyright © 2012

The Indian Express Ltd. All rights reserved throughout the world. Reproduction in any manner, electronic or otherwise, in whole or in part, without prior written permission is prohibited.

And now, the future



Express Computer has for over two decades been providing IT professionals with just what they need to stay ahead. The complete picture.



Cover Story | Trends | Case Study | News Analysis | Products | Interviews | News | CIO Profile

To advertise, please write to raghu.pillai@expressindia.com

COVER STORY



BIG DATA

HADOOP

The open source framework that supports data-intensive distributed apps looks set to save enterprises from the oncoming data deluge

BY HARSHAL KALLYANPUR

For the past couple of years, Android and iOS fans have been at loggerheads as to which operating system—and therefore, smartphone—is better over the other. And these wars have spilled on to the comments sections of smartphone manufacturer forums for customers, gadget review websites, social networking platforms and the like.

To most people this may seem like mindless banter, but to companies manufacturing these devices, they can tap into useful customer sentiment effectively, by going through all this information. They can derive meaningful insights out of this data and convert them into results that translate into features and functionality on upcoming models. So far so good. However, it is this “gather,

filter, derive, and translate” part that has most organizations wound up in knots.

The industry today is abuzz with talks of big data and how enterprises need to look at the famed ‘Vs’ of data: velocity, volume, variety and value. And choose a path that makes the business case for Business Intelligence (BI) and analytics.

Enterprises today are seeing volumes of data being generated not only from

within their enterprise applications but also from customer and industry interactions on the Internet, social media, mobile devices and machines as sensor data or logs.

According to Sanchit Vir Gogia, Chief Analyst & CEO of Greyhound Research, as consumers are using more touch points such as mobile, Internet and social to obtain information, enterprises are looking at providing this information at every touch point in context to the consumer. And putting this information in context is key to big data, as content in context is proving to be the king.

However, to do so, an enterprise first needs to understand how it would draw information from various data sources and how it can be used in a context that will bring business value to the enterprise.

And it is the diversity of information, its nature as structured or unstructured, the speed at which it is getting generated and the volume that decides the approach the enterprise needs to take toward big data, something that organizations are in various stages of either understanding or implementing. Here, we look at how Hadoop as an approach to big data is starting to make sense for enterprises on a big data journey.

Why go the Hadoop way?

Most enterprises looking at a big data analytics implementation would typically have an enterprise data warehouse or some sort of a structured database already in place, which gives them access to business data in a fairly defined way and allows them to make business decisions based on this information.

However, many organizations are now seeing data from multiple sources, a lot of which is unstructured. At the consumer side, people are accessing data from different devices and using different channels such as social media, websites, Internet forums and video to express their sentiments. At the enterprise side, manufacturing equipment, network devices, smart devices, etc. are generating machine data which though fairly structured, is coming into the enterprise at a rate which is beyond the capabilities of traditional database solutions.

Traditional data warehousing solutions which work with structured data, are not quite equipped to handle unstructured data. Hadoop, with its HDFS file system, can store a variety of data that can be processed using tools





Uptime
Champion
AWARDS
2013

PRESENTED BY

NxtGen'

Uptime Champion Awards are for organizations and their CXOs who are determinedly working to improve the overall reliability of their IT infrastructure thereby reducing costs and improving productivity. Instituted by Express Computer, presented at the Technology Senate, these awards celebrate corporate India's most reliable IT networks and individuals who tirelessly champion them.

To register your nomination, please visit
www.technologysenate.com

OCTOBER 3rd-6th | ABU DHABI, UAE

**CALLING
CHAMPIONS
WHO STOPPED
AT NOTHING IN
2013**

**EXPRESS
Technology
Senate11**
What CIOs Want



**EXPRESS
COMPUTER**

FOR ENQUIRIES, PLEASE CONTACT:

BANGALORE: Dr. Raghu Pillai
raghu.pillai@expressindia.com, 09886293667

MUMBAI: Harit Mohanty
harit.mohanty@expressindia.com, 09821015167

NEW DELHI: Prabhas Jha,
prabhas.jha@expressindia.com, 09899707440



Hadoop does not come neatly packaged, and you need developers and solution architects to put a Hadoop-based big data infrastructure together.

Srinivasan Govindarajalu,
Senior Director and Practice head –
DWBI, Virtusa Corporation

Enterprises have already started experiencing the problem of scale with data that Yahoo and Google have faced before, which led them to work on Web Scale or MapReduce

specifically written for Hadoop-based file systems. And this is what is making it an interesting proposition for big data analytics.

According to Santhosh D'Souza, Director - Systems Engineering, NetApp India, the nature of data consumption creation and analysis in web scale environments has translated extremely quickly into enterprises as well. Enterprises have already started experiencing the problem of scale with data that Yahoo and Google have faced before, which led them to work on Web Scale or MapReduce.

"The increasing amount of collaboration or social media type of applications within enterprises, have also contributed to the amount of data going in and coming out of enterprise applications to present a scenario where Hadoop becomes one of the answers," says D'Souza.

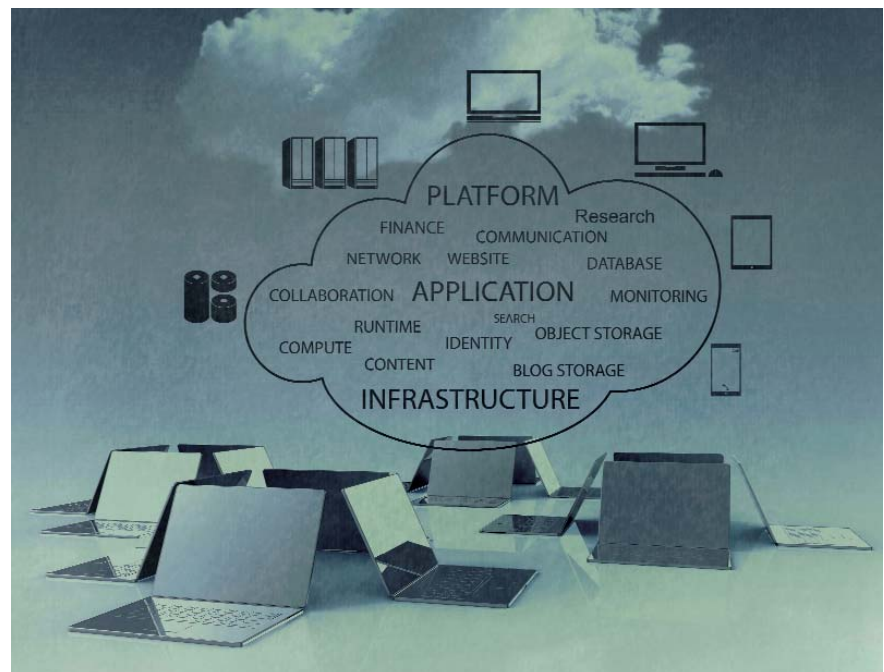
Speaking about the merits of Hadoop and how vendors like NetApp are able to leverage on it he says, "A Hadoop system can scale out to a large extent. We can scale up to 69 petabytes for a single logical namespace and can build multiple such logical namespaces. It can also deal

with structured data and has a wide variety of applications which can use it as a data store."

Amit Gupta, Senior Business Intelligence Architect, Persistent Systems, explains, "Hadoop's MapReduce programming paradigm allows any type of data to be processed in any programming language to provide flexibility and low entry barrier for developers. The Hive interface on Hadoop provides a layer of database metadata that can be used to define table structures on Hadoop files, and allows users to browse and process data using standard SQL commands."

"Many commercial and open source ETL tools utilize the Pig interface to push heavy data processing to Hadoop for warehousing and data integration tasks. This helps in bringing down ETL server and license costs to achieve scalability with Hadoop," adds Gupta.

Srinivasan Govindarajalu, Senior Director and Practice head – DWBI, Virtusa Corporation giving a similar opinion says, "Most enterprises are quite happy using Hadoop for back end processes like for ETL and storage. As opposed to popular belief, Hadoop is





Intelligent
Enterprise
AWARDS
2013

PRESENTED BY

Canon

Delighting You Always

The Intelligent Enterprise Awards

recognize enterprises for their innovative use of information technology that provides companies with a definite business advantage. Instituted by Express Computer, presented at the Technology Senate, these awards celebrate the power of information technology to fundamentally transform business.

To register your nomination, please visit
www.technologysenate.com

OCTOBER 3rd-6th | ABU DHABI, UAE

**BECAUSE
YOUR IDEAS
TRANSFORM
BUSINESSES**

EXPRESS
Technology
Senate11
What CIOs Want



EXPRESS
COMPUTER

FOR ENQUIRIES, PLEASE CONTACT:

BANGALORE: Dr. Raghu Pillai
raghu.pillai@expressindia.com, 09886293667

MUMBAI: Harit Mohanty
harit.mohanty@expressindia.com, 09821015167

NEW DELHI: Prabhas Jha,
prabhas.jha@expressindia.com, 09899707440



In future, we see Hadoop becoming the underlying data store, while the data which is needed for real-time analytics will be available in memory.

Seshadri Rangarajan,
CTO, BIM, Global Service Line,
Capgemini India



Typically, an enterprise won't undertake a Hadoop implementation due to the complexities involved and hire a system integrator to do it for them.

Greg Kleiman,
Director - Strategy, Red Hat Storage

getting adopted a lot from a storage point of view, such that many experts are describing the use of Hadoop for storage as unsupervised digital landfill."

Anil Bajpai, Senior Vice President and Head of Research and Innovation, iGate, shares a similar opinion and says, "Hadoop can handle data better especially if it is coming from multiple structured or unstructured sources. It is also becoming relevant for most organizations as it offers a cost-effective way of processing huge amounts of data. Cost, can be an issue from an in-memory or enterprise data warehouse perspective as anything over a terabyte runs into exorbitant costs."

In-memory and Hadoop

Hadoop may offer a cost-effective way of data storage for big data analytics, but when it comes to performance, in-memory has been gaining popularity in India for the last one year or more. A lot of organizations which have had traditional enterprise data warehouses, have looked at adopting in-memory as it offers near real-time analytical performance and works with structured data, which today continues to add a lot more business value than unstructured data.

Says Gogia of Greyhound, "The biggest fallacy about big data is that it is all about unstructured data. The largest amount of big data analytics is happening around structured data today, and it continues to be the most critical decision making factor."

Therefore, in-memory is finding a lot of adoption within the country which currently has most enterprise environments working largely with structured data. According to Seshadri Rangarajan, CTO, BIM, Global Service Line, Capgemini India, in-memory is finding greater adoption than Hadoop in India and particularly for SAP's HANA,

as India is a major SAP market with a lot of organizations having implemented SAP within their enterprise. For performance related challenges that the enterprises face from an ERP or a data warehouse perspective, HANA provides an immediate solution.

However, in-memory works best with structured data and has limitations on memory beyond which it becomes a cost-intensive proposition. As enterprises get more into predictive and advanced analytics, they would need large volumes of data to work with and here the acceptance of Hadoop will grow.

According to Dinesh Jain, Country Manager, Teradata India, only 5 percent of unstructured data is usable data. Hadoop can therefore be used for staging the unstructured data, gathering meaningful data out of it and then running analytics on top of it. It's a tiered approach wherein the storage platform or staging area is Hadoop based. Then there is a data warehouse which is front ended by in-memory. The in-memory database grabs the data from data mart which in turn gets filtered data from the Hadoop storage.

He explains this with an example and says, "If you have website data which is one petabyte and you are loading that in Hadoop, you have a data warehouse which is 200 TB, only 5-10 terabytes of it will go for in-memory." He is of the view that memory is expensive therefore rather than trying to put hundreds of terabytes of memory to load the entire data warehouse, the enterprise can simply look at loading that part of it into memory which is frequently asked for by business users.

Rangarajan of Capgemini feels that at this point, most enterprises are looking at real time analytics, and not looking at petabytes of data, and in-memory technologies have been able to support more than 100 terabytes of data. Over a

As opposed to popular belief, Hadoop is getting adopted a lot from a storage point of view, such that many experts are describing the use of Hadoop for storage as unsupervised digital landfill



Security 
Strategist
AWARDS

The Security Strategist Awards honour India's most secure IT networks and their CSOs for outstanding leadership in the field of enterprise security. Instituted by Express Computer, presented at the Technology Senate, these awards celebrate outstanding leadership and vision in the arena of information security.

To register your nomination, please visit
www.technologysenate.com.

**BECAUSE
ULTIMATELY
YOU ARE THE
LAST LINE OF
DEFENCE**

OCTOBER 3rd-6th | ABU DHABI, UAE

EXPRESS
Technology
Senate11
What CIOs Want



EXPRESS
COMPUTER

FOR ENQUIRIES, PLEASE CONTACT:

BANGALORE: Dr. Raghu Pillai
raghu.pillai@expressindia.com, 09886293667

MUMBAI: Harit Mohanty
harit.mohanty@expressindia.com, 09821015167

NEW DELHI: Prabhas Jha,
prabhas.jha@expressindia.com, 09899707440



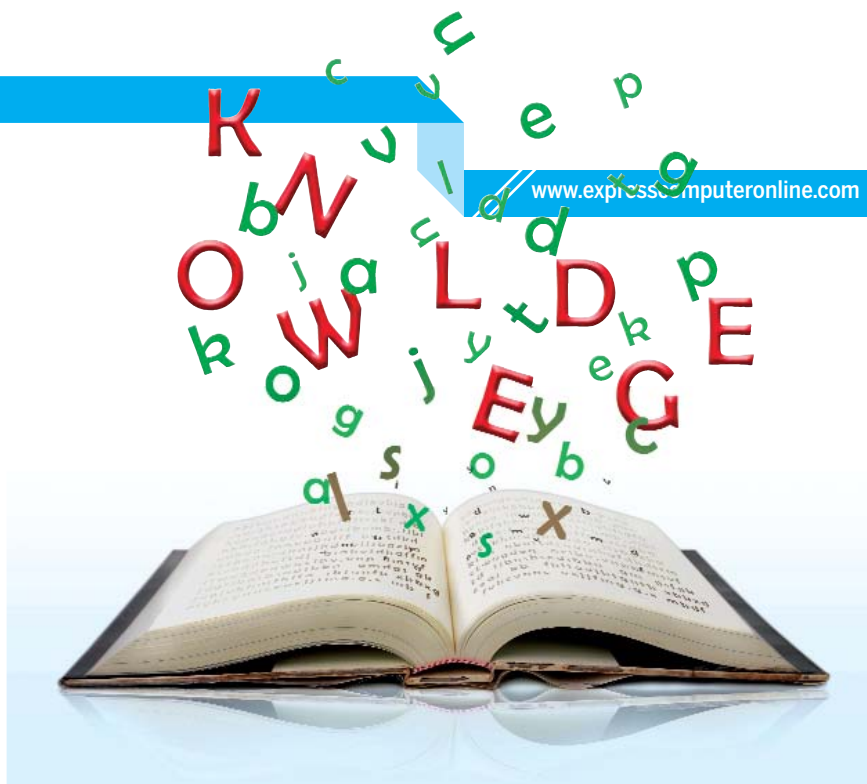
A Hadoop system can scale out to a large extent. We can scale up to 69 petabytes for a single logical namespace and can build multiple such logical namespaces.

Santhosh D'Souza,
Director - Systems Engineering,
NetApp India



Hadoop can be used for staging unstructured data, gathering meaningful data out of it and then running analytics on top of it.

Dinesh Jain,
Country Manager, Teradata India



period however, Hadoop will be seen as a complementary advantage to in-memory as the volume of data grows.

"In future, we see Hadoop becoming the underlying data store while the data which is needed for real-time analytics, will be available in memory. As the latency of this data increases, it would be moved to a Hadoop based storage where it would be looked at for historical and predictive analytics," says Rangarajan.

Greg Kleiman, Director - Strategy, Red Hat Storage, shares a similar opinion and says that on the price to performance basis, users can afford to pay a premium for in-memory because usually, big data is data in motion and it has to be processed in near real-time, as it is coming in at a very high rate. Hadoop, on the other hand, is built for data at rest and for unstructured data.

"A lot of enterprises combine in-memory and Hadoop such that they take the real time data feed, and use in-memory database to analyze that data in real time. When they're done with the analytics, they put the result in Hadoop and can then run historical trends on that data which is now at rest," explains Kleiman.

Rangarajan is also of the view that in the current scenario, data with low latency moves into in-memory, and data with high latency moves into Hadoop. However, he believes that we will move toward an area where we will need to bring the computing power to where the

data is, rather than taking the data to where the computing power is. It is slowly moving to a scenario wherein enterprises can generate the data, have real time analytics while processing large volumes of data for historical analysis.

Tarun Kaura, Director - Technology Sales, India and SAARC, Symantec believes that the decision to go with Hadoop or in-memory will depend on whether the organization is looking at structured or unstructured data, the response times that it is looking for from the analytical framework and the associated costs.

Challenges around Hadoop

It may seem like Hadoop will fit perfectly into an enterprise's big data plans. However, the approach, though around for a while now, has only started to find adoption recently. There are several reasons why it's taken a while for Hadoop to catch on with the Indian audience.

Firstly, the approach requires in-depth understanding of Hadoop, the HDFS file system and the associated tools that in many cases, need to be built ground up to suit the organization's data warehousing requirements. Though popular with developers, the approach has not found any initial mainstream adoption due to the considerable amount of coding required.

Furthermore, Hadoop has largely been an open source effort, due to which the development and support has largely



You're just 180 seconds away from an instant
subscription to Express Computer

For subscription as easy as ABC, just log on to www.expresscomputeronline.com and click
'Subscribe Online'. For further information, you can also contact us on 022-67440451 or
email us at bpd.subscription@expressindia.com



EXPRESS
COMPUTER
INDIA'S FOREMOST ENTERPRISE IT MAGAZINE

GOING HADOOP

- Experiment with big data technologies like Hadoop by selecting suitable problems to solve. Hadoop is not for everything. Understand what it means to your organization within the context of your business goals
- Develop a strategy on adopting big data technologies like Hadoop. However, think big but start small. Execute small projects to build out the vision and strategy
- Hadoop type of technologies are used to develop insights and the business insights in particular are extremely valuable. It is important for IT and business to work together and ensure a smooth deployment of solutions with quantifiable business goals
- If the adoption of Hadoop in the organization starts as an IT initiative, securing the initial funding to set up the Hadoop cluster, etc. is a challenge. Plan early and tie this to short initiatives that deliver value to the core business
- Breaking down the data silos in an organization is more difficult than it sounds. Plan for acquiring the data that you need for the analysis before setting up a large cluster for the analysis
- Data is an enterprise asset and Hadoop has to be handled as an Enterprise Information Asset. Make sure that your big data solution does not become a silo but integrates with the rest of the enterprise information systems. A good example is lineage. Most enterprises have set up metadata solutions to track data lineage and introducing Hadoop will disrupt this model. Look at the integrations that can re-establish your data lineage.

Rajeev Nayar, Associate VP & Head,
Big Data Practice - Cloud, Infosys

been community based. Given this fact, Hadoop lacked enterprise grade product offerings and support until recently, which further saw it failing to gain good traction among enterprise customers.

Finally, though data storage is cheaper with Hadoop, the investment in the infrastructure and the associated tools, the skillset and the management efforts required, push the total cost of ownership or TCO further, making it somewhat unpopular with enterprises experimenting with the technology approach.

Jain of Teradata is of the view that Hadoop skill set is not available in abundance. While people are getting trained and a lot of system integrators are creating competence in Hadoop, even if they are put to work, the usability of the platform by the user will remain a challenge for a very long time.

"In a relational database, you can directly have the user look at data and work with it. If the data is stored in a tabular format, it is very easy for everyone to understand. With the Hadoop file system, you need a high amount of technical manpower to pull meaningful information out of it. The fundamental architecture of the Hadoop file system is complex and therefore this challenge will always exist," he says.

Govindarajulu of Virtusa shares a similar perspective and says, "The Hadoop architecture is quite complex and deployment is not as straightforward

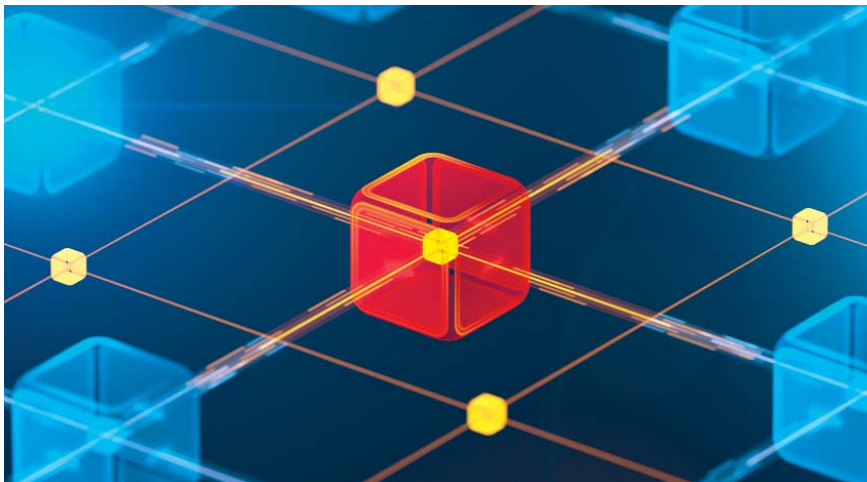
as some of the proprietary BI solutions. It does not come neatly packaged, and you need developers and solution architects to put a Hadoop-based big data infrastructure together."

He also feels that while the Hadoop approach is good for analyzing data, the visualization layer is not that mature and therefore enterprises would need to interface with visualization tools offered by organizations such as QlikView, SAS, etc.

Kleiman of Red Hat says, "With in-memory, the analytics part is much more mature while with Hadoop it is still pretty new. An enterprise looking at an analytics solution won't care much about the infrastructure but would care about the value of analytics and what they can get out of their data to help business increase revenue or get more competitive."

Talking about the skill set part he says, "The skillset on the IT side on building a Hadoop infrastructure is fairly mature. The area that is catching up is the data analytics and the data scientist side of things. That part is still pretty immature globally and in India. There is very good talent in India on the building side, but not much on the analytics and data scientist side."

He also observes that typically an enterprise won't undertake a Hadoop implementation due to the complexities involved and hire a system integrator to do it for them. Hadoop is still a



developing skill and a lot of SIs are still learning how to do it and therefore it is going to take longer for Hadoop to find traction.

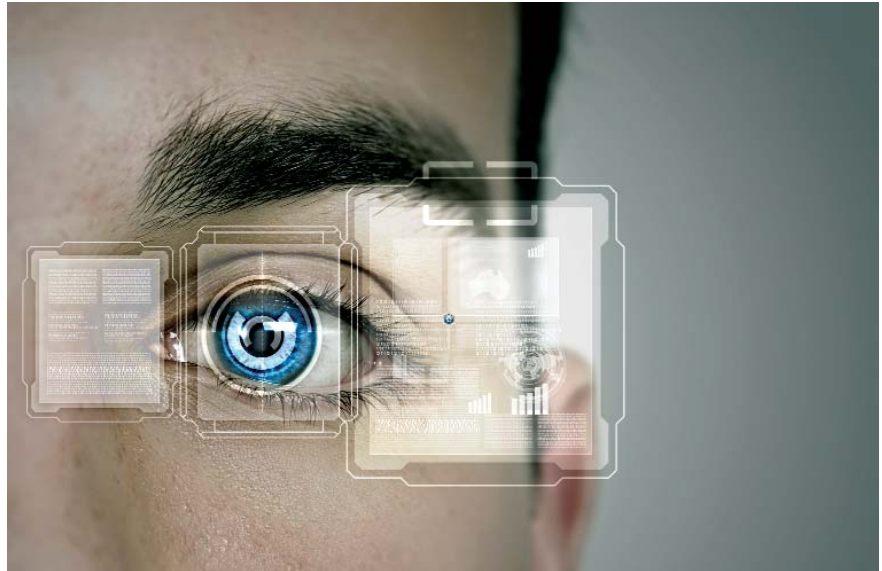
Finding acceptance

Despite all the challenges that make Hadoop adoption seem difficult, the benefits that it promises in the long term have the industry working toward making its adoption easier. Many of the challenges are due to the lack of maturity of the Hadoop ecosystem from a big data perspective, something which would change over time, as IT vendors are developing solutions at all levels of a Hadoop infrastructure. Due to its largely open nature, Hadoop is easily available to vendor organizations who are working towards building connectors that can help enterprises interface the Hadoop architecture with their existing enterprise data warehouse or in-memory investments.

Explains D'Souza of NetApp, "Vendors like us are looking to arrive at a reference configuration for specific use cases and then depend on the data services and data management vendor to provide an end-to-end support for the entire solution. Therefore, our focus has been to work with Hadoop distributions such as Cloudera and Hortonworks to develop reference architectures and validated configurations."

What this would essentially do is allow the enterprise to deploy the entire gamut of data stores, where there will be in-memory, relational, NoSQL, and Hadoop file system based data stores. The front end applications have already developed and people will continue to develop connectors to each of these data stores so that once an enterprise arrives at the disparate type of data, they will have the luxury of choosing the kind of data store they want to put the data into.

Bajpai explains iGate's efforts in this area, by talking about a big data analytics framework which the company is working on and expects to be ready in the next couple of months. The framework would allow taking data from sources that are structured, unstructured, paper-based, electronic, machine to machine, and validate, verify, test and store this



Data with low latency moves into in-memory, and data with high latency moves into Hadoop. However, we will move toward an area where we will need to bring the computing power to where the data is, rather than taking the data to where the computing power is

data using various Hadoop tools on a public cloud.

It would also look to present the data across different channels and devices, such that the results are produced instantaneously in a way best suited for the user, in various formats. This accelerated big data analytics platform can be utilized across various verticals. The framework will look at how enterprises take a business case, and visualize data to give solutions for that business scenario.

Capgemini's Rangarajan says, "The challenge with Hadoop is that SQL is a sort of a de facto standard for reading and analyzing data. When Hadoop came, people needed to know Java and other technologies. However, the evolution has led to SQL becoming the standard for Hadoop as well. It's a relief for both system integrators and the industry as there have already been a lot of investments that have happened for

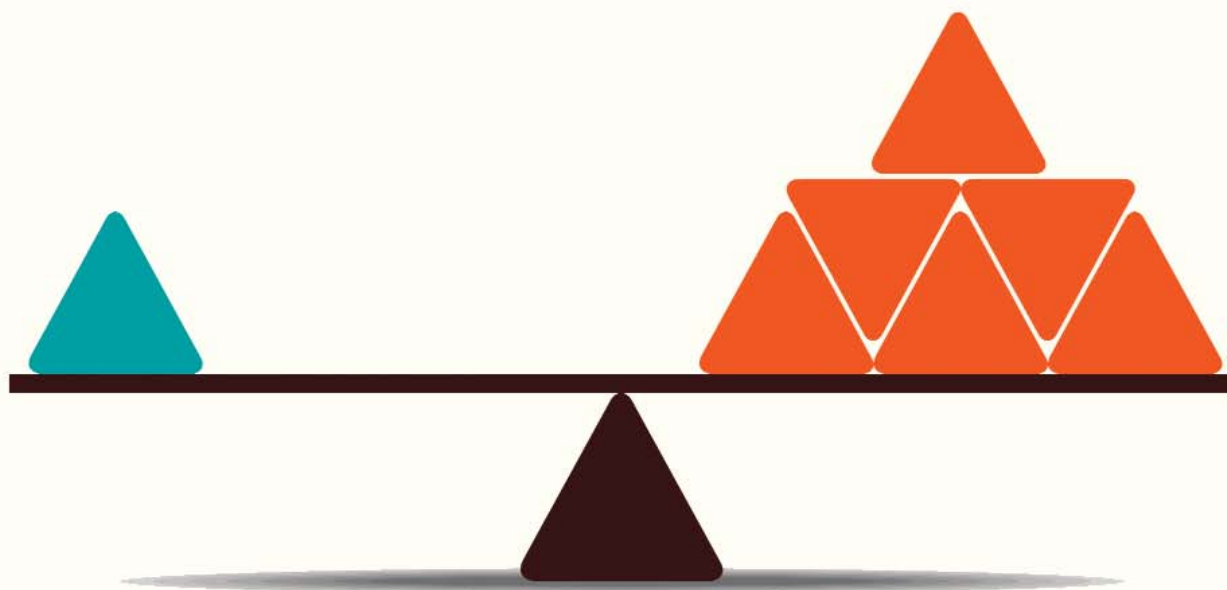
doing analytics from an SQL point of view. Almost all the leading vendors are developing SQL connectors on top of Hadoop."

All of this is helping Hadoop find acceptance as an enterprise database to complement the existing data warehouse. He believes that as enterprises start talking about Internet of things and next-generation applications, we will start seeing Hadoop getting embedded in applications of the future. In a year or two, we will start seeing a connector to Hadoop being available for most technologies.

While most vendors report interest from various industry verticals to leverage on Hadoop, it would be interesting to see a few real-world examples that talk about how Hadoop has opened doors beyond enterprise data warehouse and in-memory approaches.

harshal.kallyanpur@expressindia.com

STARTING SMALL FOR BIG



A new crop of startups is emerging in the mushrooming market for big data analytics. Let us meet some of them

BY MEHAK CHAWLA

Once in a while, we come across a technology so powerful that it makes a number of individuals take the entrepreneurial plunge. It happened with dotcom a couple of decades back, it happened with mobility not so long ago, and it's happening again - this time with the cloud.

Among other things, the cloud has given enterprises the means to do what they never could - deal adequately with their data. Cloud has also given compute powerful enough to handle the enormous amount of data. And therefore, it is eventually to cloud computing that we must attribute the mushrooming of big data startups. If big data analytics are a possibility, it is only because of the cloud sitting at the back-end.

And there is no doubt that the big data opportunity is a massive one. Globally, the big data market is estimated to be about US\$ 100 billion. In India alone, the market is anticipated to grow at the rate of 38% year-on-year, and touch US\$ 153 million by 2014.

Little wonder then, that a lot of startup firms are looking to capitalize on this big data opportunity. From creating visuals from big data, to delivering reports in various form factors, to analyzing data floating on the social media websites, these companies are doing it all. Here, we try to look at some interesting big data startups that have sprung up.

The evolution curve

According to Sid Deshpande, Senior Research Analyst, Gartner, initially most big data startups focused around big data training and certification, especially around Hadoop, since it was a relatively unfamiliar platform. "Back then, companies were looking to turn their

database administrators into data scientists and a lot of startups saw an opportunity in that," he explains.

Recently however, startups are investing their energies around the analytics aspect of big data. With there being little or no doubt about the potential of big data to yield actionable insights, enterprises are grappling with ways to make sense of the data floating around. This is where these startups are making an entrance. "The startups in India are largely focused on the unstructured data, residing online. That is because online is a relatively democratic space and gives cost effective options like cloud to startups," says Deshpande.

Deshpande believes that big data startups in India are no different from their global counterparts, except in terms of the talent pool they are utilizing, where India has a natural advantage. "Global big data startups, or Indian startups eying the global market have mostly been focused on services around big data, though quite a few of them have product offerings to supplement these services. The startups focused on the domestic market are mostly product companies with very strong vertical or outcome focus," elaborates Deshpande.

However, even despite the evolution and the opportunity, big data startups in India are struggling to differentiate themselves and make a mark in a market where mega vendors are busy wooing enterprises with their big data solutions.

Creating differentiators

Given that all these companies depend upon cloud for their back end compute, the need for creating an intellectual property differentiator has come across loud and clear. As a result, these startups are looking to create their own niche

offerings for various aspects of big data, be it visualization, social media analytics or even high speed crawl.

They are also trying to mark themselves out from the crowd of mega vendors by providing targeted outcomes at micro levels like a process or a platform, and in some cases, even through verticalized offerings and customized tools.

However, where these companies are actually looking to mark themselves out, is through their product offerings. The interesting thing to note here is that most startups we talked to, had only a single product that they are offering on different models, or a single product per vertical, in some cases.

Another view here is that despite their efforts to stand out, some of the startups might be acquired as the market is sure to witness eventual consolidation. Analysts are not ruling out a scenario like that of business intelligence startups, quite a few of which got acquired. In the opinion of Deshpande, "Some of the startups might be acquired by service companies for their technology as well as the client base. However, this scenario might still be far-fetched because big data is still very nascent in India."

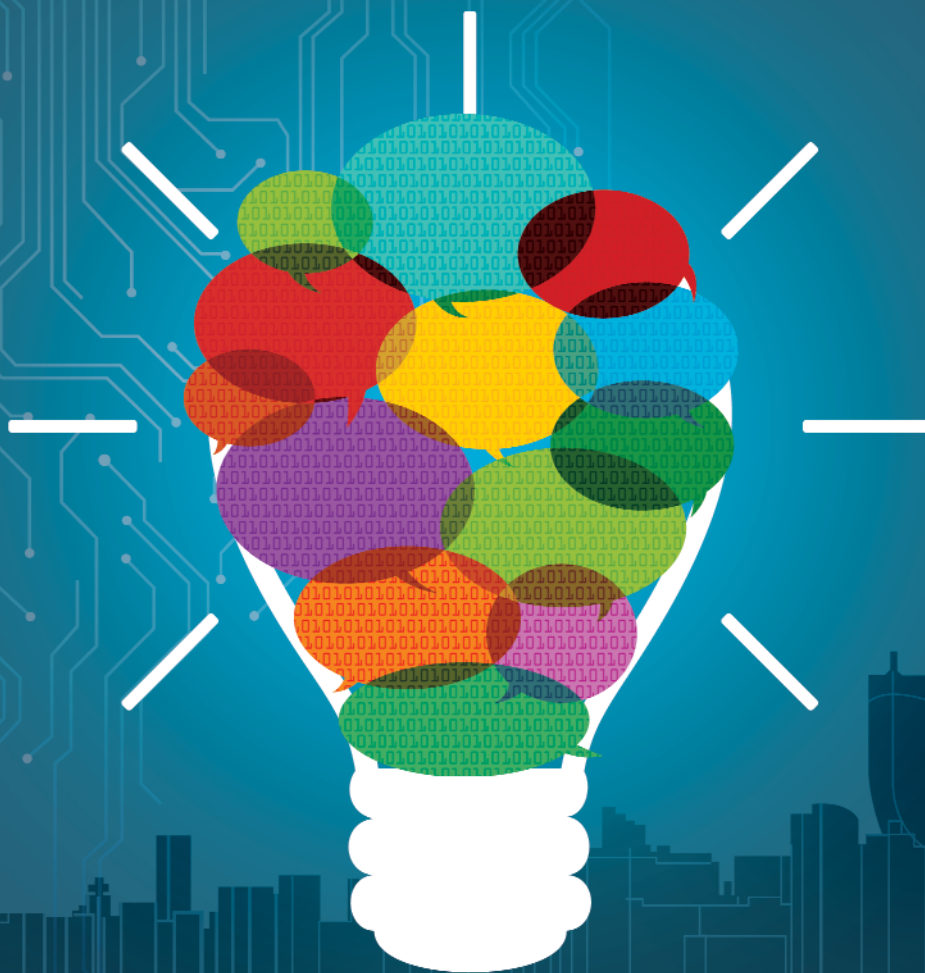
Whether this speculation shall become a reality is a thing of the future. As of now, these startups are looking to create an identity, and in the process doing some innovative work.

AFFINE ANALYTICS

Started in: 2011

Key offering: big data solutions for telecom and e-commerce

Affine analytics, a big data analytics company that took off a couple of years ago, is channelizing its energies in



KNOWLEDGE SHARING | TECHNOLOGY SHOWCASE | INDUSTRY AWARDS | NETWORKING OPPORTUNITIES | INTERNATIONAL LOCATION



CONTINUOUS INNOVATION: BRIDGING TECHNOLOGY
& BUSINESS STRATEGY FOR AGILITY AND GROWTH

PARTNERS



OCTOBER 3RD - 6TH, 2013 | **ABU DHABI, UAE**

INDIA'S MOST COVETED CIO FORUM IS BACK

The highly regarded Express Technology Senate is all set to host the stars of Information Technology. As the most coveted CIO forum of India, Express Technology Senate brings together the best minds in the IT industry to share insights and practices on deployment of technology while also catching up on the latest technological trends that are poised to reinvent enterprise IT.

For details on registration and participation please visit www.technologysenate.com

EXPRESS Technology Senate **11** What CIOs Want

PLATINUM SPONSORS

Canon
Delighting You Always

NxtGen'

FOR ENQUIRIES, PLEASE CONTACT:

BANGALORE: Dr. Raghu Pillai, Email: raghu.pillai@expressindia.com, 09886293667

MUMBAI: Harit Mohanty, Email: harit.mohanty@expressindia.com, 09821015167

NEW DELHI: Prabhas Jha, Email: prabhas.jha@expressindia.com, 09899707440



We sell integrated marketing suites for the marketing functions and a social media contact center solution for the customer facing departments.

Bhupendra Khanal,
CEO, Simplify 360



We provide a platform for making meta data more useful using visual tools.

Ryan Cunningham,
Vice President - Experience,
OneOcean Corporation

providing big data solutions to two verticals: e-commerce and telecom. For the telecom segment, their solution is targeted at evaluating customer behavior by analyzing call detail records. "Till date, all analytics companies focused on telecommunications vertical have centered around providing or analyzing subscriber details like age, gender and income group. We realized that the real value lies in call patterns and other rich details of usage," explains Manas Agarwal, Co-founder and CEO, Affine Analytics.

But the real challenge for Affine analytics is the volume that they are dealing with. "Any analytics system is incapable of crunching even a day's volume of the data that telcos generate," says Agarwal. Therefore, with their solution the company is looking to address the two V's of big data- velocity and volume, (the third one being variety). Right now, the company is bringing out their offering for the telecom space, as a product. Agarwal says that there is much more complexity involved in offering on any other model since the regulations prohibit telcos from moving their data beyond their premises.

Affine is also trying to make their solution real time. "Our differentiator is that what we are offering is a proper big data solution and not just a RDBMS or an Oracle, SAP offering," says Agarwal. Affine is using Hadoop at the back end, but Agarwal says that while Hadoop is excellent for batch processing, it is not so good for real time analytics. As a result, the company is trying to create a unique mash-up for their offerings. Their first product for telecom is likely to be out by August end.

In the e-commerce space, a common problem, according to Agarwal, is that tools like Google analytics do not give real time data. "Also, there is a variety problem with e-commerce firms because for them, data comes in different form

factors and from various sources," he says. As a result, their offering for the e-commerce space will be an independent Java app which can talk to any other big data platform, since most e-commerce players have already put in place their big data analytics. "e-commerce firms are different from telcos because chances are, they already have a big data stack. That is why we provide our solution in an app form, though we also have the stack available," explains Agarwal. The company is already working with Jabong and Myntra.

SIMPLIFY360 **Started in: 2009**

Key offering: social media intelligence products

Simplify360 started in 2009 with the aim of doing social media analytics. They began with mining social media data for insights that could help brands. They have now graduated to deal with huge data sets and yield insights. "We use Hadoop at the back and MapReduce for crawling through the data," elaborates Bhupendra Khanal, CEO, Simplify 360.

Simplify360's platform works at three levels: the first is the data collection and integration layer where they do all the crawling from social, news websites etc. The second is the analytics process and at the third level is the social media intelligence visualization tool that the company has built. On top of it is the workflow layer which provides insights for two branches — customer services and marketing functions. "We sell integrated marketing suites for the marketing functions and a social media contact center solution for the customer facing departments," explains Khanal.

The company also provides social data on demand for research and analytic companies. Simplify360 is using Apache's HBase and Solar Cloud at the

The cloud has given enterprises the means to do what they never could - deal adequately with their data. The compute power of the cloud can handle enormous amounts of data



back-end, and their own IT, says Khanal lies in the actual analytics space where they have various tools like sentiment analyzer, demographic analyzer and linguistic analyzer. "We have one of the biggest indexes of content for sites in the APAC. Our IP lies in data crawl and analytics," declares Khanal.

The company is working with some impressive clients like Coffee Day, ITC Foods, HDFC and with various BPOs like Aegis, Intelliworks and Hinduja Global for their contact center offerings. They are also present across geographies through their partners like Toyota and Schneider Electric.

ONEOCEAN **Started in: 2013**

Key offering: ClipCard for meta data

As much as 99% of data is sitting on hard disk drives and not getting analyzed. What OneOcean is doing is trying to make meta data more conducive to analysis by making it format agnostic. The technology that this startup is using is mostly proprietary, with some

outsourced components. "We provide a platform for making meta data more useful using visual tools," explains Ryan Cunningham, VP - Experience, OneOcean Corporation.

The key offerings of the company then are what they describe as meta analytics and meta visuals. "Our differentiator lies in finding the right information that needs to be analyzed in the first place, something that's not being done so far," says Cunningham.

Though the company only has a small team in India, what they are trying to do here is quite significant. "We are doing enterprise cloud engineering in Hyderabad and hoping to develop a product that can be deployed within a hybrid or private cloud," says Cunningham. As of now, OneOcean is using Amazon's public cloud offering to provide their product to customers. The company intends to target verticals like agriculture, healthcare and utilities and also other verticals where data exploration is relevant.

Their offering- called ClipCard is currently available on two models — as a



We tell stories through data visuals and since we are vendor and platform agnostic, our solution is fit for all types of enterprises.

Naveen Gattu,
Co-Founder and COO,
Gramener



We are trying to bring together two different worlds — enterprise and the Internet. So far, analytics have only been around enterprise data.

Suresh V Shankar,
Founder of Crayon Data



Startups focused on the domestic market are mostly product companies with very strong vertical or outcome focus.

Sid Deshpande,
Senior Research Analyst,
Gartner



Mecbot can empower existing data analysts and data scientists in an organization to extract insights out of data faster.

Suresh Srinivasan,
Co-founder, Formcept



These startups are looking to create niche offerings in various aspects of big data, be it visualization, social media analytics or even high speed crawl

service for SMEs with Amazon as an option, or as a license with on-premise deployment for enterprises with regulatory needs that require them to bring data analysis behind their firewall. “We have a web browser interface so our product is as easy to use as a consumer app. One of the biggest advantages here is that there is no training required to use our product,” says Cunningham.

FORMCEPT Started in: 2011

Key offering: Mecbot,
a unified analytics platform

“When we started working on machine learning and artificial intelligence based problems, we found out that industry has domain experts but they are all stuck with data infrastructure problems that are the biggest roadblocks in solving the big data challenge,” says Suresh

Srinivasan, Co-founder of Formcept. The above challenge is the reason why Formcept came into existence. “We decided come up with a big data analysis platform that can take care of all these issues, so that domain experts and data scientists can focus on solving the actual problem instead of worrying about data infrastructure issues,” he says.

Formcept’s offering Mecbot, is a unified analytics platform that is available for users to access massive amount of data, for a variety of analysis techniques at any time. Explains Srinivasan, “We have built a big data middleware, called MECBot, that can empower the existing data analysts and data scientists of an organization to extract insights out of data faster, thereby, significantly reducing the time taken to convert data into decisions.”

The platform provides batch processing, interactive analysis and

stream processing capabilities out of the box. It can analyze unstructured data in the form of documents (PDF, HTML, word doc, text, tweets, etc.) and structured data stored in relational databases. It has built-in semantic capabilities and processing algorithms that can analyze unstructured data, categorize them, retrieve on demand and also deliver the results/reports to the right devices at the right time.

Enterprises can also write customized applications on top of the platform according to their business needs. MECBot is available in a public cloud, private cloud and as an on-premise deployment.

Though Formcept is not focusing on any particular vertical as of now, they have partnered with a few system integrators who can take their product to customers in various domains and build applications on top of it. "We have also partnered with service providers in the data analytics space and built an application on the recruitment side that works on top of MECBot."

GRAMENER Started in: 2010

Key offering: data visualization product and services

Gramener aims to cut across all the three layers of big data, i.e. statistical, reporting and exploration. They are taking both structured and unstructured data from various sources and making its consumption extremely easy, explains Naveen Gattu, Co-Founder and COO of Gramener. "Presenting complex data in extremely rich visuals is our key differentiator," he says.

Gramener was started in 2010 by a bunch of ex-IBM employees who had good exposure to the North American market. It was in the year 2011 that the company launched their "Gramener Visualization Product" which is available either as an enterprise license or on a SaaS model. According to Gattu, Gramener's IP lies in their in-house built connectors. "We have built connectors for various data sources like ERP, database layers, Hadoop etc. These are all web patented intellectual properties



Vineet Kumar, Abhishek Anand and Manas Agarwal, Co-founders, Affine Analytics

and are built using the Python framework and scalable vector graphics (SVG). For customers who have custom systems, we can build custom connectors," says Gattu.

Gramener is working with some interesting customers across various verticals. Names like Airtel, India Today Group, TVS and Suguna Foods figure in their customer list. "We tell stories through data visuals and since we are vendor and platform agnostic, our solution is fit for all types of enterprises," elaborates Gattu. Figuring on their website, are some rather interesting infographics that the company has been doing for its customers.

CRAYON DATA Started in: 2012

Key offering: SimplerChoices engine and OneDrop analytics

Crayon Data took wings in 2012 with the aim of providing a big data platform that is not just integrated but also engagement based. According to Suresh V Shankar, Founder, Crayon Data, "With so much data around, traditional analytic tools will soon become redundant. We wanted to build something that was not a software but a platform which could solve

the paradox of choice."

As a result, Crayon aimed at building a platform which will give the right set of choices to users. "It involves a lot of things like factors influencing your choices, your past preferences etc," he explains. "We are trying to bring together two different worlds — enterprise and the internet. So far, analytics have only been around enterprise data," he adds.

According to Shankar, the real opportunity of big data is not in the infrastructure because that bit is already solved. The real potential of big data lies in getting the algorithms right. It is this algorithm layer that is the key focus area for Crayon Data. "One key reason why we are focusing on emerging markets like India is because a lot of things can be done differently here. Standard algorithms do not work for these markets," says Shankar. Crayon Data is focusing on verticals like hospitality, retail, banking and telecom. "However, we are seeing a lot of interest from the police, intelligence and waste management departments too," he adds.

Crayon Data has two development centers and is already doing pilots with a few customers.

Mehak.chawla@expressindia.com



COLUMN

SANTHOSH D'SOUZA

CLUSTERED STORAGE: RAMPING UP

The expanding data universe in India is accompanied by a paradigm shift toward clustered storage architectures

Big data, cloud, social and mobility are the disruptive forces that are currently driving the Indian IT infrastructure market – forecasts are currently in the vicinity of \$2.1 billion in 2013, growing 9.7 percent compared to 2012. We're seeing rapid data center implementations to meet the ever expanding server consolidation and virtualization needs, combined with growing data sets and adoption of multimedia applications and mobility.

Amidst the explosion, the data storage industry in India is witnessing a paradigm shift toward clustered storage architectures. In the past, the primary driver behind the adoption of a clustered storage infrastructure was the ability to improve operating performance. As it became increasingly necessary for mission-critical data to remain up and accessible at all times, customers have realized that clustered storage is the panacea to enable non-disruptive operation (NDO) and is therefore more important than ever before.

As IT-as-a-service became a central business driver, organizations realized that they contend with providing consistent and constant service to clients and customers while operating on shared infrastructure. This has become an increasingly difficult challenge with the consolidation of services on fewer and fewer IT components. The result is an exponential increase in the difficulty of scheduling downtime to upgrade or maintain those components.

For some customers, scheduling downtime is not just difficult, it is nearly impossible. They are often forced to postpone service upgrades until maintenance becomes absolutely critical. It often requires far more effort and resources to coordinate the downtime than to execute the actual event. In the interim, they are stuck operating with reduced capacity and/or hampered performance levels.

Many of these customers didn't realize

NDO is even possible. Until they are shown how clustered storage infrastructure will allow them to move and redistribute data without limiting access, many assume that downtime is just an unpleasant and unavoidable business reality.

Besides, organizations previously viewed unplanned downtime as their biggest concern; today's business technology leaders increasingly realize that planned downtime -- for upgrades, routine maintenance, or to scale -- is not only more common but also far more disruptive.

Clustered storage has the potential of changing the rules of how data is stored, managed and accessed. Trends driving the movement to clustered storage are modular scalability in the multiple dimensions of capacity, performance, manageability, non-disruptive operations that eliminate planned downtime requirements, and the complete agnosticism of clustered storage infrastructure to access protocols, as it supports all popular SAN and NAS protocols.

The manifold benefits that clustered storage offers has made businesses realize that with its adoption, they can reduce storage costs, increase workflow productivity, increase the IT operating leverage and unlock new revenues.

Clustered storage has driven increasing adoption among organizations to scale their data infrastructures out (horizontally) as opposed to exclusively scaling them up (vertically). Clustered storage was traditionally assumed to be primarily, or even only, appropriate for enterprise-level businesses. The ever-intensifying explosion of data and the changing role of IT operations, however, are motivating more midsize and even small businesses to investigate the advantages of clustering.

The cost equation

Some organizations assume that the cost



If an organization has a large amount of data but few CPU requirements, it could be more likely that scaling up will work better



of clustered storage outweighs the benefits it offers. When we do the math with them though, we often find that clustered storage offers significant savings. For example, rather than deploying a single high-end controller to operate on a workload, it can sometimes be far more efficient to add multiple clustered nodes that are less costly. With this approach, we have seen savings of as much as 60 percent on capital expenses while also improving performance and enabling NDO.

That said, although a clustered environment is often compelling, sometimes it is not the most appropriate data storage solution for an organization. We always advise businesses to assess their actual application and workload needs to see if clustering is right for them.

Here are a couple of -- highly simplified -- thumb rules for IT managers weighing the adoption of clustered storage. First, for organizations that

employ workloads generating a high ratio of CPU computations relative to the amount of data, scaling out with a clustered storage environment is often more efficient and more cost effective, because it drives down the cost of the CPU resources. If an organization has the inverse ratio -- a large amount of data, but few CPU requirements -- it could be more likely that scaling up will work better.

Second, for organizations that have highly shared infrastructure where availability is critical, the NDO features of clustered storage can be particularly

For organizations that have a highly shared infrastructure where availability is critical, the NDO features of clustered storage can be advantageous

advantageous. Communicating pain points and business needs to a trusted solution provider partner, will allow their engineering teams to design a system based on which workloads function better on a horizontally scalable solution as opposed to a vertical one.

As explosive growth of data now impacts more organizations across more business segments than ever before, the benefits of clustered storage have both dramatically increased and become increasingly affordable. It's not always the most appropriate platform for all businesses -- no technology ever is. But, as more companies learn about clustering, and how it could work for them, we have seen that many are pleasantly surprised to discover that it is an affordable and extremely powerful solution to their data management challenges.

Santhosh D'Souza is Director of Systems Engineering at NetApp India.

SEE THE DATA



Data visualization tools can help most organizations tackle their big data woes. Here is a look into what makes them attractive

BY JASMINE DESAI

There's an old saying, "A picture is worth a thousand words." In today's fast-paced decision-making world this adage certainly holds true. The question plaguing organizations is, How can one comprehend and communicate something visually much faster than textually or numerically? This is where data visualization steps in.

In the Forrester Wave report titled Advanced Data Visualization (ADV) Platforms, Q3 2012, authors Boris Evelson and Noel Yuhanna quote data visualization expert Edward Tufte, who once said, "The world is complex, dynamic, multidimensional; the paper is static, flat. How are we to represent the rich visual world of experience and measurement on mere flatland?" Indeed, say Evelson and Yuhanna, there's just too much information out there for all categories of knowledge workers to visualize it effectively. More often than not, traditional reports using tabs, rows, and columns do not paint the whole picture or, even worse, lead an analyst to a wrong conclusion.

Also, all data points cannot be fit into a single data screen. Even with the smallest font and single space, one cannot fit more than few thousand data points in a single page. Imagine a drug trial by a pharmaceutical organization, where each patient has thousands of attributes. Here, analysts will need to look for patterns that will need them to run through thousand of complex statistical models. But building such models and running through millions of rows of data can be very time consuming and taxing. The idea to use data visualization techniques is to make research more effective, and data more actionable.

For the key business decision makers, it is important to view results of analysis, interpret it and actionize on it on real time basis. Sandeep Bhagat, Principal Architect, Big Data & Analytics at Infosys mentions, "The need of the hour is to give organizations these insights in an intuitive and appealing mode. Hence, data visualization is playing a critical role in protecting the results of analytics process."

Organizations have multiple reasons to embrace these tools. According to



Data in the visual form simplifies 'data value' and helps users to understand and communicate important concepts, ideas and analytics.

Phillip Beniac,
Regional Vice President -
APAC, QlikTech



Beyond platform identification, it is also important to identify data visualization best practices.

Sanchit Vir Gogia,
CEO & Founder,
Greyhound Research

Sudipta K. Sen, Regional Director – South East Asia, CEO & Managing Director, SAS Institute (India). "It empowers them to drive analytics as a strategic business initiative and a competitive advantage, by empowering senior management and business users with quick, easy to understand and valuable insights."

It is easier to understand data represented on dynamic dashboards in a visually attractive and easy to use form, as opposed to reading the same from tables. The analytical results for complex problems can be very intense and comprehensive. A traditional electronic spreadsheet cannot visually represent this, and what one needs are the right tools that can visually represent data. The goal is to understand the information – visuals make that much easier. Phillip Beniac, Regional Vice President -APAC, QlikTech giving his view mentions, "Data in the visual form simplifies 'data value' and helps users to understand and communicate important concepts, ideas and analytics."

It enables organizations to see the trends and patterns in the data that are not as easily identified in rows and columns of numbers. Good visualization provides a way to explore, understand and communicate the data, along with actions that the data indicate should be taken. Rajesh Shewani, Technical Sales Leader, Business Analytics, IBM India/SA says, "It gets challenging when one has to explain issues and results to decision-makers which makes data in visual form, useful for organizations in order to gain insights from the analyzed data and improve decision-making."

Selecting a data visualization tool

Identifying the right data visualization tool is a complex process as it does not only encompass technology. According to Shewani of IBM, "Often specialized skills and elaborate infrastructure are required and cannot be undermined when it comes to selecting data visualization tools." Being familiar with the types of data that organizations work with, makes it possible to identify and discuss them relative to various visual properties. The types of data that you can

encode in visualizations include categorical, quantitative, ordinal, time, location and relationship. Companies can efficiently tap the information, both from inside and outside, and with proper tools in place; they can create their own thoughtful data visualizations.

According to Beniac of QlikTech, “The visualization tool should integrate well with all mobile devices. The tool should enable business users to remix and re-assemble data in new views on their own and in groups and to create new visualizations for deeper understanding. People do not make decisions in isolation; the visualization tool should foster communication and collaboration.”

As per Sen of SAS, “A data visualization solution should be capable of analyzing complex data to develop patterns, relationships and forecasts and present the insights in a manner that is easy to understand by the non-technical business users.”

One has to look beyond technology as well to get the right fit tool. Explains Sanchit Vir Gogia, CEO & Founder, Greyhound Research, “Beyond platform identification, it is also important to identify data visualization best practices.”

Data visualization market still not being mainstream, finds vendor grappling with certain challenges. Says Shewani of IBM, “One of the biggest challenges faced in the Indian market is that since visualizations have already moved to the mobile device, it becomes important to have the right network infrastructure to support this.”

One of the most crucial tasks from BI and analytics perspective today is how does it permeate across the organization. According to Beniac of Qlikview, “Duplication in reporting, delayed response times across departments and inability to create an easier, more effective reporting process are some of the challenges that we grapple with.”

Data visualization seeps in slowly

Analytics is seen as a competitive edge and non-technical business users and senior executives are also keen on using it. This makes data visualisation a key solution in terms of providing a simplified



A traditional electronic spreadsheet cannot visually represent this, and what one needs are the right tools that can visually represent data.

usage platform that enables users to derive insights quickly and easily.

According to Gogia of Greyhound Research, “The Indian market is still in a very nascent stage. Mid-market and small businesses do not even use data visualization unless it comes embedded as a part of CRM or ERP. It is not often that they buy these simulation and data visualization tools.”

The market is definitely propelling towards adoption. Mentions Bhagat of Infosys, “Adoption of visualization tools is gaining traction. For example, businesses involved in logistics make extensive use of location tracking mechanisms and over-laying this on top of geospatial applications to ensure real time tracking of goods.”

Another example would be of Gitanjali Group which utilizes SAS Visual

Analytics, which is an in-memory data visualization solution with an aim to streamline its operational and supply chain processes. With this respective data visualization tool, users at Gitanjali Group can execute analytic correlations on massive amounts of data rapidly in just minutes or seconds and at the same time, have instant access to reports via the Web or mobile devices. Users at Gitanjali Group can simply drag and drop business parameters to quickly generate insightful visual reports and manage the demand and supply chain across various brands.

There is little doubt that in the foreseeable future, data visualization tools will play a significant role in shaping the decision making processes of organizations across industries.

jasmine.desai@expressindia.com

DARIN BARTIK
DELL

Darin Bartik, VP & GM, Database Management, Dell, shares insights into the company's business intelligence solutions, BI trends in the APAC region and the gaps that exist in the market, in an interview with Jasmine Desai.

“The gap is between the push and pull [of data]”

What are the trends in the BI space in the APAC region?

Like technological trends go, it tends to flow from North America to Europe to APAC. Most of our customers are working on how do they grow their business at fundamental level (infrastructure, network, bandwidth, etc.). But presently, they are getting around to the BI conversation in a much more robust way, partly because the trend is there. The benefit of the big data trend is making people think about it. We are still in the hype cycle and it is making organizations re-think the way they approach BI and analytics. The way many of our customers approach it, is similar to the way they had approached ten years ago in North America and Europe. The whole process causes lot of delay. There is a gap that exists here between IT and the business group.

In APAC, businesses are changing so rapidly that the gap is felt even more and they are not satisfied with what IT provides. They are thinking in terms of how can the IT group be more adapted to business. Larger organizations tend to have more BI tools, and the standardization that they try to create only widens the gap. While small organizations, are just thinking about data warehouse. They are just getting past Excel spreadsheet and moving to Excel BI tool.

What are the gaps in BI solutions right now that Dell is trying to fill up?

The gap between current BI capabilities and what we are trying to address is what some other organizations are trying to address as well, but many of them are doing so only from one angle. IT will try to standardize and control the situation, line of business (LOB) will adopt their own BI tools called as self-service BI tools. But these compete with other larger BI tools. It is not going to be one tool or nothing. There are going to be series of tools and we want to help customers leverage what they have invested in the existing framework. We help them to report and analyze the data that may be sitting in data warehouse, in traditional databases, but also we can pull data out of the existing BI systems,



If an organization is using a cloud tool, the data has to go to the cloud environment where there could be bandwidth and network issues. If there is a large amount of data then moving that data to the cloud makes it challenging. Data is a valuable asset and giving it over to third party is a risk

preserve the meta-data layer and pull the data together so it provides a more unified view. The gap is between the push and pull.

What is your view on cloud BI and its uptake?

Cloud BI is not taking up as fast as compared to the hype around cloud and BI. If an organization is using a cloud tool, the data has to go to the cloud environment where there could be bandwidth and network issues. If there is a large amount of data then moving that data to the cloud makes it challenging. Data is a valuable asset and giving it over to third party is a risk. There are other ways to do it. Organization can have a tool sitting in the cloud, which reaches into an organization's environment using a web-based interface. However, here the data resides in the organization. Cloud BI tools can be restrictive in nature.

How is Dell doing Hadoop integration?

The advantages of Hadoop are not only in terms of speed and power that it provides, but also the analytical benefits. Our drive is to make these capabilities easier for organizations that do not have Hadoop knowledge. They do not have to know the ins and outs as much as they have to know what they are trying to accomplish. That is the capability we have with Kitenga and big data analytics.

It is giving the power of doing sophisticated analytics, while data is sitting in Hadoop cluster. We have optimized the Hadoop distributions on Dell hardware with our services. We implement them as per customer requirements and wrap Kitenga around it for analytics. We announced the launch of Shareplex, a capability that we released as a high-speed replication of data moving from Oracle to Hadoop. If a customer is using Oracle as a transactional database sitting behind critical systems like SAP ERP, then in a very real-time and high speed way, it replicates the data in Oracle and moves it over to Hadoop so that organizations can do analytics.

jasmine.desai@expressindia.com

FROM COWS TO CLOUD

Chitale Dairy has utilized the power of technology for some rather unusual purposes. So, what is the connect between cows and cloud computing?

BY MEHAK CHAWLA

When Chitale Dairy started its IT journey back in the 80s, little did it know about technology's potential to change dairy production and its impact in rural India. Today, as the organization completes 74 years of existence, using technology for a positive impact has become its operational mantra.

"Dairy contributes a significant revenue to rural India and we thought that if we could transform dairy operations using technology, we could have a significant impact on rural India,"

explains Vishvas Chitale, Partner and CTO of Chitale Dairy.

From this belief has stemmed an array of technology driven initiatives. "We have always used technology to stay ahead of the curve. We started on our tech journey several years back with an ERP for billing. The idea was to do more with less. Also, we have always tried to use best of breed technology. We believe that survival is difficult for organizations who do not innovate with new technology and business ideas," details Chitale.

It was about five years back that the

organization realized that they cannot go on increasing their hardware sprawl. As a result, they decided to virtualize. According to Chitale, they were the first in their industry to virtualize. "Since we already had Dell boxes, it made sense for us to go with them. Also, Dell had a modular approach, they have servers that can be populated as per our will and don't need continuous investment. We started with scalable architecture and that's where Dell pitched in."

Today, the dairy has about 40-50 servers, and everything from processes





We thought if we could transform dairy operations using technology, we could have a significant impact on rural India.

Vishvas Chitale,
Partner and CTO, Chitale Dairy



to enterprise applications, is virtualized. The company is also running its own private cloud in its in-house data center.

Do-IT-yourself

As the private cloud and own data center indicate, Chitale Dairy has been following the in-house IT approach. Part of the reason for this is that when they started their IT journey, there were hardly any options available the market.

“We have been developing our apps since 80's because back then, there were hardly any apps available, more so, for

our vertical. We used to do programming using Qbasic, which is all but redundant now,” recalls Chitale.

As of now, Chitale Dairy has an IT team of five people. They have the complete Lamp stack running at the back-end and it's all open source. Lamp is short form for Linux, Apache, MySQL and PHP. The Lamp stack refers to a combination of these four open source software that are used to build web servers for hosting websites or data. Also, all their apps are Web 2.0 compliant and written in PHP. Since it's all open source, the cost of

Today, the dairy has about 40-50 servers, and everything from processes to enterprise apps is virtualized. The company is also running its own private cloud

ownership is very less in terms of software applications, says Chitale.

There are some innovative, in-house solutions that the organization is running. Take for instance their logistics management system. Explains Chitale, "We do about 10-20,000 km everyday. Because logistics play a very important role in ensuring distribution, we decided to implement a logistics management system. All our vehicles are tracked in real time. We also keep our distributors updated on the location of their goods."

Chitale Dairy also tries to replicate their technologies for their call centers, that they have opened up to assist the farmer community. The whole idea was to share information in the local language. They are using SMS heavily to convey information to farmers in the form of to-do lists.

As far as hardware goes, Chitale believes that investing in best of breed, scalable hardware is any organization's best bet. He says that with Dell's storage solutions, his manageability woes have gone down drastically. "With Dell's Fluid architecture, we don't feel the need to physically go down and see the storage boxes. We get a mail every month with all that we need to know. We are choosy about our hardware performance and realize that too much tech can be a problem sometimes."

Animal lifecycle management

Although there are many technology innovations that Chitale Dairy has done, one that particularly stands out is their animal lifecycle management project, or as Chitale describes it, their "Cows to Cloud" initiative.

Though not many would have heard of a process like this, for Chitale Dairy, it's an everyday affair. Under this project, the dairy has tagged about 10,000 cows with RFID tags and is using the data generated for better mating and lifecycle management of the animals.

"We have been able to improve genetics and do selective breeding with the help of data mining. One million calves have been born using this technology," beams Chitale. They also got a US \$50,000 grant from World Bank for



this project. "In the west, each animal has an ID. We are trying to create a similar model for India," he says.

Per animal productivity is very low in India, when compared to the West, despite having the same amount of feed. It is very important to have better genetics for improving productivity. "So, we started working towards improving this generation by generation. We started running a program called genetic mating system (GMS), which is all hosted on our cloud. We try to rate cows according to several parameters and give them the best match that negates some of their issues. All this is coming from the data and data analytics," elaborates Chitale.

The project has seen some heartening results too. "The national yield average of Indian buffaloes is about 800 liters (from one lactation cycle to the next). We maintain a minimum average of 2500 liters for our buffaloes. All these animals are fed, bred and monitored by computers," declares Chitale.

The dairy started their pilot with PDA devices but animals ended up destroying those PDAs. So they decided mobiles are the best end point solutions. As a result, all information regarding animals ranging from their diet to the seasonal care that they need, are now delivered to farmers via messages. Chitale has also tried to make this project self sustaining. "We try to sell this information to pharma companies, drug manufacturers, to insurance companies. So its a self sustaining model," he says. As of now, Chitale Dairy has 10,000 animals and five people manning them, under this project. They plan to increase this number to 50,000 animals in the near future.

According to Chitale, the government, both at the central and state level, is considering their initiative very seriously and trying to create a sort of data network of animals.

Future-ready

Chitale Dairy has a slew of IT projects that are ongoing. Take for instance their initiative for their retail outlets which they have recently deployed. All their retail shops in Pune had been automated with RFIDs long ago. Now, the dairy has introduced limited credit card kind of concept in these shops wherein, when customers enter the shop they get a smart card. Any transactions they do are processed via the card and at the exit, they just surrender the card and get the bills. They don't have to pay at every counter. "One has to treat IT as a business enabler and not a cost center. Only then will the justification of RoI come," emphasizes Chitale.

As a further evolution, Chitale aims to do business process automation and try to bridge the gaps between factory world and financial world by creating an ecosystem for unified flow of information. "We are trying to build intelligence tools which shall enable us to give information back to the production people. We want to decentralize information. Yes, creating dashboards for so many employees is a task but we are trying to make it simple and standardized," he reveals.

Chitale believes that one area he has had it easy is the fact that he is himself managing the IT function of his organization. Otherwise, he admits, funds can be a challenge for IT heads. The big challenge that he has faced at several junctures is trying to strike the right balance between hardware and software. "If we invest too much in the software, we were left with very less for the hardware. So we're always at a crossroads there. We decided to invest in good robust hardware where we could achieve cost realization in terms of applications. And we focused on open source to build efficient and scalable apps," he sums up his mantra.

mehak.chawla@expressindia.com

SAM FENG
LOGITECH

Sam Feng, Director, Unified Communications, Logitech, talks to Mehak Chawla about the company's enterprise products, strategies and trends in the Indian enterprise space. Excerpts...

“Our strategy is to ensure that our peripherals work well with all platforms”

Logitech has always been known as a consumer product company. Why did you decide to venture into the enterprise space and what are the opportunities you are looking to tap?

Most people know Logitech only as a consumer product company. About a couple of years back, we realized that we were missing out on the big enterprise opportunity by ignoring the corporate customer. We realized that even though their needs were different, quite a few enterprises were already using our products in a standardized way. So there was a big opportunity that we saw and we wanted to address that market.

There are a couple of ways we looking to go about it- one is certainly addressing the unified communications (UC), video conferencing (VC) and instant messaging (IM) category. UC has got a very broad definition. Enterprises often have very diverse UC strategies. For Logitech, it is mostly about enabling people to do UC. By enabling, we mean the man-machine interface. If we think about a UC software, each one is a little different in terms of simple functionality like answering calls or answering calls with video etc. With our products, we have basically tried to make it as simple as possible. We have inculcated hard answer and end keys. What happens in a lot of scenarios, is that there is so much going on with a system that the UC software often gets buried down or lost in the middle, so people don't even realize they are getting a call. It is these simple things that we have tried to resolve through proactive hardware. We have built features like incoming indicators and one button answer into our offerings.

What kind of technology partnerships with OEMs and other stakeholders are you looking at?

We are a Swiss company and we are very neutral, and we work with as many platforms as possible. Our products are certified not only for Cisco, but for Microsoft Lync, Skype, QQ in China, etc. That's what our strategy has been so far — to ensure that our peripherals work well with all platforms. We adopt established standards where we can, like for our webcams. Most of our peripherals are USB based and



What are the trends in the Indian enterprise space that you want to capitalize on?

Customers today are using a lot of platforms which are not scalable as per their communication needs. For example, we do have several video chat options for enterprises, but in the enterprise space, video needs a lot more infrastructure. With our headsets, webcams and keyboards, we are trying to deliver a seamless experience with limited challenges, something that's not possible today.

that certainly helps.

One of our new products, a bundled keyboard, mouse and webcam, that we have developed exclusively for Cisco (Logitech UC solution for Cisco 235-C) is unique because Cisco approached us to build this. Having invested so much in their Jabber offering, they wanted a hardware that simplifies its use — so this offering is exclusive to Cisco. The keyboard too is a USB enabled product that works with a Cisco Jabber client PC, and enhances the experience.

If you however look at our webcams, new conference cameras or headsets, they are all platform agnostic. They are certified and compatible to work on multiple platforms.

Are you tweaking your channel strategies for the enterprise space?

Yes, we are utilizing some of the more evolved consumer channels for our enterprise products. We intend to develop more channels. Enterprise approach works both ways, directly as well as indirectly, but they are serviced through our channel partners. We believe that enterprises are beyond that stage where the platform needs to be made comfortable for the end consumer. We are targeting enterprises who either already have a UC, VC suite or are just starting their journey. We don't see too much competition in the kind of products that we have come up with.

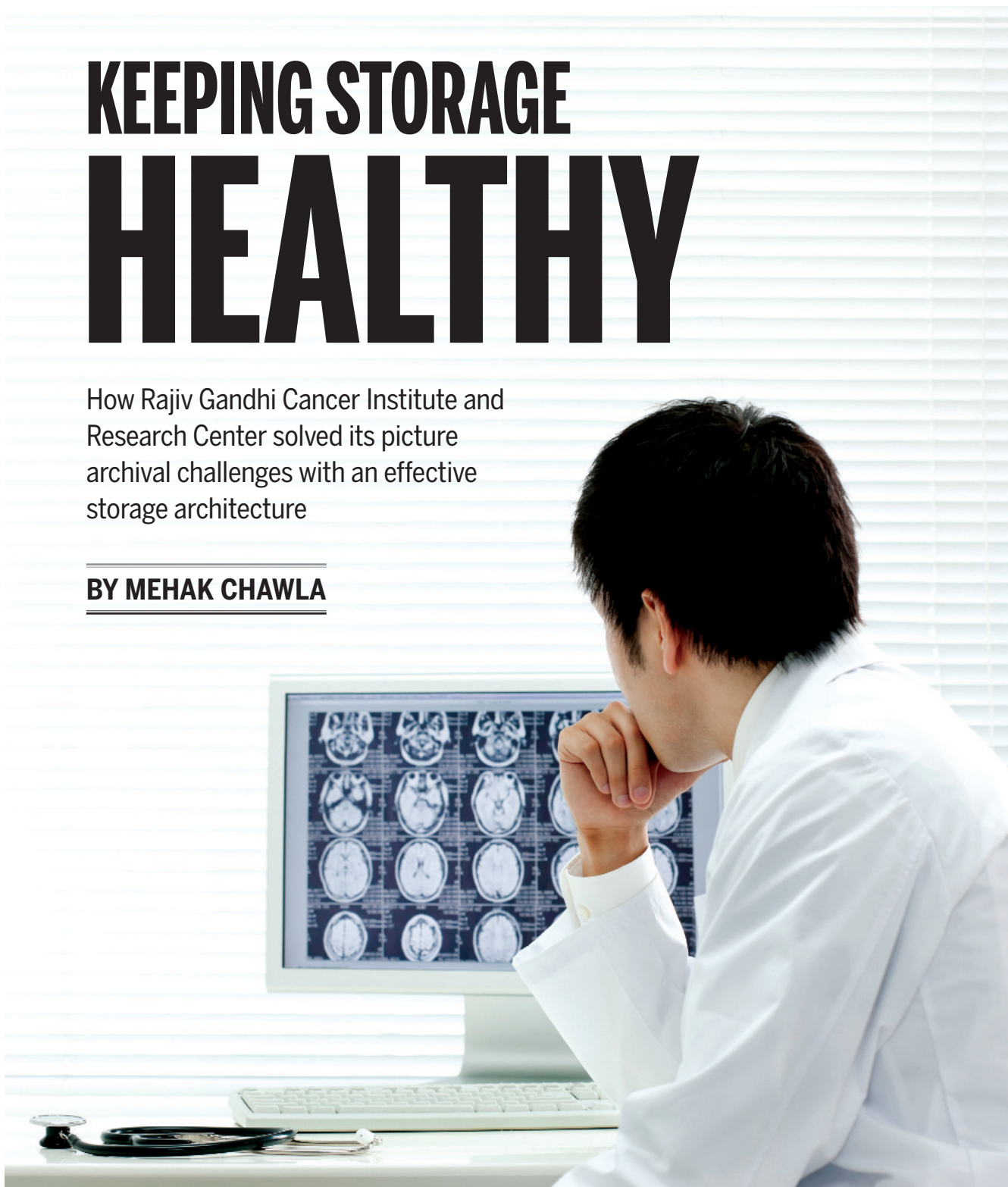
Our approach will be more educational to begin with. We want to engage in conversations and demonstrations to show our quality, both with the enterprises and channel partners. Though video has been a potential growth area for quite some time now and though the space is evolved and crowded, no vendor has put much thought on the video communication peripherals side. The right products have not reached the enterprises. That is where Logitech is looking to position itself. We are also looking to build in some advanced features like desktop sharing in our products, in the near future.

mehak.chawla@expressindia.com

KEEPING STORAGE HEALTHY

How Rajiv Gandhi Cancer Institute and Research Center solved its picture archival challenges with an effective storage architecture

BY MEHAK CHAWLA



When it came to having a technology backbone, the IT infrastructure of the much renowned Rajiv Gandhi Cancer Institute and Research Center (RGCI) was rather primitive. Then, in 2009, the medical establishment realized the need for a major revamp, because the extremely slow systems were affecting patient care and productivity. So, not only did the institute change its hospital information system (HIS) but also the entire IT infrastructure—under a project called Transcend (Transformation of service effectiveness and delivery).

J.P. Dwivedi, CIO, RGCI, explains, “We decided to focus on three key areas: improving clinical information systems, enhancing our HIS, and finding a productive way to deal with picture archival and recovery.” The institute evaluated various options and finalized Dell as its technology partner.

The picture problem

In the year 2010, RGCI deployed EMC storage (Dell was marketing EMC then). They purchased storage with about 20TB space then. However, by 2011 Dwivedi realized that they were almost out of space. “It was then that we started looking for a long term solution for picture archival.” The center needed a storage management system that could scale to meet the capacity needed for data intensive images and records.

As a cancer hospital, it was impossible for RGCI to foresee or draw a pattern to patients’ visits. “A patient may visit us the next day, after a few weeks, and maybe after 10 years,” says Dwivedi.

This means the data containing patient medical records and images needs to remain highly available rather than becoming less accessible within archival solutions such as tape libraries. “The biggest challenge in our industry is that we cannot relegate images to secondary storage as they need to be readily available, through convenient access.”

The implementation of the Fujifilm Synapse PACS medical imaging system (that enable RGCI staff to store, view and share images electronically) has provided many benefits including instant access to

images to track patient history, and elimination of deterioration in image quality that can occur with film. However, PACS is a data-intensive system and the center’s current storage area network (SAN) was reaching its full capacity. “We wanted to deploy an integrated platform that would support HIS, electronic medical records, and PACS. During planning, we realized that our current storage solution didn’t have the scalability or the price-to-performance ratio that we needed based on our predicted data demands,” says Dwivedi.

With an existing relationship with Dell for the supply of almost all server room components, RGCI evaluated storage management systems from EMC, HP, and Dell Compellent against 40 parameters. Dwivedi says, “The evaluating committee selected Dell Compellent as the most suitable storage solution for our requirements. It delivered on its competitive price-to-performance ratio promise, and the highly scalable architecture meets the expanding data needs of our medical systems,” says Dwivedi.

“Our major reasons for going with Compellent were that it is open ended and can easily scale up to 2 petabytes,” says Dwivedi.

The solution

The institute deployed a Dell Compellent storage solution and Dell PowerEdge servers to deliver a stable, scalable platform for the hospital information system, picture archival and communication system (PACS) and electronic medical records.

“After a thorough consideration of our needs, we bought a 50TB of storage from Dell and implemented the new storage architecture in November 2012,” elaborates Dwivedi.

RGCI deployed a Dell Compellent storage array and Dell PowerEdge R720 servers powered by Intel Xeon processor E5-2600 product family to run PACS on an Oracle database, with Vista (Veteran Affairs Information System and Technology Architecture) being used for electronic health records.

As a result of this implementation, RGCI can store medical images and



We decided to focus on three key areas: improving clinical information systems, enhancing our HIS, and finding a productive way to deal with picture archival and recovery.

J.P. Dwivedi,
CIO, Rajiv Gandhi Cancer Institute and
Research Center

The medical images can now be quickly shared between consultants and remain highly available during the course of the diagnosis and treatment



patient records electronically, which can be instantly compared to previous images. These images can be quickly shared between consultants and remain highly available during the course of the diagnosis and treatment. "Having medical images and patient records accessible online, reassures our patients because their surgeon is aware of all their history before making an informed decision. With our Dell Compellent storage management system, we have eliminated the potential for image deterioration and patient records can be quickly accessed to ensure treatment begins immediately," says Dwivedi.

He also reveals that with this solution and its scalability options, RGCI is prepared to meet up to seven years of projected data growth. "We can meet our data volume forecast for the next seven years by simply adding more controllers and disk space without incurring license fees or the cost of expensive components required by other solutions," says Dwivedi.

RGCI did not face any major challenges during the implementation because they contracted Dell to do everything. "Our point of contact was solely Dell," explains Dwivedi. Though data migration did require a lot of planning, it did not prove to be very challenging for RGCI. The implementation cycle was about a week

TECHNOLOGY AT WORK

Hardware:

- Dell Compellent Storage Center
- Dell PowerEdge R720 servers with Intel Xeon processor E5-2600 product family

Software:

- Dell Compellent Dynamic Capacity
- Dell Compellent Enterprise Manager

to 10 days. "The biggest advantage with Dell is that we get excellent service levels," adds Dwivedi.

Virtual future

RGCI has already started with server virtualization (on VMware) and they are looking at virtualizing storage too, in the near future. Though they are effectively managing storage through the Enterprise Manager, Dwivedi believes that virtualization will bring more transparency into their storage

infrastructure.

Where previously storage was provisioned up front based on estimated size volume, now disk space is only used when data is written. Dwivedi elaborates, "We no longer pre-allocate space which could be used for another urgent need because Dynamic Capacity thin provisioning software delivers a realistic picture of available space rather than provisioned disk space."

According to Dwivedi, RGCI did not see many tangible differences in the performance. "We were early movers and thus were still maintaining good speeds and access timings on the old storage when we decided to migrate," he explains. Also, as of now, RGCI is only using about 20TB out of their 50 TB storage, so the response time is fairly good.

Another thing high on their agenda is another instance of Compellent, for easy replication and a cost effective disaster recovery. "We do have a disaster recovery site with CtrlS. However, replicating from Delhi to Hyderabad is proving to be very cost-intensive for us. We realized that if we do our backup from Compellent to Compellent, it would not only be simple, but also very cost-effective. We are also planning to shift from manual back-up to an online module in the next one year," sums up Dwivedi.

mehak.chawla@expressindia.com



5 REASONS TO GO CONVERGED

Taking steps toward convergence now will ensure IT's ability to fulfill exponentially escalating business requirements



IT organizations in future will share information with their vendors on workload, application or general use case, and purchase a pre-integrated platform, or leverage a well thought out reference architecture

Converged Infrastructure does not really need an introduction. A technology concept that is set to change the landscape of enterprise IT, it combines compute, storage, networking, and infrastructure management into an integrated system that provides general-purpose virtualized resource pools for applications, Virtual Desktop infrastructure (VDI) and private clouds.

A good way to explore this concept is to consider the customer paradigm. Generally, organizations are looking to custom-design their data centers on their unique enterprise architecture requirements. But this requires lengthy procurement, custom integration, custom validation and testing, and, ultimately, custom management. But how necessary this is, is something to ponder about.

Successful IT organizations in the future will share information with their vendors on workload, application or general use case, and purchase a pre-integrated platform, or leverage a well thought out reference architecture, to run them.

This might mean employing a high-end platform to run SAP, a mid-range platform with extra storage to run SharePoint or a robust general virtualized platform to run the multitude of applications with more general requirements.

These platforms will more than likely have similar underlying infrastructure components, but the real value will be in the way they are optimized to tackle a particular use case.

The following are 5 reasons to make the move to a converged infrastructure:

1. Gain essential advantages

immediately: Convergence is not an all-or-nothing proposition. It can enable focus on a specific pain point such as the coordination of virtual machines and disk arrays now and bring networking into the

automation mix later. This incremental approach lets an organization validate their strategy with quantifiable wins that they use to get broader buy-in for longer-term convergence strategy.

2. Start with existing infrastructure:

Convergence does not require immediate replacement of any existing infrastructure resources. On the contrary, in its initial stages, convergence can focus exclusively on leveraging existing resources through consolidated management and automation.

3. Enables free resources for

innovation: The more a company spends its IT budget on supporting existing applications and services, the less it can devote to real business-enhancing IT innovation. But that kind of innovation has become a life-and-death issue in today's fast-moving, digitally enabled markets. So the time to start driving down OPEX is now.

4. Retain control of IT services: Any delay in a company's move to convergence will just add to the time during which services will "leak" to inadequately governed external cloud services providers. By demonstrating to the business that IT can be more responsive to its needs, companies can minimize this leakage and bring vital discipline to a company's move to the cloud.

5. Expect the unexpected: Surviving an existing infrastructure today does not guarantee a similar outcome in the future. Sudden, unforeseen changes — whether in social/mobile technology, in the global economy, in M&A activity or in the appearance of disruptive competitors — may force responses in ways which can't be predicted at present. Convergence helps mitigate the risk of these unknowns.

S. Sridhar is Director of Enterprise Solutions Business at Dell India.



COLUMN

ANAND SHRIVASTAV

WALLETS GOING DIGITAL

Digital wallets are doing for the payment industry what the Web did for the publishing industry



Next generation mobile wallets would not only bring in more customers on board but would also make them feel more valued and delighted

From transforming the publishing industry to blogging, the Internet has sparked an online revolution with numerous digital tools and modes. A parallel digital disruption has been observed in the payments industry as digital wallets are fast becoming key role players.

A digital wallet is essentially a system that securely stores value along with information and password for making payments online as well as offline. These can be used for making payments or transferring money whether online using computers, mobile or smartphones. Increasingly, digital wallets are being made not just for basic financial transactions but also as a mode to store money usually kept as currency or deposited in a bank.

If the consumer is paying with a mobile device, the process can be as simple as punching the merchant's mobile number and amount and sending SMS to his digital wallet provider to make payment, or swiping card on to a reader attached to a smart phone, using an app, or even holding up their NFC-enabled phone to its reader at a merchant's cash register. For the consumer, the digital wallet is about convenience and simplifying the transaction process, whether to send or receive money. However, despite a lot of technology innovation in this area, the digital wallet is yet to completely reach out to the masses with its widespread appeal as many consumers are still are unaware of it.

We are still in the early stages of innovation and conversion of the consumer financial transaction sector, and the emergence of a digital wallet connected to marketplace is the next act. The definition of a digital wallet continues to evolve as innovations come to market and the term is sometimes used synonymously with "mobile payment."

The adoption of digital wallet/mobile

payment is gaining traction. It is time for businesses to adopt and benefit from this simple yet effective technology.

Operating with a mobile payment feature can add additional layers of customer value and encourage user uptake of mobile money solutions. It facilitates customers to transact anytime, from anywhere, and with anyone with expediency and gives the businesses a competitive edge. For example digital wallets can help farmers, artisans, professionals such as teachers, trainers, merchants or businesses not only sell their products/services but have assured and quick payments.

A digital wallet also holds the user's financial information to identify the customer automatically, as well as shipping information to speed up transactions. The customer also benefits in multiple ways. They do not have to carry wallets with wads of currency or credit/debit cards anymore because their mobile can use the digital wallet. Additionally, complex transactions are no longer needed because the digital wallet allows customers to purchase based on information entered. Merchants can benefit from digital wallets as it is fast, secure, and guarantees payments. Smart phone manufacturers and application developers on the other hand, are continuing to innovate giving more functionalities regularly. The digital wallet design space is particularly interesting because the range of features that can be provided on mobile is endless. Every society today uses some form of currency, so this is an area that would eventually include people from all walks of life.

Digital wallets currently only include mobile financial transactions and the mobile banking aspect. However, there are a few applications currently available, that allow users to show a valid form of identification. The growth of digital wallets today needs to start including the non-transaction parts of a digital wallet



as well. Along with identification, the digital wallet applications need to include other parts of the wallet like loyalty/rewards as well as interoperability. Once everything that needs to be included in a digital wallet has been included, the process needs to be incentivized to encourage people to use a digital wallet.

For sustainable growth, there is need to create a large market so that more retail businesses and individuals take to mobile transactions, thereby enabling trade flows. Currently, the growth of digital wallets today, is still in its early days and sometime away from reaching the scale required for profitability. But it will happen sooner than later.

The promise of a mobile wallet lies in the potential it offers to overcome all these limitations. Consumer can carry an unlimited number of loyalty, membership and financial cards and see at a glance as to how close they are to receiving a benefit or premium. Information

regarding the balance on prepaid and gift cards can be instantly accessed. Coupons can be collected and managed automatically in electronic form and accessed at the drop of a hat, enhancing the customer delight.

Real opportunities come from the ability that the mobile wallet can provide retailers, to deliver offers and information to customers based on who they are, where they are, what they are doing, and what they are interested in –

Digital wallets can help farmers, artisans, professionals such as teachers, trainers, merchants not only sell their products/services but have assured and quick payments

all based on the customer's profile information in their digital wallet. The combination of location-based information and access to behavior data about customer purchasing history and their preferences will enable retailers to meet customer needs in ways that have never been possible before. It will also help retailers recognize their valued customers whenever they are on/around their location and provide them the ability to order remotely, instead of waiting for them to present a physical card when they are in the checkout line.

Next generation mobile wallets would not only bring in more customers on board but would also make them feel more valued and delighted. Mobile wallets not only focus on payments but a whole gamut of financial transactions – all to enhance the overall customer experience.

Anand Shrivastav is Chairman & Managing Director, Beam Money.

GREGORY J. DUKAT
CAMPUS MANAGEMENT CORPORATION

In an exclusive conversation, Gregory J. Dukat, Chairman & CEO, Campus Management Corporation, talks to Pankaj Maru about the company's business strategy, the India facility, trends in education and much more. Excerpts...

“The explosive growth in education in India is very appealing to us”

Early this year, you took charge as the Chairman and CEO. Are you looking at a new strategy and road map for the company's overall business?

In some ways, we are not changing our overall strategy which is to provide world-class solutions to higher education in other markets. But it is focusing specially on the higher value of CRM application and its integration with Student Information System that allows universities, colleges and other institutions to become more effective and efficient.

In the non-higher education market, we have done well in the financial, insurance and other industries, where we have provided world class solutions for relationship management. So I think if anything that is talking what we have done historically and very successfully, is executing some of those things in a better fashion and I think a part of the reason we made a change at the top and I am here, is that we have an opportunity to be more effective and more efficient internally in our execution.

Education is the core part of the company's business. What are the trends in this sector in terms of technology demand and usage?

By taking slices of different markets, we are seeing competition for students; we are seeing the importance of relationships across the entire student lifeline whether it's fund raising or some sort of constituent relationships. We are also seeing a transformation happening where there's competition for students today, which was not in the past.

How strategic is India for the company in terms of opportunities and talent?

It is very strategic for three reasons. One, half of our staff is located here and a big part of our development teams, deployment teams and sales teams are here. Two, we have been very successful in the higher education market here and we think that it is a continuing opportunity for us. And higher education is really transforming in this country and growing just at an incredible cliff. So India is a key part of our future strategy and is probably one of our top 2 or 3 markets worldwide.



Half of our staff is located here (India) and a big part of our development teams, deployment teams and sales teams are here. We have been very successful in the higher education market here and we think that it is a continuing opportunity for us. And higher education is really transforming in this country and growing just at an incredible cliff

How is the higher education segment performing against other segments?

The higher education is our largest segment and is our core business. That doesn't mean we are not focused on the other segments and there are attributes that are common across higher education, financial, insurance and others where they are utilizing our technology and expertise. Higher education has the lion's share of our business globally and in India, but we do serve the international markets in the non-higher education segment as well.

What portion of your business is driven from the India facility?

Almost 40% of our business is international today and we expect that to grow in high percentage. Because of the successes we had in the U.S., India, the U.K., and other places, new doors are opening for us around the globe. And so, I am hoping that we continue to grow more dramatically as an international global company rather than just a domestic US-based company.

Do you have any specific plans for India – for instance, software solutions that suitable for the Indian market?

I think Talisma CRM application has a great applicability in the Indian market and is a terrific success. Also, we have the traditional campus solutions, what we call enterprises/universities and large institutions; along with SmartCampus for the smaller universities and colleges. The explosive growth in education in India is very appealing to us and there is no predominant solution here.

There is a growing acceptance of cloud technology as a delivery model. So how is Campus Management looking to push its solutions or products using the cloud?

We have our next-generation product which is taking our technology footprint and delivering on the SaaS/cloud based model. We have already begun delivering that for several of our customers, and will [soon] have a new release.

pankaj.maru@expressindia.com



Nikom - An ISO 9001 Company and member of IGBC (Indian Green Building Council-CII) has an integrated capability to design and build state-of-Art World class green Datacentres on a turnkey basis for large and medium enterprises. Having successfully designed, implemented, and executed various turnkey datacentre projects for enterprises with server farm space of 200 sq. ft. to 15000 sq. ft., Nikom has won "BEST-IN-CLASS" Award in Asia Pacific Japan Region for their significant contribution in the field of Green Datacentres and Energy Management Solutions. Nikom InfraSolutions Pvt. Ltd. one of the Elite DC Partners of many leading global brands, have been winning consistently and delivering various prestigious Datacentre projects. All the Datacentres and Energy Management Solutions designed, and implemented by Nikom are with highest standards of project excellence, and technical expertise.

OFFERINGS:

- Turnkey Datacentre Implementation Projects.
- Physical Infrastructure Solutions - UPS, DG, Precision Cooling, IBMS, Civil, Electrical, Structured Passive Networking.
- Consultancy & Design for Datacentre Physical Infrastructure.
- Energy Management Solutions.
- Project Management of Datacentre Projects.
- Complete Physical Infrastructure Operation of Datacentre.
- Datacentre Audits and Certification.

SPECIAL OFFERING :

- Xpress DC Solution Services - 48 hours
- DC Infra Blocks Services - 1 hour



**Helping You Realize
Your Project Deadlines....**



Nikom InfraSolutions Pvt. Ltd.

Head Office :
309, Skylark Building 60, Nehru Place, New Delhi-110019, India
Tel. : 09968127604, 09811135559, Fax:41606375
E-mail : info@nikom.in Website: www.nikom.in

SMS NIKOM to 52424;  [nikominfrasolutions](https://www.facebook.com/nikominfrasolutions)

Juniper, VMware to unify virtual and physical networks

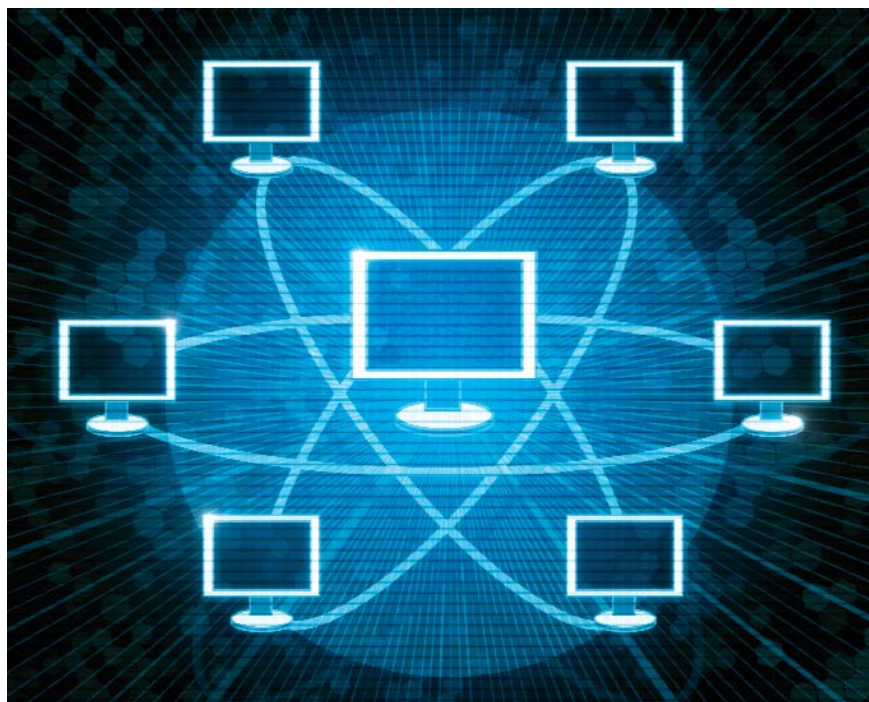
JUNIPER NETWORKS HAS announced that it has expanded its partnership with VMware to deliver a range of solutions for unifying virtual and physical networks within a virtualized data center environment. These solutions, which will include VMware NSX L2 gateway integration and VXLAN routing capabilities across access, aggregation, core and edge tiers of the data center network, will offer enterprise customers seamless management of workflows across virtualized and non-virtualized systems. Juniper Networks' VXLAN routing and gateway capabilities will enable both intra and inter data center solutions and accelerate the transition to software-defined networking (SDN).

The Juniper Networks and VMware partnership represents a shared commitment to delivering simplified, flexible solutions that will enable customers to easily migrate to SDN as their business needs evolve.

Juniper Networks is working closely with VMware to develop a broad range of networking solutions that will deliver VMware NSX Layer 2 gateway functionality to programmatically enable connectivity between virtual and physical network environments.

VMware NSX L2 gateway services will be offered on Juniper Networks EX Series and QFX Series core, aggregation and access switching platforms, and MX Series edge routers, providing customers with unparalleled levels of IT flexibility through support for nearly any virtualized data center deployment scenario. VMware NSX L2 Gateway Services are expected to be available in mid of 2014.

To support multi-tenancy or business continuity/disaster recovery initiatives, enterprises need to route network traffic between virtual networks either within a single or across multiple data centers. New VXLAN routing capabilities on Juniper Networks MX Series and



EX9200 Series switches will specifically address these needs. These capabilities are expected to be available in mid-2014.

Juniper Networks is also working with VMware to extend development of its virtual security product portfolio, to ensure future integration with VMware NSX and new security and networking application programming interfaces (APIs). Juniper's wide range of virtual security solutions for VMware environments can provide customers, the ability to implement a comprehensive network security solution to protect virtual data center assets.

Both companies are developing a validated reference architecture that will provide customers with a proven methodology for architecture and building out a simplified, integrated network framework to support virtualized data centers. This blueprint,

which is expected to be available later this year, will outline technology requirements, best practices and recommended approaches for successfully building a network foundation to support a number of advanced capabilities such as predictable application behavior, streamlined workflow-based configuration and quality of service across physical and virtual networks with ease.

According to Hatem Naguib, Vice President, Cloud Networking and Security, VMware, network virtualization is rapidly transforming virtual data centers today and as enterprises seek to simplify IT by accelerating their use of private and hybrid cloud environments, physical and virtual networks must be viewed and managed as a single unified infrastructure.

Sophos releases server protection solution

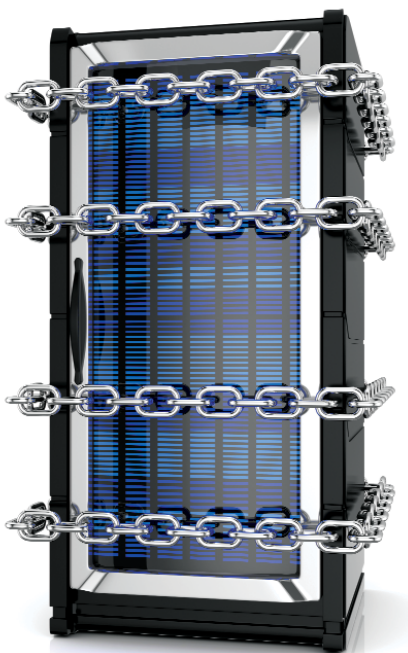
SOPHOS HAS RELEASED Sophos Server Protection, a server antivirus solution that defends data without sacrificing performance. It is the latest entry in a Sophos arsenal that provides security for servers, the network and end-user devices.

Increased migration to virtual servers and the ever-growing threat of attack on critical data are presenting new challenges to IT professionals, as they look to maintain high performance and density of servers, without compromising on security. Sophos Server Protection looks to address these challenges by integrating agentless antivirus for vShield and full antivirus clients for Windows, Linux, Mac and Unix into one centrally managed product.

"Servers need the best protection against malware, but managing that protection while maintaining server performance across a diverse environment has inevitably increased complexity and demands on time," said John Shaw, Vice President, Product Management, Sophos.

"We've delivered on what matters – server performance and security. Sophos Server Protection provides a single, easy to use management console to assign policies, view alerts and generate reports across platforms. Even licensing, often the bane of IT professionals, is straightforward: one server, one license, any platform," added Shaw.

Standalone and virtual systems will use fewer resources with Server Protection than with conventional antivirus products. Agentless scanning via vShield endpoint is designed to prevent scan and update storms, automatically protecting every Windows virtual machine on the host through a centralized virtual security appliance. Systems without vShield, will benefit from a full featured client optimized for performance. Advanced features,



including HIPS, application control and device control are also included for select platforms.

Sophos Server Protection supports a wide range of server and virtualization platforms, including Windows, Linux, Unix, Mac, Hyper-V, vSphere/ESX/ESXi and XenServer. It is designed to provide proven protection against known and unknown threats, supported by real-time communication with SophosLabs. The Windows client offers additional layers of security, including HIPS, application control and patch assessment.

"Sophos Server Protection is server security made simple, because at Sophos we believe good security shouldn't have to require the undivided attention of the IT team to make it work. Sophos Server Protection secures your business's critical assets, without sacrificing performance or adding unnecessary complexity," concluded Shaw.

Avaya announces software-defined data center framework



AVAYA HAS ANNOUNCED its software-defined data center framework, designed to deliver productivity, agility and time-to-service enhancements to businesses operating highly virtualized data centers. The Avaya Software-Defined Data Center (SDDC) framework aims to break down traditional data center silos that require weeks or months to turn up an application and replace it with a simple five-step process that takes minutes.

The Avaya SDDC framework includes an orchestration process that combines, customizes and commissions compute, storage and network components. According to Avaya, use of the OpenStack cloud computing platform will allow data center administrators to deploy virtual machines, assign storage and configure networks through a single graphical user interface.

Avaya Fabric Connect is said to enhance the OpenStack environment by removing restrictions in traditional Ethernet VLAN/ Spanning Tree-based networks to enable a dynamic, flexible and scalable network services model. Avaya's Software-Defined Data Center framework is the first phase of Avaya's Software-Defined Networking roadmap.

Panasonic strengthens its display solutions portfolio



(L-R) Vineet Mahajan - Head-Display Products, Panasonic India, Toru Hasegawa-Divisional MD -System Sales Division, Panasonic, Yoshitaka Inuzuka, Senior General Manager- Display Sales Group, Panasonic India with the new products

CONTINUING WITH ITS strong focus on enterprise solutions in India, Panasonic has launched a new range of display solutions, including Professional LED LCD display solutions, Plasma interactive displays for boardroom / classroom and portable range of interactive ultra short-throw, short throw and portable projectors.

The company is pitching these interactive displays as a perfect solution for sectors like healthcare, production, hospitality, education and a wide variety of commercial enterprises, both large and small which depend on integrated solutions to help them manage and interpret the information that drives innovation. From user-inspired design to

advanced engineering, innovation is what sets Panasonic projectors apart from the competition.

"Panasonic has strengthened its focus on the B2B and B2G business since we believe that this industry in India has a high potential. Our aim is to make B2B to contribute significantly to Panasonic's overall revenue by 2015 and keeping in line with the same we are introducing new range of innovative products, manufactured in accordance with evolving needs of our customers mainly in the security and surveillance systems, solutions products and energy solution," said Toru Hasegawa, Divisional Managing Director, System Sales Division, Panasonic India.

"The new products are targeted at enterprises and are designed to deliver high quality results to cater to their creative output requirements. These interactive solutions based on the latest cutting edge technology, will not only enhance the audio-visual experience for users but also bring an acute change in the way information is currently managed and interpreted," said Vineet Mahajan, Head, Display Products, Panasonic India.

"Our goal is to gradually provide the highest-level integrated solutions for a variety of applications so they can serve the public with 24/7 dependability and this launch of multipurpose display products is a significant step in that direction," added Mahajan.

WatchGuard brings UTM solution for Windows Azure

WATCHGUARD TECHNOLOGIES HAS announced its first Unified Threat Management (UTM) solution for Microsoft's Windows Azure cloud computing platform. As organizations worldwide continue to pour vast amounts of sensitive data, applications and services into the cloud, secure data access becomes paramount. Companies can ensure secure cloud access while leveraging WatchGuard's comprehensive and multi-layered defense across network, email, web and content security.

"Windows Azure's cloud scalability, speed and economics make it a compelling option for our customers that want to take advantage of the cloud while continuing to use their on-premises infrastructure," said David Aiken, Group Product Marketing Manager, Windows Azure, Microsoft.

"These customers require secure data access from on-premises networks to the cloud, and WatchGuard's unified threat management platform helps extend on-premises data centers to the cloud while assuring secure access," added Aiken.

All WatchGuard XTM security appliances now offer full support for VPN access to the Windows Azure virtual network service, allowing organizations to quickly and easily create secure VPN



tunnels linking on-premise networks and cloud environments. And combined with its existing Microsoft Hyper-V support (Windows Server 2008 R2, Windows Server 2012, Hyper-V Server 2008 R2, and Hyper-V Server 2012), WatchGuard will now be able to deliver unified threat management for the hybrid cloud, ensuring secure and seamless data access across public cloud, private network and virtualized IT environments.

"Windows Azure is clearly a compelling solution for organizations that are looking to improve and extend availability of their IT services. We are pleased to work closely with Microsoft to bring the same level of comprehensive and best-in-class security that companies rely on for private networks to these growing cloud connections," said Roger Klorese, Director, Product management, WatchGuard.

Microsoft targets SMBs with Dynamics NAV

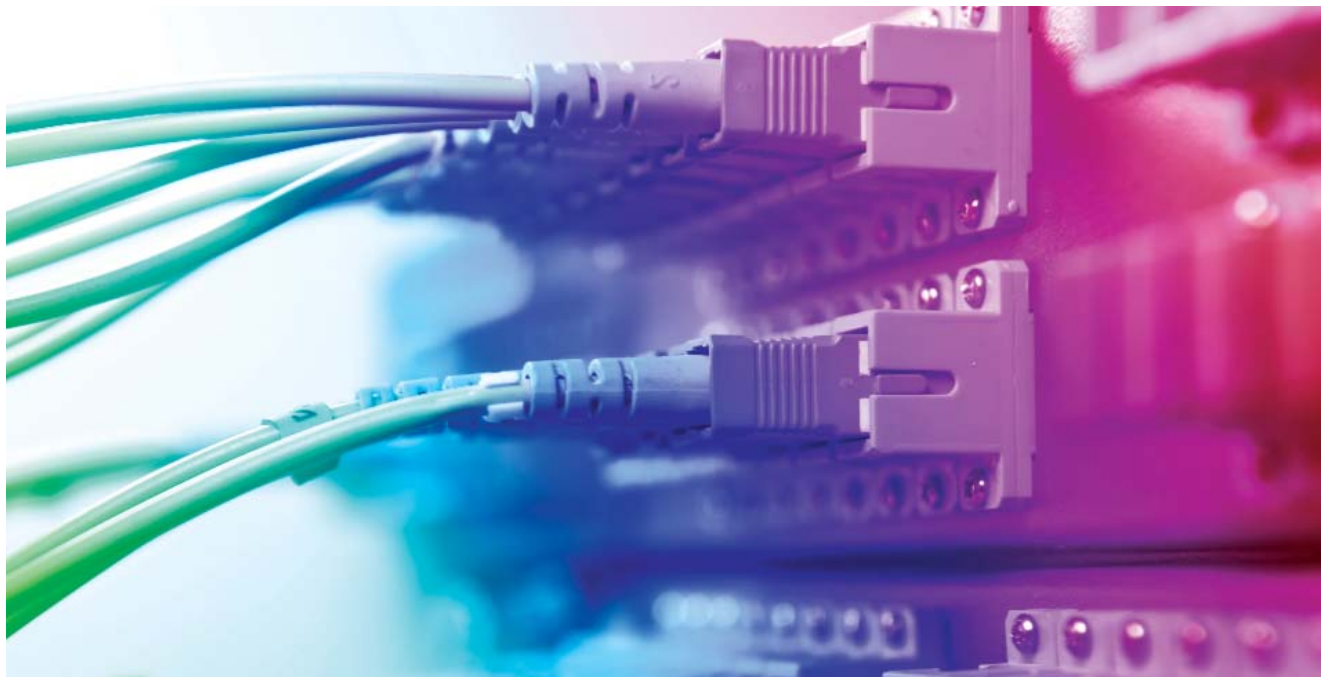
MICROSOFT IS SET to release the next upgrade to its ERP suite Dynamics NAV in October and the new version will be named Dynamics NAV 2013 R2. It looks to add significant new value for small and mid-sized businesses.

According to Microsoft, Dynamics NAV 2013 R2 reflects the company's long-term commitment to the NAV partner community. In addition, it will reflect on



Microsoft's commitment to Windows Azure and to the hosting partner community. Microsoft also offers Dynamics AX, an adaptable and scalable ERP solution that promises to deliver value by enabling large businesses and enterprises to take advantage of business opportunities and reduces risk by easily modifying processes to cater to the new requirements of business.

Brocade, VMware partner to provide better SAN management



FABRIC NETWORKING SOLUTIONS provider Brocade has collaborated with VMware to develop a new management pack that will enable enterprises to proactively manage Fibre Channel storage area networks (SANs) operating within highly virtualized environments to lower operational costs and increase application availability.

Brocade has collaborated with VMware to develop the Brocade SAN Analytics Management Pack for the VMware vCenter Operations Management Suite, which can automatically send real-time SAN health and performance metrics information from Brocade SAN fabrics into vCenter Operations Management Suite.

The integration leverages the unique behavioral learning functionality in vCenter Operations Management Suite to provide useful baseline metrics and trending information for data traffic, as

well as identifying SAN bottlenecks between servers and storage to enable more proactive application performance monitoring. The company believes that this will further simplify SAN operations management and lowers operational costs by reducing the time to troubleshoot issues — thereby resulting in faster recovery and increased availability of VM-resident applications.

"Today IT staff have limited visibility into the Fibre Channel SAN from VMware management tools, leading to more time spent troubleshooting issues and increased downtime, degraded application performance, and underutilized resources," said Jack Rondoni, Vice President, Data Center Storage and Solutions, Brocade.

"With the Brocade SAN Analytics integration with vCenter Operations Management Suite, administrators will

have an aggregated view across the entire virtual infrastructure within vCenter Operations Management Suite, including SAN and storage, enabling them to quickly isolate problems and focus troubleshooting efforts on the right location. As a result, time-to-resolution of issues is reduced from days and hours, to minutes," added Rondoni.

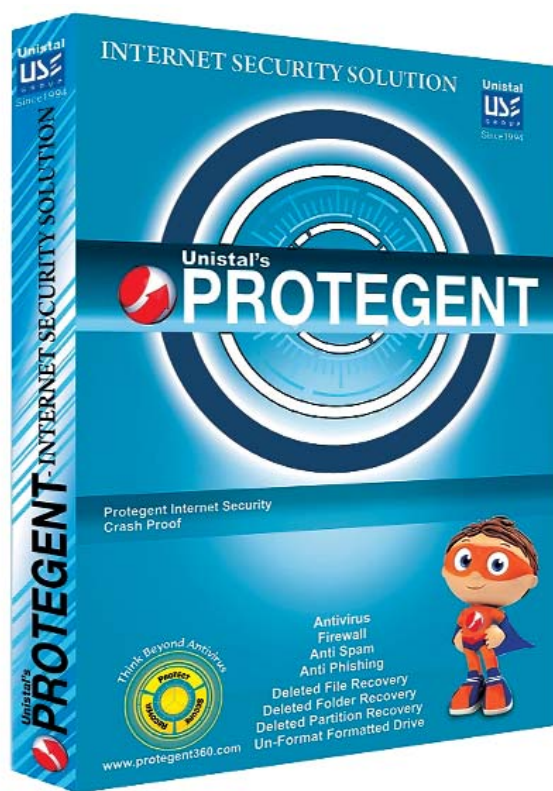
"Storage plays an important role in highly virtualized data centers. With the Brocade SAN Analytics Management Pack for VMware vCenter Operations Management Suite, customers can benefit from visibility that extends into the storage subsystem, simplified management and rapid root cause detection, as well as optimal performance of workloads running in their virtual environments," said Ramin Sayar, Senior Vice President and General Manager, Cloud Management, VMware.

Unistal's new antivirus and Internet security solutions

UNISTAL SYSTEMS HAS released Protegent antivirus solution and Protegent internet security solution, to ensure maximum security, delivered with optimal performance all-in-one, easy-to-use protection for everything users and their family do online - email, socialize, bank, browse, shop and more.

Protegent Antivirus includes features like antivirus, anti-spyware, anti-malware, anti-phishing, active virus control, one click removable device scan, setting protection, game mode, hourly update, web control and USB block. Whereas the Protegent Internet Security, apart from antivirus features also has antispam, two-way firewall, file encryption, file and folder block, personal data filter and blocks ads and website. It claims to provide more than a traditional antivirus software and internet security solution, as Protegent antivirus and internet security solution comes with proactive data recovery module.

"Unistal always visualized the need to think beyond the traditional antivirus suites and provides the security software as per user needs. With these software products, users will not only protect themselves from viruses and internet threats but, will also secure their data. For those consumers on multiple devices who not only want to protect their important data, but also to strengthen



their passwords, secure their photos and memories, and stay safe while on social networking sites - PAV and PIS are perfect all-in-one security solution," said Alok Gupta, Managing Director, Unistal Systems.

Unistal is planning to sell these products in the market through its existing partner network of more than 6000 partners and targeting to sell more than a million licenses of each of them in the first year itself. Protegent antivirus and internet security solution are available at Rs 500 and 1000 respectively.

Amdocs to acquire Actix

AMDOCS HAS ANNOUNCED that it has entered into a definitive agreement to acquire privately held Actix for approximately US\$ 120 million in cash, subject to customary closing conditions. This acquisition expands Amdocs' customer experience portfolio further into the network domain to manage customer experience across both networks and IT. The boards of directors of Actix and Amdocs have approved the transaction which, subject to the satisfaction of the conditions to closing, is expected to be completed by the end of September.

With the acquisition of Actix, an independent software provider of mobile network optimization solutions, Amdocs will be expanding its CES (Customer Experience Systems) portfolio with geo-located network data that will drive a variety of optimization use cases. The deal will position Amdocs as one of the first vendors to offer customer experience driven network optimization based on a holistic view of the customer experience across all networks, BSS and OSS (business and operational support systems).

Geo-located network information provided by Actix's solutions, combined with customer data and capabilities from Amdocs' policy management, BSS and OSS systems, will allow service providers to support sophisticated customer experience use cases and take proactive action based on network performance to modify and improve the experience of a specific customer or group of customers. As a result, service providers will be able to differentiate the customer experience and achieve cost-efficiency with improved automation and optimization of their existing networks, as well as when rolling out new network technologies, such as LTE and small cells.

Intel introduces new data center processor family

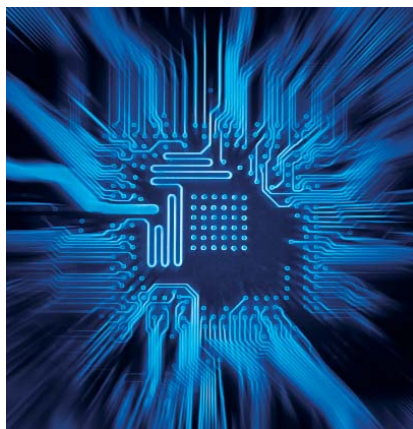
INTEL CORPORATION HAS introduced the Intel Xeon Processor E5-2600 v2 product family, a set of processors that promise to redefine the server, storage and networking infrastructure found in data centers. With greater efficiency and flexibility, these processors will enable the rapid delivery of services for high performance computing, cloud and enterprise segments, and offer compelling new opportunities for telecommunications vendors.

The new Xeon product family is based on Intel's leading 22-nanometer process technology, contributing to dramatic energy efficiency improvements of up to 451% when compared to the previous generation. The processor family also features up to 12 cores and can deliver up to 50% more performance across variety of compute intensive workloads.

"More than ever, organizations are looking to information technology to transform their businesses," said Diane Bryant, senior vice president and general manager of the Datacenter and Connected Systems Group at Intel. "Offering new cloud-based services requires an infrastructure that is versatile enough to support the diverse workloads and is flexible enough to respond to changes in resource demand across servers, storage and network."

Much of the infrastructure today is not architected to support the growth in IT services. Datacenter management is often manual and static. To enable on-demand, automated services, the next generation of datacenters will need to evolve to a "software defined infrastructure" where many of the functions are managed in software. The new Intel Xeon processors provide a common, software compatible processing foundation and possess the features and tools to help transform datacenters for the future.

The Intel Xeon processors E5-2600 v2



product family will power the new IBM NeXtScale System, a high-density, flexible computing platform designed for high-demand workloads such as analytics, technical computing and cloud delivery. Intel's newest processor family also will be used in IBM's new x3650 M4 HD high-density storage server, ideal for managing big data and business-critical workloads, as well as all of IBM's two-socket systems including System x racks and towers, Flex System, iDataPlex, and BladeCenter offerings.

Using Intel's Open Network Platform (ONP) server reference design, customers can use high-volume Xeon-based servers combined with industry open standards to consolidate virtualized networking applications. This will allow them to deliver market leading throughput performance and latency for Software Defined Networking (SDN) and Network Function Virtualization (NFV) workloads. Intel's ONP server reference design is based on the Wind River Open Virtualization Profile and the Intel Data Plane Development Kit Accelerated Open vSwitch. According to the company, HP is an ecosystem partner for Intel's ONP server and switch reference design.

To assist in accelerating the deployment of software defined

infrastructures, Intel also announced Intel Network Builders ecosystem. The program allows ecosystem partners to take advantage of Intel's reference architecture platforms to accelerate SDN and NFV deployments. With more than 20 leading technology companies contributing, Intel's partners will be able to access a comprehensive reference architecture library of proven solutions to build and optimize software-defined infrastructure based on today's telecommunications, cloud, and enterprise datacenter requirements.

The Intel Xeon processor E5-2600 v2 product family is also designed to power cost efficient scale-out, distributed, and software defined storage. From 2012 to 2020 the amount of stored data will double every two years⁵, reaching 40ZB. Fast, on-demand access to this amount of data for tasks such as big data analytics require more intelligent compute and storage intensive solutions, as well as a dramatic decrease in the cost-per-stored terabyte. Dell has selected the new processors for its upcoming storage solution.

Amazon Web Services (AWS) has also announced a new agreement with Intel that communicates the "Intel Inside" brand, letting its customers know that the services it provides are utilizing Intel technologies. AWS services that exclusively use Intel Xeon processors – intended for basic to performance-intensive use cases, will include the brand. AWS plans to add the latest Xeon processor family to its datacenters later this year.

The Xeon processor E5-2600 v2 product family will be offered with 18 different parts which range in price from \$202 to \$2,614 in quantities of 1,000. Additionally, the three single-socket Intel Xeon processor E5-1600 parts will be offered for workstations which range in price from \$294 to \$1080.

Machine-to-machine revenue to touch \$88 billion by 2023: report

MACHINE-TO-MACHINE (M2M) is often portrayed as a nascent industry sector. However, operators are already generating strong revenue in this sector, amounting to \$10 billion worldwide in 2013, and increasing to \$88 billion by 2023.

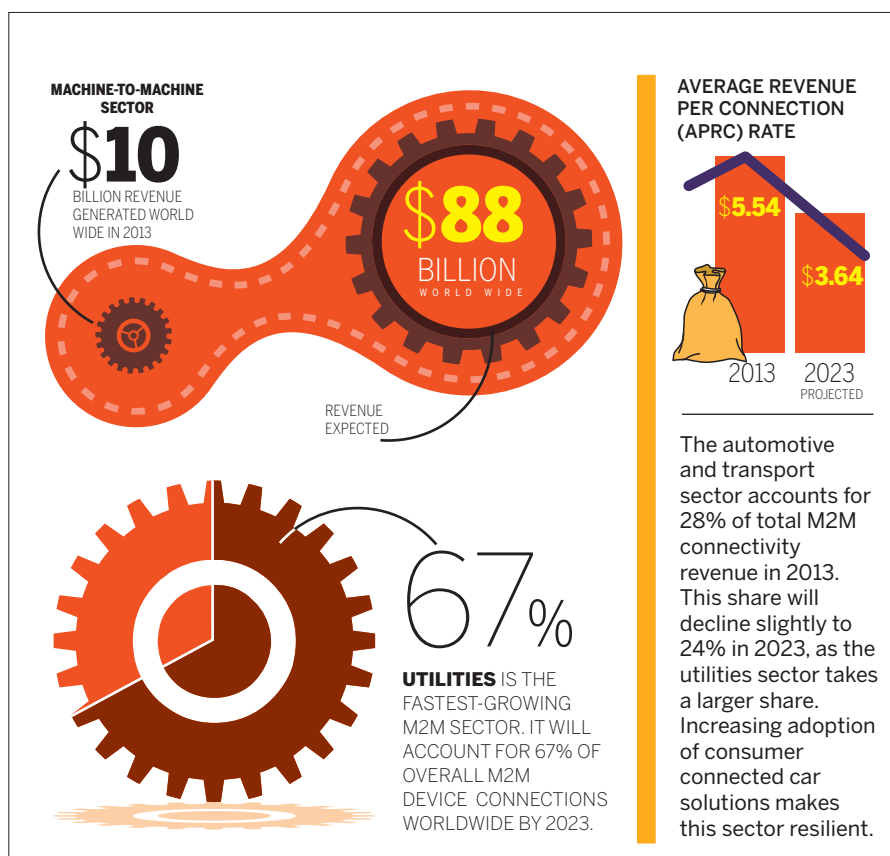
Future growth opportunities will be realised in emerging regions as applications are tailored to local markets and the cost of solutions declines, according to Analysys Mason's recent report.

M2M device connections and revenue: worldwide forecast 2013–2023 report the proportion of SME connections will increase significantly during the 10 year forecast period. The forecast predicts that SMEs will account for an increasing percentage of total M2M device connections. Excluding connections in the utilities sector, the proportion of SME M2M connections will increase from 14.6% of total connections in 2013 to 24.6% in 2023, representing a CAGR of 33%. According to the report, the utilities sector is dominated by large enterprise purchasers of M2M solutions and a large number of low-revenue connections.

It also observes that M2M solutions are currently less affordable to SMEs than to large enterprises and the public sector. However, affordability will improve for SMEs as M2M solutions become less expensive to implement at the application layer, and operators and service providers start offering off-the-shelf solutions. The M2M hardware cost will also fall. Operators have already been successful in selling productised M2M solutions such as fleet management to SME customers.

According to Analysys Manson, operators will find success in selling security and surveillance, some healthcare solutions and some retail sector M2M solutions to SME buyers.

Operators in emerging markets will



become increasingly willing to sell M2M solutions. Another insight of the forecast is that the number of M2M device connections will start to increase in emerging markets by 2015.

It also predicts that developed markets' share of connections will decline from 68% to 62% during the forecast period as operators in emerging markets seek additional customer connections and the cost of deploying M2M solutions declines.

According to the report, operators that have assembled the appropriate teams and resources will be poised for greater success as the market begins to

grow. As operators in developed markets have learned, it takes 18 months or more to organise the various aspects of an M2M business.

Emerging market operators are currently focusing on the burgeoning growth in the number of mobile handsets – running an M2M business carries a higher risk than a traditional mobile handset and broadband business. However, Analysys Manson expect that M2M solutions in the utilities, automotive and security sectors will have more-easily understood business models by 2016, and operators will be more willing to sell these M2M solutions.

HP announces its big data platform HAVEn



HP RECENTLY ANNOUNCED the launch of its big data platform HAVEn for the Indian market. The big data platform has got its name based on the key four technologies Hadoop (H), HP Autonomy(A), HP Vertica (V), Enterprise security (E). Letter 'n' means that the platform can support n number of applications. HAVEn is available on-premise as well as on cloud both private and public.

The latest offering is targeted at end users as well as developers, where the platform can be used by organizations to make their entry into the big data space and it also allows developers to build applications on top of it. HP is the first tech company to come out with big data platform in the industry, the company claimed.

Beside the HAVEn platform launch, HP also expanded its big data portfolio with additional products that include HP Operations Analytics, HP Vertica Community Edition, HP Operations Analytics, HP Autonomy Legacy Data Cleanup.

HP Operations Analytics allows IT operations in an organization to leverage the power of analytics and bring high efficiency and quality to services. HP

Vertica Community Edition is a free downloadable software targeted for user communities but it does not come with any support. HP Autonomy Legacy Data Cleanup lets organizations analyze old data, reduce costs and risks by cleaning up legacy data while driving value from big data.

According to Amit Chatterjee, Country Director, HP Software India, the country has a big opportunity in big data on the analytics side, as organizations that are using traditional technologies, are unable to manage their data volumes in order to get insights and make business decisions in time.

While the demand for real time insight remains today, traditional database applications are not equipped to big data needs of organizations, according to Chatterjee. In India, the big data is still at an early adoption stage compared to other countries. Quoting Gartner, Chatterjee said the the big data market in India is around \$200 million and is expected to touch \$1 billion by 2015.

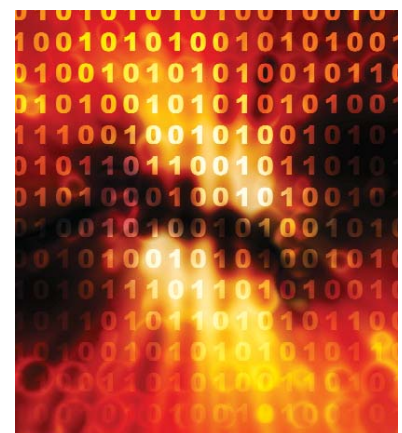
HP's HAVEn platform is open nature, supports any hardware and company is partnering with BI partners to push the new offerings. The platform is currently available in Indian market.

Synechron joins Cloudera partner program

SYNECHRON RECENTLY BECAME a Cloudera partner. Cloudera is a leading Apache Hadoop-based software and service provider. As a member of Cloudera Connect Partner Program, Synechron will have access to partner advancement and solution development resources for the Cloudera Enterprise ecosystem.

The partnership will enable Synechron to broaden its presence in the big data space by leveraging Cloudera's 100% open source and enterprise-ready distribution of Apache Hadoop and related resources as well as relevant technical support and training services.

Commenting on the development, Faisal Husain, Founder and CEO, Synechron said, "Partnership with Cloudera is an opportunity for us to further strengthen our service offerings in the big data space. The need to harness the full power of customer and market centric data is one of the key requirements of our clients in the financial services industry. Our partnership with Cloudera will contribute towards creating synergies in achieving those objectives."



EXIDE

Sure power everywhere

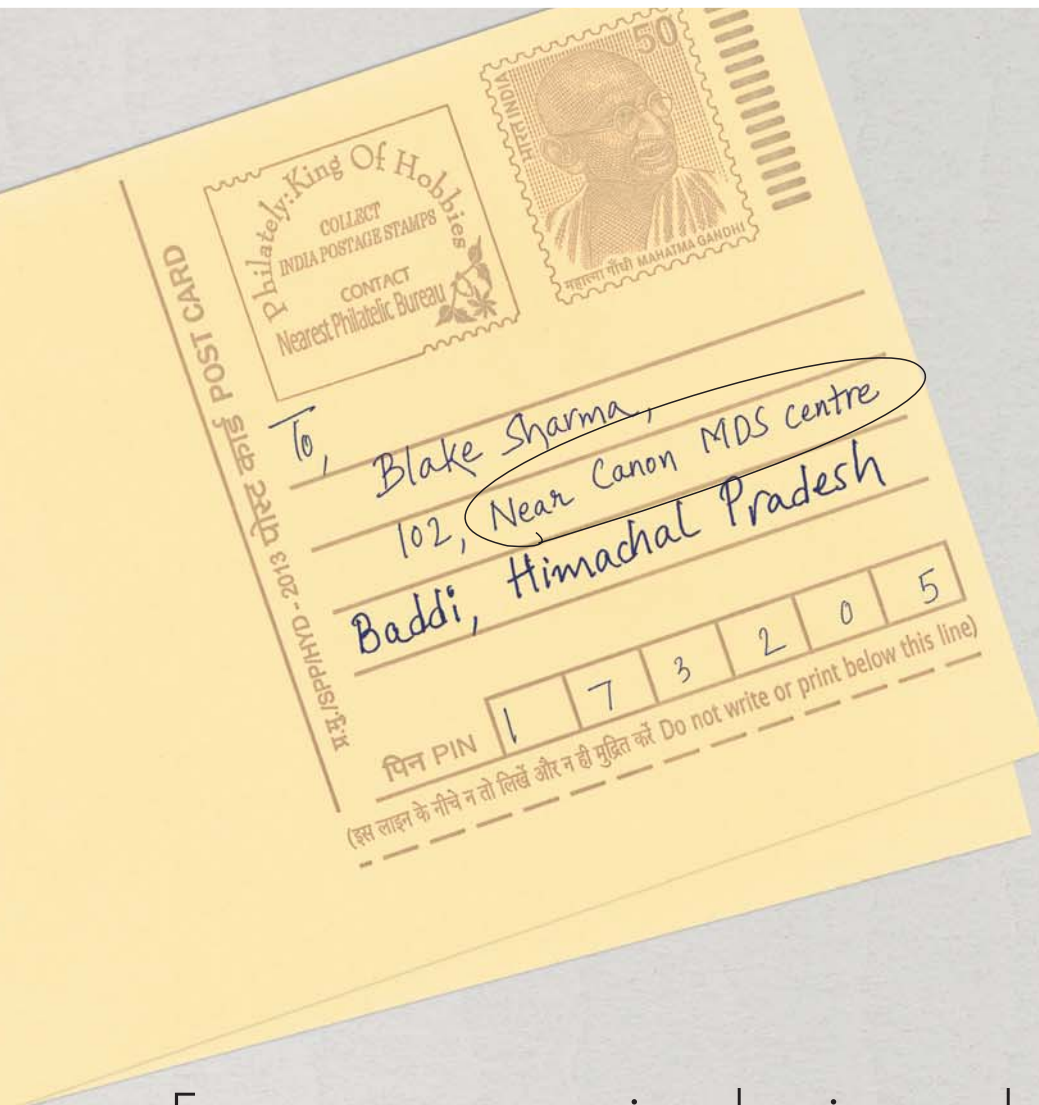
If you are looking for UPS power
make sure you have the right battery.

Environmental conditions, frequency and
duration of power cuts, maintenance,
reliability and budget, all play a part
in determining the choice. Only Exide
has the range of AGM VRLA, Tubular
GEL VRLA and Tubular Flooded
batteries to ensure you get what is

right for you. Why compromise? Remember your UPS is only as good as its battery.



Canon
Delighting You Always



For every upcoming business destination,
there's Canon MDS around.

**Outsource printing services for your business across
546 locations in India with Canon MDS.**

Why restrict your business to just your city when you can prosper nationwide. With Canon Managed Document Services available in 546 locations (across metropolitan and non-metropolitan cities), you can expand your business hassle-free in your desired location. We understand that branching out requires tremendous effort and energy which is why we deliver consistent services on your existing contract.



Canon MDS
Managed Document Services

efficlick



Call Canon : 1800 180 3366* / 39010101* or visit www.canon.co.in, Corporate Office : Canon India Pvt. Ltd., 7th floor, Tower B, Building - 5, DLF Cyber Terraces, DLF Phase III, Gurgaon - 122002, Telephone : 0124-4160011. #From MTNL/BSNL/Airtel landlines, *Prefix your city code while dialing from mobile phone.