

# [CryptReserve SOVID - Sovereign Id](https://www.blockchainbpi.com)  
CryptReserve is a server written in C exposing IPFS using Blockchain for permissioning and exposed via a RestAPI and communicating with IPFS and Geth using curl rpc.

#### ERC 1155

##### User Profile Contract

User creates a Profile Contract that links to the Passport IPFS CID file.

This ERC 1155 distributes burnable tokens to decrypt and view IPFS Attributes

- CID
- Map [WalletId, Scopes(CIDS-IPFSAttributes)] - Permissions
- CIDList (IPFS Attributes) (Coins/Personal Information Files/Permissioned/Encrypted)
- CID is 21?
- Wallet Ids (Permissioned to view)
- CID is Verified Investor (>250k/yr)
- Wallet Ids (Permissioned to view)

#### Bitcoin OP\_CODE Scripting (Taproot)

BIPs 340 (Schnorr)

341 (SegWit V1)

342 (Validation)

#### Lightning Network

Nice concept of building payment channels and signing the raw transactions off-chain then only publish after back and forth building with one or more parties. Also this is a predefined protocol subject to change and fork. Using the concepts of signing raw transactions off-chain under rules and procedure decided by the stakeholders of a system can only be effectively achieved when the transaction chain is designed, developed and implemented with contract rules written into the OP-CODE UTXO's. The OP-CODE scripts with multi sig sources can be cached on this P2P mesh network as an encrypted IPFS doc that can be decrypted only by authorized owners of private key(s). This operation would pull the OP-CODEs script from an IPFS doc identified by a CID that was agreed upon by the involved parties and any public keys would also be available in this encrypted document. This would compliment the security added the latest BTC soft fork for TapRoot.

Add a transaction building mechanism by which public keys (counter parties) are added to include

#### IPFS

Node caches CID/document information in shared memory.

##### User

- CID - encrypted permission data
- WalletId - permissioned fields/document(s)

##### Attributes

- CID
- Over 21 CID (Driver's License DMV)
- Verify Mobile Number + MACID for GPS Verification
- Verified CID ()

#### IPFS

//Plugin for Ethereum Blockchain

ERC 1155

Geth

Solc

//Front End (Really need native per platform, this is obsolete will contract front end developers for Android and IOS)

Expo/React

MVVM - nice but better ways available from front end experts.

## CryptReserve Installation Script

Run install.sh (./install.sh)

### Dependences

- \* Linux or Mac OS
- \* IPFS - trimmed c version
- \* Bitcoin Core Node Rest Server (integrated custom c++ modded build)
- \* C - gcc
- \* Jansson - library for encoding, decoding and manipulating JSON data
- \* Ulfius - libulfius-dev - HTTP Framework for REST Applications in C
- \* Orcania - LibOrcania-dev - Potluck of different fctns shared among C programs
- \* Hoel - Database (SQLite3) abstraction library written in C.
- \* Yder - Logging library for C applications
- \* Glewlwyd - OAuth2 (this is temporary, goal is to use IPFS Curl for decentralized auth storage)
- \* OpenSSL
- \* Libjwt
- \* Libgnutls28-dev
- \* Libssl
- \* Libcrypto
- \* Libsqlite3
- \* Libcurl
- \* SolC - Solidity compiler byte code and linker (smart contract dispatcher)

Bitcoin source code (c++)

\* Boost

# libmba (solidity.h/hashmap)

### Testing

## Testnet

APIKey: bd1bGD1QdMHkKgcckLXwSulDOgZSc6YcuA3mNTdlgiF1ysK

All API keys that you have created are listed below. You may create up to 10 keys for any resource you have access to.

Name maccryptreserve

Permissions ubiquity

Owner Ed Vergara

Created 25/08/2021

Expires 24/09/2021