Mastering Identus: A Developer Handbook

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2024-04-05

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Welcome

Welcome to the book!

Section I

Preface

Explains who the authors are and why we were motivated to write this book.

Introduction

Introduction to the book and what to expect to be learned from reading it.

SSI Basics

SSI Roles/Conceptual Diagram (Triangle of Trust)

- Issuer
- Holder
- Verifier
- Trust Registry

Brief explanation of each and what their role is

Identus Concepts

Identus Application Architecture Diagram

- Cloud Agent
- Edge Agent
- Building Blocks
- Mediator
- DIDComm2

Include diagram of each actor and it's relationship

Section II - Getting Started

Installation – Development Environment

Detailed instructions on how to install a development instance of Identus on your local machine.

This will include several tips and tricks to creating a fully functional environment

Section III - Building

Project Overview

This is project overview of the example app, an E-Voting app.

Wallets

A deep dive on what an Identus Identity wallet is and represents. We will discuss seed phrases and how they work.

We will talk about creating and recovering Identus wallets.

Tips for using:

- Pluto Encrypted
- Keycloak for OAuth / OpenIDConnect

DIDs

We'll do a deep dive on DIDs and did:prism specifically

- did:prism methods
- canonical vs longform DID

DID Documents

DIDDocuments:

- Resolvers
- Controllers

Connections

We will discuss the concept of Connections, PeerDIDs, and what it means to connect with another Peer, what's happening under the hood and different ways to handle the process in your application.

Also discussed:

- Managing Invites

    - OOB
    - Manual Accept
    - Auto Accept
    - DIDLess Connections (Atala Roadmap)

Verifiable Credentials

Verifiable Credentials

- Overview
- Formats (just mention types, details later in Issuing)
- Schemas
- Publishing your Schema
- Issuing

    - JWT
    - SD-JWT (Atala Roadmap Q2)
    - AnonCreds

- Updating (re-binding)
- Revoking

DIDComm

This chapter will discuss the many ways the DIDComm protocol can be used inside your Identus Application.

- Overview of the DIDComm protocol
- Sending Message
- Sending Files

Verification

Verification

- Presenting Proof
- Presentation Policies / Verification Policies
- Selective Disclosure with AnonCreds

Plugins

This is a placedholer for the topic of Plugins. Identus plugins have not been officially announced yet but are on the IOG roadmap for 2024, Q4. If there is any information by the time we publish we will write about them.

Section IV - Deploy

Installation - Production Environment

In this chapter we will discuss how to prepare a production envioronment for an Identus application.

We will discuss:

- Hardware recommendations
- Production configuration and security
- Lock down Docker / Postgres (default password hole, etc)
- SSL
- Multi Tenancy
- Keycloak
- Testnet / Preprod env
- Connecting to Mainnet
- Set up Cardano Wallet
- Key Management with HashiCorp
- Connecting to Cardano
- Running dbSync

Mediators

Here we will discuss how to set up your own Mediator

We will teach the reader how to - Install, configure, and Run your own Mediator - How to manage Websockets - Performance Tuning

Maintenance

Mastering Identus means maintaing your application once it's launched.

In this chapter we will cover: - Observability - Manage nodes / Memory - Performance Testing (could be part of install?) - Analytics with BlockTrust Analytics - Upgrading Agents - How to minimize downtime - Hashicorp - Key Management - Key rotation

Section V - Addendum

Trust Registries

Overview of the concept of a Trust Registry - What role they play in SSI - Trust Over IP Trust Registry Spec - Highlight any real world examples if they exist by book completion

Continuing on Your Journey

Information about becoming a Contributor to Identus - how to submit code or documentation

Information about how to get involved in the SSI community outside of Identus - Trust over IP (ToIP) - Decentralized Identity Foundation (DIF)

Appendices

Errata

Errata goes here

We will list any bugs that may have been "printed" in certain editions of the book.

Glossary

Glossary or Index here

This will reference key concepts and Identus terms and where they are mentioned in the book, allowing someone to look up a term and know what section it is referenced in.