




KEXT Code Signing Problems

 This thread has been locked by a moderator.



On modern systems all KEXTs must be code signed with a Developer ID. Additionally, the Developer ID must be specifically enabled for KEXT development. You can learn more about that process on the [Developer ID](#) page.

If your KEXT is having code signing problems, check that it's signed with a KEXT-enabled Developer ID. Do this by looking at the certificate used to sign the KEXT. First, extract the certificates from the signed KEXT:

 4.3k

```
% codesign -d --extract-certificates MyKEXT.kext
Executable=/Users/quinn/Desktop/MyKEXT/build/Debug/MyKEXT.kext/Contents/MacOS/MyKEXT
```

This creates a bunch of certificates of the form `codesignNNN`, where `NNN` is a number in the range from 0 (the leaf) to N (the root). For example:

```
% ls -lh codesign*
-rw-r--r--+ 1 quinn  staff   1.4K  20 Jul 10:23 codesign0
-rw-r--r--+ 1 quinn  staff   1.0K  20 Jul 10:23 codesign1
-rw-r--r--+ 1 quinn  staff   1.2K  20 Jul 10:23 codesign2
```

Next, rename each of those certificates to include the `.cer` extension:

```
% for i in codesign*; do mv $i $i.cer; done
```

Finally, look at the leaf certificate (`codesign0.cer`) to see if it has an extension with the OID 1.2.840.113635.100.6.1.18. The easiest way to view the certificate is to use Quick Look in Finder.

Note If you're curious where these Apple-specific OIDs comes from, check out the documents on the [Apple PKI](#) page. In this specific case, look at section 4.11.3 *Application and Kernel Extension Code Signing Certificates* of the *Developer ID CPS*.

If the certificate *does* have this extension, there's some other problems with your KEXT's code signing. In that case, feel free to create a new thread here on DevForums with your details.

If the certificate does not have this extension, there are two possible causes:

- Xcode might be using an out-of-date signing certificate. Re-create your Developer ID signing certificate using the developer site and see if the extension shows up there. If so, you'll have to investigate why Xcode is not using the most up-to-date signing certificate.
- If a freshly-created Developer ID signing certificate does not have this extension, you need to apply to get your Developer ID enabled for KEXT development per the instructions on the [Developer ID](#) page.

Share and Enjoy

Quinn "The Eskimo!" @ Developer Technical Support @ Apple
`let myEmail = "eskimo" + "1" + "@" + "apple.com"`

Change history:

- 20 Jul 2016 — First published.
- 28 Mar 2019 — Added a link to the *Apple PKI* site. Other, minor changes.
- 15 Mar 2022 — Fixed the formatting. Updated the section number in the *Developer ID CPS*. Made other minor editorial changes.


Kernel

Reply

Posted 6 years ago by   eskimo 

[Add a Comment](#)

This site contains user submitted content, comments and opinions and is for informational purposes only. Apple disclaims any and all liability for the acts, omissions and conduct of any third parties in connection with or related to your use of the site. All postings and use of the content on this site are subject to the [Apple Developer Forums Participation Agreement](#).

 > Developer > Forums

Platforms

iOS
iPadOS
macOS
tvOS
watchOS

Tools

Swift
SwiftUI
SF Symbols
Swift Playgrounds
TestFlight
Xcode
Xcode Cloud

Topics & Technologies

Accessibility
Accessories
App Extensions
App Store
Audio & Video
Augmented Reality
Business
Design
Distribution
Education
Fonts
Games
Health & Fitness
In-App Purchase
Localization
Maps & Location
Machine Learning
Security
Safari & Web

Resources

Documentation
Curriculum
Downloads
Forums
Videos

Support

Support Articles
Contact Us
Bug Reporting
System Status

Account
Apple Developer
App Store Connect
Certificates, IDs, & Profiles
Feedback Assistant

Programs

Apple Developer Program
Apple Developer Enterprise Program
App Store Small Business Program
MFi Program
News Partner Program
Video Partner Program
Security Bounty Program
Security Research Device Program

Events

App Accelerators
App Store Awards
Apple Design Awards
Apple Developer Academies
Entrepreneur Camp
Tech Talks
WWDC

To view the latest developer news, visit

[News and Updates](#)