

**Guide**

**1**

CALCTOPIA

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Zero-Knowledge Proof of Identity

# Mining Node Registration Guide

ZERO-KNOWLEDGE PROOF OF IDENTITY

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## Technical requisites

*A mining node with an Intel® SGX processor*

**Y**our mining node must have the following features:

- Intel® SGX CPU
- 24/7 availability
- 512 MB of RAM and 10 GB of disk-space
- A public IP-address and two open ports

Your processor must support Intel SGX instructions. Check the following official documentation from Intel:

- [Detecting and Enabling Intel® SGX](#) (Youtube Video)
- Search for your processor in [Intel Ark](#)
- On Linux:

```
cat /proc/cpuinfo | grep "sgx"
```

Additionally, note that the presence of the SGX CPUID is not enough, SGX must also be enabled on the BIOS.

## Installation Guide

Follow the next steps:



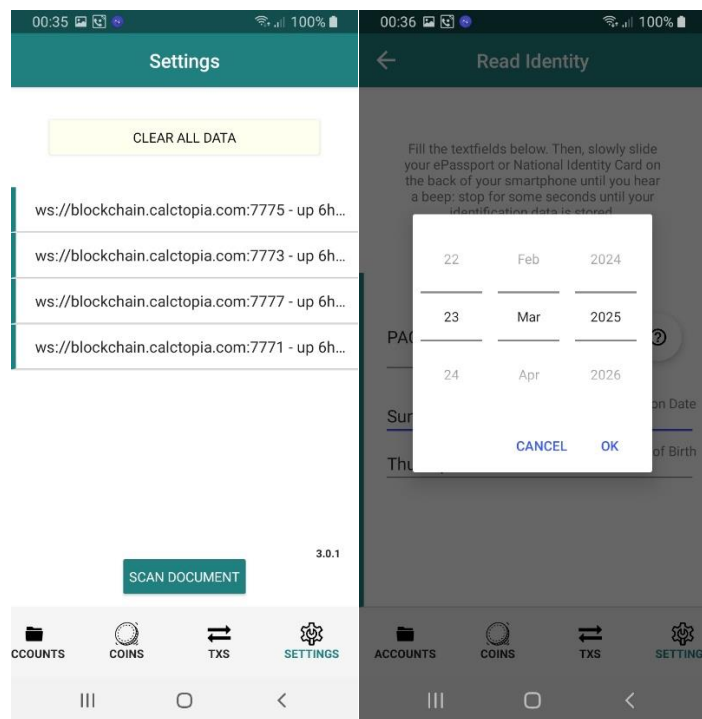
1. Install [Python 2.7 or 3.4](#)
2. Install [SGX](#)
3. Download [Zero-Knowledge Proof of Identity](#)

4. Decompress
5. Compile

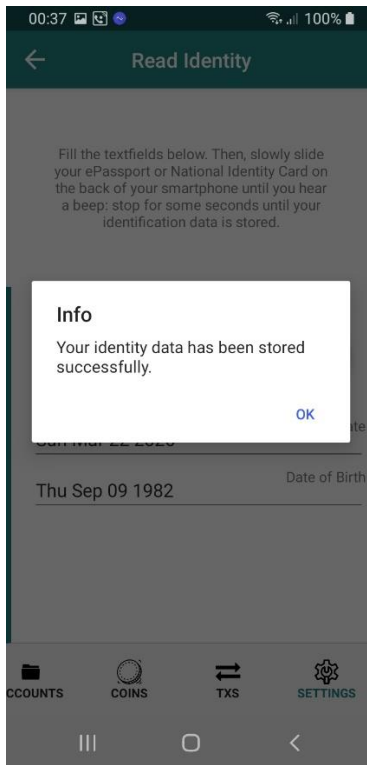
## Trusted Certificate from an Electronic Passport (Android)

Follow the next steps:

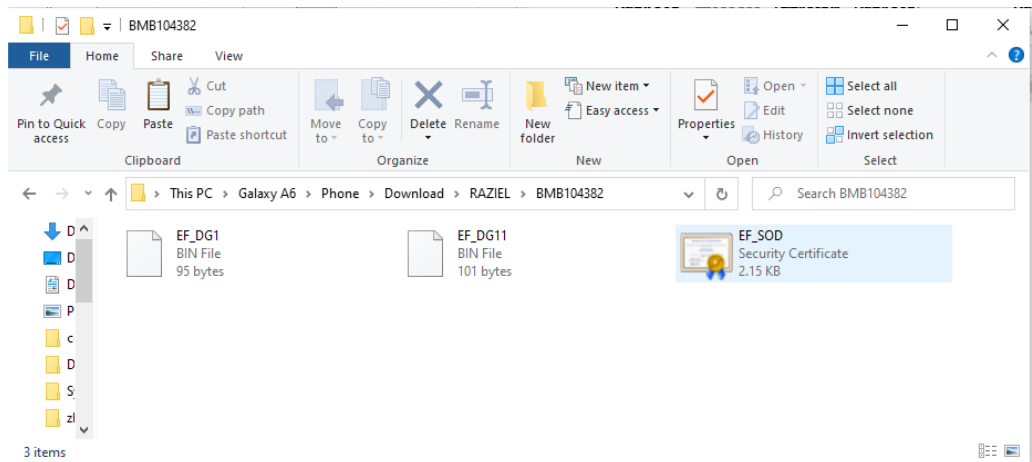
1. On Android, [install the Raziel Wallet from Google Play](#)
2. On Settings>Scan Document, set your passport BAC key: Document Number, Date of Birth and Date of Expiry.



3. Read your passport chip: move very slowly your passport under your smartphone until you hear a beep, then stand still until the passport is completely read.
4. If identity data were read successfully, an information box should appear.



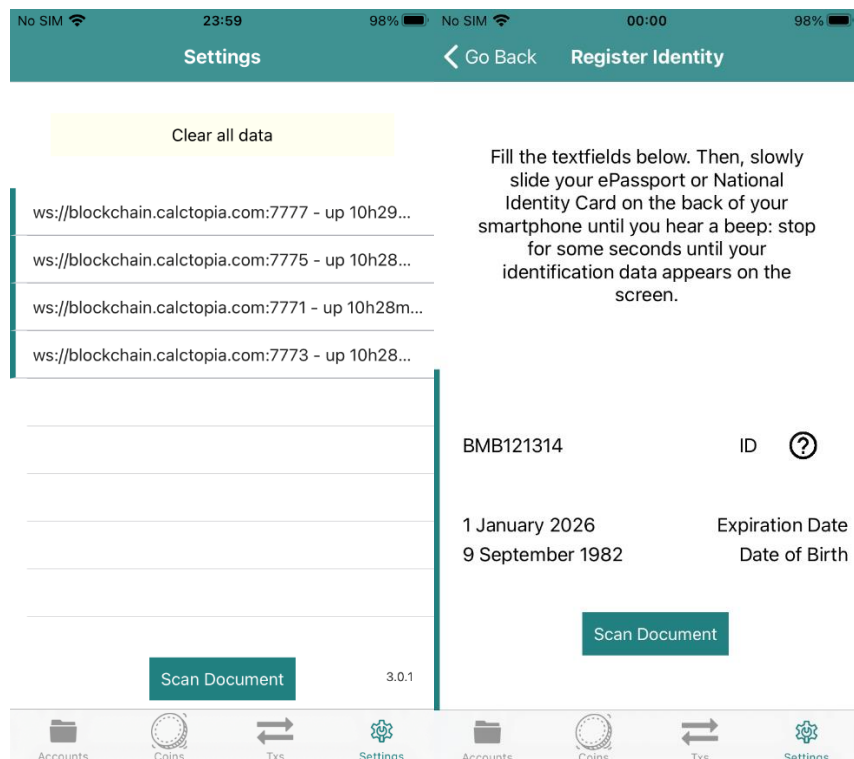
5. Connect your smartphone to your computer using an USB cable and copy the saved identity data from the external storage.



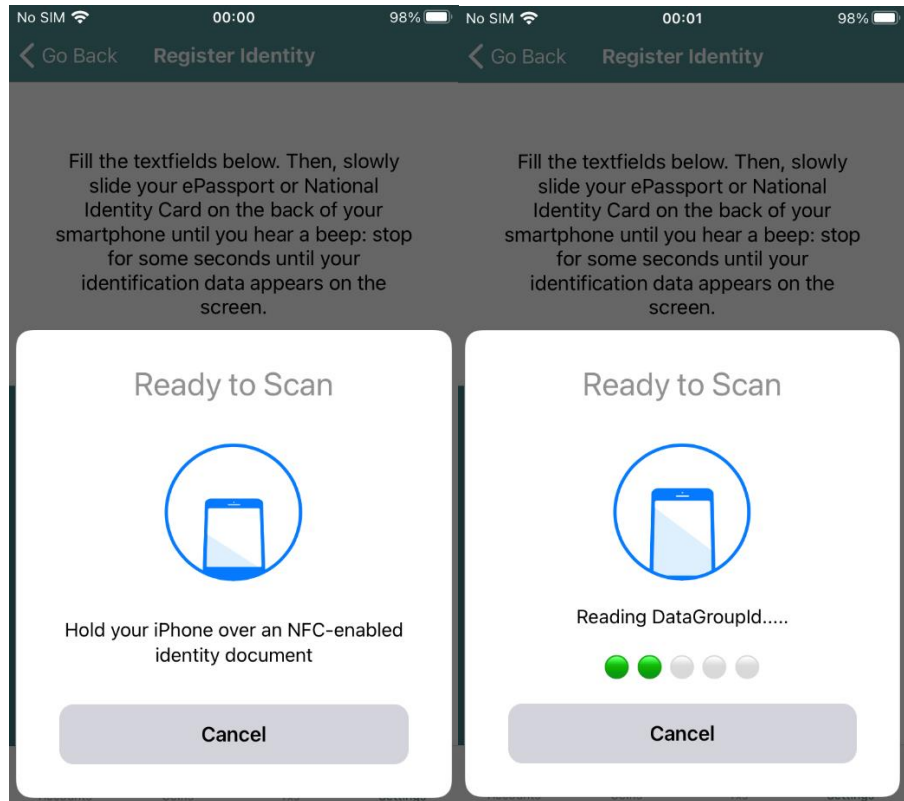
## Trusted Certificate from an Electronic Passport (iPhone)

Follow the next steps:

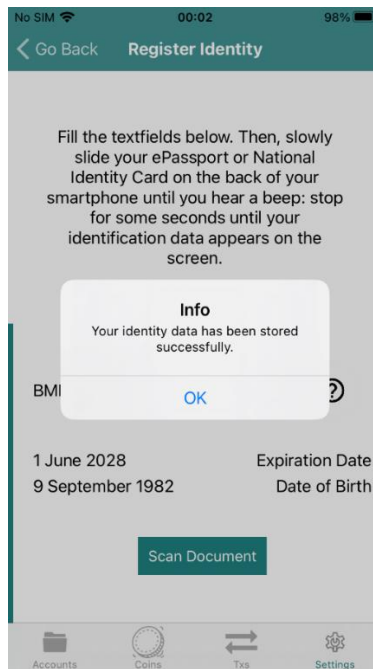
1. On iPhone, [install the Raziel Wallet from App Store](#)
2. On Settings>Scan Document, Set your passport BAC key: Document Number, Date of Birth and Date of Expiry.



3. Read your passport chip: press the “Scan Document” button, and move very slowly your passport under your smartphone until you hear a beep, then stand still until the passport is completely read.



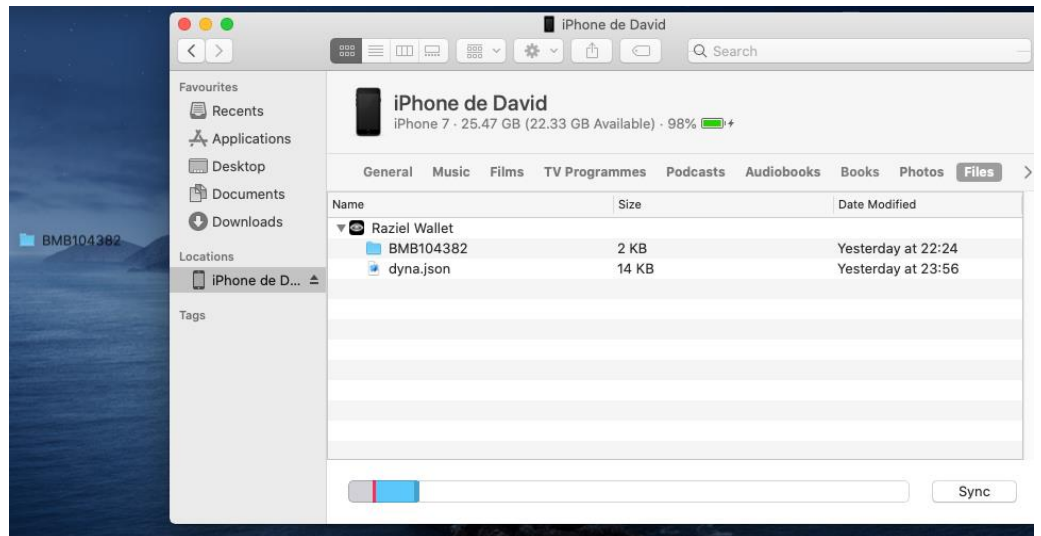
4. If your identity data was read successfully, an information box should appear.



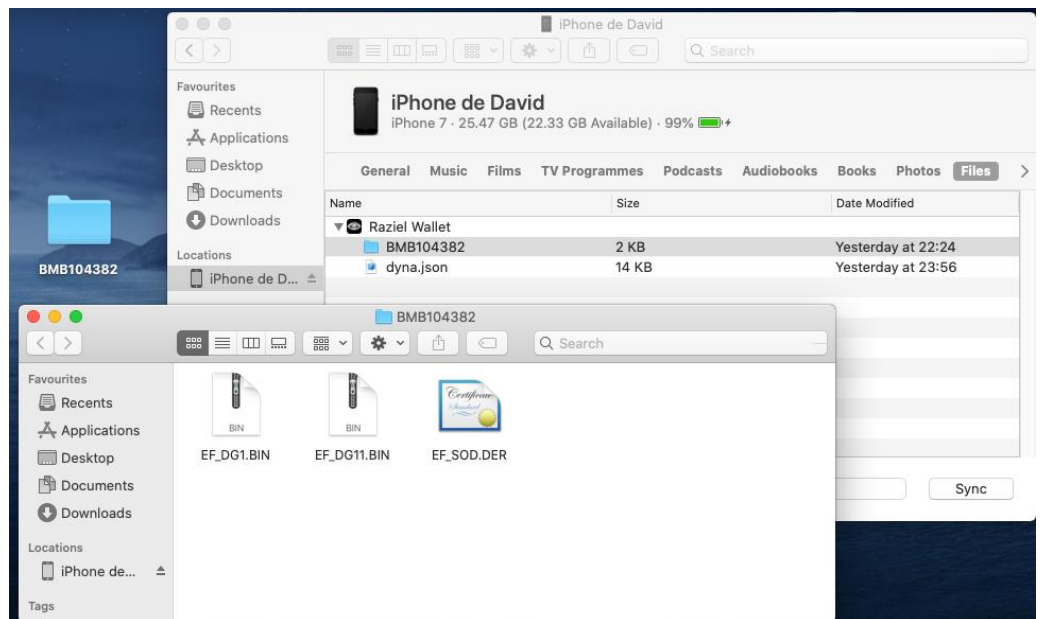
5. Connect your smartphone to your computer using an USB cable and copy your saved identity data: go to Finder > your iPhone as Location > Files >



expand the folder “Raziel Wallet” > drag and drop the folder with your document number to the Desktop, as shown in the image below.



You should obtain a folder with files representing Data Groups from your electronic passport, as shown below.



## Registration

Registering an Identity from an Electronic Passport

```
python sgx_client_with_hw_zkpoi.py --sodFile EF_SOD.DER
--dg1File EF_DG1.BIN --dg11File EF_DG11.BIN --userPassword 12345
--address tls://conode.yourhost.com:7770 --url
tls://conode.yournode.com:7771
```

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