



NeSecOr 2025 (@ CNSM 2025)
31st October 2025
Bologna, Italy

Project Overview

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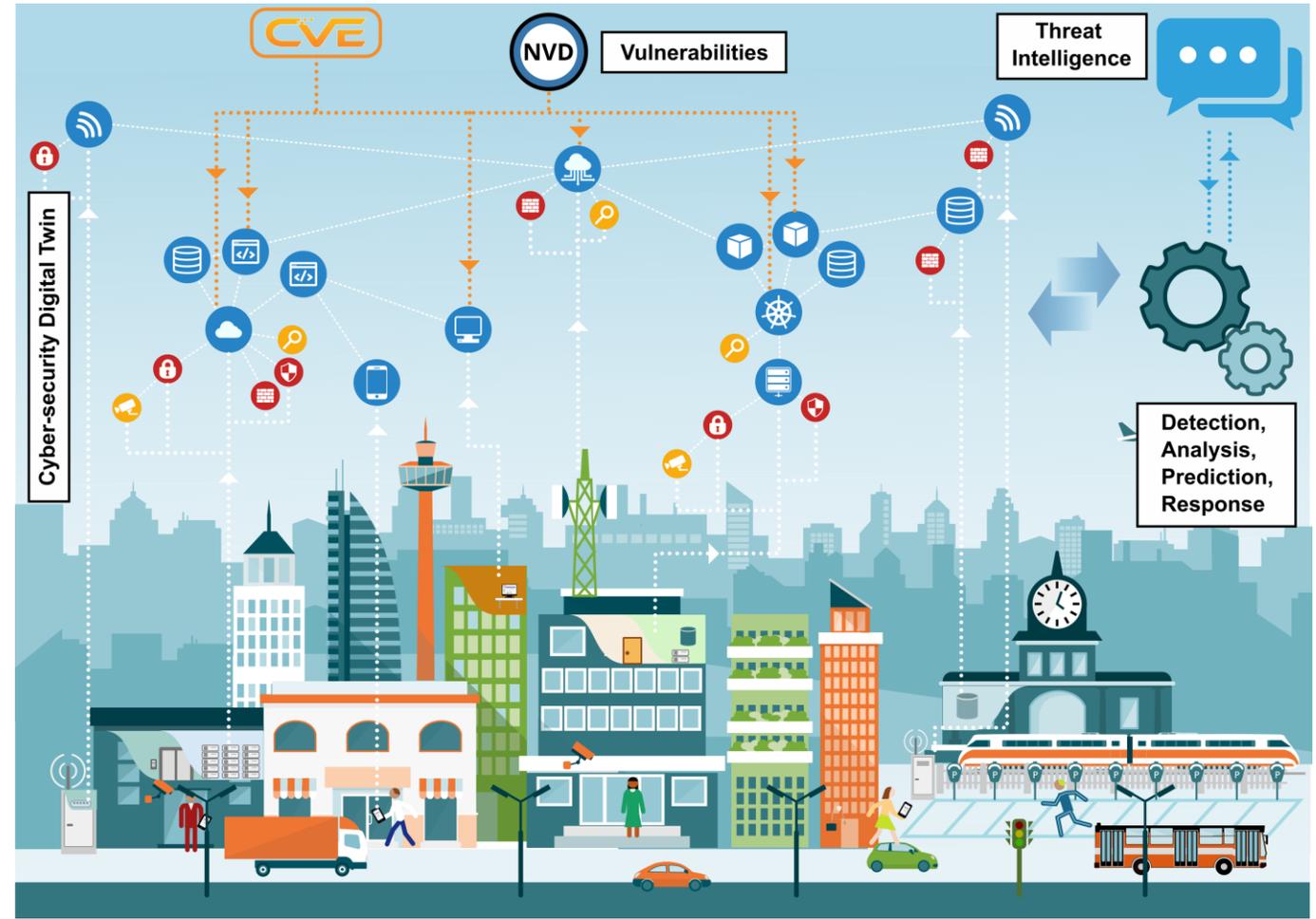


This project has received funding from the European Union's Horizon Europe Research and Innovation programme under grant agreement No. 101168144



Main objective

- A framework for **collaborative cyber-security operations** over service supply chains:
- a **Cybersecurity Digital Twin (CDT)**
 - discovers the composition and topology,
 - models potential threats,
 - predicts their materialization and propagation;
- **monitoring, detection, investigation, and response** processes
 - leverage the CDT to
 - proactively and adaptively protect single components as well as the whole system.





The POLITO Contribution



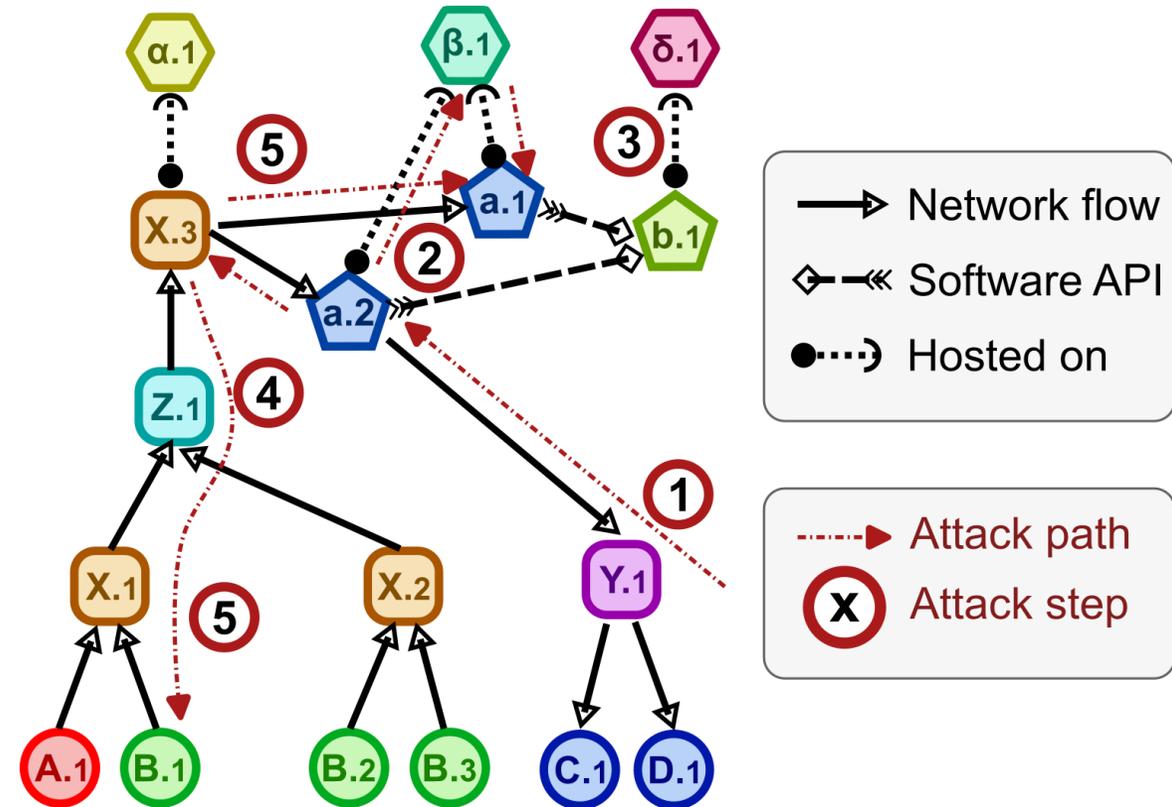
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Threat modeling

- **logical rules that define how an attacker advances within the service chain**
 - enablers to adversarial lateral movement, which a defender is required to eliminate and nullify
- **integration with external models** to improve the overall prediction and correlation capabilities
 - e.g., the distribution of people around the city or commuting patterns, digital models of IoT devices for attestation

Threat analysis

- to recognize on-going **multi-step attacks**, predict potential attack paths, identify the final target, and to tailor detection and mitigation/response actions to the current configurations





Questions?

