XRPL Provider

@web3auth/xrpl-provider

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The@web3auth/xrpl-provider is a Web3Auth provider that simplifies interaction with the XRPL Blockchain by serving as a wrapper around theXRPL JSON RPC API . It is used to interact with the XRPL blockchain and perform various operations like getting user's account, balance, signing a transaction, sending a transaction etc.

In this section we'll explore more about how you can use this provider with our SDKs.

Installationâ

@web3auth/xrpl-provider

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- npm
- Yarn
- pnpm

npm install --save @web3auth/xrpl-provider yarn add @web3auth/xrpl-provider pnpm add @web3auth/xrpl-provider

Initialisationâ

Import theXrplPrivateKeyProvider class from@web3auth/xrpl-provider .

import

{

XrplPrivateKeyProvider

}

from

"@web3auth/xrpl-provider" ;

Assign theXrplPrivateKeyProvider

class to a variableâ

After creating your Web3Auth instance, you need to initialize the Torus Wallet UI Plugin and add it to a class for further usage.

const privateKeyProvider =

new

XrplPrivateKeyProvider ({

config :

XrplPrivKeyProviderConfig

}) ; This constructor takes an object with a config ofXrplPrivKeyProviderConfig as input.

Argumentsâ

XrplPrivKeyProviderConfig

export

interface

XrplPrivKeyProviderConfig

extends

BaseProviderConfig

{ chainConfig :

Omit < CustomChainConfig ,

"chainNamespace"

&

Pick < CustomChainConfig ,

"wsTarget"

; } export

type

CustomChainConfig

=

{ chainNamespace :

ChainNamespaceType ; /* * *The chain id of the chain*/ chainId :

string ; /* * *RPC target Url for the chain*/ rpcTarget :

string ; /* * *web socket target Url for the chain*/ wsTarget ? :

string ; /* * *Display Name for the chain*/ displayName :

string ; /* * *Url of the block explorer*/ blockExplorer :

string ; /* * *Default currency ticker of the network (e.g: ETH)*/ ticker :

string ; /* * *Name for currency ticker (e.g:Ethereum)* / tickerName :

string ; /* * *Number of decimals for the currency ticker (e.g: 18)*/ decimals ? :

number ; } ; export

interface

BaseProviderConfig

extends

BaseConfig

{ chainConfig :

Partial < CustomChainConfig

; networks ? :

Record < string ,

CustomChainConfig

; skipLookupNetwork ? :

boolean ; } export

interface

BaseConfig

{ /* * *Determines if this controller is enabled* / disabled ? :

boolean ; }

Chain Configâ

For getting the Chain Config for XRPL Chain, you need to use thegetXRPLChainConfig function from@web3auth/xrpl-provider .

export

declare

const getXRPLChainConfig :

(network :

XRPLNetworkType , customChainConfig ? :

Partial < Omit < CustomChainConfig ,

"chainNamespace"

,)

=>

CustomChainConfig

&

Pick < CustomChainConfig ,

"wsTarget"

; In this function, you can pass over your custom config as well as just the network type for web3auth to generate a standard config according to your requirement.

Exampleâ

const xrplProvider :

any

=

new

XrplPrivateKeyProvider ({ config :

{ chainConfig :

getXRPLChainConfig ("testnet")

} , }) ;

// devnet, testnet, mainnet

Setting up the providerâ

For Web3Auth PnP Web SDKsâ

If you are usingchainNamespace: "other" while initializingWeb3Auth orWeb3AuthNoModal with theOpenloginAdapter , you need to add theprivateKeyProvider to the OpenLogin instance.

import

{

Web3Auth

}

from

"@web3auth/modal" ; import

```
{
CHAIN_NAMESPACES
}
from
"@web3auth/base" ; import
{
OpenloginAdapter
}
from
"@web3auth/openlogin-adapter" ; import
{
XrplPrivateKeyProvider , getXRPLChainConfig }
from
"@web3auth/xrpl-provider" ; import
{ convertStringToHex ,
Payment , xrpToDrops }
from
"xrpl" ;
const web3auth =
new
Web3Auth ( { chainConfig :
{ chainNamespace :
CHAIN_NAMESPACES . OTHER , } , clientId =
"YOUR_WEB3AUTH_CLIENT_ID" ,
// get from https://dashboard.web3auth.io web3AuthNetwork =
"sapphire_mainnet" , } ) ;
const xrplProvider =
new
XrplPrivateKeyProvider ( { config :
{ chainConfig :
getXRPLChainConfig ( "testnet" ) ,
// devnet, testnet, mainnet } , } ) ;
const adapter =
new
OpenloginAdapter ( { privateKeyProvider : xrplProvider ,
// <-- Injecting the XRPL provider } ) ; web3AuthInstance . configureAdapter ( adapter ) ;
await web3auth . initModal ( ) ;
```

const web3authProvider =

await web3auth . connect ( ) ;

Usageâ

After configuring the provider, you may utilize various functions from the@web3auth/xrpl-provider library for tasks such as obtaining the user's account, executing transactions, and signing messages. Below are a few sample use cases to assist you in getting started:

Get User Account and Balanceâ

xrpl_getAccounts

â

The purpose of this function is to retrieve the details of the connected account.

Exampleâ

try

{ // web3authProvider is from above const accounts =

await web3authProvider . request < string [ ]

({ method :

"xrpl_getAccounts" , }) ;

if

(accounts)

{ const accInfo =

(await web3authProvider . request ({ method :

"account_info" , params :

[{ account : accounts [0] , strict :

true , ledger_index :

"current" , queue :

true , } ,] , }))

as

Record < string ,

Record < string ,

string

; console . log ("XRPL account info" , accInfo) ; // xrpl Account const account = accInfo ?. account_data ?. Account ; // Balance const balance = accInfo ?. account_data ?. Balance ; }

else

{ console . log ("No accounts found, please report this issue.") ; } }

catch

(error)

{ console . error ("Error" , error) ; }

Sign a Transactionâ

xrpl_signTransaction

â

The function is utilized for signing transactions.

Exampleâ

```
try
{ const accounts =
await web3authProvider . request < string [ ]
        ( { method :
"xrpl_getAccounts" , } ) ;
if
( accounts && accounts . length
0 )
{ const tx :
Payment
=
{ TransactionType :
"Payment" , Account : accounts [ 0 ]
as
string , Amount :
xrpToDrops ( 2 ) , Destination :
"rJAHHPYmy4g3h7kzfj2Mzm2nHwpKuVdEvX" ,
// Destination address } ; const txSign =
await web3authProvider . request ( { method :
"xrpl_signTransaction" , params :
{ transaction : tx , } , } ) ; console . log ( "txRes" , txSign ) ; }
else
{ console . log ( "failed to fetch accounts" ) ; } }
catch
( error )
{ console . log ( "error" , error ) ; }
```

Sign and Send a Transactionâ

xrpl_submitTransaction

â

The purpose of this function is to sign and broadcast a transaction onto the blockchain. Upon successful execution, it will return the signature of the broadcasted transaction.

Example:â

```
try
```

{ const accounts =

await web3authProvider . request < string [ ]

({ method :

"xrpl_getAccounts" , }) ;

if

(accounts && accounts . length

0)

{ const tx :

Payment

=

{ TransactionType :

"Payment" , Account : accounts [0]

as

string , Amount :

xrpToDrops (2) , Destination :

"rJAHHPYmy4g3h7kzfj2Mzm2nHwpKuVdEvX" , } ; const txSign =

await provider . request ({ method :

"xrpl_submitTransaction" , params :

{ transaction : tx , } , }) ; console . log ("txRes" , txSign) ; }

else

{ console . log ("failed to fetch accounts") ; } }

catch

(error)

{ console . log ("error" , error) ; }

Sign a Messageâ

xrpl_signMessage

â

This method is utilized for signing any message using the currently connected wallet.

Exampleâ

try

{ const msg =

"Hello world" ; const hexMsg =

convertStringToHex (msg) ; const txSign =

await web3authProvider . request < { signature :

string

}

({ method :

"xrpl_signMessage" , params :

{ message : hexMsg , } , }) ; console . log ("txRes" , txSign) ; }

catch

(error)

{ console . log ("error" , error) ; }

Fetch User's Private Keyâ

private_key

â

The purpose of this method is to retrieve the private key of the currently logged-in user.

Exampleâ

//Assuming user is already logged in. async

getPrivateKey ( )

{ const privateKey =

await web3authProvider . request ({ method :

"private_key" }) ; //Do something with privateKey }Edit this page Previous Solana Provider Next Common Provider