

Gold Coin Kuknos WhitePaper

Abstract

The bank should be able to sell digital assets (golds), based on prepayment or full-payment methods. Customers should be able to buy these digital assets directly from the bank (in person) or buy them digital wallet (online). Customers should be able to exchange these digital assets with each other. They can exchange their digital assets for real gold coins in a bank at the release date.One of the most important requirements in this system is an application, which enables customers to buy and sell their digital assets. The exchange system should work like a stock exchange. In this whitepaper we outline the proposed Kuknos network solution for tokenization of gold coins management.

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Introduction and problem

The bank should be able to sell digital assets (golds), based on pre-payment or full-payment methods. Customers should be able to buy these digital assets (golds) directly from the bank (in person) or buy them digital wallet (online). Customers should be able to exchange these digital assets (golds) with each other. They can exchange their digital assets (golds) for real gold coins in a bank at the release date.

One of the most important requirements in this system is an application, which enables customers to buy and sell their digital assets (golds). The exchange system should work like a stock exchange (supply and demand systems).

Solution

A private blockchain network in which gold coins will act as a digital asset is a proper solution. An anchor (bank) releases these digital assets (coins) and customers are able to buy, sell and manage their balance via their digital wallet. Customers should be able to exchange their digital assets (coins) for real gold coins at the release date by visiting the bank.

Proposed Model

In this section, there are three general stages:

- A. Generate and issue GOLD tokens
- B. Customer assets cycle in sadad

A) Generate and issue GOLD tokens

This network has a GOLD issuer account and a distributor account. Sadad generates ... GOLD tokens and gives each distributor.

Before Issuing and of token

Before issuing the token you should the configure issuer accounts and distributed accounts. According to in **Table 1**, you create an Issuing, add signers and asset creation in the issuer accounts. In addition, you can configure them.

Table 1:	Issuer account configuration	(Create an Issuing,	, add signers and asset creation)
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	Issuer account (sadad)			
Account fields	Transaction1: Create the issuing account	Transaction2: Add signers	Transaction3: Asset creation	



operation	Create account	Set option	payment
Flag	-	Atomization required	-
Signer	Source account (sadad)	Sadad.GOLD.issuer	Sadad.GOLD.issuer Sadad.GOLD.issuer.M1
	Low = 0	Low = 0	Low = 0
threshold	Medium = 100	Medium = 0	Medium = 100
	High = 0	High = 100	High = 0
weight	Source account=100	Sadad.GOLD.issuer=100	Issuing account weight=50 Sadad.GOLD.issuer.M1=50

According to in **Table 2**, you create a treasury, sender and receiver in the distributed account. In addition, you can configure them.

Table 2: Distribution account creation (Treasury, Sender and Receiver) and configure

	Distribution account			
Account fields	Transaction1: Create treasury distribution account	Transaction2: Create sender distribution account	Transaction3: Create receiver distribution account	
operation	Create account	Create account	Create account	
Flag	-	-	-	
Signer	Source account	Source account	Source account	
threshold	Low = 0	Low = 0	Low = 0	



	Medium = 100	Medium = 100	Medium = 100
	High = 0	High = 0	High = 0
weight	Source account =100	Source account =100	Source account =100

According to in **Table 3**, you Add signers treasury, sender and receiver in the distributed account. In addition, you can configure them.

 Table 3: Distribution account add singers (Treasury, Sender and Receiver) and configure

	Distribution account			
Account fields	Transaction1: Add signers treasury distribution	Transaction2: Add signers sender account	Transaction3: Add signers receiver account	
operation	Set option	Set option	Set option	
Flag		-	-	
Signer	Dis.GOLD.Treasury	Dis.GOLD.Sender	Dis.GOLD.Receiver	
	Low = 0	Low = 0	Low = 0	
Threshold	Medium = 0	Medium = 100	Medium = 100	
	High = 100	High = 0	High = 0	
Weight	Dis.GOLD.Treasury=100	Dis.GOLD.Sender=100	Dis.GOLD.Receiver=100	

According to in **Table 4**, you Creating trust of treasury, sender and receiver in the distributed account. In addition, you can configure them.

 Table 4: Distribution account creation trust (Treasury, Sender and Receiver) and configure

	Distribution account			
	Transaction1:	Transaction2:	Transaction3:	
Account fields	Creating trust of treasury account	Creating trust of sender account	Creating trust of receiver account	



	Change trust/trust line to	Change trust/trust line to	Change truct/truct line to
	Change trust(trust line to	Change trust(trust line to	Change trust(trust line to
operation	issuer)	issuer and distributer	issuer and distributer
		treasury)	treasury)
		, ,	, ,
Flag	-	-	-
U U			
	Dis.GOLD.Treasury	Dis.GOLD.Sender	Dis.GOLD.Receiver
	Dist.GOLD.T.M1	Dist.GOLD.S.M1	Dist.GOLD.R.M1
Signer			
	Dist.GOLD.T.M2	Dist.GOLD.S.M2	Dist.GOLD.R.M2
	Dist.GOLD.T.M3	Dist.GOLD.S.M3	Dist.GOLD.R.M3
	Low = 0	Low = 0	Low = 0
threshold	Medium = 100	Medium = 100	Medium = 100
	High = 0	High = 0	High = 0
weight	Each signer key	Each signer key	Each signer key weight=25
weight	weight=25	weight=25	

After issuing token

After issuing the token, you should the configure issuer accounts and token. According to in **Table 5** and **Table 6**, you can configure them.

	Issuer account(sadad)	
Account fields	Transaction:	
	Limit token supply	
	Set Option - Thresholds & Weights	
	Source account weight: 0	
	low threshold: 0	
operation	medium threshold: 0	
	high threshold: 0	
	0	
F lan	Authorization required (0x1)	
Flag	Authorize revocable(0x2)	
<u>Cian an</u>	issuing account (sadad)	
Signer	sadad.GOLD.issuer.M1	
	Low = 0	
threshold	Medium = 0	
	High = 100	
weight issuing account weight=50		



sadad.GOLD.issuer.M1=50

Table 6: Distribution account token configure

	Distribution account (Broker Company)	Sender account	Receiver account
Account	Transaction1:	Transaction2:	Transaction3:
fields	Token distribution	Send token	Receiving token
operation	Payment to sender	Payment to public	Payment to treasury
Flag	-	-	-
	Dis.GOLD.Treasury	Dis.GOLD.Sender	Dis.GOLD.Receiver
	Dist.GOLD.T.M1	Dist. GOLD.S.M1	Dist.GOLD.R.M1
Signer	Dist.GOLD.T.M2	Dist.GOLD.S.M2	Dist.GOLD.R.M2
	Dist.GOLD.T.M3	Dist.GOLD.S.M3	Dist.GOLD.R.M3
	Low = 0	Low = 0	Low = 0
threshold	Medium = 100	Medium = 100	Medium =100
	High = 0	High = 0	High = 0
weight	Each signer key weight=25	Each signer key weight=25	Each signer key weight=25

After issuing and distributing token the setting of the issuer should be changed since does not an issue of this asset again. Therefore, the threshold of issuer account is set high and its weight is set zero with no trust line. In addition, the threshold of distributors is set medium to payment and the weigh is set between 50 to 100 at least. Each distributor receives GOLD tokens from sadad in its original account. Distributors have two types of accounts separately, one for receiving GOLD tokens and one for sending a GOLD token that charge it periodically Units. So distributors have receiver public key and sender public key for a transaction to customers, number of delivery points. Each distributor consists of three account such as treasury account, sender and receiver that created by sadad, and each account has three signers at least. **Figure 1** shows the Issuer and distributers accounts.





Figure 1: Issuer and distributers accounts

B) Customer assets cycle in sadad

The customer assets cycle is described as in blow

- 1. Bank issues coins as an asset in the network
- 2. Buying Coins:
 - a) A customer can buy digital coins by visiting a bank in person (directly)
 - b) A customer can buy digital coins by using a digital wallet (online)
- 3. Customers can exchange their digital coins for real gold coins by visiting a bank

In attentional, **Figure 2** and **Figure 3** show the customer assets cycle and exchange mechanism with used the stellar network in the sadad informatics corporation



Figure 2: Customer assets cycle in sadad



Figure 3: Send, receive and exchange