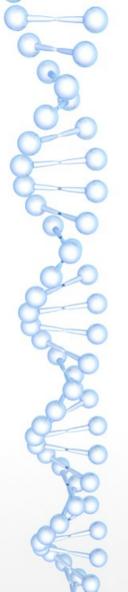# Proof-of-Concept

March 16-26 2021
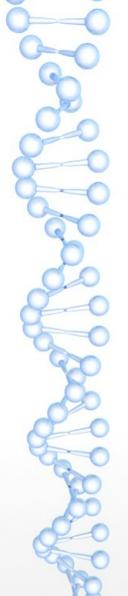

Secret **Monero** Bridge

A value transfer bridge between the Monero blockchain and the Secret Network.
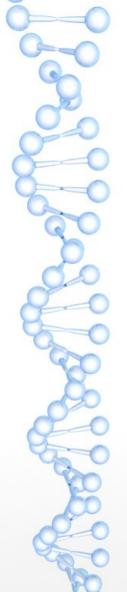
Team Members

- segfaultdoctor – secret contracts

- bobcalifornia – web application (UI)

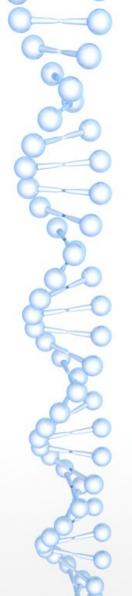- maxkoda – Monero components and project management

Motivation

- Connect the Monero community to the Secret Network and Secret DeFi

- Enable value transfer between the Monero blockchain and the Secret Network

- Provide a working reference model for the larger open source Secret Monero Bridge project

Objectives

- Create a new SNIP-20 secret token for Monero (XMR) on the Secret Network. The new secret token is named sXMR.

- Create a Secret Monero Bridge secret contract responsible for minting new sXMR tokens into circulation as well as for burning sXMR tokens taken out of circulation (converted back into XMR).

- Enable the conversion of XMR to sXMR secret tokens on Secret Network: XMR→sXMR.

- Enable the transfer of sXMR secret tokens to XMR on the Monero blockchian: sXMR→XMR.

Secret Contracts

- We deployed 2 secret contracts on the holodeck-2 testnet:

- the sXMR SNIP-20 secret token contract

- The Secret Monero Bridge secret contract

Secret Contracts

secret1dxrkvn0pg8js89swp37m8uh72dulu945ye330s

Code ID:	27890
Creator:	secret1fzatz545pzuvuc3jx8c7kznyu6e64r64xvgzrv
Data Hash:	8BCD5F937B458C3D8D3995751B8EE675262587A41D07E12BFE21 97E519CC66D1
Builder:	
Label:	sxmr-v2
Source Code:	N/A
Description:	

secret1yx6g7j82zp487h95t8wuutzy5uvfhfayl5dqld

Code ID:	27919
Creator:	secret1fzatz545pzuvuc3jx8c7kznyu6e64r64xvgzrv
Data Hash:	545933EA2A58990CD4633CD02E9DEC7600BDDC387D02742B74B0 1242151ED699
Builder:	
Label:	sxmr-bridge-3
Source Code:	N/A
Description:	

Web Application

- We developed a simple web application for this proof-of-concept.

- The web application makes calls to a monero-wallet-rpc service to interact with the Monero blockchain.

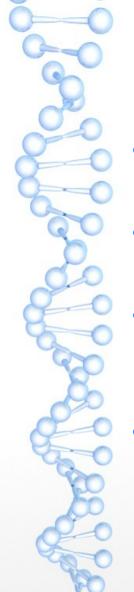- The web application utilizes SecretJS to interact with the Keplr wallet and Secret Network.
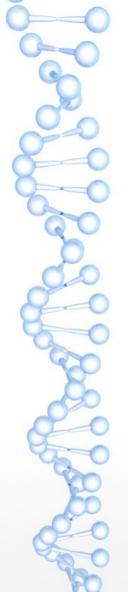
Web Application

XMR to sXMR

To convert XMR to sXMR send XMR to address:

9yjvUbbdcFSXRKAoaCGfQQR9UkbkwVBhqYXihc1EcoPdin8YibndTrCbEgQHVNfVdcdmtbt5gFqCnBAt81QakWg83GCkibK

TxID

TxKey

Please fill in this field.

Secret wallet address

Submit

sXMR to XMR

Address:
secret1ajjrdg7kfjy6460vysfcv8glu3uf4wuncrqmj8
Balance:
357.02 SCRT

Monero Wallet Address
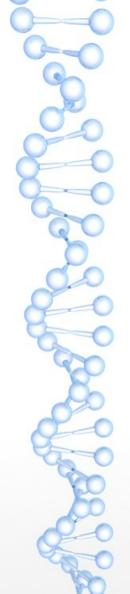
Amount

| | sXMR |

Submit

XMR→sXMR Conversion

- User sends XMR to the Secret Monero Bridge wallet address *9yjvUbbdcFSXRKAoaCGfQQR9UkbkwVBhqYXihc1EcoPdin8YibndTrCbEgQHVNfVdcdmtbt5gFqCnBAt81QakWg83GCkibK*

- User submits Monero Proof-of-Payment via the web application

- Web application verifies Monero Proof-of-Payment and then mints sXMR secret tokens and sends them to the user's secret wallet address.

- XMR received by the Secret Monero Bridge remain locked.
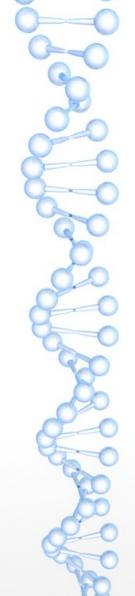
sXMR→XMR Conversion

- User converts sXMR→XMR via use of the web application.

- User indicates the amount of sXMR to convert and provides a Monero wallet address which will receive the XMR.

What's Next

The Secret Monero Bridge open source project will deliver these future improvements:

- Multi-signature consensus facility to harden Monero wallet security

- Integrated Monero wallet functionality directly in the user interface

- Design the web application as an unstoppable decentralized application (Dapp)

- And more...

Wrap-up

In this hackathon we learned:

- How to build and deploy secret contracts
- How to use SecretJS in web applications

Additional information and artifacts (demo video) for this proof-of-concept can be found on our github site at:

- https://github.com/maxkoda-cpu/Secret-Monero-Bridge/tree/main/Proof-of-Concept