

[Background Assets](#) / Downloading essential assets in the background

## Sample Code

# Downloading essential assets in the background

Fetch the assets your app requires before its first launch using an app extension and the Background Assets framework.

Download

iOS 16.4+ | iPadOS 16.4+ | macOS 13.3+ | tvOS 18.4+ | visionOS 2.4+ | Xcode 15.0+

## Overview

### Note

This sample code project is associated with WWDC23 session 10108: [What's new in Background Assets](#).

## Configure the sample code project

Before you run the sample code project in Xcode:

- Configure the WWDC Sessions and WWDC Sessions Background Assets Extension targets to use your Developer team for signing.
- See [Assign a project to a team](#).

## See Also

# Unmanaged asset downloads

## Configuring an unmanaged Background Assets project

Manage and download individual assets yourself by configuring your app and extension targets.

### `BAManifestURL`

The location URL of the app's manifest file that contains the names and sizes of assets.

### `BAInitialDownloadRestrictions`

The restrictions that apply to the set of assets that download immediately after app installation.

### `BAEssentialMaxInstallSize`

The combined, maximum size of the essential assets that the system downloads before it launches your app in bytes.

### `BAMaxInstallSize`

The combined, maximum size, in bytes, of the non-essential assets that download immediately after app installation.

### `class BADownloadManager`

An object that manages the queue of scheduled asset downloads.

### `protocol BADownloaderExtension`

An interface for reacting to app life-cycle events and processing concluded asset downloads while your app isn't running.

### `protocol BADownloaderExtensionConfiguration`

### `class BAURLDownload`

An object that represents a remote asset to download.

### `class BADownload`

An object that represents an in-progress or concluded asset download.