



MetaMask

chrome://extensions/


 Your [browser is managed](#) by your organization



Allow CORS: Access-Control-Allow-Origin
Easily add (Access-Control-Allow-Origin: *) rule to the response header.

[Details](#) [Remove](#)


☒



Google Docs Offline
Edit, create, and view your documents, spreadsheets, and presentations — all without internet access.

[Details](#) [Remove](#)

☒



Simple Allow Copy
Allow Copy on every websites

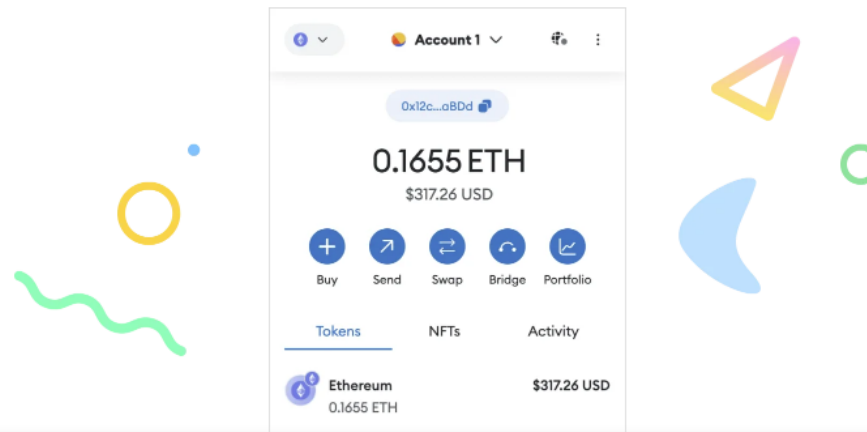
[Details](#) [Remove](#)

☒

https://metamask.io/download/

[Features](#) ▾[Build](#) ▾[Resources](#) ▾[Learn](#)[Chrome](#)[iOS](#)[Android](#)

Install MetaMask for your browser

[Install MetaMask for Chrome](#)



MetaMask

metamask.io 3.2 ★ (3.2K ratings)

Extension Workflow & Planning 15,000,000 users

Add to Chrome



Let's get started

Trusted by millions, MetaMask is a secure wallet making the world of web3 accessible to all.



☒ I agree to MetaMask's [Terms of use](#)

Create a new wallet

Import an existing wallet

1

Create password

2

Secure wallet

3

Confirm secret
recovery phrase

Create password

This password will unlock your MetaMask wallet only on this device. MetaMask can not recover this password.

New password (8 characters min)[Show](#)

.....

Password strength: **Weak**

A strong password can improve the security of your wallet should your device be stolen or compromised.

Confirm password

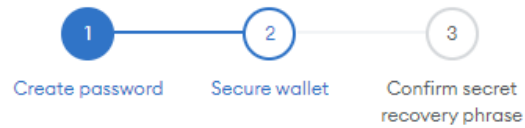
✓

.....



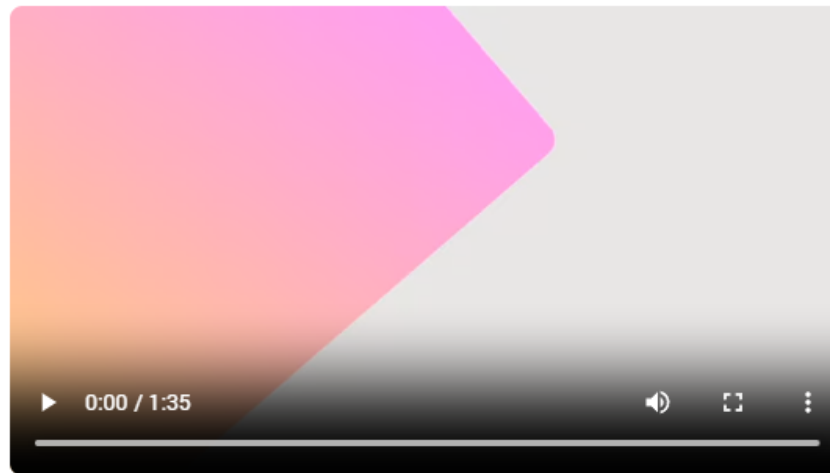
I understand that MetaMask cannot recover this password for me. [Learn more](#)

[Create a new wallet](#)



Secure your wallet

Before getting started, watch this short video to learn about your Secret Recovery Phrase and how to keep your wallet safe.



Remind me later (not recommended)

Secure my wallet (recommended)

1

Create password

2

Secure wallet

3

Confirm secret
recovery phrase

Write down your Secret Recovery Phrase

Write down this 12-word Secret Recovery Phrase and save it in a place that you trust and only you can access.

Tips:

- Save in a password manager
- Store in a safe deposit box
- Write down and store in multiple secret places

1. whisper	2. pool	3. umbrella
4. angry	5. average	6. flame
7. forward	8. glue	9. shoot
10. bracket	11. mask	12. staff

[Hide seed phrase](#)[Copy to clipboard](#)[Next](#)

- whisper pool umbrella angry average flame forward glue shoot bracket
mask staff



Confirm Secret Recovery Phrase

Confirm Secret Recovery Phrase

- | | | |
|-------------|------------|-------------|
| 1. whisper | 2. pool | 3. umbrella |
| 4. angry | 5. average | 6. flame |
| 7. forward | 8. glue | 9. shoot |
| 10. bracket | 11. mask | 12. staff |

Confirm



Wallet creation successful

You've successfully protected your wallet. Keep your Secret Recovery Phrase safe and secret -- it's your responsibility!

Remember:

- MetaMask can't recover your Secret Recovery Phrase.
- MetaMask will never ask you for your Secret Recovery Phrase.
- **Never share your Secret Recovery Phrase** with anyone or risk your funds being stolen
- [Learn more](#)

[Advanced configuration](#)

Got it!

Advanced configuration

MetaMask uses these trusted third-party services to enhance product usability and safety.

Show incoming transactions

This relies on different third-party APIs for each network, which expose your Ethereum address and your IP address.



Ethereum Mainnet
[Etherscan.io](#)



ON



Linea Mainnet
[Lineascan.build](#)



ON



Goerli
[Etherscan.io](#)



ON



Sepolia
[Etherscan.io](#)



ON



Linea Goerli
[Lineascan.build](#)



ON

Use phishing detection



Phishing detection alerts rely on communication with [jsDeliver](#). jsDeliver will have access to your IP address. View [Privacy policy](#).



ON

Choose your network

We use Infura as our remote procedure call (RPC) provider to offer the most reliable and private access to Ethereum data we can. You can choose your own RPC, but remember that any RPC will receive your IP address and Ethereum wallet to make transactions. Read our [Privacy policy](#) to learn more about how Infura handles data.

 Ethereum Mainnet 

Add custom IPFS Gateway

The IPFS gateway makes it possible to access and view data hosted by third parties. You can add a custom IPFS gateway or continue using the default.

dweb.link

IPFS gateway URL is valid

Show ENS domains in address bar

MetaMask lets you see ENS domains right in your browser's address bar. Here's how it works:

- MetaMask checks with Ethereum's ENS contract to find the code connected to the ENS name.
- If the code links to IPFS, you can see the content associated with it (usually a website).

 ON

Keep in mind that using this feature exposes your IP address to IPFS third-party services.

Show balance and token price checker

We use [CoinGecko](#) and [CryptoCompare](#) APIs to display your balance and token price. [Privacy policy](#)

 ON

Done

Select a network



Ethereum Mainnet



Linea Mainnet

Show test networks



Goerli



Sepolia



Linea Goerli

Add network

chrome-extension://nkbihfbeogaeaoehlefnkodbefgpgknn/home.html#



Ethereum Mainnet ▾

Account 1 ▾



0x41A9c...5F9A5 

0 ETH

\$0.00 USD



Buy & Sell



Send



Swap



Bridge



Portfolio

Tokens

NFTs

Activity



Ethereum

0 ETH

\$0.00 USD

+ Import tokens

↻ Refresh list

🔗 MetaMask support

Select a network



Ethereum Mainnet



Linea Mainnet

Show test networks



Goerli



Sepolia



Linea Goerli

Add network

Ethereum Mainnet ▾


 Account 1 ▾




Settings


 Search



 General


 Advanced


 Contacts

 Security & privacy

 Alerts

 Networks









 Experimental

 About

Networks > Add a network

Add from a list of popular networks or add a network manually. Only interact with the entities you trust.

Popular custom networks

	Arbitrum One	Add
	Aurora Mainnet	Add
	Avalanche Network C-Chain	Add
	BNB Chain	 Add
	Celo Mainnet	Add
	Fantom Opera	 Add
	Gnosis	 Add
	Harmony Mainnet Shard 0	 Add
	OP Mainnet	Add
	Palm	Add
	Polygon Mainnet	Add

[Add a network manually](#)

Settings

General

Advanced

Contacts

Security & privacy

Alerts

Networks

Experimental

About

Networks > Add a network > Add a network manually

A malicious network provider can lie about the state of the blockchain and record your network activity. Only add custom networks you trust.

Network name

Ganache

New RPC URL

HTTP://127.0.0.1:7545

Chain ID

1337

Currency symbol

DKKIM

The network with chain ID 1337 may use a different currency symbol (ETH) than the one you have entered. Please verify before continuing.

Block explorer URL (Optional)

Cancel

Save




Network added successfully!

Switch to Ganache

Dismiss



G Ganache ▾

 Account 1 ▾

0x41A9c...5F9A5 

0 DKKIM



Buy & Sell



Send



Swap



Bridge



Portfolio

Tokens

NFTs



^G DKKIM

0 DKKIM

[+ Import tokens](#)

[↻ Refresh list](#)

[💬 MetaMask support](#)

Select an account



Account 1

0x41A9c...5F9A5

0 DKKIM ⋮

0 DKKIM

+ Add account or hardware wallet



Add account



+ Add a new account

📄 Import account

👛 Add hardware wallet



ACCOUNTS



BLOCKS



TRANSACTIONS



CONTRACTS



EVENTS



LOGS

SEARCH FOR BLOCK NUMBERS OR TX HASHES

CURRENT BLOCK
29GAS PRICE
20000000000GAS LIMIT
6721975HARDFORK
MUIRGLACIERNETWORK ID
5777RPC SERVER
HTTP://127.0.0.1:7545MINING STATUS
AUTOMININGWORKSPACE
QUICKSTART

SAVE

SWITCH



MNEMONIC ?

hazard prepare intact spin fold next victory science page reward column jealous

HD PATH

m/44'/60'/0'/0/account_index

ADDRESS

0x0DcB3352400B6d6e005AcbB36409d7333fBa0A40

BALANCE

77.03 ETH

TX COUNT

29

INDEX

0



ADDRESS

0x7fdD4F58132Ee42De0469E6F66D6A377c878621A

BALANCE

100.00 ETH

TX COUNT

0

INDEX

1



ACCOUNT INFORMATION

ACCOUNT ADDRESS

0x0DcB3352400B6d6e005AcbB36409d7333fBa0A40

PRIVATE KEY

802885c10f71835e5212dc476476e32130a5fdd3139a1a718be23169253fd851

Do not use this private key on a public blockchain; use it for development purposes only!

DONE



Import account



Imported accounts won't be associated with your MetaMask Secret Recovery Phrase. Learn more about imported accounts [here](#)

Select Type

Private Key 


Enter your private key string here:

.....|

Cancel

Import

G Ganache ▾

 Account 2 ▾

0x0DcB3...a0A40 

77.0332 DKKIM



Buy & Sell



Send



Swap



Bridge



Portfolio

Tokens

NFTs



DKKIM

77.0332 DKKIM

[+ Import tokens](#)

[↻ Refresh list](#)

[💬 MetaMask support](#)

Select an account



Q Search accounts



Account 1

0 DKKIM ⋮

0x41A9c...5F9A5

0 DKKIM



Account 2

77.033 DKKIM ⋮

0x0DcB3...a0A40

77.033 DKKIM

Imported

+ Add account or hardware wallet



Add account



+ Add a new account

📄 Import account

🔑 Add hardware wallet



Add account




Account name

Cancel

Create

G Ganache ▾

 Creaone ▾

0x75cF9...D1F9f 

0 DKKIM



Buy & Sell



Send



Swap



Bridge



Portfolio

Tokens

NFTs



DKKIM

0 DKKIM

+ Import tokens

 Refresh list

 MetaMask support

Select an account



Q Search accounts



Account 1

0x41A9c...5F9A5

0 DKKIM ⋮

0 DKKIM



Creaone

0x75cF9...D1F9f

0 DKKIM ⋮

0 DKKIM



Account 2

0x0DcB3...a0A40

77.033 DKKIM ⋮

77.033 DKKIM

Imported

+ Add account or hardware wallet

Select an account



Q Search accounts



Account 1

0x41A9c...5F9A5

0 DKKIM ⋮

0 DKKIM



Creaone

0x75cF9...D1F9f

0 DKKIM ⋮

0 DKKIM



Account 2

0x0DcB3...a0A40

Imported

77.033 DKKIM ⋮

+ Add account or hardware



Account details




View on explorer




Remove account




Account 2 



0x0DcB3352400B6d6e005AcbB36409d7
333fBa0A40 

Show private key

S Sepolia ▾

 Account 1 ▾

0x41A9c...5F9A5 

0 SepoliaETH



Buy & Sell



Send



Swap



Bridge



Portfolio

Tokens

NFTs



SepoliaETH

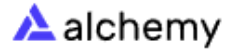
0 SepoliaETH

+ Import tokens

 Refresh list

 MetaMask support

<https://www.alchemy.com/overviews/sepolia-eth>



Products ▾

Case Studies ▾

Enterprise

Developers ▾

TESTNETS

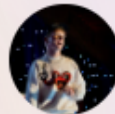
SEPOLIA FAUCET OVERVIEW

How to Get Sepolia ETH from a Faucet

Start Testing Your Smart Contracts on the Sepolia Testnet Using Free Sepolia ETH



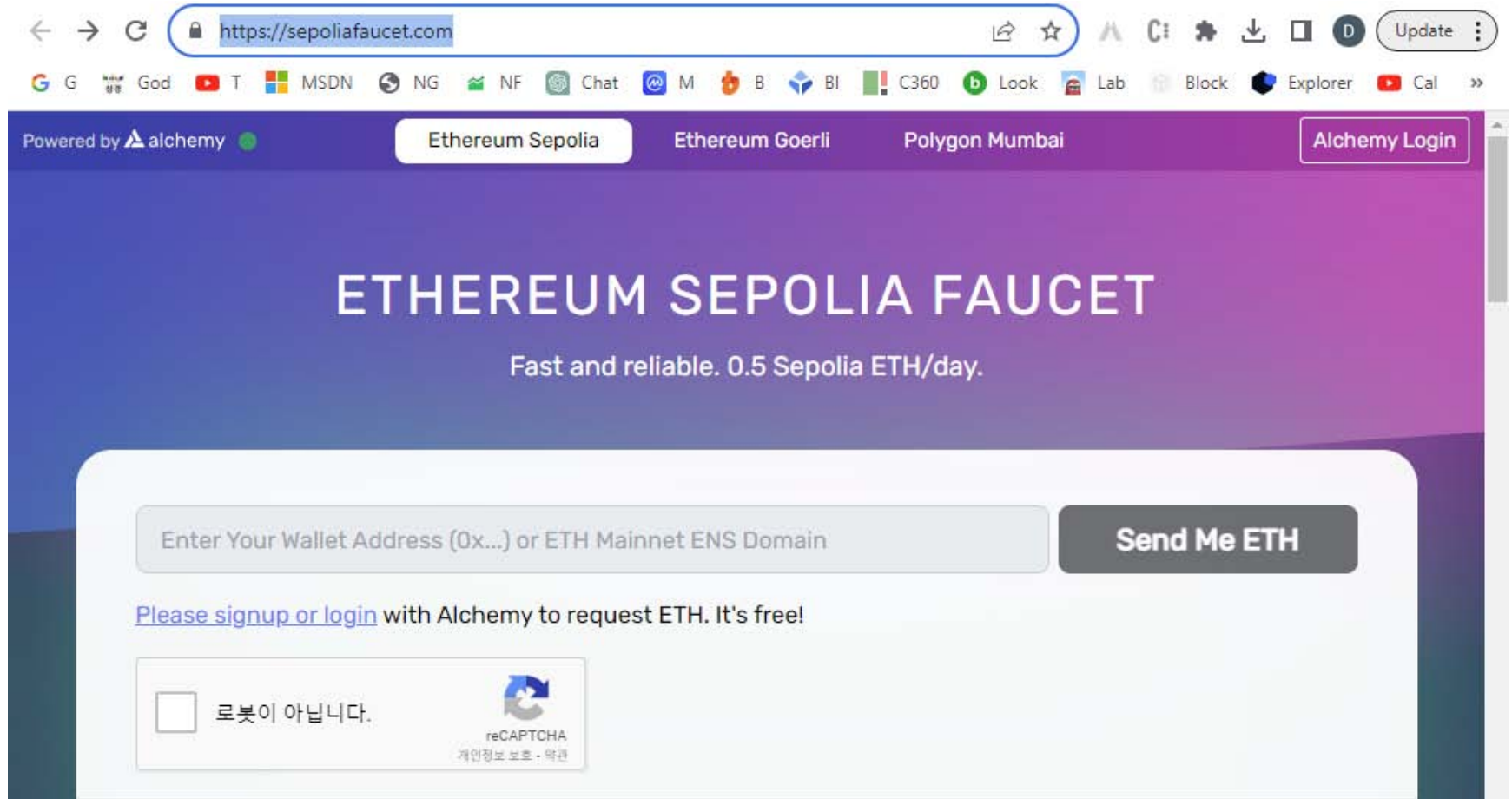
WRITTEN BY
Brady Werkheiser




REVIEWED BY
Logan Ross

Last Updated: March 3, 2023

https://sepoliafaucet.com/



The screenshot shows a web browser window with the URL <https://sepoliafaucet.com/> in the address bar. The browser's toolbar includes navigation buttons (back, forward, refresh), a search bar, and various extension icons. The website's header is purple and features the text "Powered by alchemy" with a green dot, and three tabs: "Ethereum Sepolia", "Ethereum Goerli", and "Polygon Mumbai". An "Alchemy Login" button is in the top right corner. The main content area has a blue-to-purple gradient background with the text "ETHEREUM SEPOLIA FAUCET" in large white letters, followed by "Fast and reliable. 0.5 Sepolia ETH/day." in smaller white text. Below this is a white rounded rectangle containing a form. The form has a text input field with the placeholder "Enter Your Wallet Address (0x...) or ETH Mainnet ENS Domain" and a dark grey button labeled "Send Me ETH". Below the input field is a link: "Please [signup or login](#) with Alchemy to request ETH. It's free!". At the bottom of the form is a reCAPTCHA widget with a checkbox and the text "로봇이 아닙니다." (I am not a robot.), the reCAPTCHA logo, and the text "reCAPTCHA 개인정보 보호 · 약관".

Powered by  alchemy


Ethereum Sepolia Ethereum Goerli Polygon Mumbai [Alchemy Login](#)

ETHEREUM SEPOLIA FAUCET

Fast and reliable. 0.5 Sepolia ETH/day.

Enter Your Wallet Address (0x...) or ETH Mainnet ENS Domain [Send Me ETH](#)

[Please signup or login](#) with Alchemy to request ETH. It's free!

☐ 로봇이 아닙니다.  reCAPTCHA
개인정보 보호 · 약관

Signup

 Sign up with Google

 Sign up with SSO

or

FIRST NAME

Gavin

LAST NAME

Belson

EMAIL

gavin@hooli.com

PASSWORD

Sign up



Awesome! What type of project
would you like to build?

DeFi

Learning

Analytics

NFTs

DAOs

Other

[I'm not a developer](#)

Next



What chain do you want to use?

You can always add more later.

MOST POPULAR



Ethereum



Polygon PoS



Arbitrum



Optimism



Polygon zkEVM



Base



Starknet



Solana



Astar

Back

Next



Choose your plan.

Free

\$0 300 million CUs /mo

The largest & most powerful free tier in web3.

MOST POPULAR

Growth

\$49/mo 400 million CUs /mo

Grows with your business.

Scale

☐ Monthly ☒ Yearly

\$199/mo 1.5 billion CUs /mo

The cheapest option in web3; enterprise discounts, no humans required.

Enterprise



Custom CU commitment

Volume pricing, unmatched support, custom SLAs.

[Compare](#)

Back

Next



Add payment info OPTIONAL

✓ Don't worry, you won't be charged for anything unless you upgrade your plan

FIRST NAME

LAST NAME

CARD NUMBER

EXPIRATION

CVV

BILLING ADDRESS

Back

Skip

Next



Last thing, how did you hear about us?

from Web Search

Back

Let's Build!

<https://sepoliafaucet.com/>

ETHEREUM SEPOLIA FAUCET

Fast and reliable. 0.5 Sepolia ETH/day.

0x41A9c282492c028964547C29b35e9724C235F9A5

Send Me ETH

✓ Alchemy account connected, receive 0.5 Sepolia ETH! Try out the most effective blockchain sdk - the [Alchemy SDK](#) !

✓ 로봇이 아닙니다.



Your Transactions

Time

-

ETHEREUM SEPOLIA FAUCET

Fast and reliable. 0.5 Sepolia ETH/day.

Enter Your Wallet Address (0x...) or ETH Mainnet ENS Domain

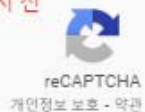
Send Me ETH

✅ Alchemy account connected, receive 0.5 Sepolia ETH! Try out the most effective blockchain sdk - the [Alchemy SDK](#) !

인증이 만료되었습니다. 체크박스를 다시 선택하세요.

☐

로봇이 아닙니다.



Your Transactions

Time



0x201d7f11887717b94a33d45b2933e2fb27b91933e5d27effd07c2024c8d3fa0e

1 minute ago

https://sepolia.etherscan.io/tx/0x201d7f11887717b94a33d45b2933e2fb27b91933e5d27effd07c2024c8d3fa0e

Sepolia Testnet

Search by Address / Txn Hash / Block / Token

Etherscan

HomeBlockchain

Transaction Details

Overview

State

[This is a Sepolia Testnet transaction only]

Transaction Hash:

0x201d7f11887717b94a33d45b2933e2fb27b91933e5d27effd07c2024c8d3fa0e

Status:

Success

Block:

47319272 Block Confirmations

Timestamp:

37 secs ago (Nov-20-2023 02:30:36 PM +UTC)

From:

0x7Ed746476A7F6520BABD24eeE1fDbCD0F7FB271f

To:

0x41A9c282492c028964547C29b35e9724C235F9A5

Value:

0.5 ETH (\$0.00)

Transaction Fee:

0.000000028279251 ETH (\$0.00)

Gas Price:

0.001346631 Gwei (0.000000000001346631 ETH)

S Sepolia ▾

 Account 1 ▾

0x41A9c...5F9A5 

0.5 SepoliaETH



Buy & Sell



Send



Swap



Bridge



Portfolio

Tokens

NFTs



SepoliaETH

0.5 SepoliaETH

+ Import tokens

 Refresh list

 MetaMask support



<https://app.infura.io/dashboard/ethereum/28d24b17cf3a4c0490f2f5bdb08cfa5f/settings/endpoints>

Endpoints

Https



Our Web3 API Key works across several networks, use it on one or use it on all.

Networks

 **Ethereum**  DOCS

MAINNET ▾

<https://mainnet.infura.io/v3/28d24b17cf3a4c0490f2f5bdb08cfa5f>

 **Linea**  DOCS

Mainnet

mainnet.infura.io/v3/28d24b17cf3a4c0490f2f5bdb08cfa5f

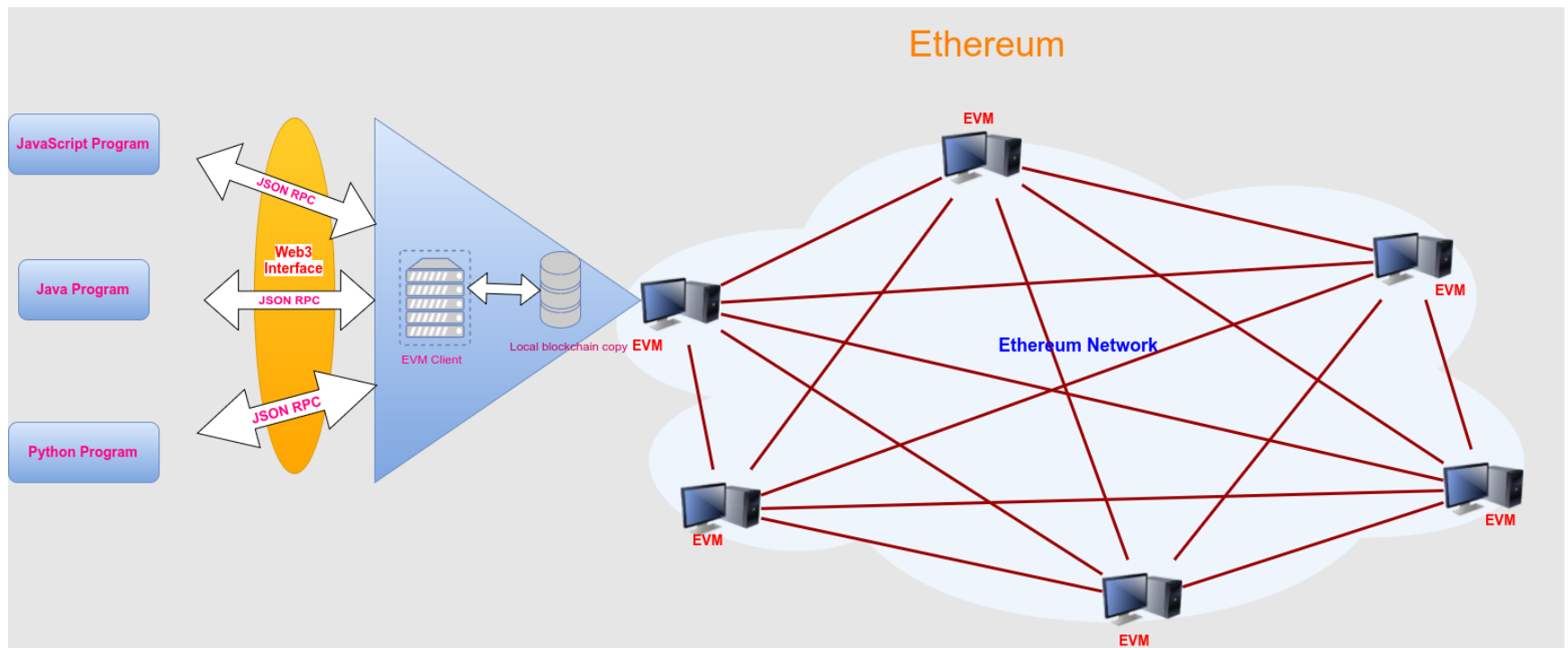
Goerli

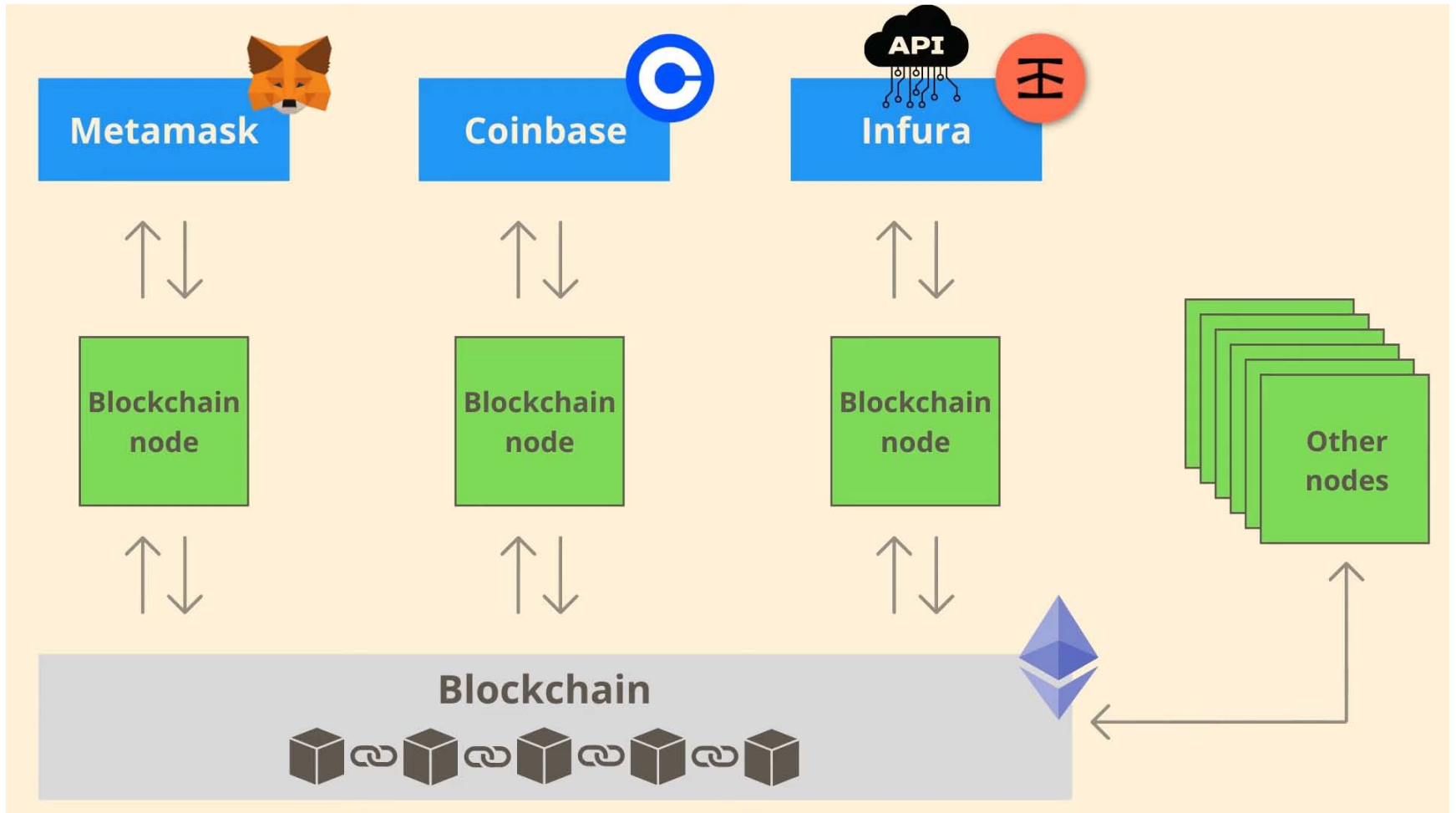
 **Polygon**  DOCS

Sepolia

Ethereum Provider : Infura

Ethereum Provider





`{Web3} = require('web3')`

```
const {Web3} = require('web3')  
const url = "https://mainnet.infura.io/v3/...";  
const web3 = new Web3(new Web3.providers.HttpProvider(url));
```

- `https://mainnet.infura.io/v3/...`
- `https://goerli.infura.io/v3/...`
- `https://sepolia.infura.io/v3/...`

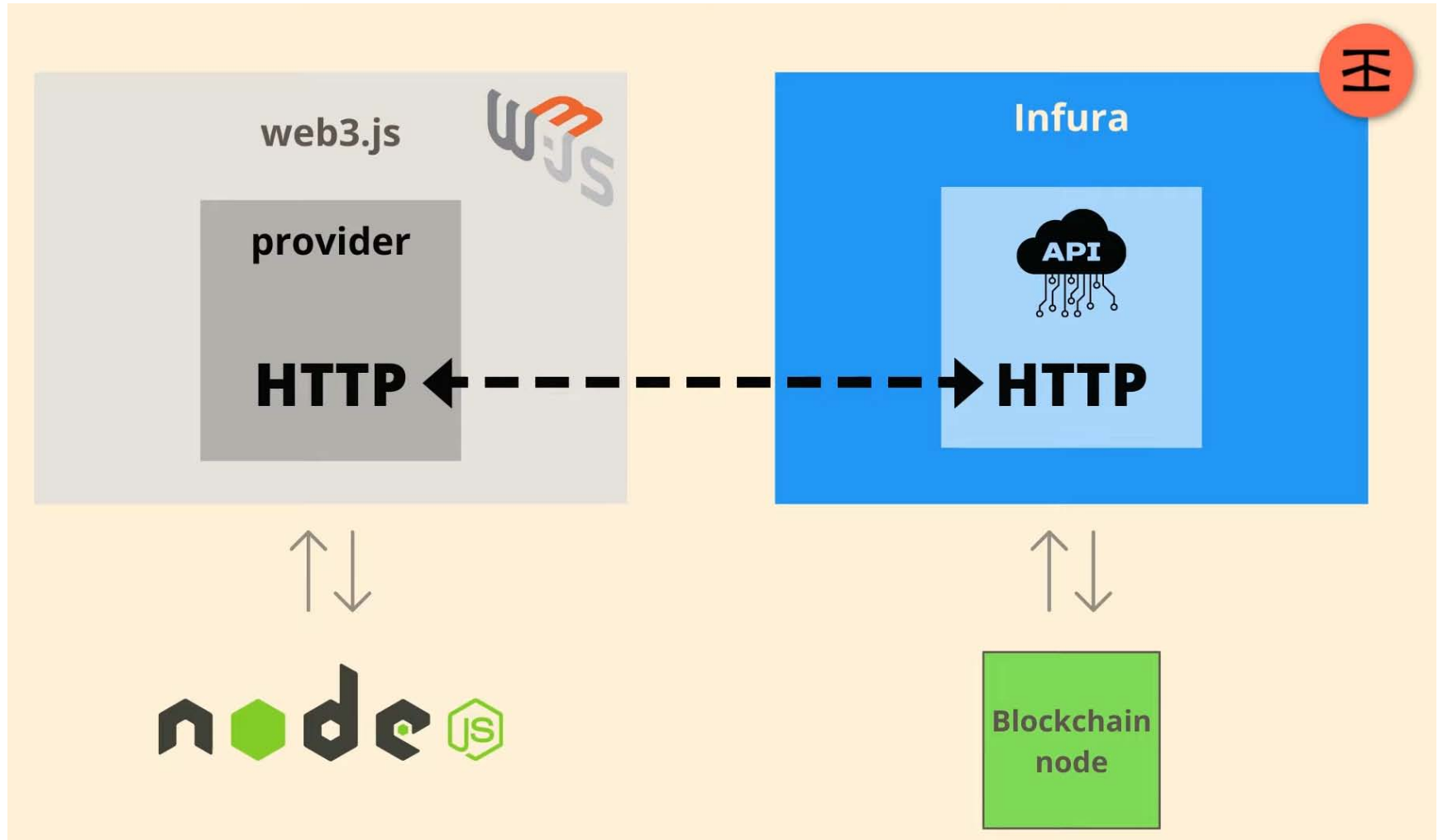
```
const address = "0x...";
```

```
web3.eth.getbalance(address)  
  .then((...) => {...});
```

HttpProvider - Allows to talk to the node via HTTP endpoints

WebsocketProvider - Like HTTP but also allows subscriptions

IpcProvider - Communication with a node happens via IPC calls
(for a blockchain node running **locally**
in a separate process)



Getting the balance



Blockchain



Balances

Address1: **5.24 ETH**

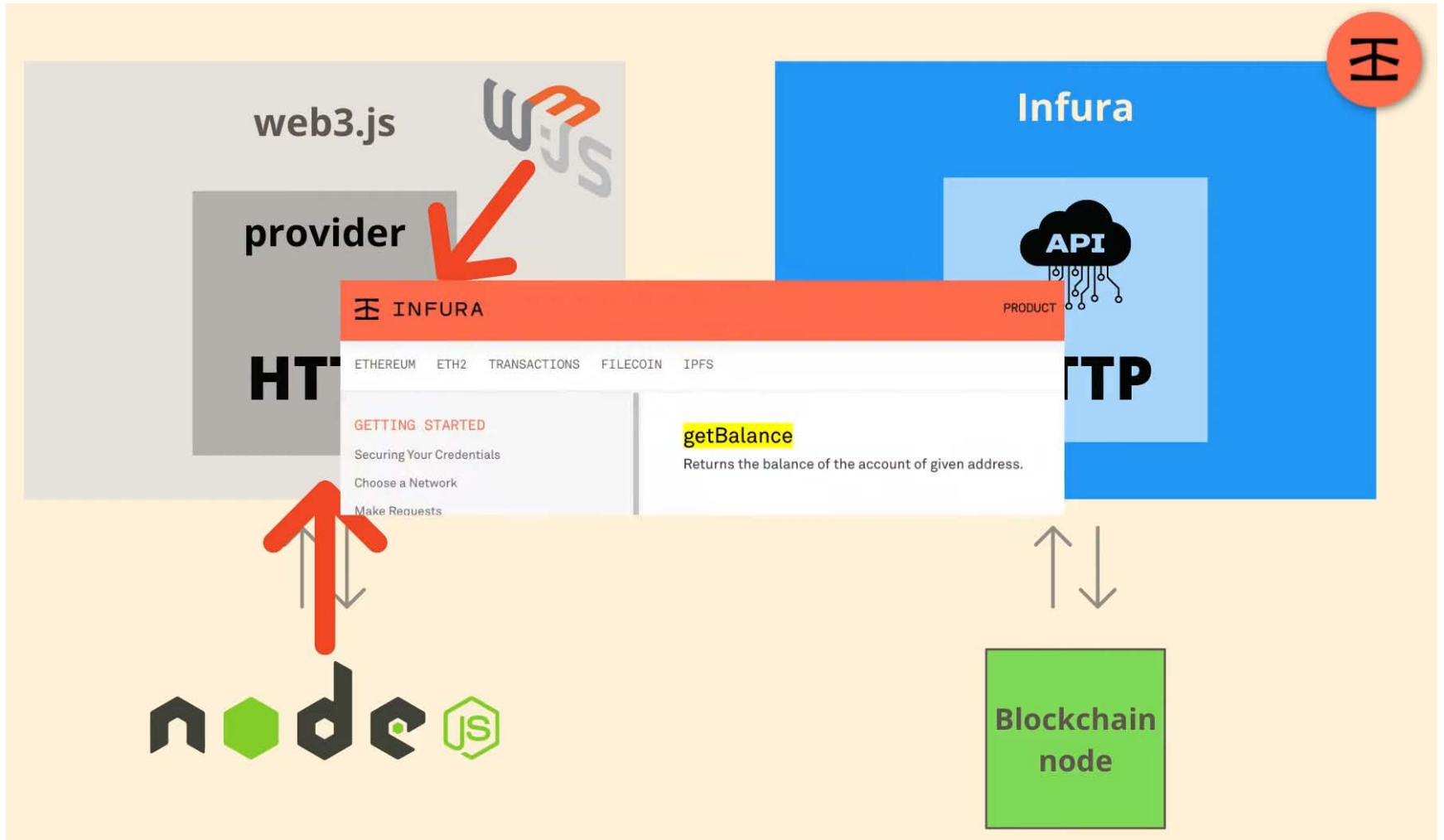
Address2: **1.87 ETH**

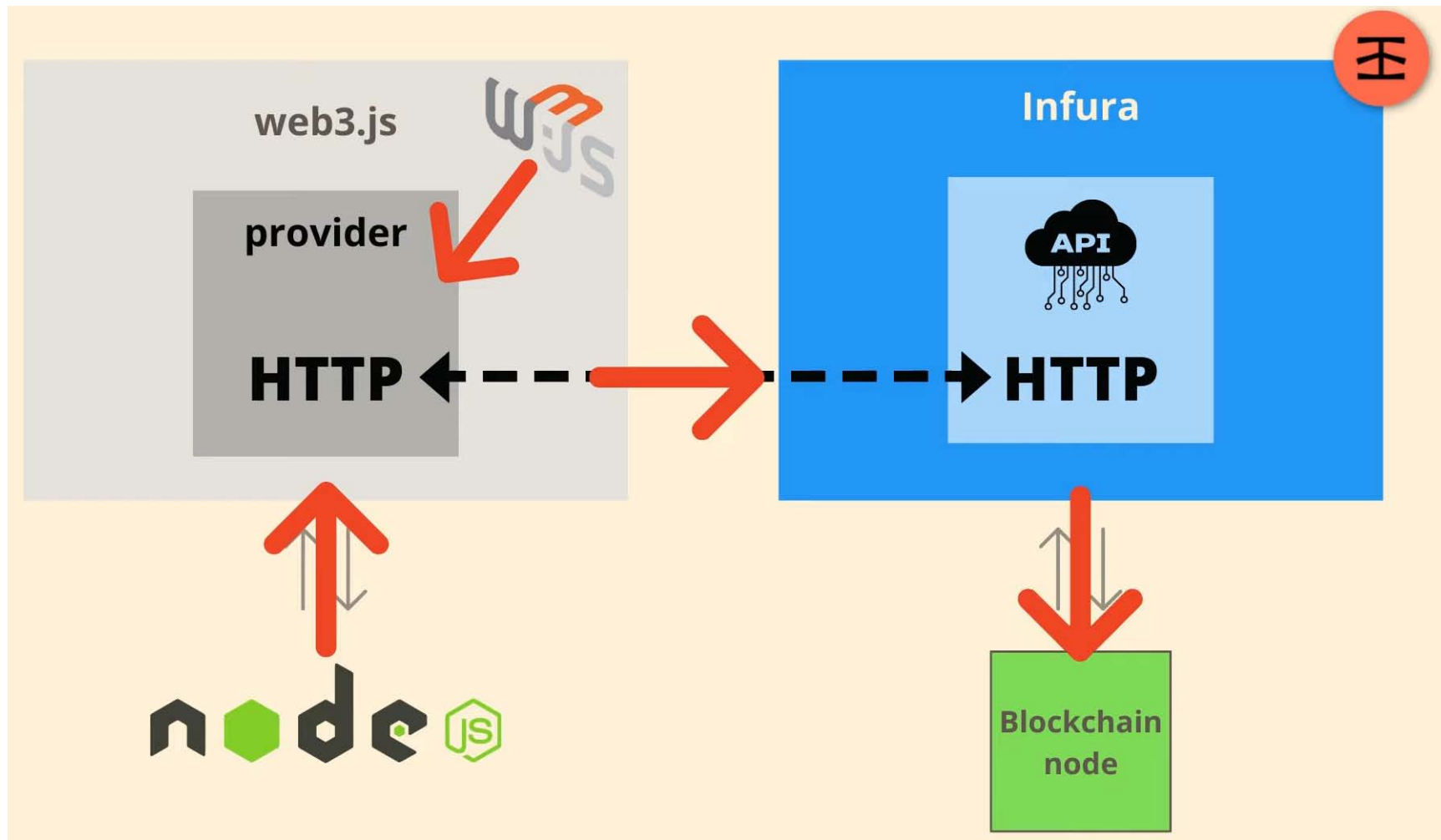
```
const {Web3} = require('web3');
const web3 = new Web3(
  new Web3.providers.HttpProvider("https://goerli.infura.io/v3/..."));

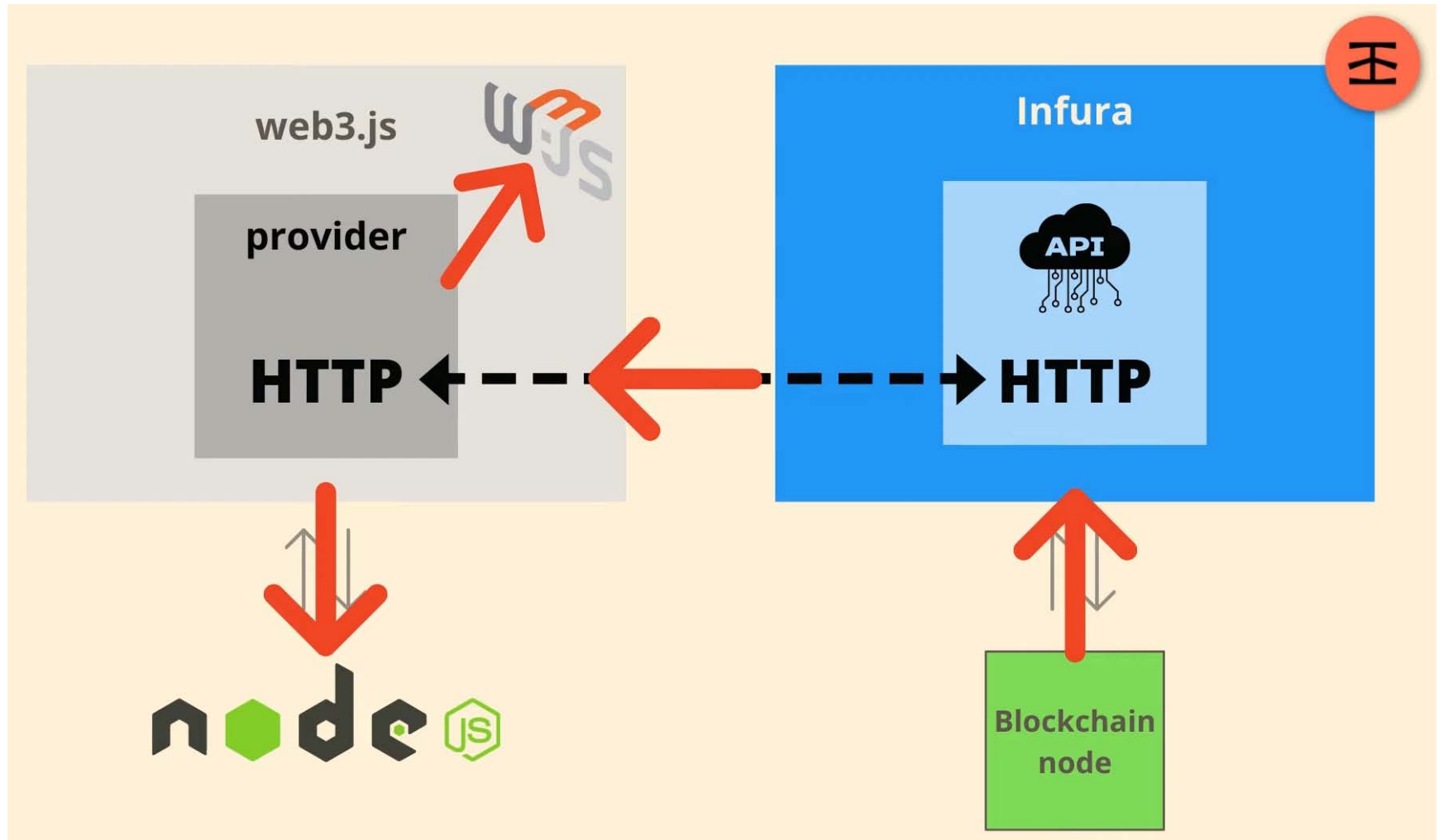
const address = "0x...";

web3.eth
  .getbalance(address)
  .then((...) => {...});

web3.eth
  .getbalance(address)
  .then((balance) => {
    console.log("balance = ${balance} ETH")
    console.log("balance = ${web3.utils.fromWei(balance, 'ether')} ETH")
  });
```







dApp

dApp

```
<html>
...
<input type=text id=myid />
<a href=# onclick=scFn()>scTest</a>
</body>
...
<script src= "./backend.js"></script>
</html>
```

Front-End

```
web3 = new Web3(new Web3.providers.HttpProvider("http://..."))
abi = JSON.parse('[...]')
contract = new web3.eth.Contract(abi);

function scFn(...) {
...
}
```

Back-End

tx (transaction)

MetaMask



json-RPC Server

...

N-2

N-1

N

N+1

Blockchain

Miners



...



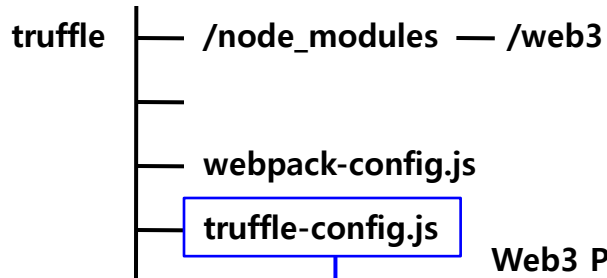
Web3 interface

Smart Contract

```
pragma solidity ^0.7.0;

contract Test {
    ...
}
```

dApp folder



```
c:\W...> truffle init  
c:\W...> truffle compile  
c:\W...> truffle migrate  
c:\W...> truffle test
```

```
c:\W...> npm init  
c:\W...> npm install  
  
c:\W...> node server.js
```

tx (transaction)

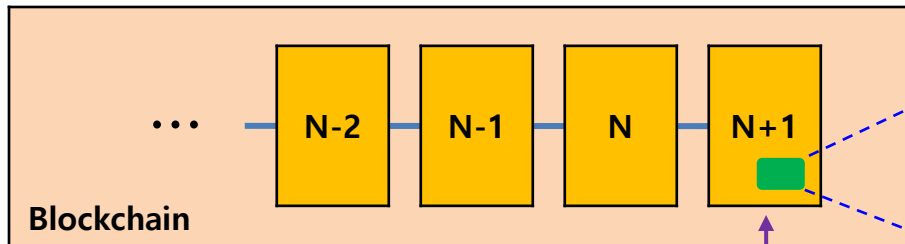
MetaMask



Web3 interface

ganache

json-RPC Server



Miners



...



Smart Contract

```
prag. sol. ^0.7.  
contract Test {  
  ...  
}
```

dApp Architecture

