MIRANDA

A framework for collaborative cyber-security operations over service supply chains

Make hypothesis, perform analysis, and draw predictions of what could happen in complex, heterogeneous, and interconnected ICT systems

Improved monitoring, detection, analysis, investigation, and response

An adaptive digital twin for agile services over the computing continuum

MIRANDA develops a Cybersecurity Digital Twin (CDT) to model and capture the security posture of interconnected multi-ownership systems, which is used to detect, hunt, and remediate threats and attacks. On top of the CDT abstraction, MIRANDA builds adaptive and automated processes for threat hunting, detection of lateral movements, and eradication of the root causes of attacks.

Multi-ownership digital service chains

While modern digital services often build upon third party's components, many providers are often not aware of what is behind their upstream suppliers' resources. Dynamic service composition paradigms makes the service mesh unpredictable and ever changing at run-time.

A new breed of Digital Twins

MIRANDA's Cybersecurity Digital Twin is not a plain model of digital assets. It is a combined model of the current execution environment and attacks, which provides pervasive visibility, proactive identification of vulnerabilities and attacks, and adaptivity to ever-evolving environments. These three features will improve existing monitoring, detection, response, and hunting processes.

Use Cases

#WolfsburgDigital

The core of #WolfsburgDigital is a service-oriented ecosystem for collection, processing, and sharing of large bulks of data around the City. The set of digital services includes intelligent

Inclusive Genoa

The core of Inclusive Genoa is a Urban Intelligence platform that mixes Big Data, Artificial Intelligence, and City Science. On top of it, adaptive services are built, that tailor input interfaces, content and its representation to different generations and abilities of citizens.

Safe Athens

The strategic plan for Safe Athens envisions the development of innovative services for both the administration and the citizens, such as e-Services, public safety, and access to municipal assets, including. in-house developments and external providers.

Consortium

Consiglio Nazionale delle Ricerche
ONESOURCE
Logstail
NASK
Sphynx
UBITECH ubiquitous solutions
SPACE
security Stelar research law
Politecnico di Torino
AIT AUSTRIAN INSTITUTE OF TECHNOLOGY
Plaixus
WOBCOM
MINDICITY
GRUPPO TIM
DAEM

Project factsheet

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MIRANDA EU project

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