



# Cybersecurity in the Software Supply Chain

Presentation by Mirko Ross, asvin GmbH, Germany



CYBERSECURITY™  
MADE IN EUROPE

# Software Supply Chain Under Fire

Attacks on Software Supply Chains raised 650% in 2021

Log4J time / HR consuming risk mitigation (up to 8 Weeks)

Regulators increasing requirements to implement security



# Dealing with Software Supply Chain Security Risks Today....



# Maintaining the IoT is a Mess

A world map is shown in a light gray tone. Overlaid on the map are numerous semi-transparent circles in shades of blue and red. The size of each circle varies, with larger circles indicating a higher density of malicious bots. The circles are scattered across the globe, with significant concentrations in North America, Europe, and parts of Asia.

**1.600.000+ Malicious Bots**  
Unsecure IoT Devices are captured by Hackers



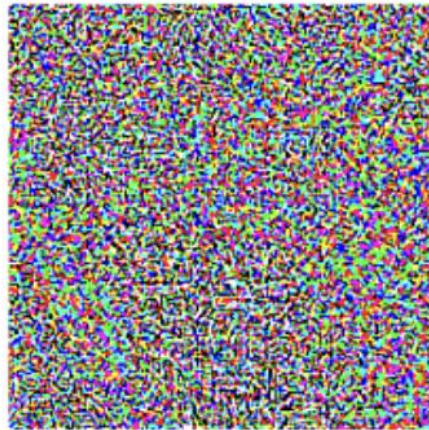
The Reality....



# Next Level: Attack AI and Data Supply Chains



+ .007 ×



=



$x$

“panda”

57.7% confidence

$\text{sign}(\nabla_x J(\theta, x, y))$

“nematode”

8.2% confidence

$x + \epsilon \text{sign}(\nabla_x J(\theta, x, y))$

“gibbon”

99.3 % confidence

**Input data (image information with pixels) contains too many parameters and thus too many decision options for classification)**

<https://github.com/bethgelab/foolbox>

GOODFELLOW 2014: <https://arxiv.org/abs/1412.6572>

# IoT manufactures operators forced towards Security by Regulators



**Executive Order National Cybersecurity (2021)**  
 Software Bill of Materials, IoT Security Implementation



**EU Cybersecurity Act (2019), AI ACT, DATA ACT,  
 RESSILLIENCE ACT (in preparation)**



**UN ECE (2021)**  
 WP. 29 Cybersecurity for connected Vehicles



# Challenge: Discover Critical Assets & Suppliers that Really Matter



Advanced Graph Analytics to identify software supply chain risks and improve risk mitigation



**asvin provides** software supply chain risk analytics based on novel MIT technology:

- **Identify software components** exposed to high cybersecurity risks due supplier relationships
- **Pick suppliers being high valuable targets** for supply chain attacks
- **Supply Chain Attack path detection** for risk mitigation



# Team



**Mirko Ross (CEO)**  
Cyber Security & IoT Expert  
for EU and ENISA



**Sven Rahlfs (COO)**  
20+y experience  
Business development



**Rohit Bohara (CTO)**  
7+y embedded &  
Blockchain development



**Rob van Kranenburg (CIO)**  
20+y IoT experience  
Founder IoT Council



**Raphael Yahalm (CSSO)**  
MIT Boston  
Supply Chain Security Expert

## Our Advisors



**Dr. Elmar Degenhart**  
Former Chairman  
CONTINENTAL AG



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Former Chairman  
DAIMLER Financial Service AG



**Christian Senger**  
Commercial Vehicles  
Volkswagen AG



**Clarissa Haller**  
Senior Communication Advisor  
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**Give Supply Chain Attackers not a Chance.**





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