

Alchemint User Manual

1. Explanation

- Version 1.1, beta use only
- Drafted by 2018-9-12
- Updated by 2018-10-17

2. Term Explanation

Alchemint Platform: Alchemint is a mixed mode stablecoin issuance platform based on NEO through smart contracts and inter-chain technology. Individuals and institutions are enabled to issue any stablecoin by different protocols. Its vision is to become a cross-protocol stablecoin management center.

Keystore: it refers to a file format (JSON) to store the private key. It allows users to customize password. Logging in wallet requires Keystore file and password.

SAR: namely "Smart Asset Reserve". It is a very important technology component within the system. It is a smart contract based on Neo.

SAR-B: Mainly for business users. Stablecoin is issued through the means of the 100% off-chain currency reserves and on-chain SDS locked as a security deposit by smart contract. Each SAR will lock SDS. The market value and the minimum margin ratio of SDS determine the number of stablecoin that can be released. The current minimum deposit ratio of 50%.

SAR-C: Mainly for individual users and business users. Stablecoin is issued by over-collateralizing digital assets. The stablecoin name is SDUSD.

SAR Status: In the SAR-C, when " $0 < \text{SAR mortgage rates} \leq 150\%$ ", the status of SAR is displayed as "Unsafe"; when " $150\% < \text{SAR mortgage rates} \leq 200\%$ ", SAR status is shown as "Dangerous"; when " $\text{SAR mortgage rate} > 200\%$, SAR", status is displayed as "Safe".

SDUSD: its price anchors at dollars. It is the standard stablecoin issued on the Alchemint platform by institutions and individuals through collateralizing digital assets. During liquidation and returning, the worth of one SDUSD is always accounted as 1 dollar and is irrelevant to the market prices.

Total SDUSD Issued: it refers to the total amount of all issued SDUSD in the whole SAR-C system.

Overall Issuing Ceiling (SDUSD): The upper limit of the total amount of the SDUSD can be issued in SAR-C system.

CNEO: due to the fact that the minimum unit of NEO is 1. Its segmentation is not allowed. Thus CNEO is needed for calculation purpose. The minimum unit of CNEO is 0.00000001. The exchange ratio between NEO and CNEO is constantly 1: 1. At any time, user can freely convert CNEO to NEO and vice versa in Alchemint platform.

Total CNEO Collateralized: it refers to all the CNEO collateralized in the whole SAR-C system.

SDS: it refers to Alchemint platform token. In the SAR-C, it acts as a mean to pay for service charge; in the SAR-B, it acts as a margin.

Issuing Fee (Yearly): Start charging since the moment of issuing SDUSD on the first block of time. Fee is charged in proportion of returned stablecoin. For example, with the condition of 1% yearly issuing fee, one year after the issuance of 100 SDUSD worth of \$ 100 requires \$ 1 fee. It will be paid through SDS.

Overall Mortgage Rate = Total CNEO Collateralized / Total SDUSD Issued

Liquidation Mortgage Rate: When mortgage rates reach below this rate, SAR state is "unsafe" which allows this SAR to be liquidated.

Liquidation: When any one of mortgage rates of the SAR in SAR-C reaches below 150%, it can be improved by liquidation. Any user holding SDUSD could participate in liquidation and obtain the corresponding collateral with a discount. But when mortgage rates rise to 160% after liquidation, further liquidation of the SAR is not allowed. If a SAR mortgage rate reaches below 100%, it is still allowed to perform the liquidation, but not only will there be no discount, it results a loss. During liquidation, no service fee is required.

SAR Liquidation Price: Under the condition that the amount of collateral and stablecoin remain unchanged, the price drop of CNEO will cause the SAR

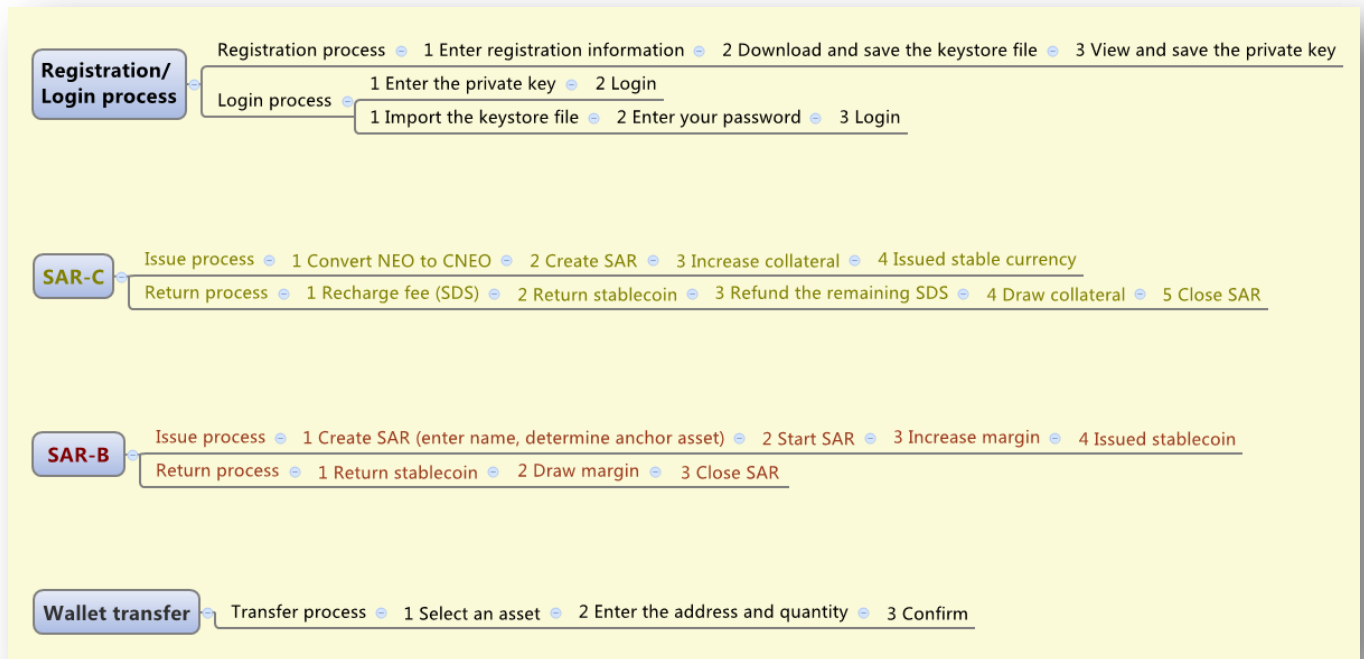
mortgage rates reach 150%. The price of CNEO that leads to the liquidation threshold is called SAR Liquidation Price.

Liquidation Discount: During testing period, the discount rate is 90%. For example, with 0.9 SDUSD worthy \$ 0.9 you can exchange for the amount of CNEO worthy \$ 1 during liquidation.

3. Operating procedures

Platform consists of three parts: Personal (SAR-C), means (SAR-B), the wallet.


The basic procedure is as follows:



4. Specific Steps

4.1 SAR-C stablecoin Issuance

First step, convert NEO into CNEO



The screenshot shows a web interface for converting NEO to CNEO. At the top, it says "NEO ⇌ CNEO". Below this, there are two rows of input fields. The first row is for converting NEO to CNEO: "Amount to input" is NEO, with a value of 6000 and a dropdown set to "ALL"; "Amount to get" is CNEO, with a value of 6000. A blue "Confirm" button is to the right. The second row is for converting CNEO to NEO: "Amount to input" is CNEO, with a value of 0 and a dropdown set to "ALL"; "Amount to get" is NEO, with a value of 0. A blue "Confirm" button is to the right.

After entering the number for the conversion, click Confirm. Here you can only enter an integer. Decimal type is not allowed.



Afterwards a 30-second countdown will pop up. You need to wait for the block to be confirmed. Since each step on the Alchemint platform is done on the blockchain, every operation requires waiting for confirmation on NEO public chain before further operation. Thus you need to be patient wait for a while. After the countdown, the page will automatically refresh.

Relevant Assets			
Type	Quantity	Price	Value
GAS	0.000	4.96	0.00
NEO	82830.000	15.58	1290491.40
SDS	99989.548	0.00	709.32
CNEO	6000.000	6.00	36000.00

After the refresh, CNEO column will be added.

Second step, click on "Creating SAR"

My SAR

Create SAR

Likewise, wait 30 seconds. After refreshing, the SAR Panel will emerge.

Third step, increase collateral

My SAR					
#1 ID	20000.00 SDUSD Issuable	6000.00 CNEO Drawable	-- SAR Mortgage Rate	0.00 SDS	<div> Increase Draw </div>
-- SAR Status	0.00 SDUSD Issued	6000.00 CNEO Collateralized	0.00 SAR Liquidation Price(CNEO)	0.00 Fee Generated(SDS)	<div> Issue Return </div>
					<div> Recharge Refund </div>
					<div> History Close SAR </div>

Click "Increase Collateral" , enter and confirm the number.

Note: Due to the execution condition is not satisfied, some buttons are in a non-clickable state, such as "Draw Collateral" in this moment.

Increase Collateral

CNEO

6000

^
v

Cancel

Confirm

The initial default number is the maximum number allowed in your account. You can edit the number in the box or drag the percentage bar if you want to change the number.

Fourth step, issue stablecoin

My SAR					
#1 ID	24000.00 SDUSD Issuable	6000.00 CNEO Drawable	-- SAR Mortgage Rate	0.00 SDS	<div> <div>Increase</div> <div>Draw</div> <div style="border: 2px solid red; padding: 2px;">Issue</div> <div>Return</div> <div>Recharge</div> <div>Refund</div> <div>History</div> <div>Close SAR</div> </div>
-- SAR Status	0.00 SDUSD Issued	6000.00 CNEO Collateralized	0.00 SAR Liquidation Price(CNEO)	0.00 Fee Generated(SDS)	

The corresponding value in the SAR Panel will occurs. Since this SAR has been collateralized, you now may issue stablecoin.

Issue

SDUSD

20000

↑
↓

Cancel

Confirm

In this testing case, the maximum SDUSD allowed to be issued is 20,000. The formula: the maximum number of stablecoins issued= total value of the collateral / mortgage rates. Let's say you issue a maximum amount of stablecoin in your SAR which will lead your SAR mortgage rates to a critical value of liquidation, namely 150%. In order to avoid the risk of being liquidated, it is recommended to keep the mortgage rates relative higher, such as 300%.

My SAR			
#1 ID	10000.00 SDUSD Issuable	3000.00 CNEO Drawable	300.00% SAR Mortgage Rate
Safe SAR Status	10000.00 SDUSD Issued	6000.00 CNEO Collateralized	2.50 SAR Liquidation Price(CNEO)

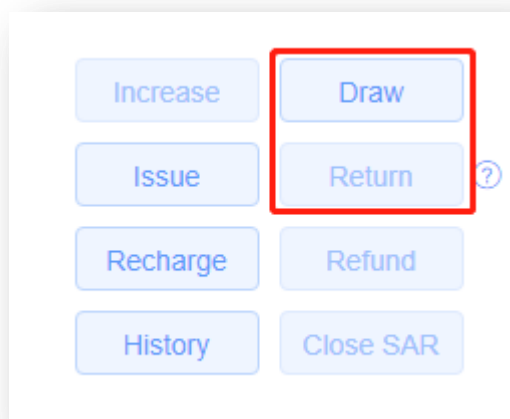
Herr we chose to issue 10,000 SDUSD which led to a 300.00% SAR mortgage rate.

In this testing case, CNEO price is \$ 5. Only when CNEO falls to \$ 2.50, will






the liquidation be triggered.

Relevant Assets			
Type	Quantity	Price	Value
GAS	0.000	4.96	0.00
NEO	82830.000	15.58	1290491.40
SDS	99989.548	0.00	709.32
SDUSD	10000.000	1.00	10000.00

Meanwhile, the number of SDUSD can be viewed in "Relevant assets" .



At this point, you can perform other operations, such as drawing collateral. As long as the SAR mortgage rate is no less than 150%, the system allows drawing. The amount extractable = $\{(SAR \text{ mortgage rates} - 150\%) / SAR \text{ mortgage rates}\} * \text{total CNEO collateralized}$.

SAR Operation History		Liquidation Operation History	
Date	Operation	Quantity	TX
2018-10-31 16:41:11	Issue	10000	0x12...81d5 
2018-10-31 16:39:26	Increase	6000	0x46...13c5 
2018-10-31 16:38:33	Draw	6000	0xd0...575c 
2018-10-31 16:34:38	Increase	6000	0x99...287e 
2018-10-18 11:39:36	Create SAR	0	0x14...51e5 

In “Operation History” , you can view all the operation records.


At this point, since you have not recharged service fee (SDS), the system also does not allow you to perform returning stablecoin.

4.2 SAR-C Return Process

First step, recharge fee (SDS)

Recharge SDS (For Deducting Service Fee)

SDS



Enter the number and click OK. After refreshing, you are allowed to return stablecoin.

10.00
SDS

0.00
Fee Generated(SDS)

Although the system begins calculating fee since the moment of issuance of stablecoin, it may not be displayed due to be the amount of fees generated is still too small.

Second step, return stablecoin

Return

SDUSD

10000

Cancel

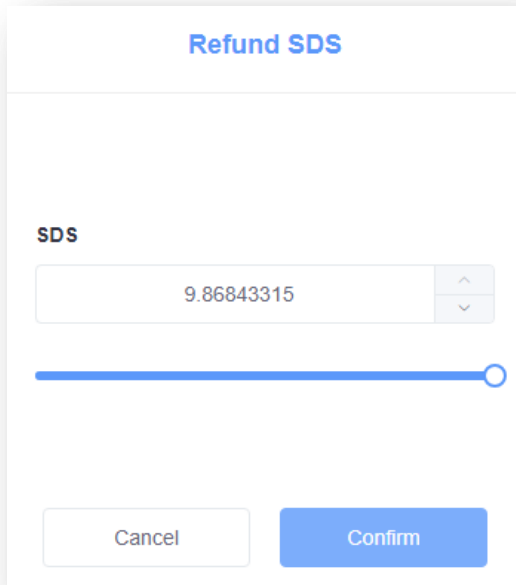
Confirm

In this testing case, we choose to return all stablecoin.

#1 ID	20000.00 SDUSD Issuable	6000.00 CNEO Drawable	-- SAR Mortgage Rate	9.86 SDS	<div>Increase</div> <div>Draw</div>
-- SAR Status	0.00 SDUSD Issued	6000.00 CNEO Collateralized	0.00 SAR Liquidation Price(CNEO)	0.00 Fee Generated(SDS)	<div>Issue</div> <div>Return</div> <div>Recharge</div> <div>Refund</div> <div>History</div> <div>Close SAR</div>

At this point, you can see "SDUSD Issued " is zero and the fee has been deducted.

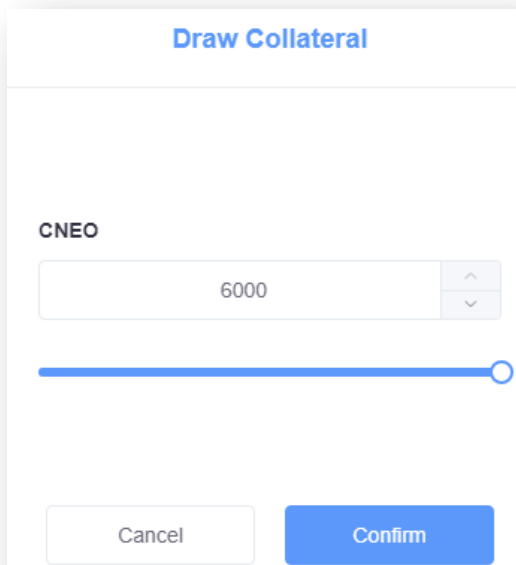
Third step, refund the remaining SDS



The "Refund SDS" dialog box features a title bar with the text "Refund SDS" in blue. Below the title bar, the label "SDS" is positioned above a numeric input field containing the value "9.86843315". To the right of the input field are up and down arrow buttons. A horizontal blue slider is located below the input field, with its handle positioned at the far right end. At the bottom of the dialog, there are two buttons: a white "Cancel" button and a blue "Confirm" button.

At this point, if we wish to close this SAR, we can extract the remaining SDS.

Fourth step, draw collateral



The "Draw Collateral" dialog box has a title bar with the text "Draw Collateral" in blue. Below the title bar, the label "CNEO" is positioned above a numeric input field containing the value "6000". To the right of the input field are up and down arrow buttons. A horizontal blue slider is located below the input field, with its handle positioned at the far right end. At the bottom of the dialog, there are two buttons: a white "Cancel" button and a blue "Confirm" button.

Let' s further drawing all the collateral. The order of the third step and

fourth step may be reversed.

Fifth step, close SAR

My SAR					
#1 ID	0.00 SDUSD Issuable	0.00 CNEO Drawable	-- SAR Mortgage Rate	0.00 SDS	<input type="button" value="Increase"/> <input type="button" value="Draw"/>
-- SAR Status	0.00 SDUSD Issued	0.00 CNEO Collateralized	-- SAR Liquidation Price(CNEO)	0.00 Fee Generated(SDS)	<input type="button" value="Issue"/> <input type="button" value="Return"/>
					<input type="button" value="Recharge"/> <input type="button" value="Refund"/>
					<input type="button" value="History"/> <input type="button" value="Close SAR"/>

Only when all values on the panel are zero, will you be able to close the SAR.
After closing, SAR Panel will close.

Close SAR

Are you sure to close SAR ID 1

History will disappear after closing and you will no longer be able to view it

When you create the next SAR, you cannot view the pervious SAR operation.

At this point, you can convert the CNEO into NEO. But if CNEO is not an integer, the remaining part after the decimal point cannot be converted to NEO.

ATTENTION

- Do not manually turn off or refresh this page!
- Otherwise the conversion may fail and the quantity might be wrong!
- Please wait patiently till two 30s countdown on the right is over.

It should be noted here that due to some limitations of the current NEO network, it is technically necessary to use 2-step blockchain confirmation to complete the conversion. Never turn off or refresh the page during this conversion process. Wait patiently for the page to automatically refresh.

4.3 SAR-B stablecoin issue

First step, Creating SAR

SAR-B

Create SAR

Click "Create SAR" , enter the name of your stablecoin, and select the anchor type of asset. Afterwards, you will not able to change it.

Create Coin Name

Name

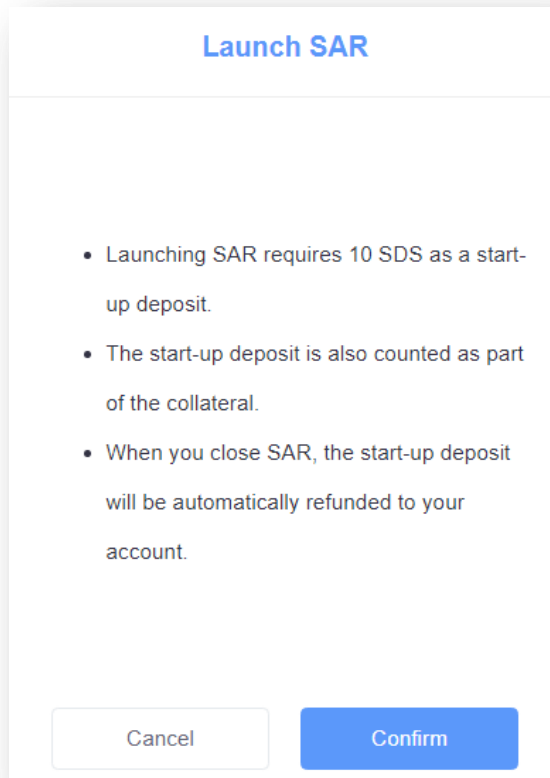
SD- Input the name suffix 3-5 capital

Anchor Asset Type

USD

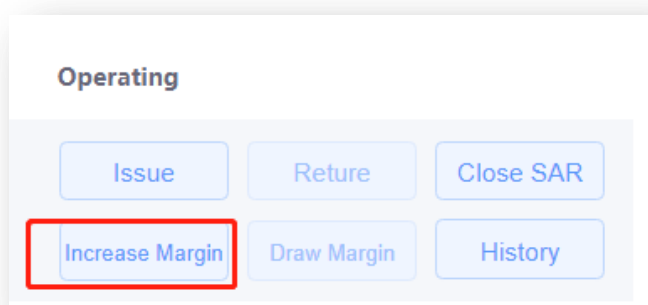
- USD
- EUR
- YEN
- GBP
- GOLD

Second step, start SAR



Note: If there are less than 10 SDS in the account, you cannot start your SAR.

Third step, increased margin



Fourth step, issue stablecoin

Issue

SD-WOW

141.8504

^
v

Cancel

Confirm

The maximum issuable number = (total value of the deposit / 50%) / unit price of the anchored stablecoin

SAR-B					
Name	Type	Circulation	SDS Margin	Margin Rate	Status
SD-WOW	USD	141.850 (\$141.850)	10000.000 (\$70.925)	50.00%	Safe

Relevant Assets	
SDS:	0.00 (\$0.00)
SD-WOW:	141.85 (\$141.85)

After confirmation, you can view it in the "Relevant assets" .

4.4 SAR-B stable recovery credits

First step, return stablecoin

Reture

SD-WOW

141.8504

^
v

Cancel

Confirm

Second step, draw margin

Draw Margin

SDS

^
v
9990

- There are 10 SDS start-up deposit in the margin which cannot be directly withdrawal.
- The start-up deposit will be automatically refunded to your account when you close SAR.

Cancel
Confirm

Third step, close SAR

SAR-B							
Name	Type	Circulation	SDS Margin	Margin Rate	Status	Operating	
SD-WOW	USD	0.000 (\$0.000)	10.000 (\$0.070)	--	Safe	Issue Return Close SAR	Increase Margin Draw Margin History

When the circulation is zero and the margin is just 10, this SAR can be closed.

Close SAR

- History will disappear after closing and you will no longer be able to view it.
- The coin name will be available on the market.
- The start-up deposit will be automatically refunded to your account.
- Precondition for closing : The circulation is 0; The amount of margin is exactly 10.

Cancel

Confirm

After closing, you cannot view the history.

4.5 Transfer wallet

First step, select an asset

Transfer

Asset

NEO (2)

GAS	0
NEO	2
SDS	9990
CNEO	16.32683956
SDUSD	218.19314124

Second step, the number of input address

Transfer

Asset

NEO (2)

Address

Abi8x8z1ArEgUbMEXUmr78XVkihvwXJZfV

Quantity

100 | ALL

Confirm

Then confirm.

5. Precautions

- Test URL: testnet.alchemint.io
- This version is currently in private beta, not the final product form. The UI, UX, functionality and mechanisms are to be improved constantly.
- Alchemint will provide volunteers the testing tokens including NEO, SDS and so on.
- Test network token is different from the main network token and cannot be traded in exchange.
- If you cannot open the page, try VPN or 4g network.
- White paper offers a detailed discussion on the mechanism. It can be downloaded through the official website.
- When encounter problems or have doubts during testing, please contact us.