



Discovering NFC Ecosystem

Everything you need to know about NFC Solutions.

Mobile NFC offers new opportunities to network operators, banks, transport companies and other service providers.

This course will allow you to easily understand the main standards, technologies, features & security around this NFC ecosystem, including **UICC, HCE, Handsets, Trusted Service Management, OTA & Business Enabler solutions**.

NFC requirements for co-operation between these different stakeholders, and **GlobalPlatform** requirements for security and confidentiality will also be explained

At the end of the training you will:

- > Understand what is Mobile NFC (Near Field Communication) and main use cases
- > Be able to describe Mobile Equipment SE & HCE architecture needed for NFC
- > Have an overview on UICC (SIM) Secure Element functionalities & OTA basic concepts
- > Know how the different actors (MNO, Bank, and Transport Operator) can manage several applications on the same card via Global Platform (GP) specifications
- > Understand Service Provider (SP) TSM role and possible architectures
- > Understand MNO TSM (Business Enabler) on server side and related specifications.

Who should attend?

All people involved in Mobile NFC project:

- > Marketing Managers
- > Project Managers
- > Technical team
- > SIM Manager
- > VAS Manager
- > Operational Team
- > Security Managers

Pre-requisites:

- > No specific pre-requisites for this course
This course is held in English



PROGRAM

Introduction to Mobile NFC

- > What is Mobile NFC?
- > Use Cases
- > Business drivers & models for different actors
- > Market feedback on trends (JV, SIM rental...), lessons learned (enrolment, advertising...) & best practices
- > Real deployment examples, Case Study, & use-cases videos

Focus on Mobile Equipment

- > Architecture for Mobile Contactless
- > Secure Elements & NFC-related protocols
 - o Different solutions compared
 - o Market trends
- > User Interface (UI)
- > Wallet introduction
 - o User experience for selecting & using NFC services (CRS, CREL concepts from GP2.2 Amendment C)
 - o UI technology & specifications
 - STK, Java, Android, and JSR 177, SIMalliance
- > Mobile Application – NFC UICC application security overview (Access Control)

Focus on HCE, Tokenization, and SIM - Secure Element

- > What is HCE, how can it fit into NFC Ecosystem
- > What is Tokenization, how it can be used to mitigate risks when needed
- > Specific UICC features required for using as NFC services Secure Element
- > Security features
- > Remote management of data

GlobalPlatform Basics

- > What is GlobalPlatform?
- > How actors can manage their applications on the same card
- > What is a Security Domain & how can it be used?
 - o Privileges, market trends...
- > Secure Channel Protocol overview (SCP80, 02, 81...)
- > Card Content Management basics (INSTALL, LOAD, PERSO, EXTRADITION...)
- > GlobalPlatform Commands summary
- > GP and Mobile NFC – Different Card architectures
 - o Pre-issuance, remote management of content...
- > Controlling Authority (GP2.2 Amendment A), Verification Authority & Certification concepts

Trusted Service Management (TSM) - Introduction

- > What is TSM?
- > Split architecture between SP-TSM & SE Issuer (MNO)-TSM
- > Each Elements basic role
- > TSM deployment models & Server Architectures
 - o Corresponding Card architectures
- > Contracts management examples

Focus on SP-TSM & MNO-TSM

- > SP-TSM & SE Issuer-TSM interfaces
 - o Standards (GP System Messaging API & AFSCM)
- > Service Life-cycle management processes examples (Eligibility, activation, lost handset...)
 - o SP-TSM & MNO-TSM solution examples
- > Demos: Payment use-case demonstration, lock-unlock with SP-TSM...

