
[Bundle Resources](#) / Entitlements

Property List

Entitlements

Key-value pairs that grant an executable permission to use a service or technology.

iOS 2.0+ | iPadOS 2.0+ | Mac Catalyst 13.0+ | macOS 10.7+ | tvOS 9.0+ | visionOS 1.0+ | watchOS 2.0+

Details

Type

Object

Discussion

An *entitlement* is a right or privilege that grants particular capabilities to an executable. For example, an app needs the [HomeKit Entitlement](#) — along with explicit user consent — to access a user’s home automation network. An app stores its entitlements as key-value pairs embedded in the code signature of its binary executable.

You configure entitlements for your app by declaring capabilities for a target in Xcode; see [Capabilities](#). Xcode records capabilities that you add in a property list file with the `.entitlements` extension. When code signing your app, Xcode combines the entitlements file, information from your developer account, and other project information to apply a final set of entitlements to your app.

You typically let Xcode manage the entitlements file for you. For information on manually editing the file, see [Editing property list files](#).

Topics

Essentials

Adding capabilities to your app

Configure your target to include and customize capabilities that provide access to Apple's app services.

Diagnosing Issues with Entitlements

Verify your app's entitlements at every stage of development to track down errors during distribution.

Signing a daemon with a restricted entitlement

Wrap a daemon in an app-like structure to use an entitlement that's authorized by a provisioning profile.

Accessibility

`com.apple.developer.accessibility.merchant-api-control`

AccessorySetupKit

`com.apple.developer.accessory-setup-discovery-extension`

An entitlement that lets an app extension discover and set up accessories.

Alternative marketplaces

`com.apple.developer.marketplace.app-installation`

The entitlement that enables an app to vend other apps as an alternative app marketplace.

App Clips

Parent Application Identifiers Entitlement

A list of parent application identifiers for an App Clip with exactly one entry.

Key: `com.apple.developer.parent-application-identifiers`

`com.apple.developer.associated-appclip-app-identifiers`

A list of App Clip identifiers for an app with exactly one entry.

`com.apple.developer.on-demand-install-capable`

A Boolean value that indicates whether a bundle represents an App Clip.

AppMigrationKit

`com.apple.developer.app-migration.data-container-access`

An entitlement required for app extensions to perform a one-time transfer of on-device data to or from another platform.

Name: App Identifier for OS Data Transfer

Authentication

Account Creation Requires Phone Number

A Boolean value that indicates whether an app requires someone to provide a phone number to create an account.

Key: `com.apple.developer.authentication-services.account-creation-requires-phone-number`

AutoFill Credential Provider Entitlement

A Boolean value that indicates whether the app may, with user permission, provide user names and passwords for AutoFill in Safari and other apps.

Key: `com.apple.developer.authentication-services.autofill-credential-provider`

Sign in with Apple Entitlement

An entitlement that lets your app use Sign in with Apple.

Key: `com.apple.developer.apple-signin`

Background tasks

Background GPU Access

The entitlement the system requires for a continuous background task to use the GPU.

Key: `com.apple.developer.background-tasks.continued-processing.gpu`

CallKit

Default Calling App

A Boolean value that indicates whether an app can be the default calling app on someone's device.

Key: `com.apple.developer.calling-app`

CarPlay

`com.apple.developer.carplay-audio`

com.apple.developer.carplay-charging
com.apple.developer.carplay-communication
com.apple.developer.carplay-maps
com.apple.developer.carplay-parking
com.apple.developer.carplay-quick-ordering
~~com.apple.developer.carplay-messaging~~ Deprecated
~~com.apple.developer.playable-content~~ Deprecated

CloudKit

com.apple.developer.icloud-extended-share-access

An array of strings that represent the types of information an app can request about a CloudKit share.

Contacts

com.apple.developer.contacts.notes

A Boolean value that indicates whether the app may access the notes in contact entries.

CoreTelephony

com.apple.CommCenter.fine-grained

An entitlement that grants access to CoreTelephony services.

Declared Age Range

com.apple.developer.declared-age-range

A Boolean value indicating whether your app may request a person's age range.

Device Management

com.apple.developer.automated-device-enrollment.add-devices

A Boolean value that indicates whether an app may add a device to Automated Device Enrollment.

Enrollment Single Sign On

An entitlement that indicates the app participates in single sign-on (SSO) during enrollment into device management.

Key: com.apple.developer.enrollment-sso-capable

Education

ClassKit Environment Entitlement

The ClassKit development or production environment for an education app that works with the Schoolwork app.

Key: com.apple.developer.ClassKit-environment

com.apple.developer.automatic-assessment-configuration

A Boolean value that indicates whether an app may create an assessment session.

Email clients

com.apple.developer.mail-client

A Boolean that indicates whether the app can act as a user's default email client.

EnergyKit

com.apple.developer.energykit

The entitlement the system requires for an app to use the EnergyKit framework.

Enterprise

Increased performance headroom

An entitlement that allows an app to adjust thresholds that balance thermal dissipation and performance against fan noise and other factors.

Key: com.apple.developer.app-compute-category

Passthrough in screen capture

A Boolean value that indicates whether an app can include passthrough in screen capture.

Key: com.apple.developer.screen-capture.include-passthrough

Main camera access

A Boolean value that indicates whether an app can use ARKit to access the main cameras on Apple Vision Pro.

Key: com.apple.developer.arkit.main-camera-access.allow

Object-tracking parameter adjustment

A Boolean value that allows an app to use ARKit to track more objects with a higher frequency.

Key: com.apple.developer.arkit.object-tracking-parameter-adjustment.allow

Spatial barcode and QR code scanning

A Boolean value that indicates whether an app can use ARKit to detect, position, and decode barcode and QR codes.

Key: com.apple.developer.arkit.barcode-detection.allow

Camera Region access

A Boolean value indicating whether your app may access the camera region.

Key: com.apple.developer.arkit.camera-region.allow

Shared Coordinate Space access

A Boolean value indicating whether your app may use a shared coordinate space.

Key: com.apple.developer.arkit.shared-coordinate-space.allow

App-Protected Content

A Boolean value indicating whether the system prohibits capturing your app's content.

Key: com.apple.developer.protected-content

Window Follow Mode

A Boolean value indicating whether your app's windows will follow the person.

Key: com.apple.developer.window-body-follow

~~Apple Neural Engine access~~

A Boolean value that indicates whether an app can use the Apple Neural Engine to speed up CoreML.

Key: com.apple.developer.coreml.neural-engine-access

Deprecated

UVC Device Access on visionOS

A Boolean value that indicates whether the app can stream USB UVC devices connected to the Developer strap.

Key: com.apple.developer.avfoundation.uvc-device-access

Deprecated

Exposure notification

com.apple.developer.exposure-notification

A Boolean value that indicates whether the app may use exposure notification.

Family controls

Family Controls

A Boolean value that indicates whether the app can request or revoke authorization to provide parental controls.

Key: com.apple.developer.family-controls

File provider

com.apple.developer.fileprovider.testing-mode

A Boolean value that indicates whether you can place domains in testing mode.

FinanceKit

FinanceKit

An entitlement that allows an app to access financial data in FinanceKit.

Key: com.apple.developer.financekit

Foundation Models

com.apple.developer.foundation-model-adapter

A Boolean value that indicates whether the app can enable custom adapters for the Foundation Models framework.

FSKit

com.apple.developer.fskit.fsmodule

An entitlement that indicates an extension provides an FSKit filesystem.

Name: FSKit Module

Games

Game Center Entitlement

A Boolean value that indicates whether users of the app may see and compare achievements on a leaderboard, invite friends, and start multiplayer games.

Key: com.apple.developer.game-center

Group activities

`com.apple.developer.group-session`

A Boolean value that indicates whether the app may implement shared group experiences.

Health

HealthKit Entitlement

A Boolean value that indicates whether the app may request user authorization to access health and activity data that appears in the Health app.

Key: `com.apple.developer.healthkit`

HealthKit Capabilities Entitlement

Health data types that require additional permission.

Key: `com.apple.developer.healthkit.access`

`com.apple.developer.healthkit.background-delivery`

A Boolean value that indicates whether observer queries receive updates while running in the background.

Fall Detection Notifications

An entitlement that permits an app to receive fall-detection notifications from Apple Watch.

Key: `com.apple.developer.health.fall-detection`

`com.apple.developer.healthkit.recalibrate-estimates`

A Boolean value that determines whether your app can recalibrate the prediction algorithm used to calculate supported sample types.

Home automation

HomeKit Entitlement

A Boolean value that indicates whether users of the app may manage HomeKit-compatible accessories.

Key: `com.apple.developer.homekit`

Matter Allow Setup Payload

A Boolean value that allows an app to provide an optional Matter Setup payload while setting up a Matter device in an ecosystem.

Key: `com.apple.developer.matter.allow-setup-payload`

Hypervisor

`com.apple.security.hypervisor`

A Boolean value that indicates whether the app creates and manages virtual machines.

~~`com.apple.vm.hypervisor`~~

A Boolean value that indicates whether the app creates and manages virtual machines.

Deprecated

`com.apple.vm.device-access`

A Boolean value that indicates whether the app captures USB devices and uses them in the guest-operating system.

`com.apple.vm.networking`

A Boolean that indicates whether the app manages virtual network interfaces without escalating privileges to the root user.

`com.apple.security.virtualization`

A Boolean value that indicates whether your app can use the Virtualization framework.

iCloud

`com.apple.developer.icloud-container-development-container-identifiers`

The container identifiers for the iCloud development environment.

`com.apple.developer.icloud-container-environment`

The development or production environment to use for the iCloud containers.

iCloud Container Identifiers Entitlement

The container identifiers for the iCloud production environment.

Key: `com.apple.developer.icloud-container-identifiers`

iCloud Services Entitlement

The iCloud services used by the app.

Key: `com.apple.developer.icloud-services`

iCloud Key-Value Store Entitlement

The container identifier to use for iCloud key-value storage.

Key: `com.apple.developer.ubiquity-kvstore-identifier`

IdentityDocumentServices

Digital Credentials API - Mobile Document Provider

An array of strings that represent the types of mobile documents (mdoc) that an identity document provider app can provide during an online web presentation.

Key: com.apple.developer.identity-document-services.document-provider.mobile-document-types

Journaling Suggestions

com.apple.developer.journal.allow

The entitlement that enables an app to present the journaling suggestions picker.

LiveCommunicationKit

Default Calling App

A Boolean value that indicates whether an app can be the default calling app on someone's device.

Key: com.apple.developer.calling-app

Default Dialer App

A Boolean value that indicates whether an app can be the default dialer app on someone's device.

Key: com.apple.developer.dialing-app

Location

Location Push Service Extension

An entitlement to enable a location-sharing app to query someone's location in response to a push notification.

Key: com.apple.developer.location.push

Managed App Distribution

Managed App Installation UI

An entitlement you enable so your app can use Managed App Distribution.

Key: com.apple.developer.managed-app-distribution.install-ui

Media

Media Device Discovery Extension

An entitlement for an app extension that adds a specific third-party media receiver to a system device-picker UI.

Key: com.apple.developer.media-device-discovery-extension

com.apple.developer.coremotion.head-pose

An entitlement that enables someone's head movement to determine the orientation of spatialized sound output.

com.apple.developer.spatial-audio.profile-access

An entitlement that enables your app to use the personalized spatial audio profile.

~~com.apple.developer.avfoundation.multitasking-camera-access~~

A Boolean value that indicates whether an app may continue using the camera at the same time as another foreground app.

Deprecated

Memory

com.apple.developer.kernel.increased-memory-limit

A Boolean value that indicates whether core features of your app may perform better with a higher memory limit on supported devices.

Extended Virtual Addressing Entitlement

A Boolean value that indicates whether the app may access an extended address space.

Key: com.apple.developer.kernel.extended-virtual-addressing

Metal

com.apple.developer.sustained-execution

A Boolean value that indicates whether your app performs consistently when the system constrains it to a sustainable performance level.

Messages

Critical Messaging

A Boolean value that indicates whether an app can use the Critical Messaging API to send SMS messages.

Key: com.apple.developer.messages.critical-messaging

Default Messaging App

A Boolean value that indicates whether an app can be the default messaging app on someone's device.

Key: com.apple.developer.messaging-app

MessageUI

com.apple.developer.upi-device-validation

A Boolean value that indicates whether the app can use Unified Payments Interface (UPI) device enrollment.

Navigation

Default Navigation

A Boolean value that indicates whether an app can be the default navigation app on someone's device.

Key: com.apple.developer.navigation-app

NearbyInteraction

Nearby Interaction NI DL-TDOA API (development)

A Boolean value that indicates whether your app can enable Downlink Time-Difference-of-Arrival (DL-DTOA) ranging.

Key: com.apple.developer.nearbyinteraction.dltdoa

Networking

Network Extensions Entitlement

The APIs an app can use to customize networking features.

Key: com.apple.developer.networking.networkextension

Personal VPN Entitlement

The API an app can use to create and control a custom system VPN configuration.

Key: com.apple.developer.networking.vpn.api

Associated Domains Entitlement

The associated domains for specific services, such as shared web credentials, universal links, and App Clips.

Key: com.apple.developer.associated-domains

`com.apple.developer.networking.multicast`

A Boolean value that indicates whether an app can send or receive IP multicast traffic.

`com.apple.developer.associated-domains.applinks.read-write`

A Boolean value that indicates whether the app can use universal links.

`com.apple.developer.networking.manage-thread-network-credentials`

A Boolean value that indicates whether the app can use ThreadNetwork.

5G Network Slicing App Category

The key that defines the app category entitlement to enable Cellular Network Slicing.

Key: com.apple.developer.networking.slicing.appcategory

5G Network Slicing Traffic Category

The key that defines the traffic category entitlement to enable Cellular Network Slicing.

Key: com.apple.developer.networking.slicing.trafficcategory

`com.apple.developer.networking.vmnet`

 Configuring your app for ultra-constrained networks

Prepare to deliver data over resource-limited data networks.

`com.apple.developer.networking.carrier-constrained.appcategory`

The key that defines an app's category for accessing a carrier-provided satellite network.

`com.apple.developer.networking.carrier-constrained.app-optimized`

A Boolean value that indicates whether your app is optimized for a carrier-provided satellite network.

Notifications

APS Environment Entitlement

The environment for push notifications.

Key: aps-environment

APS Environment (macOS) Entitlement

The environment for push notifications in macOS apps.

Key: com.apple.developer.aps-environment

Critical Alerts

An entitlement that permits an app to receive critical alert notifications.

Key: com.apple.developer.userdetails.critical-alerts

com.apple.developer.userdetails.filtering

Enable receiving notifications without displaying the notification to the user.

PassKit

Pass Presentation Suppression

An entitlement that prevents the system from initiating Apple Pay while the app is in the foreground.

Key: com.apple.developer.passkit.pass-presentation-suppression

Privacy

com.apple.developer.device-information.user-assigned-device-name

The entitlement for accessing the user-assigned device name instead of a generic device name.

Push to Talk

Push to Talk Entitlement

SafetyKit

com.apple.developer.severe-vehicular-crash-event

The entitlement for accessing Crash Detection events.

SecureElementCredential

com.apple.developer.secure-element-credential

A Boolean value that indicates whether your app can use the SecureElementCredential framework.

com.apple.developer.secure-element-credential.default-contactless-app

A Boolean value that indicates whether your app that uses the SecureElementCredential framework can become the default contactless app.

Security

☰ Security entitlements

Key-value pairs that grant an executable access to secure resources, or enable hardening checks.

📄 App Sandbox

Restrict access to system resources and user data in macOS apps to contain damage if an app becomes compromised.

📄 Hardened Runtime

Manage security protections and resource access for your macOS apps.

📄 Enabling enhanced security for your app

Detect out-of-bounds memory access, use of freed memory, and other potential vulnerabilities.

Sensitive Content Analysis

`com.apple.developer.sensitivecontentanalysis.client`

A code-signing entitlement that enables an app to detect nudity in images and video.

Sensors

`com.apple.developer.sensorkit.reader.allow`

The necessary entitlement to access sensor data that's required by your app's preapproved research study.

Siri

Siri Entitlement

A Boolean value that indicates whether the app handles Siri requests.

Key: `com.apple.developer.siri`

StoreKit

`com.apple.developer.storekit.external-link.account`

A Boolean value that indicates whether your app can link to an external website for account creation or management.

com.apple.developer.storekit.external-purchase

A Boolean value that indicates whether your app can offer external purchases.

com.apple.developer.storekit.external-purchase-link

A Boolean value that indicates whether your app can include a link that directs people to a website to make an external purchase.

com.apple.developer.storekit.external-purchase-link-streaming

An entitlement that grants a qualifying music-streaming app the ability to communicate and promote offers.

System

DriverKit

Develop device drivers in macOS and iPadOS.

System Extensions

Extend the capabilities of macOS from user space.

TelephonyMessagingKit

Default Carrier Messaging App

A Boolean value that indicates whether the app can use the TelephonyMessagingKit framework to serve as the default carrier messaging app.

Key: com.apple.developer.carrier-messaging-app

Translation

Translation

A Boolean value that indicates whether an app can be the default translation app on someone's device.

Key: com.apple.developer.translation-app

TV

User Management Entitlement

The entitlement for distinguishing between multiple user accounts on Apple TV.

Key: com.apple.developer.user-management

com.apple.developer.video-subscriber-single-sign-on

A Boolean value that indicates whether your app can use the TV Provider Authentication service.

com.apple.smoot.subscriptionservice

A Boolean value that indicates whether your app meets the requirements of the video-partner program.

Vision

Low-Latency Streaming

A Boolean value indicating whether your app may use low-latency wireless networking.

Key: com.apple.developer.low-latency-streaming

Wallet

Pass Type IDs Entitlement

A list of identifiers that specify pass types that your app can access in Wallet.

Key: com.apple.developer.pass-type-identifiers

Merchant IDs Entitlement

A list of merchant IDs your app uses for Apple Pay support.

Key: com.apple.developer.in-app-payments

com.apple.developer.in-app-identity-presentment

An entitlement that verifies age or identity.

com.apple.developer.in-app-identity-presentment.merchant-identifiers

An entitlement for the merchant identifier associated with the in-app identity presentment entitlement.

ID Verifier - Display Only

ID Verifier - Data Transfer

WeatherKit

WeatherKit Entitlement

A Boolean value that indicates whether the app may use WeatherKit.

Key: com.apple.developer.weatherkit

Web browsers

`com.apple.developer.web-browser`

A Boolean that indicates whether the app can act as the user's default web browser.

`com.apple.developer.web-browser.public-key-credential`

A Boolean value that lets your app make registration and assertion requests for passkeys and security keys for any relying party identifier.

`com.apple.developer.browser.app-installation`

The entitlement that enables a browser to install alternative-distribution apps from a website.

Wireless interfaces

Access Wi-Fi Information Entitlement

A Boolean value indicating whether your app can access information about the connected Wi-Fi network.

Key: `com.apple.developer.networking.wifi-info`

Wireless Accessory Configuration Entitlement

A Boolean value that indicates whether your app may configure MFi Wi-Fi accessories.

Key: `com.apple.external-accessory.wireless-configuration`

Multipath Entitlement

A Boolean value indicating whether your app may use Multipath protocols to seamlessly transition between Wi-Fi and cellular networks.

Key: `com.apple.developer.networking.multipath`

Hotspot Configuration Entitlement

A Boolean value indicating whether your app can use the hotspot manager to configure Wi-Fi networks.

Key: `com.apple.developer.networking.HotspotConfiguration`

HotSpot Helper

An entitlement that permits an app to participate in navigating Wi-Fi network hotspots.

Key: `com.apple.developer.networking.HotspotHelper`

ISO18092 system codes for NFC Tag Reader Session

A list of FeliCa system codes that the app supports.

Key: `com.apple.developer.nfc.readersession.felica.systemcodes`

Near Field Communication Tag Reader Session Formats Entitlement

The Near Field Communication data formats an app can read.

Key: com.apple.developer.nfc.readersession.formats

ISO7816 application identifiers for NFC Tag Reader Session

A list of application identifiers that the app supports.

Key: com.apple.developer.nfc.readersession.iso7816.select-identifiers

com.apple.developer.nfc.hce

A Boolean value indicating whether your app can use the card session API.

com.apple.developer.nfc.hce.iso7816.select-identifier-prefixes

An array of identifier strings the app handles with the card session API.

com.apple.developer.nfc.hce.default-contactless-app

A Boolean value indicating whether your app can be a default app for contactless NFC with the card session API.

Wireless insights

Wireless Insights Service Predictions

A Boolean value that indicates whether the app can use the WirelessInsights framework to obtain wireless service predictions.

Key: com.apple.developer.wireless-insights.service-predictions

Deprecated entitlements

Maps Entitlement

A Boolean value that indicates whether the app may provide directions beyond what Maps supports, such as subway routes, hiking trails, and bike paths.

Key: com.apple.developer.maps

Deprecated

Inter-App Audio Entitlement

A Boolean value that indicates whether the app may exchange audio with other Inter-App Audio-enabled apps.

Key: inter-app-audio

Deprecated

All files entitlement

A Boolean value that indicates whether the app may have access to all files.

Key: com.apple.security.files.all

Deprecated

BrowserEngineKit

com.apple.developer.embedded-web-browser-engine
com.apple.developer.memory.transfer_accept
com.apple.developer.memory.transfer_send
com.apple.developer.web-browser-engine.host
com.apple.developer.web-browser-engine.networking
com.apple.developer.web-browser-engine.rendering
com.apple.developer.web-browser-engine.webcontent

ScreenCaptureKit

Persistent Content Capture

A Boolean value that indicates whether a Virtual Network Computing (VNC) app needs persistent access to screen capture.

Key: com.apple.developer.persistent-content-capture

Wi-Fi Aware

com.apple.developer.wifi-aware

The entitlement the system requires for an app to use the Wi-Fi Aware framework.

Wi-Fi Infrastructure

com.apple.developer.wifi-infrastructure

The entitlement the system requires for an app to use the Wi-Fi Infrastructure framework.

Key: com.apple.developer.wifi-infrastructure

Beta

See Also

Property Lists

Information Property List

A resource containing key-value pairs that identify and configure a bundle.

☰ Privacy manifest files

Describe the data your app or third-party SDK collects and the required reasons APIs it uses.