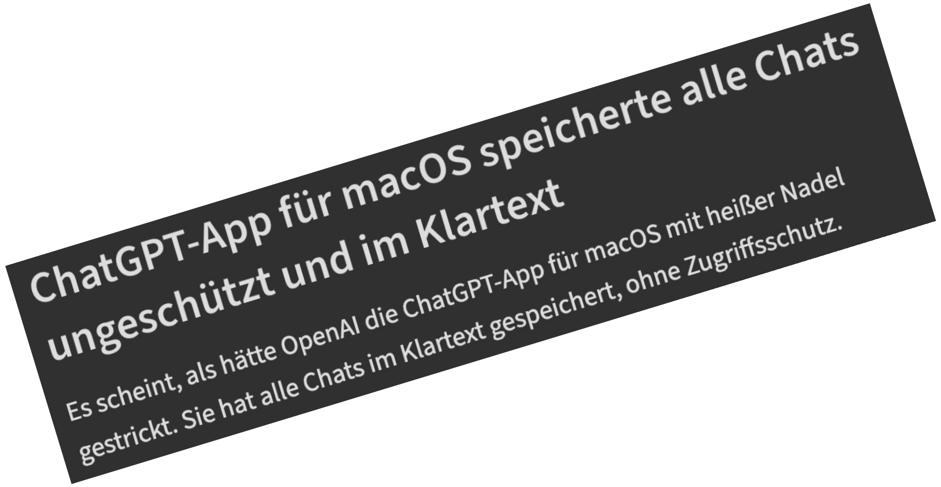
Hochschule
München
University of
Applied Sciences

Fakultät für Informatik und Mathematik

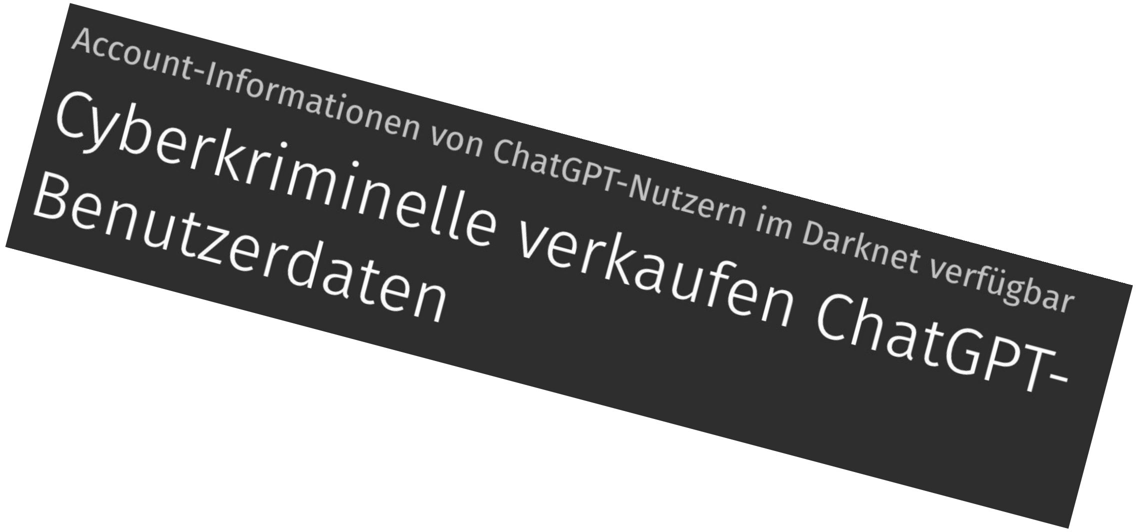
KI – Chance und Gefahren für die Informationssicherheit

2024-11-27 / Prof. Dr.-Ing. Thomas Schreck



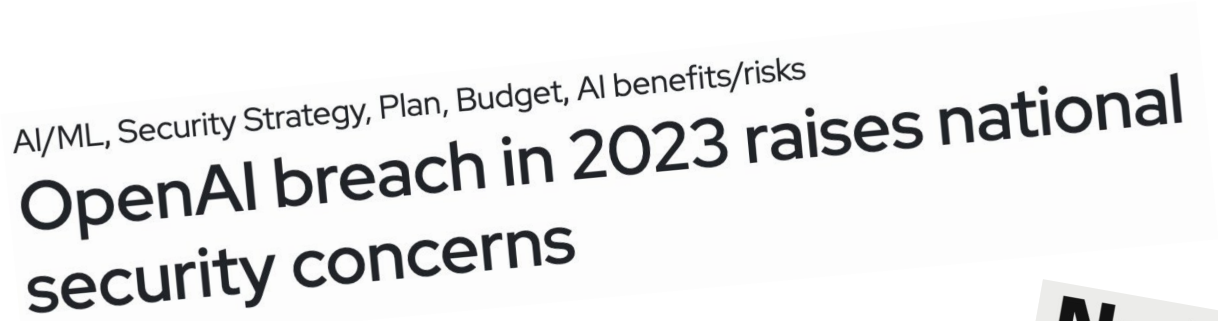
ChatGPT-App für macOS speicherte alle Chats ungeschützt und im Klartext

Es scheint, als hätte OpenAI die ChatGPT-App für macOS mit heißer Nadel gestrickt. Sie hat alle Chats im Klartext gespeichert, ohne Zugriffsschutz.



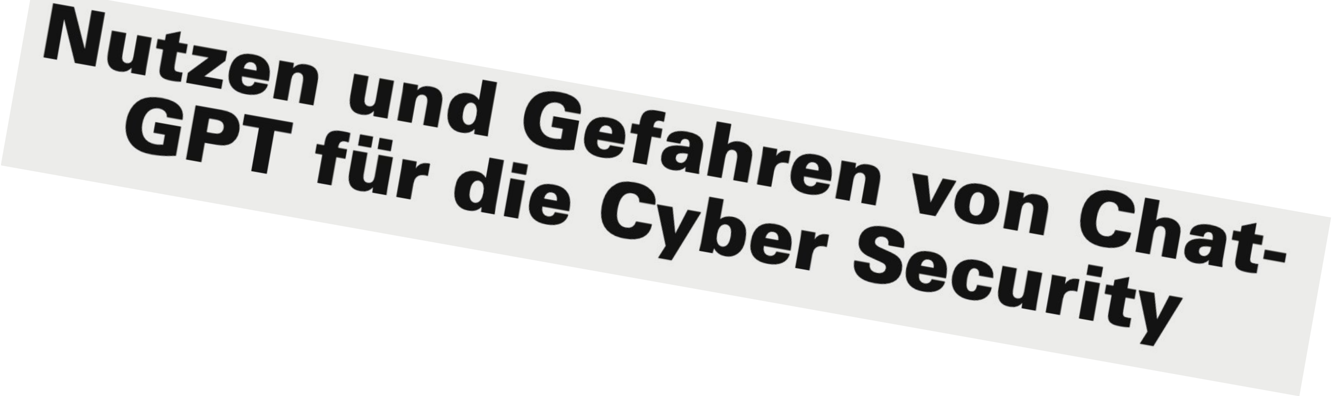
Account-Informationen von ChatGPT-Nutzern im Darknet verfügbar

Cyberkriminelle verkaufen ChatGPT-Benutzerdaten

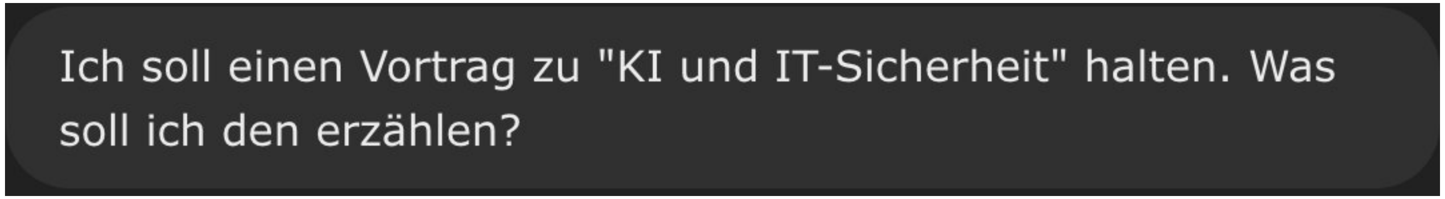


AI/ML, Security Strategy, Plan, Budget, AI benefits/risks

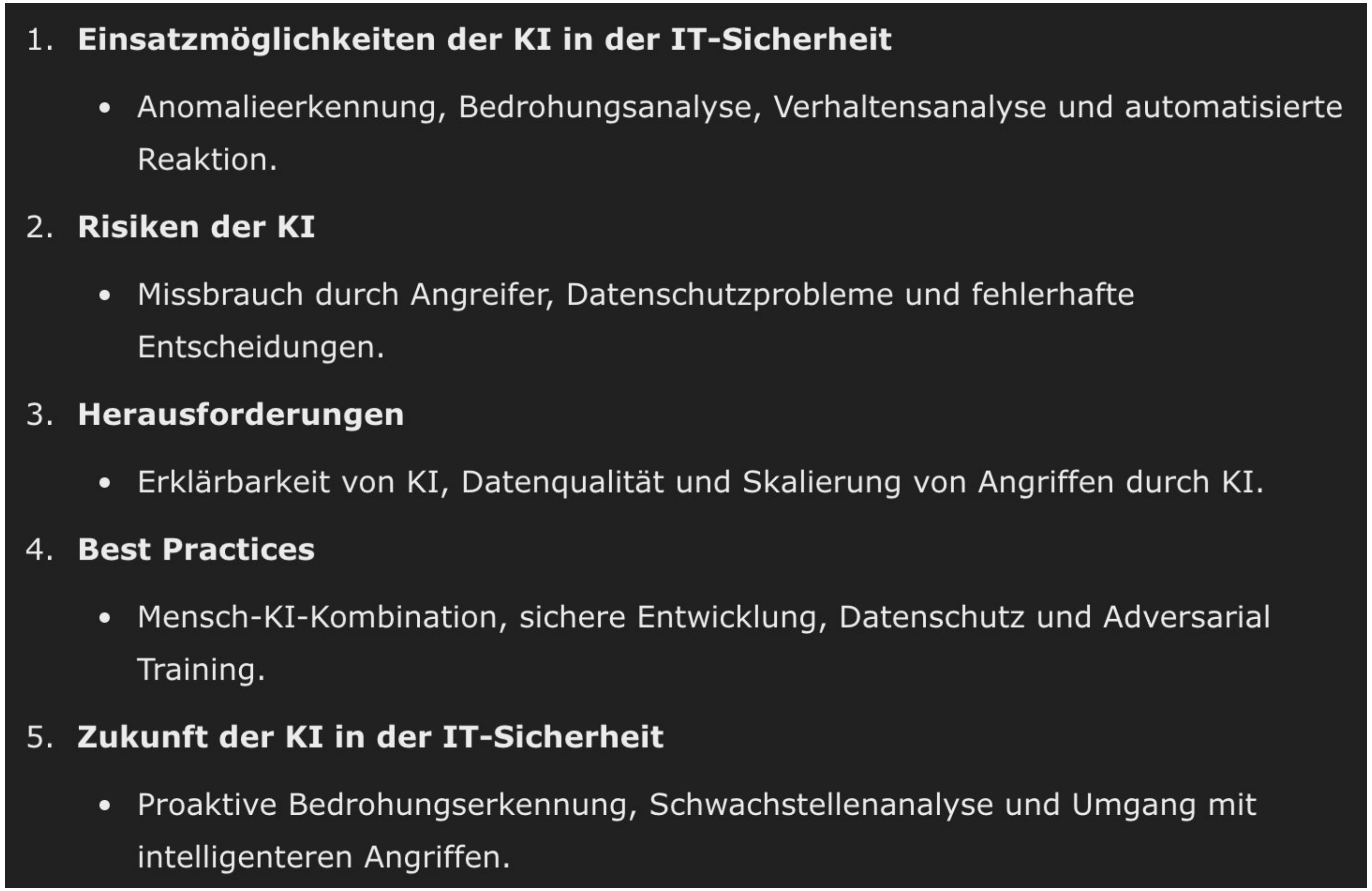
OpenAI breach in 2023 raises national security concerns



Nutzen und Gefahren von Chat-GPT für die Cyber Security

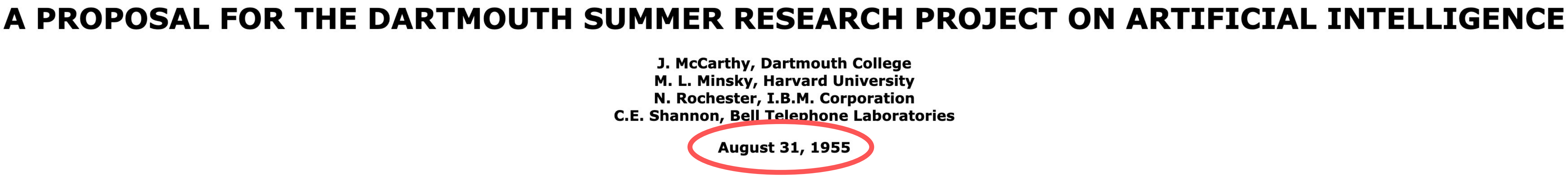


Ich soll einen Vortrag zu "KI und IT-Sicherheit" halten. Was soll ich den erzählen?



1. **Einsatzmöglichkeiten der KI in der IT-Sicherheit**
   - Anomalieerkennung, Bedrohungsanalyse, Verhaltensanalyse und automatisierte Reaktion.
2. **Risiken der KI**
   - Missbrauch durch Angreifer, Datenschutzprobleme und fehlerhafte Entscheidungen.
3. **Herausforderungen**
   - Erklärbarkeit von KI, Datenqualität und Skalierung von Angriffen durch KI.
4. **Best Practices**
   - Mensch-KI-Kombination, sichere Entwicklung, Datenschutz und Adversarial Training.
5. **Zukunft der KI in der IT-Sicherheit**
   - Proaktive Bedrohungserkennung, Schwachstellenanalyse und Umgang mit intelligenteren Angriffen.

Künstliche Intelligenz



A PROPOSAL FOR THE DARTMOUTH SUMMER RESEARCH PROJECT ON ARTIFICIAL INTELLIGENCE

J. McCarthy, Dartmouth College
M. L. Minsky, Harvard University
N. Rochester, I.B.M. Corporation
C.E. Shannon, Bell Telephone Laboratories

August 31, 1955

… woher kommt der Hype jetzt?

LLM ⊂ AI

AI is a Cloud Service

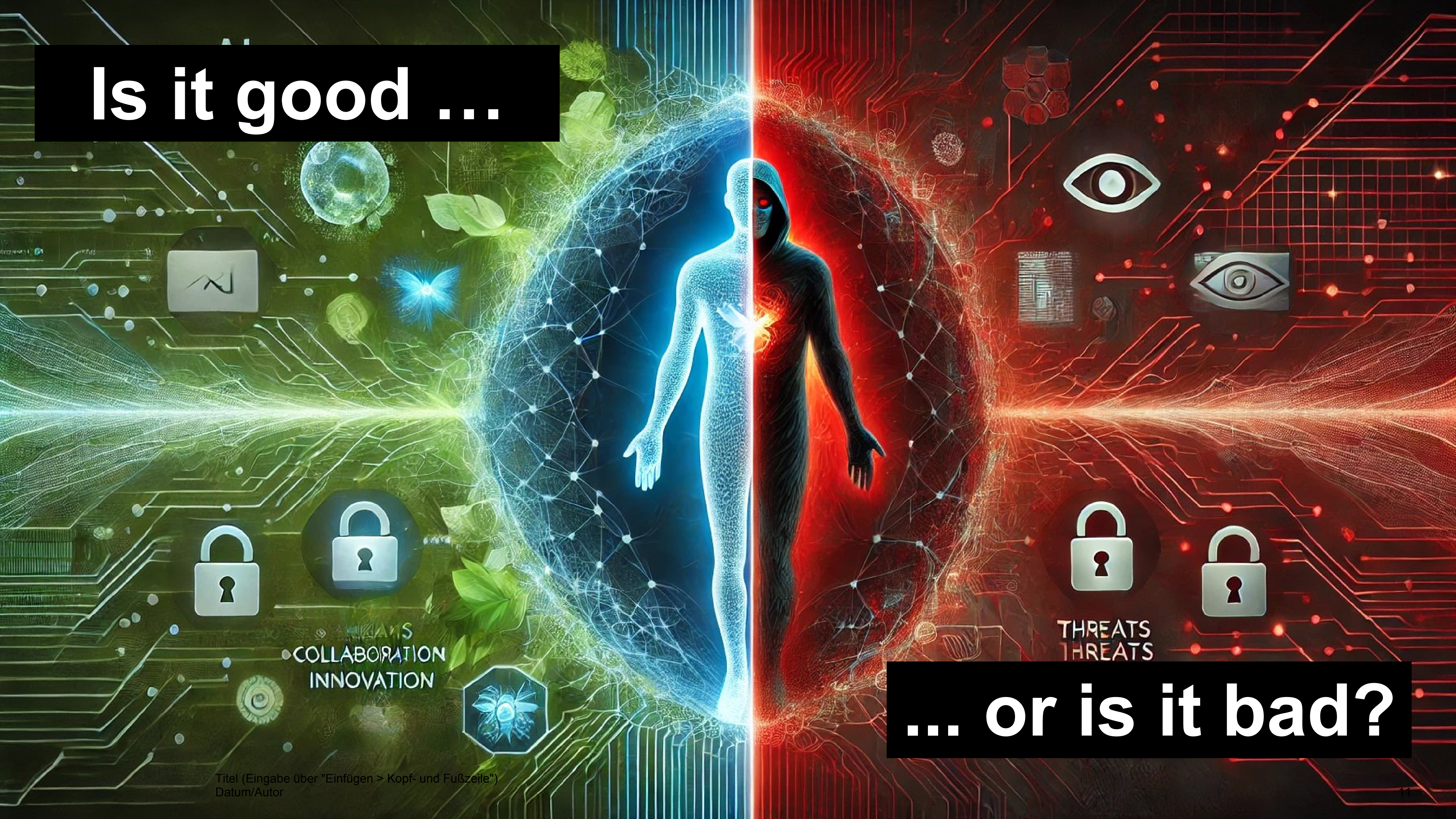
Looking at AI from IT-Security

Trust in AI

Criminals use AI

AI and Cyberdefense

Is it good …



... or is it bad?

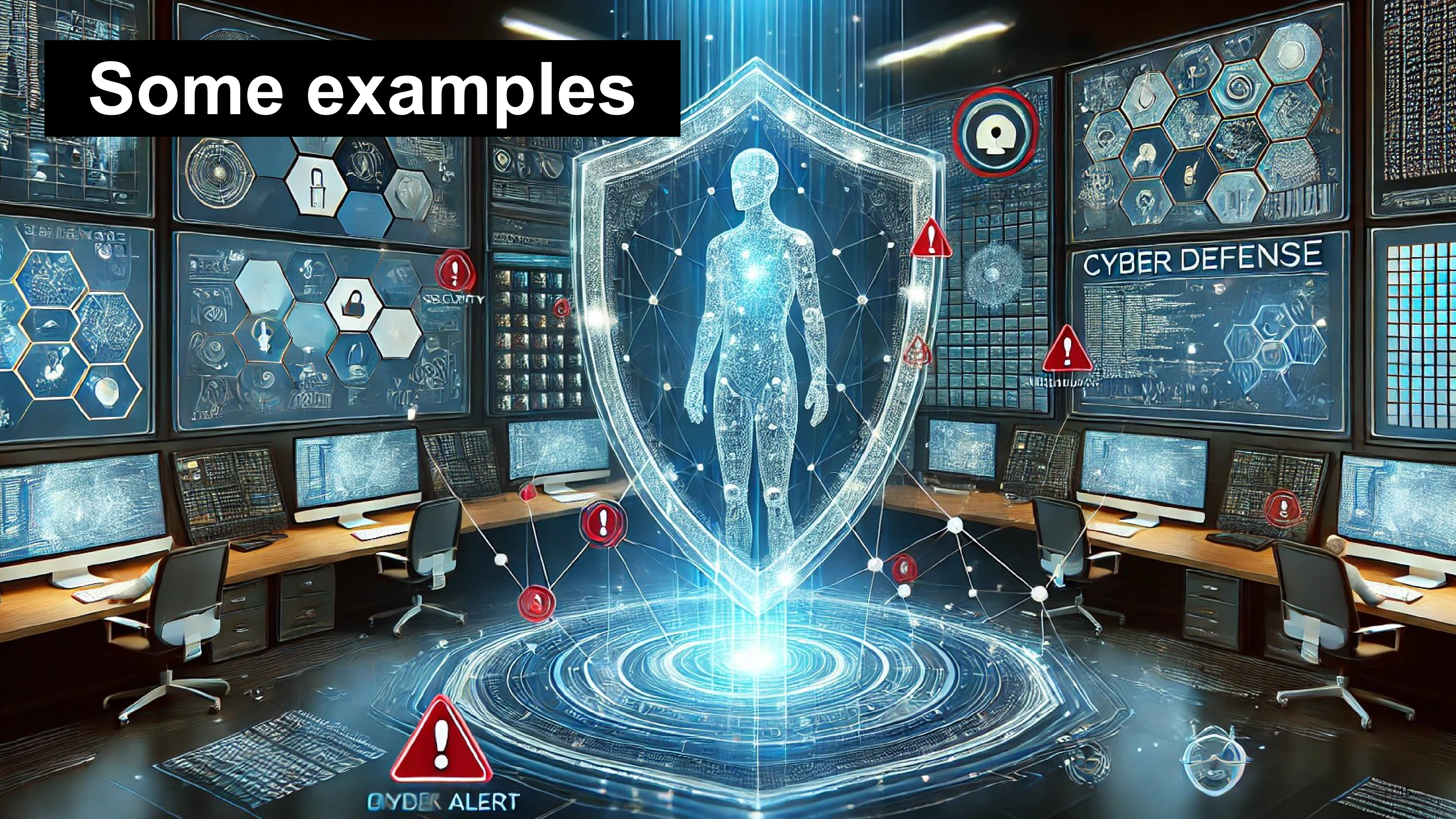
New technologies …

… interrupt

Focus on the opportunities …

... and manage the risk.

Some examples

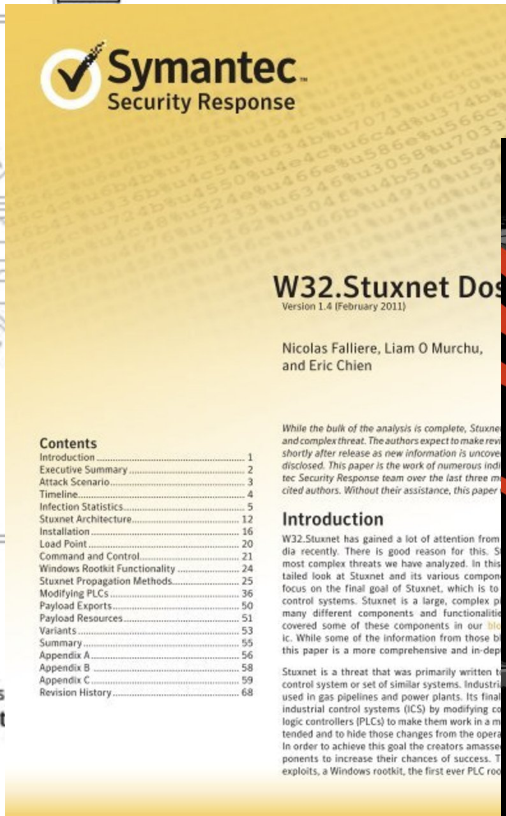


Understanding

DIE LAGE DER IT-SICHERHEIT IN DEUTSCHLAND 2024

Bundesamt für Sicherheit in der Informationstechnik

Deuts
Digit



Symantec.
Security Response

W32.Stuxnet Dos
Version 1.4 (February 2011)

Nicolas Falliere, Liam O Murchu,
and Eric Chien

While the bulk of the analysis is complete, Stuxne
and complex threat. The authors expect to make rev
shortly after release as new information is uncove
disclosed. This paper is the work of numerous indi
tec Security Response team over the last three m
cited authors. Without their assistance, this paper

Introduction

W32.Stuxnet has gained a lot of attention from
dia recently. There is good reason for this. S
most complex threats we have analyzed. In this
tailed look at Stuxnet and its various compon
focus on the final goal of Stuxnet, which is to
control systems. Stuxnet is a large, complex p
many different components and functionaliti
covered some of these components in our blo
ic. While some of the information from those b
this paper is a more comprehensive and in-dep

Stuxnet is a threat that was primarily written t
control system or set of similar systems. Industri
used in gas pipelines and power plants. Its final
industrial control systems (ICS) by modifying co
logic controllers (PLCs) to make them work in a m
tended and to hide those changes from the opera
In order to achieve this goal the creators amasse
ponents to increase their chances of success. T
exploits, a Windows rootkit, the first ever PLC roo

CROWDSTRIKE

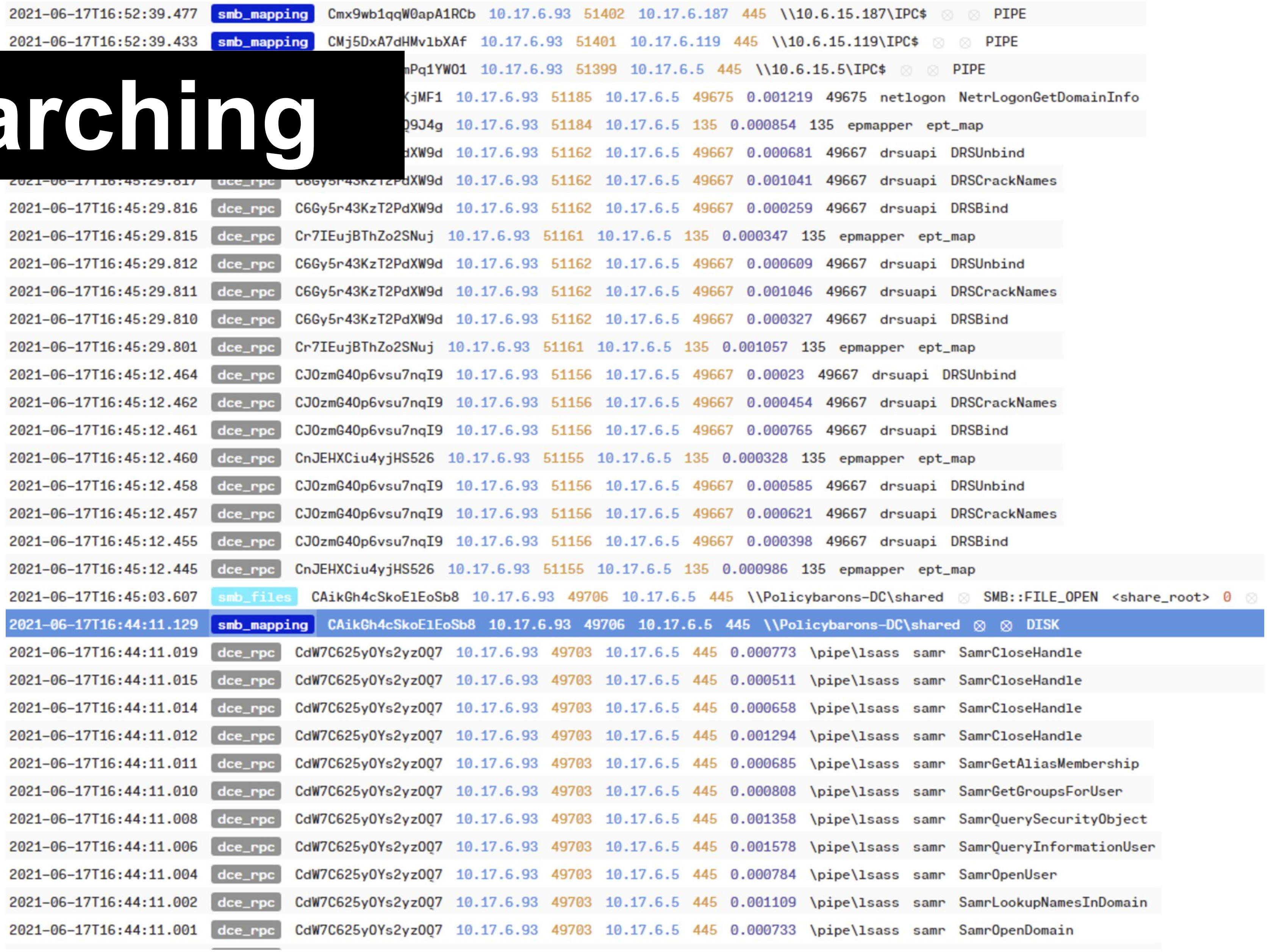
THREAT HUNT REPORT 2024

NSA joins CISA and partners in releasing:

2023 TOP ROUTINELY EXPLOITED VULNERABILITIES

CYBERSECURITY ADVISORY

Searching



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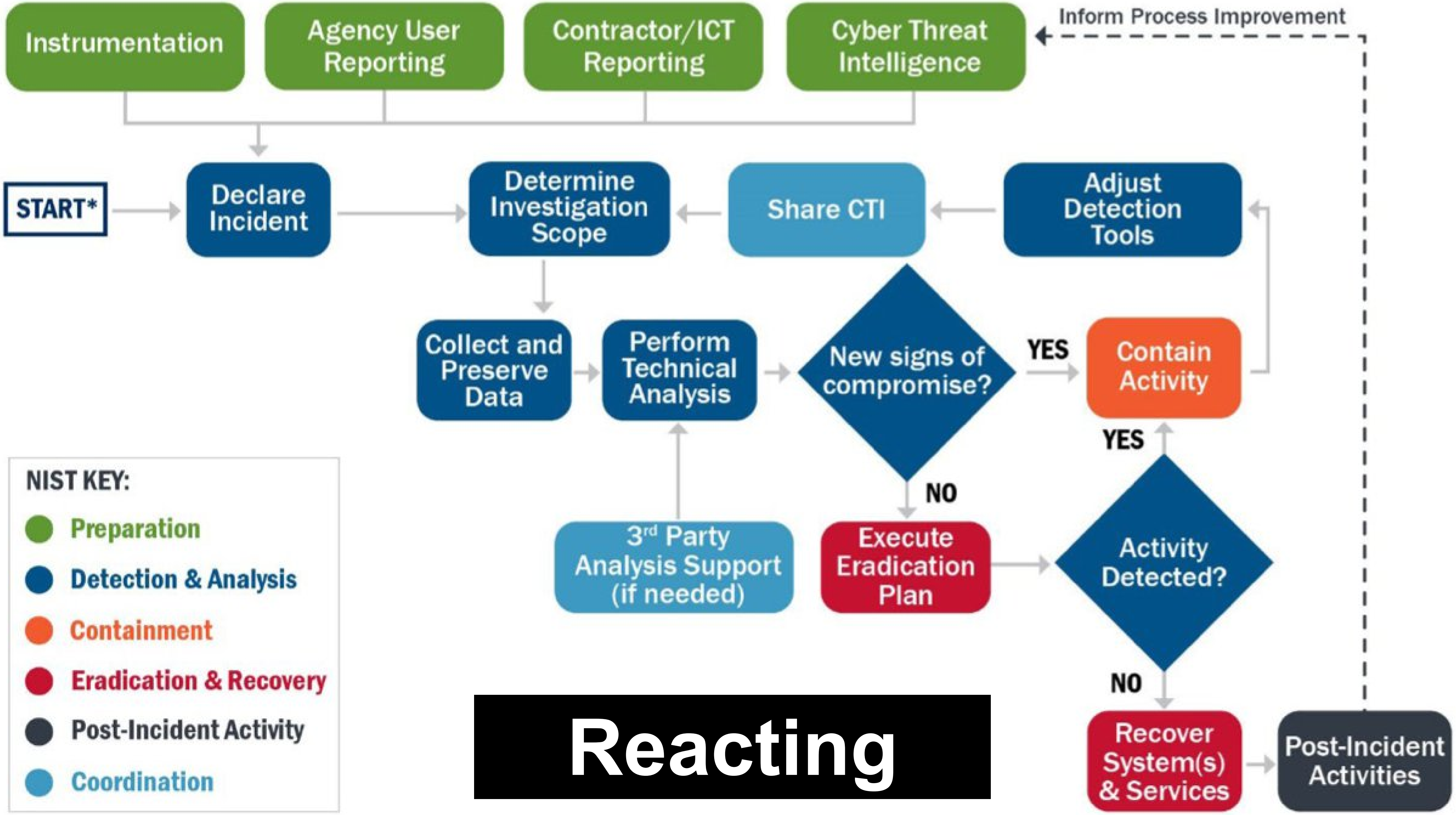

Instrumentation

Agency User Reporting

Contractor/ICT Reporting

Cyber Threat Intelligence

Inform Process Improvement

START*

Declare Incident

Determine Investigation Scope

Share CTI

Adjust Detection Tools

Collect and Preserve Data

Perform Technical Analysis

New signs of compromise?

YES

Contain Activity

NO

YES

3rd Party Analysis Support (if needed)

Execute Eradication Plan

Activity Detected?

NO

Recover System(s) & Services

Post-Incident Activities

NIST KEY:

- ● Preparation
- ● Detection & Analysis
- ● Containment
- ● Eradication & Recovery
- ● Post-Incident Activity
- ● Coordination

Reacting

Takeaways

- KI sind Algorithmen, die in groß angelegten Infrastrukturen eingesetzt werden.
- Aus sicherheitstechnischer Sicht handelt es sich um einen Datenprozessor.
- Nutzen Sie einfach die bereits vorhandenen risikobasierten Ansätze.
- KI ist eine Technologie, die sowohl von **guten** als auch von **schlechten Akteuren** genutzt werden kann.

- Ein Thema ist jedoch wichtig: **Vertrauen in KI**

Kontakt

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Open Source Projekte der HM IT:

https://github.com/hm-edu