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DREAM. EXPLORE. INVENT

WTF is NFT?

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Our NFT use case

SaaS sales platform for digital products

NFT feature – to offer a limited number of "tokens" alongside digital product releases

Agenda

What is it?

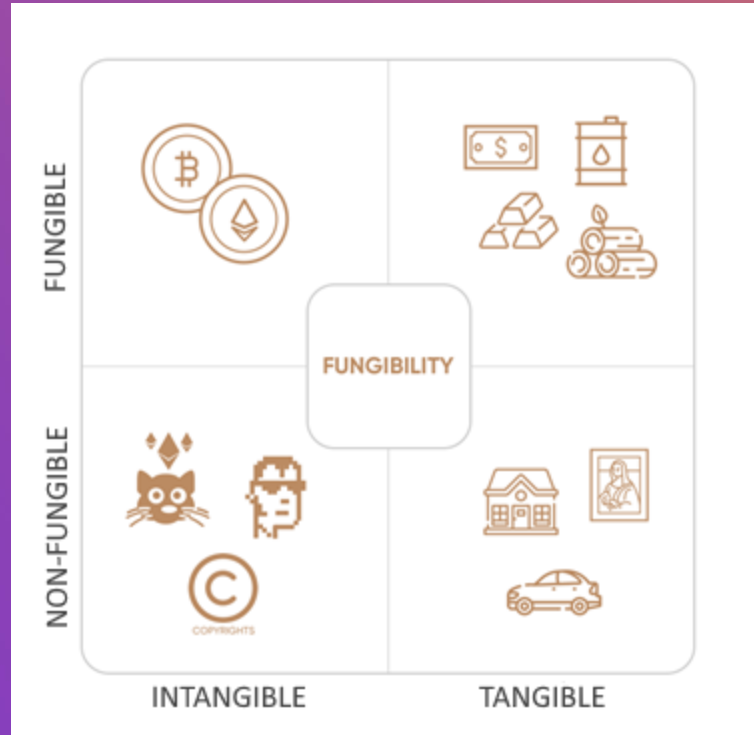Can I steal it?

How to "mint" it?

What's next?

Fungible?

Fungible?

What is it?

- Non-Fungible Token

- Started with Ethereum

- Smart contract deployed on Blockchain

- Blockchain benefits

  ○ Permanence

  ○ Ownership

  ○ Transparency

  ○ Security*

Can I steal it?

How to "mint" it?

Select a Blockchain

(Görli, Sepolia)

Create a wallet & add crypto

Implement your Smart contract

```solidity
pragma solidity ^0.8.0;

import "@openzeppelin/contracts/token/ERC721/ERC721.sol";
import "@openzeppelin/contracts/utils/Counters.sol";
import "@openzeppelin/contracts/access/Ownable.sol";
import "@openzeppelin/contracts/token/ERC721/extensions/ERC721URIStorage.sol";

contract IstaConNFT is ERC721URIStorage, Ownable {
    using Counters for Counters.Counter;
    Counters.Counter private _tokenIds;

    constructor() ERC721("istacon", "NFT") {}

    function mintNFT(address recipient, string memory tokenURI) public onlyOwner returns (uint256)
{
        _tokenIds.increment();
        uint256 newItemId = _tokenIds.current();
        _mint(recipient, newItemId);
        _setTokenURI(newItemId, tokenURI);
        return newItemId;
    }
}
```

Store the digital content

- InterPlanetary File System (IPFS)

- Public, distributed & resilient

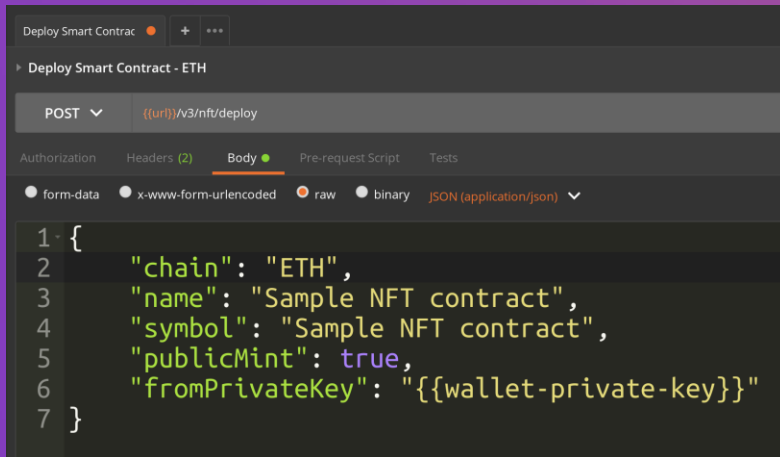- Content addressing via hashing – content cannot be changed

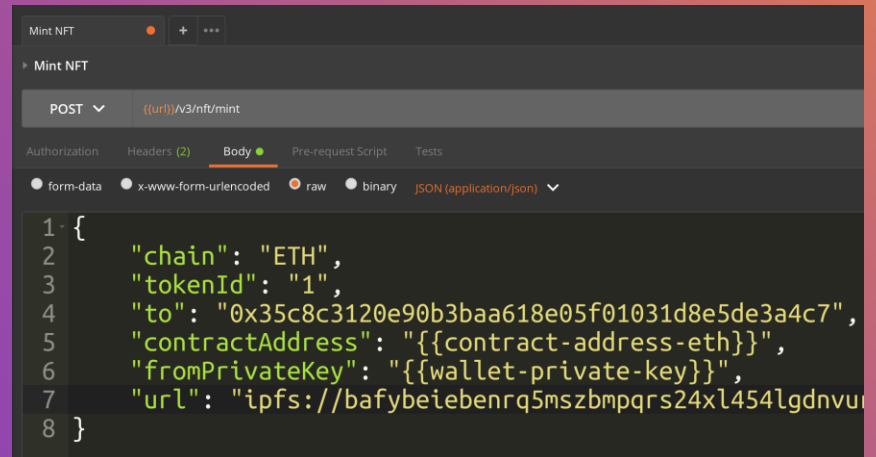`ipfs://bafybeiebenrq5mszbmpqrs24xl454lgdnvuryyrl73v3hkq445gvoqpjqu/`

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Use an API

Use API calls to deploy the contract and mint the NFT


```
Deploy Smart Contrac  ●  +  ...

▶ Deploy Smart Contract - ETH

POST ∨   {{url}}/v3/nft/deploy

Authorization   Headers (2)   Body ●   Pre-request Script   Tests

○ form-data   ○ x-www-form-urlencoded   ● raw   ○ binary   JSON (application/json) ∨

1 {
2     "chain": "ETH",
3     "name": "Sample NFT contract",
4     "symbol": "Sample NFT contract",
5     "publicMint": true,
6     "fromPrivateKey": "{{wallet-private-key}}"
7 }
```

```
Mint NFT  ●  +  ...

▶ Mint NFT

POST ∨   {{url}}/v3/nft/mint

Authorization   Headers (2)   Body ●   Pre-request Script   Tests

○ form-data   ○ x-www-form-urlencoded   ● raw   ○ binary   JSON (application/json) ∨

1 {
2     "chain": "ETH",
3     "tokenId": "1",
4     "to": "0x35c8c3120e90b3baa618e05f01031d8e5de3a4c7",
5     "contractAddress": "{{contract-address-eth}}",
6     "fromPrivateKey": "{{wallet-private-key}}",
7     "url": "ipfs://bafybeiebenrq5mszbmpqrs24xl454lgdnvu
8 }
```

View the results

0xf755c3176dd30facdf08
61caf2db94a61eadeff879
54fd33ab13c01a7ab4c112

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Lessons learned from our use case

- Ethereum is fancy but more expensive and slower
  - ETH: 10-100 EUR,   duration: minutes
  - CELO: ~0.0005 EUR,   duration: seconds

- Many "sales" materials online – but few good developer resources

- Dynamic area (prices, deprecated testnets, new Blockchains)

What's next?

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Collectibles

Investment?

Image by jcomp on Freepik

Illegal activities

Image by Racool_studio on Freepik

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Intellectual property

Image by pikisuperstar on Freepik

Summary

"So you can't own the precious physically, but you can pay to have your name listed as its owner in an online distributed database."

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Thanks!

Questions?