Cyber Security and Cyber Laws

EFFECT OF THE CHANGE: HACKERS GETTING EASY ACCESS

Cyber Security and Cyber Laws

WHO IS ON THE OTHER END OF COMMUNCIATION?

On internet some things are not what they seem to be.

Be aware and enjoy the web at its best.
Know how to surf safe.
Go to www.internetsegura.be and learn more.

WHAT IS THE INFORMATION?

- Knowledge is something you know for eg the earth is spherical in shape, KJSCE is an engg college, amazon is a shopping website etc

- Data which is physicaly or electronically available like name, address, places etc

- Information is processed data for eg calculating age of a person by knowing the DOB, drawing some statistics by looking into the shopping or spending habit of a person etc

- Any More examples you can add

IN TECHNICAL TERMS

'Information is an asset which, like other
important business assets, has value to
an organization and consequently needs
to be suitably protected'

WHAT IS CYBER CRIME

- First cyber crime took place in 1820
- Cybercrime can be defined as misuse of technology to do any unlawfullactivity.

MOTIVE

- Just for fun
- Financial gain
- Revenge purpose
- Political gain
- Media coverage

TYPES OF CYBER CRIME

- Computer used as a tool

- Computer used as a weapon

- Fraud and Crime

TYPES OF CYBER CRIME

- Unauthorised Access and Hacking
- Web Hijacking
- Pornography
- Child Pornography
- Cyber Stalking
- Denial of Service Attacks
- Virus attacks
- Software policy
- Salami Attacks

TYPES OF CYBER CRIME

- Phishing
- Sale of illegal articles
- Online gambling
- Email spoofing
- Cyber defamation
- Forgery
- Theft of information contained in electronic form
- Email bombing
- Data Diddling
- Internet time Theft

TYPES OF CYBER CRIME

- Theft of Computer system
- Physically damaging a computer system
- Breach of privacy and confidentiality
- E-commerce / investment frauds
- Cyber Terrorism

DENIAL OF SERVICE ATTACK

- http://study.com/academy/lesson/what-is-a-denial-of-service-dos-attack-definition-types-examples.html

DOS ATTACK AND DDOS ATTACK
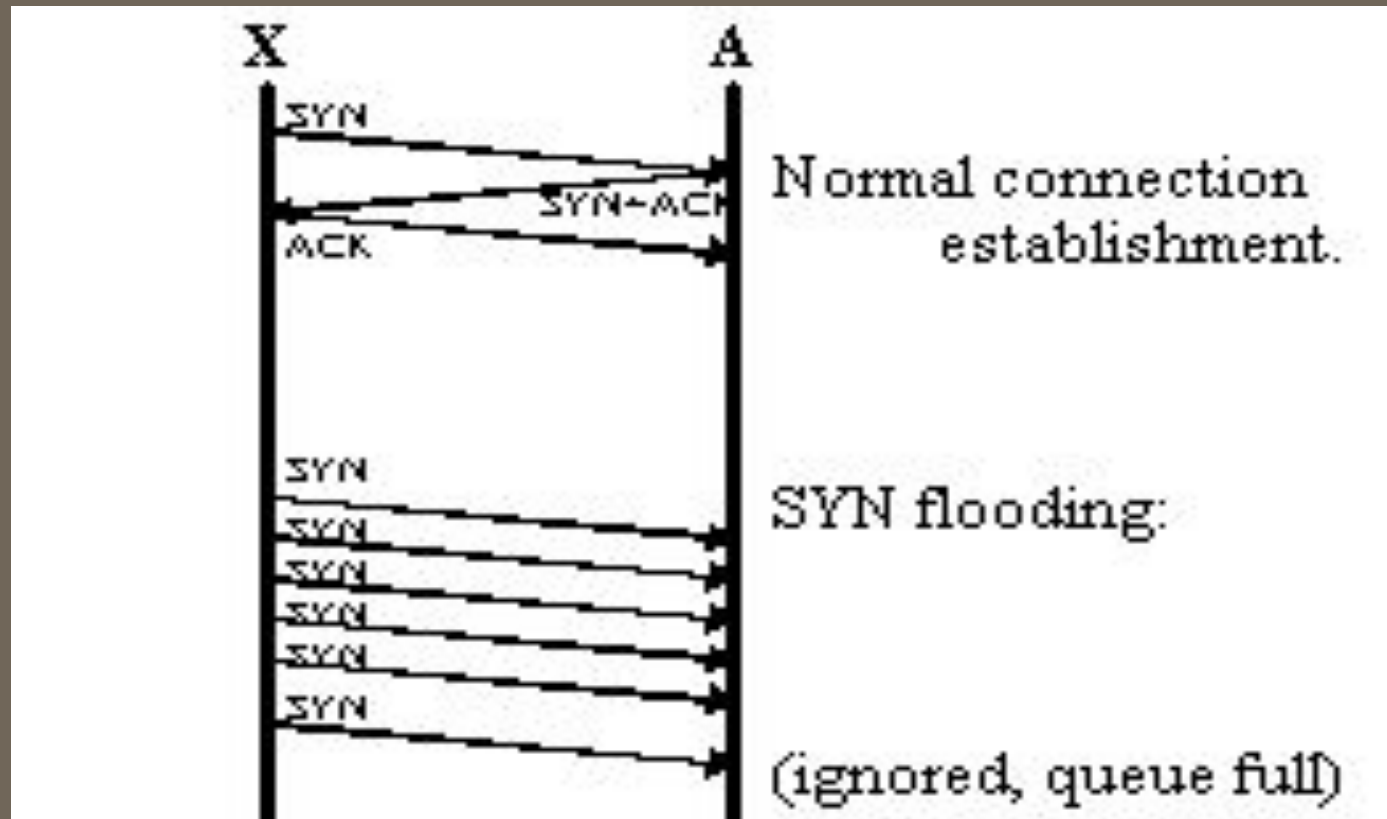
WHAT IS MALWARE?

- Malware is an abbreviated term meaning "malicious software." This is software that is specifically designed to gain access or damage a computer without the knowledge of the owner.

Most common types of Malware of 2020

- **Virus**: Spreads with user action, such as opening an infected file. They depend on a host file.
- **Worms**: They replicate themselves automatically, without the use of a host file.
- **Trojan Horse**: Malware that disguises as legitimate software. Once you install the "legitimate software" the malware takes control of your system.
- **RootKit**: Hidden deeply within the computer files. It provides continued privilege or backdoor access to the computer.

Most common types of Malware of 2020 cont..

- **Logic Bomb:** A set of instructions inserted into software that sets off a malicious action when a certain condition is triggered.
- **Exploit Kit:** Searches for software vulnerabilities. It is very effective on unpatched systems.
- **Adware:** Stands for Malicious Ads. It presents continuous unwanted ads on a computer. Some adware monitors the user's behavior so it can serve tailored ads.
- **Ransomware:** It blocks (kidnaps) key files or data on the computer and asks for money so they can be liberated.

CHALLENGES OF TECHNOLOGY

- Lack of Awareness
- Lack of Training
- Lack of Security standard model
- No international collaboration to combat the attacks
- Sophistication of the Hackers

Hacking

Cyber Security and Cyber Laws

Hacking

Ecommerce Frauds

3 Digit Card Validation Number

Back of Your Credit Card

F42652HC

For Customer Service Call 1.800.555.1212

Authorized Signature — John Doe — 5424000000000015 — 123

Not Valid Unless Signed

INTERLINK   PLUS   Your Bank

Case:- Paytm Database Hacking

CASES

- https://economictimes.indiatimes.com/tech/software/whatsapp-says-it-moved-fast-to-contain-spyware-attack-damage/articleshow/69435047.cms
- https://economictimes.indiatimes.com/magazines/panache/mumbai-police-initiates-probe-into-hacking-of-big-bs-twitter-account-informs-maharashtra-cyber-unit/articleshow/69737199.cms
- https://economictimes.indiatimes.com/industry/banking/finance/banking/un-security-council-panel-finds-cosmos-bank-cyber-attack-motivated-by-n-korea/articleshow/68589549.cms

CURRENT ATTACKS

- https://www.cisomag.com/amazon-suffers-fraud-attack-from-cybercriminals/
- https://www2.deloitte.com/be/en/pages/risk/articles/insurance.html

CYBER WARFARE

- https://www.bbc.com/news/world-us-canada-48735097

THE UNPROTECTED CONNECTED

71% of smartphones have no antivirus

Vs

6% of PCs have no antivirus

TOP 3 MOBILE SECURITY CONCERNS

Bank details stolen

Online fraud

Phishing attacks for personal information

HIGH-RISK MOBILE SPYWARE OF THE RISE

80% of emerging mobile malware threats monitor location, calls, text and emails and track the victims' web browsing.

TOP 7 SMART CITIES PRONE TO CYBER ATTACKS
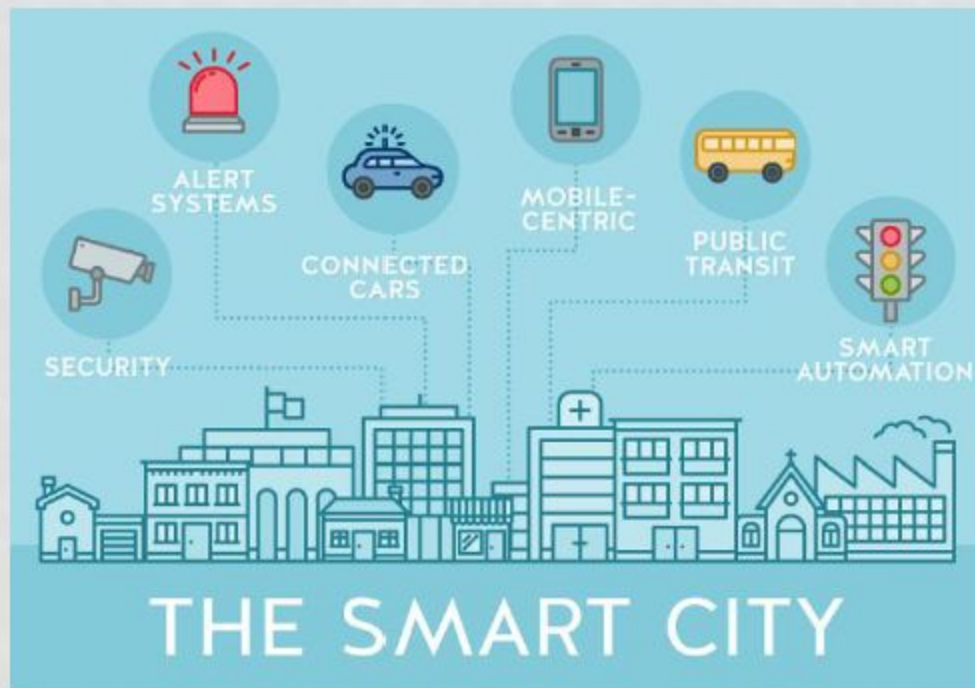
THE SMART CITY

Below is the list of Top 7 developed smart cities arou the world, but also labelled the most vulnerable Cities t Cyber threats:

- Santander, Spain
- New York City, USA
- Aguas De Sao Pedro, Brazil
- Songdo, South Korea
- Tokyo, Japan
- Hong Kong
- Arlington County, Virginia, U

ATTACKS THROUGH EMAIL

Malicious Email Per User by Industry (per year)

Industry	Users Targeted (%)
Mining	38.4%
Wholesale Trade	36.6%
Construction	26.6%
Non-classifiable Establishments	21.2%
Retail Trade	21.2%
Agriculture, Forestry & Fishing	21.1%
Manufacturing	20.6%
Public Administration	20.2%
Transportation & Public Utilities	20.0%
Services	11.7%
Finance, Insurance & Real Estate	11.6%

CYBER SECURITY STATISTICS FOR 2019

540 Million

Facebook users exposed in breach

20.4 Billion
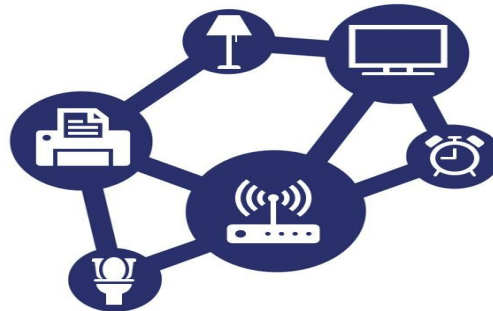
IoT Devices will exist by 2020

Microsoft Office

Microsoft office files accounted for 48% of all malicious email attachments in 2018

95% of Servers

Are vulnerable to Man-in-the-Middle attacks

CYBER SECURITY STATISTICS FOR 2019

86% of Phishing Attacks

Target the United States

46% of Websites

Have high-severity cybersecurity vulnerabilities

Just 2%
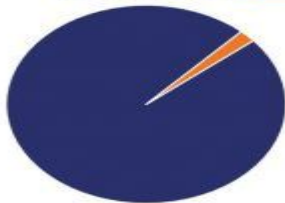
Of the average IT Budget gets spent on cybersecurity

68% of Businesses

Don't have Cyber Insurance coverage

TAYLOR ARMERDING CSO

Biggest **DATA BREACHES** of the 21st century
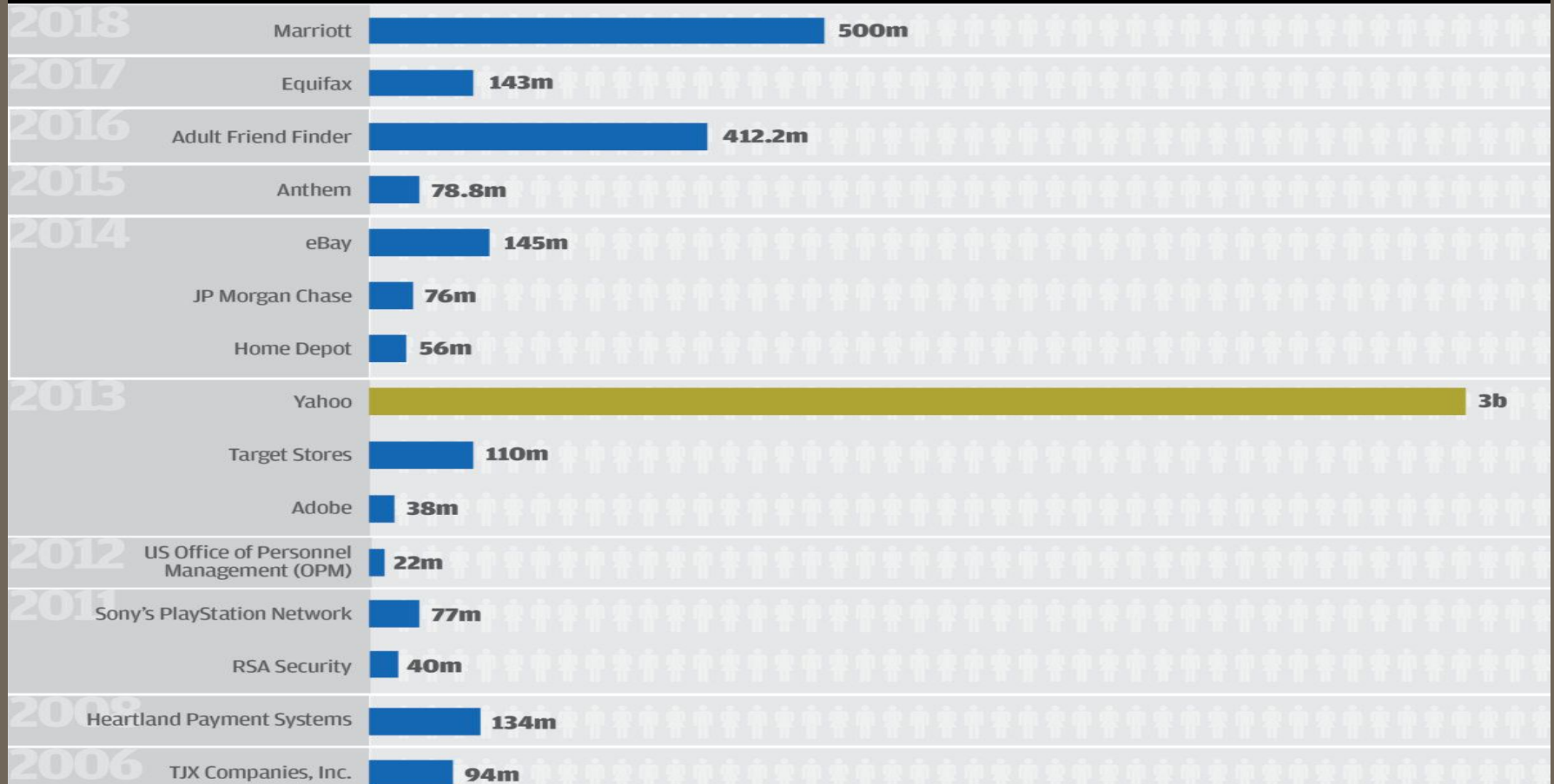
CLOUD SECURITY

According to
Gartner

Through 2020, more than half of security failures associated with IaaS and PaaS will be attributable to significant security gaps caused by *failure to adopt Privileged Access Management* technology and processes.[2]

>50%

Cyber crime: average company loss in selected countries 2016

Average costs of cyber crime in selected countries as of August 2016
(in million U.S. dollars)

Country	Cost
United States	17,36
Japan	8,39
Germany	7,84
United Kingdom	7,21
Brazil	5,27
Australia	4,3

Information loss: almost 40% of the damage. Information governance reduces losses by $1 million annually

Evolution average costs US
(in million U.S. dollars)

| FY 2013	FY 2014	FY 2015	FY 2016
11,56	12,69	15,42	17,36

Average annual losses to companies worldwide exceed $9.5 million

Source: Ponemon Institute – HP Enterprise Security (August 2016)

http://www8.hp.com/us/en/software-solutions/ponemon-cyber-security-report/
https://www.hpe.com/h20195/V2/getpdf.aspx/4AA6-7930ENW.pdf

AADHAR CARD DATA BREACH, WORLD'S LARGEST BREACH

- https://www.moneylife.in/article/aadhaar-data-breach-largest-in-the-world-says-wefs-global-risk-report-and-avast/56384.html

- https://krebsonsecurity.com/2019/05/first-american-financial-corp-leaked-hundreds-of-millions-of-title-insurance-records/
- https://www.forbes.com/sites/zakdoffman/2019/04/18/facebook-illegally-harvested-data-from-1-5m-users-as-it-leveraged-its-data-machine/#3761d2f26a2e

PREVENTIVE APPROACH EXPECTED IN INDIA

- https://www.pwc.in/consulting/cyber-security/blogs/seven-cyber-security-trends-that-india-will-witness-in-2019.html

INDIAN MARKET DEMAND

- https://www.business-standard.com/article/companies/india-needs-3-million-cyber-security-professionals-right-now-ibm-118051300153_1.html
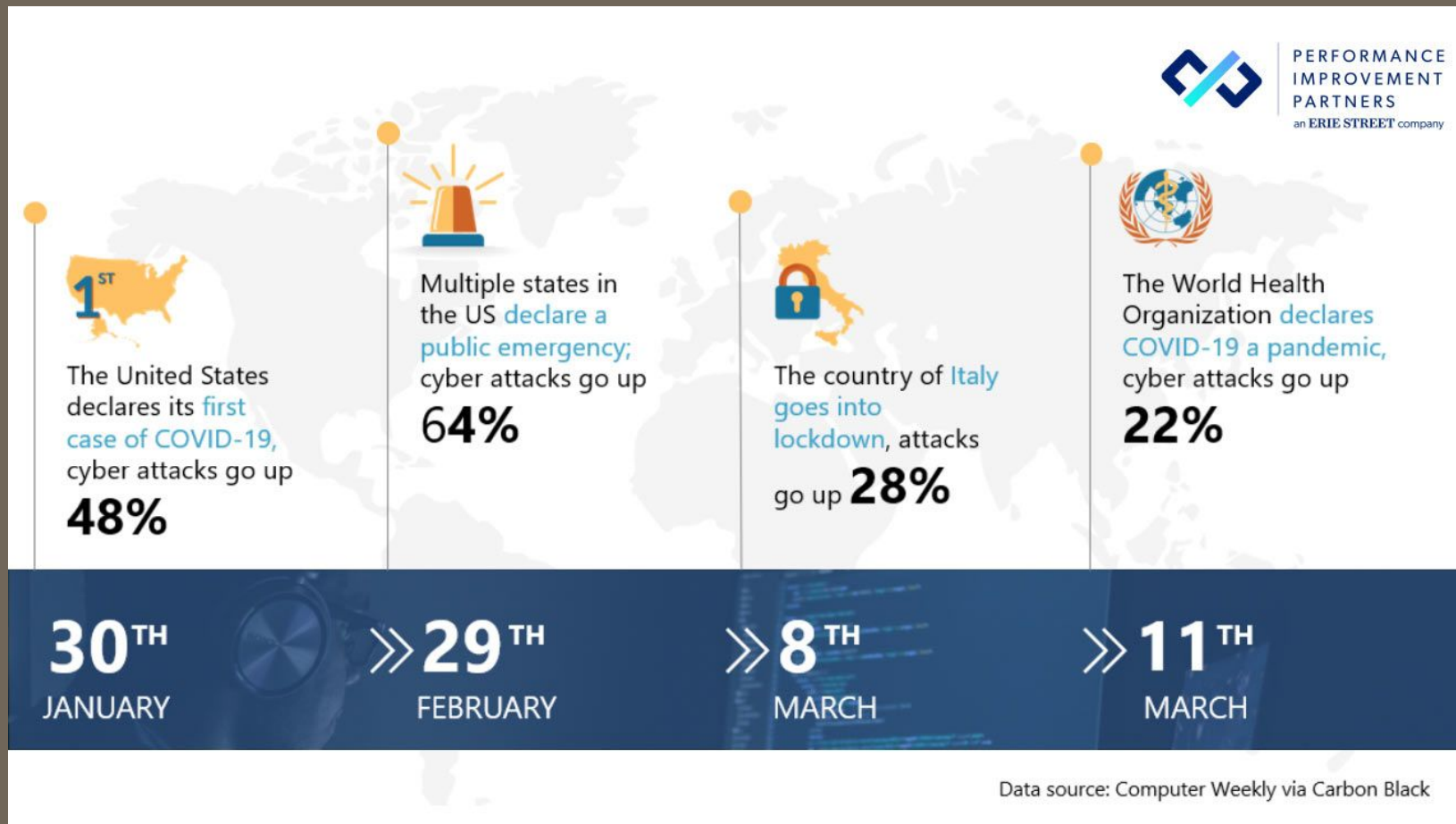
Distribution of the key COVID-19 inflicted cyberthreats based on member countries' feedback

59%

36%

22%

14%

Malicious domains

Malware/ Ransomware

Phishing/ Scam/ Fraud

Fake news

- https://www2.deloitte.com/ch/en/pages/risk/articles/impact-covid-cybersecurity.html
- https://www.thehindubusinessline.com/info-tech/surge-in-cybercrime-amidst-covid-pandemic-86-involved-in-phishing-study/article34140656.ece

- https://economictimes.indiatimes.com/news/company/corporate-trends/3x-increase-in-cyber-attacks-results-in-increased-budgets-and-attention-on-cyber-security-issues-etilc-members/articleshow/83949181.cms

https://www.pipartners.com/covid-19-cyber-security-statistics-40-stats-and-facts-you-cant-ignore/

THANK YOU