

macOS 10.14 beta Release Notes

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About macOS 10.14 beta

The macOS 10.14 SDK provides support for developing macOS apps for systems running macOS 10.14. The SDK comes bundled with Xcode 10 available from the Apple Developer Program download page.

For information on the compatibility requirements for Xcode 10, see the Release Notes on the Xcode download page.

Supported Configurations

macOS 10.14 supports:

- MacBook (Early 2015 or newer)
- MacBook Air (Mid 2012 or newer)
- MacBook Pro (Mid 2012 or newer)
- Mac mini (Late 2012 or newer)
- iMac (Late 2012 or newer)
- iMac Pro (2017)
- Mac Pro (Late 2013, plus mid 2010 and mid 2012 models with recommended Metal-capable GPU)

*Support for 2010 and 2012 Mac Pro models will be available in an upcoming beta

Installing macOS 10.14

Back up your Mac.

Always back up your data and files before installing beta versions of macOS. If you have multiple Mac computers, we strongly recommend installing on a secondary system. Backing up files on a Mac is easy with Time Machine, the built-in backup utility.

[Learn more about Time Machine.](#)

Enroll Your Mac in the Apple Developer Program

If you are enrolling a new Mac, download the macOS Developer Beta Access Utility from developer.apple.com and run the installer. Follow the onscreen instructions to enroll your Mac.

If you have already enrolled your Mac, proceed to the next step.

To check if your Mac is enrolled in the Apple Beta Software Program on macOS High Sierra, open System Preferences and click App Store. If your Mac is enrolled, the message “Your computer is set to receive beta software update” is shown.

Get the macOS Developer Beta

Click the link below to view the macOS 10.14 beta in the Mac App Store. Then download and install the macOS beta.

[View the macOS 10.14 beta in the Mac App Store.](#)

Stay on the latest macOS developer beta

When a new macOS developer beta is available, you'll receive a notification and can install the beta from Software Update in System Preferences.

Stop receiving beta updates

To stop receiving macOS beta updates:

1. Open System Preferences and click Software Update.
2. Click the "Details..." button below "This Mac is enrolled in the Apple Beta Software Program."
3. In the dialog that appears, choose "Restore Defaults" to restore the default settings for Software Update.

Once you've completed the steps above, Software Update no longer delivers developer betas to your Mac. Install the next shipping version of macOS after it is released from Software Update. Alternately, restore your Mac from the Time Machine backup that you created before installing the developer beta.

[Learn how to restore a Time Machine backup from macOS 10.14.](#)

Bug Reporting

For issues not mentioned in [Notes and Known Issues](#), file bugs through the Apple Developer website <https://developer.apple.com/bug-reporting/>.

When filing a bug, please include the full version number in the bug title and in the description. This looks like "10.14 (18Axxxx)." You can find the full version number by choosing About This Mac from the Apple Menu. In the window that appears, click on "Version 10.14" displayed beneath "macOS" to show the full version including the part that is in parenthesis.

Technical Support and Learning Resources

Apple provides the following resources to support your development:

- Developer documentation is available both on <https://developer.apple.com/documentation> and from Xcode by choosing Help > Developer Documentation.
- [Apple Developer Forums](#). Participate in discussions about developing for Apple platforms and using developer tools.
- [macOS 10.14 Developer Beta Forum](#). Participate in discussions about developing for macOS 10.14 and issues with the SDK.
- [iCloud for Developers](#). Find information about developing for iCloud.
- [macOS homepage](#). Get high-level information about the latest release of macOS. Download current and beta macOS releases.
- For help with using Xcode, choose Help > Xcode Help.

Legal Notices

The macOS pre-release software identified above and the macOS Beta Access Utility are Apple Confidential Information and your use of such software is subject to your Registered Apple Developer Agreement, Mac Developer Program License Agreement, and the applicable license agreements accompanying such software. Distributing such software to anyone other than another Registered Apple Developer who is working for the same entity as you is considered a violation of your agreement with Apple and is damaging to both Apple and those who develop for the Apple platform. We sincerely appreciate your efforts to keep this Apple software Confidential.

You agree that you will not export or reexport any of the software or Confidential Information received from Apple (a) into (or to a national or resident of) any U.S. embargoed countries or (b) to anyone on the U.S. Treasury Department's list of Specially Designated Nationals or the U.S. Department of Commerce Denied Person's List or Entity List. You also agree that you will not use said software for any purposes where prohibited by United States law, including, without limitation, the development, design, manufacture or production of nuclear, missile, chemical or biological weapons.

64-bit testing mode

Developers can use 64-bit testing mode in macOS 10.14 to test software for 64-bit compatibility.

NOTE: It is strongly recommended that this mode is enabled only by developers or experienced IT administrators.

To enable the 64-bit testing mode:

1. Boot to Recovery OS by restarting your machine and holding down the Command and R keys at startup.
2. Launch Terminal
3. Execute the following command: `nvrnm boot-args="-no32exec"`
4. Restart the machine

The 64-bit testing mode prevents 32-bit processes from launching. Launching an app that depends on 32-bit software results in a notification that the application can't be opened. Other types of software may fail silently, such as 32-bit versions of Dashboard and WebKit plugins, preference panes, and background processes.

Disable the test mode once the software is updated to work in 64-bit.

To disable the 64-bit testing mode:

1. Boot to Recovery OS by restarting your machine and holding down the Command and R keys at startup.
2. Launch Terminal
3. Execute the following command: `nvrnm boot-args=""`
4. Restart the machine

Notes and Known Issues

General

New Issues

- Location Services and its System Services might be disabled. (40308265, 40622586)
Workaround: Use the Privacy tab of Security & Privacy System Preferences to enable Location Services and authorize System Services.
- Dashboard widget backdrops might display visual artifacts. (35975567)
- Recently added users might not be displayed at the login screen on Macs with FileVault enabled. (40078644)
- Applications might crash when launched by another process. (40341165)
Workaround: Launch the application directly from Finder or Dock.
- Migrating from Microsoft Windows requires a new version of Windows Migration Assistant which will be available in an upcoming beta. (40428975)
- iMac Pro might be unable to boot from certain types of external media. (40271601)
- iOS devices running versions earlier than iOS 9 might not be recognized by macOS 10.14. (39778681)
- Aperture might crash on launch. (40619059)
- When beginning installation of macOS 10.14 beta on iMac Pro, your Mac might shut down instead of rebooting. (40668149)
Workaround: Press the power button once to continue installation.

Deprecations

- Ink APIs exposed within `Ink.framework` and associated Ink events exposed within `Carbon.framework` have been deprecated. (29008562)
- Use of Carbon File Manager and other APIs based on the `FSRef` type might slow system performance when using APFS-formatted volumes. `FSRef`-based APIs are deprecated and Apple recommends developers switch to URL-based replacements, such as `NSFileManager` and `NSURL` file properties.

32-bit Deprecation

New Features

- 32-bit processes will now trigger an alert on launch.
- Users can review 32-bit processes using the System Information application. The Software > Legacy Software report provides an overview of impacted software.

New Issues

- The presentation of certain 32-bit deprecation alerts might be delayed for some time after an application is launched. (40536151)

Deprecations

- Remaining Apple-provided 32-bit system services such as `mdworker32`, `quicklookd32`, `inkserver`, `qtkitserver`, etc are for compatibility purposes and will be deprecated in a future release of macOS. Please migrate to 64-bit equivalent frameworks.
- Administrators are encouraged to review root-owned daemons and processes on behalf of non-administrator users, as these users might lack permissions required to resolve previously-installed 32-bit dependencies.

Apple File System (APFS)

New Issues

- The APFS file defragmenter new in macOS 10.14 is currently disabled and will be enabled in an upcoming beta. (39925294)
- After enabling or disabling FileVault, the volume will become invisible to pre-macOS 10.14 systems until the encryption or decryption process completes.

CoreML

New Features

- Support for quantized models (\leq 8-bit linear and/or lookup table)
- Support for flexible image sizes and multi-array shapes
- Batch prediction API
- Support for custom models
- Support for Create ML models (Vision Feature Print, Text Classifier, Word Tagger)

New Issues

- When layers are quantized <8 -bits or with a lookup table, users might encounter issues in deconvolution and recurrent layers. (40632252)

Workaround: Use only linear 8-bit quantization on these layers.

- Models with flexible input sizes might unexpectedly reject an input using the default size shown in Xcode's type field. (40632323)

Workaround: Supply a sample non-default size input on first prediction call.

Date & Time

New Issues

- Time Zone settings might require manual adjustment using Date & Time in System Preferences. (39656353)

Disk Utility

New Issues

- Attempting to create new partitions on APFS-formatted Fusion Drives might result in error "Target disk too small for this operation." (40350950)

- **Important:** Do not use Disk Utility while booted from Internet Recovery to erase an APFS Fusion container. (40565698)

Workaround: Use Disk Utility while booted into macOS 10.14.

FaceTime

New Issues

- Group FaceTime is unavailable in macOS 10.14 beta.

Find My Mac

New Issues

- Find My Mac might be unable to determine the location of your Mac. (37808916)

New Built-in Mac Apps

New Issues

- On Macs with a Force Touch trackpad, News and Stocks might crash when you Force click text to look up the definition of a word. (40070065)
- Sharing and editing in Voice Memos is unavailable in macOS 10.14 beta. (40537700)

iWork

New Issues

- iWork apps might quit unexpectedly when displaying the first launch panel. This will be resolved in an upcoming release. (39868310)

Workaround: Launch Terminal and execute the following command, substituting <AppName> with Pages, Numbers, or Keynote:

```
defaults write com.apple.iWork.<AppName> TMAFirstLaunchVersion 65547
```

Localization

New Features

- British English, Australian English, Canadian French, and Hong Kong Chinese (Traditional) localization has been added to macOS 10.14.

New Issues

- Certain languages might exhibit clipped or misaligned layout. (40420329)
- Certain languages might display unlocalized text. (40420422)

Mac App Store

New Issues

- The Ask to Buy feature is unavailable in macOS 10.14 beta. (37723993)
- Purchased history might be unavailable. (40178646)

Workaround: Choose Apple menu > Log Out then log back into your Mac.

- Some users might encounter “Cannot connect to App Store.” after switching store locales. (40597093)

Workaround: Launch Terminal and execute the following command:

```
defaults delete com.apple.appstore.commerce
```

Mail

Deprecations

- The Stationery feature has been removed. (38725777)

Maps

New Issues

- On certain Macs, Maps locations within applications might appear black. (37716978)

Workaround: Use Maps application.

Model I/O

New Issues

- In `.obj` models, the bump semantics in `.mtl` files do not map to `MDLMaterialSemanticTangentSpaceNormal`. (40665817)

Workaround: Use `MDLMaterialSemanticBump` instead.

Networking

New Features

- The `NSURLSession` HTTP/2 implementation has been updated to support HTTP/2 connection reuse per [RFC 7540 Section 9.1.1](#). This requires an HTTP/2 server to present a certificate which covers more than one server hostname. The certificate may use the Subject Alternative Name extension or wild-carded domain names. In addition, `NSURLSession` requires name resolution to resolve the different hostnames to the same IP address. `NSURLSession` may reuse HTTP/2 connections across different domain names when these conditions are satisfied. (37507838)

Deprecations

- FTP and File URL schemes for Proxy Automatic Configuration (PAC) are deprecated. HTTP and HTTPS are the only supported URL schemes for PAC. This affects all PAC configurations including, but not limited to, configurations set via Settings, System Preferences, profiles, and `NSURLSession` APIs such as `NSURLSessionConfiguration.connectionProxyDictionary`, and `CFNetworkExecuteProxyAutoConfigurationURL()`. (37811761)

OpenGL and OpenCL Deprecation

Deprecations

- The APIs in the OpenGL and OpenCL frameworks are deprecated and remain present for compatibility purposes. Transition to Metal if your app is using OpenGL or OpenCL.

Preview

New Issues

- Certain images might appear blank. (40508340)

Privacy

New Features

- Applications which use the `–scanForNetworksWithParameters` API will no longer obtain the MAC address (BSSID) of nearby Wi-Fi access points when Location Services is disabled. If broadcasted, the network name (SSID) remains included in the scan results. (37427543)
- 3rd Party Apps cannot access protected storage unless they are added to the Application Data category located in the Privacy tab of Security & Privacy System Preferences. (39798760)

Safari and WebKit

New Issues

- Websites might be unable to prompt users to accept push notifications. (39154112)
- When Dark Mode is enabled, certain web pages might display a dark background. (39706506)

Workaround: Reload the web page.

- Newly installed or modified content blockers might not run in Safari. (40502882)

Workaround: Use Safari Technology Preview for testing.

Deprecations

- The Safari Extension `canLoad` API is deprecated. Safari will inactivate these extensions and notify users upon first launch. Affected extensions can be reenabled via the Extensions pane in Safari preferences. Extensions using `canLoad` should switch to the Content Blocker model. (33726891)
- Legacy NPAPI browser plug-ins are no longer supported in Safari, with the exception of Adobe Flash. These plug-ins will not be loaded and cannot be reenabled. (34213078)
- Safari no longer supports developer-signed `.safariextz` packaged legacy Safari Extensions. At first launch of Safari on macOS 10.14, if users have any legacy developer-signed extensions installed, they will be notified such extensions are no longer supported. These extensions cannot be reenabled. Safari Extension Gallery extensions remain supported on macOS 10.14; however, this support will be removed in an upcoming macOS release. Developers should move to the Safari App Extensions programming model. (39007695)

Social Network Integrations

Deprecations

- macOS 10.14 no longer includes built-in integrations with social networking and media sites. Developers may use a sharing extension if this functionality is desired.

Text Input

New Issues

- The Option+Return shortcut to select Chinese characters while typing in Korean is unavailable in macOS 10.14 beta. (39967040)

Xcode

New Issues

- The simulator runtimes for iOS 9.2 and earlier are unavailable in macOS 10.14 beta. (40335891)