

## Advanced Entropy Security For The Post-Quantum Era

Fortify Your Critical Assets With True Random Entropy & Post-Quantum Cryptography

Encryption is under constant threat from both pre-quantum vulnerabilities and post-quantum risks. High-performance computing and cloud advancements have surpassed the capabilities of pseudo-random methods, leaving sensitive data and intellectual property exposed. EntropiQ addresses these challenges with true random entropy and proven technologies to secure communications and data without impacting performance.

### The Quantum Threat

Organizations Face an Immediate and Critical Security Threat

- Current encryption is vulnerable to advanced computing and quantum threats.
- Adversaries use "harvest now, decrypt later" strategies.
- Quantum computers will break traditional encryption at scale.
- NIST has introduced quantum-resistant cryptographic algorithms.
- Upgrading to post-quantum encryption is a critical priority.
- Encryption faces threats from both current and future technologies.



Data resides across enterprises, cloud environments, and connected devices.



Adversaries are stealing data now with plans to decrypt it in the future.



**Post-quantum cryptography secures interoperability and future protection.**

### The EntropiQ Solution

Immediate Security Enhancement

- Strengthens existing encryption with true random entropy.
- Eliminates vulnerabilities in pseudo-random number generation.
- Provides verified chain of custody to prevent entropy poisoning.

Flexible Post-Quantum Strategy

- Multiple implementation paths for different security needs.
- API access to Post-Quantum Algorithms (PQA).
- Innovative Post-Quantum Encryption (PQE) tunnel overlay.

Performance-Optimized Automation

- Automated entropy eliminates manual key handling.
- Smart metering alerts at thresholds & scales use.
- Real-time crypto enable on-demand keying.

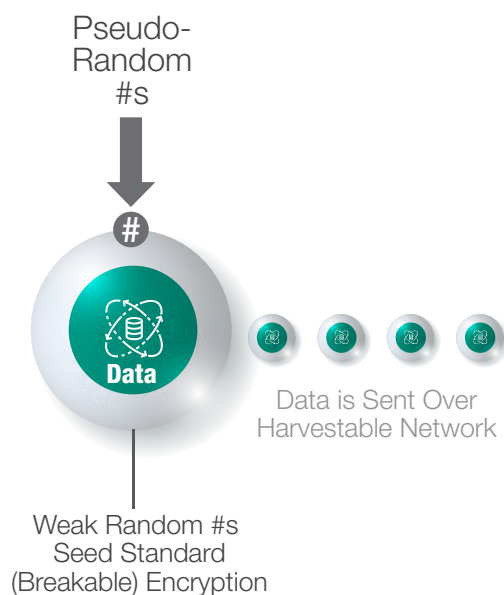
Cost-Effective Implementation

- SaaS delivery model for scalable deployment.
- Accessible for organizations of all sizes.
- No infrastructure overhaul required.

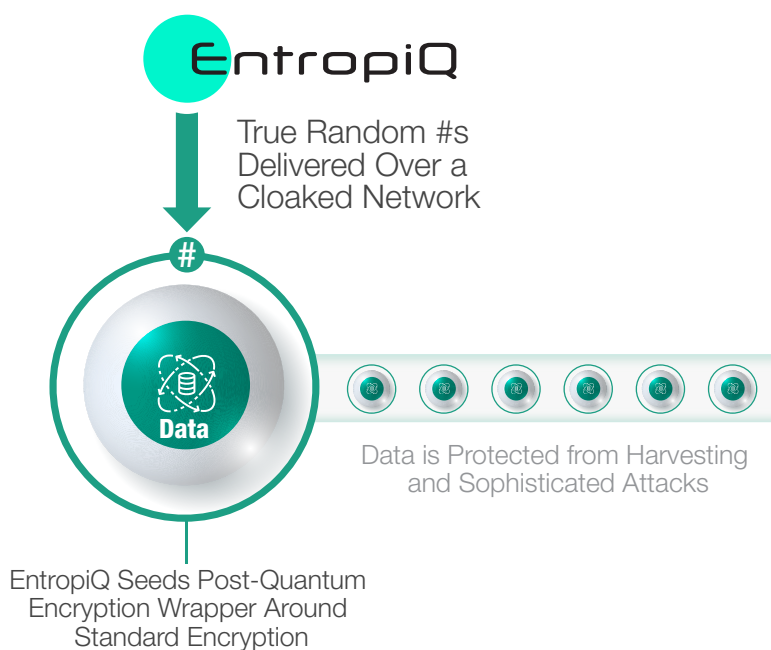
## Entropiq Protects Organizations Against Current and Future Quantum Threats

In the current environment, encryption relies on weak pseudo-random seeds, leaving data vulnerable to harvesting and decryption by sophisticated attackers. Entropiq's quantum-safe environment uses true random numbers delivered over a cloaked network, wrapping standard encryption with post-quantum security to protect data from threats.

### CURRENT ENVIRONMENT



### ENTROPIQ'S QUANTUM-SAFE ENVIRONMENT



## Real-World Applications

- Protect intellectual property from current and future threats.
- Secure sensitive data against harvest now, decrypt later attacks.
- Enable immediate post-quantum readiness without infrastructure changes.
- Strengthen existing encryption implementations
- Support compliance requirements for enhanced security.

## Deployment Options

### SaaS Platform

Cloud-based delivery for immediate implementation and scalability.

### API Integration:

Direct access to Post-Quantum Algorithms for custom implementation.

### PQE Tunnel

Overlay solution for existing infrastructure protection.

## ABOUT ENTROPIQ

Entropiq, a US-based company, delivers innovative post-quantum security solutions. Led by seasoned executives with Fortune 50 and Intelligence Community expertise, Entropiq makes enterprise-grade security accessible to organizations of all sizes. Backed by In-Q-Tel, our platform addresses current and emerging data security challenges with an elegant, cost-effective SaaS solution.