MOCANA

Simplify and Scale Device Security Lifecycle Management

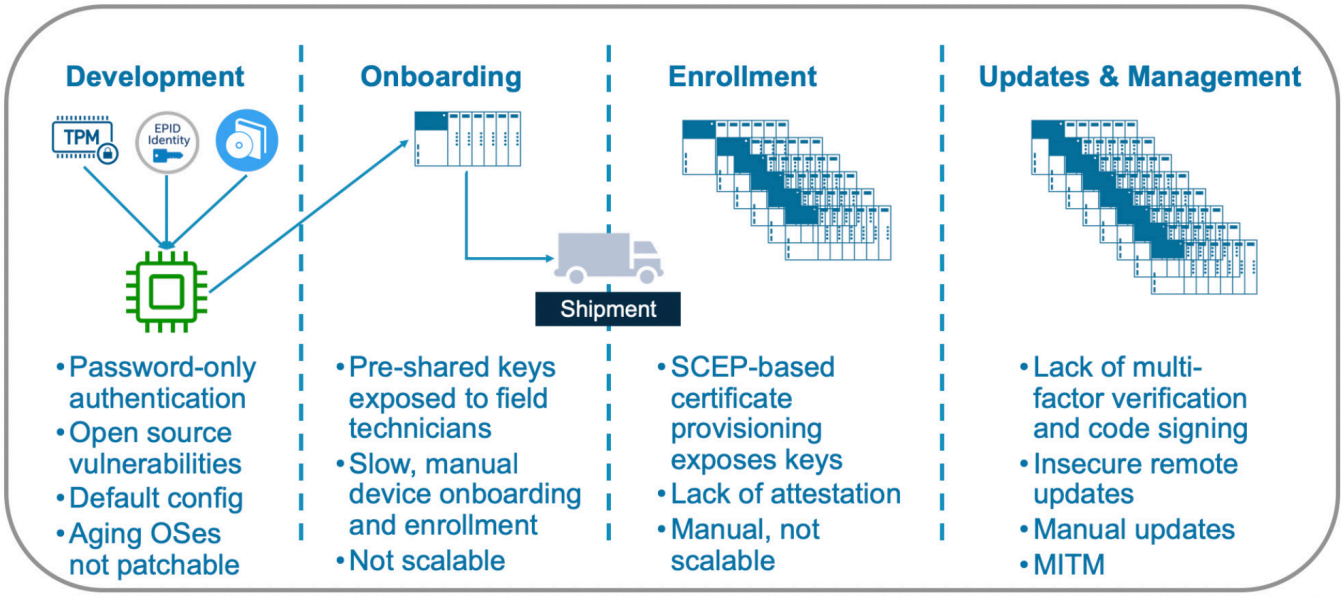

Figure 1. Challenges of Managing the Device Security Lifecycle

The Cost of Cybersecurity Breaches

The United States Council of Economic Advisors estimates that malicious cyber activity costs the U.S. economy between $57 and $109 billion per year.[i] The NotPetya attack alone may have cost companies more than $1 billion, with A.P. Moller-Maersk and FedEx each experiencing an estimated $300 million in damages.[ii] It is believed that Saudi Aramco spent more than $1 billion to replace 35,000 computers damaged by the Shamoon attack. The WannaCry virus that crippled computers across 150 countries could cost companies up to $4 billion.[iii]

Challenges of Device Security Management

Protecting and managing the security of industrial and IoT devices is challenging. According to IMS Research, 85% of all industrial devices in the field are considered to be legacy, and critical infrastructure operators and industrial automation companies are struggling to protect decades-old equipment. Securing the supply chain requires an understanding of the device security lifecycle.

Costly Manual Updates and MITM Attacks

Aging devices with limited security protections need to be updated and patched manually by field technicians, often using insecure methods. Field technicians with access to private keys or device credentials can be compromised, allowing keys to get into the hands of malicious actors who can stage man-in-the-middle (MITM) attacks. Dispatching a field technician to manually update a device can cost hundreds of dollars per incidence.

Unpatchable Workstations and Devices

Legacy industrial control system (ICS) devices have an average lifespan of 15 to 35 years. Many devices and workstations that are using unsupported operating systems are especially vulnerable. Mainstream support has ended for Microsoft Windows XP, Vista, 7 and 8. Additionally, Windows XP, Vista and 7 have reached the end of their Extended Support period, which means that Microsoft no longer provides bug fixes and security patches.

Short Maintenance Windows

Due to the high reliability and uptime requirements of the industrial sector, maintenance windows to upgrade aging equipment can be very short. Even if patches are available, staging a manual upgrade of software on industrial systems can be difficult.

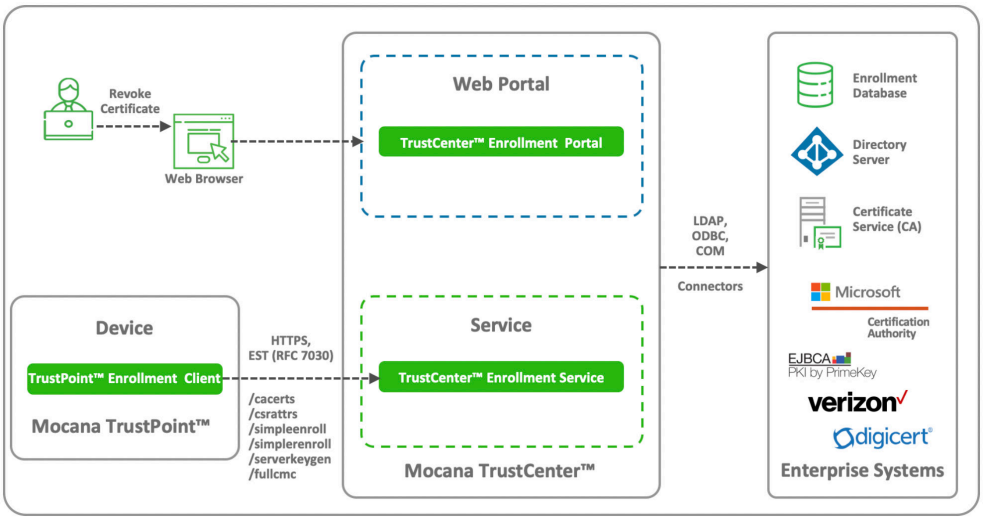

Figure 2. Mocana TrustCenter™ Automated Lifecycle Management

Mocana TrustCenter™ - Automated Device Security Lifecycle Management

Mocana TrustCenter™ is a services platform that automate the device security lifecycle. Mocana TrustCenter™ Enrollment Service (TCES) automates key, certificate and credential management. Mocana TrustCenter™ Update Service (TCUS) automates secure firmware updates. These services run on private or public cloud servers.

Mocana TrustCenter™ automates certificate enrollment, renewal, and rekey operations that enable secure device onboarding, trusted updates, secure transport and data protection required by IoT applications.

Mocana TrustPoint™ - Device Security Software

Mocana TrustPoint™ is comprised of comprehensive embedded security software that is delivered as binary clients or source code that runs on Linux, Windows or a real-time operating system. TrustPoint™ includes a FIPS 140-2 level 1 validated crypto engine. Mocana TrustPoint™ Enrollment Client (TPEC) can be installed as a binary to the target operating environment without impacting the application. The TPEC includes secure session management, certification chain verification, support for containers and virtual machines, and a comprehensive set of Enrollment over Secure Transport (EST) commands. TPEC leverages the TCES as a protocol translation layer between the EST protocol (RFC 7030) and COM/REST API connectors to enterprise and commercial certificate authorities (CA) for certificate lifecycle management.

Simple Credential Management and Updates

Operators and asset owners can use Mocana TrustCenter™ to securely and remotely provision and manage keys, digital X.509 certificates, device credentials, and software updates. Using TrustCenter™ simplifies the management of the device security lifecycle. This dramatically lowers the cost of operational device security management.

---

[i] https://www.whitehouse.gov/wp-content/uploads/2018/03/The-Cost-of-Malicious-Cyber-Activity-to-the-U.S.-Economy.pdf
[ii] https://www.cybereason.com/hubfs/Content%20PDFs/Paying-the-Price-of-Destructive-Cyber-Attacks.pdf
[iii] https://www.cbsnews.com/news/wannacry-ransomware-attacks-wannacry-virus-losses/

Mocana Corporation
111 W Evelyn Ave, Ste 210
Sunnyvale, CA 94086
tel (415) 617-0055 toll free (866) 213-1273
iotsales@mocana.com