

Introduction

Firebase is one of the most prominent cloud computing platforms to develop mobile and web apps. Firebase offers numerous [MBaaS](#) services for mobile development, including a database (NoSQL and document), file storage, authentication, crash reporting, notifications (FCM), analytics, hosting, dynamic links, remote config, A/B testing, machine learning, and so on.

We are using firebase for chat database management, authentication and push notification with FCM also we are using store for store files in chat module

Prerequisites

React Native follows the development structure and tools of React, so this guide assumes that you have basic knowledge of the following technologies and tools.

Technologies

- React Native,
- Firebase FCM
- Firestore
- Agora IO (Video conference)

Installed Tools

- [Node.js](#)
- React Native Command-line interface (CLI)
- Android studio
- XCode and [CocoaPods](#) (explained in next section)

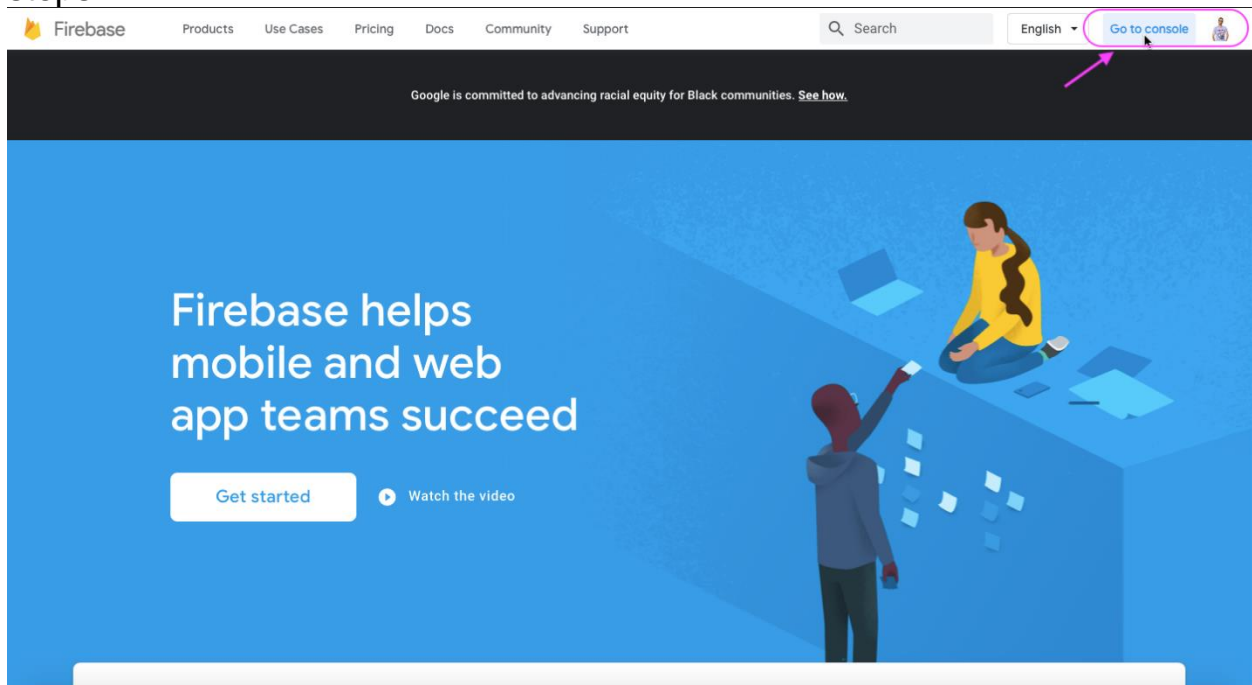
Run a React Native Project

```
1 cd ChatApp
2 npm install
3 npm react-native run-android
```

The above command will install required dependency for the project and it will run project in android devices

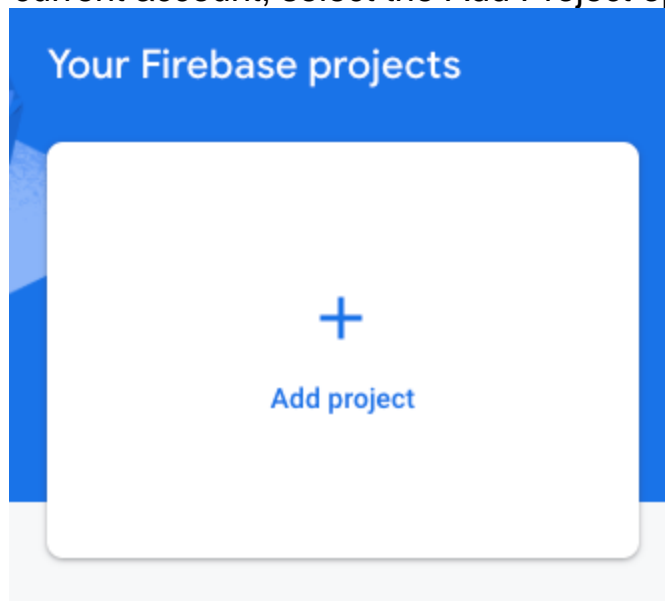
Creating a Firebase Project

To create Firebase projects for Android and iOS, create an account on [Firebase Console](#), then select the Go to console option for the next steps:



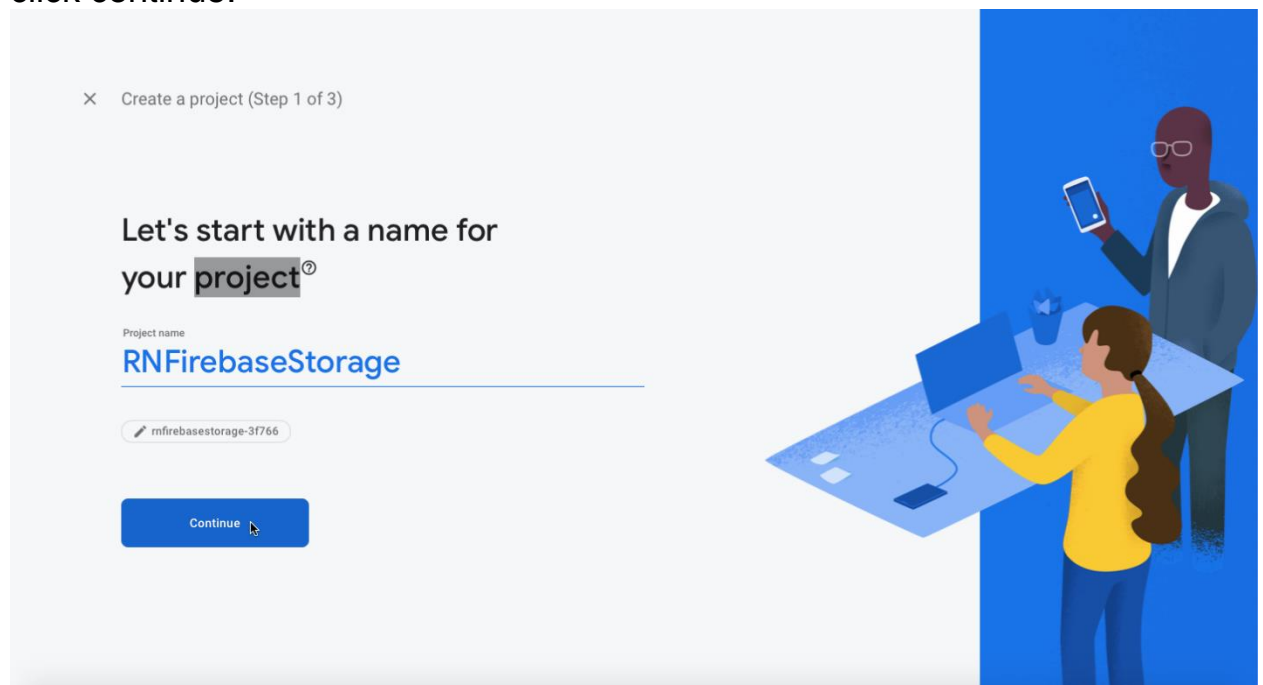
1. Create/Add a Firebase Project: The first time, Firebase will show a Create a project option to set up a project. If there is already an

existing project in the current account, select the Add Project option to



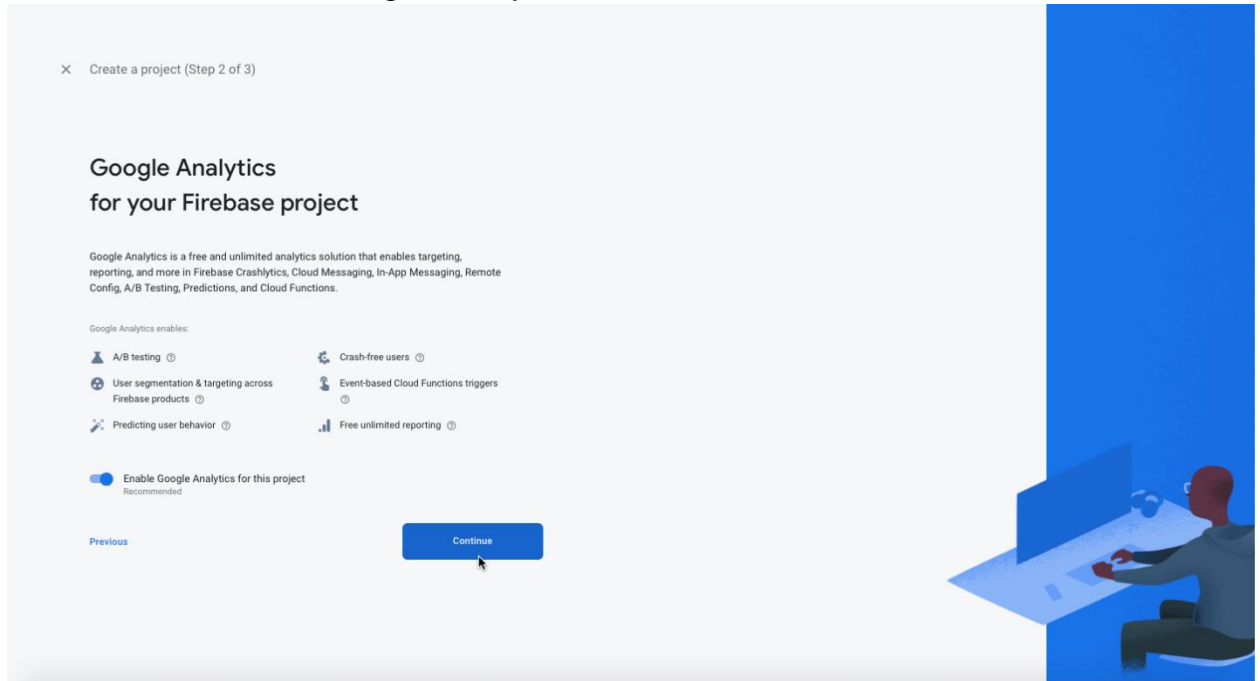
create a new project:

2. Add Name: A project name can be anything but should be at least four characters long and should contain numbers, letters, spaces, and - ! ' " special characters only. Provide a name and click continue:

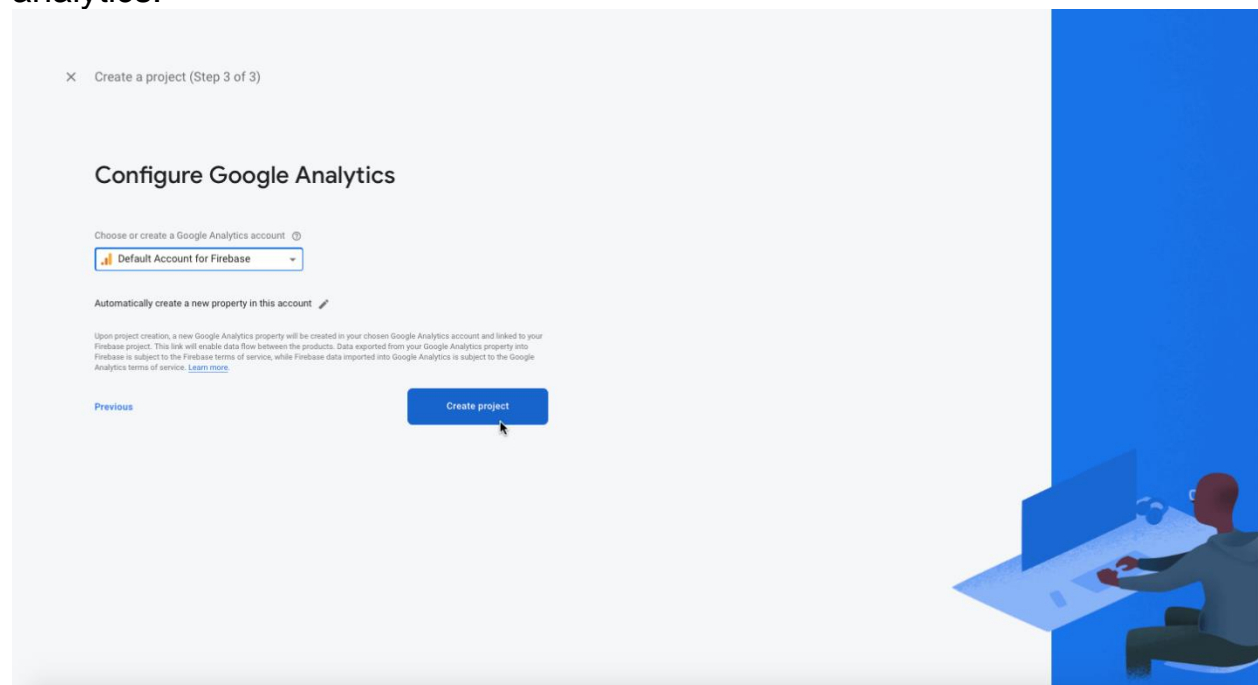


Project names can be duplicates, but always use a unique name to avoid possible configuration issues.

3. Create Project: As of now, there is no need for any other Firebase service, so disable Google Analytics and select the Create



Select the default account for analytics:



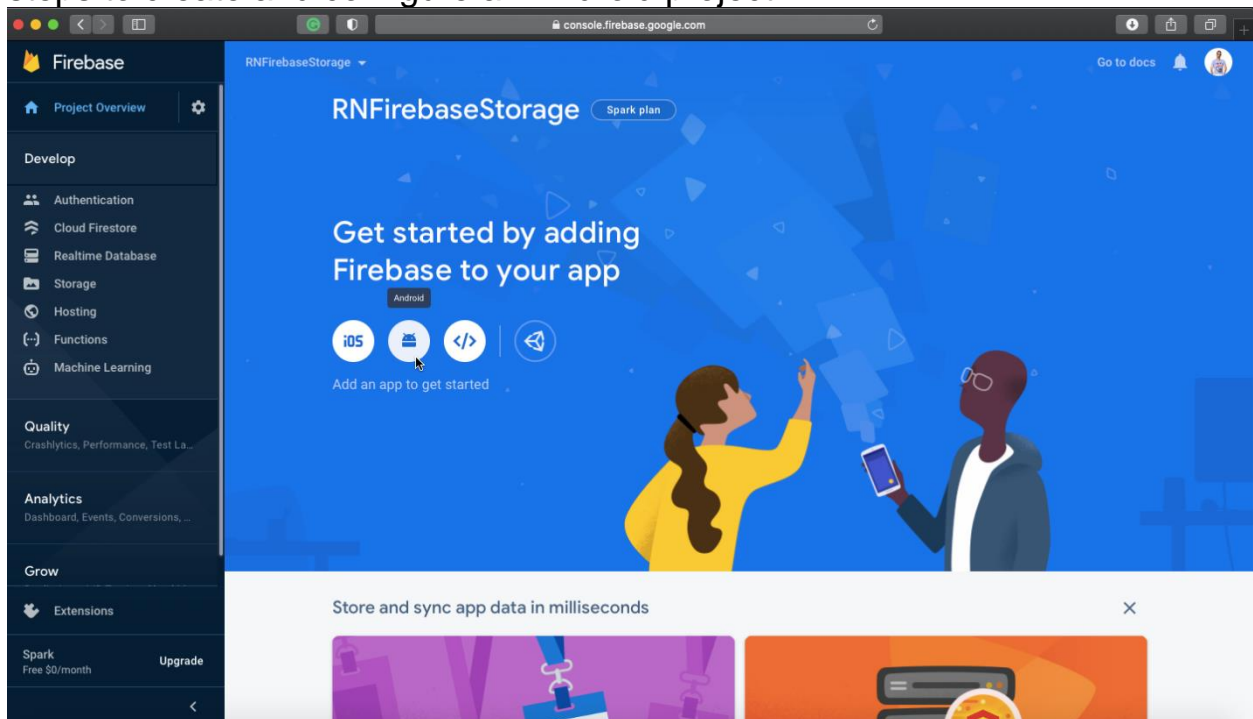
It might take a couple of minutes to create a project. Press continue to go to the project screen after the successful project creation.

Add Native Projects in Firebase Project

Firebase supports mobile and web apps, so the platform-specific apps need to be added under the Firebase project and the native (Android and iOS) project files need to be configured:

Setting Up an Android Firebase Project

Select the Android app option in the Firebase project console and follow the steps to create and configure an Android project:



1. Add Package: A package name is required to create an Android project. It's a unique identifier of an Android app. The package name is used to identify an app on the Play Store and device, so it must be a unique value. The package name is defined as a string value of `applicationId` key in the `ChatApp/android/app/build.gradle` file:

```
1 applicationId "com.chatapp"
```

```
groovy
```


3. Configure Google Services: Firebase configurations requires `google-services` plugins to build the project, so add the `google-services` dependency in the `ChatApp/android/build.gradle` file:

```
1buildscript {
2ext {///...}
3repositories {///...}
4dependencies {
5///...
6classpath 'com.google.gms:google-services:4.3.3' // add
this
7}
8}
```

groovy

Add the `google-services` plugin in the `RNFirestoreStorage/android/app/build.gradle` file at the top:

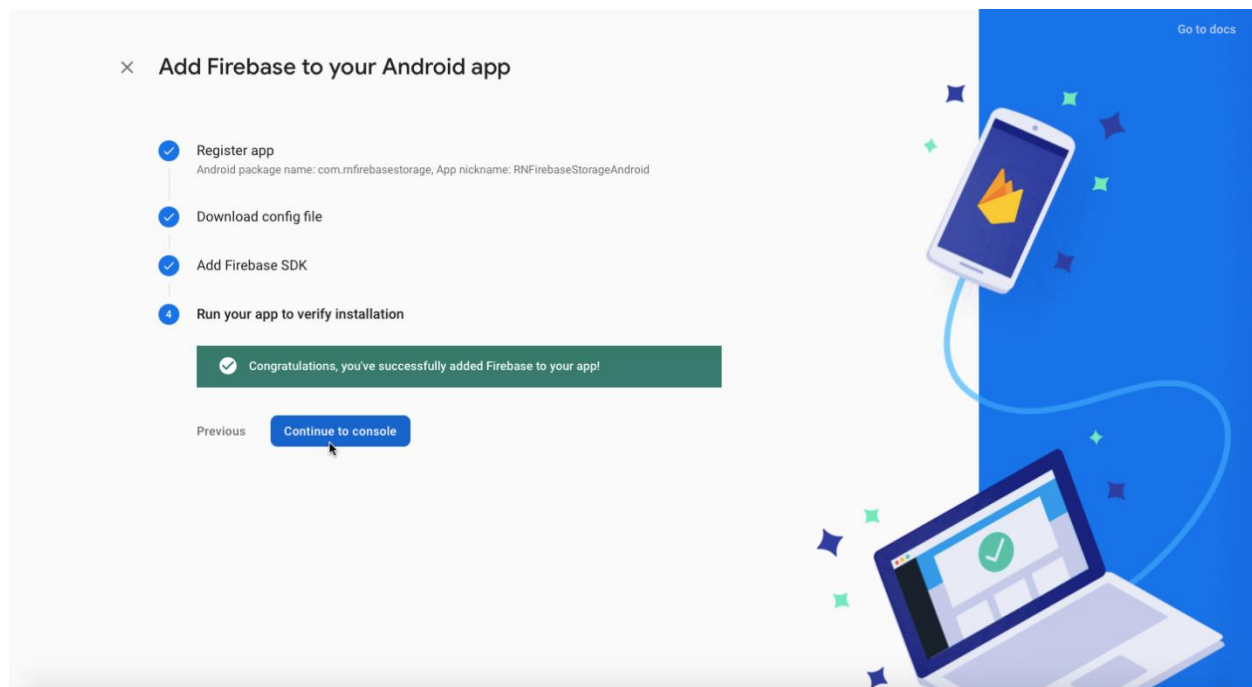
```
1// apply plugin: "com.android.application"
2apply plugin: "com.google.gms.google-services" // add
this
```

groovy

There is no need to add any other Firebase SDK dependency for Android. If you've opted for Google Analytics, it should also be added as an NPM module dependency, not as a `gradle` dependency. 4. Verify App: Run the Android project to confirm the successful integration with Firebase:

```
1npx react-native run-android --verbose
```

bash



Note: In case of any issue, make sure that the [google-services.json](#) is correct, though there can be a slight delay to receive the update status. Alternately, run

```
1cd android && ./gradlew clean && cd ..
```

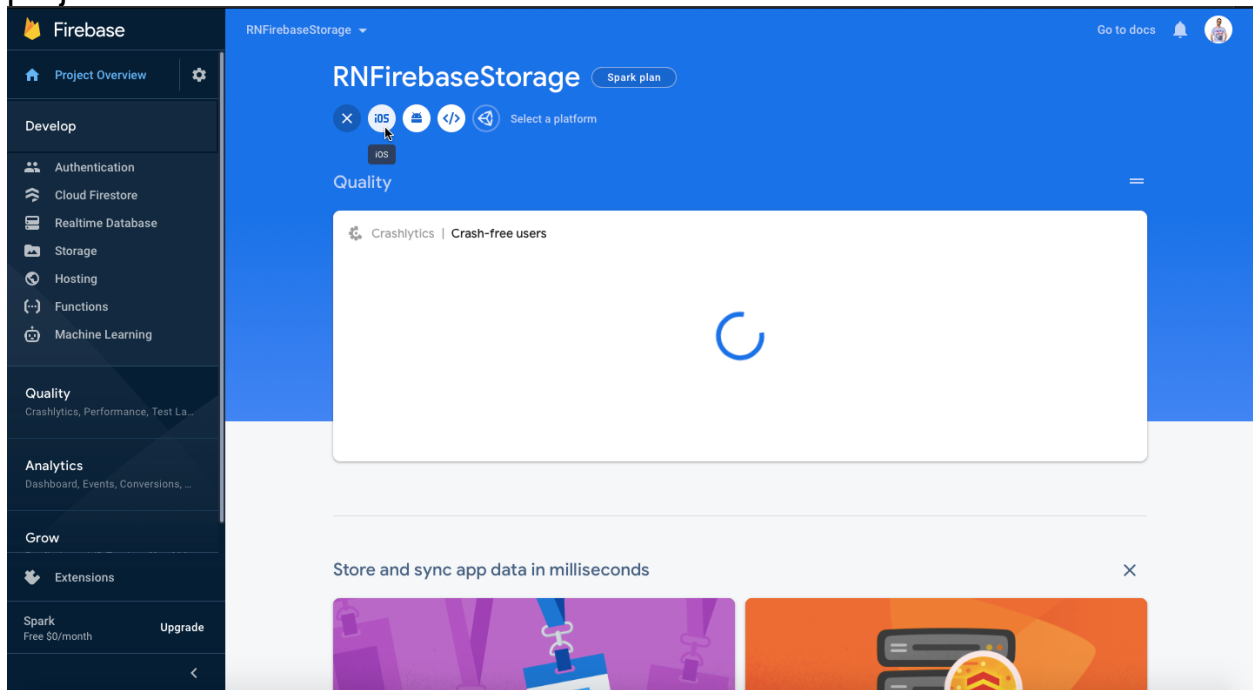
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to clean the project and rerun the project.

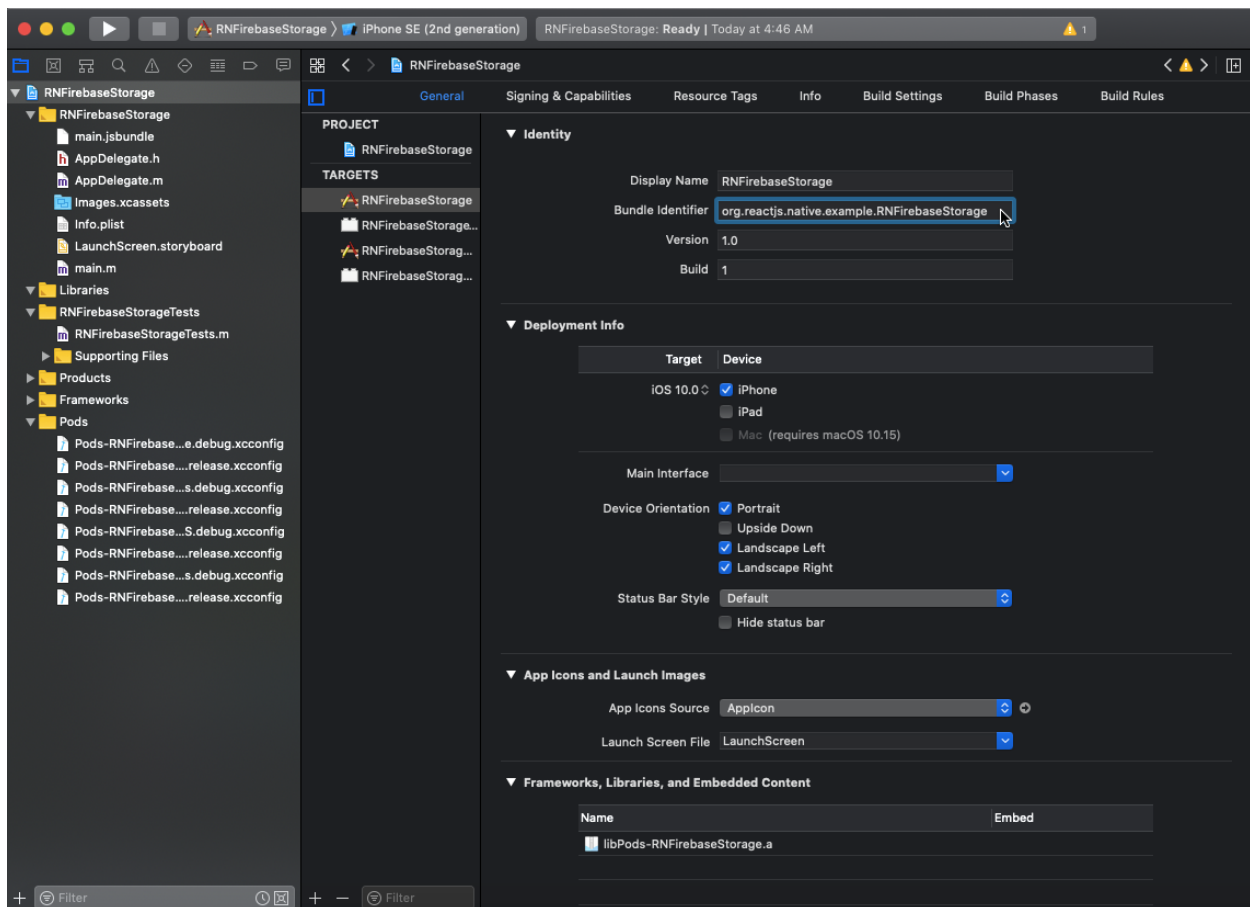
Setting Up iOS Firebase Project

Select the iOS app option in the Firebase project console and follow the steps to configure the iOS project in the React Native

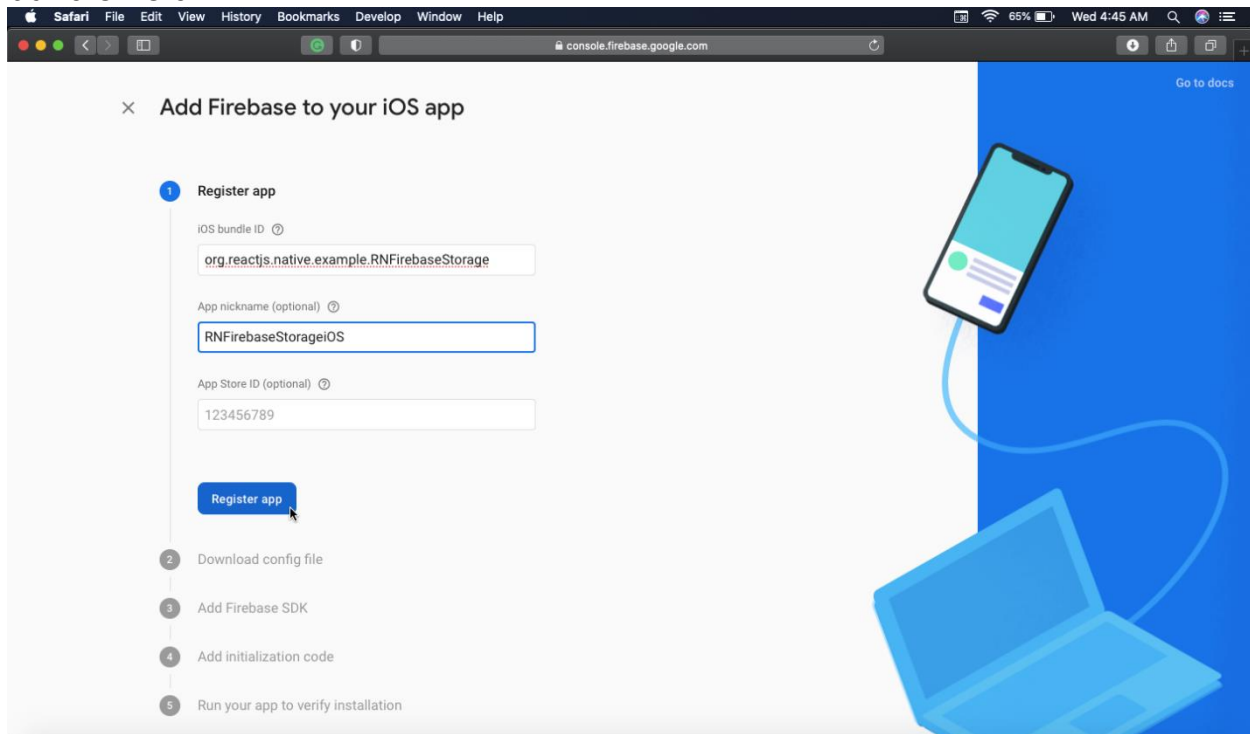
project:



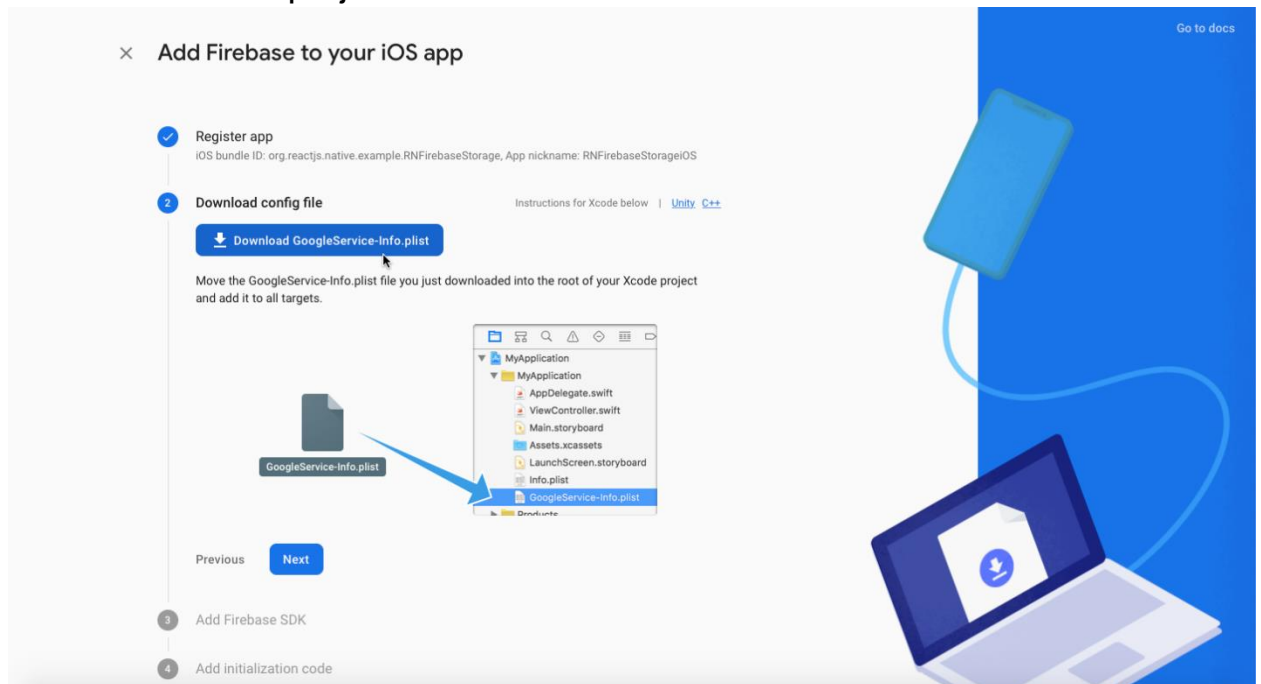
1. Add Bundle ID: A bundle ID (like `package-name`) is a unique identifier that is required to create an iOS project in the Firebase console. The best way to get the bundle ID is via using `XCode`, since often it's not available directly. The configurations files often use the value of globally defined variables. Open the `RNFirebaseStorage.xcodeproj` (`RNFirebaseStorage.workspace`) file with `Xcode` and select the root folder of the project to view the value of `Bundle identifier` in `General` tab:



Copy the identifier and paste it to the iOS bundle field:

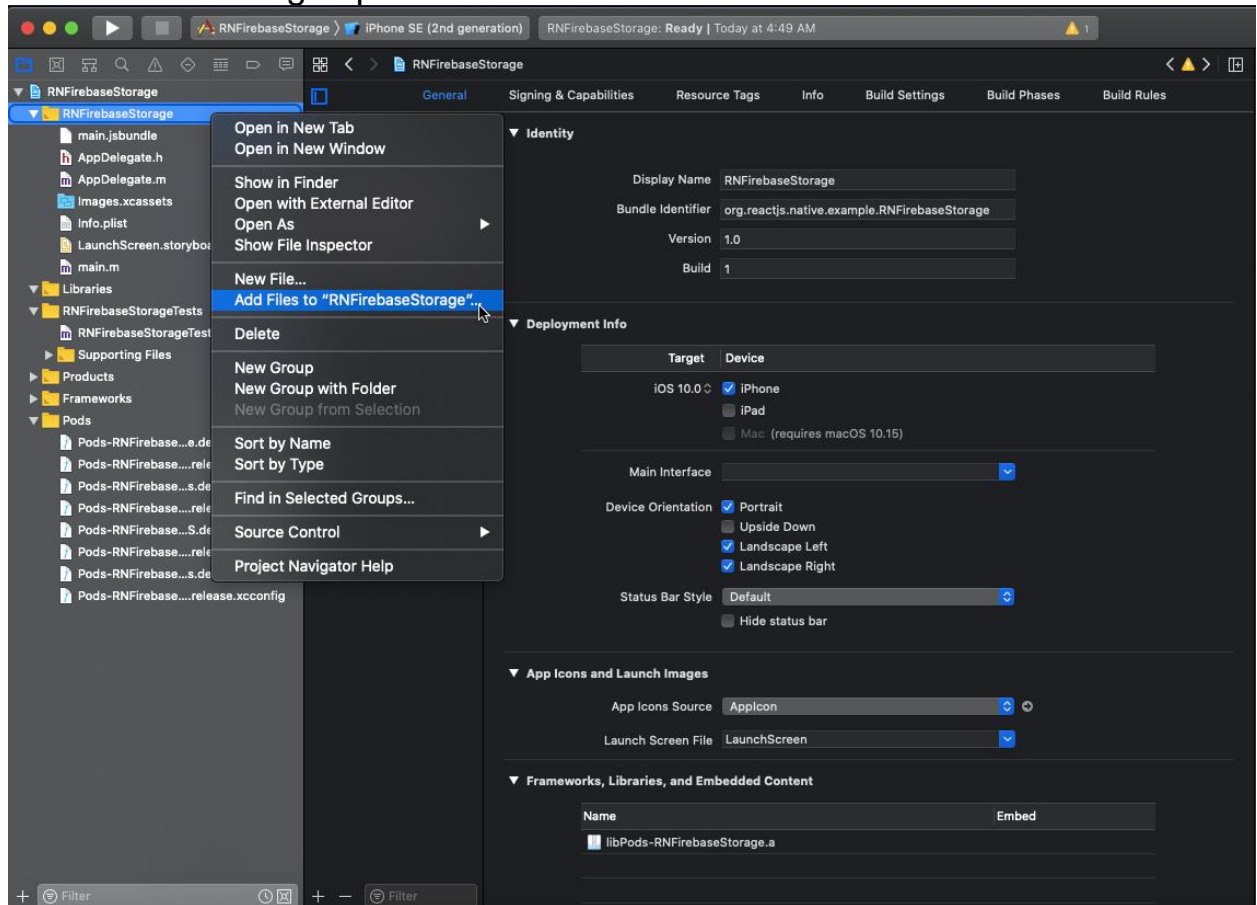


2. Add Configuration File: Download the `GoogleService-Info.plist` file from the Firebase iOS project



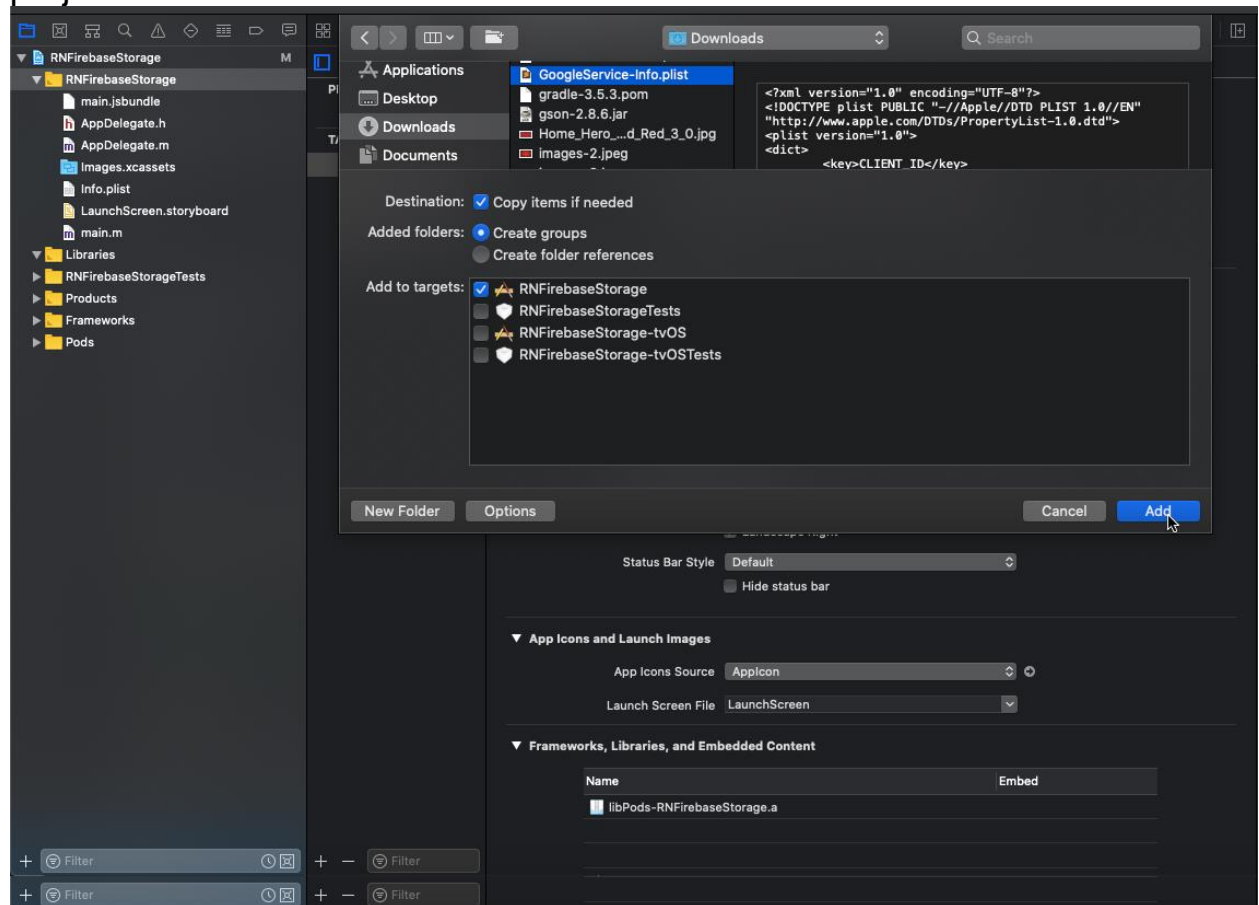
Add the file in the React Native's iOS project using Xcode:

- Right-click on the project and select the Add Files to RNFirestoreStorage option.



- Locate the `GoogleService-Info.plist` file, then select Create groups and all the target

projects:



3. Configure Firebase: The entry point of an iOS app execution is the [AppDelegate.m](#) file where the Firebase SDK initialization call needs to be added inside the `didFinishLaunchingWithOptions` function:

```
1@import Firebase; // add the import
2//...
3
4@implementation AppDelegate
5
6- (BOOL)application:(UIApplication *)application
didFinishLaunchingWithOptions:(NSDictionary
*)launchOptions
7{
8// initialize Firebase SDK
9if ([FIRApp defaultApp] == nil) {
```

```
10[FIRApp configure];
11}
12// ...
13return YES;
14}
```

objective-c

Note: As of Sep 2020, React native is using objective-c for iOS projects. Analytics dependency is required for an iOS project to verify the successful integration.

Now update the [pod](#) dependencies:

```
1npm install @react-native-firebase/analytics
2# in the root folder
3cd ios && pod install --repo-update && cd ..
```

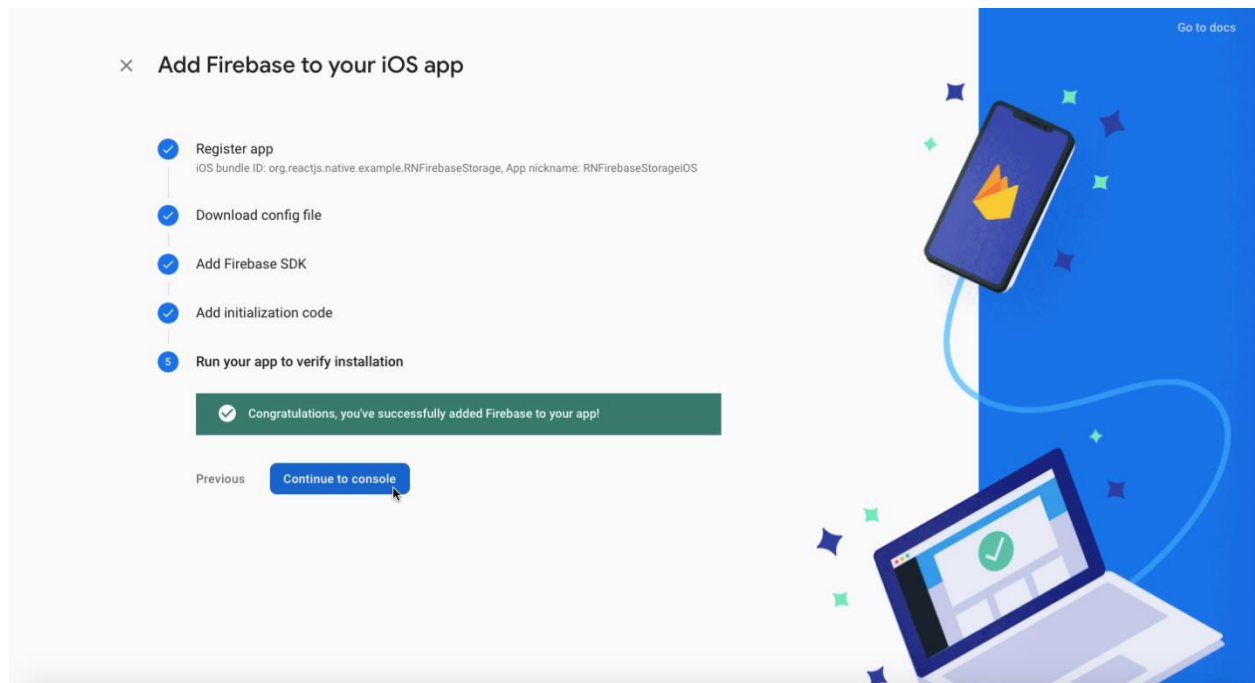
bash

Firebase analytics dependency is a must to verify successful Firebase integration with iOS.

4. Verify App: Run the iOS project to confirm the successful integration of Firebase with the iOS project:

```
1npx react-native run-ios --verbose
```

bash



The Firebase console may take time to confirm the successful integration of Firebase SDK with the iOS app.