

# IoT Security – In Industry, Enterprise and Home («IOTSEC»)

In this course you will find out why voice assistants like Alexa belong in your company's security concept and how you can sustainably secure connected production facilities – without having to be a mechanical or chemical engineer yourself.

**Duration:** 2 days

**Price:** 2'200.–

**Course documents:** Digicomp course material

## Content

1. Introduction IoT-Security
  - IoT security vs. cyber security
  - Consumer vs. industrial IoT devices
  - Why IoT security is important
  - How do organizations approach the topic of IoT security?
  - Principles of IoT Security
  - Emerging technologies for IoT security
  - IoT Security
2. Overview of IoT technologies
  - IoT: Historical Background
  - Evolution of IoT Technologies
  - Cyber-physical systems
  - Emerging IoT Technologies
  - IoT technologies: risks vs. opportunities
3. Understanding the IoT ecosystem
  - The lifecycle of IoT devices
  - IoT architectures
  - Elements of an IoT ecosystem
4. Risks and issues in the IoT space
  - Challenges
  - Threats
  - Vulnerabilities
  - Attacks
5. Designing IoT security concepts
  - IoT security and IoT systems (life cycle)
  - Security for IoT development
  - Security for IoT implementation
  - Evolving guidelines and standards
6. IoT Security: technical measures
  - Hardware security
  - Software and firmware security
  - Sensors
  - Interfaces
  - Network Security
  - Protocols
  - Cloud and web-based elements
7. Identity and Access Management (IAM)
  - IAM Basics
  - Designing an effective IAM infrastructure
  - Designing secure authentication methods
  - Design effective authorization mechanisms

8. Implement an IoT security strategy
  - Develop and enforce strategies, policies, processes and procedures
  - Assessing and managing risk
  - Managing suppliers and third-party vendors
  - Continuous monitoring and analysis
  - Security Awareness
  - Incident management
  - Security Audits
  - Penetration Testing

## Key Learnings

- Understanding of the fundamentals of IoT security
- Overview of IoT technologies
- Understanding of the IoT ecosystem
- Knowledge of IoT security risks and issues
- Design of IoT security concepts
- Knowledge about technical measures of IoT security
- Knowledge about Identity and Access Management (IAM)
- Implementing an IoT security strategy

## Methodology & didactics

Day 1: Theory in the morning / group work in the afternoon

Day 2: Hacking Lab in the morning / theory and conclusion in the afternoon

## Target audience

This course is intended for CIOs, CISOs, IT managers, IT security officers, project managers and administrators.

## Any questions?

We are happy to advise you on +41 44 447 21 21 or [info@digicomp.ch](mailto:info@digicomp.ch). You can find detailed information about dates on [www.digicomp.ch/courses-security/cyber-security-defense/course-iot-security-in-industry-enterprise-and-home](https://www.digicomp.ch/courses-security/cyber-security-defense/course-iot-security-in-industry-enterprise-and-home)