

# IT NEXT

FOR THE NEXT GENERATION OF CIOs



## FIVE ACTIONS

THAT CAN HELP YOU GET THE MOST OUT OF  
**ZERO TRUST** IMPLEMENTATION!

LAUNCHING



# Here is your chance to become a Digit certified tech influencer

## Benefits of Digit Squad Member



Launch your own tech channel on Digit.in



Become a Digit Certified tech influencer

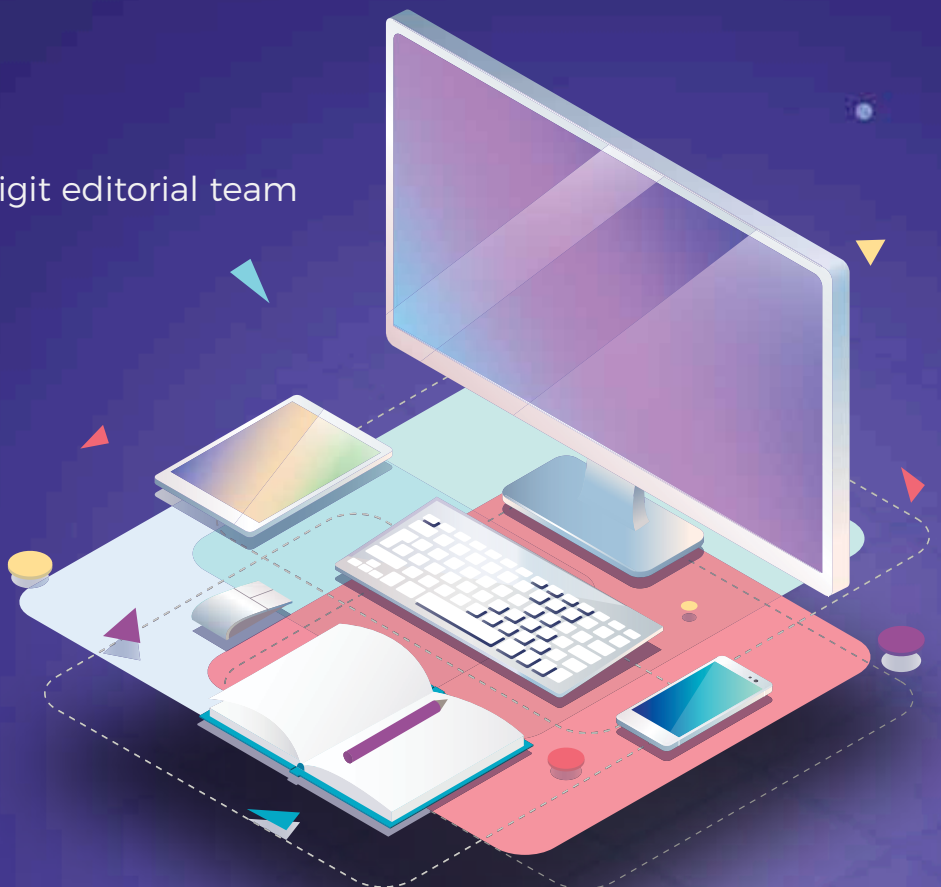


Engage with digit editorial team



Make money

Apply now by  
scanning the QR code



[www.digit.in/digit-squad/apply.html](http://www.digit.in/digit-squad/apply.html)

# Zero Trust: Beyond the Hype



Today, emerging technologies and ideas are being looked at with a proactive stance: what can it do for us? Very often, the answers are superficial. But the action that gets taken on them are real

**Shyamanuja Das**

Not long back in my professional career, I have seen a time when the most common complaint of enterprise IT heads was the lack of realization from their top management about the value technology could bring to business. That has most definitely changed, and all of us are just too familiar with the change. Among other reasons, it was because the CIOs learnt to speak the language that business speaks; the vendors realized that it is not enough to market to the IT decision makers and they should target the functional heads too (and they did) and most importantly, industry and multilateral forums like World Economic Forum continuously pitched that the future of business was digital. And the result is: today, emerging technologies and ideas are being looked at with a proactive stance: what can it do for us?

Very often, the answers are superficial. But the action that gets taken on them are real. In simple words, you can call them herd mentality. Just because everyone is doing it, there must be something good about it. Some even go a step further. Instead of looking at 'how' it can be done, they just replicate what others are doing so that they can implement it in 'record time'. Just think about how many such statements, social media boasts that you get along similar lines.

In this issue's cover story, our 'not-so-new, new Associate Editor, Jatinder Singh, takes on one such hyped idea – Zero Trust in security. Jatinder was in the founding team of ITNEXT and has re-joined us this month. In the story, he does not just examine where Zero Trust fits in the organization, but also cautions against jumping onto the bandwagon without being adequately prepared or taking decisions based on the view of the organization's challenges through someone else's lenses. I hope it will be useful for anyone serious about undertaking the Zero Trust journey. It is neither an implementation guide nor an update on what is latest in Zero Trust. Rather, it tries to sensitize you to ask some questions to yourself—and of course, convince yourself.

As I am writing this, the second big wave of COVID-19 pandemic has manifested itself and the news is not exactly good. But this is the time we need each other. This is the time the world will turn to technology with a lot of hope. We must keep hope to show and ensure hope for others.

All the best. ■

# Content

■ COVER STORY | PAGE 06

**FIVE ACTIONS**  
THAT CAN HELP YOU GET THE MOST OUT OF  
**ZERO TRUST** IMPLEMENTATION!

FOR THE LATEST  
TECHNOLOGY  
UPDATES GO TO

**ITNEXT.IN**



FACEBOOK  
[WWW.FACEBOOK.COM/ITNEXT99](http://WWW.FACEBOOK.COM/ITNEXT99)



TWITTER  
[HTTP://TWITTER.COM/ITNEXT\\_](http://TWITTER.COM/ITNEXT_)



LINKEDIN  
[HTTPS://IN.LINKEDIN.COM/PUB/IT-NEXT/68/717301](https://IN.LINKEDIN.COM/PUB/IT-NEXT/68/717301)





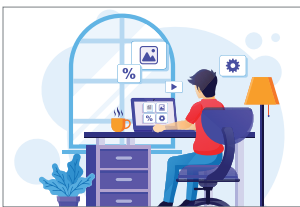
INSIGHT | PAGE 12-18  
The 2nd CIO&Leader Samman



INSIGHT | PAGE 19-21  
Google Wins The Java API Legal Battle; War Remains For Developers



INSIGHT | PAGE 22-23  
How Is RPA Redefining The Manufacturing Business Landscape?



INSIGHT | PAGE 27-29  
Three Ways The World Of Work Has Improved Due To The Pandemic



INSIGHT | PAGE 34-35  
Fraudsters Up Their Impersonation Game For Social Cyber Attacks



INSIGHT | PAGE 38-39  
Digital Transformation In Banking Is Key To Level-Up Customer Experience



Cover Design:  
ANIL VK

## ADVERTISER INDEX

HPE

BC



Please recycle this magazine and remove inserts before recycling

## MANAGEMENT

Managing Director: Dr Pramath Raj Sinha  
Printer & Publisher: Vikas Gupta

## EDITORIAL

Editorial Director: Shyamanuja Das  
Assistant Manager - Content: Dipanjan Mitra

## DESIGN

Sr. Art Directors: Anil VK, Shokeen Saifi  
Associate Art Director: Shri Hari Tiwari  
Sr. Visualiser: Baiju NV

## SALES & MARKETING

Executive Director - B2B Tech:  
Sachin Nandkishor Mhashilkar (+91 99203 48755)  
Associate Publisher & Director - Community:  
Mahantesh Godi (+91 98804 36623)  
Associate Director - Enterprise Technology:  
Vandana Chauhan (+91 99589 84581)  
Head - Community Engagement:  
Vivek Pandey (+91 9871498703)  
Head - Community - NEXT100 & CIOs:  
Megha Bhardwaj  
Community Manager - B2B Tech: Renuka Deopa  
Senior Manager - Community Development:  
Neelam Adhangale

## Regional Sales Managers

South: BN Raghavendra (+91 98453 81683)  
West: Shankar Adaviyar (+91 9323998881)

Ad Co-ordination/Scheduling: Kishan Singh

## PRODUCTION & LOGISTICS

Manager - Operations: Rakesh Upadhyay  
Asst. Manager - Logistics: Vijay Menon  
Executive - Logistics: Nilesh Shiravadekar  
Logistics: MP Singh & Mohd. Ansari  
Head - Digital & Event Operations: Naveen Kumar

## OFFICE ADDRESS

### 9.9 Group Pvt. Ltd.

(Formerly known as Nine Dot Nine Mediaworx Pvt. Ltd.)

121, Patparganj, Mayur Vihar, Phase - I  
Near Mandir Masjid, Delhi-110091

Published, Printed and Owned by 9.9 Group Pvt. Ltd.  
(Formerly known as Nine Dot Nine Mediaworx Pvt. Ltd.) Published and printed on their behalf by  
Vikas Gupta. Published at 121, Patparganj,  
Mayur Vihar, Phase - I, Near Mandir Masjid,  
Delhi-110091, India. Printed at Tara Art Printers  
Pvt Ltd., A-46-47, Sector-5,  
NOIDA (U.P.) 201301.

Editor: Vikas Gupta



© ALL RIGHTS RESERVED: REPRODUCTION IN WHOLE OR IN PART WITHOUT WRITTEN PERMISSION FROM 9.9 GROUP PVT. LTD. (FORMERLY KNOWN AS NINE DOT NINE MEDIAWORX PVT. LTD.) IS PROHIBITED.

# EXTRA Curricular



*Yoga and meditation make a person healthy and stress free*

*"Good health and good sense are two of life's greatest blessings"*

**- Publilius Syrus**

**T**he current times of health adversities are teaching us the meaning of the above proverb, passed down generations as invaluable assets.

We are all aware of the vastly changing environment and the advancements in technology that have made the human race more dependent on devices, computers, etc., rather than on their own resources. And since every advantage has a disadvantage, we, as a working society, pay for it due to our weakening health and immune system.

Being an IT professional, you have to sit in front of a computer continuously, which not only strains your eyes, spinal cord, and your mind but also creates a lot of mental pressure and stress.

As we always have to be on our toes, I think yoga and meditation are the best ways to relax, loosen some of the mental stresses, improve our immune system naturally and also spend some quality time with family members in a very healthy way. I personally spend about 30 minutes on yoga every day. And I think each one of us should incorporate this habit in our daily curriculum because it will not only make you healthy, but will also help you create a healthy society.

Even if we are unable to find time in the morning, we can do yoga asanas such as Anulom Vilom Pranayama, Bhramari Pranayama, etc., for stress relief, mental clarity and calm, and to increase body awareness. ■

**As told to Dipanjan Mitra, Team ITNEXT**

## Inculcating The Art of Yoga

NEXT100 Winner 2018 **Anil Kumar**, Deputy General Manager - IT, Maharashtra Seamless shares his immense passion for yoga and meditation and how they help individuals relax their mind and body and keep them stress-free, especially in tough times...

*"He who enjoys good health is rich, though he knows it not"*

**- Italian Proverb**



### Anil Kumar

Anil Kumar is Deputy General Manager - IT at Maharashtra Seamless. He has been a NEXT100 winner in 2018. He had served in esteemed organizations like HCL Technologies, Bata India, Orient

### Snapshot

Abrasives and Indian Air Force. He completed his MSc in Computer Science from Maharshi Dayanand Saraswati University and BA in Public Administration from Katakia University.



*A rejuvenating break in the lap of nature leaves one enriched*

and with the realization that whatever we do in the mechanized world, the energies of nature are much stronger.

While each journey has a different set of experiences and memories, I would like to mention about a couple of trips here. It was a trip to Kedarnath in May 1999. Back then, it used to be a very narrow and muddy road for last 11km of the journey to the temple. There were concerns raised by some people regarding oxygen levels while walking uphill. However, one of my friends and I decided to walk up the hill. Although it was a bit tiring, but the feeling of accomplishment was much bigger. At night, the temperature fell drastically, and it was chilly, but the next morning came a surprise as there was a layer of snow right next to our place of stay. The hill behind the temple was also fully covered with snow giving a magnificent view. That moment was the high point of the travel.

A recent travel was made to a similar place, albeit this time more towards the north, to the wonderful Ladakh. In May 2019, along with my family members, I visited Kashmir and Ladakh region. The interesting aspect of the journey was that while the destination has its own magic, the distance, if covered via road, takes us to a different world. The barren mountains with some parts covered with snow create such a picturesque view that even eyes prefer not to blink. The trip went as far as Hunder Valley and the famous Pangong Tso Lake. I would urge readers to plan at least one trip of Ladakh, if not done so far, to observe and appreciate the beauty of mountains. The natural treasures that exist there are not explainable in words.

While the stories of all the travels may go on and on, the crux is, taking a break from routine. Spending time with nature not only rejuvenates a person, but also gives a memory worth preserving. ■

*As told to Dipanjan Mitra, Team ITNEXT*

## Travel On...

NEXT100 Winner 2018 **Aniruddh Upadhyay**, Assistant Vice President - IT, Axis Asset Management Co shares his immense passion for travelling...

**T**he best place to unwind is in the lap of Mother Nature. Being in a diverse country like India gives us uncountable options to achieve the same. Hence, travelling to various places and enjoying their natural treasure has always fascinated me. Travelling has been a sort of regular activity for me since childhood as there was at least one family trip annually to a tourist place. During the course of all these years, I got opportunities to travel as far as Guwahati in the East, Dwarka in the West and from Ladakh in the North to the Havelock Island of Andamans in the South. At every location, nature canvasses a different color (or its combination), which leaves the travellers in awe



### Aniruddh Upadhyay

Aniruddh Upadhyay is Assistant Vice President - IT at Axis Asset Management Co. He has been a NEXT100 winner in 2018. He had served in several top companies like

### Snapshot

Accenture, Reliance Mutual Fund and SBI Life Insurance Co. He completed his PGDM in IT from IMT-Ghaziabad and BE in Computer Science from IET-DAVV.





**FIVE ACTIONS**  
THAT CAN HELP YOU GET THE MOST OUT OF  
**ZERO TRUST** IMPLEMENTATION!



## Lessons from the Zero Trust journeys across enterprises that can help you better approach your own, while avoiding common mistakes!

By Jatinder Singh

**T**he black swan event of 2020 and its rampage across the globe compelled organizations to take wide-ranging measures to keep their operations afloat, which essentially begun with enabling remote working for a significant part of their employees.

While the COVID-19 pandemic brought significant challenges for businesses, ranging from real-time decision-making, managing erratic customer expectations, and sustaining workforce productivity, the most concerning aspect businesses had to deal with were the growing instances of sophisticated information security attacks.

Over the last twelve months, increased uptake of cloud workloads and data proliferation from many endpoints has put unprecedented pressure on IT managers and CIOs. Identifying new ways to protect corporate ecosystems from multiple unknown devices and unsupervised users is an area of growing interest for all information technology and security leaders.

This dramatic shift has suddenly enthused the spotlight on zero-trust architecture to address evolving security threats, besides generating additional efficiencies for an organization.

Conceptually, the zero-trust approach provides many benefits which are not available in other traditional network security models. However,

**ARCHIE JACKSON**

Senior Director  
(Head - IT & Security), Incedo



“While zero trust is a route to an improved cybersecurity posture however CIOs & CISOs must not forget the fact that eventually, it is to serve the business and therefore a ‘trust none, block all’ approach is not practical enough. This is applicable in segments... segmentation may be based on data classification.”

many cybersecurity experts’ lack of understanding and knowledge has often caused zero-trust implementations an extensive process, making it challenging for tech-honchos to achieve desired operational gains.

Zero-trust primarily tries to address the lateral movement, eliminating the difference between inside and outside network access. For most of the

experts, it's a good framework within an organization. But the main challenge witnessed by organizations is to tackle the valid concerns and find the correct answer to the right question.

In this month's cover story, we focus on many of these aspects and the key actions that can enable organizations to get the most out of the zero-trust implementations at a breakneck speed!

## Start with a vision and organizational goals

Forrester Research developed the Zero Trust approach in 2010. This is essentially a cybersecurity framework based on the premise that no organizational network (external or internal) is secure and cannot be fully trusted. By incorporating a set of technologies and practices, zero trust focuses on establishing adequate access and rights at each data flow and consumption step.

First and foremost, an organization needs to understand why they want to implement zero-trust – if it is only about the lateral movement or stopping the lateral direction. It is recommended to deploy controls or enforce the security measures as close to the organizational asset.



**MAHENDRA K UPADHYAY**  
Chief Information/Technology Officer at BARC India

“It's the responsibility of users to ensure and make workplace and information secure. You are secure till you are not breached, so be alert every moment”

Secondly, implementing a zero-trust model need strong authentication mechanisms, whether an organizational infrastructure is on premises or in the cloud,

Before embarking on the zero-trust journey, organizations must reach a significant maturity level on the authentication front.

Archie Jackson, Senior Director, (Head - IT & Security, Incedo, recommends that as an initial step, the focus should be expanded on legacy systems, tools, and procedures that may have left unprotected conventionally.

It becomes paramount to continuously classify and segment all areas on the stretched enterprise network in zero-trust, which cybercriminals can leverage to launch their attacks.

“While zero trust is a route to an improved cybersecurity posture however CIOs & CISOs must not forget the fact that eventually, it is to serve the business and therefore a ‘trust none, block all’ approach is not practical enough. This is applicable in segments, and that segmentation may be based on data classification,” Jackson elucidates.

For any organization, moving to a complete zero-trust architecture is a time-consuming process that requires careful planning with their security and networking teams. Several vendors have demonstrated their standalone security products as an unreliable complete solution in many past cases, amplifying the erroneous perception of zero-trust.

“Authorization is arguably the most critical part of your journey towards the zero-trust network, and hence decisions related to this should be taken after a rigorous evaluation. There can be multiple databases and enabling systems that play a crucial role in affecting those decisions. For example, before re-engineering your IT security strategy, it is essential to ponder whether you already have authorized mechanisms such as Radius, to ensure that the network can be accessed only by the sanctioned identities and devices,” says Chandresh Dedhia, Head of IT, Ascent Wellness Pharma.

## Evaluate your infrastructure carefully

The comprehensive workforce security framework's objective is to ensure devices and users' confidence across the user's network. Zero-trust focuses on the authentication of each access and treats access for all users as an unreliable network. It focuses on ongoing trust assessment to permit or deny future network access to identified users or accounts.

It is possible to add safety dimensions to existing applications in many instances, and it is not necessary to completely overhaul their infrastructure. However, organizations that are heavily skewed towards legacy applications often fail to integrate with zero trust architecture or face deficiency of authentication methods within their ecosystem. In such cases, enterprises keen for zero trust implementation have an alternative to replace these applications, albeit with a cost that can be significant.

"Today's business work on the expectations of 'block none, secure all.' Zero trust architecture also requires upgradation from traditional infrastructure and needs to be aligned to work with all business applications. Every company and business implement different technologies based on their unique needs. The same size does not fit all," outlines Archie Jackson.

"In zero trust, the technology leaders must focus on Secure Access Service Edge (SASE) and handpick the components as required. Most importantly, it is recommended to determine the effort and cost required before embarking on any technology journey," Jackson adds.

Different organizations can be at a different maturity level and readiness to adopt zero-trust models. Therefore, companies must carry out a



**RAJESH AGGARWAL**  
Head of IT at Aamir Inox

Before you fully implement any intelligent, risk-based engine to detect threats, you need to ensure that your people are well-informed about the security objectives that you intend to pursue as an organization

## Five common mistakes you can avoid in your zero trust journey...

**#1 Trying to replicate someone else's model:** Analyze your existing IT environment and unique security needs through your own lens before embarking on the zero trust journey. There is no sure-shot winning zero trust formula and hence do not replicate a successful model thoughtlessly.

**#2 Getting started without a well-designed network monitoring strategy:** Make sure you have data analytics tools in place for complete network visibility rather than focusing only on managed devices. Inadequate monitoring can prevent the zero trust framework from taking remedial action promptly.

**#3 Managing change without clear communication:** If your employees are not

aware of the zero trust model's relevance and effectiveness, the chances of risk governance failure remain high, creating unnecessary friction at regular intervals.

**#4 Confusing security orchestration with security automation:** Security orchestration connects and integrates different security systems and processes, while security automation allows automatic job management in a system.

**#5 Applying AI/ML on incomplete information:** Applying AI/ML on half-baked information could give unsatisfactory results, making the zero trust approach futile. Be sure to capture the correct data at scale to get excellent results.

detailed self-assessment of the importance of zero-trust in their organization.

"During the COVID era, we implemented many security steps, and awareness drives not only at application/network level but at an end-user level too. One should keep in mind that end-user awareness and proactiveness are key to be safe. Finally, they are the last mile security credential bearer," says Dhiraj Sinha, AVP - Technology, BARC India.

We made DNS level security improvements, creating two different layers of firewall controls and separate firewall control for end-users. Besides, we also implemented MDM, DLP, PIM, NGAV, and 256-bit encryption at each transaction level," Sinha adds.

### Analyze the inhouse capabilities

A zero trust framework is essentially a cybersecurity approach based on the principle that nothing in any organizational network (external or internal) is secure and can be fully trusted. It recommends putting adequate controls of access and rights at every step of the data stream and consumption.



**YASK**  
Chief Information  
Security Officer, IOCL

“Organizations need to be vigilant of their business goals in the areas of trust and resilience. The key to successful zero trust implementation is taking an intelligent approach that enables businesses to capitalize and leverage the distinct advantages offered by people, processes, and technologies.”

If your zero trust architecture needs, for example, ten algorithms to support and you supply only two algorithms, you will not get the desired results of zero trust implementation. It is important to recall that zero trust is not a standalone tool or product. It is an evolving process which success hugely depends on the amalgamation of various prevailing technologies and governance processes to secure the IT infrastructure. Capturing information from where the access request is originating, what data they are accessing in real-time is essential for successful zero-trust implementations.

Organizations should either have this capability developed in-house or check with their solution partner to integrate this crucial aspect into the third-party security tools they are using.

"Organizations need to be vigilant of their business goals in the areas of trust and resilience. The key to successful zero trust implementation is taking an intelligent approach that enables businesses to capitalize and leverage the distinct advantages offered by people, processes, and technologies," recommends Yask, Chief Information Security Officer, IOCL.

Yask also adds that a one-size-fits-all approach is ineffective. Organizations should map their information flow processes across different IT assets, applications, users, and entities to determine corrective actions that they need at various junctures.

Micro-segmentation is another essential component of zero-trust that minimizes the impact of a probable attack by creating perimeters. It is based on network behavioral analysis, cyber posture, end-user analysis, among several other aspects.

Against this backdrop, an organization need not be swayed by buzzwords or jargon. They should have (or through their partners) remote monitoring capabilities, compliance, and intelligent data analysis tools to ensure survival and transformation.

### Build an effective change management plan

One of the major bottlenecks that prevents organizations from achieving desired success from the zero-cost implementation is the lack of an effective change management plan. For successful execution of zero-trust architecture, an organization needs to leap forward in terms of culture and processes.

The zero trust concept has been around since 2010; however, it has only seen broad deliberations recently, after the pandemic. With business



disruption at an all-time high, many organizations have immediately rushed to transform their security programs to adapt to a post-COVID-19 business landscape. In many cases, it resulted in hasty deployments without a focused change management strategy.

“First and foremost, people and processes must be straightforward and streamlined, and wherever difficult to streamline, use technology. For any organization, security should be embedded by design and not as icing on a cake. For every company, for every business, the architecture and technologies are different. The exact size does not fit all,” states Archie Jackson.

As enterprises look to firm up their cybersecurity posture by deploying third-party solutions, they must train their existing employees with changes they plan to implement and evaluate new employees on security concepts. IT teams must provide necessary training to all employees concerning the best practices around handling organizational data through well-organized knowledge-sharing activities and a resource library.

Agrees Rajesh Aggarwal, Head of IT at Aamor Inox, “In today’s digital workspace landscape, people who accessed your systems and provided with necessary controls play a pivotal role in enabling your organization to achieve robust security controls. Before you fully implement any intelligent, risk-based engine to detect threats, you need to ensure that your people are well-informed about the security objectives that you intend to pursue as an organization. Even in authenticating visitors, a well-placed zero trust plan should include escorting visitors to the specified place for a definite amount of time.

A change management plan varies for new companies that are just expanding their cloud-based services compared to traditional companies with legacy infrastructure.

“At BARC, we have different challenges. We ensure our systems should be accessed by the right people at the right time only, which we control through tools. This ensures no single data leakage for our organization,” shares Mahendra K Upadhyay, Chief Information/Technology Officer at BARC India.

For developing forward-looking security architectures, businesses need to ensure that they are making their technical and non-technical users aware of zero trust implementation to avoid any later stage resistance.

“It’s the responsibility of users to ensure and make workplace and information secure. Logging and control mechanisms ensure all the data



**CHANDRESH DEDHIA**  
Head of IT, Ascent Wellness Pharma

“Authorization is arguably the most critical part of your journey towards the zero-trust network, and hence decisions related to this should be taken after a rigorous evaluation.”

access is recorded properly on time bond method. You are secure till you are not breached, so be alert every moment, every access, every permission, despite so many controls are in place. Still, we are looking for more security products/protocols that give us a more secure framework with an ever-changing digital world,” Upadhyay adds.

### Create a proof of concept (PoC)

Finally, before introducing various processes and zero-trust tools to the scoreboard, IT decision-makers should run a small PoC of cases.

The PoC will enable a zero-trust aspirant to have clarity on the way forward. It will allow the organization to test the framework in real-time, integrate the necessary data, and get a comprehensive overview of the live environment. Needless to say, that setting up a conducive zero trust framework encompasses the right technology partner, automated controls and mechanisms to identify and stop threats, data discovery, and robust analytics.

Ensure beforehand that the business is ready to invest money, time, and resources in the required facilities and skillsets. ■



# 2ND CIO&LEADER SAMMAN

LEADERSHIP • BY THOUGHT • BY ACTION

The second edition of the Samman, announced during the 21st annual conference on 26th February 2021, honored 15 veteran Indian CIOs

By ITNEXT

The CIO&Leader Samman was launched in 2019 to mark the 20th anniversary of the annual CIO&Leader Conference, to acknowledge the contribution of senior IT leaders in Indian enterprises.

CIO&Leader has never been involved in giving any awards to CIOs, even though its sister publication ITNEXT confers the prestigious NEXT100 awards. That is because while that serves a community objective of finding future CIOs of India, giving awards to CIOs, in our humble opinion, is not exactly something we think we are qualified to do.

During the first CIO&Leader Samman, our then publisher, late Kanak Ghosh, explained the philosophy thus.

“The CIO&Leader Samman, as the name denotes, is an honor for the veteran CIOs for their contribution and achievements. It is not an award. We, as a community cause facilitating platform, can only honor them with humility, not bestow awards on them.”

So, CIO&Leader Samman is not an award at all. It is a way of paying respect to the veteran CIOs.

To choose a few from among a set of deserving people is anything but easy. We decided to turn to the CIOs themselves to do the selection. To avoid conflict of interest, we turned to erstwhile CIOs, as only serving Indian CIOs are eligible for the Samman.

## Methodology

For the purpose of selection of the recipients of the awards, CIO&Leader

invited five erstwhile CIOs to be members of a jury panel. They were:

- **Kaushal K Choudhary**, former Executive Director - IT, Lanco
- **Prashun Dutta**, former CIO, Tata Power & Reliance Energy
- **Pratap Gharge**, former CIO, Bajaj Electricals
- **S. Ramasamy**, former Executive Director - IS, Indian Oil
- **TG Dhandapani**, former CIO, TVS Motors and Sundaram Clayton Group

Except for TG Dhandapani, who was a member of the 1st CIO&Leader Samman jury panel, all the four were new jury members.

For getting the names initially, we decided to follow the peer nomination route and asked the CIOs to

nominate a maximum of three CIOs each for the honor.

But before that the criteria were finalized, in consultation with the jury, CIO&Leader spelt out the minimum criteria.

To be considered for the Samman, the CIOs needed to meet the following basic criteria:

- He/she needed to have had a minimum of 30 years of professional experience. Those in their 30th year were also to be considered.
- Out of those years, at least five should have been as a CIO
- He/she needed to be serving as a CIO in India now. Those who have retired or are serving in a non-CIO role or are based outside India we're not be considered.

## JURY



**Kaushal K Choudhary**



**Prashun Dutta**



**Pratap Gharge**



**S Ramasamy**



**TG Dhandapani**

## ■ SPECIAL FEATURE

For all these considerations, 28th February 2021, was taken as the reference date.

These criteria were publicized for the people who would nominate. Many CIOs came back with their nominations.

While each of the valid nomination—those meeting the criteria—were considered by the jury for the honor, the number of nominations had no bearing on the final selection. That choice was completely the jury's.

The jury took into account the CIOs' professional achievements, use of IT to maximize strategic values for businesses that they have been associated with, their leadership, and their contribution to and participation in the community cause.

In the 2nd CIO&Leader Samman, the jury decided to give more importance to the leadership and contribution to the community. The logic was that the jury considered almost all the CIOs who had made it to the short-list as almost equal when it came to their professional achievement. They agreed that unless they have those credentials, they could not have come thus far.

After three meetings and exhaustive research put forward by jury members, they came out with 15 recommended names.

### **ARAVAMUTHAN BALAJI**

**Global CIO, UPL**

He may sound less like an IT or business leader and more like a spiritual leader when he proclaims, "we must be thankful for where we have reached, does not mean that we are the most talented". If that shows his humility, his thinking also reflects high sense of empathy.

Yet, Aravamuthan Balaji, a CIO since last one and half decade, does not lose sight of his role as a business enabler. Purpose-driven IT is what he swears by. And advises the younger lot to focus more on understanding and living that purpose than to get obsessed by a particular



technology in this age of 'shrinking technology lifecycles'.

Dedicated to the community cause, Balaji has been serving as a jury member for NEXT 100 since 2017. Apart from UPL and Piramal Enterprises, Balaji had stints at Reliance Industries, TI Cycles and Dinamalar.

### **ATANU ROY**

**Group CIO, Biocon**

A CIO who combines experience in consulting and offshoring services segments before moving to enterprise IT, Roy gives equal importance to strategy, execution and creating strong teams. Strategy for him involves looking at all dimensions of the business – looking beyond the business dynamics and keeping pace with the trends sweeping through the industry.

His advice to the next generation IT managers is four-fold – know the big picture of evolving technology landscape; learn the dynamics of industry that you work with thoroughly; build



leadership skills early on, especially the communication/persuasion skills as that is now an essential need for an IT leader and finally, focus on team building.

Roy has worked in Pricewaterhouse Coopers, HP Services, Dr Reddy's, Sun Pharma before taking up his current assignment at Biocon. Always sensitized to the community causes, he has served as a member of NEXT100 jury for three years.

### **BISHWANATH GHOSH**

**former CIO- Enterprise, Manufacturing Systems & Corporate Functions, Mahindra & Mahindra**

What separates a great CIO from a good one is whether he can perceive business needs, rather than being



'told' about them. By that account alone, Bishwanath Ghosh would feature among the most successful CIOs in India, as he has continuously worked with business by observing them and helping them define the needs—and of course, executing the solutions successfully.

Whether in conceptualizing a centralized dealer management system, which was perceived to be an impractical idea that time, because of availability of networks in Maruti or giving end-user devices to dealers to demonstrate experiences in Mahindra & Mahindra, he has always been a trendsetter.



Ghosh attaches equal importance to business alignment and harnessing teams. Not surprisingly, Mahindra & Mahindra has seen one of the highest successful candidates in NEXT100. He himself has been involved as a jury member for two years.

### DEEPAK AGARWAL

Executive Director (IS), IOCL

The guiding principles which has led to success in the past may not be as relevant today. Hence, a leader must stay on top of the changes that are happening today and analyze how he can do better and influence the team with a shared vision and goals. That is the philosophy that guides Deepak Agarwal.

He believes that any IT professional should continuously upskill, but more importantly, should have passion and compassion to succeed in his role. In fact, he is one of the few CIOs who thinks lateral movements between IT and other functions would make the organizations absorb and compete on technology much better.

A winner of the first batch of NEXT100 awards in 2010, Agarwal has



always pushed himself to adapt to the changes, whether it's business or technology-related.

Managing IT in India's largest company is, undoubtedly, complex. Combining conventional wisdom and an acute sense of changing business needs makes that enjoyable for Agarwal.



### DHIREN SAVLA

Group CIO, VFS Global Services

With over two and a half decades of experience in solving some of the most complex enterprise IT issues, Dhiren Savla has cemented his position as a business-focused CIO.

Exemplifying the spirit of continuous improvement, Savla advises his juniors to make learning a habit and incorporate it in every task that they do.

Widely regarded as an outstanding strategist and mentor by fellow CIOs and younger IT professionals, his contribution to the community cause is noteworthy. Savla is one of the longest-serving jury members for NEXT 100 and has been associated with the initiative since 2010.

Savla has spent the major part of his CIO career with Switzerland-based global travel and destination management firm Kuoni Group and its subsidiary VFS Global Services. Besides Kuoni, he has also held technology leadership roles in CRISIL, Merrill, IL&FS, PL India, and Sharekhan.

### GIRISH RAO

former Group CIO, Future Group India

What sets Girish Rao apart is his progressive thinking about role of a CIO. Understanding business needs and leveraging technology to fulfil those needs is of course the minimum common denominator. But he sees the CIO's role a bit wider – in making people comfortable in using technology – by removing whatever barriers

that may be there – user experience, fear about security, loss of control...

His dedication for community causes is revealed by his long association with NEXT100 as a jury member – eight times, one of the most by any jury member – from the very early days of 2011 to last year.

Starting his professional journey in Marico as a Systems Manager, he came back to the company after a stint in consulting at Mahindra Consulting/Bristlecone before taking



up the assignment at Future Group India. He has now moved on to a new assignment.

### GYAN PANDEY

Global & Group CIO, Aurobindo Pharma

For someone who accidentally landed up in IT, by his own admission, it has been an extremely 'fruitful' journey for Gyan Pandey as an IT leader.

Being honest to yourself, knowing your strength and weaknesses, doing everything with passion but accepting



the failure and moving on have been some of the guiding principles in his professional life—and ‘personal life’ as well.

But the single biggest value that defines Pandey as a person—and everyone who has closely interacted with him will vouch for it—is the deep sense of empathy that he possesses.

Gyan Pandey has been very active in community activity, serving as member of the jury committee of NEXT100 awards, continuously for four years, since 2016.

Starting with PricewaterhouseCoopers in early 90s, Pandey has worked in Accounts for multiple companies including Panasonic India, before moving as an ERP manager in Spectranet. He has worked in Genpact, Oracle, Qatar Petrochemicals and Enrich LLC.



### JAGDISH LOMTE

**Vice President - IT & CIO - BTG, Thermax**

A CIO who talks more about values and principles than technology, taking decisions based on core principles, trusting the employees, and care and respect for each member of the team are the guiding principles of Jagdish Lomte as a leader.

One of the most accessible and enthusiastic personalities in the community, Lomte's achievements as a CIO speaks volume of his professional competence, even though he stresses more on values and principles—probably implicitly implying that it is those principles that guide his success as a CIO.

An active community member, Lomte has served as a jury member for NEXT100 in two consecutive years from 2017 to 2018.

Lomte has worked mostly in manufacturing/heavy engineering segment with stints in well-known companies like Bajaj Auto, Mahindra & Mahindra, KEC International, Walchandnagar Industries, before taking up his current assignment at Thermax.

### RAJAT SHARMA

A leader who swears by delegation of ‘authority’, not just work, yet challenges his juniors to challenge the status quo, is a typical creative head of a global agency. Right? Wrong. He is a CIO \_ Rajat Sharma.

Interestingly, the most dominant theme in Sharma's discussion around his leadership is a kind of unassuming character. He begins by crediting all his mentors and seniors for whatever leadership position he has achieved and ends by crediting his team members and juniors for all the success that he has attained. As such, conversations with him steers significantly towards his team from himself, no matter whatever is the topic.

Such an IT leader, who credits others for everything, cannot but be an active community contributor. Sharma is, for sure. He has served as the jury member in NEXT100 awards twice.

In his long career, he has worked in reputed organizations like Atul Ltd, Shree Cements, Dainik Jagran and Bajaj Hindustan.



### S RAGHUNATHA REDDY

**CIO, UTI Mutual Fund**

A CIO who believes thoroughly in leading by example, S Raghunatha Reddy, is a people's leader. A leader, he says must know when to delegate a task, make people accountable for results, and must take the pilot's seat to motivate teams. Yet, delegation does not mean shying away from being hands-on.



With this guiding philosophy, he has been inspiring his teams successfully, pushing them, and delivering outstanding results throughout his three-decades-long career. Like some other CIOs in this Samman list, he gives utmost importance to developing empathy as a leader.

He recommends his juniors to develop critical thinking and acquire expertise in multiple business domains early in their career.

Reddy has been very active in community activity and served as a member of the jury committee of NEXT100 awards continuously for four years, between 2015 to 2018.

Reddy has been with his present company, UTI Mutual Fund, for three decades.

### SACHIN GUPTA

**President & Chief Information & Innovation Officer, Usha International**

If a multitude of diverse experience is increasingly being considered an essential requirement for a CIO, no one comes close to Sachin Gupta. A

hotelier by education, Gupta did his MBA post hotel management degree, only to be an IT manager. One of the few Indian CIOs with considerable experience in the industry side managing revenue, his experience in the user side too is diverse.

Success in these diverse roles comes to him for two basic principles that he adheres to and advises the younger professionals to follow—'there could be someone out there who may do it better than me' and 'don't fear failure but be decisive and fail fast'.



Sachin Gupta has been a NEXT100 jury member continuously for three years since 2017.

He has worked in companies like Deloitte, Cardinal Health and Toyota Financial Services in the US before moving to India as Senior Director for Microsoft Consulting, where he later took up India CIO role. Among his recent stints are as CIOs of Bennett, Coleman & Co and Havells.

### **SANJIV KUMAR JAIN**

**Group Chief Information Officer, Krishna Maruti Group**

A typical Indian techie of the Y2K generation, Sanjiv Kumar Jain still remains, at heart, a techie, despite proving his success in solving numerous challenging business problems. Always on learning mode, he advises his juniors too for continuous learning—both inside and outside work. Calculated



risk taking remain his essential approach for business technology rollout—create PoCs, demonstrate value, and scale up. But what sets him apart is the way he involves the team, not just in execution but also in the decision-making phase, which makes him a popular leader.

Popular among fellow CIOs, his contribution to community cause is remarkable. He has served in NEXT100 jury in 2015 and 2016.

In his long career, he has worked in major companies like ABB, Shriram Pistons, Subros, Jindal TIF, Minda Group before joining his present organization, Spark Minda Group.

### **V RANGANATHAN IYER**

**Group CIO & EVP - IT, JBM Group**

Enterprise IT, which has been a process efficiency enhancer in traditional industries, it is rare to find a CIO who is not just willing to 'tolerate' failure but actively encourages it. What arms V Ranganathan Iyer to practice this are



his two guiding principles. One: do not reinvent the wheel; learn from others and your own experience. Two: Try fast and fail fast. Once you go through the fast filter—not reinventing the wheel—a failure essentially means you are trying something new.

A leader known for both his sense of clarity in his plans and his excellent relationship with people—be his team members, peers, partners or other community members—Iyer stands out for two other attributes – his stress on team spirit and integrity.

Known for his active community participation, Iyer has been a NEXT100 jury for three years between 2014 to 2016. He has worked in organizations like Jindal Exports, Shahi Exports, House of Pearl Fashions before taking up the current assignment.



### **VENKATESH NATARAJAN**

**Senior Vice President - IT & CIO, Ashok Leyland**

In a career spanning over two decades, veteran CIO, Venkatesh Natarajan, is widely known as a people person who has built several high-performance teams through his unique mentoring approach.

He firmly believes that a leader must be a 'role model' for his people who accept him for his knowledge and skills, respect his vision, and cherish every interaction with him. He attaches equal importance to emotional intelligence, empathy, and mindfulness and advises young technology professionals to choose an area they are passionate about, gain

## SPECIAL FEATURE

deep knowledge in a specific domain, and remain enthusiastic about learning new things.

Venkatesh has spent his entire career primarily in the Chennai-based Indian multinational automotive manufacturing company, Ashok Leyland.

His passion for mentorship and community cause is evident as he has served as a jury for NEXT100 for four years.

### VINAY AVADHUT KHARGONKAR

**Vice President & Head - Corporate IT, Larsen & Toubro**

Most CIOs today emphasize the need to understand and appreciate business needs, rather than just getting



obsessed with technology. Vinay Avadhut Khargonkar, goes a step further. He says CIO's job is not just to provide solution to the business problem through technology but also help

the organizations in adapting to the changing environment and in bringing cultural change.

A leader whose mantra is under-promising and over-delivering, Khargonkar insists that it can lead to huge respect from others in organizations. His advice to the newcomers is to learn, unlearn and relearn.

His focus on talent makes him contribute back to the community. He has been a a NEXT100 Jury member since 2019.

Khargonkar has spent majority of his professional career at Larsen & Toubro. He started off his journey as Head of Information Systems, rising up the ranks to where he is today. ■

## The 1st CIO&Leader Samman Recipients







# Google Wins The Java API Legal Battle; War Remains For Developers

The US Supreme Court has ruled that Google did not violate Oracle's copyright in using code related to Java for its Android platform but does not take a stand on API's copyrightability

**By Shyamanuja Das**

Bringing a 10-year-old legal battle between Google and Oracle on copyright to an end, the US Supreme Court has ruled in favor of Google. The issue of contention was Google's copying of about 11,500 lines of code from Sun's Java, while developing Android, without taking permission from Oracle, which, after buying Sun, is the owner of Java now.

While programmers and champions of open source are celebrating—understandably so—it may not be as landmark a decision as it could have been, as the Supreme Court handed down the victory to Google on the basis of 'fair usage' and by parking the other and bigger question for now. That question is: whether APIs are copyrightable.

And the court does that in no uncertain terms. The judgment says there were two questions that were reviewed: the first was whether Java's API is copyrightable and the second whether Google's use of the API was a "fair usage".

"Given the rapidly changing technological, economic, and business-related circumstances," the Court says, "we believe we should not answer more than is necessary to resolve the parties' dispute. We shall assume, but purely for argument's sake, that the entire Sun Java API falls within the definition of that which can be copyrighted. We shall ask instead whether Google's use of part of that API was a 'fair use'".

Unlike the Federal Circuit, where it was held that it was not, the Supreme Court concluded that it was a fair use on Google's part.

### Reactions on expected lines

Google welcomed the decision. "Today's Supreme Court decision in Google v. Oracle is a big win for innovation, interoperability & computing. Thanks to the country's leading innovators, software engineers & copyright scholars for their support," tweeted Google Global Affairs SVP Kent Walker.

The developers and open-source backers too have welcomed the deci-

sion. "Supreme Court decision is a win for developers and the software industry; it recognizes the critical role of software interfaces to promote innovation, interoperability, and new technologies," said Red Hat in a released statement.

"Supreme Court decision in Google v. Oracle reaffirms that developers' ability to port their code and skills between platforms is a significant interest to be protected," wrote Mike Linksvayer, Head of Developer Policy at GitHub in GitHub blog. "In holding that Google's reimplementation of Java's API for a different platform was fair use, the Court gave significant airtime to these developer concerns," he added.

use provision. They are the purpose and character of the use; the nature of the copyrighted work; the amount and substantiality of the portion used in relation to the copyrighted work as a whole; and the effect of the use upon the potential market for or value of the copyrighted work.

### What's fair?

For deciding on nature of the copyrighted work, the court observed that it is part of 'user interface' and does not actually instruct the computer to perform a task, which most other programs do.

Two, the Court said, the copied lines are bound together with uncopyrightable ideas (the overall organiza-

**For deciding on nature of the copyrighted work, the court observed that it is part of 'user interface' and does not actually instruct the computer to perform a task, which most other programs do**

### Big question remains

But for the programmers and open-source community, it is not as simple. The takeaways are two.

One, the battle (and let's have no confusion, it was Google's battle, not the community's) is won and the war—to make APIs not copyrightable—remains for another day. While the overall response has been enthusiastic, many have expressed disappointment over the Court side-stepping that question.

Two, practically, it is important for them to understand why the Court considered it a 'fair use' by Google. While stressing that 'fair use has an important role to play for computer programs by providing a context-based check that keeps the copyright monopoly afforded to computer programs within its lawful bounds' the Court considered the four guiding factors set forth in US Copyright Act's fair

tion of the API) and the creation of new creative expression (the code independently written by Google). Also, unlike other computer programs, the value of the copied lines is in significant part derived from the investment of users.

Both these observations are important while taking up the bigger question of whether APIs are copyrightable, as they are not specific to Google's case.

On the factor of the "the purpose and character" of the use, the court said, Google copied only what was needed to allow programmers to work in a different computing environment without discarding a portion of a familiar programming language. "Google's purpose was to create a different task-related system for a different computing environment (smartphones) and to create a platform—the Android platform—that would help

achieve and popularize that objective,” it observed.

This is where it can get a little complex. Though the court talks about context-based check, the first observation regarding nature of copyrighted work is not exactly too context-specific, whereas this one, on the purpose and character of the use is very context specific. This may be the big challenge for smaller companies. As a disappointed Oracle EVP and General Counsel Dorian Daley said, “They stole Java and spent a decade litigating as only a monopolist can.” Monopolist or not, it does not take much to figure out that a small company may not have the ability and resilience to take on a big company on this issue.

In relation to the amount and substantiality, the court rightly observed that the 11,5000 lines of code copied by Google are only 0.4% of the 2.86 million total lines in the entire API. “Google copied these lines not because of their creativity or beauty but because they would allow pro-

grammers to bring their skills to a new smartphone computing environment,” it said. This is a very tangible factor.

Finally, on the issue of potential market for the copyrighted work, the Court observed that ‘Google’s new smartphone platform is not a market substitute for Java SE’. The court also observed that Java SE’s copyright holder would benefit from the reimplementation of its interface into a different market. So, they gave this to Google too on fair use.

### ‘Not so fair’

Two judges dissented. One of the strongest arguments that the dissenting judge Thomas made is directly related to this factor. He argued that since Google’s model was different from Oracle’s – it depended on user data and ad sales – it decided to give the Android to device manufacturers for free. And by doing so, it made it redundant for manufacturers to pay for installing Java in their phones. “With a free product available that

included much of Oracle’s code (and thus with similar programming potential), device manufacturers no longer saw much reason to pay to embed the Java platform,” he says.

He gave examples of specific cases too. Before Google released Android, Amazon paid for a license to embed the Java platform in Kindle devices. But after Google released Android, Amazon used the cost-free availability of Android to negotiate a 97.5% discount on its license fee with Oracle. Similarly, Samsung’s contract with Oracle dropped from USD 40 million to about USD 1 million, right after Google released Android.

He argues Google interfered with opportunities for Oracle to license the Java platform to developers of smartphone operating systems. Before Google copied Oracle’s code, nearly every mobile phone on the market contained the Java platform. “Oracle’s code was extraordinarily valuable to anybody who wanted to develop smartphones, which explains why Google tried no fewer than four times to license it,” he says.

This is a very contentious issue and Judge Thomas has raised some relevant questions. For a smaller company, with lesser power to carry on long litigation, it will be very difficult to argue its case.

From these four factors of ‘fair use’ the court has taken into account, while deciding on one – nature of copyrighted work – it all but gives it to the proponents of APIs-should-not-be-copyrightable opinion, even though it has explicitly decided to sidestep the question in this judgment. This is a shot in the arm for the open-source proponents.

But as some of these questions, especially the ones that the dissenting judges have raised, will get further discussed in future.

So, while it may symbolically be a positive news for open-source community, it may not mean much for how their lives change after this.

For that, we will have to wait and watch—and keep discussing. ■



**Though the court talks about context-based check, the first observation regarding nature of copyrighted work is not exactly too context-specific...**



# How Is RPA Redefining The Manufacturing Business Landscape?

RPA is a must evaluate technology for manufacturing enterprises to navigate the disruption and achieve efficiency in these times of elevated uncertainty

By **Jatinder Singh**

**F**or manufacturing enterprises, achieving continual speed and efficiency — both at the process and people level — remains one of the inherent challenges.

The industrial sector has traditionally countered that test well by focusing on automation-led innovations to build resiliency and agility. However,

amidst the current crisis, where a contactless environment and workforce cap limits continue to remain in place, a more comprehensive automation approach is needed for labor-intensive manufacturing firms.

Indian IT industry body, NASSCOM's "COVID-19 – Tipping for automation report" notes that the pandemic has acted as a catalyst for the develop-

ment of automation technologies. Across all sectors, there is a sudden emergency to minimize cost, improve time-to-market, strengthen productivity and reduce employee stress.

Robotic Process Automation (RPA), also known as a digital worker, is fast emerging as a bankable process automation solution for manufacturing enterprises, which rely heavily



on process designs. It brings much-needed operational efficiency, helping manufacturers achieve a faster return on investment, higher production, and better revenues even during the present times.

### **Traditional automation vs. RPA**

Within a few months of nationwide lockdowns, it became clear that most manufacturing organizations were not prepared for the pandemic-related fallout in business and IT-related interruptions. The investments in many new-age technologies were slow, and with no transparent model, execution of a business continuity plan was largely dependent upon proven technologies.

Much of the earlier automation initiatives are dependent upon the programming integrated into the existing software system and where interaction with the system happens through APIs. Traditional automation often needs several IT infrastructure adjustments, but it also limits its potential due to APIs' boundaries.

RPA, on the other hand, does not require any changes in the existing IT infrastructure and mimics human actions to complete a task. According to Gartner, RPA is a digital enablement technology that principally leverages a combination of user interface (UI) and surface-level features to create scripts that automate routine, predictable data transcription work.

It enables businesses to execute a range of high-volume repetitive and rule-based tasks automatically across software systems. Since RPA software is process-driven, it can be deployed quickly compared to many traditional automation tools with reduced errors and precise output.

Manufacturing companies have been leveraging physical robots for product assembly, testing, and packaging. While this has enabled them to streamline the assembly lines, optimizing many other supporting and back-office processes remains challenging. This is particularly critical

in the new normal where businesses cannot access the traditional supply chains and customers.

According to a whitepaper, titled *Innovating The Manufacturing Industry With Robotic Process Automation*, published by a digital transformation services provider, Jolt Advantage Group, one of the most significant advantages offered by RPA to manufacturing enterprises is real-time reporting provided by the software robots. It allows manufacturers to determine optimal inventory levels based on previous needs and modify current operations based on customer demand patterns.

RPA can also be implemented for automating communications, helping manufacturers respond to customer and supplier requests efficiently. India's largest carmaker, Maruti, has taken a focused approach to automate most of its tedious work processes and achieve a quicker turnaround in supply chain and finance by leveraging robotics. RPA has helped the car manufacturer reduce about 20-25% costs in customer claims and finance processes.

It is important to note that RPA doesn't operate on cognitive intelligence and differs from ML and AI. The AI and ML software can learn and train themselves by analyzing and interpreting different data patterns and structures, something that's not the case with RPA.

### **Growing market**

As a consequence of the pandemic, Robotics is expected to play a significant role in transforming business operations and supporting a broader set of transactions.

According to a study, titled *RPA Market in India - Drivers, Restraints, Opportunities, Trends, and Forecast*, published by Infoholic Research, the Indian RPA market is expected to witness a CAGR of above 20% growth for the next four years to surpass USD 100 million by 2025.

RPA led initiatives to empower manufacturing entities to reduce work-

flow waste, improve compliance and develop resilient supply chain models. Some of the critical advantages that RPA offers to the manufacturing firms include better operational efficiency, fewer human errors, improved safety of workers, exceptional customer experience, automation of intricate inventory management, among others.

Deloitte also sees this as one of the most significant investments and focus areas for enterprise buyers. It estimates that over 65% of the organizations with USD 1B in revenue have adopted RPA and surpassed the pilot stage.

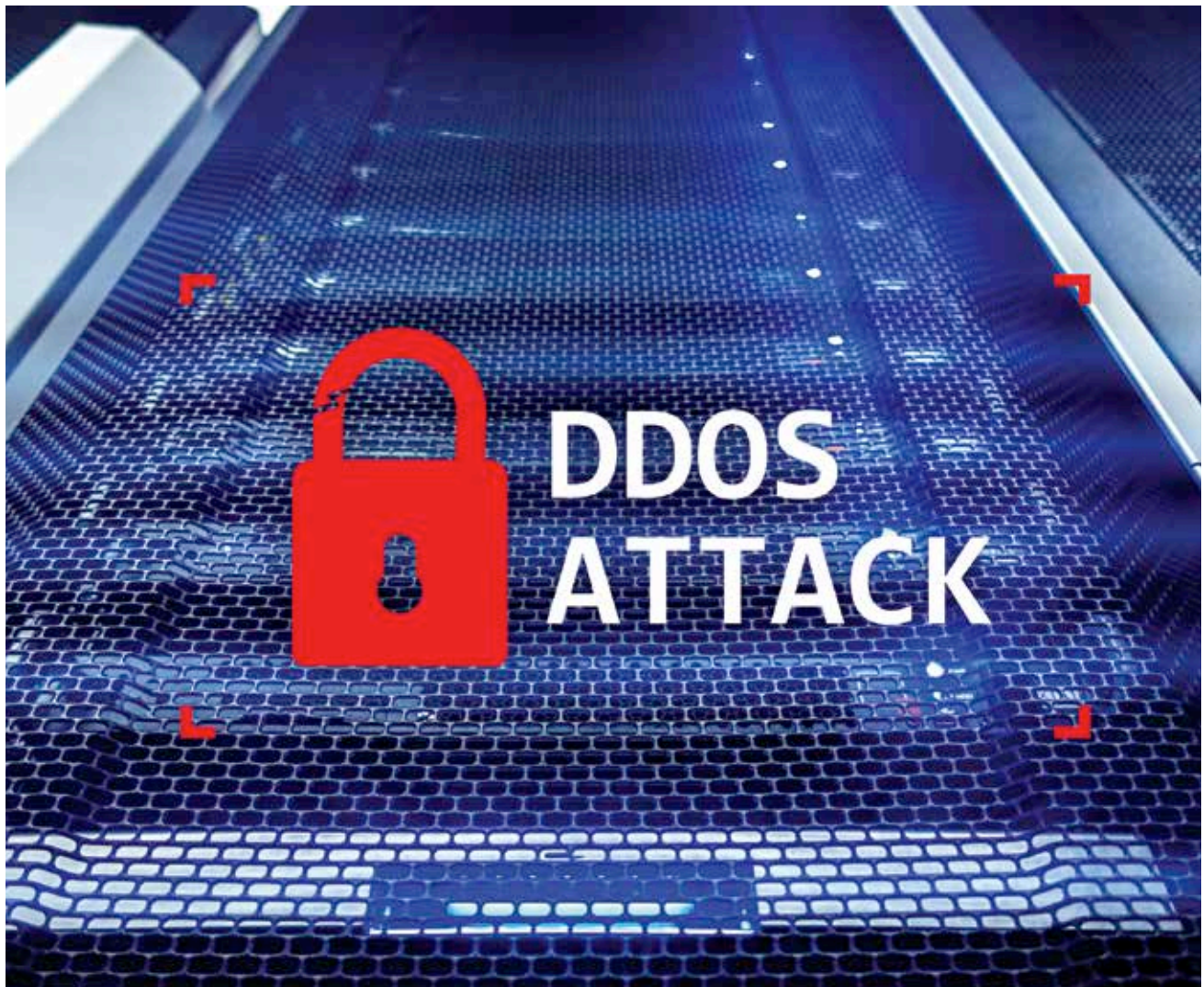
### **Winning framework for RPA success**

RPA has helped many enterprises achieve significant productivity gains. However, despite its growing acceptance, the failure rate of RPA projects continues to remain high. According to an EY study, 30% to 50% of initial RPA projects fail, unleashing numerous risks. The number could be even higher in the manufacturing sector, primarily governed by traditional automation or mechanical processes.

Most technology leaders embarking on the RPA journey see the technology as an opportunity to minimize manual errors, lower costs, and achieve better speed. However, testing its capability becomes challenging because of the enormous legacy IT ecosystem within numerous service lines service functions. Another challenge that enterprises face in running the RPA program efficiently is the lack of an effective change management plan.

Like any significant automation initiatives, the introduction of bots for any process requires extensive investments in training, robust governance models, and a strong collaboration between business and IT. Identifying which processes to automate needs careful deliberation by teams.

By integrating RPA with a broader set of digital transformation goals, organizations can unlock the actual value of RPA implementations. ■



## Use Case Defines DDoS Appliance: On-Demand, Always-On Or Hybrid

The rise in both attack size and sophistication has naturally brought about an increase in interest in DDoS protection solutions, as organizations seek to protect themselves against this threat

By Nikhil Taneja

Looking back at 2020, we have to say it was surely a record breaker for DDoS! Just during the past 12 months, we witnessed the largest DDoS attack known to date, a global ransom DDoS campaign against financial services, large-scale attacks on gaming services, and – lest we forget COVID – how the coronavirus crisis was exploited by malicious actors.

This rise in both attack size and sophistication has naturally brought about an increase in interest in DDoS protection solutions, as organizations seek to protect themselves against this threat.

However, as businesses begin to weigh their options for DDoS protection, many of them quickly realize that DDoS protection can come in a variety of formats, and they must consider which deployment type is best for them: On-Demand cloud service, Always-On cloud service, on-prem appliance, or Hybrid protection?

And the answer, in a nutshell, is that it depends...

### Different Deployment Options are Better for Different Use Cases

It's very important to realize that there is no such thing as the "best" type of DDoS protection. Rather, different deployment options have different merits and drawbacks, and as a result, are best-suited for different business use cases. Thus, it becomes a question not of "what is the 'best' type of DDoS protection?", but of "which deployment options are best suited for your needs?"

#### Hardware Appliance: Advanced Functionality, but Limited Capacity

Traditionally, DDoS protection relied on hardware appliances deployed at the customer's data centers. Hardware appliances frequently provided advanced protection, low latency, and granular control by network admins.

However, its capacity was constrained by limits of the hardware

appliance, or the traffic pipe leading into it. These limits made hardware appliances susceptible to large volumetric attacks which saturated the organization's traffic pipe. In addition, they required additional management overhead by the organization, large upfront investment (CAPEX) to purchase, and dedicated staff to operate them.

Therefore, standalone hardware appliances are most suited today either for large organizations or service providers who are creating their own mitigation scrubbing centers (usually with multiple such devices), or for organizations that are prevented by national or industry regulations from using cloud security services.

#### On-Demand Cloud Service: Massive Capacity, Only When You Need It

Due to the capacity constraints of hardware appliances, many organizations began looking to cloud-based scrubbing services for a solution. Compared to standalone hardware

appliances, cloud scrubbing services offer massive capacity – usually measured in terabits – as well as lower management overhead and more flexible pay-as-you go, and subscription-based (OPEX) costs. However, cloud services are more limited in the types of attacks they can protect against, due to the fact that they usually have visibility only to ingress traffic.

The first type of cloud-based DDoS protection is the on-demand service. On-demand service – as its name implies – is activated only once an attack is detected. During peacetime, on a routine basis, traffic flows directly to the customer's network. Only once an attack is detected is traffic diverted to the cloud scrubbing center, where traffic is 'scrubbed' for malicious traffic and only 'clean' traffic is sent back to the customer location.

The advantages of the on-demand approach are that since traffic flows on a routine basis directly to the customer location, it does not add any latency during peacetime. On-demand services usually have little operational



**It's very important to realize that there is no such thing as the "best" type of DDoS protection. Rather, different deployment options have different merits**





overhead and do not require day-to-day management or maintenance. In addition, they are usually the cheaper than other deployment types.

The drawback of the on-demand cloud service, however, is that attack detection is usually based only on volumetric detection (based on netflow traffic rates), and that traffic diversion – once it takes place – requires a certain window of time (usually a few minutes) until diversion is complete, and the customer will remain vulnerable during this ‘diversion gap’.

Therefore, an on-demand protection is usually best for organizations that are infrequently attacked but want some form of ‘insurance’ in case of attack, with assets that are non-mission-critical and do not mind the ‘diversion gap’ window, as well as for cost-conscious organizations.

### **Always-on Cloud Service: Constant Protection, With Some Added Latency**

An alternative to on-demand protection is an always-on cloud service. Under the always-on model, traffic is routed on a constant basis through a cloud scrubbing center, where it is inspected for DDoS traffic.

The advantages of the always-on model is that it eliminates the need for diversion when there is an attack and provides 24/7 protection. It also

## **Hybrid protection is usually best for large organizations with mission-critical applications which cannot afford any downtime, particularly in verticals such as banking, ecommerce, or SaaS**

allows for more granular detection of attacks, including detection of non-volumetric attacks.

However, it is usually more expensive than an on-demand service, and may add some minor latency to customer communications. As a result, it is best suited for organizations which frequently come under attack, as well as applications that are not latency sensitive.

### **Hybrid Protection: The Best of Both Worlds**

The hybrid protection model combines both an on-premise appliance together with a cloud service. This allows protected organizations to enjoy both the advanced capabilities of hardware appliances, along with the massive capacity of a cloud service. As a result, customers can defend against both large and sophisticated attacks, and level multi-layered protection so that if an attack is able to get around the cloud defenses, it will be mitigated

by the appliance. However, a hybrid solution is usually more expensive, since it combines both an appliance and a cloud service.

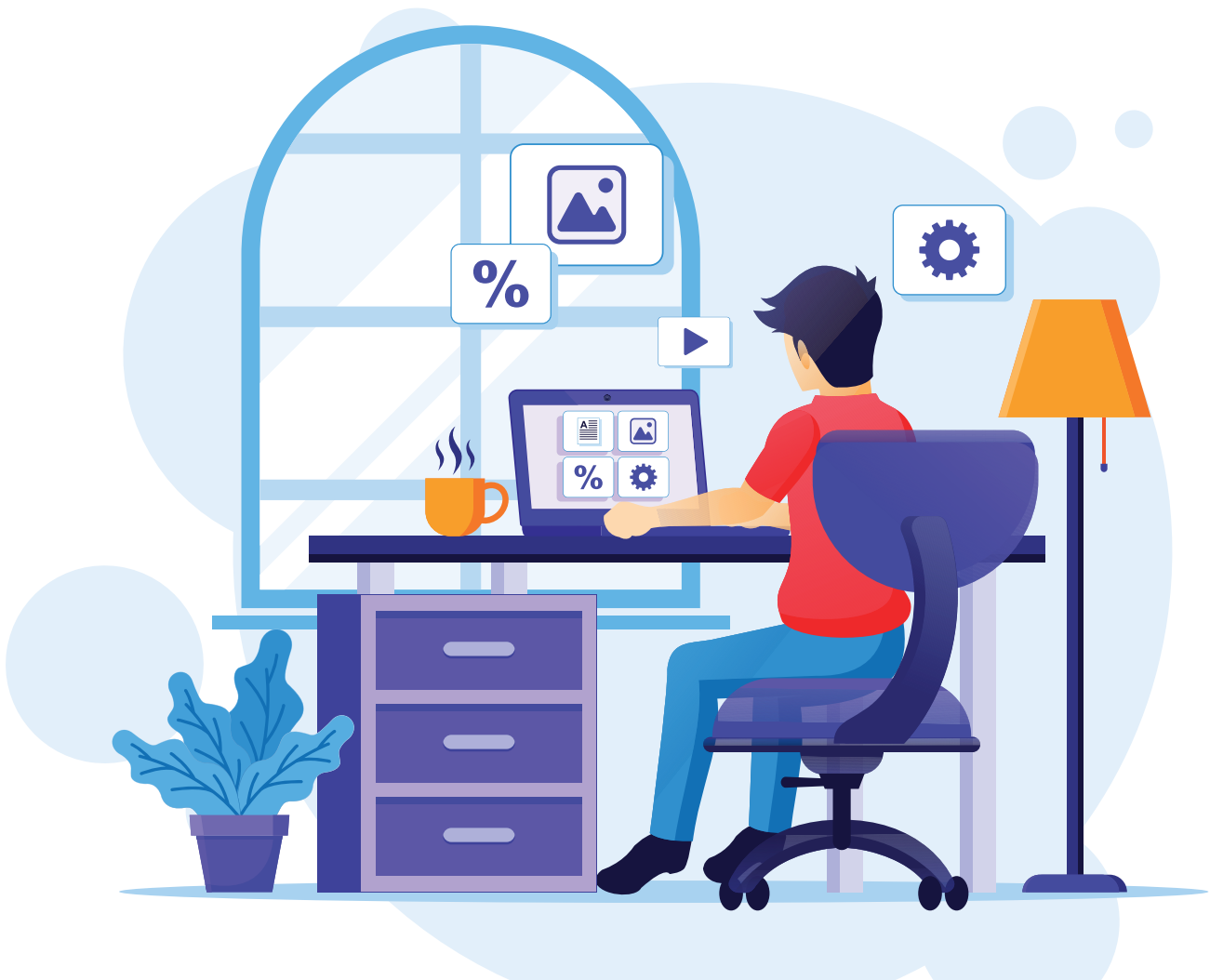
As a result, hybrid protection is usually best for large organizations with mission-critical applications which cannot afford any downtime, particularly in verticals such as banking, ecommerce, or SaaS.

### **There is No “Best” Solution; It Depends on Your Needs**

Ultimately, there is no ‘right’ or ‘wrong’ when it comes to choosing a DDoS protection solution. Rather, it depends on what are your needs, constraints and threat profile. Ask yourself which model makes the most sense for you, and also don’t be afraid to mix-and-match protection options for different assets, to create a solution which is specifically tailored to you. ■

*The author is Managing Director - India, SAARC, Middle East & GSI at Radware*





# Three Ways The World Of Work Has Improved Due To The Pandemic

Changing nature of workplace, a more humane approach and leveraging data to create optimized work experience and hence better productivity are changing the definition of work for ever

By Ranga Pothula

While it would be easy to reflect on 2020 as a disastrous dumpster fire of a year, the reality is that the pandemic has changed the workplace for the better. And many of these modifications are likely to be permanent. This is undoubtedly difficult to appreciate from our current vantage point, but by the end of 2021 we will likely witness the seeds sown during the crisis begin to bear sustainable fruit. In fact, you can already observe alterations that have had almost universal impact regardless of industry or geography.

### Redefining workplace norms

The last 50 years of work have been defined by predictable patterns involving who is doing the work, where it occurs and when it happens. While these standards have been impacted by technological advancements, demographic shifts and emerging

Coronavirus. According to a recent Gartner survey, this is not a temporary shift that will revert back to “normal” post pandemic, as 82% of company leaders plan to allow employees to work remotely at least part time going forward. These same leaders understand that it will be the elastic enterprise that withstands the inexorable disruptions of the future.

While it is easy to point to technology as the enabler of the new work-from-home environment, the truth is our mental mindset is the crucial component for long-term acceptance of this new model. The visceral reaction that normally accompanies the request to allow people to work remotely is based on the assumption that they will be less productive and more prone to laziness. The reality is quite different according to Natalia Emanuel and Emma Harrington, PhD candidates in economics at Harvard. They evaluated call-center workers in a Fortune 500 retailer and found that

done by humans. While this platitude has been wielded by politicians and prognosticators for decades, recent advancements in computing and automation have given it fresh fuel. Research by economists Daron Acemoglu and Pascual Restrepo seems to corroborate this point of view as they predict a reduction in both employment and wages resulting from industrial robots. Others suggest that technology has historically created more jobs than it destroyed, and that workers have benefited from improvements in quality of life and even income. It may sound counter-intuitive, but could technology be the key to creating a more human experience at work?

As work has emerged from industrial roots to more of a services orientation, the number of jobs that require manual labour have declined. Even as those jobs shifted to ones requiring more administrative and transactional work, new forms of automation have replaced those positions as well. What is left is work that requires a truly human skill set including critical-thinking, problem-solving, creativity, communication and even compassion. This is the reason that Amazon announced last year that it was spending \$700M to retrain their employees. They recognized that eventually their operations will be comprised mostly of machinery, and that their people will need to upskill and reskill in order to remain relevant.

As we migrate to these new roles and responsibilities, ubiquitous cloud technologies have enabled us to maintain uninterrupted connectivity. 5G has arrived and is enabling mobile devices, IOT sensors and video platforms while work/life balance transforms into work/life integration. We get to peer into our colleagues’ personal lives through Zoom calls and we realise that they have kids and pets and a decorating style we would not have guessed. And all the while the world moves away from traditional models of 8 to 5, Monday through Friday, on-site, full-time work arrange-

## Even as those jobs shifted to ones requiring more administrative and transactional work, new forms of automation have replaced those positions as well. What is left is work that requires a truly human skill set

social norms, COVID-19 has accelerated the arrival of new ways of working. While most organizations initially resisted the inevitable reforms that accompanied the crisis, virtually all of them eventually accepted that work can be done anywhere, anytime and by almost anyone.

REI, an outdoor gear retailer, announced earlier this year that they were selling their brand new, never used corporate headquarters. The reason was simple: it was no longer necessary and would save them significant money as they looked for ways to endure the economic impact of the

productivity increased 8% to 10% in remote workers versus on-site. And while our attitudes about the evolving world of work are important, technology may hold the key to the long-term future of work.

### Humanity at work

Prior to the pandemic, the topic du jour was how technology (particularly artificial intelligence and machine learning) was destroying our economic livelihood. A study by Pew Research found that 82% of US adults say that by 2050, robots and computers will likely do much of the work currently



ments and toward four-day work weeks, temporary gigs from anywhere and daily pay.

### Data has changed everything

As the pandemic accelerated the adoption of new technologies and operational models (about 25 times faster according to a recent survey by McKinsey, it also hastened the digital transformation of the workplace. Virtually all work is somehow captured in a computerized format, which provides endless opportunities for the elevation of how work happens. By aggregating the droves of data now readily available, organizations can predict and prescribe the orchestration of work in an evidence-based format. And as companies concede that their ability to harness the power of data is the key to sustainability, the most intriguing reservoir of data is arguably in their HR systems.

While this people data could be used in a wide variety of ways including real-time engagement scores, quantitative productivity ratings and optimized schedules, the real value lies in the utilization of behavioural data. Top companies like Google and Hilton are no longer requir-

## Top companies like Google and Hilton are no longer requiring degrees, and employers are acknowledging that specialized skills can become obsolete in a matter of months

ing degrees, and employers are acknowledging that specialized skills can become obsolete in a matter of months. Instead these organizations have prioritized the hiring of individuals with transferrable skills and foundational behavioural characteristics so that they are able to redistribute talent as environmental and economic conditions change.

Knowing each individual's behavioural DNA can enable a high degree of personalization in their hiring, development, coaching and career growth. This information has even been used to determine their aptitude for working from home, as characteristics like pace and discipline have been proven to be strong predictors of success in remote work environments. Most importantly, we need to stop pigeon-holing people and recog-

nize that people can serve in a variety of capacities regardless of their current background and title. A comprehensive profile of each human allows organizations to develop a data-driven strategy to move people around based on changing demand.

Most of us would likely agree that 2020 has been a year to forget. But it would be a shame to simply revert to the way things were once vaccines are widely distributed and the world opens back up. We have seen wild experiments based on necessity, and lessons learned that should not be forgotten. And we have real potential to continue the momentum created by this crisis for the betterment of workers everywhere. ■

*The author is MD - India Sub-continent & SVP - Global Delivery Services, Infor*



# Future Of 'Remote Working': Did It Work Or Didn't It?

Businesses are focusing on how to make work from home a better and safer experience

By Rohan Vaidya



Initially, there was a rush for businesses to enable their employees to work from home, as the global pandemic offered no other choice.

While speedy medical research and vaccines have been developed, it looks like remote working is here to stay, in future too. The reason being, corporations have seen that it simply works! It allows great deal of flexibility to both the employer and employees.

Therefore, businesses are focusing on how to make work from home a better and safer experience. It goes without saying we will witness further investments in better collaboration tools, more efficient access in a way that is safe as well as cost-effective for businesses and user-friendly too.

### **More time for fitness activities and some extra sleep. Long live remote work!**

For many office workers, hectic mornings of school car lines and bumper-

chores between meetings. Meanwhile, 32% of remote workers say putting their commutes in park is a key benefit. Plus, it's (basically) a scientific fact that wearing sweatpants while working increases one's overall mood and sense of wellbeing. Not forgetting the air getting fresher with far lesser vehicular pollution.

With more time and flexibility in their days, it's unsurprising that 95% of employees want to continue working from home even after their offices re-open.

### **Disruption from family & pets. What could possibly go wrong?**

Of course, remote work has its downsides (quarantine 15, anyone?). For instance, nearly half of respondents (45%) say disruption from family and pets is their biggest challenge. Anyone who's had to proctor a spelling test while giving a work presentation

work, it was sort of fun to connect with colleagues by video. We saw their home offices, "met" their significant others and kids (hopefully not wielding dripping paintbrushes) and gushed over their adorable pets. We got creative with elaborate video backgrounds and turned ourselves into virtual potatoes during team brainstorm. But for most people the novelty wore off quickly. Many working parents are still juggling work meetings and virtual schooling – there is no secret recipe to keep these in peaceful co-existence. And what once was a quick 'swing by someone's desk' to ask a question is yet ANOTHER 30-minute video call. It's no wonder 34% of remote workers cite "Zoom fatigue" as a top challenge.

### **Technical issues...there goes my productive week.**

For 78% of employees, working through technical issues like connecting securely to corporate systems and resources is a major hurdle. To stay productive and keep up with work responsibilities, 67% admit to finding workarounds to corporate security policies, from sending work documents to personal email addresses and sharing passwords, to installing rogue applications on company-issued devices. While these shortcuts may seem harmless, they can potentially open doors for cyber attackers, leading to credential theft, fraud and costly security breaches.

In these challenging times it has become very important to update cybersecurity practices and be at the forefront to protect our own as well as our employer's data. 46% of respondents who have not received remote-work specific security training, ask about it and do their part to keep safe and secure remote work a viable option for the long run. It's everyone's responsibility to keep safe and secure in our remote and hybrid work environments. ■

*The author is Regional Director - India at CyberArk*

**But for most people the novelty wore off quickly. Many working parents are still juggling work meetings and virtual schooling – there is no secret recipe to keep these in peaceful co-existence. And what once was a quick 'swing by someone's desk' to ask a question is yet ANOTHER 30-minute video call**

to-bumper traffic are but a distant memory. We've settled into new normal(ish) routines, commuting from upstairs to down and bed to desk, ready to take on the workday from the couch or home office.

The shift to remote work has been a big change, but for most people, it's been a largely positive one. Employees embraced it with open arms. Nearly half (47%) feel more productive at home, citing the flexibility to run errands, take a walk or do household

while frantically muting every other word to muffle their barking dog can relate. And as the lines between work and home blur, always-home and always-on increasingly means always-working. 43% of remote workers say they struggle to maintain the right work/life balance.

### **Co-existence & Zoom fatigue. Have you had too much of the same?**

For the first few weeks of remote



**T**he COVID-19 pandemic has dramatically altered the ways organizations worldwide operate, with their recruitment strategies and processes too undergoing a radical change. Though remote hiring is cer-

tainly not a new trend, it became sort of a necessity during these unprecedented times to help organizations ensure effective hiring by avoiding or limiting physical interactions. Now, as the waves of the pandemic gradually begin to settle down, the employ-

ment of scientific assessment tools for hiring and recruitment purposes is constantly on a rise, enabling companies to intelligently assess the candidates and their core competencies, further helping them create an efficient talent pool for their organi-

zations. This, clearly, is a trend which is here to stay and emerge strong in times to come.

A recent Fortune survey revealed that around 47% of the Indian recruiters who never used any virtual assessment tool before the COVID-19 outbreak, have now started to use one post the pandemic. So, how do these scientific assessment tools work and aid employers in ensuring effective remote hiring? Well, it is definitely much more than just scanning or screening a resume via automation. Surely, resume screening becomes easier, faster and efficient as automation takes over to scan the pool of resumes received and finally filter the best ones for interviewing. However, it is the further stages of a candidate's assessment – cognitive assessment, behavioural assessment and other skills evaluation, where technology champions and gives the desired results.

To start with, videos are undoubtedly a great way to interview remote candidates, as it lends a personal, one-on-one touch to the overall interview process. Of course, seeing the candidates talk and respond to questions works well for recruiters, as it helps them understand the candidate in greater depth and detail. In many cases, candidates can even record their responses to interview questions in a video format, store and share them over the cloud with the recruiter, which turns out to be fairly convenient for both parties involved.

However, if the video interviewing process is also supported with AI, it surely works as an icing on the cake. AI-powered tools greatly help in cognitive and behavioural assessment of the candidates. They allow recruiters to effectively read the facial expressions of each candidate, gauge their personality, determine and capture their ability to learn or solve problems and also delve deep into their thinking and reasoning capabilities. Also, the built-in advanced algorithms can smartly analyse the candidate's soft skills, aptitude and other expert



## As physical recruiting takes a halt and as HR professionals learn to recruit in a remote world, it is utmost important for organizations to up their recruitment capabilities and turbocharge their remote recruiting process

areas of the candidate. The short-listed candidates can also then be assessed, scored and ranked using AI technology, which helps recruiters save a lot of their precious time, efforts and money.

Of course, organizations would always be on the look-out for candidates with certain skillsets for different positions. AI-led tools make the entire process smooth and smart for recruiters by helping them take well-informed hiring decisions, ones that are not based on gut, but those which are backed by science and technology.

So, in a nutshell, it is true that identifying and recruiting the right talent, ones that fit your organizational requirements well, is not a plain easy task. As physical recruiting takes a halt and as HR professionals learn to

recruit in a remote world, it is utmost important for organizations to up their recruitment capabilities and turbocharge their remote recruiting process. Scientific assessment tools are definitely a smart and more efficient approach to accelerate the hiring process. However, there are a plethora of these tools available now and it is important to select the right ones for your organization, ones that clearly match your business requirements.

Looks like the hiring environment in the future is certainly going to grow robust on the remote side. Interviewing and selecting candidates via technology is likely to emerge as a key trend. ■

*The author is CTO & Co-Founder of Stratbeans*



# Fraudsters Up Their Impersonation Game For Social Cyber Attacks

While the tactic may not be entirely novel, the increased frequency of such attacks against cyber security professionals is threatening

By **Jatinder Singh**



Cyber-attackers and fraudsters are upping their game by leveraging modern-day digital tools to target enterprises and employees to carry out fierce cyber-attacks. As reported by Google's Threat Analysis Group (TAG), they are increasingly exploiting the social media networks to breach gaps in organizational networks and even the cybersecurity researcher community.

Google has recently reported that it identified multiple LinkedIn and Twitter accounts impersonating antivirus and security firm recruiters and top researchers. While this modus operandi may not be entirely novel, it's intimidating that many of these fake profiles had been generating good traction even though the target was security researchers and practicing security professionals.

## Since the pandemic started, social media platforms LinkedIn and Twitter have been generating unprecedented traffic. Without a well-defined categorization or threat intelligence mechanisms, many people continue to trust these platforms instinctively

TAG also discovered a fake security company, using domain, securielite.com, claiming to be a Turkey-based penetration testing services provider, and revealed that the website was hosting attackers' PGP public key that tempted internet users visiting the site.

"Security researchers successfully identified these actors using an Internet Explorer 0-day. Based on their activity, we continue to believe that these actors are dangerous and likely have more 0-days. We encourage anyone who discovers a Chrome vulnerability to report that activity through

the Chrome Vulnerabilities Rewards Program submission process," TAG, which specializes in hunting APTs, mentions in a blog post. These respective accounts now stand suspended.

Global information security solutions provider, eSentire, has also recently highlighted the increased cases of cybercriminals impersonating as recruitment specialists on LinkedIn platforms to offer fake jobs to professionals and infiltrate backdoor trojans in their systems.

### A massive surge of cyber-attacks in 2020

Amidst a rapid acceleration of digital services due to the COVID-19 triggered lockdown and mass shutdown of physical offices, 2020 witnessed a sharp increase in cybersecurity incidents. Many organizations had to transition to the complete work-

from-home environment without getting much time to beef up their IT infrastructure.

As reported by the Indian Computer Emergency Response Team (CERT-In), in 2020, 11,58,208 cybersecurity incidents were reported compared to 3,94,499 attacks in 2019, witnessing over 193% jump. A considerable percentage of these attacks are originating from social media.

Understandably, attackers are continuing to seek new ways to exploit the home-office security gaps, and in that respect, social media platforms are a new battleground for them.

According to Accenture's State of Cyber Security Report, 40% of security breaches are now indirect, as threat actors target the weak links in the supply chain or business ecosystem. The report further adds that most organizations' current cybersecurity programs can defend only about 60% of the organizational network.

Social media accounts unattended for too long could also allow hackers to steal crucial personal data, launch disinformation campaigns or distribute malware to associated accounts or connections.

### Way ahead

Since the pandemic started, social media platforms LinkedIn and Twitter have been generating unprecedented traffic. Without a well-defined categorization or threat intelligence mechanisms, many people continue to trust these platforms instinctively.

Security experts have become a key target for cybercriminals because of their knowledge and repository to tackle various vulnerabilities. Hacking this information can empower cybercriminals to launch well-orchestrated indirect cyberattacks such as Solarwind supply chain attack and bitcoin theft operation executed through Twitter.

It is also interesting to note that fraudsters plan these attacks in a very professional manner. Attackers take a lot more time to build credibility with the likely targets by conversing with them through blogs, emails, and multiple social media accounts other channels.

Changing passwords frequently, staying cautious about suspicious links and messages, checking the connection's credibility before replying, and using suitable security software are some of the fundamental hygiene factors that most experts recommend to avert cyber threats. Nevertheless, in the face of unprecedented global challenges, this new pattern of attacks demands more advanced strategies, continuous vigilance, and transformative solutions to alleviate them at the foundation. ■



# Semi-Urban Areas Fuel Growth Of India's App Economy: Study

Domestic apps dominate the mobile marketplace, beating out foreign players

By ITNEXT

There is growing popularity of domestic apps as they continued to climb up the ladder in India's app race, according to AppsFlyer's State of App Marketing in India 2021 report. The report's compelling findings showed

an increase in India's app installs with 38.5% of market share, beating China and the US in 2020. Since Indians along with the rest of the world, spent most of their time at home during the pandemic, the dependency on apps increased substantially.

The study analyzed 7.3 billion installs that were recorded in India from January 1st to November 30th, 2020, including 4519 apps covering Entertainment, Finance, Shopping, Gaming, Travel, News, Food & Drink, and Utility verticals. The data sample also includes 933 billion app opens and 3.0 billion remarketing conversions.

## Demand from semi-urban areas fires up India's app consumption:

The overall mobile usage increased, and semi-urban areas emerged as the hub for mobile usage giving rise to an ideal opportunity to reach younger digital consumers.

- States with predominantly semi-urban areas emerged as the new sweet spots for mobile usage.
- Uttar Pradesh, which is India's most populated state, led the market in non-organic installs (NOI) at 12.10%, leaving behind Maharashtra at 11.49% due to the impact of lockdown.
- Owing to the availability of cheaper mobile data and handsets, the tier 2, 3, and 4 cities saw a rise in mobile usage in Gaming, Finance, and Entertainment.
- Additionally, various apps in different verticals were launched targeting lower-tier cities that boosted mobile usage in tier 2 and 3 cities.

In the hyper-competitive app space fuelled by the growing choice of apps, keeping mobile users engaged with an app or app retention was a major challenge for marketers. Owing to the government lockdown's financial implication, app marketers have had to slash their budgets, resulting in lower overall spending, which led to a 12% decrease in app retention rates. The lower retention rate encouraged marketers to change their strategies towards remarketing.

Sanjay Trisal, Country Manager, AppsFlyer India, "The State of App Marketing report is the source of truth for apps to drive marketing success in 2021 and beyond. While Chinese apps have slipped in terms of overall market

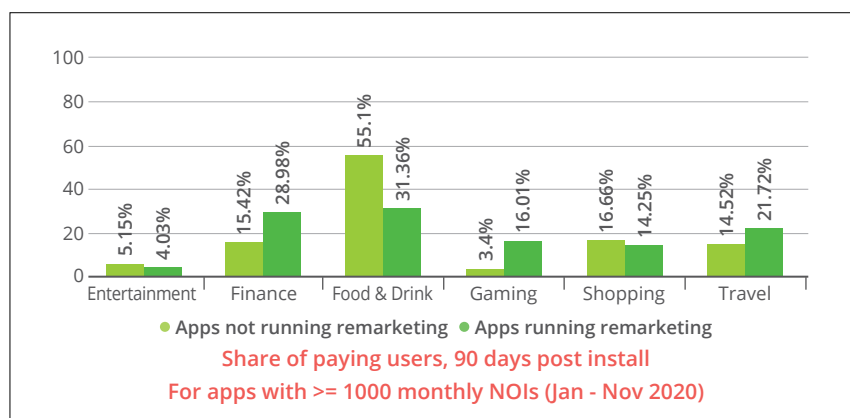
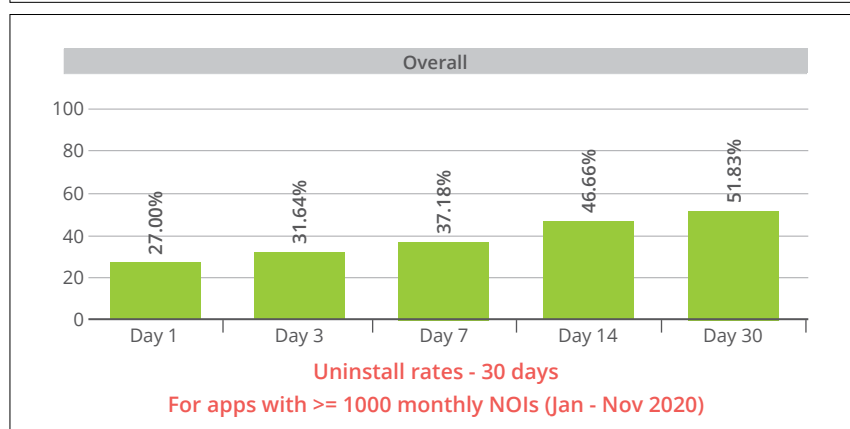
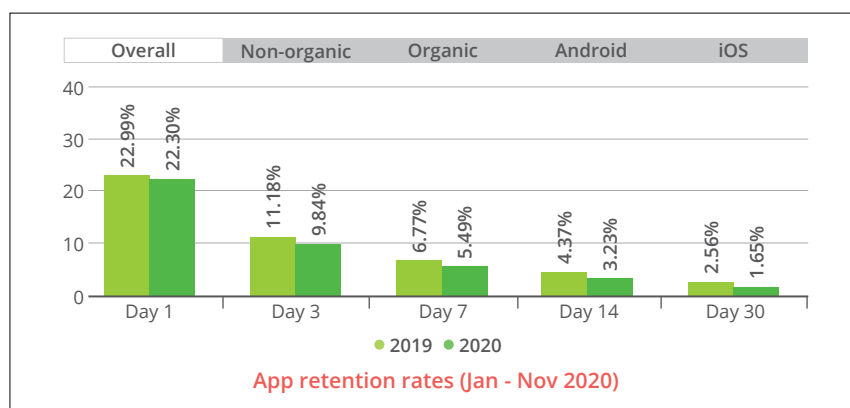
share (29%), Indian apps leveraged this opportunity by dominating the install volume (40%) in the country. Foreign apps from Israel, the United States, Russia, and Germany made further inroads into this rapidly growing market and are in line to challenge China. Closer to home, it is encouraging to see tier 2 and 3 markets provide tough competition to the metros when it comes to gaming, entertainment, and fintech. Regional content is a key by product of this trend, and it will be the next big pivot for app marketers."

### Key user acquisition insights:

- Entertainment vertical enjoyed the fastest time to first purchase, often converting the user within the first 10 minutes.
- Shopping events and promotions made for a significant rise in in-app purchases, and relaxed COVID-19 restrictions helped support the spike as well.
- Overall, 50% of all app uninstalls happen within the day of installation. Uninstall rates increased as compared to last year – this insight paves the way for marketers to launch their remarketing campaigns.

**Remarketing insights:** Owing to the above scenario and retention rates dipping, sectors like gaming, travel, and fintech that were most hit had to invest heavily into remarketing to incentivize their existing user base. These remarketing tactics proved to be highly effective and in twelve weeks the retention rate went up to 85% as compared to the sectors that did not invest in it. Therefore, app marketers need to analyze the marketing ROI and invest in remarketing campaigns that are providing better returns.

**Mobile ad fraud insights:** While the report found that spend and reduced marketing budgets led to lower fraud rates across all apps, improved preventive measures also contributed to the decline in mobile frauds. Fraud will remain a serious issue and will come back in 2021 as soon as the marketing budgets



recover. Travel, entertainment, and finance were the most affected verticals and will remain most vulnerable to fraud. Apart from being exposed to bot fraud, which is the most dominant fraud type, app marketers need to watch out for click flooding and install hijacking.

### Key recommendations for 2021:

- Brands should look at measuring the incremental lift from remarketing campaigns to better under-

stand their ROI and optimization of remarketing budgets.

- Regional content plays a significant and growing role for marketers to acquire and retain users.
- Marketers should seek fraud protection solutions to mitigate this perennial risk.
- Maintaining a healthy mix of SRN, affiliates, agencies, and owned media is critical for marketers.
- Remarketing campaigns, referrals and rewards will play a crucial role to re-engage and acquire new users. ■



# Digital Transformation In Banking Is Key To Level-Up Customer Experience

The traditional banking models are fast getting outdated and need technology modernization and collaboration with fintechs to win customer trust

By ITNEXT

The COVID-19 pandemic has put extensive pressure on the traditional banking sector to transform itself digitally or risk losing its customers altogether. Often considered digitally advanced, many conventional financial institutions are still aligned to the archaic and manual processes and fail to provide value-based customer-centric banking.

With social distancing being the current norm, the call for on-demand and fully digitized banking experience has increased tremendously over the last twelve months. Even many conservative customers have accepted digital banking in a big way.

For many brick-and-mortar financial institutions, this sudden change has been massive to manage and needs extensive technological investments to

support. According to a recent World Retail Banking report published by French IT major Capgemini and Efma, a Paris-headquartered non-profit organization, conventional banks face tough competition from the mushrooming digital-only neobanks, also known as smart banks and challenger banks. "Over the last ten years, neo and challenger-banks have attracted more than 39 million customers.



Currently, 81% of consumers opine that easy access and flexible banking would motivate them to switch to a new-age financial provider, in place of their traditional bank," it says.

The report comprises insights from 23 markets, over 8,500 banking customers, and over 130 senior executives of leading banks and non-banking firms across regions.

### **Neobanks and payments bank disrupting banking**

The conventional banks face a stiff challenge to provide unique customer experiences and resolve their complaints efficiently without making them visit physical branches. They need to transform themselves fast to stay relevant.

The ubiquitous online convenience and technological enhancements have made neobanks such as (Free, Instant Pay, and Yelo) and payments bank (such as Paytm and Airtel Payments) favorite for customers for business payments and money transfers. Incumbents and brick-and-mortar financial institutions still need to do much catch-up to bridge the customer experience gap by modernizing their network architectures, integrating efficient frameworks, and moving beyond product-focused business models.

The Capgemini-Efma report also adds that there is a growing disconnect between customer expectations and traditional bank priorities. While banks have become increasingly vocal about delivering superior CX, they appear less focused on improving support, reducing the cost of banking products and services, and offering sustainability initiatives. On the other hand, Neobanks and payments bank offers a range of customized services, using tools based on Artificial Intelligence and Machine Learning to maximize customer banking experience.

To create new opportunities, traditional banking organizations need to migrate to the cloud - from IaaS to PaaS, SaaS, and BPAas; optimize internal API networks to eliminate silos, sync operations, build plug-and-

play capabilities, and extend APIs externally to power collaborations and push new business frontiers.

### **BaaS to lead the revolution**

Though BaaS is not a new phenomenon, fintech players' emergence has accelerated the need for its adoption. The benefits of adopting the BaaS model are beyond monetizing existing infrastructure or expanding the customer base. It has proved itself as a critical enabler to meet banking customer needs and facilitate innovation.

Banks need to integrate digital transformation in all their operations and services to improve efficiency if they have to stay in the game. BaaS can enable banks to offer a holistic range of financial solutions without making a substantial investment.

With BaaS, firms can share their core capabilities with third parties as consumable application programming interfaces (APIs). "A Banking as-a-Service (BaaS) approach, strategically defined and powerfully deployed, well supported by the management, and enriched by the right mix of partners and products, is the recipe for maximum benefits," says the Capgemini-Efma report. Currently, 66% of banks are using a BaaS platform, while 25% are currently developing the platform. A majority of banks (38%) have been using an in-house developed platform, and others are leveraging third-party BaaS platforms.

Most importantly, third-party BaaS models offer targeted and low-cost distribution models. The World Retail Banking report cites the example of US-based Customers Bank, which offers white label products through its digital, mobile-only subsidiary, Bank-Mobile. It enables a new customer/account acquisition cost to less than USD 10 versus traditional banks' USD 100 per new account.

There are many private Indian banks too that have successfully leveraged the potential of BaaS to serve the changing customer needs. RBL, for instance, has collaborated with Bajaj Finance to offer vehicle loans to

people across India. The BaaS adoption in India faces some bottlenecks: Banks need to modernize their core banking system. But most importantly, the government needs to take regulatory measures such as open banking regulation such as PDS2 for a conducive BaaS ecosystem.

### **Data-driven insights for amplifying customer experience**

While banking organizations have been setting goals every year to improve their offerings and provide exceptional customer experience, they need to maintain a proper planning and execution balance.

Modern-day banking needs a consistent mapping of a customer journey to offer them unique experiences through treasured data-driven insights. Today's banks have a vast amount of transactional data – from their credit cards, payments, purchases withdrawals – that can help them understand their preferences and give informational context.

Moreover, according to Capgemini, 86% of banking consumers are willing to share their data if they are getting the assurance of a personalized banking experience. However, what's concerning is the fact that even today, not many banks have taken adequate measures to leverage customer data for improving the user experience. In last year's World Retail Banking report, only a quarter of global bank executives said their firm could manage and utilize data to gain powerful and deep insights.

It becomes critical for banks to take appropriate actions to strengthen their engagement engine with consumers. This can be achieved by either developing in-house AI/ML capabilities or a partnership with an external solution provider. Nevertheless, integrating deeper technology understanding and aligning it well with customers' future needs can help banking organizations transform themselves and stay ahead of the competition. ■



Two times  
the revelation

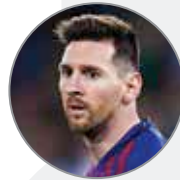


**Chetan Shah**

Head - IT Infra, L&T Technology Services

A TECH EVENT WHICH I ATTENDED  
RECENTLY AND LOVED THE MOST

Microsoft event on "Enhancing  
Productivity" by Dr. Nitin Paranjape



MY FAVORITE SPORTSPERSON

Leo Messi



A BOOK WHICH I LOVE TO  
READ THE MOST

Orbit Shifting Innovation by  
Devika Devaiah & Rajiv Narang

MY FAVORITE SINGER

Alka Yagnik



A GADGET WHICH I  
USE THE MOST

iPhone

MY PEER IN THE IT  
COMMUNITY

Vibha Naik, Head - IT,  
Linde Engineering India



**Vibha Naik**

Head - IT, Linde Engineering India

MY FAVORITE TECH GURU

Sundar Pichai



A GADGET WHICH I  
USE THE MOST

Smartphone



A HOLIDAY SPOT WHICH I  
LIKE THE MOST

Mahabaleshwar

MY FAVORITE COLOR

Green

MY FAVORITE SINGER

Lata Mangeshkar

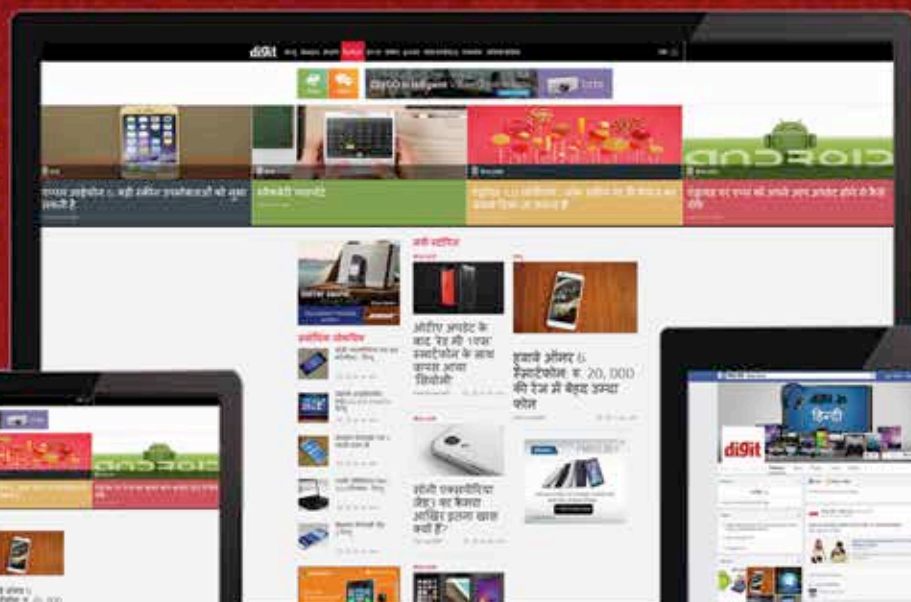




# डिजिट अब हिंदी में

देश का सबसे लोकप्रिय और विश्वसनीय टेक्नोलॉजी वेबसाइट डिजिट अब हिंदी में उपलब्ध है। नयी हिंदी वेबसाइट आपको टेक्नोलॉजी से जुड़े हर छोटी बड़ी घटनाओं से अवगत रखेगी। साथ में नए हिंदी वेबसाइट पर आपको डिजिट टेस्ट लैब से विस्तृत गैजेट रिव्यू से लेकर टेक सुझाव मिलेंगे। डिजिट जल्द ही और भी अन्य भारतीय भाषाओं में उपलब्ध होगा।

**di9it.in**  
NOW IN HINDI



[www.digit.in/hi](http://www.digit.in/hi)  
[www.facebook.com/digithindi](http://www.facebook.com/digithindi)

डिजिट





## HP ProBook 440 G8

**EASY**  
ON THE BUDGET



## HP EliteBook Series

Helping you find your work flow from home.

Work from Home solutions by HP now available on easy finance and leasing offers.

### HOW IT WORKS

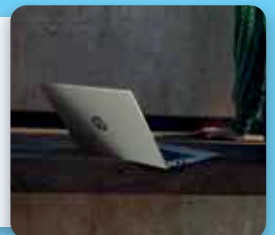


#### FINANCE PROGRAM

- Acquire your HP devices on a 24, 36 or 48-month contract
- Pay on a monthly basis
- At the end of the tenure hardware ownership is of the buyer
- Pay in easy instalments with attractive interest rate
- Minimum deal size: INR 5,00,000.00

#### LEASING PROGRAM

- Acquire your HP devices on a 24, 36 or 48-month contract
- Pay on a monthly basis
- Return the device at the end of the term and acquire new
- Pay in easy instalments with minimal interest rate
- Minimum deal size: INR 5,00,000.00



## Genuine HP Accessories



HP Thunderbolt  
Dock 120W G2



HP Slim  
Bluetooth Mouse



HP USB-C  
Travel Hub



HP Executive  
15.6 Backpack

For more information, contact:

**Himanshu Dikshit**

+91-9810836357 | sales@citycircuitasia.com

**Rohit Gupta**

+91-9811761318 | rohit@citycircuitasia.com