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Threat Management

Internet of Things (IoT) Penetration Testing

Cybercriminals continuously evolve their attack tactics and digital attributes to bypass the latest security controls and exploit vulnerabilities in systems, software, and endpoints. In this challenging threat environment, you need a partner that can help you manage your risk.

Tevora IS that partner. Our certified and experienced engineers proactively test your IT environment to uncover security risks, remediate existing threats and vulnerabilities, assess compliance with industry security requirements, and train users on security awareness. If you suspect a compromise, Tevora's elite team can isolate the threat, clean the system, and build your defenses to help protect against future attacks.

The Internet of Things (IoT) is a network of connected "things"—computing devices that are embedded in everything from washing machines to automated manufacturing equipment. These devices have sophisticated capabilities and can connect to the Internet and each other, allowing for tremendous efficiencies in our daily lives and opportunities for business. Unfortunately, attackers have found ways to benefit, too, by leveraging the advanced functionality and often rudimentary security of these devices for malicious purposes.

Tevora's IoT Penetration Testing Process

1. Reconnaissance

- Perform static analysis of hardware and firmware
- Identify supporting platforms and services
- Perform dynamic analysis of device communication, including protocols and traffic over Bluetooth, Wi-Fi, ZigBee, and other networks
- Conduct white box testing, including reviews of:
  - Documentation
  - IoT platform architecture

2. Assessment

- Perform application logic analysis
- Identify known vulnerabilities including:
  - Transport security issues
  - Known vulnerable services
- Conduct input validation and fuzzing
- Develop proof-of-concept exploits to demonstrate potential IoT vulnerabilities

3. Report

- Provide a detailed findings report with recommended remediation
- Retest with validation
- Present findings to executive team
- Create an executive summary of findings for management

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Our Purpose

To protect the world from cyberthreats.

Insightful Advice
Expert Resource
Confident Delivery

About Us

Founded in 2003, Tevora is a specialized management consultancy focused on cybersecurity, risk, and compliance services. Based in Irvine, CA, our experienced consultants are devoted to supporting the CISO in protecting their organization's digital assets. We make it our responsibility to ensure the CISO has the tools and guidance they need to build their departments, so they can prevent and respond to daily threats.

Our expert advisors take the time to learn about each organization's unique pressures and challenges, so we can help identify and execute the best solutions for each case. We take a hands-on approach to each new partnership, and—year after year—apply our cumulative learnings to continually strengthen the company's digital defenses.

Go forward.
We've got your back.

Proactively Address IoT Vulnerabilities

Tevora's IoT penetration testing enables you to embrace the potential of IoT while keeping your organization protected. Our team applies advanced expertise and capabilities, and leading tools, to determine the potential risks of your IoT devices, connections, and gateways linking your IoT devices to your IT infrastructure or cloud. We can help you create forward-thinking policies that address IoT vulnerabilities before attackers discover them.

Defend the Last Frontier

Tevora's penetration testing helps you defend the last frontier of your network by focusing on commonly overlooked devices such as printers, network appliances, and other unmanaged hosts. Attacks on these platforms often involve exploitation of unpatched systems or recovery of system credentials that allow for legitimate access to other systems (lateral movement).

Tevora's Holistic Approach

Our holistic approach to IoT penetration testing includes IoT device white box testing and platform architecture review, static analysis of hardware and firmware, and dynamic analysis of device communications, including protocols and traffic over Bluetooth, Wi-Fi, ZigBee, and other networks. This testing enables Tevora's threat team to determine the impact a targeted IoT attack could have on your organization's core platforms and services. We use testing results to make recommendations for securing your infrastructure against the compromise of IoT devices (e.g., reverse engineering device hardware or impersonating a device).

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