BANCO DE ESPAÑA
Eurosistema

# INFORMATION TECHNOLOGY COMMITTEE

# ESCB-PKI PROJECT


USER GUIDE:

INSTALLING THE ROOT AND SUBORDINATE CERTIFICATION AUTHORITIES

**VERSION 3.0**

**ECB-PUBLIC**
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RELEASE NOTES

In order to follow the current status of this document, the following matrix is provided. The numbers mentioned in the column "Release number" refer to the current version of the document.

| Release number | Status | Date of issue | Revisions |
|---|---|---|---|
| 0.1 | Draft | 07.10.2011 | Initial version. |
| 1.0 | Draft | 05.11.2011 | BdE Revision |
| 1.1 | Draft | 25.11.2011 | BdE Revision |
| 1.2 | Final | 26.11.2011 | Format |
| 2.0 | Final | 11.09.2018 | BdE Revision |
| 2.1 | Final | 06.02.2024 | Updated http links to ESCB-PKI website to https |
| 3.0 | Final | 31.10.2024 | Addition of *ESCB-PKI Online CA V1.2* |

# 1. INTRODUCTION

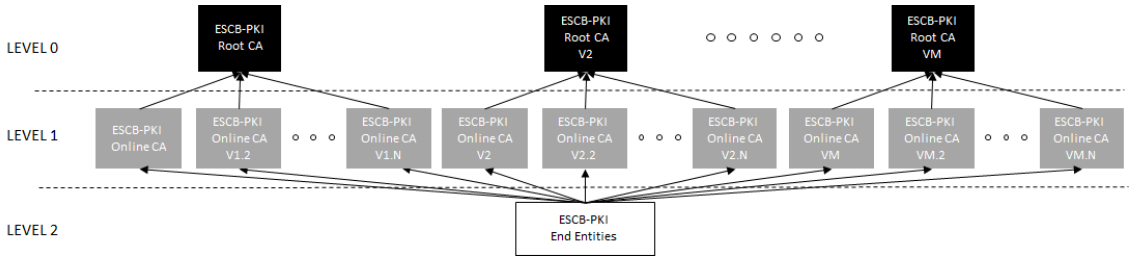
This guide describes how to install the ESCB-PKI root and subordinate Certification Authorities.

The screen shots are included only as a reference. Depending on the operating system version and web browser configuration used, the real screens could be slightly different.

**Note**: The last version of this document can be found in the Support tab of the ESCB-PKI Website, along with other ESCB-PKI guides and manuals.

## 2. THE ESCB-PKI CERTIFICATION HIERARCHY

The ESCB Public Key Infrastructure is based on the following certificate chain:




Where:

- **ESCB-PKI Root CA**: is the first-level Certification Authority. This CA only issues certificates for itself and its Subordinate CA. Its most significant data are:

| | |
|---|---|
| **Subject** | CN=ESCB-PKI ROOT CA, O=EUROPEAN SYSTEM OF CENTRAL BANKS, C=EU |
| **Serial Number** | 4431 9C5F 91E8 162F 4E00 73F6 6AB8 71D8 |
| **Issuer** | CN=ESCB-PKI ROOT CA, O=EUROPEAN SYSTEM OF CENTRAL BANKS, C=EU |
| **Validity** | From 21-06-2011 12:35:34 to 21-06-2041 12:35:34 |
| **Thumbprint (SHA-1)** | 3663 2FBA FB19 BDBC A202 3994 1926 ED48 4D72 DD4B |
| **Thumbprint (SHA-256)** | 7963 2A97 1D12 A889 9724 BB35 C37B 51D2 3E21 4DF9 20C3 2450 093E 0EA7 49FB AAEB |

- **ESCB-PKI Online CA**: this second-level Certification Authority is subordinate to the Root CA. It is responsible for issuing certificates for the ESCB-PKI end entities. Its most significant data are:

| | |
|---|---|
| **Subject** | CN= ESCB-PKI ONLINE CA, O=EUROPEAN SYSTEM OF CENTRAL BANKS, C=EU |
| **Serial Number** | 660C 9B12 9A0A 6C21 5509 38DD 54A0 ED2D |
| **Issuer** | CN=ESCB-PKI ROOT CA, O=EUROPEAN SYSTEM OF CENTRAL BANKS, C=EU |
| **Validity** | From 22-07-2011 12:46:35 to 22-07-2026 12:46:35 |
| **Thumbprint (SHA-1)** | E976 D216 4A5F 62DA C058 6BE0 EC10 EF24 36B8 12AC |
| **Thumbprint (SHA-256)** | 1335 26DC 99E9 CC36 62F8 F5FA 2006 3005 BA90 E663 2BF3 4F18 A84B A39B 5FAA 5700 |

- **ESCB-PKI Online CA V1.2**: Certification Authority subordinated to the ESCB-PKI Root CA. It is responsible for issuing the ESCB-PKI end entities certificates in order to replace the current ESCB-PKI Certification Authority when it is near its expiration date. Its most significant data are:

SHA-256 certificate:

| | |
|---|---|
| **Distinguished Name** | CN = ESCB-PKI ONLINE CA V1.2, O= European System of Central Banks, C=EU |
| **Serial Number** | 1121 4958 04E1 E706 695D D1D1 2997 FAEF 6653 |
| **Distinguished Name of Issuer** | CN=ESCB-PKI ROOT CA, O=EUROPEAN SYSTEM OF CENTRAL BANKS, C=EU |
| **Validity Period** | From 08-06-2023 17:07:00 to 08-06-2038 17:07:00 |
| **Message Digest (SHA-1)** | DC92 042E 6316 CB60 F8F6 109B 8C43 F3C6 AF2F B2F3 |
| **Message Digest (SHA-256)** | 96B7 8E9C F914 ED4D 072D 93C8 C531 DEEF D102 7571 7218 A202 0924 3216 99D8 1C48 |
| **Cryptographic algorithms** | SHA-256 / RSA 4096 |

- **End entities**: they are the ESCB-PKI users that hold one or several digital certificates.

Before using any ESCB-PKI certificate, it is required to install the root and subordinate CA certificates; otherwise, the computer will not trust the certificate.

# 3. INSTALLING THE ESCB-PKI ROOT AND SUBORDINATE CERTIFICATION AUTHORITIES

There are many technical possibilities to trust a Certificate Authority certificate. Check with your local Help Desk which options are available at your organization.

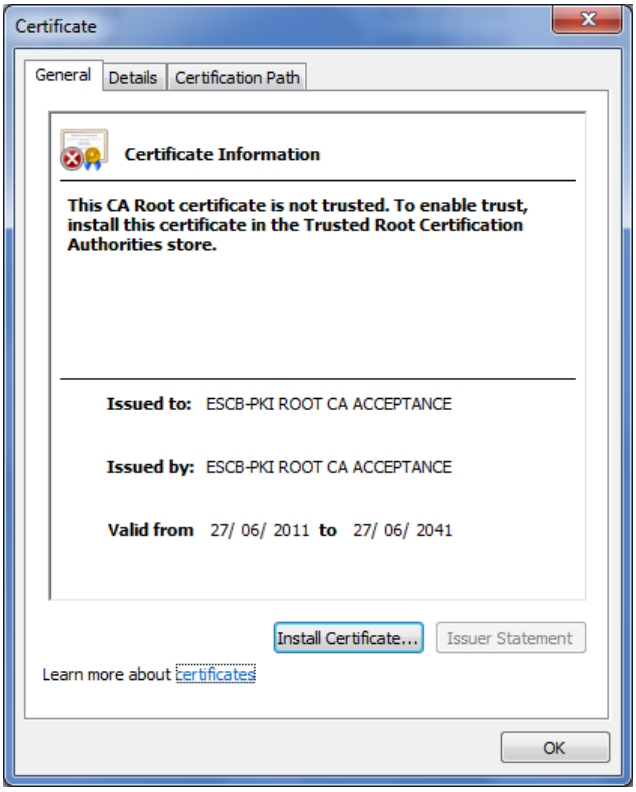
Below you can find the necessary steps to install the root and subordinate CA certificates in your computer for the Windows user account you use to log in. In case you require installing these certificates among several computers or for several user accounts, ask your local Help Desk.

## 3.1. OBTAIN THE CERTIFICATES FOR THE ROOT AND SUBORDINATE CERTIFICATION AUTHORITIES

These certificates can be downloaded at the ESCB-PKI website, https://pki.escb.eu

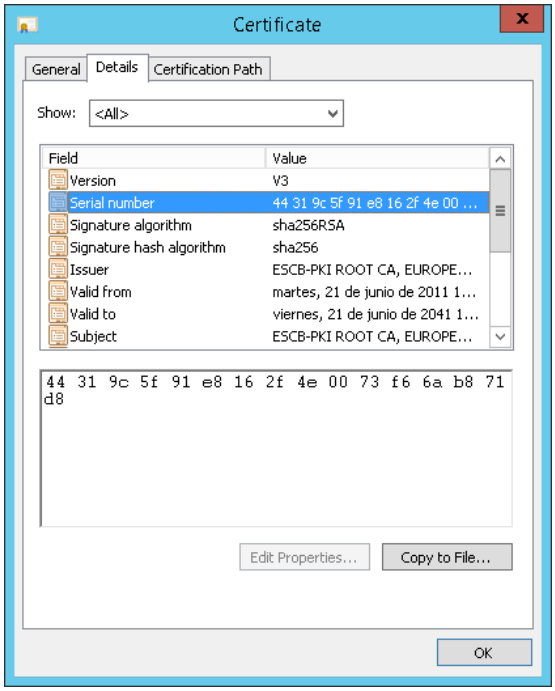
## 3.2. INSTALL THE ROOT CERTIFICATION AUTHORITY

- Double-click on the root CA certificate file (rootCA.crt). You will see the following screen indicating that the certificate is not trusted:



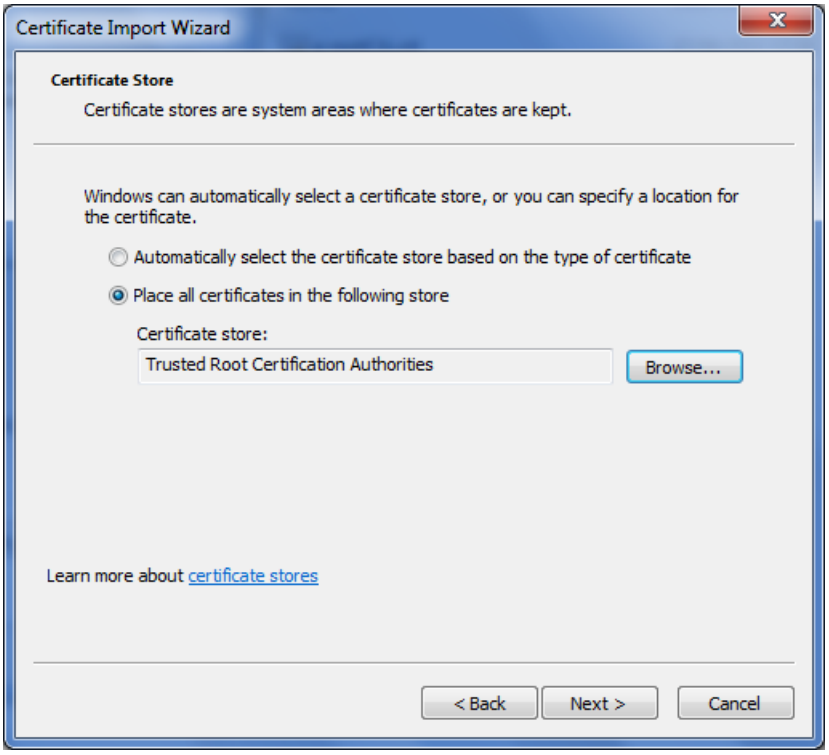

- In case the certificate is not tagged as “not trusted”, it means that your computer already trusts the certificate and you can skip the rest of the steps.

- Click on the Details tab and check the most significant data against the certificate information provided in section 2:

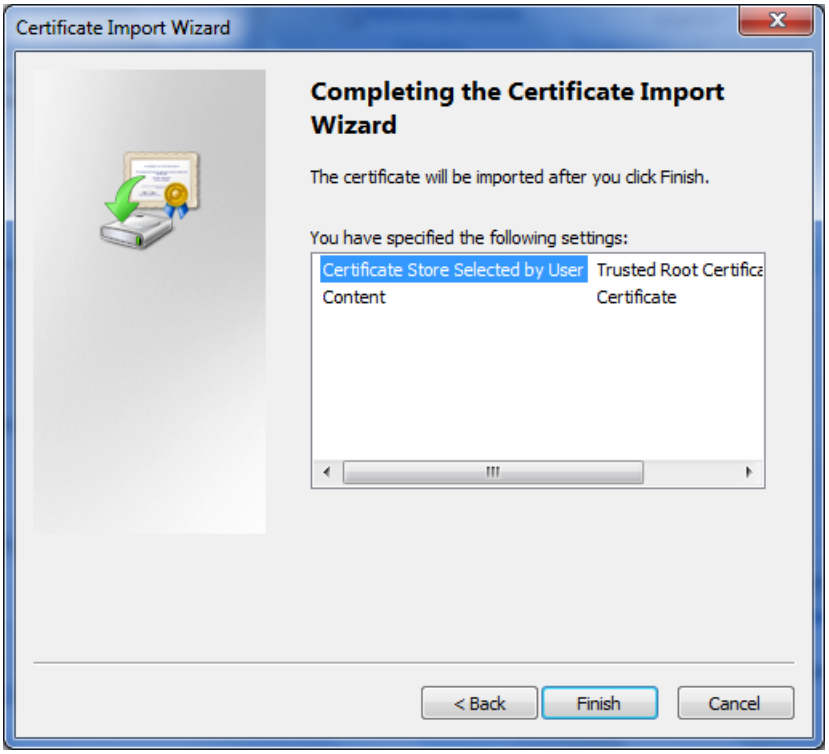



- If all the information matches, click on the General tab again and press the Install Certificate button. The Certificate Import wizard will start:

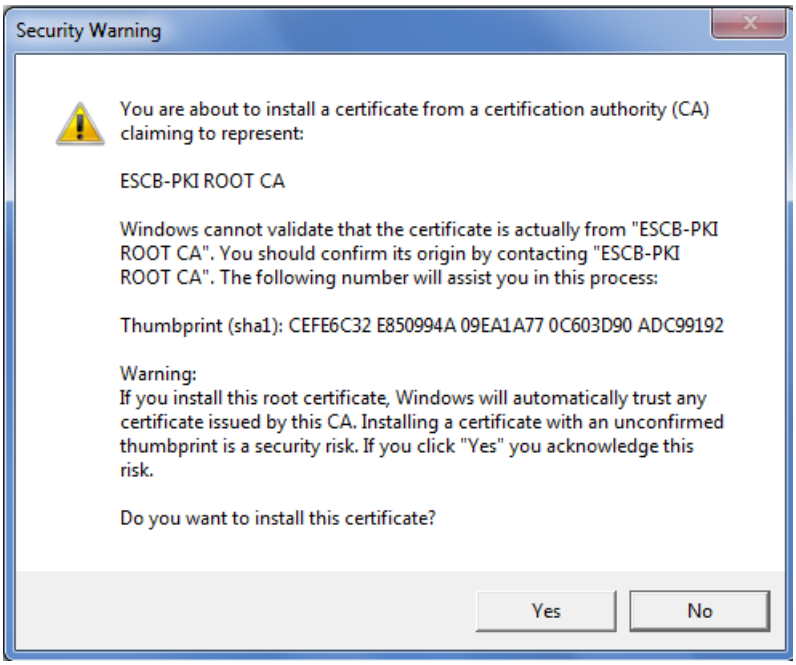
- Press Next. Select the “Trusted Root Certification Authorities” store:




- Press Next. The following screen will be shown:



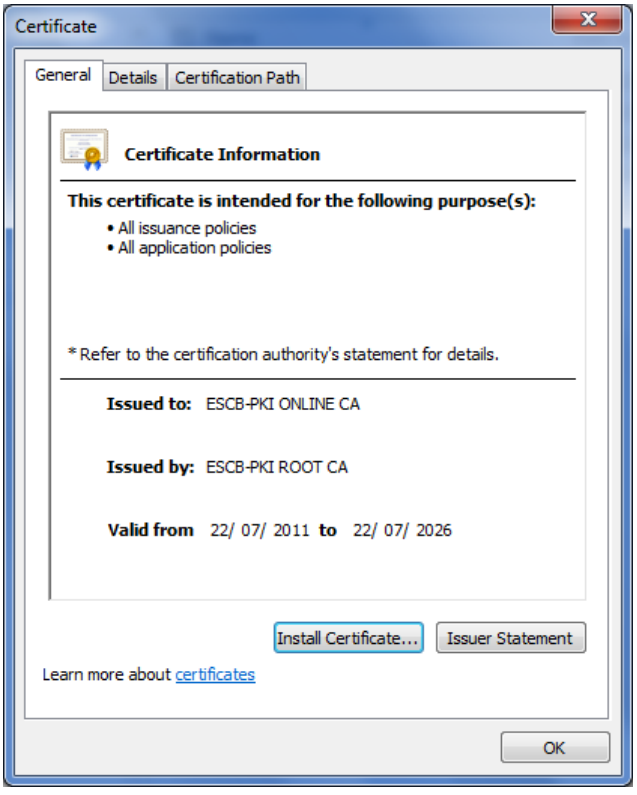
- Press Finish. The following security warning will be shown:



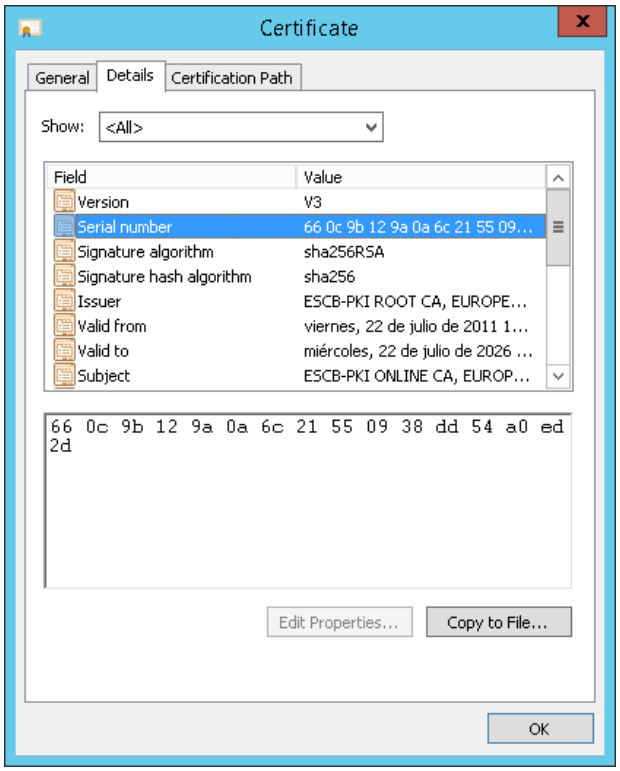

- Check the SHA-1 thumbprint against the one in section 2. Press Yes and then OK in the “The import was successful” pop-up message.

## 3.3. INSTALL THE SUBORDINATE CERTIFICATION AUTHORITIES

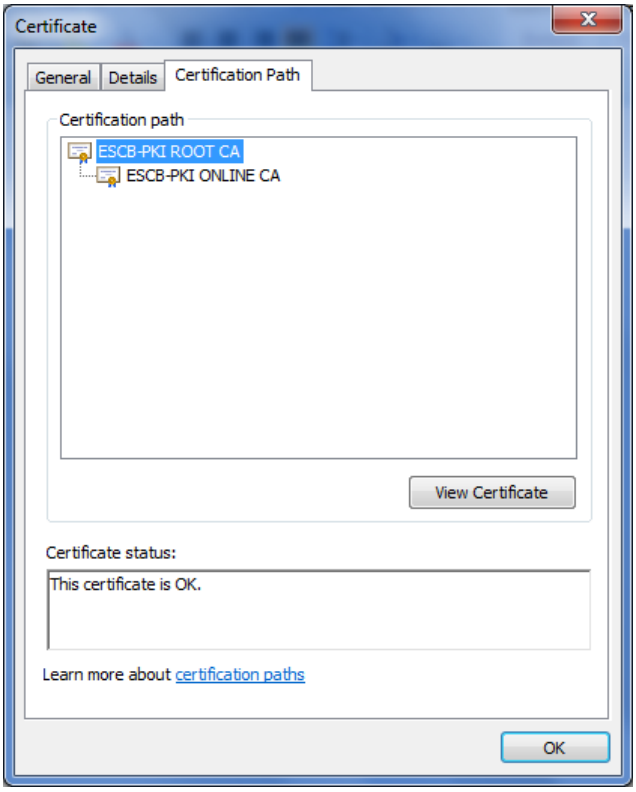
- Double-click on the subordinate CA certificate file. You will see the following screen:



- Click on the Details tab and check the most significant data against the certificate information provided in section 2:

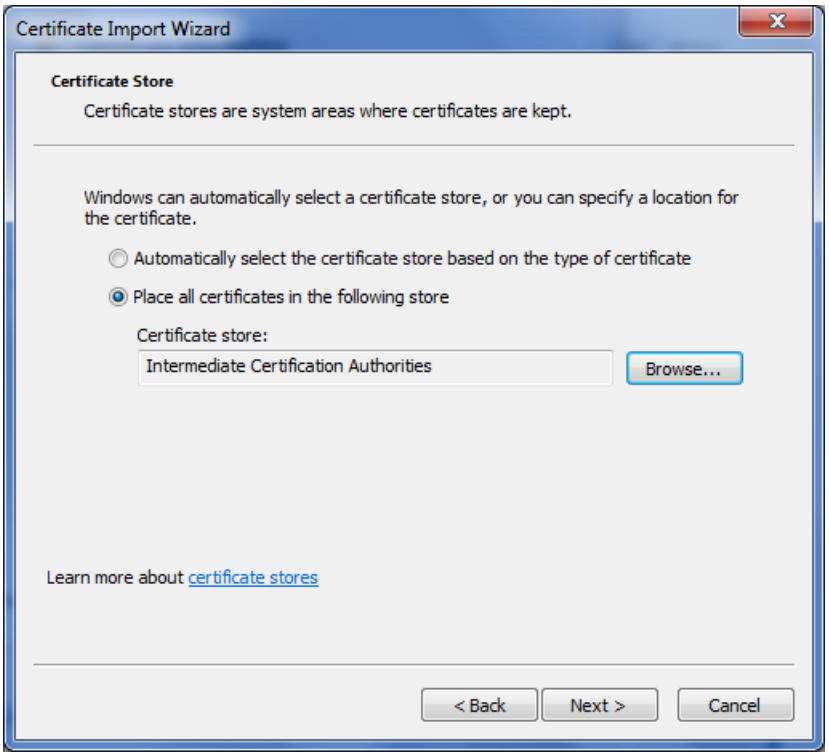



- Click on the Certification Path tab to make sure that the root CA certificate is properly installed in your computer (if that is not the case, install it again):

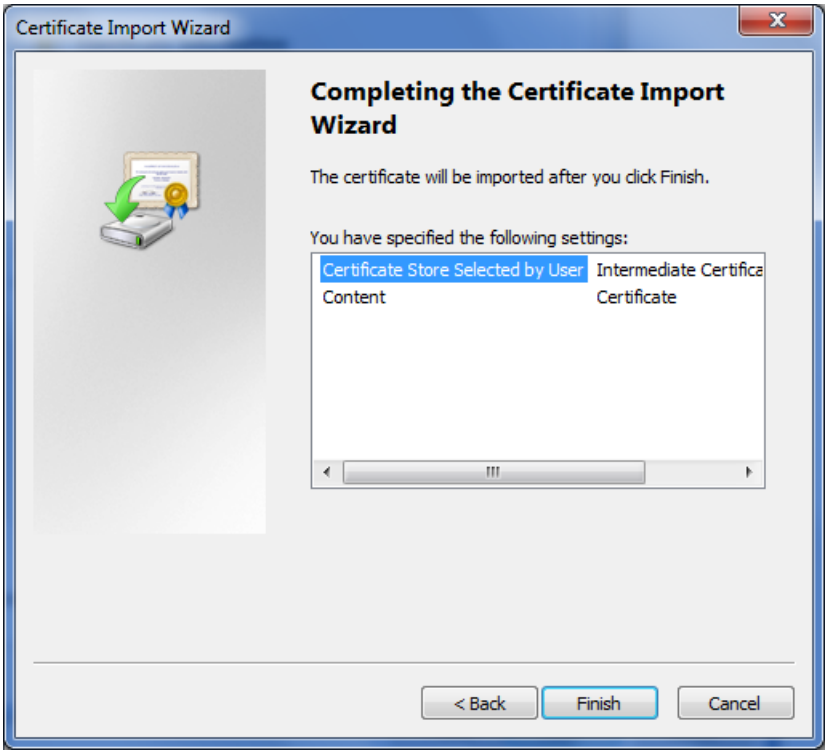


- Click on the General tab again and press the Install Certificate button. The Certificate Import wizard will start:


- Press Next. Select the “Intermediate Certification Authorities” store:



- Press Next. The following screen will be shown:




- Press Finish and OK in the “The import was successful” screen.

**Repeat all the steps at point 3.3 Install the subordinate Certification Authorities for the subordinate CA v1.2 certificate file.**