Swiss Open Blockchain

Virtual Environments

Why Virtual Environment

On the NovaCrypto Proprietary Platform we create such called it "Swiss Open Blockchain Virtual Environment" by following uses-cases for our Business Customers.

Advantages of "Virtual Environments" reside in the fact that we provide a scalable way to easily change the configuration and thus be ready to scalability effects.

How it works

A right way to run a Testnet node is as a virtual machine image (e.g. Virtual Box, Docker, Cloud Server) dedicated for that purpose.

At NovaCrypto LTD we elected "Virtual Box" Software from Oracle. Free of use. Intended to do test of integration of the Blockchain Protocols that we consider, in order to build our uses-cases. As long one protocol is not ready for the MainNet we keep it in the Virtual Box.

We elected also Exoscale as our Swiss Cloud Provider allowing us to run our dedicated server materializing our NovaCrypto Proprietary Platform. Because the safety of your documents is no more in the bank instead in the platform, the NovaCrypto Proprietary Platform run our LN Node totally securely and data governance compliant in the earth of Swiss Alps, hidden in a former Military Bunker, 100% locally produced green energy, independent from the world's energy markets, right on the internet backbone of Europe. Origin OS is Windows with embedded "Virtual Box". Origin OS Windows because we have some BPOS (Business Process Oriented Solutions) that are running under this OS.

SPV Virtual Environment – Components and features

As an integrator of the Swiss Open Blockchain, we must provide the most suitable Blockchain Protocols. Acting as a SPV (Simplified Payment Verification), we elected the Lightning Network and his Segwit (Segregated Witness) offering the most "Scalable, Instant Bitcoin/Blockchain Transactions". Since Lightning Network is emerging and become a reality and acts as a second layer on top of Bitcoin Blockchain, the payment with LiteCoin (this currency was created because the lack of scalability for Bitcoin) is no more necessary. We compiled all the best-practice and tools in a "SPV Virtual Environment" constituted of the following components and features :

- Ubuntu 14.04.4 Linux OS
- Electrum Wallet provided and owned by NovaCrypto
  - The wallet offers Bitcoins Currency
  - The wallet's public key is published on NovaCrypto.net – ONLY for the Affiliated/KYC B2B or B2C actors -- to send BitCoins to NovaCrypto
- GIT Client is used to access the repository on GitHub.
- LnNode is materialized by LND (Ligthning Network Daemon) running and syncing with the TestNet Lightning Network (furthermore on the MainNet)
  - Channel Creation for NovaCrypto
  - Segwit 2X Compatible (Segregated Witness to secure block headers signature)
- BitCoin Core
- Curl
- Graphana is a dashboard tool displaying the Lightning Network
- HeidiSQL
  - MYSQL access to the database Novacrypto under novacrypto.ch (Linux Server)
  - Database used to check the Affiliation and KYC to our service SPV (Simplified Payment Verification)
- WinSCP Client to access NovaCrypto.ch FTP Server
- NovaCrypto ToolBox : a set of tools to query the blockchain

Trends in the Platform Decentralized World

The trends in the Platform Decentralized World is Decentralized Applications (DAPS) ideally running with a high rate of transactions per seconds (TPS). Ethereum is a platform allowing Smart Contracts but with a low TPS (25) execution due to his scalability problem (due to the consensus "Proof-of-Work" same Consensus as in the Bitcoin Blockchain).

At NovaCrypto LTD we believe in the EOS Platform that should allow a better adoption by the community, among other reason we can notice the consensus "Delegated Proof-of-Stake" raised by EOS allowing a better scalability and TPS until 100'000. We believe also in the Stellar Platform where we speak about DEX (Decentralized Exchanges).

For those platforms we will create also "light" Nodes by using our "Virtual Environment" as the same way we do with the "SPV Virtual Environment".