The State of PKI Security in 2026: Key Trends, Risks, and What's Breaking at Scale

Insights from a global study of 1,800+ IT and security professionals conducted by Ponemon Institute

PKI is foundational, but confidence is alarmingly low

46%
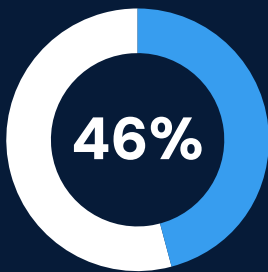
of organizations have high confidence in PKI meeting compliance requirements

< half

Less than half rate their PKI as highly effective at protecting against attacks

114,000+

Organizations manage an average of 114,000+ certificates

PKI underpins secure access, encryption, and trust. But complexity and scale are eroding confidence across the enterprise.

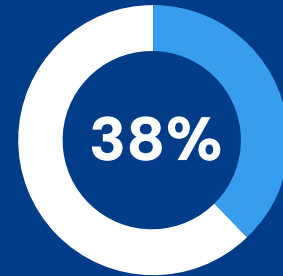# PKI is breaking down under complexity and scale

50% cite PKI misconfigurations as a top confidence blocker

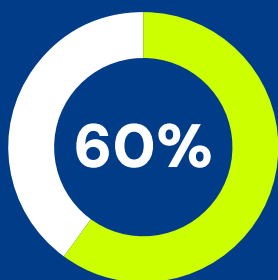**49%** report unplanned outages caused by expired certificates

38% lack visibility into certificate inventory

These aren't edge cases—they're systemic issues tied to manual processes and fragmented ownership.

PKI failures have real security consequences

60%
experienced weak cryptographic exploits

58% suffered a third-party CA compromise

56% had outages due to certificate expiration or configuration errors

Poor PKI hygiene doesn't just slow teams down. It exposes organizations to outages, exploits, and loss of trust.

Manual PKI doesn't scale to machine identity growth
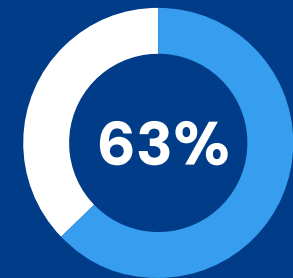
42% believe they have enough in-house PKI expertise

53% still assess PKI security manually

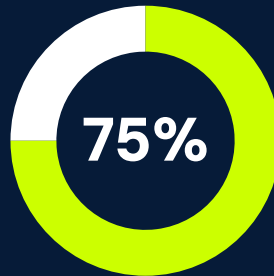**33%** evaluate PKI weekly or bi-weekly

63% currently use a managed security service provider (MSSP)

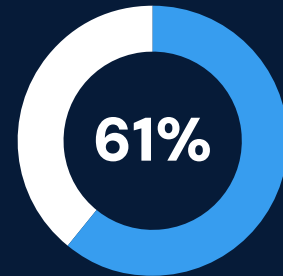Certificate growth is accelerating, but staffing, tools, and processes aren't.

High-confidence organizations take a different approach

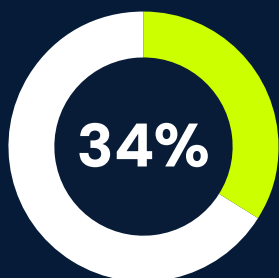High performers report fewer operational burdens and stronger compliance confidence

75% of high performers have strong visibility into certificate inventory
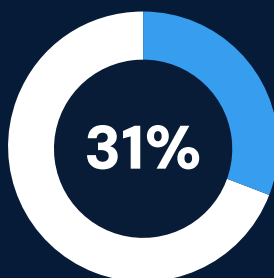
61% of high performers adopt AI to predict issues and prevent outages

The difference isn't size or industry. It's visibility, automation, and execution discipline.
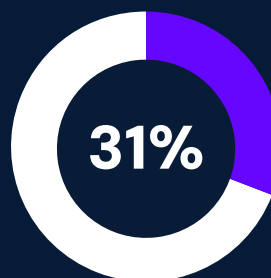
Where PKI leaders are investing next

34% are focused on achieving unified visibility across environments

31% are committed to reducing PKI complexity

31% are preparing for crypto-agility and algorithm change

These priorities reflect a shift from maintaining PKI to modernizing it—driven by scale, risk, and accelerating change.

Want the full picture?

This infographic highlights only a fraction of the findings from Ponemon Institute's global study on PKI security.

Download the full Ponemon Report

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