

# Smart Card Production Installation Guide

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## PKI usage

Usage of smart card client certificate from FRCS VMS PKI depends on the following requirements:

1. Adding Root CA certificate ("VMSRCA.cer" for Production environment) to Trusted Root Certificate Authority store
2. Adding Issuing CA certificate ("VMSICA1.cer" for Production environment) to Intermediate Root Certificate Authority store<sup>1</sup>
3. Installed Smart Card Reader – driver from manufacture's web site

Smart card for FRCS VMS PKI works on following platforms:

- 1) Windows 7 (and higher) when using
  - a) MS CryptoAPI out-of-the-box. No additional drivers are needed.
  - b) PKCS#11 requires installation of OpenSC - <https://github.com/OpenSC/OpenSC/wiki/Windows-Quick-Start>
- 2) MacOS uses PKCS#11 and requires installation of OpenSC - <https://github.com/OpenSC/OpenSC/wiki/macOS-Quick-Start>
- 3) Unix flavors uses PKCS#11 and requires installation of OpenSC - <https://github.com/OpenSC/OpenSC/wiki/Compiling-and-Installing-on-Unix-flavors>

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<sup>1</sup> Explained in manual **RCA and ICA Production installation guide (end users)**

## Configuration examples

### Example 1: Windows 7 (and higher) Operating System with Chrome | Edge (CryptoAPI)

Works out-of-the-box, if not, verify if **Certificate Propagation** and **Smart Card service** are **Running** and startup type is set to **Automatic**.

### Example 2: Windows 7 (and higher) Operating System with Firefox (PKCS#11)

To install the certificates, follow these steps:

- 1) Finish installation RCA and ICA1 for Firefox from manual
- 2) In Firefox, do the following:
  - a) Install smart card reader driver if not already automatically installed
  - b) Download OpenSC - <https://github.com/OpenSC/OpenSC/releases> (current release is 0.17).
  - c) Follow the steps described in <https://github.com/OpenSC/OpenSC/wiki/Installing-OpenSC-PKCS%2311-Module-in-Firefox,-Step-by-Step>
  - d) Insert smart card from VMS into smart card reader
- 3) Firefox uses client certificate from its own store. Open this store by selecting
  - a) Tools->Option->Certificate click **View Certificate**
  - b) Point to Your Certificate
  - c) look for a certificate starting with first 4 character of certificate serial number in VMS Environment (on smart card serial number, 8 characters length, is printed on card). In this case Firefox is verifying all certificates in path for validity

### Example 3: Other platforms

1. Download the Certificate from <http://pki.vms.frcs.org.fj/pki/VMSRCA.cer> and use browser manual to import the certificate to Trusted CA certificate store
2. Download the Certificate from <http://pki.vms.frcs.org.fj/pki/VMSICA1.cer> and use browser manual to import the certificate to CA certificate store
3. Install smart card reader for platform from manufacture web site
4. Depending on the platform, follow these guides
  - a) <https://github.com/OpenSC/OpenSC/wiki/macOS-Quick-Start>
  - b) <https://github.com/OpenSC/OpenSC/wiki/Compiling-and-Installing-on-Unix-flavors>