

**PLEASE PROVIDE CERT ON FILE IN  
.CRT .CER or .PEM FORMAT**

**How to generate private key and certificate on macOS Mojave and LINUX**

Open terminal

Locate user folder: `cd ~/` Run

command:

```
openssl req -new -newkey rsa:4096 -days 720 -nodes -x509 -sha256 -keyout  
superSecretPrivateKey.pem -out sendMeToCitadeleCert.pem
```

You are about to be asked to enter information that will be incorporated into your certificate request.

What you are about to enter is what is called a Distinguished Name or a DN.

Country Name (2 letter code) []:

[example] LV

State or Province Name (full name) []:

[example] Latvia

Locality Name (eg, city) []:

[example] Riga

Organization Name (eg, company) []:

[example] Sia ABC

Organizational Unit Name (eg, section) []:

[example] IT

Common Name (eg, fully qualified host name) []:

[example] example.com

Email Address []:

[example] [janis.berzins@abc.lv](mailto:janis.berzins@abc.lv)

This example will create private key (superSecretPrivateKey.pem) and certificate (sendMeToCitadeleCert.pem)

## How to generate public key (certificate) using Java keytool (Windows)

Instruction and short description about certificate generation using Java keytool you may find here:

<http://docs.oracle.com/javase/7/docs/technotes/tools/solaris/keytool.html>

Citadele bank requirements:

Algorithm:	SHA256withRSA
Public key code algorithm:	RSA
Public key length:	4096
Max validation:	2 years

### 1. First step to generate certificate

Call the command line and sign the following request:

```
keytool -genkeypair -alias [the name of the certificate in the certificate store] -keyalg RSA -keysize 4096 -sigalg SHA1withRSA -validity [certificate validation days] -keystore [certificate store name ks]
```



Example: `keytool -genkeypair -alias DigilinkCert -keyalg RSA -keysize 4096 -sigalg -SHA256withRSA -validity 720 keystore DigilinkKeys.ks`

```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

C:\>cd
C:\>cd C:\Program Files\Java\jre6\bin
C:\Program Files\Java\jre6\bin>keytool -genkeypair -alias DigilinkCert -keyalg RSA -keysize 4096 -sigalg SHA1withRSA -validity 720 -keystore DigilinkKeys.ks_
```

The program will prompt you to enter the information required to obtain a certificate –

Enter keystore password: \*\*\*\*\* Password of certificate store (min 6 symbols)

Re-enter new password: \*\*\*\*\* Repeat the password

What is your first and last name? (name and surname)

[Unknown]: Janis Berzins

What is the name of your organizational unit? (department name)

[Unknown]: IT

What is the name of your organization? (company name)

[Unknown]: SIA ABC

What is the name of your City or Locality? (city)

[Unknown]: Riga

What is the name of your State or Province? (country)

[Unknown]: Latvia

What is the two-letter country code for this unit? (country code)

[Unknown]: LV

Is CN=Janis Berzins, OU=IT, O=SIA ABC, L=Riga, ST=Latvia, C=LV correct?  
(confirm your choice)

[no]: yes (if all data are correct, accept YES)

Enter key password for <DigilinkCert> \*\*\*\*\* (set the password of  
certificate) (RETURN if same as keystore password):

Re-enter new password: \*\*\*\*\* (repeat the password)

The result of this example will create a certificate repository for  
DigilinkKeys.ks and the certificate is stored there DigilinkCert.

- 2. The next step is to export from the certificate the public key to be sent to the Bank. The Public Key is required by the Bank to verify the authenticity of messages (payment requests) received from the Company.**

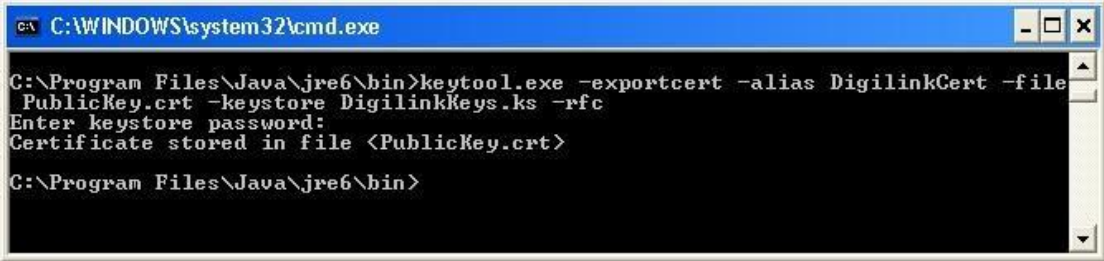
To do this, type the following command:

keytool.exe -exportcert -alias [the previously created certificate name in the certificate store] -

file [The name of the exported key file.crt] -keystore [The name of the previously created certificate repository.ks] -rfc

Example:

```
keytool.exe -exportcert -alias DigilinkCert -file PublicKey.crt -keystore DigilinkKeys.ks -rfc
```



```
C:\WINDOWS\system32\cmd.exe
C:\Program Files\Java\jre6\bin>keytool.exe -exportcert -alias DigilinkCert -file
PublicKey.crt -keystore DigilinkKeys.ks -rfc
Enter keystore password:
Certificate stored in file <PublicKey.crt>
C:\Program Files\Java\jre6\bin>
```

The program will ask you to enter the certificate store password that you created in step 1:

Enter keystore password: \*\*\*\*\*

Certificate stored in file <PublicKey.crt> - the certificate is currently exported to the PublicKey.crt file in the directory you are working in and can be sent to the Bank as an email attachment. If the certificate system does not allow sending, it must be archived.

Fails izskatās sekojoši:



PublicKey.crt

Open fail the informtaion looks like this:

