

Here's a step-by-step guide on how to set up, deploy, and interact with the contracts using Remix IDE a web-based Solidity IDE:

Setup

1. Open Remix IDE:

- Go to the Remix IDE website: Remix IDE(<https://remix.ethereum.org/>).
- Click on the "+" icon to create a new file for each contract.

2. Write Contracts:

- Create a new file for each contract ('TokenLock.sol', 'Origin.sol', and 'Release.sol').
- Copy and paste the contract code into the respective files in Remix IDE.

Deployment Steps

1. Compile Contracts:

- Click on the "Solidity Compiler" tab in Remix IDE.
- Compile each contract by selecting it from the file explorer on the left and clicking on "Compile."

2. Deploy 'Origin.sol' (Token Contract):

- Click on the "Deploy & Run Transactions" tab in Remix IDE.
- Select 'TokenContract' from the dropdown.
- Enter parameters for the constructor (name, symbol, initial supply).
- Click on "Deploy."

3. Deploy 'Release.sol' (Release Contract):

- Select 'NoEvmRelease' from the dropdown.
- Enter the address of the deployed 'TokenContract' as the parameter for the constructor.
- Click on "Deploy."

Interacting with Contracts

1. Lock Tokens on EVM Side ('TokenLock.sol'):

- In the "Deployed Contracts" section, select 'TokenLock' contract.
- Use the provided functions ('lockERC20' and 'lockETH') to lock tokens.
- Input the required parameters and click on "Transact" for each function call.

2. Release Tokens on Non➤EVM Side ('Release.sol'):

- In the "Deployed Contracts" section, select 'NoEvmRelease'.
- Use the 'releaseTokens' function to release tokens.
- Input the required parameters (receiver address, amount) and click on "Transact."

Example Interaction

1. Lock ERC20 Tokens:

- Select 'TokenLock' contract.
- Use 'lockERC20' function, providing token contract address, amount, target chain address, and receiver address.
- Click on "Transact."

2. Release Tokens:

- Select 'NoEvmRelease' contract.
- Use 'releaseTokens' function, providing the receiver address and token amount to release.
- Click on "Transact."

Notes

- Ensure you're connected to the correct network in Remix IDE for deployment and interaction.
- Make sure to have test ETH available in your wallet connected to Remix for deploying and executing transactions.
- Follow the Remix IDE interface for accessing and interacting with deployed contracts, using the provided functions and input fields.

