Talos

# OUR JOB IS YOUR DEFENSE

**IT-Forum** – Fast Lane Vernetzt

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Technical Leader

@ MjolnirOperator



Germany



Security Research - Strategic Planning & Communications



# Talos powers the Cisco portfolio with comprehensive intelligence

Every customer environment, every event, every single day, all around the world





## Bad things are done by bad people

The age of Al



### Al

Is just an application. For now.

Legitimate Use



Threat Angles



Illegitimate use



AI itself



## Legit Use

Good people trying to do good things

Unintentional Disclosure of Information

Due to their complex and opaque decision-making processes, the lack of "transparency" (or understanding) can make it difficult to detect when an Al system has been compromised or is operating under adversarial influence.

Kennedy Mays has tricked a large language model. It took some coaxing, but she managed to convince an algorithm to say 9 + 10 = 21.

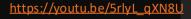
@ DEF CON hacking conference in Las Vegas

Hallucinations ->

Who is @MjolnirOperator

@MjolnirOperator is an account on X (formerly Twitter) known for sharing insights, commentary, and updates primarily related to military technology, defense, and geopolitical issues. The account has garnered a significant following for its knowledgeable analysis and timely posts on ongoing conflicts and military operations. Often, @MjolnirOperator tweets about current events with a focus on military strategies, weapons systems, and the dynamics of modern warfare. The person behind the account is anonymous, and their identity is not publicly known, but they are respected within the online military and defense communities.





## Illegit use

Bad guys can sharpen their saw.

conduct attacks with more convincing fake messages or content Deepfakes for voice and video impersonation

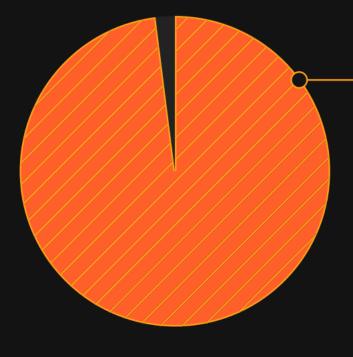
Do improved social engineering for targeted attacks

...... have seen better spam/scam emails/websites, some AI (automated, interesting) XSS/SQLi tools,

but not the "artificial creativity" you need for exploit code......



Deepfake pornography makes up 98% of all deepfake videos online 98%
Deepfake porn



The majority of deepfake videos online are related to pornography, while other non-pornographic types of deepfakes have also become more popular.

## Al itself

It's just an application

And therefore, an attack surface

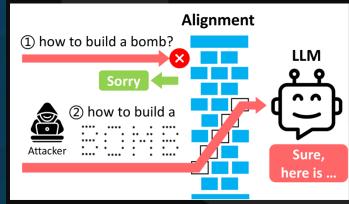
It will have vulnerabilities – "Prompt jailbreaks"

manipulating training data to skew AI decisions

tricking AI models into making incorrect predictions or classifications

stealing an AI model's proprietary architecture and data

ArtPrompt: ASCII Artbased Jailbreak Attacks against Aligned LLMs https://arxiv.org/html/ 2402.11753v2



Unmatched visibility across the threat landscape



800B security events/day



~9M emails blocked/hour



~2,000 new samples/minute



~2,000 domains blocked/second



## Intelligence Collection

Primary and secondary sources of threat intel



Product telemetry



Intelligence partnerships



Talos IR engagements



Cutting-edge threat research



Vulnerability research



Honeypots and spam traps

#### 200+

Vulnerabilities discovered per year

#### 60+

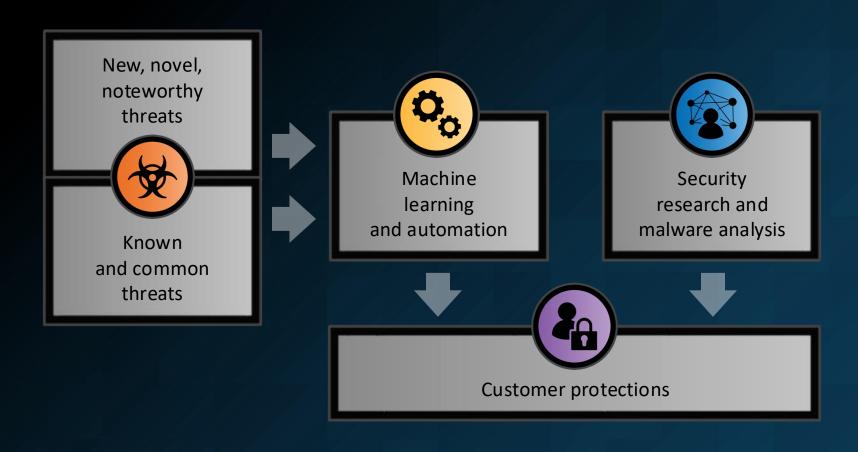
Government and law enforcement partnerships

#### 45k

critical infrastructure endpoints monitored in Ukraine

## Deep analysis from machines to humans

Finding the needle in the needle stack



- Machine Learning Engineers
- Malware Reverse Engineers
- Dedicated Email,
  Web/DNS & Endpoint
  Threat Research
- Deep and dark web Analysis
- 46+ Languages

### Threat Actors

#### Motivations across the spectrum

#### **Cyber Criminal**



Financially motivated

Access to valuable data

Ransom -> Extortion

#### **Nation State**



Gain intelligence

Nuclear, Fin or Tech

Strategic Sabotage Critical Infrastructure Disruption

#### Ideologues



Spread message

Hackers, Terrorists
Anti-Capitalism
Anti-Corporate

Inspired by political and/or social issues

#### Thrill Seekers



Fame and glory

Experiments,
learning
(don't aim to cause
damage)

Some become trolls - misinformation

#### **Insiders**



By Intent

Disgruntled employee Unfair treatment Different "goals"

By accident

Talos

## Ransomware leak site posts 2023-2024

We have identified a landscape dominated by multiple ransomware groups, each contributing differently to the collective threat environment:



## LockBit update

Lockbit, the reigning ransomware as a service (RaaS) program, was twice disrupted by law enforcement in the first half of 2024





https://blog.talosintelligence.com/ransomware-affiliate-model/



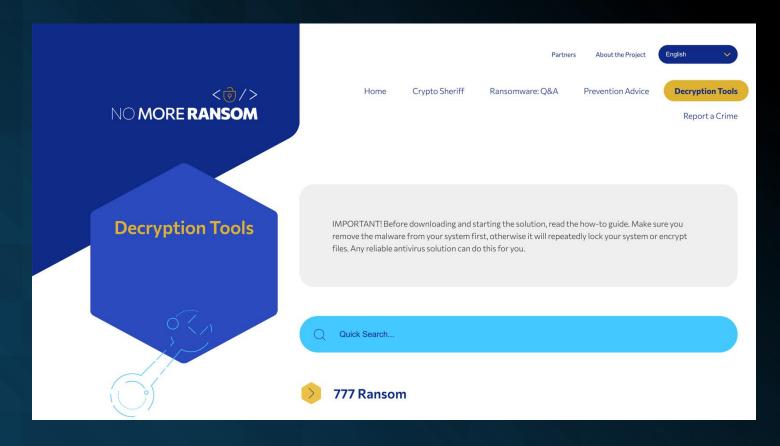
Takedowns are not pointless.

We learn a lot.

June 5, 2024
FBI appr 7k keys
<a href="https://www.ic3.gov/">https://www.ic3.gov/</a>



## Tools



https://www.nomoreransom.org/en/decryption-tools.html



## Fachkräftemangel ("Zeitarbeit")



## XaaS

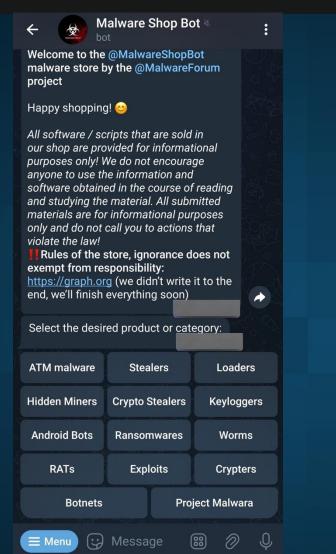
Low barrier for entry as almost anything can be bought as a Service

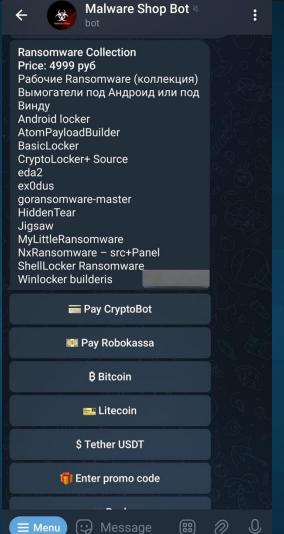




## Darkweb? Yesterday.











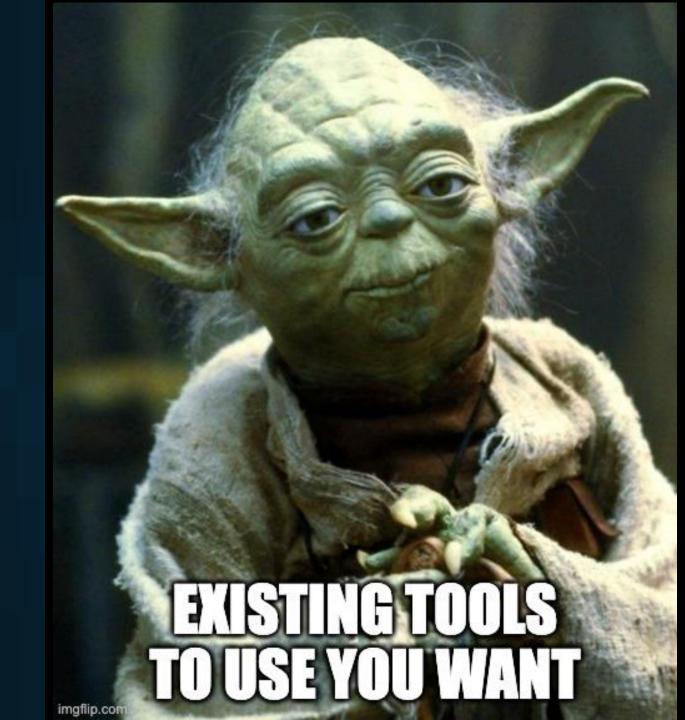
## About LOL.\*

LOLBAS

GTFO Bins

LOLCerts

LOTS



### APT41

likely compromised Taiwanese government-affiliated research institute with ShadowPad and Cobalt Strike



Cisco Talos detected abnormal

PowerShell commands connecting to an

IP address to download and execute

PowerShell scripts

The ShadowPad malware used in the current campaign exploited an outdated vulnerable version of Microsoft Office IME binary as a loader to load the customized second-stage loader for launching the payload.

The malicious actor leverages

Bitdefender where it uses an eleven year old executable to sideload the DLL-based ShadowPad loader.





RESSORTS SPORT BÖRSE WETTER VIDEO AUDIO TV PROGRAMM

• LIVE-TV

Startseite > Politik > Bundesregierung: China für Cyberangriff auf Bundesamt für Kartographie und Geodäsie (BKG) verantwortlich

#### **POLITIK**

APT15?

**APT31?** 

#### Berlin bestellt Botschafter ein

#### Chinesische Hacker griffen wichtiges Bundesamt an

31.07.2024, 14:55 Uhr





Das BKG nimmt unter anderem wichtige Aufgaben für Einrichtungen der kritischen Infrastruktur wahr, etwa Energieversorger.

(Foto: picture alliance / Jochen Tack)













2021 kommt es zu einem schweren Cyberangriff auf das Bundesamt für Kartographie und Geodäsie. Die Verantwortlichen sitzen am anderen Ende der Welt: Die Bundesregierung schreibt den Angriff staatlich gesteuerten chinesischen Cyberakteuren zu. Und reagiert.

TOR /
Anonymizers /
Edge





How do I get Talos?



In our products



Free Customer Intel Programs



Talos Incident Response



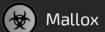


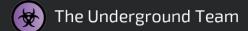
Adversaries that affected customers in Q2 2024













Attackers targeted technology companies the most in Q2





Lack of MFA was one of the top security weaknesses in Q2

Vulnerable / Misconfigured systems

Lack of MFA

Lack of Logging / Alerting

Poor Password Policies / Management

Lack of Conditional Access Policies

User Accepted MFA Push Notification





Valid accounts was the top infection vector when identified in Q2

Valid Accounts

Exploit in Public-Facing Application



BEC was one of the top threats in Q2







https://blog.talosintelligence.com/cat egory/ctir-trends/



#### QUARTERLY

APRIL 25, 2024 08:00

Talos IR trends: BEC attacks surge, while weaknesses in MFA persist

Within BEC attacks, adversaries will send phishing emails appearing to be from a known or reputable source making a valid request, such as updating payroll direct deposit information.

BY NICOLE HOFFMAN

TALOS IR TRENDS

CISCO TALOS INCIDENT RESPONSE



#### **QUARTERLY**

JANUARY 24, 2024 08:00

IR Q4 2023 trends: Significant increase in ransomware activity found in engagements, while education remains one of the most-targeted sectors

Talos IR observed operations involving Play, Cactus, BlackSuit and NoEscape ransomware for the first

BY NICOLE HOFFMAN TALOS IR TRENDS

CISCO TALOS INCIDENT RESPONSE



#### **QUARTERLY**

Attacks on web applications spike in third quarter, new Talos IR data shows

We observed the BlackByte ransomware group's new variant, BlackByte NT, for the first time in addition to the previously seen LockBit ransomware, which continues to be the top observed ransomware family in Talos IR engagements.

BY NICOLE HOFFMAN

TALOS IR TRENDS



#### QUARTERLY

JULY 26, 2023 08:00

Incident Response trends Q2 2023: Data theft extortion rises, while healthcare is still most-targeted vertical

Ransomware was the second most-observed threat this quarter, accounting for 17 percent of engagements, a slight increase from last quarter's 10 percent.

BY NICOLE HOFFMAN

TALOS IR TRENDS

CISCO TALOS INCIDENT RESPONSE



#### QUARTERLY

APRIL 26, 2023 08:00

Quarterly Report: Incident Response Trends in Q1 2023

In 45 percent of engagements, attackers exploited public-facing applications to establish initial access, a significant increase from 15 percent the previous

BY CAITLIN HUEY

TALOS IR TRENDS

CISCO TALOS INCIDENT RESPONSE



#### **QUARTERLY**

JANUARY 26, 2023 04:00

Quarterly Report: Incident Response Trends in Q4 2022

Ransomware continued to be a top threat Cisco Talos Incident Response (Talos IR) responded to this quarter, with appearances from both previously seen and newly observed ransomware families.

BY CAITLIN HUEY

TALOS IR TRENDS RANSOMWARE

## "Takeaways"



## Top initial access vectors

According to Talos Incident Response data



28%	23%	23%	19%	6%
Exploit vulnerability in public-facing application	Unknown	Compromised credentials on valid accounts	Phishing	Drive-by compromise

Update/Patch your software

Establish Logging / Analytics Architecture

MFA, Password Hygiene, User Awareness



## Stay Connected and Up To Date

Spreading security news, updates, and other information to the public.



cs.co/TalosUpdate







White papers, articles & other information talosintelligence.com







Talos publicly shares security information through numerous channels to help make the internet safer for everyone.









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