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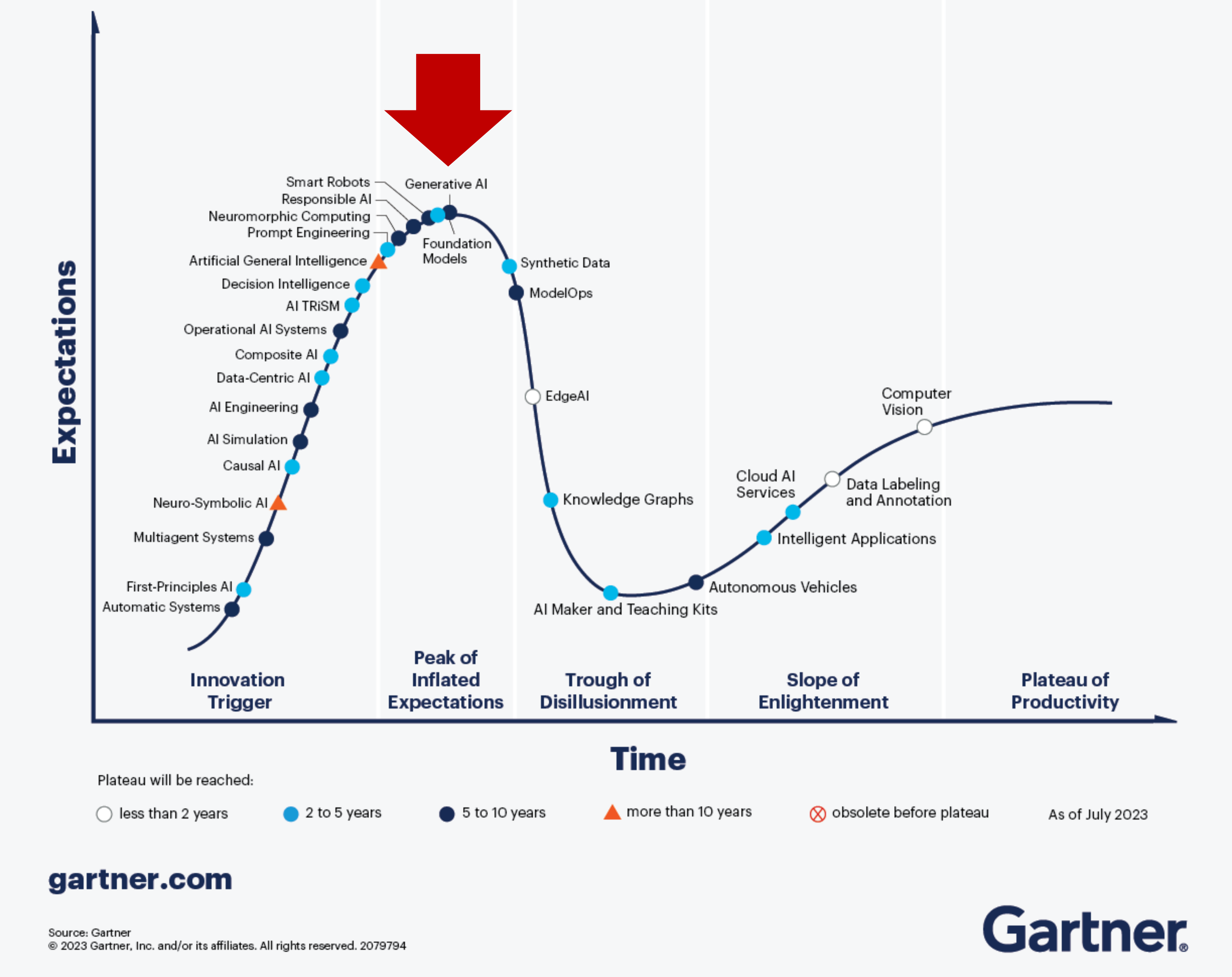
AI zkušenosti v Security Analytics

Petr Hněvkovský, CISM, CISA, CISSP, CEH
Sr. Manager | Cybersecurity Solutions Consulting
Duben 2024

Úspěch generativní AI zajistil maximální humbuk!



Source: Gartner
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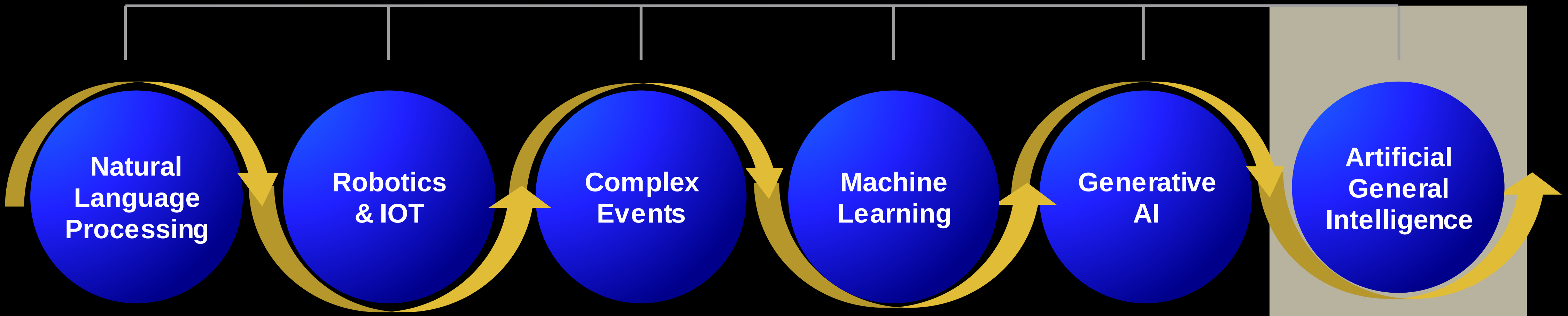
Dvě desetiletí inovací AI s více než 371 patenty AI



Natural Language Processing

- Programmed Translation
- Information Extraction

Robotics & IOT

- Process automation
- Optimization
- Expert systems

Complex Events

- Text to Speech
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- Machine vision
- Image Recognition

Machine Learning

- Predictive Models
- Deep Learning
- Reinforced Learnings

Generative AI

- Prompt-engineering
- Large Language Models
- Vector DB
- API Orchestration

Artificial General Intelligence

- Automating decisions
- Machine made choices
- AI Trust, Risk & Security Management

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Významné AI inovace kybernetické bezpečnosti

2010

BrightCloud první cloudová platforma Threat Inteligence

2014

Interset User and Entity Behavioural Analytics

2019

Fortify Audit Assistant k třídění výsledků testování

2020

ArcSight Recon introduces outlier analytics

2023

Voltage Financial Risk calculator

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Použijte správnou AI pro správný scénář!

AppSec testovací problémy

- Omezení šumu
- Časově náročný proces
- Nedostatek auditorů AppSec
- Opakující se všední kontrola

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	Random Forest	ChatGPT
Classification performance	Equal or better	Equal or worst
Parameters	8 million[1]	1.76 trillion[3] (~950,000 larger)
Memory	50 MB[1]	45 GB[2] (~1300 times larger)
Training cost	< $30.67	> $100,000,000 [4]
Training CPUs/GPUs	1-3	~10,000[5]
Prediction speed	milliseconds	seconds

Fortify Audit Assistant první a přelomový od 2019

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[5] https://www.fierceelectronics.com/sensors/chatgpt-runs-10k-nvidia-training-gpus-potential-thousands-more

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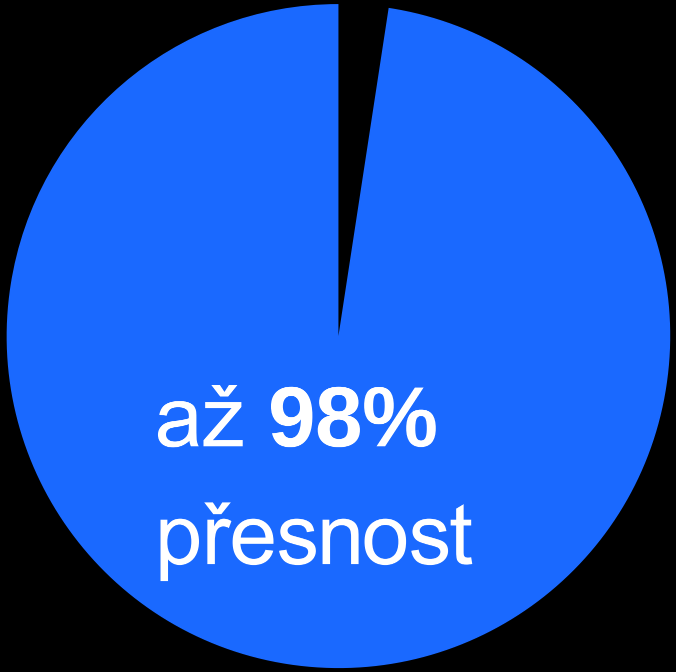

Okamžité výsledky

- Prioritizace pro výsledky s velkým dopadem
- Snížení manuálního úsilí
- Granulární označování
- Lidský asistent s AI

Fortify Audit Assistant první a přelomový od 2019

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Poučení se z AI pro vytvoření vhodnějších řešení

Klíčové výzvy SOC 2020

- Nedostatek talentů
- Dlouhá doba expozice
- Rozvoj hrozeb
- Informační přetížení
- Manuální opakující se úkoly

Robotic Driven SOC 1/4

AI and RPA Improving SecOps

RoboSOC Security Guide

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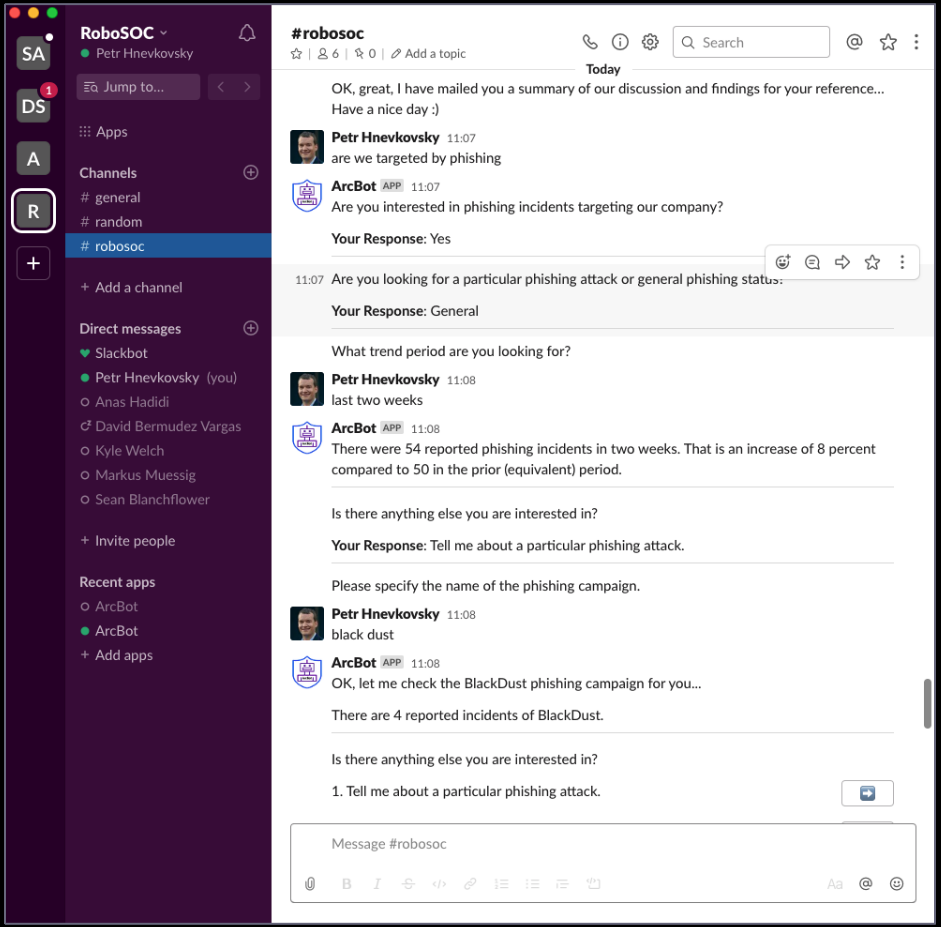
Získejte okamžitý přehled bez technické znalosti



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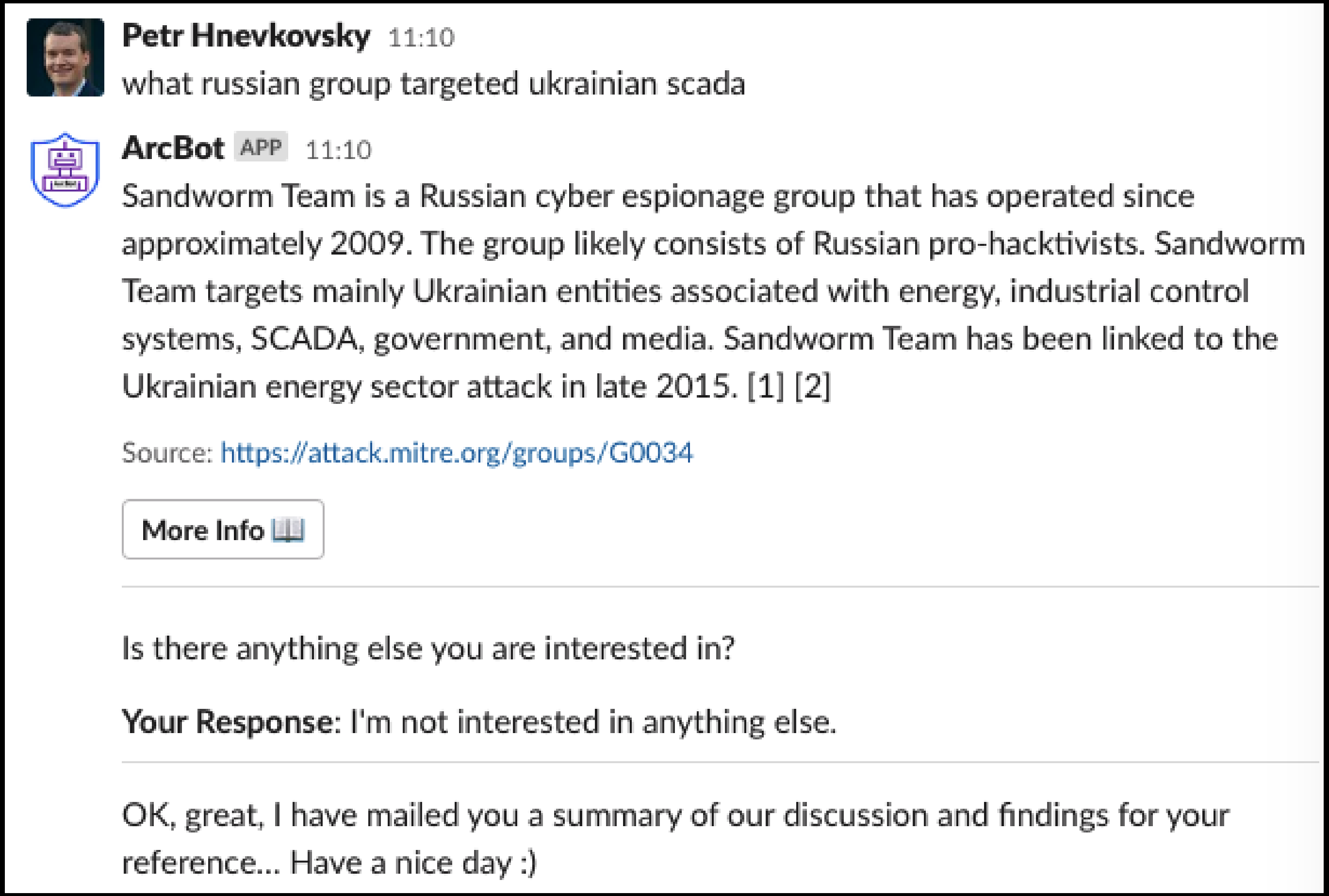

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Source: https://attack.mitre.org/groups/G0034

Is there anything else you are interested in?

Your Response: I'm not interested in anything else.

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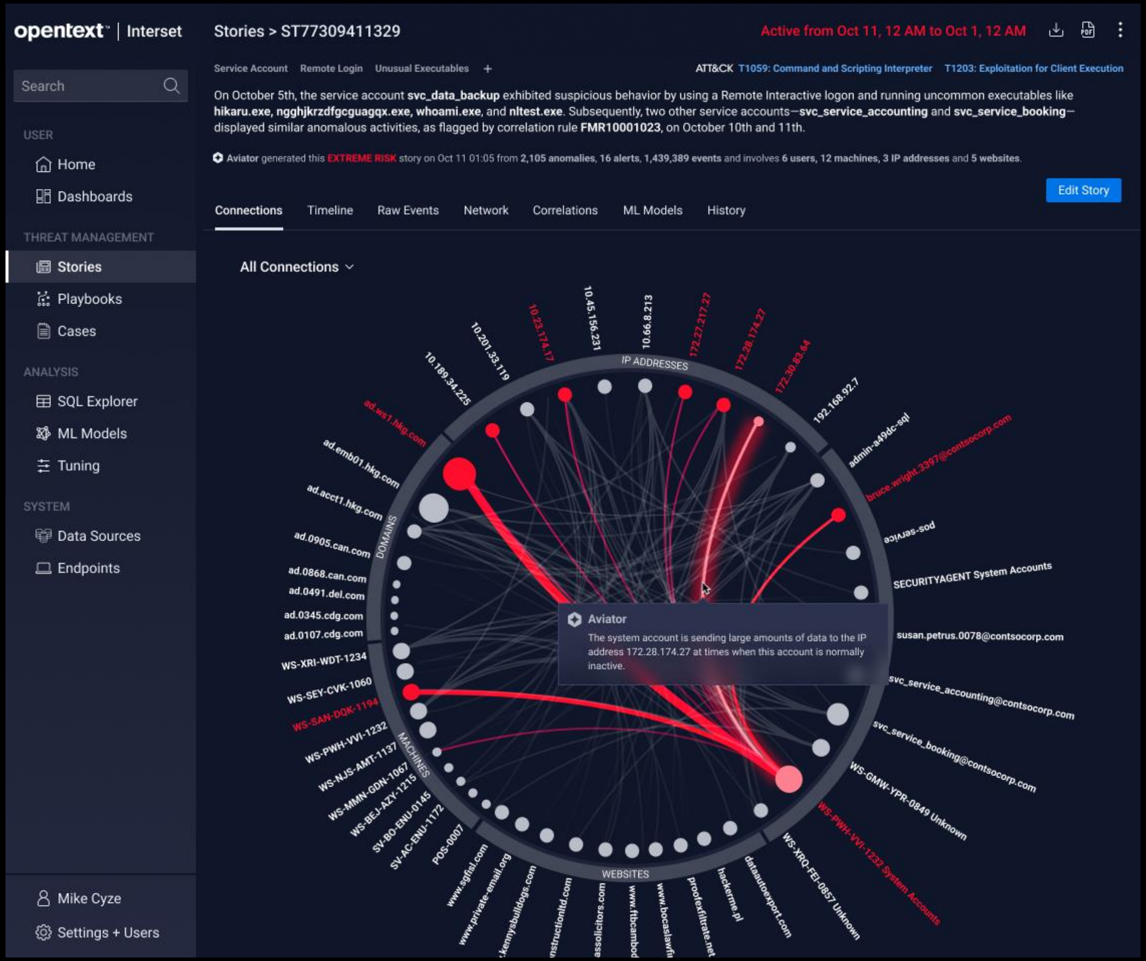
Vývoj přesných a spolehlivých schopnosti AI a RPA

RoboSOC*

- User & Entity Behaviour Analytics
- Security operations automation response
- Global adversary analytics



Stories > ST77309411329

Active from Oct 11, 12 AM to Oct 1, 12 AM

ATT&CK T1059: Command and Scripting Interpreter T1203: Exploitation for Client Execution

On October 5th, the service account **svc_data_backup** exhibited suspicious behavior by using a Remote Interactive logon and running uncommon executables like **hikaru.exe, ngghjkrzdfgcguagqx.exe, whoami.exe**, and **nltest.exe**. Subsequently, two other service accounts—**svc_service_accounting** and **svc_service_booking**—displayed similar anomalous activities, as flagged by correlation rule **FMR10001023**, on October 10th and 11th.

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ArcSight Security Analytics

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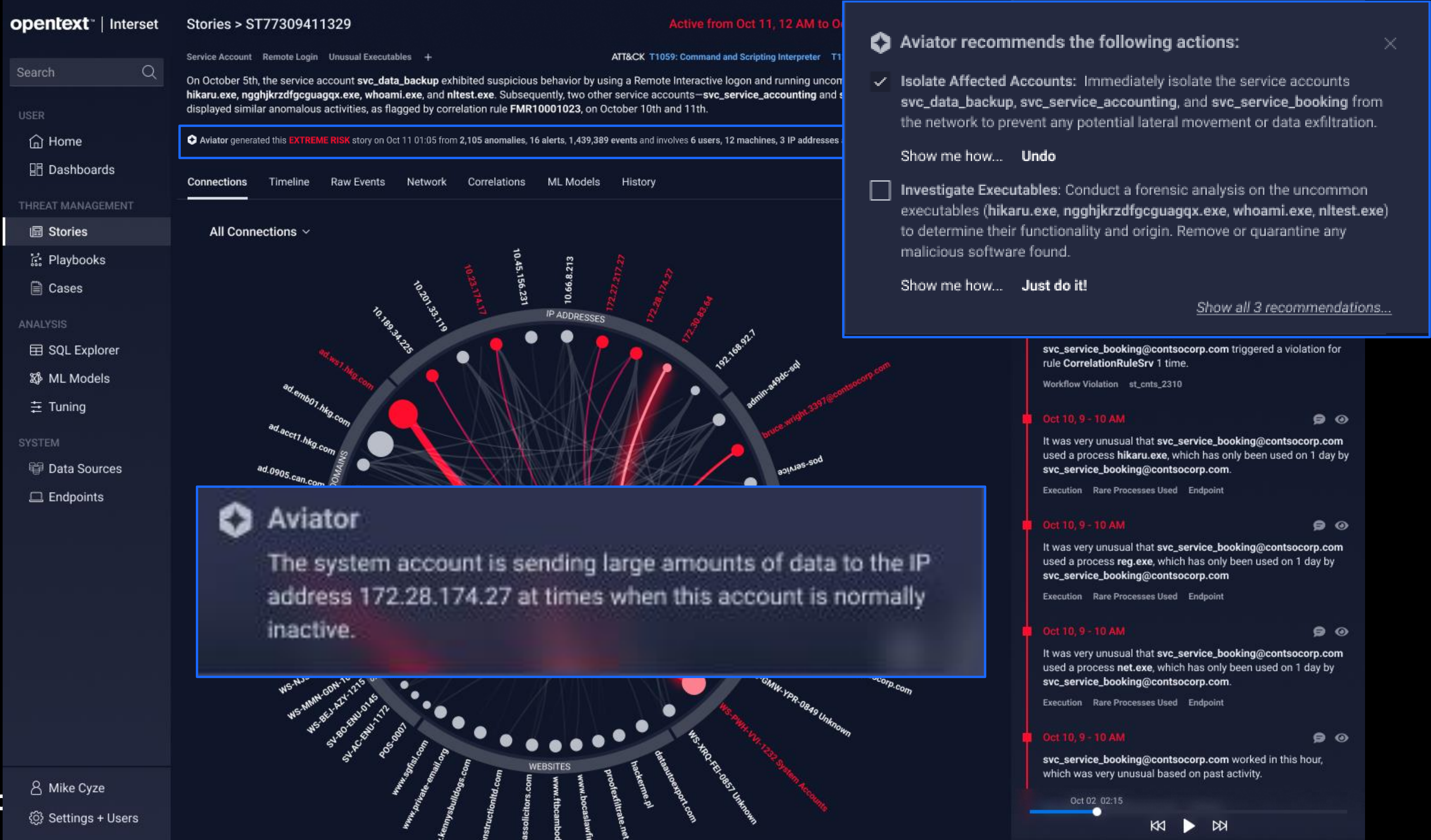

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☑ **Isolate Affected Accounts:** Immediately isolate the service accounts **svc_data_backup**, **svc_service_accounting**, and **svc_service_booking** from the network to prevent any potential lateral movement or data exfiltration.

Show me how... **Undo**

☐ **Investigate Executables:** Conduct a forensic analysis on the uncommon executables (**hikaru.exe, ngghjkrzdfgcguagqx.exe, whoami.exe, nltest.exe**) to determine their functionality and origin. Remove or quarantine any malicious software found.

Show me how... **Just do it!**

Show all 3 recommendations...

svc_service_booking@contsocorp.com triggered a violation for rule **CorrelationRuleSrv** 1 time.

Workflow Violation st_cnts_2310

Oct 10, 9 - 10 AM

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Přesná detekce vnitřní hrozby pomocí jednoho zdroje

Snadno pochopitelné a kvalitní zacílení

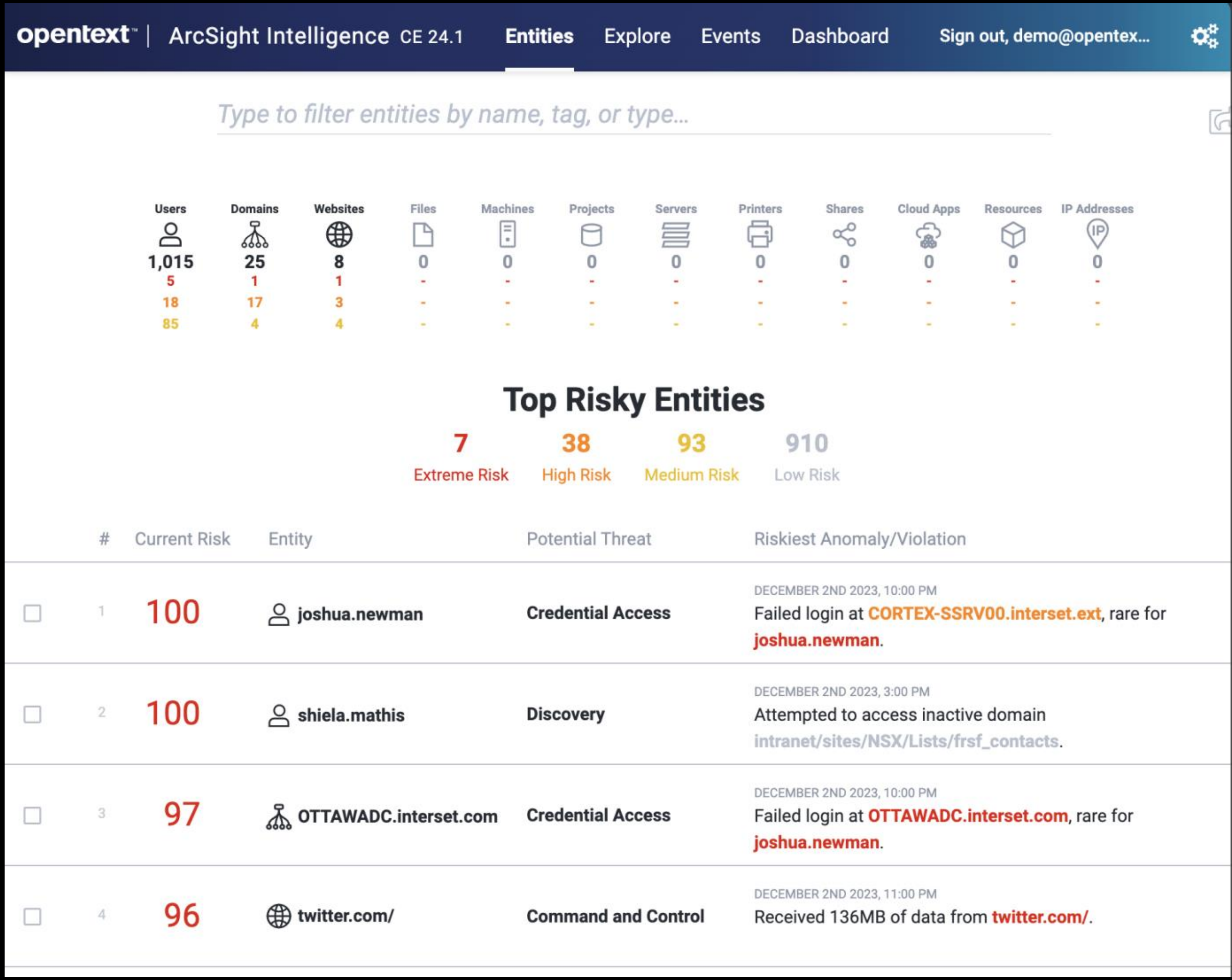
- Podniková špionáž
- Útoky na hesla
- Špatné IT postupy
- Exfiltrace dat

CROWDSTRIKE

MS Defender

SentinelOne

Azure AD


opentext™ | ArcSight Intelligence CE 24.1
Entities
Explore
Events
Dashboard
Sign out, demo@opentex...
Type to filter entities by name, tag, or type...

Users	Domains	Websites	Files	Machines	Projects	Servers	Printers	Shares	Cloud Apps	Resources	IP Addresses
1,015	25	8	0	0	0	0	0	0	0	0	0
5	1	1	-	-	-	-	-	-	-	-	-
18	17	3	-	-	-	-	-	-	-	-	-
85	4	4	-	-	-	-	-	-	-	-	-

Top Risky Entities

7	38	93	910
Extreme Risk	High Risk	Medium Risk	Low Risk

	#	Current Risk	Entity	Potential Threat	Riskiest Anomaly/Violation
☐	1	100	joshua.newman	Credential Access	DECEMBER 2ND 2023, 10:00 PM Failed login at CORTEX-SSRV00.interset.ext, rare for joshua.newman.
☐	2	100	shiela.mathis	Discovery	DECEMBER 2ND 2023, 3:00 PM Attempted to access inactive domain intranet/sites/NSX/Lists/frsf_contacts.
☐	3	97	OTTAWADC.interset.com	Credential Access	DECEMBER 2ND 2023, 10:00 PM Failed login at OTTAWADC.interset.com, rare for joshua.newman.
☐	4	96	twitter.com/	Command and Control	DECEMBER 2ND 2023, 11:00 PM Received 136MB of data from twitter.com/.

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Kognitivní a reaktivní kybernetická obrana (XDR+)

Varovné signály

Dřívější detekce a vyhledávání hrozeb s cílem minimalizovat dobu zdržení.

Signály útočníka ze vzdáleného prostoru

Early warning signals and adversary analytics that indicate an imminent or impending attack.

Signály chování

User behavior analytics to identify insider threats often associated with compromised accounts/credentials.

Korelace

Real-time correlation that provides instant visibility into known threats as well as suspicious patterns.

Síťová detekce

Network telemetry to detect lateral movement, and anomalous traffic and provide forensic playback.

Řízení identit a koncových bodů

Identity account and endpoint blocking, containment, re-imaging, and forensics

MITRE ATT&CK Enterprise Matrix

WoA
WoC

Warnings of Attack
Warnings of Compromise

IoA

Indicators of Attack

IoC

Indicators of Compromise

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Kybernetická odolnost

- Ochrana aplikací, dat a identit
- Přesná detekce a automatizovaná reakce

Lidský kapitál

- Virtuální asistenti
- Partnerství mezi lidmi a umělou inteligencí
- 1 + 1 = 3

Digitální transformace

- Aviator podpoří Váš růst
- Umožněte své AI využívat svá data

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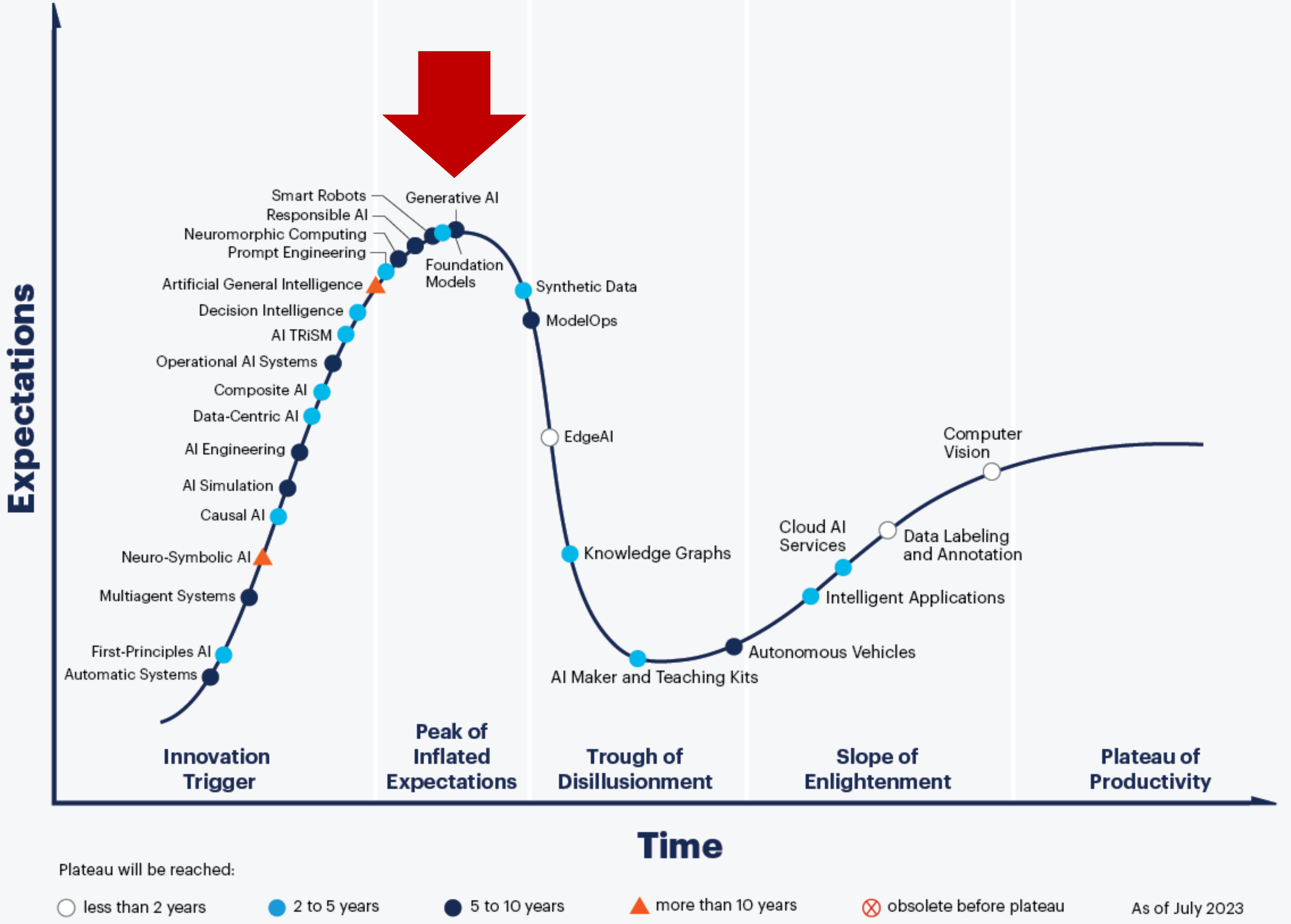
Jak může AI Aviator zabezpečit vaše podnikání?

opentext.ai | phnevkovsky@opentext.com

Generative AI achievement unlocked: maximum hype!



gartner.com

Source: Gartner
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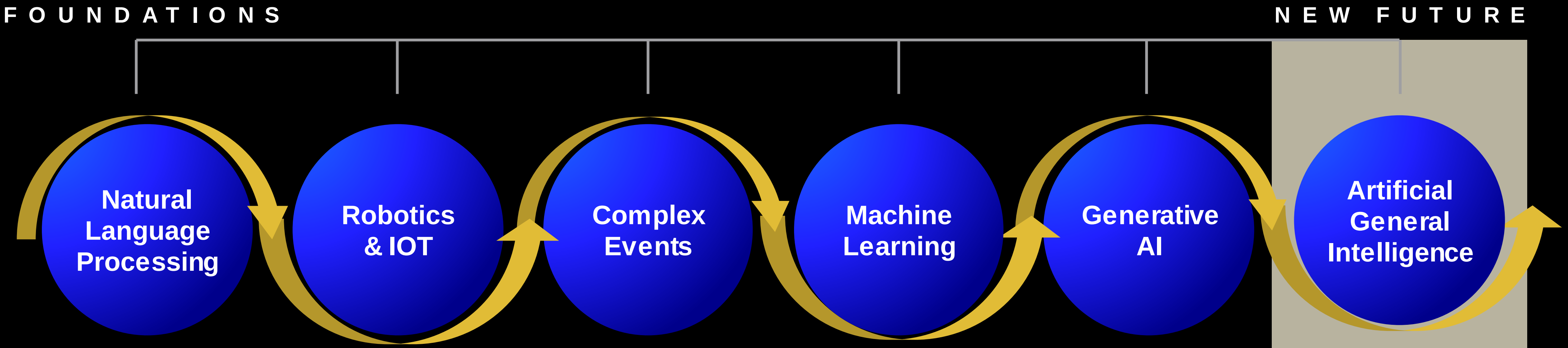
Two decades of AI innovations with 371+ AI patents



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Notable cybersecurity AI innovation milestones

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BrightCloud first cloud threat intelligence platform

2014

Interset User and Entity Behavioural Analytics

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Fortify Audit Assistant to triage testing results

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Use the right AI for the right use case!

AppSec testing burden

- Noise reduction needed
- Time Intensive process
- AppSec auditor shortage
- Repetitive mundane reviews

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Up to **98%** accuracy

Immediate actionable results

- Prioritization on high impact results
- Reduce manual effort
- Granular labelling
- Human AI assistant

Fortify Audit Assistant first & ground breaking since 2019

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Learning from AI to build better suited solutions

2020 Key SOC challenges

- Talent shortage
- Long exposure time
- Evolving threats
- Information overload
- Manual repetitive task

Robotic Driven SOC 1/4

AI and RPA Improving SecOps

RoboSOC Security Guide

Innovation Lab

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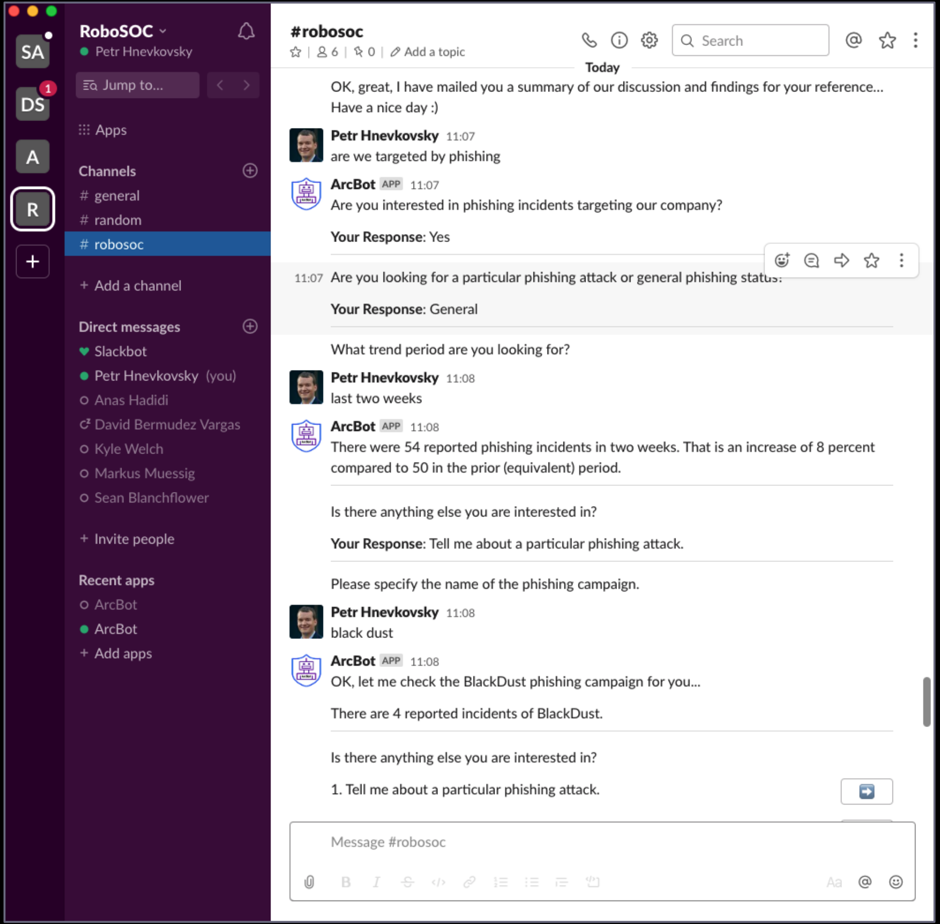
Gain immediate insight without technical burden



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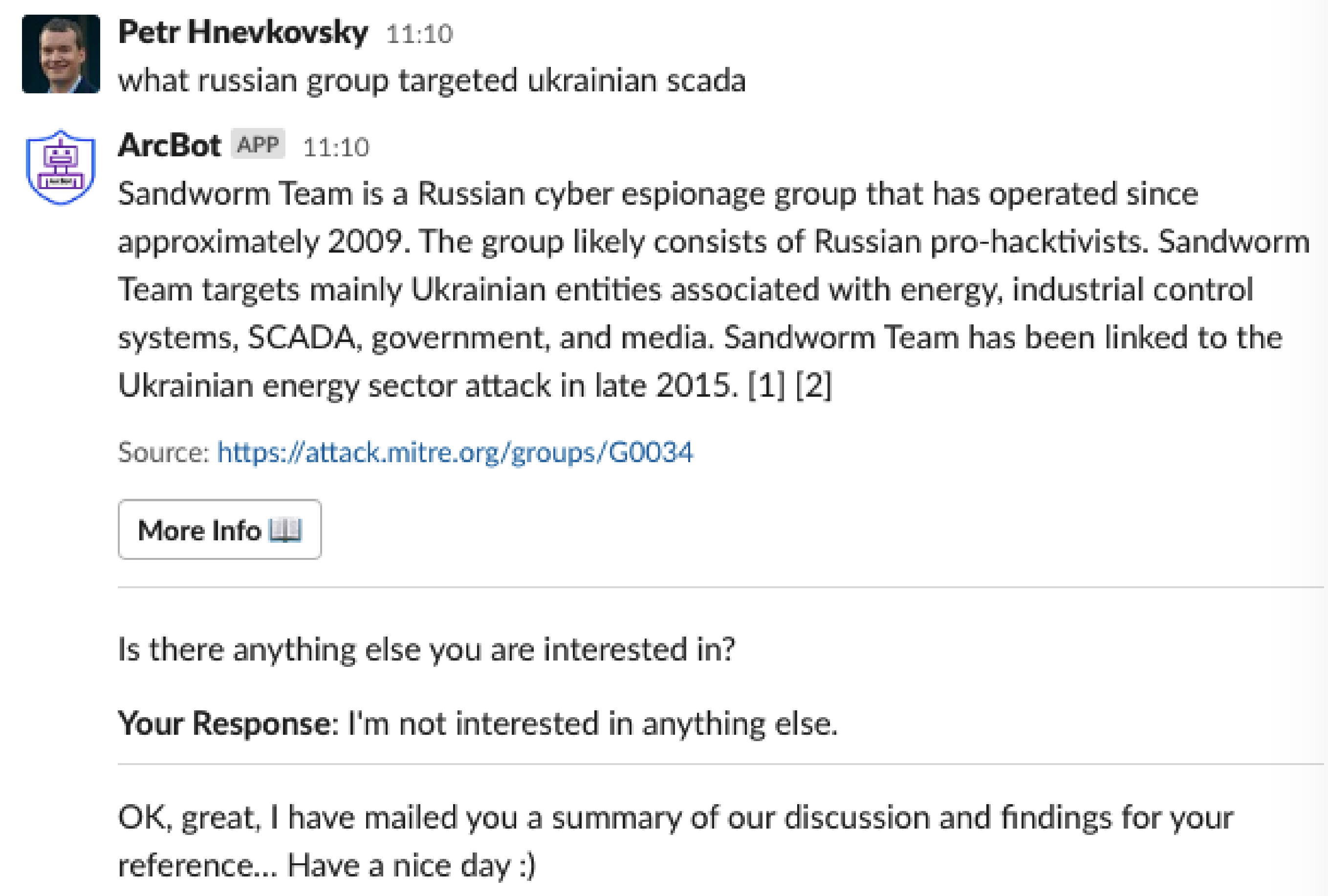

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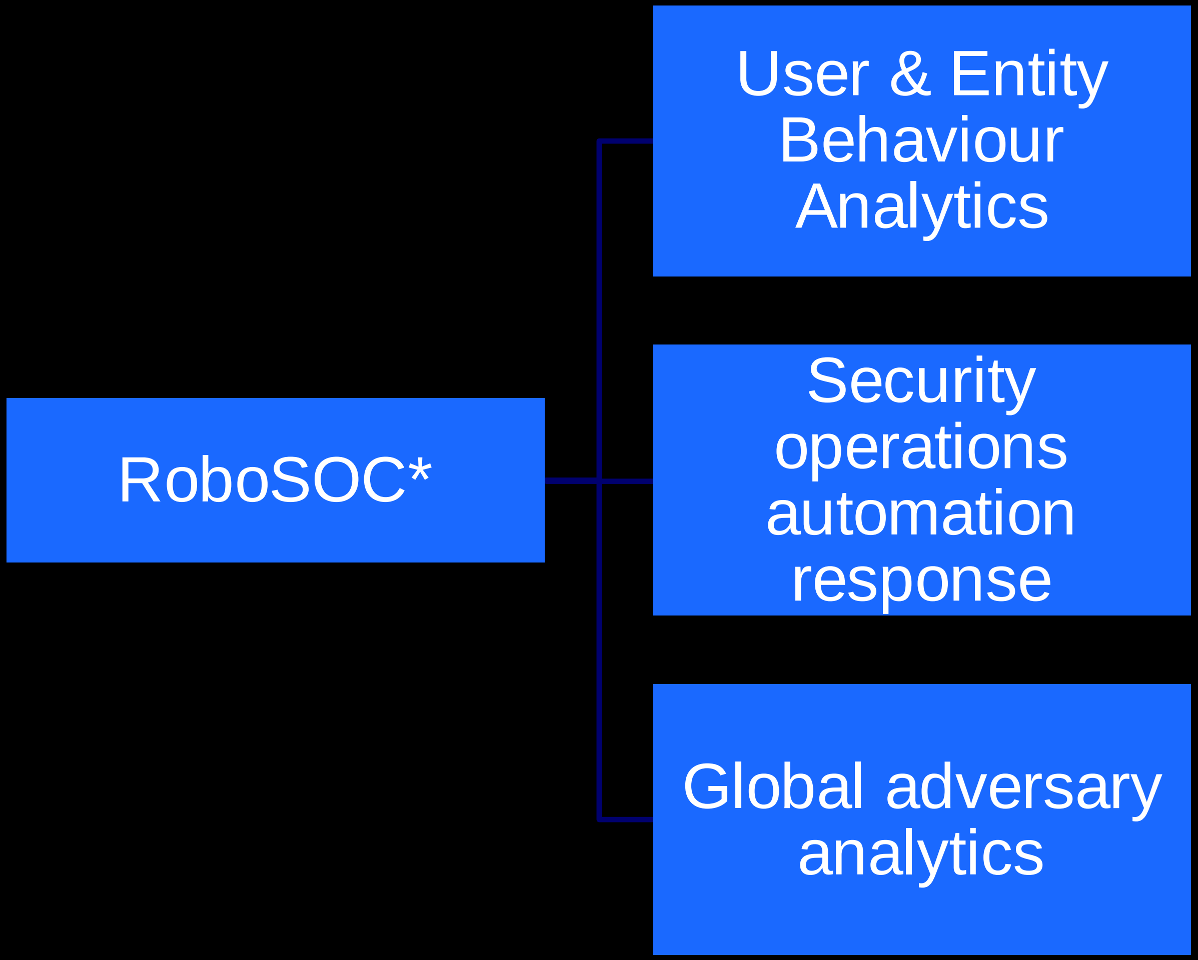
Derived new accurate & reliable AI and RPA capabilities



RoboSOC*

User & Entity Behaviour Analytics

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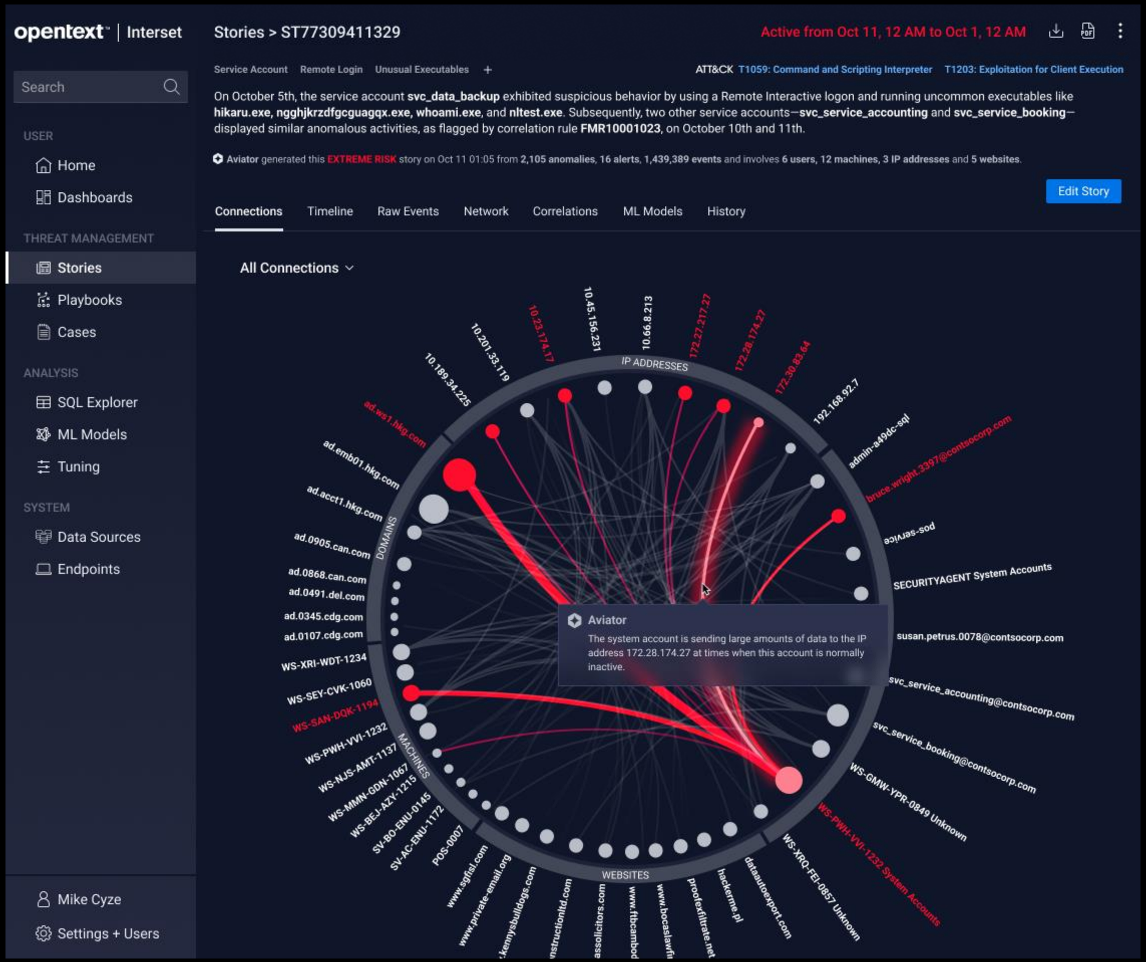

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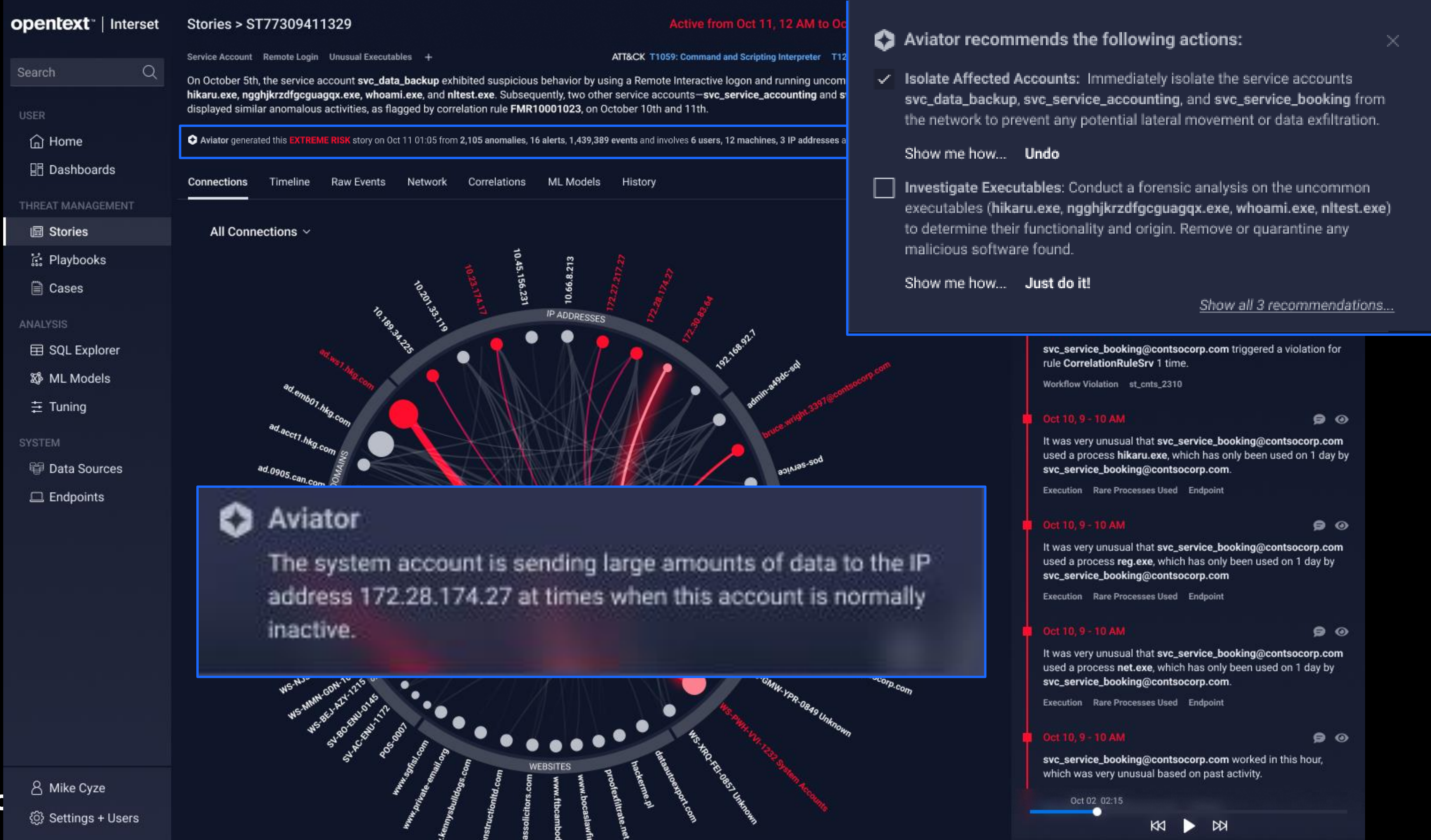

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Detect Insider Threat accurately & with one rich source

Easy to understand high-quality insight to

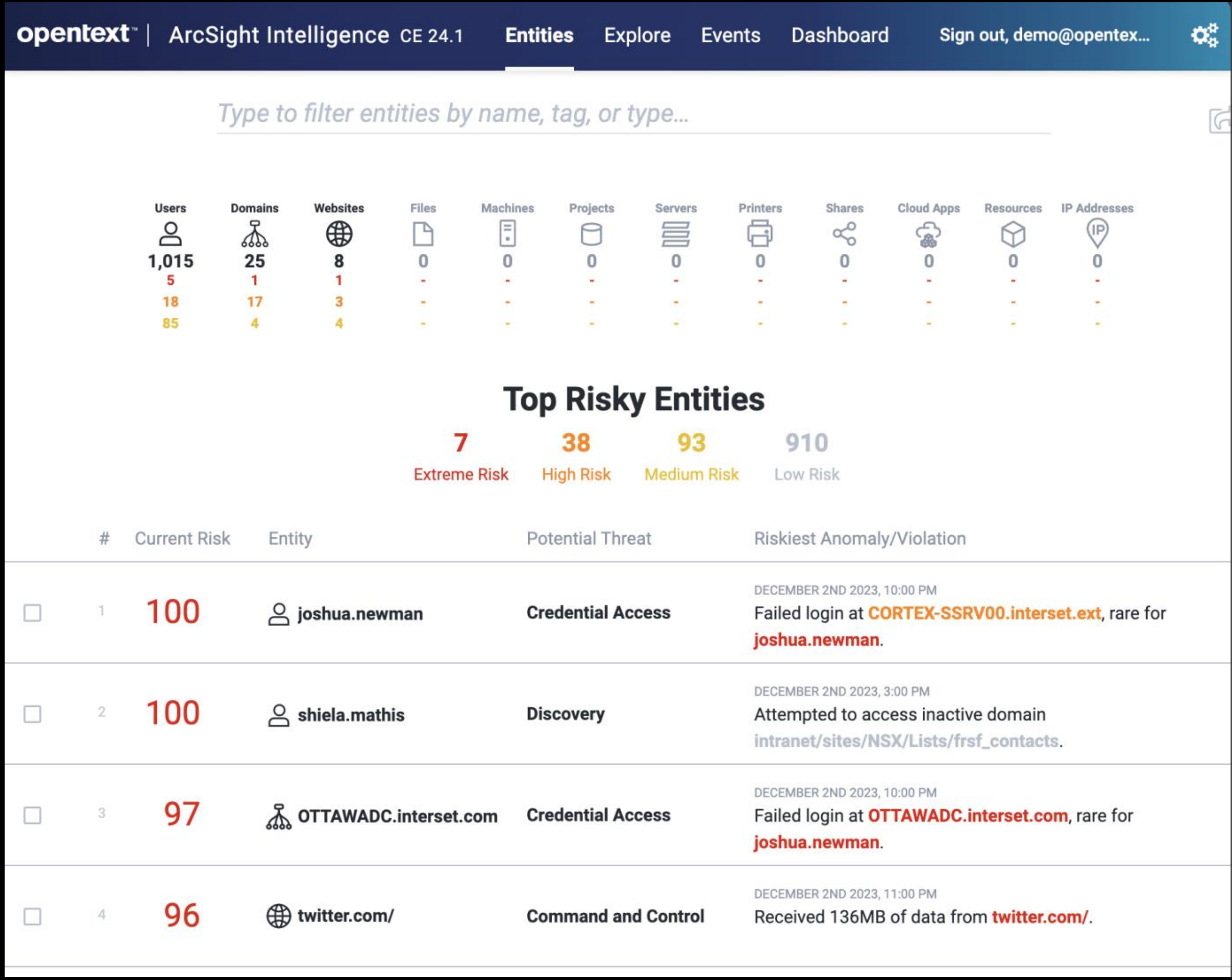
- Data Exfiltration
- Corporate Espionage
- Password Brute Forcing
- Bad IT Hygiene

CROWDSTRIKE

MS Defender

SentinelOne

Azure AD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Explore
Events
Dashboard
Sign out, demo@opentex...
Type to filter entities by name, tag, or type...

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85	4	4	-	-	-	-	-	-	-	-	-

Top Risky Entities

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Extreme Risk	High Risk	Medium Risk	Low Risk

	#	Current Risk	Entity	Potential Threat	Riskiest Anomaly/Violation
☐	1	100	joshua.newman	Credential Access	DECEMBER 2ND 2023, 10:00 PM Failed login at CORTEX-SSRV00.interset.ext, rare for joshua.newman.
☐	2	100	shiela.mathis	Discovery	DECEMBER 2ND 2023, 3:00 PM Attempted to access inactive domain intranet/sites/NSX/Lists/frsf_contacts.
☐	3	97	OTTAWADC.interset.com	Credential Access	DECEMBER 2ND 2023, 10:00 PM Failed login at OTTAWADC.interset.com, rare for joshua.newman.
☐	4	96	twitter.com/	Command and Control	DECEMBER 2ND 2023, 11:00 PM Received 136MB of data from twitter.com/.

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Cognitive / Responsive Cyber Defense (XDR +)

Warning Signals

Threat detection and hunting earlier to minimize dwell time

Far-space Adversary Signals

Early warning signals and adversary analytics that indicate an imminent or impending attack.

Behavioral Signals

User behavior analytics to identify insider threats often associated with compromised accounts/credentials.

Correlation

Real-time correlation that provides instant visibility into known threats as well as suspicious patterns.

Network Detection

Network telemetry to detect lateral movement, and anomalous traffic and provide forensic playback.

Identity and Endpoint Controls

Identity account and endpoint blocking, containment, re-imaging, and forensics

ATT&CK* Enterprise Matrix

WoA
WoC

Warnings of Attack
Warnings of Compromise

IoA

Indicators of Attack

IoC

Indicators of Compromise

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Cyber resilience

- Protect apps, data and identities
- Detect & respond

Human capital

- Provide virtual assistants
- Human & AI partnership
  1 + 1 = 3

Digital transformation

- Aviator boosts your growth
- Enable your AI with your data

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How can AI Aviator secure your business?

opentext.ai | phnevkovsky@opentext.com

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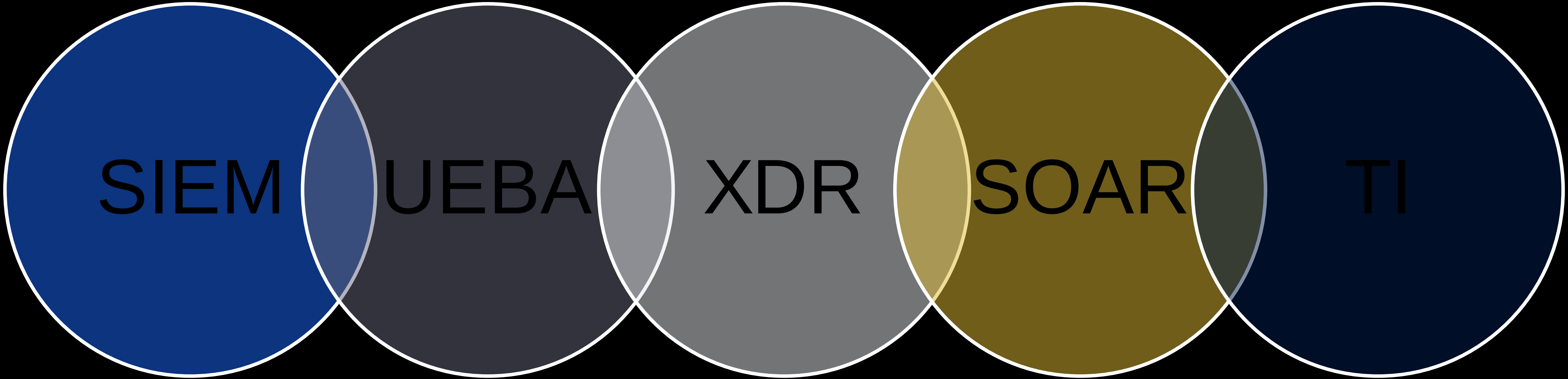
Security analytics convergence



SIEM

UEBA

XDR

SOAR

TI

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ArcSight Intelligence unique values

Minutes instead of days or never

Accurate Detection

Self-learning Intelligence

Friction-less Integration

Reduce TCO

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Enable your AI models and sensitive data analytics

AI data challenges now and forever

- Data sprawl
- Compliance mandate
- Sensitive data leak
- Public environments
- Biases & pollution

Discover	• Structured & unstructured
Classify	• Understand risk
Act	• Sanitize & protect

Voltage Fusion Data Privacy and Protection

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