

Handbook-01 signatures and setup

1.0 Key generation

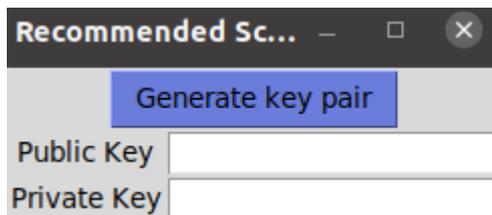
In the menu "Signature"

Modules Signature Diffie-Hellman key exchange

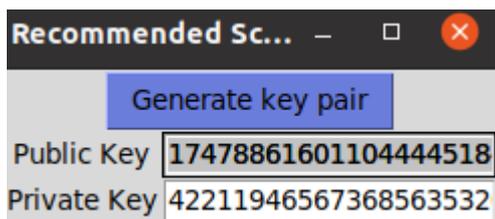
go to the page „Recommended Schnorr KeyPar generator with static safeprime and generator".

Recommended Schnorr Key_Par generator with static safeprime and generator

Press on the „Generate key pair“ button to generate your keys.



With a double left mouse click followed by the str+c press on the keyboard you can easily move your Schnorr keys.



Now both numbers must be saved on the PC. It is recommend to use the build in solution on page "Read/write text to secured file"

To keep the signatures secure you can never share your "Private Key" with anyone. If you share this key it can be used to craft messages which appear to be written by yourself.

It is necessary for the receiver to have your public key to check the correctness of your generated signatures. You can post or send it as a signed message with point 2.0.

2.0 Create a Schnorr signature

In the menu “Signature”

Modules Signature Diffie-Hellman key exchange

go to the page "Schnorr sig creator"

Schnorr sig creator

Input the private key you generated in point 1.0 in the entry with the description “Input private key”.

Modules Signature Diffie-Hellman key exchange

Static Safe-Prime and Generator

Input private key

Input the message text

As an example text I use a random generated public key with a small description.

Static Safe-Prime and Generator

Input private key

Input the message text

Good day
my name is Max Mustermann. My public key is:
17478861601104444518427471269886296252739299682494018080513465660293959713715202
58262587946275551191868189661663295471550177765740427700715058988486079967258094
45133626062978444145662748772763427115950559456482659340138171107143970794609719
42442824924265008194143534915876384520656755924348612469769905694409570387763252
14899114212240373981477449942054090513564419051990064603070117612088941297587092
33200805433040833433654426390151931072769630125532605974465345103052804838238261
32461537162658946193554774664154328499947015623057137853788117964642217930777500
63797963685422899519391652424344164722005367150284126919413710168334284686401977
96267230012139909337332220819890024450119960868288630067111087058316382121996405
03877590253427168278656304531702181975670236069069951304968857559357226558727298
79970741745131193822994935733923990738934967112213527524001062587091372850736024
79758098466164545566559293336707286622251412225939654681839643599818008431280697
13375042661184357141803810171813778031523432392474370392898431948886372977654131
31460547943639900058651065375250106240762689007168821578761966437021499870219886
82340020044573480527040414201448642747404227610878801081400468003056202070802220

Now press the button “Generate signature” in the bottom corner.

1924713572	
2826291513	
	Generate signature
	Copy to clipboard

To make recognition of the exact message easier your text gets an added “start-----” at the beginning and a “-----end” at the end.

The now generated signature part 1 and 2 are used to by your message recipient check your message integrity

Signature part 1	59772910067442769341
Signature part 2	19988743645485378260

To copy all important parts of the signature and message, press the button “Copy to clipboard”

Now you can send the text to whoever you want.

1924713572	
2826291513	
	Generate signature
	Copy to clipboard

3.0 Verify a Schnorr signature

In the menu “Signature”

Modules Signature Diffie-Hellman key exchange

go to the page “Schnorr sig verifying”

Schnorr sig verifying	
<input checked="" type="checkbox"/> Static Safe-Prime and Generator	
Input the public key	47654467158812060190
Input signature part 1	25820266404522255519
Input signature part 2	15534767623689345898
Input the text	
start-----	
Good day	
my name is Max Mustermann. My public key is:	
17478861601104444518427471269886296252739299682494018080513465660293959713715202	
58262587946275551191868189661663295471550177765740427700715058988486079967258094	
45133626062978444145662748772763427115950559456482659340138171107143970794609719	
42442824024265008104142524015876284520656755024248612460760005604400570387762252	

Now fill in the public key of your contact, the message from “start-----” to “-----end”. The signature part 1 and 2 are only for the entry with the description “Input signature part 1” and “Input signature part 2”

Now push the button “Start signature test”

```
-----  
2190721483930369744189489574767261307434197  
0317321452934126257315207847228483286491509  
-----end
```

Start signature test

If the message integrity is correct you receive a message about the positive test outcome.

```
031732145293412625731520784722848328649  
-----end
```

Start signature test

Signature is correct

You can get a negative message if one or more of the following points is true:

- wrong public key
- wrong signature 1 or 2
- wrong message

If none of the above are true then please check if the variables have been correctly pasted in the corresponding entry points.

To delete the input of an entry double click with your left mouse button to choose the input and then press delete. You can not overwrite input with double click select and strg+v with the new input. It has to be deleted first

4.0 Save a username and the corresponding public key

Input your chosen password in the password entry.
Then press the “Add a user/pubkey” button.



Input in the the “user name” you want to pair to the public key.
Now press the “add user/pubkey pair” button

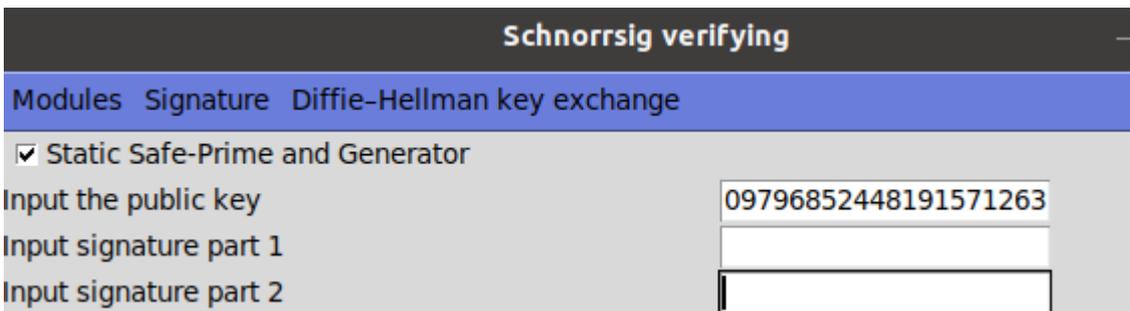


This adds the pair to your text file. It is important to not change the formating.
|user:key since other functions depend on it.

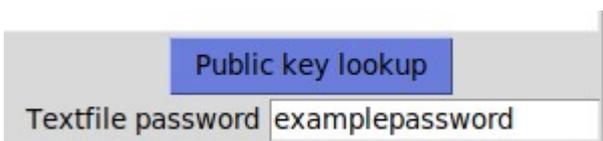
5.0 Check if an public key from a signature is from a known user

Go to the menu “Signatures” and click on “Schnorr sig verifying”

Input the public key of your contact.

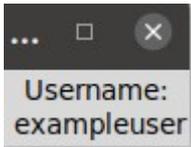


Now input your text file password in the botton right corner of the window.



Now click the button “Public key lookup”

Now a small window will pop up and tell you if you have saved this pubkey to a username and saved it under the given text file password.



6.0 Write and read from the secured text file

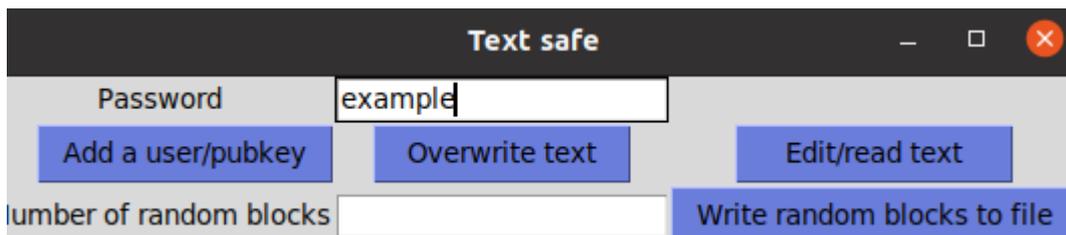
In the menu “Modules”

Modules Signature Diffie-Hellman key exchange

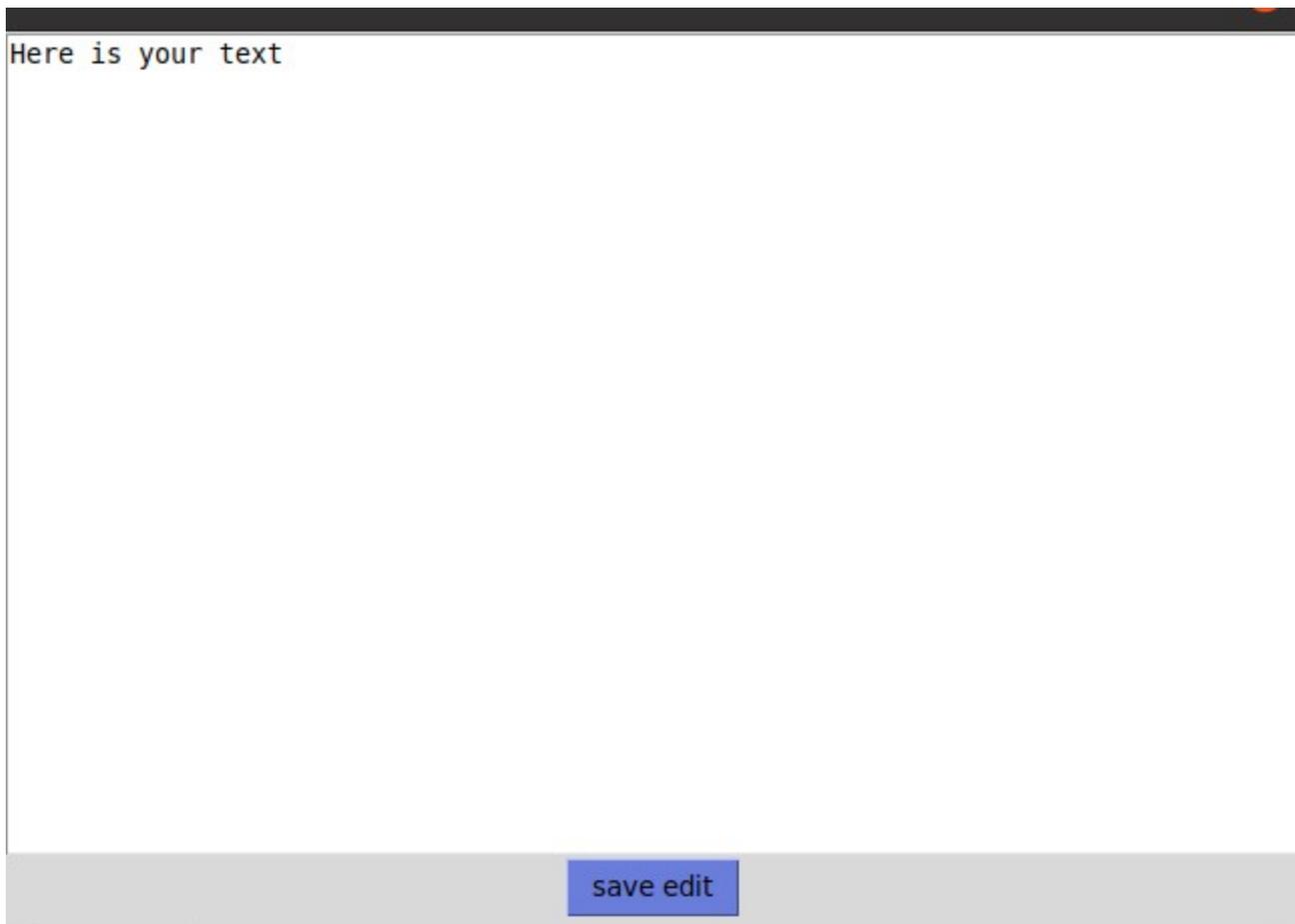
go to the page “Read/write text to secure file”

Read/write text to secured file

First input your chosen password for your secure text file.



If you want to read or edit your saved text press the “Edit/read text” button. If there is text saved for this password it will be displayed in the text field.



To save the changed text click in “save change”.

7.0 overwriting text file information

To delete the text saved under a password enter the password and press the button “overwrite text”

8.0 random blocks in the file

This option is important for **deniable encryption**. Only if this option is important to you should the function be used. Be careful what your input is. Each block cost an 129byte of disk space!