

ENS + IPFS: USING ENS AS A NAMING SYSTEM FOR IPFS



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@makoto

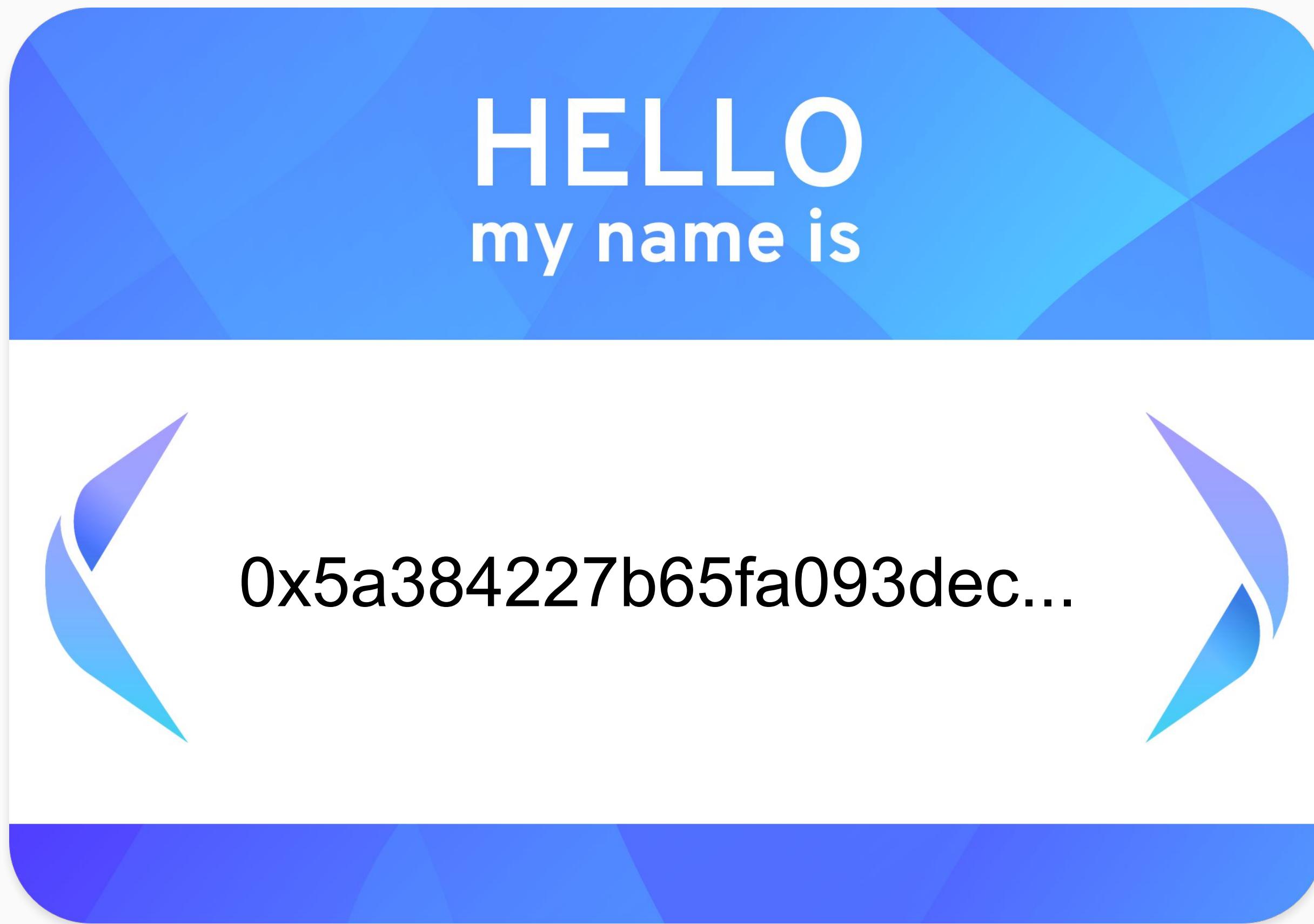




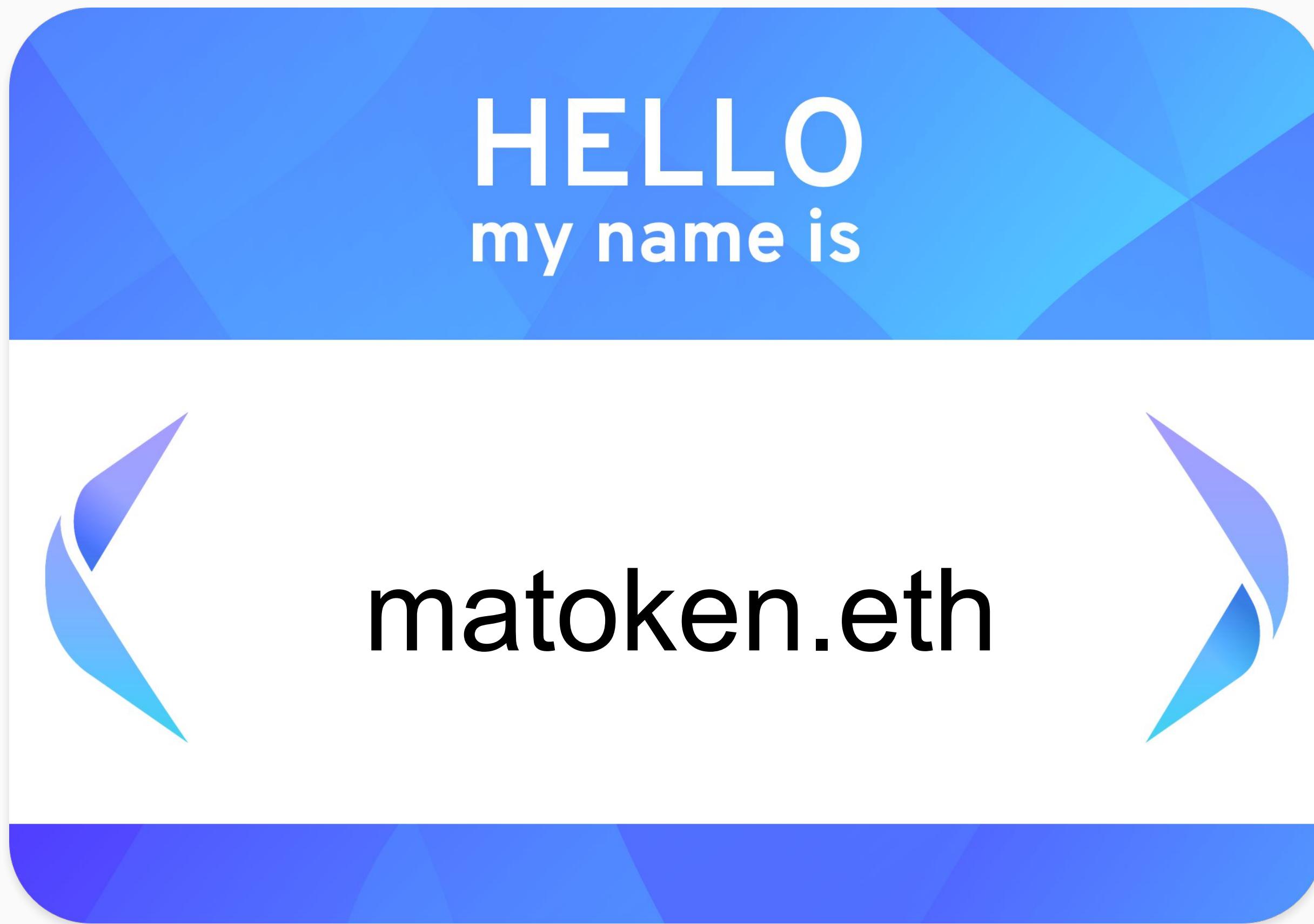
ETHEREUM NAME SERVICE

IPFS Camp
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ENS as Ethereum Smart contract

```
1 contract PublicResolver {
2     struct Record {
3         address addr;
4         string name;
5     }
6
7     mapping (bytes32 => Record) records;
8
9     function setAddr(bytes32 node, address addr) external onlyOwner(node) {
10        records[node].addr = addr;
11    }
12
13    function addr(bytes32 node) external view returns (address) {
14        return records[node].addr;
15    }
16 }
```

<https://manager.ens.domains/>

The screenshot shows a web browser window for the ENS Manager at <https://manager.ens.domains/name/matoken.eth>. The page displays the following information for the name `matoken.eth`:

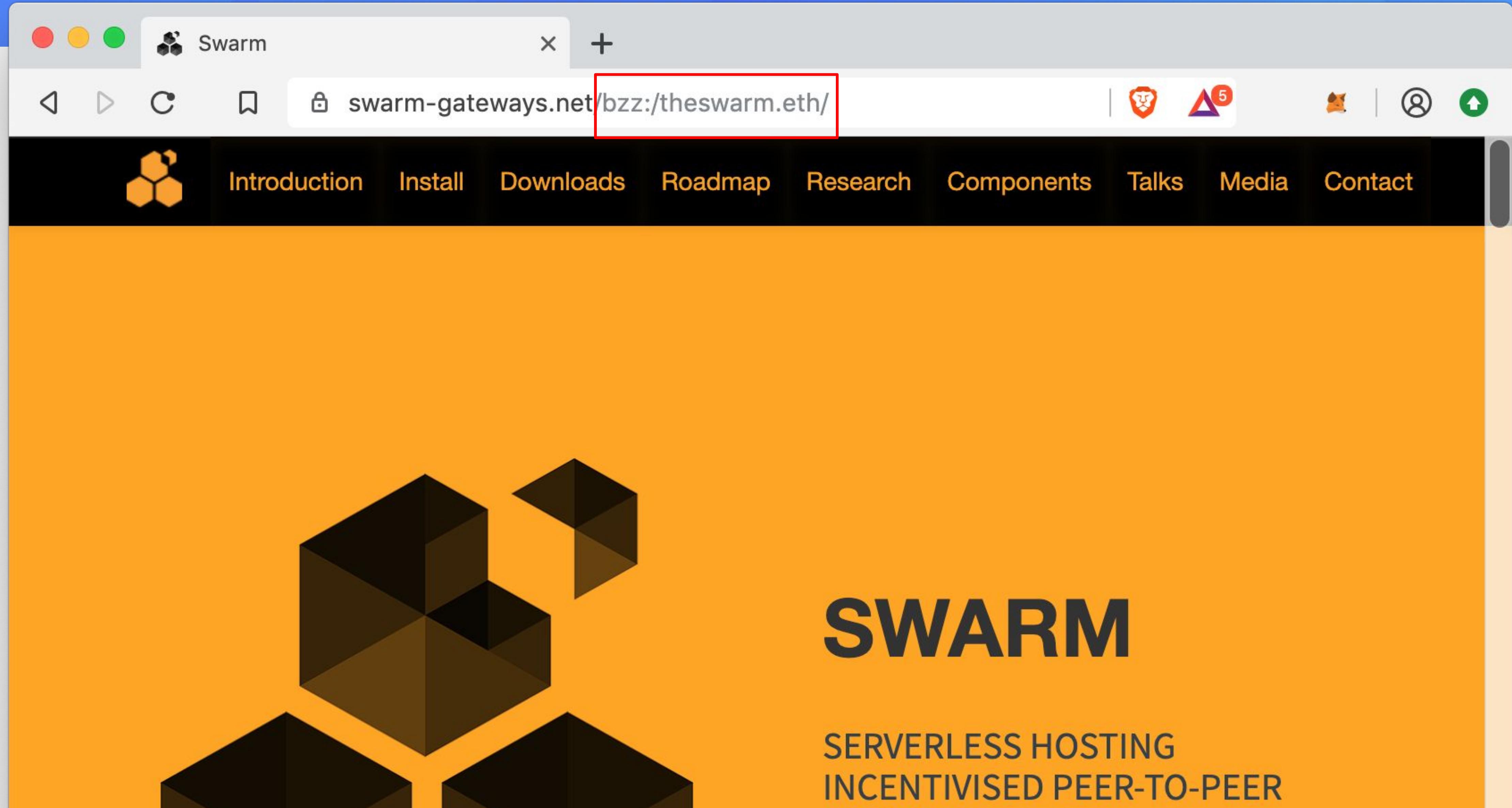
- PARENT:** `eth`
- REGISTRANT:**  `0x5A384227B65FA093DEC03Ec34e111Db80A040615` [Transfer](#)
- CONTROLLER:**  `0x5A384227B65FA093DEC03Ec34e111Db80A040615` [Set](#)
- EXPIRATION DATE:** `2020.05.04 at 09:00` [Renew](#)
- RESOLVER:**  `0xD3ddcCDD3b25A8a7423B5bEe360a42146eb4Baf3` [Set](#)

A red box highlights the **RECORDS** section, which contains the following entry:

ADDRESS
<code>0x5A384227B65FA093DEC03Ec34e111Db80A040615</code>

Below the address, there is a note: `Reverse record: Set to matoken.eth`.

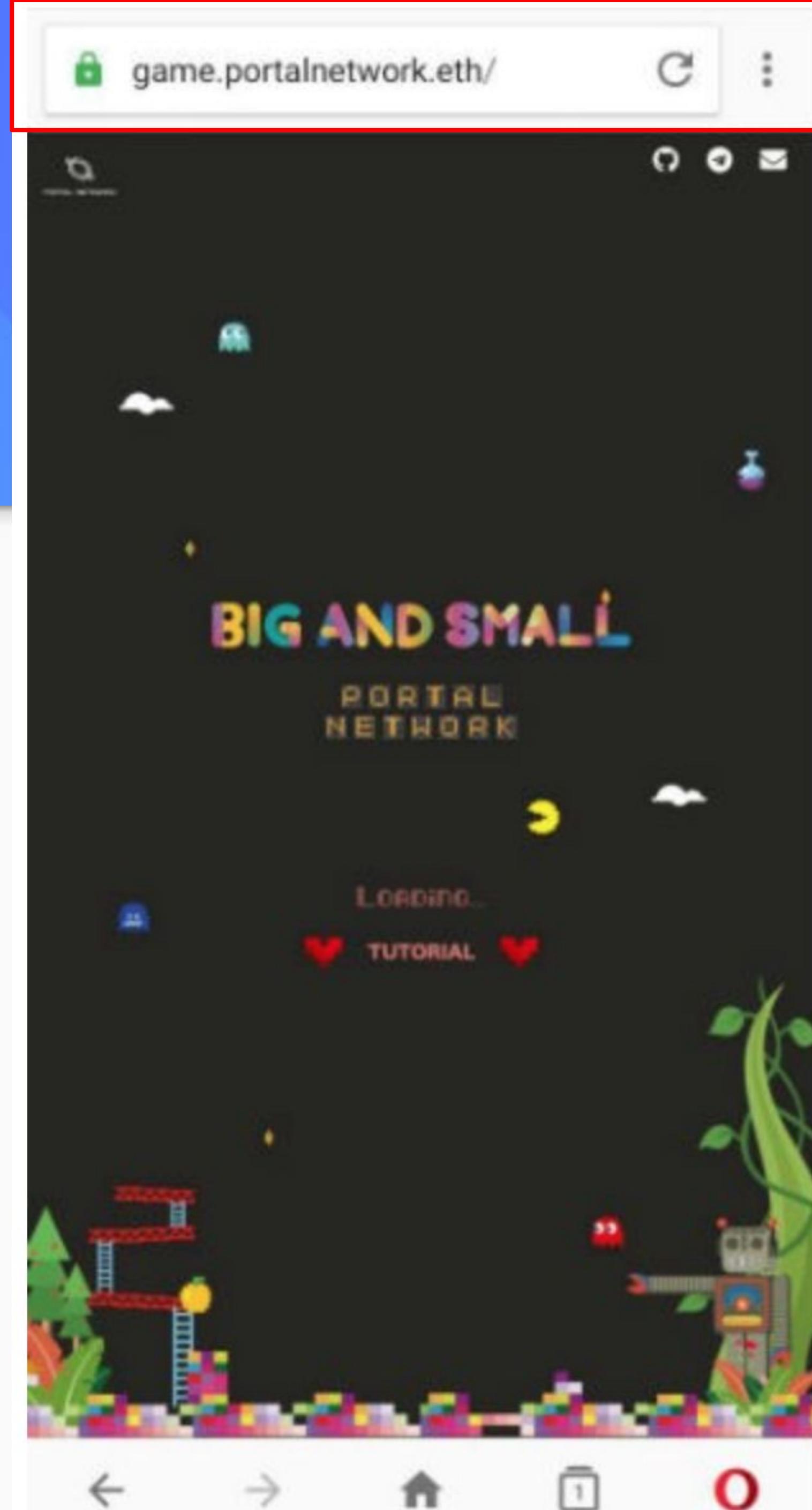
Not just for Ethereum hex addresses



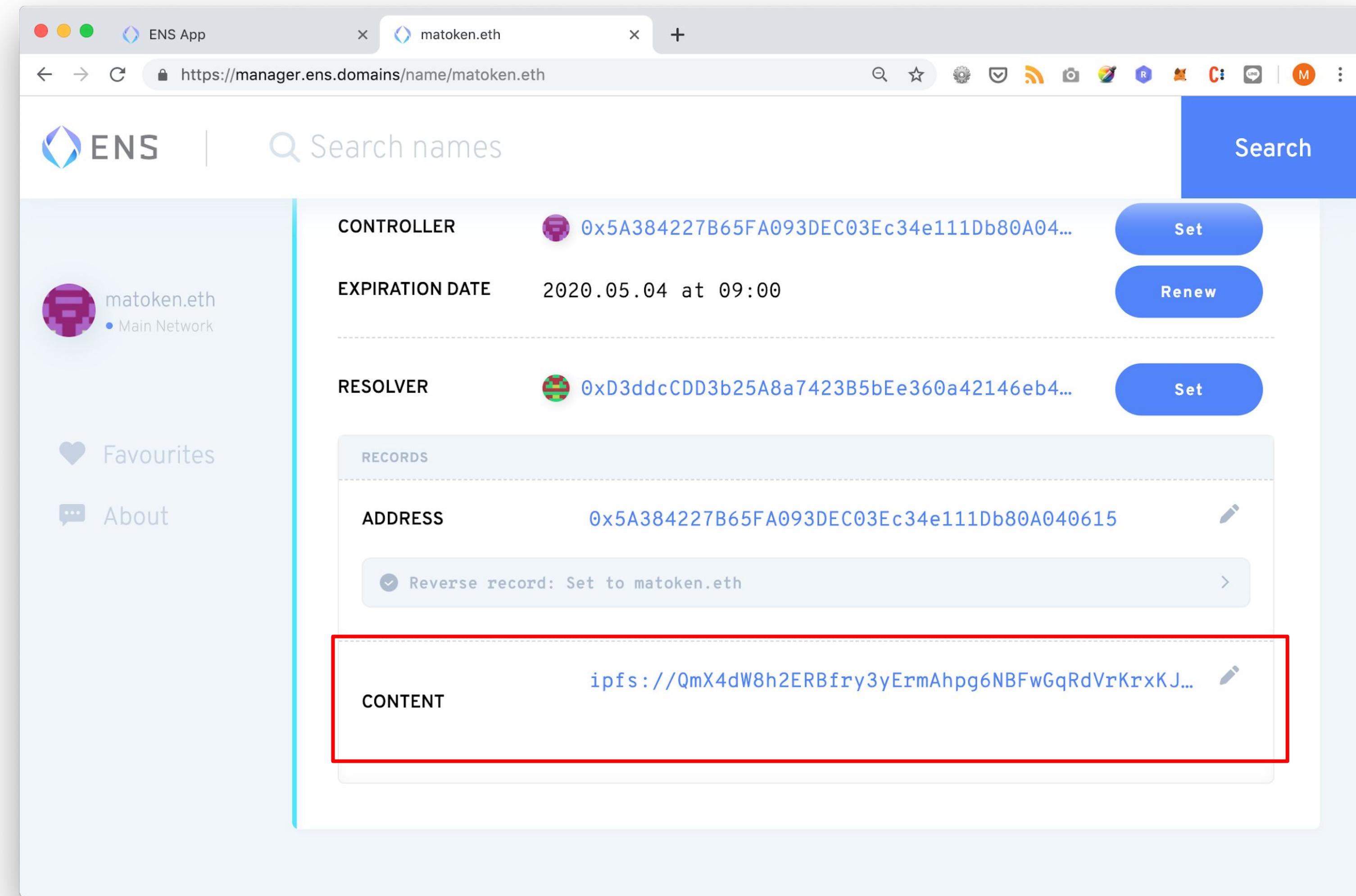
Contenthash support (EIP1577)

<http://eips.ethereum.org/EIPS/eip-1577>

- Supports multi-codec format
- Supported by wallets, browsers, and chrome plugins



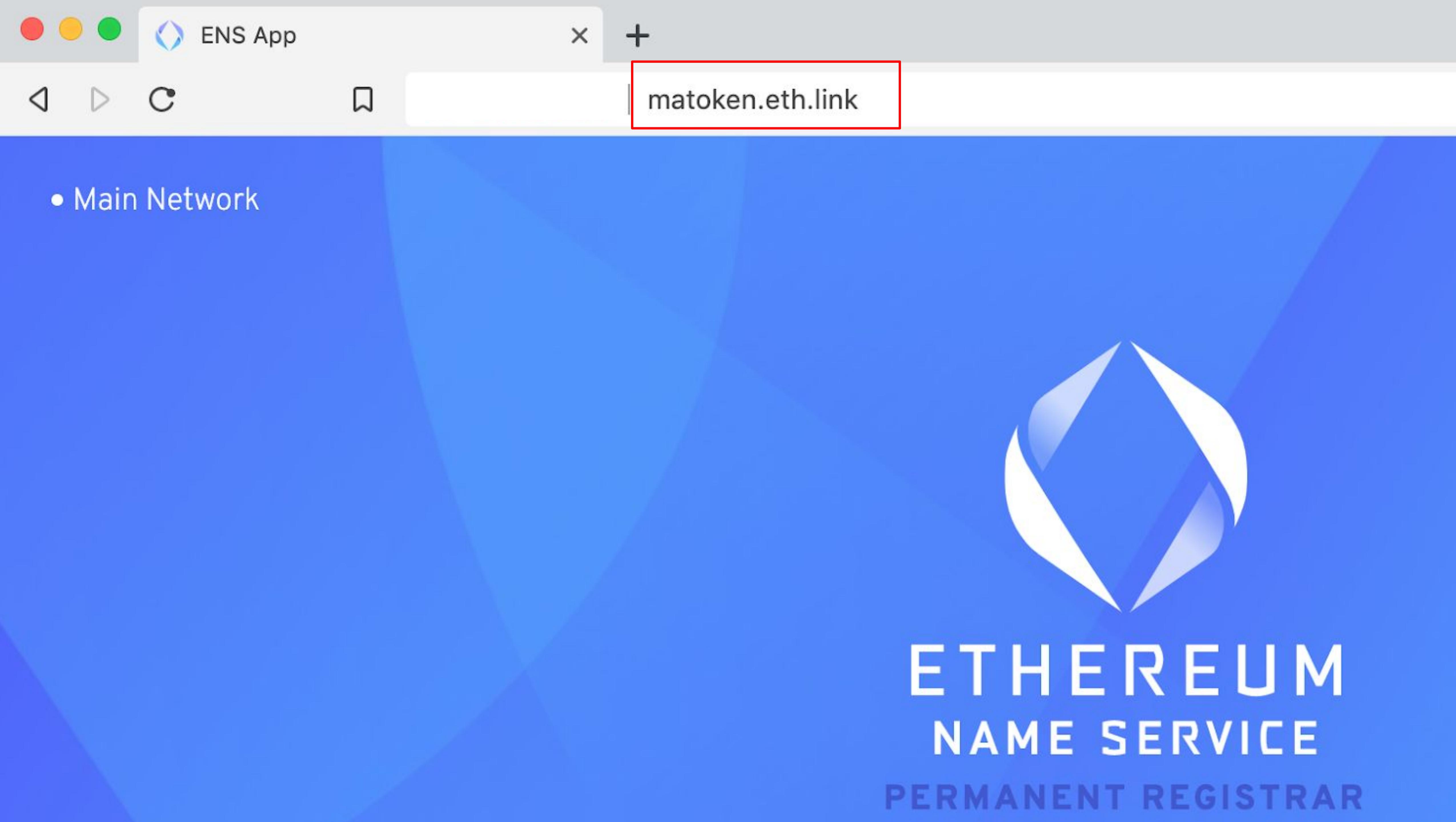
Setting up IPFS hash



Introducing EthDNS



On behalf of Jim McDonald



ENS App

X +

matoken.eth.link

◀ ▶ C

□

• Main Network



ETHEREUM

NAME SERVICE

PERMANENT REGISTRAR

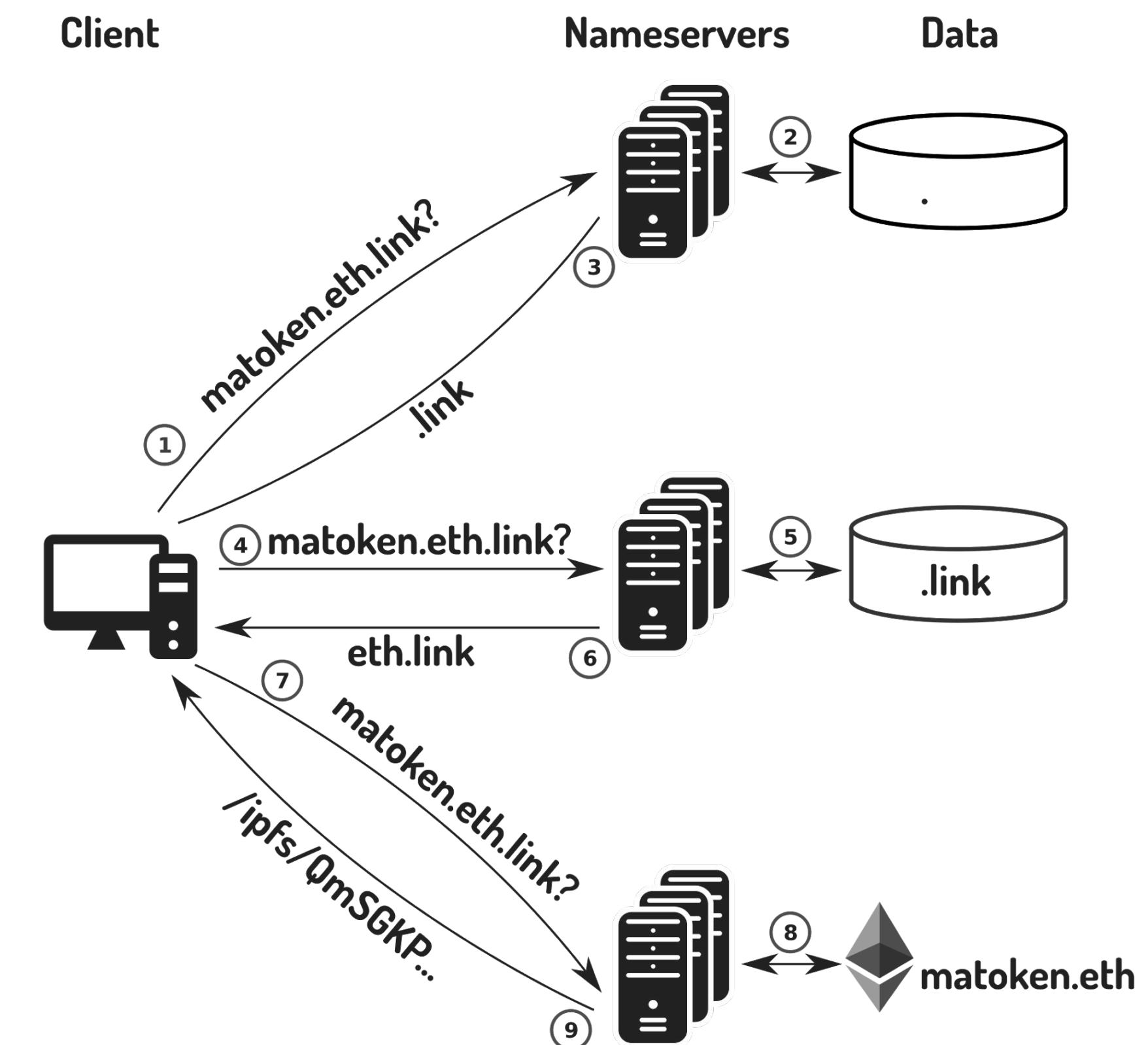
How does it work?

1. *.eth.link returns the IPFS gateway address
2. IPFS gateway looks up contenthash in ENS
3. IPFS gateway servers content

```
[~/.../ens/ens-app (dev)$host matoken.eth.link  
matoken.eth.link has address 176.9.154.81  
matoken.eth.link has IPv6 address 2a01:4f8:160:4069::2
```

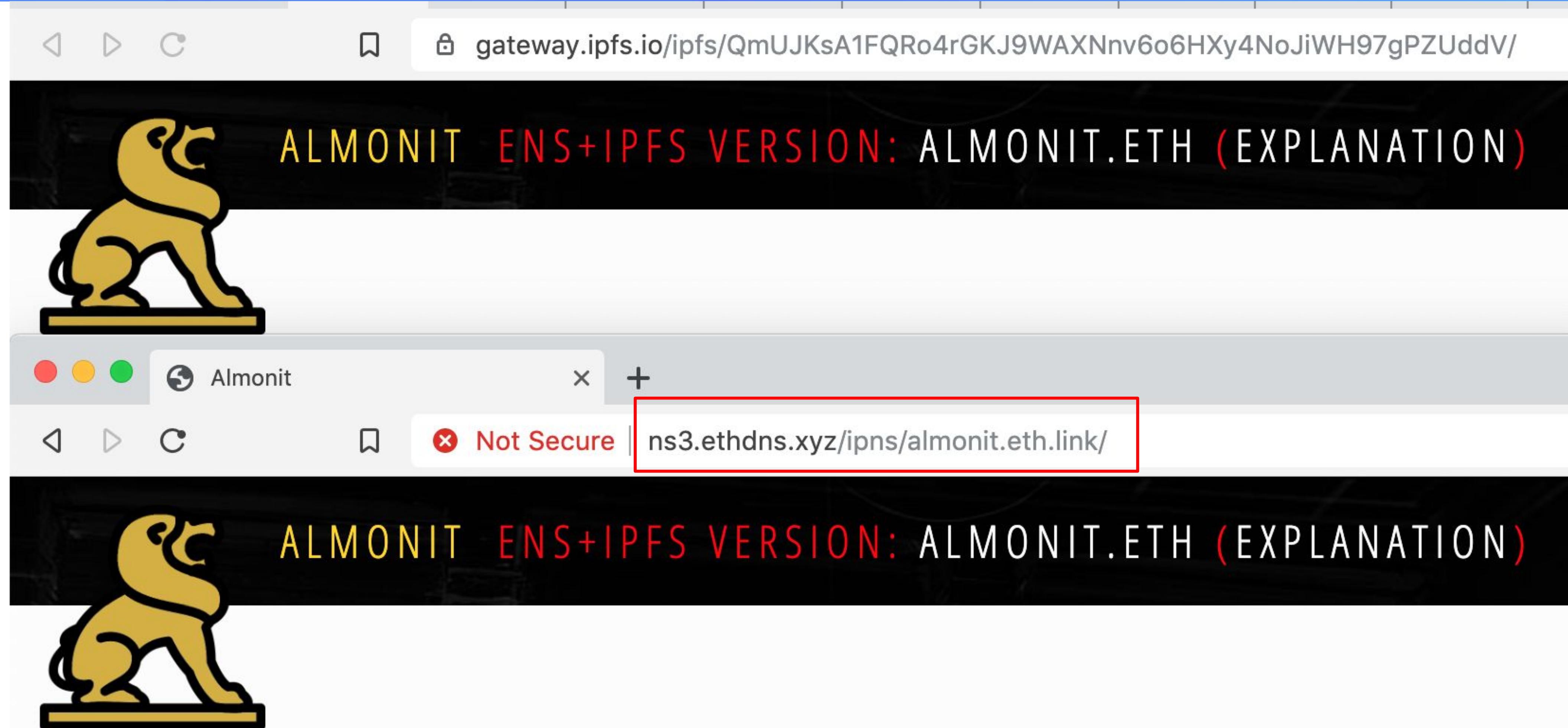
Why EthDNS?

- No browser support is required
- Partially decentralised



EthDNS application ideas

IPFS gateway integration



List of ENS+IPFS websites

Can we get rid of “eth.link”?

- .eth domain reserved for Ethiopia
- .com/.net/.xyz, etc?
- .ipfs, .dweb?

For more info

- <https://www.wealdtech.com/articles/ethdns-an-ethereum-backend-for-the-domain-name-system/>
- <https://github.com/ethereum/EIPs/blob/master/EIPS/eip-1577.md>
- <https://github.com/mcdee/coredns>
- <http://ensmanager.matoken.eth.link>

Thank you!

Demo: <http://ensmanager.matoken.eth.link>

Or Say hi at SciFair

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