macOS Catalina

macOS Catalina (version 10.15) is the sixteenth major release of macOS, Apple Inc.'s desktop operating system for Macintosh computers. It is the successor to macOS Mojave and precedes macOS Big Sur, which is planned to be released in the second half of 2020. It was announced at WWDC 2019 on June 3, 2019, and was released to the public on October 7, 2019. Catalina is the first version of macOS to support only 64-bit applications and the first to include Activation Lock.[4][5] It is the last version of macOS to have the version number prefix of 10, as the next release, Big Sur, is version 11.0.[6]

The operating system is named after Santa Catalina Island, which is located off the coast of southern California.

Contents

macOS 10.15 Catalina

A version of the macOS operating system

Screenshot of the macOS Catalina desktop in "dark mode".

Developer	Apple Inc.
OS family	Macintosh · Unix
Source model	Closed, with open source components
General availability	October 7, 2019[1]
Latest release	10.15.6 (19G2021)[2] (Supplemental Update)[3] (August 12, 2020) [±] (https://en.wikipedia.org/w/index.php?title=Template:Latest_stable_software_release/macOS_Catalina&action=edit)
Update method	Software Update
Platforms	x86-64
Kernel type	Hybrid (XNU)
License	APSL and Apple EULA
Preceded by	macOS 10.14 Mojave
Succeeded by	macOS 11.0 Big Sur
Official website	apple.com/macos/catalina (https://www.apple.com/macos/catalina)
Support status	

System requirements

macOS Catalina officially runs on all standard configuration Macs that support Mojave. 2010–2012 Mac Pros, which could run Mojave only with a GPU upgrade, are no longer supported.[5] Catalina requires 4 GB of memory, an increase over the 2 GB required by Lion through Mojave.[7][8]

- iMac: Late 2012 or newer
- iMac Pro
- Mac Pro: Late 2013 or newer
- Mac Mini: Late 2012 or newer
- MacBook: Early 2015 or newer
- MacBook Air: Mid 2012 or newer
- MacBook Pro: Mid 2012 or newer, Retina display not needed

It is possible to install Catalina on many older Macintosh computers that are not officially supported by Apple. This requires using a patch to modify the install image.[9]

Changes

System

Catalyst

Catalyst is a new software-development tool that allows developers to write apps that can run on both macOS and iPadOS. Apple demonstrated several ported apps, including Jira and Twitter (after the latter discontinued its macOS app in February 2018).[10][11]

System Extensions

An upgrade from Kexts. System Extensions avoid the problems of Kexts. There are 3 kinds of System Extensions: Network Extensions, Endpoint Security Extensions, and Driver Extensions. System Extensions run in userspace, outside of the kernel.[12][13] Catalina will be the last version of macOS to support legacy system extensions.[14][15]

DriverKit

A replacement for IOKit device drivers, driver extensions are built using DriverKit. Driverkit is a new SDK with all-new frameworks based on IOKit, but updated and modernized. It is designed for building device drivers in userspace, outside of the kernel.[16][13]

Gatekeeper

Mac apps, installer packages, and kernel extensions that are signed with a Developer ID must be notarized by Apple to run on macOS Catalina.[17]

Activation Lock

Activation Lock helps prevent the unauthorized use and drive erasure of devices with an Apple T2 security chip (2018, 2019, and 2020 MacBook Pro; 2020 5K iMac; 2018 MacBook Air, iMac Pro; 2018 Mac Mini; 2019 Mac Pro).[5][18]

Dedicated system volume

The system runs on its own read-only volume, separate from all other data on the Mac.[5]

Voice control

Users can give detailed voice commands to applications.[19] On-device machine processing is used to offer better navigation.[5]

Sidecar

Sidecar allows a Mac to use an iPad (running iPadOS) as a wireless external display. With Apple Pencil, the device can also be used as a graphics tablet for software running on the computer.[11][20] Sidecar requires a Mac with Intel Skylake CPUs and newer (such as the fourth-generation MacBook Pro), and an iPad that supports Apple Pencil.[21][22]

Support for wireless game controllers

The Game Controller framework adds support for two major console game controllers: the PlayStation 4's DualShock 4 and the Xbox One controller.[23][24][25][26]

Applications

iTunes

iTunes is replaced by separate Books, Music, Podcasts, and TV apps, in line with iOS. iOS device management is now conducted via Finder.[27][28] The TV app on Mac supports Dolby Atmos, Dolby Vision, and HDR10 on MacBooks released in 2018 or later, while 4K HDR playback is supported on Macs released in 2018 or later when connected to a compatible display.[11]

Find My

Find My Mac and Find My Friends are merged into an application called Find My.

Reminders

Among other visual and functional overhauls, attachments can be added to reminders and Siri can intelligently estimate when to remind the user about an event.[5]

Removed or changed components

macOS Catalina exclusively supports 64-bit applications. 32-bit applications no longer run (including all software that utilizes the Carbon API as well as QuickTime 7 applications, image, audio and video codecs). Apple has also removed all 32-bit-only apps from the Mac App Store.[29]

Zsh is the default login shell and interactive shell in macOS Catalina,[30] replacing Bash, the default shell since Mac OS X Panther in 2003.[31] Bash continues to be available in macOS Catalina, along with other shells such as csh/tcsh and ksh.

Dashboard has been removed in macOS Catalina.[32]

The ability to add Backgrounds in Photo Booth was removed in macOS Catalina.

Built-in support for Perl, Python 2.7 and Ruby are included in macOS for compatibility with legacy software.[33] Future versions of macOS will not include scripting language runtimes by default, possibly requiring users to install additional packages.[34]

Legacy AirDrop for connecting with Macs running Mac OS X Lion, Mountain Lion and Mavericks has been removed.[35]

Reception

Catalina received favourable reviews on release for some of its features.[36] However, some writers and bloggers said that the OS was unreliable.[37][38][39][40][41] Similar to the addition of User Account Control dialog boxes on Windows Vista the previous decade, prompts for allowing software access to sensitive data were criticized by some writers as annoying.[39][42]

Release history

| | Previous release | | Current release |

Version	Build	Date	Darwin	Release Notes	Standalone download
10.15	19A583	October 7, 2019	19.0.0	Original Software Update release Security content (http s://support.apple.com/HT210634)	
	19A602	October 15, 2019	19.0.0	Supplemental update	
	19A603	October 21, 2019	19.0.0	Revised Supplemental update	
10.15.1	19B88	October 29, 2019	19.0.0 xnu-6153.41.3~29	About the macOS Catalina 10.15.1 Update (https://sup port.apple.com/HT210642# macos10151) Security content (http s://support.apple.com/HT210722)	macOS 10.15.1 Update (htt ps://support.apple.com/kb/ DL2022)
10.15.2	19C57	December 10, 2019	19.2.0 xnu-6153.61.1~20	About the macOS Catalina 10.15.2 Update (https://sup port.apple.com/HT210642# macos10152) Security content (http s://support.apple.com/HT210788)	macOS 10.15.2 Update (htt ps://support.apple.com/kb/ DL2025) macOS 10.15.2 Combo Update (http s://support.apple.com/ kb/DL2028)
10.15.3	19D76	January 28, 2020	19.3.0 xnu-6153.81.5~1	About the macOS Catalina 10.15.3 Update (https://sup port.apple.com/HT210642# macos10153) Security content (http s://support.apple.com/HT210919)	macOS 10.15.3 Update (htt ps://support.apple.com/kb/ DL2029) macOS 10.15.3 Combo Update (http s://support.apple.com/ kb/DL2030)
10.15.4	19E266	March 24, 2020	19.4.0 xnu-6153.101.6~15	About the macOS Catalina 10.15.4 Update (https://sup port.apple.com/HT210642# macos10154) Security content (http s://support.apple.com/HT211100)	macOS 10.15.4 Update (htt ps://support.apple.com/kb/ DL2036) macOS 10.15.4 Combo Update (http s://support.apple.com/ kb/DL2037)
	19E287	April 8, 2020		Supplemental update	macOS 10.15.4 Supplemental Update (http s://support.apple.com/kb/D L2038)
10.15.5	19F96	May 26, 2020	19.5.0 xnu-6153.121.1~7	About the macOS Catalina 10.15.5 Update (https://sup	macOS 10.15.5 Update (htt ps://support.apple.com/kb/ DL2039)

				macOS 10.15.5 Combo Update (https://support.apple.com/kb/DL2040)
			port.apple.com/HT210642#macos10155) Security content (https://support.apple.com/HT211170)	
	19F101	June 1, 2020	19.5.0 xnu-6153.121.2~2	Supplemental update Security content (https://support.apple.com/HT211215)	macOS 10.15.5 Supplemental Update (https://support.apple.com/kb/DL2043?locale=en_PH)
10.15.6	19G73	July 15, 2020	19.6.0 xnu-6153.141.1~9 Jul 5 00:43:10 PDT 2020	About the macOS Catalina 10.15.6 Update (https://support.apple.com/en-us/HT210642#macos10156) Security content (https://support.apple.com/en-us/HT211289)	macOS 10.15.6 Update (https://support.apple.com/kb/DL2047) macOS 10.15.6 Combo Update (https://support.apple.com/kb/DL2048)
	19G2021	August 12, 2020	19.6.0 xnu-6153.141.1~1 Jun 18 20:49:00 PDT 2020	Supplemental update	macOS 10.15.6 Supplemental Update (https://support.apple.com/kb/DL2049?locale=en_PH)

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External links

- macOS Catalina (https://www.apple.com/macos/catalina) – official site
- macOS Catalina (https://support.apple.com/en-us/HT206886) download page at Apple

Preceded by **macOS 10.14 (Mojave)**	**macOS 10.15 (Catalina)** 2019	Succeeded by **macOS 11 (Big Sur)**