2025
EUROPE
COMMUNITY
MEETING

Code Red

A Cybersecurity Crime Drama

PCI Security Standards Council

Jake Marcinko

Senior Technical Product Manager

PCI Security Standards Council


8
7
The
Designated
Driver
Is The Life


NEW
YORKER


MHU
MHU
MHU

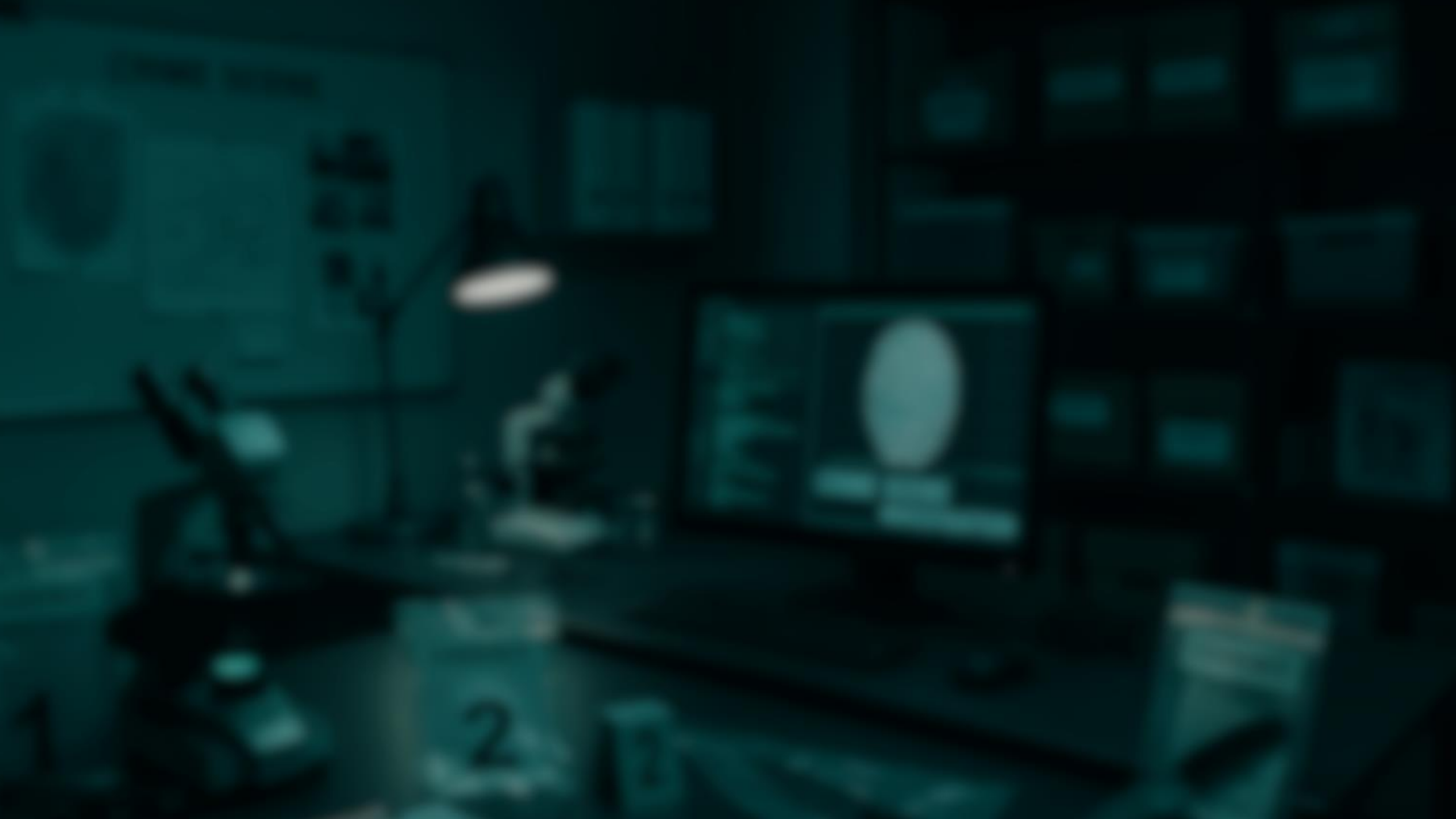

POLICE
POLICE LINE DO NOT CROSS


LÖGREGLAN

CSI:PCI


CRIME SCENE
CRIME SCENE
INVESTIGATION
EVIDENCE
2
2
EVIDENCE
EVIDENCE
1


HORATIO CAINE




CODE
RED
CYBER ATTACK
CYBER ATTACK
WARNING
CYBER ATTACK
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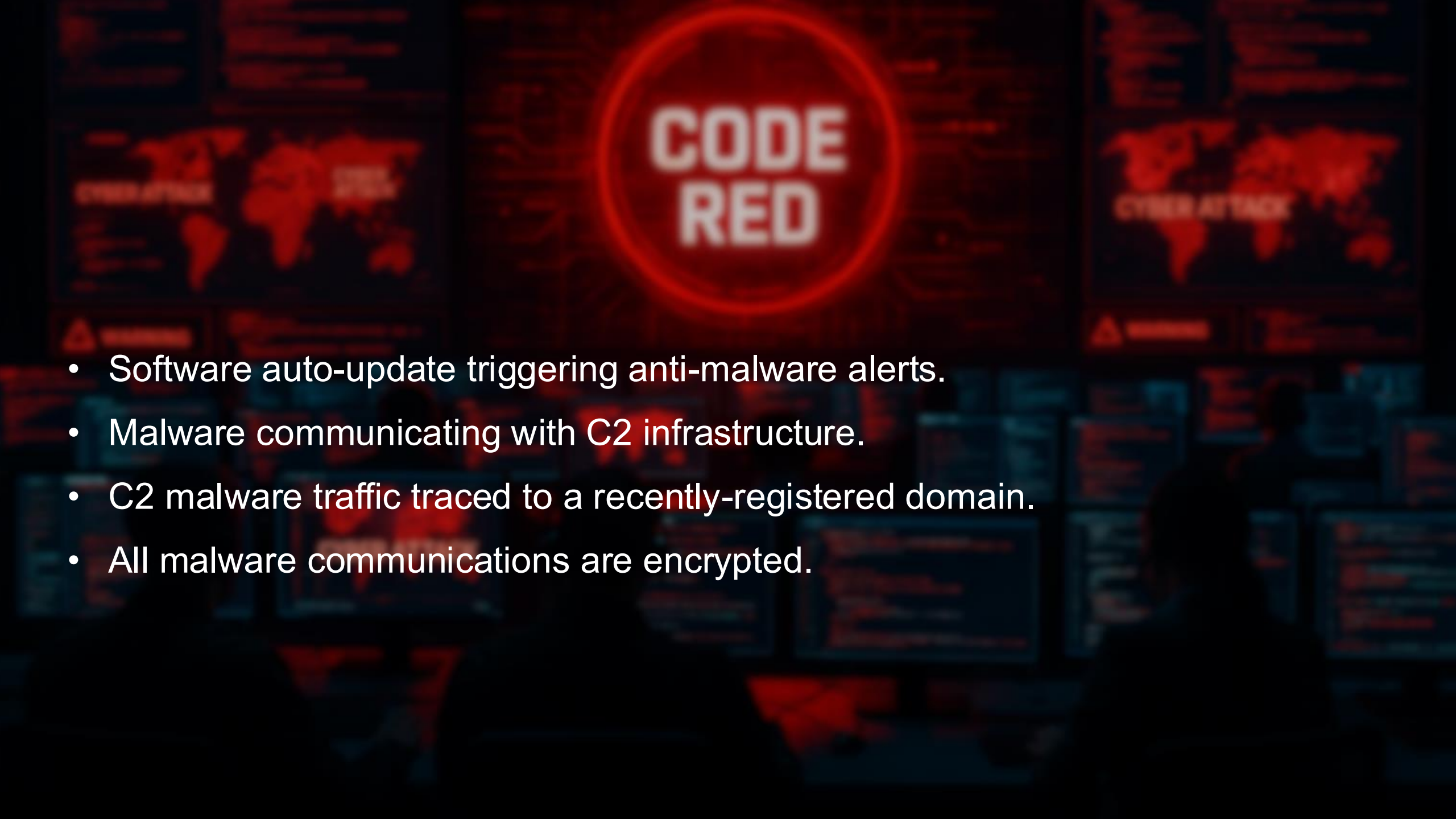
CYBER ATTACK



- Software auto-update triggering anti-malware alerts.
- Malware communicating with C2 infrastructure.
- C2 malware traffic traced to a recently-registered domain.
- All malware communications are encrypted.

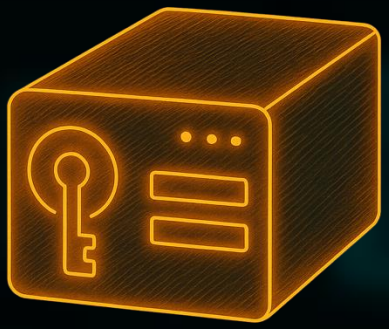
Background

Software Architecture and Update Process

Client app with SaaS backend

Source code stored in GitHub Enterprise

Jenkins to compile, sign, & deploy code



Code-signing keys stored in a secure HSM

EVIDENCE

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Critical client-side vulnerability

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EOL library dependency

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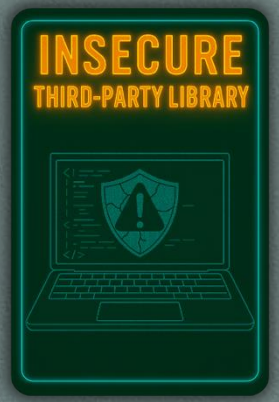

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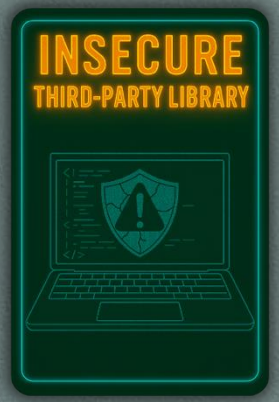

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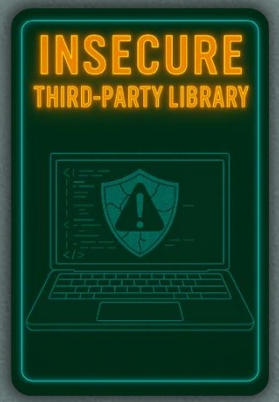

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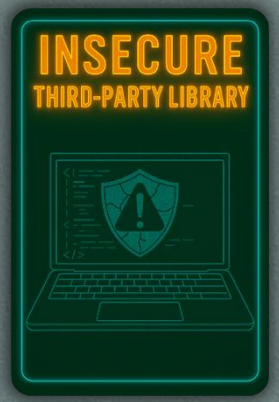

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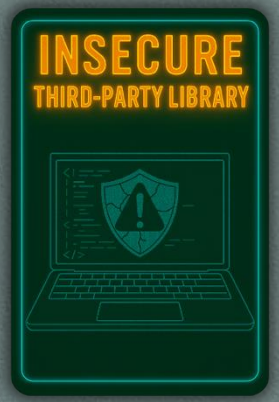


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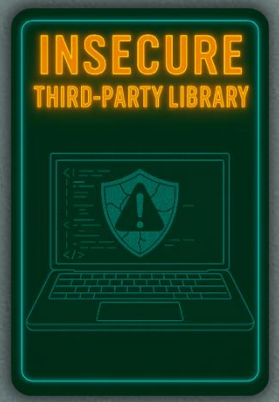

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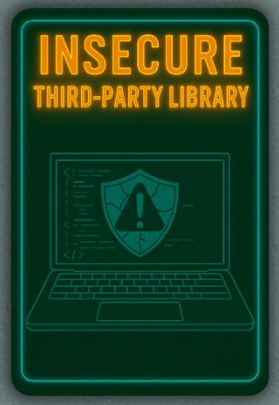

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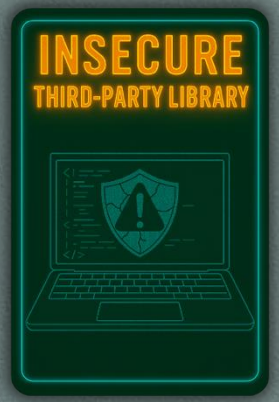

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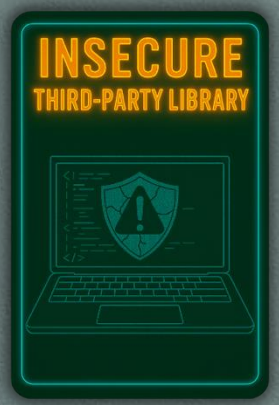

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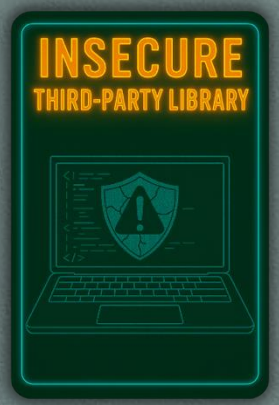

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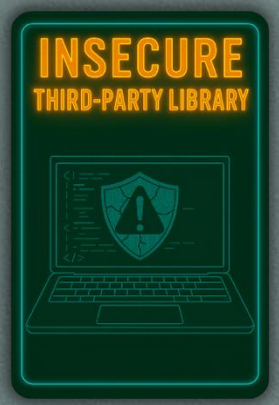

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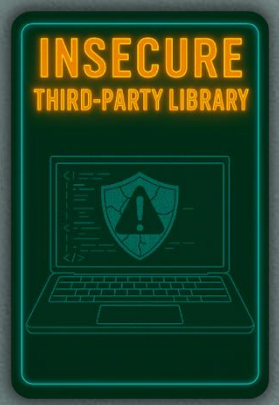

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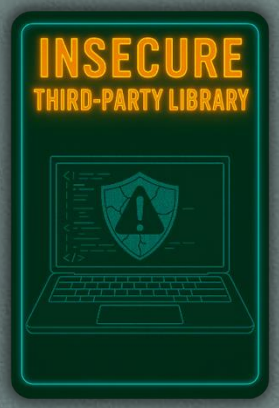

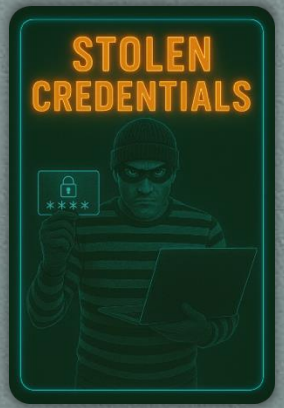


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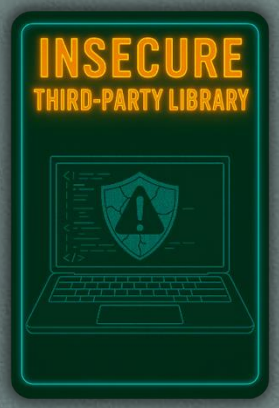

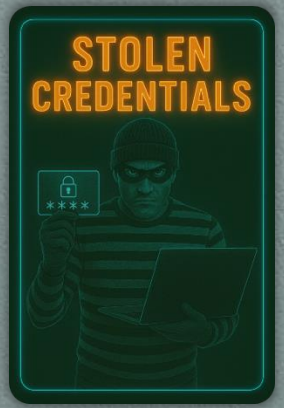

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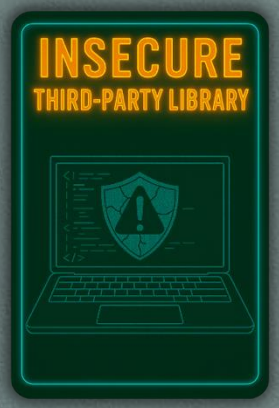

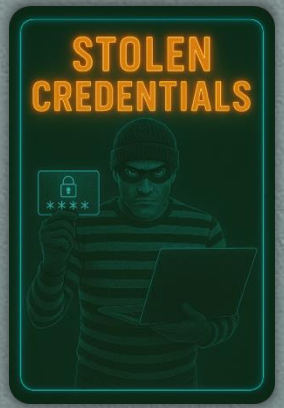

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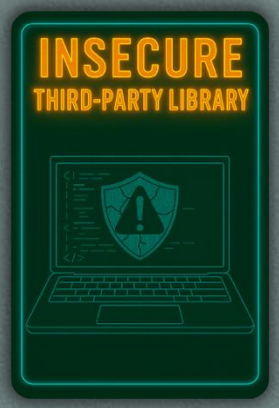

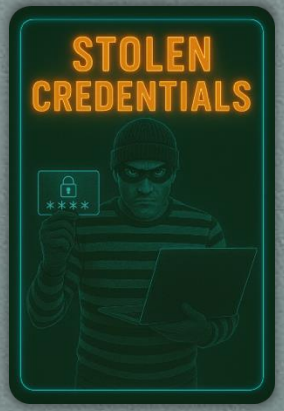

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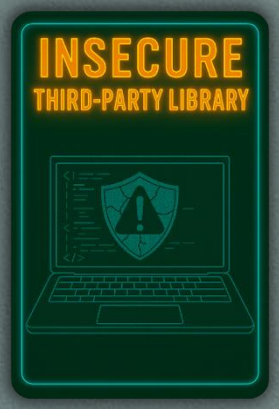

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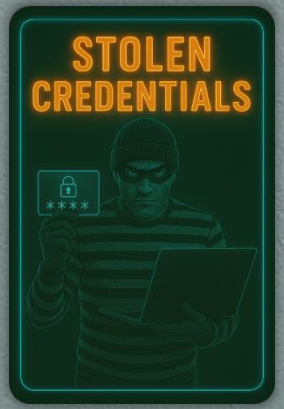

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What was the likely main attack vector?

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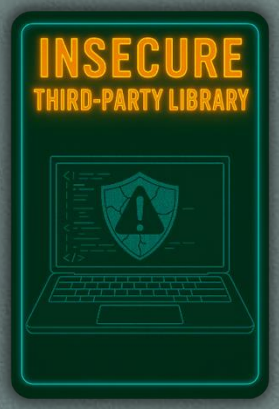

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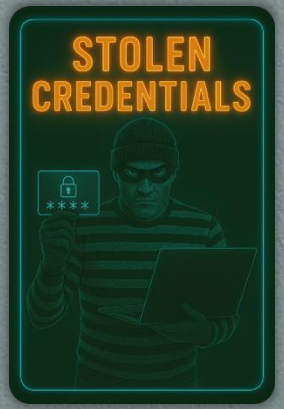

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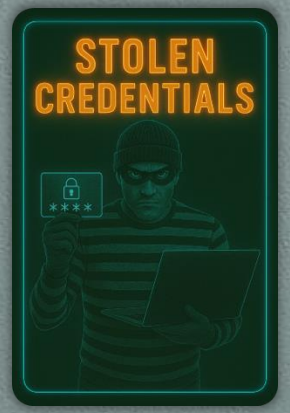

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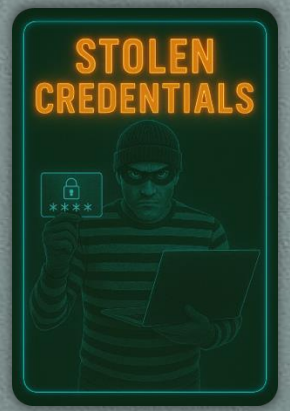

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Who is most likely the perpetrator?

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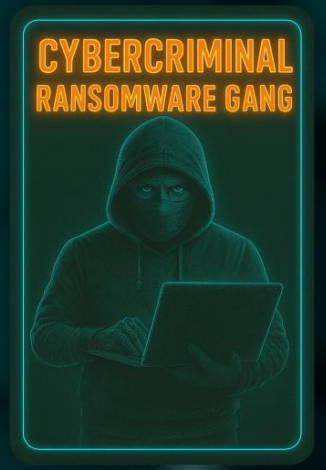
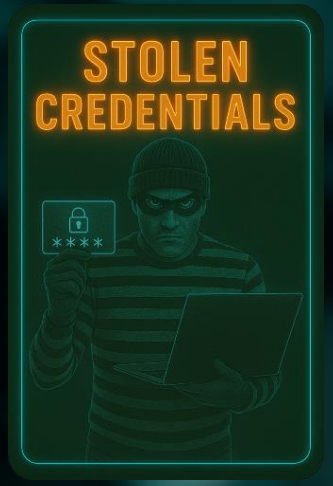
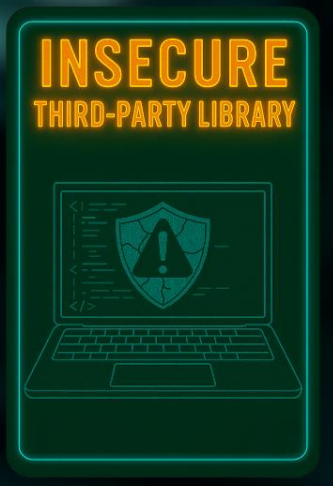
Attacks and Attackers







PCI Software Security Framework

Overview

Secure Software Standard

- Requirements for ensuring software products sufficiently protect their sensitive assets*

Secure Software Lifecycle Standard

- Requirements for ensuring software providers design, develop, maintain, and operate** their software in a secure manner

Associated Validation and Listing Programs

- Assessments and assessors
- Listings
- Supporting materials, templates, guidance, etc.

* Term and scope is defined in the Standard.

** Where all or some of software operations are managed by the software provider.

PCI Software Security Framework

Listings

Security Facts

Software Application

Security Checklist	100% Reliable
Encryption	99%
Authentication	99%
Access Control	99%
Secure Coding	99%
Input Validation	99%

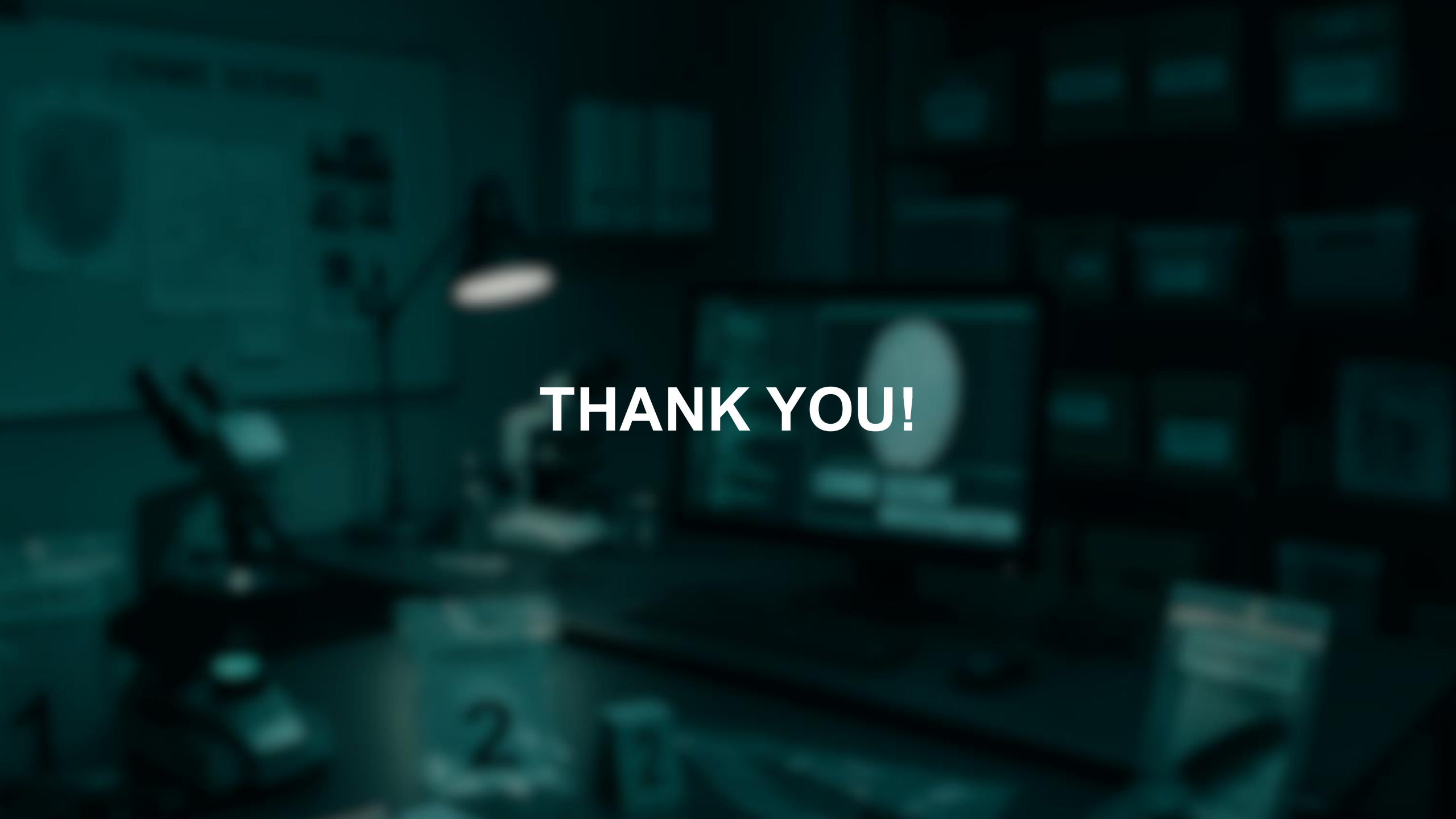
Comprehensive security features


UPDATE
2.0


DIGITAL
ASSETS


Search
UPDATE.....


Software@pcisecuritystandards.org


THANK YOU!

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