



EMV Training - EMV migration for Issuers

Banking & Payment Services

INTERMEDIATE COURSES

Course Reference: B1003S





This 5-day seminar allows for the technical management and staff to understand in details the EMV specifications and related security mechanisms. It will give them the right theoretical and practical knowledge to be key actors in the migration project, and to define the issuer's strategy in terms of card issuance.

A significant part of the training is dedicated to practical exercises, including creation of EMV test cards, and transaction simulations.

Objectives

At the end of the training, you will:

- | Understand the EMV transaction (interaction between card & terminal)
- | Master and take advantage from the security mechanisms implemented in EMV
- | Understand EMV impacts on issuance and authorization systems
- | Be able to prepare your risk management strategy

Key topics

- | Introduction to EMV
- | EMV Specifications
- | EMV Migration Impacts
- | EMV Transaction Flow
- | Personalization Profiles

Who should attend

People from technical management and staff working in the banking and payment domain involved in the migration process, such as:

- | Operations
- | IT systems, security, quality
- | Marketing
- | Fraud monitoring

Each session consists of

- | Complete training manual
- | Exercises with EMV Migration Kit (transaction simulator)

Pre-requisites

- | Basic knowledge about Payment Systems
- | This course is held in English. On customer request a session in French can be organized.

Duration:

- | 5 days

Location:


- | On-site at customer premises, or at one of the Thales training centers. Please contact us for more details.

Course fee:

- | € 3499 per attendee, Price does not include taxes nor travel expenses

Course schedule

When performed at customer premises, the agenda is tailored to customer attendance profile. The standard agenda is provided below:

| Day 1: Introduction to EMV | Practice |
|---|---|
| <p>Introduction to EMV</p> <ul style="list-style-type: none"> Major differences between a magnetic stripe transaction and a chip transaction Analysis of the differences between the EMV specifications and the EMV implementations defined respectively by Visa and MasterCard Review of the major business benefits of the EMV chip card Visa and MasterCard liability shifts | |
| <p>EMV Security Benefits</p> <p>Analysis of the security mechanisms defined in EMV to reduce fraud and limit the financial risk taken by an Issuer:</p> <ul style="list-style-type: none"> Solutions provided by an chip EMV card to improve the security of offline transactions – advantages of offline transactions vs. online transactions Solutions provided by chip EMV card to improve the security of online transactions Selection criteria between the Offline authentication methods defined in EMV(SDA /DDA /CDA) | |
| <p>General over view of the EMV card content</p> <ul style="list-style-type: none"> Analysis of the data elements present in the EMV card: application selection data, cardholder data, system data, risk management data (Visa/MasterCard), cryptographic data | |
| Day 2: Terminal Risk Management | Practice |
| <p>Terminal Risk Management</p> <ul style="list-style-type: none"> Checks performed by the terminal Terminal Action Analysis Terminal Action Analysis after online processing Recommendations defined by Visa and MasterCard | |
| <p>Cardholder Verification Algorithm</p> <ul style="list-style-type: none"> Review of the possible methods available to an Issuer Analysis of the algorithm used by the terminal (CVM algorithm) Recommendations defined by Visa and MasterCard |  |
| <p>Card Authentication Methods</p> <ul style="list-style-type: none"> Methods available at terminal level based on Public Key Infrastructure proposed by payment System (SDA / DDA / CDA) | |

Day 3: Card Risk Management

Practice

Card Risk Management defined by a Payment System (Visa or MasterCard)

Depending on the customer's need, the trainer will detail the card decision algorithm, **either for Visa 1.4, or for M/Chip 4.0** (M/Chip 2.1 also available upon request)

- | Offline Transactions Management
- | Card Decision Process, first step
- | Card Decision Process, second step (after online authorization)

Exercices on Card Risk Management

- | The trainee is set in front of practical cases of card usage: based on the card and transaction parameters, he/she shall find out the outcome of the transaction.
- | Alternatively, instead of the exercises, another Card Risk Management algorithm might be studied here.



Day 4: EMV Migration Kit

Practice

This day is 100% dedicated to practice, with the help of Gemalto's EMV Migration Kit:

- | Visual Builder: a PC application allowing to personalize EMV test cards
- | Visual Tester: a PC application simulating a terminal and a remote authorization centre. It allows trying the behavior of the test cards previously generated.

Visual Builder

- | Review of Visa 1.4 or M/Chip 4.0 personalization profiles
- | Customization of card data elements values
- | Generation of test cards



Visual Tester

- | Parameterization of the terminal simulator, issuer host simulator and transaction
- | Transaction simulations
- | Result Analysis



Day 5: EMV Impacts on the infrastructure of an Issuing bank

EMV Impacts on Card Issuance Process

- | General over view of the new information required for card issuance
- | New functions required in Card Data Preparation System
- | New functions required in Card Personalization System
- | Possible scenarios for Issuer Card Issuance Policy
- | Definition of the inter face between an Issuer and a Service Bureau (chip personalization)

EMV Impacts on Authorization/Clearing system

- | Analysis of the possible implementation scenarios for authorization:
 - Minimum impact of chip transaction on Authorization System ("magstripe grade" / "early option")
 - Review of the possible implementation scenarios for "full chip"/"full option implementation"
 - New Stand-in Services related to chip data processing available at Visa or MasterCard
- | Analysis of the possible impacts on Clearing System

Related courses

EMV Business Impacts (B1001I)

Mastering EMV Implementation (B1002I)

EMV Migration for Issuers (B1003S)

EMV Card Personalization Specification (B1007S)

Common Payment Application (B1009S)

For further information about registration, course schedule: please contact us via email to: bps_training@thalesgroup.com or visit our web site: <https://www.thalesgroup.com/en/markets/digital-identity-and-security/banking-payment/consulting>

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