

## 任务 2 – 发行一个ERC721的NFT合约

1. 在 sepolia 或其他测试网络发行一个 ERC721 的 NFT 合约，可以参照 <https://solidity-by-example.org/app/erc721/>
2. 或使用 <https://docs.openzeppelin.com/contracts/5.x/erc721>，提交合约地址与对应网络

这里我们用remix部署一个简单的ERC721的NFT合约

### 一、部署合约

```
1 // SPDX-License-Identifier: MIT
2 pragma solidity ^0.8.20;
3 import "@openzeppelin/contracts/token/ERC721/ERC721.sol";
4 import {ERC721URIStorage} from "@openzeppelin/contracts/token/ERC721/extensions/ERC721URIStorage.sol";
5 contract GameItem is ERC721URIStorage {
6     uint256 private _nextTokenId;
7
8     constructor() ERC721("GameItem", "ITM") {}
9
10    function awardItem(address player, string memory tokenURI)
11        public
12        returns (uint256)
13    {
14        uint256 tokenId = _nextTokenId++;
15        _mint(player, tokenId);
16        _setTokenURI(tokenId, tokenURI);
17
18        return tokenId;
19    }
20 }
```

对合约先在内置的虚拟机中进行编译和部署看是否通过

然后在切换到Sepolia Testnet网络上，进行测试网络的部署

HomeBlockchainTokensNFTsMisc

Transaction Details

OverviewStateMore

[ This is a Sepolia Testnet transaction only ]

Transaction Hash:

0x94da7b40d065601947aa6d95158e3a764bb039becc7bb6d6512350770fedb4d2

Status:

Success

Block:

482092311 Block Confirmations

Timestamp:

2 mins ago (Dec-04-2023 01:45:00 PM +UTC)

Method:

0x00000040

From:

0xC0b76D87381C918943Dc14718Af16d66c165e91B

To:

[ 0x3bd3d8452fd32e2eb74e9b20c6554996c8e6b017 Created ]

Value:

0 ETH (\$0.00)

Transaction Fee:

0.003276716415043294 ETH (\$0.00)

Gas Price:

1.606478446 Gwei (0.00000001606478446 ETH)

More Details:

+ Click to show more

A transaction is a cryptographic proof of interaction that changes the blockchain state. Block explorers track the details of all transactions in the network. Learn more about transactions in our [Knowledge Base](#).

在用函数去造一个nft，点击transact进行部署，成功部署可以根据哈希查询nft

At AddressLoad contract from Address

Transactions recorded 2

Deployed Contracts

GAMEITEM AT 0X3BD...6B017 (BLOCKCHAIN)

Balance: 0. ETH

approveaddress to, uint256 tokenId

awardItem

player:0xC0b76D87381C918943Dc14718Af16d66c165e91B

tokenUR&fined&dyTabStr=MCwxLDMsMiw2LDQsNSw3LDpsOQ%3D%3D

CalldataParameterstransact

safeTransferFr...address from, address to, uint256 tokenId

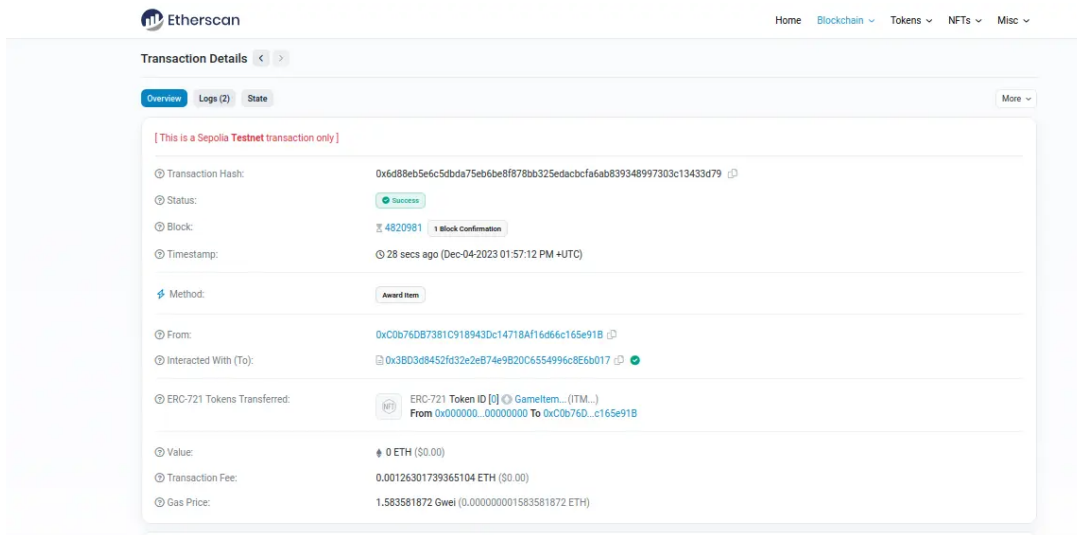
safeTransferFr...address from, address to, uint256 tokenId, bytes data

setApprovalFo...address operator, bool approved

transferFromaddress from, address to, uint256 tokenId

balanceOfaddress owner

getApproveduint256 tokenId



在metamask中导入nft，可以看到导入成功

