

What's New in Xcode App Signing

Developing and distributing

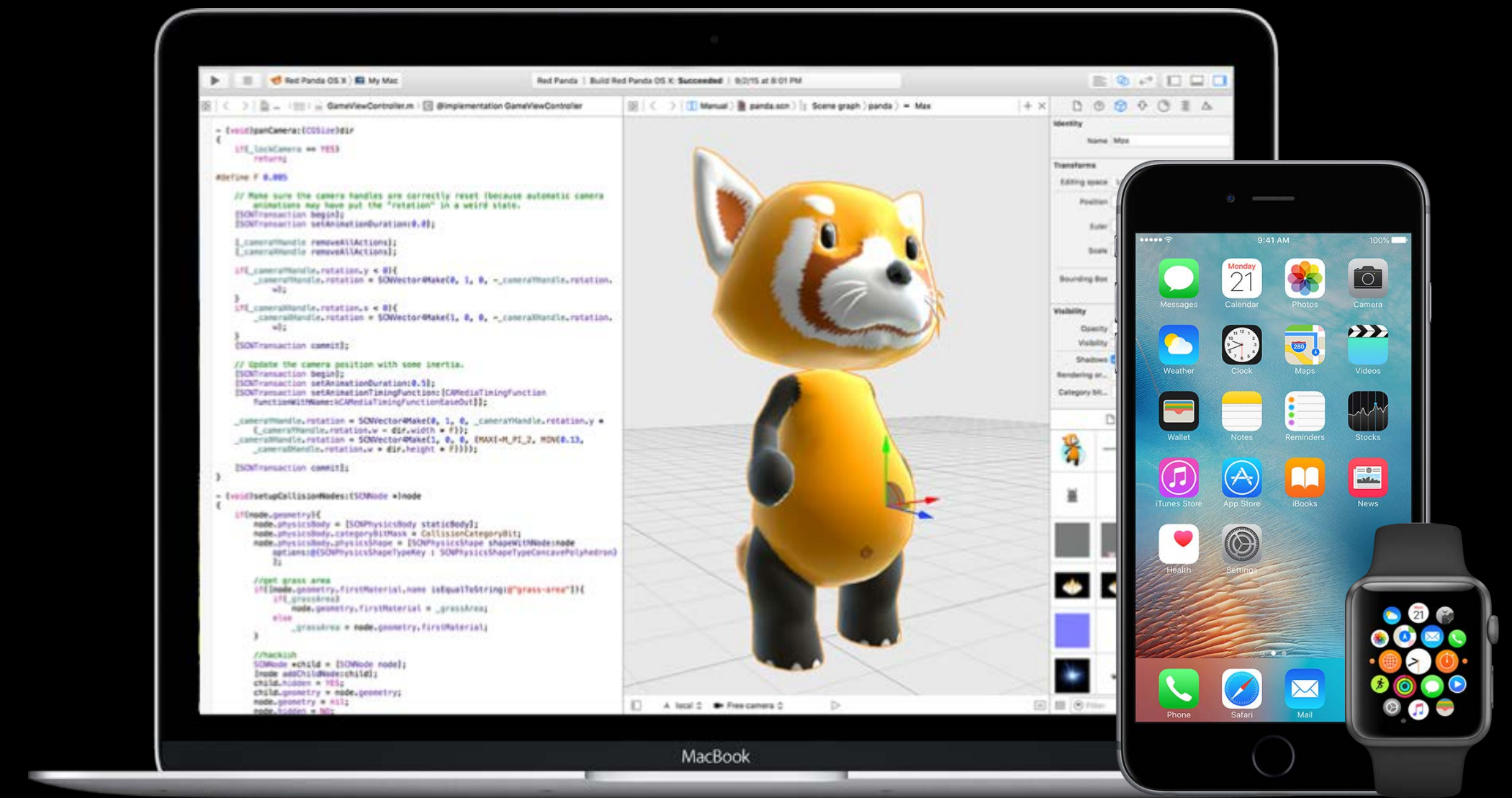
Session 401

Joshua Pennington Tools Engineering Manager

Itai Rom Tools Engineer

What's New in Xcode Signing

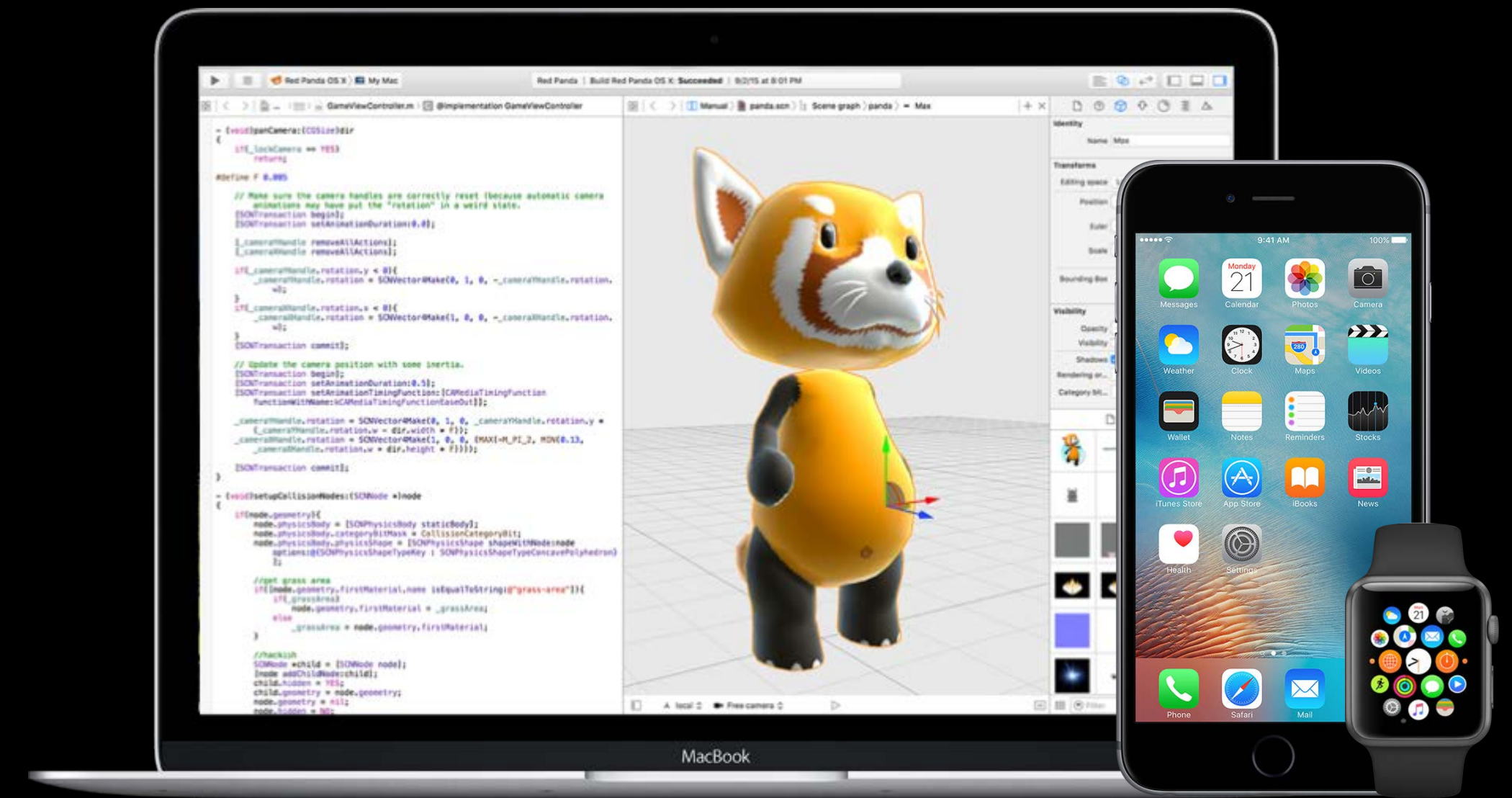
What is signing?



What's New in Xcode Signing

What is signing?

Identifies you to users

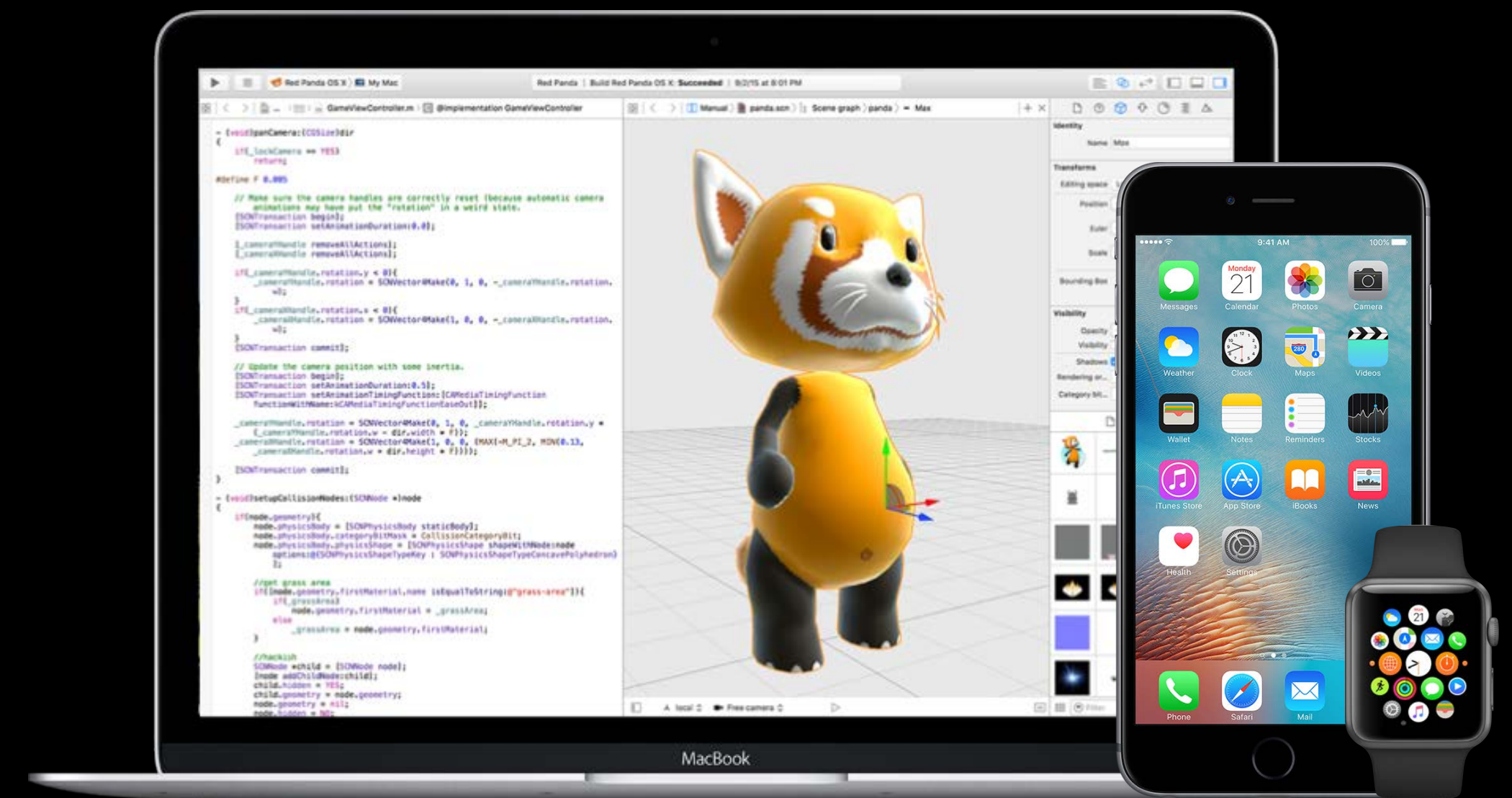


What's New in Xcode Signing

What is signing?

Identifies you to users

Prevents spoofing



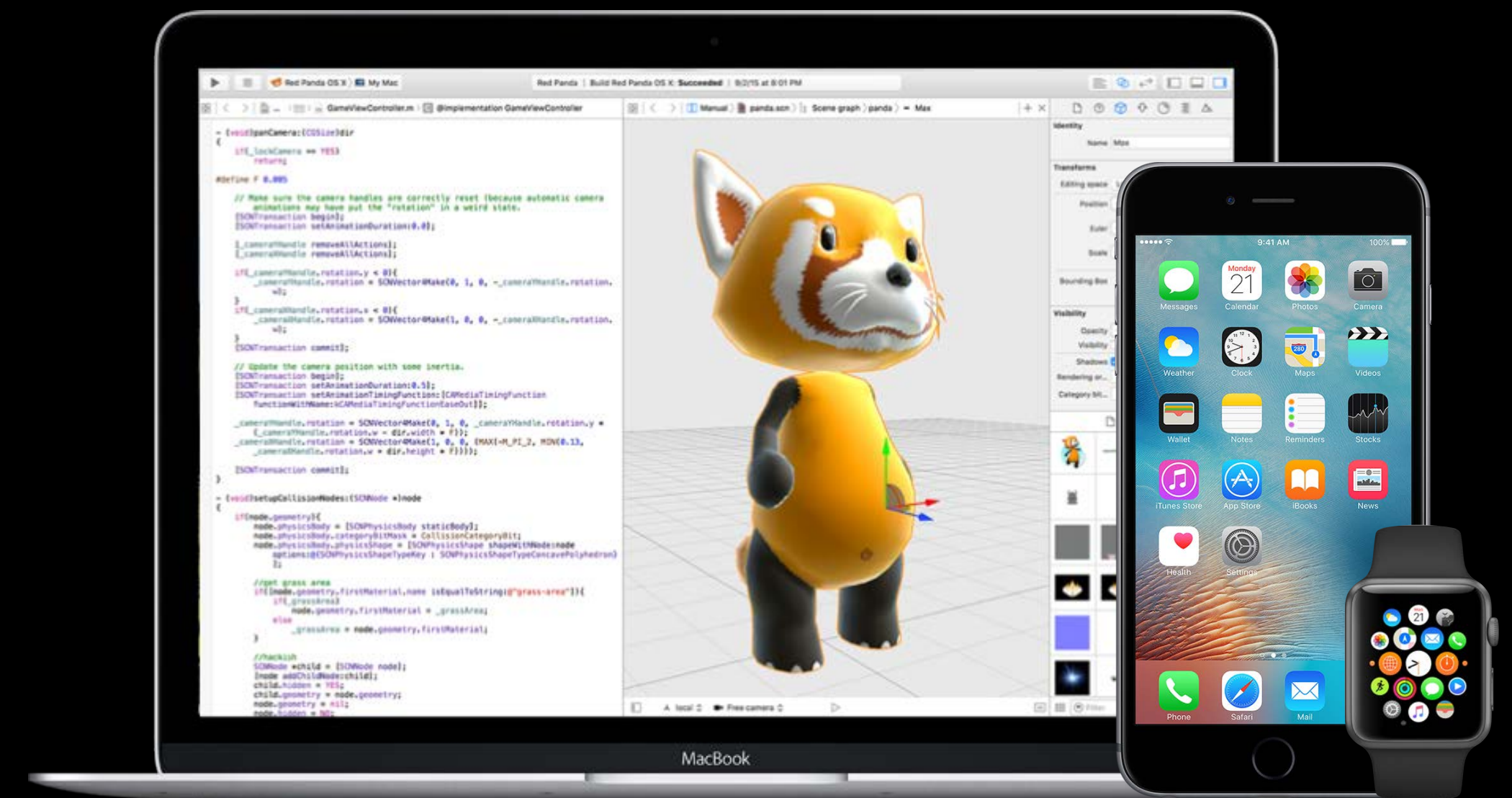
What's New in Xcode Signing

What is signing?

Identifies you to users

Prevents spoofing

Allows access to system services



What's New in Xcode Signing

Overview

Fundamentals

Signing Certificate per Mac

Signing in Xcode

Best Practices

What's New in Xcode Signing

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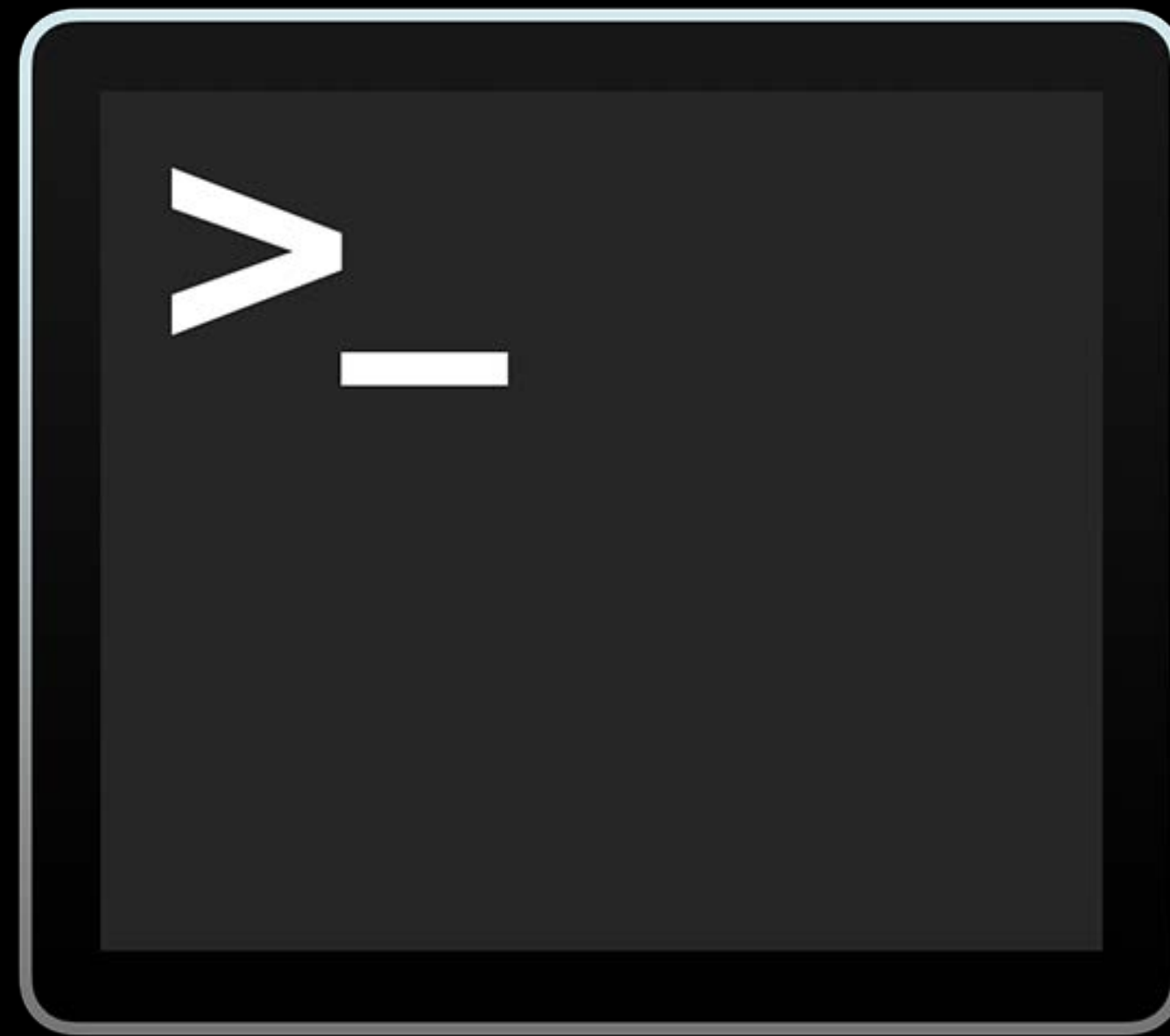
Fundamentals

Signing Certificate per Mac

Signing in Xcode

Best Practices

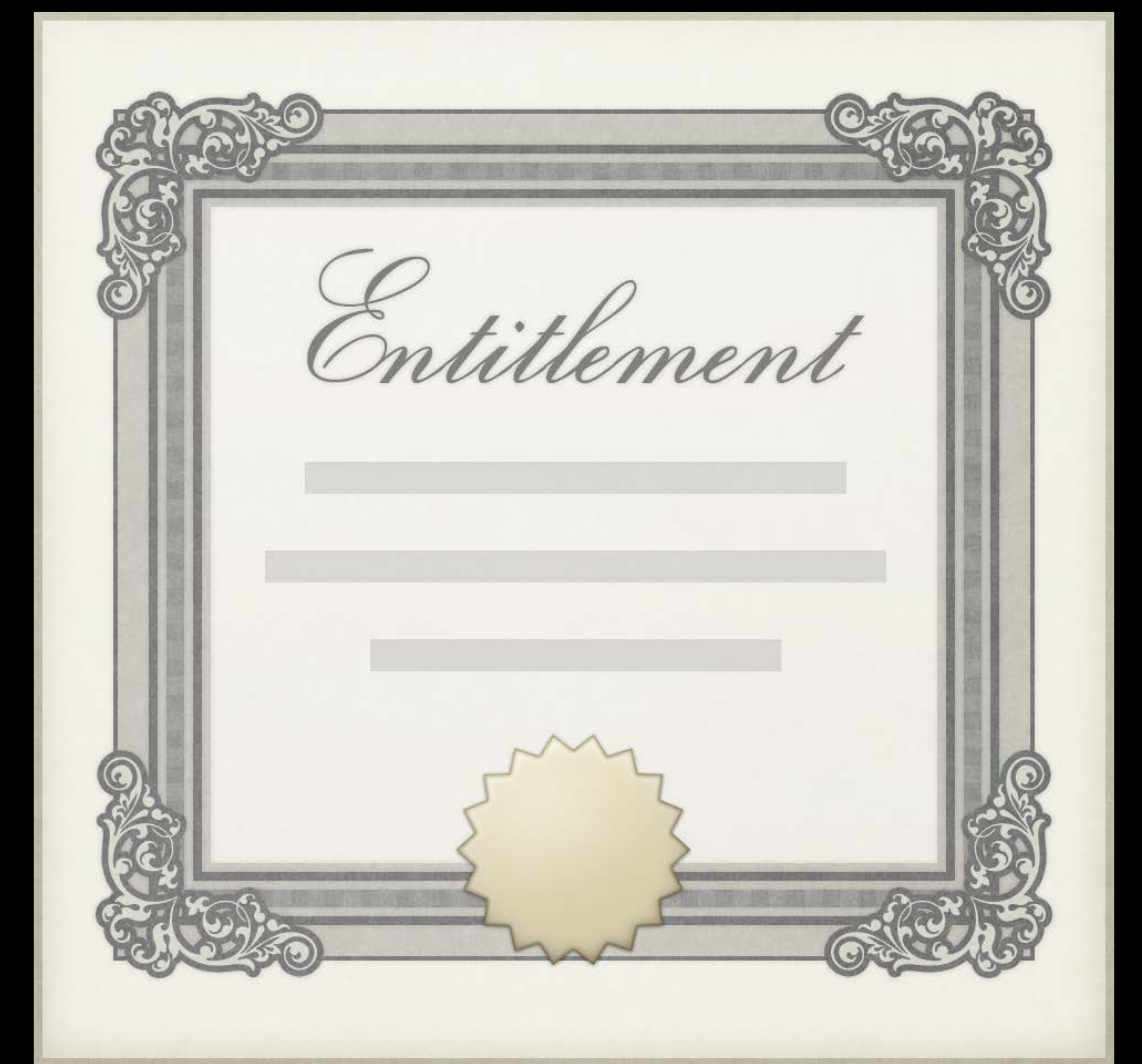
Fundamentals



codesign

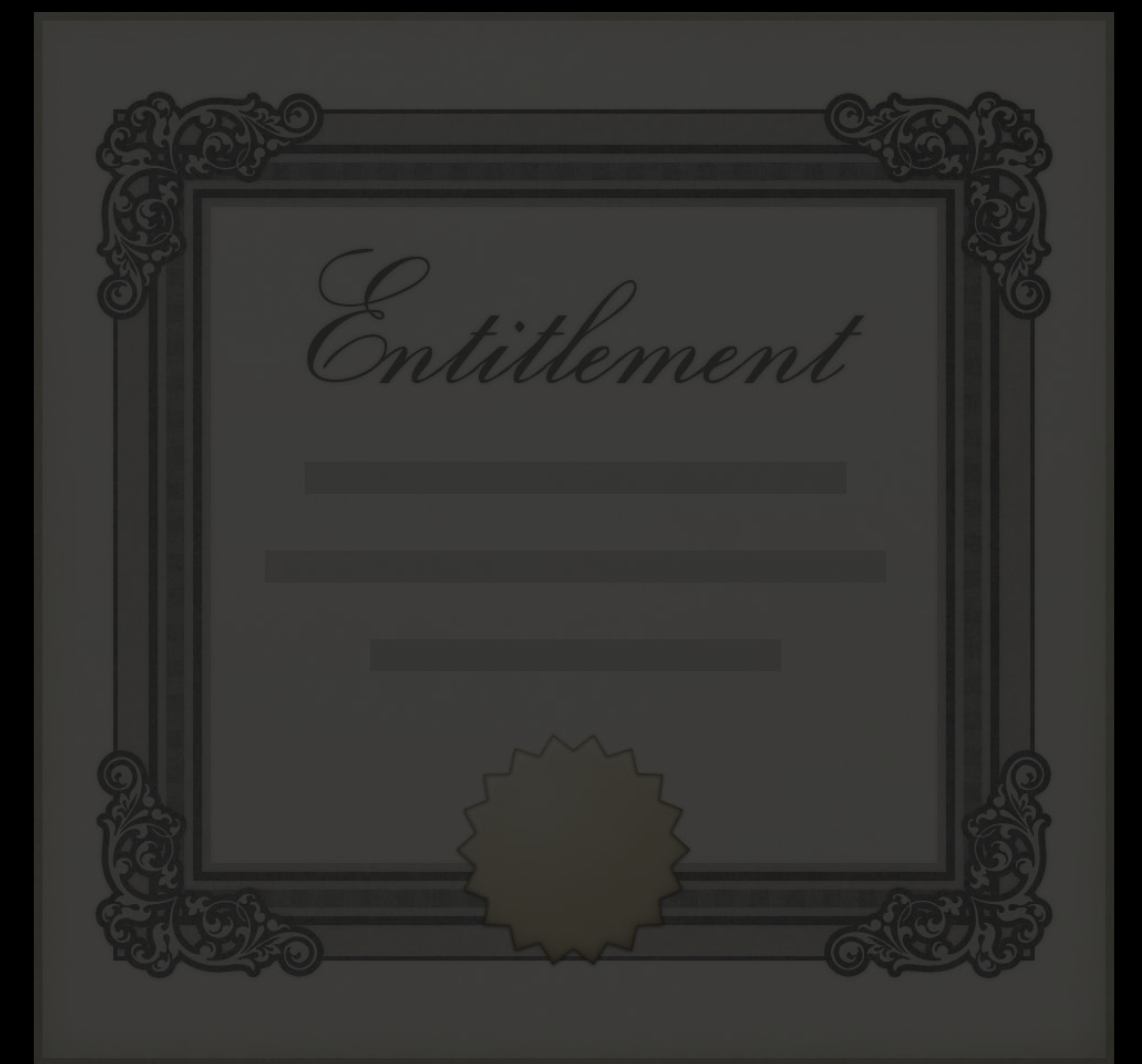
Fundamentals

Overview



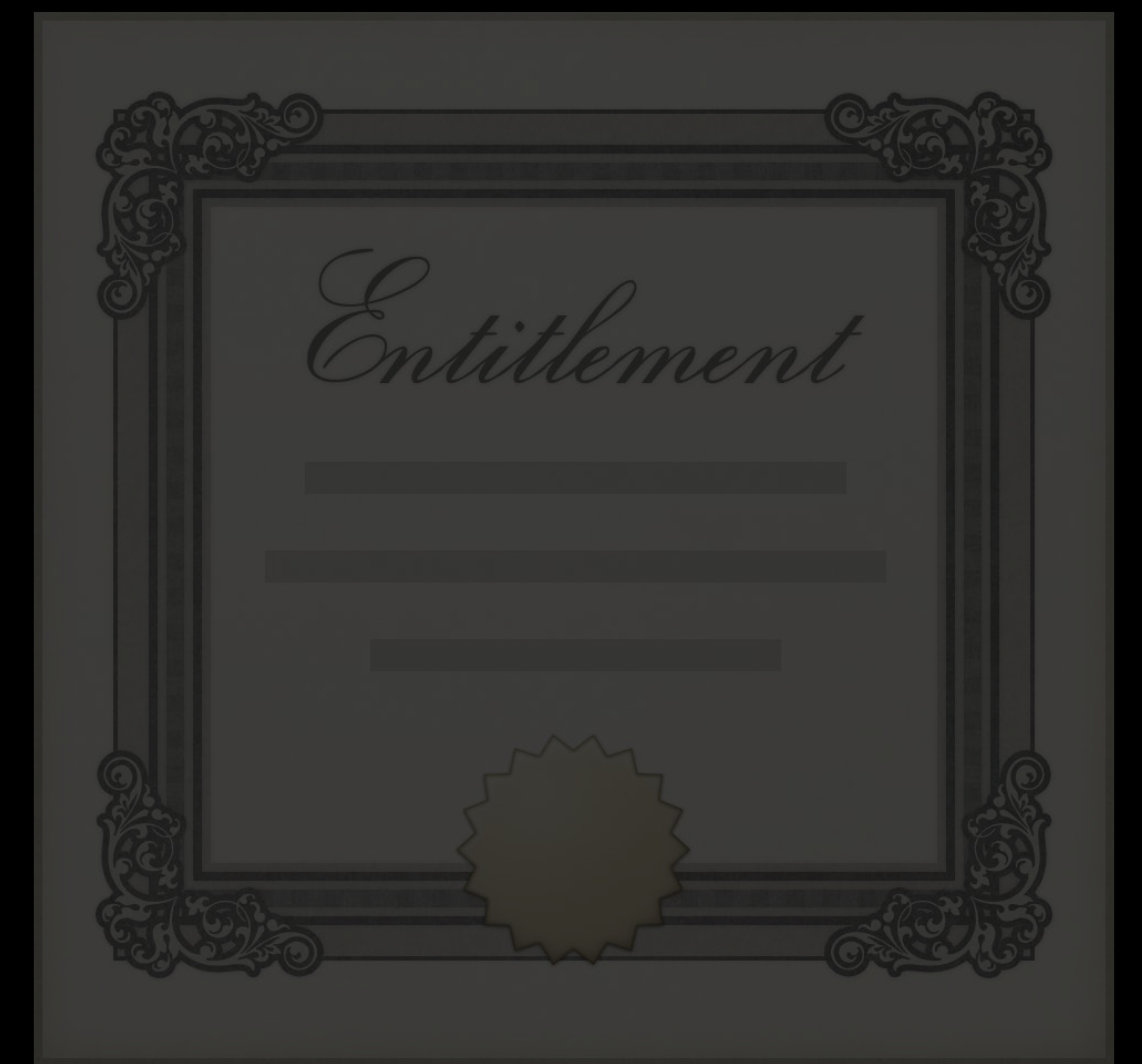
Fundamentals

Overview



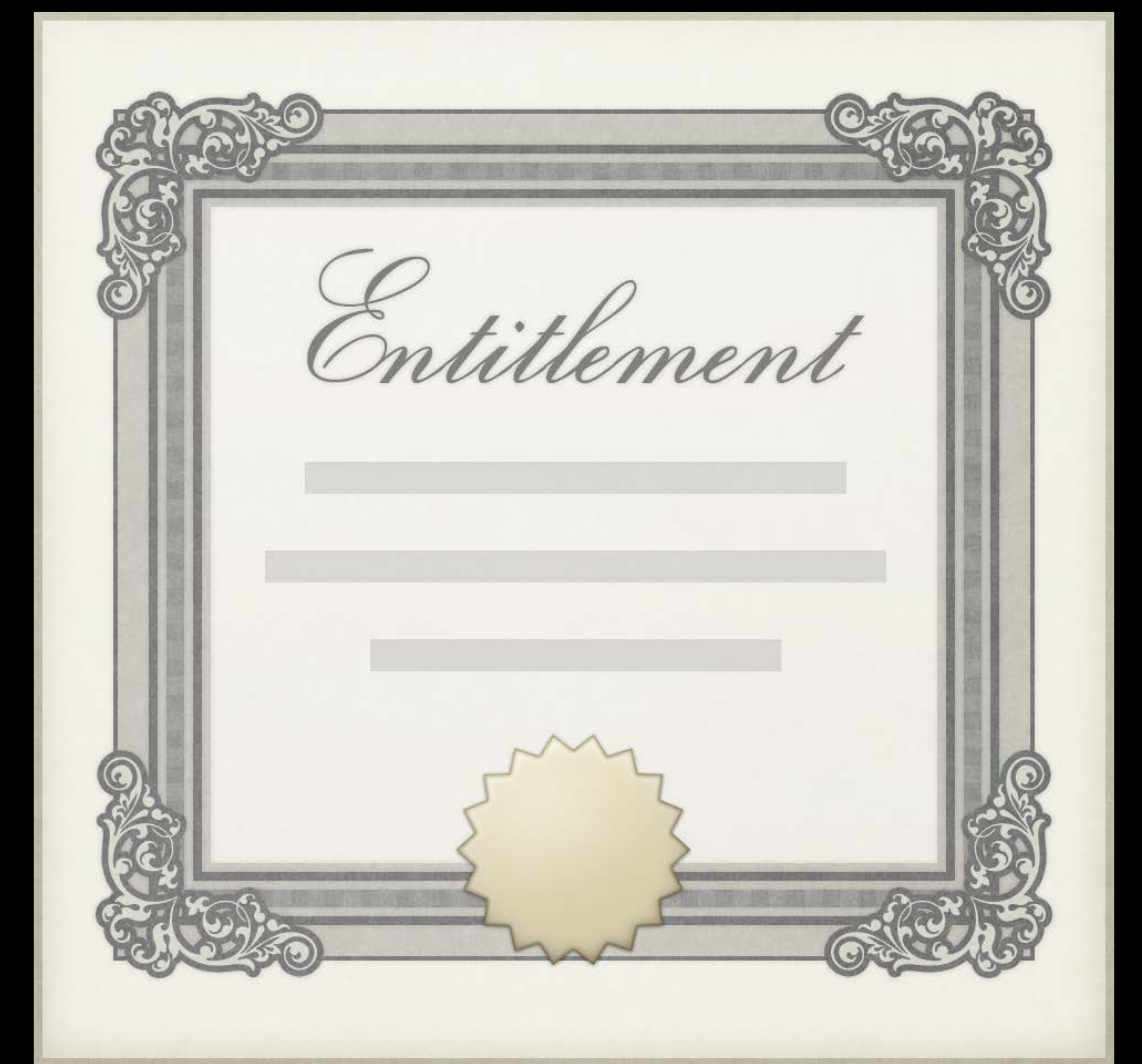
Fundamentals

Overview



Fundamentals

Overview



Fundamentals



Fundamentals

Signing certificates

Issued by Apple



Fundamentals

Signing certificates

Issued by Apple

Development and Distribution



Fundamentals

Signing certificates

Issued by Apple

Development and Distribution

Must have a private key



Fundamentals

Signing certificates

Issued by Apple

Development and Distribution

Must have a private key

Apple never has the private key



Fundamentals

Provisioning profiles



Fundamentals

Provisioning profiles

Issued by Apple



Fundamentals

Provisioning profiles

Issued by Apple

App-specific



Fundamentals

Provisioning profiles

Issued by Apple

App-specific

Allows running on devices



Fundamentals

Provisioning profiles

Issued by Apple

App-specific

Allows running on devices

Allows entitlements



Fundamentals

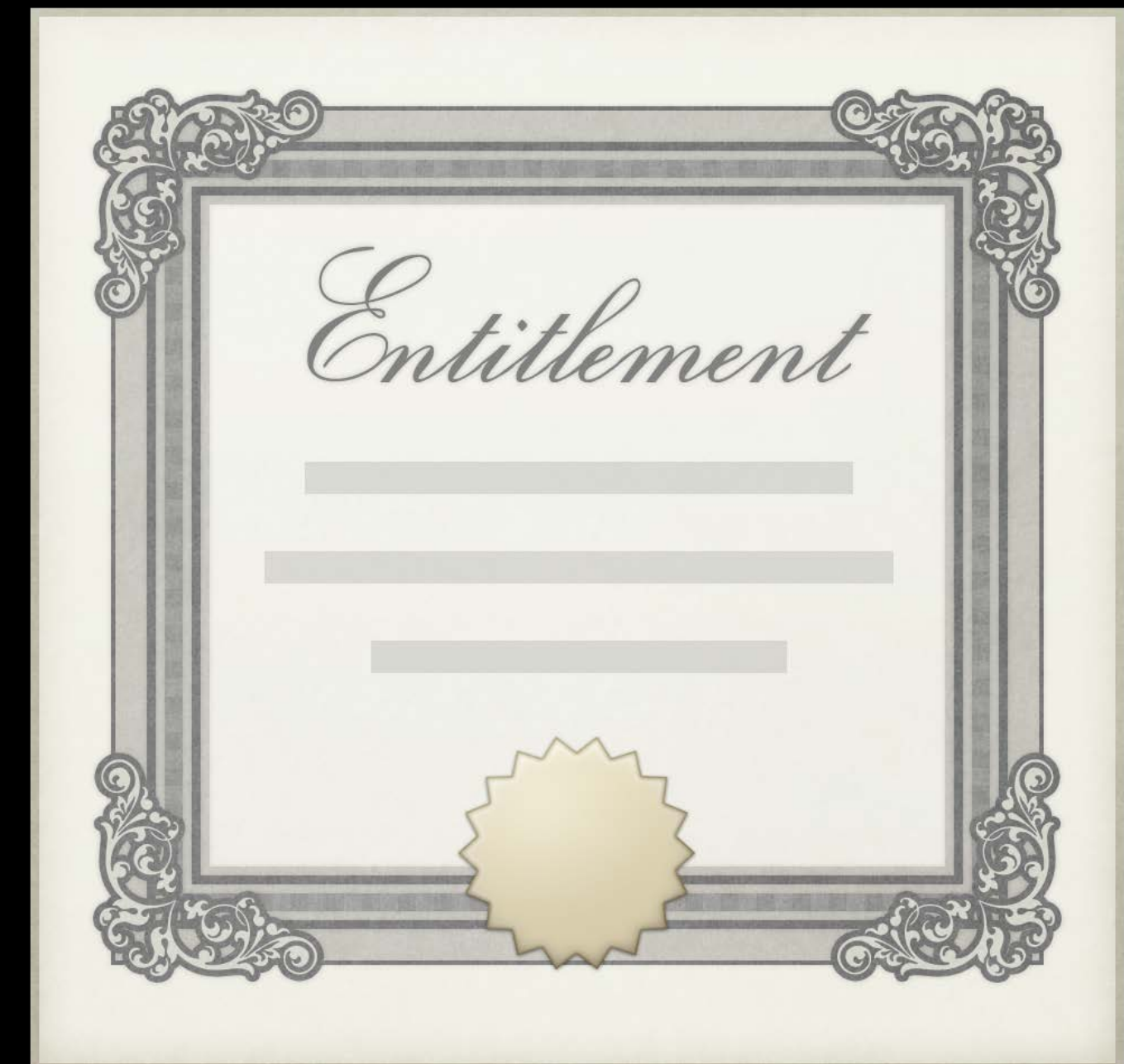
Entitlements



Fundamentals

Entitlements

Declares support for capabilities

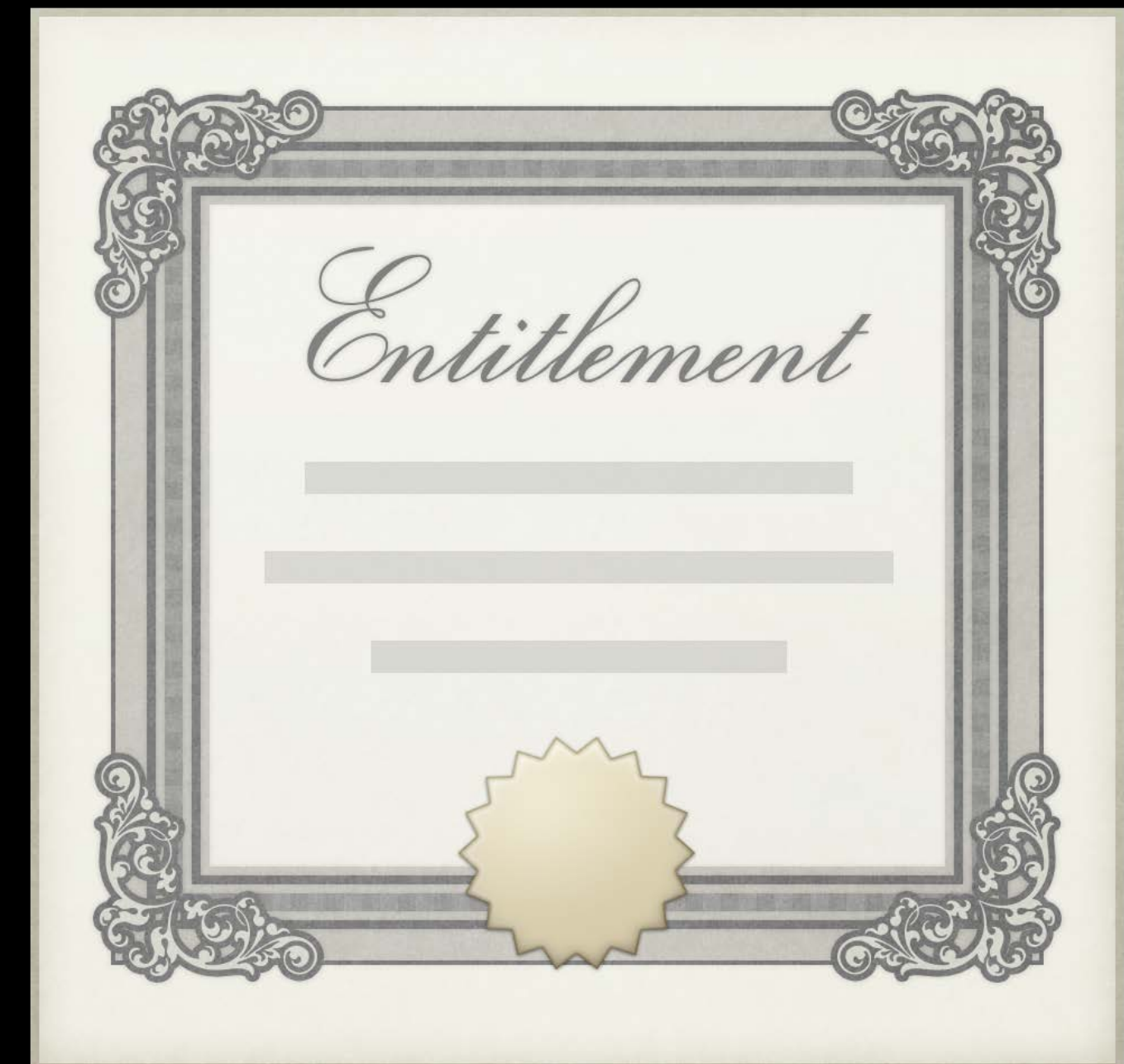


Fundamentals

Entitlements

Declares support for capabilities

Defined per-target



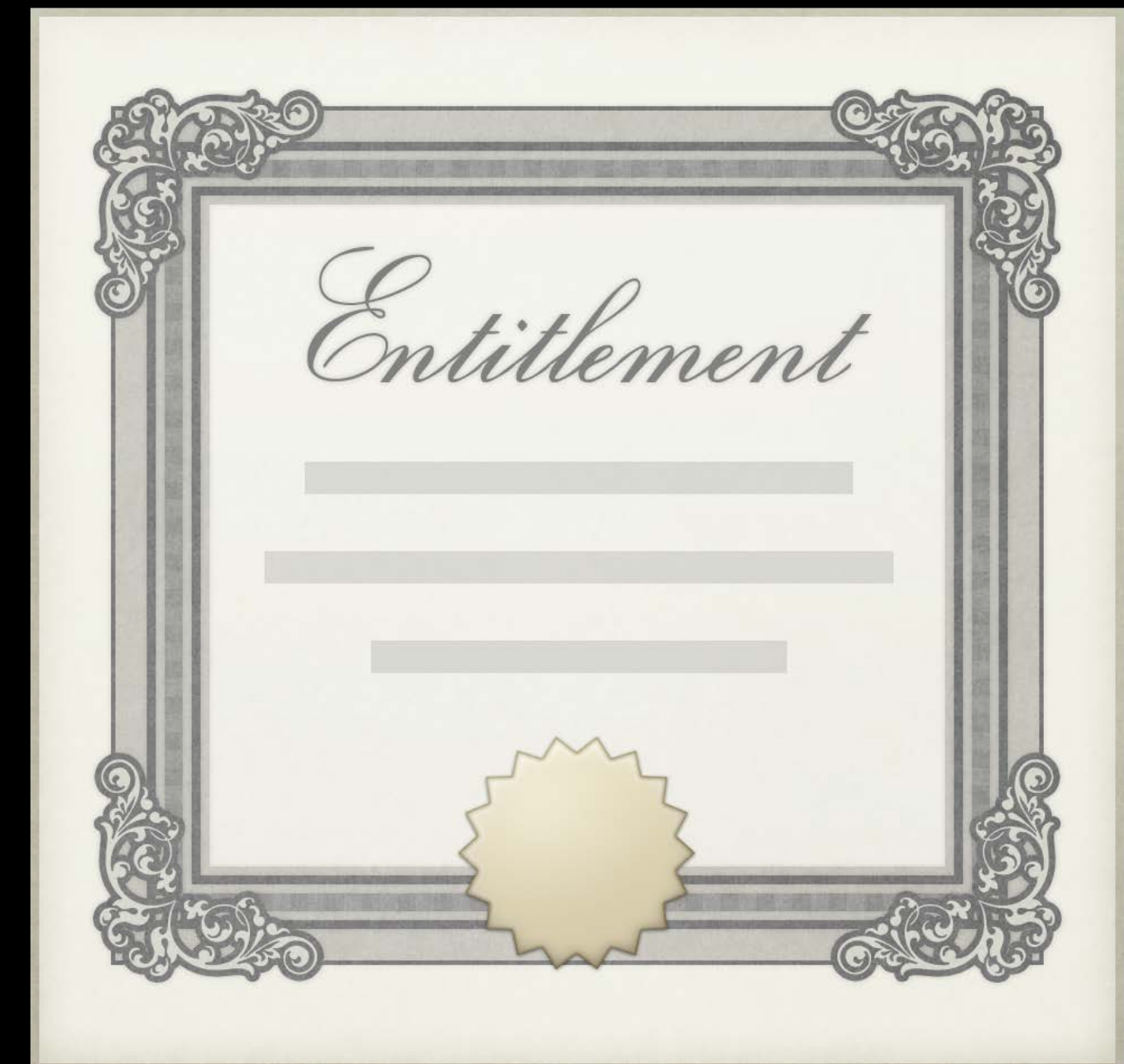
Fundamentals

Entitlements

Declares support for capabilities

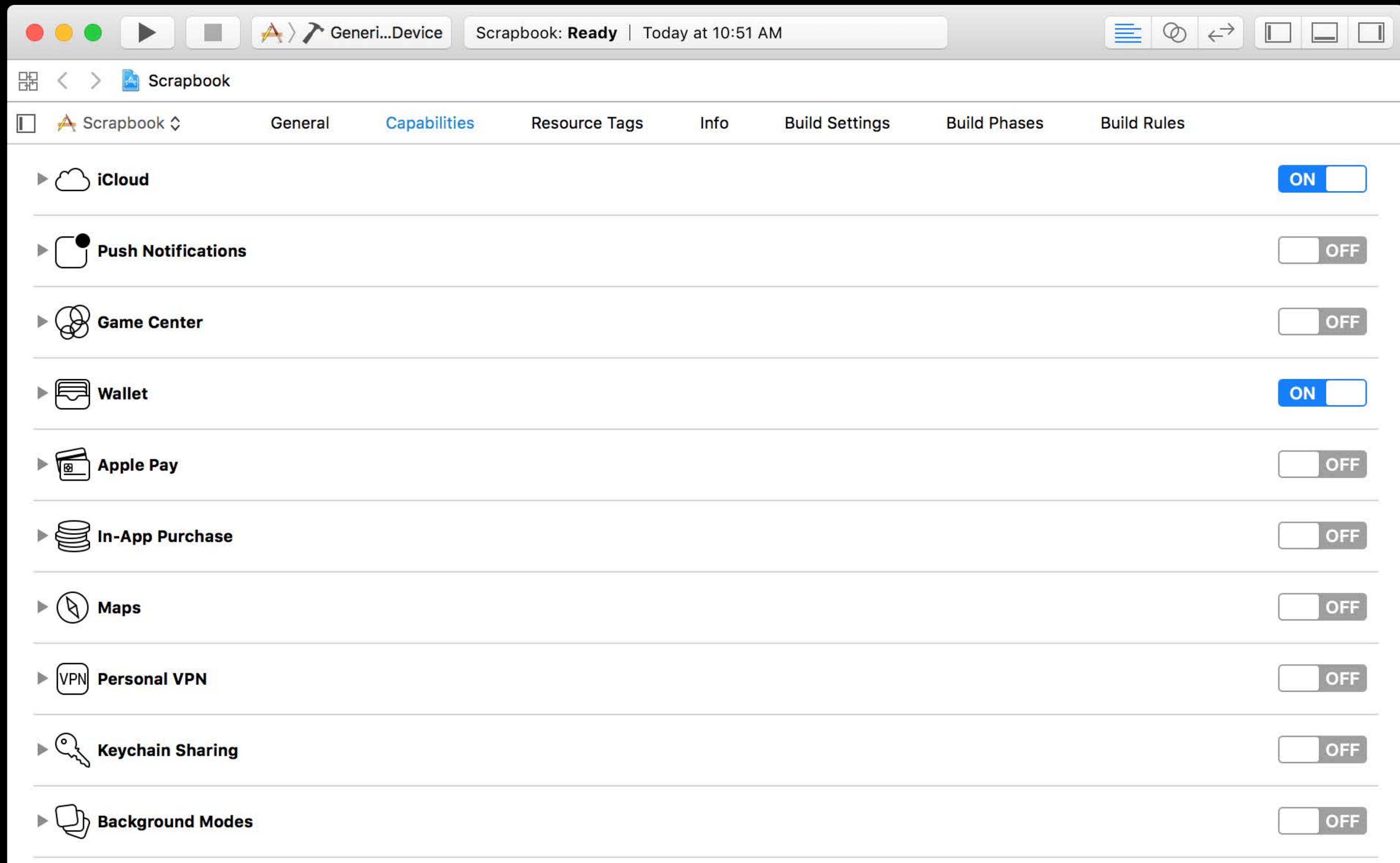
Defined per-target

Use the Capabilities tab



Fundamentals

Entitlements



Fundamentals

Signing in Xcode

Fundamentals

Signing in Xcode



Fundamentals

Signing in Xcode



Fundamentals

Signing in Xcode



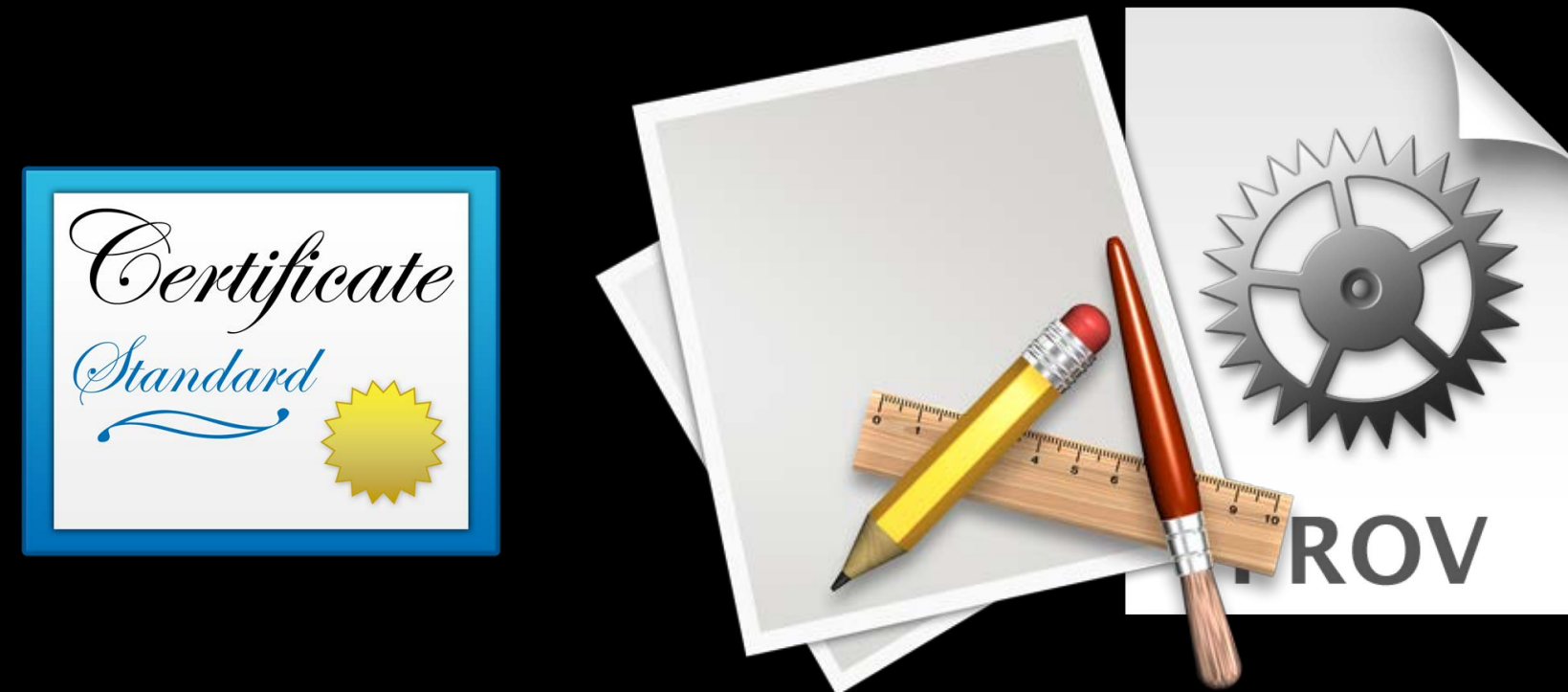
Fundamentals

Signing in Xcode



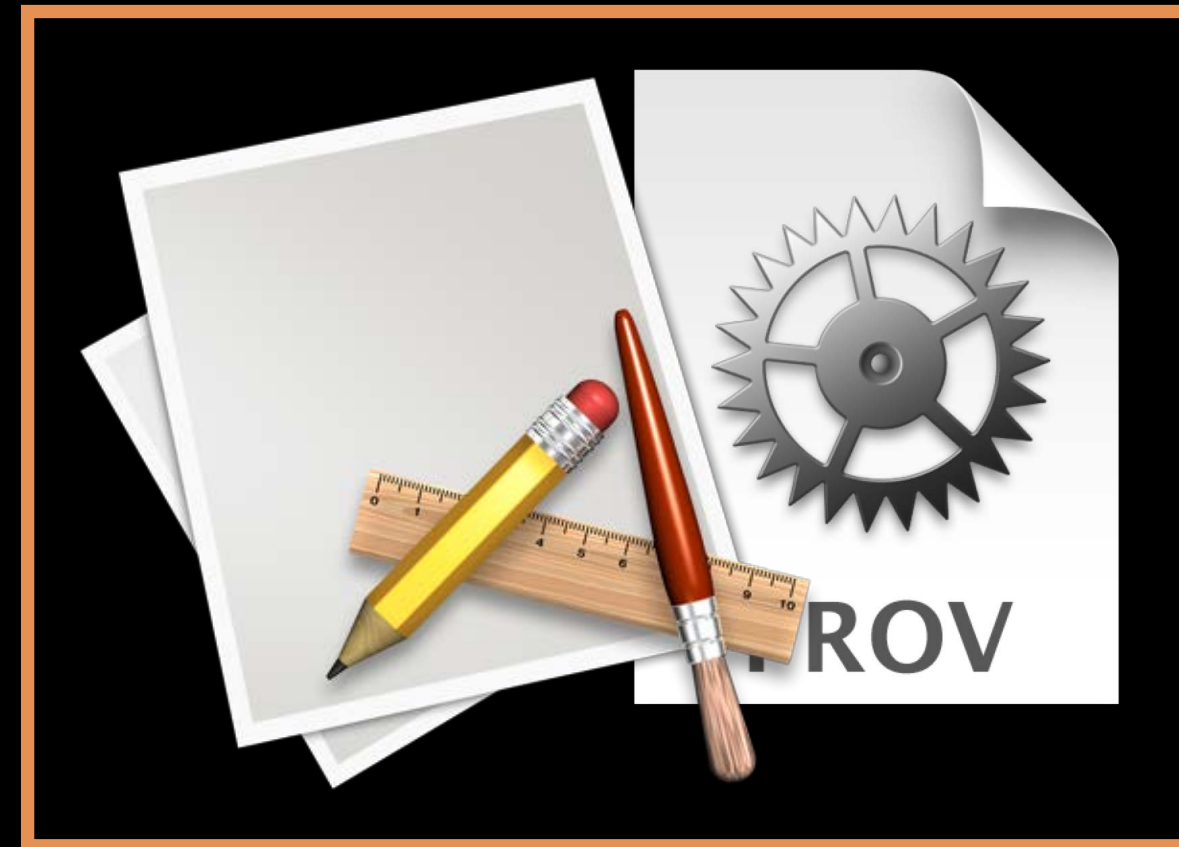
Fundamentals

Signing in Xcode



Fundamentals

Signing in Xcode



Signing Certificate per Mac

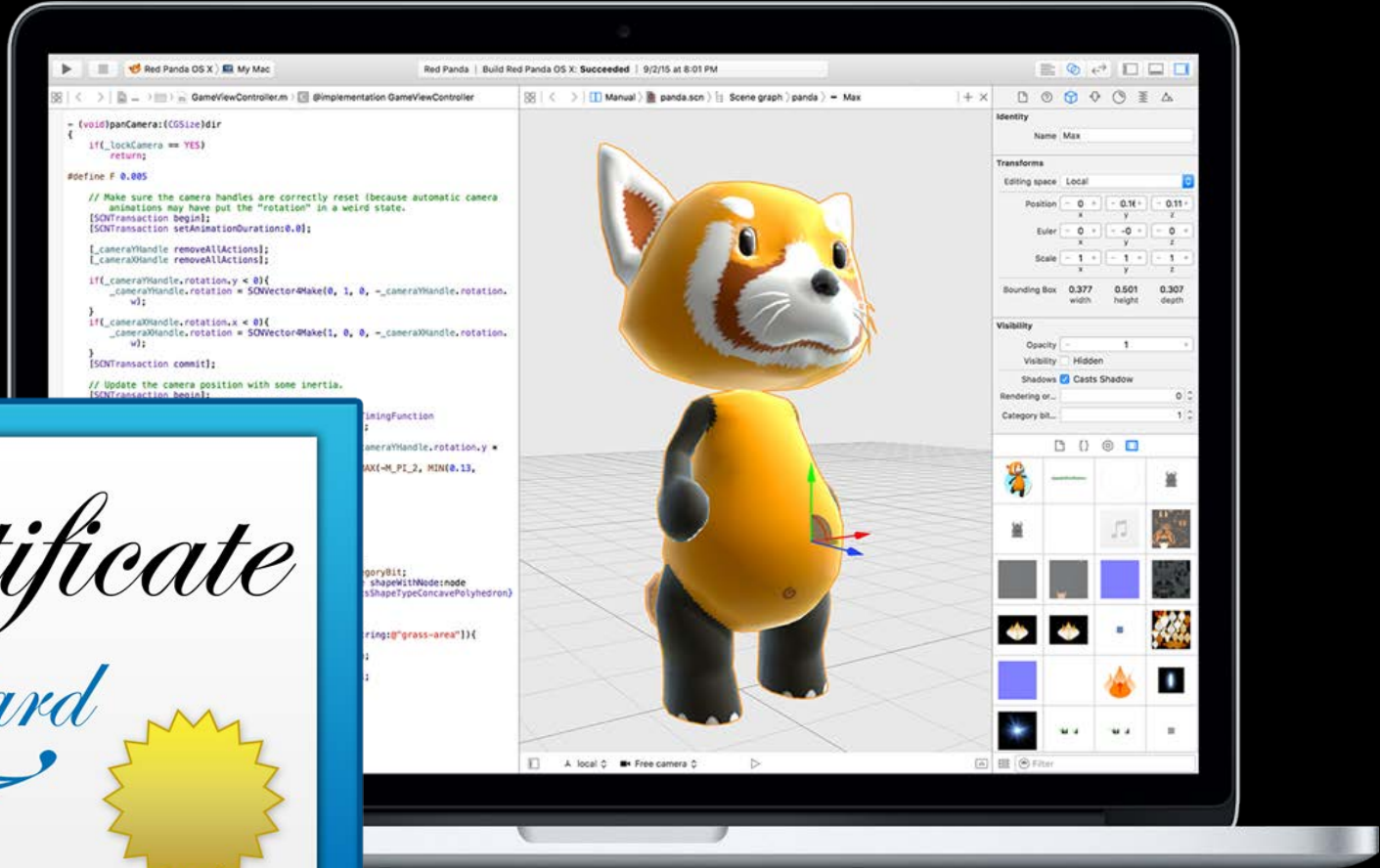


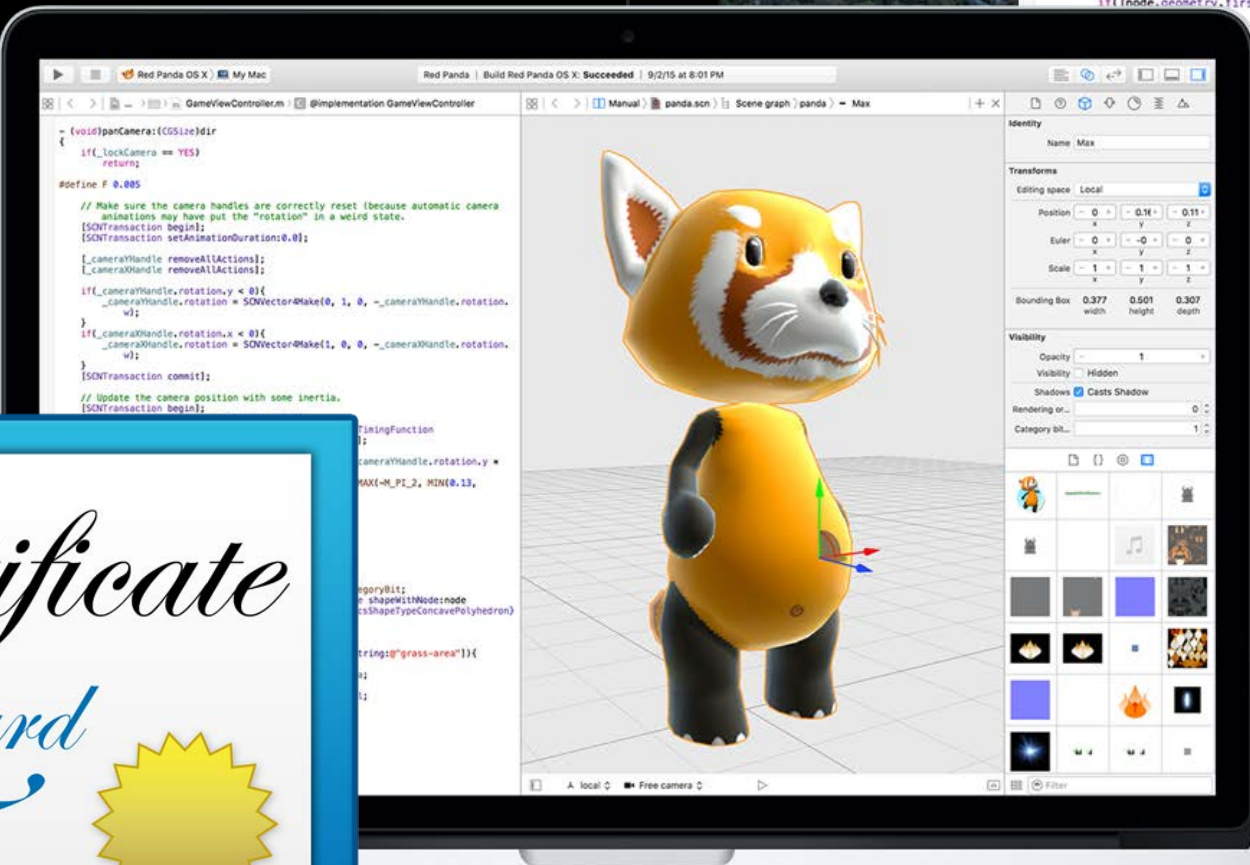
**Your account already has a valid Mac
Development certificate**

You have a valid Mac Development certificate in the Member Center, but it is not installed locally. If your signing identity is installed on another Mac, you can export a developer profile on that Mac and import it on this Mac. You can also reset your current certificate.

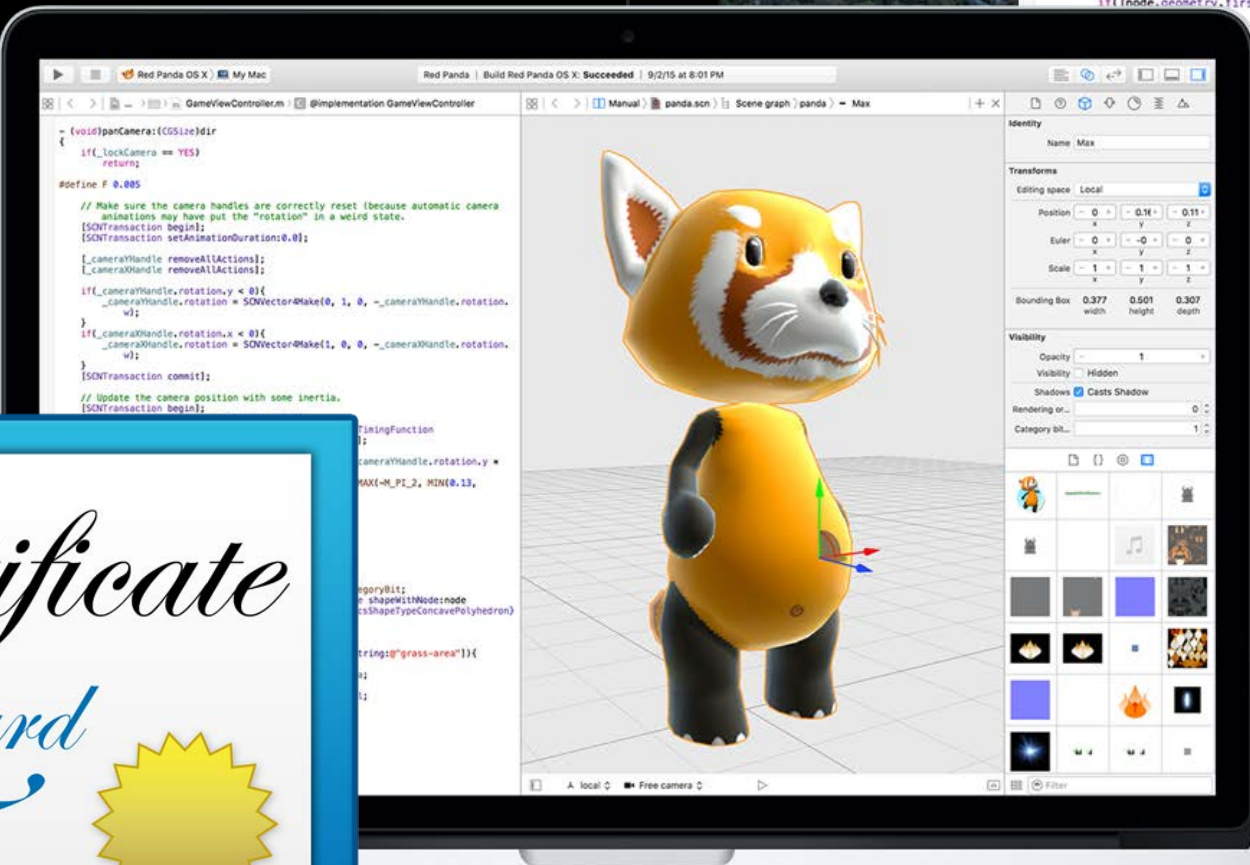
Cancel

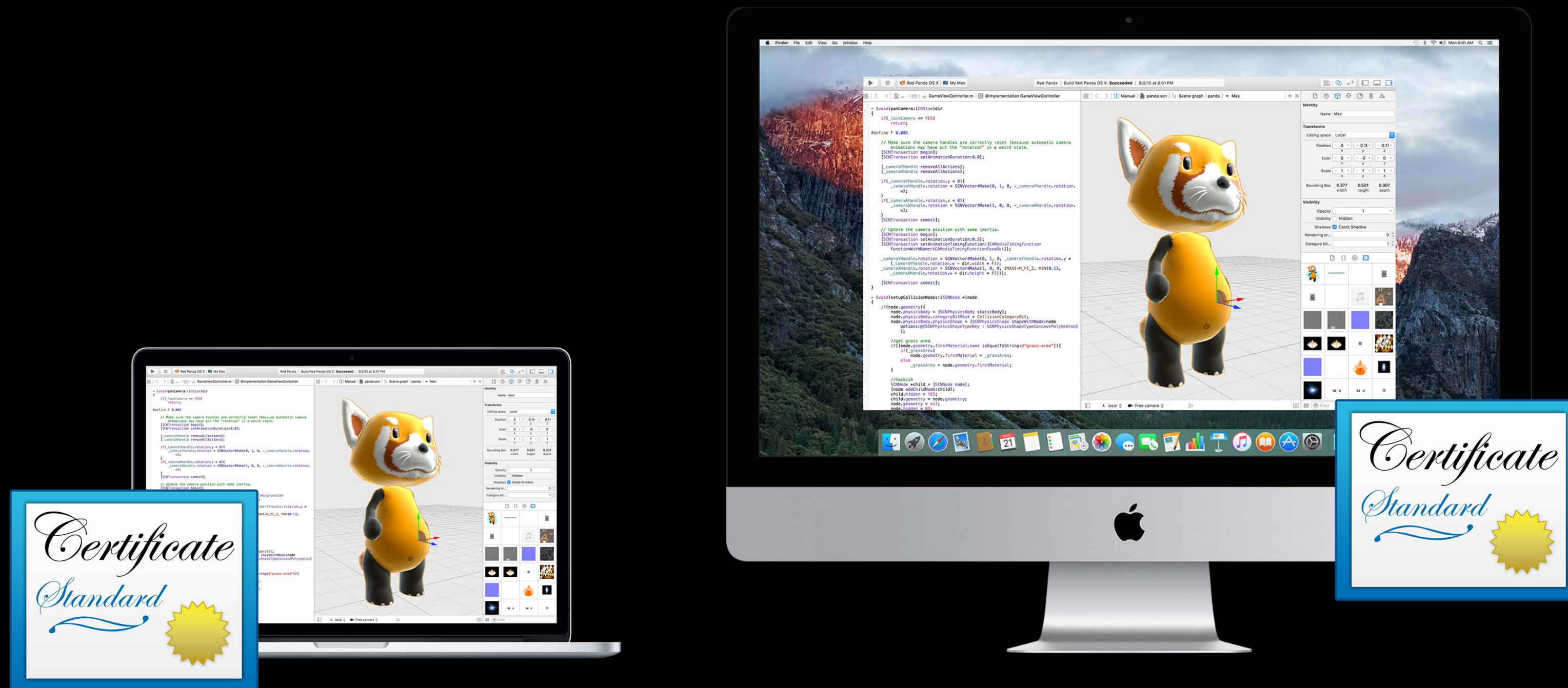
Reset











Multiple Development Certificates



Your account already has a valid Mac Development certificate

You have a valid Mac Development certificate in the Member Center, but it is not installed locally. If your signing identity is associated on another Mac, you can export a developer profile file on that Mac and import it on this Mac. You can also reset your current certificate.

Cancel

Reset

Signing Certificate per Mac

Overview



Signing Certificate per Mac

Overview

Development only



Signing Certificate per Mac

Overview

Development only

Xcode and developer website



Signing Certificate per Mac

Overview

Development only

Xcode and developer website

Created by Xcode 8 and later



Signing Certificate per Mac

Overview

Development only

Xcode and developer website

Created by Xcode 8 and later

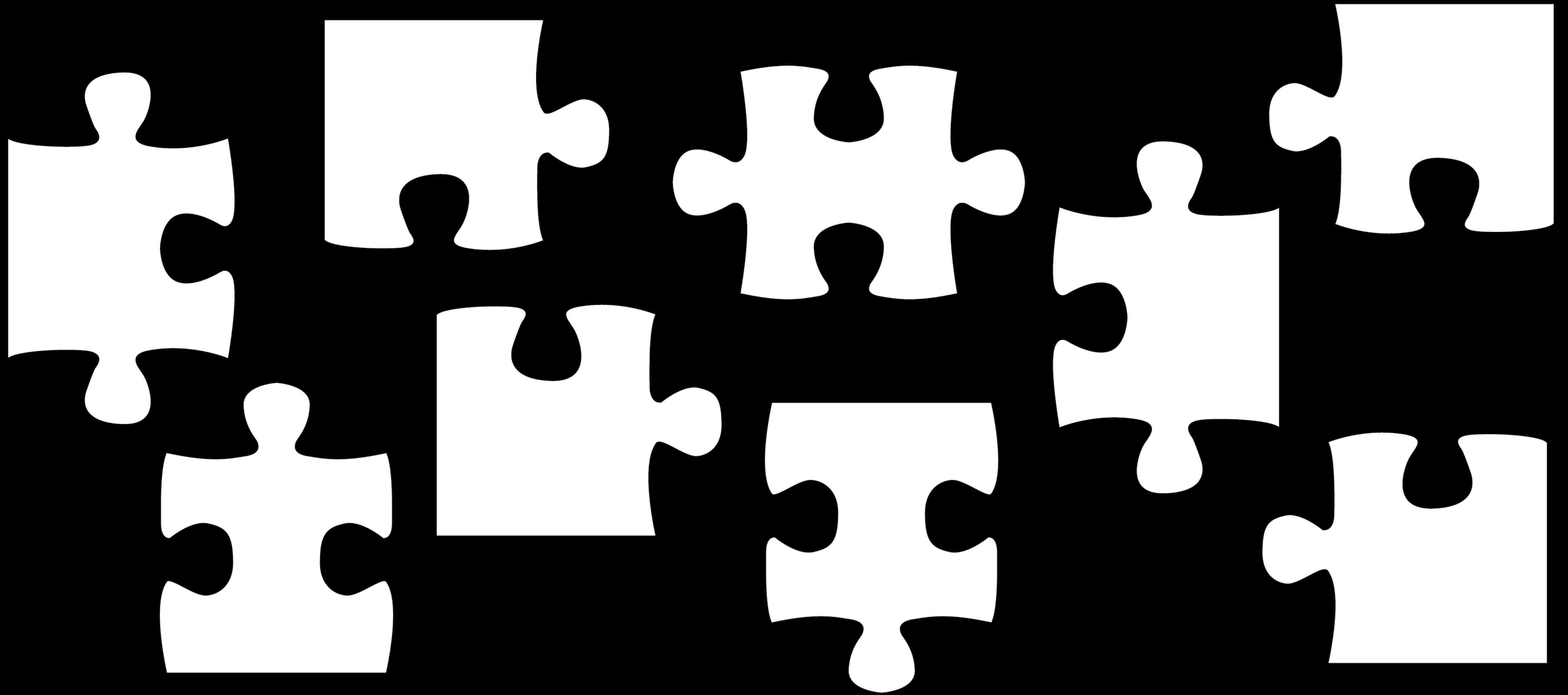
Usable with all versions



Signing in Xcode

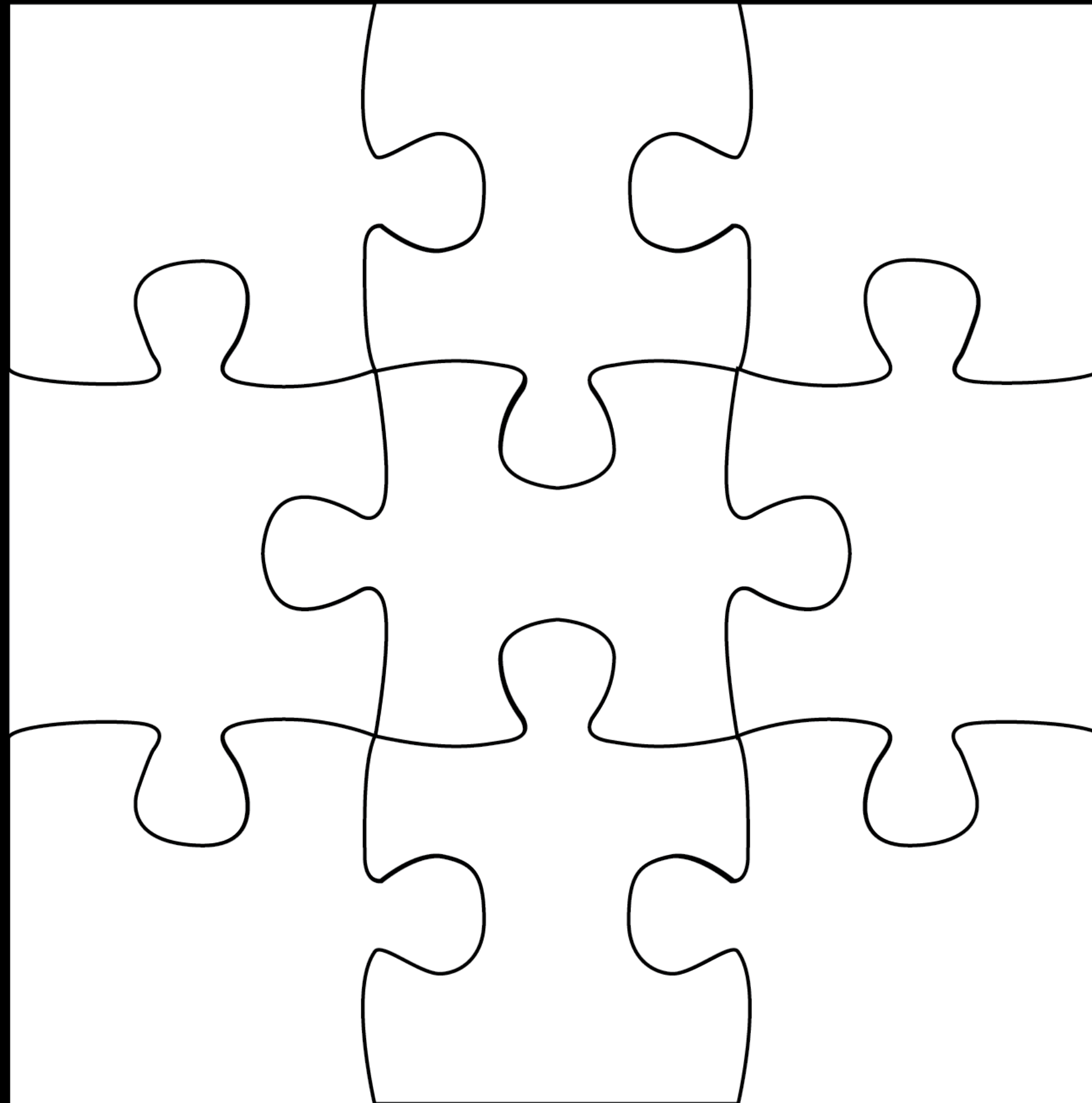
Signing in Xcode

Signing can be complicated



Signing in Xcode

Signing can be complicated



Signing in Xcode 7

Fix Issue

Signing in Xcode 7

Fix Issue

What was the issue?

What did Fix Issue *do*?

Why did Fix Issue do *that*?

Why do I even have to click a button...?



Signing in Xcode 8

Fully redesigned

NEW

Signing in Xcode 8

Fully redesigned

Brand new infrastructure

NEW

Signing in Xcode 8

Fully redesigned

Brand new infrastructure

New workflows and UI

NEW

Signing in Xcode 8

Fully redesigned

NEW

Brand new infrastructure

New workflows and UI

Actionable messaging

Signing in Xcode 8

Fully redesigned

NEW

Brand new infrastructure

New workflows and UI

Actionable messaging

Status reporting



Automatic Signing



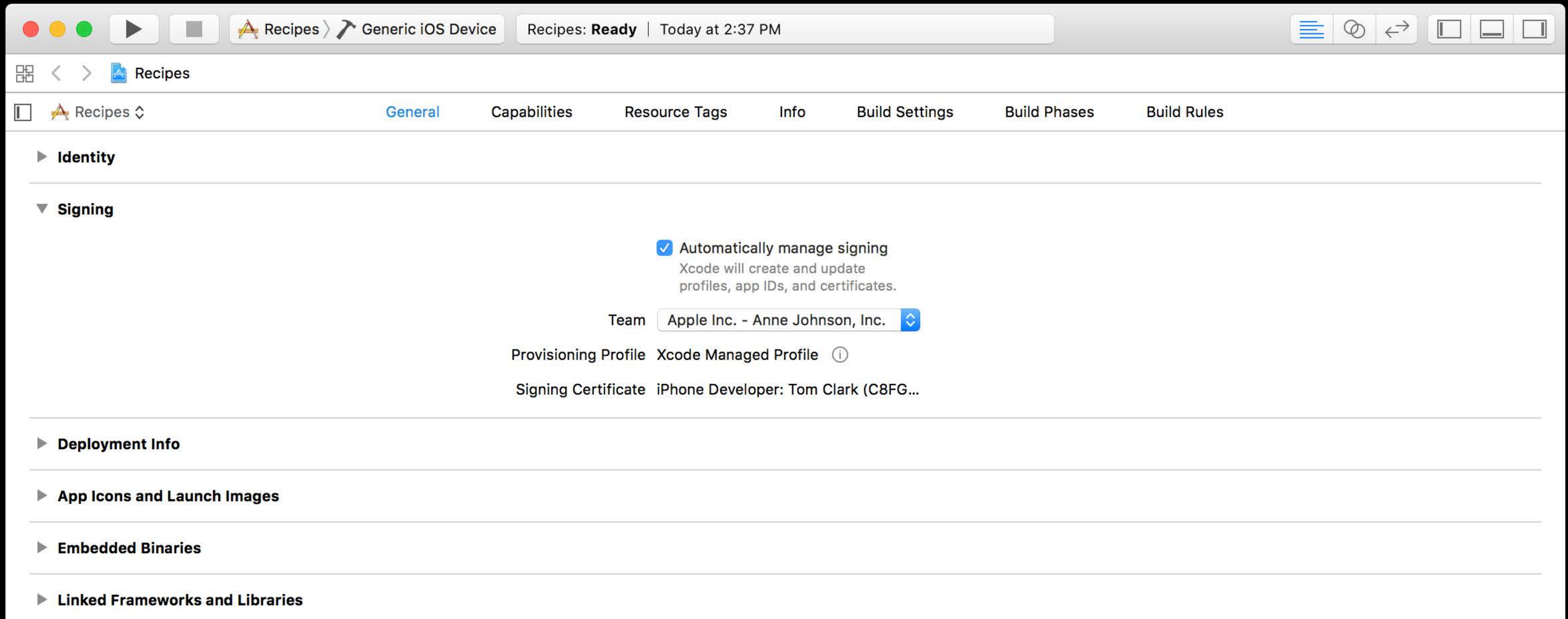
Automatic Signing



Customized Signing

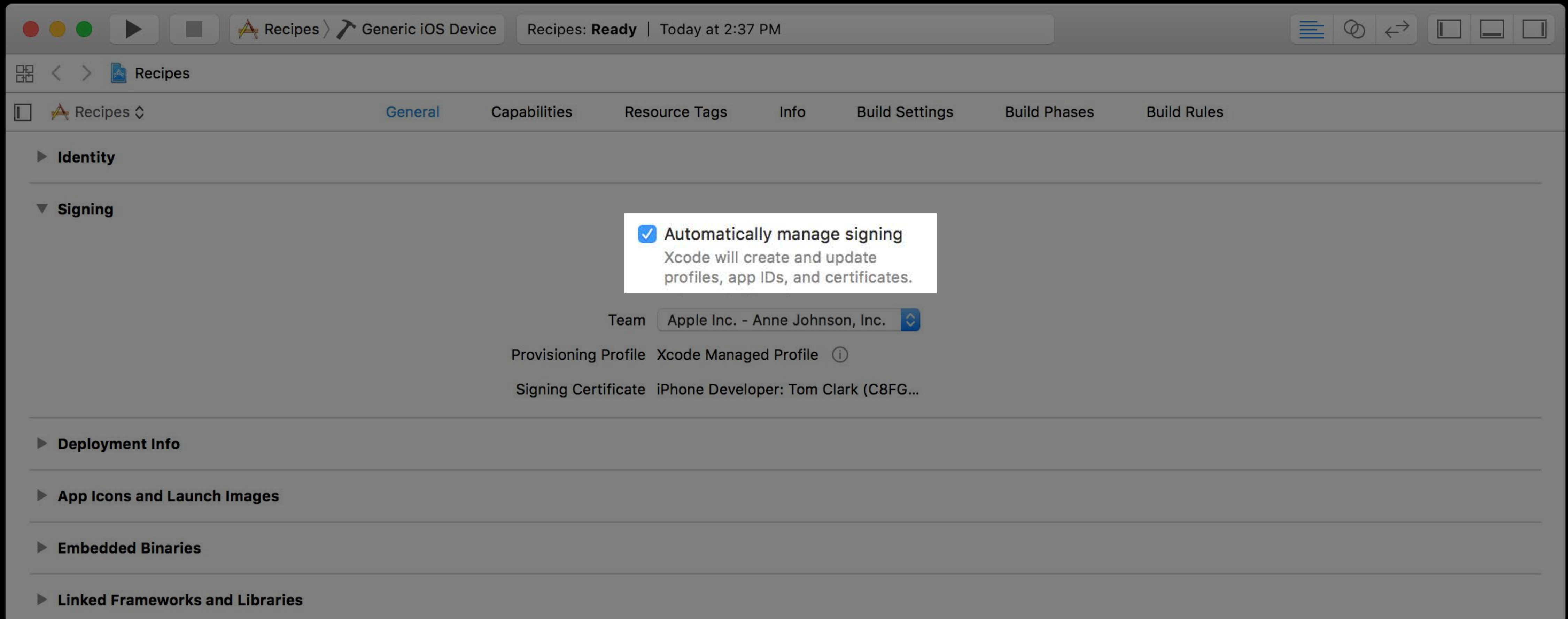
Signing in Xcode

Automatic signing



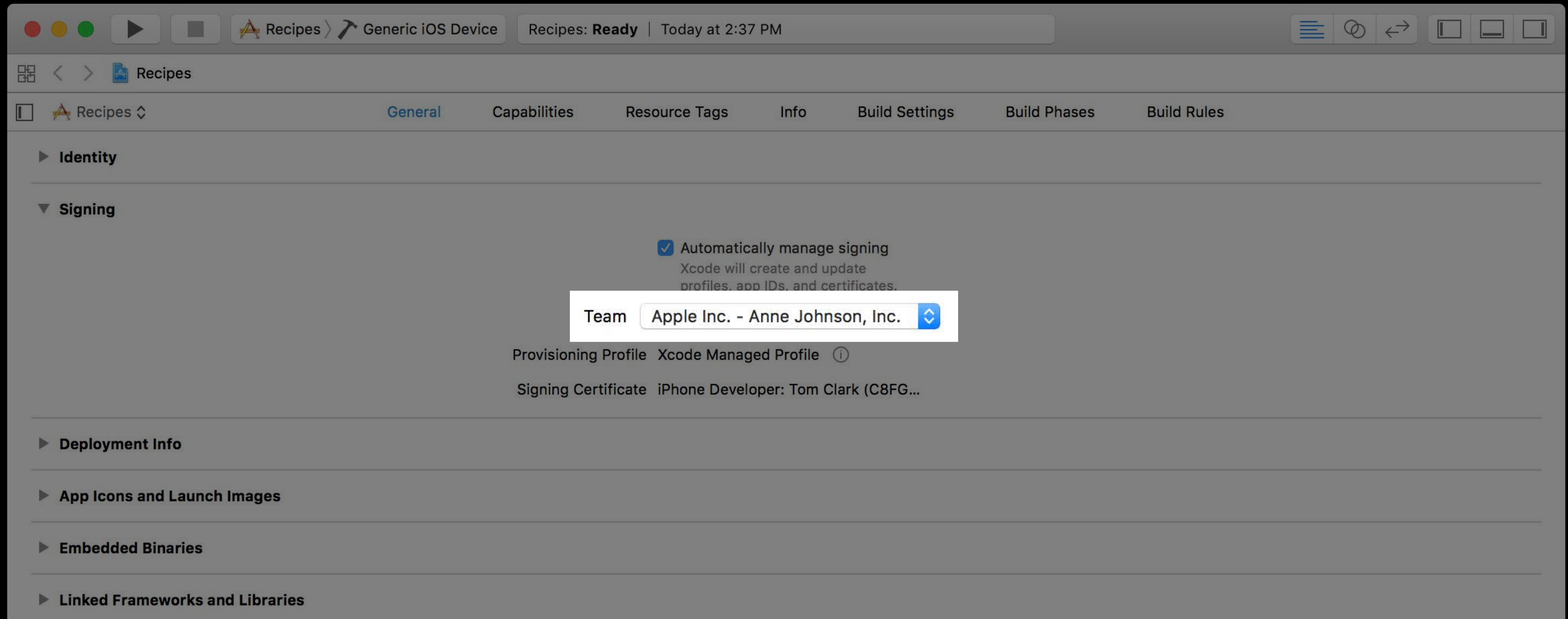
Signing in Xcode

Automatic signing



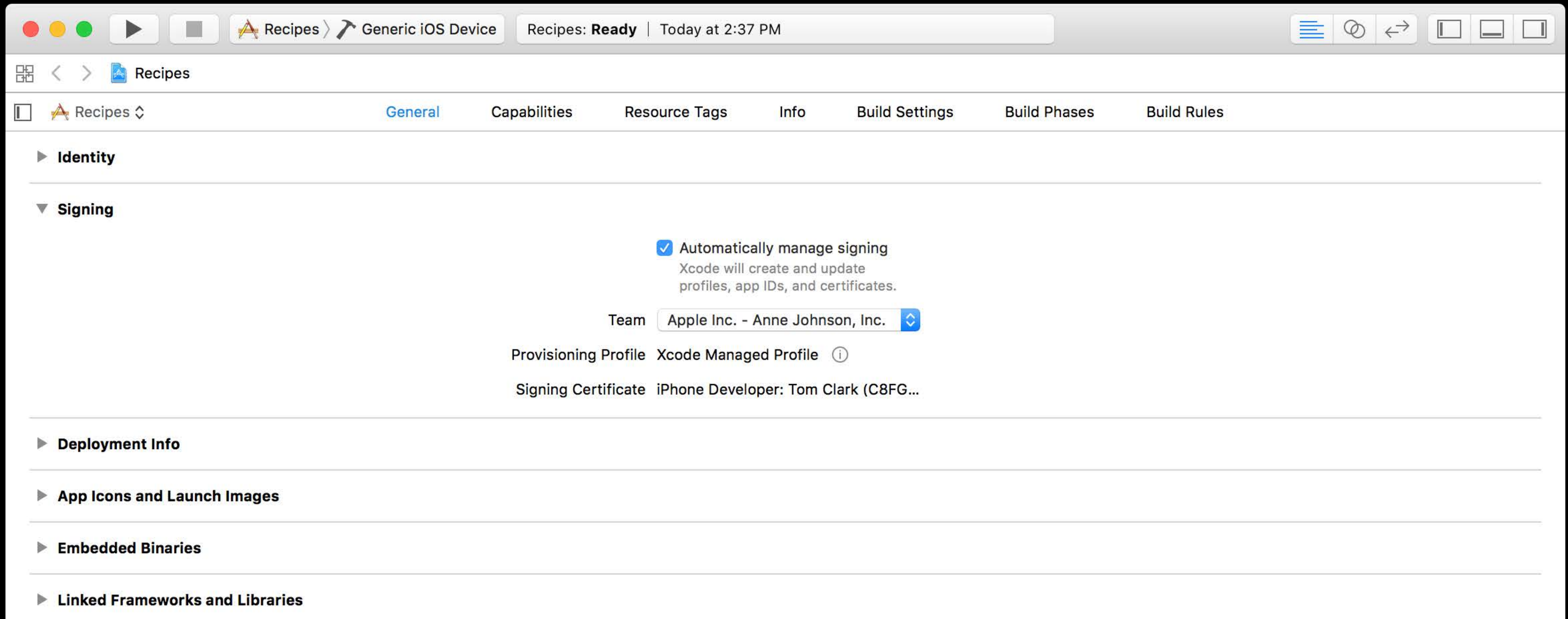
Signing in Xcode

Automatic signing



Signing in Xcode

Automatic signing



Signing in Xcode

Automatic signing

Signing in Xcode

Automatic signing

Creates signing certificates

Signing in Xcode

Automatic signing

Creates signing certificates

Creates and updates App IDs

Signing in Xcode

Automatic signing

Creates signing certificates

Creates and updates App IDs

Creates and updates provisioning profiles

Signing in Xcode

Automatic signing

Signing in Xcode

Automatic signing

Prompts you only when necessary

Signing in Xcode

Automatic signing

Prompts you only when necessary

Signing report shows what Xcode did and why

Demo

Automatic Signing

Signing in Xcode

Automatic signing

Signing in Xcode

Automatic signing

Development signing

Signing in Xcode

Automatic signing

Development signing

Limited to Xcode-created provisioning profiles

Signing in Xcode

Automatic signing

Development signing

Limited to Xcode-created provisioning profiles

Distribution signing assets aren't touched

Signing in Xcode

Automatic signing

Signing in Xcode

Automatic signing

Completely redesigned in Xcode 8

Signing in Xcode

Automatic signing

Completely redesigned in Xcode 8

Stays out of your way

Signing in Xcode

Automatic signing

Completely redesigned in Xcode 8

Stays out of your way

Manages signing so you can focus on development



Automatic Signing



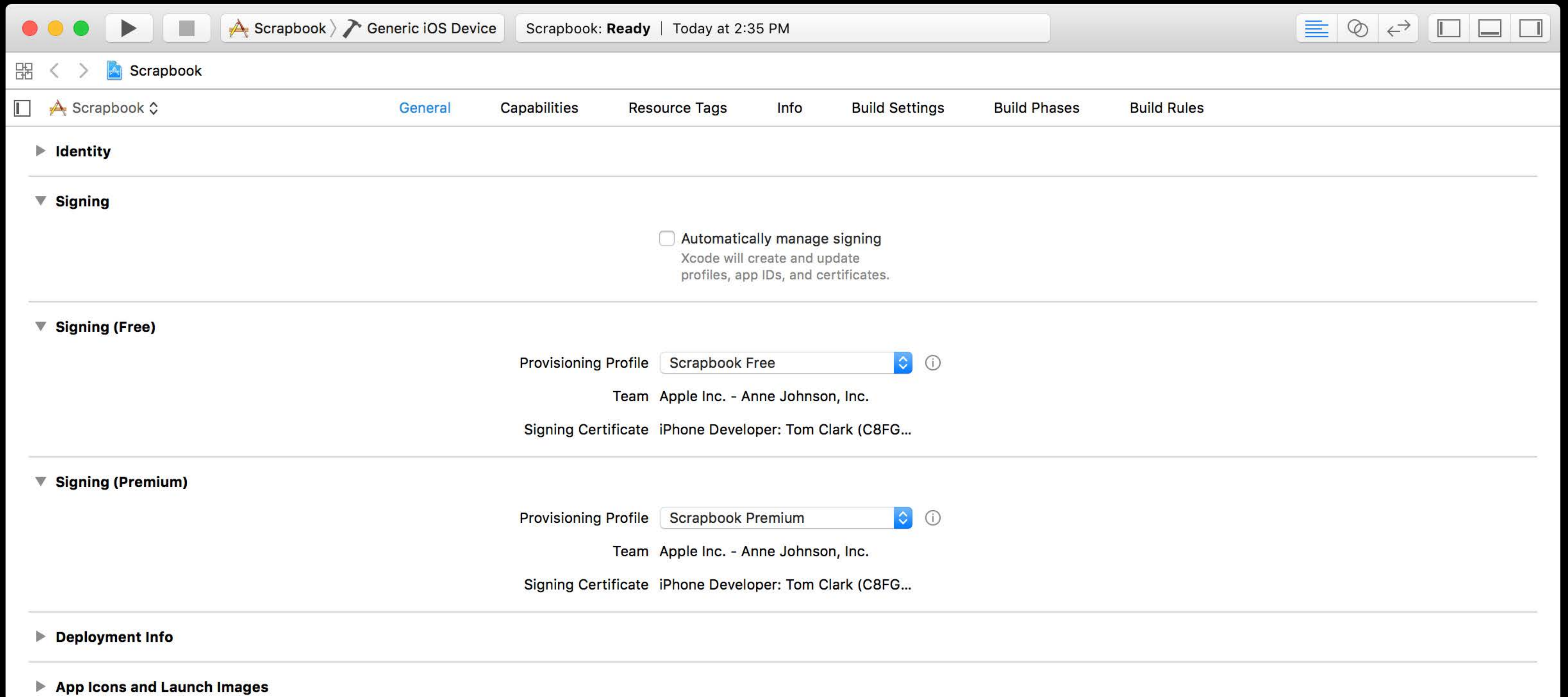
Automatic Signing



Customized Signing

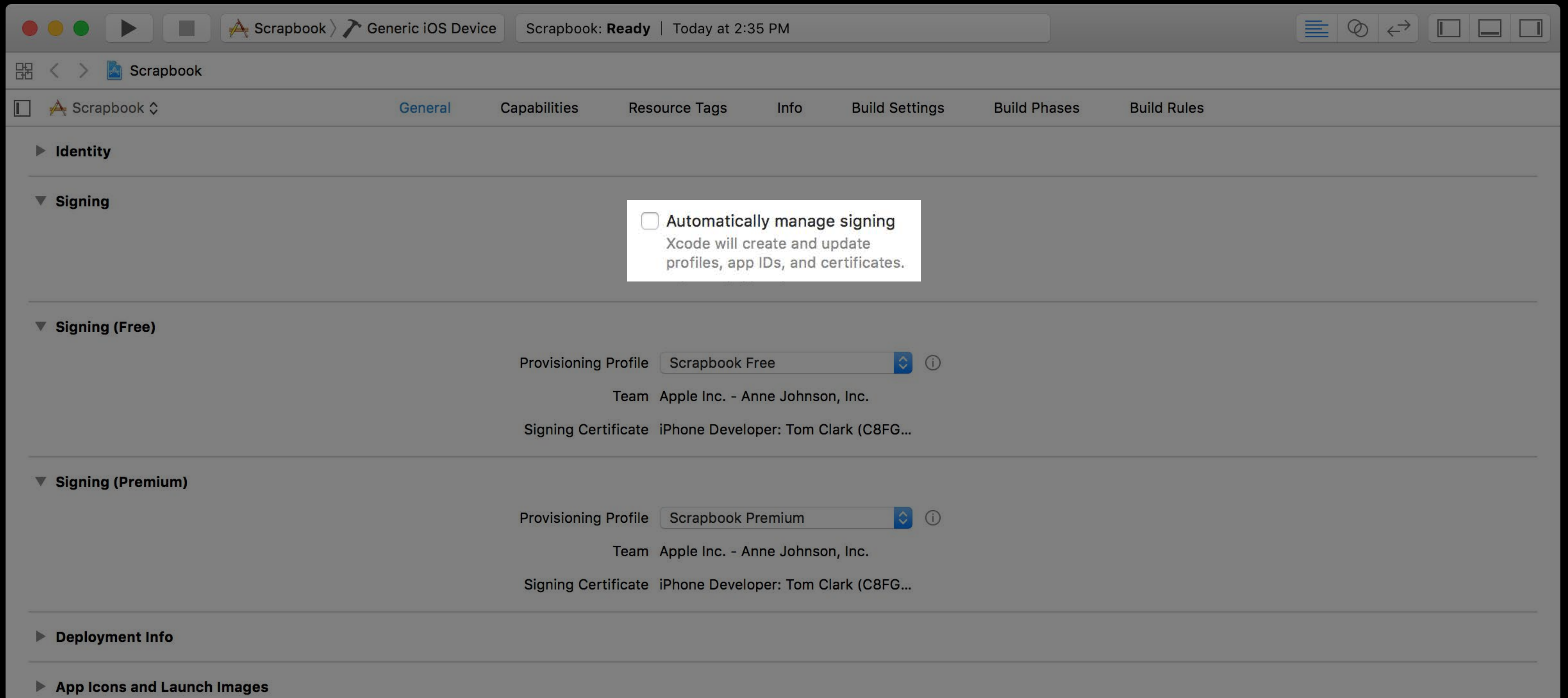
Signing in Xcode

Customized signing



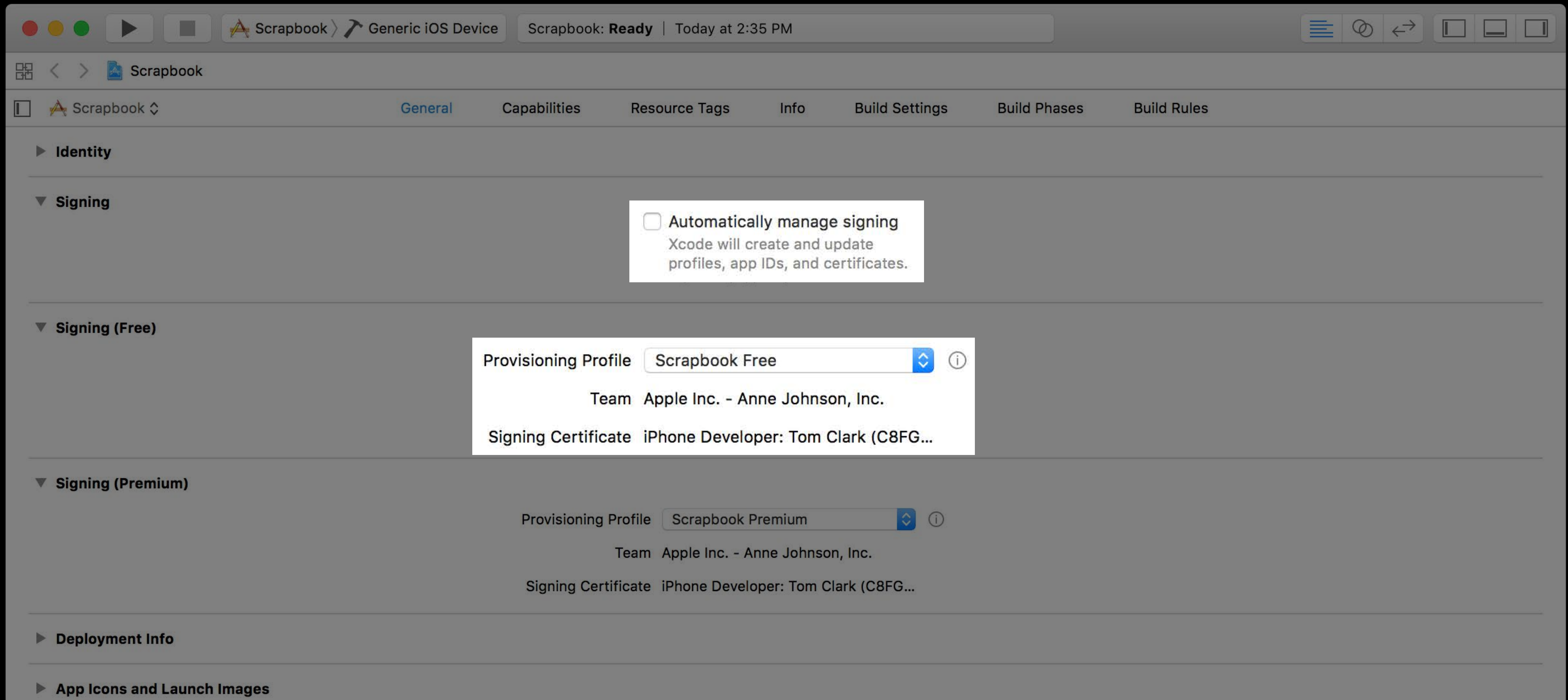
Signing in Xcode

Customized signing



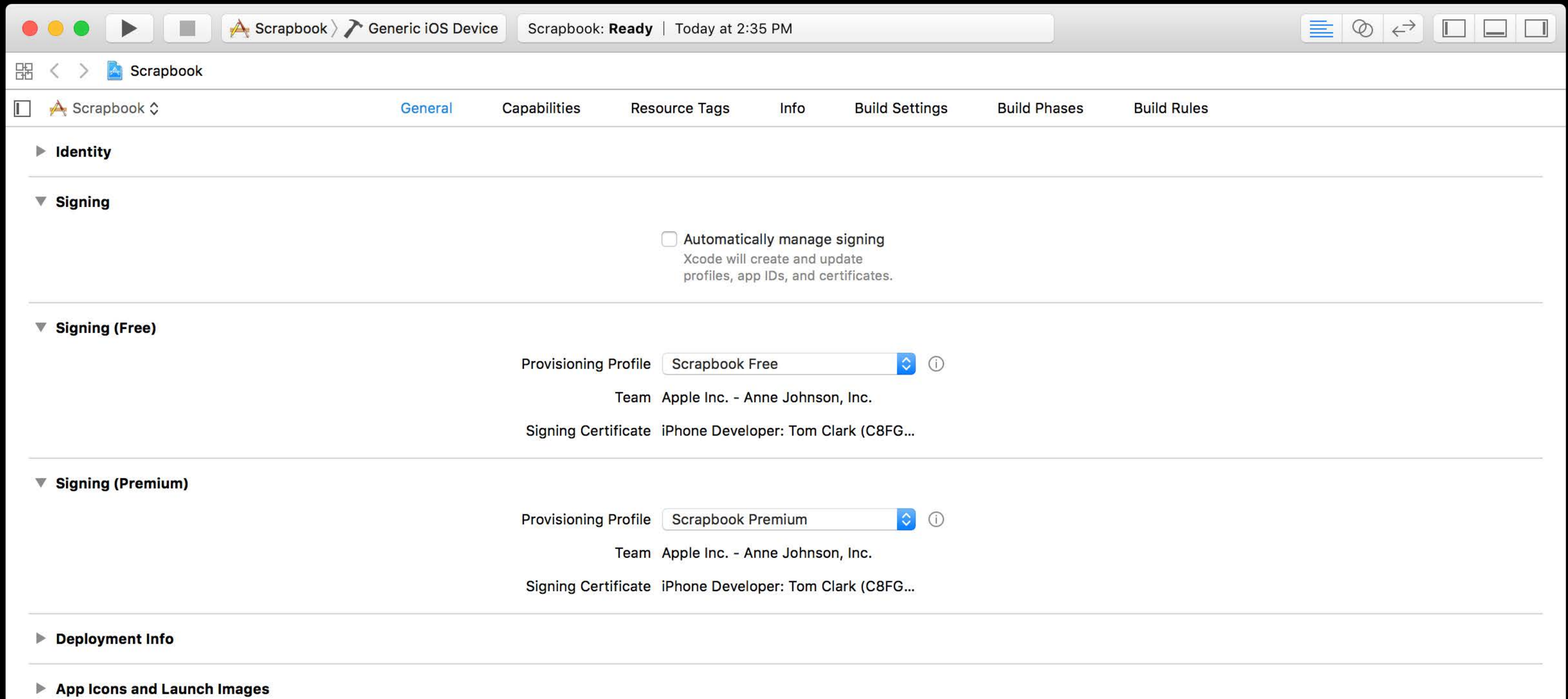
Signing in Xcode

Customized signing



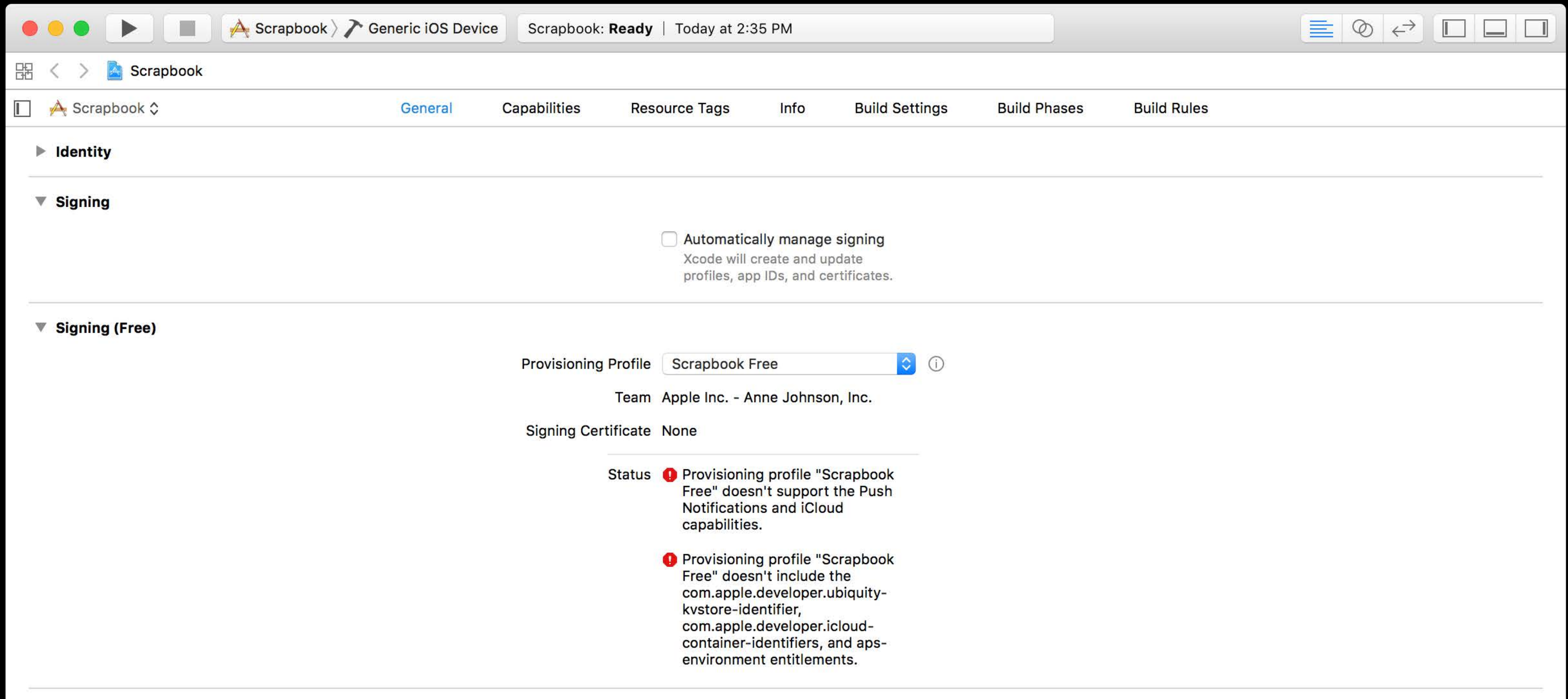
Signing in Xcode

Customized signing



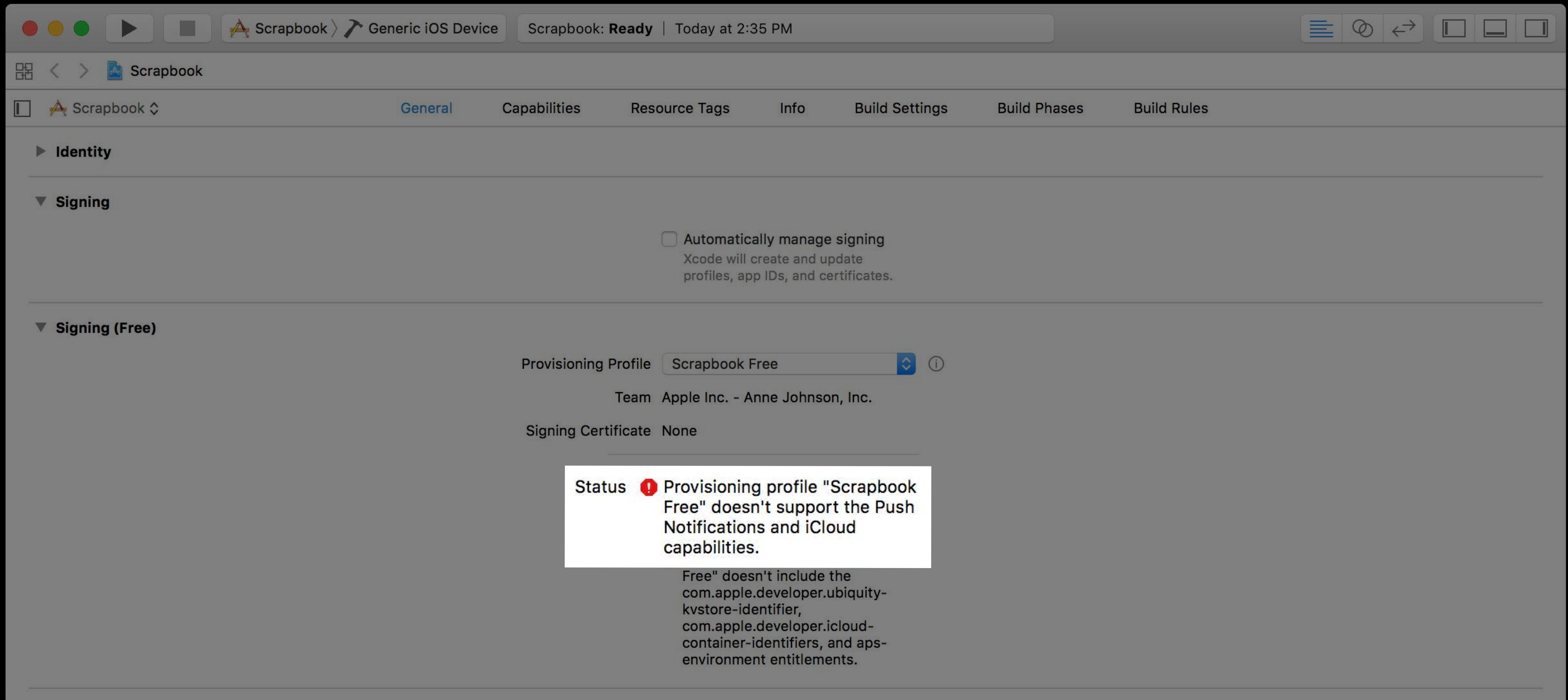
Signing in Xcode

Customized signing



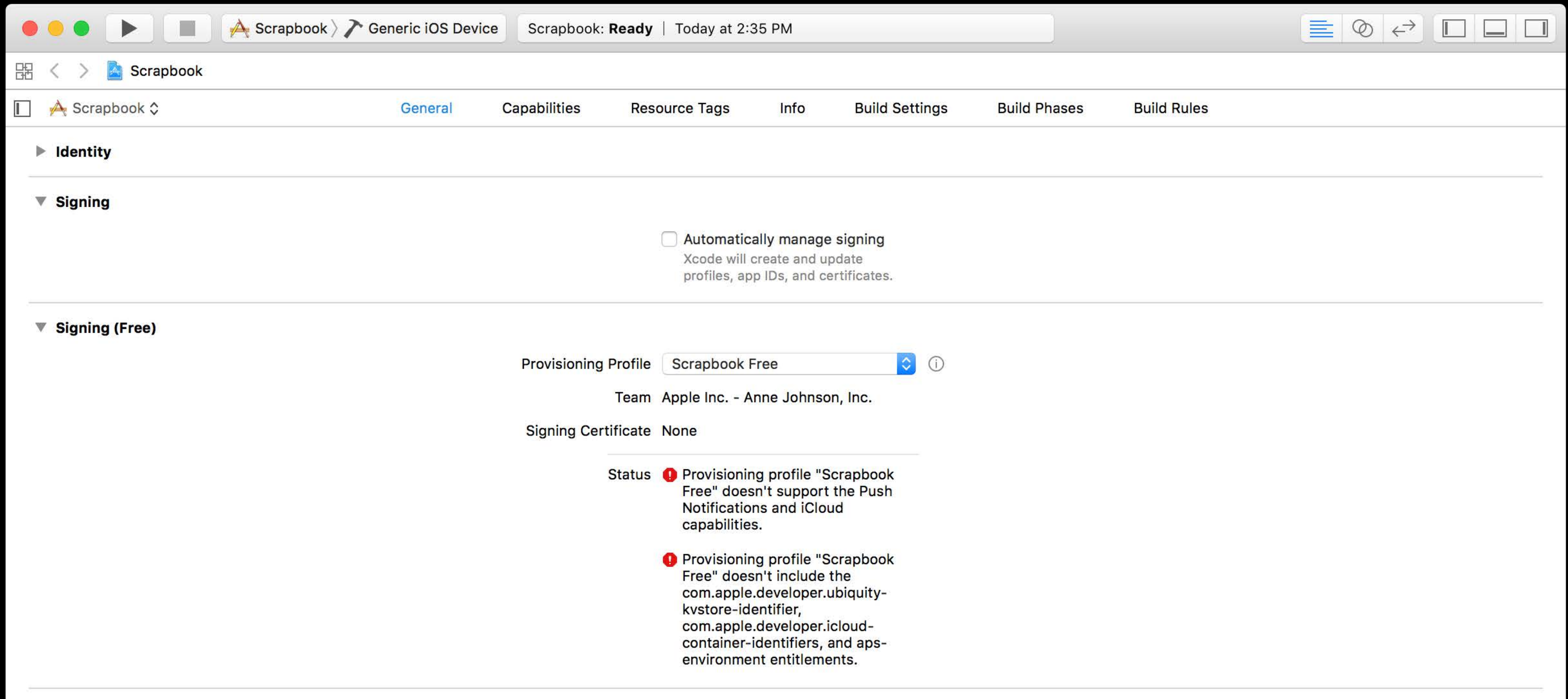
Signing in Xcode

Customized signing



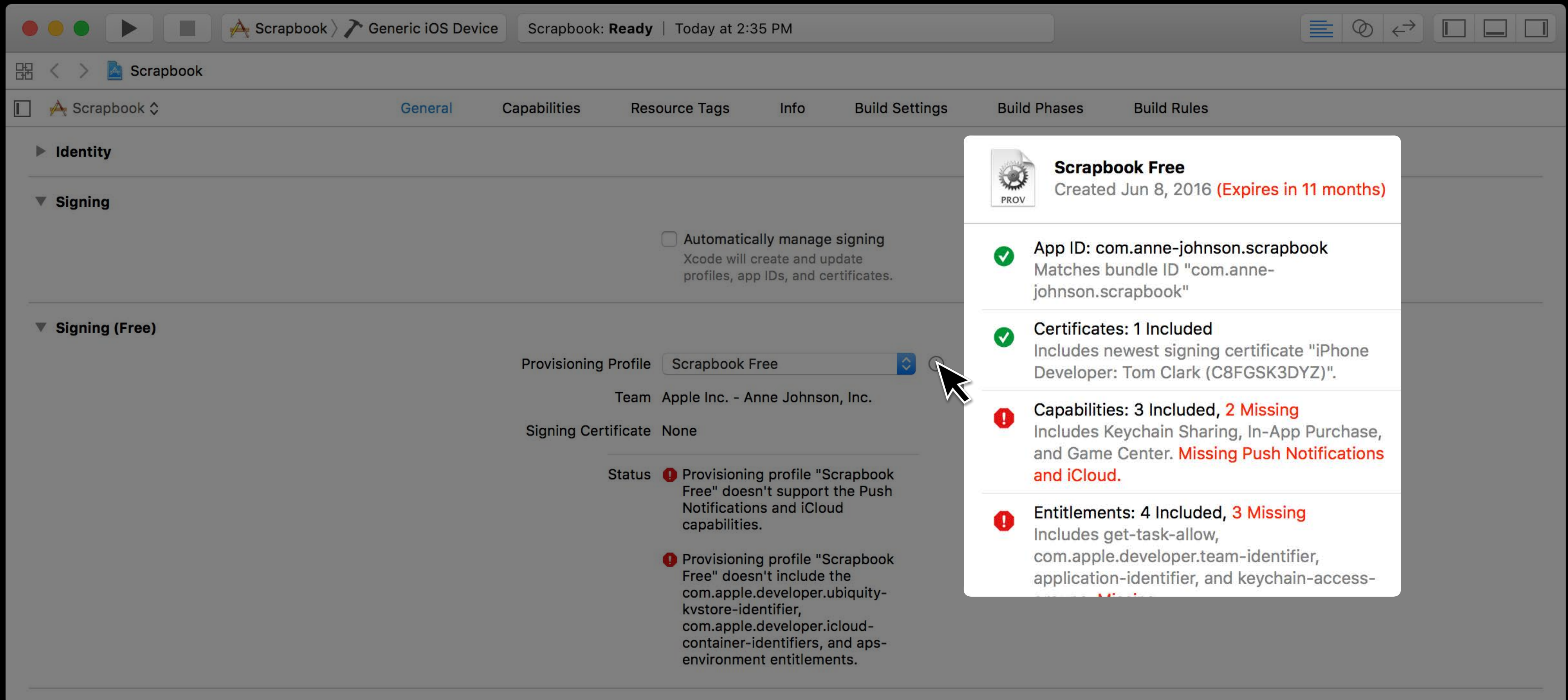
Signing in Xcode

Customized signing



Signing in Xcode

Customized signing



The screenshot shows the Xcode interface for signing a project named "Scrapbook". The "Signing" section is expanded, showing the "Provisioning Profile" dropdown menu. The selected profile is "Scrapbook Free", which was created on Jun 8, 2016, and expires in 11 months. The profile details include:

- App ID: com.anne-johnson.scrapbook (Matches bundle ID "com.anne-johnson.scrapbook")
- Certificates: 1 Included (Includes newest signing certificate "iPhone Developer: Tom Clark (C8FGSK3DYZ)".)
- Capabilities: 3 Included, 2 Missing (Includes Keychain Sharing, In-App Purchase, and Game Center. Missing Push Notifications and iCloud.)
- Entitlements: 4 Included, 3 Missing (Includes get-task-allow, com.apple.developer.team-identifier, application-identifier, and keychain-access-)

The "Signing (Free)" section also displays the following information:

- Provisioning Profile: Scrapbook Free
- Team: Apple Inc. - Anne Johnson, Inc.
- Signing Certificate: None
- Status: Provisioning profile "Scrapbook Free" doesn't support the Push Notifications and iCloud capabilities.
- Status: Provisioning profile "Scrapbook Free" doesn't include the com.apple.developer.ubiquity-kvstore-identifier, com.apple.developer.icloud-container-identifiers, and aps-environment entitlements.

Signing in Xcode

Customized signing

Signing in Xcode

Customized signing

Manually created profiles only

Signing in Xcode

Customized signing

Manually created profiles only

Any type of profile

Signing in Xcode

Customized signing

Signing in Xcode

Customized signing

New build setting, PROVISIONING_PROFILE_SPECIFIER

Signing in Xcode

Customized signing

New build setting, PROVISIONING_PROFILE_SPECIFIER

References profiles by name

Signing in Xcode

Customized signing

New build setting, PROVISIONING_PROFILE_SPECIFIER

References profiles by name

Update profiles without making project changes

Demo

Customized Signing



Customized Signing



Customized Signing



Automatic Signing

Best Practices

Best Practices

Development

Best Practices

Development

Use automatic

Best Practices

Development

Use automatic

Add all developers to team

Best Practices

Development

Use automatic

Add all developers to team

Use the capabilities tab

Best Practices

Manual

Best Practices

Manual

Don't set `CODE_SIGN_IDENTITY`

Best Practices

Manual

Don't set `CODE_SIGN_IDENTITY`

Use the new general tab UI

Best Practices

Manual

Don't set `CODE_SIGN_IDENTITY`

Use the new general tab UI

Use the capabilities tab

Best Practices

Manual

Don't set `CODE_SIGN_IDENTITY`

Use the new general tab UI

Use the capabilities tab

Migrate to automatic

Best Practices

Distribution



Best Practices

Distribution



Development

Best Practices

Distribution



Development



Organizer



Distribution

Summary

Multiple development certificates
Xcode 8 automatically manages signing
Dedicated customized signing mode

More Information

<https://developer.apple.com/wwdc16/401>

Related Sessions

How iOS Security Really Works

Nob Hill

Tuesday 4:00PM

What's New in Security

Nob Hill

Tuesday 5:00PM

Introduction to Xcode

Pacific Heights

Thursday 1:40PM

Labs

Signing and Distributing Your App with Xcode	Developer Tools Lab C	Tuesday 12:00PM
Signing and Distributing Your App with Xcode	Developer Tools Lab C	Wednesday 3:00PM

