

Create Smart Accounts with Ethers JS

This section showcases two ways you can create Smart Accounts using Ethers JS. Using Private keys or using the Ethers Signer Object from a browser injected EOA. Note this is not a full implementation but a recipe to use and add to your existing projects. See our [tutorials](#) for full context on how this can be used.

Using Private Keys

Dependencies

You will need the following dependencies to create a Smart Account this way:

```
yarn add @biconomy/account @biconomy/bundler @biconomy/common @biconomy/core-types @biconomy/modules @biconomy/paymaster ethers@5.7.2
```

Imports

```
import
{ createSmartAccountClient }
from
"@biconomy/account" ; import
{ Wallet , providers , ethers }
from
"ethers" ;
```

Create a Signer using a Private Key:

```
const provider =
new
providers . JsonRpcProvider ( "https://rpc.ankr.com/polygon_mumbai" ) ;
// or any other rpc provider link const signer =
new
Wallet ( ""
||
"" , provider ) ; // we recommend using environment variables for your private keys!
```

Create the Biconomy Smart Account

```
async
function
createAccount ( )
{ const biconomySmartAccount =
await
createSmartAccountClient ( { signer , bundlerUrl :
"" ,
// <-- Read about this at https://docs.biconomy.io/dashboard#bundler-url biconomyPaymasterApiKey :
"" ,
// <-- Read about at https://docs.biconomy.io/dashboard/paymaster } ) ; console . log ( "address: " ,
```

```
await biconomySmartAccount . getAccountAddress ( ) ) ; return biconomySmartAccount ; }  
createAccount ( ) ;
```

Using Ethers Signer from Browser EOA

Dependencies

You will need the following dependencies to create a Smart Account this way:

```
yarn add @biconomy/account ethers@5.7.2
```

Create the Biconomy Smart Account

```
const  
connect  
=  
async  
( )  
=>  
{ const  
{ ethereum }  
= window ; try  
{ const provider =  
new  
ethers . providers . Web3Provider ( ethereum ) ; await provider . send ( "eth_requestAccounts" ,  
[ ] ) ; const signer = provider . getSigner ( ) ; const biconomySmartAccount =  
await  
createSmartAccountClient ( { signer , bundlerUrl :  
"" ,  
// <-- Read about this at https://docs.biconomy.io/dashboard#bundler-url biconomyPaymasterApiKey :  
"" ,  
// <-- Read about at https://docs.biconomy.io/dashboard/paymaster } ) ; const address =  
await biconomySmartAccount . getAccountAddress ( ) ; console . log ( address ) ; }  
catch  
( error )  
{ console . error ( error ) ; } } Previous Sign with EOA Next Viem
```