

# Initializing Core Kit SFA Node SDK

After Installation, the next step to use Web3Auth Node.js SDK is to Initialize the SDK.

However, the Initialization is a two-step process, ie.

- [Instantiation of Web3Auth](#)
- [Initialization of Web3Auth](#)

## Instantiating Web3Auth

### Import the Web3Auth

class from @web3auth/node-sdk [@](#)

```
const
```

```
{
```

```
Web3Auth
```

```
}
```

```
=
```

```
require ( "@web3auth/node-sdk" );
```

### Assign the Web3Auth

class to a variable [@](#)

```
const web3auth =
```

```
new
```

Web3Auth ( Web3AuthOptions ) ; This Web3Auth constructor takes an object with Web3AuthOptions as input.

## Arguments

### Web3AuthOptions

[@](#)

- Table
- Interface

Parameter Type Description Mandatory clientId string Web3Auth Client ID. Obtain your clientId from the [Web3Auth Developer Dashboard](#) . Yes web3AuthNetwork? sapphire\_mainnet or sapphire\_testnet Web3Auth Networks No enableLogging? boolean Setting it to true will enable logs. No usePnPKey? boolean Setting this to true returns the same key as web sdk (i.e., plug n play key), By default, this sdk returns CoreKitKey . No export

```
interface
```

```
Web3AuthOptions
```

```
/* * Client id for web3auth. * You can obtain your client id from the web3auth developer dashboard. * You can set any random string for this on localhost. / clientId :
```

```
string ;
```

```
/* * Web3Auth Network to use for login * @defaultValue mainnet/ web3AuthNetwork ? :
```

```
TORUS_NETWORK_TYPE ;
```

```
/* * setting to true will enable logs * * @defaultValue false/ enableLogging ? :
```

```
boolean ;
```

```
/* * setting this to true returns the same key as web SDK (i.e., plug-n-play key) * By default, this SDK returns CoreKitKey
```

usePnPKey ? :

boolean ; }

## Usage Example

```
const web3auth =  
new  
Web3Auth ( { clientId :  
"WEB3AUTH_CLIENT_ID",  
// Get your Client ID from the Web3Auth Dashboard web3AuthNetwork :  
"sapphire_mainnet" , usePnPKey :  
false ,  
// By default, this SDK returns CoreKitKey } ) ;
```

## Instantiating Provider

For getting the appropriate key for your selected chain, you need to instantiate a provider. This provider is used to make calls to the selected blockchain. Currently, Web3Auth exposes the following provider packages to be integrated within the SDKs:

- [EthereumPrivateKeyProvider](#)  
: For Ethereum and EVM compatible chains (secp256k1 private key)
- [SolanaPrivateKeyProvider](#)  
: For Solana Blockchain (ed25519 private key)
- [XRPLPrivateKeyProvider](#)  
: For XRP Ledger
- [CommonPrivateKeyProvider](#)  
: For other blockchains (secp256k1 private key)

Using these providers, you can export the private keys for the respective curves of the selected blockchain. You can use these keys to even create manual providers for other blockchains supporting the curves/ have conversion packages for their blockchain curves.

- ETH
- Solana
- XRPL
- Other Chains

Usage import

```
{  
EthereumPrivateKeyProvider  
}  
from  
"@web3auth/ethereum-provider" ; import  
{  
CHAIN_NAMESPACES  
}  
from  
"@web3auth/base" ;  
const privateKeyProvider =  
new
```

```
EthereumPrivateKeyProvider ( { config :
```

```
  { / pass the chain config that you want to connect with. all chainConfig fields are required/ chainConfig :
```

```
    { chainNamespace :
```

```
      CHAIN_NAMESPACES . EIP155 , chainId :
```

```
      "0x1" , rpcTarget :
```

```
      "https://rpc.ankr.com/eth" , displayName :
```

```
      "Ethereum Mainnet" , blockExplorer :
```

```
      "https://etherscan.io" , ticker :
```

```
      "ETH" , tickerName :
```

```
      "Ethereum" , } , } , } ) ; Usage import
```

```
{
```

```
  SolanaPrivateKeyProvider
```

```
}
```

```
from
```

```
"@web3auth/solana-provider" ; import
```

```
{
```

```
  CHAIN_NAMESPACES
```

```
}
```

```
from
```

```
"@web3auth/base" ;
```

```
const privateKeyProvider =
```

```
new
```

```
  SolanaPrivateKeyProvider ( { config :
```

```
    { / pass the chain config that you want to connect with. all chainConfig fields are required/ chainConfig :
```

```
      { chainNamespace :
```

```
        CHAIN_NAMESPACES . SOLANA , chainId :
```

```
        "0x1" , rpcTarget :
```

```
        "https://rpc.ankr.com/solana" , displayName :
```

```
        "Solana Mainnet" , blockExplorer :
```

```
        "https://explorer.solana.com/" , ticker :
```

```
        "SOL" , tickerName :
```

```
        "Solana" , } , } , } ) ; Usage import
```

```
{
```

```
  XrplPrivateKeyProvider
```

```
}
```

```
from
```

```
"@web3auth/xrpl-provider" ; import
```

```

{
CHAIN_NAMESPACES
}

from
"@web3auth/base" ;

const privateKeyProvider =

new
XrplPrivateKeyProvider ( { config :

{ / pass the chain config that you want to connect with. all chainConfig fields are required/ chainConfig :

{ chainNamespace :

CHAIN_NAMESPACES . OTHER , chainId :

"0x1" , rpcTarget :

"https://s.altnet.ripple.net:51234" , displayName :

"XRPL" , blockExplorer :

"https://testnet.xrpl.org" , ticker :

"XRP" , tickerName :

"XRP" , } , } , } ) ; Usage import

{

CommonPrivateKeyProvider

}

from

"@web3auth/base-provider" ; import

{

CHAIN_NAMESPACES

}

from

"@web3auth/base" ;

const privateKeyProvider =

new

CommonPrivateKeyProvider ( { config :

{ / pass the chain config that you want to connect with. all chainConfig fields are required/ chainConfig :

{ chainNamespace :

CHAIN_NAMESPACES . OTHER , chainId :

"0x1" , rpcTarget :

https://rpc.target.url , displayName :

"Display Name" , blockExplorer :

"https://chain.explorer.link" , ticker :

```

```
"TKR" , tickerName :
```

```
"Ticker Name" , } , } , } ) ;
```

## Initializing Web3Auth

**init()**

[^](#)

To complete the initialization process, we need to initialize the Web3Auth instance, which we named web3auth . This is achieved by calling the init() function of the previously created web3auth instance, using a private key provider .

```
web3auth . init ( {  
  provider : privateKeyProvider } ) ;
```

## Example

```
const  
Web3Auth  
  
=  
require ( "@web3auth/node-sdk" ) ; const  
EthereumPrivateKeyProvider  
  
=  
require ( "@web3auth/ethereum-provider" ) ; const  
CHAIN_NAMESPACES  
  
=  
require ( "@web3auth/base" ) ;  
  
// Swap with a different privateKeyProvider if you want to use a different blockchain const privateKeyProvider =  
new  
EthereumPrivateKeyProvider ( { config :  
  { chainConfig :  
    { chainId :  
      "0x1" , rpcTarget :  
        "https://rpc.ankr.com/eth" , displayName :  
          "Ethereum Mainnet" , blockExplorer :  
            "https://etherscan.io" , ticker :  
              "ETH" , tickerName :  
                "Ethereum" , } , } , } ) ;  
const web3auth =  
new  
Web3Auth ( { clientId :  
  "WEB3AUTH_CLIENT_ID" ,  
  
  // Get your Client ID from the Web3Auth Dashboard web3AuthNetwork :  
  "sapphire_mainnet" , usePnPKey :
```

false ,

// By default, this sdk returns CoreKitKey by default. } ) ;

web3auth . init ( {

provider : privateKeyProvider } ) ; Note One needs to re-initialize the SDK for each new user [Edit this page](#) [Previous Install](#)  
[Next Authentication](#)