

**CENTRAL BANK OF MONTENEGRO**  
**INFORMATION TECHNOLOGY DEPARTMENT**  
Application Systems Development Division

**CBCGSign**

(for the needs of submitting written forms for application Resident's Reporting and signed bids  
for participating in T-bills auctions)

User Guide

Version 1.0

June 2022

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# 1. INTRODUCTION

The **CBCGSign** sub-project is part of the **CBCG ePortal** project. The task of this application is to load XML documents entered through the CBCG ePortal created following the CBCG specification, sign them with a qualified digital certificate, and forward them to the CBCG's information system (ISCBCG) by starting the appropriate web service. The XML data sent through this application is signed following the XMLDSIG standard, which guarantees the submitted data's integrity and non-repudiation. Data will be transmitted via encrypted SSL channels.

## 2. CBCGSign application

**CBCGSign** is a Windows Forms application developed in MS Visual Studio 2019 in the C# programming language.

The application loads the forms entered into the system through the ePortal in XML form, signs them with a qualified digital certificate and forwards them to ISCBCG by starting the appropriate web service. Possible application operation errors are recorded in the corresponding folders defined in the configuration.

### 2.1 Application installing

#### 2.1.1 Preconditions

The following must be provided on the client's computer to install the application:

- Install **Microsoft .NET Framework 4.7.2** (if not already included as an OS component);
- Install appropriate client certificates for forms signing (*Izvještavanje rezidenata (Resident Reporting)* application) and bids (*Aukcija državnih zapisa (T-Bills Auction)*);
- Provide a network connection between the client and the server on which the Web service for entering signed forms is set up.

## 2.2 Installation

You must download the installation version of the **CBCGSign** application from the CBCG ePortal homepage, available at <https://eportal.cbcg.me> (Figure 1)

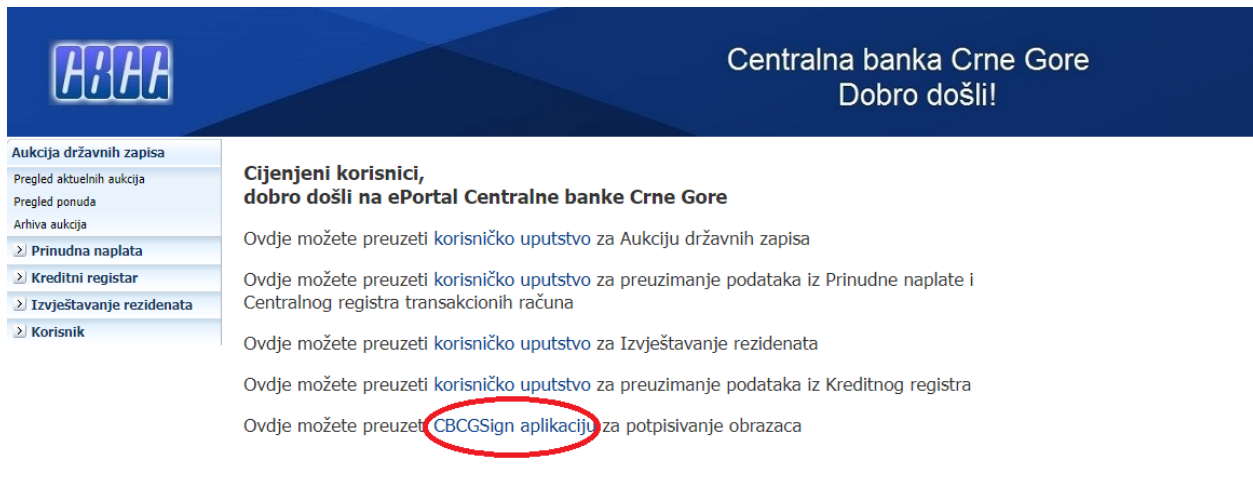


Figure 1 – Downloading CBCGSign application

After downloading the **CBCGSign** application installation version (by clicking on the download link), start its installation. Open the downloaded file (CBCGSign.msi - located in the Downloads folder), and you will receive a notification as in Figure 2:

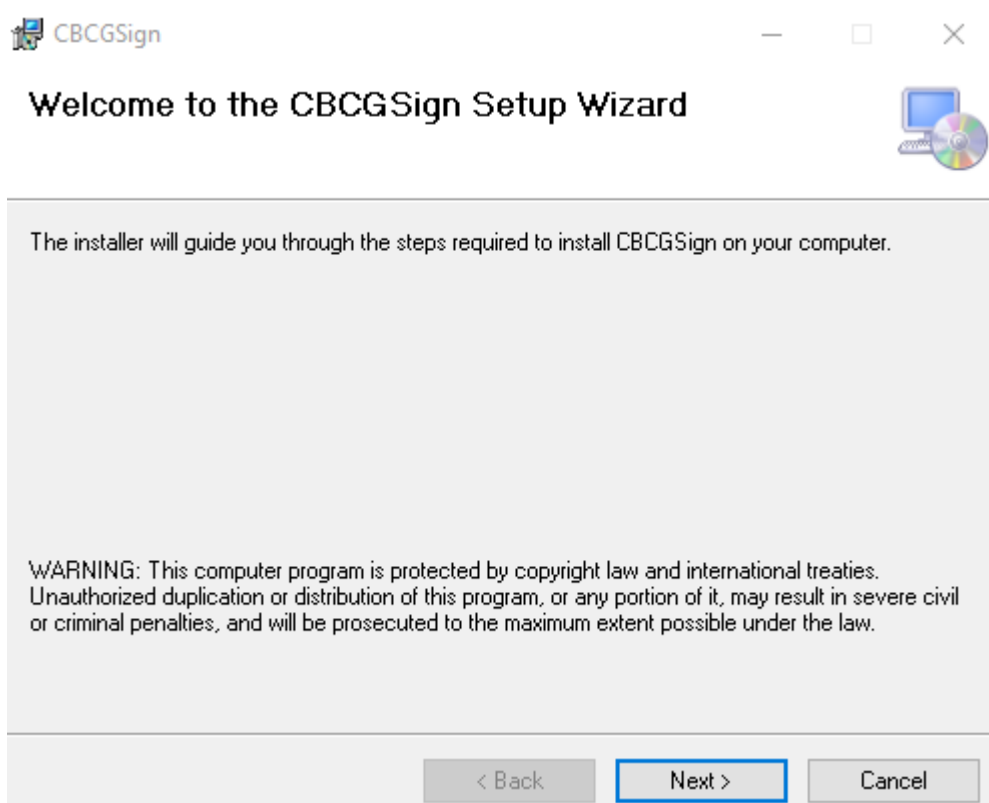


Figure 2 – CBCGSign application installation

Click on the **Next** button, after which you will receive the notification (Figure 3).

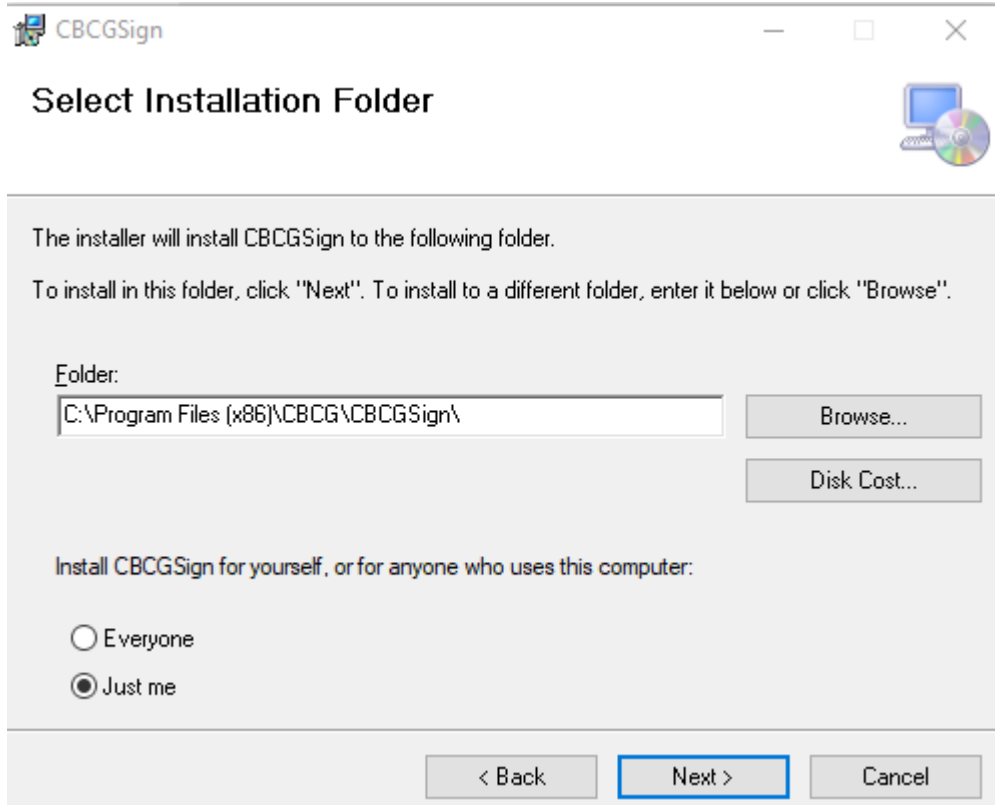


Figure 3 – Select the folder in which you want to place the application

You need to select the path where you want to place the installation. We suggest leaving the default location offered by the installation. When you have selected the appropriate path, click the **Next** button. Confirm the installation again by clicking the **Next** button (Figure 4).

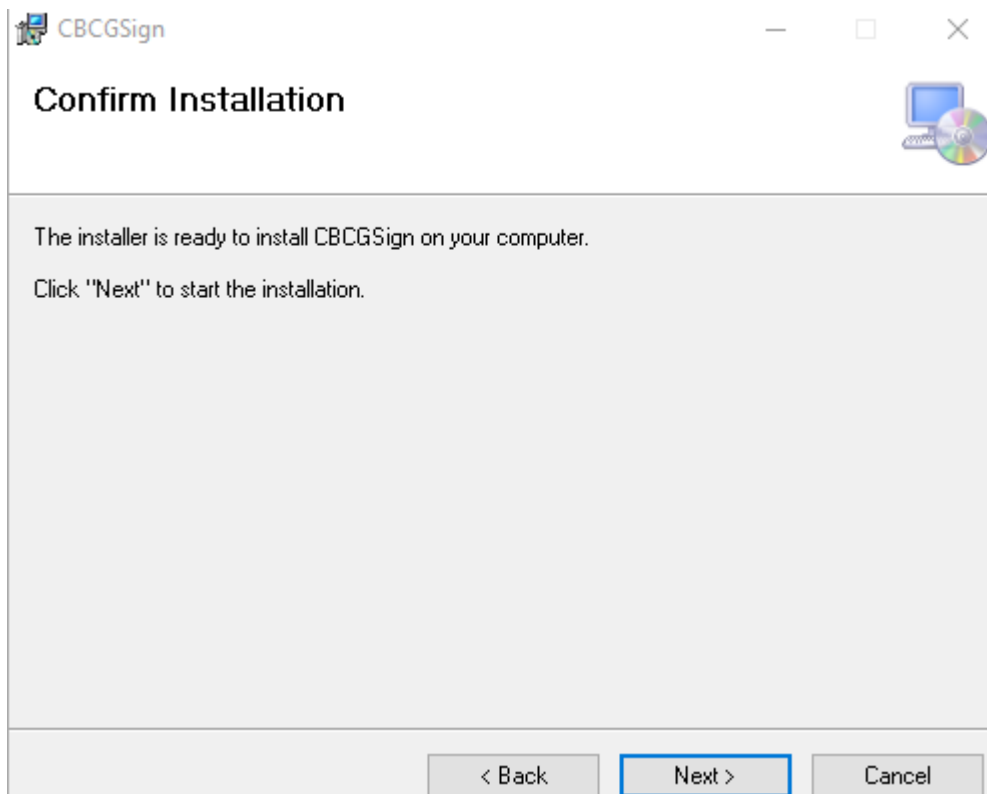


Figure 4 – Installation confirmation

You will receive a notification that the application will be installed on your computer. Click the **Yes** button. You will receive a notification (Figure 5) if the installation has been completed successfully. Click the **Close** button.

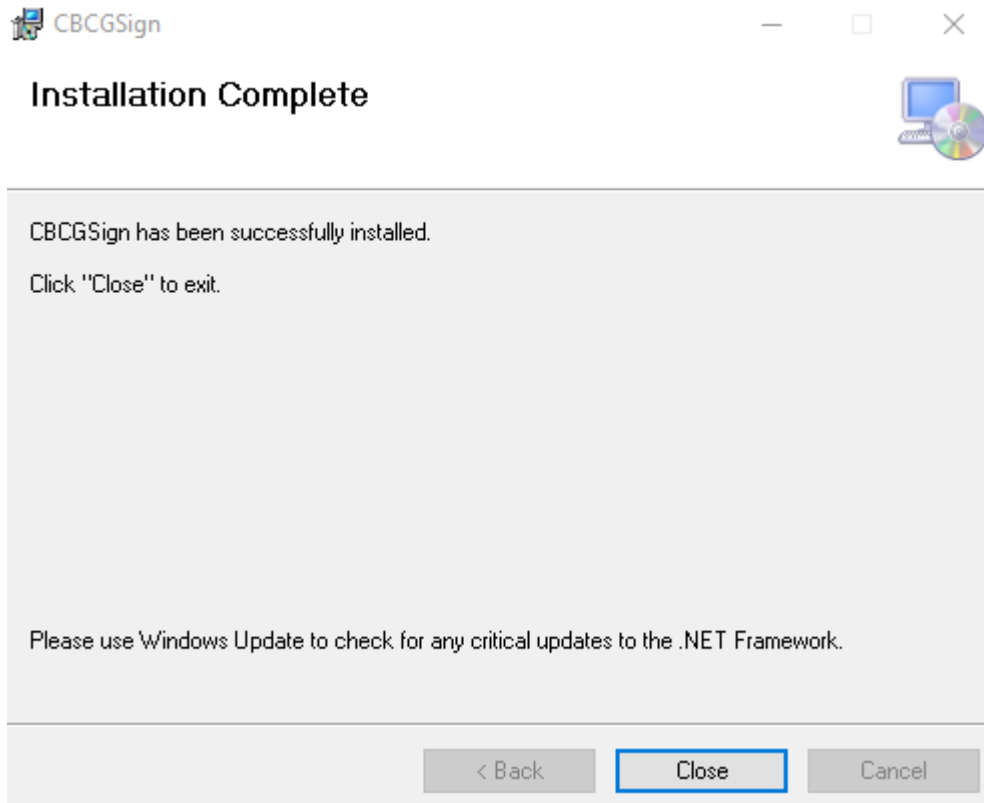


Figure 5 – Notification of successful installation of the CBCGSign application

## 2.3 Parameters

Application parameters are located in the **PotpisivanjeObrazacaFormsApp1.exe.config** file in the application directory.

You can change the parameters at any time, but you must restart the application to accept the changed parameters.

The following table gives the parameters and their description.

rb	tag	Description
1	<Debug>	The parameter can have two different values: <ul style="list-style-type: none"><li>• DA (YES) – writes the log file to the folder specified in the Logfolder parameter;</li><li>• NE (NO) – does not generate a log file</li></ul> The default value is "NE".

2	<TestProdukcija>	<p>The parameter can have two different values:</p> <ul style="list-style-type: none"> <li>• 1 – the application communicates with the CBCG test environment;</li> <li>• 0 – the application communicates with the CBCG production environment</li> </ul> <p>The default value is “0”.</p>
3	<LogFolder>	<p>The location where the log files are placed. The default value is D:\\log\\</p>

## 2.4 Removing the application from the computer

To remove the application from your computer, go to the path: **Control Panel -> Programs and Features**.

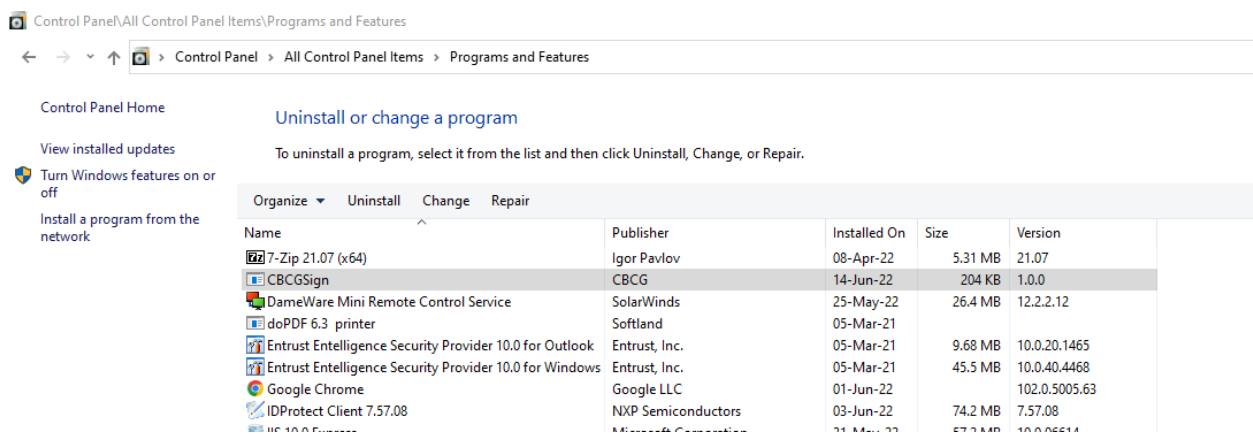


Figure 6 – Removing CBCGSign application from the computer.

Select the CBCGSign application and click the **Uninstall** button (Figure 6).

## 2.5 Using the application

The application is started by double-clicking on the **CBCGSign** icon (located on the desktop) or launching the **CBCGSign** application from the start menu.

Launching the application will open the form (Figure 7).

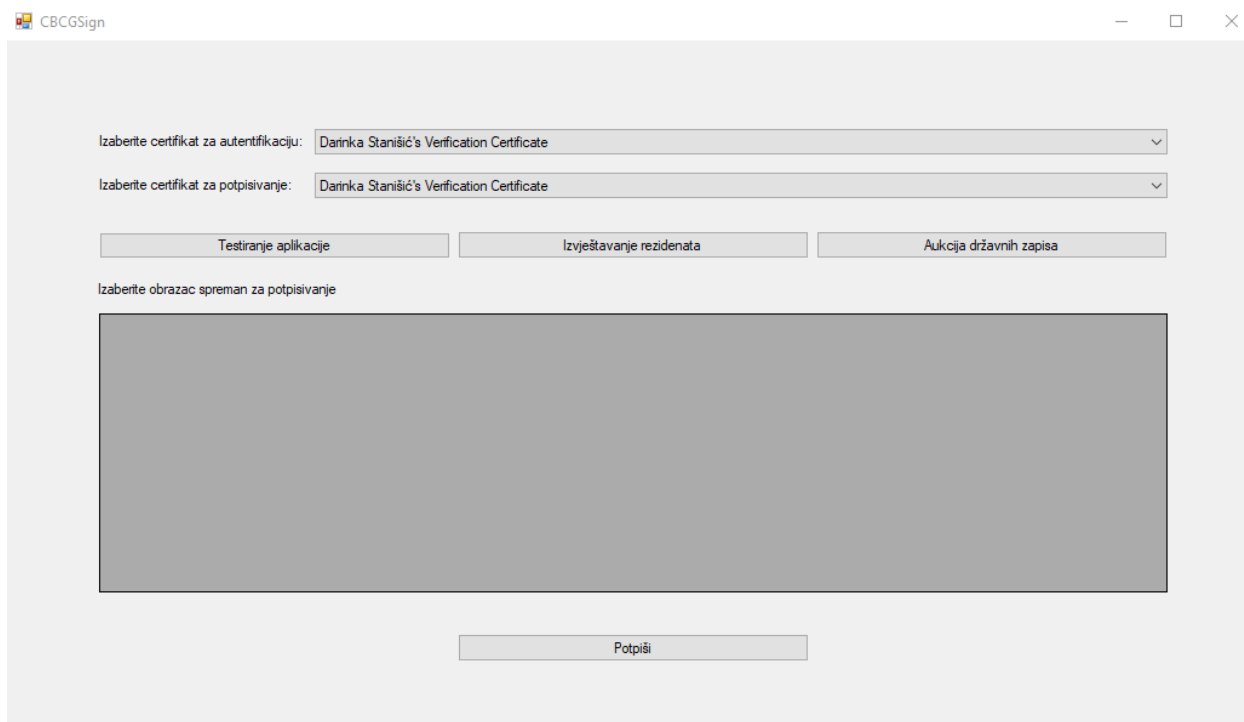


Figure 7 – CBCGSign application

The authentication and signature drop-down lists will load all the certificates installed on your computer. You need to select relevant certificates for authentication and signature:

- If you have certificates issued by the **Pošta Crne Gore (Post of Montenegro)**, choose the same certificate for both authentication and signing;
- If you have a certificate issued by **Coreit CA**, select the appropriate authentication certificate in the authentication section and select the proper certificate for signing in the drop-down list for signing;
- If you have a certificate issued by the **MUP Crne Gore (Montenegro's Ministry of Interior)**, select the appropriate certificate for identity in the authentication section and select the proper certificate for signature in the drop-down list for signing.

The application has the following features:

- **Testiranje aplikacije (Application testing)** - By clicking on this button, you can test the connection to the server on which the Web service that enables the entry of forms signed using this application and whether the selected user with appropriate certificates exists in our system.



- **Izveštavanje rezidanata (Resident Reporting)**

After the user has selected the appropriate certificates for authentication and signing, clicking the **Resident Reporting** button loads and displays all forms from the Resident Reporting application entered by the selected user with the status **“SPREMNO ZA POTPIS” (READY FOR SIGNING)** on the ePortal. An example is given in Figure 8.

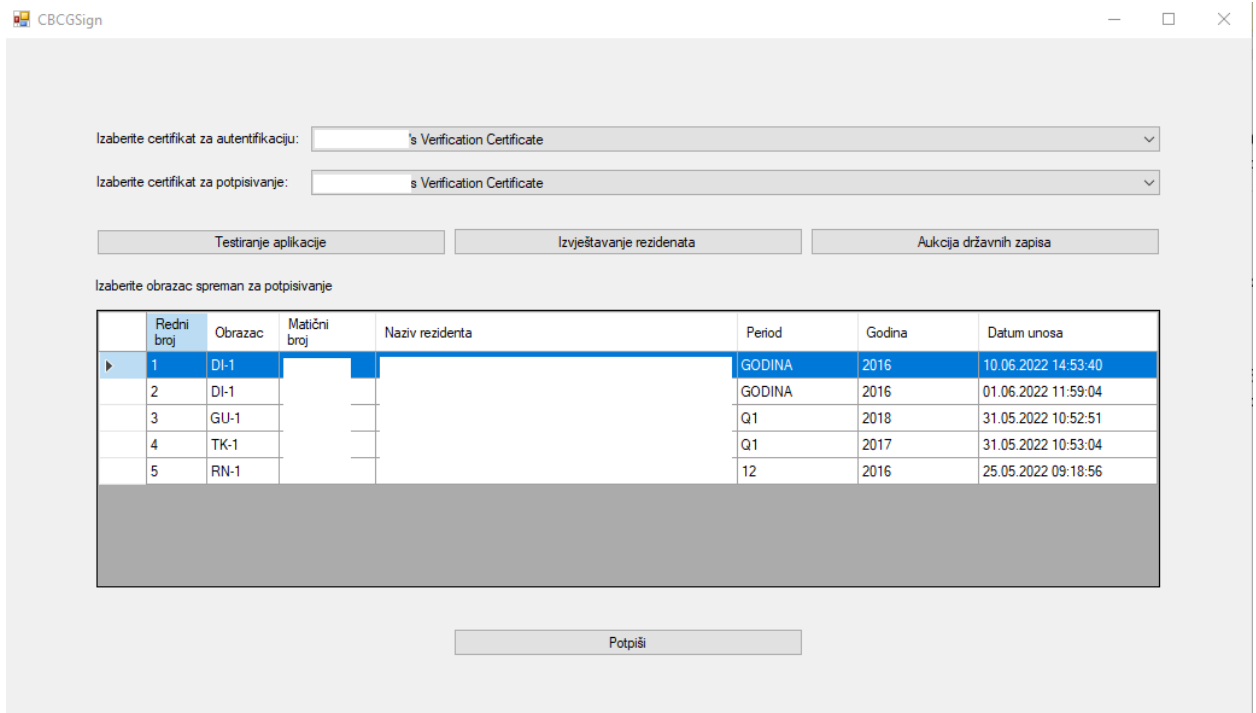


Figure 8 – Reports ready for signing

The table provides basic data on the entered forms. These include form code (DI-1, DI-2, KO-1, KZ-1, RN-1, TK-1, TK-2, GU-1, GU- 2), the resident’s identification number and name, the period and year to which the form refers, and the form entry date.

The user must indicate which form it wants to sign and submit (by selecting the appropriate row in the table - highlighted in blue), after which he has to click the **Potpisi (Sign)** button. After that, enter the certificate password (Figure 9) and click the OK button to forward the signed document to the ISCBCG via the Web service.

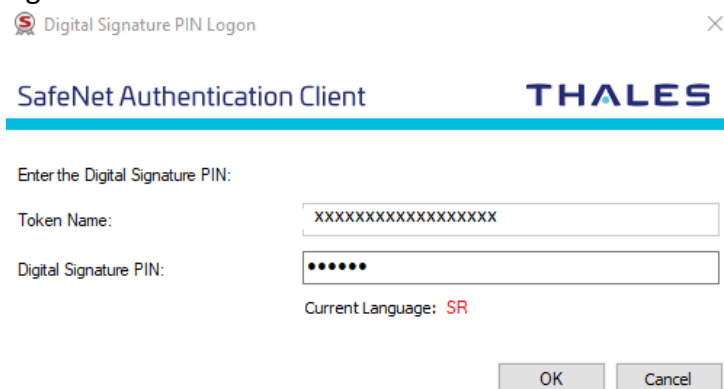


Figure 9 – Password entry

After successfully processing the request, the user will receive a notification (Figure 10).

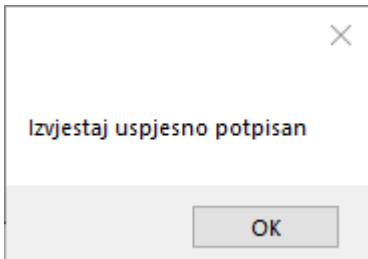


Figure 10 – Notification of a successfully signed and forwarded report

After successfully entering the report, the user can login to the CBCG ePortal and check the submitted report's status. Only reports signed in this way will be considered adequately submitted.

Note: If the user receives an error notification, it must contact the CBCG.

- **Aukcija državnih zapisa (T-bills auction)**

After the user selects the appropriate certificates for authentication and signing, clicking on the **Aukcija državnih zapisa (T-Bills Auction)** button loads and displays all bids related to the T-Bills Auction application to which the selected user is allowed access with the **“UNESENA” (ENTERED)** status on the ePortal. An example is given in Figure 11.

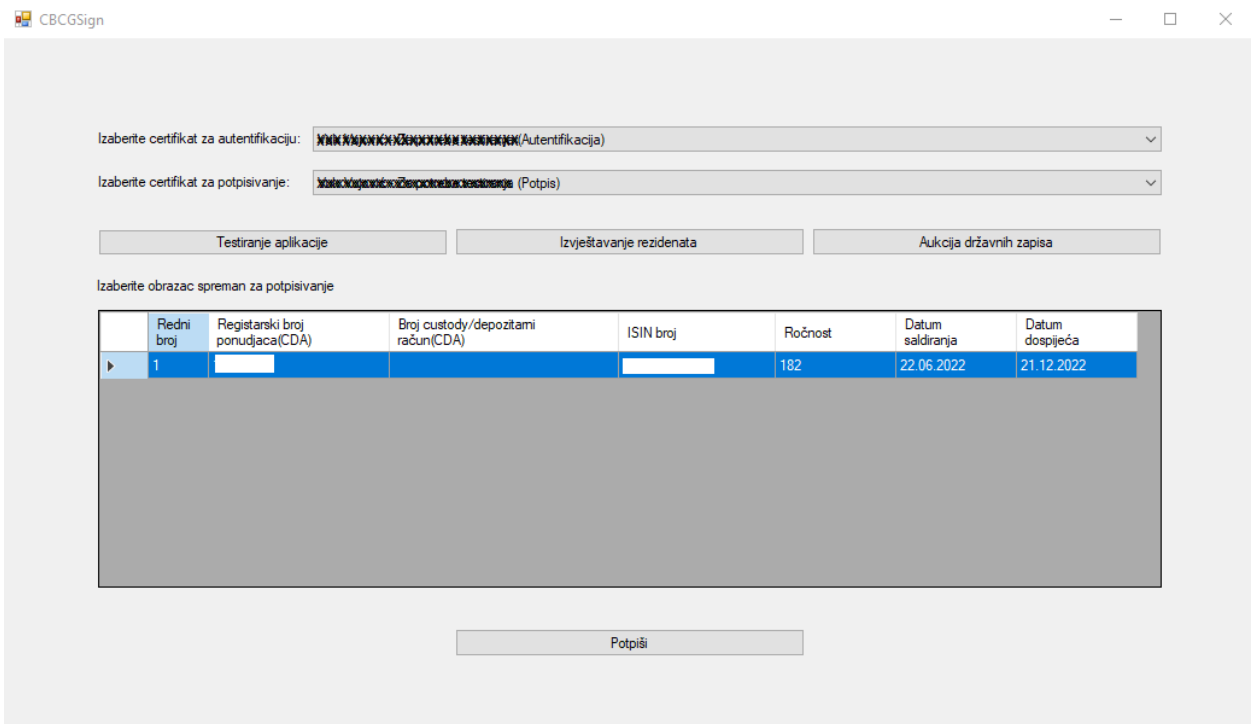


Figure 11 – Bids ready for signing

The table contains basic data on the bids entered. These include bidder's registration number in the Central Securities Depository and Clearing Company (CSDCC), custody/depository account number with the CSDCC, auction ISIN number, auction maturity date, auction settlement date, and auction due date.

The user must mark the bid it wants to sign and deliver (by selecting the appropriate line in the table - highlighted in blue), after which it clicks on the **Potpisi (Sign)** button.

After that, it must enter the certificate password (Figure 12) and click the **OK** button to forward the signed bid to the ISCBCG via the Web service.

Digital Signature PIN Logon

SafeNet Authentication Client THALES

Enter the Digital Signature PIN:

Token Name: XXXXXXXXXXXXXXXXXXXX

Digital Signature PIN: ●●●●●●

Current Language: SR

OK Cancel

Figure 12 – Password entry

After successfully processing the request, the user will receive a notification (Figure 13).

Ponuda uspjesno potpisana i dostavljena

OK

Figure 13 –Notification of a successfully signed and submitted bid

After receiving the notification, the user can login to the CBCG ePortal and check the submitted bid's status. Only bids signed and submitted in this way will be processed by the CBCG.

Note: If the user receives an error notification, it must contact the CBCG.