

printout

Keystone MacCentral Macintosh Users Group ❖ <http://www.keystonemac.com>

We're back.

This month we have a group of presentations. Time permitting we will get to most of them.

First, we should have some highlights from Apple's September 12th event.

Second, we will cover an app called PullTube that downloads online videos and playlists.

- download any online video or playlist from YouTube, Vimeo, Dailymotion, Facebook, Instagram, Soundcloud, Cloudmix, Bandcamp, Youku, IQIY and a lot more;
- download subtitles for videos you like;
- convert them directly to MP3 and M4A, with artwork and metadata support;

Third, how to restore lost data or images.

Fourth, some utilities on Mavericks 10.9. 🍏

Meet us at

Bethany Village Retirement Center

Education Room

5225 Wilson Lane, Mechanicsburg, PA 17055

Tuesday, September 18th 2018 6:30 p.m.

Attendance is free and open to all interested persons.

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Keystone MacCentral is a not-for-profit group of Macintosh enthusiasts who generally meet the third Tuesday of every month to exchange information, participate in question-and-answer sessions, view product demonstrations, and obtain resource materials that will help them get the most out of their computer systems. Meetings are free and open to the public. The *Keystone MacCentral printout* is the official newsletter of Keystone MacCentral and an independent publication not affiliated or otherwise associated with or sponsored or sanctioned by any for-profit organization, including Apple Inc. Copyright © 2018, Keystone MacCentral, 310 Somerset Drive, Shiresmanstown, PA 17011.

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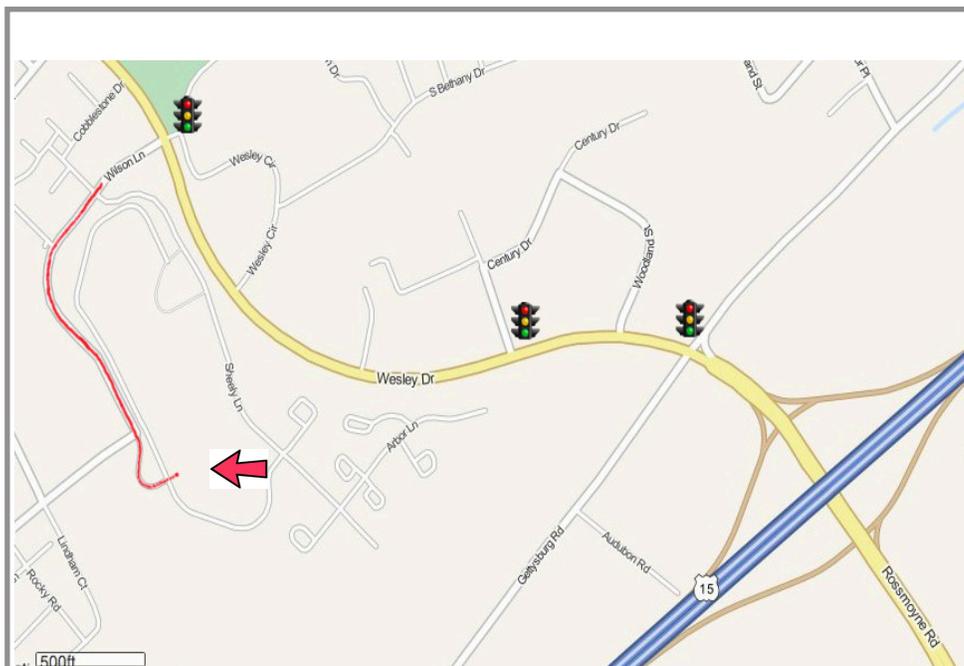
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USB Restricted Mode Can Block iOS Device Charging

Since the release of iOS 11.4.1, some readers have complained that their iOS devices aren't charging, or are charging only after being unlocked. There's a simple explanation: the new USB Restricted Mode, a security feature introduced in iOS 11.4.1 (see ["Apple Releases macOS 10.13.6, iOS 11.4.1, tvOS 11.4.1, and watchOS 4.3.2,"](#) 9 July 2018).

If USB Restricted Mode is bothering you, you can disable it by turning on USB Accessories in Settings > Touch/Face ID & Passcode. Before you do that, let's look at what USB Restricted Mode does and why Apple added it to iOS.

Apple and the FBI

Longtime TidBITS readers know that Apple and law enforcement agencies have long been at loggerheads. Usually, I'd link to one of our old articles here, but many are relevant, including:

["Apple and Google Spark Civil Rights Debate,"](#) 10 October 2014

["The FBI's War on Encryption Continues,"](#) 10 December 2015

["Thoughts on Tim Cook's Open Letter Criticizing Backdoors,"](#) 17 February 2016

["Details Emerge in Dispute between Apple and FBI,"](#) 22 February 2016

As far as law enforcement is concerned, Apple's iOS device encryption is too good because only authorized users can access data on a device that's properly secured. So the FBI and other law enforcement agencies tried to compel Apple to install a backdoor that they insist would only be used by them and not by criminals. Apple refused, and because of that, some government figures even have accused Apple of aiding and abetting terrorists.

The problem is that if Apple were to put in a backdoor, foreign governments and savvy criminals would eventually find it. It's the digital equivalent of hiding a house key under a rock in your walkway—it's not in plain sight, but a dedicated criminal who knows the key has been hidden somewhere will eventually unearth it. Now imagine that same key could unlock every house in the country. That's how big a problem creating a backdoor would be for Apple.

In fact, this scenario has already happened. The WannaCry ransomware that infected hundreds of thousands of

computers was made possible by backdoors stolen from the National Security Agency, the very agency in charge of America's electronic security—see ["WannaCry Ransomware Vindicates Apple's Battle with the FBI"](#) (16 May 2017). To make matters worse, law enforcement has made it clear that it's unable or uninterested in dealing with malware threats—see ["The FBI Isn't Much Help with Ransomware"](#) (5 November 2015).

Apple's lack of cooperation didn't stop the FBI. What finally ended that standoff was the Israeli firm Cellebrite, which found a way to crack iPhone encryption at the cost of \$5000 per device. In 2017, a new player entered the iPhone-cracking game, Atlanta-based Grayshift, which sells a product called the GrayKey to law enforcement. It's a physical box that can extract information from a connected iPhone in a matter of hours or days. The box costs between \$15,000 and \$30,000, making it a pretty good deal compared to Cellebrite.

Consider what this means from Apple's perspective: the invention of GrayKey meant that there was a big security hole in every iOS devices—an actual hole in this case—the Lightning port. Hence USB Restricted Mode.

What USB Restricted Mode Does

Put simply, USB Restricted Mode makes it so that a computer—or a GrayKey-like device—cannot access data from your iOS device unless you have unlocked it within the last 60 minutes. The timeout means that most of the time, you shouldn't have to unlock your device explicitly before connecting it to your Mac or a USB accessory.

In theory, the way USB Restricted Mode locks down access shouldn't prevent charging, but in reality, it can, particularly when used with third-party cables. [Apple acknowledges this problem.](#)

Will USB Restricted Mode Be Effective?

There's another problem with USB Restricted Mode: attackers can easily circumvent it if they capture the device before the 60-minute timer has expired. Security firm [ElcomSoft discovered](#) that plugging Apple's Lightning to USB 3 Camera Adapter into a device's Lightning port disables the timer. Unfortunately, the nature of the Lightning port makes a software fix unlikely. ElcomSoft explains:

While we cannot know for sure, the issue appears to lie in Apple's Lightning communication protocol. If the iPhone talks to a

computer, the two devices must establish trust by exchanging unique cryptographic keys. This, however, does not apply to the majority of existing Lightning accessories. Existing accessories share public keys for trust; many of them are simply not designed to exchange cryptographic keys the way computers do. As a result, before USB Restricted Mode kicks in, an iPhone can check if the accessory is MFi certified—but that is pretty much it. It appears that there are no key pairs to be exchanged, and this is probably by design.

So, what should you do, now that USB Restricted Mode is a fact of life in iOS?

Disable USB Restricted Mode... Or Not

If USB Restricted Mode isn't causing you any trouble, leave it on. Although it doesn't offer complete protection against

an alert attacker who can get access to your device quickly, it's not worthless. Once your device has been locked for more than 60 minutes, nothing we know of can crack it.

If unlock alerts are nagging you, or if your device fails to charge because you didn't unlock it, the easiest solution is to turn USB Restricted Mode off. Just go into Settings > Touch/Face ID & Passcode and enable USB Accessories.

Finally, for those who have an iPhone 8, iPhone 8 Plus, or iPhone X, you can work around issues with USB Restricted Mode by getting a Qi wireless charger. Check "[13 Qi Wireless Chargers for the iPhone Reviewed](#)" (22 February 2018) for some recommendations. They bypass the Lightning issues entirely and offer a number of other advantages. 🗑️

by Sharon Zardetto

macOS Hidden Treasures: Secrets of the System Preferences Window

System Preferences is easy to use: open it, click here, click there—whoops, not there, over here instead... wait, where is that setting? My point is: System Preferences could be easier to use. And it is, once you know the details.

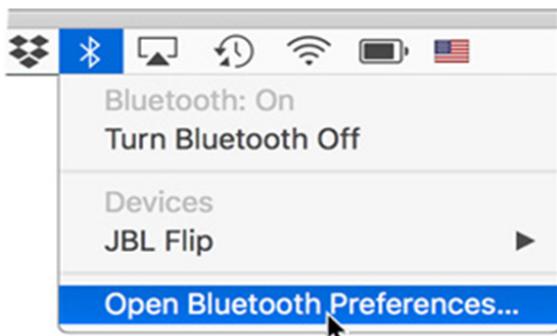
You don't, for instance, need 30-plus items displayed when you use only a dozen of them regularly. You don't always have to start with the full window, click a preference pane, and then click a tab to get where you want to be. And that Search field is more useful than you might expect.

Open System Preferences and Preference Panes

To open System Preferences, you can choose Apple > System Preferences or click its icon on the Dock. (System Preferences isn't on your Dock? See the tip at the end of this article.) Or, use a keyboard shortcut to open it, as described below.

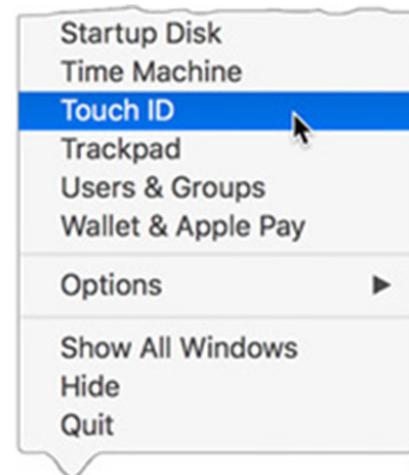
You can jump directly to a specific pane without first opening System Preferences itself, although the first two options here are limited to only a handful of panes:

If the item has a status menu on the menu bar, choose Open Preferences from its menu.



If an item has a dedicated function key—as do volume control and screen brightness, for instance—press Option and the function key to go to its preference pane. This trick also works with the Touch Bar.

If the System Preferences icon is in your Dock, press (click-and-hold, rather than just click) it, and choose the pane you want from the menu.



Put an icon for a specific pane in your Dock; clicking it opens System Preferences to that pane. (A tip at the end of this article explains how.)

Use Spotlight to jump directly to specific panes using only the keyboard. Command-Space bar is the system

default for opening Spotlight, and typing the name of a pane—usually just the first few letters—gives you a list of options, including the preference pane. The first hit in the list is always highlighted, indicating that pressing Return will open it. I used this method for years, and often still do (I blame [muscle memory](#)), but it's much quicker to use the next method.



Assign keyboard shortcuts to items in the View menu that you open frequently—and to System Preferences itself—as described next. (The shortcuts show up in the Show All button's menu, too.)

To return from a preference pane to the icon array, you can:

Click the Show All button.

Choose View > Show All Preferences (Command-L).

Use the Back button on the menu bar, or choose View > Back (Command-]). Use the Forward button or View > Forward (Command-]) to head in the other direction when you've been tweaking more than one setting. These buttons and commands can take you through a history of where you've been in System Preferences.

No matter how you move around, if you return to a multi-tab pane, the tab you worked in previously will remain selected as long as System Preferences remains open.

Set Up Keyboard Shortcuts

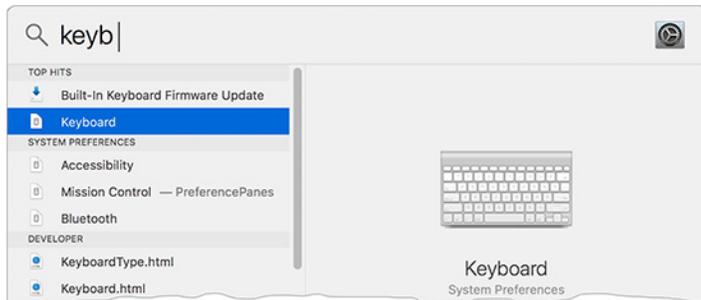
You can skip menu selections and/or multiple clicks to get where you need to go in System Preferences: set up a keyboard shortcut to open System Preferences, and then others within System Preferences to take you to the pane you want. Two quick key combos get you there in about two seconds, and you can move quickly from one pane to another if you have more than one thing to adjust.

For System Preferences itself:

Go to System Preferences > Keyboard and click Shortcuts.

Select App Shortcuts in the category list on the left, and click All Applications in the list on the right—you want this available no matter where you're working. Click the + button under the app list and type System Preferences... in the Menu Title field. You can type three periods instead of the ellipsis character that you get with Option-colon.

Click in the Keyboard Shortcut field and press your key combination. I use Command-Option-Control-comma because the three modifier keys are easy to press together and unlikely to conflict with any app shortcut, and Command-comma is used in almost all apps to trigger the Preferences command.



Okay, this isn't exactly "directly" to a pane, but it's so quick, it might as well be. Set up a keyboard shortcut to open System Preferences, and create shortcuts in System Preferences for the panes you use the most. The two keyboard shortcuts can get you to a pane in about two seconds.

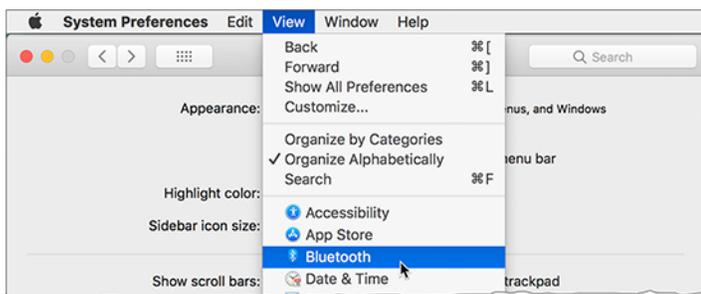
(I describe how to set these up later in this article.)

Open Panes from Within System Preferences

Once the System Preferences window is open, displaying its collection of icons, there are many ways to open a specific preference pane:

Click its icon.

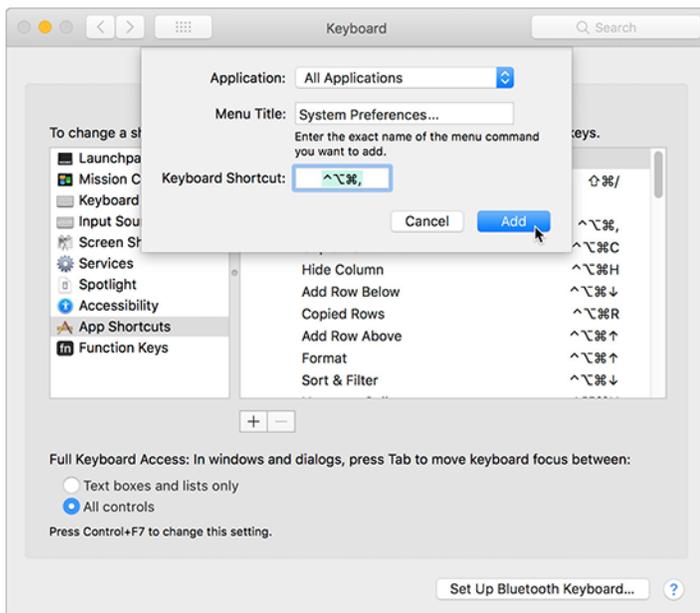
Choose it from the View menu.



Choose it from the Show All button's menu: press—that is, click and hold—the button for a list of panes.



When the Search field is inactive (the magnifying glass and Search label are grayed-out and centered in the field), type one or more letters to specify a target pane; a quick animation outlines it in blue (as with the Dock icon shown below), and pressing the Space bar opens it.



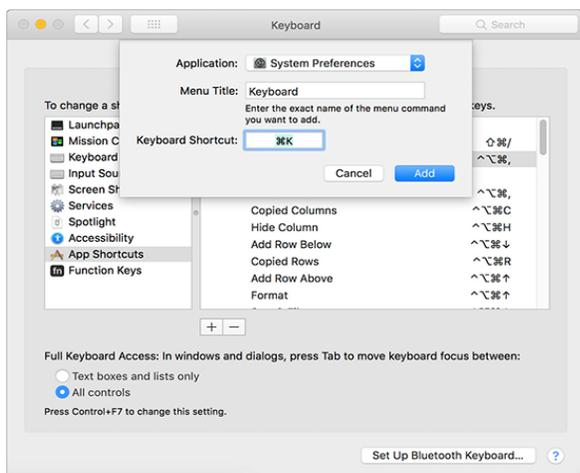
To set up a keyboard shortcut for a specific pane—one that works within System Preferences:

In System Preferences, go to Keyboard > Shortcuts and click App Shortcuts in the category list on the left.

Click the + button beneath the list of apps, and choose System Preferences from the pop-up menu. (Embedded little tip: Jump to the System Preferences item in this incredibly long menu by clicking it to open it and then typing sy to select it, or pressing its keyboard shortcut if you've created one.)

In the Menu Title field, type the name of the pane for which you want to make a shortcut. The name must be exact, so Date and Time will not work for the Date & Time preference pane. You can double-check the name by looking in the View menu (since you're in System Preferences while you're doing this).

Enter the shortcut you want for the pane. Since System Preferences has no keyboard shortcuts of its own, you'll be able to use single-letter shortcuts for your most-used panes: Command-K for Keyboard, Command-T for Trackpad, and Command-S for Sound, for instance.



To use these shortcuts in tandem, you would press Command-Control-Option-comma to open System Preferences and then Command-K to open the Keyboard preference pane.

These keyboard shortcuts even open hidden preference panes, described ahead.

Use the Search Field

Using the View menu or the menu from the Show All button is great when you know where to find the feature you need, but what about items that are less obvious? Where do you change your default browser, for instance? You haven't used Spaces in a while... wait, there's no preference pane for that? Nor for dictation, which you've been meaning to try....

While the Search field may seem redundant, or just relatively useless for going to a pane, it's great for going directly to a tab, or finding where a setting lives when you're not sure where to look, and even if you're not sure of the correct term.

So, using login or even log in as a search term can get you directly to the Login Items tab of the Users & Groups pane. The icon used to identify you and other account owners at startup... what's that called? It doesn't matter: type picture and you can select from User Picture, Desktop picture, and Screen saver. Search for wallpaper, and you get Desktop picture.

As you type, a drop-down menu lists candidates, all of whose panes are spotlighted in the window. (If you've hidden seldom-used panes to cut down on clutter—that's covered next—they still appear in the Search field's menu of suggestions.) You can jump to the related pane by clicking its icon or by clicking an item in the menu; you'll be sent directly to the appropriate tab in the pane.



Note that once the Search field is active, it stubbornly insists on staying that way as long as System Preferences is open, no matter what you do from then on, and even if you delete the search term. (Which means you can't simply type to select a displayed icon, as described earlier.) You can deactivate it by clicking its Cancel button or pressing Esc, but neither of those works unless there's something

typed in the field because an empty, active field doesn't provide a Cancel button or respond to Esc.

Streamline the Preferences Window

The System Preferences View menu provides two organizational choices: Organize Alphabetically and Organize by Category. Experts agree that the alphabetical approach is by far the better of the two (the experts polled being Adam Engst and me.)

But how many System Preferences panes do you use on a regular basis, rather than in set-it-and-forget-it mode? How many do you never use (perhaps Mouse on your laptop, or maybe Parental Controls), or need only once in a **blue moon**, such as Startup Disk? If you want more convenient access to the panes you actually use, you can reduce the clutter by hiding seldom-used panes:

Choose View > Customize. Every icon starts with a checked checkbox, indicating it shows in the window.

Click icons to uncheck those you want to hide; if you change your mind, click the icon again. (You don't have to click the icon's checkbox—clicking the icon itself is enough.)

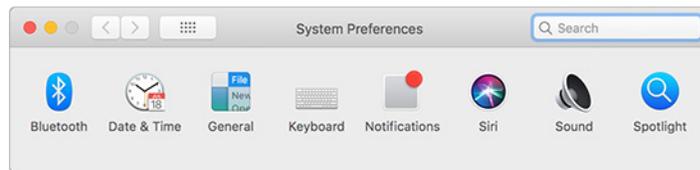


Click the Done button in the toolbar. The unchecked items disappear.

You can still easily access a hidden pane if you need it: choose it from the View menu, use the Search field, or trigger it with a keyboard shortcut that you've set up. The only catch is that a hidden pane isn't listed in the Show All button's menu except for the duration of the current System Preferences session.

Note that neither the View > Show All Preferences command nor a click of the Show All button unhides out-of-sight icons. The purpose of Show All is to get you back from a specific preference pane to the window view that displays all the available icons.

Here's what my System Preferences window looks like — it would have even fewer icons, but the window has a fixed width, so I filled an entire row.

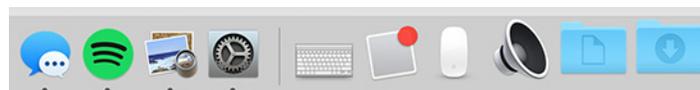


Quick Tips

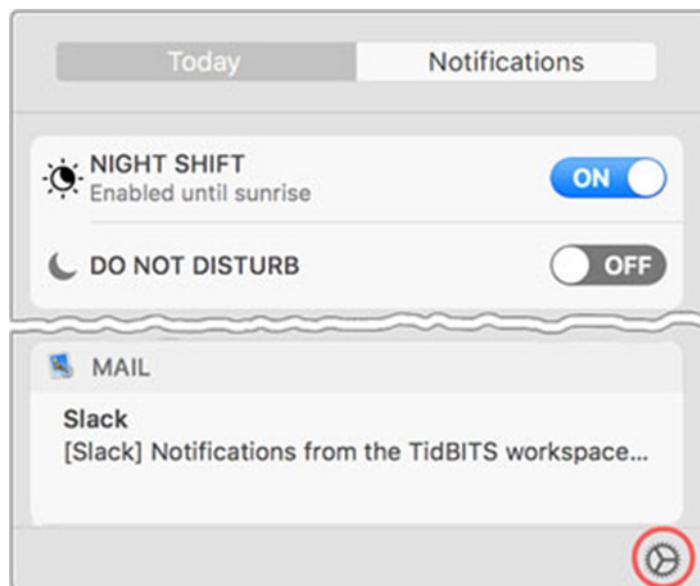
Here are a few more useful tips:

Dock or un-dock System Preferences: System Preferences is displayed in the Dock by default. To remove it, press (click-and-hold) the icon for a pop-up menu, and uncheck Keep in Dock from the Options submenu. It's still there? That's because you have System Preferences open, and all open apps show in the Dock. Your System Preferences icon isn't available in the Dock unless it's open? Drag its icon from your Applications folder to the left side (or top, if you have it showing vertically) of the Dock.

Add panes to the Dock: If you need to use certain preference panes frequently, add them to your Dock for quick access. You'll find them in /System/Library/PreferencePanes. Since they're essentially documents, drag them to the right side (or the bottom) of the Dock. The screenshot here shows the System Preferences icon on the "app" side of the Dock and icons for the Keyboard, Notifications, Mouse, and Sound panes on the "document" side.

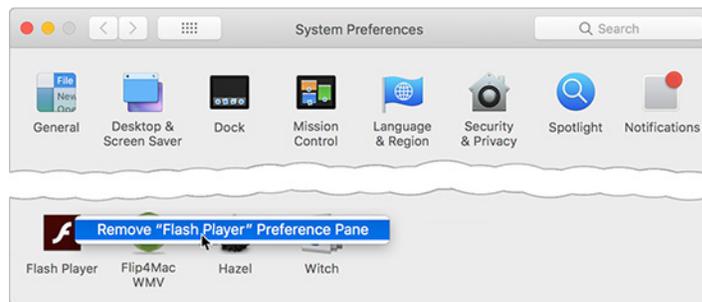


Notifications shortcut: There's a special shortcut from the Notifications sidebar to the Notifications preference pane: click the little gear icon at the bottom of the panel.



Third-party pane placement: Non-Apple preference panes are interspersed with the others in an alphabetized System Preferences window but appear in their own row at the bottom of the window when it's viewed by categories.

Delete a third-party pane: Third-party preference panes live in ~/Library/PreferencePanets. That's your user Library folder—Apple's preference panes are stored in the System Library folder. The user Library folder is hidden by default, but you can easily access it in the Finder by pressing Option while opening the Go menu and then choosing Library. To delete a pane that has outlived its usefulness, however, you don't have to access the folder. Instead, Control-click its icon in System Preferences and choose Remove.



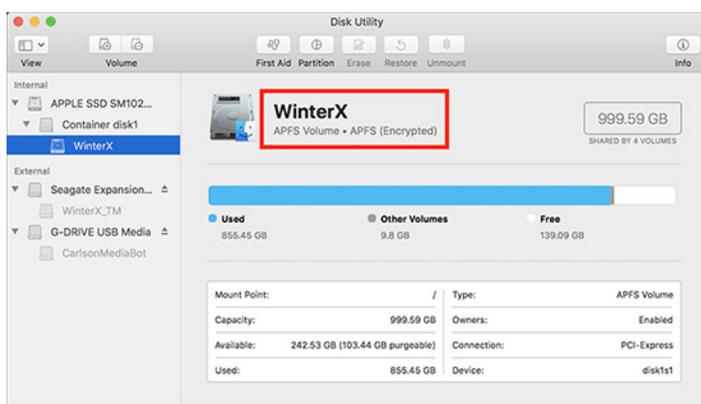
by Jeff Carlson

What APFS Does for You, and What You Can Do with APFS

When Apple released macOS 10.13 High Sierra in 2017, one of its most notable features was nearly invisible. Installing the update on a Mac with a solid-state drive (SSD)—but not a Fusion drive—automatically switched the underlying file system from Mac OS Extended (also known as HFS+) to APFS (Apple File System).

The file system is the bedrock-level technology that specifies where data is stored—not just in terms of how files and folders are represented in the operating system, but where individual bits are physically stored in the cells of an SSD chip or on the magnetic surfaces of the spinning platters in a mechanical hard disk drive.

There are any number of ways the switch to APFS could have gone wrong, but for most people the shift was seamless—if a bit more time consuming than most macOS upgrades. You may not even have noticed that your Mac is now running APFS. To find out, open Disk Utility, click your startup disk in the sidebar, and look under the disk name.



High Sierra converted my 2016 MacBook Pro when I upgraded and, since nothing blew up, I filed APFS away as another technology shift that Apple managed efficiently. But in the process of writing my just-released book [Take Control of Your Digital Storage](#), I learned why Apple went to all the trouble. APFS offers a few notable automatic benefits and some useful things you can do directly.

What Does APFS Do for Me?

Let's start with why Apple made the switch from Mac OS Extended to APFS in the first place. Although mechanical hard disk drives are still widely used and offer the best price per gigabyte, solid-state storage media is the future. (In fact, APFS is the file system used by iOS devices, Apple Watches, and Apple TVs—all of which store data in solid-state memory.) An SSD provides much faster performance because it doesn't suffer from the lag between macOS asking for data and a mechanical disk's armature skipping to the correct positions on the platters to read it. An SSD also has no moving parts, so the likelihood of mechanical failure is extremely low.

However, the file system in use before APFS, Mac OS Extended, isn't as efficient when working with SSDs. It was designed—many years ago—with magnetic disks in mind, where a file is preferably written in a long stretch across the surface. In reality, most files are split up into many tiny pieces, which is why we used to optimize performance by “defragmenting” disks, a practice largely unneeded these days except in rare circumstances.

On an SSD, data is written to cells regardless of where they are located in relation to one another. But there's a catch: data can be written to the cells only a finite number of times, so APFS efficiently shuffles data around to manage SSD wear. Also, if you duplicate a file on an SSD, APFS uses the stored data of the original file and writes just the changes rather than writing an entirely new file. In terms of performance that you can see, duplicating that file—or folder, or hundreds of files—happens nearly instantaneously because APFS makes metadata links to the originals.

So, underneath the surface, APFS handles data more efficiently. That said, Apple is still working on APFS, making it a moving target for developers of backup and disk utility software and limiting the compatibility of the file system. APFS currently works only with SSDs, although Apple says that full support for mechanical hard disks and Fusion drives is coming in macOS 10.14 Mojave. It's

possible to format a hard disk drive as APFS, but you're likely to [experience a performance hit](#) compared to it formatted with Mac OS Extended. It will be interesting to see how Apple addresses that in Mojave.

APFS also isn't supported on Time Machine drives. Even if your startup disk is an SSD, your Time Machine drive needs to remain in Mac OS Extended format for the time being.

What Can I Do with APFS?

That's all behind-the-scenes stuff, but what does APFS enable you to do? One of its most powerful user-facing features is how it enables you to create multiple, resizable volumes on your drive. Sometimes people want to split a drive into multiple virtual volumes to separate data such as files for work and files for home or to encrypt one for storing sensitive data and leave the other unencrypted.

To explain how Mac OS Extended and APFS each handle that task, imagine the drive is a factory that builds rockets. I could instead use an office building as a metaphor, but wouldn't you rather visualize spaceships?

On a drive formatted as Mac OS Extended, the factory is a giant open space where the rockets can be assembled and parts can be stacked. The factory floor is the free space on the drive.

(There's also a secret door to a hidden room of emergency equipment that nobody pays attention to unless something goes wrong on the factory floor. That room represents macOS Recovery, the invisible startup partition that runs a scaled-down version of the operating system when you need to repair your main macOS installation.)

Now, let's say you want to partition the drive into two volumes or, in our example, to split the factory into two sections to build two rockets simultaneously. Under Mac OS Extended, you'd erect a permanent wall between the sections, creating two separate rooms. (The hidden macOS Recovery room is still there, too. Safety first, people.)

Soon your rocket business is growing quickly, and you realize you need to build a larger rocket that will get a spacecraft to Mars. The problem is, this new rocket won't fit into either of the two rooms. So, to make way for it, you have to take everything out of the factory (back up all the data and erase the volume), smash the wall (reformat the drive), build a brand-new wall that allocates enough space for the large rocket and leaves a smaller second room for the first rocket design and components (repartition the drive), and put everything back (restore the data from backup).

(Technically, there's another option. If one of the rooms (partitions) is empty, Mac OS Extended enables engineers to move the wall, resizing the partition non-destructively. But when there's equipment (data) in each room, the wall has to come down first.)

If, instead, you decide to go back to the one-room layout, you need to take everything out of both rooms and start over (back up all the data, erase the entire drive, and restore the data).

Now, let's look at an APFS-powered rocket factory.

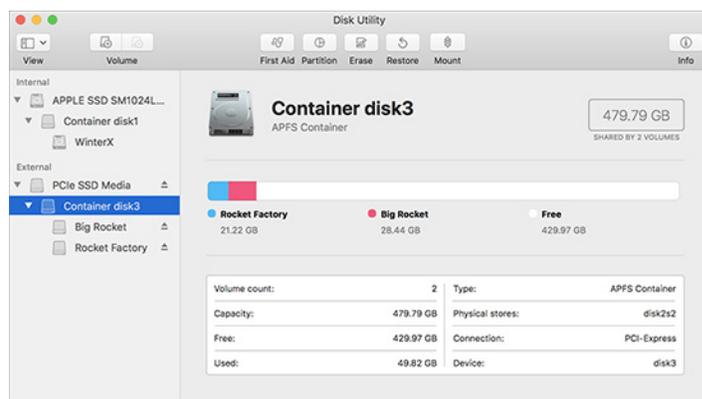
In terms of how space is allocated when formatting or partitioning a drive, APFS creates containers that include volumes, which can be dynamically adjusted as needed.

In our rocket factory analogy, APFS starts as a large open building, but even before a single piece of machinery is installed, a border of bright yellow-and-black tape is put onto the floor to indicate the active work area. That's the container, and it encompasses nearly all of the factory area. That large area is also a single volume.

(If the drive is a startup disk, there are two other small areas taped off, one for the macOS Recovery room, and one for virtual memory, basically a small spot to store equipment — data — for short periods of time to make it easier to access.)

In this scheme, all the space in the volume is available for use, just as in the Mac OS Extended factory, but the factory manager is better about positioning tools and equipment near each other for a more efficient workflow.

As production ramps up and the factory floor needs to split into two sections, the APFS factory doesn't build a physical wall. Instead, the manager merely moves the tape to indicate that there are now two work areas: adding a new volume and making the original volume smaller. The equipment in the area that becomes the second work area moves as needed—rather than being removed (erased) to create the volume. (You can also set minimum and maximum size limits for a container when you create it.) In the Finder, you see two volumes.



When the order comes in to start manufacturing bigger rockets, the volume that needs the extra space automatically grows as needed: redrawing the taped area and taking space from the second volume dynamically. No walls need to be torn down; no volumes need to be erased and then restored.

(Note that it is possible to partition an APFS drive, which gives you multiple immovable containers, but then they

have the same limitations as Mac OS Extended partitions. So there isn't much point.)

APFS Snapshots

Another major benefit to APFS is its support for snapshots, which are a record of a drive's state at a point in time. When you apply a system update, macOS automatically creates a new snapshot, so if anything goes wrong, you can roll the Mac back to the exact state it was in before the update. A snapshot is also created once every hour. These snapshots also enable you to retrieve deleted files or to go back to an earlier version of a file.

Sound familiar? Except for the automatic pre-update backup, that's how Time Machine works. In fact, to access snapshots, you use the Time Machine interface (even if you haven't yet set up Time Machine). But two separate things are going on behind the scenes.

When a Time Machine drive is connected, macOS makes regular Time Machine backups, not APFS snapshots, to that drive. Since a Time Machine drive must be formatted as Mac OS Extended, macOS copies to the drive any files that were changed since the last backup.

If the Time Machine drive is not connected—let's say you're traveling with your MacBook Pro—macOS creates APFS snapshots every hour and stores them on the startup disk or any APFS-formatted SSD directly connected to the Mac. The snapshots don't take up much extra space, because they only contain metadata describing the states and locations of every file, plus data that's been removed or replaced. Snapshots also age out after 24 hours and are automatically deleted.

On Macs running macOS versions earlier than High Sierra or those with hard disk drives or Fusion drives still formatted as Mac OS Extended, Time Machine creates similar local "mobile Time Machine" snapshots when the Time Machine drive is disconnected. But because the drive isn't formatted as APFS, those local snapshots are not the same as APFS snapshots.

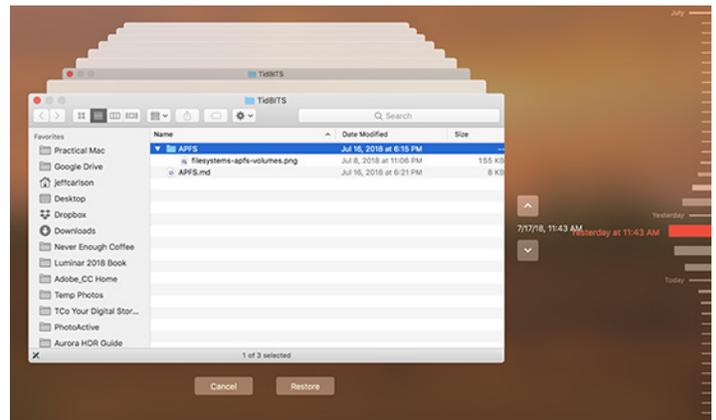
On a drive formatted as APFS, you can see how many snapshots are present by opening the Terminal app and typing:

```
tmutil listlocalsnapshots /
```

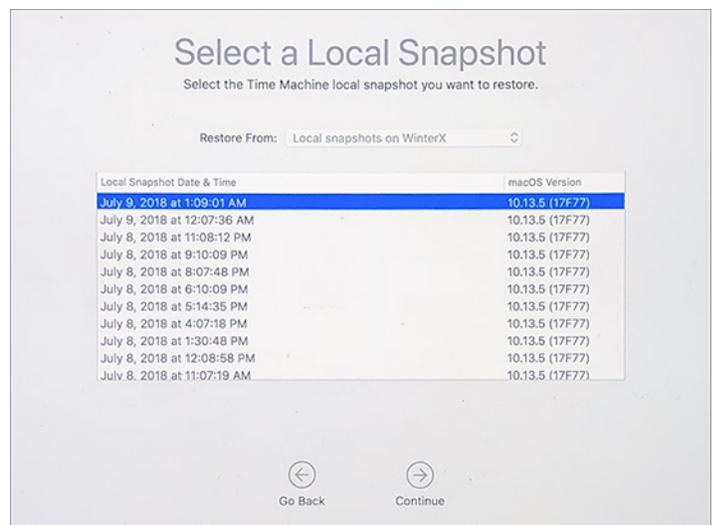
You can also create a snapshot at any time by typing:

```
tmutil snapshot
```

If you need to restore deleted files or go back to an earlier version of a file, you use the Time Machine interface to do it. Click the Time Machine icon in the Dock or choose Enter Time Machine from the Time Machine menu bar icon, and then use the timeline on the right to navigate to the version of the file you want.



Should you need to restore the entire startup disk to a previous state, restart into macOS Recovery (hold Command-R at startup until you see the macOS Utilities screen), and choose Restore from Time Machine. You'll be given the option to select one of the local snapshots.



(Speaking of macOS Recovery, if you open Disk Utility and run First Aid on the startup disk, it also checks all the snapshots. So if you have a lot, be prepared to wait quite some time for First Aid to complete.)

You may never need to take advantage of snapshots, but it's comforting to know that macOS has a built-in data protection mechanism in place at the file-system level.

Take Control of Your Digital Storage

APFS is just one part of our modern storage picture. In [Take Control of Your Digital Storage](#), I also investigate the other acronyms that bedevil us when contemplating adding capacity: what to look for when buying a NAS (Network-Attached Storage), understanding the difference between HDDs (hard disk drives) and SSDs (solid-state drives), and explaining RAID (Redundant Array of Independent Disks) and, related to RAID, possibly my favorite acronym ever, JBOD (just a bunch of disks). You'll also learn more about creating partitions and volumes, using Disk Utility and First Aid, encrypting drives and data, and more. 🗑️

Socializing Siri: Add Relationships, Teach Pronunciations, and More

As magical as Siri can be when it works, it's annoying when Siri fails due to not realizing who you are, doesn't understand who your mother is, or pronounces names wrong. Apple provides a few ways you can teach Siri about yourself and the people in your life, but because many of them require voice commands, they're not obvious or well explained.

Tell Siri Who You Are

Siri works better if it knows who you are. For instance, when Siri can access a contact card assigned to you, you can issue commands like "Give me directions home" because Siri can look up the home address on your contact card. This contact card also lets you tell Siri who your relatives are.

You might already have this set up—check in Settings > Siri & Search > My Information or just ask Siri "Who am I?". If you haven't yet introduced yourself to Siri, tap My Information and choose your contact card from the list. (And if you don't have your own contact card, open the Contacts app and tap the + button in the upper-right corner to add a new contact with your information.)

Teach Siri Who Your Relatives Are

You can ask Siri to perform tasks like "Call Bertie Wooster." However, we often don't refer to those close to us by their names, but instead by how they're related to us, like "my mom," "my brother," "my assistant," etc. One of the handiest things I do with Siri is telling it to "Call my wife," after which it calls Hannah Centers without me having to give her name explicitly.

The simplest way to set up such a relationship is via Siri itself, by saying something like "Hannah Centers is my wife." Or you can do it with these steps:

Go to your contact card in the Contacts app.

Tap Edit in the upper-right corner.

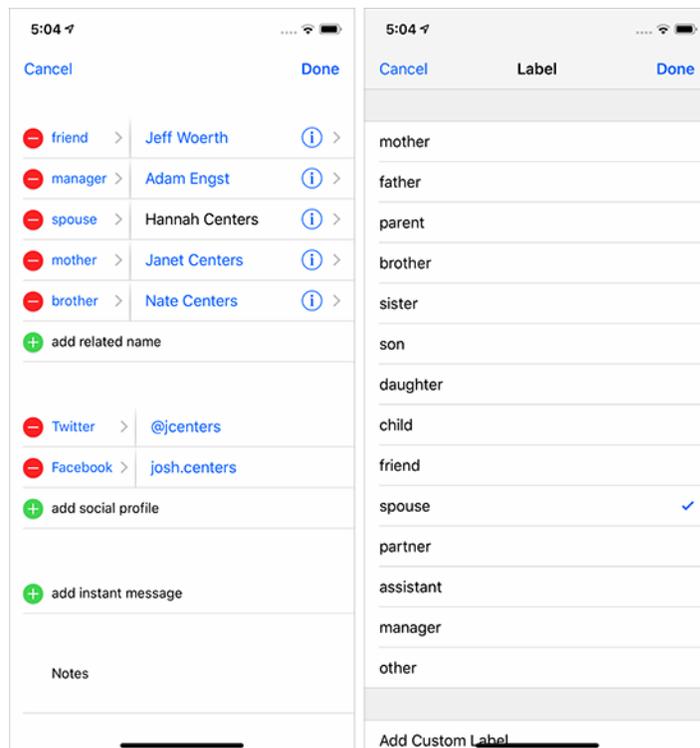
Scroll down and tap Add Related Name.

A new field appears with a relationship and related name field. The default relationship is Mother. Tap that to choose another from the list, or you can create a custom label.

In the Related Name field, tap the info button and choose a contact from the list.

Repeat from Step 3 for additional relationships.

If you set the relationship to "spouse," Siri will respond to either "husband" or "wife" for the same person. So if I say "Call my husband," the iPhone still dials Hannah.



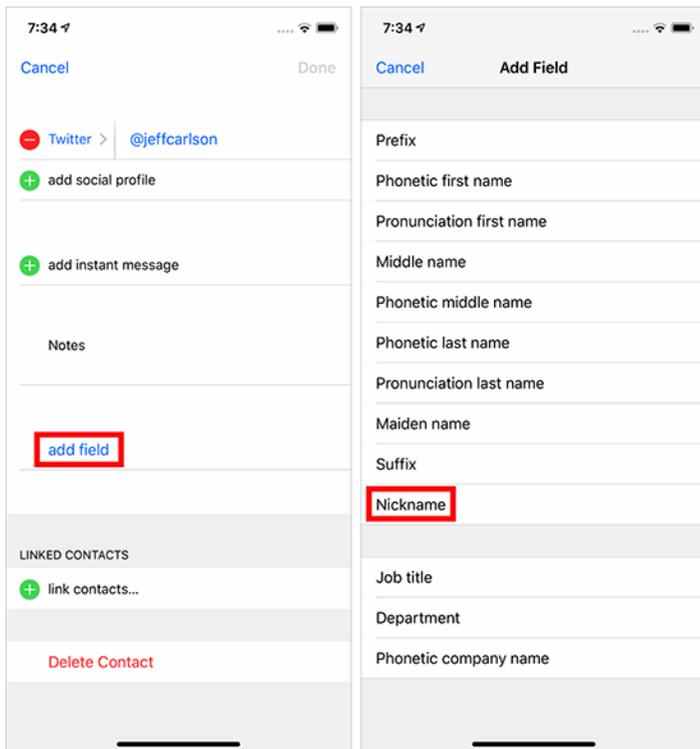
Set Nicknames for Contacts

Let's say your mom's name is Dahlia, but you only call her "Mom." People "solve" this problem by setting the first name for their mother's contact card to "Mom," which is terrible data hygiene. If you were to share that contact card with someone who has done the same thing, they would end up with two cards called Mom. Apple added a Nickname field to Contacts for just this purpose. Here's how to assign it to a contact:

Open a contact and tap Edit in the upper-right corner.

Scroll down to the bottom and tap Add Field.

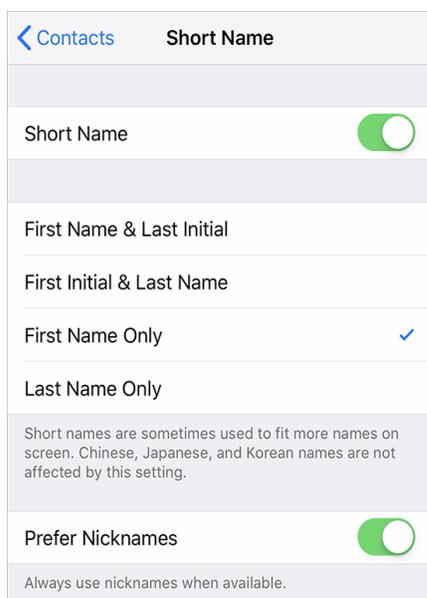
Tap Nickname.



Back on the contact screen, tap the new Nickname field at the top, enter the nickname, and tap Done in the upper-right corner when you're finished.

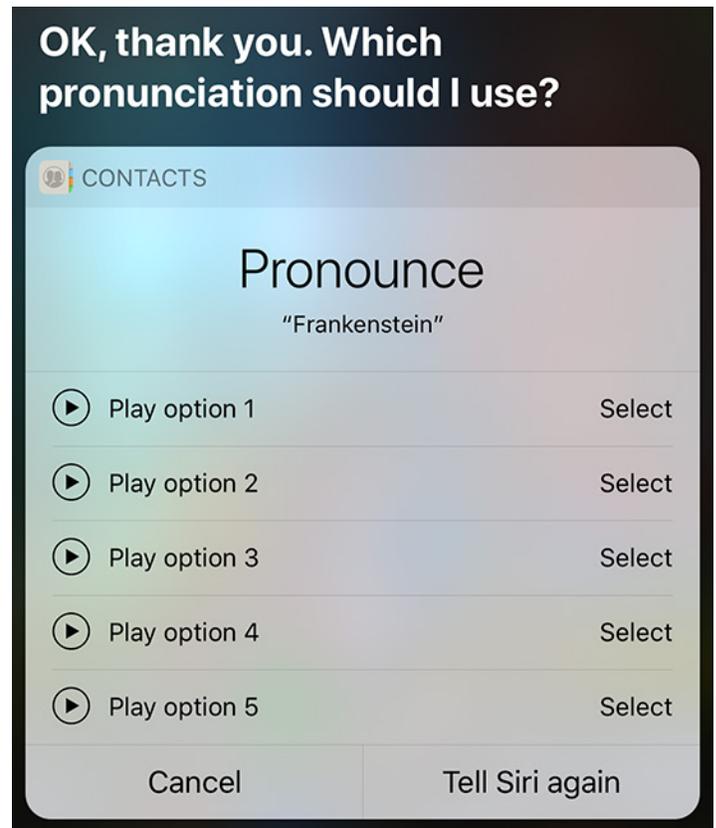
From then on, in Messages and phone calls, that person's name will be replaced by their nickname. Also, you can give Siri commands based on the contact's nickname. So if you have a friend named Augustus Fink-Nottle, and you've set his nickname field, you can tell Siri to "Call Gussie."

One more nickname-related tip. By default, Messages displays the first name of the person with whom you're having a conversation, and if you have a nickname assigned to that contact, it shows the nickname instead. If you'd prefer a different short name format, you can pick one in Settings > Contacts > Short Name.



Teach Siri How to Pronounce Names

Out of the box, Siri often butchers names with unusual pronunciations, but Apple provides a few built-in ways to correct it. The easiest is to tell Siri "Learn how to pronounce Contact Name." Siri will ask you first how to pronounce the first name followed by the last name, and after each presents a list of options. Tap the play buttons to hear each pronunciation and then tap Select next to the best one.



A quick way to test how Siri thinks a name is pronounced is to tell it "Show me the contact card for Contact Name"—this requires Settings > Siri & Search > Voice Feedback be set to Always On.

Alternatively, you can train Siri with the pronunciation and phonetic name fields in Contacts. You add these fields the same way you add the Nickname field above. The two fields appear to work the same from Siri's perspective, but the phonetic fields change how the name sorts in lists as well as how it's pronounced. [That's essential in Japanese](#), for instance.



I prefer this way of training Siri since you get a handy pronunciation reminder below the contact's name. Plus, if you use these fields, the information syncs with all the rest of your devices via iCloud, so they'll pick up the correct pronunciations as well. Training Siri's pronunciation with the voice command seems to work only on that device.

Voice assistants still have a long way to go before we'll be able to carry on anything resembling normal conversations with them, but with a little setup and training, you can make talking about people with Siri a lot less stilted. 🗑️



Software Review

Apple Updates

macOS High Sierra 10.13.6 Supplemental Update 2 for MacBook Pro (2018)

Aug 28, 2018 – 1.3 GB

System Requirements

- macOS 10.13.6

The macOS High Sierra 10.13.6 Supplemental Update 2 improves the stability and reliability of MacBook Pro with Touch Bar (2018) computers, and is recommended for all users. 🗑️



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