PAM- SafeNet eToken

blocked URL

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. : pcscd

Etoken

- - USB- - , (PKI).

eToken Astra Linux

- 4100
- 5100
- 5105
- 5110
- 5200
- Pro 72k
- NG-OPT

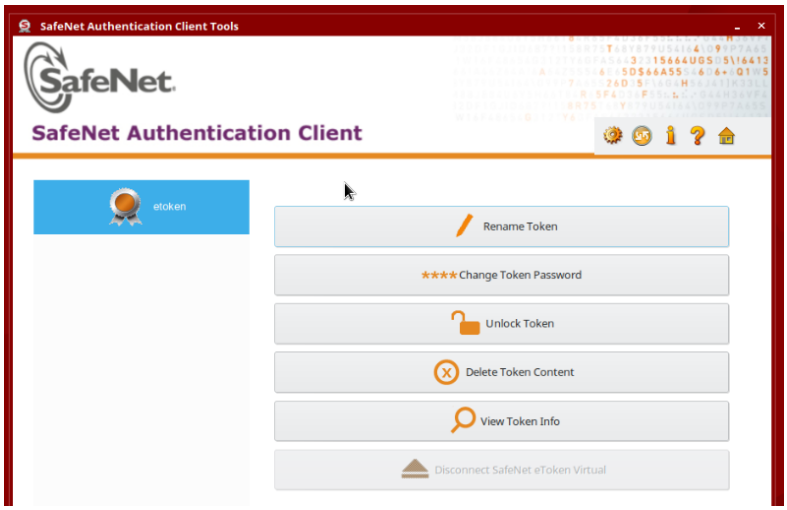
Astra Linux:

- libccid
- libpcsclite1 pcscd;
- opensc

:

```
sudo apt install libccid pcscd libpcsclite1 opensc libengine-pkcs11-openssl*
```

SafeNet Authentication Client



SafeNet Authentication Client – , - eToken Gemalto. Safenet Authentication Client -.

Gemalto

., . :

```
sudo dpkg -i SafenetAuthenticationClient-amd64.deb
```

SafeNet Authentication client :

```
CRYPTO/Crypto.c:247: init_openssl_crypto: Assertion lib failed.
```

, . , :

```
sudo ln -s /usr/lib/x86_64-linux-gnu/libcrypto.so.1.0.2 /usr/lib
/libcrypto.so.6
```

eToken

Etoken:

.

1

:

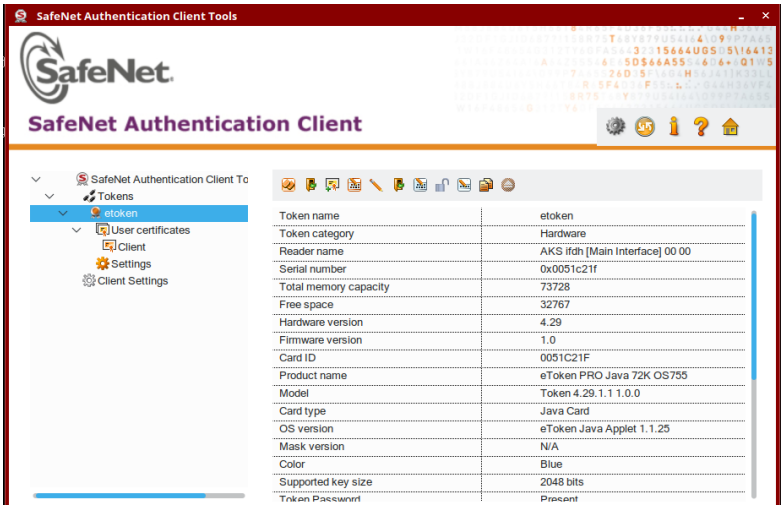
```
pkcs11-tool --module /usr/lib/libeToken.so -T
```

:

```
u@smolensk:~$ pkcs11-tool --module /usr/lib/libeToken.so -T
Available slots:
Slot 0 (0x0): AKS ifdh [Main Interface] 00 00
  token label        : etoken
  token manufacturer : SafeNet, Inc.
  token model        : eToken
  token flags        : login required, rng, token initialized, PIN initialized, other flags=0x200
  hardware version   : 4.29
  firmware version   : 1.0
  serial num         : 0051c21f
  pin min/max        : 6/20
u@smolensk:~$
```

2

"" "" "SafeNet Authentication lient Tools" . :



eToken

pkcs11-tool.

```
pkcs11-tool --login --init-token --label "eToken Astra" --init-pin 12345678 --
module /usr/lib/libeToken.so
```

--slot 0 — . , 0, – 1,2 ..

--init-token – .

--pin - .

--label 'eToken Astra' - () .

--module - eToken

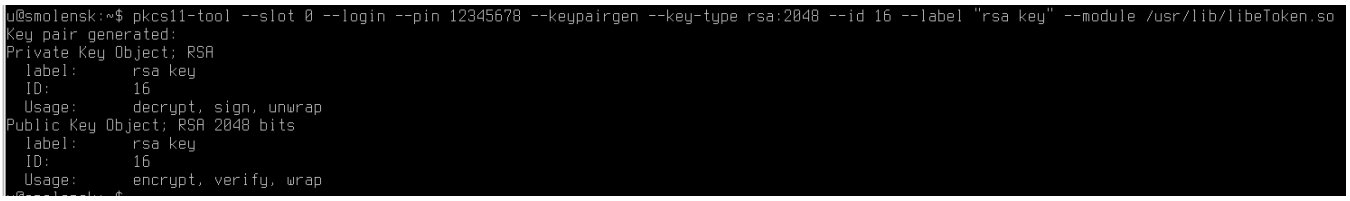
SafeNet Authentication lient Tools " ".

! eToken .

RSA

RSA :

```
pkcs11-tool --slot 0 --login --pin 12345678 --keypairgen --key-type rsa:2048 --id 16 --label "rsa key" --module /usr/lib/libeToken.so
```



:

```
openssl
```

openssl, :

```
engine dynamic -pre SO_PATH:/usr/lib/x86_64-linux-gnu/engines-1.1/pkcs11.so -pre ID:pkcs11 -pre LIST_ADD:1 -pre LOAD -pre MODULE_PATH:/usr/lib/libeToken.so
```

:

```
req -engine pkcs11 -new -key 0:16 -keyform engine -x509 -out test.pem -text
```

```
exit
```

```
OpenSSL> engine dynamic -pre SO_PATH:/usr/lib/x86_64-linux-gnu/engines-1.1/pkcs11.so -p
(dynamic) Dynamic engine loading support
[Success]: SO_PATH:/usr/lib/x86_64-linux-gnu/engines-1.1/pkcs11.so
[Success]: ID:pkcs11
[Success]: LIST_ADD:1
[Success]: LOAD
[Success]: MODULE_PATH:/usr/lib/libeToken.so
Loaded: (pkcs11) pkcs11 engine
OpenSSL>
OpenSSL> req -engine pkcs11 -new -key 0:16 -keyform engine -x509 -out test.pem -text
engine "pkcs11" set.
No private keys found.
PKCS#11 token PIN:
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.
There are quite a few fields but you can leave some blank
For some fields there will be a default value,
If you enter '.', the field will be left blank.
-----
Country Name (2 letter code) [AU]:ru
State or Province Name (full name) [Some-State]:Moscow
Locality Name (eg, city) []:
Organization Name (eg, company) [Internet Widgits Pty Ltd]:Rusbitech
Organizational Unit Name (eg, section) []:Astra
Common Name (e.g. server FQDN or YOUR name) []:user
Email Address []:user@astralinux.ru
OpenSSL> exit
u@smolensk:~$
```

Common Name .

, eToken.

PEM DER:

```
openssl x509 -in test.pem -out test.cer -inform PEM -outform DER
```

test.cer :

```
pkcs11-tool --slot 0 --login --pin 12345678 --write-object test.cer --type
'cert' --label 'Certificate' --id 16 --module /usr/lib/libeToken.so
```

(SACTool)

eToken:

```
pkcs11-tool --module /usr/lib/libeToken.so -O -l
```

Astra Linux eToken

- -

:

- libpam-p11
- libp11-2

FLY:

```
sudo apt-get install libp11-2 libpam-p11
```

```
openssl x509 -in <___>.crt -out <___>.pem -inform DER -outform PEM
```

<___>- ,

ID :
:

```
mkdir ~/.eid
chmod 0755 ~/.eid
cat <___>.pem >> ~/.eid/authorized_certificates
chmod 0644 ~/.eid/authorized_certificates
```

, :

```
mkdir /home/user/.eid
chmod 0755 /home/user/.eid
cat <___> >> /home/user/.eid/authorized_certificates

chmod 0644 /home/user/.eid/authorized_certificates
```

, id.

- - Fly

```
sudo nano /usr/share/pam-configs/p11
```

:

```
Name: Pam_p11
Default: yes
Priority: 800
Auth-Type: Primary
Auth: sufficient pam_p11_opensc.so /usr/lib/libeToken.so
```

, Alt + X, Y

```
sudo pam-auth-update
```

Pam_p11 OK

- - Fly

```
sudo login
```

. , <PIN >.