

QUANTUM CHAIN

PRODUCT // 2026



HTTPQ:
*Hypertext Transfer
Protocol Quantum-Secure
Pilot Program*



HTTPQ

Quantum-Safe Security for Web Infrastructure

EXECUTIVE SUMMARY

Today's HTTPS/TLS infrastructure is not quantum-secure. Adversaries are already capturing encrypted traffic with the intent to decrypt it later (harvest now, decrypt later). HTTPQ upgrades the existing TLS stack to quantum-resistant encryption without changing applications, infrastructure, or workflows.

HTTPQ OVERVIEW

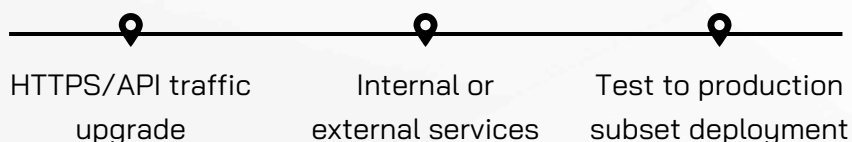
- **Quantum-secure mechanism:** Hybrid key exchange (X25519 & ML-KEM-768)
- **Zero** application changes
- Deployable as **server config, proxy, or client library**
- Configuration-level **upgrade to existing HTTPS** stack

HTTPQ PILOT OVERVIEW

Deploy HTTPQ into your environment and upgrade live traffic to quantum-safe encryption within 14–30 days.

- HTTPQ intercepts TLS handshake
- Generates audit logs & evidence
- Upgrades to Hybrid PQ encryption
- No application changes or downtime

Pilot Scope



Deployment Methods

A. STRICT MODE:
Quantum-safe connection fails

B. COMPAT MODE:
Quantum-safe preferred with
fallback audit logging

HTTPQ PILOT OVERVIEW

What You Will Prove

1. Quantum-safe HTTPS traffic live
2. Hybrid PQ encryption validated
3. Handshake-level cryptographic evidence
4. Compliance readiness (CNSA 2.0)
5. Full observability (metrics + logs)

Relevance Now

- Test to production subset deployment
- Internal or external services
- HTTPS/API traffic upgrade

Performance

<1ms added latency
(handshake only)

0% throughput impact

No runtime degradation
post-handshake

Commercial Model

- Pilot Fee: \$0
- Duration: 14–30 days
- Deployment start within 5 days
- Post-pilot: Integration + monthly + usage fees

Requirements

- Technical lead
- Test or controlled production access
- Defined pilot scope
- Internal sponsor (CISO/CTO)

Next Steps

- Confirm participation
- Select deployment mode
- Define endpoints
- Deploy within 5 days
- Live within 14-30 days

HTTPQ is not a new system. It is a quantum-safe upgrade to the internet layer your institution already relies on.