

Threat Landscape

Report in **2022**



Agenda

- 01 Introduction
- 02 Global Attack Trends
- 03 KSA Statistics
- 04 sirar Battles
- 05 Key takeaways
- 06 sirar Glossary
- 07 References

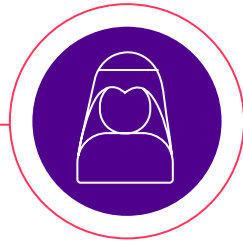
Introduction

01



Introduction

The Trusted platform for the data economy



Saudi Company

As a 100% Saudi company, we are not affected by the restrictions impacting foreign-owned consultancy companies.



Strong Partner Ecosystem

An ecosystem of top tier partners that we can leverage to compliment our offerings and fulfill all your needs.



Highly Qualified Team

A team with an average of 15 years of experience; previously worked for international companies, large entities, and big 4



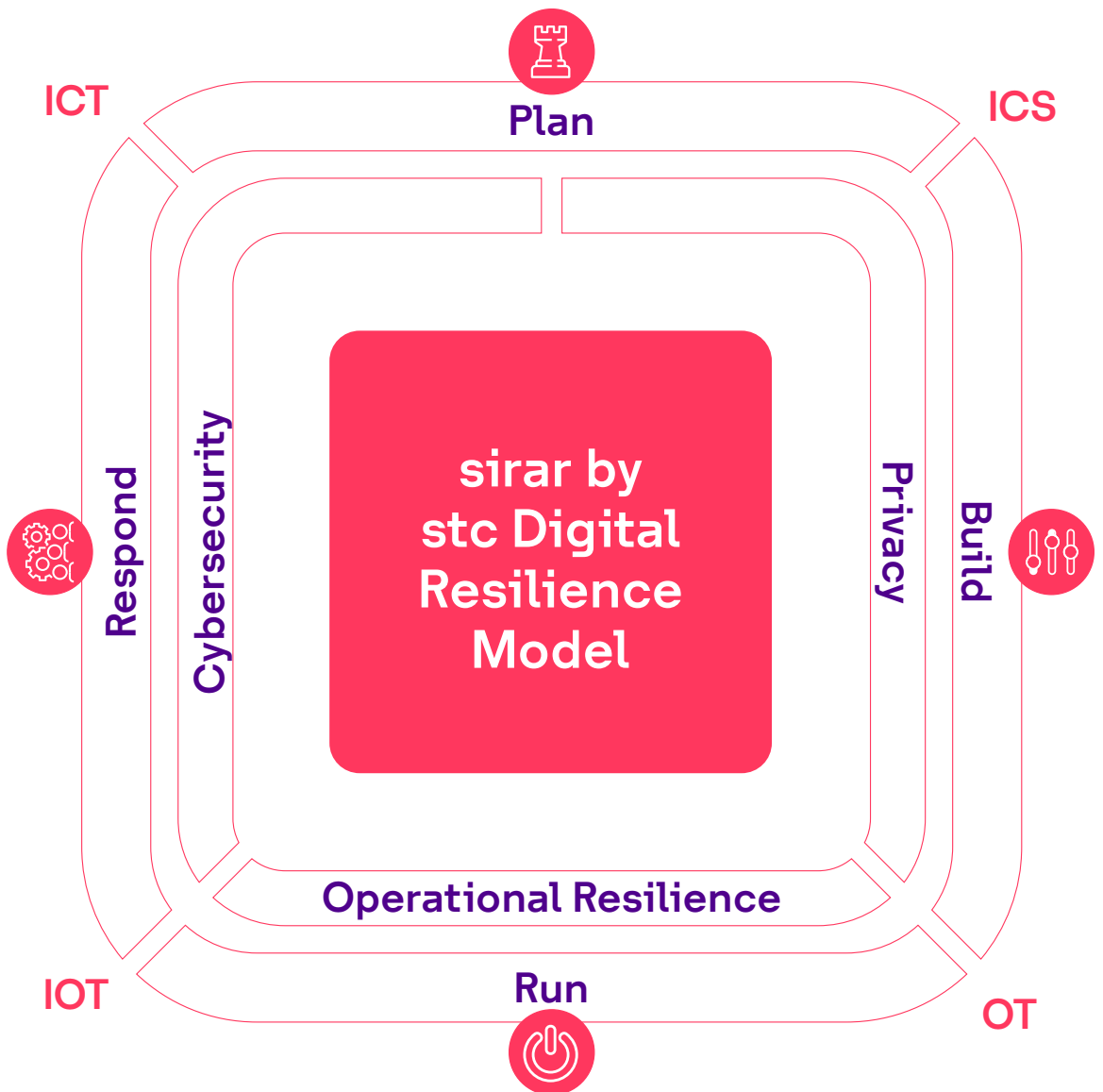
One Stop Shop

We provide all your privacy, cybersecurity, & resilience needs; save the time spent coordinating between many vendors.



Data Driven Protection

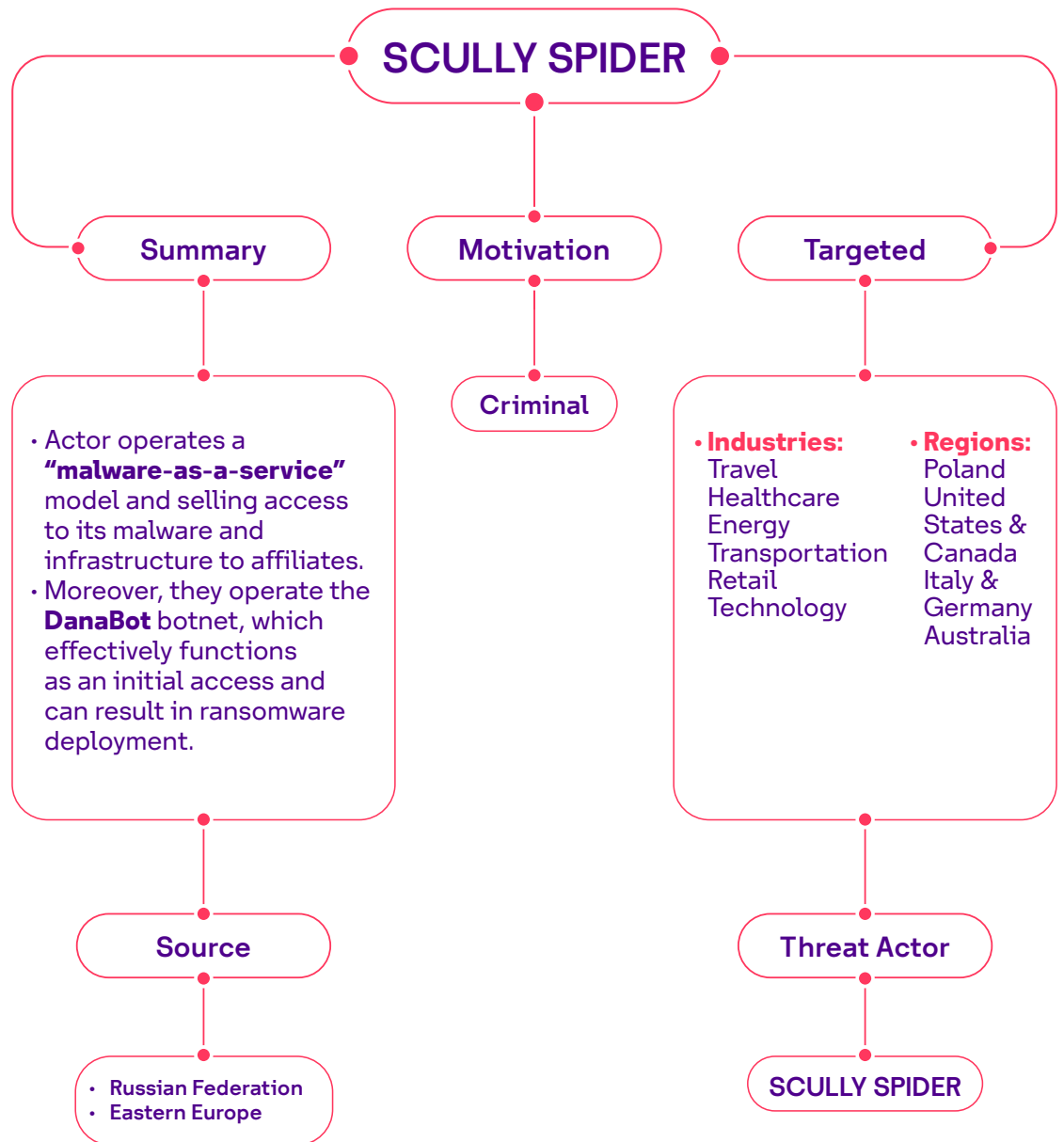
Offering Superior Threat Intelligence as we have great visibility on the threat landscape locally and regionally



Global Attack Trends

02

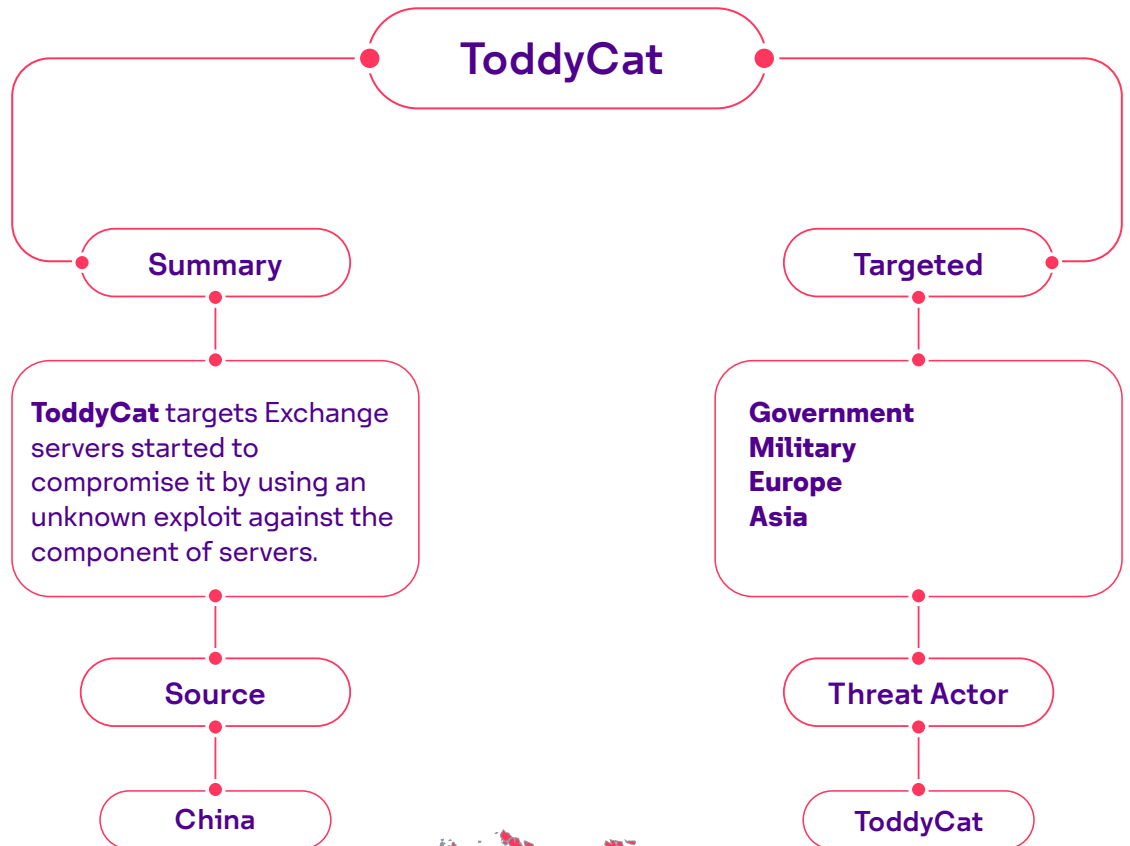
Most Global Active APTs



Russian & Europe based threat actor

APT Stands for advanced persistent threat (Attack Group).

Most Global Active APTs



● The First wave

● The Second wave

● The Third wave



China based threat actor

APT Stands for advanced persistent threat (Attack Group).

Microsoft Exchange Zero-Day vulnerability (ProxyNotShell)

Exchange

A New Critical zero-day vulnerability (ProxyNotShell) in Microsoft Exchange has been exploited and allowing remote code execution, according to claims made by security researchers at Vietnamese cybersecurity outfit GTSC, who first spotted and reported the attacks.

Affected Version

- Microsoft Exchange 2013
- Microsoft Exchange 2016
- Microsoft Exchange 2019

MITRE ATT&CK TTPs

- Criminal

Attacker

A Chinese threat group suspects to be responsible for the attacks based on the web shells' code.



Microsoft Warns AiTM Phishing Attacks and Payment Frauds

Microsoft

Microsoft disclosed a large-scale phishing campaign targeting over 10,000 organizations by hijacking Office 365's authentication process. It uses stolen credentials and session cookies to access affected users' mailboxes to perform payment fraud by using a technique called Email Thread Hijacking to dupe parties.

Technical Details:

Threat Actor :Unknown

Threat Vector: Phishing site

Impact : Credentials & Session Cookies Theft, Payment fraud

Severity : High

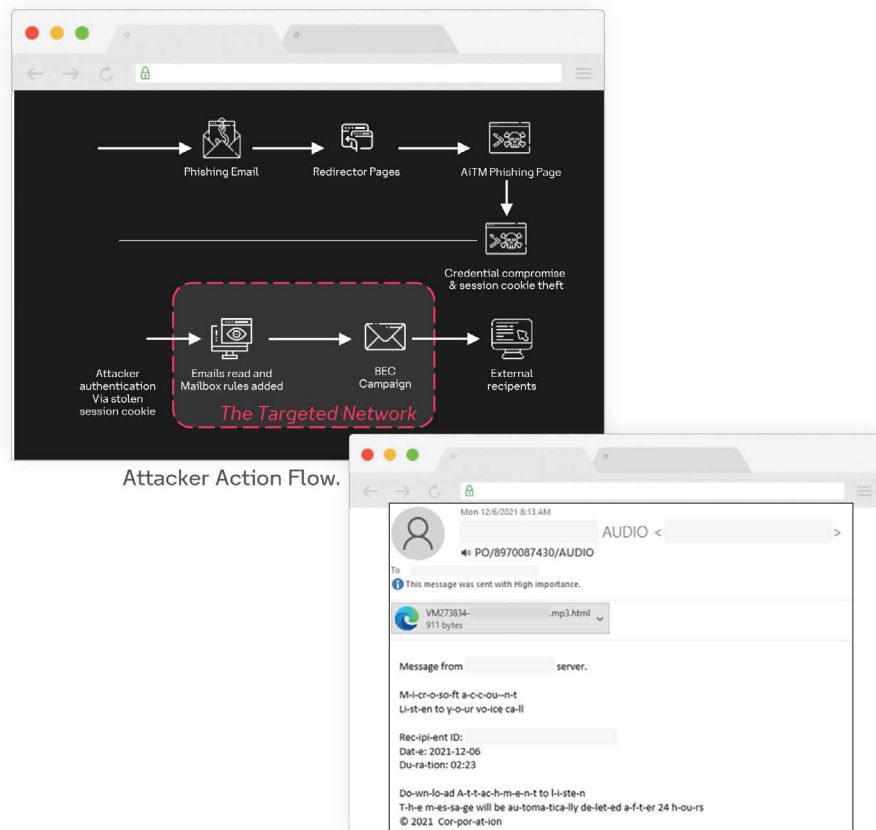
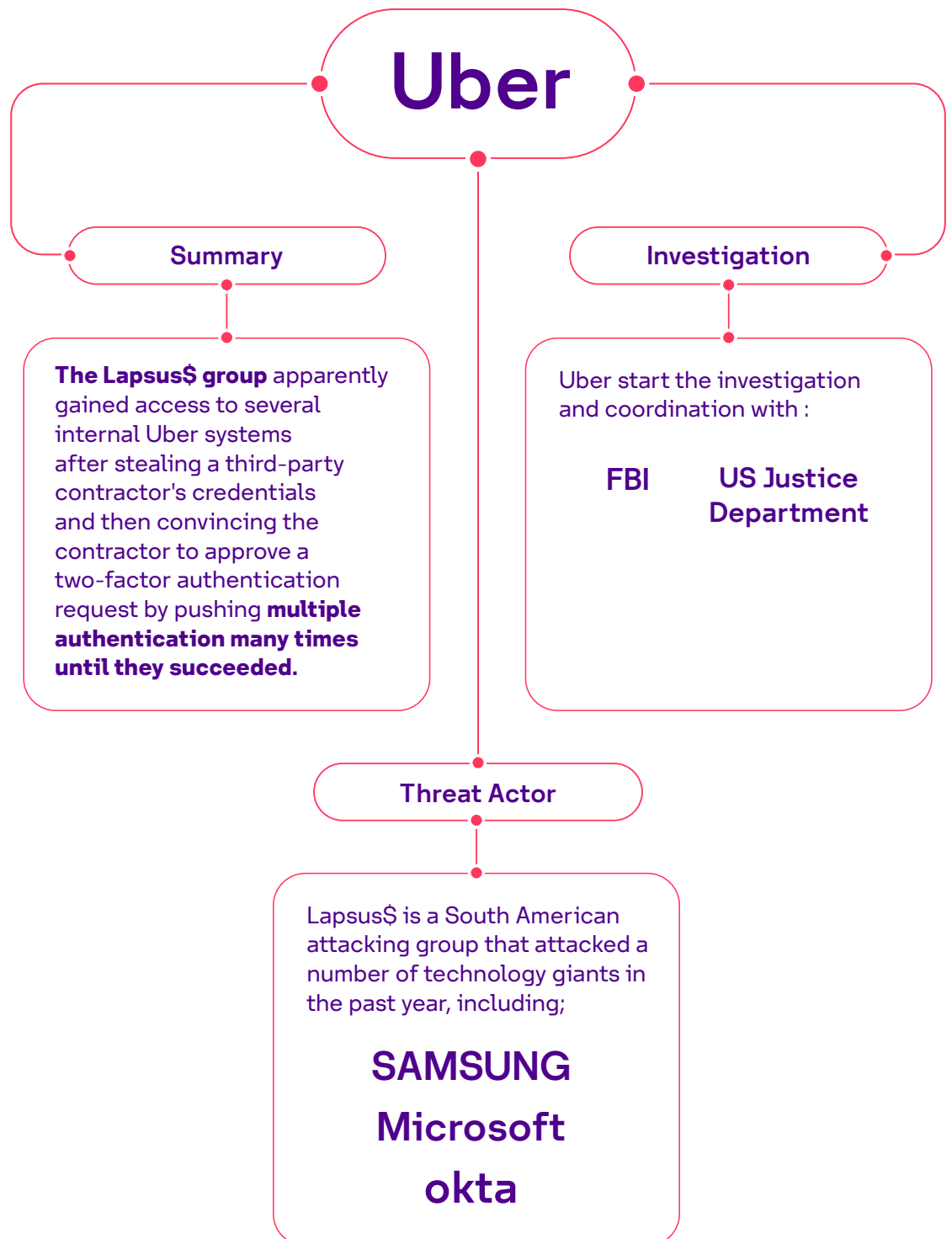
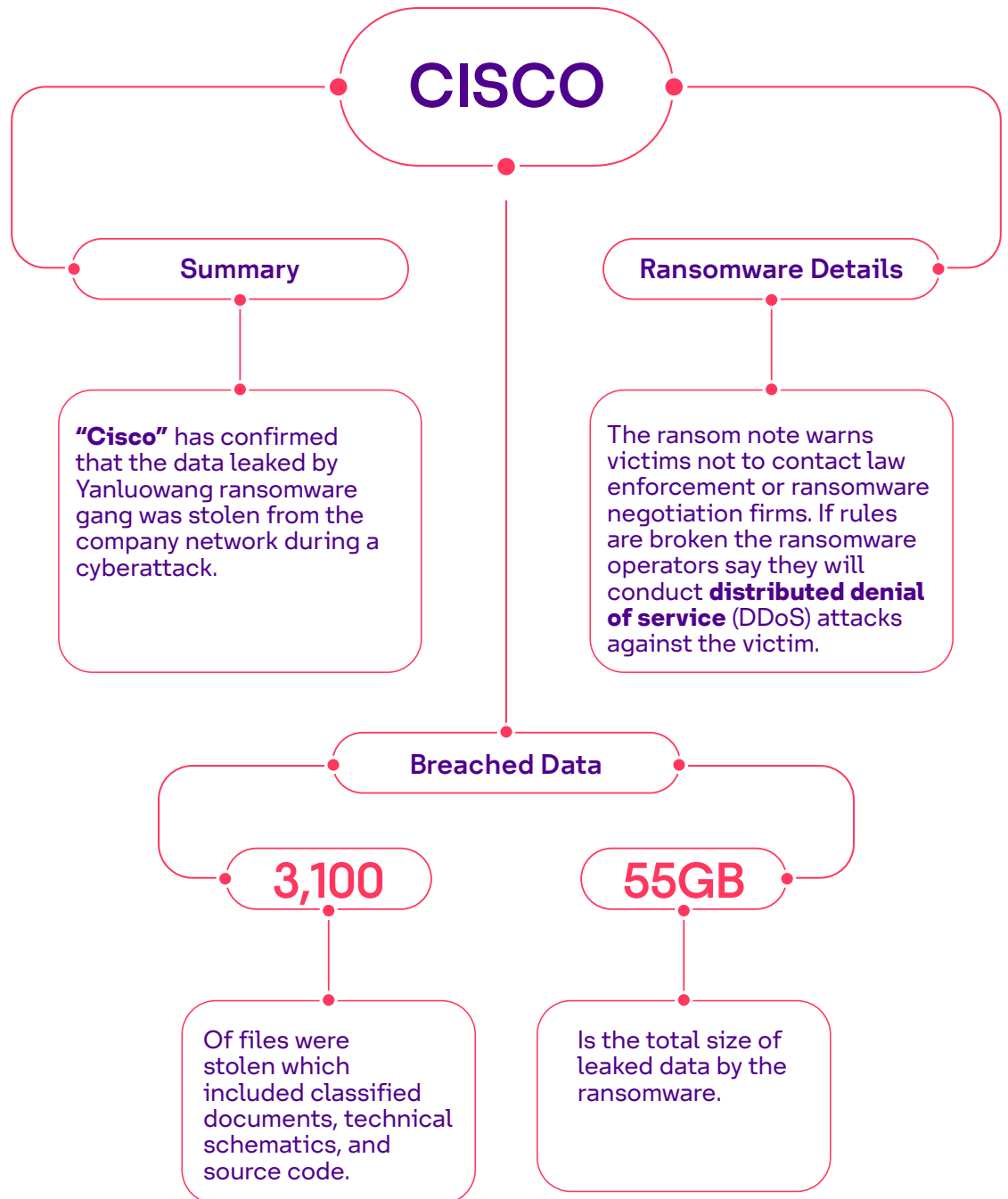


Figure 2: Phishing sample.

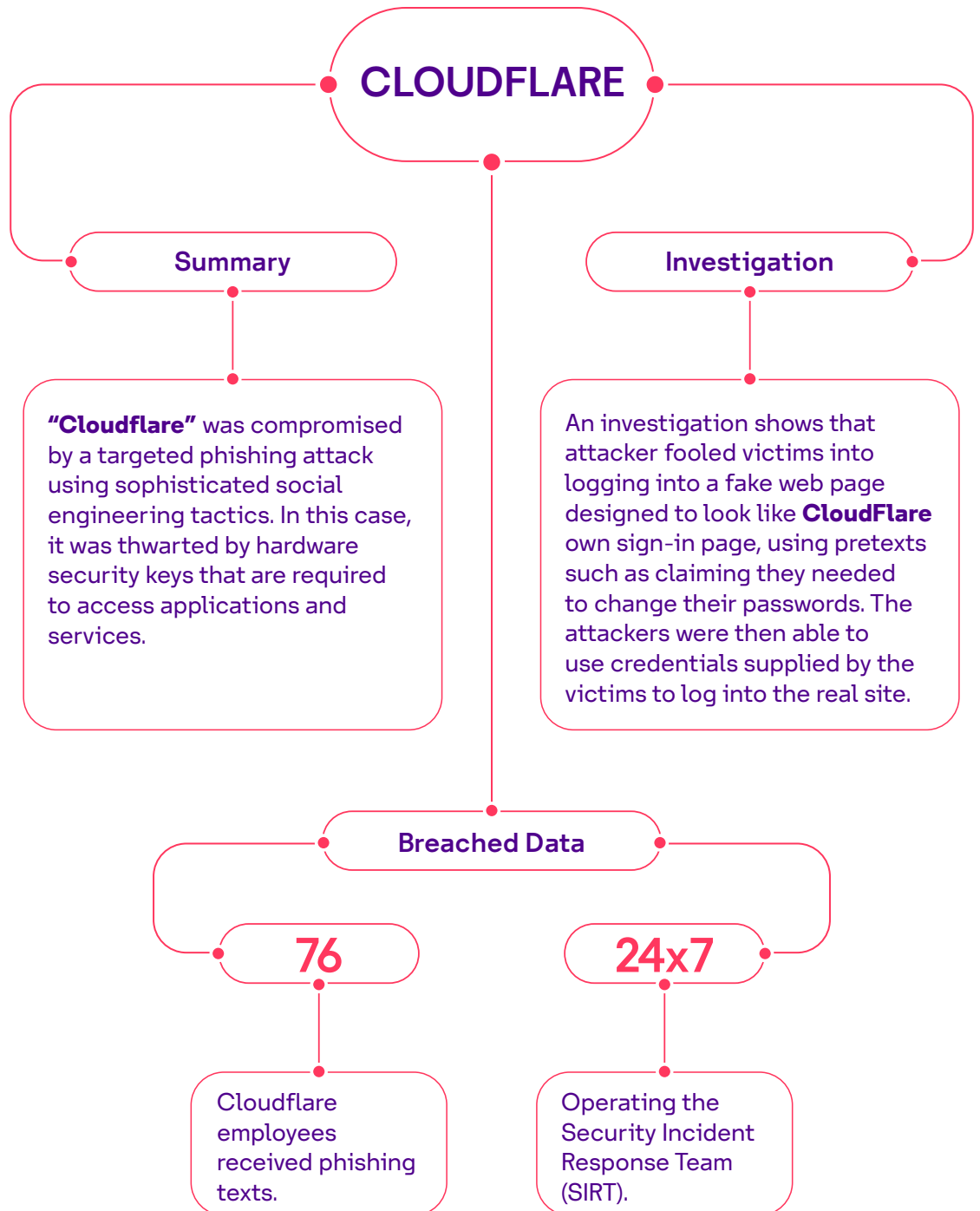
Uber's Internal Network Breached



Cisco Hit By Ransomware That Leaked Its Data

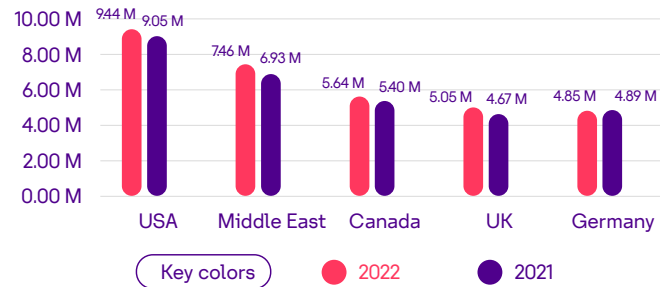


Phishing Campaign Reported On Twilio & Cloudflare



Cyber Data Breach Statistics 2022

Average Cost Of A Data Breach For Top 5 Country/Region



Breaches Cost And Causes

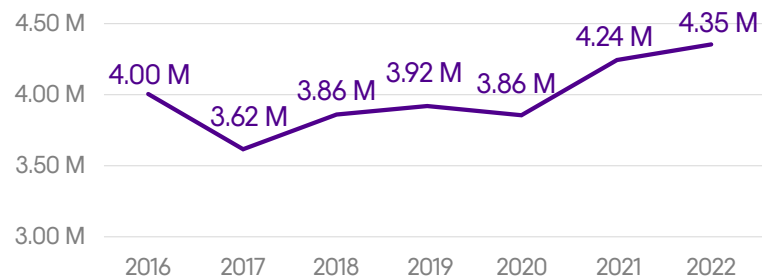
• **\$4.24M** •

Is the cost of data breach of **private** clouds in 2022.

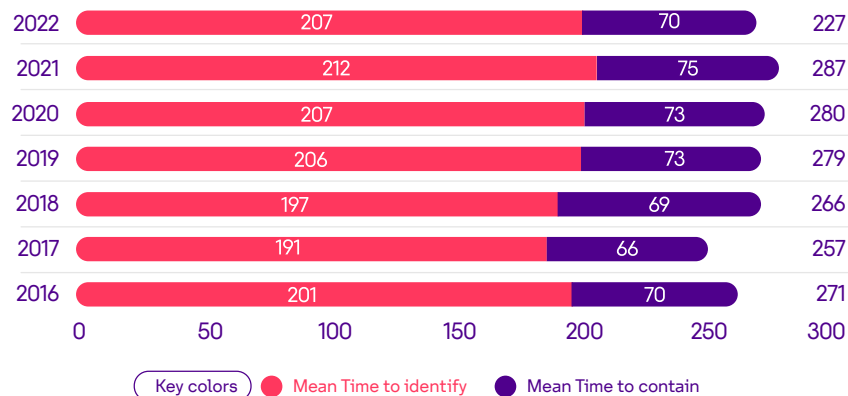
• **\$5.02M** •

Is the cost of data breach of **public** clouds in 2022.

Average Total Cost Of Data Breach

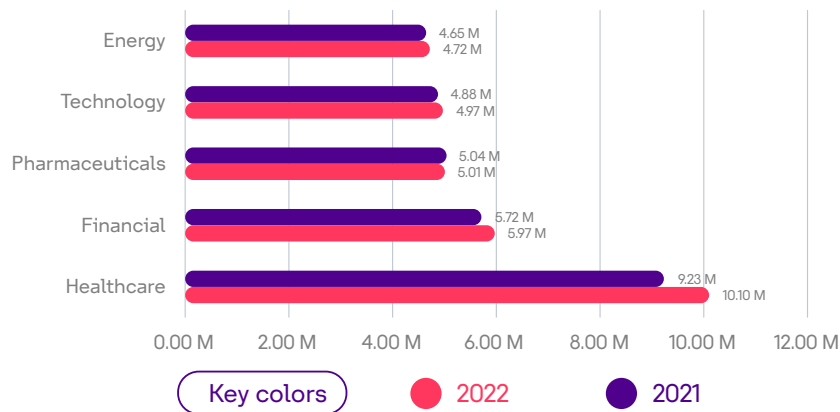


Average Time To Identify And Contain A Data Breach

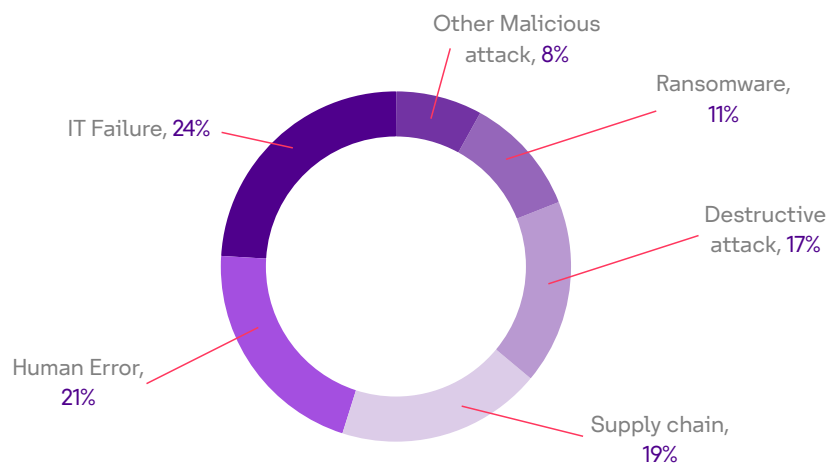


Cyber Data Breach Statistics 2022

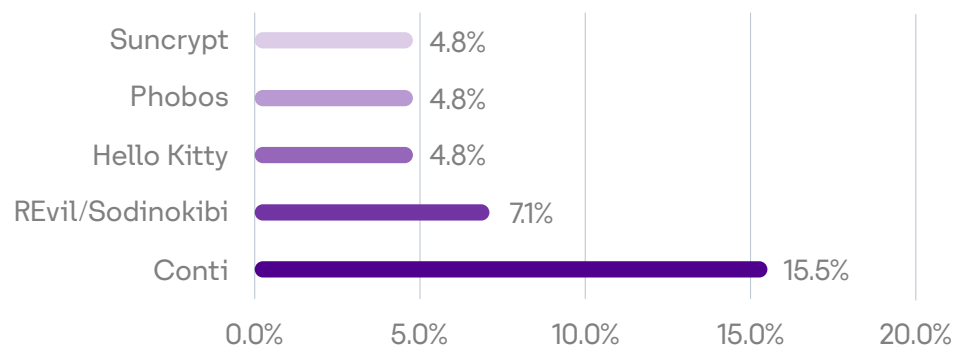
Average Cost Of A Data Breach By Top 5 Industry



Types of breaches experienced by organizations



Most Active Ransomware Group



Cyber Sector Attacks

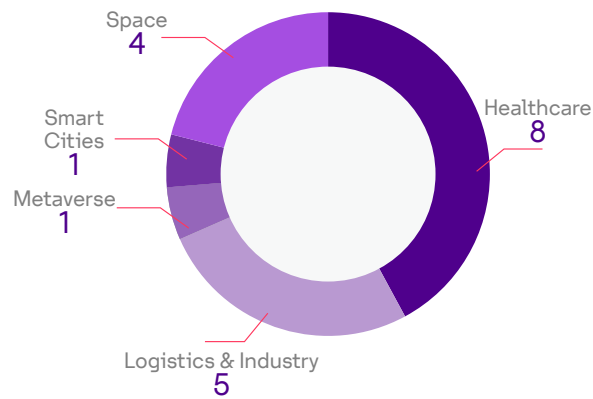
Sector	List of Actors	List of Malware & Tools
 HealthCare	TEMP.Hex UNC2633 UNC2420 UNC2500 UNC3840 APT29 UNC2835 UNC3810	NIGHTROPE BITPAYMER FAKEUPDATES FLASHBANG HANDYAXE SNOWFIRE CASUMARZU CHIPSEAL MIXDOOR SUCCESSFLY
 Logistics and Industry	UNC1543 UNC2975 UNC2165 FIN11 UNC2824	TOUGHQUIZ OLDFLAT ROOMMATE DRABCUBE
 Metaverse	UNC3524	QUIETEXIT
 Smart Cities	FIN11	CLOP FLOWERPIPE QUICKPEEK SIXFINGERS
 Space	GhostSec Gonjeshke Darande UNC4368 Gaza Cybergang	CLOP INCONTROLLER METEORLIGHT METEOR

Cyber Sector Attacks

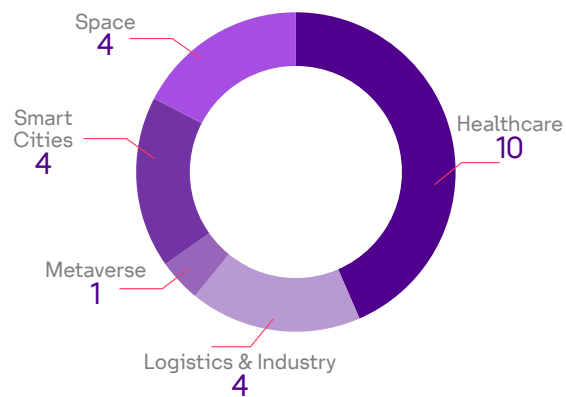
Indicator Of Compromised By Sector

Total Indicators	Sector
1,726	Healthcare
238	Logistics and Industry
1,899	Space
323	Smart Cities
7	Metaverse

Total Actors



Total Malware & Tools

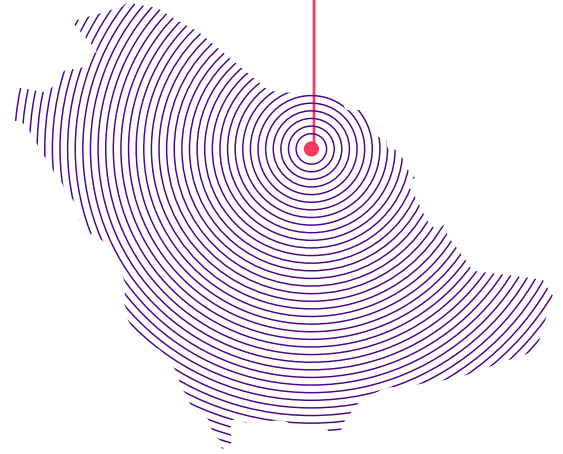
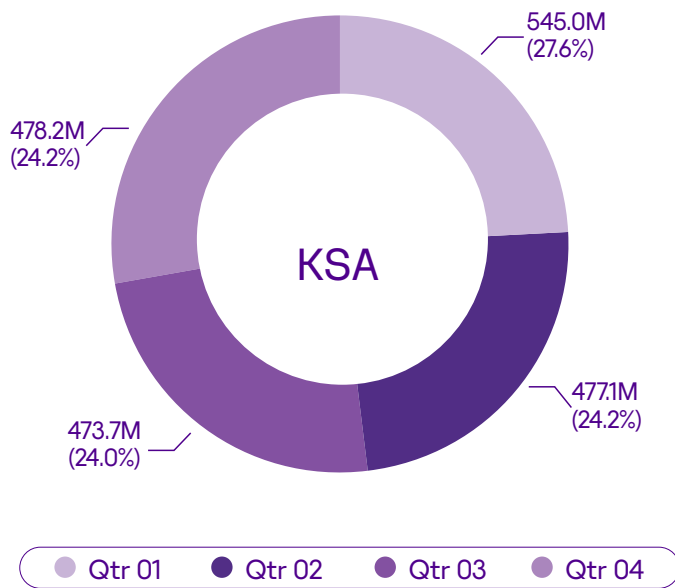


KSA Key Statistics

03

Malicious Activity Distribution by Country

Saudi Arabia



Exploit Attempts



Log4Shell
53 M



DoublePulsar
624 M



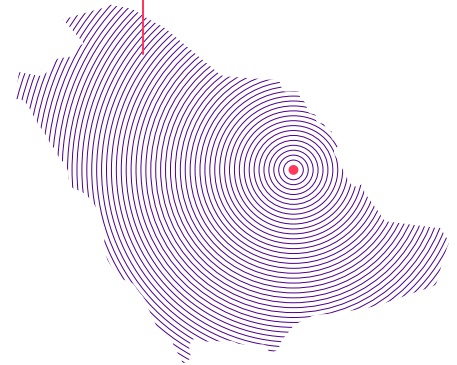
Cross Site Scripting
3 M



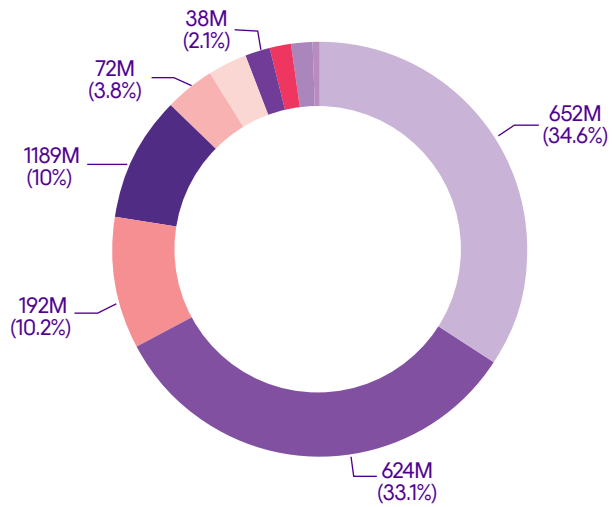
SUNBURTS
10 M



Exploit Techniques Detected
1.93bn

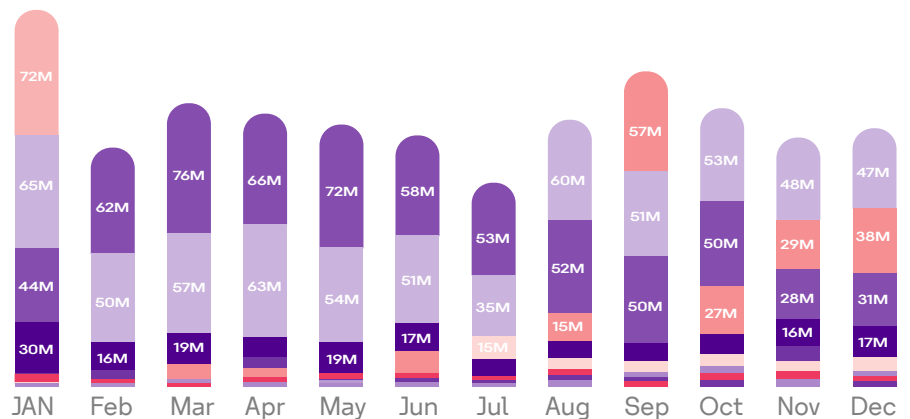


Exploit Attempts Distribution by Signature

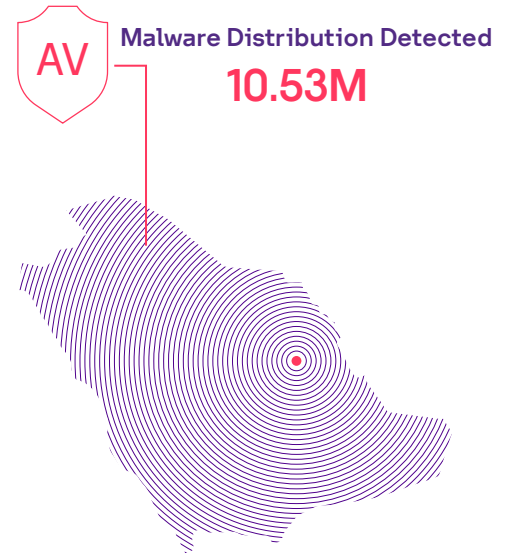
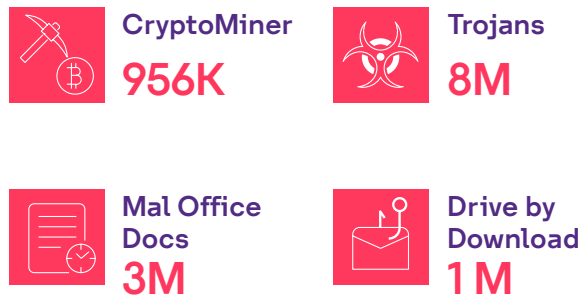


Behavioral Trend Analysis by Signature

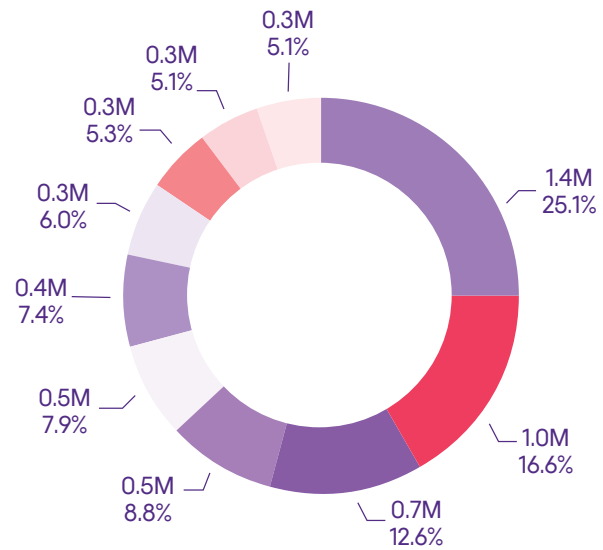
- Apache.Log4j.Error.Log.Remote.Code.Execution
- Backdoor.DoublePulsar
- HTTP.Suspicious.Headers.With.SpecialCharacters
- MS.SMB.Server.Trans.Peeking.Data.Information.Disclosure
- MS.Windows.HTTP.sys.UlpParseAcceptEncoding.Use.After...
- NTP.Zero.Transmit.Timestamp
- SolarWinds.SUNBURST.Backdoor
- SSL.Anonymous.Ciphers.Negotiation
- SSLV3.POODLE.Information.Disclosure
- Web.Server.Password.Files.Access



Malware Detections

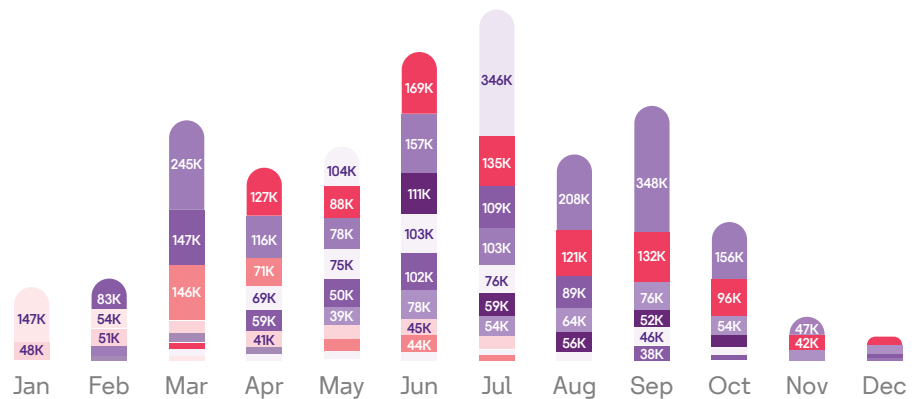


Malware Distribution by Signature

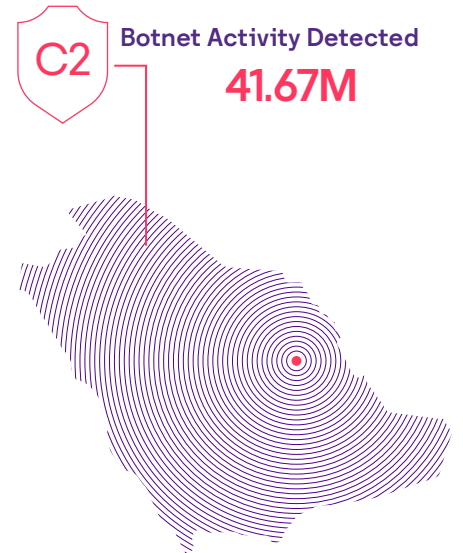
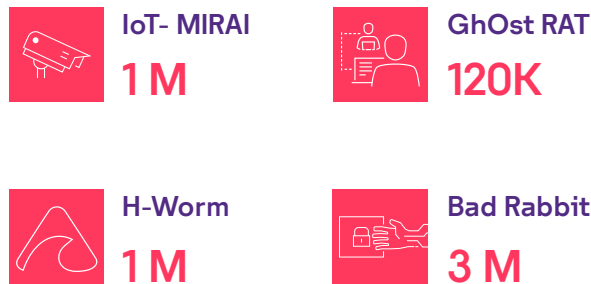


Behavioral Trend Analysis by Signature

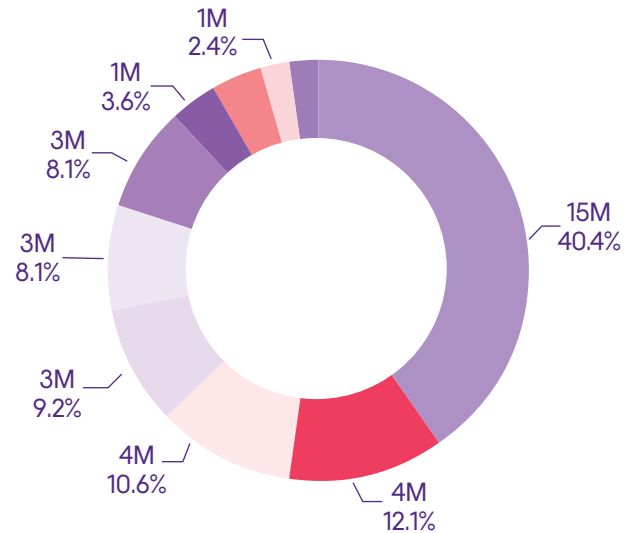
- LNK/Phishing.B166!tr
- MSExcel/Agent.DKF!tr.dldr
- MSExcel/Agent.DVP!tr.dldr
- MSExcel/CVE 2017_11882.F!exploit
- MSExcel/CVE 2018_0798.F!exploit
- MSIL/Injector.VLV!tr
- MSOffice/CVE_2017_11882.C!exploit
- VBS/Rbik.5BDA!tr
- W32/CVE 2017_11882.F!exploit
- 1XF/Coin Miner.Z!tr



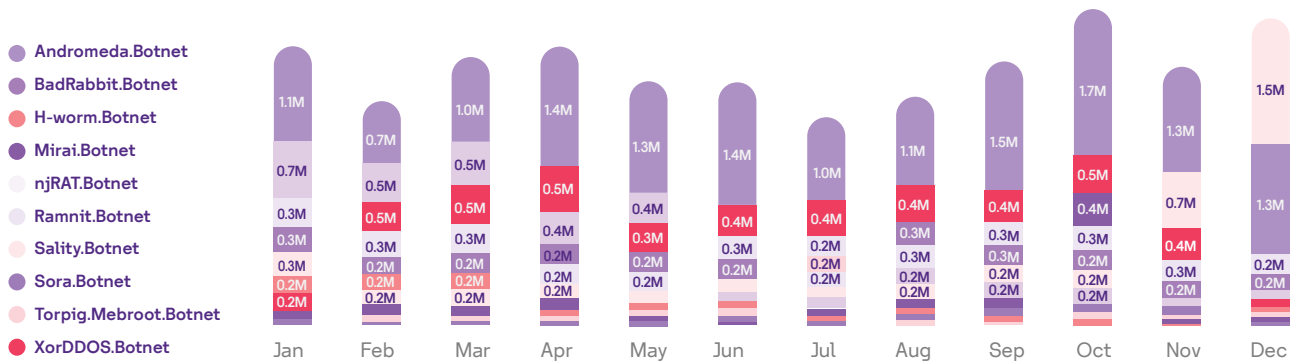
Botnet Activity



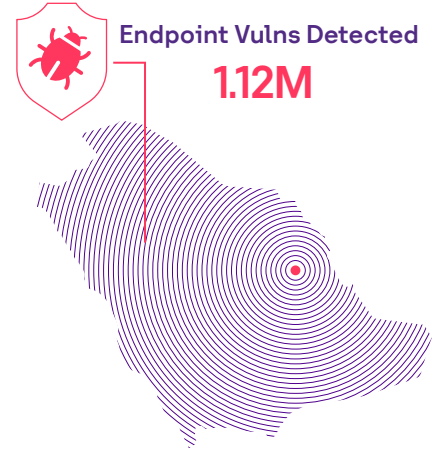
Botnet Activity Distribution by Signature



Behavioral Trend Analysis by Signature



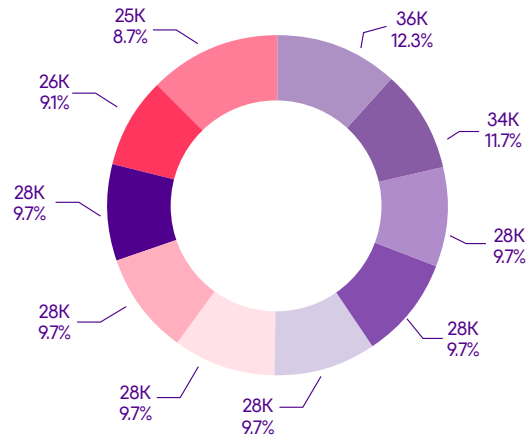
Endpoint Vulnerabilities



Oracle Vulns
675K

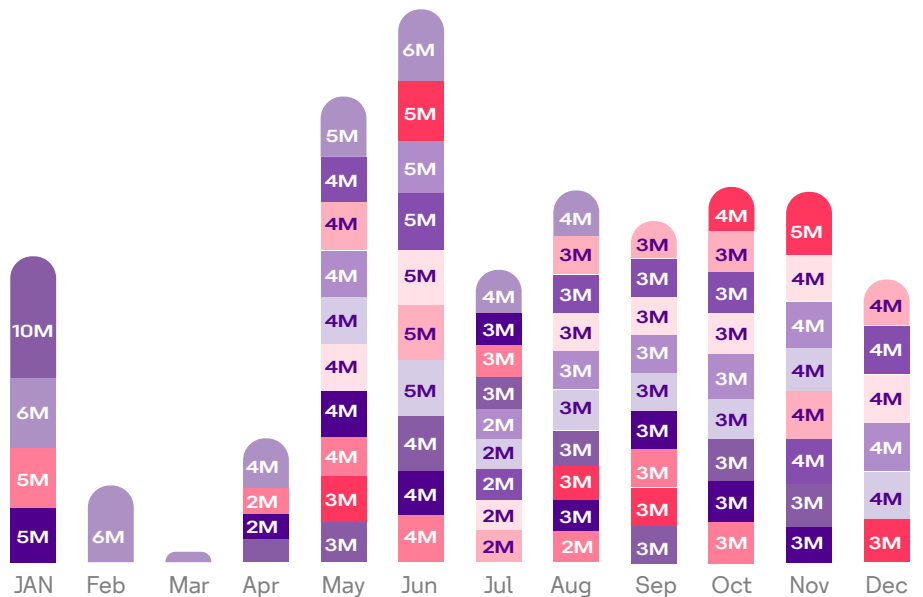
Log4Net
34K

Vulnerabilities Distribution by Signature

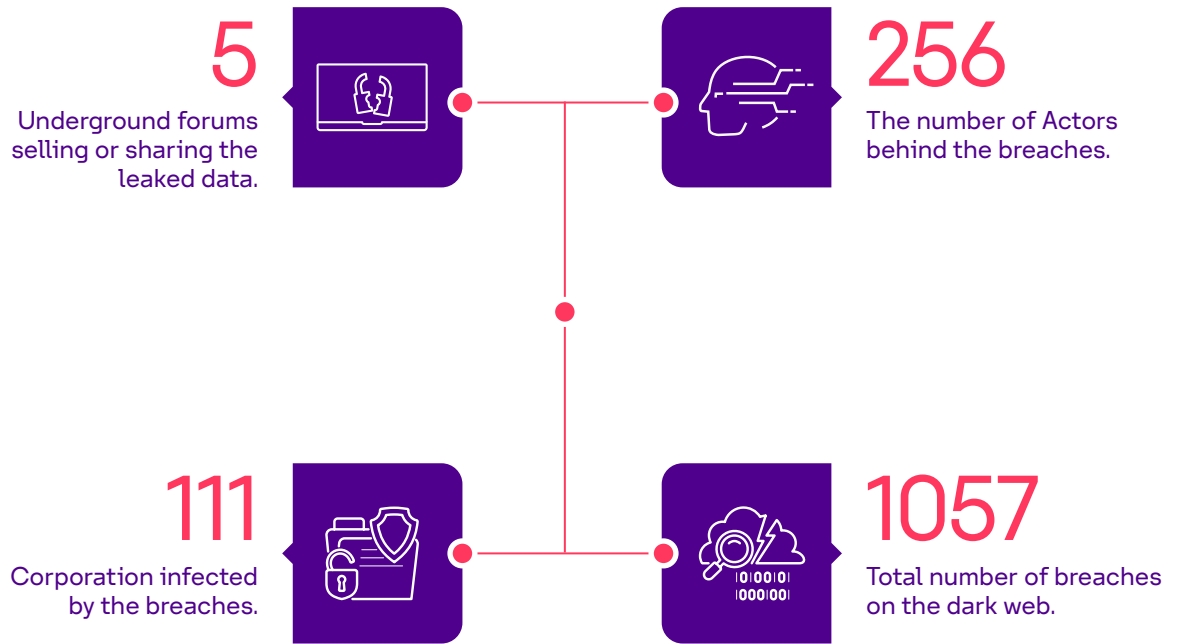


Behavioral Trend Analysis by Signature

- Denial of Service for ManageEngine AssetExplorer
- Security update available for Adobe Reader APSB17-11
- Security update available for Adobe Reader apsb17-24
- Security Vulnerability CVE-2018-1285 for lognet
- Security Vulnerability CVE-2022-21426 in Oracle JRE
- Security Vulnerability CVE-2022-21434 in Oracle JRE
- Security Vulnerability CVE-2022-21443 in Oracle JRE
- Security Vulnerability CVE-2022-21476 in Oracle JRE
- Security Vulnerability CVE-2022-21496 in Oracle JRE
- WARNING: Adobe Reader X is no longer supported by the



KSA Breaches On The Dark Web



sirar Battles

04



sirar Battles

DDoS

DDOS
ATTACK

Top DDoS Attacks In KSA In 2022

208 Gbps

Top 4 attacks by volume
The size of the largest DDoS attack mitigated 2022

182 Gbps

178 Gbps

171 Gbps

Total Prevented Downtimes

5,560 Hours

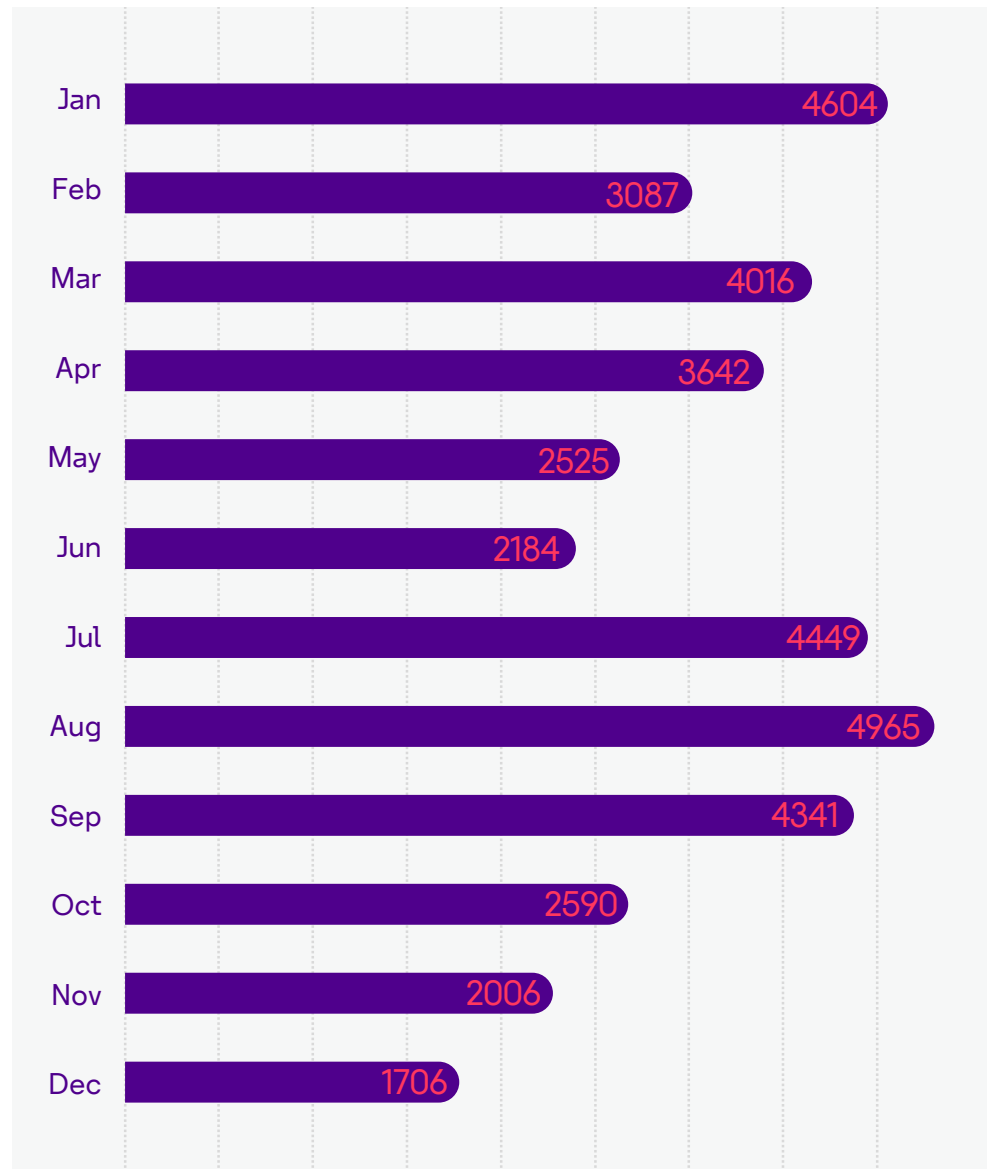
The period of time a DDoS attack could have taken services / network / applications down if not mitigated properly .

4 TB

Our local scrubbing unit (which is the largest in the region) can mitigate up to 8tpps on cloud level.

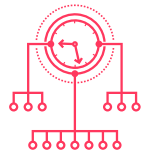


Top DDoS Attacks In 2022:



Number of
DDoS attacks in 2022

DDoS Attacks In Details



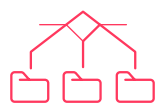
49% NTP
Amplification

DDoS attacks that exploit publicly- accessible Network Time Protocol (NTP) servers to overwhelm the targeted with UDP traffic.



18% DNS
Amplification

DDoS attacks that massively exploit open recursive DNS servers mainly for performing bandwidth consumption DDoS attacks.



20%
Others

Other vectors i.e., TCP SYN, CLDAP, Memcache.. etc.



13%
UDP

DDoS attacks that can be initiated when an attacker sends a large number of UDP packets to random ports on a remote host.

sirar Battles

VMDR

Vulnerability Management,
Detection and Response

Vulnerability Management, Detection And Response (VMDR)



In 2022

402K

CLOSED VULNERABILITIES

This represents A **172%** increase in closed vulnerabilities vs last year.

785K

VULNERABILITIES DETECTED

This Represents A **192%** increase in vulnerabilities detected vs last year.

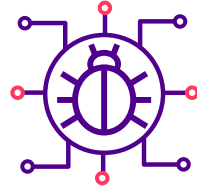
sirar by stc vulnerability management detection and response services gives your organization a continuous, always-on, assessment of your infrastructure Cybersecurity vulnerabilities and compliance posture.

sirar Battles

Email Security



Email Security



In 2022

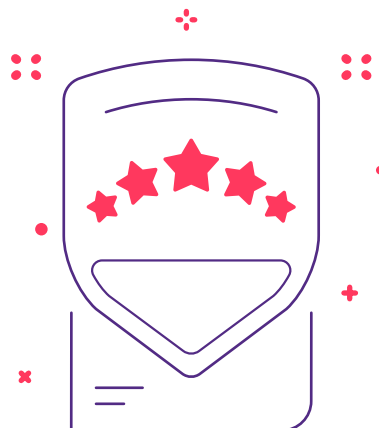
84.92%

PERCENTAGE OF CLEAN EMAILS

15.08%

PERCENTAGE OF BLOCKED EMAILS

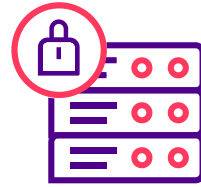
The email security is helping customers to prevent, detect and respond to the latest email-borne threats including spam, phishing, malware, zero-day threats, impersonation, and Business Email Compromise (BEC) attacks.



sirar Battles

Web Security

Web Security



In 2022

Total Number of **transactions** proceed in sirar:

251.7_M

Total Number of **threats** blocked in sirar:

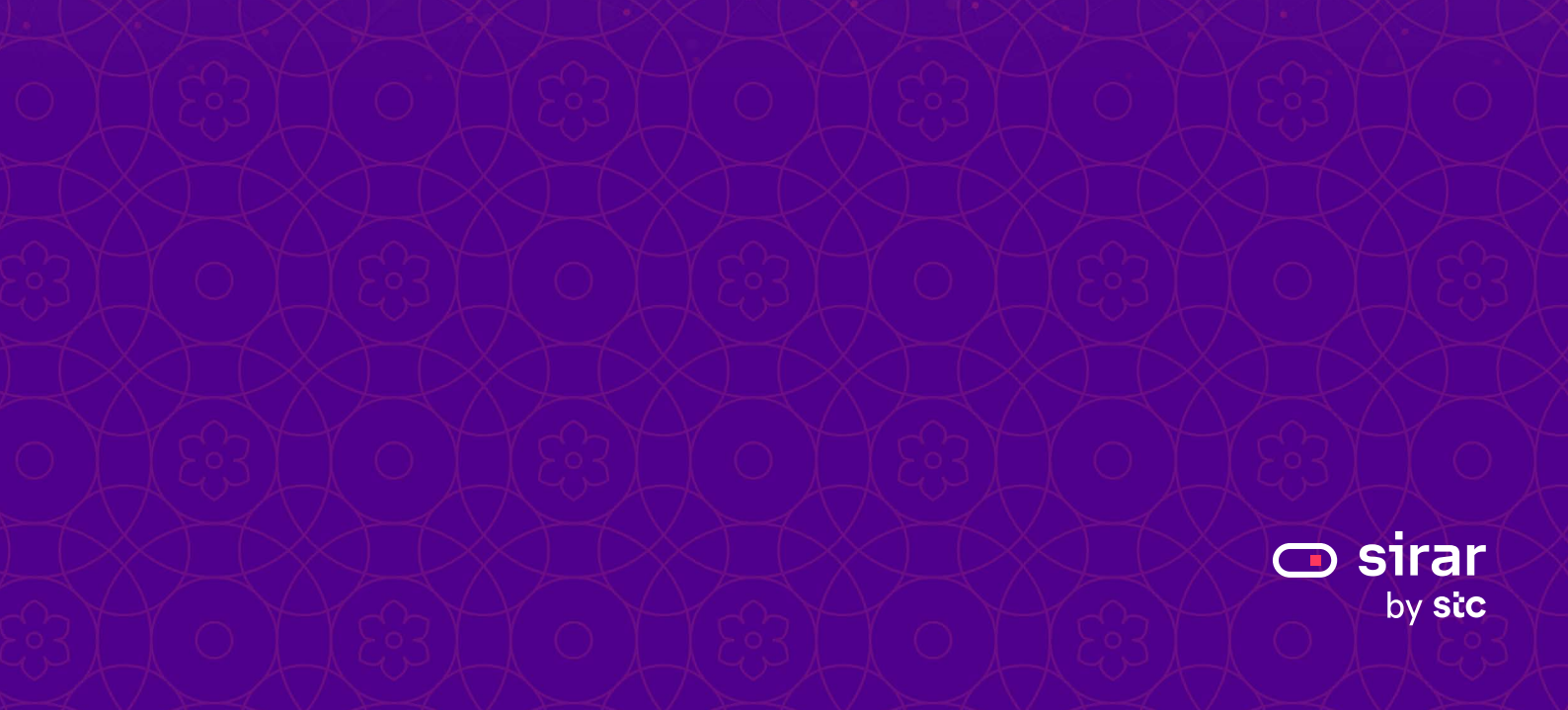
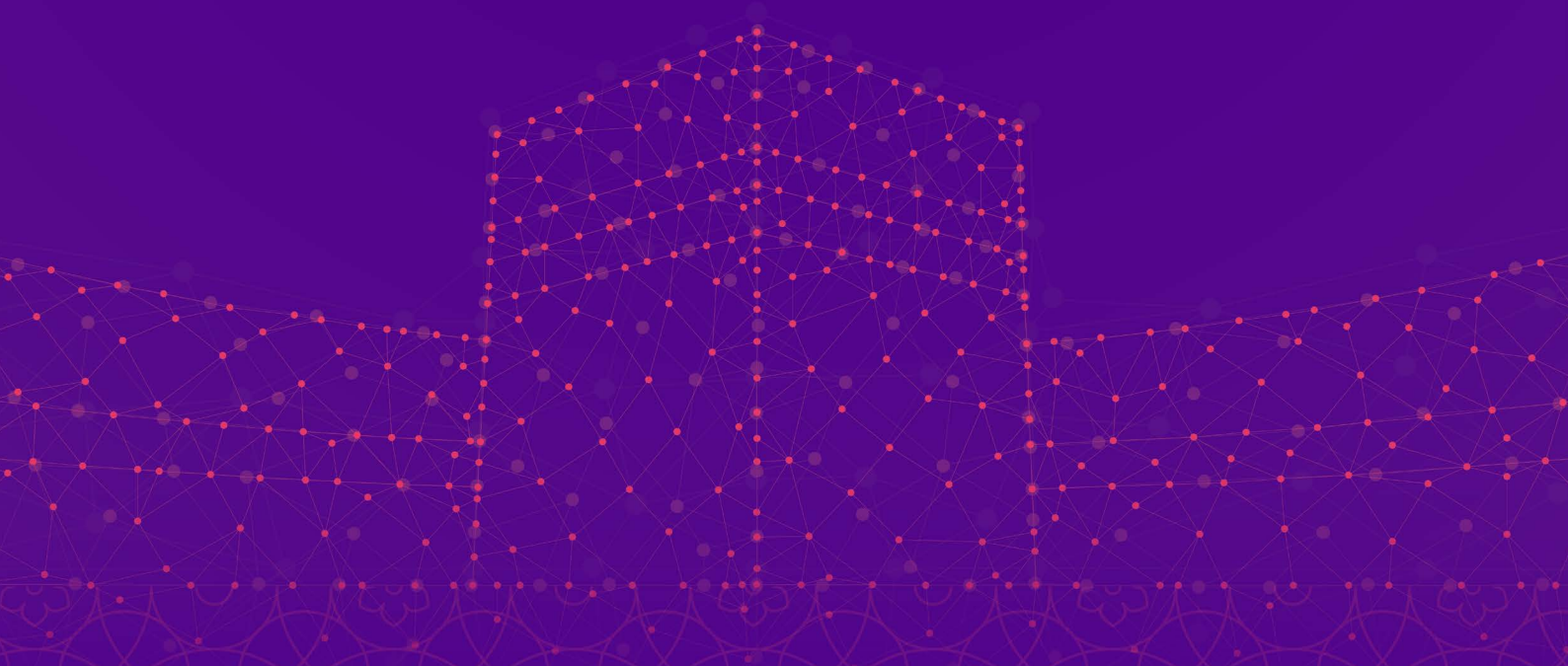
2.398_M

Total Number of **policy traffic** Volume:

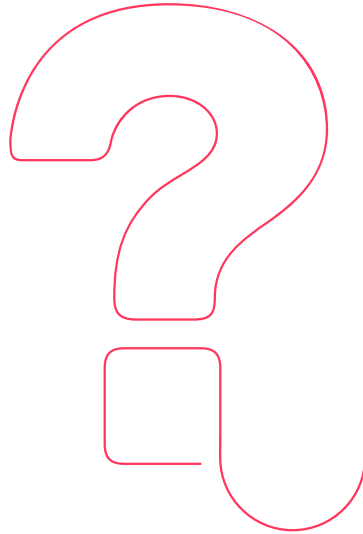
266.6_{GB}

sirar Battles

Hajj & National Day



Our Contributions To Keep Our Home And Country Safe

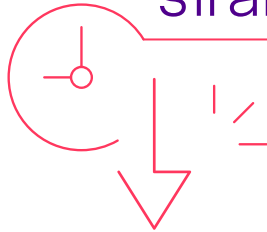


What Happened During Hajj?

1

sirar's contribution

sirar monitoring services



600 Million Inbound Malicious traffic



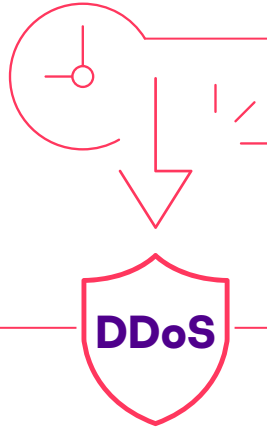
Blocked Malware: **39**

Our Contributions To Keep Our Home And Country Safe

2

sirar's contribution

Prevented Attacks
(29th of June – 11th of July)



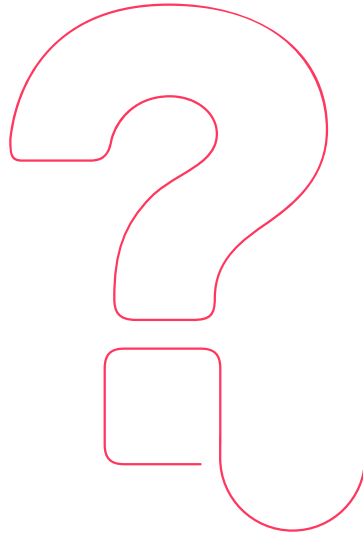
Total Attacks: **1266**

The largest mitigated **DDoS attack** **66** Gbps

Total
Prevented Downtime

167:12:38
Hour

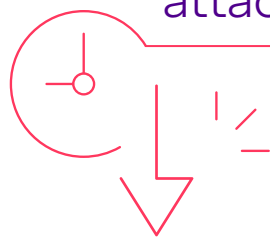
Our Contributions To Keep Our Home And Country Safe



What Happened During National Day?

sirar's contribution

During national day, sirar was able to protect the Kingdom against multiple attacks



Most targeted entities were government and critical infrastructure



74 phishing URL's addressed

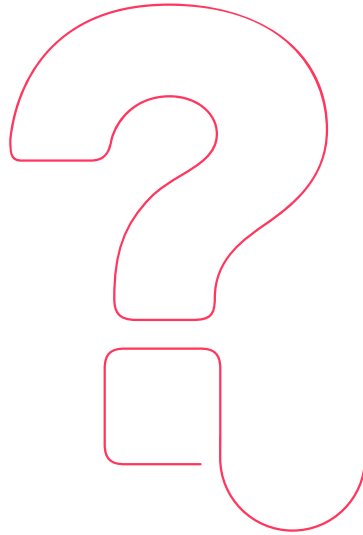


111 phishing domains addressed



10 ATP's and
9 Malwares Adressed

Our Contributions To Keep Our Home And Country Safe



What Happened During Jeddah summit?



sirar's contribution

sirar by stc was defending Jeddah Security and Development Summit from Cyber Attacks



+33

Number of blocked attacks



5.5 Gbps

Largest attack size

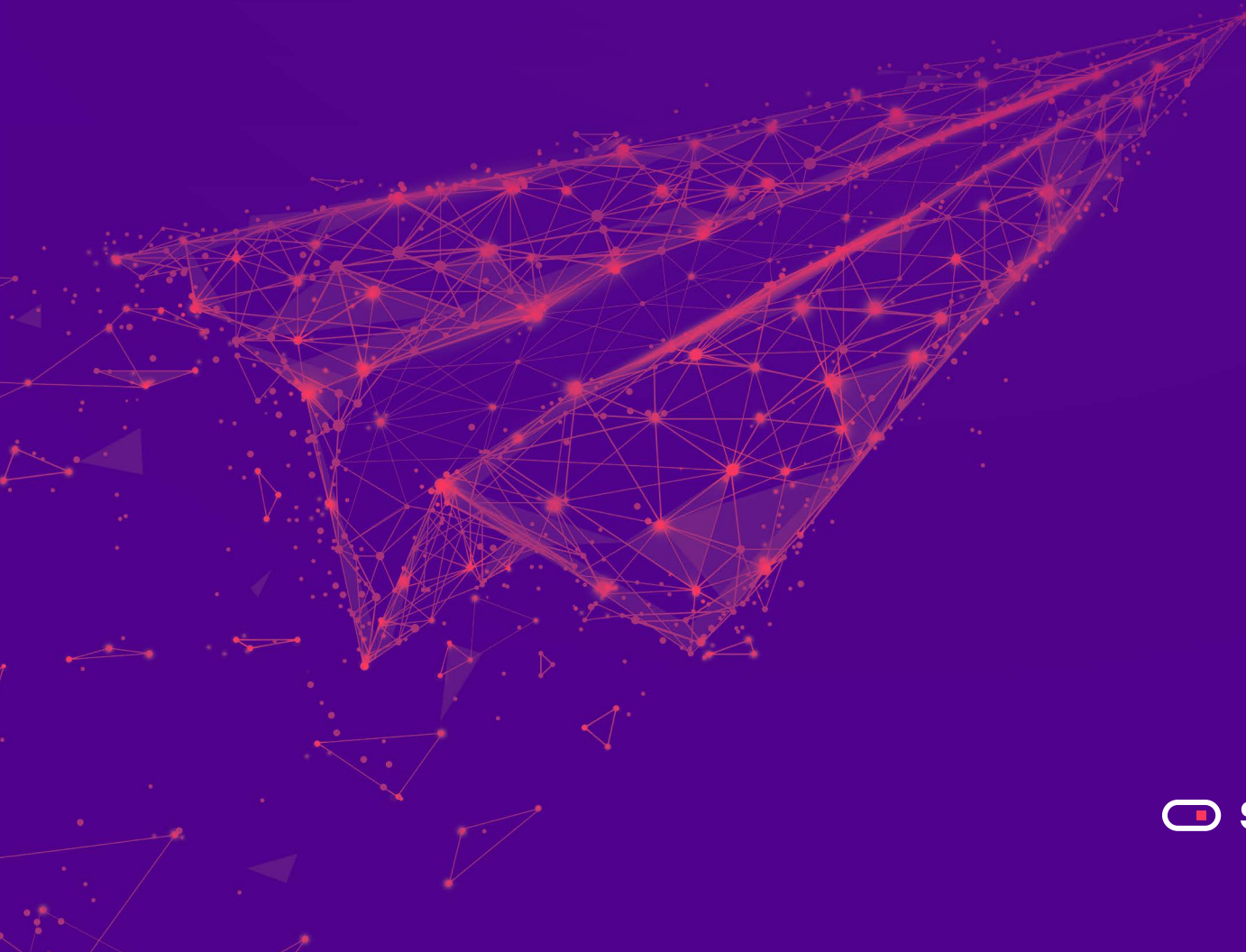


+8 Hours

Total prevented downtime

Key takeaways

04



Main Takeaways



Proactive Security , Data Backups and Relevant additional security controls are necessary to prevent **Ransomware**



Software Code security is essential to prevent **Supply Chain Attacks**



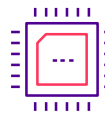
Effective Information Security Governance **Policies**



User Awareness is paramount to prevent infection through **Phishing**



Build your outbound countermeasures to detect data exfiltration with **Web Security** solution



Adoption of **AI / ML** in security to stop sophisticated Attacks



Security First kind of cultural shift should be instilled to prevent intrusions



Make the service available and stable with **Anti-DDoS Service**

sirar Glossary

05



sirar Glossary

Cybersecurity

Cybersecurity is a process through which people and organizations lower their risk of being attacked online. The main goal of cyber security is to prevent theft or damage to the electronic devices that we all use (which include computers, laptops, tablets, and smartphones) along with the services we use both at work and at home.

SOCaaS

The Security Operations Center performs 24/7 comprehensive monitoring for advanced cyber threats across client on-premise networks, cloud environments, SaaS applications, endpoints, and event logs enriched with threat intelligence. The SOC has senior analysts that conduct threat hunting in logs to improve detection capabilities and find anomalies that are not automatically detected in addition to threat-intelligence based detection. The SOC will be monitoring for the tactics and techniques based on leading Cybersecurity frameworks.

Ransomware Attack

is a type of malware actively used by cybercriminals to disrupt a victim's organization by encrypting an organization's important files into an unreadable form and demands a ransom payment to decrypt them.

DDoS

A distributed denial-of-service (DDoS) attack is a malicious attempt to disrupt the normal traffic of a targeted server, service or network by overwhelming the target or its surrounding infrastructure with a flood of Internet traffic.

MITRE ATT&CK

MITRE ATT&CK (Adversarial Tactics, Techniques and Common Knowledge) is a framework, set of data metrics, and assessment tool developed by MITRE Corporation to help organizations understand their security readiness and uncover vulnerabilities in their defenses.

Malware

Malware is intrusive software that is designed to damage and destroy computers and computer systems. Malware is a contraction for "malicious software." Examples of common malware includes viruses, worms, Trojan viruses, spyware, adware, and ransomware.

Phishing Attacks

Phishing attacks are the practice of sending fraudulent communications that appear to come from a reputable source. It is usually performed through email. The goal is to steal sensitive data like credit card , login information or to install malware on the victim's machine. Phishing is a common type of cyber attack that exploits the weakest link of cybersecurity, the human element.

Cybersecurity Architecture

A cyber security architecture is the foundation of an organization's defense against cyber threats, and ensures that all components of its IT infrastructure are protected.

sirar Glossary

Zero Trust Security

Zero Trust is a framework for securing infrastructure and data for today's modern digital transformation. It uniquely addresses the modern challenges of today's business, including securing remote workers, hybrid cloud environments, and ransomware threats. While many vendors have tried to create their own definitions of Zero Trust, there are a number of standards from recognized organizations that can help you align Zero Trust with your organization.

Dark web

The dark web is the hidden collective of internet sites only accessible by a specialized web browser. It is used for keeping internet activity anonymous and private, which can be helpful in both legal and illegal applications. While some use it to evade government censorship, it has also been known to be utilized for highly illegal activity including but not limited to selling victim credentials, credit card info or even providing cyber-attack services for a fee.

Network Time Protocol (NTP)

Is a protocol that helps the computers clock times to be synchronized in a network. This protocol is an application protocol that is responsible for the synchronization of hosts on a TCP/IP network. NTP was developed by David Mills in 1981 at the University of Delaware. This is required in a communication mechanism so that a seamless connection is present between the computers.

User Datagram Protocol (UDP)

Is a Transport Layer protocol. UDP is a part of the Internet Protocol suite, referred to as UDP/IP suite. Unlike TCP, it is an unreliable and connectionless protocol. So, there is no need to establish a connection prior to data transfer. The UDP helps to establish low-latency and loss-tolerating connections establish over the network. The UDP enables process to process communication.

DNS Servers

Domain Name System (DNS) Server: is when users type domain names into the URL bar in their browser, DNS servers are responsible for translating those domain names to numeric IP addresses, leading them to the correct website.

Vulnerability Management, Detection & Response (VMDR)

Identify Your Cybersecurity Vulnerabilities Proactively.

Cybersecurity is changing constantly, and new threats are emerging daily.

Vulnerability management detection and response services gives your organization a continuous, always-on, assessment of your infrastructure Cybersecurity vulnerabilities and compliance posture.

A comprehensive visibility across your entire IT assets, wherever they reside, with automated built-in threat prioritization, patching, and other response capabilities.

Log4Net

Log4Shell, an internet vulnerability that affects millions of computers, involves an obscure but nearly ubiquitous piece of software, Log4j. The software is used to record all manner of activities that go on under the hood in a wide range of computer systems.

sirar Glossary

Scrubbing

is a common DDoS mitigation technique. The live traffic destined for a particular IP address range is re-directed where any malicious traffic is “scrubbed” or cleaned and the clean traffic is then forwarded to delivery. Keeping you online without losing service.

Brute force attack

A brute force attack is a method that uses trial and error to crack passwords, login credentials, and encryption keys. It is a simple yet reliable tactic for gaining unauthorized access to individual accounts and organizations’ systems and networks. The Attacker tries multiple usernames and passwords, often using a computer to test a wide range of combinations, until they find the correct login information.

Log4Shell

Apache Log4j 2, a well-known Java library for logging error messages in applications, has a software vulnerability called Log4Shell. If a device is using a specific version of Log4j 2, the vulnerability, identified as CVE-2021-44228, allows a remote attacker to take control of the device over the internet.

DoublePulsar

DOUBLEPULSAR is a loading dock for extra malware whose purpose is to provide a covert channel by which to load other malware or executables. All the SMB and RDP exploits in FuzzBunch exploitation framework uses DoublePulsar as the primary payload.

Cryptominer

Cryptomining malware, or 'cryptojacking,' is a malware attack that co-opts the target's computing resources in order to mine cryptocurrencies like bitcoin. This malware uses a systems CPU and sometimes GPU to perform complex mathematical calculations that result in long alphanumeric strings called hashes.

Trojan

Is malware that appears to be legitimate software disguised as native operating system programs or harmless files like free downloads. Trojans are installed through social engineering techniques such as phishing or bait websites.

Bad Rabbit

Is a strain of ransomware that first appeared in 2017 and is a suspected variant of Petya. Like other strains of ransomware, Bad Rabbit virus infections lock up victims’ computers, servers, or files preventing them from regaining access until a ransom — usually in Bitcoin — is paid.

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06



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