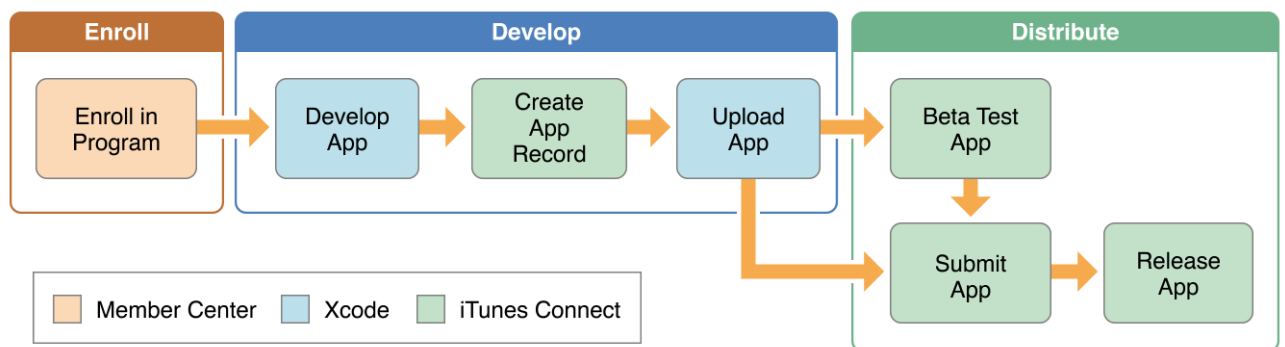


About App Distribution Workflows

This guide contains everything you need to know to distribute an app through the App Store, Apple TV App Store, or Mac App Store.

- Get step-by-step guidance for enrolling in the Apple Developer Program and building, testing, and submitting your app.
- Configure services that are available only to apps submitted to the store.
- Test your app on multiple devices and system versions, or offer testers a preview of your next release.
- Upload metadata about your app so the store can present it to customers.
- Verify that you've prepared your app correctly, upload the build and submit it to the store.
- Learn how to release and maintain your app after submission.



You perform these tasks using Xcode features and several web tools available only to members of the Apple Developer Program. Before you use certain app services, such as iCloud and Game Center, you must join the Apple Developer Program. Join the Apple Developer Program even if you distribute an app outside of the store so that customers know your app comes from a known source.

You use Xcode to develop Mac, iOS, tvOS, and watchOS apps. Mac apps launch on your development computer running OS X. But iOS, tvOS, and watchOS apps must run on their respective devices or in a simulator on your Mac. For iOS apps, a device is an iPad, iPhone, and iPod touch. For tvOS apps, a device is an Apple TV. For watchOS apps, a device is an iPhone paired with an Apple Watch. Xcode provides simulators for all these types of devices but you'll need to connect a real device to your Mac to thoroughly test your app.

Note: If you just want to use Xcode to run an app on a device or write code that uses an app service, read *App Distribution Quick Start* first and then return to this document for additional tasks you'll perform throughout the lifetime of your app.

At a Glance

This guide explains how to develop, test, upload, submit, and release your app. By understanding your tools and the distribution process, you'll be able to get your new app and updates to your customers faster.

Enroll in the Apple Developer Program to Distribute Your App

Joining the Apple Developer Program is the first step to submit your app to App Review, to distribute an iOS in-house app, or to sign an app that you distribute outside the Mac App Store with Developer ID. As a

member, you have access to the resources you need to configure app services and to submit new apps and updates.

Related Chapter: Managing Accounts

Add Services to Your App

Apple provides advanced, integrated services for certain types of apps, such as games and Newsstand apps, and for additional sources of revenue, such as In-App Purchase and iAd Network. These app services require additional configuration—both during development and later, when you submit your app to the store. Good examples are Game Center and iCloud. In this guide, you'll learn how to configure these capabilities for your app.

Related Chapter: Adding Capabilities

Prepare Your App for Distribution

Before you distribute your app for testing or submit it to the store for approval, complete the configuration of your Xcode project. Your final Xcode project should contain required app icons and launch images, and specify which devices and operating systems your app supports.

Related Chapter: Configuring Your Xcode Project for Distribution

Test Apps On Numerous Devices and Releases

Make sure you test your iOS, tvOS, and watchOS app not only in Simulator but on all the devices and releases that your app supports. Testing on more than one kind of device ensures that your app operates exactly as you thought it would, no matter which device it's running on. After testing an app yourself, distribute a beta release of your app to testers. You can distribute a beta app yourself or use iTunes Connect to manage beta testing. For apps distributed through TestFlight and the store, Apple provides a service that collects and aggregates crash logs that you can download and analyze in Xcode. Crash reports are also available for Mac apps available on the Mac App Store.

Related Chapters: Exporting Your App for Testing (iOS, tvOS, watchOS), Analyzing Crash Reports

Submit and Release Your App on the Store

Submitting your app to the store is a multistep process. First, you sign in to iTunes Connect to create an app record and enter necessary information. If you're selling your app on the store, you also enter the information for your reimbursement in iTunes Connect. In Xcode, you create an archive and sign it with your distribution certificate. Then you upload your app using Xcode or Application Loader. Use iTunes Connect to submit your app to the store. When your app is approved, use iTunes Connect to release it by setting the date when the app will be available to customers.

Related Chapters: Submitting Your App to the Store, Managing Your App in iTunes Connect, Distributing Apple Developer Enterprise Program Apps, Distributing Apps Outside the Mac App Store

Distribute Your App Outside the Store

Alternatively, join the Apple Developer Enterprise Program and distribute your in-house apps directly to employees. To distribute a Mac app outside of the Mac App Store, create and sign your app with a

Developer ID certificate. If you're distributing your app outside the store, you follow a slightly different process. You don't have access to iTunes Connect and some app services so can skip those steps.

Related Chapters: Distributing Apple Developer Enterprise Program Apps, Distributing Apps Outside the Mac App Store

Maintain Your Certificates, Identifiers, and Profiles

Apple implements an underlying security model to protect both user data and your app from being modified and distributed without your knowledge. Throughout the development process, you create assets and enter information that Apple uses to identify you, your devices, and your apps. Xcode automatically creates certificates, identifiers, and profiles for you as you need them. Xcode maintains the App IDs and provisioning profiles it creates for you, but not the other assets. During your Apple Developer Program membership, you may maintain various other certificates, identifiers, and profiles yourself.

Related Chapters: Maintaining Your Signing Identities and Certificates, Maintaining Identifiers, Devices, and Profiles

How to Use This Document

How you use this document depends on your role (team agent, admin, or member) in the Apple Developer Program. If you develop Mac apps, your role can be different for the Mac platform than the other platforms. For Mac apps, how you use this document also depends on whether you choose to submit your app to the Mac App Store or distribute it outside of the Mac App Store.

First choose a type of account (individual or organization). If needed, create an Apple ID and join the Apple Developer Program, as described in Managing Accounts. If you enroll in the Apple Developer Program as an individual, you're the team agent for a one-person team. If you enroll in the Apple Developer Program as an organization, you're the team agent and can invite other people to join your team, as described in Inviting Team Members. You specify whether a person is a team admin, who can perform most of the same tasks as a team agent, or a team member who can't create assets in their developer account. To learn more about team roles, read About Apple Developer Program Team Roles and Privileges.

Then refer to the tables in this section for the tasks you perform depending on your role and Apple Developer Program membership. (Refer to the glossary for the definitions of terms used in this guide.)

If you're a team agent or admin and want to submit your app to the store:

| | To learn how to | Read |
|--------------------------|--|---|
| <input type="checkbox"/> | Add your Apple ID to Xcode | Adding Your Apple ID Account in Xcode |
| <input type="checkbox"/> | Set your bundle ID and assign your project to a team | Configuring Identity and Team Settings Configuring Your Xcode Project for Distribution |
| <input type="checkbox"/> | Configure app services | Adding Capabilities |
| <input type="checkbox"/> | Launch your app on devices | Launching Your App on Devices |
| <input type="checkbox"/> | Perform final configuration steps before distributing your app | Configuring Your Xcode Project for Distribution |
| <input type="checkbox"/> | Test your iOS, tvOS, and watchOS app on different devices | Exporting Your App for Testing (iOS, tvOS, watchOS) |

| | | |
|--------------------------|--|--|
| <input type="checkbox"/> | Fix problems during testing | Analyzing Crash Reports |
| <input type="checkbox"/> | Upload your app to iTunes Connect for approval | Submitting Your App to the Store |
| <input type="checkbox"/> | Release and maintain your app on the store | Managing Your App in iTunes Connect |
| <input type="checkbox"/> | Maintain your Apple Developer Program assets | Maintaining Your Signing Identities and Certificates Maintaining Identifiers, Devices, and Profiles |
| <input type="checkbox"/> | Fix issues with your code signing assets | Troubleshooting |

If you're a team agent or admin for an organization:

| | To learn how to | Read |
|--------------------------|---|--------------------------------------|
| <input type="checkbox"/> | Add team members and assign roles for organization accounts | Managing Your Developer Account Team |

If you're a team member for an organization who is developing an app for the store:

| | To learn how to | Read |
|--------------------------|--|---|
| <input type="checkbox"/> | Add your Apple ID to Xcode | Adding Your Apple ID Account in Xcode |
| <input type="checkbox"/> | Set your bundle ID and assign your project to a team | Configuring Identity and Team Settings Configuring Your Xcode Project for Distribution |
| <input type="checkbox"/> | Launch your app on devices | Launching Your App on Devices |
| <input type="checkbox"/> | Fix issues with your code signing assets | Troubleshooting |

If you're a team agent or admin in the Apple Developer Enterprise Program:

| | To learn how to | Read |
|--------------------------|--|--|
| <input type="checkbox"/> | Manage your certificates and distribute your app | Distributing Apple Developer Enterprise Program Apps |

If you're a team agent and want to distribute your Mac app outside of the Mac App Store:

| | To learn how to | Read |
|--------------------------|--|---|
| <input type="checkbox"/> | Perform final configuration steps before distributing your app | Configuring Your Xcode Project for Distribution |
| | | |

| | | |
|--------------------------|---|---|
| <input type="checkbox"/> | Create a Developer ID–signed app | Distributing Apps Outside the Mac App Store |
| <input type="checkbox"/> | Create additional Developer ID certificates | Creating Additional Developer ID Certificates |

For Mac apps, if you select None as the distribution method, as described in [Choosing a Signing Identity \(Mac\)](#), you don't need to read this guide.

See Also

This guide assumes you are already familiar with the software and tools you use to write code. If not, start by reading a number of platform–specific tutorials. Next, read the technology overview documents followed by the appropriate human interface guidelines for your platform, and most important, the guidelines for submitting your app to the store.

| | iOS, tvOS, watchOS | Mac |
|--|--|--|
| To get started . . . | <i>App Distribution Quick Start</i> | <i>App Distribution Quick Start</i> |
| To learn more about technologies . . . | <i>iOS Technology Overview</i> <i>App Programming Guide for iOS</i> <i>App Programming Guide for tvOS</i> <i>App Programming Guide for watchOS</i> | <i>Mac Technology Overview</i> <i>Mac App Programming Guide</i> |
| To learn about the user interface guidelines . . . | <i>iOS Human Interface Guidelines</i> <i>App Store Review Guidelines</i> <i>Apple TV Human Interface Guidelines</i> <i>Apple Watch Human Interface Guidelines</i> | <i>OS X Human Interface Guidelines</i> <i>Mac App Store Review Guidelines</i> |
| To learn more about tools . . . | <i>Xcode Overview</i> <i>iTunes Connect Developer Guide</i> <i>Simulator User Guide</i> <i>Using Application Loader</i> | <i>Xcode Overview</i> <i>iTunes Connect Developer Guide</i> <i>Using Application Loader</i> |
| To learn about tools for large teams. . . | <i>Xcode Server and Continuous Integration Guide</i> <i>Testing with Xcode</i> <i>Source Control Management Help</i> | <i>Xcode Server and Continuous Integration Guide</i> <i>Testing with Xcode</i> <i>Source Control Management Help</i> |

For more information on the app review process, go to [App Review](#).