

## Upcoming Events

Do join us for this exclusive event to learn how to hyperscale your Cyber Security platform with Checkpoint and Galaxy.

### Event Topic-

### Cloud Native Security Webinar with Check Point and Galaxy.



A new way to utilize current hardware investment and maximize appliance capacity in an easy-to manage Hyperscale network security solution to bring our networks and data center to the world of hybrid clouds. With Maestro, organizations can simplify their data center workflow orchestration and scale up their existing Check Point security gateways on demand — the same way as they can spin up new servers and compute resources in public clouds.

### Event Date & Time:

Friday, 22nd October 2021

4:00 - 5:00 pm

[Register Now](#)



**Anoop Pai Dhungat**  
Chairman & MD

**MD SPEAKS**

Dear Readers,

*I am very happy to announce that most of us at Galaxy and our families are now fully vaccinated. This now enables us to serve our clients in India at the same high levels that we were doing before COVID-19 struck. Please note that all of us will be taking the basic precautions of masking and social distancing where possible to prevent any break through infections and this if for not only our safety but the safety of our clients also.*

*I am very happy that we have been able to help many of our clients to continue their businesses with minimum interruptions, by enabling them to securely move from working in the office to working from anywhere. The same tools that were used for that, can be extended now to enable staggered working from office thus using the same office space to support upto three times more employees. This will save over 50% of office running costs. Do get in touch with us to know more about these solutions.*

*As the festival season approaches, I pray that this does not cause a third wave and further disruptions. I appeal to all to take basic precautions even though you may be vaccinated.*

*Stay safe and happy reading.*

*AP Dhungat*



# Future Is Now

## The robotics and AI revolution will, like climate change, disrupt life as we know it; what future will it herald for humans?

The impossibility of distinguishing between fake and real in images and videos is an everyday occurrence now, something we just must live with. Even as we spend more of our days staring at screens of various sizes, we increasingly cannot tell if what we are looking at, whether word, image, or video, is a depiction of reality or the creation of someone's imagination.

It's going to get more interesting soon. Last year, in October, a painting titled "Portrait of Edmond de Belamy" created by an AI was sold by Christie's in New York for \$432,000 (close to Rs 3 crore). Earlier this year, Sotheby's hosted an auction of an AI artwork. It didn't get anywhere near the price of the first Christie's piece, fetching only £40,000 (around Rs 35 lakh) — but that's not the point. The point is that AI systems are creating artworks that are deemed good enough and interesting enough to be auctioned by Christie's and Sotheby's. It's no longer only human imaginations we must contend with.



Portrait of Edmond de Belamy auctioned by Christie's. Image via Wikimedia Commons.

This year also saw the publication (by academic publisher Springer) of a research book on lithium-ion batteries authored by a bot. And Open AI, a company backed by Elon Musk among others, released a paper on a system that can generate what they called "deepfakes for news", or "high-quality fake news". They did not release the code because they thought it would be too dangerous to do so.

Technology seems already to be getting to the point where it is able to generate images and text that at least the vast majority of humans would be unable to distinguish from the work of other, expert humans — artists and writers. Video will follow. Our perception of what's real and what's not is obviously going to be challenged in years to come. We may not want to acknowledge this, but the signs are clear enough.

We also don't want to acknowledge that, like climate change, the revolution in robotics and AI will in fact disrupt life as we know it. For starters, it's obvious that if AI systems are smart enough to create art and write books and news reports, beat the best in the world in chess, win quiz shows such as Jeopardy and the board game Go, they're also smart enough to do a lot of less challenging tasks. Agriculture was the principal occupation of most people around the world for thousands of years. That began to change with the Industrial Revolution, though the shift has been gradual. According to World Bank data, in 2018, in countries it classifies as High Income, only 3 percent of total employment was in agriculture. The corresponding figure for Middle Income countries was 30 percent, and for Low Income countries was 63 percent.

The idea has generally been that as economies develop, people move out of agriculture into other sectors such as manufacturing and services. In the developed world, employment in industry has also seen a fairly steady downward trend since 1990 at least. The services sector has been the growth area; for



# Future Is Now

instance, in the European Union, in 2018, employment in services accounted for 72 percent of the total. In North America the corresponding figure is 79 percent.



It's obvious that if AI systems are smart enough to create art and write books and news reports, beat the best in the world in chess, win quiz shows and board games, they're also smart enough to do a lot of less challenging tasks. Still from the film *Ex-Machina*. Image for representation only.

Retail, transport, banking and telecom are important examples of industries in the service sector. All are seeing increasing automation. For instance, in London, the big retail chains such as Sainsbury's and Marks & Spencer's already have plenty of self-checkout counters. There are that many fewer workers in each store. Self-driving cars are already a thing; the day when Uber taxis drive themselves, at least in countries where traffic rules are followed, is not far. A lot of buying and selling of shares in the stock market is already being done by algorithms. They'll come for banking jobs too, as they will come for routine customer service and call centre jobs in telecom.

Also on Firstpost — The future according to Yuval Noah Harari: The historian on the 21st century's biggest challenges, and how to face them

The logic of companies is finally driven by two words: efficiency and profit. When tireless bots, algorithms and robots can do jobs without errors, without complaints, without holidays and sick leaves, and most

importantly, without salaries, you can be sure that as soon as costs and availability permit, the technologies will be adopted. A future in which automatons do most of work as we know it is nigh. Since work is either physical or mental, and the automatons will increasingly be capable of both, it will be difficult if not impossible for most humans to move to a higher niche in the job market.

The question is who all the work will be for. The trouble with robots and algorithms is they don't need to buy stuff; only humans do. A professional optimist might conceive of a future where the machines do most of the work while we humans get a universal basic income in our bank accounts so that we can buy things and keep the whole economy running. This is wonderful, but it leaves us with an even bigger question. We are finally confronted with the idea of freedom, and that is a frightening thought for most. Our days and our lives at present are given structure by work. People value themselves and others by designations and salaries. They live eight hours a day, five days a week, most weeks of the year, for most of their lives with work. Their youths are spent in preparation for this; education is motivated and directed in large measure towards gainful employment. With gainful employment out of the picture, would so many people be interested in studying for 16 or more years of their lives, at considerable expense?

Perhaps, as professional optimist Karl Marx remarked, it will be possible, finally, for everyone "to do one thing today and another tomorrow, to hunt in the morning, fish in the afternoon, rear cattle in the evening, criticise after dinner...without ever becoming hunter, fisherman, herdsman or critic," though the hunting, fishing, and cattle-rearing may have to be done virtually, and the criticism may be bereft of even the semblance of education now seen on social media and in comments sections.

The professional pessimist version of this scenario is too dark to paint.

<https://cutt.ly/mEATXmo>



# Technology Focus

## IoT Security: Is Blockchain the way to go?

**Low barriers of entry, combined with the unique nature of blockchain as a technology, open a world of possibilities, especially in the current times when COVID-19 has amplified security vulnerabilities to critical infrastructure.**

The first-generation blockchain has demonstrated immense value being a secure and cost-effective way for recording and maintaining history of transactions for asset tracking purposes. What makes Blockchain secure is the fact that it is a peer-to-peer distributed ledger system in which transactions are recorded but cannot be copied. This technology overcomes the drawbacks of traditional internet networks as blockchain is essentially a self-auditing ecosystem that reconciles transactions every ten minutes in groups known as blocks.

Blockchain value increases further in the ever-growing inter-connected world with 8.6 billion IoT connections which are projected to grow to 23.6 billion by 2026! Low barriers of entry, combined with the unique nature of blockchain as a technology, open a world of possibilities, especially in the current times when COVID-19 has amplified security vulnerabilities to critical infrastructure.

Unfortunately, the attack surface has expanded significantly during the pandemic with remote working becoming more prevalent. This is because most of the system users do not have proper security built into home networks and connected devices.

### **Decentralisation is the Key to Data Protection**

Blockchain technology can be used not only to secure IoT network systems and devices against attack from the external world, it can also secure data exchanges between IoT devices. In an IoT blockchain, authentication, data verification, and security decisions are made by every device on the network as opposed to the central IoT platform.

Blockchain's consensus method of authenticating information makes IoT data significantly more difficult for hackers to sway. Instead of a central system that only needs to be breached once, a hacker intent on compromising a blockchain would need to breach most of the devices on the blockchain network.

In addition to decentralising IoT security, blockchain can also decentralise data storage.

### **Current Challenges with IoT Blockchain Implementation**

While blockchain seems to be a promising match for addressing IoT security vulnerabilities, the implementation still faces challenges. Blockchain requires enormous processing power that is currently out of the scope of many IoT devices. Current blockchains also are vulnerable if a group of users control more than 50% of the network's devices.

Due to the global distribution of nodes in applications such as a cryptocurrency, this amount of control is nearly impossible in most blockchains. However, a smaller, more localized IoT blockchain deployment could be more vulnerable.

To prevent hackers from gaining a majority control of smaller IoT deployments, each device will still require current IoT defense-in depth security solutions such as VPNs, certificate-based authentication, unique identities for devices that are built into the hardware, and hardware-enforced barriers.

Despite the implementation challenges, blockchain holds significant potential for the security of IoT networks. NASA recently released a study regarding its use of blockchain technology to secure air traffic services against denial-of-service and other cyberattacks, and organisations, such as the Trusted IoT Alliance are dedicated to implementing a secure IoT blockchain network. As these efforts continue, it is highly likely that blockchain will soon become the perfect match for ensuring cybersecurity in IoT.





## Technology Focus

### Smart data analytics: How cloud is creating value for financial service CIOs

**Cloud is influencing key business trends, leading to emerging use cases that solve for unique challenges, such as the ones faced by the Indian BFSI sector, which had to accelerate its cloud adoption. As bank branches had to close during the pandemic, banks had to provide digital services to its customers during lockdown restrictions.**

2020 was one of the most challenging years in our recent history and was also the year that businesses saw the importance of cloud technology for business continuity. Cloud technologies not only enabled employees who typically commute to offices daily to transform into remote workers overnight, but it also gave the IT departments of companies the flexibility to keep people functioning without losing the opportunity to collaborate and be innovative. The world has realized that this intelligent business architecture and 'accessible anywhere' nature of operations, will be the key to economic recovery.

#### Fraud Detection

This period saw an increase in services such as online transactions, digital payment gateways, mobile wallets; and cloud strategies ensured the ease of administration, scalability, reliability, security, and customer support. BFSI industry leaders are leveraging the cloud to drive innovation and new capabilities. They are using smart data analytics to increase operational efficiency, support and improve business performance, and optimize business processes. Smart data analytics will help unlock the potential of big data to improve decision-making and accelerate innovation. By using

real-time insights and data applications, financial companies can strengthen their efforts around offering tailor-made customer strategies. As businesses look to a recovery in 2021 and beyond, they need to make optimal use of smart data analytics to connect deeper with their customers, build new experiences, and convince them that the bank is at the center of their financial lives.

Today, financial institutions are leveraging the full potential of data analytics without moving all their workloads - thanks to hybrid and multi cloud models that can support their hybrid cloud strategy. It provides them with flexibility and choice and allows them to shift their workloads either on-premises or to a public cloud provider, without having to compromise on security controls. And the adoption of hybrid cloud strategies is helping them compete, ramp-up services and profitability, while reshaping customer experience. Apart from existing customers, the kind of insights drawn through smart data analytics can help in understanding future consumers and their preferences. BFSI organizations can accordingly customize their products and deliver to their customers. It can also help in managing risks by providing greater visibility into the lending ecosystem, especially at the loan application level. Combined with AI and ML APIs, in-depth analytics can help detect risks quickly, in real-time, resulting in higher financial security and cost efficiency.

Going forward, cloud platforms will provide the foundation on which financial institutions build a technology stack that delivers business agility and growth. With the Indian economy already on a path to recovery, financial companies will move further into their cloud journeys, and we will see more BFSI CIOs recognize the importance of getting their cloud strategy right.





# Special Focus

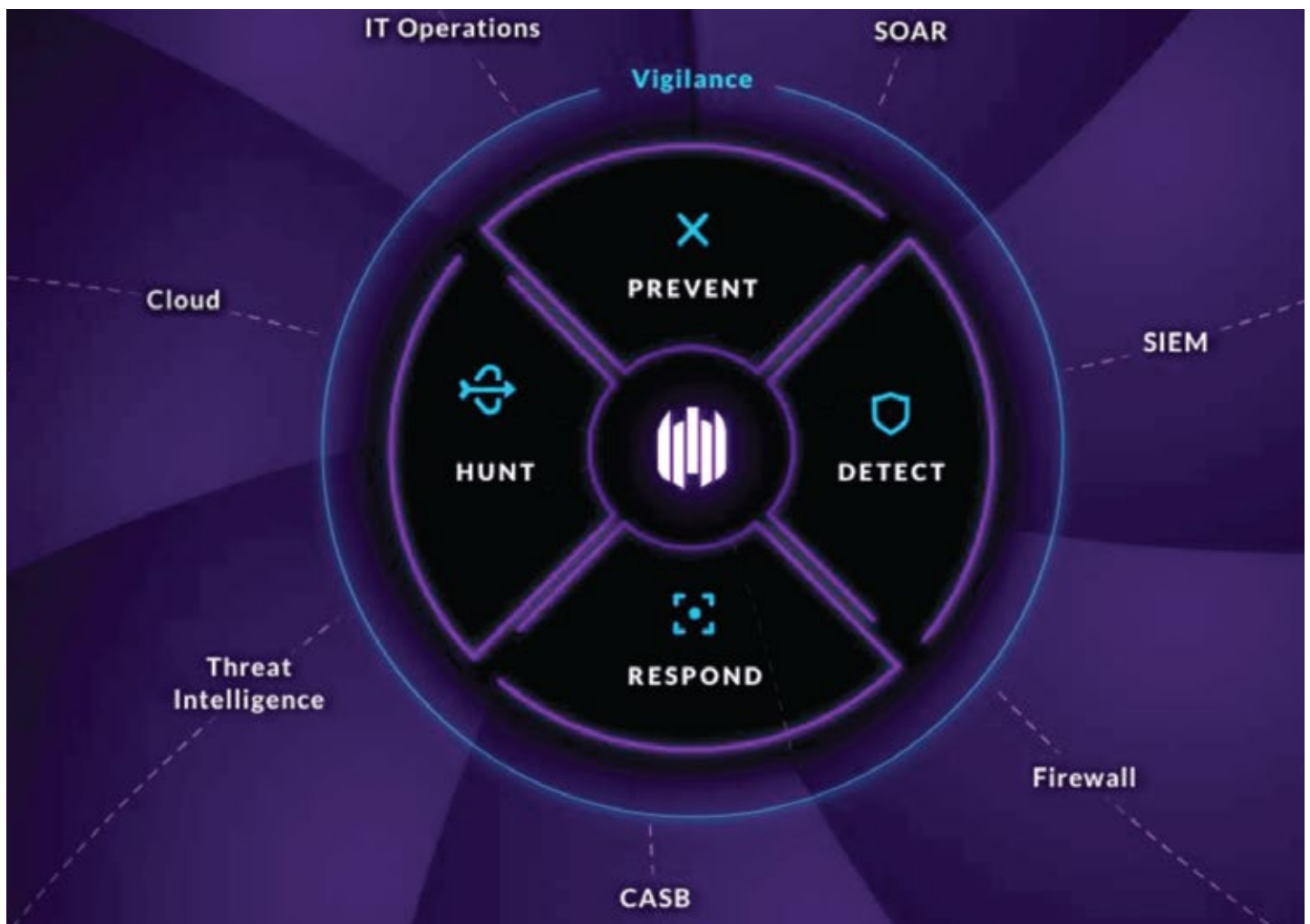
## Sentinel One.

Sentinel One's is a disruptive AI-powered EDR technology platform, and our autonomous end point agents use artificial intelligence to help enterprises like across the world, to detect, respond and remediate cyber-attacks in real time.

Sentinel One does a few things very uniquely in the EDR space which include but not limited to:

- Fully Automated Recovery with Patented 1-click remediation and rollback
- Storyline™ technology: Automatic correlation of benign and malicious telemetry, mapped to MITRE for fastest investigation and response
- Real-time, machine-powered attack reconstruction: Focused, contextualized alerts for analysts means faster MTTR
- Fastest MDR on the planet: SOC expertise powered by platform automation unlike human-speed limited of other players
- Multi-site, multi-level: Customisable to complex Org structure

- Fully flexible architecture for deployment & management: Cloud-first SaaS, hybrid, and on-premises
- Coverage from endpoints, servers, cloud workloads, Kubernetes
- Only vendor to cover legacy operating system.  
Sentinel One patented Active EDR and True Context technology, allows companies to quickly understand the story and root cause behind threats and autonomously respond, without any reliance on cloud resources.
- Gartner Leadership in the Magic Quadrant and their recommendation of our solutions for the superiority in platform / geographic support / ease of deployment / best efficacy
- Gartner Peer Insights Leadership for last 2 years as highest rated EDR + EPP Vendor across the world from current customers
- Mitre Attack Evaluation Report – We are the ONLY No 1 vendor to have “Zero misses” and “most detections”
- Over 6000 customers across the world and growing in India





## Linode to triple data centre capacity in India to support growth in Asia

**The company expects a 200 per cent increase in capacity at Mumbai facilities, which will sustain its momentum around customer acquisition and new service launches through 2023.**

New Delhi: Cloud computing infrastructure firm Linode on Wednesday said it is tripling its data centre capacity in India. The company expects a 200 per cent increase in capacity at Mumbai facilities, which will sustain its momentum around customer acquisition and new service launches through 2023.

"Our customers in India and around the world trust us to provide cloud infrastructure to support their rapid shift to digital-first business models and look to us to give

them an alternative to the complexity and cost of larger hyperscale providers," Linode's Vice President of Cloud Experience Blair Lyon said in a statement. Linode has seen customer growth in the region double throughout the pandemic, driven by demand for core compute and storage infrastructure services, as well as the introduction of new services.

"The demand surge resulted in surplus capacity being filled in less than half the time Linode had predicted," the statement added. According to Gartner, end-user spending on public cloud services in India will total USD 4.4 billion in 2021, growing at a 31.4 per cent rate compared to 2020.

Linode said India is the second largest and fastest-growing cloud services market in Asia Pacific, trailing only China.





## Power infrastructure major Techno Electric plans \$1 billion investment in data centers

**The Kolkata-based listed company with more than 400 completed engineering procurement and construction (EPC) projects is looking to develop data centres backed by green energy.**

Power infrastructure major Techno Electric and Engineering Company (TEECL) is planning to invest \$1 billion (about Rs 7,310 crore) in setting up data centres across key Indian cities. The Kolkata-based listed company with more than 400 completed engineering procurement and construction (EPC) projects is looking to develop data centres backed by green energy.

“We will be leveraging our renewable energy assets across the country to ensure these data centre projects are 100% powered by renewable energy and remain carbon-neutral. With this objective, we have finalised a plan to develop 250 MW of data centres across India over the next five years,” Ankit Saraiya, wholetime director, TEECL, told ET.

The company is targeting Mumbai Metropolitan Region

(MMR), Hyderabad, Pune, National Capital Region (NCR), Chennai and Kolkata for setting up data centres. For its first project, which is coming up in Chennai, the company has acquired a four-acre land parcel from the Tamil Nadu government at SIPCOT IT Park in the city’s southern suburb of Siruseri. The company is investing about Rs 1,200 crore to develop this data centre with a total load capacity of 45-60 MW, and preliminary site activities for this development have started. The second project in Kolkata will also be of almost the same size as that of the Chennai data centre and will be developed on nearly five acres with an investment of about Rs 1,200 crore.

“Both Chennai and Kolkata data centre projects will comprise around \$340 million or one-third of the total planned \$1 billion investment,” said Saraiya. “We are a debt-free company with over Rs 800 crore of cash reserves. We generate around Rs 200-250 crore of revenues through our EPC business year-on-year. We are well-funded internally to build these projects.” The company may opt for leverage 60-40 with debt-equity composition, and it is also open to divesting equity in these projects.



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