



Applet for Java
programmable chip cards





What is it?

jEMVS is an applet for Java programmable chip cards (known as 'Java Cards'). It makes a Java Card behave 100% according to EMV standards, allowing it to be accepted by any EMV capable payment terminal.

Target

Banks that issue cards for the major brands are massively migrating from magstripe technology to EMV chip, which provides them with better security against skimming frauds. Statistically, this fact incentivizes the perpetrators to migrate their attacks to other issuers that still rely on magstripe technology.

With **jEMVS**, any card issuer, even not affiliated with any major brand, can issue cards according to the EMV standard, enjoying its security and interoperability.



Characteristics

- Use of Java Cards based on the Global Platform specification (v2.1.1 or superior - www.globalplatform.org), supported by most chip card providers.
- Implementation of all the payment transaction functionalities according to the EMV 4.2 standard (www.emvco.com) and CCD (Common Core Definitions), allowing total compatibility with most payment terminals.
- Implementation of personalization functionalities according to the EMV CPS 1.1 standard (www.emvco.com).
- Internal parameterization based on the CPA standard, through the use of CIACs (Card Issuer Action Codes) and ADR (Application Decisional Results).
- Multiple configuration support ('profiles') selected through PDOL / GET PROCESSING OPTIONS.
- Offline authentication (SDA or DDA, depending on the chip capabilities).
- Offline PIN verification (cleartext or encrypted, depending on the chip capabilities).



Supported Commands

- INITIALIZE UPDATE (for personalization - CPS)
- EXTERNAL AUTHENTICATE (for personalization - CPS)
- STORE DATA (for personalization - CPS)
- SELECT (native of the Java Card)
- GET PROCESSING OPTIONS
- READ RECORD
- VERIFY
- GET DATA
- GENERATE APPLICATION CRYPTOGRAM
- PIN CHANGE/UNBLOCK
- APPLICATION UNBLOCK
- INTERNAL AUTHENTICATE
- GET CHALLENGE
- UPDATE/ADD DATA (proprietary)



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