

HAL E-BANK MANUAL

INSTALLATION AND UPGRADE



Hal E-Bank version: 20.X.X.01

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1 BASIC REQUIREMENTS

Preconditions for using Hal E-Bank:

- An appropriate PC with Windows 7 SP1, Windows 8.1 or Windows 10 operating system installed. All Windows operating systems have to be updated with the latest security updates;
- Hal E-Bank software;
- a valid qualified digital certificate issued by Halcom CA and authorized by the bank;
- connection to the bank server (internet access or a dial-up connection);
- bank agreement.

If your digital certificate was issued on a smart card, you will also need a smart card reader (connect it to your computer).

1.1 Personal computer

1.1.1 Hal E-Bank/Personal

1.1.1.1 Hardware requirements

OPERATION SYSTEM	WIN 7 SP1, WIN 8.1 AND WIN 10
COMPONENT	REQUIREMENT
Processor	<i>minimal:</i> 1 GHz <i>recommended:</i> 2GHz 32-bit processor or higher
RAM size	<i>minimal:</i> 1 GB <i>recommended:</i> 2 GB or more
Hard drive space	<i>minimal:</i> 1 GB <i>recommended:</i> 2 GB available hard drive space or more
Screen resolution	<i>minimal:</i> 1024 x 768 pixels
Additional requirements	Internet connection. In case of using a modem connection it is required that the modem supports a connection speed of at least 128 Kbps, recommended 512 Kbps.
	If your digital certificate was issued on a smart card, you will also need a smart card reader (connect it to your computer).

1.1.1.2 Software Requirements

You will need appropriate rights to successfully install all the necessary software, otherwise your system administrator should be present. The following software is needed:

- The program to work with qualified digital certificates - [Nexus Personal](#) (Windows 7 SP1/8.1/10).
- Microsoft Internet Explorer 11.0 or higher.
- Adobe Acrobat Reader or Adobe Acrobat X 10.0 or higher.

1.1.1.3 Parameter requirements

Parameter requirements:

- On the PCs, where Hal E-Bank client or database is installed, time zone must be set to GMT+1.
- Slovenian regional settings have to be installed on all work stations (these settings don't need to be selected as default).

In order to connect with the bank server through the firewall, you will need to have an open port for data transfer and updating of the program. IP addresses and required port numbers are listed in the program, which is located at the following link:

http://www.halcom.si/halcom_exp/UserFiles/File/checkEbankConn.exe

- Application does not use HTTP proxy servers, as the basic protocol for data transmission protocol is not HTTP.

The application can be linked directly to the HTTPS server, but not through a proxy server. So far we have received very few requests for implementation of SSL Tunnelling or SSL proxy support. From a safety point of view it is the same, whether a company allows access to a URL via SSL proxy or permits the opening of the external links to the exact defined server and TCP port.

The only proxy servers supported by our client are so-called "port forwarding" or "traffic redirection" proxy servers, where all the traffic, which is sent on TCP port of the proxy server, is forwarded to the target e-banking server and remains unchanged.

1.1.2 Multi-user version - Hal E-Bank/Corporate

Hal E-Bank/Corporate is intended for organizations where several persons are responsible and authorized for working with electronic bank and perform payment operations on many computers that are connected to the local area network.

Hal E-Bank/Corporate program works on the client-server principle and requires a shared database, which is usually installed on a server. The database server IBM DB2 has to be installed on the server. On the workstations, where Hal E-Bank Corporate clients are installed, there has to be IBM DB2 Client Application installed and the software has to be properly configured. To perform installation on the server full control administrator rights are necessary.

Additional requirements have to be fulfilled when using Hal E-Bank /Corporate. Workstations have to meet all the requirements stated in Hal E-Bank/Personal section as well!

1.1.2.2 Workstation requirements

- A workstation must be connected to the local area network via TCP/IP protocol.
- At least 100 MB additional hard disk space is required.
- If you are using dial-up access for connecting to the Hal E-Bank server, then at least one computer running Hal E-Bank client should have a modem installed. In the event that dial-up access is used, then it is possible to exchange data with the bank only on computers on which modems are installed. In case that the modem is installed on only one computer, all data exchange with the bank takes place via that computer.

1.1.2.3 Hardware and software requirements for server

IBM DB2 database OS requirements:

- **IBM DB2 ver. 11.1**
 - ◇ Windows 7 SP1 (Enterprise, Professional, Ultimate)
 - ◇ Windows 8.1 (Enterprise, Professional, Standard)
 - ◇ Windows 10 (Enterprise, Professional)
 - ◇ Windows Server 2012 (Datacenter, Essentials, Standard)
 - ◇ Windows Server 2012 R2 (Datacenter, Essentials, Standard)
 - ◇ Windows Server 2016 (Datacenter, Essentials, Standard)

The requirements for the operating system for workstations are the same as for the server.

- TCP/IP protocol support.
- Hard drive space required for normal operation of IBM DB2 database is at least 2 GB. Greater amount of hard drive space is required with more frequent use and greater size of the database. An approximate amount can be calculated using the following formula: 5000 transactions = 20 MB hard drive space + received files size.
- Required RAM size:
 - **Windows 7 SP1 / Windows 8.1 / Windows 10** at least 1 GB and 4 MB for each additional user (recommended 1.5 GB)
 - **Windows Server 2012 / 2016** at least 1,5 GB and 4 MB for each additional user (recommended 2 GB)
- RAM usage depends on other applications running on the server as well. **The server must have enough RAM to manage normal operations without swapping memory.**
- Slovenian regional settings must be set as default, at least during the installation process (»Regional Settings - Slovenian«, »Set as system default local«).
- IBM DB2 database installation.

In order to facilitate the installation on the server before the arrival of our technician the following is needed:

- Creation of a folder named »EbankFiles«.
- For all future users of multi-user version of the Corporate E-Bank is required to set access to that folder (security, share, users should have the right to change folders, subfolders and files).

Client accesses the server through TCP / IP port 50000, which means that the port must be opened in any firewall or router, which is located between the client and the server location.

1.2 Smart card readers

You will need a smart card reader to work with Hal E-Bank if the qualified digital certificate was issued to you on a smart card.

A smart card reader can be ordered from the smart card suppliers (including Halcom d.d.), smart card readers are also offered by some banks. A smart reader that is already installed on your computer can also be used.

Readers differ among themselves primarily by the interface for connecting them to the computer. Therefore, before purchase check the communication port on your computer (see chapter **1.1.1 - Hal E-Bank/Personal**). For newer desktop computers we recommend readers with a USB interface, while for laptop computers readers with a PCMCIA interface are recommended.

We recommend that you check the compatibility of a reader with your operating system prior to purchase.

1.3 Connection with Hal E-Bank server

You can connect to the Hal E-Bank server via the Internet or via a dial-up line. The type of connection is determined by the bank, which should provide you with all required information (user name and password for dial-up connection, numbers for communication ports which should be open on fire-walls, etc.).

Any type of the Internet access is sufficient (analog or ISDN connection, LAN, ADSL, cable connection, leased line ...). Internet connection must operate flawlessly.

Your bank will provide you with the parameters settings. A service program, ConnectionSettings.exe, can be used for entering the correct settings chapter 5 - Connection settings.

For a direct connection to the bank's server (via a dial-up line), you need an adequate modem (analog, ISDN) and drivers, and a properly configured dial-up connection. The procedure for creating a new dial-up connection depending on the operating system you are using is described in chapters [5](#) and [6](#).

1.4 Hal E-Bank software

The bank will provide you with information related to obtaining the required Hal E-Bank software. You will receive all information necessary on how to connect to the Hal E-Bank server.

The Hal E-Bank solutions enable you to do business with multiple banks. If you have the **Hal E-Bank program already installed and you are using it**, you can add the additional account of another bank to the existing program installation.

If the installation of Hal E-Bank is out of date, you can upgrade the program (chapter 4 - Upgrading older Hal E-Bank version TO THE LATEST VERSION).

1.5 Contract with bank

In the first place, you make a business contract with the bank on operations via Hal E-Bank solutions. You will obtain all the required information from the bank, while you can find all current information on the Hal E-Bank electronic bank on the web site of [Halcom d.d.](http://wwweng.halcom.si/index.php?section=1) (<http://wwweng.halcom.si/index.php?section=1>).

1.6 Qualified digital certificate

ONE FOR ALL qualified digital certificates ensure a high level of security and confidentiality of payment transactions. They offer the highest level of electronic business protection currently available on the market.

You can use **ONE FOR ALL** qualified digital certificates for doing business with all banks using Hal E-Bank solutions. Banks offer Hal E-Bank solutions under different brand names: Abacom, E-Bank, Hal E-Bank, HYPOnet, Multi SKB Net, Net.StikPRO, NLB Proklik, PROSLPETPlus, RB-online and BKS Bank Net. **ONE FOR ALL** qualified digital certificates are issued by Halcom's certificate agency, Halcom CA. More information about the agency is available on the [Halcom CA Certificate Agency](http://wwweng.halcom-ca.si/index.php?section=1) website (<http://wwweng.halcom-ca.si/index.php?section=1>).

You can also order the qualified digital certificate from your bank. If you receive a qualified digital certificate which is not **ONE FOR ALL**, it means that this certificate is valid only for this particular bank and its solutions.

ONE FOR ALL qualified digital certificates make business easier, since you can use one qualified digital certificate for multiple accounts and multiple banks. People who have **ONE FOR ALL** qualified digital certificates can manage the liquidity of their portfolio at their individual banks. At the same time, the sum of all accounts together in a selected currency can be shown, which makes business more transparent.

ONE FOR ALL qualified digital certificates can also be used for other types of e-business or for other applications requiring a high level of security and data protection:

- Digital signing of documents, electronic forms, files, etc.
- Verifying the sender's identity,
- Secure business with public administration within e-applications,
- Applications for secure business between legal entities.

You will receive the **ONE FOR ALL** qualified digital certificate by mail, while the next day you will receive your personal identification number (PIN) along with the number for unlocking the security card (PUK). Do not keep these security codes together with the qualified digital certificate. We recommend that you save the codes in a safe place. Do not give out the qualified digital certificate or security codes to other persons.

PIN

In line with the public rules by the Halcom CA certificate authority, we recommend that after the first log-in and later on at least once a month you change your personal identification number (PIN). You should also change your PIN if you suspect that an unauthorized person has become acquainted with it. The personal identification number can be changed by using the corresponding function of the Hal E-Bank program (chapter [Changing the digital certificate personal identification number \(PIN\)](#)). The PIN should be no shorter than six and no longer than eight alphanumeric characters.

PUK

The qualified digital certificate will automatically lock after entering the wrong personal identification number (PIN) three times in a row. By using the personal unlocking key (PUK), you can unlock your qualified digital certificate. Incorrectly entering the PUK code three times in a

row will permanently destroy the smart card.

1.6.1 Unlocking a locked qualified digital certificate

Qualified digital certificate is locked after three consecutive entries of wrong personal identification number (PIN). The locked qualified digital certificate cannot be used, so it has to be unlocked.

For unlocking ONE FOR ALL digital certificates, issued by Halcom CA, you will need a program for unlocking the card. It can be found on Halcom CA CD, which you received together with the qualified digital certificate. The program can also be found online at web page

<http://www.halcom.si/en/support/?action=showEntry&data=337>.

Users of **Nexus Personal** are advised to unlock a locked digital certificate directly from the **Nexus Personal**, using function **Unblock**. Open the program from **Start → All programs → Personal → Personal**. Enter menu **File → PIN management**. Click **Next**. Select the second option **Unblock PIN**. Enter PUK code in field **PUK** (PUK code was delivered together with the digital certificate). Enter a new PIN code in bottom fields.

1.6.2 Renewal of ONE FOR ALL qualified digital certificates

ONE FOR ALL qualified digital certificates, whose 3-year validity will expire soon, can be renewed on the existing media (smart card or USB flash drive). A simple renewing procedure is available for all ONE FOR ALL qualified digital certificates. The qualified digital certificates are renewed for a period of three years.

The renewal procedure is carried out without any additional paper work and without visiting bank's branch. Please, make sure that you conduct the renewal process **with a still valid ONE FOR ALL digital certificates**.

The procedure to renew the validity of qualified digital certificate is the following:

- 30 days prior to expiration of a qualified digital certificate you will receive a notification on its validity expiration.
- Order the renewal of your qualified digital certificate in three simple steps at [Renewal of digital certificate](http://renewal.halcom.si) (<http://renewal.halcom.si>).
- You will receive a pro forma invoice for the renewal to the address stated in this application.
- Upon receiving a payment confirmation, Halcom CA will send you further instructions for the renewal process.

2 SMART CARD READER INSTALLATION

You will need a smart card reader to work with Hal E-Bank only if **ONE FOR ALL** qualified digital certificate was issued for you on a smart card.

If a card reader is already installed and works properly, it should not be installed again

For using or reading a qualified digital certificate, the adequate software should be installed on a computer. For **ONE FOR ALL** qualified digital certificates, you can use the following software Nexus Personal.

3 HAL E-BANK SOFTWARE INSTALLATION

Prior to the installation, it is recommended to check the following:

- Make sure that the basic requirements for hardware configuration are met. Usually, it is a free space on a hard disk drive that is critical. The Hal E-Bank program usually requires approximately 200 MB, which depends on the number of entries you want to keep in the files.
- Make sure that the Windows operating system version, you are using, works flawlessly. Eliminate all potential errors, before installing the Hal E-Bank software.

Only the Windows operating systems, supported by the manufacturer, are supported to work with Hal E-Bank.

3.1 Hal E-Bank/Personal

The installation of a single-user version of the Hal E-Bank program is a simple procedure, which does not require substantial computer knowledge.

In a dialog box, select **Type of installation**. Smart card reader drivers are offered by their distributors.

Confirm a selection. Specify the directory, to which you want to install the software. Restart the computer, if prompted.

3.2 Hal E-Bank/Corporate

The network version of Hal E-Bank software contains all the functions of the non-network Hal E-Bank/Personal version, but it also offers additional multi-user functionalities. The network version of Hal E-Bank is based on the common database. Many users with different authorization levels can be connected to the network version of Hal E-Bank program within a company at the same time.

The multi-user Hal E-Bank/Corporate version functions on a client/server basis and therefore needs a common database, usually installed on a special, better performance computer, which acts as a server. The database server software IBM DB2 UDB Universal Database Express Edition must be installed on this computer, while IBM DB2 client and Hal E-Bank software have to be installed on all work stations - clients. All software and connections have to be adequately configured and this has to be performed by a qualified person.

4 UPGRADING OLDER HAL E-BANK VERSION TO THE LATEST VERSION

When necessary, the Hal E-Bank software can be upgraded. The data in the program will be saved. The bank will inform you about the available upgrades.

4.1 Upgrading Hal E-Bank/Personal from Hal E-Bank installation CD

Run `Setup.exe` file from the installation CD on a work station with functioning Hal E-Bank system. For **Type of installation**, select **Upgrade**. Specify a directory, where the older program version is installed.

4.2 Upgrading Hal E-Bank/Corporate from Hal E-Bank installation CD

The same version of the Hal E-Bank/Corporate program must be installed on all work stations. During the upgrade, all users of Hal E-Bank/Corporate should be logged-off the program. The upgrade should be carried out on each client separately

Run the `Setup.exe` file from the installation CD, on a work station with functioning Hal E-Bank/Corporate program.

- At the first work station, where you are upgrading Hal E-Bank/Corporate, select **Custom installation**. Install the **Program Files** and **E-Forms** components. Specify a directory, in which the older version of the program is installed. Start the new version of Hal E-Bank/Corporate program.
- At other work stations, select **Custom installation**, but install only **Program Files**.

During the upgrade to the latest version the program will perhaps warn you that the database should also be upgraded. Database upgrade should be performed by a qualified person.

4.3 Upgrading Hal E-Bank/Personal or Hal E-Bank/Corporate through bank server*

*Software upgrading through bank server is not supported by all banks.

If you haven't received the installation CD with a new version of the program, try to update the program with bank server. Within Hal E-Bank program, enter the menu **Tools, Program upgrade** or click the **Program upgrade** icon shown in the figure below.

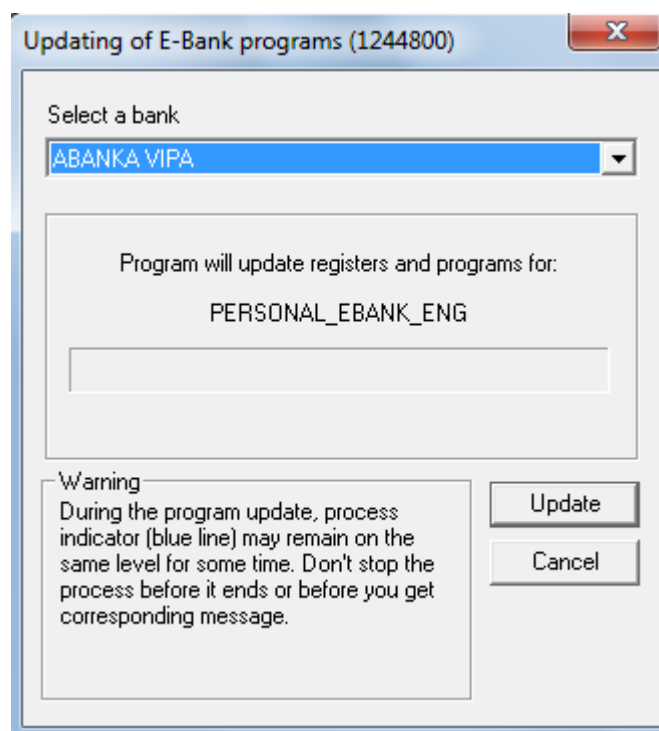
Upgrading your Hal E-Bank will stop your work with the program. Multi-user version of program Hal E-Bank (Hal E-Bank/Corporate) needs to be upgraded on all user computers separately. We suggest, that other users are logged out during upgrading.

Hal E-Bank upgrading procedure:

- From the **Tools** menu choose **Program upgrade** or choose **Program upgrade** from the toolbar.



- The program warns you that upgrading program stops work with Hal E-Bank. Confirm by clicking **YES**. Program Hal E-Bank closes.
- A dialog window appears for upgrading the program (picture 1). Choose the bank you're doing business with. Start the upgrading by clicking **Upgrade**, if you do not want to upgrade your program click **Cancel**.



Picture 1

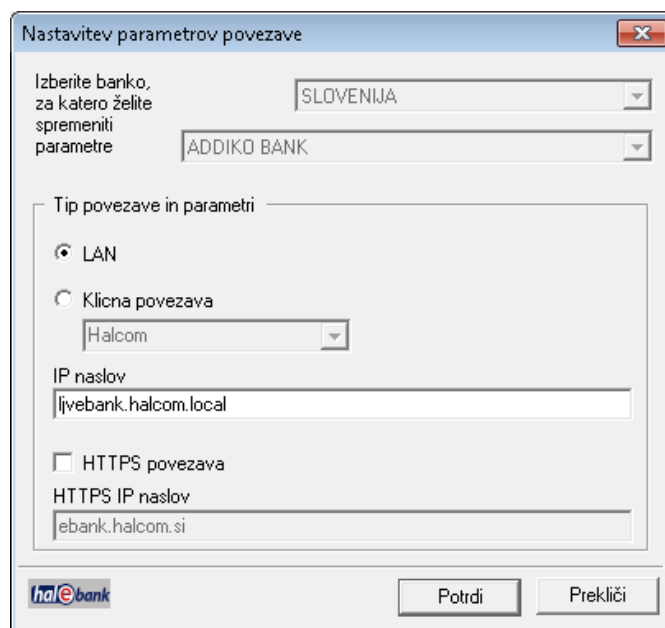
4. Program connects to bank server and transfers the latest version of coders and Hal E-Bank client. The time of the transfer depends on the speed of the computer and the quality of internet connection.

If you already have the latest version installed on your computer, the program notifies you that the upgrade is not necessary.

5 CONNECTION SETTINGS

In order to set parameters of connection with the bank's server, use service program **ConnectionSettings.exe**. The program is located in installation folder of Hal E-Bank program. You can access the program also from Hal E-Bank. Enter the menu **Communication, Connection settings**.

With **ConnectionSettings.exe** program, you can specify for each bank separately a type of connection, an IP address, a name of dial-up connection (if you are using one). In case of HTTPS connection, you can specify also an HTTPS IP address.

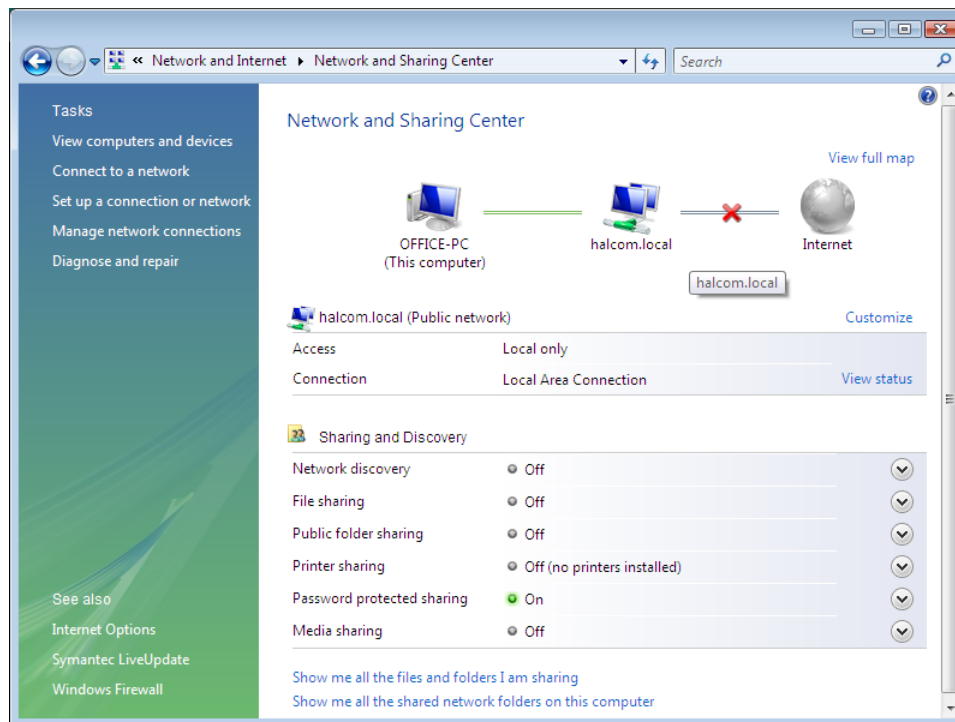


From a drop-down menu, select your bank. When necessary, change the settings and confirm the entry by clicking **OK**. If you accessed the program **ConnectionSettings.exe** directly from Hal E-Bank, close the Hal E-Bank program after changing settings parameters and restart it.

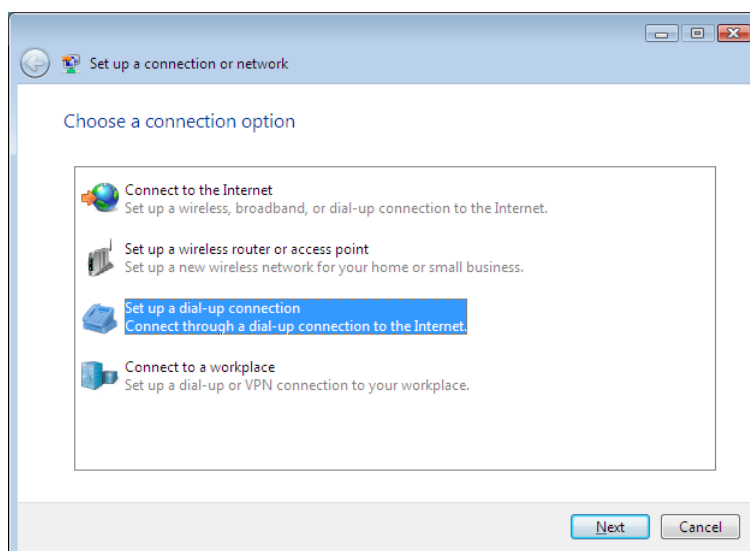
The connection with the bank's server will be successful only if connection parameters are correctly defined. Correct settings should be entered even before the first start of a client. Your bank will provide you with detailed information on settings.

6 CREATING A NEW DIAL-UP CONNECTION

Enter Start → Control Panel → Network and Sharing Center.

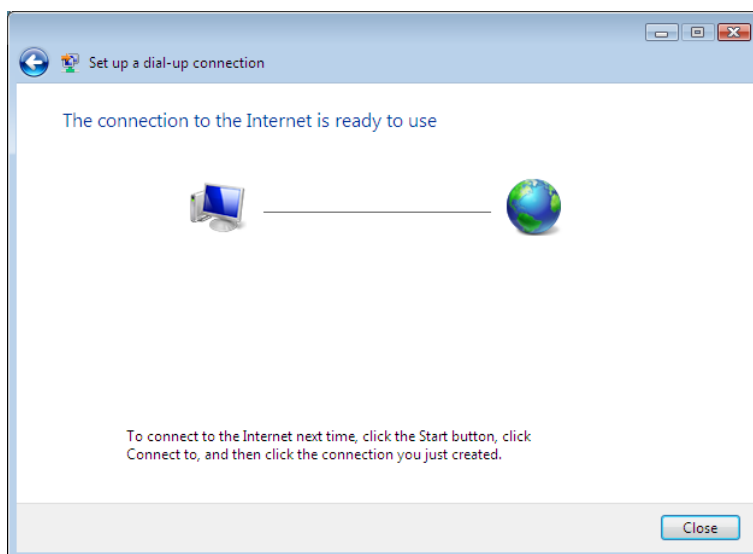


Select **Setup a connection or network**. Type of connection is selected in the next window. Select **Set up a dial-up connection**. Click **Next>**.

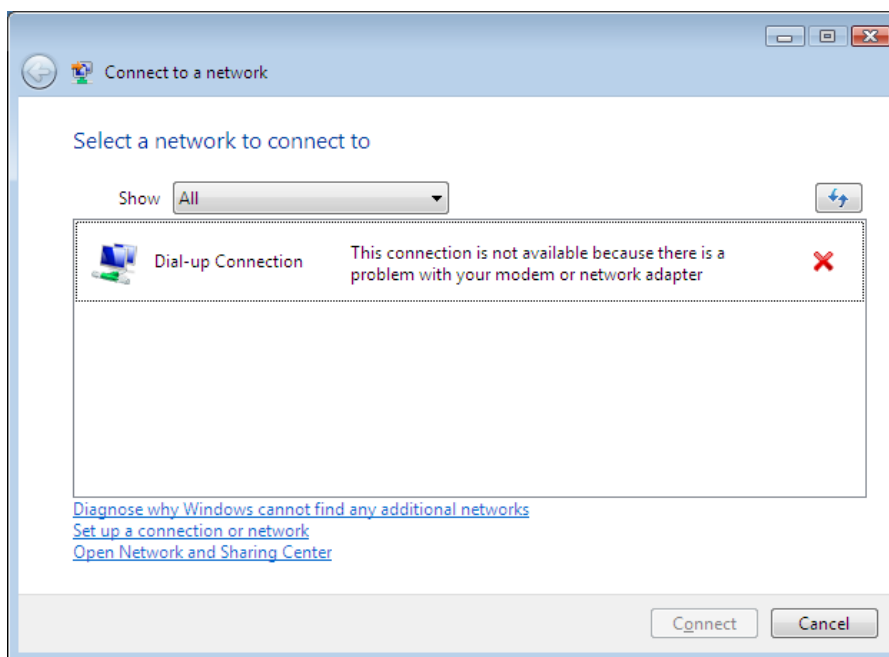


Phone number to dial, username and password for dial up connection are entered in the next window. Username and password for dial-up connection are provided by the bank.

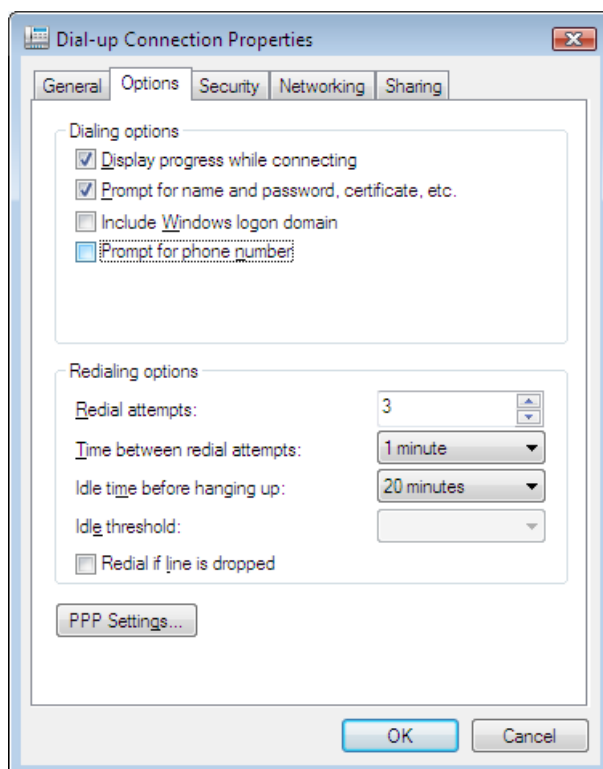
Setup of the new dial-up connection is completed by clicking **Create**. Successful setup is confirmed. Close the confirmation by clicking **Close**.



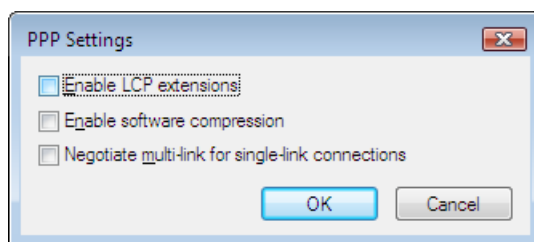
In **Network and Sharing Center** select **Connect to a network**. A list of available network connections is displayed



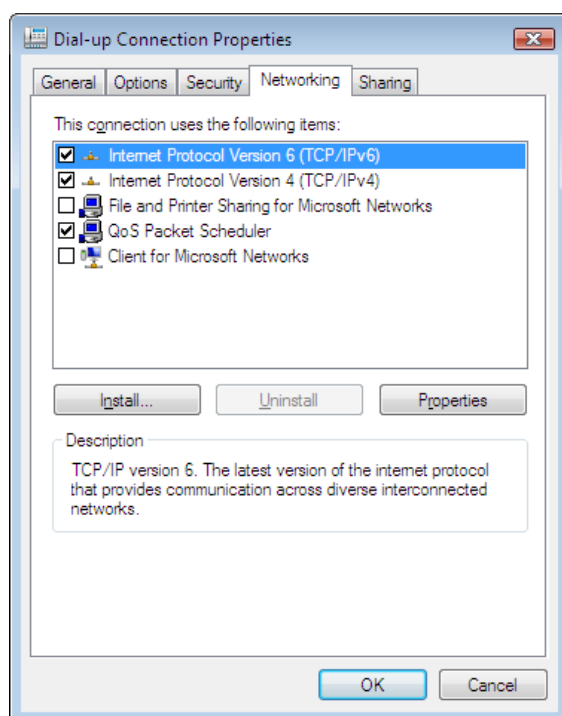
Right-click the new dial-up connection. Select **Properties**. Click **Options**.



Click **PPP Settings**. Unmark all options in **PPP Settings** window. Confirm by clicking **OK**.



Select tab **Networking**.



Click **Properties**. Select option **Obtain DNS server address automatically**. Confirm by clicking **OK**.

