Visibility & Security into Hardware Assets
Hardware Access Control (HAC)

For Federal

Federal agencies and the nation's critical infrastructure—such as energy, transportation systems, communications, and financial services—depend on IT systems to carry out operations and process essential data.

But the risks to these IT systems are increasing—including insider threats from witting or unwitting employees, escalating and emerging threats from around the globe, and the emergence of new and more destructive attacks.

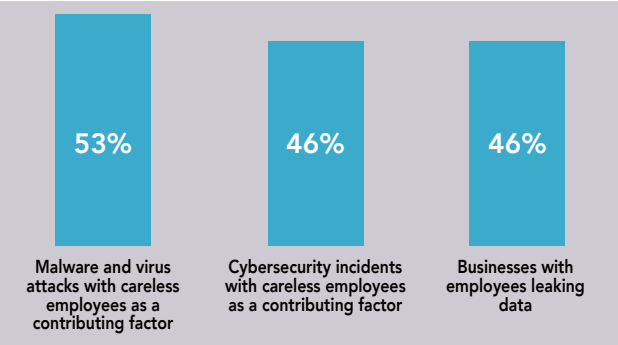
As per GAO's recommendation – Establishing a comprehensive cybersecurity strategy and performing effective oversight with regards to mitigation of global supply chain risks and possible malicious hardware is of the utmost importance.

Tackling this challenge requires complete visibility to your Hardware assets, regardless of their characteristics and the interface used for connection, as attackers take advantage of the "blind" spots – mainly through USB Human Interface Device (HID) emulating devices or Physical layer network implants.

Securing your network assets at the hardware layer by using a field proven solution developed by Cyber Physical Security experts, will be the first step in bringing your cyber security posture to the next level.

Key Challenges

- Total visibility is required to account for all of the agencies IT/OT/IoT assets - Knowing what you have, protecting what you own.
- Manipulated HID devices, which impersonate as legitimate devices, sharing the same logical identification, cannot be identified with existing solutions.
- Physical layer implants or spoofing devices cannot be identified by existing Network Access Control (NAC)/Intrusion Detection System (IDS) solutions, as they have visibility from L2 (MAC) and above.



How Sepio Fixes the problem

By discovering rogue devices through physical layer hardware fingerprinting and behavior analytics, SepioPrime, which orchestrates Sepio's solution, provides alerts for security threats, enforces policies and delivers risk insights and best practices recommendations. By supplying organizations with full visibility of the enterprise's IT assets, a stronger cybersecurity posture is achieved with the following highlights -

- Graphical dashboards
- Security status summary
- Policy management
- Risk insights
- Report engine
- Standalone or VM installation
- SIEM and NAC integrations
- Open APIs

How does it work

Peripheral Security

Sepio Endpoint Agent

Physical Layer, Interface & Behavior Information →

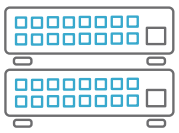
SepioPrime

Fingerprint & Machine Learning

Discover & Block →

- USB Attack Tools
- Unmanaged Peripherals
- Vulnerable Peripherals
- Device Management

Network Security



Network Switches

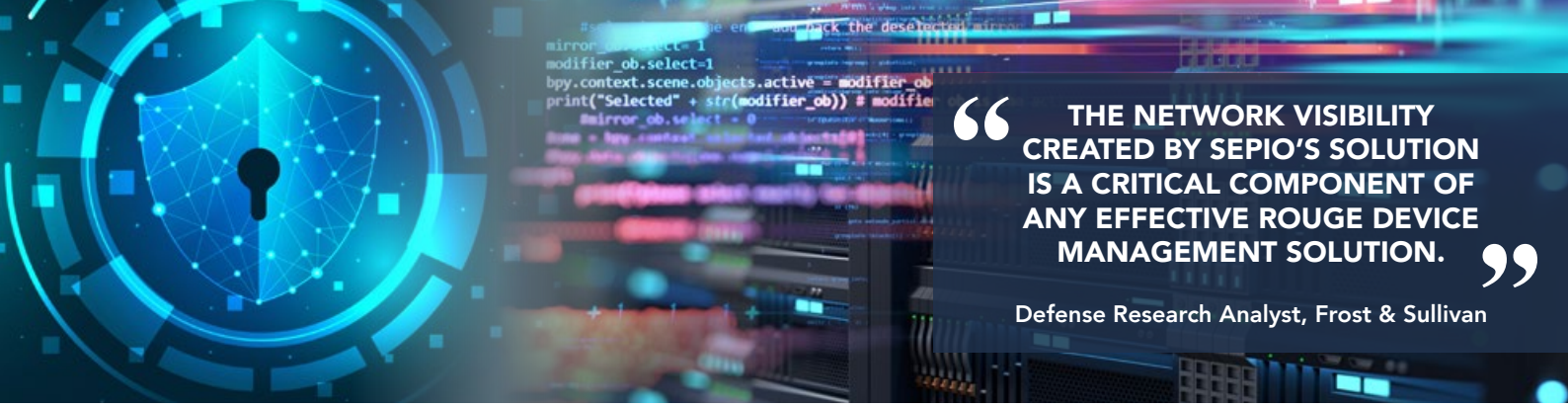
SSH Polling Switches (read only)
Physical Layer Information →

SepioPrime

Fingerprint & Machine Learning

Discover →

- Invisible Network Implants
- Switch Vulnerabilities
- Unmanaged Network Devices
- Manipulated Hardware



> THE NETWORK VISIBILITY CREATED BY SEPIO'S SOLUTION IS A CRITICAL COMPONENT OF ANY EFFECTIVE ROUGE DEVICE MANAGEMENT SOLUTION.
>
> Defense Research Analyst, Frost & Sullivan

- **Network Security:** works at the Physical Layer, polling switches to analyze what is happening at that layer and detecting all devices including rogue devices plugged into the Ethernet network.
- **Peripheral Protection:** guards against rogue devices connected to USB ports through multiple security layers, including real-time behavior analysis of suspicious devices. A Rogue Device being used to carry out an attack on an organization would be detected and blocked.
- **SepioPrime:** orchestrates Sepio's solution and presents the overall status and security dashboards. It also alerts for security threats, defines and distributes the device usage policies and delivers risk insights and best practices recommendations.

Use Cases

Visibility Gap

Transparent Network Device that was found on a network in a Tier 1 bank.

- Can you detect it?
- Do you have a visibility to your hardware assets that are connected to your infrastructure?
- Do you have any idea about unmanaged devices in your network?
- Do you know how many and what peripherals are connected to your endpoints?

Insider Threat

In 2019 a US Federal Agency facility had been hacked by a Raspberry Pi device that was linked to the agency's network without authorization. Attacker exploiting this device were able to facilitate a massive breach of classified data.

- Are you sure you don't have hidden implants in your network?
- Are you sure you know what your endpoint devices really are?
- Can you be sure that you don't have tapping devices inside your network?
- Do you know how many devices are being charged through a USB port on endpoints?

Supply Chain

A malicious peripheral device was found in an air-gapped network in a Power plant

- How do you know if you really received the hardware you bought?
- How do you know that your hardware was not modified/switched/tampered during upgrade or maintenance sessions?

Sepio phased Trial Program

Demo	POC - Lab/Production	Partial/Full production deployment
>> Demo Feedback report	>> PoC report	>> Complete Visibility & RDM coverage

CAGE CODE - 8FB16

GSA

SEWP V

DUNS # - 100288214

NAICS CODES

511210 541519 541512 541511 541330 541690 541618 518210 541611

About Sepio

Sepio is disrupting the cyber-security industry by uncovering hidden hardware attacks. Sepio Prime provides security teams with full visibility into their hardware assets and their behavior in real time. A comprehensive policy enforcement module allows administrators to easily define granular device usage rules and continuously monitor and protect their infrastructure. Leveraging a combination of physical fingerprinting technology together with device behavior analytics, Sepio's software-only solution offers instant detection and response to any threat or breach attempt coming from a manipulated or infected element.

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