Linkdrops

Linkdrops allow users to distribute assets and onboard people to Web3 apps through a simple web link.

They work by storing assets and linking AccessKeys to them. The AccessKeys are then distributed to users in the form of web links. These links take users to a website that automatically uses the keys to call the claim method in the linkdrop contract.

In order for a contract to be considered a Linkdrop-contract it has to follow the LEP-452 standard. The NEP-452 explains theminimum interface required to be implemented, as well as the expected functionality.

Keypom

The simplest way to create Linkdrops is by using Keypom . Keypom is a community project that allows you to create Linkdrops for NEAR tokens and NFTs in a few clicks.

AccessKeys

In order to create any kind of drop, you need to first generate key pairs. You will need to createone key per drop .

- Thelinkdropcontract will store thepublic
- · part of the key.
- You will give theprivate
- part of the key to the user you want to receive the drop.
- * Component
- WebApp

```
CLI

    Keypom API

const dropsNumber =
"2"; const keysGeneratorUrl =
"https://keypom.sctuts.com/keypair/";
asyncFetch ( keysGeneratorUrl + dropsNumber +
"/rootEntrophy").then((res)
{ const keyPairs =
JSON . parse ( res . body ) ; const pubKeys =
[]; const privKeys =
[];
keyPairs . forEach ( ( e )
{ pubKeys . push ( e . pub ) ; privKeys . push ( e . priv ) ; } ) ;
{ publicKeys : pubKeys , privKeys : privKeys , } ;
State . update ( obj ) ; } ) ; * near-api-js * Keypom API
import
KeyPair
}
from
'near-api-js';
const newKeyPair =
KeyPair . fromRandom ( 'ed25519' ) ; newKeyPair . public_key
= newKeyPair . publicKey . toString ( ) ; const state =
{};
const dropsNumber =
"2"; const keysGeneratorUrl =
"https://keypom.sctuts.com/keypair/";
fetch ( keysGeneratorUrl + dropsNumber +
"/rootEntrophy").then((res)
=>
{ const keyPairs =
JSON . parse ( res . body ) ; const pubKeys =
[]; const privKeys =
[];
```

keyPairs . forEach ((e)

```
=>
{ pubKeys . push ( e . pub ) ; privKeys . push ( e . priv ) ; } );
state . publicKeys
= pubKeys ; state . privKeys
= privKeys ; } ); * Near CLI * Keypom API
```

This command creates a key pair locally in .near-credentials with an implicit account as the accountld (hash representation of the public key)

near generate-key Example response:

Key pair with ed25519:33Vn9VtNEtWQPPd1f4jf5HzJ5weLcvGHU8oz7o5UnPqy public key for an account "1e5b1346bdb4fc5ccd465f6757a9082a84bcacfd396e7d80b0c726252fe8b3e8" export NUMBER_OF_DROPS=2

curl https://keypom.sctuts.com/keypairNUMBER_OF_DROPS/rootEntrophy

NEAR Drops

To create a NEAR drop you will ask the contract to create a drop (create_drop), passing the public part of the keys you generated, and how much you want to drop on each key use (deposit_per_use).

The contract will create a drop andreturn the numerical ID that identifies it.

```
    * Component

                       WebApp
const keypomContract =
"v2.keypom.near"; const dropAmount =
"100000000000000000000000";
Near . call ( [ { contractName : keypomContract , methodName :
"create_drop", args:
{ public_keys : state . publicKeys , deposit_per_use : dropAmount , } , deposit :
"230000000000000000000000",
// state.publicKeys.length * dropAmount + 300000000000000000000, gas :
"10000000000000", }, ], ]); import
Wallet
from
'./near-wallet';
const
KEYPOM_CONTRACT_ADDRESS
"v2.keypom.near"; const
DROP_AMOUNT
"10000000000000000000000";
// 0.1 NEAR
const wallet =
new
Wallet ( {
createAccessKeyFor:
KEYPOM_CONTRACT_ADDRESS
});
await wallet . callMethod ( { method :
"create drop", contractId:
KEYPOM_CONTRACT_ADDRESS, args:
{ public_keys : state . publicKeys , deposit_per_use :
DROP_AMOUNT, }, deposit:
"230000000000000000000000"
// state.publicKeys.length * dropAmount + 300000000000000000000, gas :
```

To drop an existing NFT, you will (1) create a drop, and then (2)transfer the NFT to keypom.

1. Creating the Drop

To create an NFT drop, you will call thecreate_drop method, now passing anft argument, which will tell the linkdrop contract to wait for an NFT to be transferred.

The contract will then create a drop andreturn the numerical ID that identifies it.

```
• * Component
                   WebApp
const accountld = context . accountld
?? props . accountId ; const keypomContract =
"v2.keypom.near"; const nftContract =
"nft.primitives.near"; const dropAmount =
"10000000000000000000000";
Near . call ( [ { contractName : keypomContract , methodName :
"create_drop", args:
{ public_keys : state . publicKeys , deposit_per_use : dropAmount , nft :
{ // Who will be sending the NFTs to the Keypom contract sender_id : accountId , // NFT Contract Id that the tokens will come from contract_id : nftContract , } , } , deposit :
"230000000000000000000000"
// state.publicKeys.length * dropAmount + 300000000000000000000, gas :
"10000000000000", }, ]); import
Wallet
from
'./near-wallet';
const
KEYPOM_CONTRACT_ADDRESS
"v2.keypom.near"; const
NFT_CONTRACT_ADDRESS
"nft.primitives.near"; const
DROP AMOUNT
"100000000000000000000000";
const keypomConnectedWallet =
new
Wallet ( {
createAccessKeyFor:
KEYPOM CONTRACT ADDRESS
}); const nftConnectedWallet =
new
Wallet ( {
createAccessKeyFor:
NFT_CONTRACT_ADDRESS
await wallet . callMethod ( { method :
"create drop", contractld;
KEYPOM_CONTRACT_ADDRESS, args:
{ public_keys : state . publicKeys , deposit_per_use :
DROP AMOUNT, nft:
{ // Who will be sending the NFTs to the Keypom contract sender_id : accountId ,
// TODO How to get it // NFT Contract Id that the tokens will come from contract_id :
NFT_CONTRACT_ADDRESS, }, }, deposit:
"230000000000000000000000"
// state.publicKeys.length * dropAmount + 300000000000000000000, gas :
```

2. Transferring the NFT

```
Having the Drop ID, you now need to transfer the NFT to the linkdrop contract, specifying to which drop you want to add it.
```

```
WebApp
                                                                                                                                CLI
const nftTokenId =
 "1";
 Near . call ( [ { contractName : nftContract , methodName :
 'nft_transfer_call', args:
 \{\ receiver\_id: keypomContract\ ,\ token\_id: nftTokenId\ ,\ msg: dropId\ .\ toString\ (\ )\ \}\ ,\ deposit: leaves the contract of the contra
 "1" , gas :
  "30000000000000" } ]); import
  Wallet
 }
 from
 './near-wallet' :
 const
  KEYPOM_CONTRACT_ADDRESS
  "v2.keypom.near"; const
 NFT CONTRACT ADDRESS
  "nft.primitives.near"; const
 NFT_TOKEN_ID
 "1" ; const
  DROP_AMOUNT
  "100000000000000000000000";
 const nftConnectedWallet =
  new
Wallet ( {
createAccessKeyFor:
 NFT_CONTRACT_ADDRESS
});
  await wallet . callMethod ( { method :
  "nft_transfer_call", contractId:
  NFT_CONTRACT_ADDRESS, args:
  \{\ receiver\_id: keypomContract\ ,\ token\_id: nftTokenId\ ,\ msg: dropId\ .\ toString\ (\ )\ \}\ ,\ deposit: leaves the contract of the contra
  1 , gas :
"10000000000000", }); TheWallet object comes from ouguickstart template near call nft.primitives.near nft_transfer_call '{"receiver_id": "v2.keypom.near", "token_id":, "msg":}' -- depositYocto 1 --gas 1000000000000000 --accountld bob.near tip Thelinkdrop contract will validate that you are transferring the NFT to a drop that belongs to you
```

FT Drops

The process to drop a Fungible Token is very similar to that of creating an Inst drop. You will first create the drop, and then fund it with FTs.

1.Creating a drop

To create a FT drop you will call thecreate_drop method, now passing aftData argument, which will tell the linkdrop contract to wait for a certain amount of FT to be transferred.

The contract will then create a drop andreturn the numerical ID that identifies it.

```
{ public keys : state . publicKeys . deposit per use : dropAmount . ftData :
{ contractId : ftContract , senderId : accountId , // This balance per use is balance of human readable FTs per use. amount :
"1" // Alternatively, you could use absoluteAmount, which is dependant on the decimals value of the FT // ex. if decimals of an ft = 8, then 1 FT token would be absoluteAmount =
100000000 } , } , deposit :
"2300000000000000000000000",
// state.publicKeys.length * dropAmount + 300000000000000000000, gas :
"100000000000000" } , ] ) ; import
Wallet
from
'./near-wallet';
KEYPOM_CONTRACT_ADDRESS
"v2.keypom.near"; const
FT_CONTRACT_ADDRESS
"ft.primitives.near"; const
DROP_AMOUNT
"100000000000000000000000";
const wallet =
new
Wallet ( {
createAccessKeyFor:
KEYPOM_CONTRACT_ADDRESS
});
await wallet . callMethod ( { method :
"create_drop", contractId:
KEYPOM_CONTRACT_ADDRESS, args:
{ public_keys : state . publicKeys , deposit_per_use :
DROP_AMOUNT, ftData:
{ contractId :
FT_CONTRACT_ADDRESS, senderId: accountId,
// TODO How to get account id // This balance per use is balance of human readable FTs per use. amount :
"1" // Alternatively, you could use absoluteAmount, which is dependant on the decimals value of the FT // ex. if decimals of an ft = 8, then 1 FT token would be absoluteAmount =
100000000 } , } , deposit :
"2300000000000000000000000"
// state.publicKeys.length * dropAmount + 300000000000000000000, gas :
2. Transferring FT
Having the Drop ID, you now need to transfer the fungible tokens to the linkdrop contract.
note To transfer FTs to an account, you need to firstegister the receiver account (e.g. the keypom contract) on the FT contract. * * Component *
                                                                                                                                                WebApp *
Near . call ( [ { contractName: ftContract , methodName:
"ft_transfer", args:
{ receiver_id : keypomContract , amount :
"1", }, deposit:
"1", gas:
"30000000000000", }, ]); import
{
Wallet
}
from
'./near-wallet';
const
```

```
KEYPOM CONTRACT ADDRESS
"v2.keypom.near"; const
FT CONTRACT ADDRESS
"ft.primitives.near";
const wallet =
new
Wallet ( {
createAccessKeyFor:
FT CONTRACT ADDRESS
});
await wallet . callMethod ( { method :
"ft_transfer", contractId:
FT CONTRACT ADDRESS, args:
{ receiver_id :
KEYPOM_CONTRACT_ADDRESS, amount:
"1" } , deposit :
"1", gas:
"100000000000000" } ) ; TheWallet object comes from ouquickstart template near call ft.primitives.near ft_transfer '{"receiver_id": "v2.keypom.near", "amount": "1"}' --depositYocto 1 --gas 10000000000000 --accountId bob.near
Function Call Drop
Linkdrop contracts allow to createfunction call drops. These drops will execute one or more methods on a contract when the user claims the drop.
tip Function call drops can be thought as the abstract version of other drops: you can create a drop that will mint an NFT, register a user in a DAO, or pay for a service. * * Component *
WebApp *
const accountld = context . accountld
?? props . accountld ; const keypomContract =
"v2.keypom.near"; const nftContract =
"nft.primitives.near"; const nftTokenId =
"1"; const dropAmount =
"100000000000000000000000";
Near . call ( [ { contractName : keypomContract , methodName :
"create_drop", args:
{ public_keys : state . publicKeys , deposit_per_use : dropAmount , fcData :
{ // 2D array of function calls. In this case, there is 1 function call to make for a key use // By default, if only one array of methods is present, this array of function calls will be used for all
[ // Array of functions for Key use 1. [ { receiverId : nftContract , methodName :
"nft_mint", args:
JSON\ .\ stringify\ (\ \{\ /\!/\ Change\ this\ token\_id\ if\ it\ already\ exists\ -\!>\ check\ explorer\ transaction\ token\_id\ :\ nftTokenId\ ,\ metadata\ :\ nftTokenId\ ,\ metadata\ :\ nftTokenId\ ,\ 
{ title :
"My NFT drop" , description :
"" , media :
"", } }), accountIdField:
"receiver\_id" \ , // \ Attached \ deposit \ for \ when \ the \ receiver \ makes \ this \ function \ call \ attached \ Deposit \ :
"1000000000000000000000" } ] ] ] } , deposit :
"230000000000000000000000",
/\!/\, state.publicKeys.length * dropAmount + 300000000000000000000, gas:
"10000000000000", }, ]); import
{
Wallet
from
'./near-wallet';
KEYPOM_CONTRACT_ADDRESS
"v2.keypom.near"; const
```

```
NFT CONTRACT ADDRESS
"nft.primitives.near"; const
NFT TOKEN ID
"1"; const
DROP_AMOUNT
const wallet =
Wallet ( {
createAccessKeyFor:
DAO_CONTRACT_ADDRESS
});
await wallet . callMethod ( { method :
"create_drop", contractId:
KEYPOM_CONTRACT_ADDRESS, args:
\{\ public\_keys: state \ .\ publicKeys \ ,\ deposit\_per\_use \ :
DROP_AMOUNT , fcData :
{ // 2D array of function calls. In this case, there is 1 function call to make for a key use // By default, if only one array of methods is present, this array of function calls will be used for all
key uses methods
[ // Array of functions for Key use 1. [ { receiverId :
NFT_CONTRACT_ADDRESS, methodName:
"nft_mint", args:
{\sf JSON: stringify} \ (\ \{ \textit{// Change this token\_id if it already exists -> check explorer transaction token\_id : }
NFT_TOKEN_ID , metadata :
"My NFT drop", description:
"" , media :
"", } }), accountIdField:
"receiver_id", // Attached deposit for when the receiver makes this function call attachedDeposit:
"1000000000000000000000" } ] ] } } , deposit :
// state.publicKeys.length * dropAmount + 300000000000000000000, gas :
Building drop links
getLinks
()
{ const links =
[];
// It assumes that private keys have been already stored in State by using State.init() and State.update() method state . privKeys . map ( (e , i )
{ const link = "https://app.mynearwallet.com"
"/linkdrop/v2.keypom.near/"
+ e ; links . push ( link ) ; \} ) ;
https://app.mynearwallet.com/linkdrop/v2.keypom.near/ed25519:2H32THYM8ob336yk81cZUxpidvKi34zLck6a97ypmCY8bbSAuEfrCTu9LWmWGiG9df2C6vkg2FGKGZzY9qE4aEcj', https://app.mynearwallet.com/linkdrop/v2.keypom.near/ed25519:3eoMcqKmmY9Q6qgBy3hZy65HisZ8NXQd9aGGYUGe6RRsmNpGJS5YN64MgZaBVVYJJhbFXhQ2ca3DRRBiKh1rYM48'] note If you didn't save your linkdrop links before closing NEAR App, you can always find them on KeyPom app.
```

Additional Resources

- allows to create a Simple Drop. Powered by KeyPom
 Keypom Drop Viewer
 shows drops created by current logged in user. Edit this page Last updatedonJan 30, 2024 bygarikbesson Was this page helpful? Yes No

Previous Non-Fungible Tokens (NFT) Next Price Oracles