

ORS Token Sale Smart Contracts

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Abstract

Technical specifications of the ORS tokensale. The ORS Tokensale contains two main smart contract. The Token contract is a standard contract from the Open Zeppelin library. The token sale contract is minting tokens directly to the addresses of the investors. There will be a KYC process done by a KYC service provider with an integrated KYCBase interface. Also an ICOEngineInterface provides informational functions for the Eidoo wallet.

1 Token Contract

The token contract implements a ERC20 standard token. It is named ORS Token. Ticker symbol will be ORS. The number of decimals will be 18 to keep the ORS resolution identical to Ξ .

The token contract emits the standard ERC20 events including a transfer event to address 0x0 in case of issued tokens.

We rely on the broadly trusted Open Zeppelin ¹ implementation of an ERC20 compliant Token. The following extensions are used:

1.1 Capped and Mintable

Tokens are minted on demand by the owner of the token contract. Therefore the ownership of the token contract has to be transferred to the token sale contract. The minting of tokens is capped at 833,333,333.

1.2 Pausable

Transfer of tokens is paused on construction of the token contract. Transfer of tokens is unpaused on finalization of the token sale contract. No transfer of tokens is possible during the ICO.

¹<https://github.com/OpenZeppelin/openzeppelin-solidity/tree/master/contracts/token>

1.3 Owned

Minting and pausing functions are restricted to the token contract owner. The ownership of the token contract is transferred to the token sale contract immediately after deploy.

1.4 StandardBurnable

Token can be irreversibly burned (destroyed) by the token holder at any time.

2 Token Sale Contract

The token sale contracts implements the Eidoo ICOEngineInterface² to provide the Eidoo app with informations on the ICO status.

The token sale contract provides a function that enables the token contract owner to set the ORS Token price at any time. The price represents the ORS per Ξ rate. With a target price of 0.05 € per ORS we will have a rate of $\approx 13,000$ according to a price of ≈ 650 € per Ξ .

Tokens are issued immediatly within the transaction receiving the Ξ payment.

Tokens are minted from different pools in the token sale contract. Any try to mint tokens from an empty pool will revert the whole transaction.

Pool		Cap	Drained
Main ICO	M	tbd	during ICO
Presale	P	tbd	after end of ICO
Bonus	B	64,460,000	together with M and P
Team	T	83,333,333	at finalization
Company	C	127,206,667	at finalization
Advisors	A	58,333,333	at finalization
		833,333,333	

With $|M| + |P| = 500,000,000$.

The token sale consists of the three stages main ICO, presale and finalization:

2.1 Main ICO

The Main ICO starts at 2018-05-14T09:00:00+02:00 (ISO 8601) and ends at 2018-05-26T23:00:00+02:00. There may be an early end if $|M| = 0$.

²<https://github.com/eidoo/icoengine/blob/master/contracts/ICOEngineInterface.sol>

Issued tokens are taken from M . Additional 5 % bonus tokens are taken from B if the KYC is signed by the Eidoo Wallet. When the cap of M is reached, the last investor will get the last tokens and the remaining Ξ will be refunded.

Remaining tokens in M after the end of the ICO will not be issued at all.

2.2 Presale

After the end of the main ICO and before finalization tokens are issued to pre-sale investors by the owner of the token sale contract according to a list provided by ORS. This list contains the amounts of tokens and bonus tokens assigned to presale buyer addresses and complies to the choosen caps of P and B . Issued Tokens are taken from P . Additional bonus tokens are taken from B . $|P| = 0$ is a precondition for finalization of the token sale contract.

2.3 Finalization

After completeness of the issuing of presale tokens the finalization stage takes place. $|T|$ tokens are issued to team. $|C|$ tokens are issued to company. $|A|$ tokens are issued to advisors. Remaining $|B|$ tokens are issued to company. Further miniting of tokens in token contract is disabled. Transfers are unpaused in token contract. The ownership of the token contract is not transferred. The token sale contract is useless from now on. The token contract has no owner capable of acting.

2.4 KYC

The token sale contract implements the Eidoo KYCBase ³ (ors-integration branch) contract. Eidoo provides two addresses of KYC signers. The first belongs to Eidoo wallet investors and will provide 5 % bonus tokens. The second address belongs to all investors using Eidoo without the wallet.

³<https://github.com/eidoo/icoengine/blob/master/contracts/KYCBase.sol>

3 Timeline

Date	Event
\approx 2018-05-11	Token contract deployment Token sale contract deployment Transfer of token contract ownership to token sale contract Transfer of ownership of token sale contract to ORS
2018-05-14	Main ICO start
\leq 2018-05-26	Main ICO end
\approx 2018-05-26	Issuing of presale tokens
\approx 2018-05-27	Finalization of token sale contract ERC20 transfers enabled

4 Deployment Requirements

The following requirements have to be fulfilled at deployment time 2018-05-11:

Requirement	Source
Size of M and P	ORS
Address of wallet receiving Ξ from ICO	ORS
Address of team	ORS
Address of company	ORS
Address of advisors	ORS
Eidoo wallet signer address	Eidoo
Second signer address	Eidoo

