EUROPEAN UNION AGENCY
FOR CYBERSECURITY

ENISA THREAT LANDSCAPE: THREATS TO RAILWAY

Ifigeneia Lella
ENISA Threat Landscape Team

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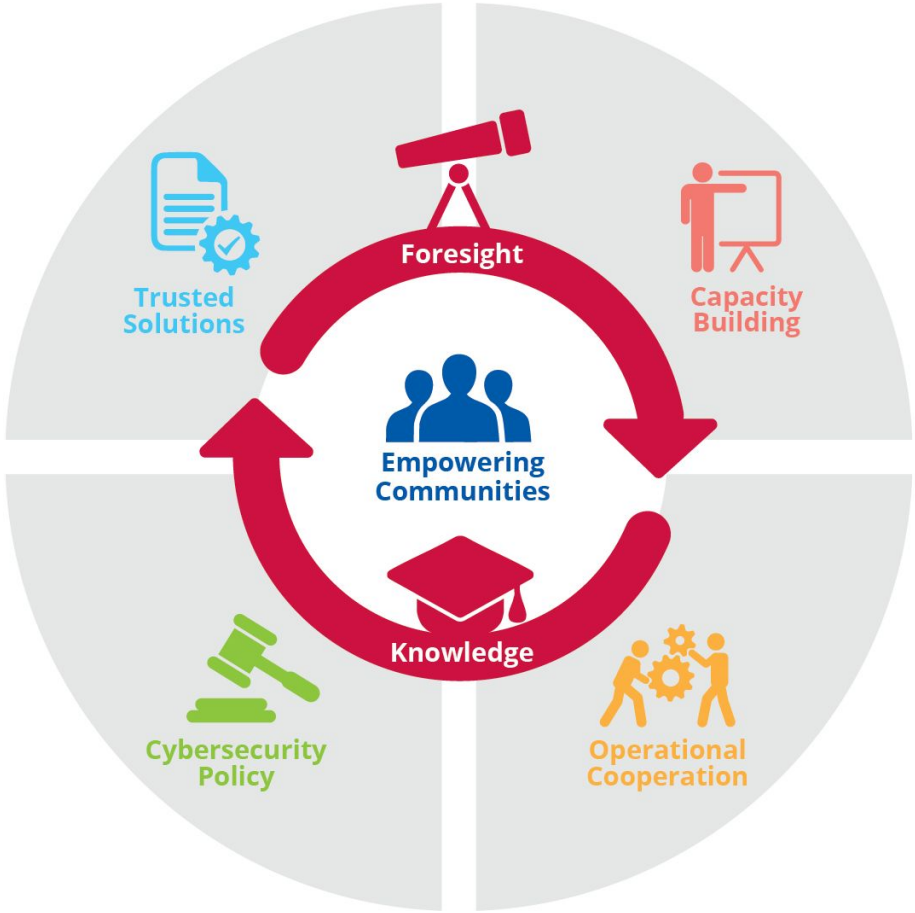
ROLE OF ENISA – WHO WE ARE

EUROPEAN UNION AGENCY FOR CYBERSECURITY

A TRUSTED AND CYBER SECURE EUROPE

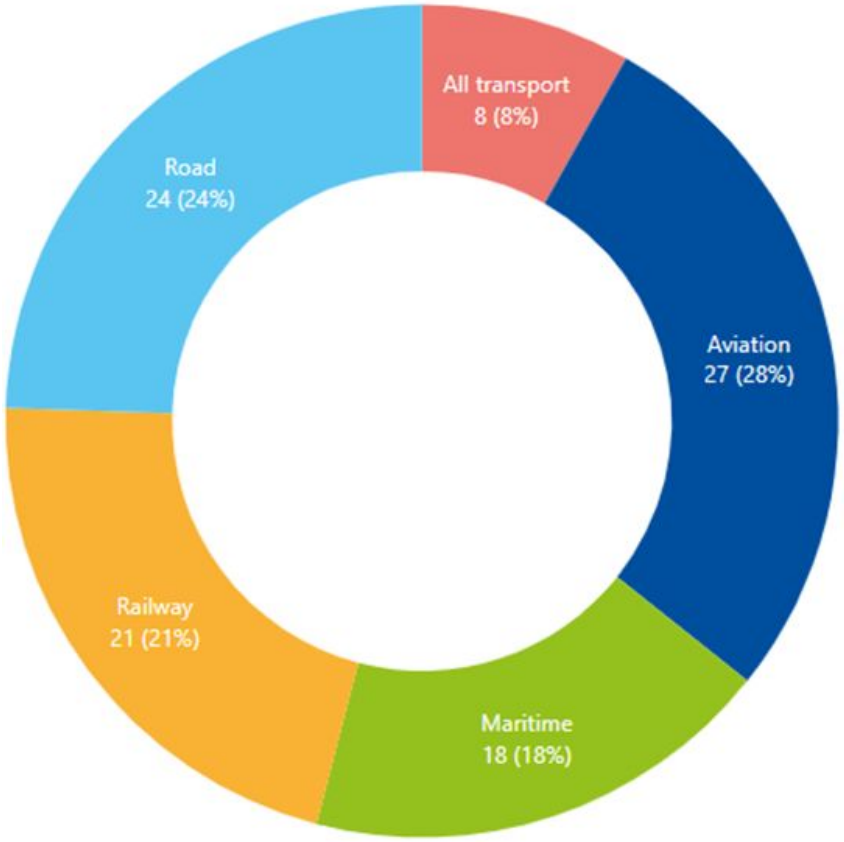
Our mission is to achieve **a high common level of cybersecurity** across the Union in cooperation with the wider community



ENISA THREAT LANDSCAPE TRADITION

It's reflecting on the PAST to prepare for the FUTURE

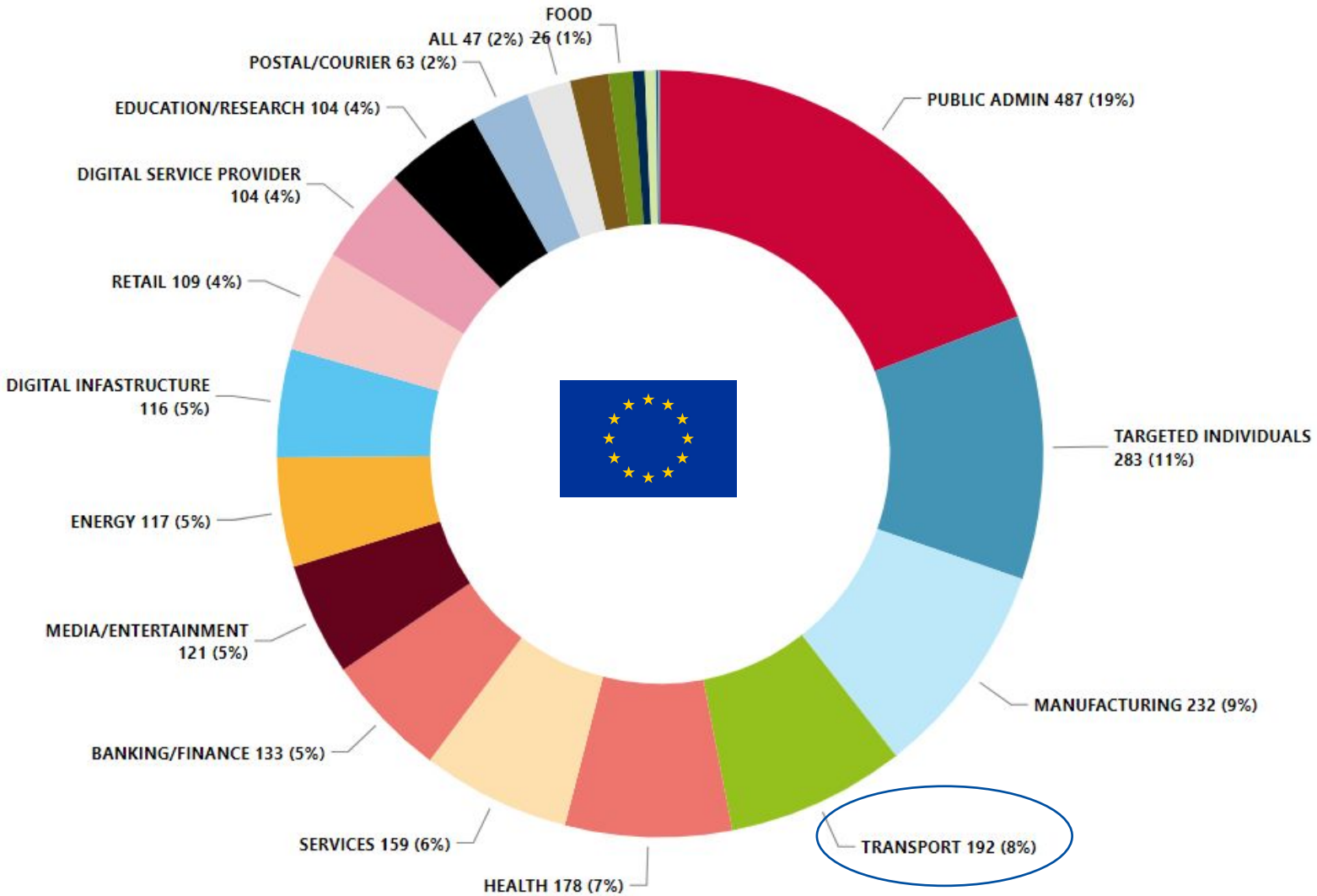
- **January 2021 to October 2022**
- **Analysis of the incidents concluded in December 2022**
- **98 publicly reported incidents**
- **Railway: 21 incidents over a period of 22 months.**



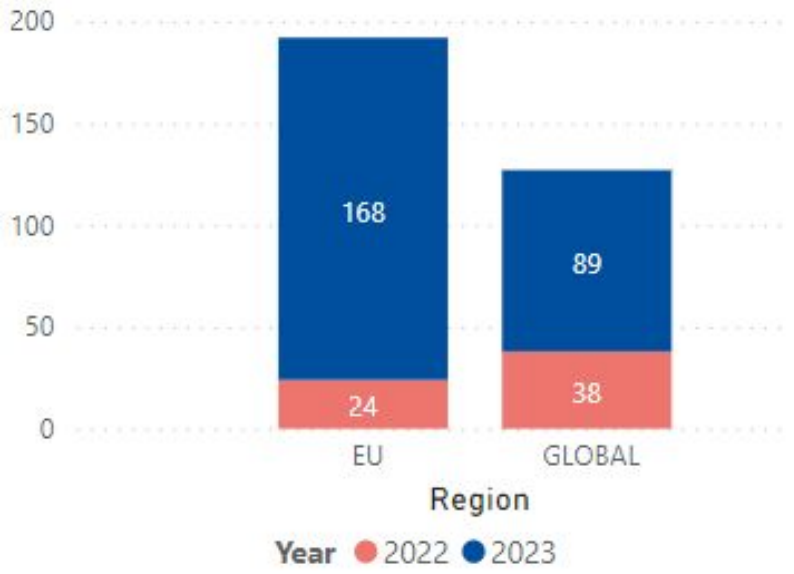
https://www.enisa.europa.eu/publications/enisa-transport-threat-landscape

TRENDS IN RAIL

2023 THREAT LANDSCAPE

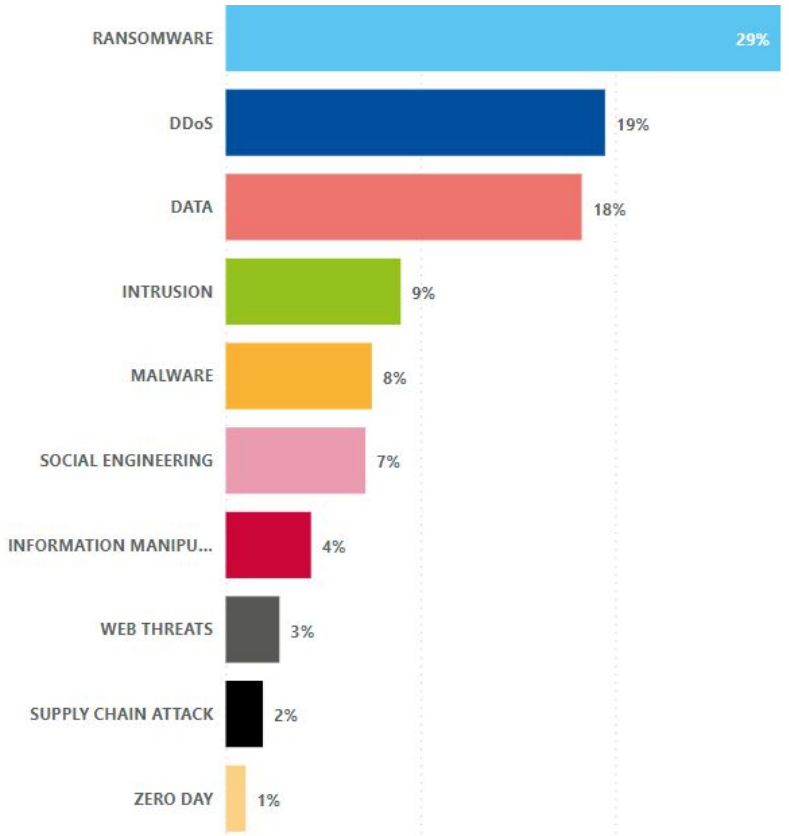


- **July 2022 to June 2023**
- **2580 incidents**, with an additional 220 incidents affecting more than one EU MS
- **192 incidents** affecting the transport sector in the EU

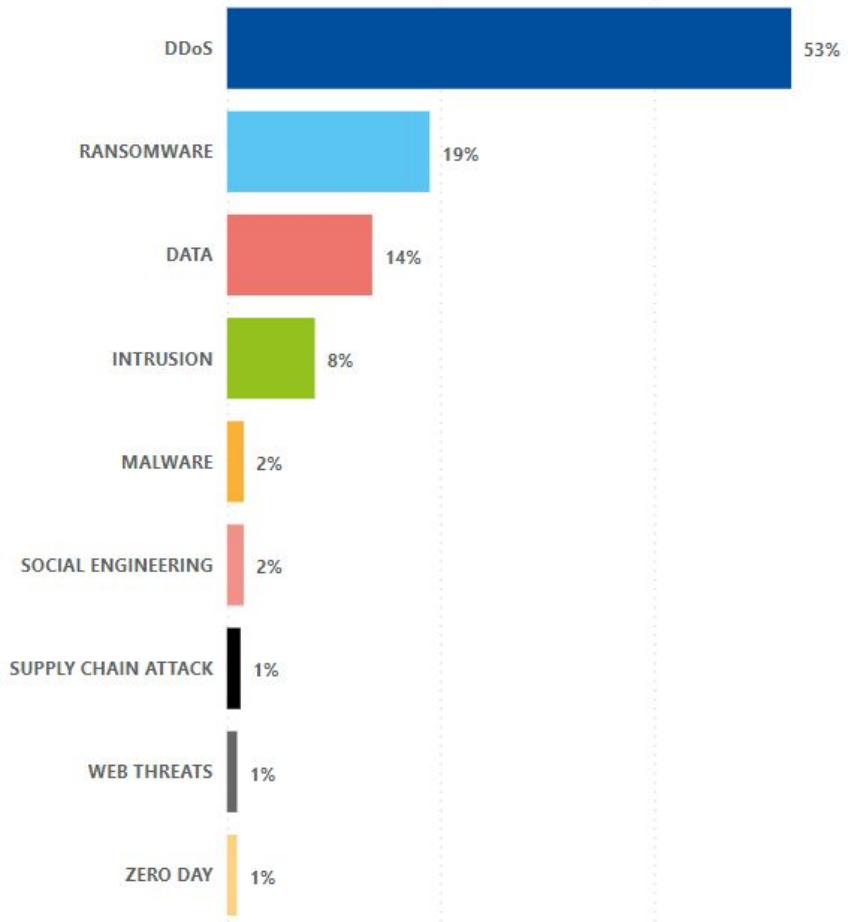


PRIME THREATS IN THE EU

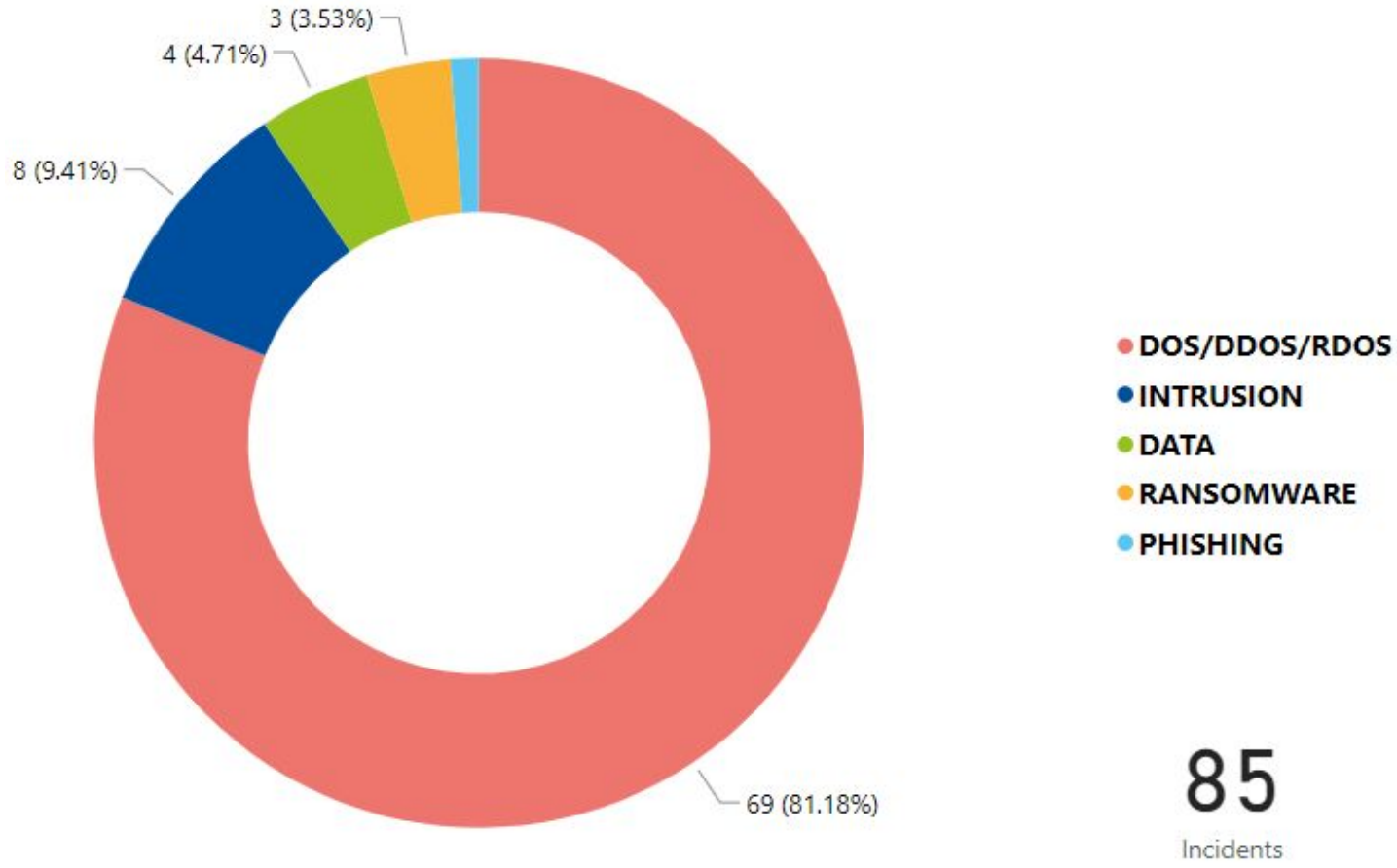
Overall



Transport



IN RAIL : THREATS 2023



DENIAL OF SERVICE

Increased hacktivist activity of groups (NoName, KILLNET)

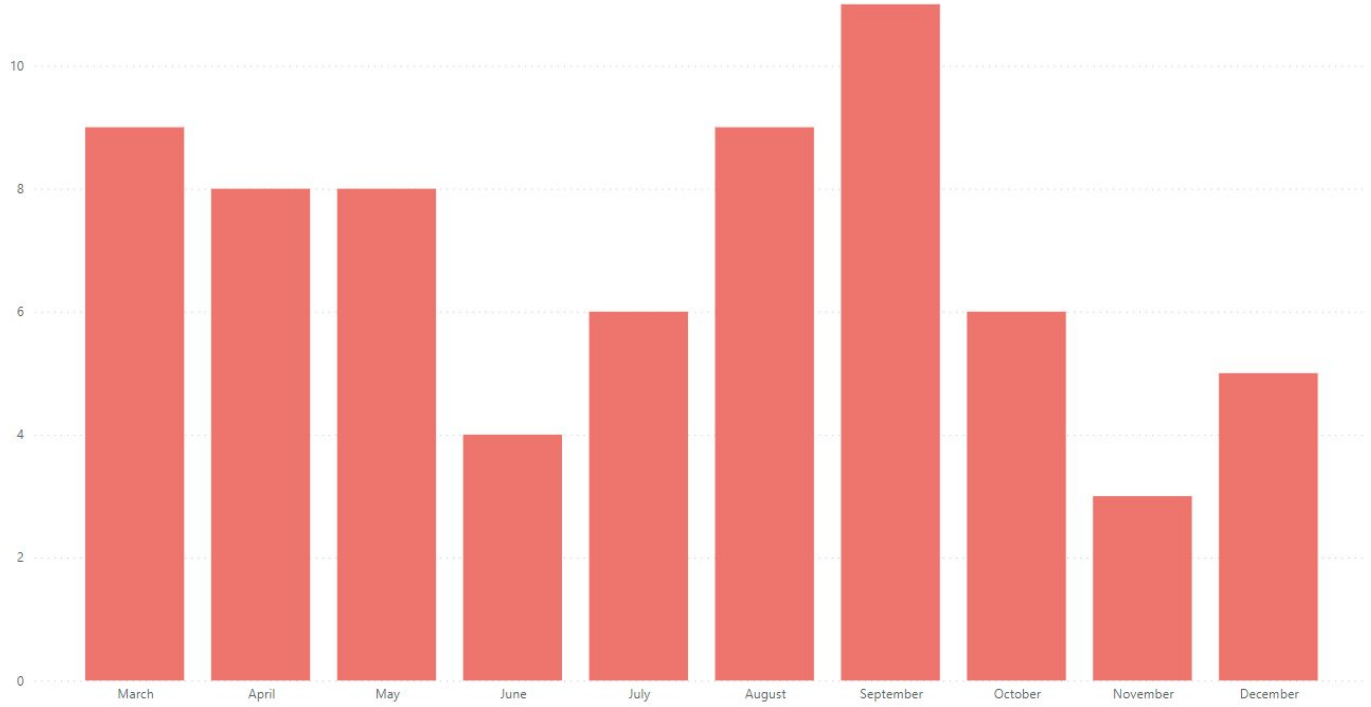
Server-class botnets, DDoS-for-Hire services and DDoS tools

IoT devices used as tools

DDoS attacks to distract from other attacks e.g. data breaches or account takeovers.

Extortion-based DDoS attack

Impact of vulnerabilities in cloud infrastructure



RANSOMWARE

Ransomware remains a significant threat

Ransomware groups: opportunistic, relatively indiscriminate in their targeting.

Ransomware attacks: not only monetary motivations – use for hacktivism due to effectiveness, impact and media attention.

Ransomware groups will likely target and disrupt OT operations.

2023 updates

Use of zero day vulnerabilities.

March 2023 broke ransomware attack records.

URL delivered ransomware instead of e-mail.

Fewer victims paid in 2022 but not the case for 2023 - shifting from encryption to data extortion.

DATA RELATED THREATS

Trends in transport

Notable data thefts.

Customer, personnel and medical records are usually stolen.

Customer data are of most value.

First publicly known case of a double-extortion ransomware attack against a US freight rail operator.

2023 updates

- Increase in 2023
- Lack of transparency in data breach notices
- A shift towards storing sensitive data in the cloud has been reported, with a majority of organizations indicating they now store between 21% and 60% of their data in cloud services.
- Cloud misconfigurations have been identified as a primary factor
- Instances of data breaches involving AI chatbots have been reported, compromising user payment information.

SUPPLY CHAIN ATTACKS

2023 updates

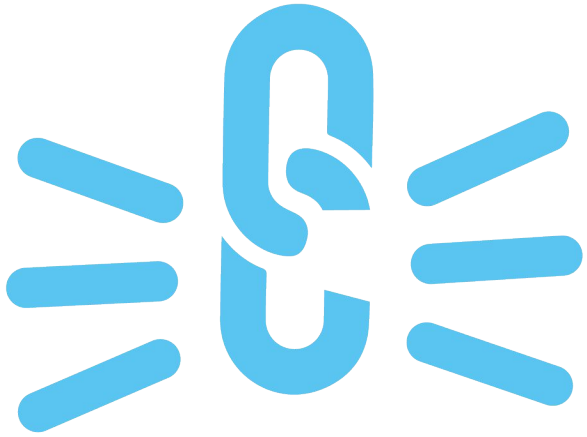
Rise in Russian cyber attacks on Ukrainian supply chains. Prestige ransomware used on transportation.

Targeting Identity Providers, MSPs and IT Suppliers

Use of Employees as Entry Points via continued targeting of employees with access privileges, personal device attacks, and social engineering, such as MFA fatigue attacks, call back phishing or QR phishing.

Notable case

Service disruptions to an EU train operator (October 2022) due to an attack on one of its ICT service providers after an alleged DDoS attack. The incident reportedly affected the accessibility of a key safety-critical IT system, thereby disrupting operations for several hours that day.



IS OPERATIONAL TECHNOLOGY (OT) SECURE?

- **IT systems are mainly targeted.** No reliable information on a cyber-attack affecting safety in the EU.
- **Disruptions due to the unavailability of IT services**: passenger services, ticketing systems, mobile application, display boards, etc.
- **OT systems and networks were affected**: when entire networks were disrupted or when safety-critical IT systems were unavailable.

SUMMARY

Threat actors use whatever is more relevant and evolve and adapt to the change of technologies.

Good practices and coordinated actions are important to reach a common high level of cybersecurity.

Cyber attacks has increased compared to last year but we still lack the visibility.

Information Sharing is caring…

It helps potential victims , it helps researchers. It also helps cybersecurity authorities and ENISA.

THANK YOU FOR YOUR ATTENTION

Agamemnonos 14, Chalandri 15231
Attiki, Greece

ENISA Threat Landscape:
Transport Sector

etl@enisa.europa.eu

www.enisa.europa.eu