

## Solving Modern IT Asset Inventory and Vulnerability Detection Challenges

### Introduction – Why Device Profiling Matters

As modern networks face a growing Internet of Things (IoT) footprint, organizations face a daunting task: managing their ever-growing device inventories and adopting new security measures. Traditional approaches fall short on profiling xIoT devices, leaving networks vulnerable to unidentified and unmanaged devices and missed vulnerabilities. This paper explains why traditional profiling approaches must be supplemented for more complete IT asset inventories and vulnerability detection, especially on xIoT.

### The Limitations of Traditional Approaches

- 1) Active scanners:
  - rely on endpoint agents or by connecting to open ports to gather profiling information, but IoT devices often don't support agents and have no/limited open ports
  - are intrusive and risk overwhelming resource-constrained devices
- 2) Passive monitoring and profiling:
  - is hindered by encryption
  - requires sensitive data/packet collection,
  - fails to detect xIoT device vulnerabilities & exploits that require active inspection
- 3) Asset management solutions inherited the limitations of scanning and passive monitoring.
- 4) Manual inventory management proved impractical due to the exponential growth and increasing heterogeneity of IoT devices.

### Be the Hero with IoTSecure's Enhanced Device Profiling for More Complete Inventory Management and Security

By combining active inspection that's designed to be safe on even sensitive IoT devices, with passive profiling and a huge library of profiled devices, IoTSecure's unique approach is designed to help you overcome the limitations of traditional approaches.

The result is enhanced device profiling, resulting in more complete and accurate device inventories and vulnerability detection. It's continuous, always on and always up to date.

- Proprietary multi-faceted, agentless approach integrates non-intrusive active scanning with AI-enhanced passive monitoring and service profiling for enhanced device profiling
- Extensive library containing millions of device fingerprints for accurate profiling and vulnerability detection
- Simple, rapid, set it and forget it deployment without relying on endpoint agents, network TAP/SPAN ports, sensitive data, or packet collection
- Safe on the network and safe on even resource-constrained IoT devices
- Continuous discovery and profiling of ALL devices, with detailed device identification (category, type, manufacturer, ports, OS, manageable or unmanageable)



- Seamless integration of device context with existing tools and processes (Asset Management, SIEM, ITSM, CMDB, CMMS, NAC, etc.) for increased efficiencies in IT asset management & inventory supplementation, segmentation, and remediation prioritization

IoTSecure's unique combination of profiling techniques vastly improves profiling on xIoT devices.

Profiling Techniques for xIoT	Traditional Scanning	Passive Monitoring: SASE & SIEM	IoTSecure™
Scan open ports	✓	✗	✓
Endpoint agent	✓	✗	NOT USED
Utilizes identity services (SNMP)	NOT USED	✓	✓
TAP/SPAN port	NOT USED	✓	✓
- fully functional without TAP/SPAN	NOT USED	✗	✓
Monitor cloud communications	NOT USED	✓	✓
- including encrypted traffic (HTTPS)	NOT USED	MAYBE	✓
- profile & identify cloud endpoints	NOT USED	✗	✓

IoTSecure goes to great lengths to profile xIoT devices because they have different network profile characteristics than traditional devices.

Device Profiling Characteristics	Active Scanning	Endpoint Agents	Passive Monitoring	IoTSecure™
<b>Traditional:</b> (i.e. Computers, Servers, Laptops, etc.)				
Common OS & services	✓	✓	✓	✓
Numerous open ports	✓	✓	NOT USED	✓
Support identity services	NOT USED	NOT USED	✓	✓
<b>Common:</b>				
Communicates to cloud	NOT USED	✓	✓	✓
Encrypts outbound traffic	NOT USED	✓	✗	✓
<b>xIoT:</b>				
Custom OS & Services	MAYBE	✗	MAYBE	✓
Few/No Open Ports	✗	✗	NOT USED	✓
Lack IT identity services	✗	✗	✗	✓

With IoTSecure, you can revolutionize the way your organization manages device inventories and threat detection in an IoT world with confidence and clarity, ensuring a secure and well-managed future for all.

**Try it free, it takes just 5 minutes!**

Experience the power of IoTSecure today with our no-obligation, 30-day free trial of the IoT-mini evaluation unit! Visit: <https://iotsecure.io/iotmini>

**Note:** Outside of the scope of this paper, IoTSecure also provides dynamic micro-segmentation to automatically detect and block anomalous external communications and lateral movement without disrupting intended device functionality.