## **Synapse Smart contracts detailed Description**

Name token: Synapsecoin

Symbol: SYP Decimals: 18 Kind: ERC20

cost: 0.05 USD

**Hardcap**: 18,000,000 USD **Soft**cap: 3,000,000 USD

**Tokens Supply**: 990000000

Tokens for sale: 495,000,000

frozen for team: 10% - 99,000,000 SYP

**frozen for reserve**: 8% - 79,200,000 SYP

frozen for others: 5% - 49,500,000 SYP

12% Marketing9% Expansion3% Bounty3% Advisor

#### Note:

50% of tokens available for sale will be in crowdsale owner's wallet. 27% of tokens available for marketing, expansion, Bounty, Advisor will be transferred to token owner Crowdsale of synapse has 3 phases, each and every phase of crowdsale can be started, pause, Restart, end manually from Crowdsale Contract.

#### **Phases Of Crowdsale**

➤ Phase one: Private Sale

➤ Phase Two : Pre Sale

➤ Phase Three : Public Sale

**Direct Tokens** can be transfer at any phase of a sale to direct investor or investor invested through btc or any other coin.

Direct tokens can be transfer by using sendDirectInvestorTokens()

That require three fields:

- 1. Ethereum Address of beneficiary / Direct Investor
- 2. No of Tokens (to send to beneficiary)
- 3. USD in cents that owner got through any mode of payment.

# Step 1: Deploy the Synapse Token Contract:

- => Constructor of synapse token requires Three parameter that are the address.
- => Ethereum Address of Token Contract Owner
- => Ethereum Address of Crowdsale Contract Owner
- => Ethereum Address of Vesting Contract Owner

#### Note:

- ➤ Token contract owner address is a address where 27% of total Supply will be transferred.
- ➤ Crowdsale contract owner address is a address where 50% of total Supply will be transferred for token sale.
- ➤ **Vesting contract** owner address is a address where 23% of total Supply will be transferred for freeze tokens(team,reserve,others).

# Step 2: Deploy the crowdsale contract:

- => Constructor of crowdsale contract requires four parameters.
  - a) Ethereum Address of owner of crowdsale contract.
  - b) Address of ethereum wallet, where funds will get forwarded when some one invest in sale.
  - c) Address of Synapse token contract.

d) Initial ether price in cents.

# Step 3: Deploy the TokenVesting Contract:-

- => Constructor of TokenVesting contract requires three parameters.
  - a) Ethereum address of a owner of vesting contract
  - b) Address of Synapse token contract.

# Step 4:- Call the ActivateSaleContract Function of Synapse token contract:-

- => Executing this function requires One parameter.
- a). Address of crowdsale contract.

This function is only called by crowdsale Owner.

=> This function will not start the crowdsale.

After that crowdsale Contract Owner will call function Approve() that require two parameters

- (a) address of a token Contract.
- (b) Crowdsale Tokens.

Using this function crowdsale owner approves crowdsale contract to use tokens on the behalf of crowdsale owner.

Tokens will be in crowdsale owner wallet.

# Step 4:- Call the ActivateVestingContract Function of Synapse token contract:-

- => Executing this function requires One parameter.
- a). Address of vesting contract.

This function is only called by vesting Owner.

After that vesting Contract Owner will call function Approve() that require two parameters

- (c) address of a vesting contract.
- (d) vesting Tokens.

Using this function vesting owner approves vesting contract to use tokens on the behalf of vesting owner.

Tokens will be in vesting owner wallet.

# **Stages of Crowdsale**

1) To start private sale of Crowdsale contract call function startPrivateSale() only by crowdsale owner.

## **Buying tokens in Private Sale:-**

- => Minimum \$5000 required to invest in Private Sale.
- => maximum \$2,000,000 can be invested in Private Sale.
- => tokens will be reflected in Beneficiary wallet, but not available for transfer till ico finalize.

To end private sale of Crowdsale contract call function endPrivateSale() only by crowdsale owner.

# **Buying tokens in Pre Sale:-**

- 2) To start pre sale of Crowdsale contract call function startPreSale() only by crowdsale owner.
- => Minimum \$50 required to invest in pre Sale.
- => maximum \$2,000,000 can be invested in pre Sale.
- => tokens will be reflected in Beneficiary wallet, but not available for transfer till ico finalize.

To end pre sale of Crowdsale contract call function endPreSale() only by crowdsale owner.

# Buying tokens in Public Sale:-

- 3) To start public sale of Crowdsale contract call function startPublicSale() only by crowdsale owner.
- => Minimum \$50 required to invest in public Sale.
- => maximum \$2,000,000 can be invested in public Sale.
- => tokens will be reflected in Beneficiary wallet, but not available for transfer till ico finalize.

To end public sale of Crowdsale contract call function endPublicSale() only by crowdsale owner.

After Public Sale is ended, call function finaliseSale of Crowdsale contract that will inform token contract that sale is finalised and now investor can transfer their tokens.

Note: after finalising a sale, vesting of tokens will not be available.

Token vesting can only be done before sale is finalised.

# Updating eth price :-

### Auto price update:-

=> Call update() function to update the eth price to recent price

note: To update the price automatically you need to have some ether in crowdsale contract address as oraclize charges fee to be paid in ether. Only owner can send ether to crowdsale contract.

=> Call updatePeriodically(uint256 \_updateTime) function to update the price periodically after \_updateTime seconds.

## Manual Price update:-

=> Contract owner can also update the price manually by calling setEthPriceInCents(uint\_ethPriceInCents)

discountInCurrentSale() function return, discount percentage in current sale only for public sale not for private sale.

tokenAmount() required usd in cents and it will return tokens you will get during that phase of a sale. Only when sale is public.

#### **Token Contract Functions**

#### sendBounty()

This function will transfer bounty tokens only called by owner of token contract.

Require two parameters

Address of bounty beneficiary

No of tokens to send

#### sendExpansionTokens()

This function will transfer Expansion tokens only called by owner of token contract.

Require two parameters

Address of bounty beneficiary

No of tokens to send

#### sendAdvisorsTokens()

This function will transfer Advisors tokens only called by owner of token contract.

Require two parameters

Address of bounty beneficiary

No of tokens to send

#### sendMarketingTokens()

This function will transfer Advisors tokens only called by owner of token contract.

Require two parameters

Address of bounty beneficiary

No of tokens to send

#### freezeAccount()

This function will freeze particular ethereum address to transfer tokens called by owner of token contract.

Require two parameters

Address to blacklist

bool(true/false) true to blacklist.

#### burn()

By using this function any synapse token holder can burn their tokens.

Require one parameters

Value of tokens to burn.

#### transferAnyERCTokens()

This function will transfer any erc20 token incidentally transfer to contract.

Require two parameters

Address to token contract

No of Tokens.

**Crowdsale Contract Functions** 

#### pause()

By using this function crowdsale contract Owner can stop current sale. Doesn't Require any parameters.

#### restartSale()

By using this function crowdsale contract Owner can restart current sale.

Doesn't Require any parameters

#### getStage()

This function will return the current stage of a sale.

#### discountInCurrentSale()

This function will return the discount in current stage.

#### tokenAmount()

This function will return the amount of token you will get in current sale.

Require one parameter.

Amount of usd in cents.

#### burnToken()

This function will approve crowdsale contract to spend zero tokens. Only called by Owner of crowdsale contract.

#### isSoftCapReached()

This function will return true if softcap reached and false is softcap is not reached.

#### minimumInvestmentIncurrentSale()

This function will return the minimum investment in current sale in usd cents.

#### maximumInvestmentIncurrentSale()

This function will return the maximum investment in current sale in usd cents.