**INSTALLATION AND USER INSTRUCTIONS**

# ChorSSI

# A model-driven approach for modeling and executing self-sovereign identity systems on Blockchain

A guide on how to execute the ChorSSI framework from a fresh new Virtual Machine.

Immagine che contiene testo, schermata, diagramma, Carattere

Descrizione generata automaticamente

Camerino, January 2024, University of Camerino.

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# PREFACE

This is a guide on how to use this framework from the beginning.

## Description of the user

The user for which the user manual is intended is a user who wants to easily manage a digital identity system. This is not intended to be used by more than one person.

The person who may manage this system should have some basic knowledge about digital identity systems, digital wallets, digital credentials and blockchain.

## Obtaining documentation and information

The latest version of the documentation is available at the following address: <https://github.com/LorenzoLuziL/ProgettoSystem>

Documentation, user instructions and technical information can be obtained by pulling the original repository from GitHub.

# Description of the software

## Purpose of the software

As we increasingly rely on digital platforms for communication, commerce, and  
other activities, the need for secure and reliable methods of identifying ourselves has  
become more important than ever. Traditional identity management systems, which  
are often centralized and controlled by third parties, have been criticized for being  
insecure and vulnerable to data breaches, fraud, and other forms of abuse. In fact,  
the storage of user identity data in multiple centralized data repositories with varying  
implementations of security present a tempting target for hackers, leading to increased  
security breaches and identity fraud. In addition, centralized data repositories present a  
lack of appropriate data management standards, resulting in potential privacy troubles.

Self-sovereign identity (SSI) is an emerging concept in the field of digital identity management that aims to empower individuals by providing them with more control and autonomy over their personal data and online identities.

The SSI paradigm shifts away from the traditional, centralized systems of identity management, where individuals are forced to rely on third-party providers to create, manage, and authenticate their digital identities. Instead, SSI proposes a decentralized and distributed architecture where individuals can create, own, and control their digital identities using cryptographic technologies such as blockchain.

This software is a model-driven framework that can replicate the behavior and reproduce all the typical operations of self-sovereign identity systems.

## Product Compliance

This software was originally built using the version 18.04 of Ubuntu <https://releases.ubuntu.com/18.04/> and version 14.17.5 of Node.

If you are using different versions of these, you could maybe notice some unexpected problems or errors.

## Software architecture

The software architecture is composed by these main elements: TODO foto software architecture

[Product image with callouts at main elements

### Hyperledger Aries

This is an open-source toolkit within the Hyperledger ecosystem that provides a set of protocols and tools for creating, transmitting, and storing **verifiable digital credentials**. It enables individuals, organizations, and devices to exchange secure, private, and tamper-evident information with each other without relying on a central authority.

### Hyperledger Indy

Hyperledger Indy is a decentralized, open source **blockchain** platform that provides the infrastructure for building and using decentralized identity (**DID**) solutions. It is specifically designed to address the unique requirements of decentralized identity systems, such as privacy, security, and interoperability.

### Von-network

A von-network is a pre-packaged Indy network built by the Government of British Columbia’s Digital Identity and Trust team. It provides an easy way to run a local sandbox **Indy network using Docker containers** with minimal effort. The network is designed to enable digital identity solutions that allow people, organizations, and things to prove their identities to each other in a secure and decentralized manner.

### Indy-sdk

This SDK has to be installed manually by the user( step by step procedure described here <https://yunxi-zhang-75627.medium.com/hyperledger-aries-aca-py-agents-setup-and-running-tutorials-part-i-i-i-dev-environment-setup-20ab5a32457e> ).

- GitHub Desktop (download online, oppure direttamente i comandi qua sotto)

sudo wget https://github.com/shiftkey/desktop/releases/download/release-3.1.1-linux1/GitHubDesktop-linux-3.1.1-linux1.deb

sudo apt-get install gdebi-core

sudo gdebi GitHubDesktop-linux-3.1.1-linux1.deb

TODO Architecture & REPOS

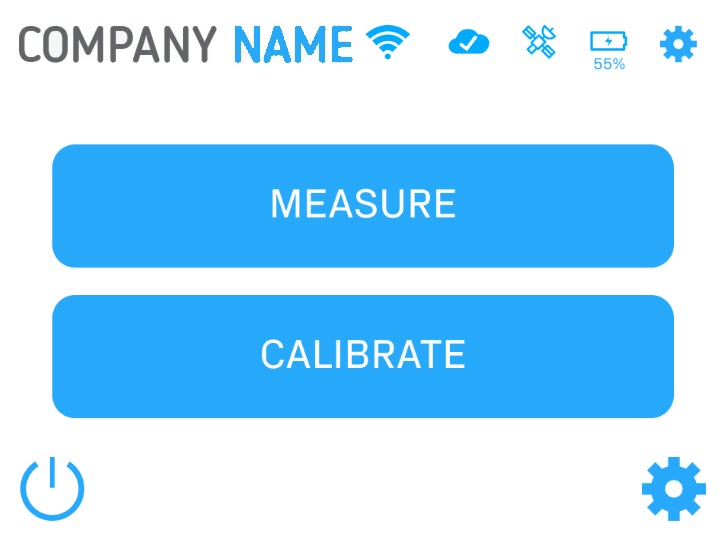
## How to use the software

### 

**To install the product:**

1. Do this.
2. Complete an action.
3. Do that.

[Provide an explanation of the user interface, if applicable]



*Fig. 2 This is a caption*

# Troubleshooting and repair

## How to Identify and solve problems

### Troubleshooting and repair by non-skilled persons

**WARNING:** Lorem ipsum dolor sit amet, consectetur adipiscing elit. Etiam at porta est, et lobortis sem. Duis imperdiet in nisl sed luctus.

|  |  |  |
| --- | --- | --- |
| Error | Cause | Solution |
| Product does not start | **Part A** is broken | Replace **part A**. See *7.2.1.4 Replacement of Part A* |
| … | … | … |

*Table 6 This is a table*

### Troubleshooting and repair by skilled persons

**WARNING:** Lorem ipsum dolor sit amet, consectetur adipiscing elit. Etiam at porta est, et lobortis sem. Duis imperdiet in nisl sed luctus.

|  |  |  |
| --- | --- | --- |
| Error | Cause | Solution |
|  |  |  |
|  |  |  |

*Table 7 This is a table*