Using JavaScript API to interact with NEAR

Quick Reference

What isnear-api-js

near-api-js is a complete library to interact with the NEAR blockchain. You can use it in the browser, or in Node.js runtime.

You'll typically first create a connection to NEAR withconnect using aKeyStore . With the connection object you now can:

- Interact with theWallet
- in a browser.
- Instantiate anAccount
- object to:* Send tokens
-
    - Deploy contracts
-
    - Inspect, create or delete accounts
-
    - Manage keys for accounts.
- Instantiate aContract
- object to call smart contract methods.

The library also contains someutility functions .

tip To quickly get started with integrating NEAR in a web browser, read ourWeb Frontend integration article. info Note the difference betweennear-api-js andnear-sdk-js :

The JavaScriptSDK is a library for developing smart contracts. It contains classes and functions you use to write your smart contract code.

The JavaScriptAPI is a complete library for all possible commands to interact with NEAR. It’s a wrapper for the RPC endpoints, a library to interact with NEAR Wallet in the browser, and a tool for keys management.

Install

Includenear-api-js as a dependency in your package.

npm i --save near-api-js

Import

You can use the API library in the browser, or in Node.js runtime. Some features are available only in one of the environments. For example, theWalletConnection is only for the browser, and there are differentKeyStore providers for each environment.

- Browser
- Node

import

*

as nearAPI

from

"near-api-js" ; const nearAPI =

require ("near-api-js") ;

Key Store

If you sign transactions, you need to create aKey Store . In the browser, the LocalStorage KeyStore will be used once you ask your user to Sign In with the Wallet.

- Using Browser
- Using Credentials Directory
- Using a File
- Using a private key string

// creates keyStore using private key in local storage

const

{ keyStores }

= nearAPI ; const myKeyStore =

new

keyStores . BrowserLocalStorageKeyStore ( ) ;ClassBrowserLocalStorageKeyStore // creates a keyStore that searches for keys in .near-credentials // requires credentials stored locally by using a NEAR-CLI command: near login // https://docs.near.org/tools/cli#near-login

const

{ keyStores }

= nearAPI ; const homedir =

require ("os") . homedir ( ) ; const

CREDENTIALS_DIR

=

".near-credentials" ; const credentialsPath =

require ("path") . join (homedir ,

CREDENTIALS_DIR) ; const myKeyStore =

new

keyStores . UnencryptedFileSystemKeyStore (credentialsPath) ;ClassUnencryptedFileSystemKeyStore // creates keyStore from a provided file // you will need to pass the location of the .json key pair

const

{

KeyPair , keyStores }

=

require ("near-api-js") ; const fs =

require ("fs") ; const homedir =

require ("os") . homedir ( ) ;

const

ACCOUNT_ID

=

"near-example.testnet" ;

// NEAR account tied to the keyPair const

NETWORK_ID

=

"testnet" ; // path to your custom keyPair location (ex. function access key for example account) const

KEY_PATH

=

"/.near-credentials/near-example-testnet/get_token_price.json" ;

const credentials =

JSON . parse (fs . readFileSync (homedir +

KEY_PATH)) ; const myKeyStore =

new

keyStores . InMemoryKeyStore ( ) ; myKeyStore . setKey (NETWORK_ID , ACCOUNT_ID , KeyPair . fromString (credentials . private_key)) ; ClassInMemoryKeyStore ClassKeyPair // creates keyStore from a private key string // you can define your key here or use an environment variable

const

{ keyStores ,

KeyPair

}

= nearAPI ; const myKeyStore =

new

keyStores . InMemoryKeyStore ( ) ; const

PRIVATE_KEY

= "by8kdJoJHu7uUkKfoaLd2J2Dp1q1TigeWMG123pHdu9UREqPcshCM223kWadm" ; // creates a public / private key pair using the provided private key const keyPair =

KeyPair . fromString (PRIVATE_KEY) ; // adds the keyPair you created to keyStore await myKeyStore . setKey ("testnet" ,

"example-account.testnet" , keyPair) ;ClassInMemoryKeyStore ClassKeyPair

Connecting to NEAR

The object returned fromconnect is your entry-point for all commands in the API. To sign a transaction you'll need a KeyStore to create a connection.

- TestNet
- MainNet
- LocalNet

const

{ connect }

= nearAPI ;

const connectionConfig =

{ networkId :

"testnet" , keyStore : myKeyStore ,

// first create a key store nodeUrl :

"https://rpc.testnet.near.org" , walletUrl :

"https://testnet.mynearwallet.com/" , helperUrl :

"https://helper.testnet.near.org" , explorerUrl :

"https://testnet.nearblocks.io" , } ; const nearConnection =

await

connect (connectionConfig) ; const

{ connect }

= nearAPI ;

const connectionConfig =

{ networkId :

"mainnet" , keyStore : myKeyStore ,

// first create a key store nodeUrl :

"https://rpc.mainnet.near.org" , walletUrl :

"https://wallet.mainnet.near.org" , helperUrl :

"https://helper.mainnet.near.org" , explorerUrl :

"https://nearblocks.io" , } ; const nearConnection =

await

connect (connectionConfig) ; const

{ connect }

= nearAPI ; const connectionConfig =

{ networkId :

"local" , nodeUrl :

"http://localhost:3030" , walletUrl :

"http://localhost:4000/wallet" , } ; const nearConnection =

await

connect (connectionConfig) ;Moduleconnect Edit this page Last updatedonJan 31, 2024 bygagdiez Was this page helpful? Yes No

Previous Home Next Wallet