June 2018 Vol. XXIX, No 6





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.

Contents

Summer Vacation						
Reveal Invisible Files on the Mac with a Keystroke						
by Adam Engst						
Roll Your Own Cloud Backups with Arq and B2						
by Glenn Fleishman						
iOS 12 to Focus on Performance and Refinement by Josh Centers 7 - 10						
watchOS 5 Targets Fitness, Communication, and More						
<i>by Julio Ojeda-Zapata</i>						
Software Review						

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.

Nonprofit user groups may reproduce articles form the Printout only if the copyright notice is included, the articles have not been edited, are clearly attributed to the original author and to the Keystone MacCentral Printout, and a copy of the publication is mailed to the editor of this newsletter.

The opinions, statements, positions, and views stated herein are those of the author(s) or publisher and are not intended to be the opinions, statements, positions, or views of Apple, Inc.

Throughout this publication, trademarked names are used. Rather than include a trademark symbol in every occurrence of a trademarked name, we are using the trademarked names only for editorial purposes and to the benefit of the trademark owner with no intent of trademark infringement.

Board of Directors

President Linda J Cober

Recorder Wendy Adams

Treasurer Tim Sullivan

Program Director Dennis McMahon

Membership Chair Eric Adams

Correspondence Secretary

Sandra Cober

Newsletter Editor Tim Sullivan

Industry Liaison Eric Adams

> Web Master Tom Bank II



Keystone MacCentral Essentials

Meeting Place Bethany Village West Maplewood Assisted Living (Bld 21) 5225 Wilson Lane Mechanicsburg, PA 17055

Web Site http://www.keystonemac.com

Mailing Address

310 Somerset Drive Shiresmanstown, PA 17011

Reveal Invisible Files on the Mac with a Keystroke

Now and then, advanced Mac users need to work with files or folders that are normally invisible because their names start with a period. This need goes beyond revealing the ~/Library folder, which we wrote about first in "Dealing with Lion's Hidden Library" (20 July 2011) and covered again in "Colonel Mustard in the Library with the Shift Key" (7 April 2017).

Some Unix-level files and directories start with a period so they are hidden by default, and many apps create such items to hide support files from the user. I currently have 61 files and directories that start with a period at the top level of my home directory, one dating as far back as 2008. That was a file called **.Maelstrom-data** that must have been related to the game **Maelstrom**, a fun blast from the past. Most recently, and the event that was the impetus for this article, I needed to check to see if I had a public key in ~/.ssh.

Because macOS is based on Unix, you can open Terminal and list all the files in a directory, including the invisible ones, with ls -asl (only -a is necessary, but I always use -asl to get hidden files, file sizes, and a detailed listing).

	● ● ●									
					~		bas	sh		+
Ade	ams-iMac:∼ ad	am\$	ls -a	sl]
to	tal 312									
0	drwxr-xr-x@	79	adam	staff	2528	Apr	10	11:05		
0	drwxr-xr-x	6	root	admin	192	Apr	6	07:51		
8	-rw-rr	1	adam	staff	266	May	21	2015	.498731.padl	
8	-rw-rr@	1	adam	staff	16	Feb	19	2009	.AB64CF89	
8	-r	1	adam	staff	7	Apr	10	11:05	.CFUserTextEncoding	
0	drwx	2	adam	staff	64	Sep	29	2017	.CMVolumes	
96	-rw-rr@	1	adam	staff	47108	May	15	18:00	.DS_Store	
8	-rw-rr	1	adam	staff	35	Dec	4	2008	.Maelstrom-data	
0	drwxr-xr-x	8	adam	staff	256	Nov	10	2015	.RationalPlan	
0	drwxr-xr-x	3	adam	staff	96	Jun	9	2010	.Sigil	
0	drwxrwxrwt@	4	adam	staff	128	Aug	16	2017	.TemporaryItems	
0	drwx	87	adam	staff	2784	May	15	17:22	Trash	
0	-rw	1	adam	staff	0	Feb	23	2011	.Xauthority	
0	drwxr-xr-x	2	adam	staff	64	Feb	17	2009	.Xcode	
0	drwxr-xx	4	adam	staff	128	Nov	1	2012	.adobe	
0	drwxr-xr-x	3	adam	staff	96	Dec	1	2011	. amu	
0	drwxr-x	4	adam	staff	128	May	10	2013	.android	
8	-rw-rr	1	adam	staff	250	Jan	10	2011	.apdisk	
0	drwxr-xr-x	3	adam	staff	96	May	15	2014	.app	

However, sometimes you don't want to mess with Terminal, or it would just be easier if you could open one of these files in a text editor by dragging it to the app's Dock icon. Wouldn't it be helpful if you could just see these invisible files in a Finder window? You can!

Just press Command-Shift-. and watch your invisible files appear. The shortcut is easy to remember because the period is the character Unix uses to hide files and directories. (Bonus points to those who flinch slightly when typing it because your fingers remember when Command-. was the universal "stop it!" keystroke on the Mac.)

After you press that keyboard shortcut, all hidden files and directories appear, grayed out so you know they're meant to be invisible, in all open Finder windows. Despite being grayed out, you can work with them like any other icons in the Finder, double-clicking them, copying or moving them, opening them in an app by dragging to the app's Dock icon, or even trashing them. It all works. That said, don't go nuts—you're not meant to see or interact with these files, so if you don't know what you're doing, leave them alone.

Invisible Files Hidden						Invisible Files Showing				
		👚 adam			1		🛧 adam			
Name	~	Date Mudified	Site	Kind			 Date Modified 	Size	Kind	
Applications		Sep 14, 2017 at 4:01 PM		Folder		A98731.ped	May 21, 2015 at 7.57 PM			
Je books		5ep 3, 2016 at 4.36 PM		Folder		AB64CEB9	Feb 19, 2009 at 6.56 PM	1.0 59595	Textildit	
Creative Cloud Files		May 11, 2018 at 10:28 AM		Folder		adobe	Nov 1, 2012 at 9110 AM		Folder	
Cesktop		Today at 6:04 PM		Folder		amy .	Oec 1, 2011 at 10:19 AM		Folder	
Documents		Jan 31, 2018 at 9:45 AM		- Folder		Jandroid	May 10, 2013 at 10:28 AM		Folder	
Downloads		Yesterday at 6:40 PM		Folder		apdisk	Jan 10, 2011 at 2:31 PM	250 bytes	TextEdit	
Dropbox III	•	Apr 30, 2018 at 5:54 PM		Folder			May 15, 2014 at 2:40 PM		Folder	
Coogle Drive		May 15, 2018 at 10:27 AM		Folder		bash, Natory	May 4, 2018 at 0.39 PM	20 KB	TextEd t	
Cloud Drive (Archive)		Jan 24, 2018 at 3:39 PM		- Folder		 bash profile 	Sep 4, 2010 at 4:06 PM	1.68	Test file	
Library		May 2, 2018 at 10:44 AM		Folder		4 Jack profile rs. 04, at 16/067	08 Aug 13, 2010 at 12:47 PM	d16 bytes	Test file	
Movies 14		Apr 6, 2018 at 7:01 PM		- Folder		bash, sessions	Today at 6:01 PM		Folder	
Music		Mar 12, 2018 at 5:00 PM		Folder		.bashrt	Aug 13, 2010 at 12:47 PM	634 bytes	Tesd file	
Pictures		Aug 22, 2017 at 4:63 PM		Folder		CFUserTextEncoding	Apr 10, 2018 at 11:05 AM	7 bytes	TextEdit	
Public		Apr 15, 2014 at 7:20 PM		Folder		CM/shimes	Sep 29, 2017 at 11:35 AM		Folder	
Sites		Dec 28, 2016 at 7.02 PM		Folder		in config	Aug 21, 2012 at 1531 AM		Folder	
						a connecteddata	Dec 10, 2013 at 9:44 AM		folder	

(For those who are paying close attention to the screenshots, the difference in what's showing between the Terminal listing and the Finder window is because ls puts the files that start with a capital letter together at the top, whereas the Finder doesn't distinguish between cases when alphabetizing.)

As much as it might sound amusing to work with invisible files showing, they can clutter the display, so just press Command-Shift-. again to hide them. As long as you remember the keyboard shortcut, it becomes trivial to show invisible files, do what you need, and hide them again, all from the Finder.







Roll Your Own Cloud Backups with Arq and B2

It's surprising Apple still doesn't offer iCloud backups for macOS. Time Machine requires a separate external drive or partition, making it feel long in the tooth. And it doesn't help that Apple just killed the Time Capsule (see "RIP: Apple AirPort, 1999–2018," 27 April 2018). Despite Apple's commitment to iCloud and the availability of up to 2 terabytes of storage, the company offers no set-and-forget backup option for the Mac. It's a bizarre omission because Apple has every other piece in place to make it an offering.

Paid cloud services can readily fill this gap, such as Backblaze (a TidBITS sponsor), but you can also now roll your own cloud service at a reasonable price by combining Haystack Software's Arq backup app for macOS with Backblaze's B2 on-demand, usage-based cloud storage service. I reviewed Arq for Macworld in March 2017, and found it generally good, although it needs more refinement in its restore process; Arq added B2 support a year ago.

Backblaze B2 competes with **Amazon's Simple Storage Service** (S3) and **Google Cloud Storage**, the two biggest similar firms in the space. All cloud storage companies regularly lower their prices, and a recent price drop from B2 now makes it a reasonable option for your own backup.

This article provides a roadmap for how you can roll your own cloud backup and not give up anything in the process. Expect more options to arise in the future.

Why Build Your Own Solution?

Cloud-based backups predate even the term "cloud" for distributed online storage. Mozy was one of the first in 2005, and Code42's CrashPlan followed in 2007. (Code42 is in the process of exiting the personal backup business, see "CrashPlan Discontinues Consumer Backups," 22 August 2017.) The advantage in the early days was not having to manage a server, pay for specific amounts of storage, or find software reliable enough to transfer data routinely and automatically.

The rise of on-demand, usage-based cloud storage and its precipitous price drop since Amazon S3 first appeared make it possible to consider the benefits of rolling your own cloud-backup solution. That would let you control the entire backup process, paying only for ongoing archival storage and downloading data when you need to restore files. Plus, you could manage the security of your archived data through client-side encryption, an area of increasing concern. Arq makes all of this feasible, and I'll explain how to set it up in the how-to section below. But first, where should you store your data?

The Best Storage Option for Your Money

Currently, B2's pricing is cheaper than similar storage from Amazon S3. With its recent price drop, B2 now charges \$0.005 per GB per month for storage, and charges only for downloads at \$0.01 per GB transferred, which occurs almost entirely when you're restoring files from a backup. (It's free to upload data.) Amazon and Google have tiers of service. Their standard "fast access" tiers cost much more than B2 for storage and retrieval, and while their deep-storage options compete more closely with B2, they can still wind up being more expensive for storage or retrieval on restores. (I went into excessive depth about these tiers in "Investigating ChronoSync 4.7 for Cloud Backup," 22 December 2016.)

B2 support has only recently become widespread in macOS software, which means price and opportunity finally intersect for many users. If you could limit your total archive to 1 TB, you'd pay \$5 per month in storage (\$60 per year); at 5 TB, that's \$25 per month (\$300 per year). For a single machine, most unlimited hosted backup services will be as cheap or cheaper, but for multiple computers, rolling your own could cost less or about the same, as you're only paying for the total data stored among all your backups. Restoring data costs \$1 per 100 GB, so a typical restore won't cost much.

If you have a lot of data to restore relative to your broadband connection, Backblaze is testing the **B2 Snapshot Return Refund Program**, which will charge you the standard download fees and then ship you a drive for a refundable fee (\$99 for up to 128 GB; \$189 for up to 4 TB) and return shipping costs.

You could also save money by using a sync or storage service that you're already paying for and that has unused capacity:

Dropbox: Dropbox's lowest-tier paid service includes 1 TB of cloud storage, and Arq can talk directly to Dropbox's API. You can use Dropbox's Selective Sync or Smart Sync to prevent those backups from being unnecessarily synced to a desktop computer.

Amazon Drive: If you're paying for 1 TB or more on Amazon Drive, you might have hundreds of gigabytes available, and Arq can store files directly there. Server: If you happen to have a real or virtual server at a data center with spare storage and data transfer capacity, Arq lets you transfer via SFTP.

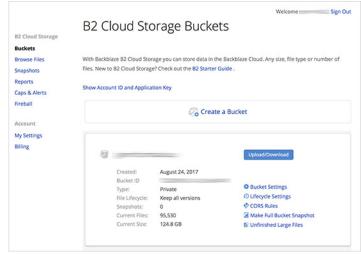
With these prices in mind, let's look at how to make this happen.

Set up Your B2 Account

Start by creating an account for Backblaze B2 and obtaining the credentials you need:

- Visit the B2 signup page and sign up for an account. (I highly recommend enabling two-factor authentication when prompted.)
- Backblaze includes 10 GB of storage for free, but fill out the Billing section if you want to store more than that immediately.

Click Buckets on the left, and then click Show Account ID and Application Key, which you'll need to plug into your archiving app—Arq, in this case.



In the Account ID & Application Key screen, click Create Application Key.

Acc	ount ID & Application Key	×
Account ID:	43	
Create Application Key Important: When you create a new applicat	on low the old one will be longer under	
important: when you create a new applicat	on key, the old one will no longer work.	
	Close	

Copy both the account ID and the application key, and store them securely, Someone might be able to derive your account ID, but wouldn't be able to access your stored data without the application key. (Encryption, as described below, also helps protect your data.) At this point, you can either choose to create a "bucket," or you can do it in Arq.

What's a bucket? You can think of it as a folder in a cloud-storage system. Unlike a folder on your Mac's drive, every bucket name has to be unique across the entire cloud system! Your backup software can generate one randomly, or you can smash down on the keyboard to create one.

With a B2 account in hand, let's configure Arq.

Configure an Arq Backup

Arq has a one-time \$50 license fee—it includes perpetual updates—and offers a 30-day trial, so you can experiment with it before being locked in. Arq can back up folders or entire volumes from internal or external drives attached to the computer on which Arq runs, or from mounted network volumes, avoiding the need for an Arq license for each backed-up computer. Be aware that it has a strippeddown interface, which doesn't look much more advanced than a screen-based terminal app, but it's fairly powerful within those parameters.

To set up your backup, follow these steps after launching Arq:

Choose Arq > Preferences.

Click the plus (+) sign in the lower-left corner.

Select Backblaze B2, and click Continue. (The "Which destination is best for me?" help that comes up offers good price comparisons.)

Туре	Host	Select the destination for your backups:		Budget	Schedule	
SFTP 82 Amazon Cloud Drive AWS Dropbox	glennf.com:22 apl.backbiazeb2.com drive.amazonaws.com s3-us-west-2.amazonaw dropbox.com	Amazon Drive AWS (53 and Glacler) • Backblaze B2 Dropbox Google Drive	5384 MQ	None None None 100 GB	Manual Manual Manual Manual	
+-		Google Cloud Storage OneDrive Wasabi Other S3-Compatible Service SFTP	-	Edit	Clear Cache	
		A folder on your hard drive or NAS (Which destination is best for me?) Cancel Continue				

Enter your B2 account ID and application key that you set previously, and then click Continue.

At this point, either name a bucket at this stage—see details above about limitations—or use one you've already created. Then click Continue.

Every destination uses the same parameters for encryption (see step 3 below), schedule, budget, and scripts. You can modify all but the encryption parameters by selecting the destination in Preferences, clicking Edit, and setting the options in the Schedule, Budget, and Before and After Backup tabs.

82	62
Account: Bucket: Change Credentials)	Account: Bucket: Change Credentials
Schedule Budget Before and After Backup Schedule • Back up every 4 hours at 7 minutes past the hour Back up every 4 hours at 7 minutes past the hour	Schedule Budget Before and After Backup Budget Unit total size of backups to 1000 GB NOTE: Are will keep at least 1 backup record no matter what limit you set
Bockup only hoppens when you select "Slack Up Now" from the menu ✓ Rouse backup between 09:00 C and 15:00 C Validate backup data every 60 days Bochumender learners: 0 days	Enforce budget and/or remove unreferenced objects every 30 days Recommended interval: 30 days
Cancel Save	Cancel Save

Backups (left) occur hourly by default, but you can refine these settings on a per-destination basis. Budget (right) lets you set a maximum size (B2 and others) or cost (Amazon S3 and others) beyond which archives are trimmed.

The Budget tab is the most interesting one for managing costs. You set a maximum total size for backups, and as long as it's larger than a complete set of your files, Arq automatically thins older archived files to keep you within that amount. (It always maintains a single full set of all files, no matter the budget.) With Amazon S3 and others, you can set a maximum monthly dollar amount, which Arq calculates based on Amazon's rates. Arq can also remove "unreferenced," or locally deleted, items every 30 days or at a rate you set.

Next, you use the main Arq window to add the folders you want to back up:

- Under Configure Backups, select To B2, and then click Add a Folder to Backups.
- Select a folder. With your startup volume, I recommend picking folders like your home folder and the Applications folder individually to avoid backing up system files and logs. For external drives that don't have system files, you can select the entire volume as a "folder."
- When Arq prompts you, set a passphrase for encryption; I'll explain more about this later. Use a password manager like 1Password or LastPass to generate and store a relatively long passphrase, like 15 to 20 characters. Do not do this by hand because the passphrase cannot be recovered if lost. Arq creates a local file that contains necessary encryption details.

cel Continue
Can

A warning reminds you to write down the password, which is poor advice in the modern age—use a secure password manager. The dialog has a single button labeled "I Wrote It Down," which is unhelpful because at this stage you've already set the password and can't back up to change it.



WARNING: Write down your password!

It's only stored on this computer. If you forget it you will not be able to restore from your backups! Write it on paper and store it somewhere safe.

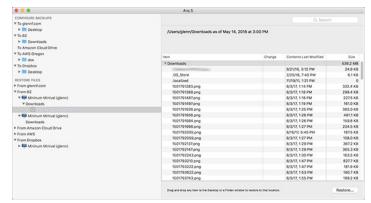
I Wrote It Down

Death to sticky notes!

Click the folder under To B2 and then click Edit Backup Selections to modify which folders and files Arq will monitor for changes.

As I noted earlier, restoring files is not as simple as setting up backups:

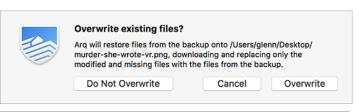
- In the Restore Files section, click From B2, and select your computer.
- Underneath, in the list of backed-up folders, click one of these items to expand it.
- Under the expansion, where Arq lists a snapshot for each archived operation, select a snapshot.



Restoring files in Arq requires a lot of drilling down to backup sets and then individual files.

In the list of available files on the right (which includes the last modification date for each file), select a single item and either click Restore or drag it to a location in the Finder.

Unfortunately, you can restore only a single file or folder at a time; there's no provision to make multiple selections at once. If there are conflicting items at the restore location, you're prompted with Do Not Overwrite, Cancel, and Overwrite. But Do Not Overwrite doesn't selectively replace files. Instead, it creates a nested local directory with the full set of restored files.



Arq's Overwrite warning is more complicated than its explanation.

Handling Encryption in Arq

Arq uses its own encryption system, relying on standard libraries. Arq's developer, Haystack Software, **documents it fully on its Web site** (in a text file!), and notes that it uses an encryption approach similar to the one used by the Git file-versioning system.

Arq transforms your passphrase into a number of encryption keys, which are stored in a local file that's encrypted directly using your passphrase. While Arq is in use, it keeps the encryption keys available for itself, which is true for all backup software with client-side encryption and decryption.

The encryption keys are never transmitted to a server in any fashion, which is the best behavior if you want the highest level of control over your archived files, and the least possibility that any unwanted party—personal, criminal, or governmental—could gain access to those files.

Backblaze's consumer backup solution keeps your encryption key private until and unless you have to restore data, at which point it has to be transferred to the company's servers to decrypt archives and create a downloadable Zip archive of your restored files. It's not stored permanently, but it's a point of weakness for someone who could gain privileged access, and one not found in SpiderOak or CrashPlan.

Google and Amazon's cloud-based server systems also allow encryption, but they encrypt and decrypt on the server side with a user-provided key, so the key ends up out of your control even though the process is designed to be secure.

Arq's only encryption problem is that its passphrase-entry approach isn't integrated with anything else, so you must retain a copy in some secure fashion, such as with a password manager like 1Password or LastPass. Haystack Software should consider adding integrations.

Why Not Other Backup or Sync Apps?

You may wonder why I don't discuss two other popular file transfer apps that support B2 and other cloud services, SFTP, and other connection methods.

ChronoSync by Econ Technologies (\$50 perpetual license, 15-day trial) is a terrific clone, mirror, sync, and archive app that keeps getting better. Unfortunately, it doesn't offer any client-side encryption options. ChronoSync can use Google and Amazon's serverside encryption (see above). If Econ Technologies added client-side encryption, it would be a strong competitor to Arq.

Panic's Transmit 5 also supports cloud-storage systems like B2 and synchronization, but it lacks scheduling, restoring, and archiving features necessary for a backup solution. It doesn't offer client-side or server-side encryption.

The Future of Rolling Your Own Cloud Backups

I still wish Apple would provide an iCloud-based backup service, not to put other companies out of business, but to provide a minimum level of archiving that would be easily and affordably available. That would teach everyday users that cloud-backup solutions exist, which could grow the market for independent backup services with more to offer.

Arq and B2 aren't the perfect combination, but they're the best option that I've seen to date for a combination of control, archiving features, and price. I expect we'll see more, between CrashPlan's exit from the market, the growing interest in controlling one's own encryption, and the drop in cloud-based storage pricing.

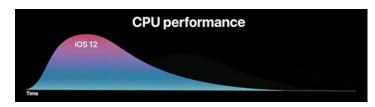
by Josh Centers

iOS 12 to Focus on Performance and Refinement

At WWDC, Apple announced iOS 12, which, like every-other release of macOS, focuses on refinement over radical new features, with an emphasis on speed, better time management, Siri improvements, and sprucing up long-ignored Apple apps. And augmented reality, although there seems to be more talk than action in this space so far.

The Need for Speed

The first way Apple hopes to improve your experience is by making your iOS devices faster. Apple claims that iOS 12 will be faster than iOS 11—a lot faster. The company is touting 40% faster app launches, 50% faster keyboard display, and 70% faster Camera access, plus up to 100% faster app launches and share sheet display while under heavy CPU load. Apple says this speed boost shouldn't impact battery life since iOS 12 ramps up CPU performance instantly when needed and drops it as soon as it's not.



These speed boosts will occur on every device iOS 12 suports, which is happily every device which iOS 11 supports—all the way back to the iPhone 5s and the original iPad Air. In fact, Apple suggested that these older devices may benefit the most from the speed improvements. Apple claims that iOS 12 will have the largest supported base ever for an Apple operating system release.

Take Back Your Time

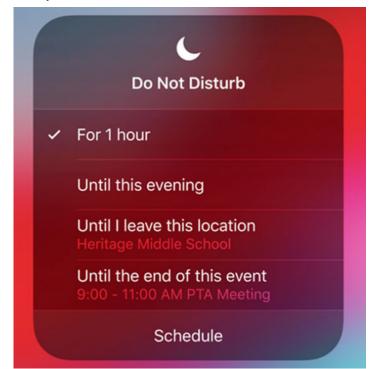
Apple seems painfully aware of how the iPhone has rehaped society and is ever so slightly regretful.



To that end, Apple is enhancing two existing iOS features and rolling out a new one to help you use your iPhone less.

Do Not Disturb Improvements

First up, Do Not Disturb (DND) is getting some upgrades. You can now set an automatic end to DND by time or location: press the DND button in Control Center and you can set when or where to automatically leave DND mode. Now you don't have to remember to turn it off.



DND can already keep your phone from buzzing and lighting up when you're trying to rest, but Apple is taking it to the next level with Do Not Disturb During Bedtime, which also dims the display and hides all notifications until you wake up. When you do check your iPhone in the morning, it will slowly introduce notifications to you instead of bombarding you first thing.



Notification Improvements

iOS 12 will introduce two ways to make notifications less obnoxious:

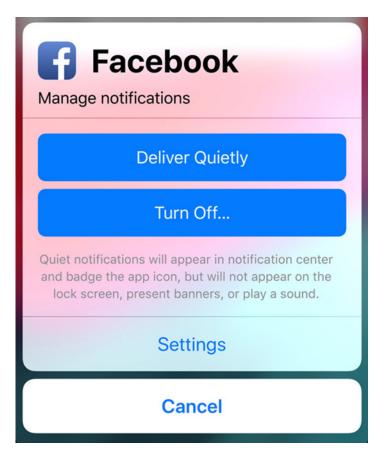
Notification Grouping: Notification grouping collects related notifications from the same app into "stacks" that you can tap to expand or dismiss with a swipe.

MESSAGES now Michael Dibs I'll see you bright and early tomorrow. 4 more messages from Michael CALENDAR 3m ago Fourth of July BBQ Summer Bash Invitation From Smeeta Singpuri July 4, 2018 at 2:00 PM 2 more invitations

4m ago

Brian Carey Sweet stuff, that song is my jam. 2 more notifications

Instant Tuning: In iOS 12, you can press a notification on the Lock screen to stop receiving notifications from that app, or to quietly send them to Notification Center without bothering you when the phone is locked. Siri may also make suggestions for adjusting them based on your usage.



Screen Time

The new Screen Time feature helps you track and control how often you and your children use your iOS devices, much like the existing **Moment app** but with more capabilities. You can see exactly how long you've been using your devices, which apps you've spent time in, set timed daily limits for apps, and set time away from the screen. You can also do this for your children's devices via Family Sharing.

< Screen Time Jason Brennan						
SCREEN TIME Today at 9:41 PM						
Jaso	on's	iPad		>		
3h	14	m	22m above av	rerage		
Game 1h 50		Entertainment 45m	Social Networking 25m	Other 14m		
Q ₂ ×	Downtime Schedule time away from the screen.					
X	App Limits Set time limits for apps.					
	Always Allowed > Choose apps you want at all times.					
0		ontent & Priva	cy Restrictions te content.	>		

Smarter Siri

The most ambitious new feature of iOS 12 is Siri Shortcuts, accompanied by the new Shortcuts app. Apple did a weak job of explaining Shortcuts, so let me clear it up for you: it's the official integration of the Workflow automation app that we've been anticipating since Apple purchased it last year (see "What Apple's Purchase of Workflow Means for Automation," 27 March 2017). It turns out that the title of my Workflow review—"Workflow Is the Next Step for iOS Automation" (21 December 2014)—was on the nose.

Siri Shortcuts will tie into hundreds of apps for you to create automated routines, which you activate on screen or with Siri. Plus, Siri will learn your daily habits and suggest certain shortcuts when they are relevant.

Here are some examples of stuff you can do with Siri Shortcuts:

Locate your keys with Tile

Order a favorite beverage

Text a friend with a premade message



Augmented Reality

Apple spent quite a bit of the keynote talking about and showing off the capabilities of the new ARKit 2 framework. As before, augmented reality demos well, but hasn't made a splash among mainstream apps used by most users yet. It's obvious that Apple is laying the groundwork for something much bigger—perhaps digital glasses or an augmented Apple Car display. In any case, Apple is very excited about AR, despite it not really rocking the App Store yet. Here's what's new in AR in iOS 12:

Shared Experiences: ARKit 2 will allow for "shared experiences"—think multiplayer games where everyone's device can project shared virtual objects as an overlay on the real world. Apple demonstrated this capability with an upcoming Lego game and a demo app that fired virtual bullets at realistic virtual wooden blocks—on a table that actually exists. It was impressive, but wasn't a very good example of augmented reality, since nearly everything that was interesting was in the virtual aspect of the game; the original Lego model just sat there. AR File Format: Apple announced the new USDZ file format for augmented-reality content. Adobe is an early partner, and Creative Cloud apps like Photoshop will be able to export USDZ. The USDZ standard will enable publishers to embed augmented reality in apps and Web sites more easily. As an example, Apple's Craig Federighi demonstrated creating a customized guitar, and projecting it as an AR object so you could see how it would look at full size, and how it might look alongside surrounding objects.

For now, the most useful implementation of ARKit will be Apple's new Measure app, which will ship with iOS 12. The app is—as you can guess—a virtual measuring tape. Measure will help you measure real-world objects with your iPhone and can even measure select objects, like photos, automatically.

Other Stuff

Many other various and sundry changes are coming to iOS 12:

- Animoji: iPhone X users can look forward to ghost, koala, tiger, and Tyrannosaurus animojis. iOS 12 will also introduce memojis, which are animojis you can customize to match your appearance. Also, animojis will be able to detect the movement of your tongue and animate that on screen. No, that's not a joke.
- Apple Books: iBooks has been redubbed Apple Books and has been given a fresh new design.
- Apple News: The News app will receive a design refresh, including a new sidebar on the iPad.
- Battery: The 7-day battery usage information in Settings > Battery will now show battery usage over the past 10 days instead.
- Camera Effects: The Camera app will gain Snapchat-esque effects you can apply to images, such as turning your face into an animoji, inserting emojis and stickers in the image, and applying various fun filters. You'll be able to use these in other apps like Messages.
- CarPlay: With iOS 12, CarPlay will support third-party navigation apps, like Google Maps and Waze. Adam Engst was just complaining about the lack of this capability in iOS 11 while on his trip to the UK, where Apple's Maps app wasn't working acceptably, but

Google Maps couldn't be displayed on the rental car's screen via CarPlay.

- FaceTime: FaceTime will finally let you have calls with more than two people. In fact, it will support up to 32 of your friends and relatives! You'll also be able to use the aforementioned Camera effects while chatting with FaceTime.
- Password Generation: Not only can iOS 12 save and manage your Web and app passwords, but it'll also be able to suggest new passwords and automatically save them.
- Photos: The Photos app boasts improved search, though are curious if it will be as good as the search in Google Photos. A new For You tab reveals photos from your library, and—here's a great feature—prompts you to collaborate with recognized friends to share photos from an event so you both get a complete set.
- Safari: The Safari Web browser gets some bold new privacy protections. Share buttons and comment boxes are now prevented from tracking you without permission, and advertisers can no longer track your device's unique characteristics. Facebook, Google, and Web advertisers may not be happy about that, but nearly all users will appreciate it.
- Stocks: Remember the Stocks app? Apple has redesigned it, and it will integrate articles from Apple News.
- Two-Factor Authentication: If you need a one-time SMS code to log into a Web site, iOS 12 can automatically detect that and suggest it to you with AutoFill so you don't have to switch between two apps.
- Voice Memos: The Voice Memos app is getting a big overhaul with support for both iPad and iCloud. macOS 10.14 Mojave will have Voice Memos as well, and recordings will sync between the two via iCloud, so it will be far more useful than it ever has been.
- Wallet: Apple demonstrated iOS 12 supporting contactless student ID cards at schools and universities that are partnering with them.

As welcome as many of these features are, none are game-changing. But that's fine—we'd rather see the company instead focus on performance and refinement. There's surely much more to discover over the summer as I work on updating Take Control of iOS 11.





watchOS 5 Targets Fitness, Communication, and More

With the just-announced watchOS 5, Apple's emphasis is largely on fitness, which has become a key reason for the Apple Watch's success. But the company also revealed new communication, entertainment, and information-consumption capabilities. As a bonus, it announced a couple of goodies (not dependent on watchOS 5 and immediately available) that support a pet Apple cause, LGBTQ pride.

Fitness Features

The Apple Watch is already a superb fitness device, so the promised features aren't game-changing, but make it more useful for current users while looking to woo new kinds of athletes.

Fresh features include Activity Competitions, which let exercise-focused groups of friends compare notes and challenge each other. The competition feature in watchOS 5 enables users to invite each other to participate in sevenday Activity contests while receiving coaching notifications and earning points for closing Activity Rings.



For those who regularly forget to begin a workout from the Workouts app, the watch now can nudge you with an alert to start the correct kind of workout and provide retroactive credit for the exercise you've already done. Users will also be reminded to end their workouts in the app when they're finished.



There are new kinds of fitness regimens in the Workout app, too, including Yoga and Hiking, each with their own metrics.

Speaking of metrics, the Apple Watch will now measure cadence (steps per minute) for those engaged in indoor and outdoor runs and walks. For those running outdoors, it will also provide a pace alarm to flag whether your workout is behind or ahead of a designated target pace. There is a new metric, too—called rolling mile pace—for runners to see their pace for the immediately preceding mile in addition to their average or current paces.



Walkie-Talkie

Kids love walkie-talkies. Now Apple Watch users of all ages can get in on this fun. The brand new Walkie-Talkie app is the height of simplicity—it just has a big, yellow Talk button.



When users fire up the app, they'll see lists of Apple Watch users with whom they often swap email, texts, or voice calls. Any user can then be invited to have a **half-duplex** voice conversation via taps on the Talk button. This feature works over cellular data and Wi-Fi.

Apple Podcasts

Listening to podcasts directly from the Apple Watch has until now tended to be a challenge, spawning a number of third-party apps for this purpose (see "Five Apps That Play Podcasts Directly from Your Apple Watch," 9 April 2018).

The absence of Apple's Podcasts app for the Apple Watch seemed like a glaring omission. Now that gap has been filled. The watchOS 5 version of the Podcasts app will sync with the iOS versions, and will automatically refresh with the latest episodes of subscribed shows. Users also will be able to summon podcast content with Siri commands.



In a broader audio sense, watchOS 5 will improve how users listen to music, audiobooks, and meditation sessions. Content from apps like Pandora, Audible, and 10% Happier will sync from your iPhone to your watch for offline playback away from the phone. Third-party support for background audio playback also is on board, so look for more things like independent podcast apps for watchOS.

Info on the Go

At-a-glance alerts and other informational snippets have made the Apple Watch a popular sidekick to the iPhone. Here are some ways watchOS 5 improves upon that:

The Siri watch face, with its rolling queue of tidbits, will gain some smarts, anticipating information users require based on routines, locations, and health information. Think heart-rate readings after a workout, commuting times via the Maps app, remote activation of HomeKit scenes, reminders about favorite commuting playlists, and scores from favorite sports teams. The Siri watch face also will embrace third-party apps such as Nike+ Run Club, Glow Baby, and Mobike by incorporating information from them in its rolling alert queue.



Notifications will be more feature-rich, too. Built-in interactivity will let users, for instance, tap to check in for a flight, change a restaurant reservation time, or extend parking-meter time via relevant third-party apps. In

addition, multiple notifications from one app will be grouped together for less scrolling.

- Web content is finally viewable on the Apple Watch, albeit in a limited way.
- You will be able to customize Do Not Disturb by time and location.

When you raise your wrist to talk to the Apple Watch, you will no longer have to start Siri commands with "Hey, Siri."

Student Features

It makes sense that early-adopter, Apple-enthused college students would embrace the Apple Watch, and it better caters to their needs.



With watchOS 5, the watch can now serve as an electronic ID card (initially at only a handful of U.S. universities) for dorm access, meal or snack payments, laundry-machine sessions, and the like.

LGBTQ Pride

Along with the upcoming features in watchOS 5, Apple provided a couple of immediately accessible goodies for those marking LGBTQ History Month.

There's a new rainbow-colored watch band—complementing a similar one released in 2016—and a matching watch face that should be available as of this writing. Proceeds from sales of the watch band go in part to a number of LGBTQ advocacy organizations.



Apple also released new standard new bands with summerthemed colors such as Marine Green, Peach, and Sky Blue.

Availability and Compatibility

watchOS 5 will be available "this fall"—likely in September —as a free update for Apple Watch Series 1 and later, and it will require an iPhone 5s or later running iOS 12. watchOS 5 will not be available for the original Apple Watch, which may make the people who bought the \$17,000 gold Apple Watch Edition models sad.

Software Review

Apple Updates

Security Update 2018-003 (Sierra) Jun 3, 2018

System Requirements – macOS 10.12.6

Security Update 2018-003 is recommended for all users and improves the security of OS X.

macOS High Sierra 10.13.5 Combo Update Jun 1, 2018

System Requirements - macOS 10.13.0 The macOS High Sierra 10.13.5 update improves the stability, performance, and security of your Mac and is recommended for all users.

This update adds support for Messages in iCloud, which lets you store messages with their attachments in iCloud and free up space on your Mac. To enable Messages in iCloud, go to Preferences in Messages, click Accounts, then select "Enable Messages in iCloud".

macOS High Sierra 10.13.5 Update Jun 1, 2018

System Requirements – macOS 10.13.4 The macOS High Sierra 10.13.5 update improves the stability, performance, and security of your Mac and is recommended for all users.

This update adds support for Messages in iCloud, which lets you store messages with their attachments in iCloud and free up space on your Mac. To enable Messages in iCloud, go to Preferences in Messages, click Accounts, then select "Enable Messages in iCloud".

Security Update 2018-003 (El Capitan) Jun 1, 2018

System Requirements - macOS 10.11

Security Update 2018-003 is recommended for all users and improves the security of OS X.

iTunes 12.7.5 May 29, 2018

This update includes minor app and performance improvements.

Share Keystone MacCentral with other MACaholics

Name	To join Keystone MacCentral, mail this form with your membership dues (payable to Keystone MacCentral) to:		
Address		(f -))	
City	State Zip	Keystone MacCentral Membership Chair	
Home Phone	Day Phone	310 Somerset Drive	
E-mail Address		Shiresmanstown, PA 17011	
Date	Is this \bigcirc Renewal or \bigcirc New?	Keystone MacCentral meetings are held at 6:30 p.m. on the 3rd Tuesday of	
How did you hear about us?		the month at Bethany Village Retirement	
Dues for one person are \odot \$20/yr.	Family or Corporate dues are O \$30/yr.	Center, 5225 Wilson Lane, Mechanicsburg, PA 17055	





