

SETCCE

User Manual SETCCE proXSign® component v2.2 for WIN OS

[New generation of SETCCE proXSign® component]

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About SETCCE

SETCCE is the leading regional provider of specialized solutions and services for business process dematerialization. We have pioneered in local as well as in international markets with technologies that deliver trust in e-business and e-government services, and comply with the most demanding legislative requirements.

Working with industries such as telecom, finance, and the governmental sector, SETCCE delivers a range of products and services covering the fields of:

- Electronic invoicing
- Electronic archiving
- Electronic signing
- PKI and information security

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1. NEW GENERATION OF SETCCE PROXSIGN® COMPONENT

The **SETCCE proXSign®** components provide digital signing, encryption/decryption, and time stamping of your documents.

The new generation of **SETCCE proXSign®** v2 has been developed as a response to the limited plug-in support by the majority of browsers. **SETCCE proXSign®** v2 overcomes issues raised by the limited access to the certificate store and crypto functions in Firefox v 33 and higher, as well as issues related to limited plug-in access to the system functions in Google Chrome and Microsoft Edge.

SETCCE proXSign v2 innovative concept provides a solution, which is browser-independent as it works in all popular browsers.

The new proXSign® component is installed as a desktop application that runs as a background process. Features like »Autoupdate«, »Autostart« and »Check for Updates« are configurable in the graphical user interface. You can also always check if the component is running.

The advantages of the **SETCCE proXSign®** v2 are:

One component for all functionalities (signing of PDF and XML documents, timestamping)

- Support for all popular browsers,
- Users can use different browsers and only one digital certificate store,
- Single installation for all browsers,
- Autoupdate.

For assistance with installation or use of SETCCE proXSign v2 please first contact the service provider (i.e. online banking, governmental services, etc.), and then the SETCCE support.

2. SUPPORTED ENVIRONMENT

2.1. Supported environment

Operating system (OS)	Browser ⁽¹⁾
Windows 7 SP1 ⁽²⁾ , 8.1,10,11	Internet Explorer v11
	Microsoft Edge from v86
	Mozilla Firefox; from v60 Google Chrome; latest stable channel version
Notes: ⁽¹⁾ Due to security reasons use the latest browser version and latest Windows updates. ⁽²⁾ Due to security reasons, all Windows 7 users without ESU support (https://support.microsoft.com/en-us/help/4527878/faq-about-extended-security-updates-for-windows-7) should upgrade their system to Windows 10 since Windows 7 is not supported anymore by Microsoft (https://www.microsoft.com/en-us/windows/windows-7-end-of-life-support-information).	

3. REQUIREMENTS

3.1. Communication port

Browsers communicate with SETCCE proXSign® component over one of the following unused ports:

- 14972,
- 41472,
- 57214,
- 61427.

To run SETCCE proXSign® component in your environment, you have to ensure that one of the listed ports is unused.

3.2. Virtualized/multiuser environments

In virtualized/multiuser environments like Citrix or RDP, the number of unused ports must be the same as the number of concurrent users in your system.¹

For proXSign® to work as expected, the web application has to be adjusted also.

Note:

- For best performance of proXSign®, use Mozilla Firefox or Google Chrome browsers. You can run initial performance tests on different browsers by using: https://eperostarttest.setcce.si/proxsign/Demo_Test_Ports.htm.
- When using digital certificates on smart cards/USB keys, the limitations may apply;
 - See Citrix and Microsoft RDP documentation for details.
 - Check at your certification authority if their smart cards/USB keys are supported in virtualized environments.
- Set Autostart option for all users during the installation process.

3.3. Import a personal digital certificate

Along with the Root and Intermediate digital certificate, your digital certificate has to be installed in Windows or Mozilla Firefox certificate store. You can have your digital certificate issued on a smart card or smart USB key. See chapter 9 for details. For additional help, please turn to your Certificate Authority.

3.4. »SETCCE proXSign« digital certificate

SETCCE proXSign® component provides a higher level of security to its user by encrypting the communication between the component and the browser.

Therefore digital certificate »**SETCCE proXSign**« issued by SETCCE d.o.o. has to be installed on your computer as a trustworthy certificate.

¹ List of ports: See [C:\Program Files (x86)]\SETCCE\proXSign\etc\proxsign.ini].

»SETCCE proXSign« digital certificate is dynamically created for each user on the computer (current user). It is valid for two years from the day it was created. Ten days before it expires, the warning dialog to install a new one appears; the user has to confirm the removal of the old one and its installation otherwise the component won't work. At the same time, it is installed in the Mozilla Firefox user store (if the browser is installed) but without extra user confirmation.

3.4.1. How to install »SETCCE proXSign« digital certificate

When the SETCCE proXSign® component is launched for the first time, the following Security Warning dialog windows appear. They have to be confirmed by the user for the component to work.

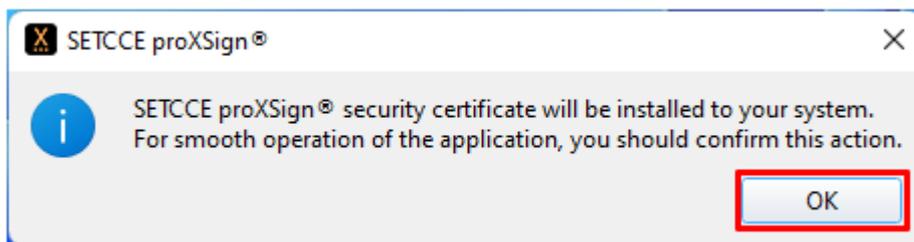


Figure 1: SETCCE proXSign® info window

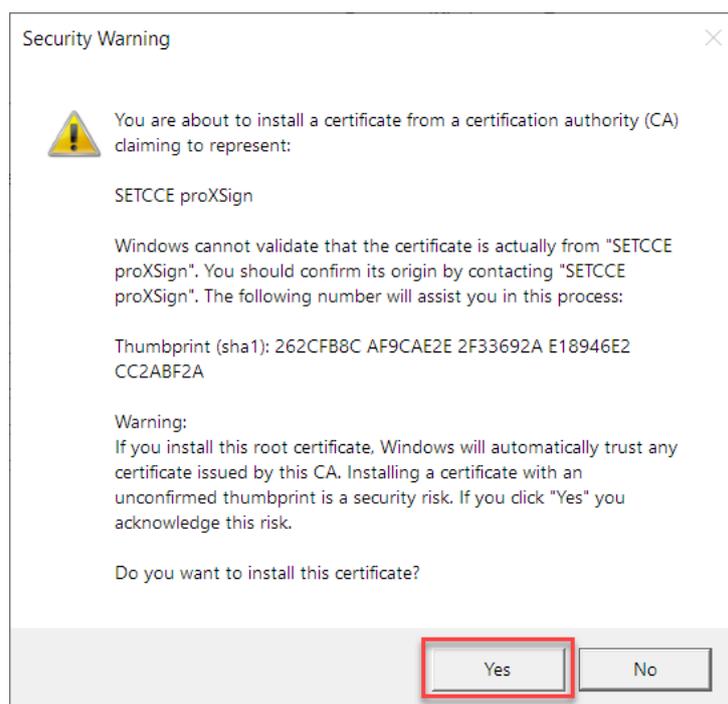


Figure 2: Dialog window for installing »SETCCE proXSign« digital certificate

After the user confirmation, the »SETCCE proXSign« digital certificate is automatically installed into Windows and Mozilla Firefox certificate store as a trustworthy certificate. It is installed in the current user certificate store.

In the Windows store, the digital certificate »SETCCE proXSign« is installed in »Trusted Root Certification Authorities«. See Figure 3.

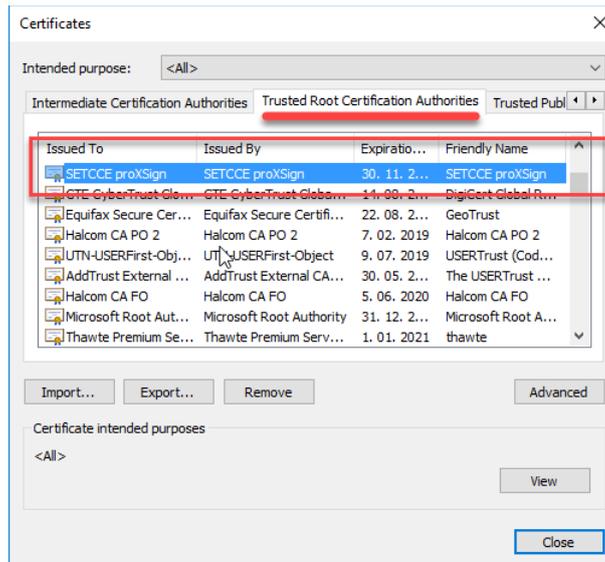


Figure 3: »SETCCE proXSign« digital certificate in Windows store

In the Mozilla Firefox store, it is installed in »Authorities«. See Figure 4.

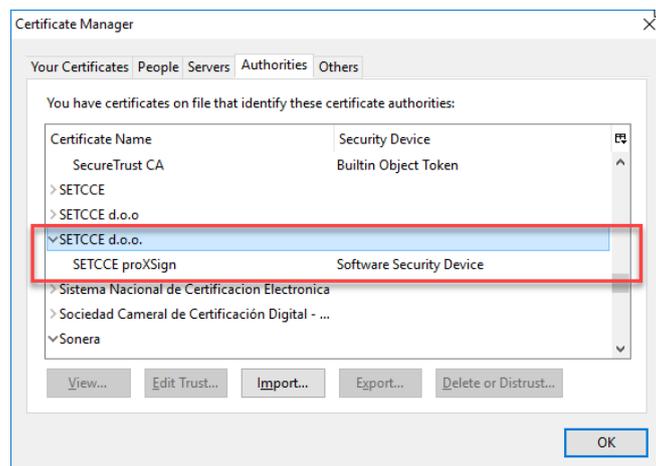


Figure 4: »SETCCE proXSign« digital certificate in Mozilla Firefox certificate store

Important:

1. If you want to install the **Mozilla Firefox** browser on your computer, after the SETCCE proXSign® component has already been installed and running, **you have to restart the component**. The restart of SETCCE proXSign® component **installs** the SETCCE certificate into the Firefox certificate store. To refresh digital certificate data in the **Mozilla Firefox** browser, you must restart the browser.

See chapter 6 for restart.

2. If you **install and run the component using the Mozilla Firefox browser**, you have to **restart the browser** after a successful installation.

3.4.2. Automatic renewal of »SETCCE proXSign« digital certificate

proXSign® automatically verifies if its digital certificate is still time valid. Ten (10) days before its expiration, the Warning window for its renewal pops up; The old one will be deleted and the new one will be installed.

You need to confirm all steps by pressing »Yes« on dialog windows as shown in Figures 5,6 and 7.

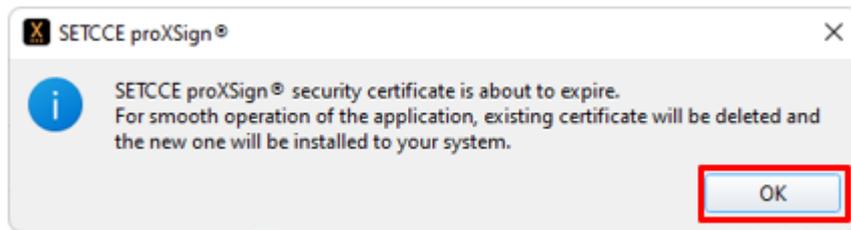


Figure 5: SETCCE proXSign® info window

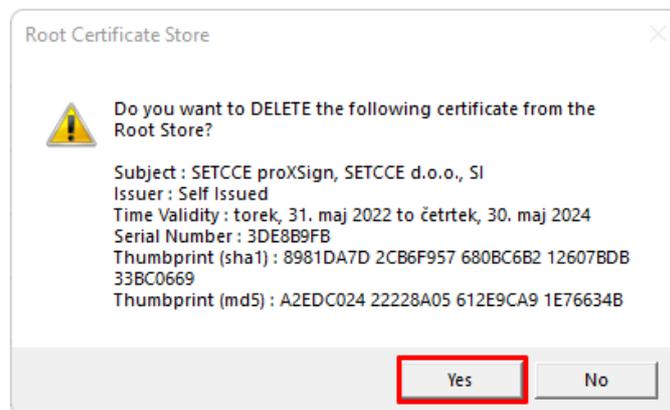


Figure 6: Windows system window for SETCCE proXSign® digital certificate removal

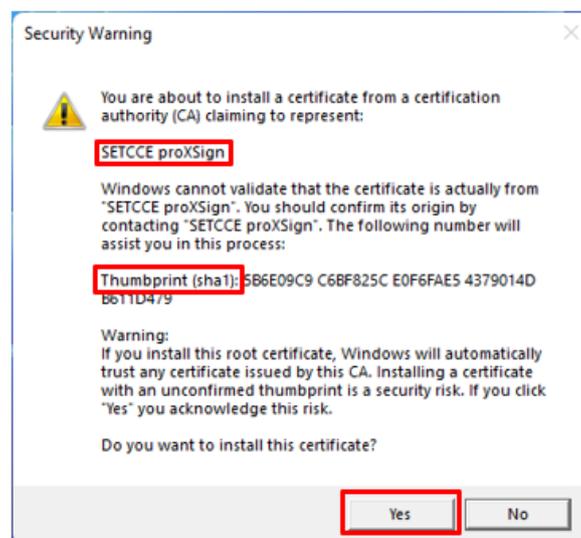


Figure 7: Windows Security warning window for installing new SETCCE proXSign® digital certificate

3.4.3. How to check if the »SETCCE proXSign« digital certificate is trustworthy

If you have any doubt that SETCCE proXSign® digital certificate you are installing is not from a trustworthy source, you can check it by yourself.

You need to compare Thumbprint from the Windows Security window (Figure 7) with Thumbprint of a digital certificate from %AppData%\SETCCE\proXSign\PlugoutRoot.crt (Figure 8).

When you double-click on PlugoutRoot.crt, the SETCCE proXSign® digital certificate will open.

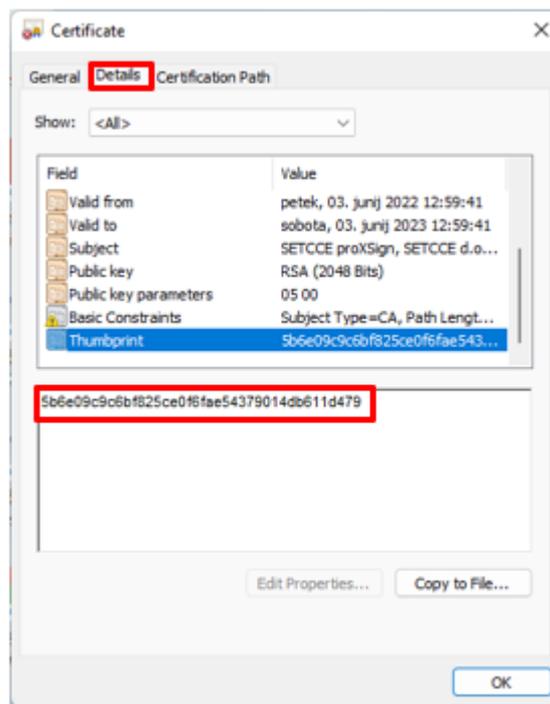


Figure 8: SETCCE proXSign® digital certificate Thumbprint

4. INSTALLATION AND UPGRADE

SETCCE proXSign® component is installed as a desktop application that runs as a background process.

The features like »Autoupdate«, »Autostart« and »Check for Updates« are configurable in SETCCE proXSign® graphical user interface. You can also check if the SETCCE proXSign® component is running.

The executable program **SETCCE_proXSign_setup_<version>.exe** is signed with SETCCE digital certificate, issued by **Digicert**.

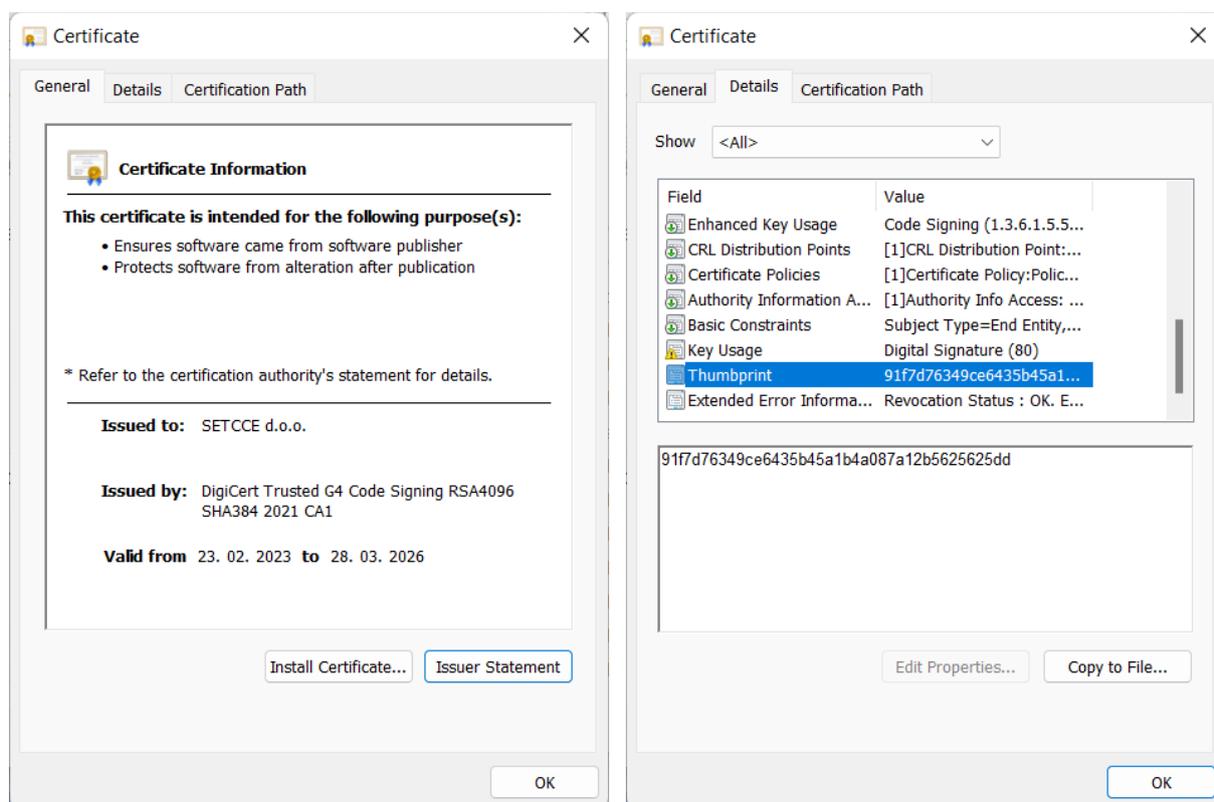


Figure 9: SETCCE Code signing certificate and its thumbprint

4.1. Install SETCCE proXSign® component

SETCCE proXSign® component can be installed in two ways:

- Silent installation
- Standard installation

Both installation procedures demand **administration privileges**.

Important:

Before you start with the setup procedure, make sure that SETCCE proXSign® component is not running on your computer (under any user on your computer). See chapter 8 for stopping the component. And make sure that Mozilla Firefox browser is not running.

4.1.1. Silent installation

Silent installation can be run in two modes:

- Silent installation with autostart of the component
- Silent installation without running the component

Note: Before initiating the silent installation, please ensure that the Firefox.exe process is not running in any user profile. Therefore, all users must close the Mozilla Firefox browser.

Run the SETCCE proXSign® component in command prompt with the next command:

```
SETCCE_proXSign_setup_<version>.exe /silent
```

The component will be installed in silent mode. After a successful installation, the component will start automatically. Autostart applies to all users on the system (when logging into user profile). Restriction: max 4 concurrent users.

4.1.1.1. Silent installation without running the component

Run the SETCCE proXSign® component in command prompt with the next command:

```
SETCCE_proXSign_setup_<version>.exe /silent /norun
```

The component will be installed in silent mode but it won't be started at the end.

4.1.2. Standard installation

Installation steps:

1. Log in to your user account as an administrator.
2. Download and save the program SETCCE_proXSign_setup_<version>.exe.
3. For security reasons, check the Security Warning dialog window. If the component is SETCCE proXSign® and the publisher is SETCCE d.o.o., then click »**Yes**«.

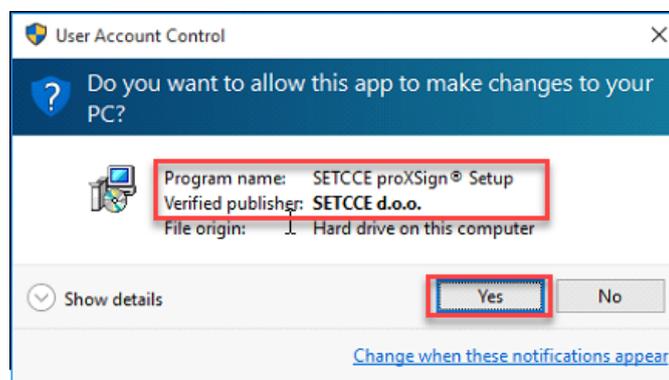


Figure 10: Security warning dialog window

4. Before installation, close your browser(s).
5. Then follow the setup instructions.

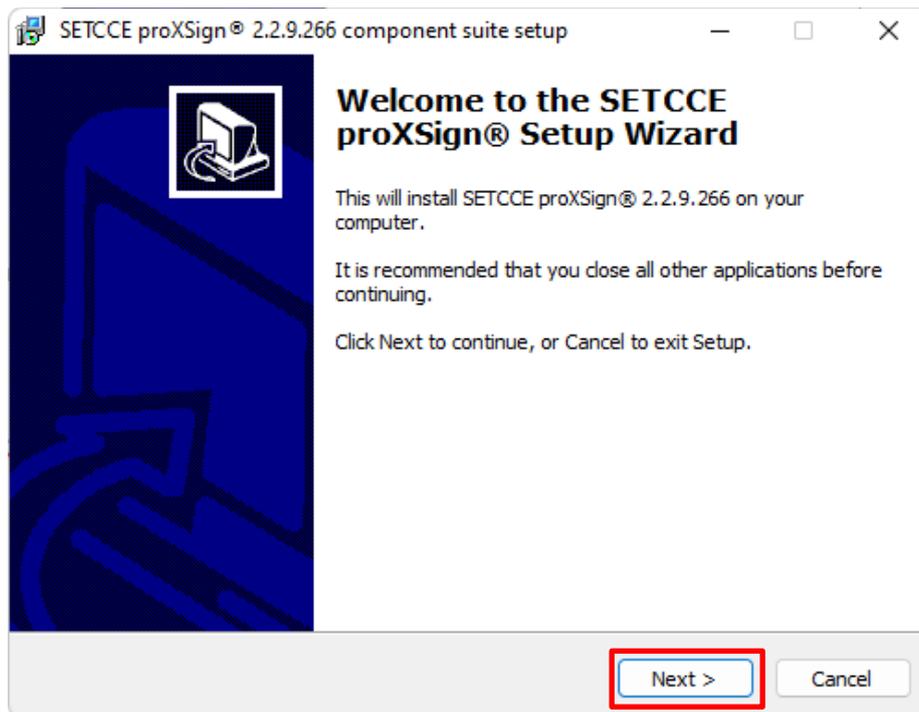


Figure 11: Setup procedure of SETCCE proXSign® component

During the installation process, you can choose setup language, you need to agree with the license agreement, you can select the location where the proXSign® will be installed and you can select **two additional options**:

1. Create a desktop icon.
2. Automatic start for all users. Autostart applies to all users on the system (when logging into user profile). Restriction: max 4 concurrent users.

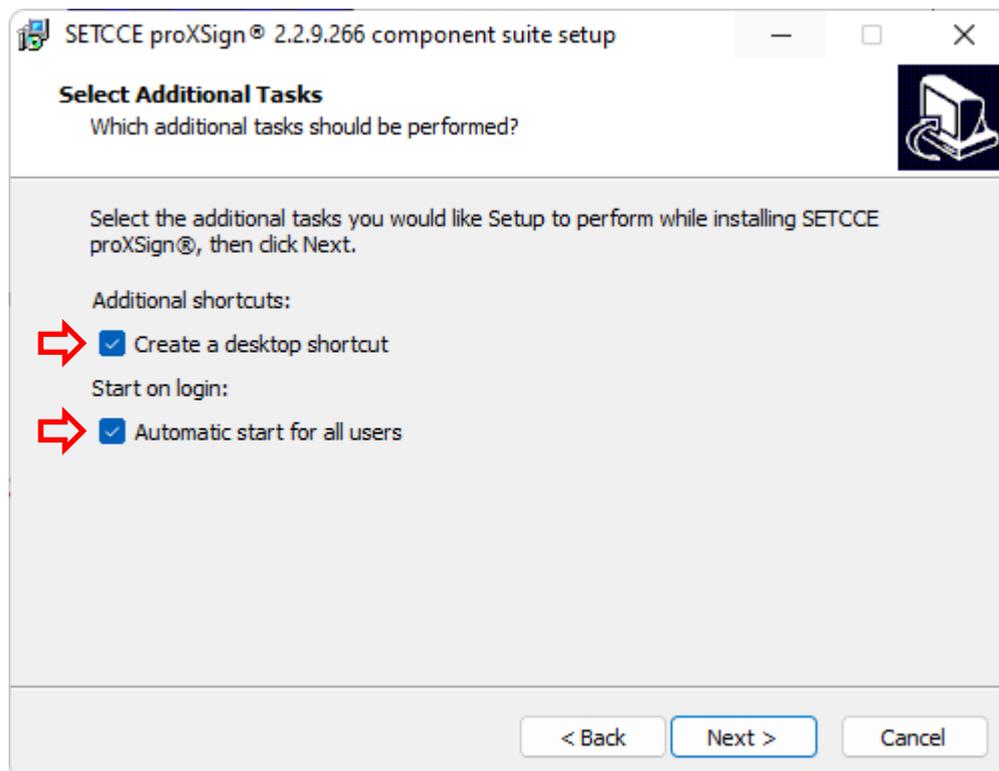


Figure 12: Option »Create a desktop icon« and »Automatic start for all users«

By choosing the option »Launch proXSign®«, the component is launched as soon as the installation process is finished.

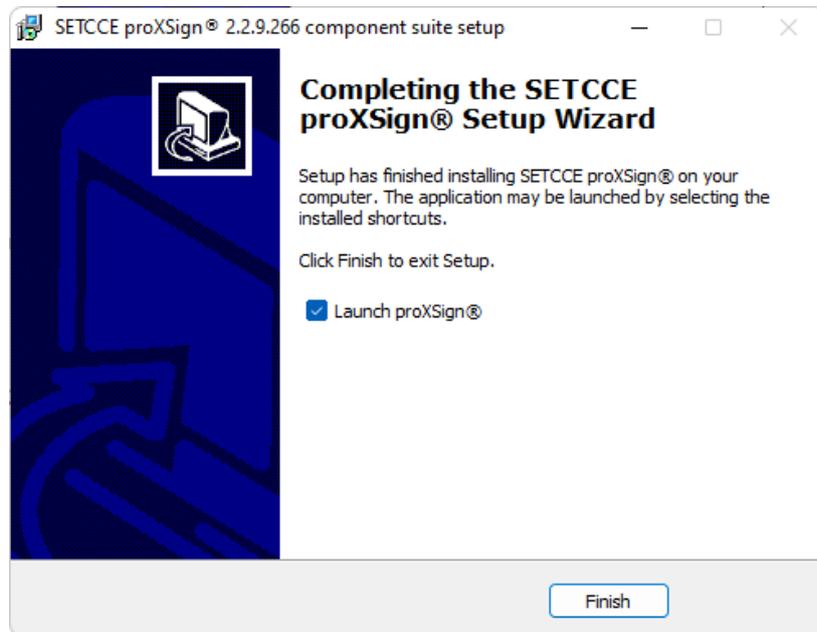


Figure 13: Choosing the option »Launch proXSign« during the installation process

Note: During the launch of the component, the »SETCCE proXSign« digital certificate is generated and installed (or renewed). See chapter 3.4.

When the component is started the icon appears in the tray bar. By double-clicking on the icon, the SETCCE proXSign® main window appears, with the list of all digital certificates installed in Windows and/or Mozilla Firefox store.



Figure 14: »SETCCE proXSign« icon in the Tray bar

4.2. Autoupdate

There are two autoupdate options:

1. Standard autoupdate.
2. Autoupdate in a highly secured control environment.

Both update procedures demand administration privileges.

4.2.1. Autoupdate

The component can be updated on request or automatically (when a new release is available).

See chapter 7.2.4 in 7.2.5.

4.2.2. Autoupdate in a highly secured control environment

The internal URL address for the autoupdate package can be configured in `proxsign.ini` file. `Proxsign.ini` file is located on `C:\Program Files (x86)\SETCCE\proXSign\etc`.

Example default settings in `proxsign.ini` file:

```
[common]
update_url=http://public.setcce.si/proxsign/update/SETCCE_proXSign_update_<
version>.exe
version_url=http://public.setcce.si/proxsign/update/version
```

The upgrade package is available inside the SETCCE proXSign® SDK package.

4.3. Check for updates

See chapter 7.2.5.

5. REMOVING SETCCE PROXSIGN® COMPONENT

To be able to remove SETCCE proXSign® component from your computer you have to log in as an administrator.

5.1. Standard uninstall

Steps for removing SETCCE proXSign®:

1. Open »Control Panel« from the Start menu and choose »Programs and Features«.
2. Choose SETCCE proXSign® component from the list.
3. Right-click on it and »Uninstall«.
4. Confirm uninstall of SETCCE proXSign® digital certificate.

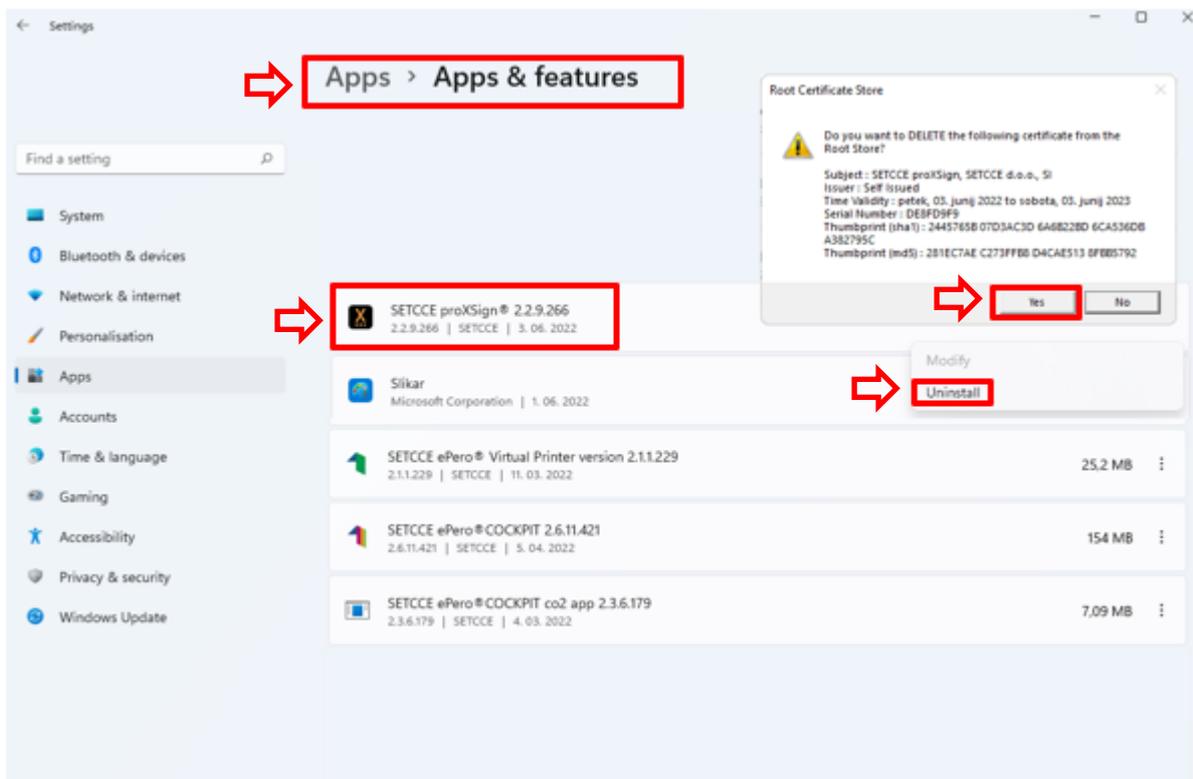


Figure 15: Uninstall SETCCE proXSign® from your computer

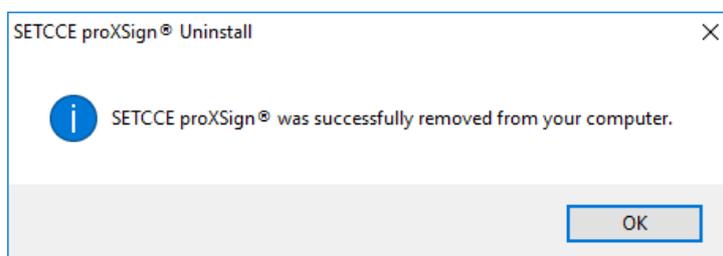


Figure 16: The component was successfully removed

The SETCCE proXSign® component is removed from your computer.

5.2. Silent uninstall

In cmd, run the following command:

```
"[C:\Program Files (x86)]\SETCCE\proXSign\unins000.exe" /silent
```

6. START SETCCE PROXSIGN® COMPONENT

6.1. Start

The component itself can be started in three different ways – depending on which option is chosen during the installation process:

1. The component is already running (if you are logged in as administrator and the component was installed with an option »Launch proXSign®«).

In this case, check the System Tray for SETCCE proXSign® icon. See figure 18.

2. From »Start«  menu: you can choose SETCCE proXSign® from the list or type proXSign in the search box.

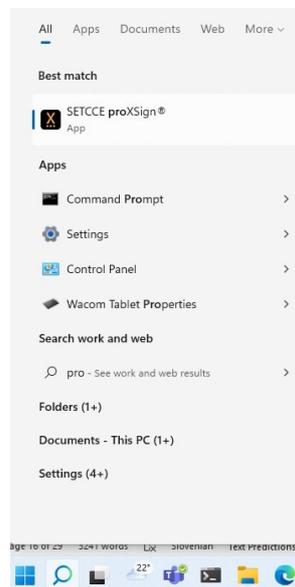


Figure 17: Run proXSign from the Start menu



3. By clicking on the desktop icon  (if the option »Create a desktop icon« was chosen during the installation process).

6.2. Autostart

See chapter 7.2.1.

7. GRAPHICAL USER INTERFACE AND SETTINGS IN SETCCE PROXSIGN COMPONENT

By double-clicking on SETCCE proXSign® icon in System Tray, the main proXSign GUI, with a list of all your digital certificates, will open.

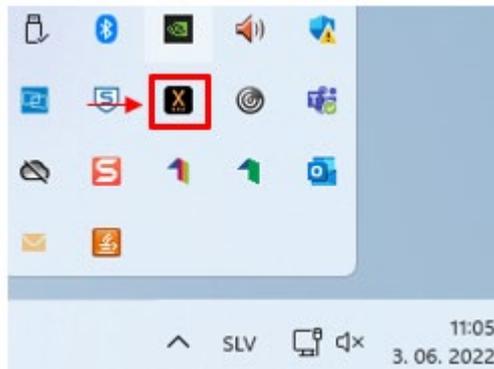


Figure 18: SETCCE proXSign® icon in System Tray

7.1. Main graphical user interface and Certificates section

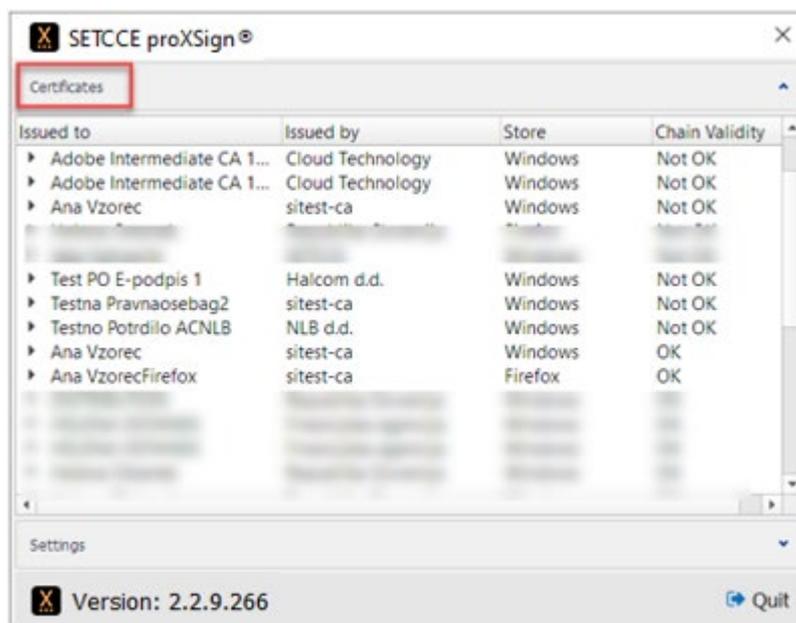


Figure 19: Main SETCCE proXSign® GUI with a list of Certificates

Columns in proXSign® main GUI represents:

- **Issued to:** Common Name (CN) of your digital certificate
- **Issued by:** Issuer of your digital certificate
- **Store:** certificate store where your certificate is installed (Windows or Firefox)

Optional:

- **Chain Validity:** Chain validity of your digital certificate (the status if the digital certificate is revoked is not checked (CRL check)).

When Chain Validity status is »Not OK«, the digital signature with such digital certificate won't pass. The reason can lay in the expired digital certificate (or one of them in the chain is not time valid), or the certificate chain is not complete, or if one of the certificates in the chain is not Trusted (In the case of Mozilla Firefox certificate store)

The column is visible only if you set the appropriate parameter in the `proxsign.ini` file. You will need administrator privileges.

Steps:

1. Quit form proXSign®
2. Open file [C:\Program Files (x86)]\SETCCE\proXSign\etc\proxsign.ini
3. Change value
 `check_all_chains=false`
 on
 `check_all_chains=true`
4. Save changes
5. Start SETCCE proXSign®

Example form `proxsign.ini` when check validity is enabled:

```
[common]
update_url=http://public.setcce.si/proxsign/update/SETCCE_proXSign_update.exe
version_url=http://public.setcce.si/proxsign/update/version
check_all_chains=true
; use_CNG : no, yes, prefer, only
use_CNG = no
```

Note:

In case the proXSign® is launched very slowly on your computer, you please disable Check Validity.

7.2. Settings

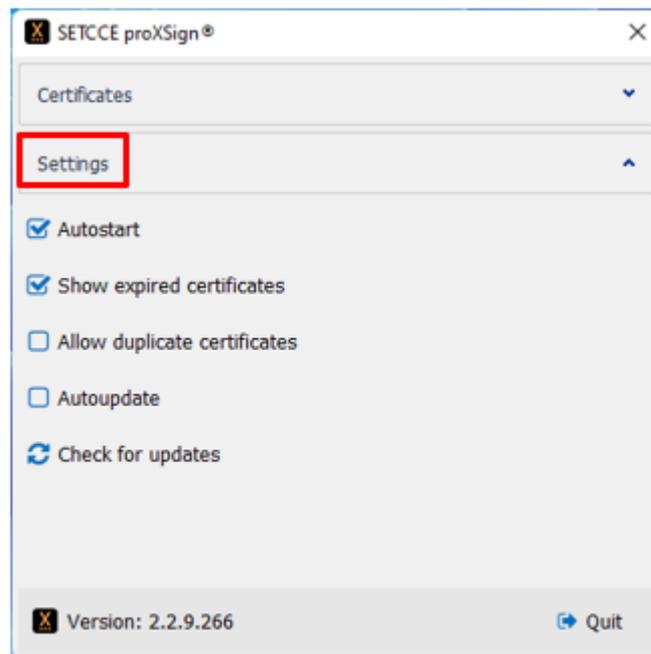


Figure 20: Settings in SETCCE proXSign® component

7.2.1. Autostart

The SETCCE proXSign® component supports autostart functionality. If the »Autostart« setting is configured, the component runs when you log in.

Setting »Autostart« is enabled by default.

7.2.2. Show expired certificates

If enabled, the expired digital certificates are displayed only in the main proXSign GUI, but the digital signature with expired certificates is disabled by default.

Setting »Show Expired certificates« is disabled by default.

7.2.3. Allow duplicate certificates

In case your digital certificate is installed into the Windows certificate store and in Mozilla Firefox browser, then proXSign® displays the same certificate from both stores, and digital signature is enabled with both certificates.

The setting »Show Expired certificates« is disabled by default.

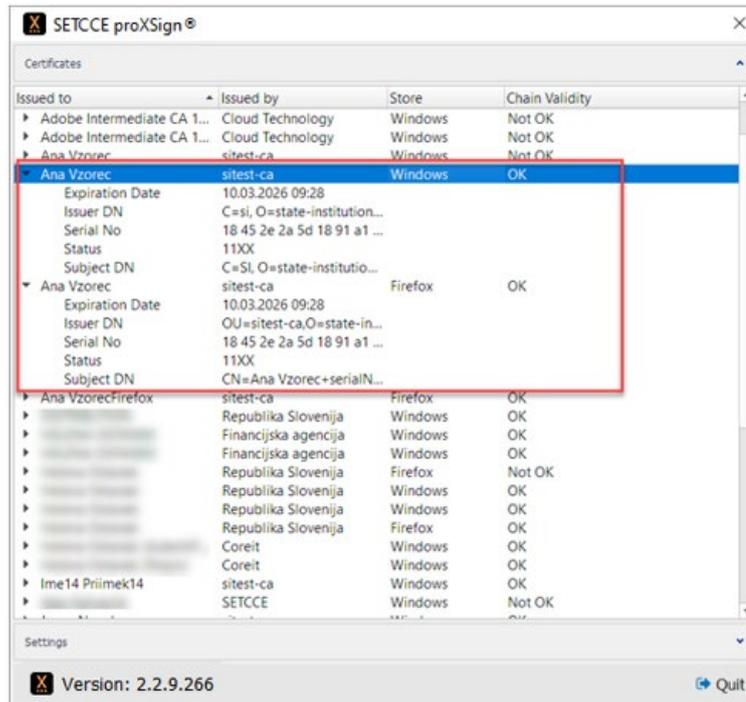


Figure 21: Example of SETCCE proXSign® GUI when the same digital certificate is installed in Windows and Mozilla Firefox certificate store

7.2.4. Autoupdate

When the »Autoupdate« setting is checked, the proXSign® periodically checks (every 3 hours) if there is a new version available. If it is, the upgrade procedure is triggered.

The setting »Autoupdate« is disabled by default.

7.2.5. Check for Updates

By clicking on »**Check for updates**« proXSign® checks if a newer version is available. If it is, the upgrade procedure is triggered.

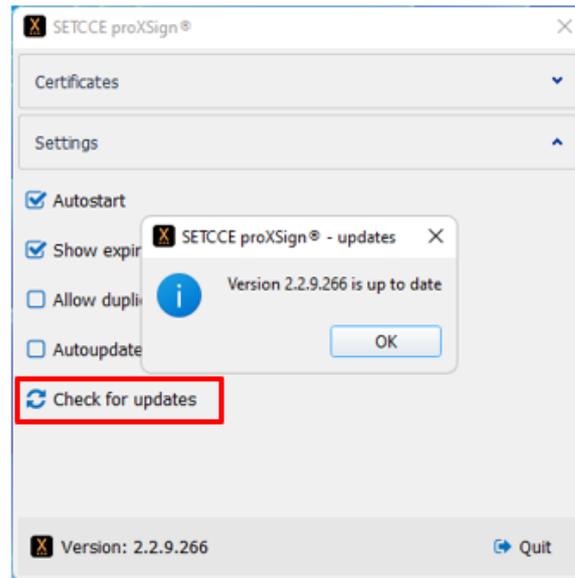


Figure 22: Info message if your current version is up to date

8. QUIT (STOP) SETCCE PROXSIGN® COMPONENT

We suggest running SETCCE proXSign® component as a background process. In this case, the component itself does not perform any activity except if it is configured to perform »Autoupdate«.

- If you want to stop the component (kill the process) click on the »Quit«  button. See Chapter 6 for restart.
- If you want to hide or minimize the SETCCE proXSign® user interface, then click on  in the upper right corner. In this case, the component is still running in the background and the SETCCE proXSign® icon is placed in the System Tray.

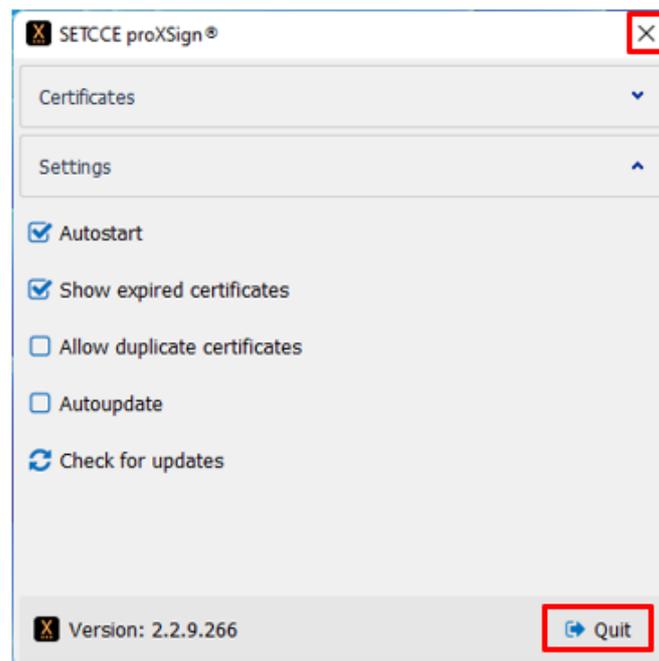


Figure 23: Options »Quit« and »Close«

9. INSTALLING A DIGITAL CERTIFICATE

9.1. Is your personal digital certificate installed on your computer?

To use SETCCE proXSign® component on your computer, your digital certificate has to be installed in **Windows** or **Mozilla Firefox** digital certificate store or on a smart card/USB key.

Steps to install your personal digital certificate in Windows store by Internet Explorer, Edge, Chrome on Windows OS are as follows:

1. Save your digital certificate on your computer.
2. Double click on your digital certificate and follow the instructions.

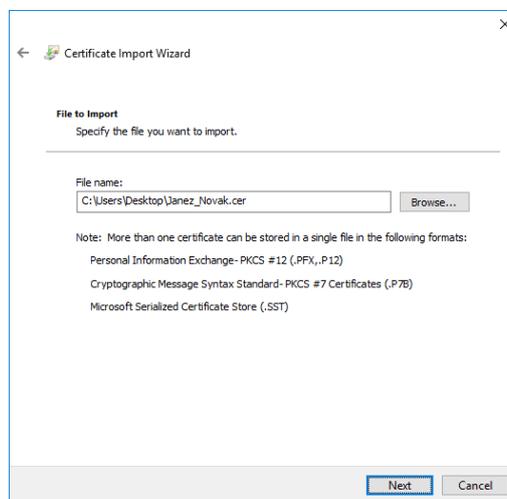


Figure 24: Installing your personal digital certificate

3. Then click »**Import**« and select your digital certificate. Enter the password in the dialog window and click »**OK**«.
4. Your digital certificate is installed in the Windows digital store, among Personal certificates, as shown in Figure 25.

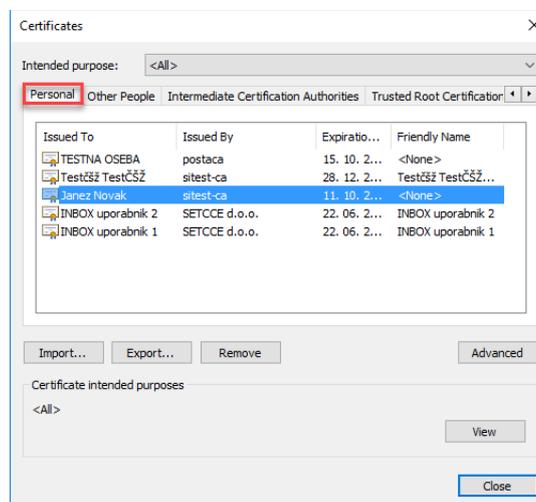


Figure 25: Digital certificate »Janez Novak« among Personal certificates.

Steps to install your personal digital certificate in Mozilla Firefox store by Mozilla Firefox:

1. Save your personal digital certificate on your computer.
2. Open Mozilla Firefox and go to Options/Advanced/View Certificates/Your Certificates.
3. Then click »Import« and select your certificate. Enter the password in the dialog window and click »OK«.
4. Your personal digital certificate is installed in the Mozilla Firefox certificate store, among Personal certificates, as shown in Figure 26.

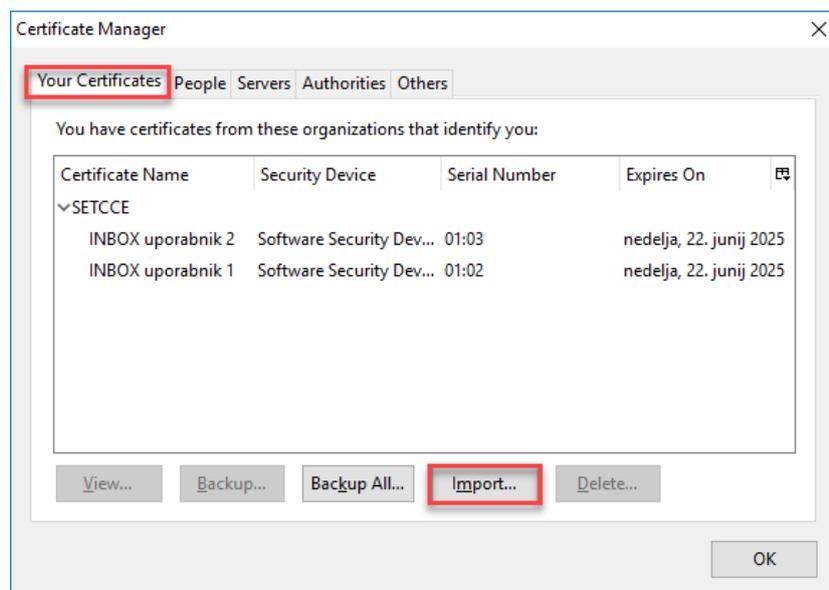


Figure 26: Digital certificate »Inbox uporabnik« among Personal certificates in Mozilla Firefox.

9.2. Is your root certificate installed on your computer?

To use SETCCE proXSign® component, you also have to install the root certificate of the Certification Authority who issued your digital certificate.

You have to install a root digital certificate into Windows digital store in »Trusted Root Certification Authorities«, as shown in Figure 27.

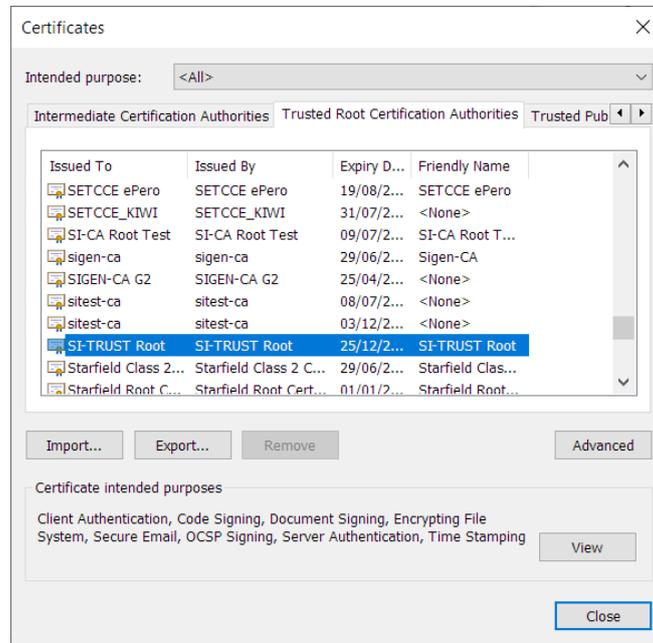


Figure 27: Root certificate »SI TRUST Root« in Trusted Root Certification Authorities« in the Windows store.

In the Mozilla Firefox certificate store, you have to install a root digital certificate into »Authorities«, as shown in Figure 28.

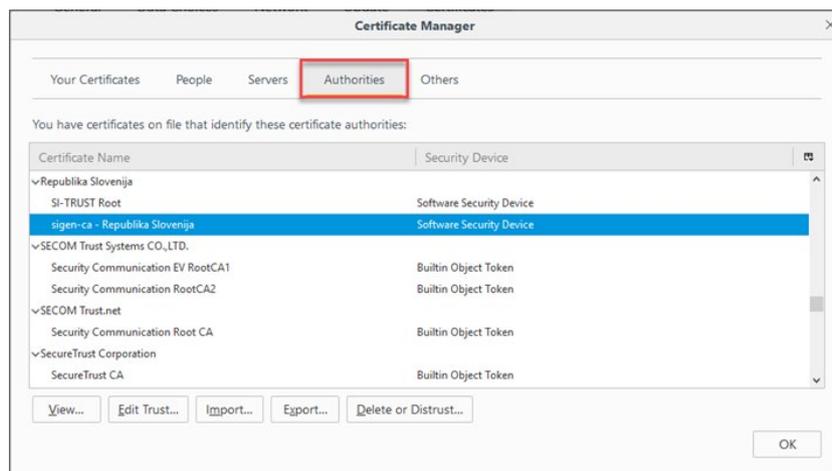


Figure 28: Root certificate »Sigen-ca« in »Authorities« in the Mozilla Firefox store.

9.3. How can you find/check or install a digital certificate in the Windows digital store?

The digital certificate can be installed as described in chapter 9. In addition to that, you can also follow the installation steps described below.

Installation steps:

1. Open Internet Explorer.
2. Press »**Alt + X**«.
3. From the »**Tools**« drop-down menu choose »**Internet Options**«.
4. Choose tab **Content**« and option »**Certificates**«.

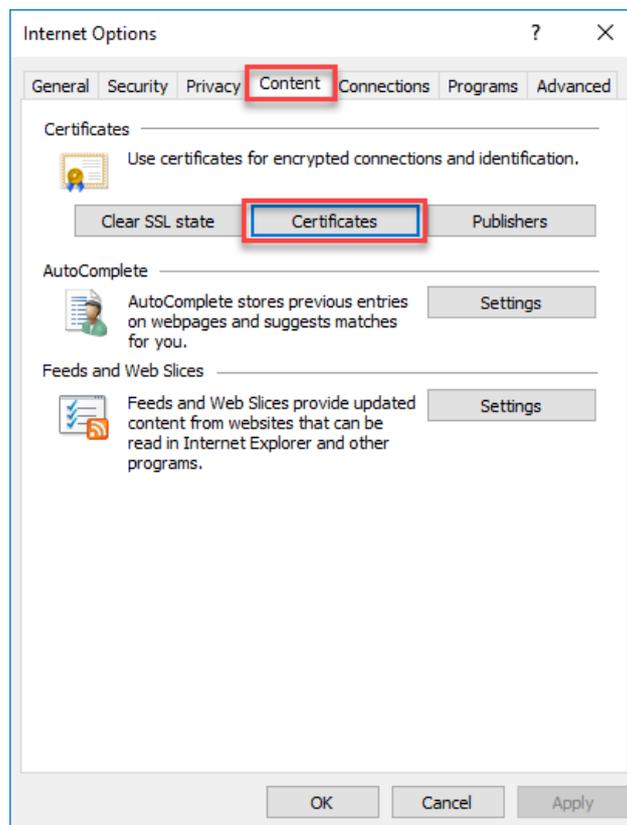


Figure 29: Find »Certificates« among »Internet options« in the Windows store.

5. The dialog window shown in Figure 29 will pop up.
 - You can find your certificates under the tab »**Personal**«.
 - You can find your root CA certificates under the tab »**Trusted root Certification Authorities**«

Digital certificate installation procedure:

- To install your personal digital certificate choose tab »**Personal**« then press »**Import**« and follow the steps from chapter 9.1.
- To install root CA digital certificate select the tab »**Trusted root Certification Authorities**« then press »**Import**« and follow the steps from chapter 9.2.