Smart contract requirements

Requirements

This is the functional specification of the Noon Capital ICO smart contracts.

N, X and Y are constants, determined later.

Token

Basics

The token is based on the industry wide best practices, and must have the following properties.

1. The token implements the ECR20 standard token interfaces.
2. N pre-minted tokens are available, token minting and burning is not possible.
3. At the beginning the *token sale administration account (TSA)* owns the total supply and will reserve the unsold tokens.
4. The decimals number is 18.
5. The name of the token is NOON.

White list

The white list secures that only allowed allowed accounts can have tokens and make any operation on them.

1. The white list is managed by the *white list administartion (WLA) account*.
2. Only white listed accounts can transfer the tokens.
3. The TSA is white listed by default.
4. The WLA is assigned on the token creation. The owner can change it later.

Secondary market

1. At the beginning the TSA can move tokens only, other accounts are forbidden (eg. secondary market is disabled).
2. The TSA can enable the secondary market. This can not be reversed.

Other

1. In emergency mode only the owner can preform any action on the token. The owner can activate and deactivate the emergency mode.
2. Token can not be moved to the TSA, WLA and owner accounts. Their address is forbidden as a token transfer address.
3. The TSA is assigned on the token creation. The owner and the TSA can change it later.

Token sale

Basics

The token sale is the initial period, the issuance of the Noon Digital Certificates. The basic properties of the token sale are the following:

1. The token sale is started manually by the owner.
2. The token sale is closed manually by the owner or automatically when the total supply is depleted.
3. There is no minimum sold token requirement, the token sale is successfully anyway.
4. The TSA account is used to manage the tokens.

Token price

1. There are no tiers or bonuses implemented in software, this are handled by the manual issuance.
2. Token purchase is possible both in USD and ETH.
3. One token worth X USD and the USD purchases are handled manually. Manual issuance is used only to issue the tokens for those customers hows are paying for it in USD.

4. The smart contract issues the tokens of an ETH purchase. The ETH token price is calculated using the USD/ETH exchange rate.
5. If there is not enough unsold token left to fulfill the full amount of a purchase, it will be fulfilled partially and the remaining ETH will be returned to the purchaser.

Issuance

1. The manual issuance is done be the manual issuance administrator (MIA) account.
2. The USD/ETH exchange rate is set when the contract deployed. During the token sale the owner can change the MIA account any time.
3. The price of an ETH purchase is immediately transferred to the fund collector wallet. The fund collector is separate account from the contract owner, ideally a multisig wallet.
4. The minimum token count to buy in one transaction is Y.

End of the token sale

When the token sale is closed either way the following procedure must be implemented:

1. Enable the secondary market of the tokens.
2. Change the TSA and addresses to the owner address.
3. Transfer any remaining Ether to the owner. (In normal case this should be zero.)

Other

1. In emergency mode only the owner can preform any action on the token sale. The owner can activate and deactivate the emergency mode.
2. The organizer's wallet address is set during the contract deployment. The owner can change it any time.