


Cyber trends in 2021 and predictions for 2022

The year that was and the year that will be



Introduction

2021 continued to witness **complex** and **potent cyber attacks**. With the COVID-19 surge **crippling critical infrastructure**, governments and the health sector were overwhelmed, given the **high volumes of cases**. The cyber posture of organisations was stretched to the maximum with the **hybrid work model** becoming a norm for most organisations amidst the crisis. With threat actors exploring every possible strategy to hunt for **weakness** and **launch attacks**, it became imperative for businesses to put in place a **resilient framework** for cyber, embracing **security considerations** across the board. This paper talks about some of the key cyber trends that we witnessed during **2021** and what to watch out for in **2022**.



Cyberattacks will continue to rise, assuming more potency and severity. Organisations will have to devise a dedicated cyber strategy framework at the board level and instill a cyber aware culture in the firm to be able to better detect and defend.

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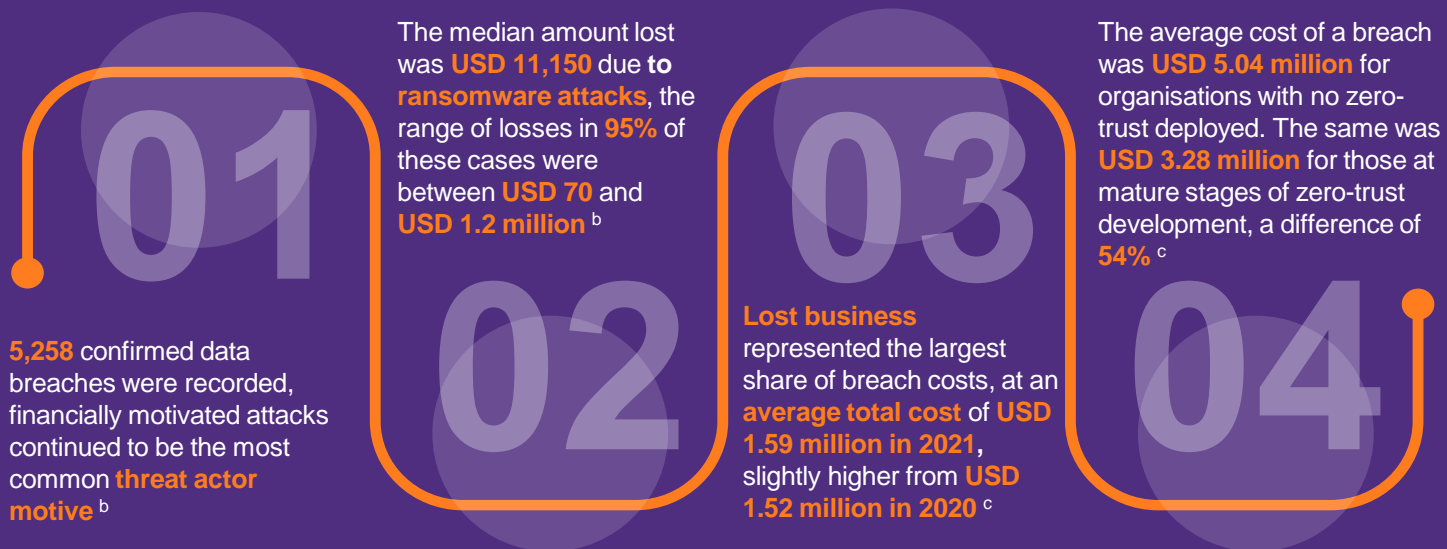
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Explosive growth of digital technologies creating new potential for conflict, disarmament.^a

- **United Nations Security Council debates, 2021**

a. United Nations press release (<https://www.un.org/press/en/2021/sc14563.doc.htm>)

Global key facts - 2021



Key cyber trends in India - 2021

Increase in cyberattacks

Ransomware attacks^d

Indian firms suffered more ransomware attacks than any other country
Ransom: 27% firms paid an average of **USD 5,00,000**; some firms paid up to **USD 5 million**

Data breaches^e

India came in at **third**, after the US and Iran.
Quantum: 86.6 million data breaches recorded, a huge increase from **2020's** count of **19 million**

DDoS attacks^f

5.4 million attacks were reported in the **first half** of 2021. A **30x** increase was recorded in October, comparing to the previous month

Leading airline^m

Data: Passport, ticket details, credit card data
Quantum: 4.5 million customers' data

Leading fintech^l

Data: Know Your Customer (KYC) details hosted on the platform
Quantum: 3.5 million user accounts

Leading pizza chain^k

Data: Orders and customer data were breached and made public
Quantum: 180 million orders



SEBI^g, RBI^h

Various circulars to the existing master directions on cyber were released by the statutory bodies in **2021** in order to strengthen the **cyber readiness** and **IT infrastructure** of the Indian organisations in the midst of the pandemic

Regulatory



Enterprise information security and risk management^d

Spends increased to **USD 2.08 billion** in **2021**, an increase of **9.5%** from **2020**

- Security services** topped the list, with about **USD 988 million** spent in **2021** from **USD 936 million** in **2020**.
- Network Security** and **Infrastructure Protection** came in **2nd** and **3rd** in the next set of high spend segments at **USD 302 million** and **USD 231 million**, respectively, in **2021**

Cyber spends

b. 2021 Verizon Data breach investigations report (<https://enterprise.verizon.com/content/verizonenterprise/us/en/index/our-reports/2021-data-breach-investigations-report.pdf>)
c. IBM - Cost of a data breach report 2021 (<https://www.ibm.com/security/data-breach>)
d. DSCI - India cybersecurity industry report 2021 (<https://www.dsci.in/>)
e. Times Of India News (<https://timesofindia.indiatimes.com/business/india-business/india-3rd-in-data-breaches-till-now/articleshow/8828816.cms>)
f. Economic Times News (<https://cio.economicstimes.indiatimes.com/news/digital-security/thirty-fold-increase-in-ddos-cyber-attacks-in-india-in-festive-season/88288440>)

g. SEBI (https://www.sebi.gov.in/legal/circulars/jun-2021/revised-framework-for-regulatory-sandbox_50521.html)
h. RBI (<https://rbidocs.rbi.org.in/rdocs/notification/PDFs/MD7493544C24B5FC47D0AB12798C61CDB56F.PDF>)
k. Mint News (<https://www.livemint.com/companies/news/hacker-leaks-dominos-customer-data-firm-says-financial-information-safe-11621729101700.html>)
l. Hindu Business Line News (<https://www.thehindubusinessline.com/info-tech/data-of-35-m-mobikwik-users-allegedly-hacked/article34192591.ece>)
m. BBC News (<https://www.bbc.com/news/world-asia-india-57210118>)

Key trends to watch out for in 2022

Data privacy and protection

- The Data Protection Bill, 2021 is expected to be passed this year in India. This would mandate a huge change in how organisations store, process and share personal and non-personal information, also outlining the government's powers on surveillance.

Seen as a much-needed upgrade to the erstwhile Information Technology Act, 2000 for covering contemporary issuesⁿ

Threats to critical infrastructure

- Security consideration for large infrastructure assets, such as oil rigs, power grids, nuclear reactors, manufacturing assembly lines will be in focus.
- Increased adoption of technology in critical processes will make them likely targets for cyber criminals.

Operational technology (OT) security in critical infrastructure to be closely monitored

Artificial intelligence (AI), Machine Learning (ML) driven attacks

- AI powered attacks set to increase with algo trained machines having pre-defined payloads and penetration strategies directed at specific targets.

AI/ML driven strategies will power both offensive and defensive cyber

Cyber attacks on connected cars/devices

- Connected cars and other Internet Of Things (IoT) devices are expected to be very prone to attacks.
- Distributed denial of service (DDoS) and Ransomware attacks will witness a rise without regular IoT security testing of the devices and software updates.

1.5 billion IoT device breaches recorded between January and June 2021, an increase from 639 million breaches in the same period in 2020^o

FinTech security to be in focus

- Digital payments using multi-party connected systems without secure APIs continue to rise.
- Payment gateways, e-wallets, UPI transactions, lending platforms and other online payment systems continue to be vulnerable and exposed to cyber-attacks.

Phishing and identity frauds expected to swell with more digital accounts

Increase in supply chain attacks

- Bad actors will continue to hunt for vulnerabilities, thereby, finding the weakest links in the supply chain to launch their attacks. Crippling the supply chain would disrupt the entire operations.

Supply chain attacks increased in quantity and sophistication between 2020 and 2021^p

Security issues around crypto set to rise

- Cryptocurrency and other blockchain-enabled trust systems are expected to witness a huge surge in cyber attacks.
- The Government of India is expected to pass the crypto bill in 2022 after another deferral in 2021.^q

Cryptocurrency fueled ransomware attacks to further evolve^r

Regulations and compliances to become more stringent

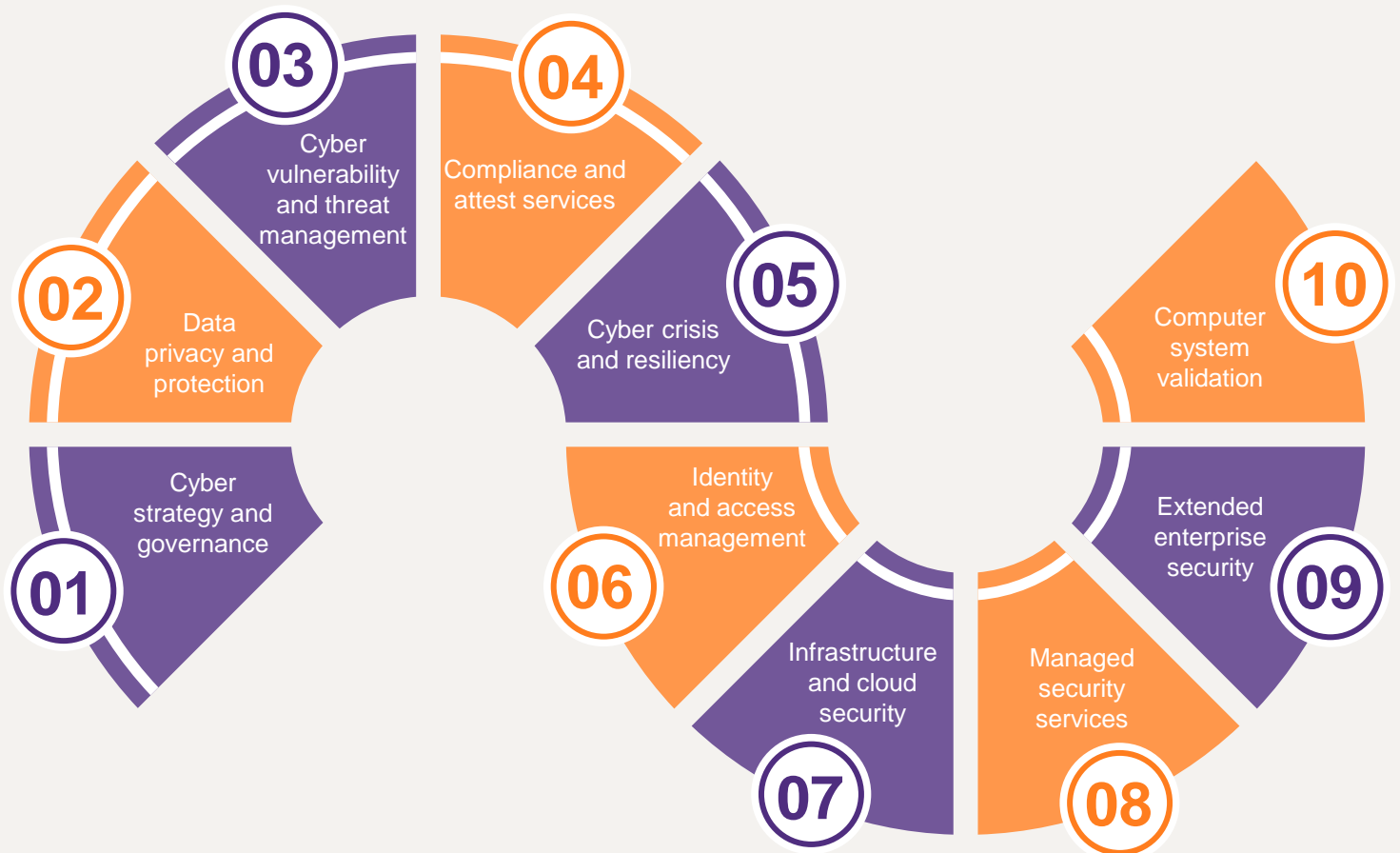
- Regulations pertaining to telecom, banking, financial services and insurance, healthcare, and pharma, IT/ITeS on cyber, data privacy and protection to be more rigorous.
- Government would get more powers in monitoring and enforcing safe cyber practices.

Increasing number of cyber incidents across sectors has forced the government and regulators to enforce rigour in statutory compliances

n. Economic Times news (<https://economictimes.indiatimes.com/tech/technology/decoding-data-protection-bill/articleshow/87952722.cms>)
o. Digit magazine (<https://www.digit.ly/iot-security-kaspersky-research-attacks/>)
p. ENISA press release (<https://www.enisa.europa.eu/publications/threat-landscape-for-supply-chain-attacks>)
q. Economic Times news (<https://economictimes.indiatimes.com/tech/tech-bytes/millions-more-will-answer-the-call-of-crypto-in-2022/articleshow/88655915.cms>)
r. Indian Express news: <https://indianexpress.com/article/technology/crypto/heres-how-cyber-threats-will-evolve-in-2022-7683494/>



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