



Europe
17. Mar 09 (Hamburg) / 03. Nov 09 (Graz)

Asia
20. May 09 (Singapore) / 11. May 09 (Shanghai)

USA
On demand

J-1 JCOP Introduction & Basic Training

This training deals as JCOP product introduction. It includes important concepts about Java Card and GlobalPlatform, as well as basics about card management, applet development, smart card I/O and security. The training concludes with a JCOP Tools introduction.

Audience	System architect and new software engineer Technical oriented manager Business development for smart card products Smart card distributor and customer support
Prerequisite	Basic software development knowledge Smart card basics Notebook with Windows XP
Overview and positioning of all JCOP Products	Products & features HW platform
JCOP Concept, introduction into	Java Card GlobalPlatform JCOP specific features Pre-Personalization
Java Card development introduction	Object oriented programming Java Card applet structure Smart card communication
GlobalPlatform introduction	CardManager, Security Domain Secure channel Content management Life cycles
Smart card security introduction	HW/SW countermeasures Java Card security concept Cryptography
JCOP custom mask process	
JCOP roadmap & value proposition	
JCOP Tools introduction	Requirements Installation & activation Card access

Duration: 09:00 – 18:00



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J-2 JCOP Administration & Programming Training

The second day of JCOP training is going into details of Java Card applet development, GlobalPlatform card mechanisms, pre-personalization and JCOP specific features like Mifare emulation access and BAC API. The emphasis is on development with JCOP Tools. The working examples cover pre-personalization, card content management and selected Java Card topics.

Audience	Software engineer
Prerequisite	Knowledge of J-1 contents Java programming skills at intermediate level Notebook with Windows XP
Pre-personalization in detail	Scope and principles Commands
Card and content management	CardManager Secure channel Loading and instantiation Security Domain and extradition JCOP Tools in detail
Applet development	Applet components Implementation essentials APDU processing
Hands-On examples	Pre-personalization CardManager Smart card I/O, APDU handling Memory usage (EEPROM, RAM)
<i>1st package (banking + transport)</i>	Transactional processing Cryptography Mifare emulation Extended Length APDU
<i>2nd package (egov)</i>	BAC API Extended Length APDU Cryptography
Applet optimization and performance	

Duration: 09:00 – 17:00



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J-3 JCOP Applications Training

The third day of JCOP training is dedicated to e-governement and banking applications available in NXP portfolio. The application trainings are held in parallel and are focused on specific pre-personalization, instantiation and personalization of the applet.

Audience	Software engineers
Prerequisite	Basic knowledge on J-1 and J-2 Knowledge on ICAO (e-gov) Knowledge on EMV (banking) Notebook with Windows XP
Introduction	Installation and activation of JCOP tools Pre-personalisation Content management
1) Banking application	
Introduction	Introduction on M/Chip and (q)VSDC
Pre-Personalisation	EMV requirements
Applet instantiation	Instantiation with parameters
Personalization	Mutual authentication APDU commands Hands-on session
Contactless Performance	
2) E-government application	
Introduction	Applet presentation Security features
Pre-personalisation	Configuration for ICAO compliance
Applet instantiation	SDU applet LDS file system Instantiation with parameters
Personalization	Mutual authentication APDU commands Personalization and reading performance Hands-on session

Duration: 09:00 – 17:00