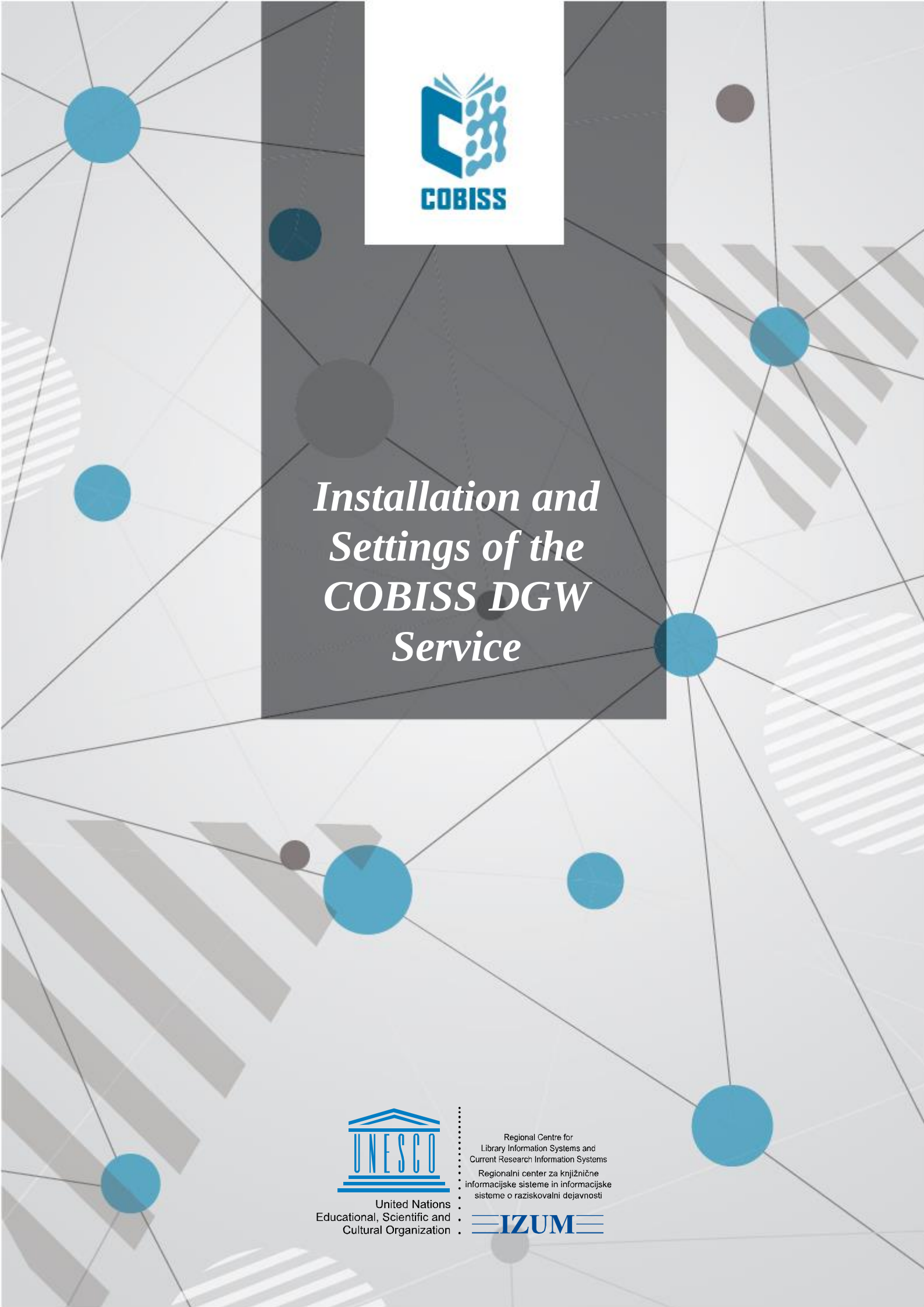


# *Installation and Settings of the COBISS DGW Service*

United Nations
Educational, Scientific and
Cultural Organization

Regional Centre for
Library Information Systems and
Current Research Information Systems
Regionalni center za knjižnične
informacijske sisteme in informacijske
sisteme o raziskovalni dejavnosti

IZUM

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# 1 Introduction

The document describes the procedure for installing and setting up the COBISS DGW service, which is only available for the Window operating system. This service is necessary for the operation of RFID devices and in COBISS Lib for the operation of most peripheral devices (e.g. printers, cash register drawer, etc.) and also some other functionalities, e.g. installation of a certificate for the tax office, VALÚ, etc.

Inventory for RFID is described in separate instructions.

Recording data on the RFID chip is made according to the Danish standard: http://biblstandard.dk/rfid/dk/rfid_data_model_for_libraries_february_2009.pdf.

The method is only used for IZUM's RFID support solution.

**NOTE:** To install the COBISS DGW service, the recommended open-source version of Java, i.e. the permitted version must be installed. More information is available in the instructions: http://www.cobiss.net/doc/Namescanje_OpenJDK_8%E2%80%93x64_windows_EN.pdf

# 2 Installation of the COBISS DGW service

Installation takes place by launching a program that requires administrator rights on the computer.

Download the C3Setup installer for 64-bit Windows from the website https://www.cobiss.si/priporocena-oprema/doc/c3dgw/lastversion/Adm64/C3Setup.msi.

When starting, the window below appears, where we click **Next**.

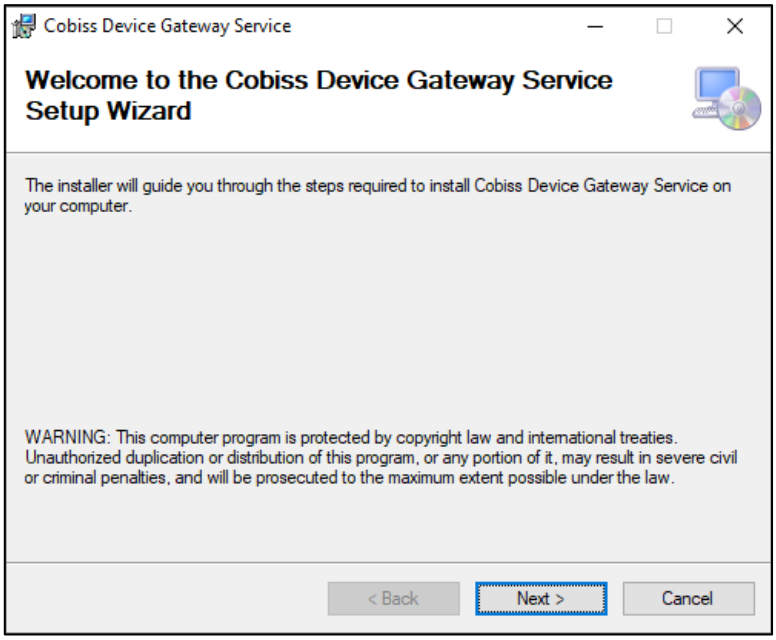


**Figure 1: Initial installation window**

Continue the installation by clicking the **Next** button.

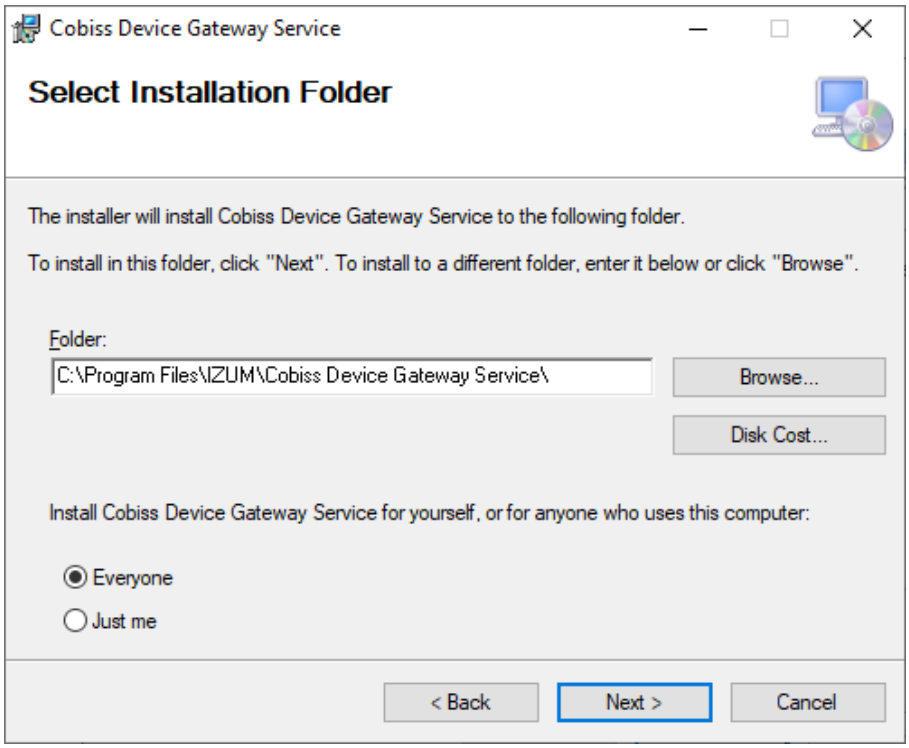


**Figure 2: Choosing the installation location on the workstation**

Click the **Next** button and start copying the data and starting the service.

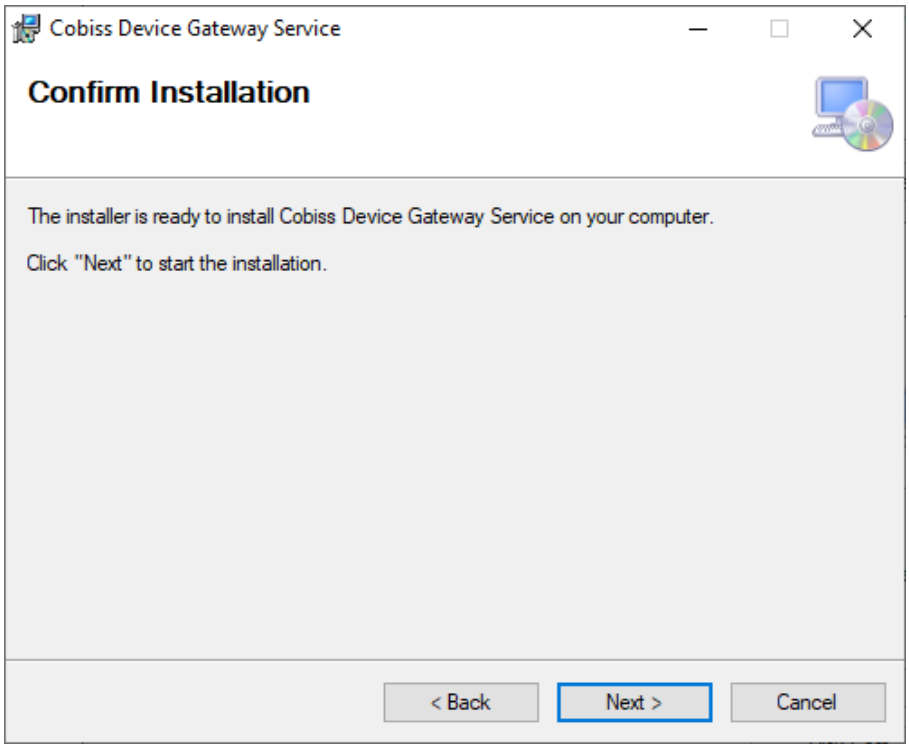


**Figure 3: Installation confirmation**

 

Finish the installation by clicking the **Close** button.

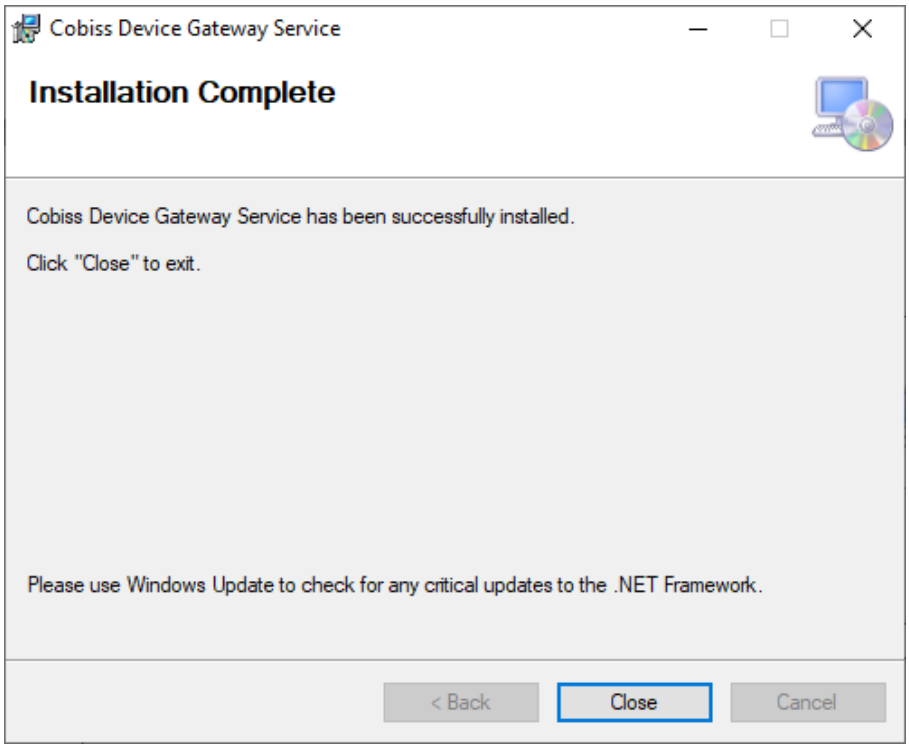


**Figure 4: Completing the installation**

After the installation is complete, find the *Setup DGW* program on the desktop and run it.


**Figure 5: Installing *Setup DGW***

The window below opens, in which we click the **OK** button. Confirm the following windows with the **OK** button.

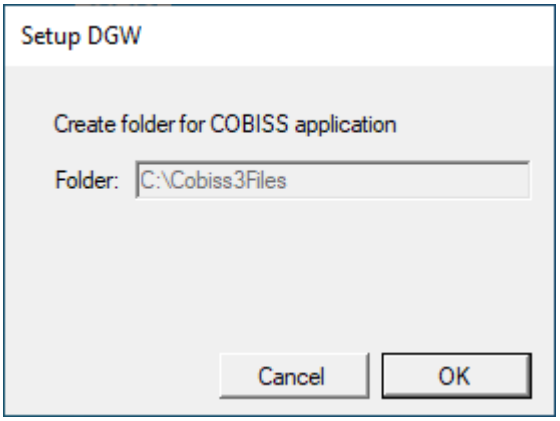


**Figure 6: Creating the Cobiss3Files folder**

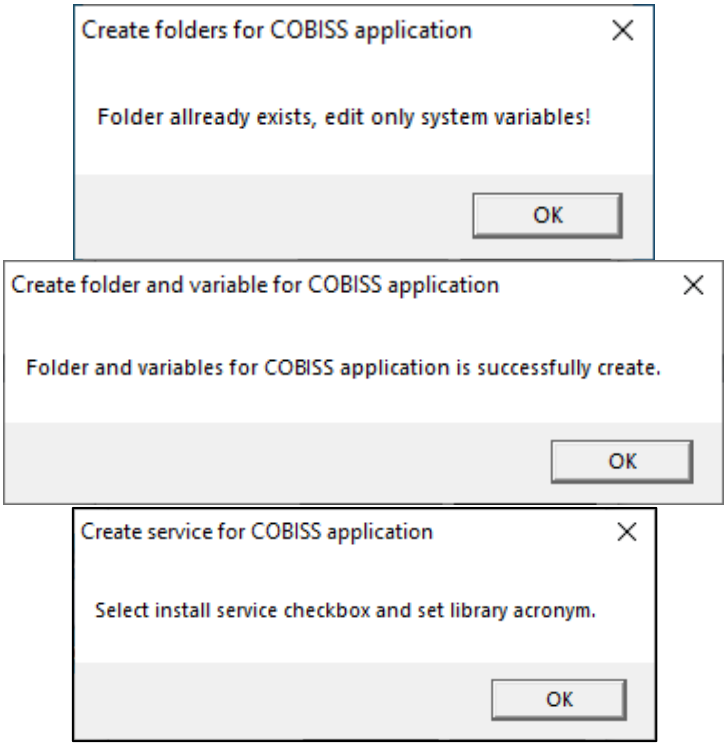


**Figure 7: Cobiss3Files installation messages**

Select the *Install service for Cobiss devices* option with a check mark and enter the acronym of your library (e.g. IZUM). Confirm with the **Setup** button.

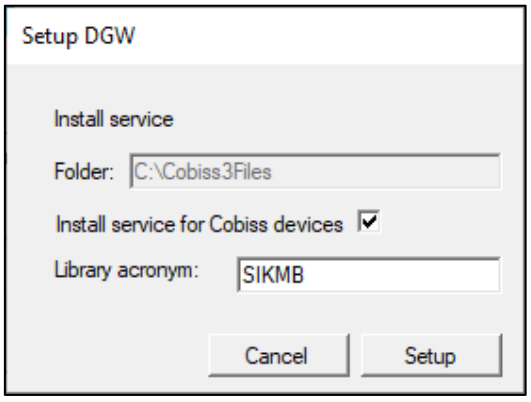


**Figure 8: Entering the library acronym**

The window below appears, in which we click the **OK** button.

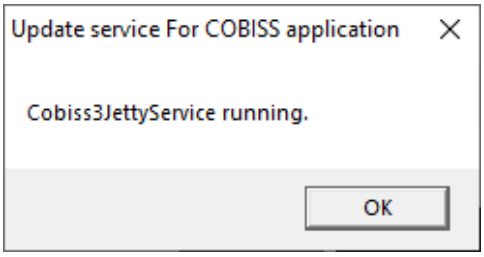


**Figure 9: Completing the installation process**

 

# Problems installing the program

If we do not have the JAVA_HOME variable defined, the program will inform us of this and terminate the installation prematurely.

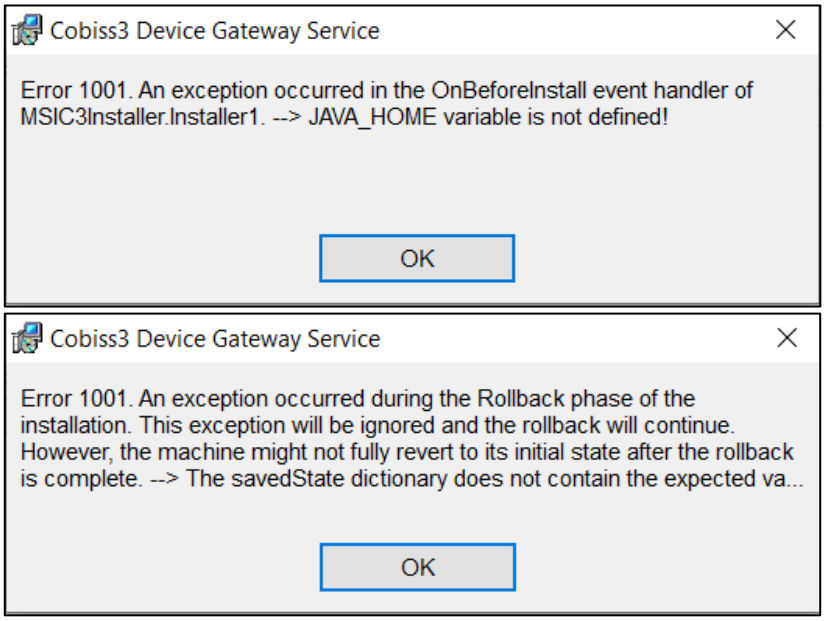


**Figure 10: Installation problems**

The JAVA_HOME variable is defined in the environment system variables.

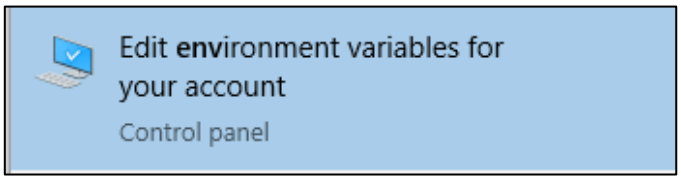


**Figure 11: JAVA_HOME variable settings**

The variable name is JAVA_HOME (uppercase). The value of the variable depends on the type and version of java.

**Table 1: JAVA_HOME variable settings**

| Type of java | Variable name | Value |
|---|---|---|
| AdoptOpenJDK | JAVA_HOME | C:\ProgramFiles\AdoptOpenJDK\jdk-8.0.xxx.x-hotspot\ |
| Eclipse Adoptium | JAVA_HOME | C:\Program Files\Eclipse Adoptium\jdk-8.0.xxx.x-hotspot\ |
| Licenced Oracle Java | JAVA_HOME | C:\Program Files\Java\jre1.8.0_xxx |
| OpenWebStart | JAVA_HOME | C:\Program Files\OpenWebStart\jre |

**NOTE:** If the service is already installed and you run the installation software and select the *Repair* function, make sure to stop *Cobiss3JettyService* beforehand.

# 3 Setting up a domain username

If you use network printers or a printing server, it is required to use a domain username and password for login to *Cobiss3JettyService*. Find *Services* in the Windows operating system and run them as the administrator or ask your administrator to do this. Next, find *Cobiss3JettyService* and right-click in the drop-down menu to select *Properties*:

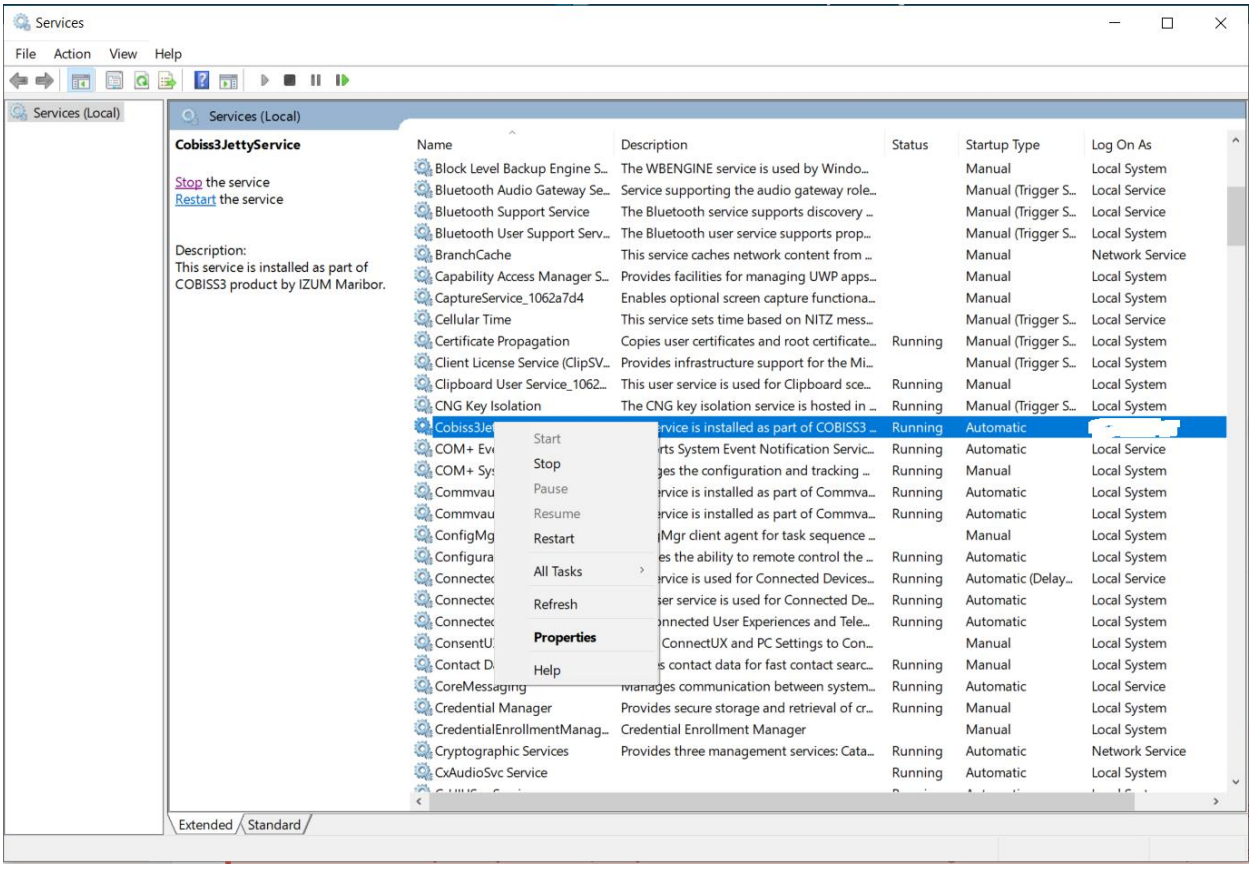


**Figure 12: Services window**

In the *Cobis3JettyService Properties* window, select the *Log On* tab and select the option *This account*, and then enter the domain username and password. The domain username must be entered as follows: <domain>\<username> e.g. *testdomain\printers*. Once you enter the username and password, click **Apply** and **OK**.

 

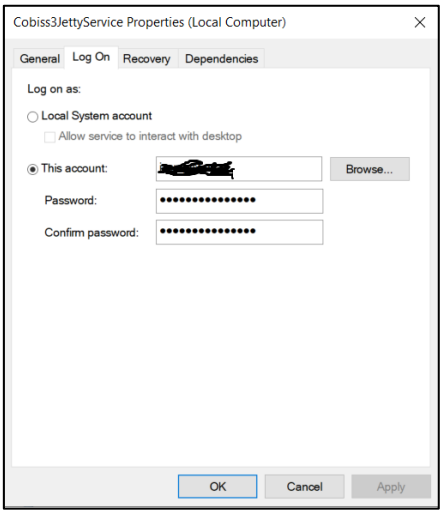


**Figure 13: Entry of domain user**

It is recommended that you create a username with a prolonged password validity for printing purposes, as it is required to change the password every time the password for the domain user is changed.

Once you change the user, restart *Cobis3JettyService Properties*:

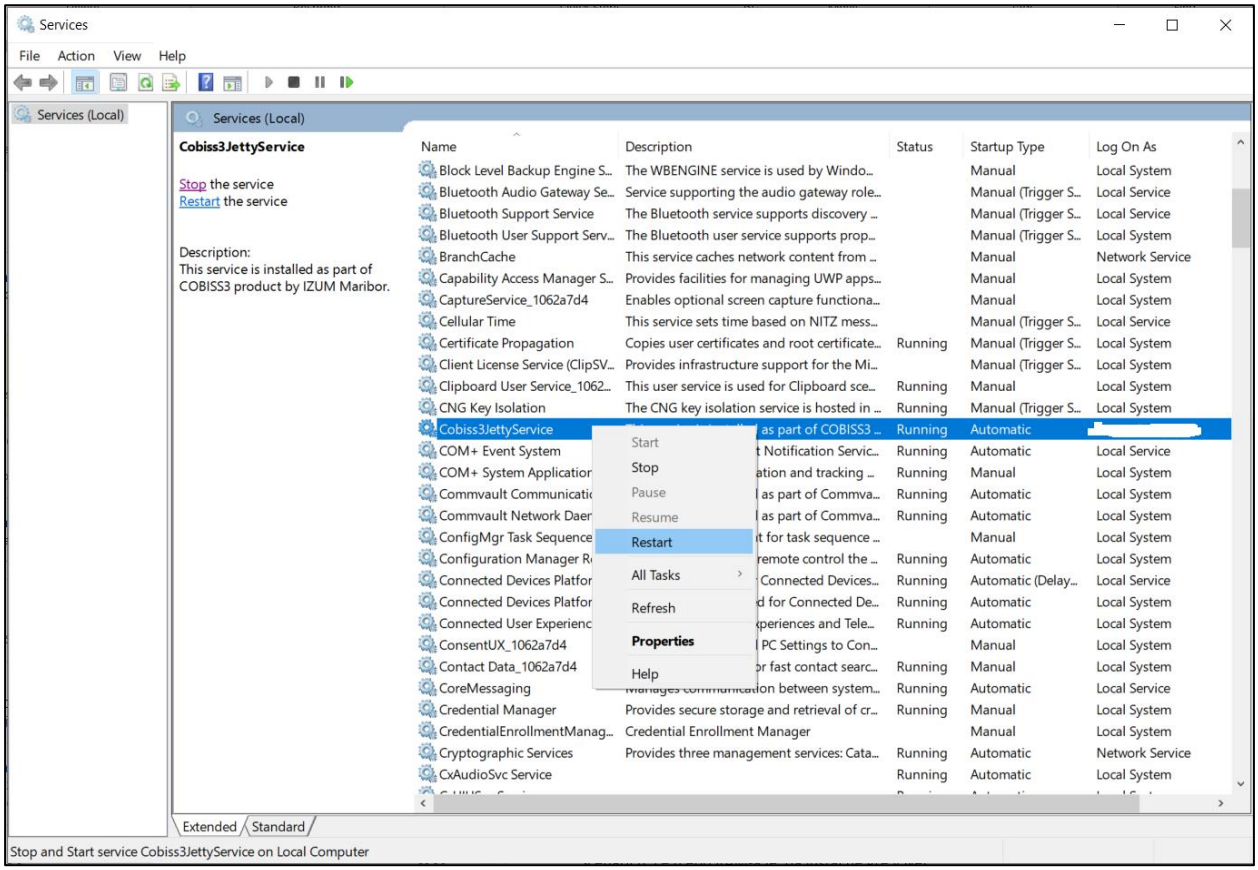


**Figure 14: Restarting *Cobis3JettyService***

# 4 Installing the USB driver for RFID books

In the folder *C:\Cobiss3Files\bin* is the folder *Standard_USB_Driver_v03.10.00*. It contains instructions for installing the USB driver. Driver installation begins by running the *setup.exe* file. The installer guides you through the entire installation process.

You can also use the latest drivers downloaded from the FEIG website or provided with the hardware.

# 5 Installing the driver for the RFID device for reading membership cards

In the folder *C:\Cobiss3Files\bin* is the folder *Setup_CDC_V184_Build20130214*. It contains instructions for installing the CDC USB driver for the FEIG ID RW40.30-USB interface. Installation is done by running the *setup.exe* file. The installer guides you through the entire installation process.

You can also use the latest drivers downloaded from the FEIG website or provided with the hardware.

# 6 COBISS DGW service

The COBISS DGW service is an independent program written in Java that handles the communication with peripheral devices. COBISS3 and COBISS Lib connect to the COBISS interface via web services and thus access peripheral devices via the COBISS DGW service. The service is installed on every local computer where the COBISS3 or COBISS Lib application is also installed.

The service is web-oriented, which means that the entire service is accessible via a web browser. You can use any browser, Mozilla Firefox is recommended.

The program is intended primarily for technical personnel.

## COBISS DGW service

The COBISS DGW service can be accessed via a web browser at the URL: http://localhost:8088/c3dgw/. This URL displays the base page:

 

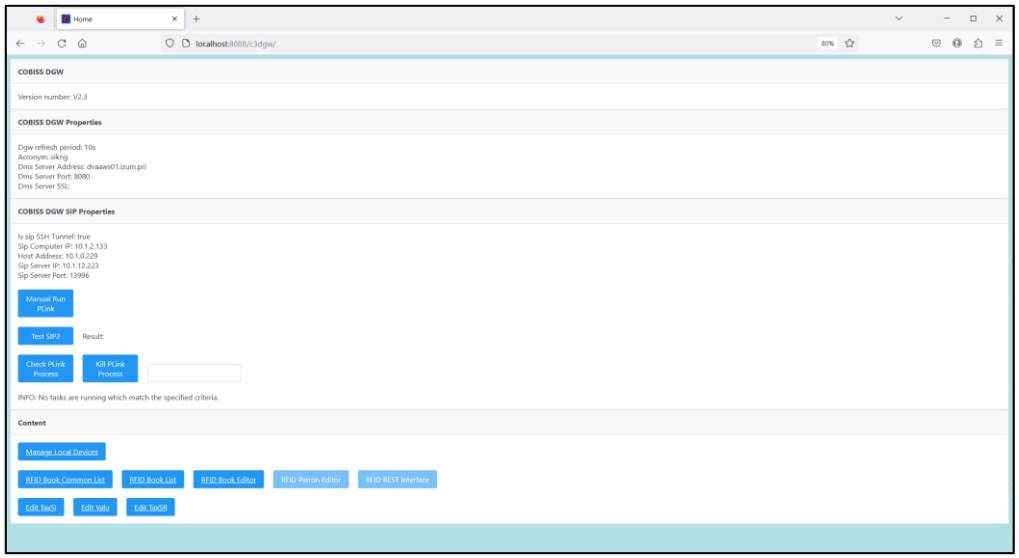


**Figure 15: COBISS DGW service**

- **COBISS DGW Properties:** Data for basic RFID settings and DMS server settings is shown. The settings are edited in the *Dgw.cfg* file in the *C:\Cobiss3Files\conf* folder.
- **COBISS DGW SIP Properties:** The settings for the SIP server used by e.g. self-checkout, sorter, etc. The data is used for a secure VPN connection. The settings are edited in the *Dgw.cfg* file in the *C:\Cobiss3Files\conf* folder. The **Manual Run** button is for manually running the PLINK command. The **Test SIP2** button checks whether the SIP connection is established. A successful test returns a *loginresponse false* message. The **Check Plink Process** button checks whether the *Plink.exe* process is running in the background. **Kill Plink Process** terminates the specified *Plink.exe* process.
- **Manage Local Devices**: With this method, you get to the window for the settings of individual peripheral devices, e.g. RFID reader for materials, RFID reader for members, etc.
- **RFID Book Common List:** All RFID chips on the material RFID reader are displayed. It also appears in various methods from the COBISS Lib when manual editing of material protection is required.
- **RFID Book List**: All RFID chips on the material RFID reader are displayed. It is used only with IZUM's driver.
- **RFID Book Editor**: You can enter or edit data on the RFID chip for the material. It is used only with IZUM's driver.
- **RFID Patron Editor**: The data recorded on the RFID chip on the member card is displayed.
- **RFID REST Interface**: The button is active with the corresponding setting used by software developers on peripheral devices.
- **Edit TaxSI**: It is a method for editing settings for tax verification of invoices in the Republic of Slovenia. Installation of the certificate is necessary if you work in COBISS Lib. For COBISS3, the certificate installation process has not changed.
- **Edit Valu**: Use this method to edit the settings.
- **Edit TaxSR**: It is a method for editing settings for tax verification of invoices in the Republic of Serbia.

# Description of the Manage Local Devices web window

In the **Manage Local Devices** window, set the parameters for the drivers. You currently need to set up four physical interfaces: *RFID_book* – card reader for materials, *RFID_card* – card reader for members and *POS* – POS-terminal.

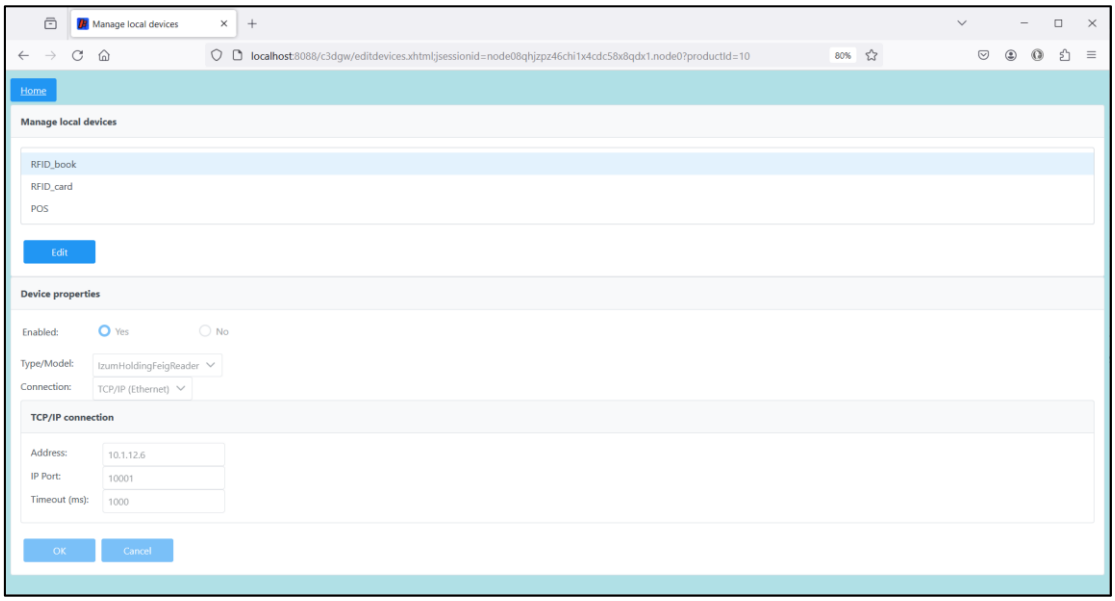


**Figure 16: Manage Local Devices window**

# Editing settings in Manage Local Devices

To add a new RFID device on the local computer, the settings must be edited. Under **Manage local devices**, select the device for which you want to edit the settings and click **Edit**.

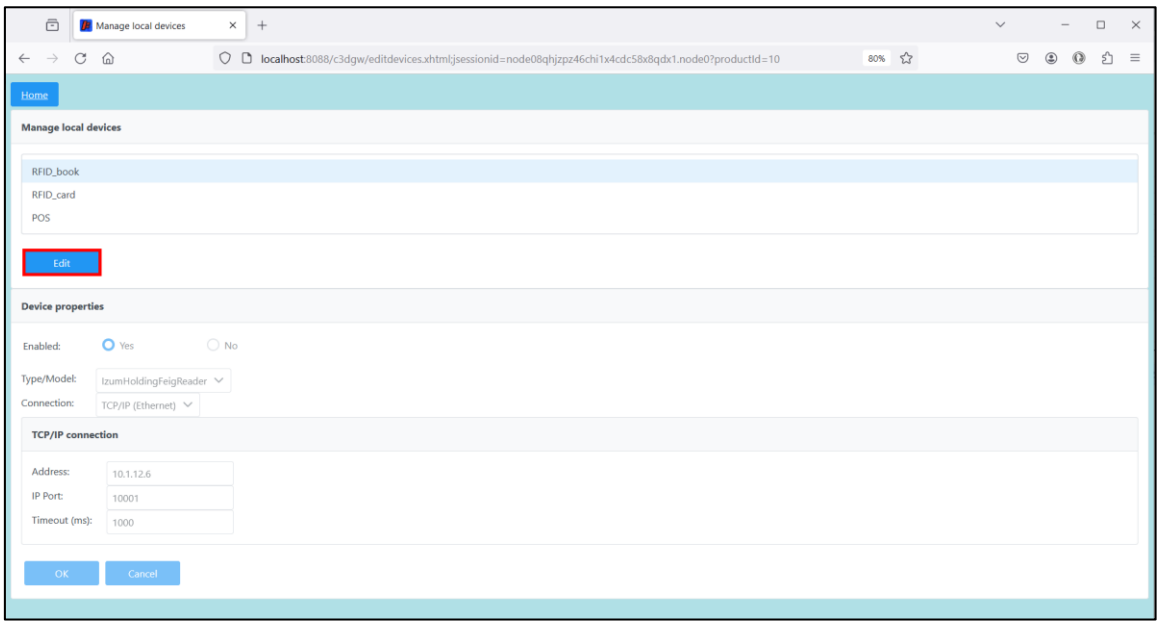


**Figure 17: Device setup**

 

Under **Device properties**, select **Enabled: Yes**. If we use IZUM's solution, select under **Type/Model: IzumHoldingFeigReader**. For the connection method, you can choose between USB, TCP/IP or Serial.

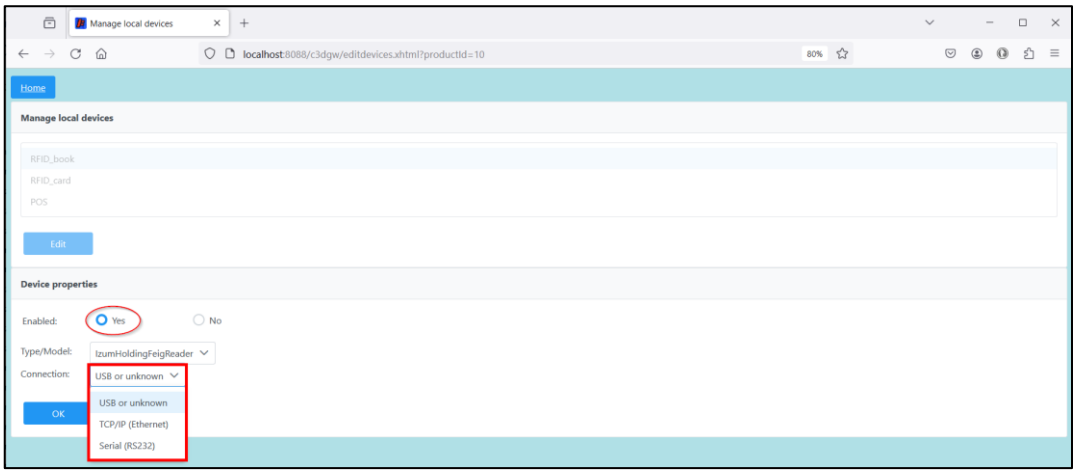


**Figure 18: Setting up the RFID tag for material connected via USB**

If TCP/IP is selected, we have the *FEDiscO.exe* program in the *C:\Cobiss3Files\bin\V0.9.0* folder, which can be used to check the IP address of the RFID device. This IP address is then entered in the Address field.

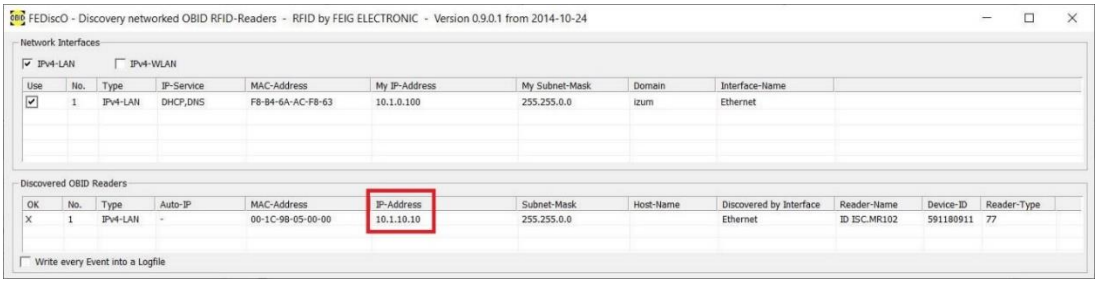


**Figure 19: TCP/IP connection setup for RFID tag for the material - driver**

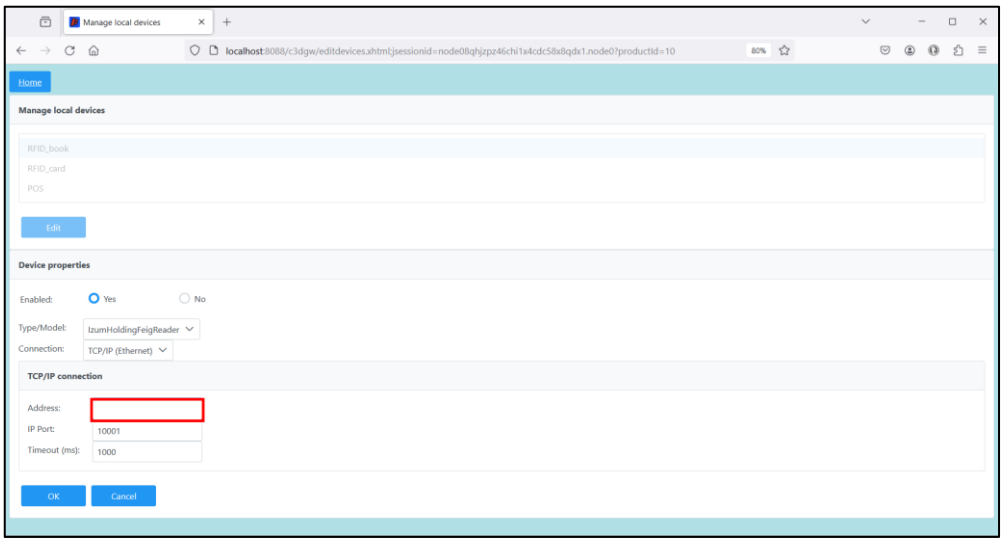


**Figure 20: TCP/IP connection setup for RFID tag for material – COBISS DGW**

To use the POS terminal in COBISS Lib, select **Enabled: Yes** and the corresponding model and connection method in the **Device properties**. Also enter the appropriate values for the selected connection, e.g. IP address, port, etc. Copy this from the POS terminal.

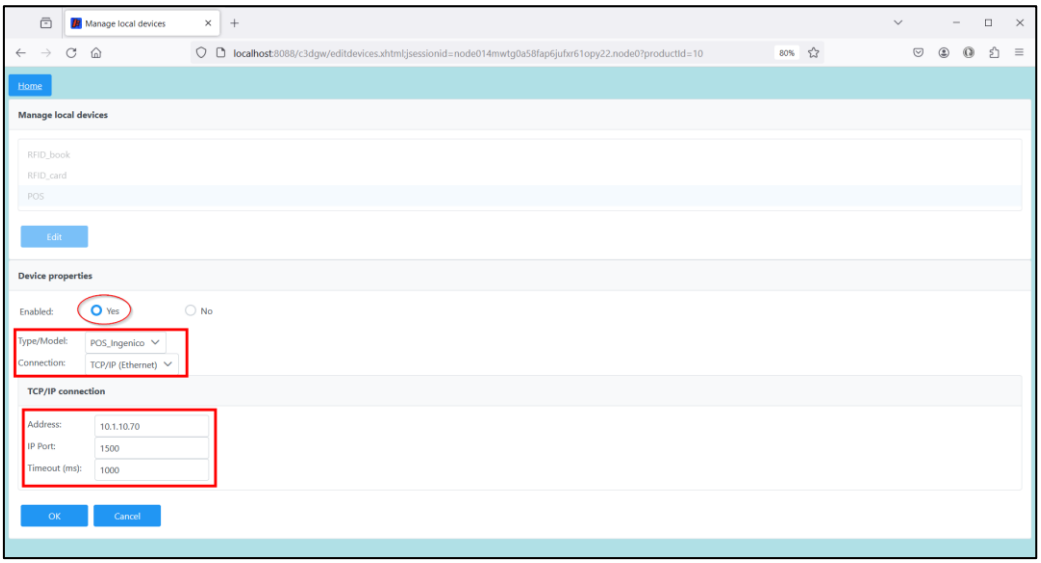


**Figure 21: POS terminal setup for COBISS Lib**

The POS terminal setup in COBISS3 is described on the link.

# Description of the Common List RFID items web window

In the **Common List RFID items** window, you can read the RFID chips that are on the RFID panel for the material. This window replaces the **RFID control panel** window in COBISS3 for the needs of COBISS Lib (**RFID device/protection status** method). RFID tag reading will work after device confirmation in IZUM (see chapter 6). You can also enable or disable protection of the material in the **Change EAS tag** column by checking the checkboxes and clicking the **Change** button.

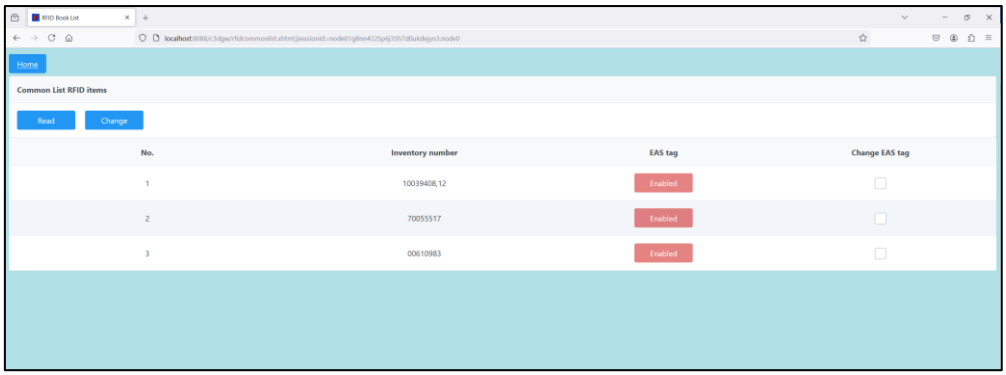


**Figure 22: A window to display the material list on the RFID material panel**

 

# Description of the RFID Book List web window

In the **List RFID items** window, you can read the RFID chips that are on the RFID board for the material. The format in which the results are displayed is Danish S24/u4 ('mandatory part'). The window is active only in the case of IZUM's solution. RFID tag reading will work after device confirmation in IZUM (see chapter 6). We can also enable/disable material protection in the **EAS tag** column.

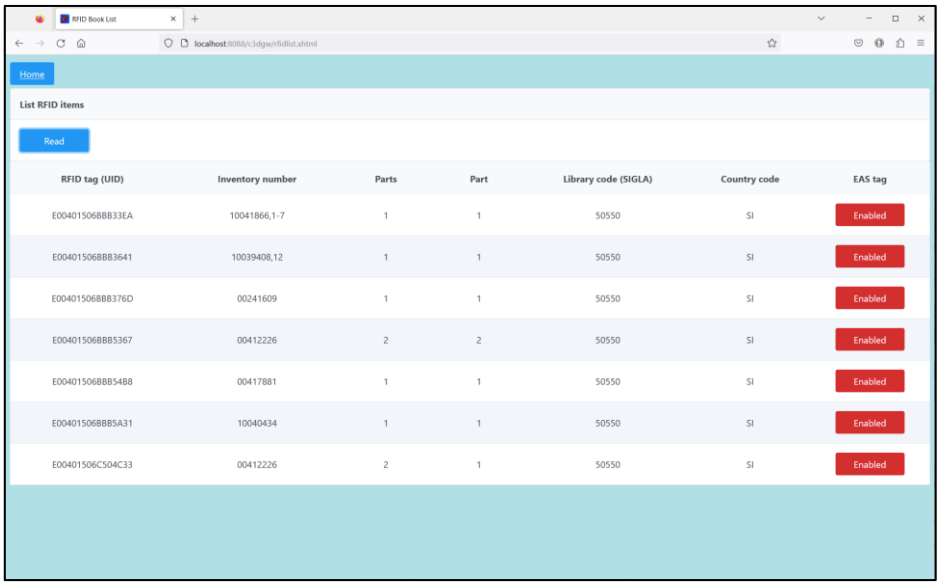


**Figure 23: A window to display the material list on the RFID tag for material**

# Description of the RFID Book Editor web window

In the **RFID Book Editor** window, you can read and write data to the RFID chip for the material. All data is recorded in the Danish format S24/u4 ('mandatory part'). The window is active only in the case of IZUM's solution. The window is not intended for inventory or any other manipulations, but is used exclusively for test purposes.

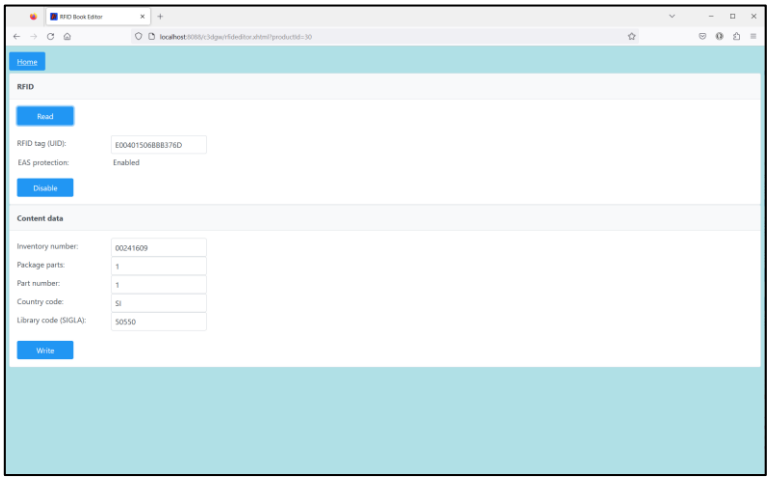


**Figure 24: RFID Book Editor window (material)**

# Description of the RFID Patron Editor web window

In the **RFID Patron Editor** window, we can read the data on the RFID chip for the membership card.


**Figure 25: RFID Patron Editor window**

# Description of the parameters for setting up the COBISS DGW service

There is a *Dgw.cfg* file in the *C:\Cobiss3Files\conf* folder. It contains parameters that are important for setting up the COBISS DGW service.

Parameters:

- PERIOD_DGW – The parameter is used to determine the interval of sending messages to the server. The base unit is the second. The default value is *900* (seconds).
- LOGGING_LEVEL – Must be ALL value, specifies logging level.
- ACRONYM_DGW – Enter the library's acronym here. It is very important information.
- DMS_SERVER_ADDRESS – Enter the address for the dms server. The default value is *ws.cobiss.net*.
- DMS_SERVER_PORT – The port on which the dms server listens. The default value is *443*.
- DMS_SERVER_SSL – The value must be *true*.

The dms server has the role of recording and displaying the status of the dgw service. Each dgw service connects to the dms server, where it records the state of the dgw service. In this way, it is easier to monitor the operation of peripheral interfaces.

# Log files for COBISS DGW

The *C:\Cobiss3Files\log* folder contains log files for COBISS DGW. The entire operation of COBISS DGW can be observed in these files.

 

# 7 Notifying IZUM and confirming operation

For the RFID device to function in COBISS3, the device must first be confirmed in IZUM. It is best to call the IZUM call centre at **+386 (0)2 2520 333** or notify IZUM in writing at the e-mail address podpora@izum.si. We'll let you know when we enable it.

# 8 Setting up RFID readers for IZUM's solution for use in COBISS3

If we use appropriate RFID devices that support IZUM's solution and we also use this solution, we edit the settings in COBISS3 according to the following procedure.

We select the **System / Settings / RFID device settings** method.

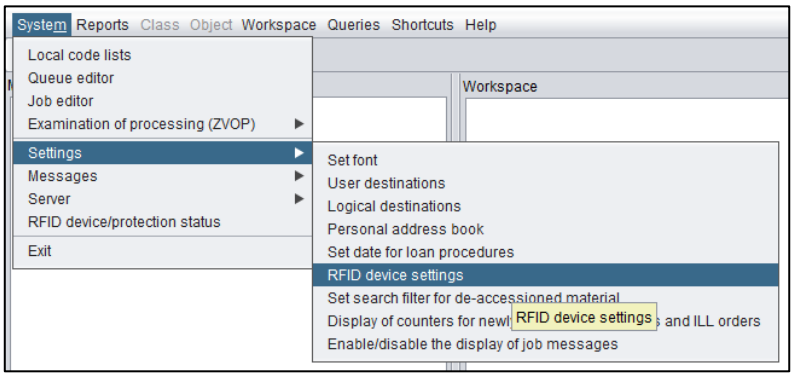


**Figure 26: Method Setting RFID devices**

The **RFID Device Settings** window opens. On local computers that have a connected RFID device for the material, select the value *TRUE* for the option *HAS RFID TERMINAL* and the value *IzumC3DGW* for the option *RFID TERMINAL TYPE*. If you are also using the recommended reader for RFID cards for members, select the value *TRUE* for the option *HAS Card RFID TERMINAL* and the value *IzumC3DGW* for the option *Card RFID TERMINAL TYPE*.

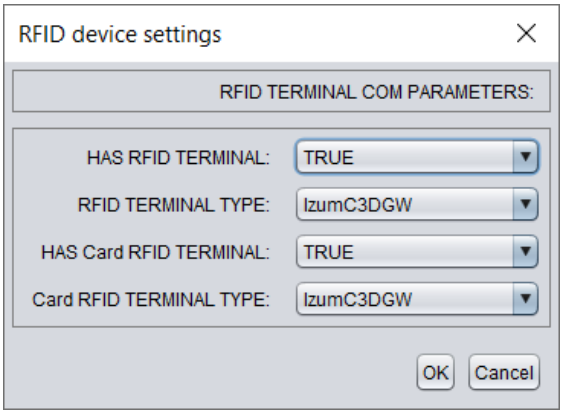


**Figure 27: Window for setting RFID devices - activation**

**NOTE:** Computers or workstations in the library that do not have a specific RFID device connected should have the corresponding device set to *FALSE*. This ensures faster operation of the COBISS3 software.

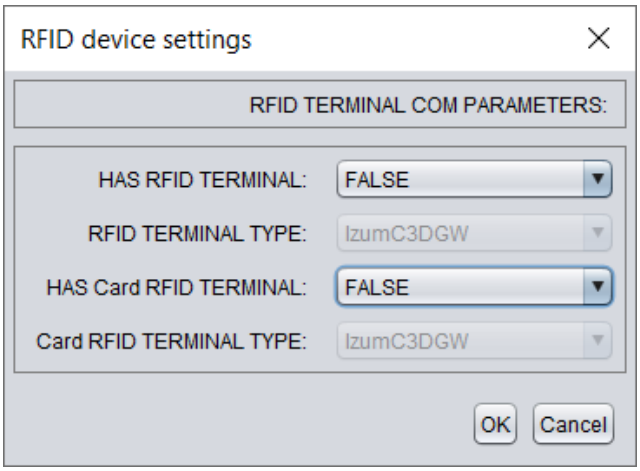


**Figure 28: Window for setting RFID devices - deactivation**

Trained technical personnel can also edit the appropriate setting of RFID devices in the *RFIDTerminalParameters.txt* file located in the *C:\Cobiss3Files* folder. This file with the appropriate settings edited can then be distributed to all workstations that have connected RFID devices. The setting of the RFID device for the material using IZUM's solution is:

RFIDTERMINAL_hasRFIDTerminal#true
RFIDTERMINAL_RFIDTerminalType#9
RFIDTERMINAL_hasCardRFIDTerminal#true
RFIDTERMINAL_CardRFIDTerminalType#1

The values of individual parameters are as follows:

- **RFIDTERMINAL_hasRFIDTerminal**
  - *true* – the device for material is connected to the computer or workstation
  - *false* – the device for material is not connected to the computer or workstation
- **RFIDTERMINAL_RFIDTerminalType**
  - *9* – IzumC3DGW (IZUM's solution)
- **RFIDTERMINAL_hasCardRFIDTerminal**
  - *true* – the device for membership cards is connected to the computer or workstation
  - *false* – the device for membership cards is not connected to the computer or workstation
- **RFIDTERMINAL_CardRFIDTerminalType**
  - *1* – IzumC3DGW (IZUM's solution)

 

# Quick check of the function of the RFID device for the material in COBISS3

Place material with an appropriately written RFID chip on the RFID device. Select the method **System / RFID device / protection status**.

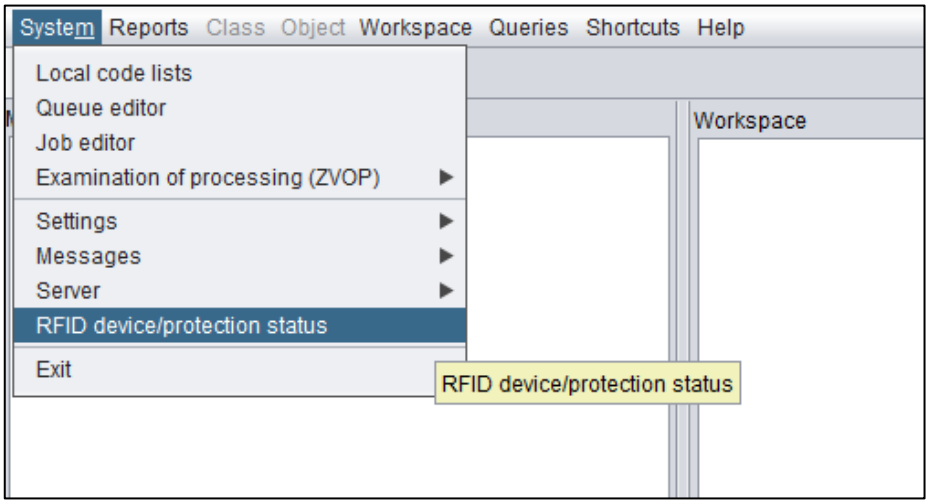


**Figure 29: Method RFID device/protection status**

The **RFID control panel** window opens, in which the status of the RFID device is clearly visible.

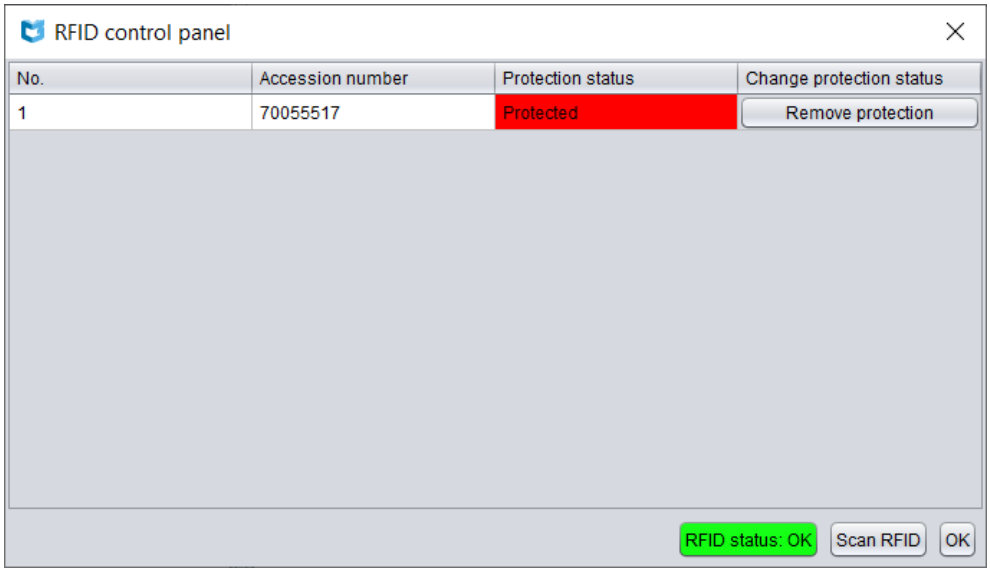


**Figure 30: RFID control panel**

If the RFID device is not properly connected, the message "*RFID device is not available.*" or "*RFID instance does not exist.*" is displayed. In this case, it is necessary to check whether all the necessary settings for the RFID device are arranged and whether the device is connected to the power source or into the network. The reason for the problem may also be that the **Cobiss3JettyService** service must be started on the computer or on the workstation.

**WARNING:** ***After each change of settings for RFID devices, a re-login to COBISS3 is required.***

# 9 Editing settings for tax verification of invoices in the Republic of Slovenia

In the library, you must first:

- ensure that the latest version of the COBISS DGW interface is installed;
- obtain a special certificate for tax verification of invoices (certificate) and a password from the tax administration in the Republic of Slovenia;
- arrange the relevant parameter settings for the tax verification of invoices in the COBISS3 or COBISS Lib application, in cooperation with IZUM.

  This must be arranged at all workstations where it will be possible to verify invoices.

Next, edit the settings in COBISS DGW as follows:

- On the COBISS DGW entry window, click on the **Edit TaxSI** button to go to the settings editing environment.

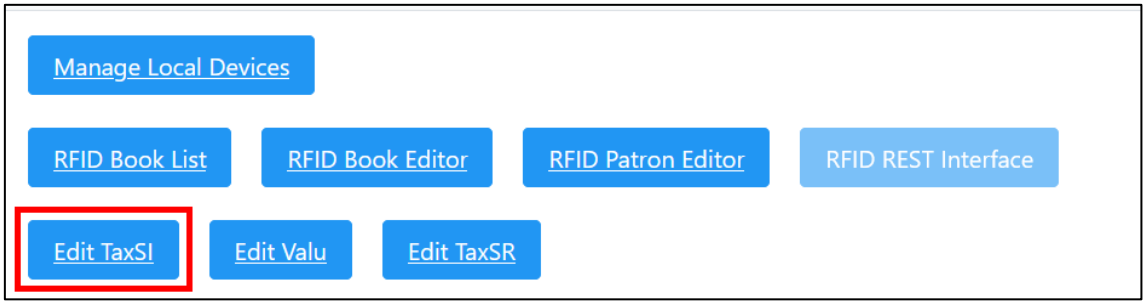


**Figure 31: Selection of options for editing settings for tax verification of invoices in the Republic of Slovenia on the COBISS DGW entry window**

- The **Edit TaxSI** window will open.

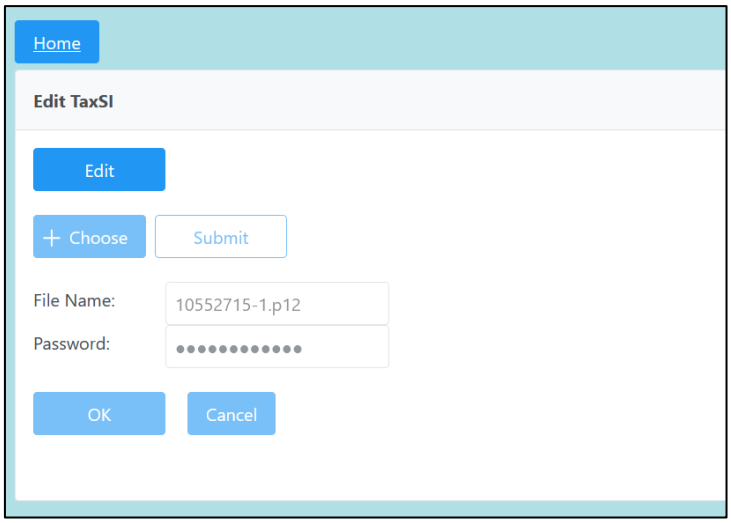


**Figure 32: Editing settings for TaxSI**

 

- To edit the settings, first click on the **Edit** button.
- By clicking on the **+ Choose** button, we upload a certificate for tax verification of invoices.

  You look for the certificate in the *Cobiss3Files* directory in the *cert* folder, where you had to save it previously.

  Select the **Submit** button and, after confirming the selection, enter the name of the certificate in the **File Name** window.
- Enter the password for the certificate in the **Password** window.
- Save the setting by clicking the **OK** button and a message about the appropriate installation of the certificate is displayed.

If the COBISS DGW service cannot access the certificate with the entered password, a corresponding message is displayed.

After editing the settings in the library, someone can check the About FURS feature in the COBISS Lib application by selecting the button ? and the procedure **About FURS**. It is also reasonable to check the issue of an invoice, which can also be cancelled.

# 10 Editing the settings for paying with the VALU mobile wallet

In the library, you must first:

- ensure that the latest version of the COBISS DGW interface is installed (at least version 1.16);
- obtain a certificate and password from the payment service provider with VALU for the implementation of this service;
- save the certificate (file xxxx.p12) on disk C (System) in the *Cobiss3Files* directory in the *valu* folder.

  This must be arranged at all workstations where it will be possible to pay with VALU.

Next, edit the settings in DGW as follows:

- On the COBISS DGW entry window, click on the **Edit Valu** button to go to the environment for editing settings for VALU.

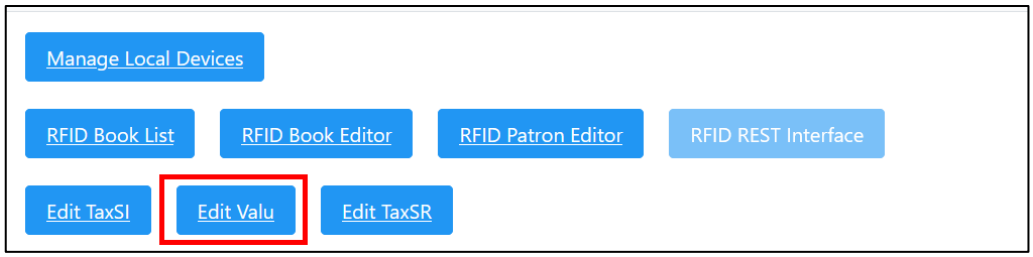


**Figure 33: Selection of options for editing settings for VALU on the COBISS DGW entry window**

- The **Edit Valu** window will open.

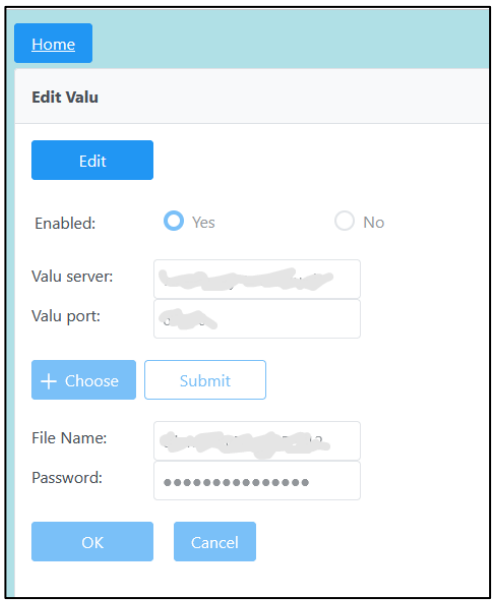


**Figure 34: Editing settings for VALU**

- To edit the settings, first click the **Edit** button.
- For COBISS Lib, enter the data for **Valu server** and **Valu port** and select **Yes**.
- By clicking on the **+ Choose** button, you upload the certificate for paying with VALU.

  Find the certificate in the *Cobiss3Files* directory in the *valu* folder, where you had to save it previously.

  After confirming the selection, enter the name of the certificate in the **File Name** window.
- Enter the password for the certificate in the **Password** window.
- Save the setting by clicking the **Submit** button and then by clicking the **OK** button.

After editing the settings in the library, someone who has the option to pay with VALU can check that the option to pay with VALU is working properly. You can then also cancel this payment.

# 11 Editing settings for tax verification of invoices in the Republic of Serbia

In the library, you must first:

- ensure that the latest version of the COBISS DGW interface is installed;
- to obtain a PIN for a smart card for tax verification of invoices from the tax administration in the Republic of Serbia;

 

- install the local LPFR online service with a reader and smart card;
- arrange the relevant parameter settings for the tax verification of invoices in the COBISS3 application, in cooperation with IZUM.

  This must be arranged at all workstations where it will be possible to verify invoices.

Next, edit the settings in COBISS DGW as follows:

- On the COBISS DGW entry window, click on the **Edit TaxSR** button to go to the settings editing environment.

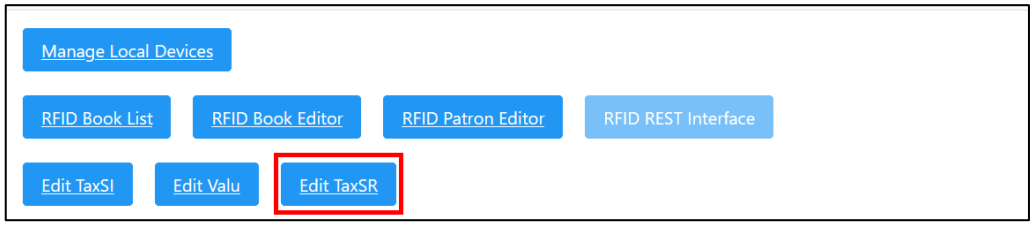


**Figure 35: Selection of options for editing settings for tax verification of invoices in the Republic of Serbia on the COBISS DGW login window**

- The **Edit TaxSR** window will open.

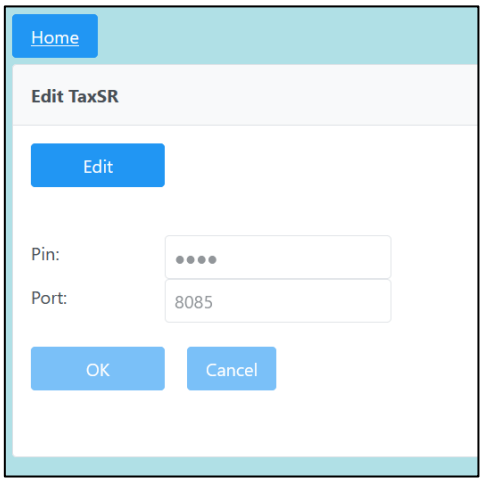


**Figure 36: Editing settings for TaxSR**

- To edit the settings, first click on the **Edit** button.
- Enter the obtained PIN number in the **Pin** window.
- Save the setting by clicking the **OK** button.

After editing the settings in the library, someone can check the About PURS function in the COBISS3 application using the **Help / About PURS** method. It is also reasonable to check the issue of an invoice, which can also be cancelled.