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How the high assurance industry stretches the limits of supply lines (and what we can learn from it)

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[PSA]
I AM NOT A CRYPTOGRAPHER

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Post quantum security

Post quantum security

Post quantum security

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A Legacy of Security and Innovation

From wartime cryptography to future ready digital defense. This timeline highlights the key moments that shaped our expertise, our partnerships and our mission to secure what matters most.

1940 – 1945

The Dutch PTT establishes a cryptography research division during World War II to improve secure communications.

1957

Philips acquires PTT's cryptographic activities, integrating them into its broader operations

1990

Philips Crypto BV is founded as an independent private company within Philips, focusing on security for industrial, business, and military communications.

1999

Fox-IT is founded, becoming the first digital investigation agency in Western Europe. Specialization: digital forensics and security testing for governments and financial institutions.

2003

Fox-IT acquires Philips Crypto technology forming the foundation for what becomes Fox Crypto.

2015

Fox-IT is acquired by NCC Group (UK). Due to security concerns raised by the Dutch Government, measures were implemented to safeguard Dutch state secrets and protect Fox Crypto data.

2018

Fox Crypto becomes a Strategic partner of the Dutch Ministry of Defence

March 2025

Fox Crypto is acquired by Sweden's CR Group, a leader in secure communications for critical societal functions.

Sept 2025

New name, same mission

“Security assurance is the degree of confidence one has that the security controls operate correctly and protect the system as intended”

[NIST SPECIAL PUBLICATION 800-12]

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ABDO: General Security Requirements for Defence Contracts

NEC 2020:
NLNCSA Evaluation Criteria

Development

Security by design
Security
Trustworthiness
Reliability
Maintainability
Functionality
Cost

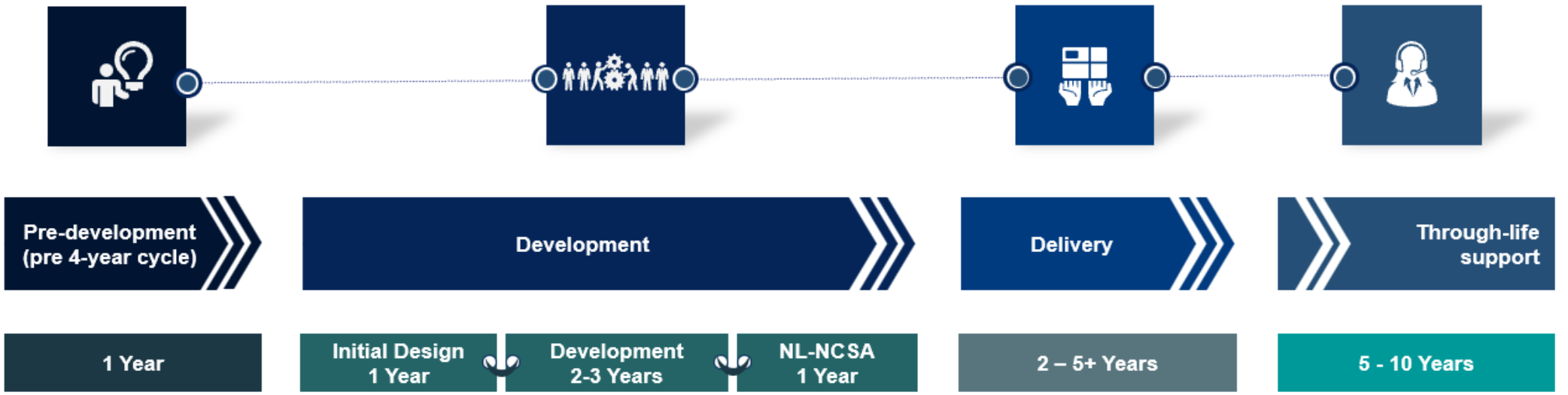
Usability by design
Functionality
Reliability
Cost
Trustworthiness
Maintainability
Security

SkyTale Secure Communications

- Developed in close collaboration with MoD
- Protecting state secret information
- Symmetrical encryption

Filax

Supply chain management



Security in the supply chain

- Supplier with suppliers, who have suppliers
- Component sourcing
- PCB & PCBA production
- Assembly
- Software installation
- Shipping

Ultimate security.....

- Implementing all software, firmware, libraries, compilers, and other tools ourselves is infeasible

So:

- we source trusted components from trusted suppliers
- we apply defense in depth for trusted components
- we vet trusted components before using them
- we harden all components and strip unnecessary parts

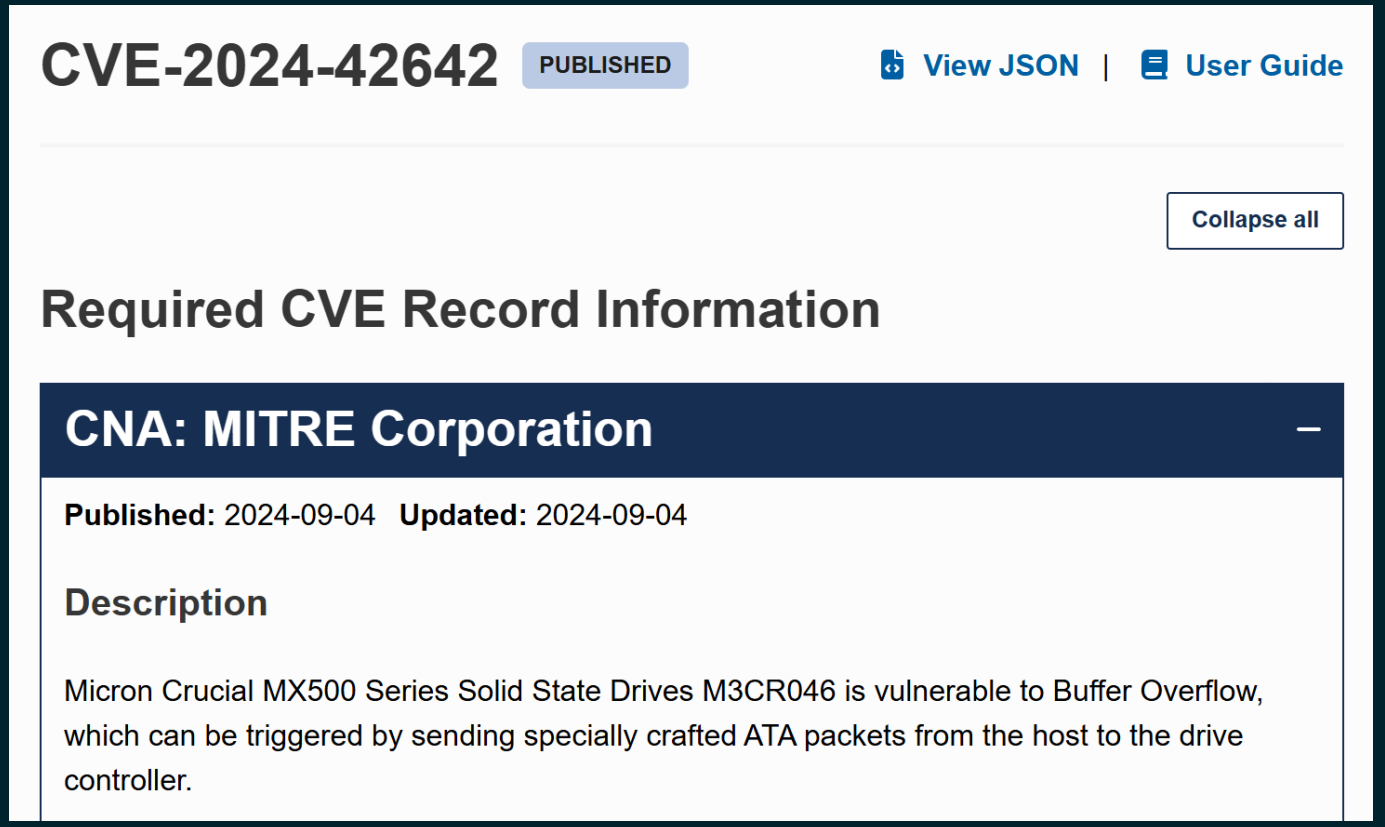
Defense In Depth

- Multi-source component strategy in supply chain
- Hybrid algorithm strategy
- Multi supplier strategy
- Need to know

Bug in Crucial MX500 SATA-disk

- Storage product in one of our solutions

- Pre-empted
  - No sensitive information stored on disk
- What if ( )then
  - Information stored encrypted
  - Security of keying material



CVE-2024-42642 PUBLISHED

View JSON | User Guide

Collapse all

Required CVE Record Information

CNA: MITRE Corporation –

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Description

Micron Crucial MX500 Series Solid State Drives M3CR046 is vulnerable to Buffer Overflow, which can be triggered by sending specially crafted ATA packets from the host to the drive controller.

Supply chain attacks

- Well known documented attacks:
  - SolarWinds
  - NotPetya
  - Israel attack on Hezbollah pagers & walkie-talkies
  - Crypto AG

- Through motivation and focus, achieve specific objectives

In conclusion

- Increased effort ≠ increased cost
  - Organize in collective
  - Using set standards
  - Source with focus

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Trusted to protect what matters most