

# printout

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

## April Program

This month we will cover Apple's March announcements that included

- A streaming service with original content
- Apple News+ which offers news content and an array of national magazines
- Apple Arcade that includes over 100 exclusive games
- Apple's own credit card, Apple Card. Check out our article on this card.

We will also discuss setting up mail using AOL. This will be of special interest to Verizon customers who had to migrate when Verizon gave up email service. 📧

Meet us at

### **Bethany Village Retirement Center**

Education Room

5225 Wilson Lane, Mechanicsburg, PA 17055

**Tuesday, April 16<sup>th</sup> 2019 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 © 2019, Keystone MacCentral, 310 Somerset Drive, Shiresmanstown, PA 17011.

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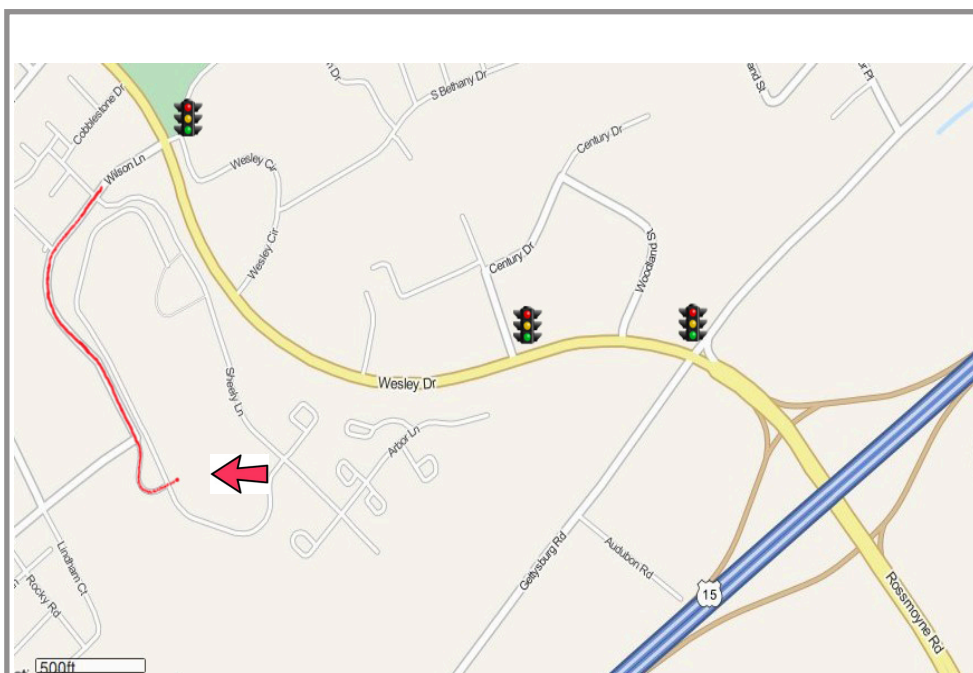
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# 14 Siri Tricks You Can Use Right Now

**Answering** questions, making telephone calls, and (perhaps) telling jokes may be some of the things you think of when you think of Siri, but Apple's digital assistant has many more tricks up its sleeve.

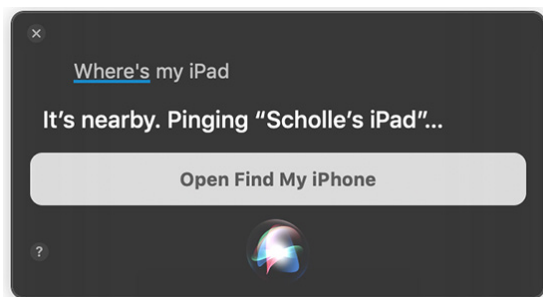
Here's a collection of some of the coolest things it can help you do that don't fit into a particular category, from translating phrases into foreign languages to controlling your smart home. (Not sure how to trigger Siri on all your devices, including your Mac, iPhone, HomePod, AirPods, and Apple TV? [See this Apple support page.](#))

These tips are just the part of the iceberg that's peeking out of the water when it comes to Siri, though. You can learn about everything that Siri can do in detail in my new book [Take Control of Siri](#). It's just \$14.99, and if you've caught the HomeKit bug as well, you can buy it for just \$20 in a bundle with the just-updated [Take Control of Apple Home Automation](#), by Josh Centers, which is also normally \$14.99.

## 1. Find Your Apple Devices

It can get tiring to log in to iCloud.com and scan the map for a wayward Apple device, just so you can end up, as always, wandering around your house listening for a muffled ping. (In my case, that ping once came from the freezer where my iPhone was cooling its heels, carefully wrapped in tin foil. Ah, toddlers).

Siri lets you cut to the chase. Trigger Siri and try "Ping my watch" or "Find my iPhone." Siri tells you if any of the devices signed into your iCloud account are nearby and can play a sound to lead you to it. I find this particularly useful with the HomePod as I can just call out "Hey Siri, where's my iPhone?"



## 2. Retrieve Passwords

From time to time, you may need to look up a password for a Web site when Safari AutoFill goes on the blink or you need to type the password on another device. As of iOS 12 and macOS 10.14 Mojave, Siri makes the process

a whole lot easier. Trigger Siri and ask for a password by name to jump right to it. For example, ask "What's my Netflix password?" or "What's my Dropbox password?" Or say "Show my passwords" to pull up the whole list. Don't worry: you must enter your login password on the Mac to gain access to passwords. Your iOS device can verify your identity using Touch ID or Face ID.

**Tip:** Wi-Fi passwords aren't covered by Siri's password recall powers, but there is a quick trick that makes sharing them easy. See "[Share your Wi-Fi password from your iPhone, iPad, or iPod touch.](#)"

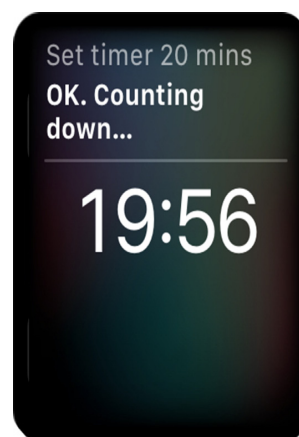
## 3. Launch an App

On your Mac and iOS devices, Siri offers fast access to your apps. Trigger Siri and say: "Open app name," "Launch app name," "Play app name," or even just the app's name. (Perhaps Apple thought it would improve our attitude toward work to say "Play Photoshop" just as easily as "Play the Sims.") However, Siri can't close apps.

**Tip:** You can also search the App Store using Siri. Say something like "Show me money management apps" or "Show me kids' games" and the App Store opens to that category.

## 4. Set a Timer

Whether you're keeping track of when to take something out of the oven or timing a test, Siri can help you count down a few minutes or a few hours on your iOS devices, Apple Watch, or HomePod. It's as simple as triggering Siri and saying "Set timer 20 minutes."



To check how much time is left, trigger Siri and say "Check timer." To cancel it, say "Stop timer."

The HomePod has an extra trick up its sleeve—you can use it to set multiple timers, which is particularly helpful when you're cooking. Name them so you know which one is which. Say "Hey Siri, set lasagna timer to 45 minutes" and then "Hey Siri, set sauce timer to 5 minutes." To see how much time is left on a particular timer, say "Hey Siri, check lasagna timer." To cancel it, say "Hey Siri, cancel lasagna timer." To clear all running timers, say "Hey Siri, cancel all timers."

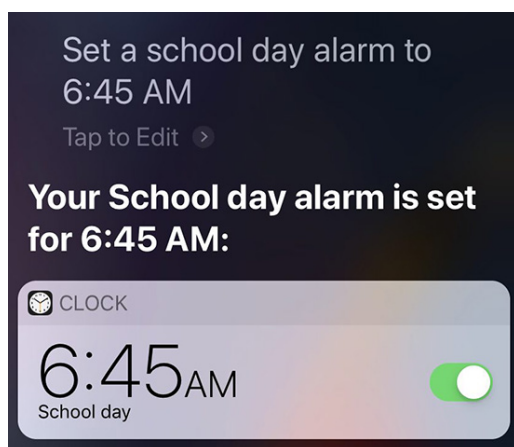
For a demonstration of some of the cool things you can do with Siri and the HomePod in the kitchen, watch my video [ow to Use Siri in the Kitchen.](#)"



## 5. Set an Alarm

Love them or hate them, alarms help us wake up on time and get out the door. Use Siri to set an alarm on your iPhone, iPad, Apple Watch, or HomePod. Trigger Siri and say "Wake me up tomorrow at 6 PM" or "Set an alarm for 5 AM." When the time comes, the alarm sounds, even if your iPhone is set to Do Not Disturb or your Ring switch is set to silent.

On your iOS devices, alarms remain in the Clock app until you delete them, making it convenient to use them again. If you name them, it's easy to turn them on or off later using Siri. For example, if you say "Set School Day alarm for 6:45 AM" on another day, you can say "Turn on School Day alarm" or "Turn off School Day alarm." Likewise, when summer comes, just say "Delete School Day alarm." To get rid of a big honking list of alarms you don't need anymore, say "Delete all my alarms."



## 6. Translate a Phrase

You can ask Siri on your iPhone, iPad, or HomePod to translate any English phrase into (deep breath) Arabic, Brazilian Portuguese, French, German, Italian, Japanese, Mandarin Chinese, Russian, or Spanish. Your iOS devices can perform these translations in writing as well as out loud. Even though Siri can't yet decode what's said back to you, this can still be a great help if you're traveling and want to order breakfast or find a bathroom. Besides, it takes us another step closer to a Star Trek future. (Universal translator, anyone?) Preface your phrase with either "How do I say" or "Translate." For example, "Translate where is the nearest bathroom in French."



## 7. Look Up a Word

Don't bother opening the Dictionary app or doing a Google search when you're at a loss for words. Trigger Siri and ask "How do you spell rhythm?" or "Define flibbertigibbet." I often use Siri on my watch to look up words when I'm reading with my teenager. (Dickens has some doozies.)





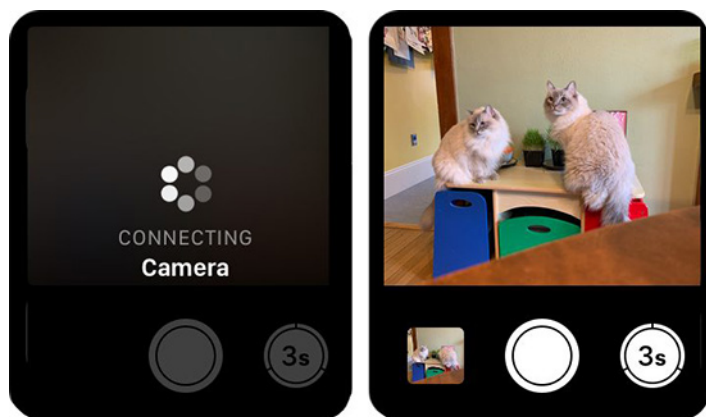
## 8. Track Down Friends and Family

Whether you find it convenient or creepy, you can use Siri on your iOS device or Mac to track down your loved ones using Apple's Find My Friends. Trigger Siri and ask it: "Where are my friends?" "Find my nearest friends," "Where's Graham?" or "Let me know when Dave gets to work." You can track anyone who has given you permission — for instance, people in your Family Sharing group. (See Apple's ["Set up and use Find My Friends"](#) and ["Share your location with your family"](#) for setup details.)

## 9. Take a Photo (or a Selfie)

It's not difficult to grab your iPhone and take a snapshot, but Siri can make it a little bit easier and faster—skipping over multiple steps that could make you miss the moment. On your iPhone or iPad, trigger Siri and try: "Take a selfie," "Take a photo," "Take a square photo," "Take a panorama," "Take a video," "Take a slow-motion video," or "Take a time-lapse video." (Siri can't activate Portrait mode.) Siri opens the Camera app to your desired setting. Line things up and take your shot. That's right, you have to take the shot — Siri can't press the shutter for you.

This gets more fun if you have an Apple Watch. Put your iPhone in place with its rear-facing camera on your target, then walk away. Activate Siri on your watch and say "Take a picture." (Other Siri Camera commands won't work.) As long as you're in Bluetooth range, your iPhone's camera activates.



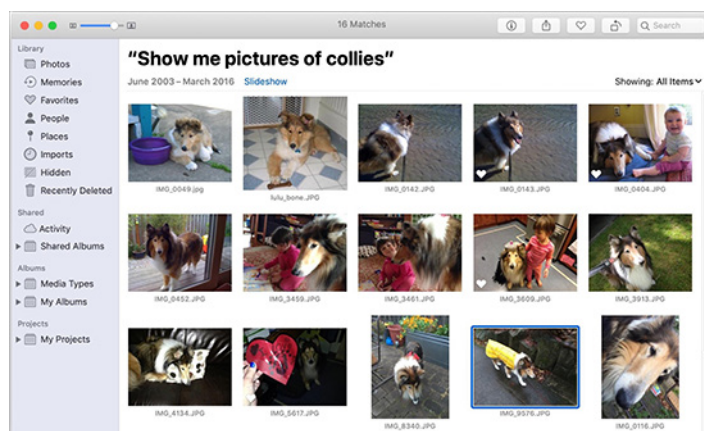
Tap the white shutter button on your watch to take the photo immediately or tap the 3s icon for a three-second countdown.

With its simpler camera setup, your Mac is more limited, but "Take a photo" does launch Photo Booth and activate the iSight camera.

## 10. Find Your Photos

Looking for a photo? Siri can help. Ask it: "Show photos from February 27," "Look up my videos taken in Portland, Oregon," "Show me my favorite photos" (ones that you've marked in Photos by clicking or tapping the heart icon), or "Show me pictures of David." (Siri taps into the People data in Photos.)

Siri can also go beyond the basics to do searches that would be complicated, or even impossible, to do by hand. Ask Siri a question that ties into the Photos Advanced Computer Vision feature to comb through your images at lightning speed. For instance, say "Show me pictures with collies" and Photos opens to a collection of images it thinks match.

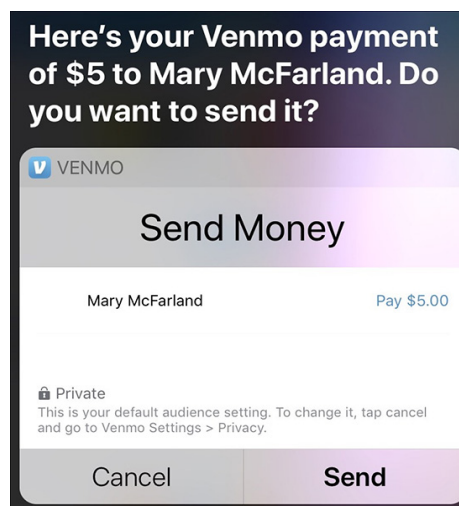


You can find a strange and wonderful variety of objects, including tree types ("Show me pictures of oaks"), plants ("Show me pictures of roses"), landmarks ("Show me pictures of the beach"), and little ones ("Show me pictures of babies") — 4432 objects, according to Apple. If Siri doesn't find matching photos in your library, it does a Web image search instead.

On the Mac, your Siri request appears at the top of the Photos window in large type. On your iOS device, your Siri request takes you to the Photos search screen with what you said in the search field.

## 11. Send or Request Money

If you use Apple Pay, PayPal, or Venmo on your iPhone, it's fast and easy to transfer money using Siri. (Apple Pay works with Siri on the Apple Watch, too.) Unlock your iPhone and then say something like "Send \$5 to Mary for coffee using Venmo" or "Apple Pay \$25 to Kabir for dinner." Confirm the recipient of the transfer by name, if necessary, and approve the transfer by saying "Yes."

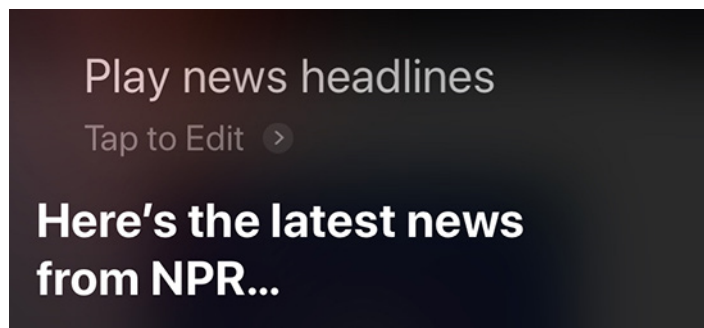


You can also request an Apple Pay payment from a friend using Siri on your iPhone or Apple Watch. Try: “Ask Eowyn for \$17 for the T-shirt.” For more details about setting up and using Apple Pay, see [this Apple support page](#).

## 12. Hear the Headlines

If you live in the United States, it’s easy (if often depressing) to keep up with the headlines on your iOS devices and HomePod. Just ask Siri about the news. As long as you have Apple’s Podcasts app installed, Siri can play news digests and recaps from Bloomberg, CNBC, CNN, ESPN, Fox News, NPR, and the Washington Post by tapping into the media outlets’ latest shows.

Trigger Siri and say “Play news headlines” or “Play news from NPR” to hear an update from the NPR News Now podcast. If you prefer something else, say “Switch to Fox News” or “Switch to the Washington Post.” Or, next time ask for your favorite outlet (from the list above) by name.



**Tip:** You can also ask for your local NPR station by name, such as “Play OPB radio.”

In some cases, you can get more specific, with a command like “Play sports news from ESPN” or “Play business news from Bloomberg.” But you’ll find that you can’t yet request

a lot of topics — science, technology, or world news for instance — that you’d usually see in the newspaper.

Of course, if you like a particular news podcast, you can also ask Siri to play the show by name. For example, say “Play the Daily” to hear that New York Times podcast. (If you have trouble getting a podcast to play, add the word “podcast” to your request, as in “Play the Daily podcast.”) When you’re done, say “Stop the news” or simply “Stop.”

## 13. Control Your Home

Siri in iOS has long been able to control smart home accessories like lights, security cameras, and thermostats through Apple’s home automation platform, HomeKit. With Mojave, we gained the capability to tap into the Home app’s powers on the Mac, too. Assuming you’re equipped with HomeKit-ready accessories — the HomePod is one, too! — try commands like: “Play music in the kitchen,” “Turn all my lights on,” “What’s the temperature in the attic,” “Make the family room blue,” and “Open the garage door.”

## 14. Turn on the Flashlight

Need a flashlight? Just activate Siri and say “Turn on the flashlight.” This can be particularly helpful if you’re still not used to the way the flashlight button works in iOS 12.

If you’ve enabled voice activation, you can also use this trick when you’re trying to find something in the middle of the night. Just say “Hey Siri, turn on the flashlight” and your iPhone illuminates, even if it’s on the charger across the room. Your toes will thank you for not stumbling around in the dark.

Discover more ways to use Siri in [Take Control of Siri!](#) 

By Adam Engst

# Dropbox Limits Free Accounts to Three Devices

The mobile technology site Liliputing has discovered that [Dropbox is now limiting free accounts to just three devices](#). In a [support article](#), Dropbox says that paid Plus, Professional, and Business users can still connect to their Dropbox accounts from as many devices as they like, but as of March 2019, free Basic account users may use only three devices at once. Happily, if you have more than three devices linked to your Dropbox Basic account currently, they’ll remain linked, but you won’t be able to add any more.

With this change, Dropbox is clearly trying to push more Basic users to the Plus plan, which costs \$9.99 per month or \$99 per year. If you don’t wish to upgrade, you can instead

link and unlink devices to stay within the three-device limit. Those who want to sync between a desktop Mac, laptop Mac, iPhone, and iPad will now be forced to do this linking/unlinking dance—or will be as soon as they’re forced to unlink one of those devices for some reason.

The other alternative is to switch to a different file syncing service. Apple’s iCloud Drive offers 5 GB of storage for free, although that tends to be eaten up quickly by iOS backups, iCloud Photos, and iCloud Mail. Google Drive provides 15 GB for free, although that’s shared with Gmail and Google Photos. Microsoft’s OneDrive gives you 5 GB for free, and if you’re paying for Office 365, you get 1 TB of space.

What's disappointing about this change is that Dropbox has historically provided the best combination of file syncing between your devices and collaborative file sharing with other people. But it's hard to complain too much about a free service being burdened by additional

limits. Dropbox's free Basic accounts exist only as a marketing tool to encourage users to upgrade to a paid plan, and when you're getting something for nothing, it's not unreasonable for a company to want to reduce the amount of that something eventually.

By Adam Engst

# iOS 12.2 and macOS 10.14.4

## Add Apple News+ and Enhance Apps

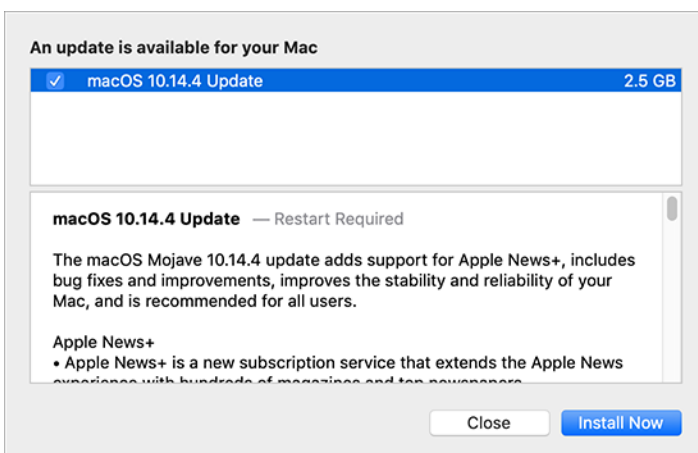
Apple said next to nothing about technology topics during its special event but did mention that a new version of iOS would be coming out to support the Apple News+ subscription service. That happened shortly after the presentation, with the release of iOS 12.2, whose marquee feature is indeed Apple News+, which you access in the updated News app. For details, see ["Apple News+ Debuts With Magazines, Newspapers, and Web Sites"](#) (25 March 2019).



**iOS 12.2**  
Apple Inc.  
824.3 MB

iOS 12.2 provides support for Apple News+, adds the ability for Siri to play videos from your iOS device to Apple TV, and includes four new Animoji. This update also includes bug fixes and improvements.

Late in the day, Apple also released [macOS 10.14.4 Mojave](#), which provides Apple News+ and many of the same enhancements as iOS 12.2, along with some of its own changes. It's a 2.5 GB download.



Here's a rundown on the major changes in both operating systems.

### Siri

With iOS 12.2 (and the [just-released tvOS 12.2](#)), Apple has given Siri [more control over your Apple TV](#), enabling you

to ask Siri on an iOS device to play a video, show, sports game, or channel on your Apple TV.

Play the marvelous Mrs. Maisel  
on the living room Apple TV

Tap to Edit >

**You'll need to continue on the  
Living Room TV.**

**Open Remote**

If you're watching something on an iOS device and want to switch to the big screen, you can ask Siri to "play this on the bedroom Apple TV." Perhaps more interestingly, you can also use Siri — even with "Hey Siri" — to control what's playing. Apple gives examples like:

"Pause the bedroom Apple TV."

"Play the bedroom Apple TV."

"Skip 30 seconds on the living room Apple TV."

"Turn on subtitles on the bedroom Apple TV."

Of course, you can still use the Siri button on the Apple TV Remote to invoke Siri on the Apple TV directly, but having access to "Hey Siri" may be more convenient than fumbling for the slim black remote in a darkened room.

These features are available only in Australia, Canada, the United Kingdom, and the United States, and only in English.

### Screen Time

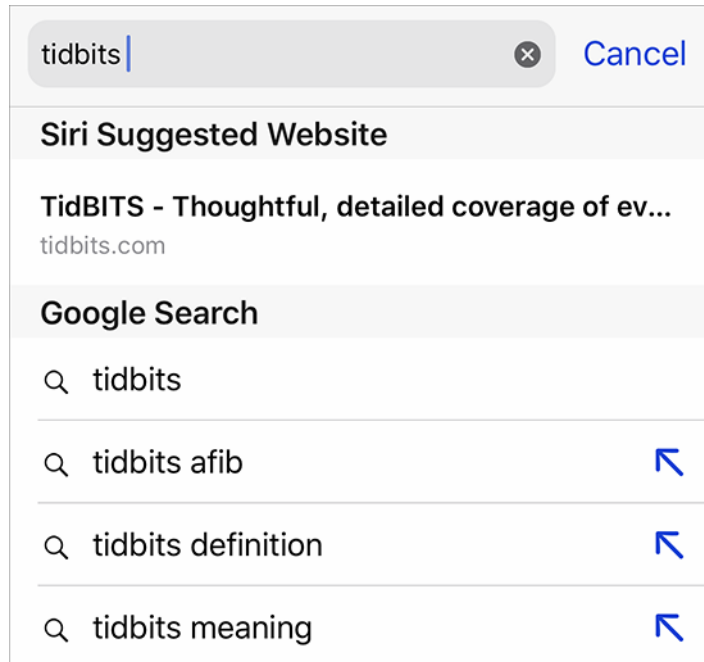
If you're a fan of Screen Time's Downtime feature, you'll be pleased to learn that iOS 12.2 now lets you customize your downtime with a different schedule for every day of the week, which was a notable lapse in the initial release.



iOS 12.2 also adds an On/Off toggle to App Limits so you can easily turn them off and back on temporarily all at once.

## Safari

The most obvious change you'll see in Safari in iOS 12.2 is that when you type in the Smart Search Field, you can accept a suggestion and modify it by tapping the arrow icon next to the suggestion. That's welcome because it can save you from typing additional words on the awkward iOS keyboard.



iOS 12.2's release notes claim that "website sign-in now occurs automatically after filling credentials with Password Autofill," and macOS 10.14.4's say it "streamlines website login when filling credentials with Password Autofill." That would be a boon, but in a couple of tests in iOS 12.2, I noticed no difference.

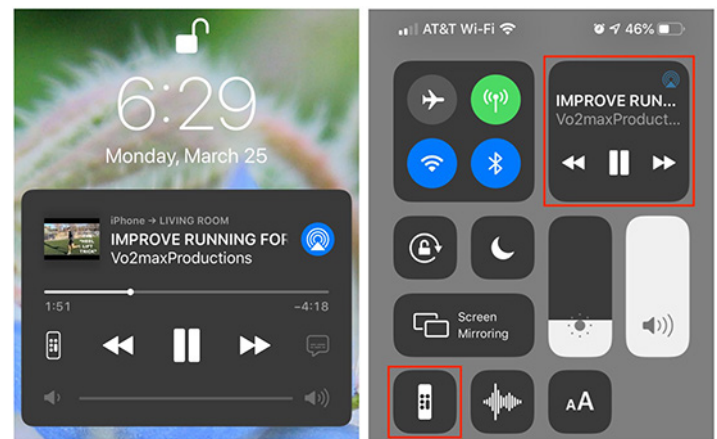
On the Mac side, Safari adds Dark mode support for Web sites that support custom color schemes, allows push notification prompts only after interacting with a site, and adds a warning when you load an unencrypted or partially encrypted Web page.

Finally, both operating systems remove support for the Do Not Track standard (see ["The Tragic Death of 'Do Not Track'."](#) 19 March 2019). Safari's Intelligent Tracking Prevention technology now protects against cross-site tracking by default. It sets new permission requirements for cookies and new limits on long-term tracking — it's all good for users, and Digiday has an explanation of [what it means for advertisers](#).

## AirPlay

When you're sending video to an Apple TV via AirPlay, iOS 12.2 now puts dedicated TV controls in Control Center and on the Lock screen. The playback controls on the Lock

screen and in Control Center are obvious, but note that the icon for the Apple TV remote in Control Center now looks like the Apple TV remote rather than the Apple TV logo. Along with Siri's new capability to control the Apple TV from an iOS device, these changes should help you avoid using the Apple TV Remote if you wish.



iOS 12.2's release notes also say that "AirPlay multitasking for video allows you to browse other apps, as well as play other short-form audio and video files locally on your device without interrupting AirPlay." It turns out that this applies only when you use AirPlay specifically from within a video app like YouTube, not when you enable Screen Mirroring in Control Center. Once you've started AirPlaying a video to the Apple TV in this way, you can use your iOS device normally without stopping the stream.

Finally, Apple says that iOS 12.2 now groups AirPlay destinations by content type so it's easier to find the device you want to play to. Perhaps some people have a lot more AirPlay devices than I do; with only an Apple TV and two HomePods, I haven't had any trouble.

## Apple Pay

Those who use Apple Pay Cash and Visa debit cards can reportedly now transfer money to their bank accounts instantly, and iOS 12.2's Wallet app now displays Apple Pay credit and debit transactions right below the card.

## Other Changes

iOS 12.2 and macOS 10.14.4 also feature numerous smaller feature changes that include:

**AirPods:** If you've ordered the second-generation AirPods, you'll need to upgrade to iOS 12.2 and macOS 10.14.4 to use them.

**Apple Music (iOS) and iTunes (Mac):** The Browse tab now shows more editorial highlights on a single page.

**Maps:** In the US, UK, and India, the Maps app now supports the Air Quality Index.

**Messages:** A new codec significantly improves the quality of audio recordings in Messages.



Wi-Fi Calling: iOS 12.2 and macOS 10.14.4 now support real-time text (RTT) for phone calls made through a nearby iPhone.

iOS 12.2 has a couple of changes it doesn't share with the Mac:

"5G E" icon: In what has been a controversial change, iOS 12.2 now displays a "5G E" icon to AT&T subscribers to indicate that the company's 5G Evolution network is available. Sprint is suing AT&T, and a study by OpenSignal found that AT&T's 5G Evolution service is slightly slower than Verizon's and T-Mobile's advanced 4G LTE networks.

Animoji: For those using an iPhone X or later, or a 2018 iPad Pro with Face ID, iOS 12.2 adds four new Animoji: an owl, boar, giraffe, and shark.

On the bug fix side, iOS 12.2:

Improves the stability and performance of the Apple TV Remote

Fixes a bug that prevented some missed calls from appearing in Notification Center

Ensures the correct size of large apps, the System category, and the Other category in the storage graph in Settings > General > iPhone Storage

Prevents Voice Memos from automatically playing back recordings after connecting to a car Bluetooth system

Resolves a bug that could cause Voice Memos to temporarily prevent renaming a recording

Receives numerous security fixes — 41 of them, to be exact

macOS 10.14.4 has its own list of fixes. In particular, it:

Provides enhanced support for external GPUs in Activity Monitor

Fixes a bug with the App Store that may have prevented adoption of the latest versions of Pages, Keynote, Numbers, iMovie, and GarageBand

Improves the reliability of USB audio devices when used with the MacBook Air, MacBook Pro, and Mac mini models introduced in 2018

Corrects the default screen brightness for the recently updated MacBook Air

Fixes a graphics compatibility issue that may occur on some external displays connected to the new Mac mini

Resolves Wi-Fi connection issues that may crop up after upgrading to Mojave

Fixes a bug that could cause a re-added Exchange account to disappear from Internet Accounts

Addresses an issue that caused Mail to request AOL passwords frequently

Receives 35 security fixes

### Updating to iOS 12.2 and macOS 10.14.4

You can update to iOS 12.2 in Settings > General > Software Update or through iTunes. The update is 834 MB for an iPhone X and 693 MB for an iPad Air 2; other devices should be in the same ballpark.

To update to macOS 10.14.4 from a previous version of Mojave, go to System Preferences > Software Update. The update is 2.5 GB.

As always, we recommend waiting to install both of these updates for at least a few days unless you're dying to try Apple News+ or have been waiting for another of the enhancements. 📺

By Jeff Porten

## Apple Card: More Than Just a Credit Card

Apple has already made big changes to how we buy things, now that it's possible to use [Apple Pay](#) to check out with a flick of the wrist or a press of a button. And Apple Pay has significant competition, with Google and Samsung promoting their own mobile payment systems, so many transactions that used to require plastic and signatures are now virtual. Apple Pay alone is on track to process 10 billion transactions this year.

Apple's recent announcement of the new [Apple Card](#) service may at first blush seem like just another added feature — now Apple Pay can have a line of credit. But it's possible that this will impact the credit card industry almost as profoundly as how Netflix affected Blockbuster when it started sending [DVDs in red envelopes](#).

### How Apple Card Works

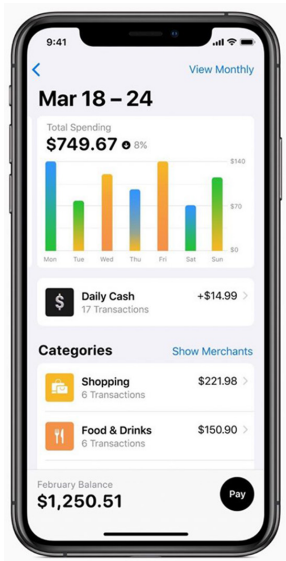
Apple Card is a credit card that lives in your Wallet app, supplemented by an unusual physical card. The application process will be built into the app when Apple Card becomes available in the United States sometime in the middle of 2019 — no mention was made of other countries. Apple Card accounts work only for individuals; multiple cards aren't supported.

Apple Card uses two different methods of payment, Apple Pay and the Mastercard network. As with current Apple Pay transactions, there's no permanent number associated with your account, and therefore no number printed on the physical card — the Wallet app generates a unique number for every transaction, which happens behind the scenes.

For Mastercard transactions — which you'll use whenever purchasing from a vendor that doesn't take Apple Pay — a tap on the card in Wallet brings up your card number, expiration date, and CVV security number. These are assigned when you open the account, but for security purposes, you can recycle those numbers and get issued new ones at any time, right in Wallet.

You'll need the physical card only when making purchases in person at vendors that don't accept Apple Pay — the card has both a chip and a magnetic stripe. Left unclear is how the magnetic stripe works when you can change the number virtually. Historically this would require writing the new number to the magnetic strip, but perhaps some networking magic pulls the latest number from Apple Pay at the time of purchase.

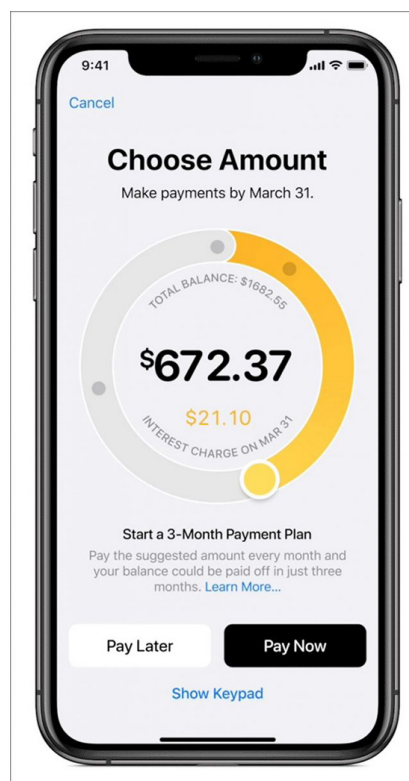
Bring up your Apple Card account in Wallet, and you'll see the kind of data you'd expect from a credit card Web site, combined with financial analysis and presented with Apple design. The launch screen shows you your balance and available credit, a thumbnail chart of your recent purchases, and a reminder of when the next payment is due. All your purchases are automatically categorized (it's unclear if you'll be able to set your own) for grouping in multi-colored graphs so you can see what you've spent on restaurants or car expenses. The report also automatically includes weekly and monthly charts and summaries.



It's at the transaction level that the Apple Card interface has some real wow factor: pull up your transactions, and each one will be clearly described instead of showing the incomprehensible abbreviations that sometimes appear on statements. It even shows logos for known vendors. Tap a transaction, and a map comes up showing you where you made the purchase — good for a reminder of what you purchased, or evidence to dispute a charge.

Behind the pretty pictures, Apple Card's financial features are quite different from what you may be used to. During the presentation, Apple said that there are no fees, period: no annual fees, no late fees, no cash advance fees, no over-limit fees. Plus, Apple said, and this is worth quoting, "our goal is to provide interest rates that are among the lowest in the industry." Even if you miss a payment, your interest rate won't go up.

When you make a payment, which you do through the Wallet app, you can use a calculator that lets you set a payment less than the full amount, and shows you what the resulting interest charge will be. Obviously, it's zero if you pay the full amount every month, but otherwise, you'll know precisely what you're being charged to carry over debt. The slider includes suggested amounts to pay: carry a large balance and the circle is red, pay a decent chunk and it shifts to yellow, or pay most or all of it for green. You'll always know when the payment is due: it's the last day of the month, for everyone.



The Wallet app will also provide "smart payment suggestions" meant to help you lower your interest charges or manage your money better, such as setting up multiple monthly payments timed to your paychecks. Wallet will prompt you that more frequent payments will lower your interest charges — which implies that interest accrues daily

since the more standard monthly accrual method doesn't lower the interest you'll owe if you pay a week early.

Instead of points, rewards, or other incentive programs, Apple Card offers cash back — same-day cash back, called Daily Cash. You'll be credited 3% for purchases with Apple (including the App Store), 2% for other Apple Pay transactions, and 1% when using Mastercard. You can apply Daily Cash to the card balance, use it for any other purpose within Apple Pay, or send to a bank account, and there's no upper limit on how much you can receive.

Fraud protection is built in by sending you a notification whenever a charge is made, which is commonplace with other credit card apps. But other apps don't give you a — Apple claims it'll then take care of it without bothering you further — and most don't offer a live 24/7 text chat in Messages you can drop into for any other problems. (Those who do don't offer Apple's no-wait promise.) It seems likely that Apple is leveraging the still-in-beta-since iOS-11.3 Business Chat service. The prominence of the chat suggests that if you prefer to get a human being on the phone, well, good luck.

Their other major security feature is mind-blowing: much as Apple can't read your iMessage conversations in real-time, the company says that it knows nothing about your transactions, their size, location, or any other metadata. That's all handled by Apple Card's banking partner, Goldman Sachs. The Wallet app stores all of this information locally to make graphs and show you the details you want. Apple hasn't said whether you'll be able to delete locally stored transaction data for security purposes, but the only way to get to it or any purchase capability is with Touch ID or Face ID. What Apple has done here is create a purchasing platform where Apple itself isn't part of the loop.

Most likely, this is done with end-to-end encryption from Goldman Sachs servers through Apple to your iOS device. Apple is warranting that Goldman will use your transactional data only for account purposes and will never share or sell it to third parties. That's a sweeping statement for one corporate partner to make on behalf of another and puts Apple on the hook both for Goldman's deliberate actions and for any errors or attacks that disclose data. It's a shockingly user-friendly move in the context of the credit card industry, as is giving up the rich data mine of information that these transactions create. Beyond that, the engineering commitment necessary to present the data Wallet has to process, in a way that exposes none of it to Apple, is stunning for a dozen technical reasons. The privacy promises Apple is making required massive effort, indicating that this is a true company value rather than a marketing maneuver.

### **How Apple Card Might Change Consumer Credit**

In fact, scratch the surface, and there's quite a lot that's stunning about these Apple Card policies. What appear to be a few user-friendly features could have massive ramifications.

### **Purchasing Decisions and Interest Rate Calculations**

One key thing to understand about financial technology is that the tools we use affect the purchases we make. If you pay with your watch versus pulling out a card, you'll buy different things — more accurately, you'll buy more things because you're bypassing psychological barriers involved with cash and plastic. There's a reason Amazon patented one-click purchasing.

Likewise, the data you have affects your behavior. How long do you spend deciding whether to make a \$500 purchase and is that more time than it took you to add a \$500 option to a \$40,000 car? The price of the car inclines you to think differently about the \$500 — especially if it becomes less of a blip in a monthly payment. This effect is called priming.

The credit card industry is geared around getting you to pay more and to never be quite clear on how much more. Say you buy a \$600 item because it's on sale for \$500, and you use a credit card because it's outside your immediate budget. That amount might cost you \$10 in interest each month — carry that balance for a year, and that sale purchase was silly. The \$100 came out of the retailer's pocket and went to the bank (with a little extra), so the bank doesn't want you to think of it as an added cost for that purchase. It's just a fee. Meanwhile, you "saved \$100" and are inclined by this thinking to do so again in the future.

If you know the basics of personal financial management, you know that this kind of thinking is not merely irrational, it's dangerous — the slippery slope to crushing debt loads. But this isn't about rationality. The psychological effects that the credit card industry triggers are hardwired — chimpanzees in primate labs demonstrate the same irrational financial behaviors we do (substituting grapes and sugar water for folding money).

Apple is upending this by dropping all fees and by telling you precisely what it will cost you to underpay your balance. Having that information primes you to make different choices — you'll know from the slider and suggested payment plans that \$500 out of the budget this month is an extra \$10 next month, and that same \$10 every month until you pay it off.

Consumer advocates have been fighting to force credit issuers to provide this information for years, but the best they've been able to get out of regulators are those 40-page pamphlets that no one reads. Their biggest victory to date has been the summary box on every application and acceptance letter. Like an FDA ingredient label on food, it boils down the most salient costs of the card. But a consumer needs non-trivial math skills to understand this information—if your card has a 24.9% interest rate and a late fee of \$25, how much interest will be added and what will your balance be in 3 months if you pay off half your balance? This involves compound interest — even math



whizzes usually need a spreadsheet to calculate it. Apple Card brings those skills to the masses.

This difference is crucial. Earlier, I introduced good credit practices by saying, “if you know the basics of personal finance management.” The fact is, very few people do. We routinely use credit instruments where calculating interest requires a spreadsheet and knowing how and when to raise a decimal to the twelfth power, in a country that routinely prints a suggested 20% tip calculation on restaurant receipts because people don’t know it means “divide by 5.” It’s not an overstatement to say that some credit card issuers prey on their customers’ ignorance and exploit normal but irrational human behaviors. Apple turns this upside down: Apple Card and Wallet subtly teach you about credit and create virtuous feedback loops that likely improve your behaviors on an unconscious level. It’s the same priming, but on the side of the angels for the first time.

Once Apple starts doing this, the question for every other credit card issuer in the country will become, “Why don’t you?” And because this is part of a free-market competition between private companies, those in favor of minimal regulation of the financial industry can do nothing about it—Apple has moved it from a political issue to a consumer feature.

### The Implication of No Fees

Apple gets to look extremely generous with its Apple Card fee structure. It’s a compelling argument to switch from more expensive cards with complicated reward structures to no fees and daily cash back. So one might ask — why? Does Apple hate money?

The answer involves some psychology and some microeconomics. Credit card issuers usually want to find the right customers. Customers who carry no debt are potentially money losers, eating the cost of the rewards and paying no interest, which is why high-reward cards have annual fees. Customers who carry a lot of debt run up huge interest, which is great for the issuers... unless those people go bankrupt. It’s no longer possible to walk away from debt via bankruptcy the way you once could, but credit card issuers still get pennies on the dollar. The sweet spot, toward which these companies herd their customers, is where the credit card issuers are extracting as much profit as possible without pushing too many customers into bankruptcy and turning future revenue into written-off unpaid debt. That’s why there are due dates, minimum payments, and late fees — they ensure a regular flow of income from even the biggest debtors because they are incentivized to avoid more fees.

What’s the incentive to pay off the Apple Card, by comparison? Why even have a due date, if there are no fees for being late? (That is, no additional cost over and above the increasing interest that happens every day the debt is carried. It’s just that the due date isn’t special.)

Here is where Apple gets to exercise its power in an interesting way: miss a normal credit card payment and it costs you money, but miss an Apple Card payment and every Apple device you own might degrade in service. Just as failing to pay for iCloud prevents any new uploads to your paid iCloud storage, Apple could deter you from going into arrears on Apple Card by affecting everything you do with an Apple ID. If you’re paying for other Apple services, you might also lose access to Apple Music, be unable to purchase new apps, or have problems using apps that require ongoing subscriptions. Now consider the free services Apple provides, such as iCloud password and calendar syncing, which could also be suspended at the same time or at a later date for customers who still haven’t paid.

Apple doesn’t need your late fees. Apple could apply pressure in other ways to make sure Apple Card is the first card you pay.

### Does Apple Really Intend to Lower Interest?

I am more skeptical about Apple’s claims that it wants to be generous regarding interest. The business of lending money is all about interest. Goldman Sachs isn’t interested in a partnership with a charity.

Part of the answer lies in the unannounced details of what merchants will pay. When you buy something with a credit card, the merchant typically pays 2–3% to the credit card issuer. (That cost is generally built into the overall price of the purchase; it’s why gas stations advertise separate cash and credit prices.) Another smaller deduction is made for the credit card processor — for example, [CNN reports](#) that Apple currently makes under 1 cent for each Apple Pay transaction. Multiply by 10 billion transactions, and that’s some nice money. But it’s nothing compared to a percentage of the transaction.

Apple is still the processor of payments that take place over Apple Pay, but it also has a relationship with Goldman Sachs for Apple Card charges. Financial news coverage is saying Apple will now share in the issuer fees that Goldman Sachs receives from the merchant, and maybe other revenue. Let’s assume Apple will make a 1% profit after shouldering business costs and its share of the 2% rebate to cardholders. [The average credit card charge in the US is \\$93](#), which means Apple makes less than 1 cent on Apple Pay, but 93 cents for whatever fraction of 10 billion transactions end up being paid through Apple Card. That’s a strong incentive for Apple to sign up as many customers as it can safely manage.

Merchant fees also make it easier for Apple to promise lower interest rates to consumers — but there are some indicators in contradiction to the company’s marketing promises. Apple did not announce rates at its presentation, but they are available in the Apple Card fine print: from 13.24% to 24.24% (based on prevailing economic conditions; the range could be different in a few months). The average

interest rate for credit cards right now is 17.67%, so Apple's range isn't exactly the "lowest."

There's one other point to consider regarding interest rates, which is that it will be difficult to know whether Apple lives up to its low-interest promise. As individuals, we can compare the rate offered by Apple against our rates on other cards. But we have no way of knowing whether this is happening across the board—the aggregate data is private. Goldman Sachs has to file various public reports disclosing some operational data, but I can't determine whether Apple Card interest rates are something we'll see clearly broken out. (If I find out after publication, I'll add it in the comments.)

Apple could have gone a different path. Apple Card is issued by Goldman Sachs, but not in New York City. It's issued by the Goldman Sachs branch in Salt Lake City, Utah. Like Delaware and South Dakota, Utah is [particularly friendly to credit card issuers](#), and by locating their consumer credit arm there, Goldman and Apple can charge higher rates and enjoy less-restrictive regulation than would be the case in New York or California. That location likely predated Goldman's conversations with Apple, but given the tight integration that must be taking place in this partnership, Apple could have forced a new location and made a binding promise about Apple Card's rates by issuing cards in a state that caps at a lower ceiling. Draw your own conclusions as to why this did not happen. It's one of the few things about Apple Card that's just like every other credit card.

### An Even Bigger Picture

One last thing is striking about the sum total of Apple's announcements, and it has little to do with financial matters. Recently, Senator Elizabeth Warren made headlines by talking about bringing antitrust charges against big tech companies, including Apple. This led to a lot of uninformed comments about how such breakups could never happen. That's historically inaccurate. Both Standard Oil and AT&T in its "Ma Bell" days were far more integrated and centrally crucial to the American economy than Apple, Amazon, Facebook, and Google are today, and the federal government broke up both. The current political climate is different, but those who think it couldn't happen again should read the writings of people who said it would never happen to AT&T.

There is no way of knowing how successful Elizabeth Warren will be in her presidential bid, of course, but she's

also a senator, and now that she's put the idea of breaking up Big Tech into the political marketplace, others are likely to take up the idea or propose parallel options. That doesn't mean that such a thing will occur, but it does suggest that the concern is not going away, and that in turn puts public pressure on corporate shoulders.

In several ways, the Apple Card announcement paints a much larger target on the company's back. There are solid technical and business reasons why it's consumer-friendly for Apple to sell iPhones, run the App Store, and ship iOS apps independent of what's part of iOS. That's a case Apple could do well with in court.

But when Apple runs the bank that you use to pay for Apple products or uses its control of Apple Pay to set pricing for Apple Card transactions, that's when it starts to look like an oil company controlling everything from the well to the refinery to the gas station. Apple is also proposing to sell you TV hardware, connect you to TV providers, and subscribe you to its own TV content — this is already drawing attention, and there's no technical argument against breaking up such business integration.

Combine this, however, with what I said earlier: the consumer-friendly processes Apple is introducing, without any government intervention, have been a goal of Elizabeth Warren's side of the political spectrum forever. (And specifically for Warren, who came to politics after becoming known as an economics professor promoting such ideas—she's the woman behind the creation of the Consumer Financial Protection Bureau.) What Apple announced is a win for consumer advocates, on par with how environmentalists would feel about Exxon Mobil announcing that it would start closing gas stations to replace them with wind power for electric vehicles.

It's fascinating that just as the American political spectrum is widening in both directions to include discussions of previously "impossible" ideas—and other major markets like the European Union and China undergo their own chaotic political and economic changes — Apple announces that it's getting into the financial world in a big way. Just as the iPhone blew away every mobile phone with a keyboard, I believe that the Apple Card could mark a similar turning point for consumer finance. First for what customers expect from their financial service providers, second for government action driven by those changes, and finally for the corporations themselves. The more people who use Apple Card, the faster these changes could occur. 🍏



# Software Review

## Apple Updates

### Security Update 2019-002 (Sierra)

**Mar 29, 2019 – 836.4 MB**

System Requirements

- macOS 10.12

Security Update 2019-002 is recommended for all users and improves the security of macOS.

### Security Update 2019-002 (High Sierra)

**Mar 29, 2019 – 1.83 GB**

System Requirements

- macOS 10.13

Security Update 2019-002 is recommended for all users and improves the security of macOS.

### macOS Mojave 10.14.4 Update

**Mar 25, 2019 – 2.53 GB**

System Requirements

- macOS Mojave 10.14.3

### macOS Mojave 10.14.4 Combo Update

**Mar 25, 2019 – 2.6 GB**

System Requirements

- macOS Mojave 10.14

The macOS Mojave 10.14.4 update adds support for Apple News+, includes bug fixes and improvements, improves the stability and reliability of your Mac, and is recommended for all users.

### Apple News+

Apple News+ is a new subscription service that extends the Apple News experience with hundreds of magazines and top newspapers

### Safari

Adds Dark Mode support for websites that support custom color schemes

Streamlines website login when filling credentials with Password AutoFill

Allows push notification prompts only after interacting with a website

Adds a warning when an insecure webpage is loaded

Removes support for the expired Do Not Track standard to prevent potential use as a fingerprinting variable; Intelligent Tracking Prevention now protects against cross-site tracking by default

### iTunes

Shows more editorial highlights on a single page in the Browse tab, making it easier to discover new music, playlists, and more in Apple Music

### AirPods

Adds support for new AirPods (2nd generation)

### More

Supports Air Quality Index in Maps for US, UK and India

Improves the quality of audio recordings in Messages

Supports real-time text (RTT) for phone calls made through a nearby iPhone on Mac

Provides enhanced support for external GPUs in Activity Monitor

Fixes an App Store issue that may have prevented adoption of the latest versions of Pages, Keynote, Numbers, iMovie, and GarageBand

Improves the reliability of USB audio devices when used with MacBook Air, MacBook Pro and Mac mini models introduced in 2018

Corrects the default screen brightness for MacBook Air (Fall 2018)

Fixes a graphics compatibility issue that may occur on some external displays connected to Mac mini (2018)

Resolves Wi-Fi connection issues that may occur after upgrading to macOS Mojave

Fixes an issue where re-adding an Exchange account may cause it to disappear from Internet Accounts

Fixes an issue where AOL user passwords may be frequently requested in Mail

### Swift 5 Runtime Support for Command Line Tools

**Mar 25, 2019 – 3.2 MB**

System Requirements

- Any macOS version can download, but it is only needed for install on macOS version 10.14.3 and earlier.

Starting with Xcode 10.2, Swift 5 command line programs you build require the Swift 5 runtime support libraries built into macOS. These libraries are included in the OS starting with macOS Mojave 10.14.4. When running on earlier versions of macOS, this package must be installed to provide the necessary Swift 5 libraries. This package is not necessary for apps with graphical user interfaces. 📦