TTkGameSDK Installation

(iOS)

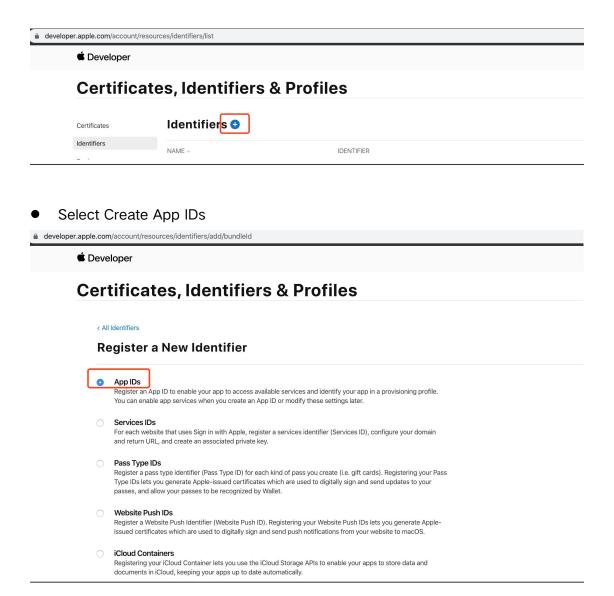
Name	Date	version	remark
Yuanjun	2020.3.18	1.0.0	created
Yuanjun	2020.3.27	1.0.1	improvements
Yuanjun	2020.4.08	1.0.2	registration app details
			(1.1 & 1.2 & 1.3)
Yuanjun	2020.4.15	1.0.4	firebase created(1.4)
			related supplement(4.1.1 &
			4.1.3)
Yuanjun	2020.4.20	1.0.5	1. Add the manual firebase
			integration step and don't care
			if using cocopods.(3.2-3 &
			4.1.4)
			2. Domain Changed & Sign in
			with Apple(4.1.1)
			3. Sign in with Apple configure
			of the Key.(6)
Yuanjun	2020.4.27	1.0.6	improvements
Yuanjun	2020.5.13	1.0.7	improvements
Yuanjun	2020.5.27	1.0.8	SDK rename
			1. Upgrade from old version :
			(1) Replace this line in Podfile
			new:
			pod 'TTkGameSDK'
			(2) \$ pod install
			2. Use the new version directly
			Reference 3.1
Yuanjun	2020.5.29	1.1.0	improvements
Yuanjun	2020.6.24	1.1.1	1. twitter created (1.5)
			2. related supplement (4.1.3)

Yuanjun	2020.7.06	1.1.2	1. AppsFlyer created(1.6)
			related supplement(4.1.3)
			2. Tapjoy created(1.7)
			related supplement(4.1.3)
Yuanjun	2020.7.10	1.1.3	1. fix AppsFlyer
			2. add note for pod
			command (3)
Yuanjun	2020.7.14	1.1.4	improvements
Yuanjun	2020.7.15	1.1.5	improvements
Yuanjun	2020.7.20	1.1.6	add Note (4.1)
Yuanjun	2020.7.22	1.1.7	improvements
Yuanjun	2020.7.27	1.1.8	improvements
Yuanjun	2020.8.03	1.1.9	1. get botim appid (1.8)
			2. botim related (4.1.3)
Yuanjun	2020.8.04	1.1.10	improvements
Yuanjun	2020.8.25	1.1.12	add white list for Messenger
			(4.1.3 fb-messenger-public)
Yuanjun	2020.11.18	1.1.15	remove specified version of fb
			sdk
Yuanjun	2021.01.20	1.1.17	improvements
Yuanjun	2021.02.20	1.1.19	Remove the specified version
			of appsflyer SDK

1. Register and create app

1.1 Apple Developer

- Log in to the Apple Developer Website and enter your developer account.
 https://developer.apple.com/
- Add your app identifier here.



Create the App's Bundle ID and record it, both 1.2 and 1.3 will be used.
 Certificates, Identifiers & Profiles



Finally, don't forget to set up Capabilities.(4.1.1 for details)

1.2 TTkGame

Register a new app in TTkGame platform

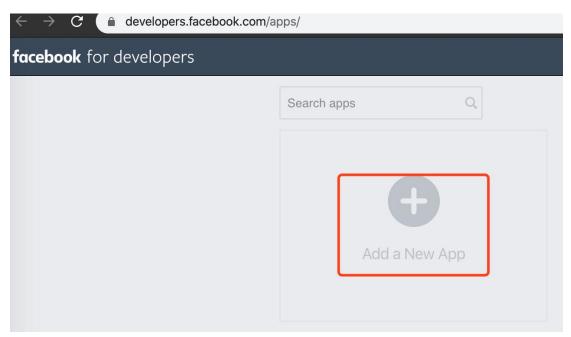
Get application information such as appld, appsecret, gameid.

1.3 Facebook

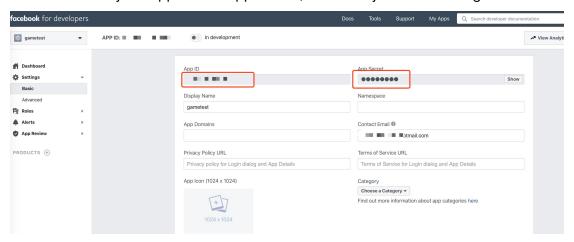
If you use Facebook related functions, you need to register with the Facebook development platform to create an application.

https://developers.facebook.com/apps/

First create your app here.



• Remember your App ID and App Secret, which may be used during 1.2 and 4.1.



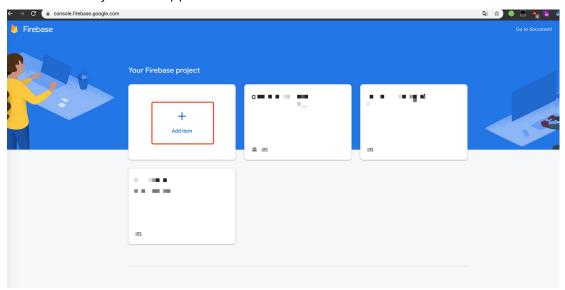
1.4 Firebase

1.4.1 Firebase project

Create a Firebase project

https://console.firebase.google.com/

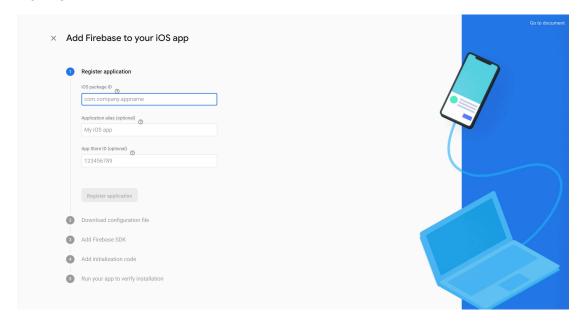
Before you can add Firebase to your iOS app, you need to create a Firebase project to connect to your iOS app.



Register your app with Firebase

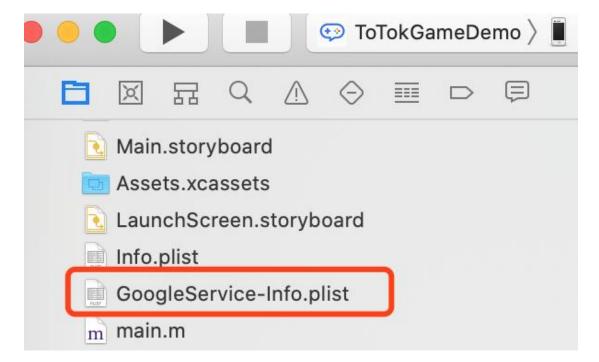
After you have a Firebase project, you can add your iOS app to it.

In the center of the project overview page, click the **iOS** icon to launch the setup workflow.



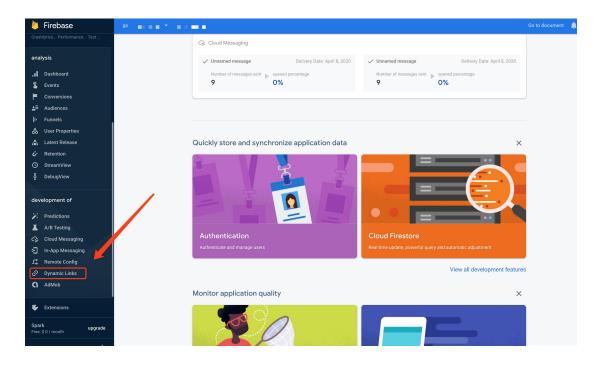
Add a Firebase configuration file

Click **Download GoogleService-Info.plist** to obtain your Firebase iOS config file. Move your config file into the root of your Xcode project. If prompted, select to add the config file to all targets.

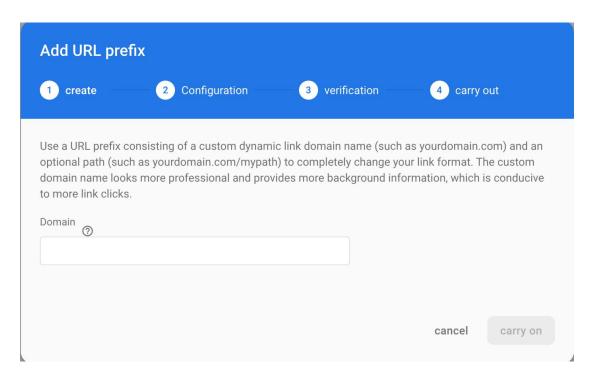


If you have multiple bundle IDs in your project, you must associate each bundle ID with a registered app in the Firebase console so that each app can have its own GoogleService-Info.plist file.

1.4.2 Dynamic link







After creating the URL, the game developer needs to configure the domain in the development project.

- 1. In the Info tab of your app's Xcode project, create a new URL type to be used for Dynamic Links. Set the Identifier field to a unique value and the URL scheme field to be your bundle identifier, which is the default URL scheme used by Dynamic Links. (See 4.1.3)
- 2. In the Capabilities tab of your app's Xcode project, enable Associated Domains and add the Associated Domains list.(See 4.1.1 for details)

1.5 Twitter

If you use Twitter related functions, you need to register with the Twitter development platform to create an application.

https://developer.twitter.com/en/apps/

First create your app here.



- Edit your app detail.
- Note the format of callback urls.

Callback URLs (required) ①

OAuth 1.0a applications should specify their oauth_callback URL on the request token step, which must match the URLs provided here. To restrict your application from using callbacks, leave these blank.



format: twitterkit-API Key://

1.6 AppsFlyer

If you use AppsFlyer related functions, you need to register with the AppsFlyer development platform to create an application.

https://hq1.appsflyer.com/apps/myapps

1.7 Tapjoy

If you use Tapjoy related functions, you need to register with the Tapjoy development platform to create an application.

https://ltv.tapjoy.com/

1.8 Botim

If you use Botim related functions, you need to register with the Botim development platform to create an application.

2. Installation and Runtime Environment

IDE: Xcode 10.3 or higher

• iOS: iOS 9.0 or higher

3. Install SDK

SDK Directory Structure:

- TTkGameSDK
 - -Core/TTkGameSDK.frame
 - -SocialLibraries/Facebook/
 - -SocialLibraries/TTGCAnalytics/
 - -SocialLibraries/Twitter/
 - -SocialLibraries/AppsFlyer/
 - -SocialLibraries/TapjoySDK/

Information of third-party SDK:

1. Facebook: use cocoapods dependency

'FBSDKCoreKit'

'FBSDKLoginKit'

'FBSDKShareKit'

2. Firebase: use cocoapods dependency

'Firebase/Analytics'

'Firebase/DynamicLinks'

3. Twitter: use cocoapods dependency

'TwitterKit5'

4. AppsFlyer: use cocoapods dependency

'AppsFlyerFramework'

5. Tapjoy: use cocoapods dependency

'TapjoySDK'

Note:

1. If you don't need any third-party SDK, you can use the command:

```
pod 'TTkGameSDK/Core'
```

2. If you only use the Firebase third-party SDK, you can use the command:

```
pod 'TTkGameSDK/Analytics'
```

3. If you only use the Facebook third-party SDK, you can use the command:

```
pod 'TTkGameSDK/Facebook'
```

4. If you only use the Twitter third-party SDK, you can use the command:

```
pod 'TTkGameSDK/Twitter'
```

5. If you only use the Appsflyer third-party SDK, you can use the command:

```
pod 'TTkGameSDK/AppsFlyer'
```

6. If youonly use the Tapjoy third-party SDK, you can use the command:

```
pod 'TTkGameSDK/Tapjoy'
```

3.1 Use Pod Install SDK (Recommend)

It is recommended to use the cocoapods install SDK. Cocoapods provides a simple dependency management system to avoid errors caused by manual import.

first you need to confirm that Cocoapods has been installed, if you have not installed Cocoapods, refer to the official website user guide:

https://cocoapods.org/.

1. In the root directory of the Xcode project, create a new Podfile.

\$ pod init

Add the following to this file:

```
source 'https://github.com/CocoaPods/Specs.git'
pod 'TTkGameSDK'
```

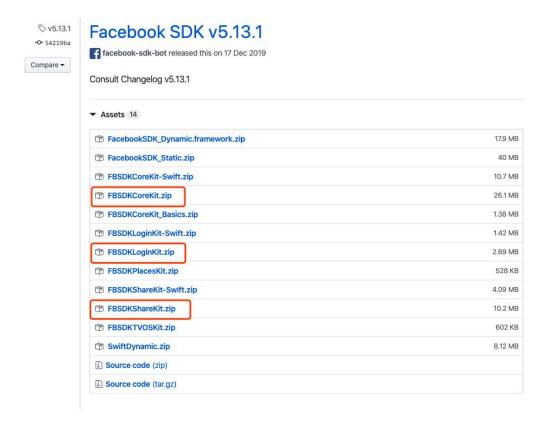
2. In the Podfile directory, execute the following instructions:

\$ pod install

- 3. After executing pod install, open the project directory and find the .xcworkspace file to run.
- 4. Future SDK upgrades can use the update command.
- \$ pod update

3.2 Install SDK Manually

- Download TTkGameSDK related releases on github https://github.com/AmuseGames/GameSDK-iOS/releases
- 2. Download related FacebookSDK version 5.3.1 on github https://github.com/facebook/facebook-ios-sdk/releases/tag/v5.13.1



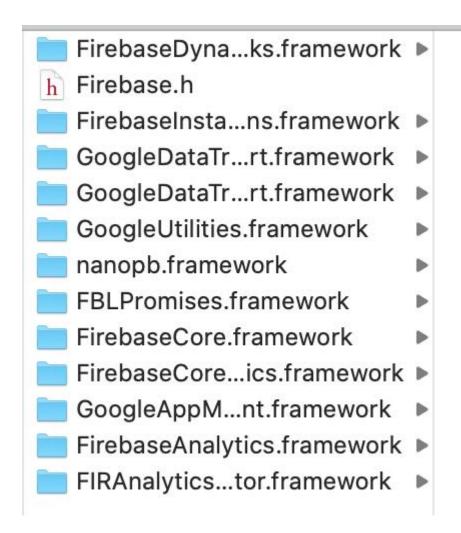
- 3. The firebase related SDK can be downloaded in the following two ways:
- (1) The new demo project installs with cocopods, then compiles with the simulator and the real machine, merges the compiled framework, and drags it into the main project.

https://firebase.google.com/docs/ios/setup#available-pods

```
pod 'Firebase/Analytics'
pod 'Firebase/DynamicLinks'
```

(2) Use the firebase source code to compile the following corresponding frameworks, and compile the simulator and the real machine, and finally merge and drag them into the project.

https://github.com/firebase/firebase-ios-sdk



4. Project Configuration

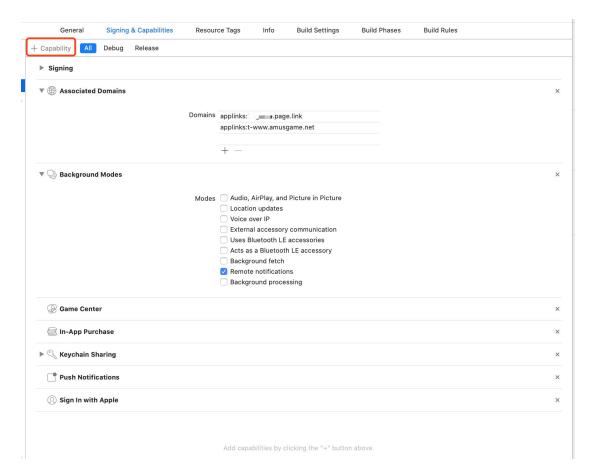
4.1 Build Configuration



Note: The build item value needs to be a number.

4.1.1 Apple service configuration, push, keychain, in-app purchase, and Universal Link are the services provided by Apple and need to be configured here.

as shown below



Domains(Test):

applinks:t-www.amusgame.net

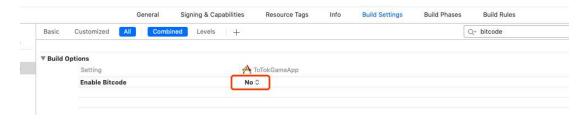
applinks: your_dynamic_links_domain (From step 1.4.2)

Domains(Production):

applinks:www.falcongames.net

applinks: your_dynamic_links_domain (From step 1.4.2)

4.1.2 Set bitcode to NO (not supported by Facebook) as shown in the below



4.1.3 Set plist.info

Relevant function configuration:

Facebook related:

key: CFBundleURLSchemes **value:** fbxxxxxxxx (fb+FacebookAppID)

key: FacebookAppID value: xxxxxxx (FacebookAppID)

key: AppName value: xxxxxxx (AppName)

Twitter related:

key: TwitterConsumerKeyvalue: xxxxxxx(Twitter key)key: TwitterConsumerSecretvalue: xxxxxxx(Twitter secret)

Firebase related:

key: CFBundleURLSchemes value: xxx.xxx.xxx (bundle id)

AppsFlyer related:

key: AppID value: xxxxxxx (AppID from AppStore)

key: AppsFlyerDevKey value: xxxxxxx (AppsFlyer key)

Tapjoy related:

key: TapjoyKey value: xxxxxxx (Tapjoy key)

Botim related:

key: CFBundleURLSchemes value: bimgamexxxxxxxx (bimgame+Botim appid)

key: BotimAppid value: xxxxxxx (Botim appid)

LSApplicationQueriesSchemes : bot botim

```
<key>NSPhotoLibraryUsageDescription</key>
<string>Photo albums are required to share pictures, please allow access</string>
<key>AppsFlyerDevKey</key>
<string>xxxxxxxxx</string>
<key>AppID</key>
<string>xxxxxxxxx</string>
<key>TapjoyKey</key>
<string>xxxxxxxxx</string>
<key>TwitterConsumerKey</key>
<string>xxxxxxxx</string>
```

```
<key>TwitterConsumerSecret</key>
<string>xxxxxxxxx</string>
<key>BotimAppid</key>
<string>xxxxxxxxx</string>
<key>CFBundleURLTypes</key>
<array>
<dict>
<key>CFBundleURLSchemes</key>
<array>
<string>fbxxxxxxxxx</string>
</array>
</dict>
<dict>
<key>CFBundleTypeRole</key>
<string>Editor</string>
<key>CFBundleURLName</key>
<string>Bundle</string>
<key>CFBundleURLSchemes</key>
<array>
<string>xxx.xxx.xxx</string>
</array>
</dict>
<dict>
<key>CFBundleTypeRole</key>
<string>Editor</string>
<key>CFBundleURLSchemes</key>
<array>
<string>twitterkit-xxxxxxxxx</string>
</array>
</dict>
<dict>
<key>CFBundleTypeRole</key>
<string>Editor</string>
<key>CFBundleURLSchemes</key>
<array>
<string>bimgamexxxxxxxxx</string>
```

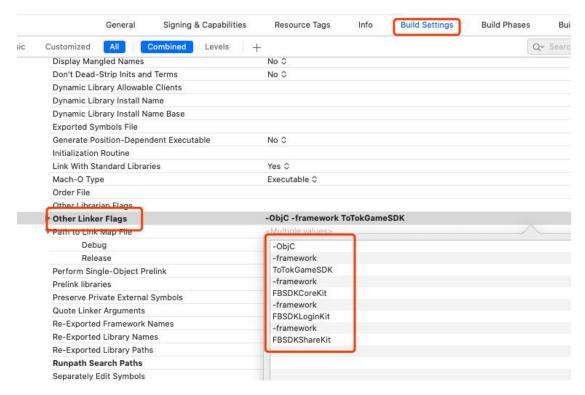
```
</array>
</dict>
</array>
<key>FacebookAppID</key>
<string>xxxxxxxxx</string>
<key>FacebookDisplayName</key>
<string>AppName</string>
<key>LSApplicationQueriesSchemes</key>
<array>
<string>bot</string>
<string>botim</string>
<string>whatsapp</string>
<string>fbapi</string>
<string>fbapi20130214</string>
<string>fbapi20130410</string>
<string>fbapi20130702</string>
<string>fbapi20131010</string>
<string>fbapi20131219</string>
<string>fbapi20140410</string>
<string>fbapi20140116</string>
<string>fbapi20150313</string>
<string>fbapi20150629</string>
<string>fbapi20160328</string>
<string>fbauth</string>
<string>fbauth2</string>
<string>fb-messenger-public</string>
<string>fb-messenger-share-api</string>
<string>fbshareextension</string>
<string>fb-messenger-api20140430</string>
<string>fb-messenger-platform-20150128</string>
<string>fb-messenger-platform-20150218</string>
<string>fb-messenger-platform-20150305</string>
</array>
<key>NSAppTransportSecurity</key>
<dict>
<key>NSAllowsArbitraryLoads</key>
```

```
<true/>
<key>NSExceptionDomains</key>
<dict>
<key>akamaihd.net</key>
<dict>
<key>NSExceptionRequiresForwardSecrecy</key>
<false/>
<key>NSIncludesSubdomains</key>
<true/>
</dict>
<key>facebook.com</key>
<dict>
<key>NSExceptionRequiresForwardSecrecy</key>
<false/>
<key>NSIncludesSubdomains</key>
<true/>
</dict>
<key>fbcdn.net</key>
<dict>
<key>NSExceptionRequiresForwardSecrecy</key>
<false/>
<key>NSIncludesSubdomains</key>
<true/>
</dict>
</dict>
</dict>
```

If you choose pod installation, the above configuration is enough. Otherwise, please proceed to the following configuration steps.

4.1.4 Build configuration

Add Other Linker Flags (Pay attention to case)

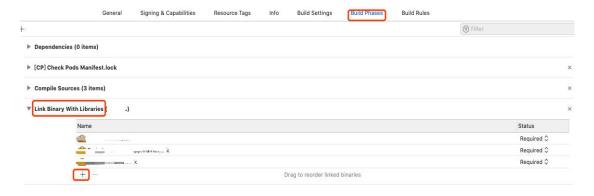


And firebase related



4.1.5 The system libraries used by related SDKs need to be configured as follows.

'sqlite3', 'UIKit', 'StoreKit', 'GameKit', 'WebKit', 'UserNotifications', 'Photos', 'ImagelO', 'Foundation', 'CoreFoundation', 'QuartzCore', 'CoreGraphics', 'AVFoundation', 'CoreTelephony', 'Security', 'CoreMotion', 'ExternalAccessory', 'SystemConfiguration', 'Accounts', 'Social', 'AudioToolbox', 'Accelerate'



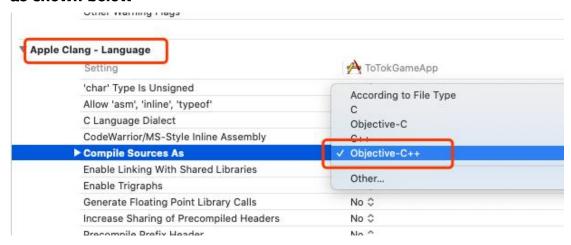
Add the system library required above here.

4.1.6 Compiling FBSDK requires setting compiling C++

Also set in build phases

Set Apple Clang - Language

as shown below



Compile configuration is over here.

5. Push configuration

If you'd like to send push notifications to your iOS users, you will need to provide either an APNs Push Certificate, or an APNs Auth Key.

5.1 APNs Auth Key (Recommend)

We recommend that you create and provide an APNs Auth Key for the following reasons:

- 1. No need to re-generate the push certificate every year.
- 2. One auth key can be used for all your apps this avoids the complication of maintaining different certificates.

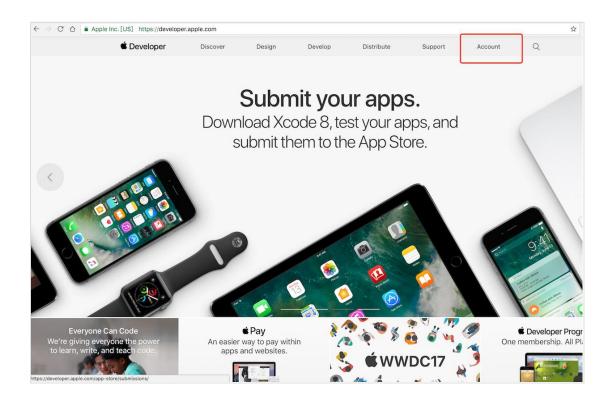
When sending push notifications using an APNs Auth Key, we require the following information about your app:

Auth Key file

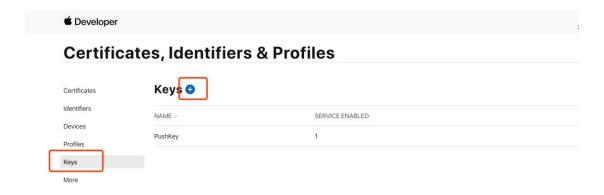
- Team ID
- Your app's bundle ID

To create an APNs auth key, follow the steps below.

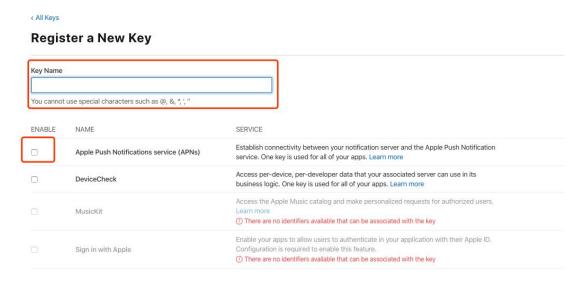
• Log in to the Apple Developer Website and enter your developer account.



- In your developer account, go to Certificates, Identifiers & Profiles, and under Keys, select All.
- Click the Add button (+) in the upper-right corner.



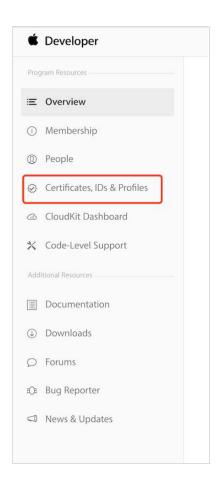
- Enter a description for the APNs Auth Key
- Under Key Services, select the APNs checkbox, and click Continue.



 Click Confirm and then Download. Save your key in a secure place. This is a one-time download, and the key cannot be retrieved later.

5.2 Certificate configuration

 Go to the "Certificates, IDs & Profiles" page from the left entry of the developer account page.



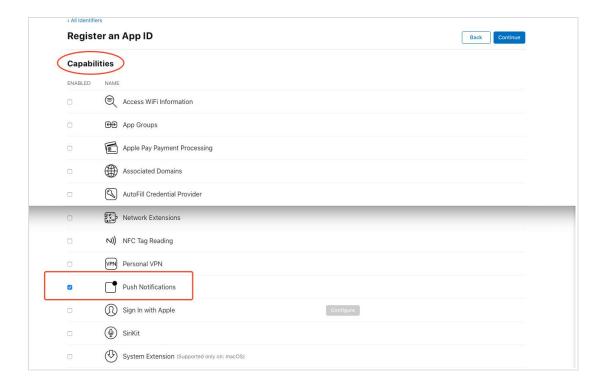
• Create an App ID, fill in the name of the App ID and the Bundle ID (skip this step if the ID already exists).



Note: You need to specify the specific bundle ID here. Do not use wildcard characters.



 Enable Push Notification for the app. If the App ID has already been created, you can also enable the Push Notification function through settings.



- After filling in the above attributes, click "Continue" to confirm the correctness of the Appld attribute, and click "Register" to register the Appld successfully.
- If you haven't created a Push certificate before or want to re-create a new one, please create a new one below the certificate list.

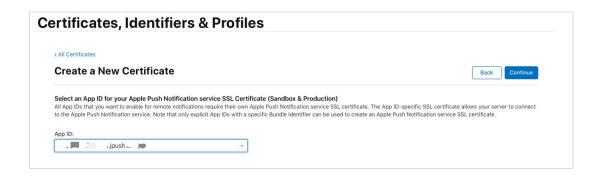


 When creating a new certificate, you need to choose the type of APNs certificate. As shown in the figure APNs certificate has two types of development (development) and production (production).

Note: The development certificate is used for development and debugging; the production certificate can be used for both development and debugging and product release. Here we choose the production certificate as an example.



Click "Continue", then select the certificate and the ApplD to be bound.

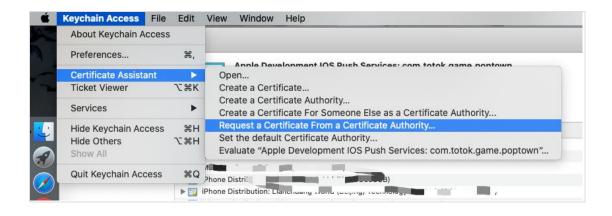


 Clicking "Continue" again will let you upload the CSR file. (CSR file will be created in the next step)



 Open KeychainAccess that comes with the mac system to create a Certificate Signing Request.

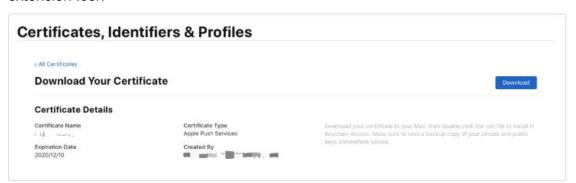
Operate as shown below:



 Fill in "User Email" and "Common Name" and select "Save to Disk". The certificate file suffix is .certSigningRequest.



- Go back to the CSR upload page in your browser and upload the file with the suffix .certSigningRequest just generated.
- After the certificate is generated successfully, click the "Download" button to download the certificate. It is a file with the extension .cer.



• After double-clicking the certificate, it will open in "KeychainAccess", select "Login" in the "Keychain" list on the left, and "My certificate" in the "Type" list, find the certificate you just downloaded, and export it as a .p12 file. As shown below:



6. Sign in with Apple configuration

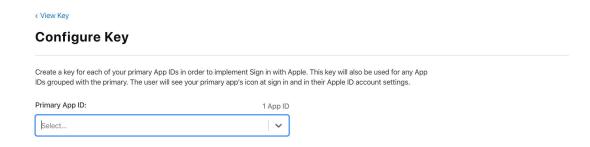
Edit your App ID Configuration



Register a New Key for Sign in with Apple



Configure the App ID



Common Problem

1. pod related

If you have a pod installed, running pod install directly may cause the following problems

```
→ ToTokGameApp git:(master) x pod install

Analyzing dependencies

[!] Unable to find a specification for `ToTokGameSDK`

You have either:

* out-of-date source repos which you can update with `pod repo update` or with `pod install --repo-update`.

* mistyped the name or version.

* not added the source repo that hosts the Podspec to your Podfile.
```

Need to update the pod repo

\$ pod install --repo-update

2. Project related

If you use xcode11 to create a new project, the iOS13 + real machine or simulator has a black screen

Reason: For the multi-window function of the iPad, the life cycle has changed. At present, the SDK does not support the multi-window function, so developer who use the SDK can change the project to the previous structure.

Specific steps are as follows:

1. First delete the Application Scene Manifest column from info.plist

Key	Туре	Value (15 items)
▼ Information Property List	Dictionary	
Localization native development re	String	\$(DEVELOPMENT_LANGUAGE)
Executable file	String	\$(EXECUTABLE_NAME)
Bundle identifier	String	\$(PRODUCT_BUNDLE_IDENTIFIER)
	String	6.0
Bundle name	String	\$(PRODUCT_NAME)
Bundle OS Type code	String	\$(PRODUCT_BUNDLE_PACKAGE_TYPE)
Bundle versions string, short	String	1.0
Bundle version	String	1
Application requires iPhone enviro	Boolean	YES
► Application Scene Manifest ♦ ۞ (Dictionary	(2 items)
Launch screen interface file base	ing	LaunchScreen
	Stri	Main
a con a casa a con a casa a	Array	(1 item)
▶ Supported interface orientations	Array	(3 items)
▶ Supported interface orientations (i	Array	(4 items)

2. In the project directory, delete the Scenedelegate.h and Scenedelegate.m files

3. Then enter AppDelegate.m to comment or delete the content shown below

```
#pragma mark - UISceneSession lifecycle
- (UISceneConfiguration *)application:(UIApplication *)application
    configurationForConnectingSceneSession: (UISceneSession
    *)connectingSceneSession options:(UISceneConnectionOptions
    *)options {
    // Called when a new scene session is being created.
    // Use this method to select a configuration to create the new
        scene with.
    return [[UISceneConfiguration alloc] initWithName:@"Default
        Configuration" sessionRole:connectingSceneSession.role];
}
- (void)application:(UIApplication *)application
    didDiscardSceneSessions:(NSSet<UISceneSession *> *)sceneSessions {
    // Called when the user discards a scene session.
    // If any sessions were discarded while the application was not
        running, this will be called shortly after
        application:didFinishLaunchingWithOptions.
    // Use this method to release any resources that were specific to
        the discarded scenes, as they will not return.
}
```

4. The last step is to add the window property in AppDelegate.h

@property (strong, nonatomic) UIWindow * window;