Mobile Testing Enterprise

UIAutomation Compatibility for iOS Applications

Release 7.3
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Overview

With the latest releases of iOS and Xcode, Apple has made using Keynote’s AppSign tool to change the identity of an app a lot harder to accomplish. In effect, the tool is doing steps that Apple does not want you to be able to do. There is a high possibility that Apple will eventually close all such loopholes, and we will no longer be able to sign an app for our customers.

So that you do not need to avail of Keynote’s AppSign tool, follow these following steps to make your apps UIAutomation compatible and therefore able to use iOS object-level scripting Mobile Testing Enterprise.

The high-level steps below are explained further in the sections that follow. It is assumed the person performing these steps has basic-intermediate knowledge of iOS app development, specifically the inner workings of Apple iOS Certificates, Apple iOS Identifiers, and Provisioning Profiles.

1. Ensure there is a valid iOS App Development Certificate.
2. Ensure there is a valid App ID for your customer app.
3. Ensure there is a valid Development Provisioning Profile for your app.
4. Ensure the Development Provisioning Profile contains UDIDs of devices the app will be deployed to.
5. Build the customer App using the proper App Development Certificate, App ID, and Development Provisioning Profile under Xcode.
6. Make the app UIAutomation compatible.

1. iOS App Development Certificate

To create a certificate:

2. Click the plus symbol at the top right to add a new certificate.
   - For a development certificate, select iOS App Development and click Continue.
   - For a distribution certificate, select App Store and Ad Hoc and click Continue.
3. Follow the instructions on the page for creating a Certificate Signing Request.
4. Open Keychain Access on your Mac.
6. Follow instructions to create a certificate:
7 Once you have the CSR file, continue with the web page for creating a Certificate. The page will ask you to select the CSR to generate the certificate.

8 Download the certificate.

9 Locate the certificate and double click it to add it to your Keychain.

10 If everything is done correctly, you will see a new Certificate along with a Private key in the Keychain Access:

2 Valid Customer App ID

Steps to create an app ID:
1 Download the certificate.
2 In the Member Center, under Certificates, Identifiers, & Profiles, click on App IDs under Identifiers.
3 Click the plus symbol at the top right of the page.
4 For App ID Description, type the desired app ID
5 Select all the services and click Continue.
6 Click Submit.

### 3 Development Provisioning Profile

To ensure there is a Development Provisioning Profile for your app:

1. In the Member Center, under Certificates, Identifiers, & Profiles, select Provisioning Profiles > Development.
2. Click the plus symbol at the top right of the page.
3. For a development profile, click on iOS App Development.
4. When asked to select an App ID, choose the ID for your app.
5. Select the certificate used with the profile.
6. Then select the devices that will be included in the provisioning profile.
7. Name the profile.
8. Download the profile. It will need to be added to devices in order to run apps that have been signed.

### 4 UDIDs in the Development Provisioning Profile

Ensure that the Development Provisioning Profile contains all the UDIDs of devices the app will be deployed to.

To add a device UDID to the Provisioning Profile:

1. Log in to the Apple Developer Portal.
2. Click on Provisioning Profiles.
3. Select the appropriate profile.
4. Click on the Edit button.
5. Select the desired device that you would like the app to be deployed to.
6. Click Generate to generate a new provisioning profile if there are any changes made.

### 5 Build the App

Build the app using the proper App Development Certificate, App ID, and Development Provisioning Profile under Xcode:

1. Launch Xcode and open your project.
2. Under the Build Settings menu, select the appropriate Development Code Signing Identity and Development Provisioning Profile.

**NOTE** You might have to exit Xcode and reopen the project for the build to see changes.

3. Ensure the build is successful.
6 UIAutomation Compatibility

To create a UIAutomation compatible app:

1. Locate your app’s derived data. This can be located by going to Xcode Organizer and clicking on the project. You will see a Derived Data main folder like this:

   ![Derived Data Main Folder](image)

   - Derived Data: ~Library/Developer/Xcode/DerivedData/<AppName>/Build/Products/Debug-iphoneos/<AppName>.app
   - Snapshots: allow you to save your project state at different points in time

2. From the Derived Data main folder, navigate to the Debug derived data folder. Typically, they are located under a folder structured like this:

   /Users/<UserName>/Library/Developer/Xcode/DerivedData/<AppName>/Build/Products/Debug-iphoneos/<AppName>.app

3. Copy this folder into a folder named Payload.

4. Zip the Payload folder and name it with an .ipa file extension, e.g., hello.ipa.

   Now you have a UIAutomation compatible app.

**NOTE** Navigating the file system using OS X’s Finder App to perform the above steps will add a hidden indexing file called .DS_Store and that may create problems if included. Performing the above steps under the command line tool will not have these side effects:

Starting from the Debug-iphoneos directory,  

```
cp -aXv <APPNAME> Payload
```

For example, if you are in  

```
/Users/<USERNAME>/Library/Developer/Xcode/DerivedData/<APPDATA>/Build/Products/Debug-iphoneos
```

issue the command:  

```
cp -aXv hello.app Payload
# zip -r hello.ipa Payload
```