

# Multi Factor Authentication in PnP Android SDK

At Web3Auth, we prioritize your security by offering Multi-Factor Authentication (MFA). MFA is an extra layer of protection that verifies your identity when accessing your account. To ensure ownership, you must provide two or more different backup factors. You have the option to choose from the device, social, backup factor (seed phrase), and password factors to guarantee access to your Web3 account. Once you create a recovery factor, MFA is enabled, and your keys are divided into three shares for off-chain multi-sig, making the key self-custodial. With backup factors, you can easily recover your account if you lose access to your original device or helps login into a new device.

You can set the mfaLevel within the loginParams to customize when mfa screen should be shown to user. It currently accepts 4 values:

- default
  - Setting the mfaLevel to default will present the MFA screen to user on every third login. mfaLevel = MFALevel.DEFAULT
- optional
  - Setting mfaLevel to optional will present the MFA screen to user on every login but user will have the option to skip it. mfaLevel = MFALevel.OPTIONAL
- mandatory
  - Setting mfaLevel to mandatory will make it mandatory for user to setup MFA after login. mfaLevel = MFALevel.MANDATORY
- none
  - Setting mfaLevel to none will skip the mfa setup screen totally. mfaLevel = MFALevel.NONE

To trigger the MFA flow after authentication, you can use enableMFA method.

Note If you are using default verifiers, your users may have set up MFA on other dApps that also use default Web3Auth verifiers. In this case, the MFA screen will continue to appear if the user has enabled MFA on other dApps. This is because MFA cannot be turned off once it is enabled. Minimum Growth plan required This is a paid feature and the minimum [pricing plan](#) to use this SDK in a production environment is the Growth Plan . You can use this feature in the development environment for free. web3Auth . login ( LoginParams ( selectedLoginProvider , mfaLevel = MFALevel . MANDATORY ) ) Usage import android . widget . Button import com . web3auth . core . Web3Auth import android . os . Bundle

```
class MainActivity :
```

```
AppCompatActivity ( )
```

```
{ private
```

```
lateinit
```

```
var web3Auth : Web3Auth
```

```
private
```

```
fun
```

```
signIn ( )
```

```
{ val selectedLoginProvider = Provider . GOOGLE // Can be GOOGLE, FACEBOOK, TWITCH etc.
```

```
// MFA Level is set Mandatory here. //mfaLevel = MFALevel.MANDATORY val loginCompletableFuture : CompletableFuture < Web3AuthResponse
```

```
= web3Auth . login ( LoginParams ( selectedLoginProvider , mfaLevel = MFALevel . MANDATORY ) )
```

```
loginCompletableFuture . whenComplete
```

```
{ loginResponse , error -> if
```

```
( error ==
```

```
null )
```

```
{ // render logged in UI }
```

```
else
```

```

{ // render error UI }

} }

override

fun

onCreate ( savedInstanceState : Bundle ? )

{ // ... // Setup UI and event handlers val signInButton = findViewById < Button

    ( R . id . signInButton ) signInButton . setOnClickListener

{

signIn ( )

} // ... } // ... }

```

## Using themfaSettings

to configure MFA Order[â](#)

Minimum SCALE plan required This is a paid feature and the minimum [pricing plan](#) to use this SDK in a production environment is theSCALE Plan . You can use this feature in the development environment for free. You can configure the order of MFA or enable/disable MFA type by passing themfaSettings object inWeb3AuthOptions .

MfaSettings

- Table
- Class

Parameter Description deviceShareFactor? MFA setting for deviceShareFactor. It acceptsMfaSetting as a value. backUpShareFactor? MFA setting for backUpShareFactor. It acceptsMfaSetting as a value. socialBackupFactor? MFA setting for socialBackupFactor. It acceptsMfaSetting as a value. passwordFactor? MFA setting for passwordFactor. It acceptsMfaSetting as a value. data

class

MfaSettings ( private

var deviceShareFactor : MfaSetting ?

=

null , private

var backUpShareFactor : MfaSetting ?

=

null , private

var socialBackupFactor : MfaSetting ?

=

null , private

var passwordFactor : MfaSetting ?

=

null , ) MfaSetting

- Table
- Class

Parameter Description enable Enable/Disable MFA. It acceptsBoolean as a value. priority? Priority of MFA. It acceptsInt as a value, where valid range is from 1 to 4. mandatory? Mandatory/Optional MFA. It acceptsBoolean as a value. data

class

```

MfaSetting ( var enable : Boolean , var priority : Int ? , var mandatory : Boolean ? ) web3Auth =
Web3Auth ( Web3AuthOptions ( context =
this , clientId =
getString ( R . string . web3auth_project_id ) ,
// pass over your Web3Auth Client ID from Developer Dashboard network = Network . SAPPHIRE_MAINNET ,
// pass over the network you want to use (MAINNET or TESTNET or CYAN, AQUA, SAPPHIRE_MAINNET or
SAPPHIRE_TESTNET) buildEnv = BuildEnv . PRODUCTION , redirectUrl = Uri . parse (
"com.w3a.web3authdemoapp://auth" ) ,
// your app's redirect URL // Optional parameters whiteLabel =
WhiteLabelData ( "Web3Auth Android FireBase Example" , null , null , null , Language . EN , ThemeModes . LIGHT , true ,
HashMapOf ( "primary"
to
"#eb5424" ) ) , mfaSettings =
MfaSettings ( deviceShareFactor =
MfaSetting ( true ,
1 ,
true ) , socialBackupFactor =
MfaSetting ( true ,
2 ,
false ) , passwordFactor =
MfaSetting ( true ,
3 ,
false ) , backUpShareFactor =
MfaSetting ( true ,
4 ,
false ) , ) ...
// add your loginconfig ) ) Edit this page Previous Custom Authentication Next dApp Share

```