THALES

Building a future we can all trust

EMV Training - EMV migration for Acquires

Banking & Payment Services

INTERMEDIATE COURSES
Course Reference: B1004S

This 3-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 knowledge to be key actors in the migration project, and to define the bank's strategy for its acquiring side.

For technical staff, we recommend to complete this seminar with 2 additional days entirely dedicated to practice (in option). Thanks to the numerous troubleshooting case exercises, the trainees will be fully efficient for the final integration phase of the EMV project.

Objectives

At the end of the training, you will:

- Know the benefits brought by EMV for both acquirers and issuers
- Understand the EMV transaction (interaction between card & terminal)
- Be able to choose the most suitable options for your terminals (POS, ATMs) among those defined by EMV
- Understand and be able to fill in EMVCo's Implementation Conformance Statement (ICS) form for Acquirers

Key topics

- Introduction to EMV
- EMV Transaction Flow
- EMV Migration Impacts for the Acquirer
- Option: Exercises - Troubleshooting

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 and chargeback.

Each session consists of

- Complete training manual

Pre-requisites

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

Duration:

- 3 days (5 days with the optional practical part)

Location:

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

Course fee:

- € 2099 (€ 3499 with optional days 4 and 5) 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

Introduction to EMV

I Major differences between a magnetic stripe transaction and a chip transaction

I Analysis of the differences between the EMV specifications and the EMV implementations defined respectively by Visa and MasterCard

I Review of the major business benefits of the EMV chip card

I Visa and MasterCard liability shifts

EMV Security Benefits

Analysis of the security mechanisms defined in EMV to reduce fraud and limit the financial risk taken by an Issuer:

I Solutions provided by an EMV chip card to improve the security of offline transactions – advantages of offline transactions vs. online transactions

I Solutions provided by an EMV chip card to improve the security of online transactions

I Selection criteria between the Offline authentication methods defined in EMV (SDA/DDA/CDA)

General overview of the EMV card content

I 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: The EMV transaction

EMV Transaction Flow

I Application selection

I Transaction initialisation

I Card authentication method

I Cardholder verification method

I Terminal risk management

I Card risk management

I Transaction certificate

I Script processing

I Recommendations defined by Visa and MasterCard

Transaction processing analysis

I Review of the optional EMV functions

I Analysis of the Visa/MasterCard requirements related to the optional functions (including optional security functions)

I Data exchanged between card and terminal

Day 3: EMV Impacts on the infrastructure of an Acquiring bank

Security Requirements defined by EMV and Payment System

❙ Payment System Public Key Management

❙ PIN management

Certification Procedure

❙ EMVCo Certification

❙ EMVCo's Implementation Conformance Statement (ICS) form

❙ Additional checks mandated by Payment Systems to their Members

Impacts on Acquiring Network

❙ Information exchanged during the authorization process (new data elements – new values in existing data elements – volume of information to exchange)

❙ Impact on the current method used for clearing

❙ Impact on the interface with MasterCard network

❙ Impact on the interface with Visa network

Impacts on Terminal Management System

❙ Analysis of the new EMV terminal parameters

For technical staff that will be involved in the Payment System certification (Visa/MasterCard) of the acquirer's infrastructure (POS terminals, ATM, network interface), we highly recommend these additional 2 days. The program is entirely focused on the analysis of various transaction log files:

Day 4 / 5 (option): Exercises - Troubleshooting

Practice

Step 1 (day 4): Understanding transaction logs

The aims of this practical day are:

❙ To make sure that the EMV transaction flow theory (cf. Day 2) is correctly assimilated

❙ To be able to decode any EMV transaction log between a card and a terminal

❙ To acquire a methodology for efficient problem troubleshooting

Step 2 (day 5): Troubleshooting

❙ During this day, trainees will play detectives on several live cases of transaction logs. They will try to find out which entity (card, terminal network) is responsible for the problem.

Related courses

EMV Business Impacts (B1001l)	**Mastering EMV Implementation (B1002l)**
EMV Migration for Acquirers (B1004S)	**EMV Migration for Issuers (B1003S)**

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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