

## Smartcard

### SMARTCARD INSTALLATION GUIDE Part One – Installing the Smartcard Reader

This document in three parts provides instructions to install your Smartcard Reader, software and public keys onto your local PC. For further guidance please visit [www.lawscot.org.uk/smartcard](http://www.lawscot.org.uk/smartcard)

#### Getting Started

This step-by-step guide assumes that you are a **user with administrative privileges to install software** onto your computer.

How to check if you have admin privileges: Go to **START** and select **CONTROL PANEL**, then select **USER ACCOUNTS**, then **MANAGE USER ACCOUNTS** and check which **GROUP** you are in. (If you have an IT support person or department, you may wish to contact them before proceeding.)

#### Equipment - Reader

Before you can use a Smartcard, you must install a Smartcard reader on your host computer. The Smartcard reader, provided by the Law Society of Scotland, is compatible with Microsoft® Windows® and Apple® operating systems. Installation is achieved by a plug and play compliant device upon detection by your host computer. The Smartcard reader provided is a high-performance reader for desktop use with a standing base in a robust housing – remove the Smartcard reader from the box and attach the base. Other card-readers are available, however, we recommend you use the device supplied by the Law Society of Scotland that has been tested and will be supported during its lifetime.



Smartcard reader with desktop base fitted



Insert Smartcard face-forward, with the gold chip inserted into the slot on the top of the reader. Your photographic image will be shown on the top right as you view the reader face on.

## Equipment – supported Operating Systems

The Law Society of Scotland Smartcard will only support computer devices with the following minimum specification:

Operating system	Web Browser			
	Internet Explorer	Firefox	Chrome	Safari
Windows XP®	OK	OK	OK	
Windows Vista®	OK	OK	OK	
Windows 7® (32-bit & 64-bit)	OK	OK	OK	
Windows 8® (32-bit & 64-bit)	OK	OK	OK	
Mac OS®		OK		Not supported

## Installing the Smartcard Reader - automatically

### To connect the Smartcard reader

1. **Shut down** and **turn off** your computer
2. **Attach** the reader to an available **USB port**
3. **Turn on** your machine and **log on as a user with the ability to install applications (admin privileges)**
4. Ensure your computer is **connected to the internet**

### Installing the device driver

**The reader is plug-and-play and will install all necessary drivers for use on its own.**

The Smartcard reader is designed to be user-friendly and install necessary drivers by itself. If the Smartcard reader has been detected and installed properly, the LED illuminates. (green light on left-hand side display)  
Your Smartcard reader is now ready for use.

However, if you are using a host computer that does not have a plug and play feature (plugging in the reader does not prompt the computer to install the appropriate driver), you must install the driver manually.

## Installing the Smartcard Reader - manually

Installing the Smartcard reader manually requires to you to download the driver from the manufacturer's website <https://www.hidglobal.com/drivers> and install the software on your computer.

### To connect the Smartcard reader

1. **Shut down** and **turn off** your computer
2. **Attach** the reader to an available **USB port**
3. **Turn on** your machine and **log on as a user with the ability to install applications (admin privileges)**
4. Ensure your computer is **connected to the internet**

### Installing the device driver

1. **Select** the link above or cut & paste into a web browser
2. **Enter** the following details into the **search filter** options:

**Brand:** Omnikey

**Product:** Onmikey 3121 USB Card Reader

**OS:** Enter the operating system of your computer.

If you are unsure of your Computer operating system, please check your system information:

**Windows:** Go to **START** and select **CONTROL PANEL**, then select **SYSTEM** – your computer's Operating System will be displayed on the "Edition" tab.

**Apple:** From the Apple (🍏) menu, choose **About This Mac**. Click the Version number underneath where the window says "OS X". The **About This Mac** window then displays your OS X version number in place of the version number.

Use the dropdown menus below to find the drivers and downloads you want. You can also search by product or keyword.

OMNIKEY 3121 USB Card Reader

Reset All

### Drivers

OMNIKEY 512X, 532X, 1021, 3X21, 6121 PCSC FOR LINUX  
ifdokccid\_linux\_i686-v4.2.8.tar.gz - 417.77 KB

Note: This is a BETA driver for evaluation only and has not been fully qualified.  
PCSC driver for OMNIKEY 1021, 3x21, 6121, 512x, 532x v4.2.8 Release date: 2016-06-08 Requirements: Linux i686, eglibc-2.11.3, libusb-1.0.8

OMNIKEY 512X, 532X, 1021, 3X21, 6121 PCSC FOR LINUX X86\_64  
ifdokccid\_linux\_x86\_64-v4.2.8.tar.gz - 428.13 KB

Note: This is a BETA driver for evaluation only and has not been fully qualified.  
PCSC driver for OMNIKEY 1021, 3x21, 6121, 512x, 532x v4.2.8 Release date: 2016-06-08 Requirements: Linux x86\_64, eglibc-2.11.3, libusb-1.0.8

08 Jun 2016

Linux x64

**DOWNLOAD**

**DIRECT LINK**

OMNIKEY 5X2X, XX21 PCSC FOR MAC OS X  
ifdokccid\_mac\_v4.2.8.tar.gz - 246.05 KB

08 Jun 2016

- All OSs
- Linux
- Linux x64
- MacOS X
- Win 2000/XP
- Win 2003 Server
- Win 2003 Server x64
- Win 98/ME
- Win CE
- Windows 10 32-Bit
- Windows 10 64-Bit
- Windows 2000
- Windows 7
- Windows 7 x64
- Windows 8
- Windows 8 x64
- Windows 8.1 x32
- Windows 8.1 x64
- Windows CE
- Windows Server 2008
- Windows Server 2008 x64
- Windows Vista
- Windows Vista x64
- Windows XP
- WinXP 64 Bit Titanium
- WinXP x64 Edition

3. **Double-click** the relevant driver (usually named “self-extracting archive”) in the upcoming list to **download** the driver and **install** as per your operating system instructions.

# SMARTCARD INSTALLATION GUIDE

## Part Two – Installing and using the Smartcard Manager

This document in three parts provides instructions to install your Smartcard Reader, software and public keys onto your local PC. For further guidance please visit [www.lawscot.org.uk/smartcard](http://www.lawscot.org.uk/smartcard)

### Getting Started

This step-by-step guide assumes that you are **a user with administrative privileges to install software** onto your computer.

How to check if you have admin privileges: Go to **START** and select **CONTROL PANEL**, then select **USER ACCOUNTS**, then **MANAGE USER ACCOUNTS** and check which **GROUP** you are in. (If you have an IT support person or department, you may wish to contact them before proceeding.)

## Installing Smartcard Manager application

Once the Smartcard reader has been successfully installed, the next step is to install the manager application & drivers. The Smartcard Manager Application is a small utility that allows you to interrogate and maintain the Smartcard. The application is not required for general usage, but used in the event that passcodes need changing or confirmation of digital signatures. This tool will enable full maintenance of the Smartcard and allow such functionality as:

- Changing PIN & PUK codes
- Unlocking PIN
- Importing certificates
- View card information

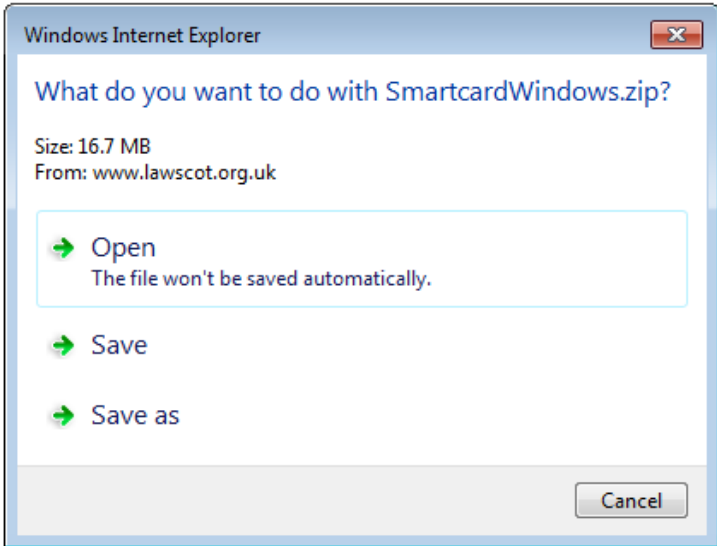
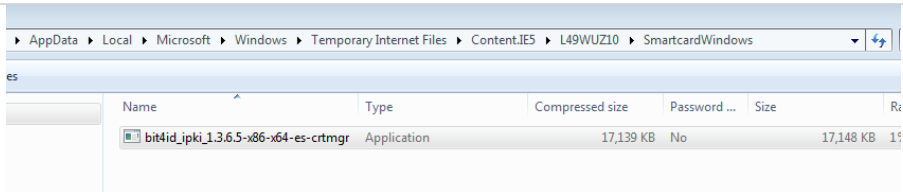
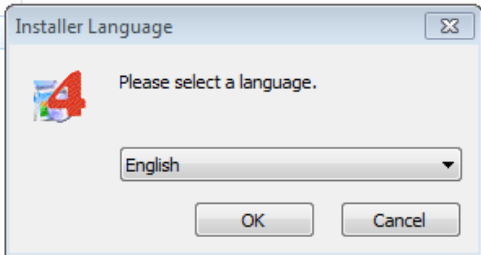
The manager application, listed in the table below, is a small utility application that is compatible with Microsoft® Windows® and Apple® operating systems. The application can be downloaded from the Law Society's website:

Application	Application purpose	Application Installation File Location
Card Manager	card maintenance	<b>Microsoft®</b> <a href="http://www.lawscot.org.uk/media/865994/SmartcardWindows.zip">http://www.lawscot.org.uk/media/865994/SmartcardWindows.zip</a> <b>Apple®</b> <a href="http://www.lawscot.org.uk/media/866067/SmartcardMac.zip">http://www.lawscot.org.uk/media/866067/SmartcardMac.zip</a>

### To install the Smartcard manager application

1. Click the **link** above and **open the file** (select the appropriate link for all Windows or Apple operating systems)
2. **Run** the software to **Install (Please allow the BIT4ID application to be installed, if prompted)**

3. **Select** a language – **English**
4. Follow the on-screen instructions, and then click **Next**
5. Click **I Agree** to the License Agreement
6. Software will install, and then click **Finish** to complete the installation. If requested to reboot your computer, select **reboot now**. Failure to complete this step can result in the application not being correctly installed
7. The application is installed and will be available from the operating system programme menu

Installation Screenshots	
Step/ instruction	Image
Step 1 - download	
Step 2 – double-click to start installation	
Step 3 – select language	

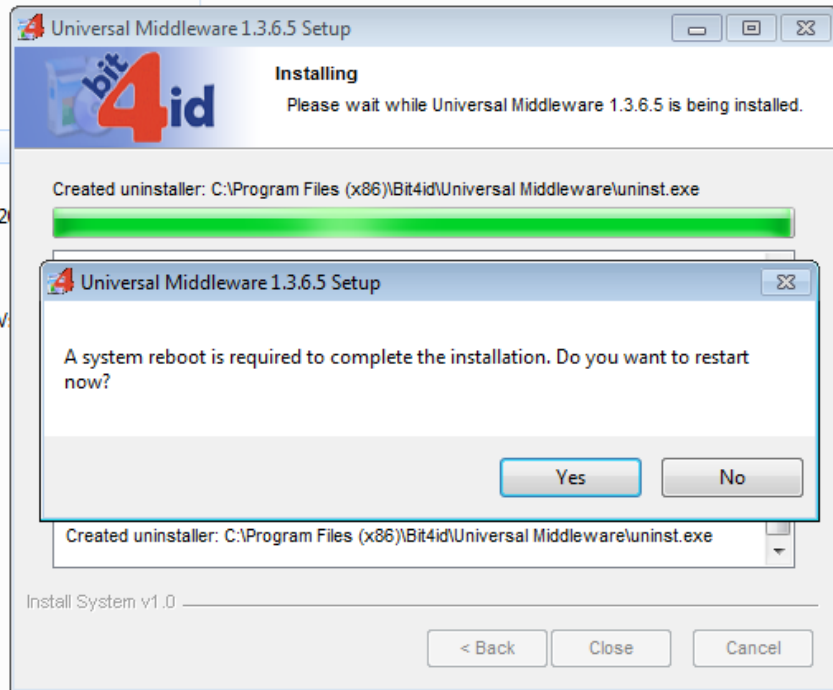
**Step 4 – follow the instructions**



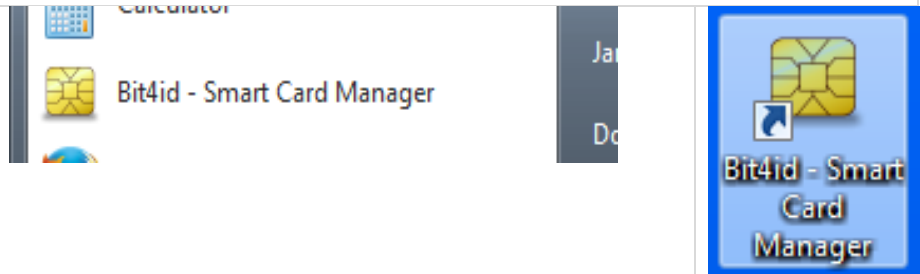
**Step 5 – agree to the License Agreement & Install**



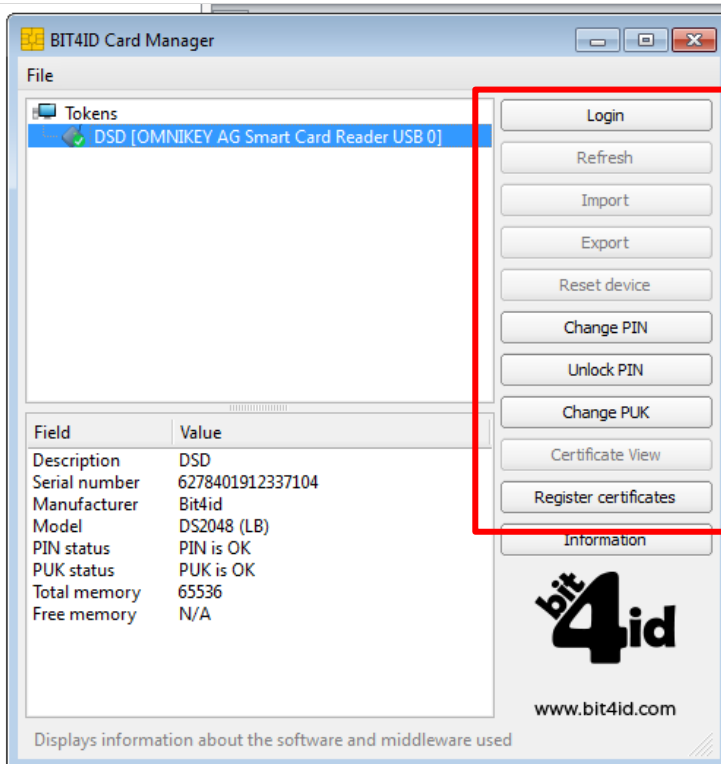
**Step 6 – reboot the computer to finish the installation**



**The Smartcard Manager will be visible in the programme list. You can also create a shortcut on the screen.**



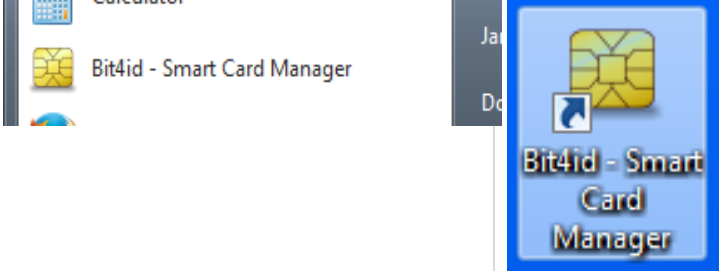
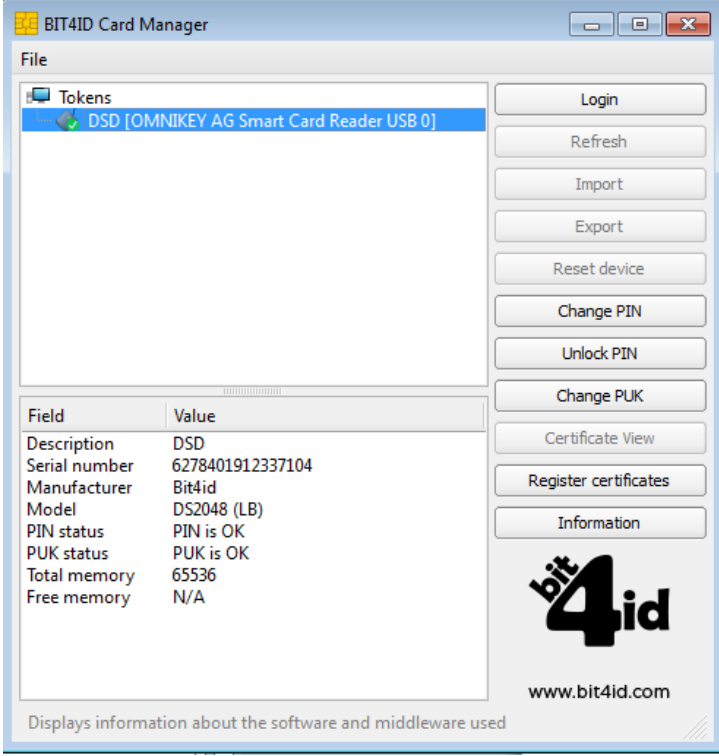
**The user interface of the Smartcard Manager allows several functions to be carried out.**





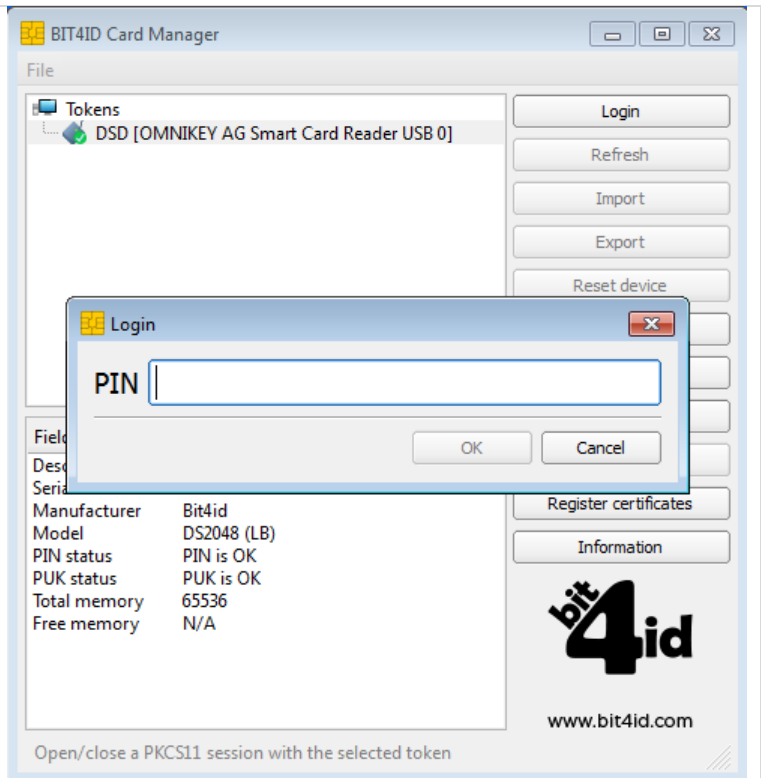
# Using the Smartcard Manager

The Smartcard Manager Application is a small utility that allows the Smartcard holder to interrogate and maintain their Smartcard. The application is not required for general usage, but used in the event that passcodes need changed, confirmation of digital signature information and a test that the Smartcard Reader is working correctly.

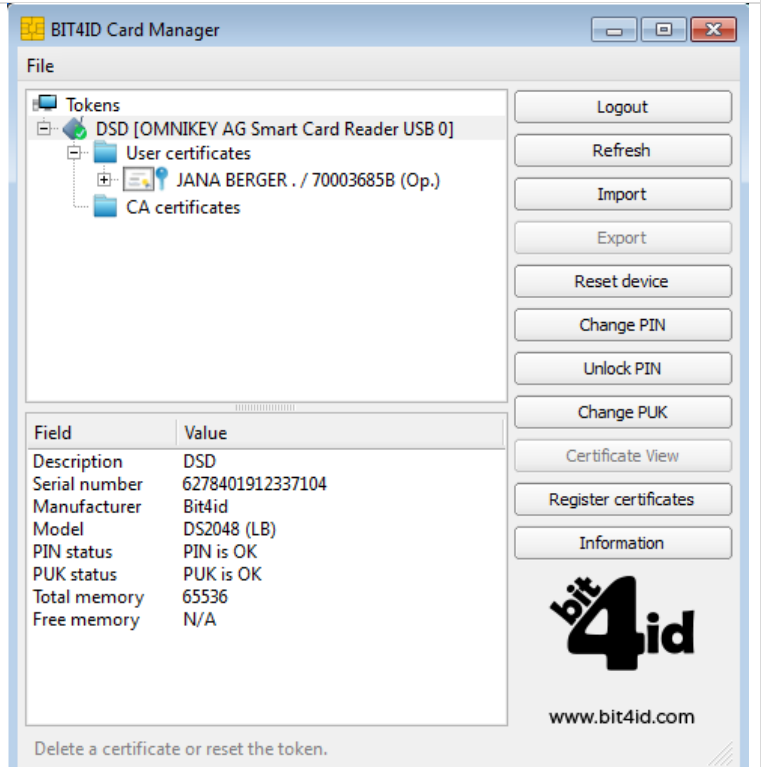
Function/ Feature	Description	Functionality Screenshot																		
<p><b>Application</b></p>	<p>Launch program from program menu, desktop or ribbon</p>	 <p>A screenshot of a Windows desktop environment. In the center, there is an application icon for 'Bit4id - Smart Card Manager' which features a yellow smartcard graphic. To the left, a portion of the Windows Start menu is visible, showing icons for 'Calculator' and 'Dc'.</p>																		
<p><b>Main Screen</b></p>	<p>Accessing all functions and features from the main screen</p>	 <p>A screenshot of the BIT4ID Card Manager application window. The window title is 'BIT4ID Card Manager'. It has a 'File' menu and a 'Tokens' list. The 'Tokens' list contains one entry: 'DSD [OMNIKEY AG Smart Card Reader USB 0]'. To the right of the list is a vertical column of buttons: Login, Refresh, Import, Export, Reset device, Change PIN, Unlock PIN, Change PUK, Certificate View, Register certificates, and Information. Below the buttons is a table with the following data:</p> <table border="1" data-bbox="774 1317 1241 1624"> <thead> <tr> <th>Field</th> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Description</td> <td>DSD</td> </tr> <tr> <td>Serial number</td> <td>6278401912337104</td> </tr> <tr> <td>Manufacturer</td> <td>Bit4id</td> </tr> <tr> <td>Model</td> <td>DS2048 (LB)</td> </tr> <tr> <td>PIN status</td> <td>PIN is OK</td> </tr> <tr> <td>PUK status</td> <td>PUK is OK</td> </tr> <tr> <td>Total memory</td> <td>65536</td> </tr> <tr> <td>Free memory</td> <td>N/A</td> </tr> </tbody> </table> <p>At the bottom right of the window is the 'bit4id' logo and the website 'www.bit4id.com'. A footer note at the bottom left states: 'Displays information about the software and middleware used'.</p>	Field	Value	Description	DSD	Serial number	6278401912337104	Manufacturer	Bit4id	Model	DS2048 (LB)	PIN status	PIN is OK	PUK status	PUK is OK	Total memory	65536	Free memory	N/A
Field	Value																			
Description	DSD																			
Serial number	6278401912337104																			
Manufacturer	Bit4id																			
Model	DS2048 (LB)																			
PIN status	PIN is OK																			
PUK status	PUK is OK																			
Total memory	65536																			
Free memory	N/A																			

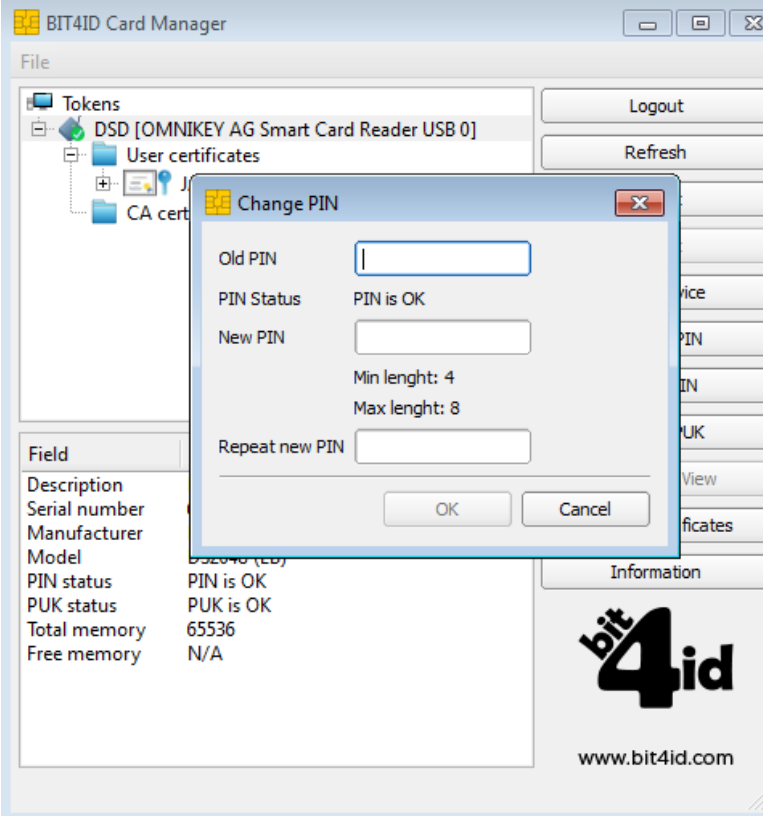
**Accessing Manager functions**

Before you can use any of the functions of your Smartcard manager, you need to log in by entering your PIN. This serves as a security feature to ensure no one else is tampering with your Smartcard.

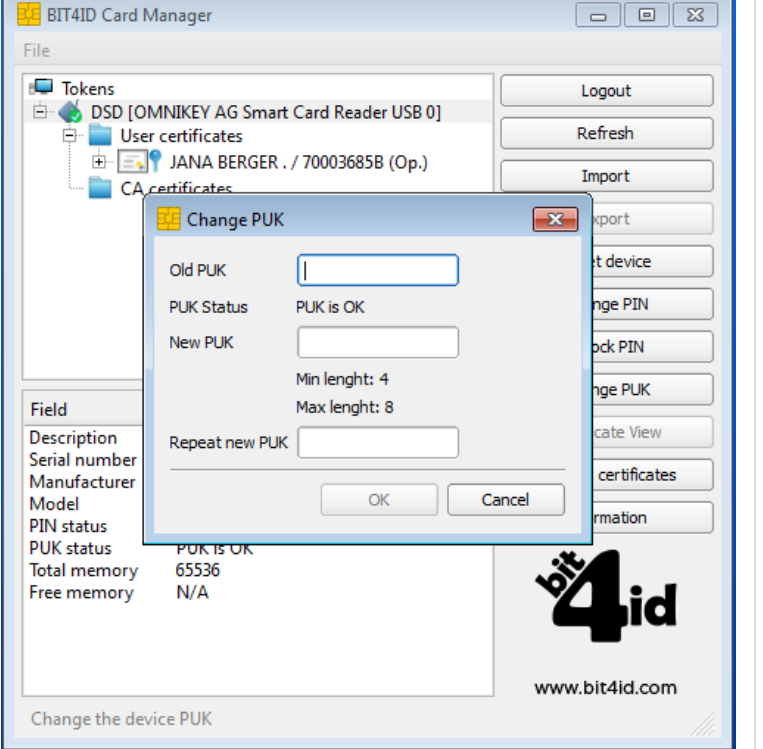



Once you have logged in, all information stored on the card will become visible.

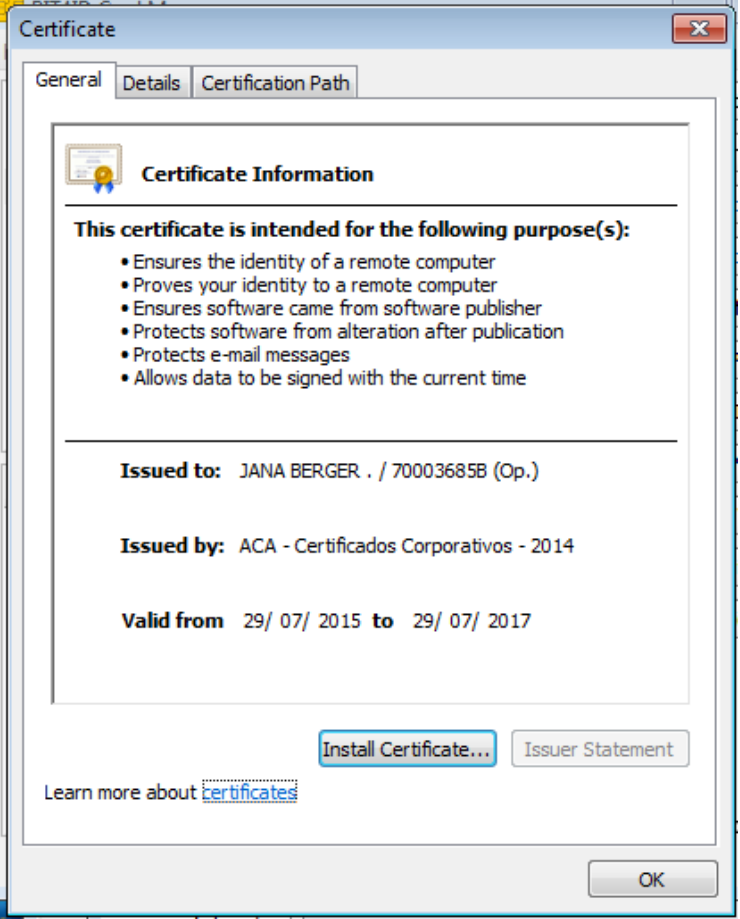



<p><b>Change PIN</b></p>	<p>Function for changing the Smartcard PIN</p>	
--------------------------	--	--

--	--	--

<p><b>Change PUK</b></p>	<p>Function for changing the Smartcard PUK</p>	
--------------------------	--	--

<p><b>Unlock PIN</b></p>	<p>Function for using the Smartcard's PUK to unblock a forgotten or compromised PIN</p>	
<p><b>Refresh</b> <b>Import</b> <b>Export</b> <b>Register certificates</b></p>	<p>Functions for adding/removing digital certificates onto your Smartcard. These functions will not apply.</p>	

<p><b>Certificate View</b></p>	<p>Feature for viewing the list of digital certificates on the Smartcard</p>	 <p>The screenshot shows a 'Certificate' dialog box with three tabs: 'General', 'Details', and 'Certification Path'. The 'Details' tab is active, displaying 'Certificate Information'. It lists the purposes of the certificate: ensuring identity of a remote computer, proving identity to a remote computer, ensuring software came from a software publisher, protecting software from alteration, protecting e-mail messages, and allowing data to be signed with the current time. It also shows the certificate was issued to 'JANA BERGER . / 70003685B (Op.)' by 'ACA - Certificados Corporativos - 2014' and is valid from 29/07/2015 to 29/07/2017. Buttons for 'Install Certificate...', 'Issuer Statement', and 'OK' are visible.</p>
<p><b>Information</b></p>	<p>Feature showing the version of the Smartcard Manager Application installed</p>	 <p>The screenshot shows an 'Information' dialog box with the Bit4id logo at the top. Below the logo, it displays the following text: 'Copyright 2013 Bit4id.com, All rights reserved.', 'Card Manager (1.3.0)', 'Informazioni Middleware', 'Product Name: BIT4ID Universal Middleware ( 'bit4ipki.dll' )', 'Version: 1.3.6.5', 'Copyright: Bit4id - Copyright (C) 2004-2009', 'Company: Bit4id (http://www.bit4id.com)', and 'Description: Universal Middleware'. An 'OK' button is located at the bottom right.</p>

# SMARTCARD INSTALLATION GUIDE

## Part Three – Installing the Certificates

This document in three parts provides instructions to install your Smartcard Reader, software and public keys onto your local PC. For further guidance please visit [www.lawscot.org.uk/smartcard](http://www.lawscot.org.uk/smartcard)

### Getting Started

This step-by-step guide assumes that you are **a user with administrative privileges to install software** onto your computer.

How to check if you have admin privileges: Go to **START** and select **CONTROL PANEL**, then select **USER ACCOUNTS**, then **MANAGE USER ACCOUNTS** and check which **GROUP** you are in. (If you have an IT support person or department, you may wish to contact them before proceeding.)

## Installing Public Keys

Public keys are required to ensure that the certificates reaching our computers have been correctly issued by the certification authority. The Smartcard certificate authority is Abogacía Certification Authority (ACA, operated by RedAbogacía) in Spain.

ACA is a member of the 'Microsoft Windows root certificate program' and further details can be found on the Microsoft website <http://social.technet.microsoft.com/wiki/contents/articles/31634.microsoft-trusted-root-certificate-program-participants-v-2016-april.aspx>

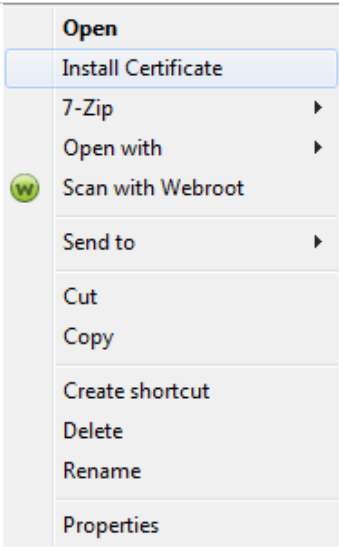
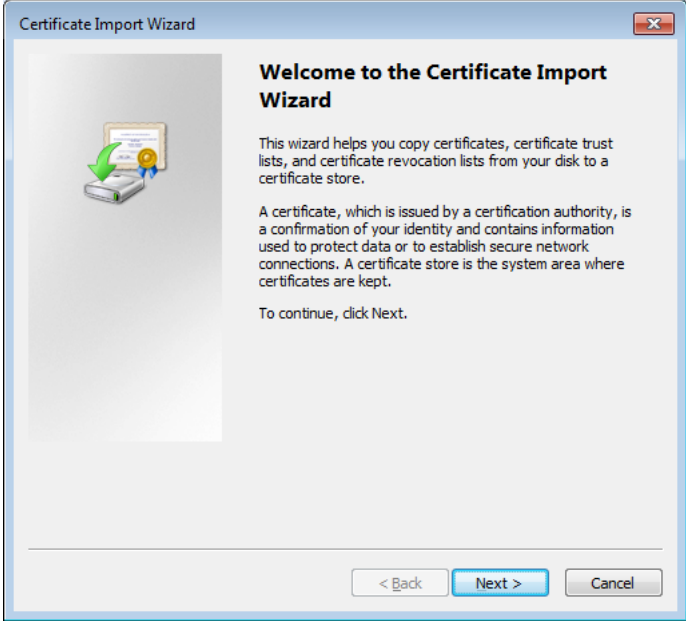
As such public these public keys can come pre-installed in Windows based systems. However, it might be necessary to install these keys manually.

As yet, ACA is not on the list of trusted root certificates that come pre-installed with Apple Operating Systems. Therefore, the Public Keys will have to be installed manually if you use a Mac.

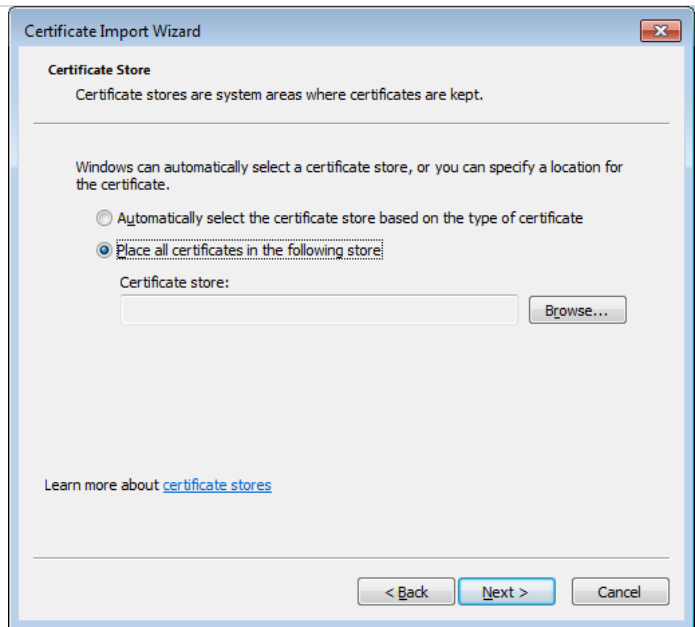
In the event that your local computer does not have the public keys installed, you will need to complete the following steps:

## Step 1: To install the Smartcard Trusted Root Certificate Authority

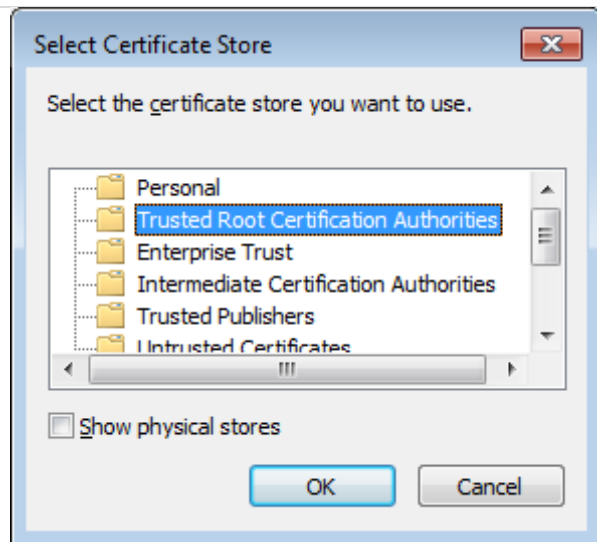
Follow the steps below to install the Smartcard root certificate key – please note the screenshot may vary slightly depending on the version of Windows your local computer is using.

Installation Screenshots	
Step/ instruction	Image
<p><b>STEP 1 – Download and Open</b> the following zip file <b>ACA Root Certificates</b> onto your local computer:</p>	<p>Download URL – <a href="https://www.lawscot.org.uk/media/1141755/ACA-root-certificates.zip">https://www.lawscot.org.uk/media/1141755/ACA-root-certificates.zip</a></p>
<p><b>STEP 2 – Open</b> the folder and install the contained certificates in order:</p> <ol style="list-style-type: none"> <li>1) <b>ACA Root Certificate</b></li> <li>2) <b>ACA_ROOT</b></li> </ol>	
<p><b>STEP 3 – Start with “ACA Root Certificate”</b></p> <p><b>Right click</b> on the file and select the option <b>“install certificate”</b> to open the “certificate import wizard” and follow the steps below</p>	 <p>A screenshot of a Windows context menu. The 'Open' section is expanded, and 'Install Certificate' is highlighted in blue. Other options include '7-Zip', 'Open with', 'Scan with Webroot', 'Send to', 'Cut', 'Copy', 'Create shortcut', 'Delete', 'Rename', and 'Properties'.</p>
<p><b>STEP 4 – Certificate Import Wizard</b></p> <p>Click <b>Next</b> to continue</p>	 <p>A screenshot of the 'Certificate Import Wizard' dialog box. The title bar says 'Certificate Import Wizard'. The main area has an icon of a certificate and a green arrow pointing to a folder. The text reads: 'Welcome to the Certificate Import Wizard. This wizard helps you copy certificates, certificate trust lists, and certificate revocation lists from your disk to a certificate store. A certificate, which is issued by a certification authority, is a confirmation of your identity and contains information used to protect data or to establish secure network connections. A certificate store is the system area where certificates are kept. To continue, click Next.' At the bottom, there are three buttons: '&lt; Back', 'Next &gt;', and 'Cancel'.</p>

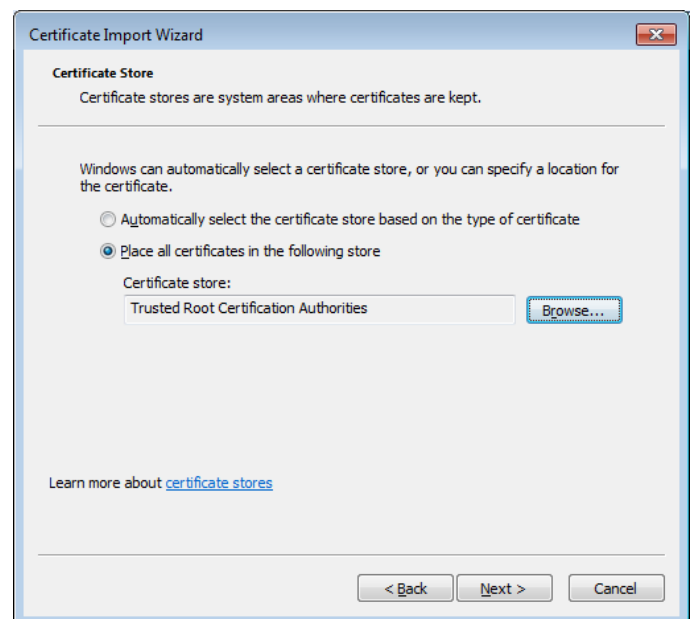
**STEP 5** - Select the option “Place all certificates in the following store” and click **browse**



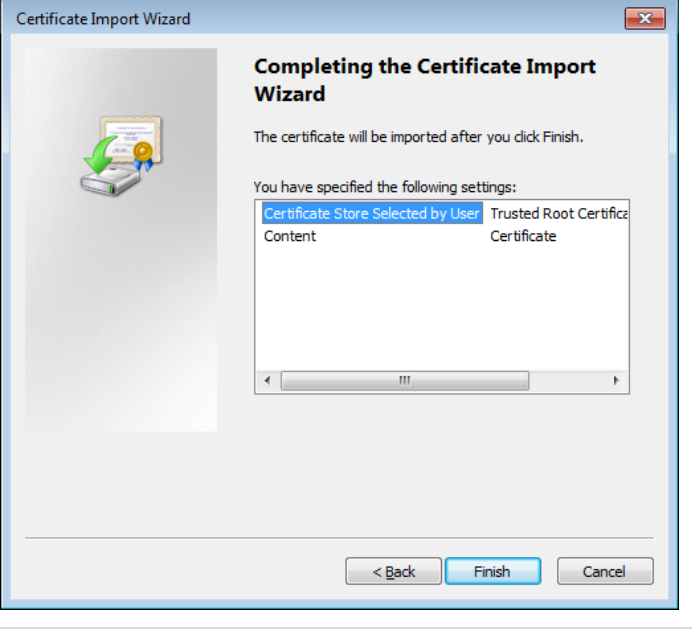
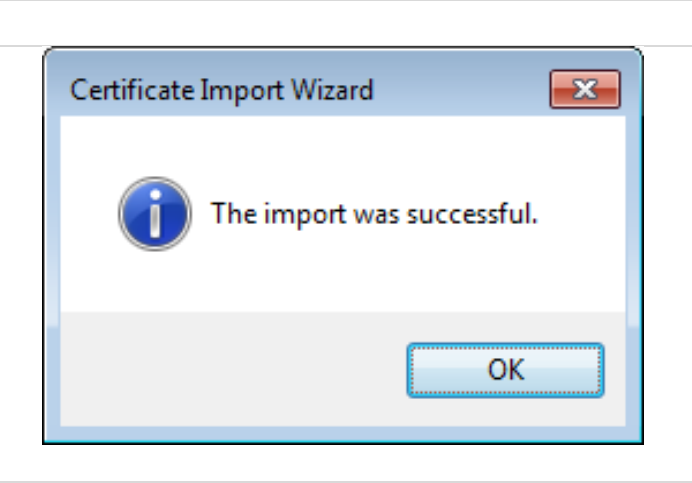
**STEP 6** - Select “Trusted Root Certification Authorities” and click **OK**



**STEP 7** – Click Next



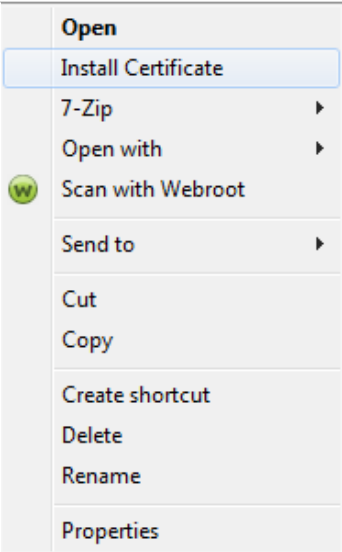
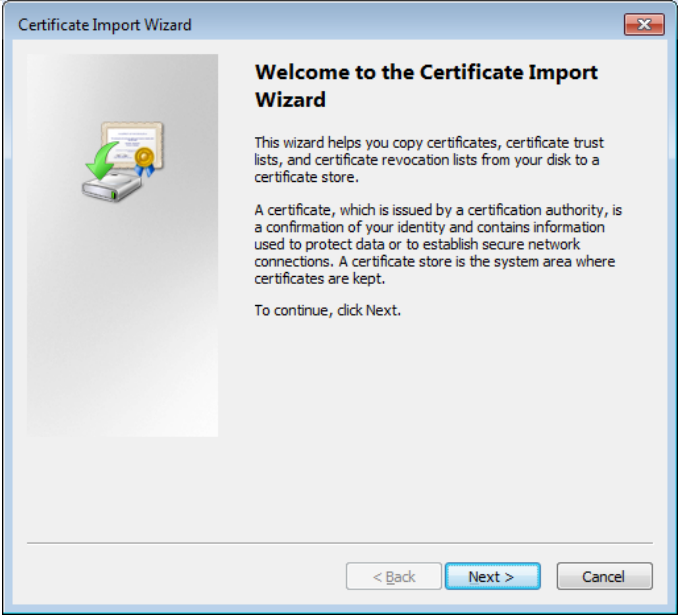


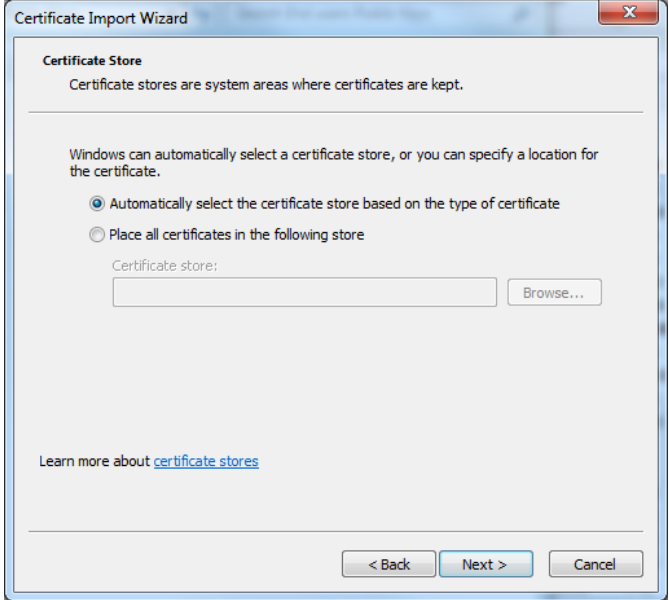
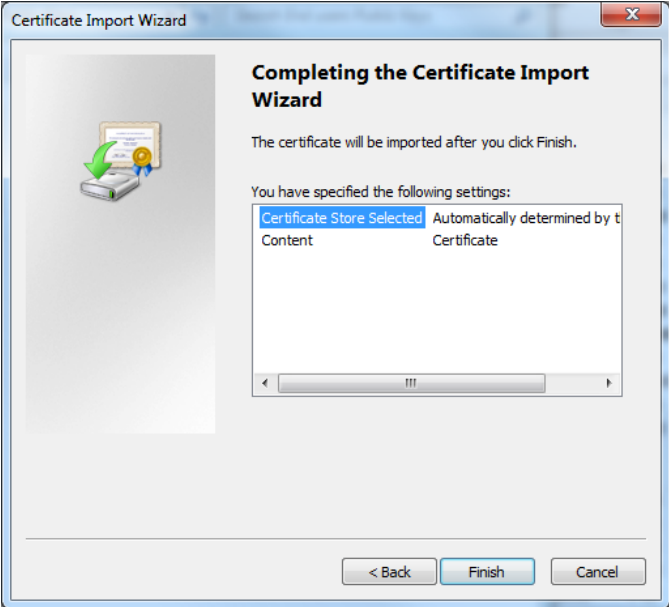
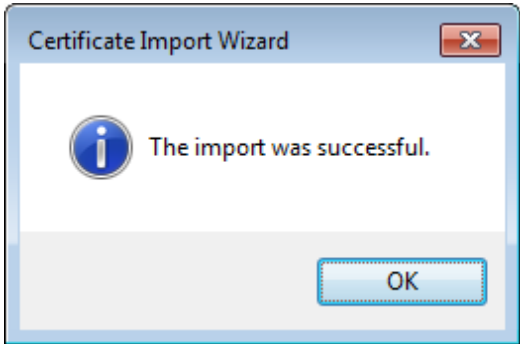
<p><b>STEP 8 - Click Finish</b></p>	
<p><b>STEP 9 - Click OK to confirm successful import of certificate</b></p>	
<p><b>STEP 10 – Repeat Steps 3 to 9 for “ACA_ROOT”</b></p>	

**Step 2: To install the Smartcard Intermediate Certification Authority**

Follow the steps below to install the Smartcard intermediate key – please note the screenshot may vary slightly depending on the version of Windows your local computer is using.

Installation Screenshots	
Step/ instruction	Image
<p><b>STEP 1 – Download and Open</b> the following file <b>ACA Root Certificates All</b> onto your local computer.</p>	<p>Download URL – <a href="https://www.lawscot.org.uk/media/1141755/ACA-root-certificates.zip">https://www.lawscot.org.uk/media/1141755/ACA-root-certificates.zip</a></p>

<p><b>STEP 2 – Open</b> the folder and install the contained certificates in order:</p> <ol style="list-style-type: none"> <li>3) <b>ACA Trusted 2014</b></li> <li>4) <b>ACA_CA2</b></li> </ol>	
<p><b>STEP 3 – Start with “ACA Trusted 2014”</b></p> <p><b>Right click</b> on the file and select the option <b>Install Certificate</b> to open the “certificate import wizard” and follow the steps below</p>	 <p>A context menu is shown over a file. The menu items are: Open, Install Certificate (highlighted in blue), 7-Zip, Open with, Scan with Webroot (with a green 'w' icon), Send to, Cut, Copy, Create shortcut, Delete, Rename, and Properties.</p>
<p><b>STEP 4 – Certificate Import Wizard</b></p> <p>Click <b>Next</b> to continue</p>	 <p>The screenshot shows the 'Certificate Import Wizard' window. The title bar says 'Certificate Import Wizard'. The main content area has an icon of a certificate with a green checkmark and a blue ribbon. The text reads: 'Welcome to the Certificate Import Wizard. This wizard helps you copy certificates, certificate trust lists, and certificate revocation lists from your disk to a certificate store. A certificate, which is issued by a certification authority, is a confirmation of your identity and contains information used to protect data or to establish secure network connections. A certificate store is the system area where certificates are kept. To continue, click Next.' At the bottom, there are three buttons: '&lt; Back', 'Next &gt;' (highlighted in blue), and 'Cancel'.</p>

<p><b>STEP 5 - Click Next</b></p>	
<p><b>STEP 6 - Click Finish</b></p>	
<p><b>STEP 7 - Click OK to confirm successful import of certificate</b></p>	
<p><b>STEP 8 – Repeat steps 3 to 7 for “ACA_CA2”</b></p>	

## Troubleshooting

The following table provides a guide to the most common issues that members have experienced when initially setting up their Smartcard reader, Manager Software and subsequent usage of their digital signature. Please read all issues & solutions and check our webpage for the latest guides, FAQs and information relating to your Smartcard – [www.lawscot.org.uk/smartcard](http://www.lawscot.org.uk/smartcard)

Troubleshooting	
Issue	Solutions
Card Manager not installing	<p>Check to ensure you do not have a previous version installed, if so remove old version before re-installing to the latest version.</p> <p>Confirm you have administrative rights to install software onto your PC, if not please contact your IT support provider/ department.</p> <p>Check to ensure your computer is connected to the Internet, the device will automatically download the drivers.</p>
Card Manager application not opening	<p>Check to ensure a Smartcard reader is connected to the computer. The application will not run without it.</p>