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

Overview

Fundamentals

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Fundamentals
Signing Certificate per Mac
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Best Practices
Fundamentals
Fundamentals
Overview

Certificate Standard

PROV

Entitlement
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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
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 enabled on another Mac, you can export a development file on that Mac and import it on this Mac. You can also reset your current certificate.
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
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
Signing in Xcode 8
Fully redesigned
Brand new infrastructure
Signing in Xcode 8

Fully redesigned

Brand new infrastructure
New workflows and UI
Signing in Xcode 8

Fully redesigned

Brand new infrastructure
New workflows and UI
Actionable messaging
Signing in Xcode 8

Fully redesigned

Brand new infrastructure
New workflows and UI
Actionable messaging
Status reporting
Automatic Signing
Automatic Signing
Customized Signing
Signing in Xcode

Automatic signing

- Automatically manage signing: Xcode will create and update profiles, app IDs, and certificates.
  - Team: Apple Inc. - Anne Johnson, Inc.
  - Provisioning Profile: Xcode Managed Profile
  - Signing Certificate: iPhone Developer: Tom Clark (C8F0...)

- Deployment Info
- App Icons and Launch Images
- Embedded Binaries
- Linked Frameworks and Libraries
Signing in Xcode

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Other sections include:
- Deployment Info
- App Icons and Launch Images
- Embedded Binaries
- Linked Frameworks and Libraries
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
Automatic signing

Completely redesigned in Xcode 8
Stays out of your way
Manages signing so you can focus on development
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

Identity

Signing

- Automatically manage signing
  Xcode will create and update profiles, app IDs, and certificates.

Signing (Free)

- Provisioning Profile: Scrapbook Free
  Team: Apple Inc. - Anne Johnson, Inc.
  Signing Certificate: None

Status:
1. Provisioning profile "Scrapbook Free" doesn't support the Push Notifications and iCloud capabilities.
Signing in Xcode

Customized signing
Signing in Xcode

Customized signing

Identity

Signing

- Automatically manage signing
  Xcode will create and update profiles, app IDs, and certificates.

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- Team: Apple Inc. - Anne Johnson, Inc.
- Signing Certificate: None

Status:
1. Provisioning profile "Scrapbook Free" doesn't support the Push Notifications and iCloud capabilities.
Signing in Xcode

Customized signing
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

IPA
Summary

Multiple development certificates

Xcode 8 automatically manages signing

Dedicated customized signing mode
More Information

https://developer.apple.com/wwdc16/401
<table>
<thead>
<tr>
<th>Session</th>
<th>Location</th>
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<tbody>
<tr>
<td>How iOS Security Really Works</td>
<td>Nob Hill</td>
<td>Tuesday 4:00PM</td>
</tr>
<tr>
<td>What’s New in Security</td>
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<td>Introduction to Xcode</td>
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<td>Signing and Distributing Your App with Xcode</td>
<td>Developer Tools Lab C</td>
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<td>Signing and Distributing Your App with Xcode</td>
<td>Developer Tools Lab C</td>
<td>Wednesday 3:00PM</td>
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