

BCDV1013 Blockchain Platforms

Assignment #3 - Algorand

Create an Algorand Testnet Account and 2 associated Algorand Standard Asset

- Create an Algorand Testnet account.
- Create 2 associated ASAs. One of them being an NFT.

MyAlgo is a client-side interface, allowing you to create locally stored private keys that are encrypted with your password. The private keys never leave your device.

1) Create an Algorand Testnet account

1.1) Open MyAlgo in your browser and click Continue

<https://wallet.myalgo.com>

Algorand Wallet

← → ↻ 🔒 <https://wallet.myalgo.com/new-account>

MyAlgo Wallet ▾

Disclaimer
Please read carefully.

By accessing your wallet through [MyAlgo.com](https://wallet.myalgo.com) you do not create an account or give us your funds to hold onto. No data leaves your computer or browser. We make it easy for you to create, save, and access your information and interact with the blockchain.

Caution, using the web wallet in incognito mode will require you to go through the process again. Make sure to back up your **mnemonic phrase and private keys**.

Always verify you are on the correct URL:

<https://wallet.myalgo.com>

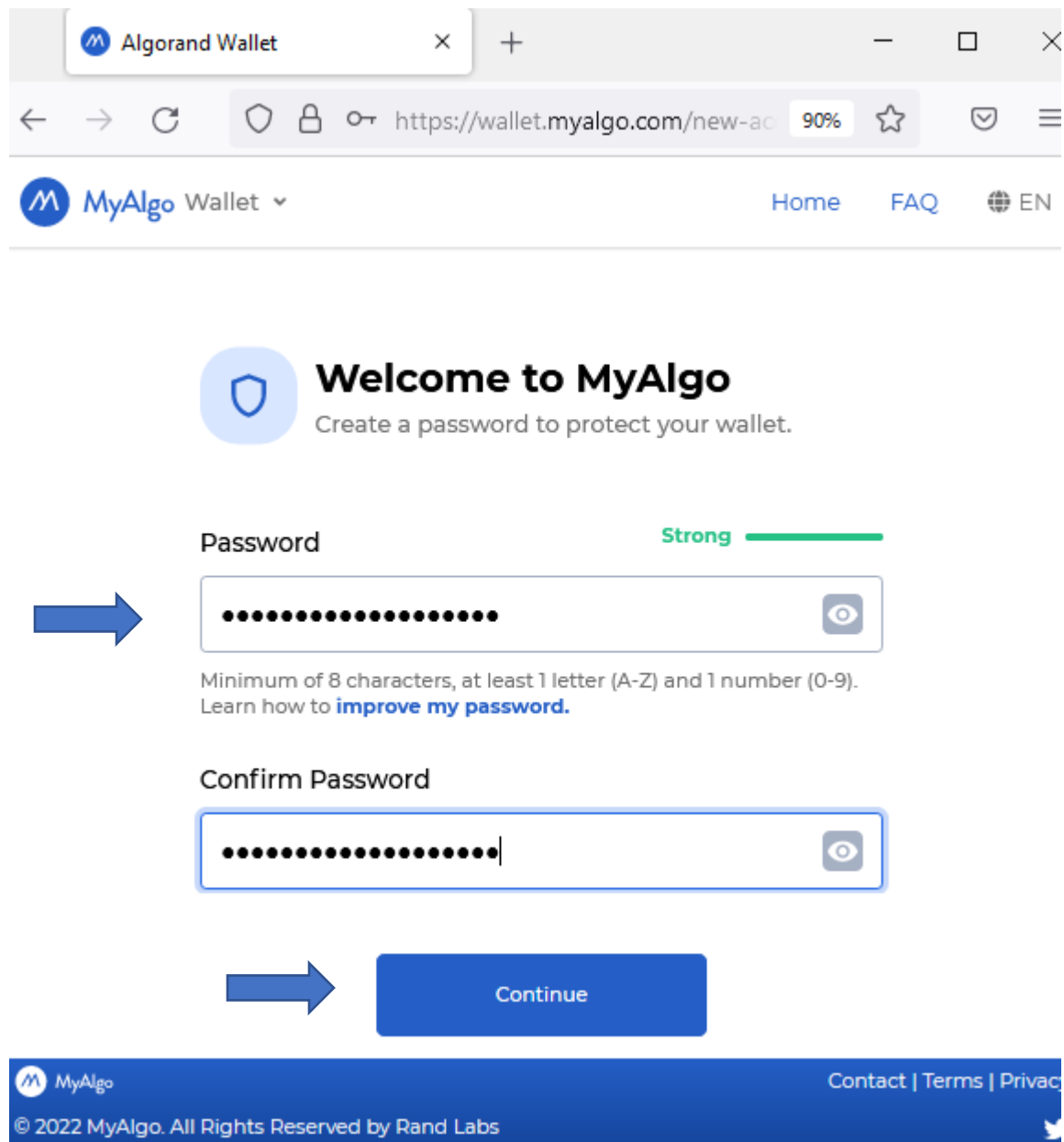
Read more on how to avoid **Scams and Phishing Attacks** to keep your account secure.

☒ I accept the [Terms of Service](#) and want to access MyAlgo

Continue

MyAlgo
© 2022 MyAlgo. All Rights Reserved by Rand Labs

1.2) Create a password to protect your wallet



The screenshot shows a web browser window with the title "Algorand Wallet". The address bar displays "https://wallet.myalgo.com/new-ac" with a 90% security indicator. The page header includes the "MyAlgo Wallet" logo and navigation links for "Home", "FAQ", and "EN".

The main content area features a "Welcome to MyAlgo" heading with a subtext "Create a password to protect your wallet." Below this, there are two password input fields. The first field is labeled "Password" and has a "Strong" strength indicator. A blue arrow points to this field. The second field is labeled "Confirm Password".

Below the password fields, there is a "Continue" button. A blue arrow points to this button.

At the bottom of the page, there is a footer with the "MyAlgo" logo, copyright information "© 2022 MyAlgo. All Rights Reserved by Rand Labs", and links for "Contact | Terms | Privacy".

Password Strong

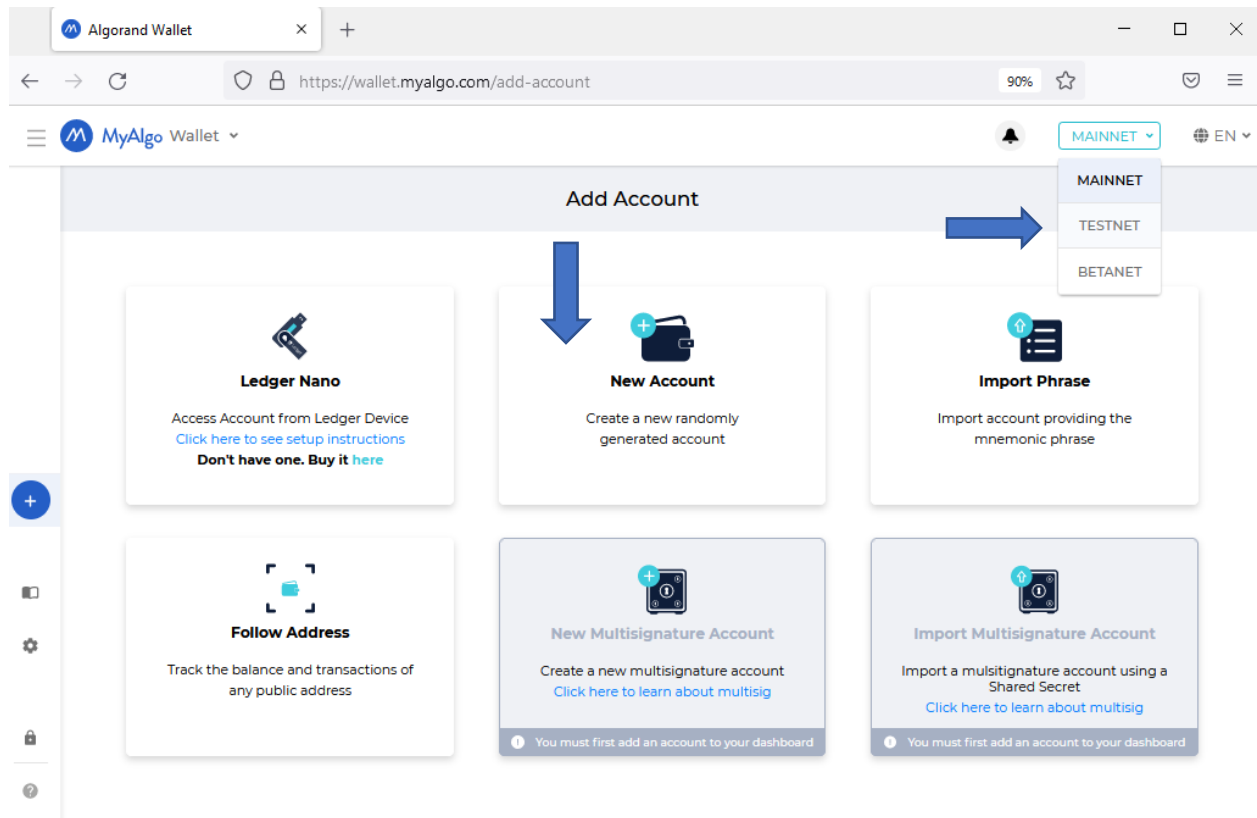
Minimum of 8 characters, at least 1 letter (A-Z) and 1 number (0-9).
Learn how to [improve my password](#).

Confirm Password

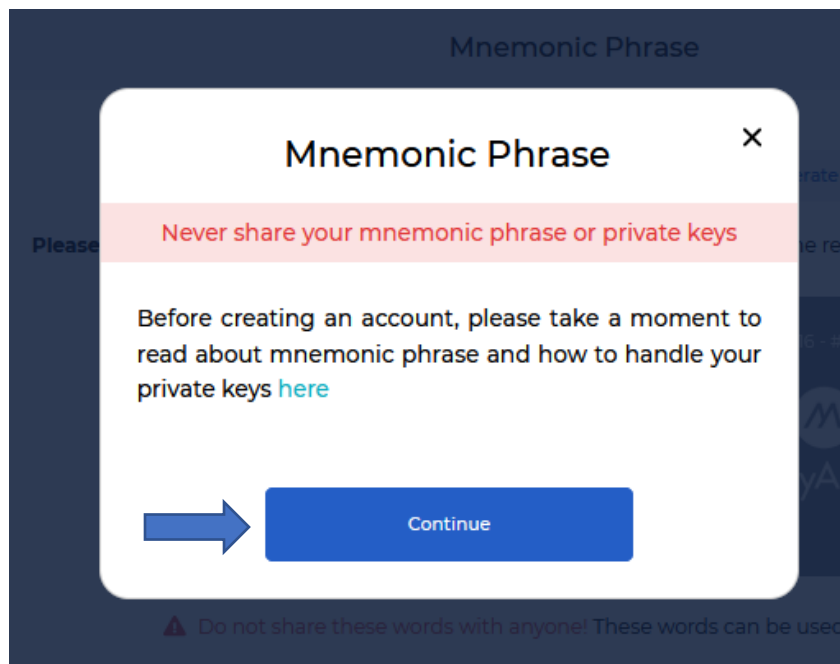
Continue

MyAlgo
© 2022 MyAlgo. All Rights Reserved by Rand Labs
Contact | Terms | Privacy

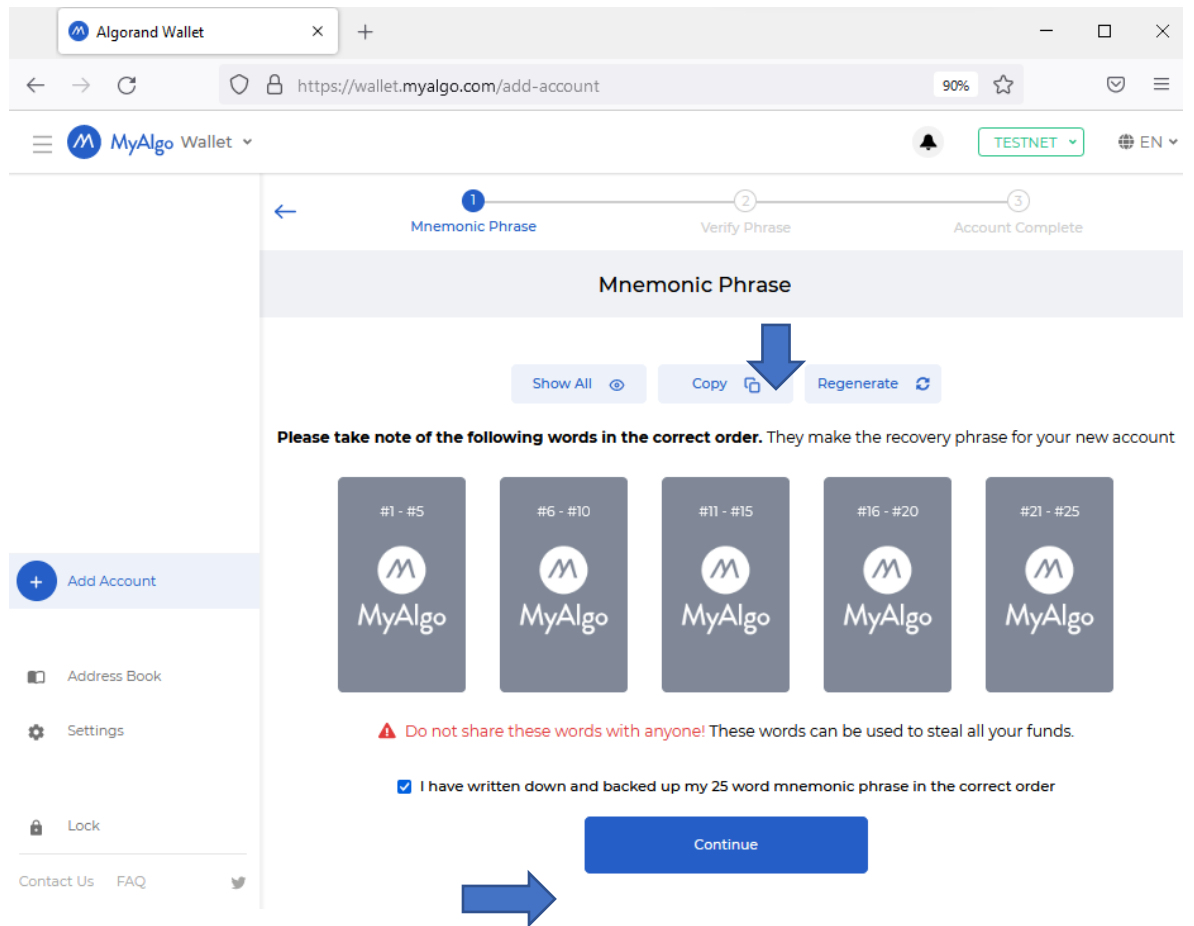
1.3) From the top-right select TESTNET, and then select New Account



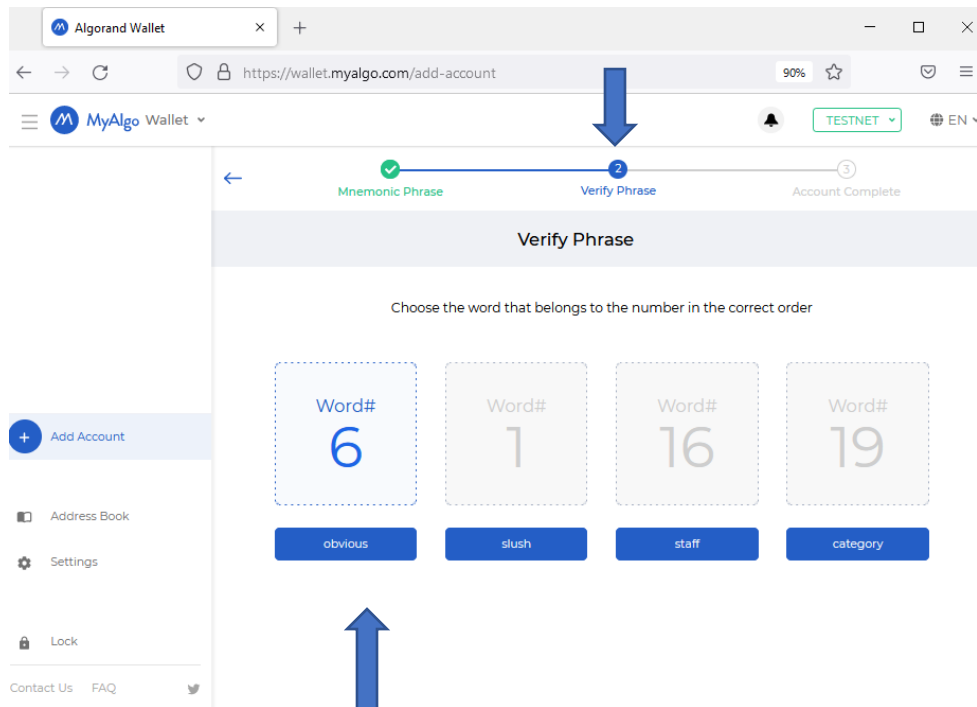
1.4) Take note of the following words in the correct order. They make the recovery phrase for your new account (Mnemonic Phrase). Click Continue.



1.5) Copy and save the Mnemonic Phrase and keep it in a safe place.



1.6) Verify the Phrase.



1.7) Verify the Phrase.

Select a name for your account. Click Create Account

Algorand Wallet

https://wallet.myalgo.com/add-account

90%

TESTNET

EN

Mnemonic Phrase

Verify Phrase

Account Complete

Account Complete

Choose the word that belongs to the number in the correct order

Word# 6

Word# 1

Word# 16

Word# 19

Account Name

MyAlgo-1

Create Account

+ Add Account

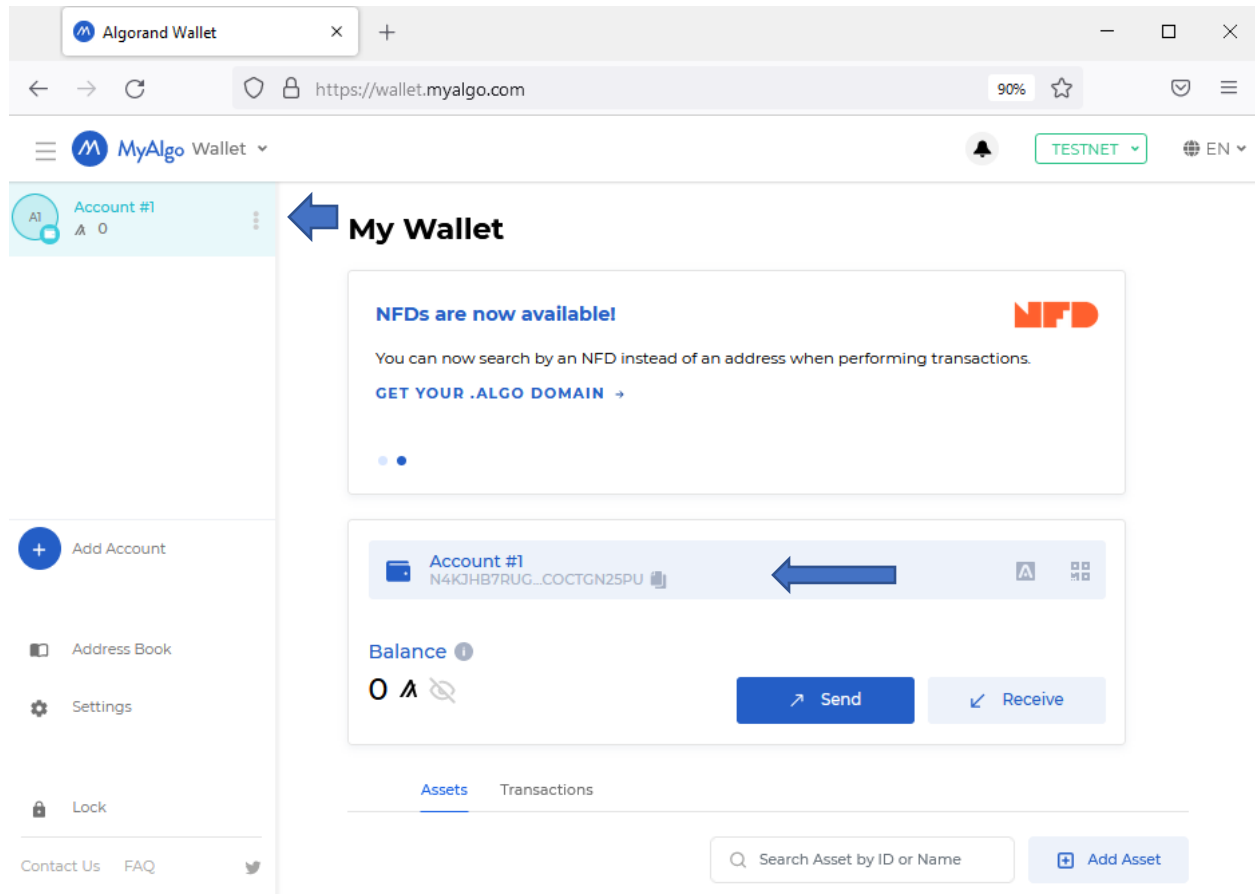
Address Book

Settings

Lock

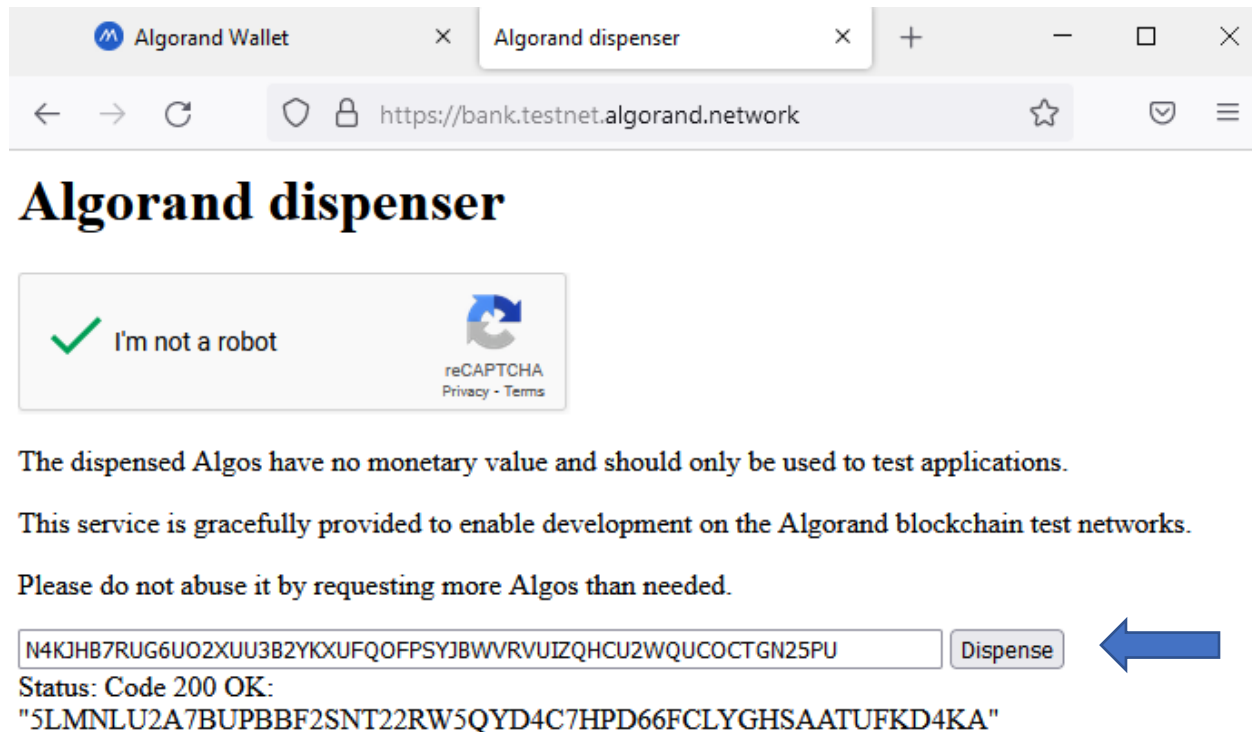
Contact Us FAQ

And finally, you will see your account




1.1) From this faucet get 10 Algo test token:

<https://bank.testnet.algorand.network/>



The screenshot shows a web browser with two tabs: 'Algorand Wallet' and 'Algorand dispenser'. The address bar shows the URL 'https://bank.testnet.algorand.network'. The page title is 'Algorand dispenser'. Below the title is a reCAPTCHA verification box with a green checkmark and the text 'I'm not a robot'. Below this, a message states: 'The dispensed Algos have no monetary value and should only be used to test applications. This service is gracefully provided to enable development on the Algorand blockchain test networks. Please do not abuse it by requesting more Algos than needed.' A text input field contains the address 'N4KJHB7RUG6UO2XUU3B2YKXUFQOFPSYJBWVRVUIZQHCU2WQUCOCTGN25PU', followed by a 'Dispense' button. A blue arrow points to the 'Dispense' button. Below the button, the status is shown as 'Status: Code 200 OK:' and the transaction ID is '5LMNLU2A7BUPBBF2SNT22RW5QYD4C7HPD66FCLYGHSAATUFKD4KA'.

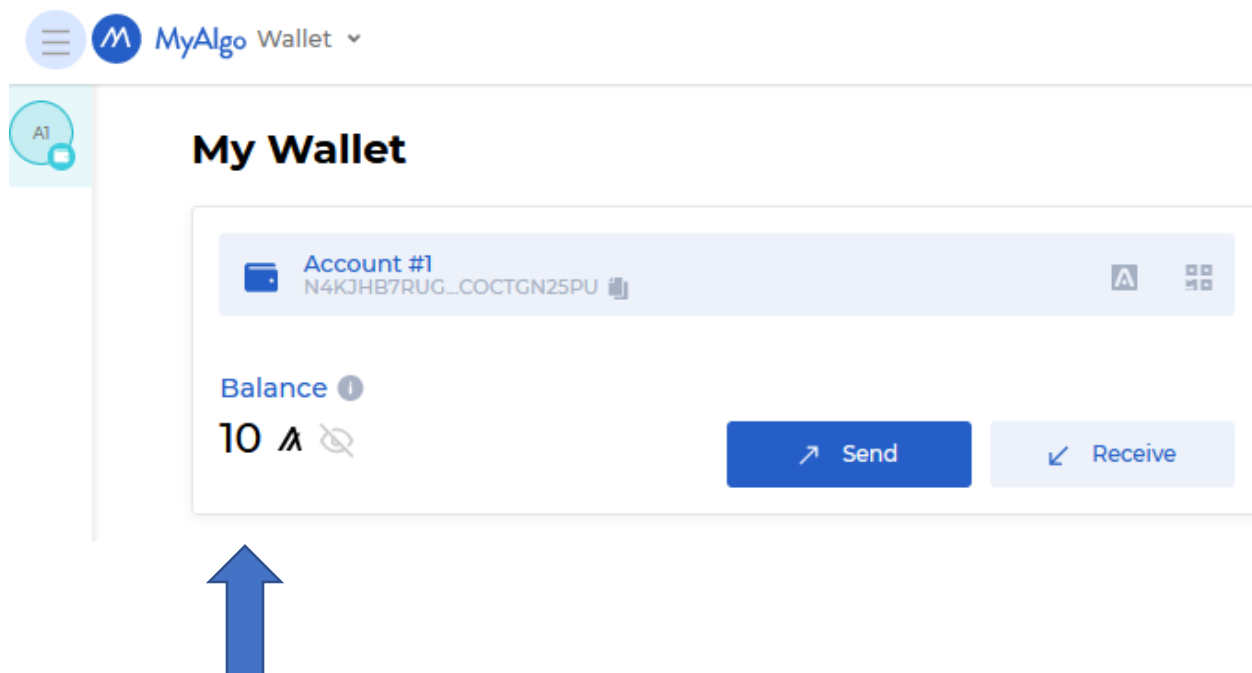
Algorand dispenser

✓ I'm not a robot 
reCAPTCHA
Privacy - Terms



The dispensed Algos have no monetary value and should only be used to test applications.
This service is gracefully provided to enable development on the Algorand blockchain test networks.
Please do not abuse it by requesting more Algos than needed.

Status: Code 200 OK:
"5LMNLU2A7BUPBBF2SNT22RW5QYD4C7HPD66FCLYGHSAATUFKD4KA"


And then check your tokens in your wallet:



The screenshot shows the 'MyAlgo Wallet' interface. At the top, there's a header with a menu icon, the 'MyAlgo' logo, and the text 'Wallet'. Below this, a sidebar on the left shows a circular icon with 'A1'. The main content area is titled 'My Wallet'. It features a card for 'Account #1' with the address 'N4KJHB7RUG...COCTGN25PU'. Below the account card, the 'Balance' is displayed as '10 A' with a small 'i' icon. To the right of the balance are two buttons: 'Send' and 'Receive'. A blue arrow points to the '10 A' balance.

  MyAlgo Wallet

My Wallet

 **Account #1**
N4KJHB7RUG...COCTGN25PU

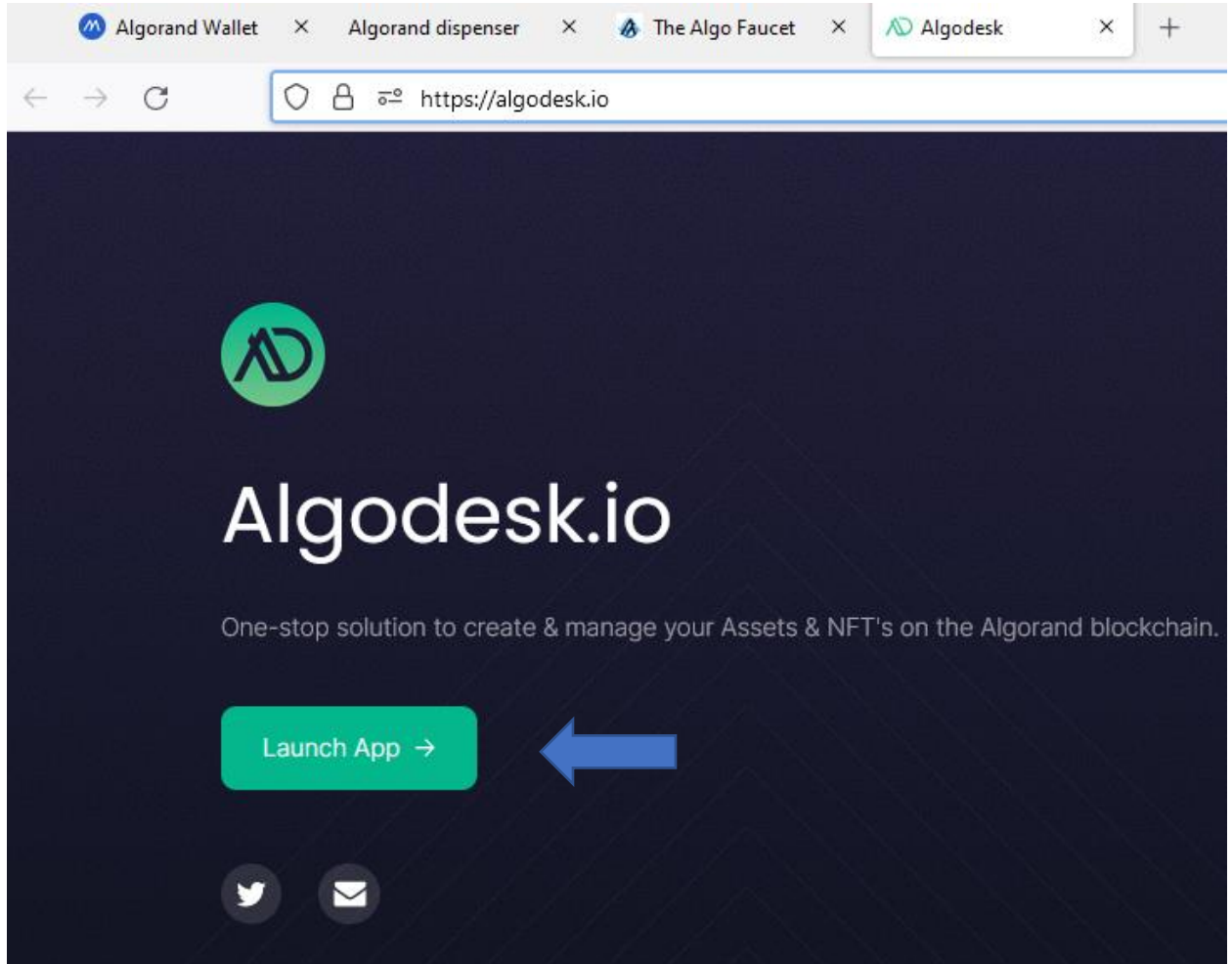
Balance ⓘ
10 A

2) Create 2 associated ASAs. One of them being an NFT.

Algodesk is a tool that facilitates the management of your ASA associated with your account.

A) Create a Fungible Token

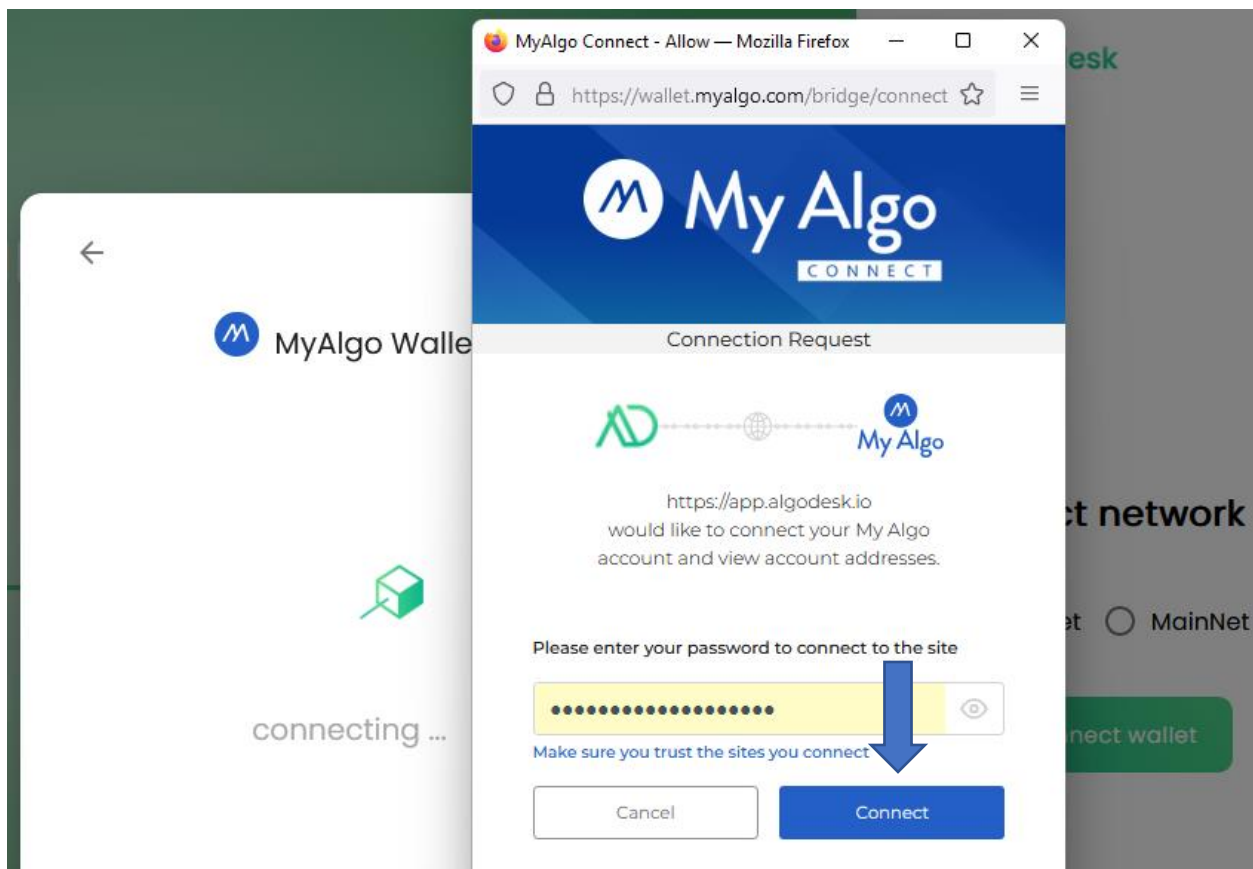
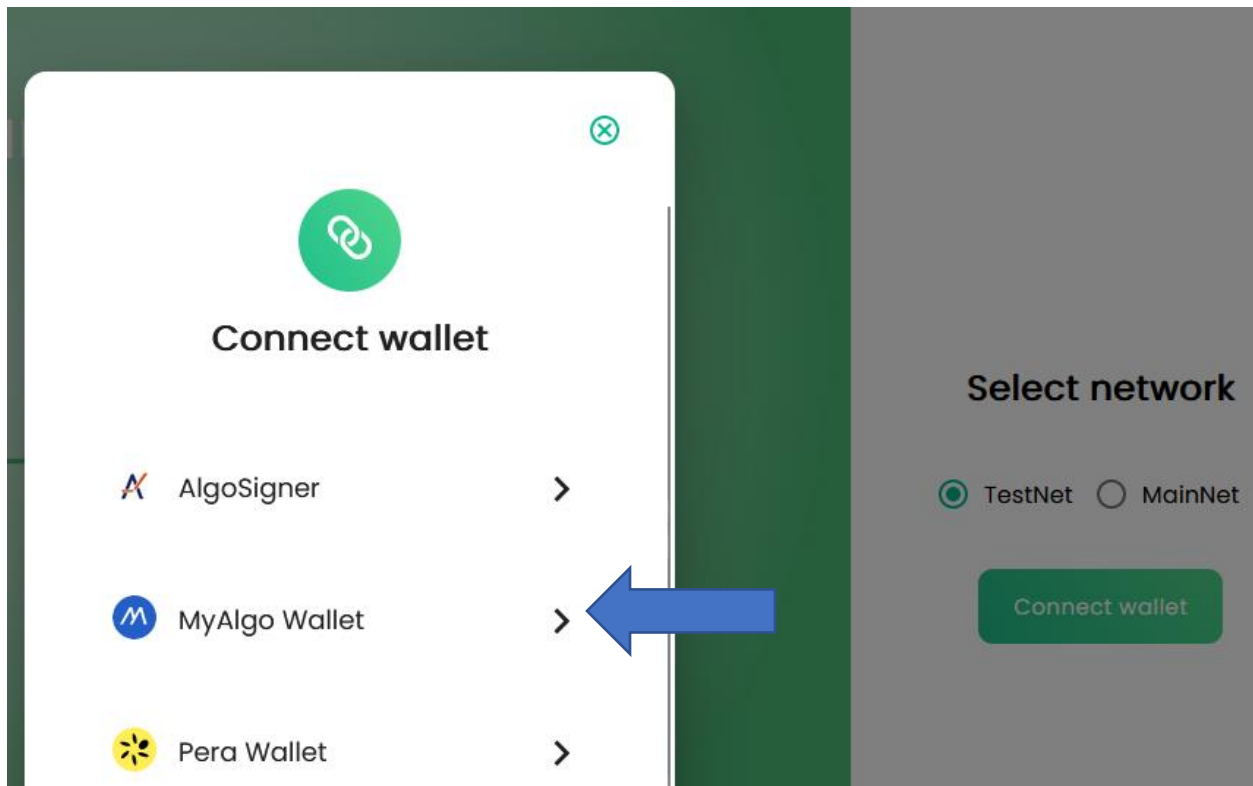
1) <https://algodesk.io/>



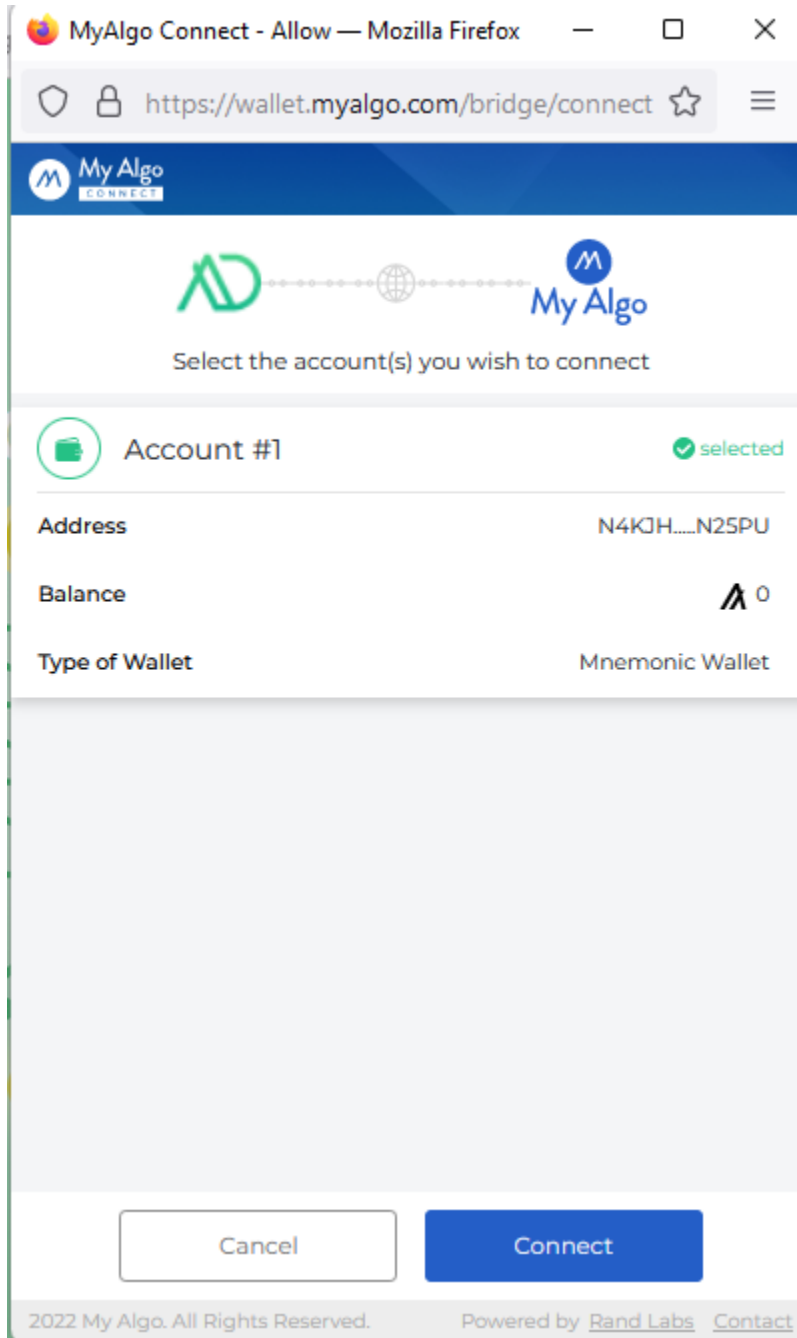
2) Select TestNet and then click connect wallet

The screenshot shows a web browser with multiple tabs open, including 'Algorand Wallet', 'Algorand dispenser', 'The Algo Faucet', and 'Algodesk'. The active tab is 'Algodesk', displaying the URL <https://app.algodesk.io/#/login>. The main content area has a green background with the text 'Create & Manage your Assets' and an illustration of three plants with lightbulbs. On the right side, there is a 'Select network' section with two radio buttons: 'TestNet' (selected) and 'MainNet'. Below this is a green button labeled 'Connect wallet'. Two blue arrows are overlaid on the image: one pointing to the 'TestNet' radio button and another pointing to the 'Connect wallet' button.

3) Select your wallet and click Connect.




4) Select Account #1 and then click Connect.



5) In My Dashboard click Create asset

The screenshot shows a web browser with multiple tabs open, including 'Algodesk'. The address bar shows the URL <https://app.algodesk.io/#/portal/dashboard/created-assets>. The page title is 'My Dashboard'. On the left, there is a sidebar with the Algodesk logo, a green circle, a long alphanumeric address, three icons, a 'View in explorer' link, and a 'Balance: 10 A' display. At the bottom of the sidebar is a 'Logout' button. The main content area has tabs for 'Created assets', 'Opted assets', and 'NFT collection'. Below these tabs is a search bar labeled 'Search asset' with a placeholder 'Name'. To the right of the search bar is a green button labeled 'Create asset' with a plus icon. A large blue arrow points upwards to this button. Below the search bar is a checkbox labeled 'Hide 0 balances'. At the bottom of the main content area is a faint illustration of a stack of papers.

6) Fill out the token specifications such as Name, Unit name, and Total supply.



Asset details

Name *

DarioT

Unit name *

DTK

Total supply *

1000000

Decimals

0



Url

Metadata hash

Asset management



Manager



N4KJHB7RUG6UO2XUU3B2YKXUFQOFPSYJ
BWVRVUIZQHCU2WQUCOCTGN25PU





Reserve


N4KJHB7RUG6UO2XUU3B2YKXUFQOFPSYJ
BWVRVUIZQHCU2WQUCOCTGN25PU











- 7) In Asset Management you can manage permissions such as Freeze and Clawback. And then click Create.





Asset management





Manager
N4KJHB7RUG6UO2XUU3B2YKXUFQOFPSYJ
BWVRVUIZQHCU2WQUCOCTGN25PU



Reserve
N4KJHB7RUG6UO2XUU3B2YKXUFQOFPSYJ
BWVRVUIZQHCU2WQUCOCTGN25PU



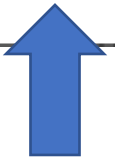
Freeze
N4KJHB7RUG6UO2XUU3B2YKXUFQOFPSYJ
BWVRVUIZQHCU2WQUCOCTGN25PU



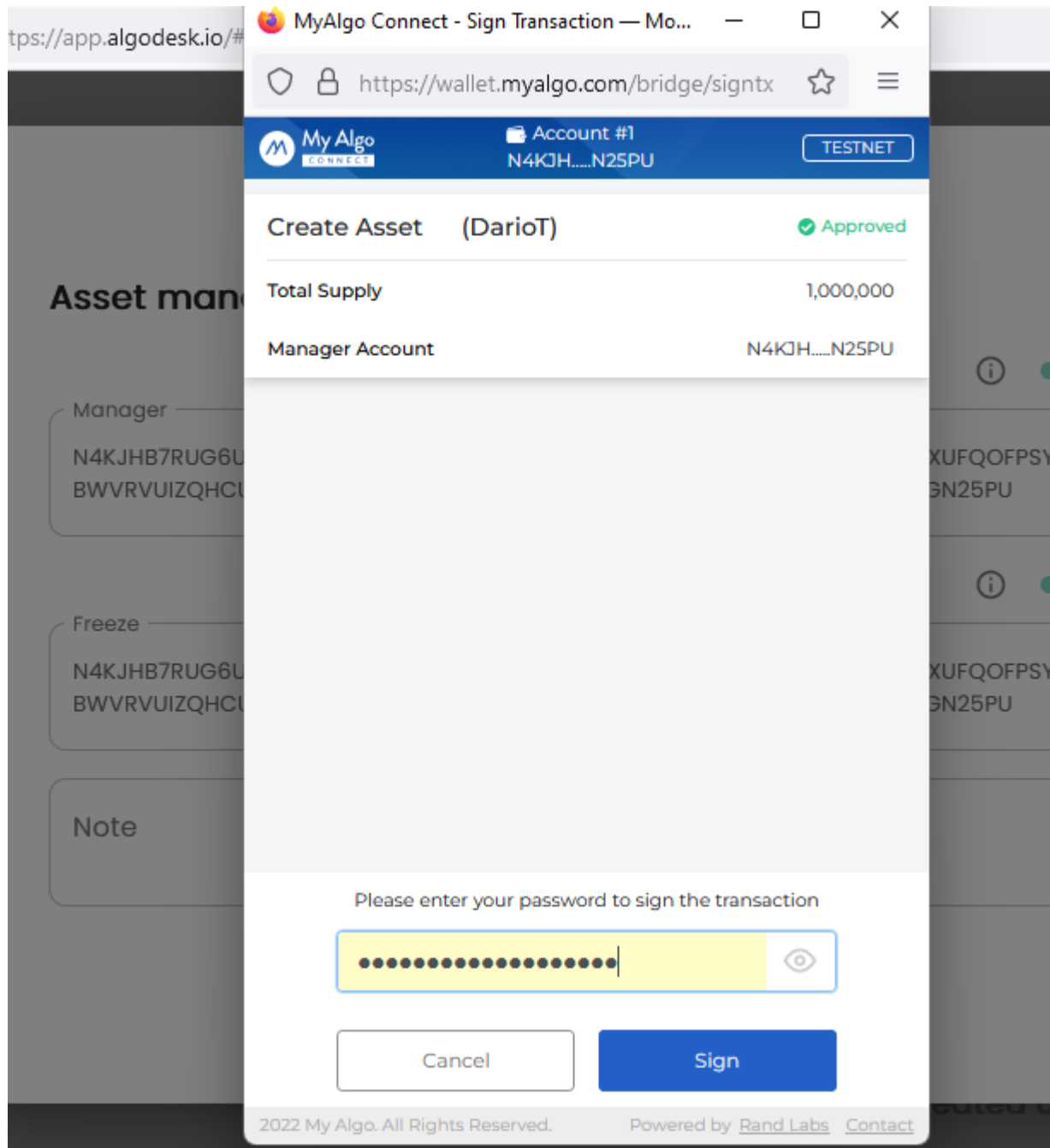
Clawback
N4KJHB7RUG6UO2XUU3B2YKXUFQOFPSYJ
BWVRVUIZQHCU2WQUCOCTGN25PU

Note

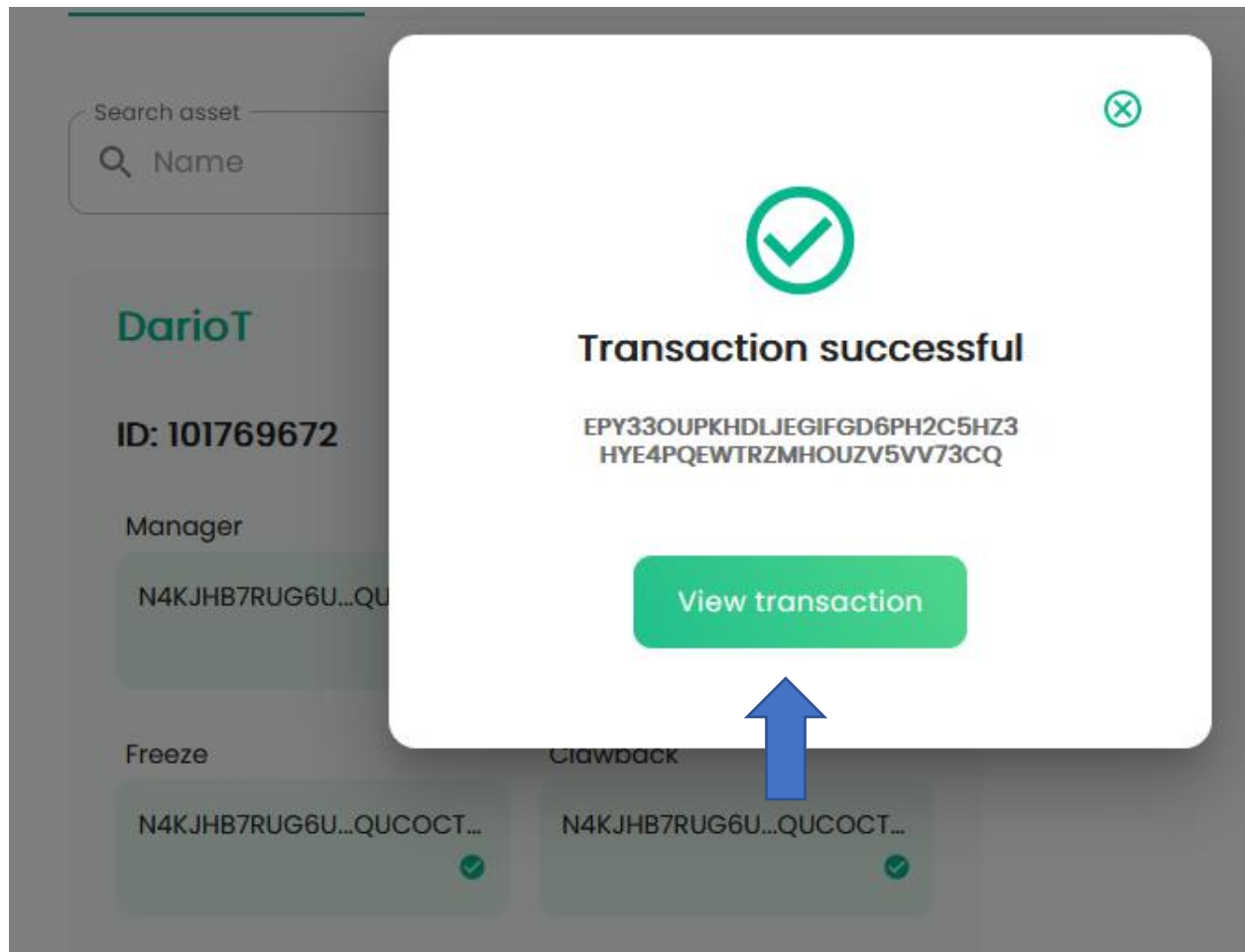
Create



8) Sign the transaction to create the token.




9) Click View transaction



Transaction Overview on Algo Explorer:

<https://testnet.algoexplorer.io/tx/EPY33OUPKHDJEGIFGD6PH2C5HZ3HYE4PQEWTRZMHOUZV5VV73CQ>



Search by Address / Tx ID / Group Tx ID / Block / Asset Name / Asset ID / App ID

AssetsAppsStatisticsBlockchainToolsAPIGovernance

TESTNET

Transaction Overview

Transaction ID

EPY33OUPKHDJEGIFGD6PH2C5HZ3HYE4PQEWTRZMHOUZV5VV73CQ

Copy

Timestamp

Fri, 29 Jul 2022 20:04:36 GMT

Block

23136067

Type

Config





Transaction Details

Asset Name:	DarioT	
Asset Unit:	DTK	
Asset ID:	101769672 (DarioT)	
Asset Reason:	Creation	
Total Supply:	1,000,000 DTK	
Decimals:	0	
Default Frozen:	False	
Creator Account:	N4KJHB7RUG6UO2XUU3B2YKXUFQOFPSY/BWVRVUIZQHCU2WQUCCOCTGN25PU	Copy


Total Supply:	1,000,000 DTK	
Decimals:	0	
Default Frozen:	False	
Creator Account:	N4KJHB7RUG6UO2XUU3B2YIOUFQOFPSYJBWVRVUIZQHCU2WQUCOCTGN25PU	Copy
Manager Account:	N4KJHB7RUG6UO2XUU3B2YIOUFQOFPSYJBWVRVUIZQHCU2WQUCOCTGN25PU	Copy
Reserve Account:	N4KJHB7RUG6UO2XUU3B2YIOUFQOFPSYJBWVRVUIZQHCU2WQUCOCTGN25PU	Copy
Freeze Account:	N4KJHB7RUG6UO2XUU3B2YIOUFQOFPSYJBWVRVUIZQHCU2WQUCOCTGN25PU	Copy
Clawback Account:	N4KJHB7RUG6UO2XUU3B2YIOUFQOFPSYJBWVRVUIZQHCU2WQUCOCTGN25PU	Copy

➤ More Information



10) Check your token on Algodesk and in your wallet.



**N4KJHB7RUG6UO2XUU3B2Y
KXUFQOPPSYJBWVRVUIZQH
CU2WQUCOCTGN25PU**

[View in explorer](#)
Balance: 9.999 

Created assetsOpted assetsNFT collection


Search asset
 Name

☐ Hide 0 balances


DarioT

ID: 101769672Balance : 1,000,000 DTK


Manager

N4KJHB7RUG6U...QUCOCT...


Reserve


N4KJHB7RUG6U...QUCOCT...



Freeze



N4KJHB7RUG6U...QUCOCT...


Clawback


N4KJHB7RUG6U...QUCOCT...





 MyAlgo Wallet


 Account #1
9.999 

 Add Account

 Address Book





 Settings

 Lock


Contact UsFAQ

My Wallet

Account #1
N4KJHB7RUG...COCTGN25PU


Balance 
9.999  Send Receive








Buy Algo!


You can now add funds to your wallet from a credit/debit card using Moonpay!



AssetsTransactions

Search Asset by ID or Name

 Add Asset

Asset	Balance	Price ▼	Actions	
 ALGO 	9.999	-	 Send	 Receive
 DTK ID 101769672	1,000,000	-	 Send	 Receive ...

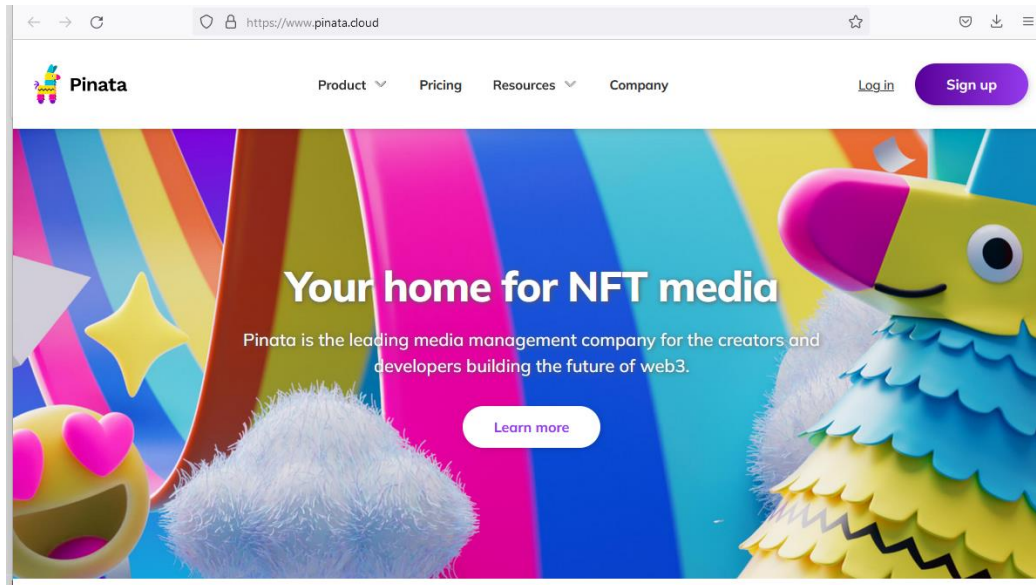
Total 2 Assets

1 of 1

B) Create an NFT!

Have the file ready that you want to turn into an NFT (jpgs, gifs, videos, word documents, PDFs, etc).

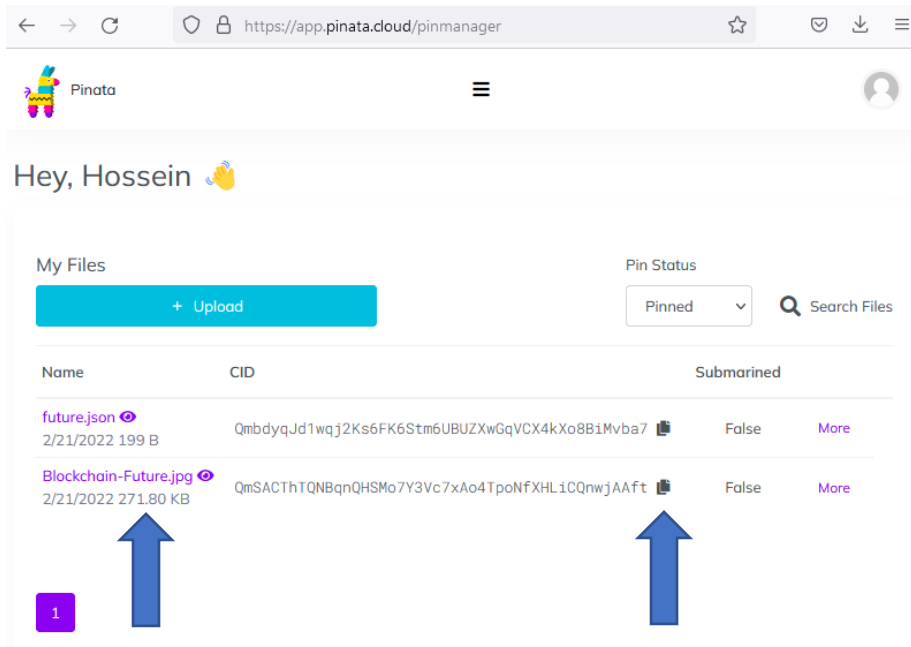
- 1) Create a free account on Pinata Cloud <https://pinata.cloud/>.



- 2) Upload the image for your NFT.

And then, copy the IPFS CID string of text that is created by pressing the small black icon to the right of it. You will need this later.

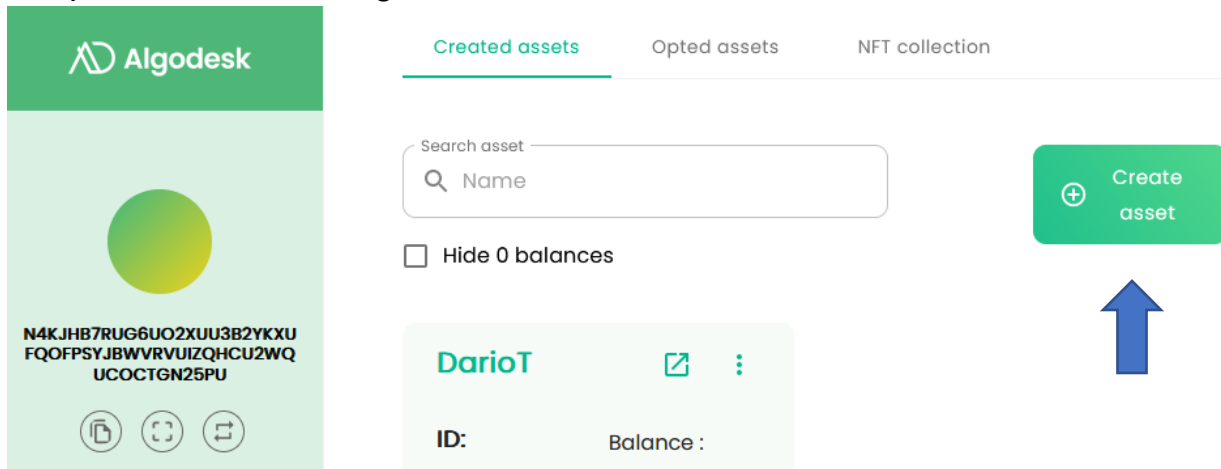
Then, click on the file you just named in the "name" column. Make sure it displays correctly. Copy the URL that appears in your browser to display your file. You will need this later.



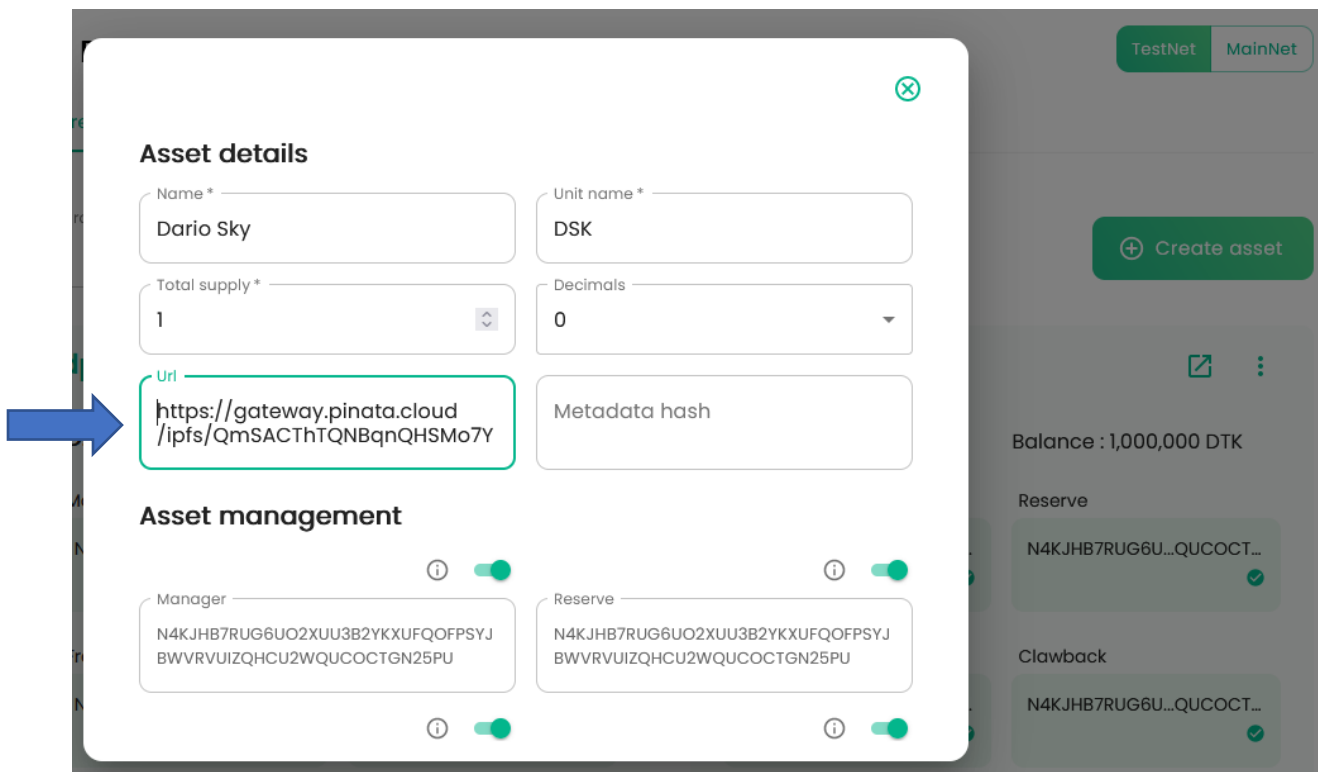
CID: QmSACThTQNBqnQHSMo7Y3Vc7xAo4TpoNfXHLiCQnwjAAft

URL: <https://gateway.pinata.cloud/ipfs/QmSACThTQNBqnQHSMo7Y3Vc7xAo4TpoNfXHLiCQnwjAAft>

3) Click Create asset in Algodesk.



- 4) Enter the NFT specifications such as Name, Unit name, and Total supply, AND Fill out "Asset Name" with whatever you wish to call your NFT. For example, "Dario Sky". Fill out "Unit Name", which is whatever you wish to call your unit. For example, DSK. Fill out "Total Supply". If you are only minting one NFT, this would be 1. Keep "decimals" 0 for things like collectables and NFT art. "Asset Url" is the URL is copied from Pinata Cloud "Pin Manager" <https://pinata.cloud/> and Just copy and paste into this field.



- 5) In the "Metadata Hash", copy the IPFS CID that you created from Pinata Cloud "Pin Manager" <https://pinata.cloud/>. Just copy and paste into this field.

OR

*Optional (or keep blank) - Paste the IPFS CID into MD5 Hash Generator

<https://www.md5hashgenerator.com/> . Press the blue "generate" button, then copy the string of text that it generates and paste into the "Metadata Hash" field as a **unique asset identifier**.

Web Dev ▾	Conversion ▾	Encoders / Decoders ▾	Formatters ▾	Internet ▾	English
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MD5 Hash Generator

Use this generator to create an MD5 hash of a string:

QmSACThTQNBqnQHSMo7Y3Vc7xAo4TpoNfXHLiCQnwjAAft

Generate →

Your String	QmSACThTQNBqnQHSMo7Y3Vc7xAo4TpoNfXHLiCQnwjAAft		
MD5 Hash	aa3d52cf597c979897d9012560bf8ced	Copy	
SHA1 Hash	ad9a41d716374038b65f6d7d01728d42fa045d84	Copy	

MD5 Hash: aa3d52cf597c979897d9012560bf8ced



Asset details

Name *

Dario Sky

Unit name *

DSK

Total supply *

1

Decimals

0

Url

<https://gateway.pinata.cloud/ipfs/QmSACThTQNBqnQHSMo7Y>

Metadata hash

aa3d52cf597c979897d9012560bf8ced

Asset management



Manager

N4KJHB7RUG6UO2XUU3B2YKXUFQOFPSYJ
BWVRVUIZQHCU2WQUCOCTGN25PU

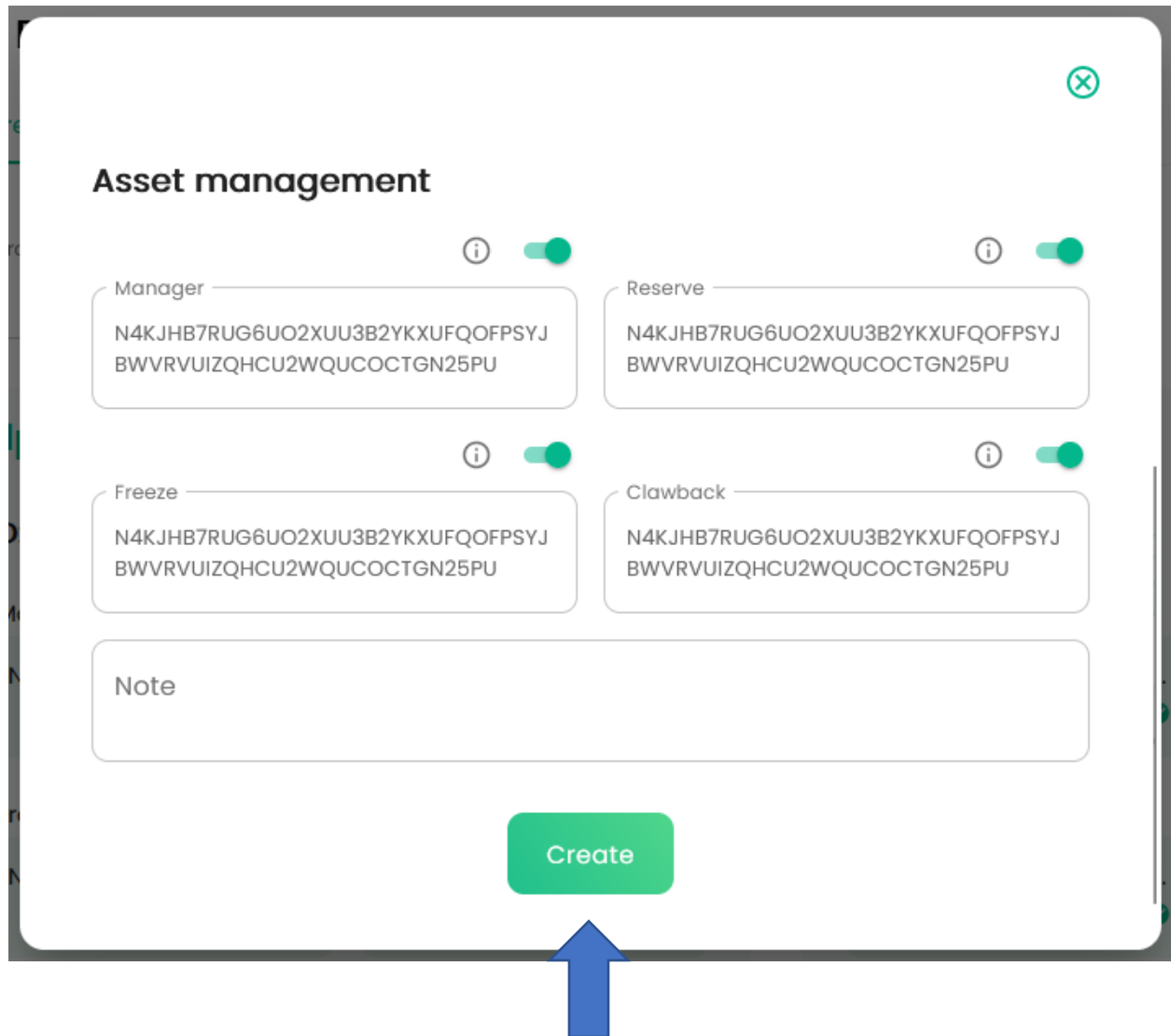


Reserve

N4KJHB7RUG6UO2XUU3B2YKXUFQOFPSYJ
BWVRVUIZQHCU2WQUCOCTGN25PU



- 6) For NFTs, especially when you are selling these, erase the "freeze address" and "clawback address". A freeze prevents reselling of NFTs and a clawback allows you to recall all assets from the user you sent it to. No one wants to buy a frozen or clawbacked NFT. NOTE: Once you remove these last two addresses, it can never be changed. AND then click Create.



The image shows a screenshot of an "Asset management" form. At the top right is a close button (X). The form contains four sections, each with a label, an information icon (i), a toggle switch, and a text input field. The sections are: Manager, Reserve, Freeze, and Clawback. Each text input field contains the same placeholder text: "N4KJHB7RUG6UO2XUU3B2YKXUFQOFPSYJ BWVRVUIZQHCU2WQUCOCTGN25PU". Below these sections is a "Note" field. At the bottom center is a green "Create" button, with a blue arrow pointing up to it.

Asset management

i ☒

Manager

N4KJHB7RUG6UO2XUU3B2YKXUFQOFPSYJ
BWVRVUIZQHCU2WQUCOCTGN25PU

i ☒

Reserve

N4KJHB7RUG6UO2XUU3B2YKXUFQOFPSYJ
BWVRVUIZQHCU2WQUCOCTGN25PU

i ☒

Freeze

N4KJHB7RUG6UO2XUU3B2YKXUFQOFPSYJ
BWVRVUIZQHCU2WQUCOCTGN25PU

i ☒

Clawback

N4KJHB7RUG6UO2XUU3B2YKXUFQOFPSYJ
BWVRVUIZQHCU2WQUCOCTGN25PU

Note

Create

7) Sign the transaction to create the NFT token.

The screenshot shows a web browser window with the title "MyAlgo Connect - Sign Transaction — Mo...". The address bar displays "https://wallet.myalgo.com/bridge/signtx". The page header includes the "My Algo CONNECT" logo, "Account #1 N4KJH.....N25PU", and a "TESTNET" button.

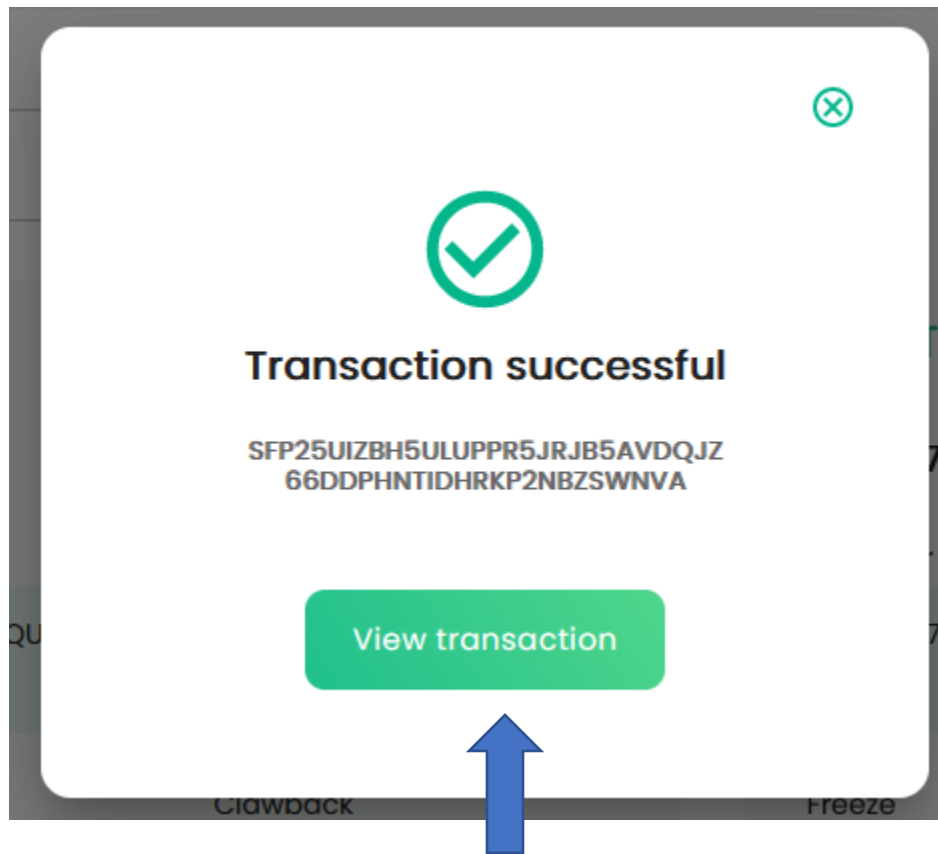
The main content area displays the following information:

- Create Asset (Dario Sky)** with a green checkmark and the word "Approved".
- Total Supply** is 1.
- Manager Account** is N4KJH.....N25PU.

Below this information is a large, empty light gray box. At the bottom, a prompt reads "Please enter your password to sign the transaction". Below the prompt is a password input field with a yellow background and a blue border, containing 12 dots. To the right of the input field is an eye icon. Below the input field are two buttons: "Cancel" and "Sign". A blue arrow points to the "Sign" button.

The footer contains the text "2022 My Algo. All Rights Reserved." and "Powered by [Rand Labs](#) [Contact](#)".

8) Click View transaction



Transaction Overview on Algo Explorer:

<https://testnet.algoexplorer.io/tx/SFP25UIZBH5ULUPPR5JRJB5AVDQJZ66DDPHNTIDHRKP2NBZSWNVA>

Algo Explorer
Algorand Blockchain Explorer

Search by Address / Tx ID / Group Tx ID / Block / Asset Name / Asset ID / App ID

TESTNET

AssetsAppsStatisticsBlockchainToolsAPIGovernance

Transaction Overview

Transaction ID

SFP25UIZBH5ULUPPR5JRJB5AVDQJZ66DDPHNTIDHRKP2NBZSWNVA

Copy

Timestamp

Sat, 30 Jul 2022 00:10:37 GMT

Block

23139559

Type

Config

Transaction Details

Asset Name:	Dario Sky	
Asset Unit:	DSK	
Asset ID:	101792190 (Dario Sky)	
Asset Reason:	Creation	
URL:	https://gateway.pinata.cloud/ipfs/Qm5ACThTQNBqnQH5Mo7Y3Vc7xAo4TpoNfXHLiCQnwjAAft	
Total Supply:	1 DSK	
Decimals:	0	
Default Frozen:	False	

Creator Account:

N4KJHB7RUG6UO2XUU3B2YKXUFQFQPSYJBWVRVUIZQHCU2WQUCOCTGN25PU

Copy

Manager Account:

N4KJHB7RUG6UO2XUU3B2YKXUFQFQPSYJBWVRVUIZQHCU2WQUCOCTGN25PU

Copy

Reserve Account:

N4KJHB7RUG6UO2XUU3B2YKXUFQFQPSYJBWVRVUIZQHCU2WQUCOCTGN25PU

Copy

Freeze Account:

N4KJHB7RUG6UO2XUU3B2YKXUFQFQPSYJBWVRVUIZQHCU2WQUCOCTGN25PU

Copy

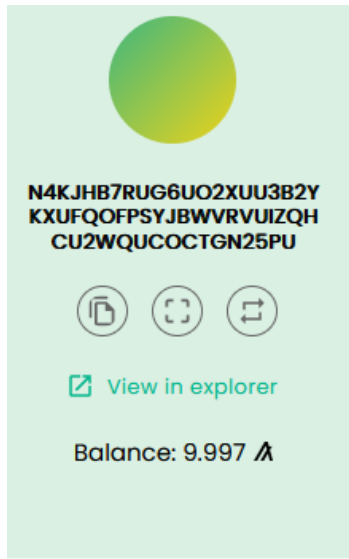
Clawback Account:

N4KJHB7RUG6UO2XUU3B2YKXUFQFQPSYJBWVRVUIZQHCU2WQUCOCTGN25PU




Copy


> More Information


9) Check your NFT on Algodesk and Algo Explorer.



N4KJHB7RUG6UO2XUU3B2Y
KXUFQOFPSYJBWVRVUIZQH
CU2WQUCOCTGN25PU



 [View in explorer](#)

Balance: 9.997 

Search asset



 Name

☐ Hide 0 bal


Dario Sky  

ID: 101792190 Balance : 1 DSK




Manager Reserve

N4KJHB7RUG6U...QUCOCT...  N4KJHB7RUG6U...QUCOCT... 



Algo Explorer
Algorand Blockchain Explorer

Search by Address / Tx ID / Group Tx ID / Block / Asset Name / Asset ID / App ID 

[Assets](#) [Apps](#) [Statistics](#) [Blockchain](#) [Tools](#) [API](#) [Governance](#)

 TESTNET  

Asset Overview

 **Dario Sky** 

NOT VERIFIED | ID 101792190 | <https://gateway.pinata.cloud/ipfs/QmSACThTQNBqnQHSMo7Y3Vc7xAo4TpoNfXHLiCQmwjAAft>

Profile

Information not provided. Creators, please [log in](#) to AlgoExplorer and head over to the [Asset Verification Module](#) to provide the asset's details.

General

Technical Information


Circulating Supply

0

Total Supply

1


ID

101792190 


Unit name

DSK

Reserve Account

N4KJHB7RUG6UO2XUU3B2YKXUFQOFPSYJBWVRVUIZQHCU2WQUCOCTGN25... 

Creator Account

N4KJHB7RUG6UO2XUU3B2YKXUFQOFPSYJBWVRVUIZQHCU2WQUCOCTGN25... 

Decimals

0





Default Frozen



False





Total Tx

1

Transactions

1 of 1    

TxID	Block	Age	Amount	From	To	Fee	Type
SFP25UIZBH5ULUPPR5JR...	2313959	5 min ago		N4KJHB7RUG6UO2XUU3... 	Asset 101792190	⌘ 0.001	Config 

1 of 1    

Asset Overview



Dario Sky

NOT VERIFIED

ID 101792190

<https://gateway.pinata.cloud/ipfs/QmSACThTQNBqnQHSMo7Y3Vc7xAo4TpoNfXHLiCQnwjAAft>

Profile

Information not provided. Creators, please [log in](#) to AlgoExplorer and head over to the [Asset Verification Module](#) to provide the asset's details.

General

Technical Information

Creation Tx

Copy

[SFP25UIZBH5ULUPPR5JRJB5AVDQJZ66DDPHNTIDHRKP2NBZSWNVA](#)

Created at round

[23139559](#)

Date of creation

7/29/2022

Manager Account

Copy

[N4KJHB7RUG6UO2XUU3B2YKXUFQOFPSYJBWVRVUIZQHCU2WQUCOCTGN25...](#)

Freeze Account

Copy

[N4KJHB7RUG6UO2XUU3B2YKXUFQOFPSYJBWVRVUIZQHCU2WQUCOCTGN25...](#)

Clawback Account

Copy

[N4KJHB7RUG6UO2XUU3B2YKXUFQOFPSYJBWVRVUIZQHCU2WQUCOCTGN25...](#)

Metadata Hash

—

Transactions

1

of 1

« « » »

TxID	Block	Age	Amount	From	To	Fee	Type
SFP25UIZBH5ULUPPR5JR...	23139559	8 min ago		N4KJHB7RUG6UO2XUU3... →	Asset 101792190	⚡ 0.001	Config

1


of 1




« « » »


10) Check your NFT in your wallet.

My Wallet

Account #1
N4K3HB7RUG...COCTGN25PU

Balance ⓘ
9.997 


  Send  Receive














NFDs are now available! 

You can now search by an NFD instead of an address when performing transactions.

GET YOUR .ALGO DOMAIN →

Assets Transactions

 Add Asset

Asset	Balance	Price ▼	Actions
 ALGO 	9.997	-	 Send  Receive
 DTK ID 101769672	1,000,000	-	 Send  Receive ...
 dpT ID 101773381	1	-	 Send  Receive ...
 DSK ID 101792190	1	-	 Send  Receive ...

Finally, by your NFT URL, you can see the image of your NFT!



Created by:
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Blockchain Development Program