Building an iOS signing key for PhoneGap in Windows

29 November 2012

One of the tasks I had to overcome when building a hybrid application that I've been working on was how to generate an iOS signing key that's required by PhoneGap Build (https://build.phonegap.com/) in order to generate iOS applications, on Windows. The steps to do this are outlined here.

Apple Developer Account

The one major thing that I will assume you have is an Apple Developer (https://developer.apple.com/) account. There is no way around this, you must have one. Yes it costs $99 a year, but if you need to build an app for iOS, then you need to pay.

OpenSSL

You also need to download OpenSSL (http://www.openssl.org/) and install it on your machine. This will end up somewhere like `C:\OpenSSL-Win32` and it's worth adding the `bin` directory to your `Path` environment variable, which the steps below will assume you have done.

The steps

The first thing you need to do is generate a private key. Go to the command line and navigate to whatever directory you want to store the generated files in. Then type in the following to generate the key:

```
openssl genrsa -des3 -out ios.key 2048
```

This will generate a key and store it in the file `ios.key`. You will be prompted to generate a password for this key (once to create and once to verify), which you should take note of as you will require it later.

Next you need to generate a Certificate Signing Request or CSR file. You can do this by running the following command, which uses the `ios.key` file generated earlier:

```
openssl req -new -key ios.key -out ios.csr -subj "/emailAddress=MY-
```

```
EMAIL-ADDRESS, CN=COMPANY-NAME, C=COUNTRY-CODE"
```

You will (obviously) need to change the email, company name and country code details to the correct values, e.g. `-subj "/emailAddress=test@iandevlin.com, CN=iandevlin, C=DE"`. This will generate the required certificate signing request and store it in the file `ios.csr`.

Now you need to go to your [Apple Developer iOS Provisioning Portal (https://developer.apple.com/ios/manage/overview/index.action)](https://developer.apple.com/ios/manage/overview/index.action) in order to generate an iOS Development Certificate, using the `ios.csr` file you've just generated. Click on "Certificates" in the left hand side, and then "Request". You will be prompted to upload a `.csr` file, and then wait for the certificate to be issued, which it will quite quickly, refresh the browser if you need to.

If you need any help with the portal, the website provides you with all you need to know.

Now download the development certificate that was issued and save it in the same directory where the other generated files are.

You now need to convert it to a PEM file which you can do with:

```
openssl x509 -in ios_development.cer -inform DER -out
ios_development.pem -outform PEM
```

Where `ios_development.cer` is the name of the development certificate created on the Apple Provisioning Portal and `ios_development.pem` is the PEM file that we want to generate.

The penultimate file to generate is the P12 file, which uses both our private key (`ios.key`) and the iOS development certificate (`ios_development.pem`):

```
openssl pkcs12 -export -inkey ios.key -in ios_development.pem -out
ios_development.p12
```

You will be asked to enter the access phrase for the `ios.key` file (which you noted from earlier) and you will need to generate an export password for the P12 file and verify it. The `ios_development.p12` file is then generated.

The last file you need to generate is the provisioning profile, which again requires you to return to the Apple Provisioning Portal. There is plenty of documentation there on how to do this, so I won't go into it here. Bear in mind that such certificates need to be tied to your iOS testing devices via their UDIDs, and again there is documentation on how to do this.

Once the provisioning profile is generated, download it (e.g. `iOS_Development.mobileprovision`) and save it in the same place as the other files. This file

will also need to be installed on each of your iOS testing devices.

You should now have everything that you need to generate an iOS signing key for PhoneGap Build:

- P12 certificate file
- provisioning profile
- certificate password

These steps can also be used to generate a distribution key for the iTunes Store.

39 Responses

[← Older Comments (http://www.iandevlin.com/blog/2012/11/phonegap/building-an-ios-signing-key-for-phonegap-in-windows/comment-page-1#comments)](http://www.iandevlin.com/blog/2012/11/phonegap/building-an-ios-signing-key-for-phonegap-in-windows/comment-page-1#comments)

- [Ian (http://www.iandevlin.com)](http://www.iandevlin.com)
  [21 January 2014 at 13:44 (http://www.iandevlin.com/blog/2012/11/phonegap/building-an-ios-signing-key-for-phonegap-in-windows/comment-page-2#comment-11247)](http://www.iandevlin.com/blog/2012/11/phonegap/building-an-ios-signing-key-for-phonegap-in-windows/comment-page-2#comment-11247)

  It's good to hear that writing such things is worthwhile. You are both welcome Bryan and Aitor.

- Pingback: [Sådan laver du IOS udviklernøgler i Windows - HTML5 og XHTML2 (http://html5.dk/2014/02/03/saadan-laver-du-ios-udviklernoegler-windows/)](http://html5.dk/2014/02/03/saadan-laver-du-ios-udviklernoegler-windows/)

- andrea
  [28 March 2014 at 09:23 (http://www.iandevlin.com/blog/2012/11/phonegap/building-an-ios-signing-key-for-phonegap-in-windows/comment-page-2#comment-11521)](http://www.iandevlin.com/blog/2012/11/phonegap/building-an-ios-signing-key-for-phonegap-in-windows/comment-page-2#comment-11521)

  Thank you from italy. Perfect! I have my certificates!

- Juan Alpízar
  [02 April 2014 at 19:44 (http://www.iandevlin.com/blog/2012/11/phonegap/building-an-ios-signing-key-for-phonegap-in-windows/comment-page-2#comment-11599)](http://www.iandevlin.com/blog/2012/11/phonegap/building-an-ios-signing-key-for-phonegap-in-windows/comment-page-2#comment-11599)

  First, thanks for this article it helped me out a lot. I'm totally new to the mac world, and I have a question related to the application deployment.

  When I was making the provisioning profile, it allowed me to make one out of 3 possible profiles: development, app store or ad hoc, my question is, if I don't wanna distribute my application through app store, is there a way to distribute it to unlimited number of clients?

  I'm developing for specific clients, so making the application available in app store is out of discussion, and ad hoc has a limited number of devices, so I'm a bit confused here.

  Thanks for your time

- [Jack Rugile (http://jackrugile.com)](http://jackrugile.com)
  [07 April 2014 at 19:08 (http://www.iandevlin.com/blog/2012/11/phonegap/building-an-ios-signing-key-for-phonegap-in-windows/comment-page-2#comment-11693)](http://www.iandevlin.com/blog/2012/11/phonegap/building-an-ios-signing-key-for-phonegap-in-windows/comment-page-2#comment-11693)

  Thank you, this worked perfectly. Saved me, no way I would have figured this out on my own. Old article, but still working in April 2014. Much appreciated!

- Jonathan Aylward
  [08 April 2014 at 03:07 (http://www.iandevlin.com/blog/2012/11/phonegap/building-an-ios-signing-key-for-phonegap-in-windows/comment-page-2#comment-11704)](http://www.iandevlin.com/blog/2012/11/phonegap/building-an-ios-signing-key-for-phonegap-in-windows/comment-page-2#comment-11704)

  Another successful key file creation thanks to this article. Thanks Ian

- [Ian (http://www.iandevlin.com)](http://www.iandevlin.com)
  [08 April 2014 at 17:08 (http://www.iandevlin.com/blog/2012/11/phonegap/building-an-ios-signing-key-for-phonegap-in-windows/comment-page-2#comment-11710)](http://www.iandevlin.com/blog/2012/11/phonegap/building-an-ios-signing-key-for-phonegap-in-windows/comment-page-2#comment-11710)

  @Jack and @Jonathan, glad to have helped!

  @Juan I'm not entirely sure to be honest, I think Apple force it that way so that every app goes through their store. In your case this seems absurd as it's a specialist app but I am afraid I don't really know the solution. Sorry.

- [Josh Winn (http://www.joshuawinn.com)](http://www.joshuawinn.com)
  [30 April 2014 at 21:55 (http://www.iandevlin.com/blog/2012/11/phonegap/building-an-ios-signing-key-for-phonegap-in-windows/comment-page-2#comment-12325)](http://www.iandevlin.com/blog/2012/11/phonegap/building-an-ios-signing-key-for-phonegap-in-windows/comment-page-2#comment-12325)

  The official PhoneGaps docs are missing a large number of these steps. They do not mention generating the .key file until you need the .key file at the last step, or that you can create the CSR on Windows. Thanks for providing this guide. I was able to generate the p12 file and get the iOS version up and running!

- Gary F
  [02 May 2014 at 15:10 (http://www.iandevlin.com/blog/2012/11/phonegap/building-an-ios-signing-key-for-phonegap-in-windows/comment-page-2#comment-12326)](http://www.iandevlin.com/blog/2012/11/phonegap/building-an-ios-signing-key-for-phonegap-in-windows/comment-page-2#comment-12326)

  Thank you so much for this straight forward guide, Ian. It's saved me heaps of time as a new iOS app developer who doesn't own a Mac and therefore can't use xcode. (So much easier to test Android apps!)

- [Bob (http://goodtiming.com)](http://goodtiming.com)
  [05 May 2014 at 15:18 (http://www.iandevlin.com/blog/2012/11/phonegap/building-an-ios-signing-key-for-phonegap-in-windows/comment-page-2#comment-12327)](http://www.iandevlin.com/blog/2012/11/phonegap/building-an-ios-signing-key-for-phonegap-in-windows/comment-page-2#comment-12327)

  Hi Ian,
  When attempting to generate the private key, at the point where I am prompted to enter a pass phrase, I am unable to as my keyboard suddenly does not work in the command window??? Ever hear of that one? If you have any idea as to why that may be, please let me know.
  Thank you

- Bob (http://goodtiming.com)
  05 May 2014 at 16:12 (http://www.iandevlin.com/blog/2012/11/phonegap/building-an-ios-signing-key-for-phonegap-in-windows/comment-page-2#comment-12328)

  Hi Ian,
  re: my 05 May 2014 at 15:18 comment
  I didn't realize that the pass phrase being keyed simply won't show up even as far as the cursor moving until I went ahead and just typed the phrase in. Everything worked out fine. So no need to respond to my previous post.
  Thanks for this helpful outline. Other sources were much less clear and/or incomplete.

- Tommy Persson (http://www.mikaelmedia.se)
  12 May 2014 at 10:34 (http://www.iandevlin.com/blog/2012/11/phonegap/building-an-ios-signing-key-for-phonegap-in-windows/comment-page-2#comment-12340)

  Works perfectly.

  The only problem I had when trying to submit was solved by deleting all certificates/provisioning from apple, then deleting the app and signing keys from phonegap, and to top it of deleted all cookies from phonegap. Then I renewed everything and it was submitted without any problems. All this done from windows 7, with application loader via macincloud service.

  Thanks Ian for a great guide!

- Pingback: Die App steht im Store - Nischenseiten Challenge Woche 9-10 - Jonas Breuer (http://www.j-breuer.de/blog/die-app-steht-im-store-nischenseiten-challenge-wochen-9-10/)

- William Pietri (http://williampietri.com/)
  28 May 2014 at 00:57 (http://www.iandevlin.com/blog/2012/11/phonegap/building-an-ios-signing-key-for-phonegap-in-windows/comment-page-2#comment-17829)

  Perfect! Works just fine in Linux as well.

- Pingback: HELLO WORLD!!! (http://yogitech.in/?p=93)

- Pingback: HOW TO BUILD YOUR OWN APP | Technology Information (http://www.techaps.in/how-to-build-your-own-app/)

- Ariel
  19 June 2014 at 03:35 (http://www.iandevlin.com/blog/2012/11/phonegap/building-an-ios-signing-key-for-phonegap-in-windows/comment-page-2#comment-24264)

It's works! Thanks a lot

- Abdo
  [04 July 2014 at 09:43 (http://www.iandevlin.com/blog/2012/11/phonegap/building-an-ios-signing-key-for-phonegap-in-windows/comment-page-2#comment-29171)](http://www.iandevlin.com/blog/2012/11/phonegap/building-an-ios-signing-key-for-phonegap-in-windows/comment-page-2#comment-29171)

  Really Thanks for your help ... no need for MAC

- Hardy
  [06 August 2014 at 07:15 (http://www.iandevlin.com/blog/2012/11/phonegap/building-an-ios-signing-key-for-phonegap-in-windows/comment-page-2#comment-41760)](http://www.iandevlin.com/blog/2012/11/phonegap/building-an-ios-signing-key-for-phonegap-in-windows/comment-page-2#comment-41760)

  Thanks man u help me a lot.....Thanks...

[← Older Comments (http://www.iandevlin.com/blog/2012/11/phonegap/building-an-ios-signing-key-for-phonegap-in-windows/comment-page-1#comments)](http://www.iandevlin.com/blog/2012/11/phonegap/building-an-ios-signing-key-for-phonegap-in-windows/comment-page-1#comments)