

# Continuous Network Security Service

Automated certificate and key management  
for millions of connected devices

**Verimatrix  
SecureCycle**

PRODUCT BRIEF



## CONTINUOUS NETWORK SECURITY SERVICE

In an era where connected devices form the backbone of critical communications and digital services, ensuring continuous network trust and data in transit security are not optional, they are foundational.

**SecureCycle** from **Verimatrix** introduces a cloud-based solution designed to securely and seamlessly manage, provision, renew, and revoke digital certificates and cryptographic keys across large-scale device fleets.

By eliminating the need for firmware updates or manual interventions, Verimatrix SecureCycle transforms how telcos, IoT manufacturers, and service providers sustain device security, compliance, and uptime, while reducing operational complexity and cost.

### The Evolving Security Landscape

Connected devices, from broadband modems to IoT gateways, are deeply embedded in the global network infrastructure. They authenticate with cloud platforms, exchange sensitive data, and enable services that consumers and enterprises rely on daily.

The **security of these devices depends on digital certificates and cryptographic keys** must be generated and renewed periodically and securely to remain valid.

#### Renewals are required due to:

- **Cloud service policies** (AWS, Azure, Google Cloud, etc.) enforcing certificate rotation.
- **Cryptographic certificate deprecation.**
- **Evolving industry regulations** such as the **EU Cyber Resilience Act** and **ETSI EN 303 645.**
- **Certificate Authority (CA) expirations or replacements.**
- **Compliance** and Audit requirements.
- **Limited lifespan of certificates** (e.g. TLS certificate validity of 45 days).

Managing these certificates and these renewals require an operational activity that can be costly, time-consuming, disrupts a smooth user experience, and might deviate from the company purpose.

For any service provider managing millions of deployed devices, the challenge scales exponentially.

# INTRODUCING VERIMATRIX SECURECYCLE: CONTINUOUS NETWORK SECURITY

**Verimatrix SecureCycle SaaS** delivers a simple but powerful proposition: it **securely generates and renews certificates and cryptographic keys, automatically, and without user disruption.**

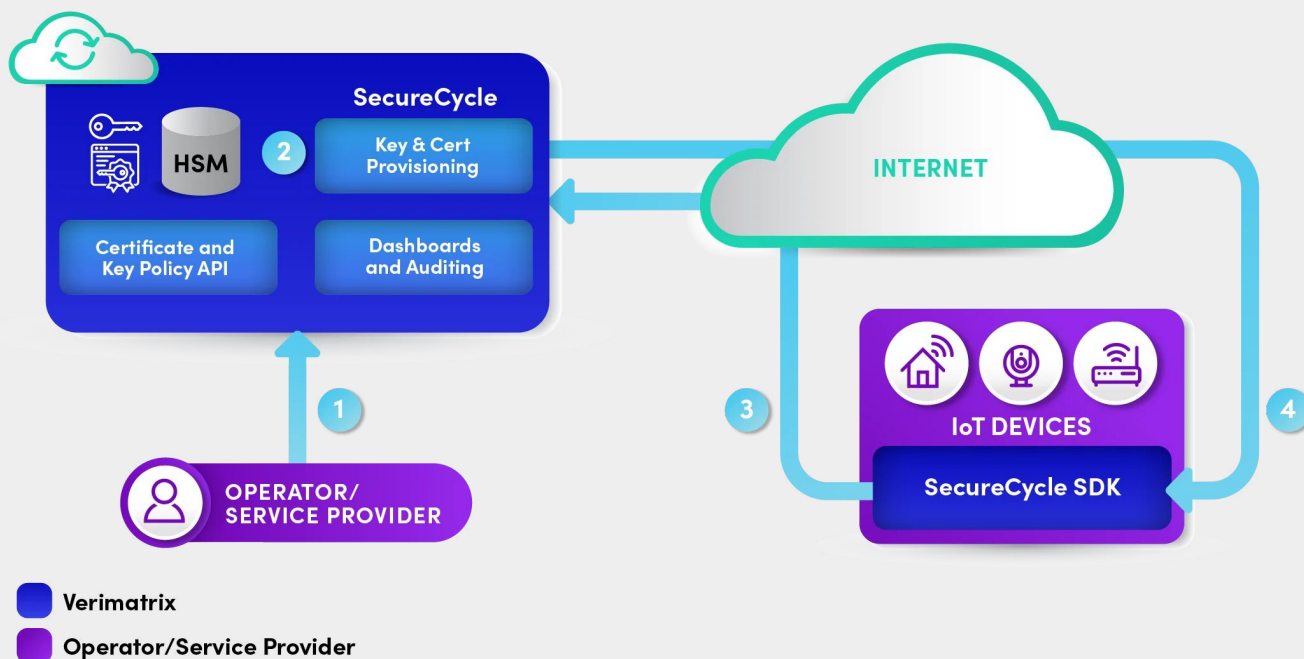
Built upon Verimatrix's extensive experience in in-field provisioning and key management for millions of connected devices, Verimatrix SecureCycle bridges the gap between cloud-driven security requirements and real-world operational limitations.

## How It Works

The solution has two key components:

1. The **Verimatrix SecureCycle Cloud Service** manages, revokes, and distributes certificates and keys.
2. A **lightweight SDK** embedded in the device or introduced through a firmware update or during manufacturing. The SDK manages local trust storage and communicates securely with the SecureCycle Cloud Service over **TLS**.

The delivery of certificates or keys is depicted in the figure below.



## Operational Flow:

1. The operator or service provider configures the Key/Certificate renewal frequency and sets revocation rules.
2. Verimatrix SecureCycle service generates certificates and keys for Devices and Servers based on the operator policies.
3. Verimatrix SecureCycle client SDK makes a secure request for a certificate/key renewal and validation.
4. Based on the configured rules new keys/certificates are delivered or revoked.

## Optional operations:

- The operator can **own the Root Certificate Key** to keep ownership of the certificates and keys generated.
- The operator can utilize the service to distribute **own certificates and keys** in a secure manner.

## The result:

Devices stay authenticated, compliant, and secure.





## Key Benefits

### Zero-Disruption Security Renewal

Verimatrix SecureCycle eliminates downtime caused by manual or firmware-based certificate updates. Renewals occur silently in the background, keeping devices online and operational.

### Operational Efficiency

Traditional renewal campaigns require significant engineering, QA, and logistics effort. Verimatrix SecureCycle replaces these with an **automated lifecycle**, reducing:

- Infrastructure-management effort for certificates and keys.
- Development time for firmware updates.
- Release management cycles.
- Technical support calls and customer escalations.

### Continuous Compliance and Trust

As new cybersecurity and privacy regulations tighten, Verimatrix SecureCycle provides a ready-made compliance pathway.

It ensures all devices maintain valid certificates and adhere to NIST cryptographic best practices. This is essential for passing audits, sustaining cloud access, and guaranteeing end-user peace of mind.

### Extended Device Lifetime

By decoupling security renewals from firmware updates, devices can stay operational and secure well beyond their initial support period, protecting both customer investments and sustainability goals.

### Cost Predictability and Scalability

Verimatrix SecureCycle's SaaS model enables predictable, device-based pricing that scales with fleet growth. Whether managing thousands or hundreds of millions of devices, customers benefit from a consistent service cost structure and ISO 27001-certified cloud infrastructure.



## Technical Highlights

Capability	Description
<b>Secure Management of Root Certificate keys</b>	Hardware Security Module (HSM) storage for Root keys used to generate Server and Client keys and certificates.
<b>Secure Provisioning</b>	Over-the-air delivery of new certificates and keys using encrypted channels and mutual authentication.
<b>Automated Renewal</b>	Configurable renewal cycles and trigger events without firmware dependencies.
<b>Revocation &amp; Replacement</b>	Flexible revocation policies for compromised or obsolete credentials.
<b>Service Agnostic</b>	Compatible to issue certificates from any public cloud or private cloud services.
<b>Lightweight SDK</b>	Minimal footprint for easy integration into embedded systems.
<b>Comprehensive Dashboards</b>	Centralized visibility into deployed certificates, certificate expiry information, renewal status, revoked status, certificate key size, certificate algorithms and device reports.
<b>Support &amp; Services</b>	24/7 global technical support and professional services for integration and lifecycle management.



## Operational Model

Verimatrix SecureCycle operates as a multi-tenant SaaS platform hosted on AWS, providing:



This approach delivers a secure, scalable, and financially sustainable path for network security renewal at scale.



Verimatrix  
**SecureCycle**

The future of connected ecosystems depends on continuous, automated trust. Manual renewals, firmware updates, and reactive security patches are no longer sustainable in a world of billions of connected devices.

With **Verimatrix SecureCycle**, operators, manufacturers, and service providers gain a proactive, scalable, and cost-efficient way to maintain secure communications, without disruption, without complexity, and without compromise.

Verimatrix SecureCycle transforms network security from a maintenance burden into a competitive advantage.

### Global Reach with Localized Support

Benefit from Verimatrix's extensive global presence, backed by local, round-the-clock support. Our team ensures a smooth integration process and ongoing assistance, making the transition to a more sophisticated and flexible streaming service effortless.

## LEVERAGE THE VERIMATRIX PARTNER ECOSYSTEM

Verimatrix thrives on a robust network of strategic alliances with leading pay-TV technology providers and Consumer Electronics (CE) manufacturers. These partnerships focus on ensuring seamless integration, operational ease, and enhanced value for our customers. Our ecosystem encompasses a wide range of industry specialists, from content aggregation and system integration, middleware systems, to hardware manufacturers like set-top boxes and smart devices. This broad and dynamic network allows Verimatrix to offer innovative, pre-integrated solutions, aligning with both current and future market demands.





## About Verimatrix

Verimatrix (Euronext Paris: VMX) helps power the modern connected world with security made for people. We protect digital content, applications, and devices with intuitive, people-centered and frictionless security. Leading brands turn to Verimatrix to secure everything from premium movies and live streaming sports, to sensitive financial and healthcare data, to mission-critical mobile applications. We enable the trusted connections our customers depend on to deliver compelling content and experiences to millions of consumers around the world. Verimatrix helps partners get to market faster, scale easily, protect valuable revenue streams, and win new business. To learn more, visit [www.verimatrix.com](http://www.verimatrix.com).



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