

User's Manual for NCALayer Software Installation



НАЦИОНАЛЬНЫЙ УДОСТОВЕРЯЮЩИЙ ЦЕНТР
РЕСПУБЛИКИ КАЗАХСТАН



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Definitions and Abbreviations

RK NCA	the National Certification Authority of the Republic of Kazakhstan servicing the participants of the "electronic government", state and not state information systems
RK RCA	the Root Certification Authority of the Republic of Kazakhstan proving the ownership and validity of digital signature open keys of the certification authorities.
EDS	Electronic Digital Signature is a set of electronic digital symbols created by means of an electronic digital signature and proofing the authenticity of an electronic document, its ownership and content invariability.
Registration Certificate (Certificate)	A paper document or an electronic document issued by the RK NCA to prove that an electronic digital signature meets the requirements set by the laws and regulations of the Republic of Kazakhstan
Security Token	A device for safe data storage for which data ciphering is performed directly during data recording on a drive using a specialized controller. A user has to indicate a personal password for data access.
OS	Operating system is a complex of interconnected software programs intended for computer resources control and coordination with a user
PC	Personal Computer

1. Preparation of a User's Personal Computer

For NCALayer prepare your PC additionally as follows. The PC configuration shall meet the minimum requirements.

1.1 Minimum Requirements to a User's Computer

- Browser: Internet Explorer 8, Firefox 3+, Opera 10+, Google Chrome, Safari;
- Pre-installed version of Java Oracle 1.7+;
- Operating system: Windows XP/7/8/10, Linux, OS X 10.

2. Installation/Launch of NCALayer in Windows OS

2.1 NCALayer Installation

Run NCALayer.exe. Install NCALayer following the installation instructions.

The program will automatically detect Java presence/performance on your PC. If this program is not available or does not work correctly, the program will automatically download and install Java software from Oracle Java official website.

Check the box for NCALayer automatic launch while starting the OS.

Important! The program will automatically detect Java presence/performance on your PC (Fig. 1).

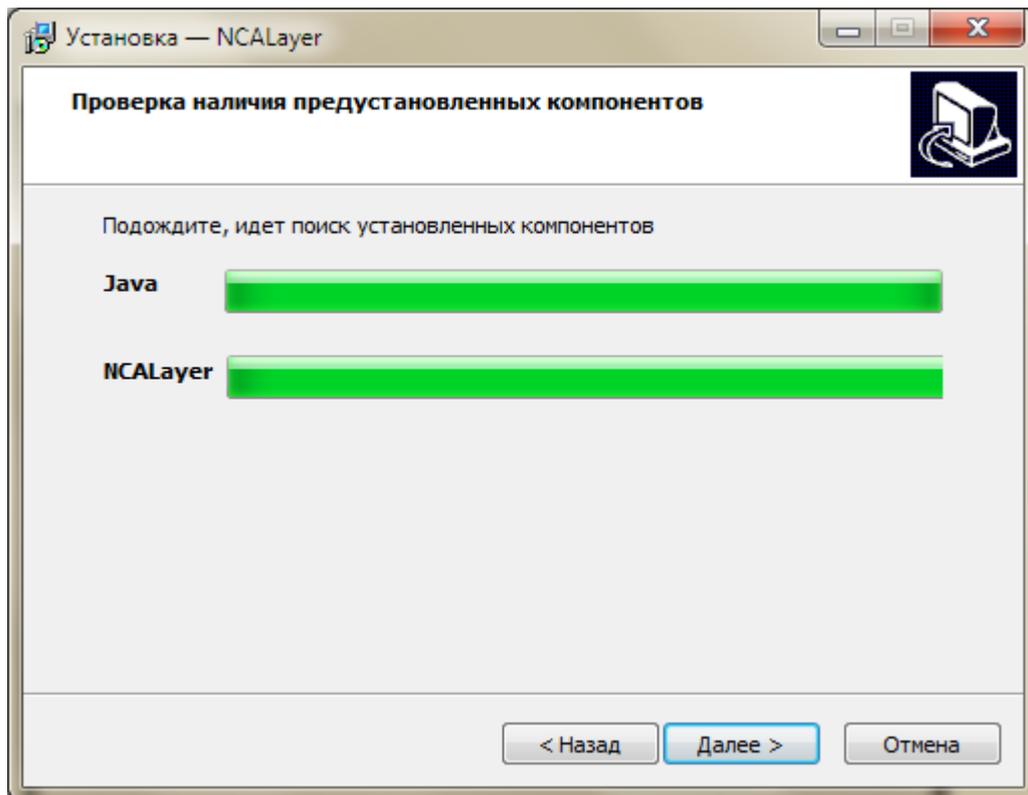


Fig. 1

If this program is not available or does not work correctly, the program will automatically download and install Java software from Oracle Java official website (Fig. 2).

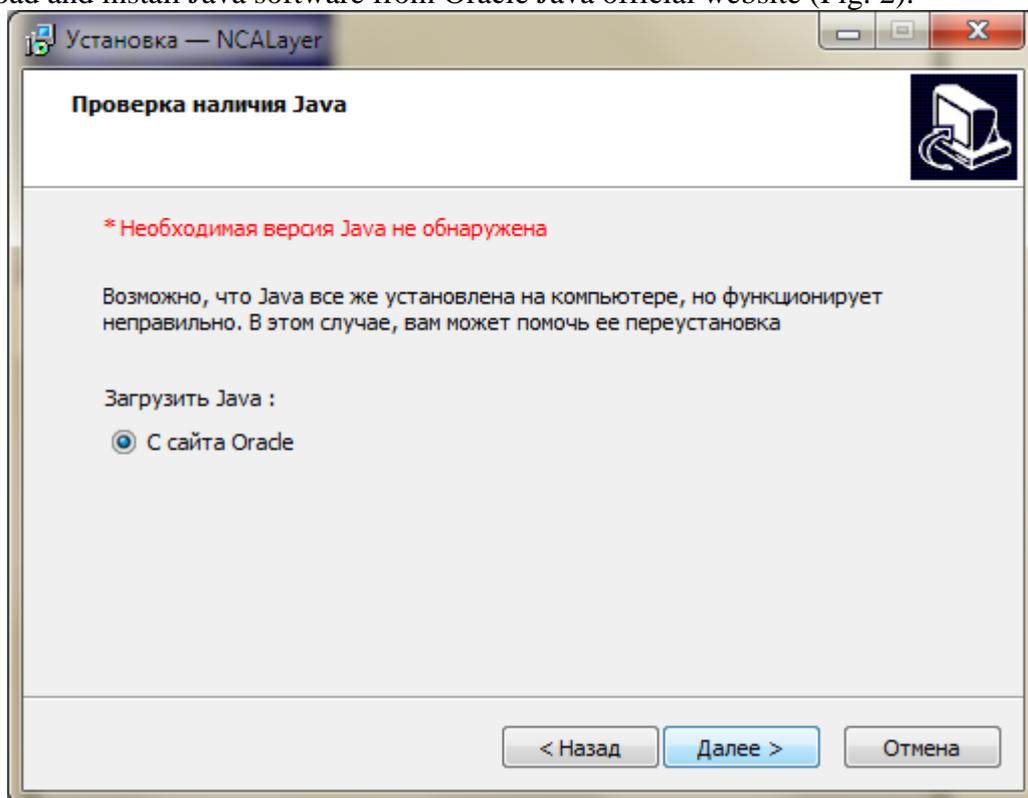


Fig. 2

When installing Java, enter proxy server settings in the resulting window if you use proxy server for this connection. If these settings are not used, or you do not know about them, leave this window without any changes and continue installation by clicking "Next" (Fig. 3).

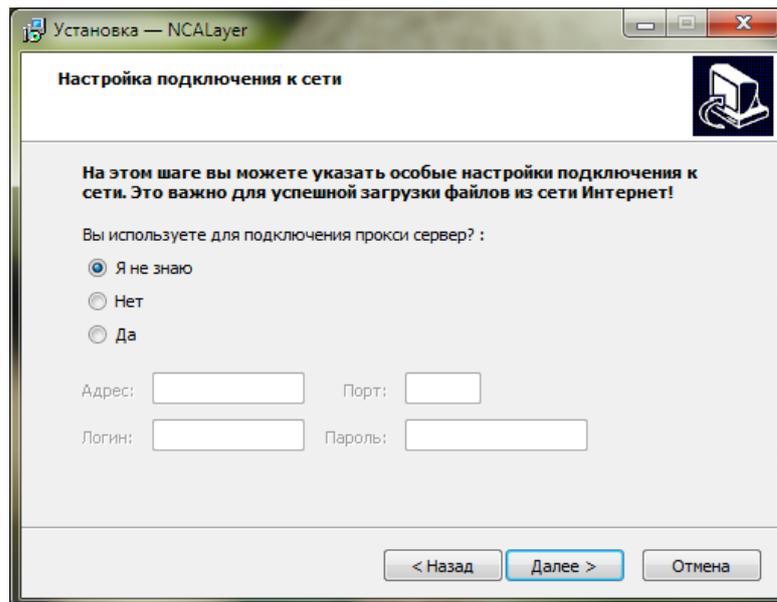


Fig. 3

Check the box for automatic program launch while starting the OS.
Continue installation until you see the message about successful program installation.

NCALayer program installation has been completed.

When NCALayer installation is complete, the browser window will be opened automatically as a default with the recommendations to use registration certificates.

Important! In case you use Mozilla Firefox, in the resulting window you must install RK NCA root registration certificate by following the link and checking "Trust during web-sites identification" (Fig. 4).

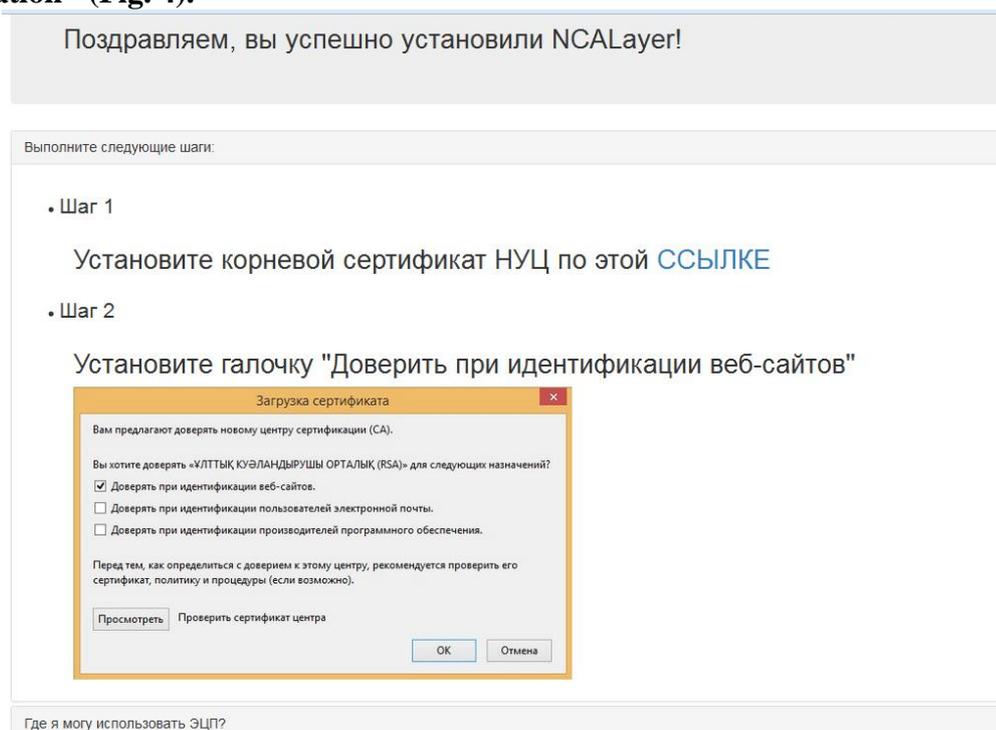


Fig. 4

2.2 Installation of root registration certificates

Right after NCALayer installation is complete, the program will install RK NCA root registration certificates needed for work in the operating system Certificate store. The window with a request for the RK NCA root registration certificate installation will appear twice. You need to accept RK NCA root registration certificate installation request.

Important! The program will be automatically minimized to the system tray. The program cannot be closed while you are using signature functions.

Installation of the root registration certificates has been completed.

Mozilla Firefox

Important! In case you use Mozilla Firefox, after NCALayer installation, in the resulting window you must install root registration certificate by following the link and then checking "Trust during web-sites identification".

In case the option of the RK NCA root registration certificate was passed during NCALayer installation, make the installation through Mozilla Firefox. To do this, open main page pki.gov.kz and click on pki_rsa (Fig. 5).

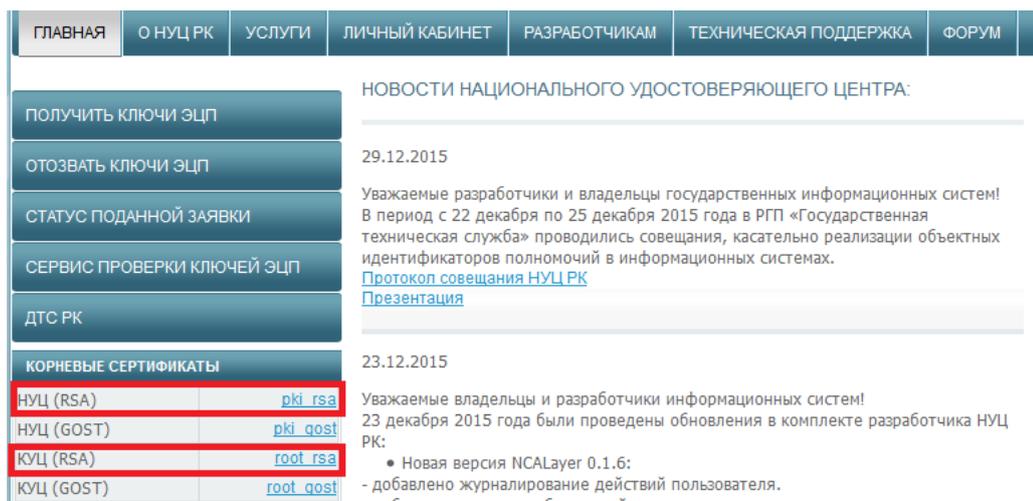


Fig. 5

In the resulting window check "Trust during web-sites identification" and click "OK" (Fig. 6). Installation of the RK NCA root registration certificate (RSA) has been completed.

Repeat installation procedure for the RK RCA root registration certificate (RSA). Restart your browser.

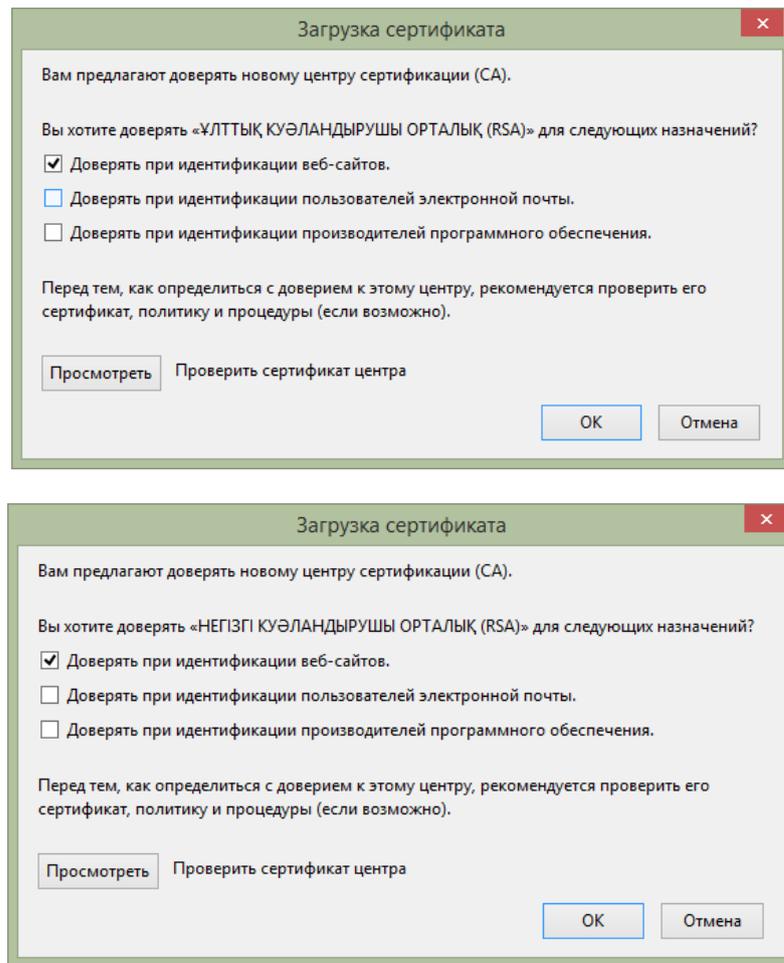


Fig. 6
Installation of the root registration certificates has been completed.

3. Installation/Launch of NCALayer in OC Linux and MacOS X

3.1 NCALayer Installation

For Linux and MacOS X operating systems, extract NCALayer.zip archive into any desired place. There are two root registration certificates, root_rsa.cer and pki_rsa.cer in the "cert" folder of the extracted archive; it is necessary to install them into a trusted root certificates repository of your browser. Depending on your browser the installation of root registration certificates will vary.

Google Chrome, Opera

In the browser settings click "Show Additional Settings" and click "Set Certificates" in HTTPS/SSL section. In the "Certification Centers" tab click "Import...". In a resulting menu choose "root_rsa.cer" root registration certificate and continue the installation. In the resulting window check "Trust during web-sites identification" and click "OK" (Fig. 7). Do the same with pki_rsa.cer. Restart your browser.

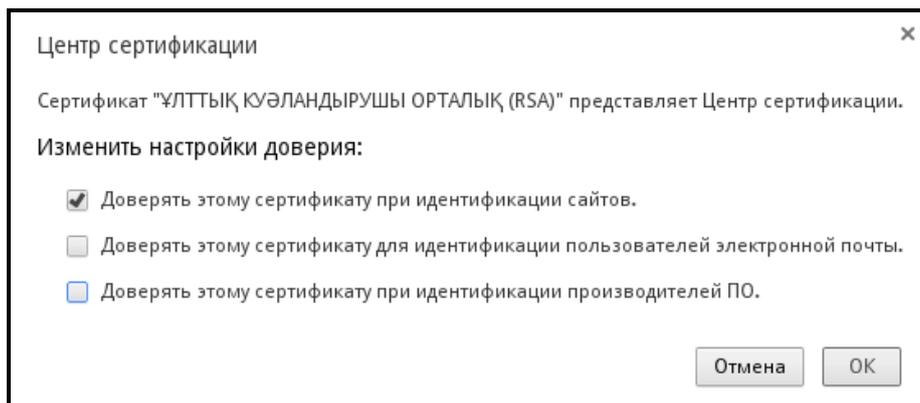
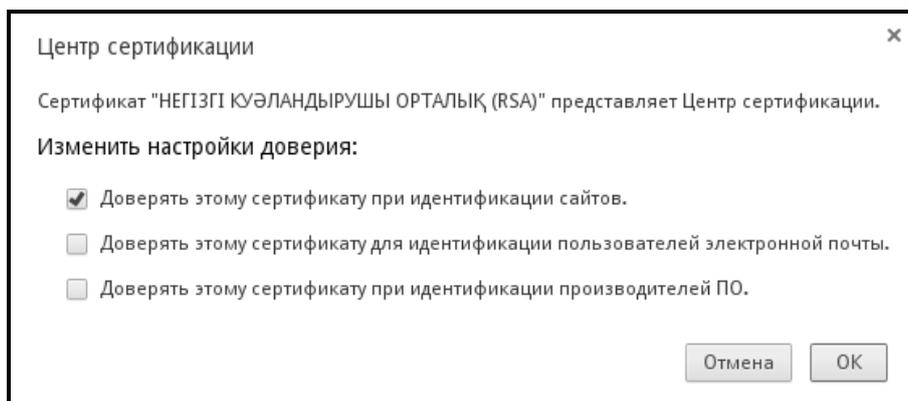


Fig. 7

Installation of the root registration certificates has been completed.

Mozilla Firefox

Install RK NCA root registration certificates in Mozilla Firefox store. To do this, open main page pki.gov.kz and click on `pki_rsa` (Fig. 8).

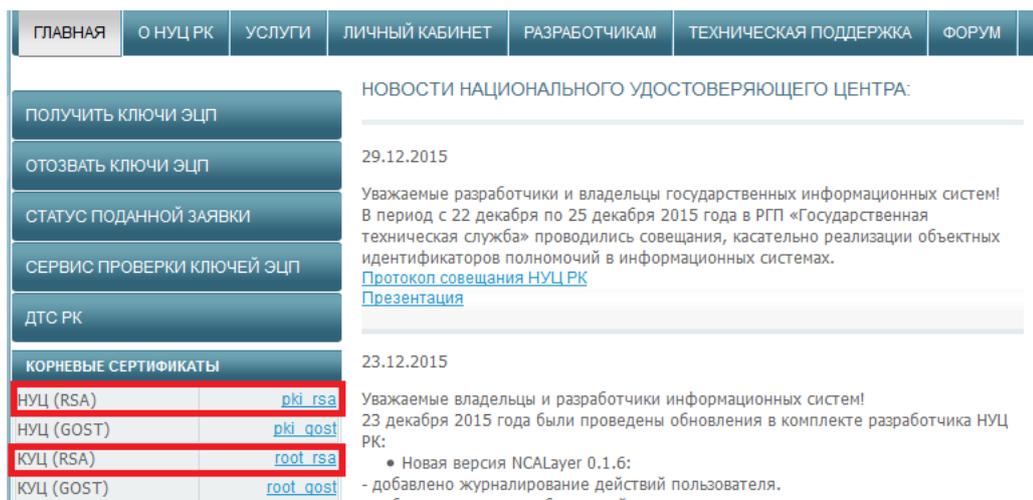


Fig. 8

In the resulting window check "Trust during web-sites identification" and click "OK" (Fig. 9). Installation of the RK NCA root registration certificate (RSA) has been completed.

Repeat installation procedure for the RK RCA root registration certificate (RSA). Restart your browser.

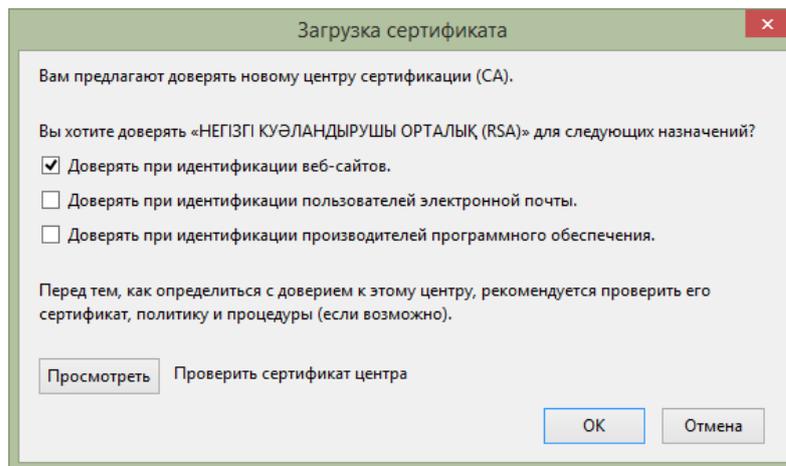
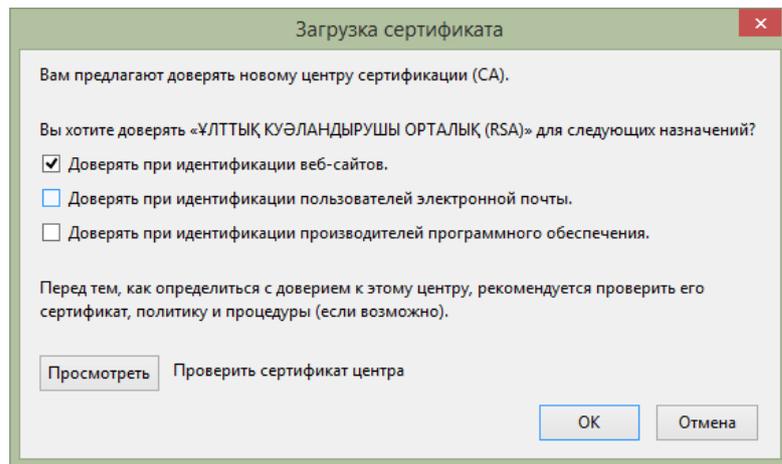


Fig. 9

Installation of the root registration certificates has been completed.

Safari

To install the RK RCA registration certificate run the standard "Keychain Access" application (Fig. 10).



Fig. 10

In the File menu choose "Import Object"s; in the resulting window choose the root_rsa registration certificate of the RK NCA from the cert folder of the NCALayer.zip archive. Choose "Properties" menu of the registration certificate installed (Fig. 11).

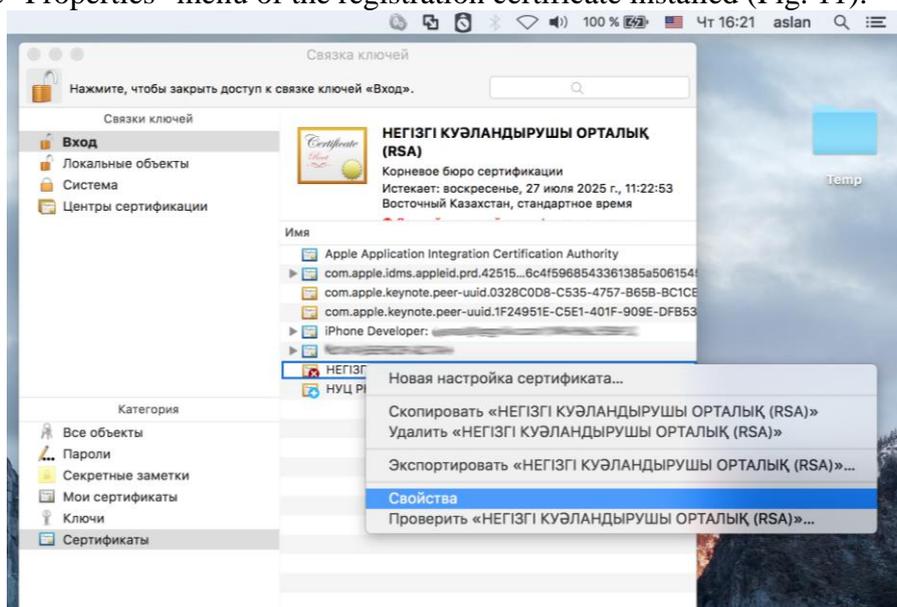


Fig. 11

In the resulting "Properties" window of the registration certificate find the "Standard algorithm X.509" parameter and check "Always trust" (Fig. 12).

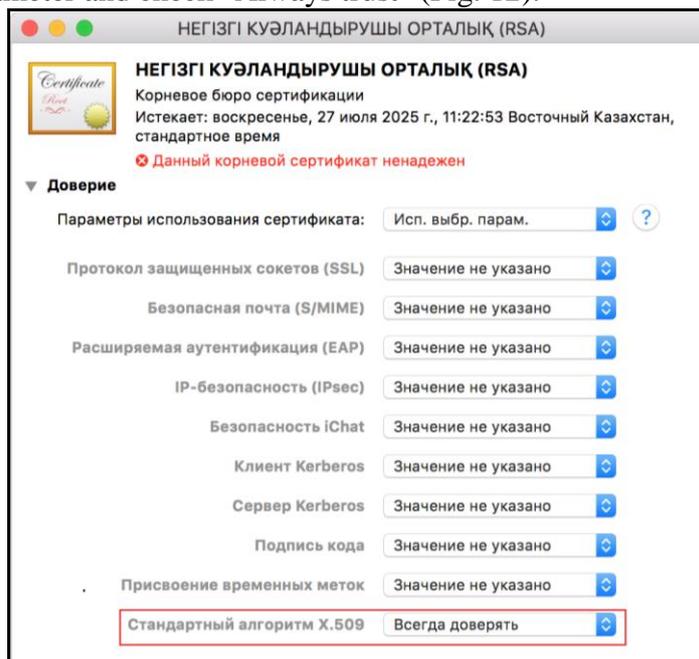


Fig. 12

When you see a login/ password request, indicate the data of your OS user's account.

Then install the RK NCA root registration certificate. Run the standard "Keychain Access" application (Fig. 10).

In the "File" menu select "Import objects"; in the resulting window choose the RK NCA registration certificate (pki_rsa) from the cert folder included into the NCALayer.zip archive.

In the resulting "Properties" window of the registration certificate find the "Standard algorithm X.509" parameter and check "Always trust" (Fig. 13).

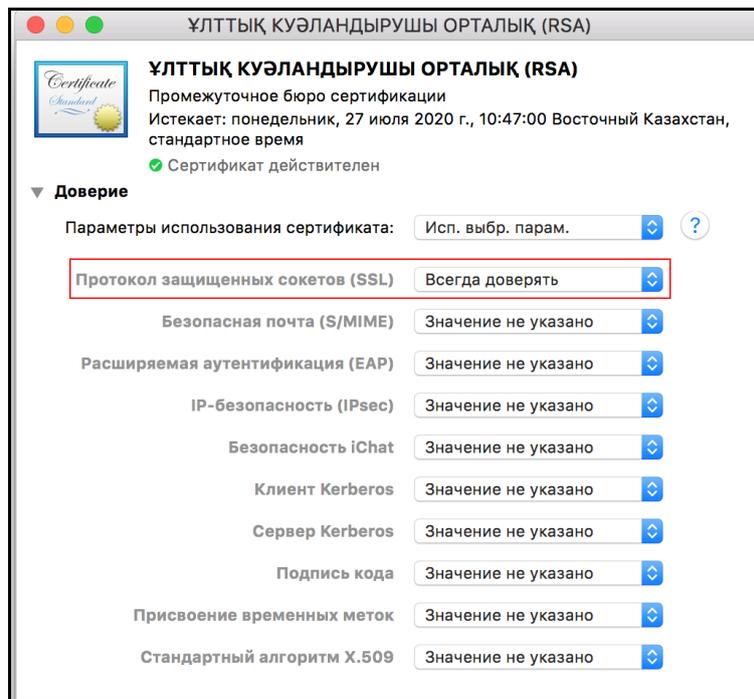


Fig. 13

When the installation has been completed there will be two root registration certificates with the permitted trust level installed in the "Keychain Access" menu (Fig. 14).

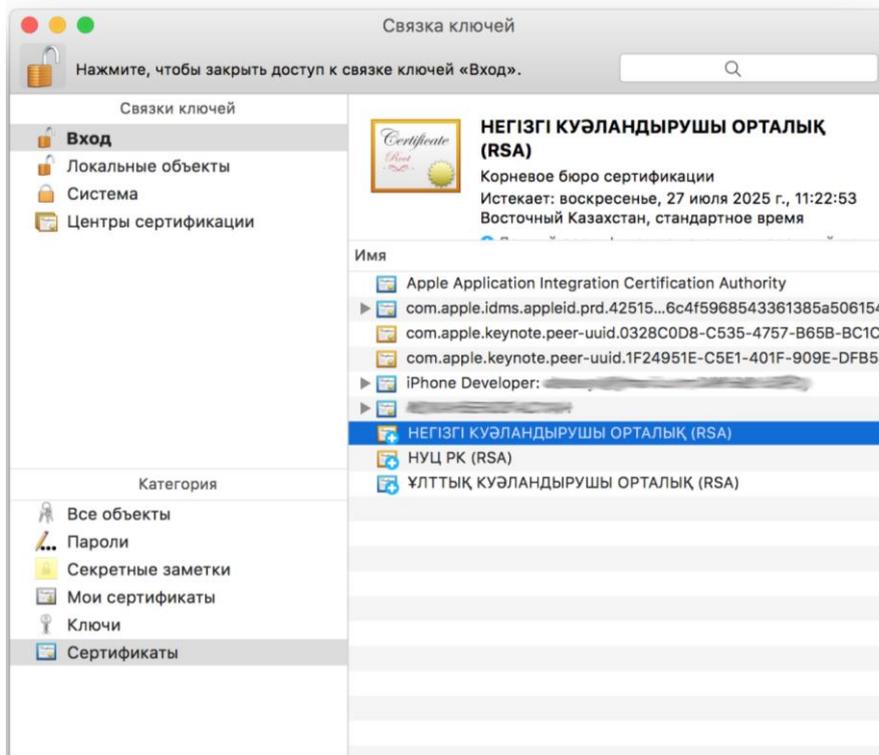


Fig. 14

Installation of the root registration certificate has been completed.

3.2 NCALayer Launch

In the Linux and MacOSX operating systems, open the Linux/MacOSX folder from the extracted archive and double click to launch NCALayer.jar. If in the graphic environment of the Linux or MacOSX operating system JAR files are not associated with the Java Runtime Environment, it is necessary to set association manually with the help of the corresponding graphic environment settings or to run the application with the command "java -jar <path to NCALayer.jar>" (e.g. "java -jar /home/user/Downloads/NCALayer.jar").

Important! The program will be automatically minimized to the system tray. The program cannot be closed while you are using signature functions.

In some MacOSX versions, program launch can be followed by the OS warning that the program can be dangerous because the source is not known, and it was not downloaded from the Apple Store.

To force launch of the program ignoring OS warnings it's necessary to do as follows:

1. In Finder file manager find the program you need to open. Do not use the Launchpad for this. Do not use a shortcut menu in the Launchpad.
2. Click "Control button", then click the program icon.
3. Select "Open" in a shortcut menu.
4. Click "Open".

The program is saved in the list of exclusions from the security settings, and further it may be launched with a double click as any other registered program.

4. Possible Problems with NCALayer

4.1 In Windows OS

In case of improper automatic installation of the root registration certificates into the trusted root certificates repository of Google Chrome, Opera and Internet Explorer, install them manually. To do this, press the combination of buttons "**WIN+R**", for quick launch of the command window, and in the resulting window type **certmgr.msc**, then click **OK**.

In the window of the certificate manager go to "**Trusted root certification centers**" folder. Highlight the "**Сертификаты**" subfolder and select "**Action->All tasks->Import...**". In the resulting window of the root certificates installation wizard select "root_rsa.cer" and continue the installation. When the operating system requests a root certificate installation confirmation click "**Yes**". Do the same with pki_rsa.cer. Restart your browser.

4.2 In Linux OS and MacOSX

Sometimes while working with external storage devices in Linux OS and MacOSX, there can be problems with device recognition; in particular it happens with **hKaztoken** and **KZ ID-Card** (electronic personal identification). In this case you need to make several additional settings of your OS, Java virtual drive and user's environment variables.

If NCALayer cannot recognize the **Kaztoken** device do as follows

- 1) Make sure that the pcscd, pcsc-tools, libpcsclite1 packages are installed.
- 2) Change /usr/lib/pcsc/drivers/ifd-ccid.bundle/Contents/Info.plist file similarly to the existing entries:
 - find the entry <key>ifdVendorID</key> and add <string>0x0A89</string>;
 - find the entry <key>ifdProductID</key> and add <string>0x0035</string>;

- find the entry <key>ifdFriendlyName</key> and add <string> DigiFlow LLP. KAZTOKEN</string>;

3) restart the **pcscd**service .

After you did all the steps mentioned above, you need to make sure that your operating system recognizes the device. To do this you need to launch the **pcsc_scanscanning** program . Then connect Kaztoken device to the workstation. The program has to show the Kaztoken data, in particular the line with the device description indicated in Info.plist ("DigiFlow LLP. KAZTOKEN").

If NCALayer cannot recognize the device in a form factor of a smart-card (**KZ ID-Card, eToken, JaCarta**), launch NCALayer in the command string with the option **Dsun.security.smartcardio.library=/usr/lib/x86_64-linux-gnu/libpcsclite.so.1**, where libpcsclite.so.1 is the library from libpcsclite1.

Example:

```
java -Dsun.security.smartcardio.library=/usr/lib/x86_64-linux-gnu/libpcsclite.so.1 -jar /home/user/Downloads/NCALayer.jar.
```

Take into account that the path to the library can vary, that is why it is important to indicated the correct library location **libpcsclite.so.1**.

4.3 Work through a Proxy-Server

If with the NCALayer launched you receive a message that the application cannot be launched or unavailable, make sure that there is an entry **127.0.0.1** in the lists of exclusions (Fig. 15, 16, 17).

Mozilla Firefox

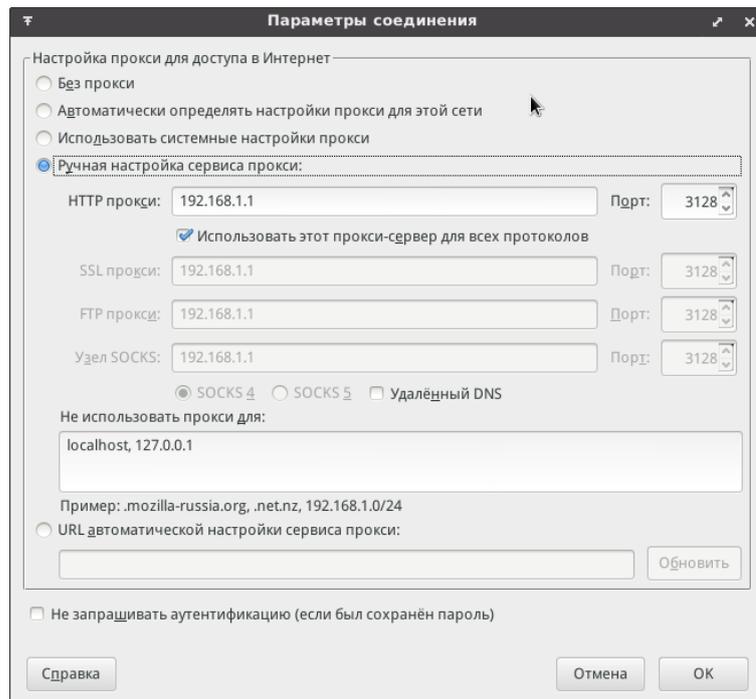


Fig. 15

Google Chrome

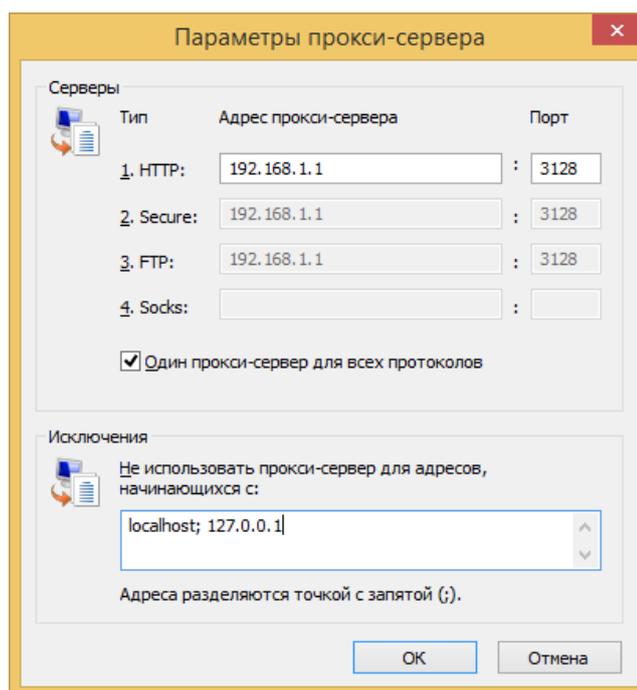


Fig. 16

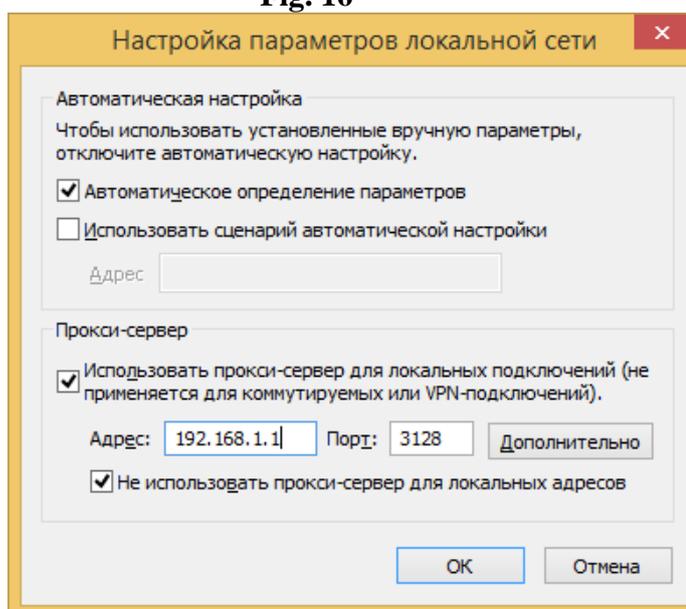


Fig. 17

For browsers without a graphic interface (in Linux OS), as settings for of proxy-server parameters and list of exclusions, you can use environment variables **http_proxy**, **https_proxy** and **no_proxy**, (in particular Google Chrome, Opera browsers), e.g.: **http_proxy=http://192.168.1.1**, **no_proxy=127.0.0.1**. In this case the presence of **no_proxy=127.0.0.1** is obligatory!

If you have any problems during the process of the registration certificates receipt, we kindly ask you to contact the technical support service under the phone number 1414, or via e-mail support@pki.gov.kz.