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SPECIAL FEATURE

ARTIFICIAL INTELLIGENCE

A Cutting-Edge Technology Revolutionising Banking Sector

CLOUD COMPUTING

Gaining Currency in BFSI's Digital Ecosystem



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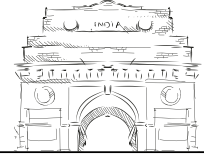
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3rd elets NBFC 100 TECH SUMMIT

TECH SUMMIT

NEW DELHI

APRIL 2018

After making a major impact in its earlier endeavours, NBFC100 Tech Summit is now unveiling its 3rd edition in Delhi. The conclave will bring various stakeholders, technology partners and the policymakers under one roof to focus upon the changing dynamics of the financial sector and projecting the role of Non-Banking Financial Companies (NBFCs) in ensuring the same. Our assurance is based on the expertise we have garnered over the years, working dedicatedly in delivering results with finesse.



Here's what you will witness in the summit

Power Packed Conference

Bringing together leading policy-makers and industry experts from across the NBFC domain

Expo on Latest Trends

Over 30 exhibitors will showcase and highlight what's new in Technology and Solutions

Awards

Felicitating leading Technology Solutions / Products / Innovations in NBFC sector

Participation From

Government Officials and Regulators | Key Dignitaries from RBI, NITI Aayog, NABARD, UIDAI and Indian Banks' Association | Small Finance Banks and Microfinance Institutions | Executives from the MSME sector Investors
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EDITORIAL

JANUARY - FEBRUARY 2018

India Treads Growth Path with Tech-Driven BFSI Sector

As Governments across the world are focusing on streamlining their banking and finance sector to expedite development process, there's an unprecedented push to transform the financial ecosystems with the help of modern technology. India is embracing the new reality in all earnest.

Transformation in sync with the technological advancements is the need of the hour for Indian banking industry. However, the upgradation is also associated with several challenges. Bridging this gap, technologies like cloud computing and Artificial Intelligence are emanating as the most preferred options for the BFSI sector.

Our latest issue thus carries the cover story, "Cloud Computing -- Emerging Reality of BFSI's Digital Ecosystem", analysing the implementation of cloud in the recent times and its role in ushering tremendous transformation in the banking sector.

The issue carries a special feature, "Artificial Intelligence—A Cutting-Edge Technology", that talks about the mounting vistas and challenges associated with Artificial Intelligence(AI) in the banking and financial sector.

Also featuring in this issue are two conference reports. First is about the NBFC100 Tech Summit held in Mumbai. Inaugurated by Aniruddhe Mukherjee, Principal Secretary, Department of Finance, Government of Madhya Pradesh, this last October conclave focused on NBFCs, Payments Banks and Small Finance Banks.

Several other dignitaries namely Ashwini Kumar, Additional Economic Advisor, Ministry of Housing and Urban Affairs, Government of India, Sumnesh Joshi, Additional Director General, UIDAI, Government of India, and Raman Aggarwal, Chairman, Finance Industry Development Council were part of deliberations.

Based on the overwhelming response from stakeholders of the NBFC sector, we organised the 2nd NBFC100 Tech Summit in Bengaluru.

Inaugurated by Vivek Jaiswal, General Manager, Karnataka Telecom Circle, BSNL, it was participated by several distinguished people including Rajkumar Srivastava, Information Technology (IT) Advisor to Government, Department of IT, BT, Science & Technology, Government of Karnataka and other dignitaries from across the BFSI sector stressed upon the need for technology upgradation and requirement for security safeguards in NBFCs.

Inspired by the overwhelming response of the two summits, we have plans to organise 3rd NBFC100 Tech Summit in New Delhi, to bring together various stakeholders, technology partners and policymakers under one roof.

This issue carries interviews of Rama Vedashree, Chief Executive Officer, Data Security Council of India, Joydeep Dutta, Executive Director and Group Chief Technology Officer, Central Depository Services Ltd, and Shashank and Murtaza Bhatia, Practice Head, Data Centre and Security, Dimension Data,

We have also carried a series of interviews and articles giving an insight of the industry and other stakeholders talking about their present scenario, innovations and the road ahead for the Indian banking and finance sector.

With such a variety of articles, interviews and special reports, we look forward to our esteemed readers' invaluable feedback.



रविगुप्त

Dr Ravi Gupta

Editor-in-Chief

The Banking & Finance Post and
CEO

Elets Technomedia Pvt Ltd



CLOUD COMPUTING GAINING CURRENCY IN **DIGITAL ECOSYSTEM**

Cloud computing is not a new technology but its implementation in the recent times is ushering tremendous transformation in the way business is carried out in banking sector. This technology is helping in create a flexible, agile business model to meet the demands of the dynamic and competitive landscape with cost efficiency and giving rise to a bundle of opportunities for the conventional as well as the non-conventional financial entities, writes **Rashi Aditi Ghosh** of **Elets News Network (ENN)**.

Banking on Cloud

Digital ecosystem surrounding the financial institutions today is happening at a never seen before pace. There are two reasons responsible for this growth- firstly, rising customer preferences towards customised banking and secondly, the strong penetration of technology.

Banks are now seeking to transform their services, products and offerings in a bid to reflect the changing customer preferences.

Cloud computing is playing a very strong role in this paradigm shift in terms of the banking and financial institutions.

According to Capgemini, a global leader in consulting, technology and outsourcing service, Cloud computing is expected to be one of the fastest-growing technologies in the years to come.

It further revealed that, business applications will have the largest market for cloud related services and spending. This will happen with a gradual transition from on-premise to cloud-based services especially for general business applications like customer relationship management (CRM) and enterprise resource planning (ERP).

"As Information Technology infrastructure contributes to a significant part of the operational costs of banks, cloud technology provides cost benefits, scalability and many more benefits to the banks. Banks have started adopting cloud technology to derive the benefits," said Rama Vedashree, Chief Executive Officer, Data Security Council of India (DSCI).

"Cloud is a key platform for mid-sized players in banking sector to accelerate IT adoption, particularly in co-operative and rural banking. It has been noted that the Indian banking sector has already started adopting cloud for collaboration and communication technologies, Human Resource solutions and payment solutions, expected to remain as one of the major domains to adopt cloud in the future as well."

According to Capgemini, a global leader in consulting, technology and outsourcing service, Cloud computing is expected to be one of the fastest-growing technologies in the years to come.

Cloud computing can be beneficial for financial institutions for several advantages it offers, some of them are as follows:

- **Cost savings and Usage-based billing**

With the help of cloud computing, financial institutions can convert a large up-front capital expenditure into a smaller version, on the current operational cost. This transition requires no additional investment in terms of new hardware and software. Further, cloud services also offer the financial services with a unique opportunity to avail services at pay-as-you-go basis.

- **Business continuity**

Cloud helps the financial institutions in ensuring services such as higher level data protection, fault tolerance and disaster recovery. Cloud computing also provides a high level of redundancy and back-up at lower price than traditionally managed solutions.

- **Business agility**

Cloud computing allows the

businesses in moving its non-critical services to the cloud, including software patches, maintenance, and other computing issues. As a result of this, firms will be able to focus on the business of financial services, not just on Information Technology (IT).

- **Reducing Carbon Footprint**

Implementation of cloud helps the financial institutions in reducing energy consumption and carbon footprint by setting up physical infrastructure.

Cloud Deployment Models

Service providers commonly deploy clouds in three ways, they are as follows:

Private clouds:

Under this model, the cloud infrastructure is solely meant for a specific company. This service can either be managed by the company or a third party and it may exist either on or off the premises. According to the experts, this is the most secure options.

"Private clouds allow more systems to operate at high transaction volumes without loading the network or slowing the process, ensuring better customer experience. They promise cost savings and efficient services by having dedicated resources for each business unit in an enterprise. Since resources are rented instead of purchased, it helps convert CAPEX (capital expenditure) to OPEX (operating expenditure), reducing the total cost of ownership," said Parag Arora, Vice President, Financial Services, Cisco India.

The cloud infrastructure is operated solely for a specific company. It may be managed by the company or a third party and may exist on or off the premises. This is the most secure of all cloud options.

Public clouds:

This particular cloud infrastructure is available to the general public or a large industry group and is owned by an organisation that sells cloud services.



Hybrid clouds:

This cloud infrastructure comprises of two or more clouds (private or public) that remain unique entities but are linked in order to provide services.

Banking is a regulated industry which, in India, has shown the lead in adopting Information Technology to service consumers and for internal operational efficiency.

"Cloud computing has already made inroads in every industry and lately in 2017, we saw BFSI embracing cloud computing primarily for Email and Collaboration services. We at IceWarp believe there is a huge opportunity for cloud computing adaption. But the need of the hour is security specialised cloud computing technology such as Private cloud or Private cloud cluster and IceWarp is completely ready with it. Private cloud or Private cloud cluster provides complete security to the customer who wants to implement all Information Security guidelines to use cloud and also they can extend their existing Leased Lines or Multiprotocol Label Switching (MPLS) connectivity to Private Cloud providing seamless secured access," said Pramod Sharda,

Chief Executive Officer at IceWarp – India and Middle East.

Challenges to cloud

Cloud computing is not a new concept for the banking industry but the sector has shown slow progress as far as adapting to the technology is concerned. These concerns are largely associated with the security of information and data in the cloud and compliance.

"There is a lot of progress in terms of infrastructure in banking industry for last 10 years, especially if we talk about high-end, tier-4 Data Centres followed by cloud computing," said Prasanna Lohar, Head Technology IT, DCB Bank.

Few organisations are also facing problem in adapting to cloud due to lack of knowledge pertaining to the significance of this technology.

According to experts, cloud gap is deviating customer's demand, leading to 'Perfect Storm'. This is hindering the popularity of cloud and its implementation.

"Cloud computing has its own advantage. According to a research, optimised public cloud strategy will enable 11 per cent growth in the

revenue strategy, 87 per cent reduction in provisioning Information Technology (IT) services and 77 per cent reduction in IT cost," said Saju Paulose, Product Sales Specialist, Data centre, Cisco Systems India.

"However, many customers do not see the significance of clouds. Only

Optimised public cloud strategy will enable 11 per cent growth in the revenue strategy, 87 per cent reduction in provisioning Information Technology (IT) services and 77 per cent reduction in IT cost.

3 per cent of the customers actually acknowledge it and accept it," he said.

While adapting to technologies like cloud is important for every sector but understanding its fitment in terms of deployment is also necessary.

"Cloud Technology has many pros but it also has a lot of cons. Up-grading the services in sync with the rising craze for technology is important but understanding the emotion of the client and then embracing new services is the need of the hour," said Goutham KS, Head-IT, Auxilo Finserve Pvt Ltd.

Future of Cloud in BFSI sector

Although cloud and its implementation is slow but its future in the BFSI sector seems to be bright. Not just the conventional financial entities such as Public Sector and Private Sector banks, cloud is frequently gaining acceptance amongst several non-conventional entities like Non-Banking Financial Companies and start-ups.

"It is important to look at the present stature of the market today and then decide the implications of cloud computing in accordance with it. NBFCs, in particular, started to address

Private Cloud or Private Cloud Cluster provides complete security to the customer who wants to implement all Information Security guidelines to use Cloud and also they can extend their existing Leased Lines or Multiprotocol Label Switching (MPLS) connectivity to Private cloud providing seamless secured access.

the issues that the conventional banks were not addressing well," said Akshath Balachandra, Enterprise Business Development, Amazon Internet Services Pvt. Ltd.

"With these new players entering the BFSI market, the delivery medium is more and more getting into the digital mode. That is where the significance of cloud comes into place," he added.

Highlighting the role of cloud in terms of the start-ups, Dominic Vijay Kumar, Associate Vice President-IT, Art Affordable Housing Finance India Ltd, said, "Cloud plays a very important role in Startups working in the Banking, Financial Services and Insurance Sector. We, at Art Affordable Housing Finance India Ltd, have hosted a lot of applications on cloud computing. This has helped us in cutting down our capital expenditure and lowering the operating expense and concentrate well on business part."

Cloud computing might have a slow progress but its hybrid approach is going concrete its sustainability in the banking and financial sector.

"Cloud computing is here to stay. What people are increasingly looking for is hybrid approach where they would want to have their core applications running out of their own Data Centres. Organisations are directly buying these services from the cloud," said Deepak Gupta, Business Development Manager Financial Services, Cisco India.

Cloud Computing despite being operational, struggled to gain acceptance in the BFSI sector. The confusion over its deployment models and security related issues have hindered its popularity over the years. But with the rising awareness pertaining to this technology and the availability of private and more secured models, significance of cloud seems to be improving with each passing day. In addition to this, it is also important for all the banking and financial institutions to understand the relevance of cloud in terms of their organisational requirement and then implement it. ●





ARTIFICIAL INTELLIGENCE – A CUTTING-EDGE TECHNOLOGY REVOLUTIONISING BANKING SECTOR

After being a subject of much curiosity and assumptions for several years, Artificial Intelligence (AI) has finally come out of its shell and experiencing a much focused implementation across the sectors. Exploring the mounting vistas and challenges associated with AI in the banking and financial sector **Rashi Aditi Ghosh** of **Elets News Network (ENN)** delves into this highly progressive topic of the recent times.

AI and its Impact on Indian Economy

Implementation of AI will change the nature of work and create better outcomes for businesses and society. Not only this, the technology will most likely add \$957 billion to the Indian economy, according to “Rewire for Growth” a report by Accenture, a management consultant company. The report further revealed that AI has the capacity to amplify India’s annual growth rate of gross value added (GVA) by 1.3 percentage points inflating 15 per cent of the country’s income in 2035.

Significance of AI in the Indian Banking and Financial Industry

According to a PricewaterhouseCoopers (PwC) FinTech Trends Report (India) 2017, in the last year (2016), global investment pertaining to AI applications increased to \$5.1 billion from \$4.0 billion in 2015.

Technologies like AI and Cloud Computing are also termed as the most preferred services used in the Banking, Financial Services and Insurance (BFSI) sector in India during 2017, said Microsoft.

“Artificial Intelligence may have had few false starts but today its role in terms of financial services is pivotal. This revolutionary technology has waked up

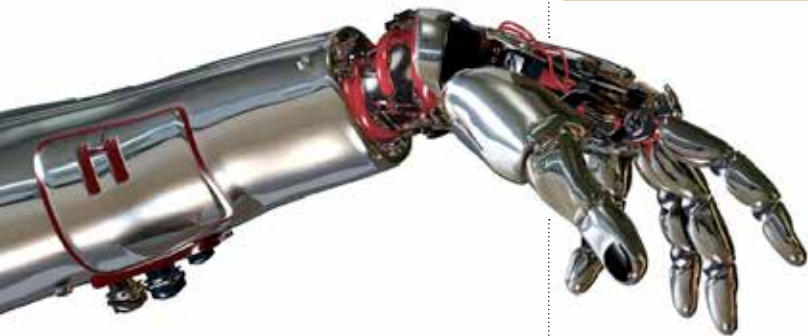
again and we all are now aware that it can bring progressive changes if used very efficiently," said Madhusudan Shekar, Principal Technical Evangelist, Amazon Internet Services Private Limited.

Several reports suggest that no other business sector as much as the financial industry is more focused on developing and implementing AI in a bid to attain speed, accuracy, and efficiency. This technology has shown a great potential towards transforming both -- front and back office operations with its cutting edge self-improving programmes.

AI Applications by Banks in India

Several banks namely the State Bank of India (SBI), HDFC bank, Axis bank and ICICI bank have made progressive steps towards implementation of AI.

India's largest public sector lender SBI is currently using an AI-based solution.



This solution is developed by Chapdex. In addition to this, the bank has also launched a chatbot named SIA-an AI-powered chat assistant that offers instant replies to customer queries. This chatbot is developed by Payjo, a Bengaluru based startup.

"We are investing in blockchain, big data analytics, AI, cognitive technologies, robotics, etc to improve the services for our customers. All this is becoming possible because of the support of top leadership team. Keeping Artificial Intelligence (AI) and big data tools in mind, we have introduced chatbots for the tellers in the branches. AI allows us to understand customer portfolio 360 degree as soon as he walks in. We launched dig voucher where no paper is

According to the global Financial Stability Board (FSB), the risks created due to the use of AI and Machine Learning needs monitoring. FSB is an entity that coordinates financial regulation across the Group of 20 Economies (G20).

required for withdrawal or deposit. This voucher can be submitted even before entering a branch," said Shiv Kumar Bhasin, Chief Technology Officer, SBI.

Private lender HDFC bank has also launched its AI-based chatbot named - Eva (Electronic Virtual Assistant). EVA has been designed by Bengaluru-based Senseforth AI Research.

"HDFC Bank's approach to AI is holistic. We have a strong testing and learning driven approach," said Rajnish Khare, Head, Digital Transformation, Social Business and New Media and Mobility Banking, HDFC Bank.

"Our key developments in the Artificial Intelligence space includes HDFC Bank OnChat - An AI based

e-commerce chatbot on facebook, Programmatic Ad Bidding, AI based ad bidding tool for digital marketing, HDFC Bank Ask "Eva", AI based FAQ and customer service assistant and HDFC Bank "IRA", Our Intelligent Robotic Assistant at branches," he added.

India's second largest private sector lender ICICI bank has installed more than software robotics in more than 200 business processes across the country. Last year, it also launched its AI-based chatbot, named iPal.

Axis Bank has unveiled an innovation lab called "Thought Factory" last year in a bid to boost the AI technology solutions for the banking sector.

AI and its Challenges

Implementation of AI in the banking and financial sector has many benefits but one must not ignore the challenges associated with its usage.

According to the global Financial Stability Board (FSB), the risks created due to the use of AI and Machine



Learning needs monitoring. FSB is an entity that coordinates financial regulation across the Group of 20 Economies (G20).

The regulator in its first report (released in November 2017) said that there are no internal regulatory standards for AI and machine learning and its rising usage in the BFSI Sector has left the regulators unsure about the real-time impact of new and unique links between markets and banks.

"We must view AI with a healthy



amount of skepticism, and avoid putting blind trust in every claim we hear. Proper model development and governance is a must, and we should watch out for companies purporting to re-invent AI. It's not the technology solution for every problem, and it can be easy for companies to misuse the algorithms that drive artificial intelligence due to inexperience, or the race to be on the hype cycle," said Vishal Goyal, Country Manager, South Asia, FICO, a leading analytics software company.

"We should also be wary of irresponsible use of AI. It won't be the algorithm that harms you or your business, it will be the inexperienced that try to apply artificial intelligence," he said.

AI is evidently one among the most promising technologies meant for transforming the banking and financial services. Implementation of this technology will definitely help in business acceleration, reducing the over head cost and controlling fraud and errors.

However, in a country like India where Financial Inclusion is still one of the most ambitious projects, its usage

According to a Pricewaterhouse-Coopers (PwC) FinTech Trends Report (India) 2017, in the last year (2016), global investment pertaining to AI applications increased to \$5.1 billion from \$4.0 billion in 2015

will be bit sluggish in comparison to the other parts of the world.

While several reports are suggesting that it is emerging as one of the most

preferred technology options for the BFSI sector and it is about to pump the Indian economy to a larger extent, it is also posing a threat to the employment scenario prevailing in the country.

Last year, former Citibank Chief Executive Officer (CEO), Vikram Pandit said that 30 per cent of banking jobs will disappear in the next five years, "Artificial intelligence and robotics reduce the need for staff in roles such as back-office functions."

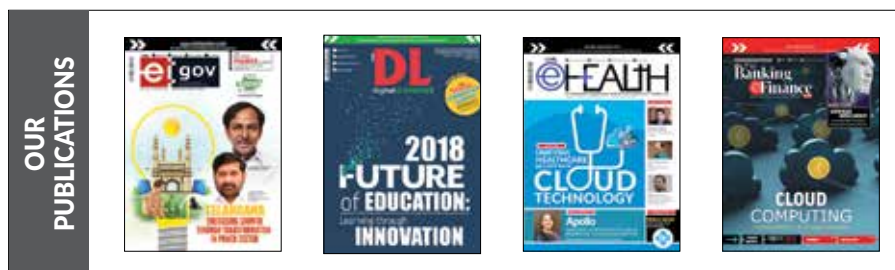
Citigroup has predicted that nearly a third of the jobs in the banking industry could be lost in the decade between 2015 and 2025. "The future of branches in banking is about focusing on advisory and consultation rather than transactions," said Jonathan Larsen, Global Head of Retail and Mortgages at Citi.

Conclusion:

Artificial Intelligence may have had a slow start in the banking and financial sector but according to various research reports and expert opinions, this piece of technology is now widely accepted as one of the most preferred option and its future seems to be bright. ●

EVENT CALENDAR 2018

EVENT NAME	PLACE	MONTH
URBAN		
2 nd National Urban Development Summit	Aizawl	9 March
Smart City Summit	Ajmer	23 March
Smart City Summit	Naya Raipur	6-7 April
Innovation Summit	Pimpri-Chinchwad	August
IT/GOVERNANCE/INNOVATION		
Ease of Doing Business Summit	Chandigarh	28 February
eOdisha Conclave	Bhubaneswar	March
National Livestock & Dairy Summit	Jaipur	27 April
Digital Social Innovation Summit	Canberra, Australia	30 November
BFSI		
3 rd NBFC100 Tech Summit	Delhi	April
4 th NBFC100 Tech Summit	Hyderabad	May
3 rd BFSI CTO Summit	Mumbai	July
5 th NBFC100 Tech Summit	Kolkata	August
6 th NBFC100 Tech Summit	Chennai	September
HEALTH		
Healthcare & Wellness Awards	New Delhi	26 March
World Healthcare Summit	New Delhi	June
EDUCATION		
12 th World Education Summit	Delhi	10 -11 August
13 th World Education Summit	Dubai	November



HYBRID IT CAPABILITIES BOOSTING DIGITISATION IN BANKING

Dimension Data is focused on implementing the most advanced technologies and ensuring optimal security at every level of an organisation's Information Technology (IT) architecture to ensure a seamless digital journey, says **Murtaza Bhatia**, Practice Head, Data Centre and Security, Dimension Data, in conversation with **Rashi Aditi Ghosh** of **Elets News Network (ENN)**.



Technology is diversifying the banking and financial industry in a big way. What role is Dimension Data portraying in this transformation?

Dimension Data is a catalyst that is helping various banks and financial institutions in their digital transformation journey with the help of Hybrid IT capabilities. The Banking, Financial Services and Insurance (BFSI) industry is fast moving towards technologies such as Blockchain and Artificial Intelligence, and considering how conservative this industry is, it is remarkable to see this change. Blockchain as a technology has great potential, especially when it comes to security, transaction security and endpoint security. Blockchain allows a digital ledger of transactions to be created and shared among participants

via a distributed network of computers. The system is highly accessible and transparent to all participants – all transactions are publicly visible. Blockchain also holds the potential to assist in forensic investigations.

These are only some of the used cases. The focus is on providing customers with a rich experience and the BFSI industry is turning to OmniChannel interactions to enable greater adoption of evolving technologies. Dimension Data is focused on implementing the most advanced technologies and ensuring optimal security at each level of an organisation's IT architecture.

What challenges do you come across in securing the IT Infrastructure in a digital world?

IT in a digital world is diverse and without any boundaries. It has become a combination of Hybrid technologies with parts of the infrastructure and applications on-site while another part on cloud. Digitisation in the BFSI industry implies, allowing the end user to leverage multichannel models. In other words, it means anytime and anywhere access to the end customer. One of the biggest challenges due to this is ensuring optimal security at every channel. This requires a Zero Trust architecture. It is capable of addressing lateral threat movement within the said network by utilising the micro-segmentation and granular perimeters enforcement, based on the user, the data and the location. It also brings in a centralised policy-driven control which when implemented can help mitigate even the most common

sources of breaches. IT teams will need to adopt the mindset of 'we don't trust anybody: to access company systems, users will need explicit permission. With improved technology, this will not necessarily result in bottlenecks – in a cloud-based systems, authentication and verification will be near-instantaneous.

Also, the Blockchain ledger can detect suspicious online behaviour and isolate the connection, giving the user restricted access until the transactions have been sanctioned by system administrators or the IT security team. Essentially, Blockchain becomes the implementer of the 'zero trust' policy.

How significant is the application of consistent security control across physical and virtual environments?

Consistent security control across various infrastructures and services provided through physical and virtual environment is quintessential. This is because, it gives better manageability and "security is as good as it is managed today". This can be achieved with security that is controlled centrally through one policy engine. This policy engine builds the context around the security decision and reacts differently with different decisions to control.

Any infrastructure whether virtual or physical calls for three important factors to consider, Authentication, Authorisation and Visibility. First, we need to identify the entity of who is accessing the virtual infra and the context around it. Some of the parameters to consider are who is accessing it? How are they accessing? Where is it being accessed from and what is being accessed? Next, the system has to have proper authorisation on 'need to know' or 'access basis' expanding to the Zero Trust factor. And lastly, the third factor is visibility of the trail.

Cloud deployment faces a major application constraint as far as the BFSI sector is concerned. What assistance do you ensure in this regard?

With respect to the adoption of



The Banking, Financial Services and Insurance (BFSI) industry is fast moving towards technologies such as Blockchain and Artificial Intelligence, and considering how conservative this industry is, it is remarkable to see this change.

Cloud technology in the BFSI sector, Dimension Data is leveraging specialised services with the help of which we assess the 'as is' application architecture of the client and suggest what kind of cloud adoption would best

compliment their business requirement. We enable them to move to a private cloud and a public cloud set up as required. We also provide a central manager to manage the private and public cloud infrastructure through a central pane of glass. This provides one management, one security in the hybrid environment.

How significantly can Data Centre transform an organisation? What role does infrastructure strategy play in enabling this?

Infrastructure plays an important role in transformation. Lean and Hybrid infrastructure is the way to go, where the business can leverage the infrastructure to increase the channels and services reaching its clients. Infrastructure strategy which transforms with faster roll outs, better accessibility and management is key to creating a boundary less organisation. That said, it needs to be underpinned by security, as it is an integral part of this journey. In other words, embedding security right from the start will ensure the smooth enablement of the transformation journey. ●

BLOCKCHAIN SOLUTIONS TO ACCELERATE DIGITAL INDIA DRIVE



The Blockchain offers a potential to revolutionise the Fintech market by minimising role of the intermediaries and bringing in efficiency. However, globally, this is still in the pilot stage, says **Sameer Dharap**, Vice President, Blockchain Applications, XinFin, a Singapore-based Blockchain technology company that recently launched its marketplace platform, 'TradeFinex' in India, in conversation with **Rakesh Roy** of **Elets News Network (ENN)**.

Tell us about TradeFinex, a platform recently launched in India by your brand.

TradeFinex is a decentralised peer-to-peer marketplace platform, powered by XinFin hybrid Blockchain and its XDC01 protocol, which will bring together governments, institutions, buyers and suppliers. TradeFinex aims to minimise inefficiency in global trade and finance using Blockchain technology.

TradeFinex helps buyers secure capital at globally competitive rates, gives suppliers' visibility on global tenders and customer base. It provides financiers real time visibility on their investments. This is enabled using Blockchain based escrow smart contracts, asset digitisation and Internet of Things (IoT) integration.

Buyers and suppliers can drive bottom line benefits using XinFin Hybrid Blockchain smart contracts and peer-to-peer decentralised TradeFinex platform. Beneficiaries can post projects and connect with global suppliers. Suppliers can reach out to potential buyers and submit techno-commercial proposals on this platform. They can execute escrow based smart contracts with global beneficiaries over secure Blockchain network. The payments terms can be linked to customised smart contract milestones, triggered upon delivery of goods or services.

Beneficiaries and Financiers can drive bottom-line benefits using XinFin Hybrid Blockchain smart contracts and peer to peer decentralised TradeFinex platform. Beneficiaries can post financing requests on TradeFinex platform and reach out to global financiers. Financiers can evaluate projects and execute escrow based smart contracts with global beneficiaries over secured Blockchain network. The assets

financed can be digitised over Blockchain and repayment can be linked to escrow smart contracts. The disbursement can be linked to customised smart contract milestones, triggered upon milestone completion.

Governments, institutions and communities can raise finance, specifically for critical public infrastructure projects that the government needs to undertake for economic well-being of the citizens. Using TradeFinex platform, infrastructure projects can be undertaken without burdening government treasury. TradeFinex platform than can be used with existing laws of the land and payment rails or in an approved jurisdiction using XinFin's underlying XDC tokens for cross border settlement.

How do you look at the Indian Market in terms of Blockchain technology adoption in various sectors? What are the potentials you foresee in India in this regard?

In India, Blockchain Technology is often confused to Cryptocurrency (like Bitcoin). The government has recently made it clear that the VCs (Virtual Currencies or cryptocurrency) are not legal tender and such VCs do not have any regulatory permission or protection in India. However Blockchain Technology and Cryptocurrency are two different things.

Globally, Blockchain technology is still in nascent stage. Most of the organisations and governments are still exploring how this technology can be utilised. The government of Andhra Pradesh under leadership of N. Chandrababu Naidu has been leading the journey in to the Blockchain and Digital technology. The state has launched pilot projects in land records

and transportation. A start-up ecosystem is being set-up in Vizag and this is just the beginning. The efforts are being supported by KPMG, Tata Consultancy Services, Infosys and other leading financial institutions. Banks are equally active in Blockchain space and several use cases are being conceptualised.

Traditionally, our processes have been paper and manual authorisation based. Prime Minister Narendra Modi has launched Digital India campaign to ensure that government services are made available to citizens electronically by improved online infrastructure and by increasing Internet connectivity or by making the country digitally empowered in the field of technology. Roll-out of Blockchain solutions will boost Digital India drive. Mobile phone penetration in India is set to rise to from the current levels of 65-75 per cent to 85-90 per cent by 2020. This coupled with digital solutions will cut down processing costs and delays and potential in a country like India is enormous. Solutions can be deployed across the sectors and government services, financial institutions, capital markets, trade and finance will see the biggest benefits.

How has Blockchain technology evolved in the Fintech revolution in the last few years?

Fintech revolution in India can be attributed to rise of Paytm in last few years. They have rewritten the rules of the game using a simple wallet solution. All cryptocurrencies have a similar

wallet solution, which is cross border and globally accepted. This will lead next round of global Fintech revolution.

Blockchain technology has come to light due to exponential growth in the price of cryptocurrencies. The market cap of all cryptocurrencies rose from \$ 20 billion at the start of 2017 to \$ 750 Billion by end of 2017. The market valuation is speculation driven and there is no underlying intrinsic value in these cryptocurrencies. The Blockchain offers a potential to revolutionise the Fintech market by minimising role of the intermediaries and bringing in efficiency, however globally this is still in the pilot stage. There are no proven cases of a production ready systems, this will evolve in coming years.

Blockchain technology has come to light due to exponential growth in the price of cryptocurrencies. The market cap of all cryptocurrencies rose from \$20 billion at the start of 2017 to \$750 billion by end of 2017.

How important is Blockchain technology in terms of cyber security in the financial systems?

Cyber security is an important element of Blockchain technology. In this digital era, all transactions are digital and funds are stored in e-wallets. Any unauthorised access to wallet will lead to loss of funds. The unauthorised access can be obtained by compromised login credentials or loss of private keys to the wallet where funds are stored. This can happen due to the attacks or leaks run through the exchanges/wallets, where private keys are stored.

Blockchain technology is built on distributed ledger. Any changes made to the ledger are immutable and cannot be reversed. This leaves a strong trail of transactions that can be traced and audited. While making simultaneous changes to all copies of shared ledger is difficult, loss of funds is still an area of concern. In past there have been numerous incidents of loss of funds and unfortunately there is no standard solution. Global nature of wallets makes it difficult for authorities to identify, track and enforce regulations pertaining to thefts.

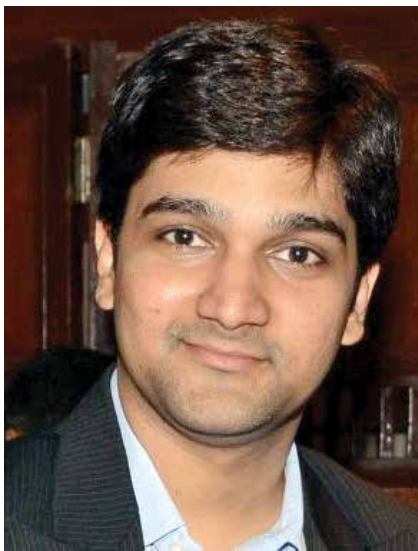
Looking at the explosive growth of digital payments in India, what are your future plans for your business growth in the country?

We have recently inaugurated our TradeFinex platform, a peer-to-peer commerce platform to improve efficiency in trade and finance. Our focus is MSME sector where access to capital is cited as the biggest challenge. Using TradeFinex platform, we aim to reduce cost of commerce to a fraction and empower this user segment.

We are initiating global tie-ups with leading trade associations and industries. We aim to bring them on this global platform and financial institutions shall follow soon. We are in the process of configuring Rs as a payment rail on our platform in order to be compliant with local laws of the land. We aim to facilitate \$100 million worth of commerce using our platform in 2018-19. ●



'CYBER ARMOUR IS NEED OF THE HOUR'



Rising menace of security threats is creating the urgent need to ensure cyber security solutions across the Banking, Financial Services and Insurance (BFSI) domain. In order to ensure complete safety of data and maintain credibility all the banks – big and small, are ensuring the use of advanced technologies, says **Harshil Doshi**, Strategic Security Solutions Consultant, Forcepoint India, in conversation with **Harshal Yashwant Desai** of **Elets News Network (ENN)**.

Give us an overview of your products and services.

Forcepoint is a global leader in cyber security domain, focusing on protecting organisation's most important assets i.e. its critical business data and users. Forcepoint was formed in January 2016 as the combination of Raytheon Cyber Products, Websense and Intel Stonesoft. Its mission is to transform cyber security by focusing on what matters the most: understanding people's intent as they interact with critical data and intellectual property wherever it resides. It is a privately held company. Our Human Point System enable companies to empower employees with unobstructed access to confidential data while protecting intellectual property and simplifying compliance.

How do you view the current trends in cyber security domain? What role is your brand portraying in this regard?

If you take a look at cyber security as a domain, you will find out that customers have been very focused towards solving the threat related issues using technology to secure digital infrastructure. This is the reason, over the years, cyber security budgets have increased multi-fold, and according to Gartner estimates, worldwide spending on information security is expected to reach \$90 billion in 2017 – making it a huge industry. Despite all these investments, the cyber security attacks have only increased. There are almost 750 cyber security vendors across

the globe offering more than 2000 technology solutions, but the risk factor however has not come down. There is a new start-up every day in the Silicon Valley offering some niche technology to a particular problem. Is it really solving our problems? And the answer seems to be a 'NO.'

Understanding human behaviour actually leads to understanding the intent of employees as they interact with critical data. Once we understand that the technologies are already in place to protect a probable security breach from happening.

This is where Forcepoint comes into the picture. We protect the points where human beings interact with data and network. We focus on understanding the rhythm of the people and flow of data to respond to risks in real time. It is completely a new dimension to how we address issues pertaining to cyber security.

What are your target areas and your clientele base?

Industries across all domains have been impacted by the digital transformation. Information Technology (IT)/ IT enabled services (ITeS), Banking and Finance, Telecom, Manufacturing, Retail, Pharmaceuticals are some of the sectors that would need protection from emerging cyber attacks. Government has laid its major focus on using technology to deliver its services to citizens and using technology to conduct its business. It is focusing on building new

Forcepoint has been a leading player in understanding some part of human behaviour as far as their internet access, their email access or their behaviour on data is concerned.

data centers, executing e-governance programmes and smart cities initiatives, which means that they are going to not only collect, store but even process lot of sensitive data.

How do you analyse the present day BFSI Sector in terms of cyber security?

BFSI is one of the sectors that is adopting cyber security solutions very swiftly. In order to ensure complete safety of data and maintain credibility, all the banks – big and small are ensuring the use of advanced technologies. Besides, regular audits from regulatory bodies also encourage banks to ensure all their systems and security measures are in place. We all know about Frank Abagnale. How in the 1960s he cheated the American banks of almost \$ 30 million by printing fake cheques. He is now a Consultant to Federal Bureau of Investigation (FBI) to detect banking frauds. According to Frank, in every fraud that he has ever investigated, there was always an insider who was involved. So, no matter how advanced

technology we implement, if we do not understand the behaviour of end users, it will be very difficult for us to catch up with these cyber security threats. And since everything has gone digital, we don't have time to understand who is thinking what, what is any user's intent. The visibility of human behaviour has actually gone down. What Forcepoint does is bring back the visibility into human behaviour and along with technology adoption helps in combating cyber attacks.

What is your modus operandi?

Forcepoint has been a leading player in understanding some part of human behaviour as far as their internet access, their email access or their behaviour on data is concerned. By combining our technologies as human point system and along with the introduction of new technologies such as user and entity behaviour and analytics with underlying algorithms like volumetric analysis, base lining and others, we are elevating the customer's security portfolio from detective to predictive. Now organisations with our data and insider threat portfolio will be able to suggest if somebody is going to do something wrong accidentally or maliciously based on their behaviour.

Tell us about your cloud-based user and application.

I think cloud today has become a reality. Even highly regulated industries like banks have started adopting cloud in a big manner. But the problem with cloud is that it opens up everything and it access is not restricted anymore. So, we can access drop box or one drive application from our mobile phones sitting at home. Further, we can download, upload, and share the data. As part of our human-centric approach to security, Forcepoint CASB helps eliminate those blind spots by giving you visibility and control over your users' devices and cloud apps, letting you understand the rhythm of your people and the flow of your data. ●



DSCI TO ENABLE CYBER SECURITY ROADMAP FOR INDIA'S DIGITAL ECONOMY

With the advent of niche Fintech capabilities and rise of digital platforms of payments and transactions, two things have been clearly established - firstly, India is headed towards a technologically driven and influenced modes of operations in the Banking, Financial Services and Insurance (BFSI) sector and secondly this would warrant a robust roadmap of which Cyber Security would be an indispensable part, says **Rama Vedashree**, CEO, Data Security Council of India (DSCI), in an interaction with **Rakesh Roy** of **Elets Network (ENN)**.



What was the objective behind the formation of Data Security Council of India?

When India became the hub of global information technology and business process outsourcing, recording a fast paced growth to \$100 billion in 2011-12, it was felt that to maintain its leadership position in this field certain enablers are necessary. Most notable among them was the requirement to strengthen the data protection environment so that global customers' offshoring to India could repose trust.

To promote India as a trusted sourcing destination, NASSCOM established Data Security Council of India as a self-regulatory organisation to scale up security and privacy based practices in the country.

The primary objectives of DSCI

were to become a focal point for public advocacy on cyber security and privacy issues globally, and to build credibility and relationship with influencers in India and across the world.

DSCI priorities and charter, since its inception, has included best practices development, outreach, capacity building, privacy certification and Law enforcement capability building.

How unique is "Digital Payment Suraksha", an initiative of DSCI?

Given the recent momentum on digital payments and government's drive for a 'Less Cash Economy', enterprises and consumers are coming together to help India leapfrog into a digital economy. Multitude of players in the ecosystem are contributing to provision the infrastructure platform, services,

applications to enable digital payments.

While Government, financial services and digital payments sector are undertaking several initiatives to drive digital payments, DSCI in association with Ministry of Information Technology (MeitY) and Google India introduced an initiative- 'Digital Payment Suraksha' Awareness Campaign in the country to educate end users, micro small and medium businesses and merchants on security best practices, dos and don'ts while making digital transactions.

This initiative has two-pronged approaches mutually complementing each other (i) Digital Payment Security Awareness Campaign: To spread awareness around security aspect of digital payments in the society, penetrating it to communities such as traders, micro and small businesses and

citizens at large. (ii) Digital Payment Security Alliance: To bring all influential stakeholders on a common platform and progress together in building up a sustainable ecosystem of digital payment security in the country.

The campaign is being supported by various institutions and enterprises spearheading Financial Inclusion and Digital Payments. The partners include NABARD's Financial Inclusion Division, NPCI, State Government Including Government of Telangana, Airtel Payments Bank, Axis Bank, Master Card, PayPal, PayTM Payments Bank and Visa.

How important is data and cyber security in the BFSI domain? What measures do you recommend to safeguard these?

The swift technological progress precipitated by the digitisation crusade is heavily and deeply impacting different sectors and stakeholders. BFSI sector is no different, especially with digital inclusion becoming the order of the day. With the advent of niche Fintech capabilities and rise of digital means and platforms of payments and transactions, two things have clearly been established- firstly, the society is headed towards technologically driven and influenced modes of operations in the BFSI sector and secondly, this would warrant a robust roadmap of which Cyber Security would be an indispensable part.

Unfortunately, amidst this technological flux and potential of digital, is the steadfast challenge of ensuring Safety and Security for the BFSI sector. The financial sector has been witnessing targeted malware attacks, which are increasingly becoming more advanced and innovative.

It is imperative for the BFSI sector to keep working towards upgradation of its cyber security and privacy agenda, in order to safeguard the sensitive ecosystem against the malicious elements that are continually looking at ways and means of intruding into the systems and inflicting damage of varying nature.



The swift technological progress precipitated by the digitisation crusade is heavily and deeply impacting different sectors and stakeholders. BFSI sector is no different, especially with digital inclusion becoming the order of the day.

Banking industry, in particular, should have focused attention to ransomware preparedness at an individual organisation level and industry level.

What changes do you oversee in the Information Technology (IT) landscape with the onset of cloud computing in the BFSI sector?

Let me elucidate the aspect of technological innovation that has been going on in this domain for some time now and which one needs to understand in order to appreciate the associated cyber security risks and concerns. Banking is a regulated industry which, in India, has shown the lead in adopting Information Technology to service consumers and for internal operational

efficiency. Traditionally, banking sector has been conservative in adopting emerging technologies. However, currently we are witnessing focus on adopting these technologies and charting out a path for digital transformation.

Cloud technology is one of the options. As IT infrastructure contributes to a significant part of the operational costs of banks, cloud technology provides cost benefits, scalability and many more benefits to the banks. Banks have started adopting cloud technology to derive the benefits. Cloud is a key platform for mid-sized players in banking sector to accelerate IT adoption, particularly in co-operative and rural banking.

What are the future plans of DSCI pertaining to data and its security?

DSCI has been deeply engaged with India's BSFI sector and has been working in tandem with the stakeholders from technology side, business side, regulatory side as well as policy side to anticipate the threat landscape and make actionable recommendations to both Government as well as industry to better protect the critical infrastructure of financial systems and processes in the country.

Recently, DSCI, in conjunction with the players from the digital payments industry and government, launched the digital payment suraksha campaign which is aimed at making a robust, safe and secured digital payments ecosystem in the country. We also recently submitted a cyber security roadmap for India's digital economy to the Department of Science and Technology. This roadmap entails a thorough study of cyber security landscape of five key technological areas, one of them being financial systems and finally proposes a set of concrete recommendations to the - policymakers. We shall continue to step up our efforts of engagement with this critical domain and come up with impactful thought leadership for different sets of stake owners in the BFSI domain. ●

BUDGET 2018: ENSURING BFSI TRANSFORMATION THROUGH INNOVATION

While presenting his last full budget before the 2019 Parliamentary elections, Union Finance Minister Arun Jaitley talked of several structural reforms already undertaken and underlined significance of new emerging topics such as AI, cryptocurrency and Blockchain and mentioned about importance of indirect tax system, GST. **Elets News Network (ENN)** sought to check the industry's pulse after it.

Jaitley talked about the personal income tax collection generated from the salaried class, as he said: "For assessment year 2016-17, 1.89 crore salaried individuals have filed their returns and have paid total tax of Rs 1.44 lakh crores which works out to average tax payment of Rs 76,306 per individual salaried taxpayer."

Although there was no change in the personal income tax

slab, in the Union Budget 2017, Jaitley had announced 25 per cent reduction in the income tax for companies whose turnover was lesser than 50 crore in financial year 2015-16.

It also made an interesting reading to see how the Narendra Modi Government's Budget 2018-19 provided a boost to the country's digital economy, allocating Rs 3,073 crore for the "Digital India". This programme also includes a big chunk of the Banking and Finance sector.

In his budget speech in Lok Sabha, Jaitley announced a national programme on Artificial Intelligence (AI) to be administered by NITI Aayog. Another programme on "Cyber Physical Systems" has been proposed to support establishment of Centres of Excellence under the Department of Science & Technology.

"These centres would be facilitating research, training and skilling in Robotics, Digital manufacturing, Big Data analysis, Quantum communication and Internet of Things (IoTs)," a statement released by the Ministry of Finance said.

Reacting to latest budget, QualityKiosk Chief Executive Officer and Founder Maneesh Jhawar said the Budget 2018-19 is "ambitious in establishing India as a knowledge-driven digital society, riding cutting edge technologies of machine learning, AI and IoTs".

SBI General Insurance Managing Director and Chief Executive Officer Pushan Mahapatra said the move would make adoption of algorithms easier and reliable. "Advanced forms of Machine learning will take away a lot of manual work involved in Insurance operations. It's not hard to imagine a more automated, customer-centric and cost-effective insurance operations in days to come."

In another major boost to facilitate the Digital India programme, Jaitley announced allocation of a budget of Rs 10,000 crore in 2018-19 for creation and augmentation of Telecom infrastructure. Five lakh wi-fi hotspots have also been announced to provide net connectivity to five crore rural citizens.

According to Finance Minister, 2.50 lakh villages have already obtained optical fiber broadband connectivity under Bharat Net program. Furthermore, the Government plans to connect 1.5 lakh more villages under the programme, which is



BUDGET

a collaborative project of the Centre and State wherein the former will contribute free Rights of Way for establishing the optical fiber network.

Also, Narendra Modi Government's latest budget has provided a boost to the country's digital economy, allocating Rs 3,073 crore for the "Digital India", a flagship programme aimed to transform the nation into a digitally empowered society and create knowledge-driven economy.

Launched by Prime Minister Narendra Modi on 1 July, 2015, the programme is both an enabler and beneficiary of other key schemes like BharatNet, Make in India, Startup India and Standup India.

The Programme has set nine pillars namely, Information for All, E-Governance, reforming Government through Technology, Electronics Manufacturing, Public Internet Access Programme, Universal Access to Mobile connectivity, E-Kranti, electronic delivery of services, Early Harvest Programmes, IT for Jobs, and Broadband Highway.

"Micro, Small and Medium Enterprises (MSMEs) are the most important sectors yet underserved segment when it comes to access to finance. Allotment of Rs 3 lakh crore for lending in Financial Year 2018-19 under PM's MUDRA Yojana for MSMEs definitely bring cheers to them. Also government's initiative to focus on process digitisation and easing the loan sanctioning process will help & encourage the emerging fintechs like us which are taking efforts to digitise the ecosystem with increased acceptance by the ecosystem," said Anita Gandhi, Whole Time Director at Arihant Capital Markets Ltd.

"By introducing incentives for MSMEs in the form of capital support and corporate tax reduction to 25 per cent for companies with turn over under Rs 250 crore, government will encourage small entrepreneurs in both urban and rural areas. Clubbed with increased target for MUDRA Yojana for this year, it will encourage small and medium entrepreneurs to expand their businesses. Government's decision to



According to Finance Minister, 2.50 lakh villages have already obtained optical fiber broadband connectivity under Bharat Net programme.

review refinancing policy of MUDRA for better financing of NBFCs is good news for Non-Banking Financial Companies-Micro Finance Companies (NBFC-MFIs)," said Rakesh Dubey, President, Microfinance Institutions network.

"MUDRA has been an important source of financing for microfinance companies and after this announcement, they can expect easier access of finance at lower rates in the future through MUDRA. Lastly, government's focus on improving digital infrastructure in rural areas will help increase the reach of financial inclusion and with the strengthened internet and telecom infrastructure microfinance companies will be able to accelerate cashless

adoption in rural areas," he said.

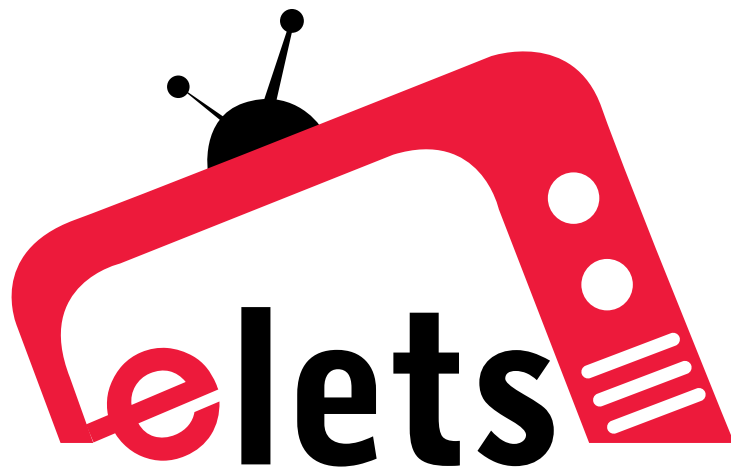
Meanwhile, cryptocurrency has been given a red signal with the Government maintaining that they can be a channel for money laundering and terrorist financing. Instead, the Government plans to use blockchain technology to curb its use.

Offering a relief to salaried class, the Minister proposed to allow a standard deduction of Rs 40,000. It is in lieu of transport and miscellaneous medical expenses intended to boost the take-home pay of the middle class.

Among other key announcements, the Finance Minister declared that fixed deposits and post office interest will be exempted till Rs 50,000. Other announcements included a slew of tax deductions for senior citizens, extending the Pradhan Mantri Vaya Vandana Yojana (PMVVY) till March 2020.

He also said the existing limit on investment of Rs 7.5 lakh per senior citizen under this scheme is also being doubled to Rs 15 lakh.

The Government is firm to achieve 8 per cent growth, stated the Finance Ministry in a statement, adding the GDP growth in the second quarter of 2017-18 stood at 6.3 per cent. The International Monetary Fund (IMF) has forecast India will grow at 7.4 per cent next year. ●



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NBFC100 Tech Summit: Magnifying the Essence of Non-Banking Financial Companies in India

The banking and financial sector in India is undergoing massive transformation due to several progressive initiatives like Digital India, demonetisation, and Pradhan Mantri Jan Dhan Yojana (PMJDY) being stressed upon by the Narendra Modi Government.

While “Banking for All” has turned one of the key focus areas of the Government, Non-Banking Financial Companies (NBFCs) are playing a pivotal role in it by boosting the level of Financial Inclusion in this country.

Highlighting this significance of NBFCs and Small Finance Banks, Elets Technomedia Pvt Ltd organised “NBFC100 Tech Summit” in Mumbai, last October. It focused on leading 100 NBFCs and Small Finance Banks.

The summit was inaugurated by Aniruddhe Mukherjee, Principal Secretary, Department of Finance, Government of Madhya Pradesh.

Several other dignitaries namely Ashwini Kumar, Additional Economic Advisor, Ministry of Housing and Urban Affairs, Government of India, Sumnesh Joshi, Additional Director General, UIDAI, Government of India, and Raman Aggarwal, Chairman, Finance Industry Development Council were part of the inaugural session and deliberated their exquisite expertise pertaining to the Banking, Financial Service and Insurance (BFSI) domain.

Esteemed dignitaries who were a part of this amalgamation shed light on several topics such as the rising significance of NBFCs and the road ahead, Role of IT in Changing Landscape in NBFC Sector, leveraging cloud, Challenges and Opportunities of NBFC: An Emerging Alternative to Mainstream Banking etc.

In this report we present to you a bird’s eye view of the grand extravaganza held in Mumbai:



Inaugural Session

Non-Banking Financial Company: Rising Significance of Providing Niche Banking & The Road Ahead

ANIRUDDHE MUKHERJEE

*Principal Secretary, Department of Finance,
Government of Madhya Pradesh*

“Non-Banking Financial Companies (NBFCs) have a lot of scope in the urban areas due to emergence of new players like payments banks. Micro-Small and Medium Enterprises (MSMEs) also play an important role in the growth of NBFCs. However, looking into the current and extensive penetration of the Cooperative banks in the rural sector; NBFCs might face a lot of challenges in building their existence in the rural economy.”



ASHWINI KUMAR

*Additional Economic Advisor
Ministry of Housing & Urban Affairs,
Government of India*

“NBFCs have an important role to play in the optimal allocation of capital in the credit market. We all know that the credit market has the problem of asymmetric information that is where the NBFCs have an edge. NBFCs have a better knowledge of the ground level insights of their customers and it actually enables them to address problem of asymmetric markets in a better way than the banks.”



SUMNESH JOSHI

*Additional Director General
UIDAI, Government of India*

“NBFCs specifically have a significant role to incorporate in the digitisation of financial services and several new players like payments banks, small finance banks etc are ensuring the same. But there is still a long way to go as far as complete digitisation is concerned. There is a need to ensure the infrastructure in place and design the applications to promote all digital payments.”


RAMAN AGGARWAL

*Chairman
Finance Industry Development Council*

“Non-Banking Financial Companies (NBFCs) are self-driven and unregulated before 1997. It went through a lot of turmoil and was subjected to several controversies. The speculations that NBFCs went through was actually a blessing in disguise because it led to the initiation of the regulatory framework in the sector. After 20 years, NBFCs are now a sector that is regulated at the par with banks. Be it the registration norms, minimum entry, customer guidelines, credit concentration and several others, the sector now offers a wide range of services.”

Technology Presentation: CISCO Security in Financial Services Industries


ATYUJWAL DEKA

*Network and Cyber Security Sales Lead,
West, North & East India, Cisco India*

“Ninty-five per cent of the companies are targeted by of malicious traffic in the recent times. Hundred per cent of the organisations are contracted with website holding malware. No organisation is safe today because the threat can be caused internally as well. Several employees and the employers search various websites using the Internet of their own organisation and unfortunately if any of the searched websites contain malware, the entire host network has the risk of getting infected.”

Technology Presentation:
Innovating at Scale with Amazon Web Services-Securely and Frugally



AKSHATH BALACHANDRA
*Enterprise Business Development
Amazon Internet Services Pvt Ltd*

“It is important to look at the present stature of the market today and then decide the implications of cloud computing in accordance with it. NBFCs, in particular, started to address the issues that the conventional banks were not addressing well.

With these new players entering the BFSI market, the delivery medium is more and more getting into the digital mode. That is where the significance of cloud comes into place.”

Panel Discussion:
Role of IT in Changing Landscape in NBFC Sector

SHASHI KUMAR RAVULAPATY
*Senior Vice President and Chief Technology Officer
Reliance Capital Ltd*

“NBFCs have significantly gained importance in the last 15 -20 months due to the openness of the regulators. Several new players such as payments bank, small finance banks, Micro-Finance institutions have emerged in the financial segment.”



JOYDEEP DUTTA
*Executive Director & Group Chief Technology Officer
Central Depository Services (India) Limited*

“The need for technology based upgradation excites a lot of us in the financial sector. However, in sync with advancement it is also crucial to understand the fitment of the technology. Do not apply technology just for the sake of doing it unless it accelerates your business growth.”



NIKHIL BANDI
*Chief Information Officer
Vistaar Financial Services Pvt Ltd*

“Journey of NBFCs with the touch of technology has become very smooth. Thanks to Prime Minister Narendra Modi-led government that has flagged off “Digital India” initiative, financial institutions have transformed and are more progressive now. Penetration of Aadhaar, e-kyc are also adding a new dimension to this journey.”





JYOTHIRLATHA B

*Chief Technology Officer
Dewan Housing Finance Corporation Limited*

“In my view the acquisition cost meant for financial institutions should be less, and digitisation is the only option that can make this happen. We, at Dewan Housing Finance Corporation Limited, have taken several digital initiatives such as e-sanction. Our sales team has been provided with tablet computers so that the data generated can be digitised at the first place.”

SAURABH NIGAM

*Chief Technology Officer
DMI Finance Private Limited*

“Few years ago cost reduction used to be one of the biggest challenges or driving forces behind automation and process improvement. A present-day analysis suggests that thrive of cost reduction has come down. Brands now lay emphasis on ensuring better results to customers lauded with optimum digital transformation.”



MANOJ K MISHRA

*Chief Technology Officer
Magma Fincorp Ltd*

“There are two sides of Information Technology (IT), traditional IT that delves into lending applications, ERPs, CRM etc. There is a lot of struggle in dealing with this section. The other side of IT is all about Artificial Intelligence, Machine Learning, Data Science and several others. This segment, in particular, is very helpful in mitigating the challenges faces by NBFCs.”



RAVI BAJAJ

*Director IT
Insta Capital Pvt Ltd*

“Earlier, banks and NBFCs would have to spend a lot for having a good technology setup and providing a seamless customer experience. It comprised getting an infrastructure and hiring a team of technology developers for functioning of the software. But today with cloud services, Application Programming Interface integration and use of software services, information technology is making it a level playing field for NBFCs to compete in this extremely dynamic space.”

PUNIT JAIN

*Chief Executive Officer
Nelito System Ltd*

“Earlier Information Technology (IT) based companies preferred banks over NBFCs. This scenario, however, has changed over the time. It is now important for the NBFCs to choose a technology partner that is agile. One cannot implement one product and rely on it for five years. You will have to keep changing and upgrading.”

**SABYASACHI GOSWAMI**

*Head Sales and Strategy
PERFIOS Software Solutions*

“NBFCs have an edge over three things as compared to other financial institutions namely the procedure of the acquisition, customer retention and servicing and targeted cross sell. These factors helps NBFCs in differentiating themselves.”

**Technology Presentation: Airpay - Banks' Payment Partner****AMIT KAPOOR**

*Co-Founder & Chief Executive Officer
Airpay Payment Services*

“Digitisation is the most talked about issue in India and there is a lot of push from the Centre to transform the country into a cashless economy. However, the required digital infrastructure is still lagging behind despite the demonetisation drive.”

CEO Round Table:**Challenges & Opportunities of NBFC: An Emerging Alternative to Mainstream Banking****R BASKAR BABU**

*Managing Director and Chief Executive Officer
Suryoday Small Finance Bank*

“In the recent times, several young and dynamic entrepreneurs are starting their NBFCs and paving a way for a new era for these financial institutions. NBFCs are not just limited to money lending but they are evolving and transforming themselves with the help of technology and young minds.”



MEENAL PATOLE

*Managing Director and Chief Executive Officer
AGORA Microfinance India Limited*

"NBFCs and Micro Finance Institutions (MFIs) face a lot of challenges and therefore it is crucial for them to face all the adversities collectively. As NBFCs are gradually growing, the need to have a uniform regulator is very important for addressing all policy related concerns."


K M VISWANATHAN

*Managing Director and Chief Executive Officer
M Power Microfinance Pvt Ltd*

"There are a lot of opportunities for the NBFCs and these opportunities are going to boost their growth to a larger extent in the next five to six years. Middle-class, in particular, are going to play a major role in this regard as most of its basic financing requirements were to be fulfilled by NBFCs and MFIs."


HEMANT B SONGADKAR

*Managing Director and Chief Executive Officer
Nabsamruddhi Finance Ltd*

"NBFCs face a lot of challenge in terms of fund raising. Nabsamruddhi Finance Ltd, with the help of its cordial alignment with NABARD, are offering support to a lot of NBFCs and helping them solve their financial issues."


SANDEEP WIRKHARE

*Executive Director and Chief Executive Officer
Essel Business Loans, Essel Finance*

"NBFCs have a lot of scope for growth as far as the present scenario is concerned. Technology is playing a very important role in this transition. However, challenges in terms of asset creation will create certain hindrances."

ASHOK BAJAJ

*Managing Director and Chief Financial Officer
Insta Capital Pvt Ltd*

"There are a lot of opportunities associated with NBFCs. Due to its simplified structure the overhead expenditure associated with it is very low. Although the cost of borrowing funds is comparatively high but its gets compensated with low overhead cost. Operation of banks is not viable on a small scale which is possible in terms of NBFCs. A first time borrower is usually not entertained in banks but NBFCs have an added opportunity in this regard."

**SANJAY SHARMA**

*Co-Founder and Managing Director
Aye Finance*

"With rise of technology, NBFCs are lauded with a plethora of opportunities. The best part of this phase is the availability of tech-led services at much affordable prices unlike the scenario in the earlier times. Deploying a new technique is also way cheaper in the recent times."

JAYANTA MAJUMDAR

*Managing Director
Jagaran Microfin Pvt Ltd*

"Since their inception, NBFCs and MFIs have been serving the unbanked sections of the society and the scenario is still prevalent in the recent times. However, these financial entities will now have to think of exploring horizons apart from boosting the Financial Inclusion."

**SATYAJIT DWIVEDI**

*Chief Executive Officer
NABKISAN Finance Ltd*

"Despite several asset related hiccups NBFCs have been performing well as compared to other financial entities. This stability will certainly help them growth further exponentially in future."

DS TRIPATHI

*Chief Executive Officer
Aadhar Housing Finance Pvt Ltd*

“There are huge opportunities available for NBFCs in India. I always believe that the moment abilities of banks end the abilities of NBFCs start. In India, where 70 per cent of the population in the rural areas is still unaware of the farmers’ finance and everyone has an aspiration to own a house and therefore the opportunities in terms of financing is humongous.”


ANUJEET VARADKAR

*Chief Executive Officer
Svatantra Microfin Private Limited*

“There are two major challenges that the MircoFinance Institutions (MFI) face in the recent times namely the challenge of diversification in terms of product and the challenge of managing event risks. Most MFIs are monoline companies as they just have one singer product offering. They donot enjoy the immunity that a typical bank enjoys.”


PRABHAT CHATURVEDI

*Chief Executive Officer
Infinity FinCorp*

“Non-Banking Financial Companies (NBFCs) in India face a lot of challenges. The availability of Information Technology (IT) solutions for a budding NBFCs is very low in India. In addition to this, new-age customers look for flexibility in terms of repayments but the core system is rigid in this regard. There is a severe lack of Software as a service (SaaS) solutions as well.”


YESHWANT AHER

*Chief Executive Officer
Anik Financial Services Private Limited*

“MFIs are dedicatedly working towards extending credit assistance to the poor and the unbanked sections of the society. The biggest challenge that this segment faces is the lack of uniformity in interest rate that ultimately hinders the zeal of promoting the Financial Inclusion.”



MANISH BACHHAWAT

Chief Executive Officer
NM Financiers Pvt Ltd

"Technology has brought in pool of opportunities for the financial sector. The Turn-Around-Time (TAT) of the customers have also decreased drastically due to the rise of Aadhaar based technology such as e-KYC, the growth is going to be exponential."

**Technology Presentation: Innovating with AI/ML in Financial Services****MADHUSUDAN SHEKAR**

Principal Technical Evangelist
Amazon Internet Services Private Limited

"Artificial Intelligence and Machine learning may have had few false starts but today its role in terms of financial services is pivotal. This progressive piece of technology can actually be used very efficiently in undertaking several challenges in BFSI industry."

**Technology Presentation: Going MultiCloud with CISCO's Intent Based Data centre****SAJU PAULOSE**

Product Sales Specialist, Data centre
Cisco Systems India

"Cloud computing has its own advantage. According to a research, optimised public cloud strategy will enable 11 per cent growth in the revenue public strategy, 87 per cent reduction in provisioning Information Technology (IT) services and 77 per cent reduction in IT cost. However, many customers do not see the significance of clouds. Only 3 per cent of the customers actually acknowledge it and accept it."

**Panel Discussion - Leveraging Cloud for NBFC Sector****ROHIT KILAM**

Head-Technology and Digital
Aditya Birla Financial Services

"The banking and financial institutions have undergone a paradigm shift. There are major changes in terms of process, regulation, operations, security and infrastructure. Cloud computing has a major role in this transition."

**ASHISH OJHA**

*Chief Technology Officer
Aye Finance*

“Business environment in the recent times is very dynamic. As a result of this, the technology based requirements change very frequently. At this juncture it is important to have a technology based platform which is agile and flexible.”

**ARUN KUMAR**

*Head, IT
Grameen Koota Financial Services Private Limited*

“Data centre traditionally helped us in handling our core as well as auxiliary applications. With the advancement in mobility and the need for flexibility has brought in several changes in the BFSI segment. In this scenario, a pay as you go model of cloud really works well.”

DHRUMIL DALAL

*Senior Vice President, IT
Bharat Financial Inclusion Ltd*

“Journey to cloud is inevitable for the banking and financial sector. Sooner or later, all the entities will have to move to cloud for better affordability and innovations.”

**DOMINIC VIJAY KUMAR**

*Associate Vice President, IT
Art Affordable Housing Finance India Ltd*

“Cloud technology is way flexible as compared other technologies for the BFSI sector. It helps in saving a lot of cost pertaining to infrastructure and helps in ensuring better innovations, agility and scalability.”



**SURESH A SHAN**

*Head-Innovation & Future Technology,
Mahindra & Mahindra Financial Services Ltd*

“Cloud has nothing to do with infrastructure it is more focused towards migration. Enabling the advancements on the basis of the requirements is important. Upgrading to technologies like cloud just for the sake of doing it without considering the demographical challenges is not a worthy exercise.”

**KRISHNASWAMI V V**

*Head, IT
Aptus Value Housing Finance India Limited*

“Adapting to cloud is not just limited to affordability but to scalability also. Cloud helps the financial institutions in matching steps with digitisation and thus embracing the other associated new-age technologies.”

Panel Discussion:**Ensuring Safe and Secure Payment System with Pleasant Customer Experience****MIHIR BHAVSAR**

*Head, IT
Indostar Capital Finance Pvt Ltd*

“Cashless transactions are need of the hour. It is important for the customers to understand that e-payments are way safer and convenient than the cash transactions. Customers can complete their complete their transactions easily without visiting the bank branch physically.”

**UMANG SHAH**

*Head, IT
Svatantra Microfin Private Limited*

“Cashless transactions are progressive but it has its own challenges. In India prior to initiating digitisation it is important to include the unbanked section of the society into the ambit of banking services. Flagship programmes like Pradhan Mantri Jan Dhan Yojna (PMJDY) have made a commendable contribution towards Financial Inclusion. Rural populace atleast have bank accounts.”





RAJESH SINGHAL
Head, IT and CISO
Indian Clearing Corporation Ltd.

“The biggest threat that the e-payments face occurs in-house. Consumers have the tendency to use weak passwords, sharing their One Time Passwords (OTPs) and ignoring the statutory warnings. It is important to ensure proper training and awareness with regards to e-payments before implementing digitisation.”



G SUBRAMANIAM
EVP, Risk and Operations
Aptus Value Housing Finance India Limited

“Demonetisation has brought several positive changes in the digital payments segment. Post the drive, debit card payments became very popular among the consumers. Cashless payments are getting popular day by day and the progress towards complete digitisation is really good.”



2nd BFSI Cloud and Security Summit, December 2017

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9TH MARCH, 2018
AIZAWL, MIZORAM

Aizawl is one the cities of Mizoram selected under the Smart Cities Mission. The State Government is taking many initiatives urban renewal which is an important aspect of a 'Smart City'.

Elets Technomedia Pvt Ltd in association with the Government of Mizoram is organising the National Urban Development Summit in February 2018 to plan an inclusive, sustainable & resilient city by leveraging the know-sharing and collaborations

Participation of Stakeholders From:

- Ministry of Housing & Urban Affairs, Government of India
 - Ministry of Housing & Urban Poverty Alleviation, Government of India
 - Ministry of Road, Transport & Highways, Government of India
 - Ministry of Electronics & Information Technology, Government of India
 - Department of Telecommunications,
 - Government of India
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KEY THEMES



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#SmartcityAizawl

IT TO ACTIVELY DRIVE SUCCESS OF DIGITAL ENTERPRISES



The building blocks for digital business are connectivity (online, mobile, social), automation (process enablement) and decision capabilities (analytics, big data), says **Joydeep Dutta**, Executive Director and Group Chief Technology Officer (CTO), Central Depository Services India Limited (CDSIL), in conversation with **Rakesh Roy** of **Elets News Network (ENN)**, and talks about transformation of Digital technology in the finance sector and its impact.

Having been into this sector for 35 years tell us about the Information Technology (IT) and Digital Technology evolution in the financial sector.

In today's age of innovation and transformation, IT is considered as a strategic function and the key differentiator in many organisations because almost every process has an element of IT. Financial services companies, in particular, have been the leaders in adopting technology.

In India, processes pertaining to digitisation accelerated its journey in early 2000s, wherein enablements of processes over the alternate channels were gradually adopted by organisations. Traditionally, business volumes were directly proportional to physical work, and to increase business's reach, companies opened up branches at locations that were likely to have the most customer walk-ins.

Earlier, companies preferred paper based processes and interactions were face to face. But with the advancement and availability of internet, mobile and high-speed telecom connectivity, companies started offering products and services through alternate channels.

What changes did the business dynamics undergo with the rapid penetration of digitisation in the finance sector?

Shifting to new technologies from traditional systems and methods is not an easy step. Sometimes, the culture

and ethos of the organisation hinder them from embracing change. However, keeping abreast with technology is mandatory and every organisation has to adopt it for being relevant.

While companies are increasingly focusing on re-skilling older employees with regards to new technologies and processes, a lot of effort is required from the employees for unlearning skills acquired over the years. While automation is expected to replace some jobs, it will also create new ones that are required to manage mature technology.

Companies that succeed in creating a digital customer value proposition do not get there by accident. They develop a clear vision of how they will meet their customers' digital needs, set objectives against that vision, and execute often over the course of multiple years.

What are some of the key digital initiatives of CDSL Group?

CDSL was set up in 1999 as a financial market infrastructure company to offer depository services to customers. It nearly has 1.45 crore active depository accounts through 600 intermediaries (brokers, banks, custodians).

Some of our services include:

Our internet based platform allows investors to monitor their accounts and securely execute instructions. It is available to those who like to transact without the need to visit their depository participant. This channel is

CDSL was set up in 1999 as a financial market infrastructure company to offer depository services to customers. It nearly has 1.45 crore active depository accounts through 600 intermediaries (brokers, banks, custodians)

particularly useful for those customers who belong to depository participants and do not have their own internet channel offering.

The mobile based investor application is also available on Android, iOS and Windows platforms offering similar capabilities as the internet channel.

eVoting and mVoting are internet and mobile based voting platforms respectively wherein shareholders can login and register their votes on company resolutions during designated voting dates. Results to such voting can be published instantly to companies. A venue voting facility enables specific shareholders who prefer to vote at the meeting venue on the day of the meeting proceedings.

Consolidated Account Statement (CAS) is collaboration between two depositories and four Register and Transfer Agents (RTA). It helps in publishing consolidated customer

statements, which are reconciled every month and sent over email in a largely automated manner. Bounced mails are sent physically to the investor to his registered address.

KYC Registration Agency (KRA): For Securities and Exchange Board of India (SEBI) regulated entities (stock brokers etc), Permanent Account Number (PAN) based electronic Know Your Customer (KYC) platform with five inter-operable Key Result Areas (KRA) are in operation. Financial intermediaries may sign up with one KRA and create KYC record for a customer only if he/she does not exist in any of the five KRAs.

Aadhaar based eKYC and eSign services of Unique Identification Authority of India (UIDAI) are offered to intermediaries by integrating their channels with our Aadhaar service platform.

Insurance Repository (IR): Demat of insurance was started for life insurance initially and later for general insurance products, wherein records are kept centrally in electronic form across insurance companies. This initiative is as per Insurance Regulatory and Development Authority of India (IRDAI) guidelines.

National Academic Depository (NAD): The NAD initiative of Ministry of Human Resource Development and University Grants Commission (UGC) holds academic records of students from Class 10 onwards. It is a single database of all student records, enabling electronic verification services.

Goods and Services Tax Service Provider (GSP): As a GSP licensee of Goods and Services Tax Network (GSTN), this service is being provided to GST Application service provider (ASPs) and end customers for their tax filings.

Commodity Repository is the most recent digital initiative under the regulator Warehouse Development Regulatory Authority (WDRA). This platform facilitates electronic issuance, holding, deposits, withdrawals and transacting of commodity warehouse receipts. ●



ENTERPRISE CLOUD TRENDS AND IMPORTANCE OF BENCHMARKING AND PERFORMANCE TEST



The Cloud adoption is moving from hype to a reality because of its promising offerings ranging from flexibility, scalability, agility and significant savings in capital and operational expenses. With rising availability of many cloud native applications and service models, cloud deployments will see a growth in the coming days, writes **Keshava Raju**, Technical Marketing Engineer (Cloud and Virtualisation Technologies), Spirent for **Elets News Network (ENN)**.

With advent of Internet of Everything (IoE), business must leverage on the benefits that cloud offers. Industry experts anticipate that concepts like Internet of Things (IoT) and Artificial Intelligence (AI) will continue to innovate real-time data analytics. In addition to this, cloud computing is also extending help by making IoE a reality. While AI generates and uses large volume of data, clouds stores and processes that data.

Consumers need faster network to experience real time access to their applications. Cloud is expected to be agile and offers faster services to provide better user experience. Today's evolving

cyber threats put increased demands on cyber security. A robust analysis of cyber security trends is needed to make informed decisions during product development, security investments and to ensure application accessibility and reliability, while elevating security assurance.

Enterprise private cloud design and deployment creates many challenges. Migration from bare metal workload to virtual workload is a challenge and it is an uncertainty area for customers. And, when multiple Virtual Machines (VMs) instantiates and starts to work on the shared cloud infra there can be performance issues on all VMs, as all of





Consumers need faster network access to experience real time access to their applications. Cloud is expected to be agile and offers faster services to provide better user experience.

they will start to contend on the shared infrastructure.

Frequently Asked Questions by consumers in terms of challenges faced:

1. How many VMs can I run on my cloud?
2. How much resources I need to procure for my cloud?
3. How much scalable is my cloud?
4. What is the performance of the compute resources?
5. What is the performance of the virtual network infra?
6. What is the performance of the

central storage?

7. What should be preferred a disk-based storage or flash storage?
8. How will I migrate my bare metal application to VW (Virtual Workload)?
9. What is the performance of my application after it migrated to a virtual workload?
10. Can my cloud infrastructure and applications defend against the broad range of malware/attacks?

At Spirent, we have solutions to validate the cloud design and all of the above deployment challenges. It helps enterprises in benchmarking and capacity planning their cloud infra. Spirent offers realistic, preemptive intelligence on network security testing and performance that enables you to make proactive decisions on testing and validating performance, up time, and defense of a broad range of targets including networks, applications and devices (app testing and mobile testing).

Cloud deployments varies in behaviour on different platforms, therefore testing, measurement and benchmarking of the cloud Infrastructure performance, network performance, application performance and efficiency of lifecycle management is very important to achieve hassle free high-performance cloud. ●

Author's profile:

Keshava Raju

Technical Marketing Engineer (Cloud and Virtualisation Technologies), Spirent

He is a technology influencer and seasoned business professional with 15 years of experience with leading technology firms. Raju has strong experience in architecting and implementing Cloud, Software Defined Infrastructure solutions and application security for Enterprises and Telcos.

He has exposure in multiple Original Equipment Manufacturer (OEM) products and Open source technologies. Raju is a keen follower of technology trends and holds a sturdy understanding of their potential business impact. At Spirent he is working to address customer's Cloud / Network Functions Virtualization (NFV) design and implementation challenges with Spirent's Cloud and Virtualisation solutions, his work includes:

1. Cloud infrastructure performance test.
2. Capacity planning of the cloud infrastructure.
3. Cloud infrastructure benchmarking by mimicking customer's workloads with realistic load generation and regression testing to stress test and benchmark the Cloud infrastructure.
4. Validate, design and build enterprise cloud to achieve high performance cloud with significant cost savings on investment, Capital Expenditure (CAPEX) and Operational Expenditure (OPEX).
5. Systems tuning for the best performance of the cloud.
6. Benchmark application performance & security compliance.
7. Ensure Cloud infrastructure and applications defends in response to the latest broad range of malware / attacks.

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2nd elets NBFC100

TECH SUMMIT

7 DECEMBER 2017 | BENGALURU



2nd NBFC100 Tech Summit: Experts pitch for technologically advanced NBFCs

Highlighting the pivotal role of Non-Banking Financial Companies (NBFCs) in meeting the diverse financial requirements of consumers, the 2nd NBFC100 Tech Summit was organised by Elets Technomedia in Bengaluru. The summit witnessed a strong congregation of who's who of the Banking, Financial Services and Insurance (BFSI) sector, experts representing NBFCs, Small Finance Banks, Payments Banks, Information Technology (IT) and other sectors participating in various sessions of the conclave and sharing their vision in the summit held last December.

Vivek Jaiswal, General Manager, Karnataka Telecom Circle, BSNL, inaugurated the summit.

During the conference, Subrata Gupta, Managing Director, NABARD Financial Services Ltd and various esteemed dignitaries from across the BFSI sector stressed upon the need for technology upgradation and requirement for security safeguards in NBFCs. They also put across their perspective about financial services.

The summit aimed to cover the factors affecting the rapid growth and upcoming opportunities within the NBFCs. The summit was powered by The Banking & Finance Post, Asia and the Middle East's premier bi-monthly magazine on the BFSI sector.

Let's have a glimpse of the 2nd NBFC100 Tech Summit:



Inaugural Session

Non-Banking Financial Company: Rising Significance of Providing Niche Banking & The Road Ahead



Vivek Jaiswal
General Manager
Karnataka Telecom Circle, BSNL

“Non-Banking Financial Companies are playing a pivotal role in meeting the Financial Inclusion dream of the country. It is actually helping the poor and unbanked sections of the society in meeting their credit demands and ensuring them respite from exploitations of unauthorised money lenders. NBFCs can further accelerate their momentum by performing loan disbursement and repayment may be done through mobile wallet/payment banks using mobile technology.”

Subrata Gupta
Managing Director
NABARD Financial Services Ltd

“Use of technology should completely depend on the genre of institution. If I have to run a Small Finance Bank, I might use Microsoft Office to manage all the relevant data. But if I am thinking of going large scale and upgrading to bank, I will have to think of software that will help in accounting the data, core banking solutions and transactions. There have been a lot of issues that hindered the adaptability of technology in financial institutions.”



Technology Presentation: Integrated Security - A Growth Engine for your Business



Vishak Raman
 Director
 Security Business, Cisco India and SAARC

"Today's attacks are stealthy and evasive, designed to bypass traditional defenses like firewall, anti-virus and Intrusion Prevention System (IPS). That's why you need Advanced Malware Protection. The nature of attacks has changed completely in the recent times. Attackers now target the most popular websites and then plant the malicious stuff in between the updates."

Technology Presentation: New Analytics Experience: Discover the Limitless Possibilities



Harpreet Singh Paintal
 Principal Manager
 Business Solutions, SAS

"SAS is the largest privately held software company in the world in the space of Business Intelligence and Analytics. We are a 41-year-old organisation and have been helping customers across geographies and industries in solving their business problems, ensuring them better decision-making insights by harnessing the power of data."

Panel Discussion: Role of Technology in Altering the Next Phase Growth of NBFCs

Dr N Raveendran
 Chief Information Officer
 Sakthi Finance Ltd

"NBFCs deal with a lot of factors such as growth, competition, compliance, regulators and customers' satisfaction. In order to achieve all these targets, financial entities are expecting the technology heads positioned in the NBFCs to bring a prolific change and therefore help in accelerating its growth."



Ashwin Khorana
 Chief Technology Officer
 Janalakshmi Financial Services

"NBFCs face a major challenge of huge volumes. When we talk about Financial Inclusion in India it is important to understand that several people across the country are still unbanked. In this era, we at Janalakshmi Financial Services make sure that technologies are functioning properly in reminding our customers regarding the repayment of their loans so, that it does not get converted into Non-Performing Assets."



Panel Discussion:

Role of Technology in Altering the Next Phase Growth of NBFCs



Paras Mittal
Managing Director
Gurdevi Leasing & Finance

“Our journey in terms of NBFC is very interesting. We started our operations as a law firm which is 12-year-old. We take care of a lot of compliances of the client companies at the Reserve Bank of India (RBI) and handle their registration matters.”



Rohit Dube
Head, IT
NABARD Financial Services Ltd

“We started our operations in 2009 under the guidance of NABARD. In less than seven years, we have a different set of experience as we have transformed ourselves from traditional organisation to technology-based banking solution firm after undergoing a lot of operational hardships.”

Tejasvi Mohanram
Founder
RupeePower

“There are several factors that may challenge the growth of the NBFCs in the recent times namely increasing the level of fund to ensure better flow of credit to the customer, keeping the operations under control and maintaining the business profitability and offering better quality portfolio.”



Punit Jain
Chief Executive Officer
Nelito Systems Ltd

“Banking industry is transforming at a very fast pace and therefore it is evident for the sector to maintain better agility. It is important for the sector to embrace recommendations pertaining to changes be it from the regulators, customers or due to the market demand.”





Arun Kumar D
 Head, Business Development
 Dvara Solutions

“Government has done a marvelous job in last four to five years as they’ve created right infrastructure catering to the demands of financial institutions in general. They have created new entities such as Small Finance Banks and Payments Banks are have given rise to a lot of healthy competition.”

Technology Presentation: Process Automation is the Core for a Successful Digital Transformation Strategy



Varun Goswami
 Associate Vice President
 Newgen Software Technologies Ltd

“Few years ago cost reduction used to be one of the biggest challenges or driving forces behind automation and process improvement. A present-day analysis suggests that thrive of cost reduction has come down. Brands now lay emphasis on ensuring better results to customers lauded with optimum digital transformation.”

Technology Presentation: Cybersecurity for Digital Age

Murtaza Bhatia
 Business Head
 Security Solutions and Services, Dimension Data India

“It is important for every organisation to believe that spending on security is not an additional cost. Financial Institutions such as NBFCs make use of micro devices such as laptops and mobile phones.”



CEO Roundtable: Challenges and Opportunities of NBFCs: Key to Dawn for Financial Inclusion Endeavour

Hemant B Songadkar
 Managing Director and Chief Executive Officer
 Nabsamruddhi Finance Ltd

“NBFCs have reported a tremendous growth in the recent times and they have become an inseparable part of Financial Inclusion endeavour. I believe in some cases these entities are even better than commercial banks in reaching the credit demands of the vast unbanked section spread across the country. In the recent times, commercial banks are facing a lot of trouble due to the Non-Performing Assets (NPAs).”





Hardika Shah
Founder and Chief Executive Officer
Kinara Capital

“Microfinance institutions (MFIs) are continuing to be a driving force for Financial Inclusion but these entities are not just limited to this aspect only. MFIs are graduating at a faster pace. Eight out of 10 MFIs have already transformed themselves into Small Finance Banks.”



Anand Rao
Founder and Chief Executive Officer
Chaitanya India Fin Credit Pvt Ltd

“NBFCs are playing a very important role in credit disbursement by reaching the requirements of a particular segment of the society that was not served by the formal banking system. I believe in the next 10-15 years NBFCs are going to witness a lot of growth and will become fairly successful financial entities.”

A Ramesh Kumar
Chairman and Managing Director
Swarna Pragati Housing MFI

“NBFCs are smaller in size as compared to several commercial banks. But despite having a larger bandwidth, the commercial banks lacked the agility to work for the rural unbanked segments of the society. NBFCs have shown a phenomenal rise by reaching out to the credit demands of rural population with great dedication and consistency.”



Arvind Sonmale
Managing Director and Chief Executive Officer
Sustainable Agro-Commercial Finance Ltd

“Financial Institutions always had lesser interest on semi-urban and rural parts of the country. However, with the recent rise of NBFCs and Micro Finance Institutions (MFINS) these otherwise untouched segments have become very popular in terms of credit lending. Farmers can now avail the loan of their choice at ease due to higher availability of financial institutions dedicated to cater their needs.”





Venkatesh N
Managing Director
Samasta Microfinance Ltd

“Technology upgradation is the need of the hour for all the banking and financial institutions. Post demonetisation drive the demand to accelerate digital banking services is soaring. Mobile penetration across the domain is increasing day-by-day. To maintain its momentum, NBFCs will have to perk up their technology based services at faster pace.”



Ravi N Deshpande
Managing Director
Trikaal Leasing and Finance Ltd

“Embracing technology is important but its implementation is challenging in terms of NBFCs. In addition to this, maintaining a properly functioning collection management system is also becoming a hardship for majority of the financial institutions working in the semi-urban and rural regions.”

Shyaman P
Chief Executive Officer
Chemm Finance Ltd

“Financial Inclusion is a plastic word and there are several challenges associated with it. The biggest challenge is the cost at which the institution is rendering its fund. If an entity is able to lend credit at lower rates, its popularity among the lenders would definitely be higher as compared to others.”



Ashish Agrawal
Director
JR Laddha Financial Services Pvt Ltd

“The Reserve Bank of India (RBI) has issued license to several NBFCs and MFINs to transform themselves into Small Finance Banks. This push is going to help these financial entities in serving the nation at a largest platform. In the next two to three years a large section of the non-banking and micro-finance segment will revamp drastically lauded with technologically advancements.”



Technology Presentation: Addressing Communication Challenges in Distributed Environment



Pramod Sharda
Chief Executive Officer
Icwarp

“NBFCs come across several challenges such as need to ensure services to the customer irrespective of his/her location, increasingly dispersed but highly connected workforce, growing use of Smartphones, cost of Investment and Management etc. Providing a solution to above mentioned issues, Icewarp helps the institutions in connection with its workforce seamlessly, enables effective communication and ensures smooth internal and external collaboration.”

Panel Discussion: Leveraging Cloud for NBFC Sector



Suresh A Shan
Head-Innovation and Future Technology,
Mahindra & Mahindra Financial Services Ltd

“We, at Mahindra & Mahindra Financial Services Ltd, went through a migration of 28,000 email ids to get into a new platform. One of our vendors, who was asked to conduct the transfer, suggested us to move to services such as WhatsApp and telegram to initiate convenient interaction without the need to have an infrastructure and that too at affordable price. Cloud-based technology is changing the way business is conducted.”

Dominic Vijay Kumar
Associate Vice President, IT
Art Affordable Housing Finance India Ltd

“Cloud plays a very important role in Start-ups working in the Banking, Financial Services and Insurance Sector. We, at Art Affordable Housing Finance India Ltd, have hosted a lot of applications on cloud computing. This has helped us in cutting down our capital expenditure and lowering the operating expense and concentrate well on business part.”



Anand Sharma
Chief Technology Officer
Asirvad Microfinance Ltd

“When we procure big software and technologies, the fundamental challenge is arranging for a testing environment. Most of us neglect out testing and development environment which is a very important. Cloud is the solution for short-term testing and development requirements.”





Phaneender Aedla
Chief Technology Officer
InCred

“We started out journey with cloud computing. It helped us with affordability and agility. We wanted to start with a platform where we can experiment on new techniques and can try again in case of any failure. Cloud gave us the confidence.”



Goutham KS
Head, IT
Auxilo Finserve Pvt Ltd

“Cloud Technology has many pros but it also has a lot of cons. Upgrading the services in sync with the rising craze for technology is important but understanding the emotion of the client and then embracing new services is the need of the hour. In future, users will look forward to technology that will help in conducting banking through platforms like Facebook.”

Panel Discussion: Implementation of Innovative Technologies for NexGen Banking

Nikhil Bandi
Chief Information Officer
Vistaar Financial Services Pvt Ltd

“Innovation in terms of technology is important but implementation of innovation should be in adherence to the perspective. NBFCs should adapt to futuristic developments but their advancements should be helping them in reaching their customers, otherwise it’s of no use.”



Henrietta Isaac
Head-Operations
Habitat Affordable Housing Technical Assistance Centre

“NBFCs have a huge client base starting from lending to insurance to remittance in some of the cases. It therefore becomes evident for them to make use of the available data and upgrade its services for better customer experience or else the user will switch to other options available in the market.”



2nd NBFC100 Tech Summit: Experts pitch for technologically advanced NBFCs



Rajesh Singhal
Head-IT & CISO
Indian Clearing Corporation Ltd

“Innovation is a mandate in the exchange segment to remain in the competition. It is important to follow the PPT model (People, Process and Technology). If the user does not gel with the process and technology, the innovation will fail in meeting its desired goal.”



Nivedita Nayak
Head-Projects
Chaitanya India Fin Credit Pvt Ltd

“As per the latest trend, the focus of BFSI sector is to become cashless and reduce the operation cost. There has been a lot of emphasis on digital payments, FinTech and Start-ups, however, in my view a lot of it is an urban phenomenon.”



Vishak Raman, Director, Security Business, Cisco India and SAARC, **Vivek Jaiswal**, General Manager, Karnataka Telecom Circle, BSNL, **Subrata Gupta**, Managing Director, NABARD Financial Services Ltd, **Harpreet Singh Paintal**, Principal Manager, Business Solutions, SAS and **Manu Raj Singhal** of Elets Technomedia at 2nd NBFC100 Tech Summit, Bengaluru. (From left to right)

Thank You!

2nd **NBFC100**
TECH SUMMIT
7 DECEMBER 2017 | BENGALURU



Thank you for participating in 2nd NBFC100 Tech Summit on 7th December in Bengaluru



From Left to Right: **CEO Round Table Discussion - Challenges & Opportunities of NBFCs: Key to Dawn for Financial Inclusion Endeavour**

Hemant B Songadkar, Managing Director & CEO, Nabsamruddhi Finance Ltd | **Ashish Agrawal**, Director, J R Laddha Financial Services Pvt Ltd | **Shyaman P**, Chief Executive Officer, Chemm Finance Ltd | **A Ramesh Kumar**, Chairman & Managing Director, Swarna Pragati Housing MFI | **Ravi N Deshpande**, Managing Director, Trikaal Leasing and Finance Ltd | **Anand Rao**, Founder & CEO, Chaitanya India Fin Credit Pvt Ltd | **Hardika Shah**, Founder and CEO, Kinara Capital | **Arvind Sonmale**, Managing Director & CEO, Sustainable Agro-Commercial Finance Ltd | **Vishak Raman**, Director, Security Business, Cisco India & SAARC | **Murtaza Bhatia**, Business Head - Security Solutions & Services, Dimension Data India Technology | **Paras Mittal**, Managing Director, Gurdevi Leasing & Finance

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Fintech Partner



Enterprise Email Partner



Exhibitors



Meet the Team



Anu Agnihotri, Rakesh Roy, Shivam Pathania, Manu Raj Singhal, Hina Shukla, Shashank Jaiswal, Prabhakar Chauhan and Harshal Yashwant Desai. (From Left to Right)

We thank you for joining us in all our endeavours and making them a huge success. We value your association with us. Hope this bond strengthens with our upcoming knowledge sharing platforms.

Year in Review-2017

- ➔ Seven Conferences
- ➔ Three Cities

200+ Speakers	More Than 1000 Delegates	60+ Exhibitors	240+ Awards and Felicitation
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We invite you to join us at _____



A woman with long dark hair, wearing a red beanie, a red puffer jacket, black leggings, and colorful sneakers, is running on a cobblestone street. She is wearing a smartwatch on her left wrist, which displays the word "here" in white text on a black background. The background is a blurred cobblestone street.

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