

FUNDAMENTALS AND APPLICATIONS: MIFARE® DESFIRE® EV2 & EV3

LEVEL 1

Course ID	STID-ACD-SEC-02
Duration	1 day
Format	ILT / OST
Certified Training	Yes
Languages	FR / EN / IT / PL / ES

MASTER MIFARE® DESFIRE® EV2 & EV3 TECHNOLOGIES

MIFARE® technologies are now at the core of access control, ticketing, and contactless payment solutions.

This training will provide you with an in-depth understanding of the cryptographic mechanisms built into these technologies, as well as best practices for effectively integrating them into your access control systems.

Through a practical and interactive approach, you will learn how to configure, secure, and optimize MIFARE® DESFire® EV2 & EV3 cards to ensure enhanced data protection and reliable authentication.

PREREQUISITES

- Prior experience with RFID, MIFARE®, and DESFire® EV.
- Operational experience in the access control field.

AUDIENCE

This training is intended for security and access control professionals, including:

- Security Architects & System Engineers
- Installers & Integrators
- Security Administrators & Managers
- Project Managers & Technical Consultants
- Developers & IT Teams working on secure credential solutions

LEARNING OBJECTIVES



Master the memory structure of MIFARE® DESFire cards, their file and application logic.



Understand built-in security mechanisms: communication modes (Plain, MACed, Fully Encrypted), mutual authentication, and session key generation.



Configure key elements of a DESFire card: applications, files, keys, and access rights.



Compare the security levels of MIFARE® Classic and MIFARE® DESFire.



DETAILED COURSE OUTLINE

INTRODUCTION TO MIFARE® TECHNOLOGIES

- Overview of MIFARE® technologies
- Market positioning and application domains
- Comparison with other RFID and NFC solutions

MODULE 1: COMPARISON OF MIFARE® PRODUCTS (CLASSIC, PLUS, DESFIRE®)

- Vulnerabilities of MIFARE® Classic Crypto1: operation and weaknesses
- Real-world attack scenarios: impersonation, cloning, replay attacks

MODULE 2: ARCHITECTURE OF MIFARE DESFIRE® TECHNOLOGY

- Study of memory structure
- File types (standard, cyclic, value, etc.)

MODULE 3: CONFIGURING MIFARE DESFIRE® TECHNOLOGY

- Creating and configuring secure applications
- Creating and configuring secure files
- Creating and configuring various security keys

MODULE 4: CASE STUDIES AND HANDS-ON WORKSHOPS

- Simulations and exercises on configuration and authentication
- Q&A session with a STid expert to address specific challenges

CERTIFICATION

Certificate of Completion awarded upon successful completion.

LEARNING FORMAT



ILT (Instructor-Led Training) :

Experience hands-on training at STid's headquarters, led by experts in a fully equipped environment. Benefit from live demonstrations, interactive exercises, and direct engagement with STid specialists for an optimal learning experience.



OST (On-Site Client Training) :

Tailored training delivered at your site, adapted to your infrastructure, security needs, and equipment for a fully personalized learning experience.

SCHEDULE AND REGISTRATION

To check the schedule, pricing, or register for the course:



customer.training@stid.com

Learn more at:

www.stid.com



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