

# Standard Code Signing on a card certificate activation

Ver. 3.1

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## 1. Product description

The Code Signing certificate allows you to digitally sign applications and drivers, certifying their authenticity and security. Thanks to this, users of your software can be sure that it has not been modified, infected or damaged by third parties.

Signing the application with Code Signing eliminates the problem of code anonymity on the internet. With a digital signature you can be sure that users will not see an "unknown publisher" warning when installing or running your program and they will be ensured about its security. Signing your app helps protect both: your users and your brand's reputation.

Digital code signing makes using the application safe, which translates into greater trust in your brand and an expansion of your group of users.

## 2. Certificate activation

As the Certum **customer**, you will be able to start the activation process of your certificate in the store at **My account** in the **Data security products** tab.

As the **partner**, you start the process through partner panel from the **Dashboard** by choosing the product you want to order.

The process of issuing the certificate consists of several steps:

- **Data verification** – providing the subscriber and/or organization's data and the verification
- **Certificate activation** – key pair generation, choosing the fields to include in the certificate and submit to issue.

As the activation process goes, each step will go through the next statuses:



Step is  
awaiting for  
the data



Data is saved  
and waiting for  
verification



Verification  
was successful



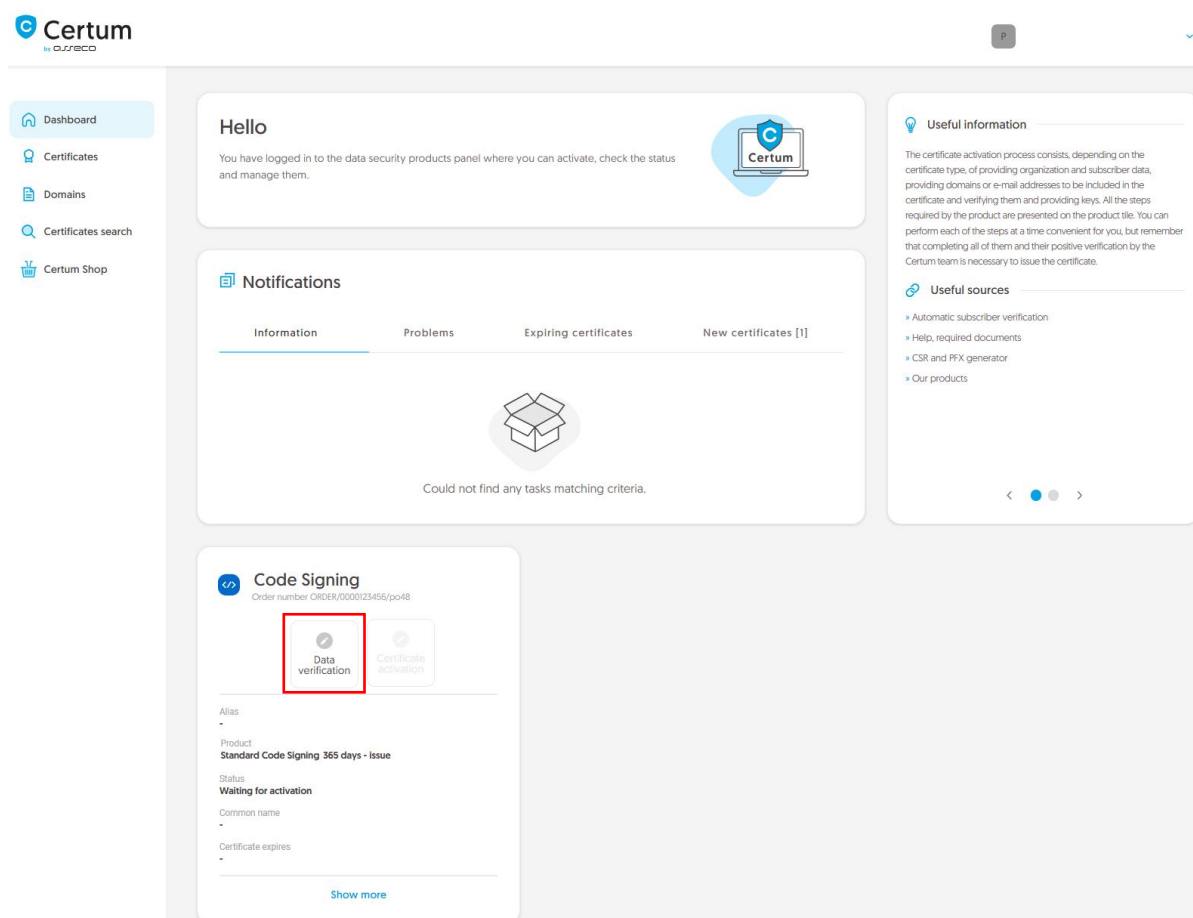
Providing the  
data is not  
available yet

## Data verification step

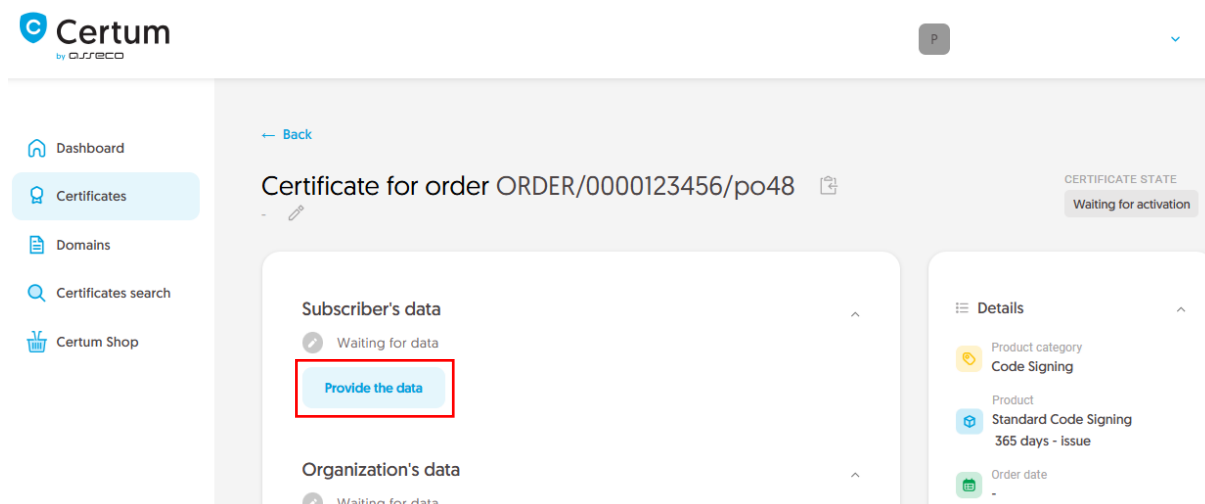
Providing data to be verified is the step in which you provide, depending on the chosen variant, the data of the organization for which the certificate will be issued, the data of the subscriber (the person who represents the organization and will be the owner of the certificate) and the data of the subscriber's authorization to represent the organization. From the data provided here, it will be possible to select data for the certificate in the last step of certificate activation.

The list of supported verification documents you can check at [Information about required documents](#).

As the Certum **customer**, you will be able to start the data verification step from **Dashboard**, using **Data verification** option:



or from the **Certificates** list – choose the certificate you want to activate and use **Provide the data** option in the subscriber's data section:



As the **partner**, you will be able to start the data verification step from **Dashboard**, using new order option. After choosing the product type and providing the order details, you will be able to provide the data used in the first step of issuing the certificate.

#### Choosing a variant of the data to be verified

Choose one of three options for providing data to be verified:

- **Individual** – the certificate contains the subscriber's data, the subscriber's identity will be verified and his address details are provided in the fields for organization data. The Common name of the certificate contains the name and surname of the subscriber
- **Organization** – the certificate contains the organization's data, the subscriber's data, organization existence and the subscriber's authorization to represent the organization are verified. The Common name of the certificate contains the organization name
- **Sponsor** – the certificate contains the subscriber and organization's data, the subscriber's identity, organization existence and the subscriber's authorization to represent the organization are verified. The Common name of the certificate contains the name and surname of the subscriber.


The wizard will guide you through the process of providing the data. In the first stage, choose **Provide new data**. In the future, it will be possible to use them to issue another certificate.

The screenshot shows the Certum by QIPSECO dashboard. On the left is a sidebar with navigation links: Dashboard, Certificates, Domains, Certificates search, and Certum Shop. The main content area displays a 'Data to be verified' screen. It includes a circular icon with a dollar sign and arrows. The text reads: 'Data to be verified', 'Select one of the verified set of data or provide a new one for verification. From the selected data, in the certificate activation step, you will be able to select the fields included in the certificate.', and a radio button labeled 'Provide new data'. A blue 'Next' button is at the bottom right.

In the next stage, provide the details of the subscriber, which means the person who represents the organization and will be the owner of the certificate. Please write the names and surnames in the form as they appear on the subscriber's identity document.

Also choose a method for verifying the subscriber's identity from the available ones:

- **Automatic identity verification** – the subscriber will receive an e-mail with a link to the identity verification service to use with a computer or phone camera and an ID document
- **Attaching a document** – you will add a scan of the subscriber's identity document or an identity confirmation.



P

[Dashboard](#)[Certificates](#)[Domains](#)[Certificates search](#)[Certum Shop](#)

✓

Data to be verified

2

Subscriber

Organization

Summary

## Subscriber data

The subscriber is a person who will be the owner of the certificate; the data of him or her or organization that he or she can represent will be available to include in the certificate. After completing this step, subscriber will be asked to verify his/her identity with an **identity document** using one of the available verification methods.

NAME\*

Joe

SURNAME\*

Doe

### Verification method

☒ Automatic identity verification ☐ Add the document to verify subscriber's identity

E-MAIL ADDRESS OF THE SUBSCRIBER\*

joedoe@yourdomain.com

In the case of **automatic identity verification**, the subscriber will receive a link and instructions to start the process to this e-mail address. The link will be sent after saving the data to be verified.

[Back](#)[Next](#)

After providing the subscriber's data, go to the next stage: providing the organization's data.

For **individual** certificate variant, provide address details of subscriber's residence. Next, go to the data verification step [summary](#).

**Certum**  
by OFS ECO

Dashboard  
Certificates  
Domains  
Certificates search  
Certum Shop

Data to be verified ✓ Subscriber ✓ **3 Organization** Summary

## Organization data

Provide the data to let us verify your organization existence. From this data you will be able to choose the fields to include in the certificate.

The data of the organization

ORGANIZATION\*

Joe Doe

Headquarters of the organization

COUNTRY\*

Poland [PL]

STATE OR PROVINCE\*

mazowieckie

LOCALITY\*

Warsaw

As a natural person you do not represent any organization. Provide the subscriber's address data, which will be included in the certificate.

[Back](#) [Next](#)

For **organization** and **sponsor** certificate variant provide the organization's details and the address of its headquarters. The data will be used to verify the existence of the organization.

Choose also how Certum will verify the existence of the organization:

- **By registration number** – Certum will search for information about the organization in the public register using the provided number
- **Attaching a document** – you will add a document confirming the establishment of the organization.



**Certum**  
by GRS EKO

Dashboard  
Certificates  
Domains  
Certificates search  
Certum Shop

Data to be verified   Subscriber   **3 Organization**   Authorization   Summary

## Organization data

Provide the data to let us verify your organization existence. From this data you will be able to choose the fields to include in the certificate.

The data of the organization

ORGANIZATION\*

Your company

Headquarters of the organization

COUNTRY\*

Poland [PL]

STATE OR PROVINCE\*

mazowieckie

LOCALITY\*

Warsaw

Verification method

☒ Search the information about the organization by registration number   ☐ Add the document to verify organization existence

REGISTRATION NUMBER TYPE\*

DUNS

After providing all the required organization's data, proceed to the last stage of providing data for verification step, which is choosing the method of verifying the subscriber's authorization to represent the organization. This stage is required for **organization** and **sponsor** variants of certificate.

There are two methods to choose from:

- **The subscriber is visible in the registry** – the person given as the subscriber appears in one of the given registers as a representative of the organization
- **Attaching a document** – you will add a document confirming authorization. You can download an example of such document by the **Download ready to sign authorization document** link.



The method of verifying the subscriber's authorization is also influenced by the organization's chosen verification method. If the registration number and its type have been provided there, Certum will first check whether the subscriber is listed in the register and the system will automatically mark the method of verifying the subscriber's authorization as **The subscriber is visible in the register**. However, this does not prevent you from adding a document confirming the subscriber's authorization.

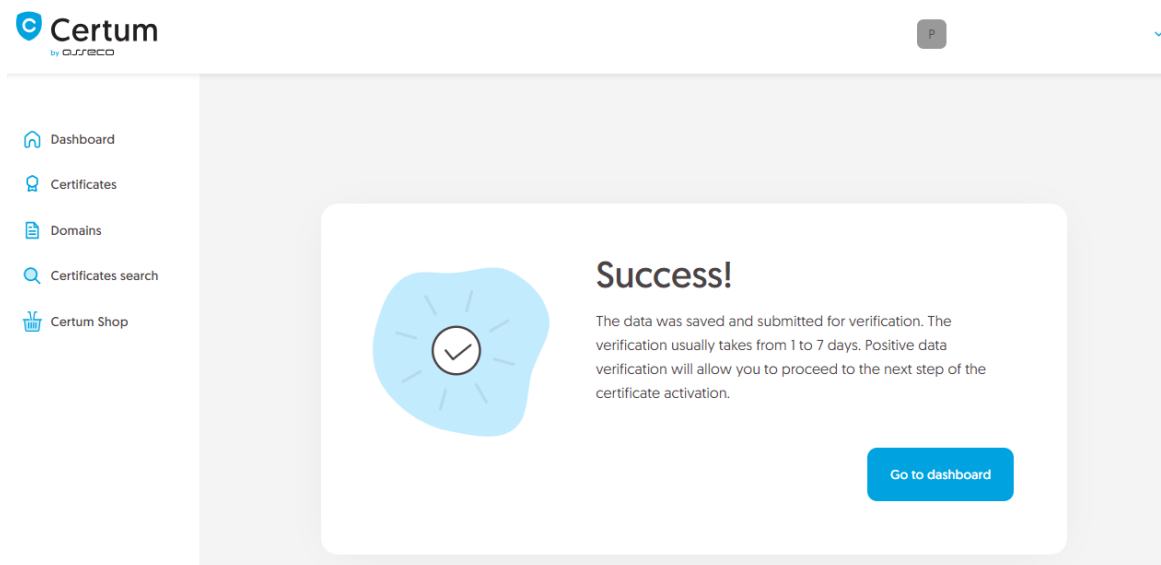
The screenshot shows the Certum by SJFECO web interface. On the left is a sidebar menu with links: Dashboard, Certificates, Domains, Certificates search, and Certum Shop. The main content area displays a progress bar with five steps: 'Data to be verified', 'Subscriber', 'Organization', 'Authorization' (the current step, marked with a blue circle and the number 4), and 'Summary'. Below the progress bar is a white card titled 'Authorization data' with the instruction: 'Choose the verification method to confirm the subscriber's relationship with the organization.' The card contains two sections: 'Subscriber data' with fields for Name (Joe) and Surname (Doe); and 'Verification method' with two radio button options: 'Subscriber is visible in DUNS, LEI or other registry as organization's representative' (selected) and 'Add the document to verify subscriber's relationship with the organization'. Below these is the 'Chosen registry type' section showing 'DUNS' and the number '12345678'. At the bottom of the card are 'Back' and 'Next' buttons.

After selecting the authorization verification method go to the next stage.

### Data verification step summary

Check provided information on the summary screen. If the data is correct, mark the required statements and complete the step of providing data to be verified.

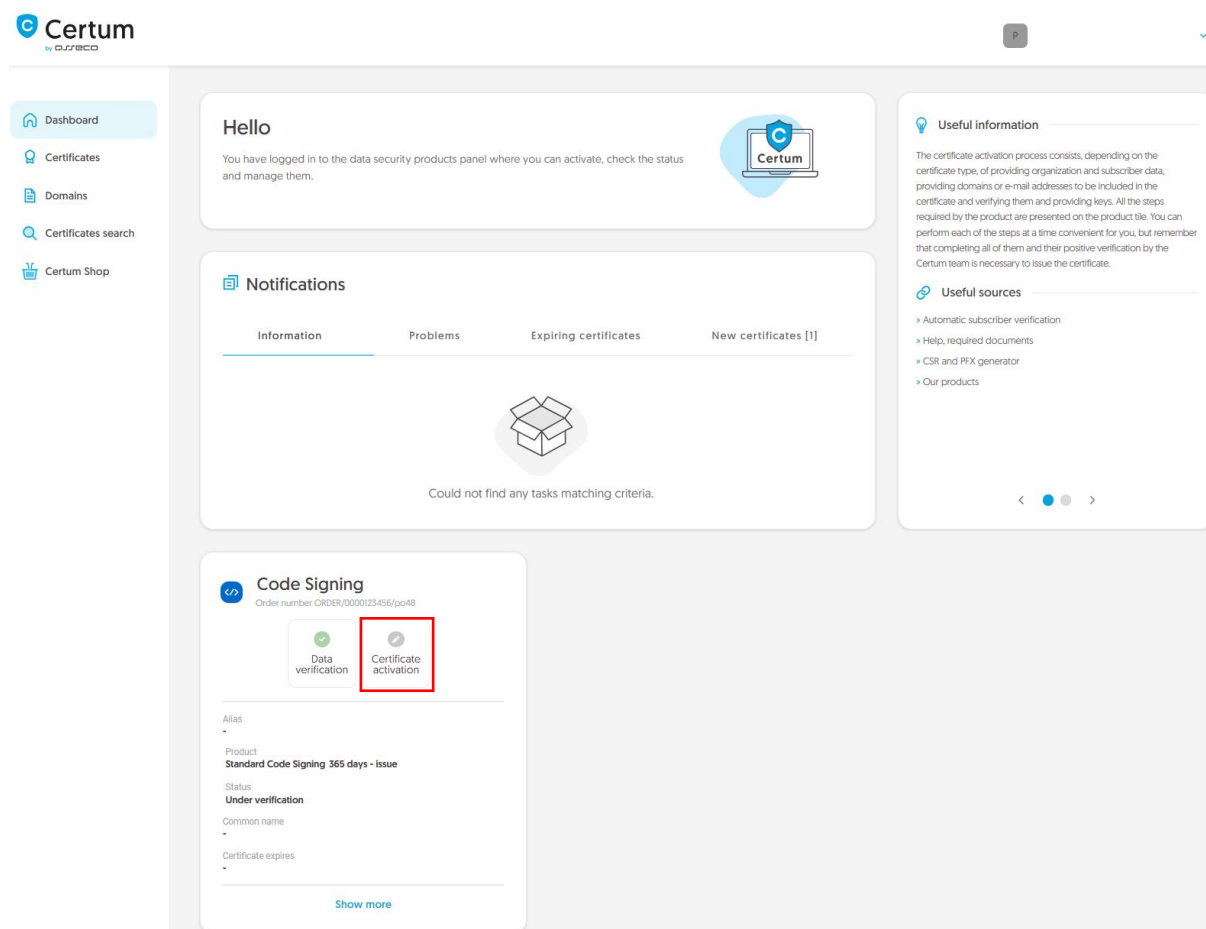
The success screen will inform you that the data have been saved for verification. Certum will verify them. During this time, if you want to add another document confirming the provided data, you can add it in the certificate details. This is also the time to perform automatic verification of the subscriber's identity, if such verification method has been chosen. You may check the [instruction for automatic identity verification](#).



Positive verification of the provided data will allow you to go to the **Certificate activation**.

### Certificate activation step

You will be able to start certificate activation step from **Dashboard**, using **Certificate activation** option:



or similar to the previous step: from the **Certificates** list – choose the certificate you want to activate and use **Activate certificate** option.

In this step, you will choose the fields you want to include in the certificate and generate key pair.

Choose the fields you want to include in the certificate. Some fields are required and cannot be unmarked.

**Certum**  
by *alfresco*

Dashboard  
Certificates  
Domains  
Certificates search  
Certum Shop

1 Certificate data   Generation method   Key pair generation   Summary

### Certificate data

Choose the data to be included in the certificate. Some of the fields are mandatory and there is no option to uncheck them.

**Code Signing**  
Standard Code Signing 365 days - issue

☒ Common name:  
Joe Doe

☒ Organization [O]:  
Your company

☒ Locality [L]:  
Warsaw

Once you have chosen the fields to the certificate, go to the key pair generation.

For Code Signing certificates, the available key generation method is **Generating key pair on card** – the keys will be saved on the cryptographic card.

When choosing a method for generating key pair on card, also choose the algorithm and key length. Your choice should depend on the algorithm and key length supported by the application in which you use the certificate or the recommendation of e.g. your IT department.

After selecting the method for generating key pair on card, choose the algorithm and key length.

The screenshot displays the Certum SignService web application. On the left is a sidebar with navigation links: Dashboard, Certificates, Domains, Certificates search, and Certum Shop. The main content area features a progress bar at the top with four steps: Certificate data (completed), Generation method (active, step 2), Key pair generation, and Summary. Below the progress bar, the title 'Key pair generation method' is shown, followed by a subtitle: 'Generating key pair with Certum SignService application allows you to store keys on a cryptographic card.' Under the heading 'Key pair generation method', the option 'Generating key pair on card' is selected with a radio button. Below this, a dropdown menu labeled 'KEY ALGORITHM AND KEY LENGTH' is set to 'RSA 3072'. An information box contains a note about the CSR method and the requirement for a cryptographic card. At the bottom, there are 'Back' and 'Next' buttons.

**Certum**  
by *ORFECO*

Dashboard  
Certificates  
Domains  
Certificates search  
Certum Shop

Certificate data   **2**   Generation method   Key pair generation   Summary

## Key pair generation method

Generating key pair with Certum SignService application allows you to store keys on a cryptographic card.

### Key pair generation method

☒ Generating key pair on card

KEY ALGORITHM AND KEY LENGTH

RSA 3072

The CSR method will allow you to obtain a certificate with a key in a form that can be transferred and installed from a file. Remember to save a private key generated with your CSR. Generating keys on the card will cause that the certificate will be installed on the cryptographic card and its connection to the computer will be required whenever the certificate is used. Only Certum cards are supported.

[Back](#) [Next](#)

In the next stage, make sure that you have the card inserted into the reader, the reader connected to the computer and the card itself has an initialized common profile with a PIN code set for it. The process also requires having the proCertum CardManager application installed on your computer, where you can also check the status of the card and the status of PIN and PUK codes.

You may check the instruction of [how to assign PUK and PIN codes for the first time](#).

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by **ojsreco**

Dashboard  
Certificates  
Domains  
Certificates search  
Certum Shop

Certificate data   Generation method   **Key pair generation**   Summary

## Key pair generation

Follow the instruction below to generate key pair.

[Download Certum SignService app](#)

1. Download and install the **Certum SignService** application.
2. Download and install the **proCertum CardManager** application if you don't have it installed or it requires updating.
3. Connect the card reader to the computer and insert the card.
4. Open the **proCertum CardManager** application and check if common profile of the card is initialized. Application will ask to set PIN and PUK codes of the card if it needs to be initialized.
5. Start the key pair generation process using **Generate key pair** button.
6. Accept the prompt message from you browser about running the Certum SignService application.
7. When Certum SignService window appears, enter the PIN code for the common profile of your card.
8. Wait until the key pair is generated, it may take up to several minutes.

*When the key pair is generated, next window of the wizard will appear.*

[Back](#) [Generate key pair](#)

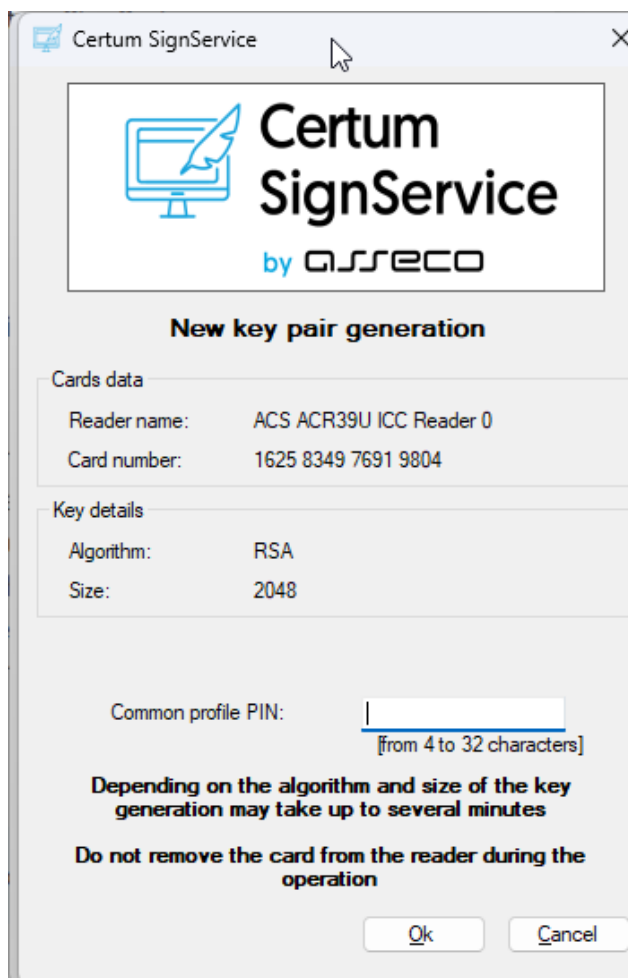
To generate keys on the card, you will also need the Certum SignService application installed on your computer. After starting key generation, the Certum SignService application can ask for permission to run and then to provide the PIN code of the card's common profile in order to generate keys on it.

**Certum**  
by **ojsreco**

Dashboard  
Certificates

Certificate data   Generation method   **Key pair generation**   Summary

**Open CertumSignService?**  
https://certmanager.certum.pl wants to open this application.  
[Open CertumSignService](#) [Cancel](#)



The image shows a Windows-style dialog box titled "Certum SignService" with a close button (X) in the top right corner. The dialog features the Certum SignService logo (a blue icon of a computer monitor with a pen) and the text "Certum SignService by ASSECO". Below the logo, the title "New key pair generation" is centered. The dialog is divided into two main sections: "Cards data" and "Key details". The "Cards data" section contains two fields: "Reader name:" with the value "ACS ACR39U ICC Reader 0" and "Card number:" with the value "1625 8349 7691 9804". The "Key details" section contains two fields: "Algorithm:" with the value "RSA" and "Size:" with the value "2048". Below these sections, there is a label "Common profile PIN:" followed by a text input field. A tooltip or hint "[from 4 to 32 characters]" is visible below the input field. Below the input field, there is a warning message: "Depending on the algorithm and size of the key generation may take up to several minutes" and "Do not remove the card from the reader during the operation". At the bottom of the dialog, there are two buttons: "Ok" and "Cancel".

Cards data	
Reader name:	ACS ACR39U ICC Reader 0
Card number:	1625 8349 7691 9804

Key details	
Algorithm:	RSA
Size:	2048

Common profile PIN:

[from 4 to 32 characters]

**Depending on the algorithm and size of the key generation may take up to several minutes**

**Do not remove the card from the reader during the operation**

Ok Cancel

After providing the PIN code, the key generation process will begin on the card. This may take up to a few minutes. Once the key is generated, the process will proceed to the summary.

Check all of provided data. Mark the required statements if needed and complete certificate activation.

The success screen will inform you that the certificate has been submitted for issuance. The issued certificate can be downloaded from the certificate creation e-mail or from the certificate details view: in a convenient **PEM** or **DER** encoding. You can install your certificate on the cryptographic card from the certificate details view.

From the certificate details view you can also download subordinate certificates for the certificate.