MOBILITY PAY

MAXxEMV
Central Issuance Solution

Easy & Secure Bulk Issuance

Version 2.0

Mobility
Payment
Solutions

A Mobility International Company

About Mobility Pay

Mobility Payment Solutions, a Mobility International initiative, is a leading innovation focused research development and integration company.

MPS brings value add to business by introducing mobility as an underlying principle for provisioning and bringing a wide range of services in a secure manner to people and businesses

MPS has developed cutting edge innovative payment technologies, and industry grade secure solutions to perform services on behalf of banks, Financial Institutions, Processors, Retailers and Third Party Service Providers.

Digital Offerings

Digital Banking

Digital Channels

Digital Issuance

Digital Merchants

Digital Proximity

Digital Security

MAXxEMV CIS: Overview

MAXxEMV CIS is state-of-the-art solution that is designed to support Banks and Personalisation Service Providers:

Manage a heterogeneous environments:

- Multi-vendor EMV Chip/OS
- Multiple Payment Schemes
- Multi Vendor EMV Personalisation Machines
- Customisable Workflow Operational Processes

MAXxEMV CIS has a strong modular architecture to support multi-brand issuance and ensure scalability for PSP. Cards can be issued for applications in a wide verity of fields such as:

- ATM and POS Systems
- National ID cards
- Ticketing
- Internet Banking
- Reward/Bonus/Loyalty programs
- Access Control System

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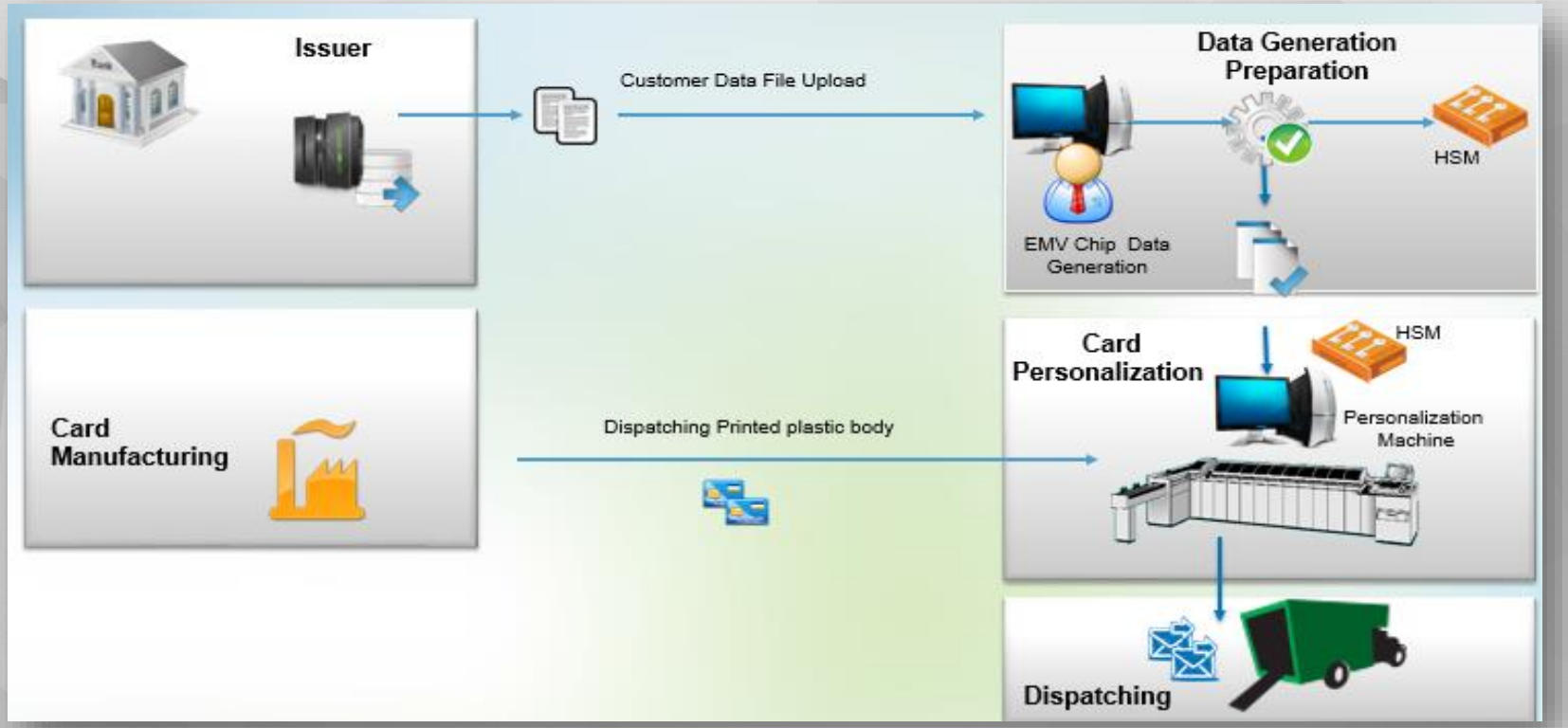
MAXxEMV CIS: Advantages

MAXxEMV CIS is state-of-the-art solution that is designed to support Banks and Personalisation Service Providers comes with various key advantages:

- Simple and Easy Use
- Resource Access Control
- Issuance Controls
- Activity Logs
- Operational Process Flow
- Operational Controls
- Reduced Wastage/Errors
- Flexibility & Scalability
- EMV Workflow Process Management
- Multi-Scheme Support
- EMV Personalisation Machine agnostic
- EMV OS/Chip agnostic
- EMV compliant Key Management
- Secure EMV Data Preparation
- EMV Quality Assurance and Validation
- Multi-application personalisation support
- Multi-sector support

MAXxEMV CIS: Solution Work Flow

PERSONALISATION DATA FLOW:



MAXxEMV CIS: Solution Architecture

COMPONENT LAYERS:

MAXxEMV CIS: Solution Architecture

COMPONENT LAYERS:

MAXxEMV CIS Engine

DATABASE

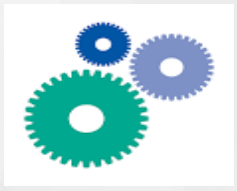
MAXxEMV HTTPS .NET ASP pages

MAXxEMV Secure File Transfer Engine/Web Service Engine (Windows Service Application)

MAXxEMV Data Generation (Windows Service Application)

MAXxEMV Key Manager (.Windows Service Application)

MAXxEMV Card Perso Manager (Windows WCF based Service Application)



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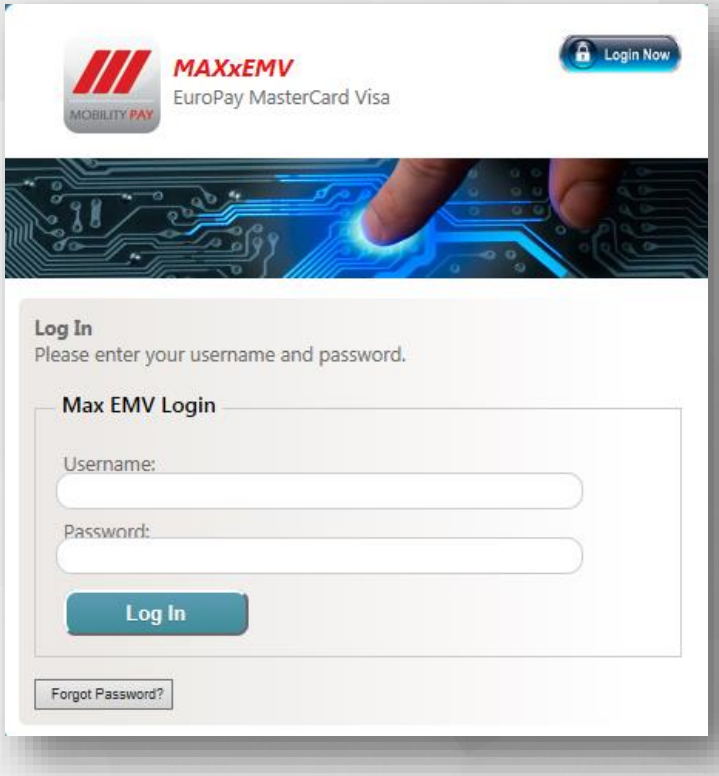
MAXxEMV CIS: Solution Modules

MAXxEMV CIS Solution Modules are listed below:

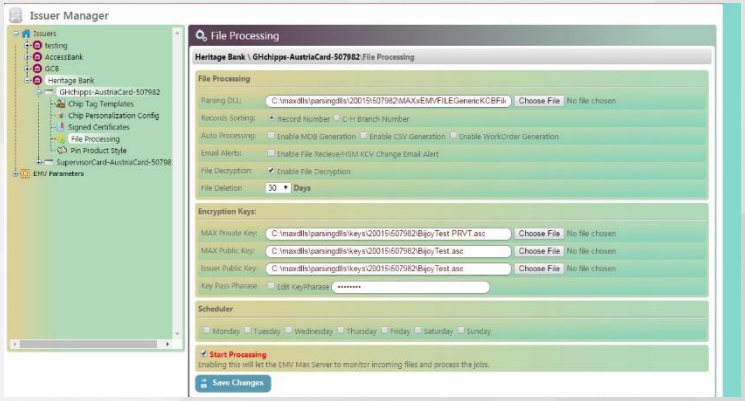
1. MAXxEMV CIS Engine
2. MAXxEMV CIS SFTP/WebServices
3. MAXxEMV CIS Data Generation
4. MAXxEMV CIS Key Management
5. MAXxEMV CIS Card Perso Manager

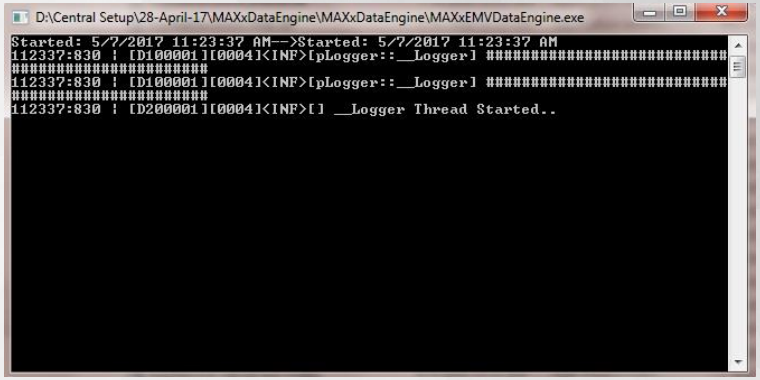


MAXxEMV CIS: CIS Engine

The MAXxEMV CIS Engine is the core service based application which powers all the modules with required functionality like…

- Schedule File Processing
- HSM interface for all the cryptographic operations
- Database interface for all DB related activities
- logging all the user activities / errors / trace
- Real time transaction monitoring
- User based access control management
- PIN Pad Management & PIN Generation
- Card Perso Management interface

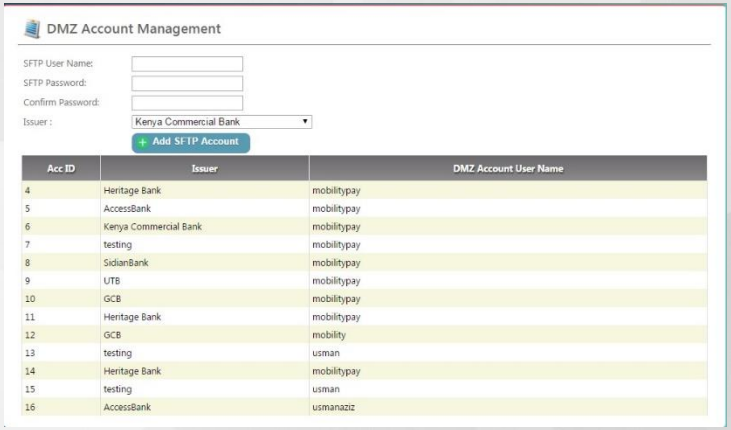




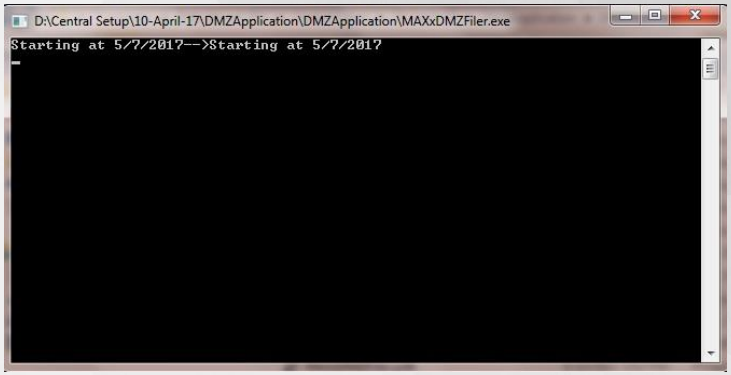
MAXxEMV CIS: SFTP/WebServices Engine

The MAXxEMV CIS SFTP/WebServices Engine enables the solution to support secure file transfer for batch mode and/or WebServices for instant secure record transfer to the platform.

- Secure File Transfer Engine communicates with Issuer's SFTP sever and download files to local server for processing
- Secure web service can call by Issuer's CMS for automated data push
- Secure web service can talk to Issuer's CMS for automated data pull at stipulated intervals
- All the communication with the customer server / CMS is in encrypted manner



Acc ID	Issuer	DMZ Account User Name
4	Heritage Bank	mobilitypay
5	AccessBank	mobilitypay
6	Kenya Commercial Bank	mobilitypay
7	testing	mobilitypay
8	SidianBank	mobilitypay
9	UTB	mobilitypay
10	GCB	mobilitypay
11	Heritage Bank	mobilitypay
12	GCB	mobility
13	testing	usman
14	Heritage Bank	mobilitypay
15	testing	usman
16	AccessBank	usmanaziz

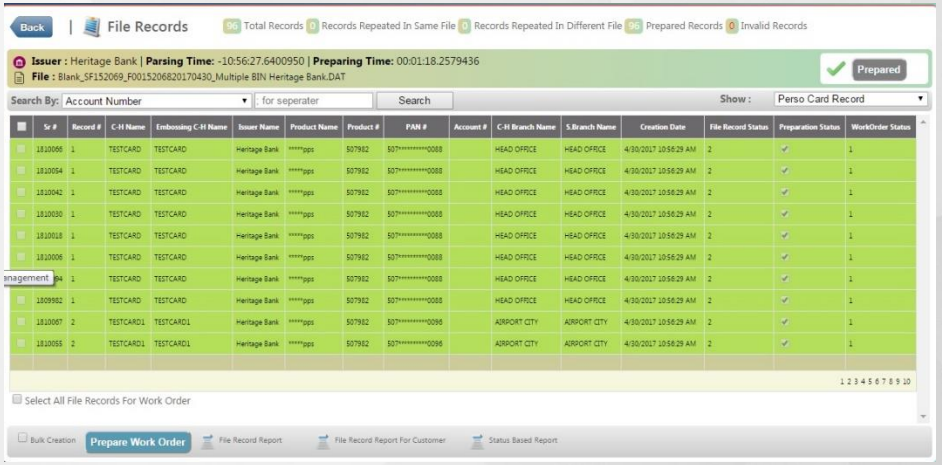


MAXxEMV CIS: Data Generation Engine

The MAXxEMV CIS Data Generation Engine generates EMV Data based on card holder magnetic stripe data, issuer configurations such as Profiles, Keys and Certificates.

Data Generation module has the features like …

- Managing Issuers and their products
- configuring profile, Keys, Certificates
- Configuring emboss
- schedule automated processing



MAXxEMV CIS: Key Management

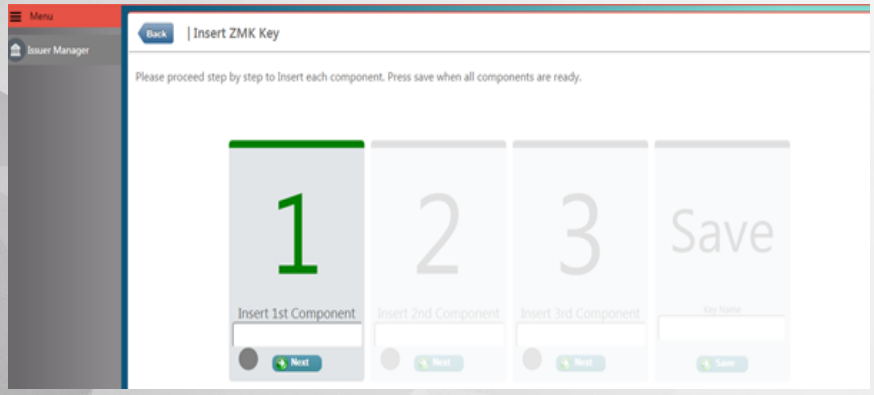
The MAXxEMV CIS Key Management Engine enables key management in compliance to the scheme regulations and processes.

KMS silent features described below…

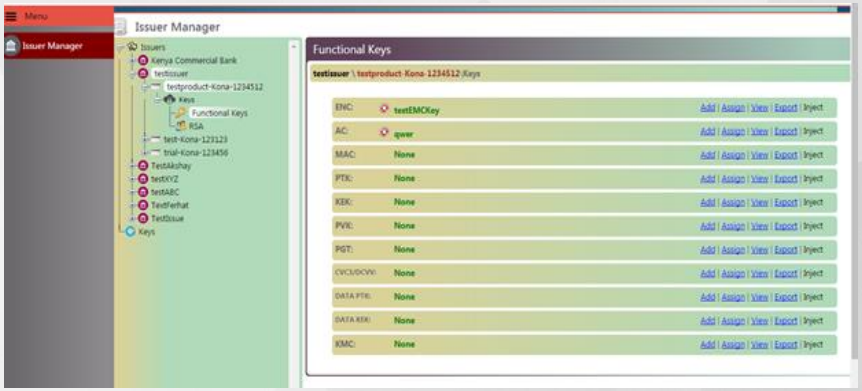
- User friendly GUI helps SO to perform their tasks
- Split knowledge & Dual control throughout
- Manages all the keys of magnetic-stripe and EMV
- Supports both static and dynamic key generation
- Simplifies implementation of HSM functionalities
- LMK Management
- Key Generate / Export / Import / Archive / Suspend / Activate / Delete in easy steps

MAXxEMV CIS: Key Management

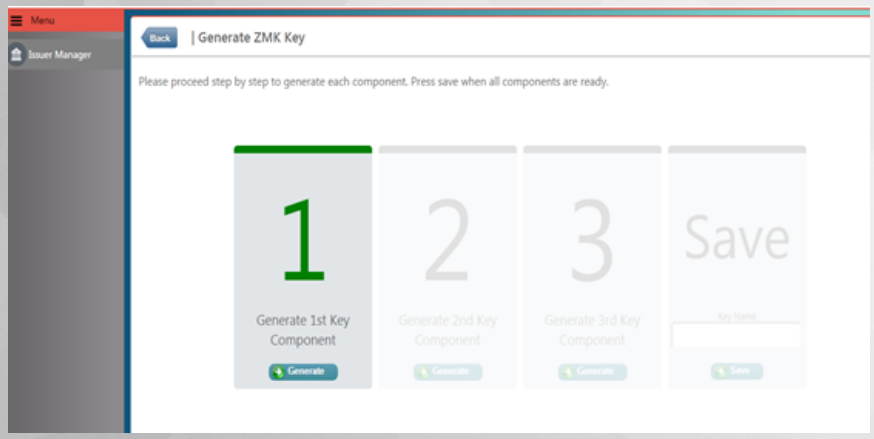
Insert ZMK from Components



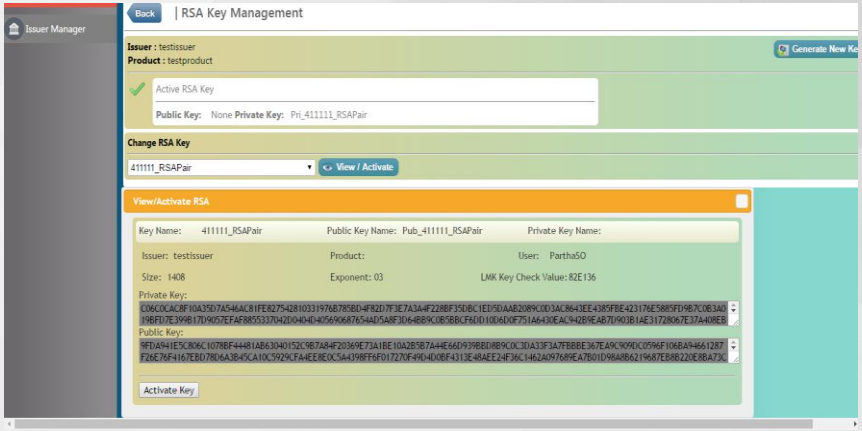
DES Key Management



Generate ZMK Components



RSA Key Management



MAXxEMV CIS: Card Perso Manager

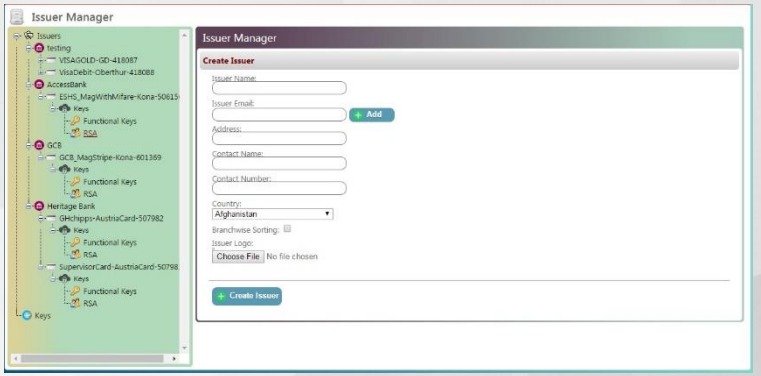
The MAXxEMV CIS Card Perso Manager enables end to end cards personalisation using connected machines. Below features of this module:

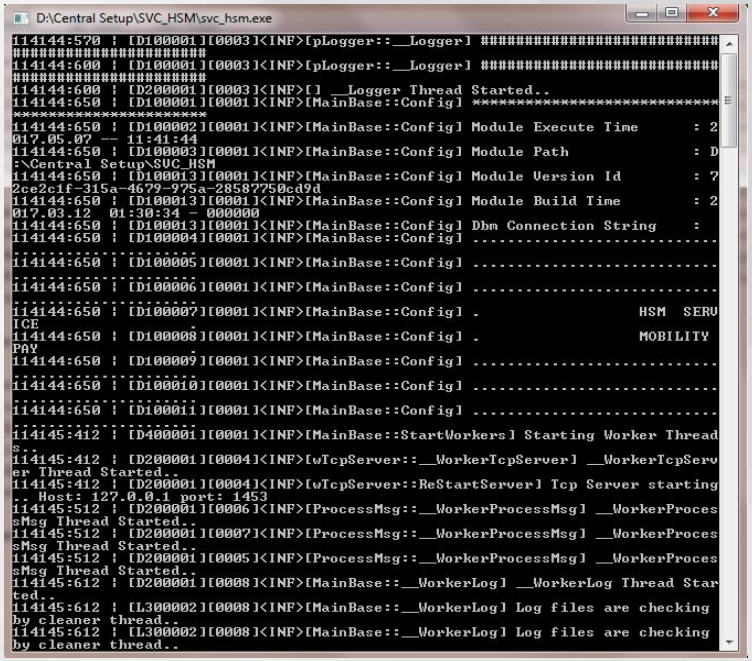
- Perso Manager is independent of machines and card types
- Perso manager choose the respective script based on the machine being used and card type
- Perso manager interacts with HSM securely for card authentication & other cryptographic activities
- Perso manager updates all the communication like machine reader interface, APDU commands, errors if any in the audit files. The system administrator can analyze the log files to find the root cause of the issue if any
- Supports most of the personalization machines from Matica, CIM, Datacard, NBS, Zebra, EVolis etc

MAXxEMV CIS: Security & Compliance

MAXxEMV solution platform is designed and developed in compliance to the core principles of data security and payment schemes regulations. Some of the security features described below:

- Roll based user login – governed by group policy
- Data received from customer is encrypted using 3DES / AES / RSA mechanism
- All the sensitive information stored in the Database is encrypted
- LMK resides at HSM all the times & backed up in smartcards
- Communication internally within the system with the other modules is encrypted
- Machine communication can also in encrypted manner if the OEM supports





MAXxEMV CIS: Project Milestones

Project Kick-off	• Approval of project, cost and defining responsible personal at both sides • Project formal initiation
Requirement Specifications	• Defining all the requirements • Defining gaps to be customized, finalization of the use case
Development/Customisations	• Development of customizations if any • Development of the specifications
Procurement of hardware	• Bank to procure all the servers, hardware related to card perso machine, etc
Implementation & Testing	• Installation of the product, integrating with Bank software if required. • Testing of all the modules
Pilot testing & Go live	• Soft launch of card in production environment • Go live

MAXxEMV CIS: System Requirements

MAX	CPU	RAM	Hard Drive	Ports	Others requirements
MAXxEMV CIS Server	Intel(R) Xeon(R) CPU E5-2609 v2 @ 2.50GHz (4 CPUs), ~2.5GHz	: 12 GB RAM	500 GB	Standard SQL Port (1433) HSM TCP Port : 1453	• SQL Server 2014 • .Net Framework(4.5) • System Admin Rights • Windows Server 2012 R2 Standard • Safe Net HSM
MAXxEMV CIS Client	1.3 GHz	500 MB	40 GB	HTTP Port :80	• .Net Framework(4.5) • System Admin Rights • Windows 7/8/8.1 • MAXIMA 861 CIM Printer • Smart Card Reader
MAXxEMV CIS Web Pro	Intel(R) Xeon(R) CPU E5-2609 v2 @ 2.50GHz (4 CPUs), ~2.5GHz	12 GB	500 GB	Standard SQL Port (1433) HSM TCP Port : 1453 HTTP Port: 80	• .Net Framework(4.5) • System Admin Rights • Windows 7/8/8.1 • Internet Information Server IIS(6.0) • Crystal Report 2013 • Crystal Reports Runtime Engine SP-4 2013
MAXxEMV CIS File Pro	Intel(R) Xeon(R) CPU E5-2609 v2 @ 2.50GHz (4 CPUs), ~2.5GHz	12 GB	500 GB	Standard SQL Port (1433) SFPT Port: 22	• SQL Server 2014 • .Net Framework(4.5) • System Admin Rights • Windows Server 2012 R2 Standard

MAXxEMV Other Issuance Models

MAXxEMV can also be implemented for varying issuance models as below:

- Distributed Bulk Issuance
- Remote Issuance (Multi-Country)
- Instant Issuance (Full Emv Encoding)
- Instant Issuance Lite (Lite Thermal Perso)

All the above issuance models continue to provide the following flexibility and robust issuance benefits to banks/issuers.

- Multi-vendor EMV Chip/OS
- Multiple Payment Schemes
- Multi Vendor EMV Personalisation Machines
- Customisable Workflow Operational Processes

The ‘M’ Value

expertise

Mobility team brings expertise with several years of digital mobility and payment technology experience to enable our partners and customers to incubate, plan, develop and continuously innovate their digital services offerings & leap ahead of their market.

efficiency

Technology today changes at speed of light, with payments and digital enablement landscape pushing conventional businesses to the edge. We catalyse digital enablement for new & established industry players in banking, retail, transport & government sectors ensuring swift time to market.

effectiveness

We help create effective digital transformation roadmap coupled with innovative solutions that deliver effective digital banking, digital issuance, digital channels and digital security solutions for banks, merchants, service providers creating Digital Next for the future.

enhanced

We collaborate with partners and customers to create user experiences that enhance the overall usability and consumer value proposition. Consumers today decide what they want, when they want and where they want, which we enable by optimising services provisioning and delivery with enriched experiences.

Digital Collaborators

Mobility and its digital technology collaborators strive to deliver integrated innovative digital transformation to our customers. A collaborative R&D and integrated projects delivery ensures swift time to market, reduced cost of technology transformation and enhanced consumer eXperiences.

Why MPS

Global sustainable partner

- MPS is a financially sound partner with and is backed by the parent company Mobility International, which is a financially sound organization.
- MI has Global footprint with 6 offices across the four geographies and customers in 6 countries.
- Executive leadership at the helm of the organization who is personally committed to the success of its customers

Commitment and Proximity

•Our presence in Middle East & Africa including Dubai, Kenya, Nigeria & Ghana will allow us to be close to you.

Manage your entire Payment Ecosystem

- MPS believe in creating a robust ecosystem for successful Services deployment.
- MIS provides All Innovative Solutions to Enhance Digital Connect
- Relations with Banks and various other Financial Institutions
- Mobility & Its Partners are trusted partner of VISA and MasterCard
- Leaders in Banking card Personalization,

Security Experts

- MPS is a digital security expert
- Serving a number of segments and industries, including Payment, Identity & Transport.
- We develop secure software and manufacture and personalize secure devices and identity documents.
- The Mobility platforms use various features to secure all interfaces and enable end to end security

Support for any type of merchant payments

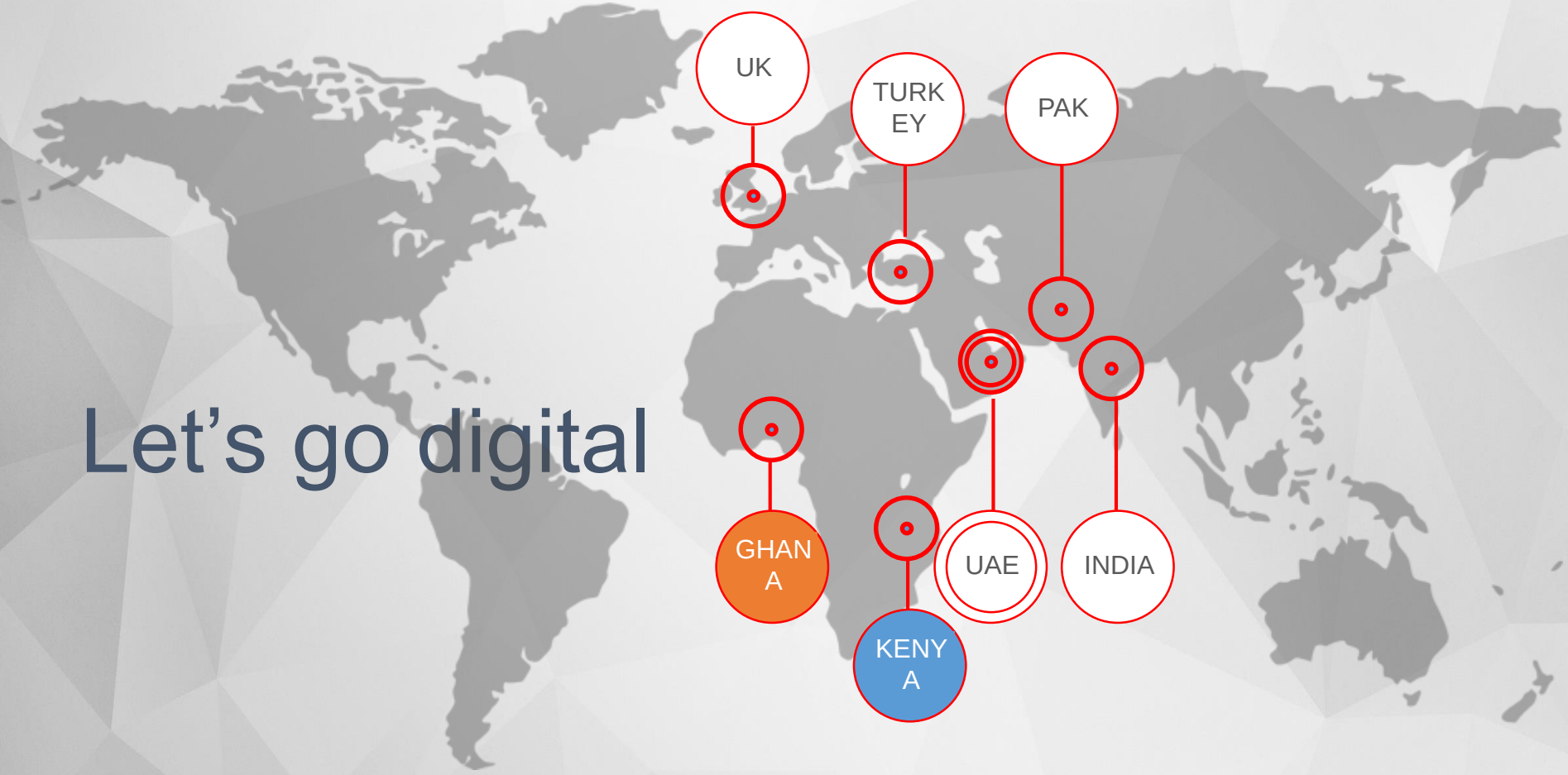
- Merchant payment is a key service for any payment service provider to get volumes and adoption.
- MIS's product portfolio supports all types of merchant payments, whether proximity/NFC or remote/online payments, enabling a truly open loop payment system.

Digitally Connected

www.mobilitypay.com

Strictly Confidential

Global Mobility



Let’s go digital

For further information on any of our products and services please feel free to write to us at corporate@mobilitypay.com and our experts shall revert for further discussion.

Mobility Personalisation Centre

Partner Personalisation Centre

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