APCUG 2019 Winter Virtual Technology Conference (VTC31) 3 mini-presentations

- 1. Microsoft Security Center Windows 10
- 2. New Privacy Updates Windows 10
- 3. Password Managers for all devices

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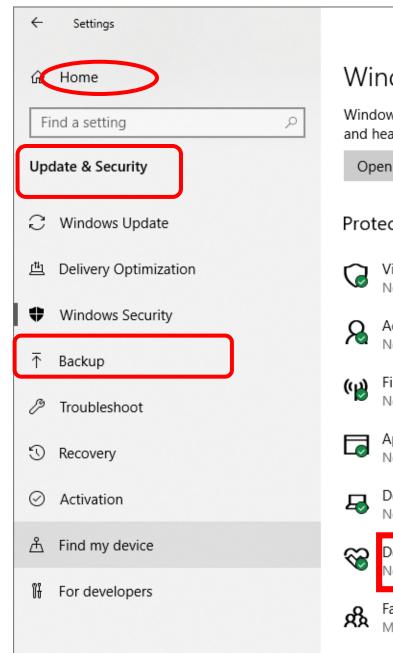


Microsoft Security Center

Windows 10 Version 1809

MS Security Center - What is it?

- Cyber attacks have changed.
- Hackers can now take over PC's and lock down files.
- These types of attacks are called <u>Ransomware</u>.
- To mitigate these types of attack, Microsoft has a feature which allows enabling Core Isolation and Memory Integrity to prevent such attacks.
- 'Windows Defender Security Center' offers these features:
 - named in Settings Device Security.



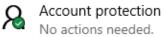
Windows Security

Windows Security is your home to view and manage the security and health of your device.

Open Windows Security

Protection areas





Firewall & network protection
No actions needed.

App & browser control
No actions needed.

Device security

No actions needed.

Device performance & health No actions needed.

Family options

Manage how your family uses their devices.

Keep your PC safe

Windows Security has options to help keep you protected online, maintain your device's health, run periodic scans, manage your threatprotection settings, and more.

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Get more info about Windows Security

Have a question?

Add Microsoft account security info How to use Windows Security Turn on Windows Defender Firewall Exclude a folder from a scan Get help

Make Windows better

Give us feedback

Security Features for Everyone

- Core isolation provides added protection against malware by isolating computer processes from the operating system.
- Security processor provides additional encryption for the device.
 - manufacturer and version numbers, as well as about the security processor's status.
- Secure boot prevents a dangerous type of malware rootkit—from loading on startup of the PC.
 - Support.Microsoft.com http://bit.ly/2MThSdS

What is Core Isolation?

- Windows uses hardware virtualization features to create a secure area of system memory.
 - It is isolated from the normal operating system.
- Windows can run system processes and security software in this secure area.
 - This protects important operating system processes from being tampered with by anything running outside the secure area.
- 'Virtualization' hides the physical characteristics of a PC from the users;
 - an additional layer of protection

What is Security Processor?

Two critical vulnerabilities — dubbed "Meltdown/Spectre" — affect nearly every (CPU) device made in the past 20 years.

- **Security Processor** a trusted execution environment subsystem.
- Responsible for creating, monitoring and maintaining the security environment.
- Many devices that run Windows 10 have Trusted Platform Module (TPM) chipsets.
 - CPU manufacturers are releasing firmware updates via Windows 10 Updates.

What is Secure Boot?

- When a PC starts, it first finds the operating system 'bootloader'.
- PCs without Secure Boot simply run whatever bootloader is on the PC's hard drive.
 - There's no way for the PC to know it's a trusted operating system or a rootkit.
- When a PC equipped with UEFI starts, the PC first verifies that the firmware is digitally signed,
 - (UEFI {Unified Extensible Firmware Interface} replaces the Basic Input/Output System (BIOS) firmware interface originally present in all IBM PC's)
 - reducing the risk of firmware rootkits.
- If Secure Boot is enabled, the firmware examines the bootloader's digital signature to verify that it hasn't been modified.

How to Enable Core Isolation

- 1. Sign in as an Administrator.
- 2. Click 'Start'
- 3. Click on 'Settings'
- 4. Click on 'Update & Security'
- 5. Click On 'Windows Security'
- 6. Click on 'Device security'.

All Screenshot slides are from my Laptop.





System

Display, sound, notifications, power



Devices

Bluetooth, printers, mouse



Phone

Link your Android, iPhone



Network & Internet

Wi-Fi, airplane mode, VPN



Personalization

Background, lock screen, colors



Apps

Uninstall, defaults, optional features



Accounts

Your accounts, email, sync, work, family



Time & Language

Speech, region, date



Gaming

Game bar, captures, broadcasting, Game Mode



Ease of Access

Narrator, magnifier, high contrast



Cortana

Cortana language, permissions, notifications



Privacy

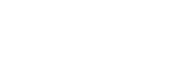
Location, camera

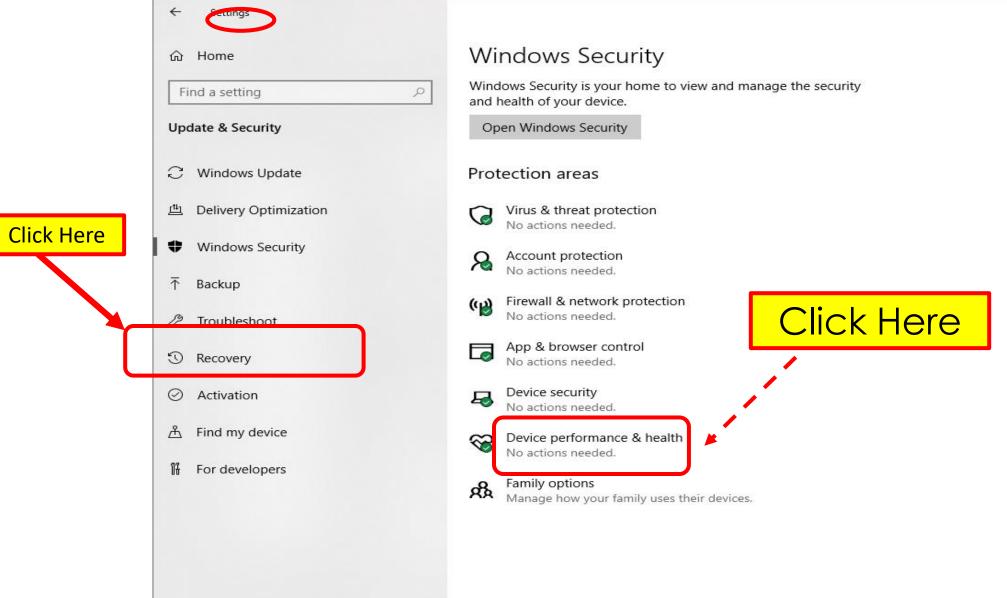


Start

backup







Keep your PC safe

Windows Security has options to help keep you protected online, maintain your device's health, run periodic scans, manage your threatprotection settings, and more.

Get more info about Windows Security

Have a question?

Add Microsoft account security info How to use Windows Security Turn on Windows Defender Firewall Exclude a folder from a scan Get help

Make Windows better

Give us feedback

The Final Screen for Core Isolation

Windows Security \leftarrow \equiv Home Virus & threat protection Account protection Firewall & network protection App & browser control Device security Device performance & health

R Family options

☐ Device security

Security that comes built into your device.

Core isolation

Virtualization-based security is running to protect the core parts of your device.

Core isolation details

The words here say I have already turned these '**ON**'.

Security processor

Your security processor, called the trusted platform module (TPM), is providing additional encryption for your device.

Security processor details

Secure boot

Secure boot is on, preventing malicious software from loading when your device starts up.

Learn more

Your device meets the requirements for standard hardware security.

Learn more

Windows Community videos

Learn more about Device security

 \Box

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Have a question?

Get help

Help improve Windows Security

Give us feedback

Change your privacy settings

View and change privacy settings for your Windows 10 device.

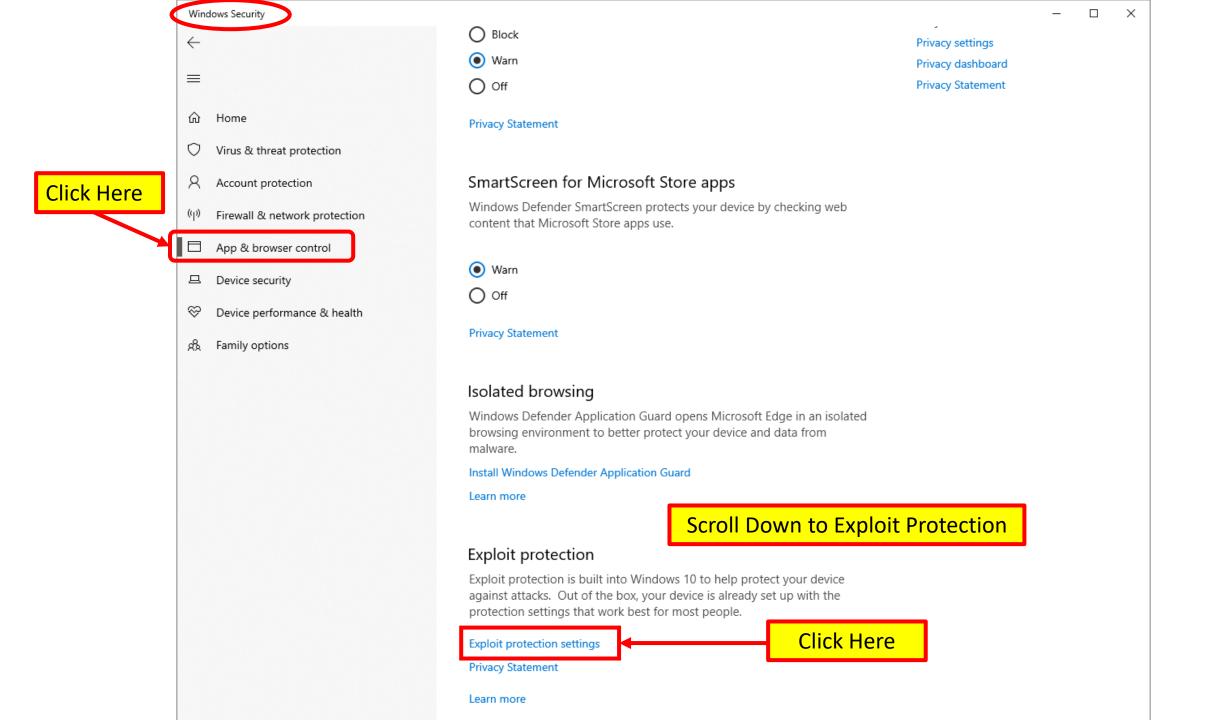
Privacy settings

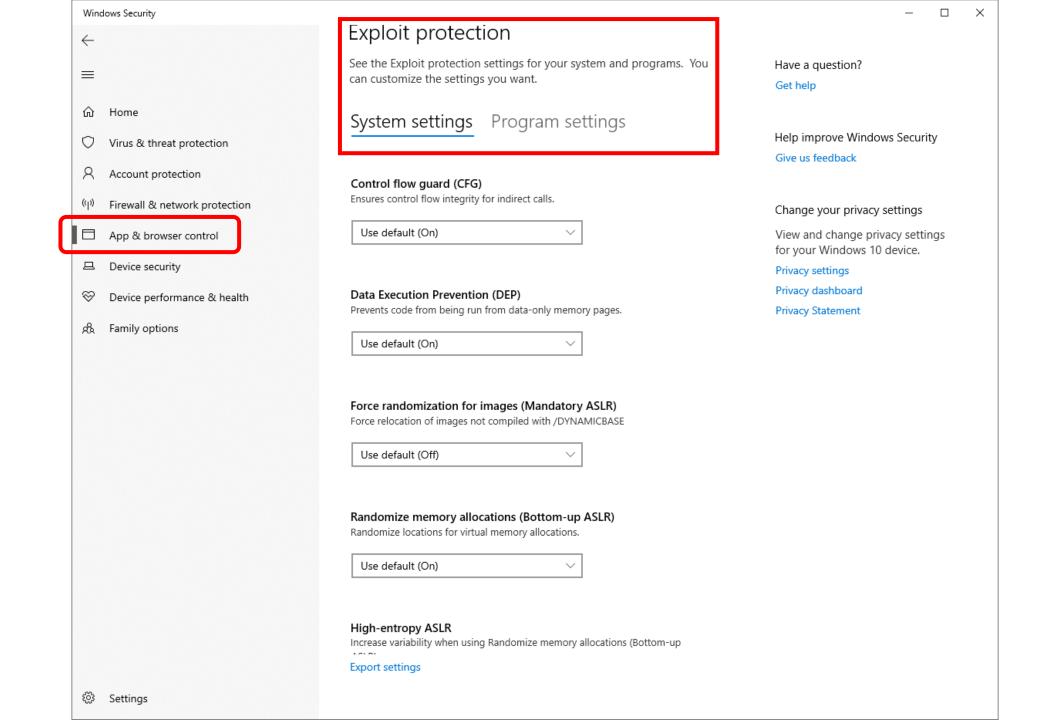
Privacy dashboard

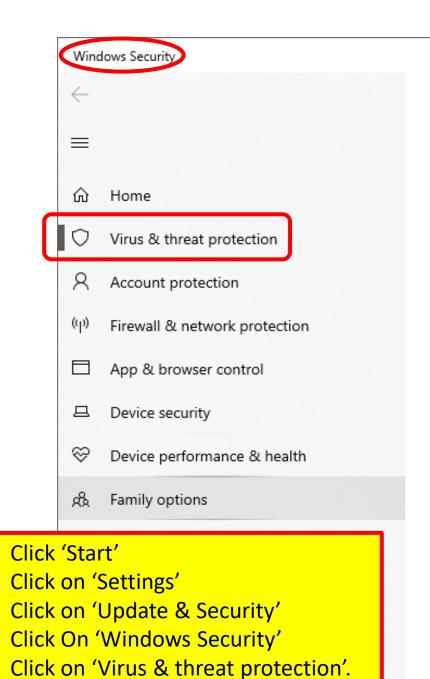
Privacy Statement

Windows Defender Exploit Guard.

- Exploit protection protects the operating system and applications from many types of exploits,
 - is enabled by default.
 - All Windows 10 users now have exploit protection.
- Controlled Folder Access, which protects PC files from ransomware.
 - It's not enabled by default for all files
 - it requires some configuration.
- Enable this feature, to allow applications access before they can access files in your personal file folders.







Settings

Ransomware protection

Protect your files against threats like ransomware, and see how to restore files in case of an attack.

Controlled folder access

Protect files, folders, and memory areas on your device from unauthorized changes by unfriendly applications.



Protected folders

Allow an app through Controlled folder access

Have a question?

Get help

Help improve Windows Security

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Give us feedback

Change your privacy settings

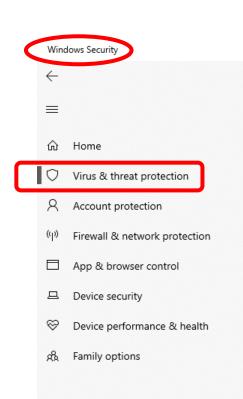
View and change privacy settings for your Windows 10 device.

Privacy settings

Privacy dashboard

Privacy Statement

Click on Protected folders = next slide



Protected folders

Windows system folders are protected by default. You can also add additional protected folders.



Add a protected folder

Documents

C:\Users\Jere Standard\OneDrive\Documents

Documents

C:\Users\Public\Documents

Pictures

C:\Users\Jere Standard\OneDrive\Pictures

Pictures

C:\Users\Public\Pictures

Videos

C:\Users\Public\Videos

Videos

C:\Users\Jere Standard\Videos

Music

C:\Users\Jere Standard\Music

Music

C:\Users\Public\Music

Desktop

C:\Users\Jere Standard\Desktop

Desktop

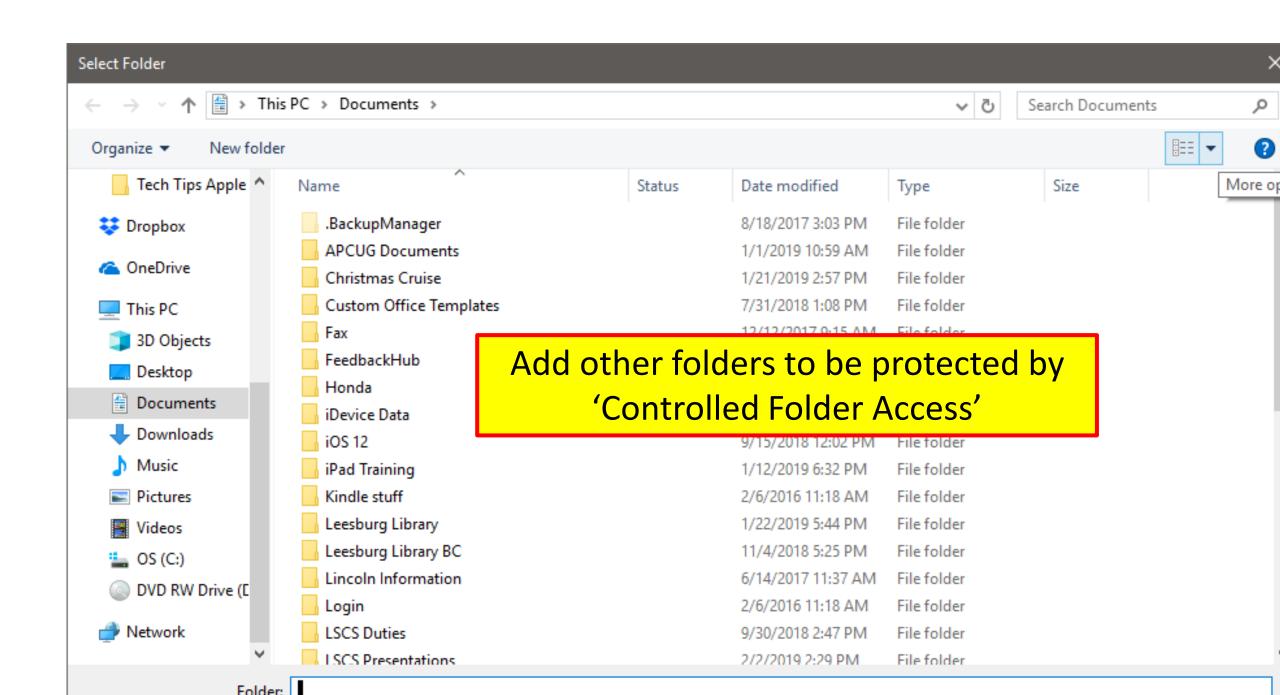
C:\Users\Public\Desktop

Favorites

C:\Users\Jere Standard\Favorites

Click on 'Add a protected folder'; opens 'File Explorer'. (Next Slide)

These are the folders I have protected on my PC.



Microsoft Security Essentials

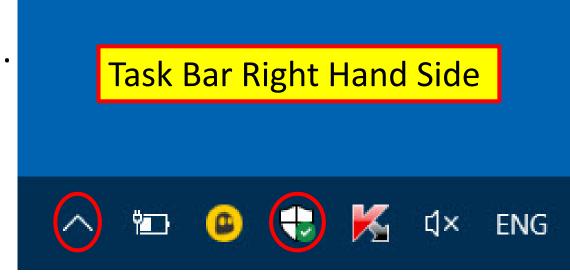
• provides real-time protection for home PC's that guards against viruses, spyware, and other malicious software.

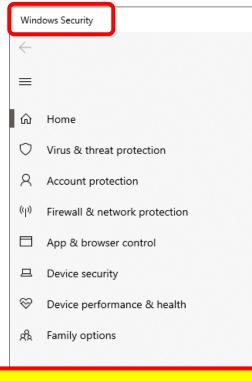
 a free download from Microsoft that is simple to install, easy to use, and always kept up to date so you can be assured your PC is protected

by the latest technology.

• the PC is secure - when green, good.

- runs in the background;
 - without interruptions.





Go Back to Setting > Windows Security

- 1. Select Each Category
- 2. Make your desired security settings.

Security at a glance

See what's happening with the security and health of your device and take any actions needed.



Virus & threat protection No action needed.



Account protection No action needed.



Firewall & network protection

No action needed.



App & browser control No action needed.



Device security View status and manage hardware security features



Device performance & health No action needed.

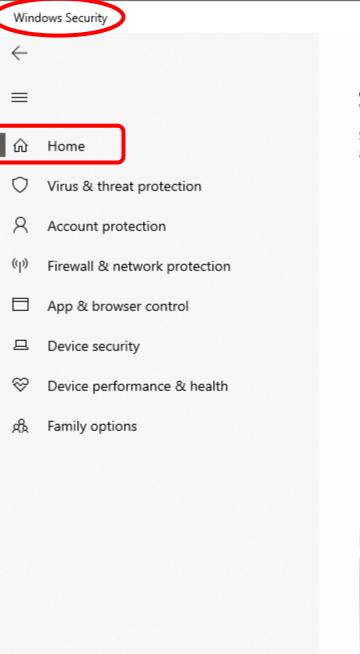


Family options their devices.

Manage how your family uses



Settings



Security at a glance

See what's happening with the security and health of your device and take any actions needed.



Virus & threat protection

No action needed.



Account protection
No action needed.



Firewall & network protection

No action needed.



App & browser control
No action needed.



Device security View status and manage hardware security features



Device performance & health

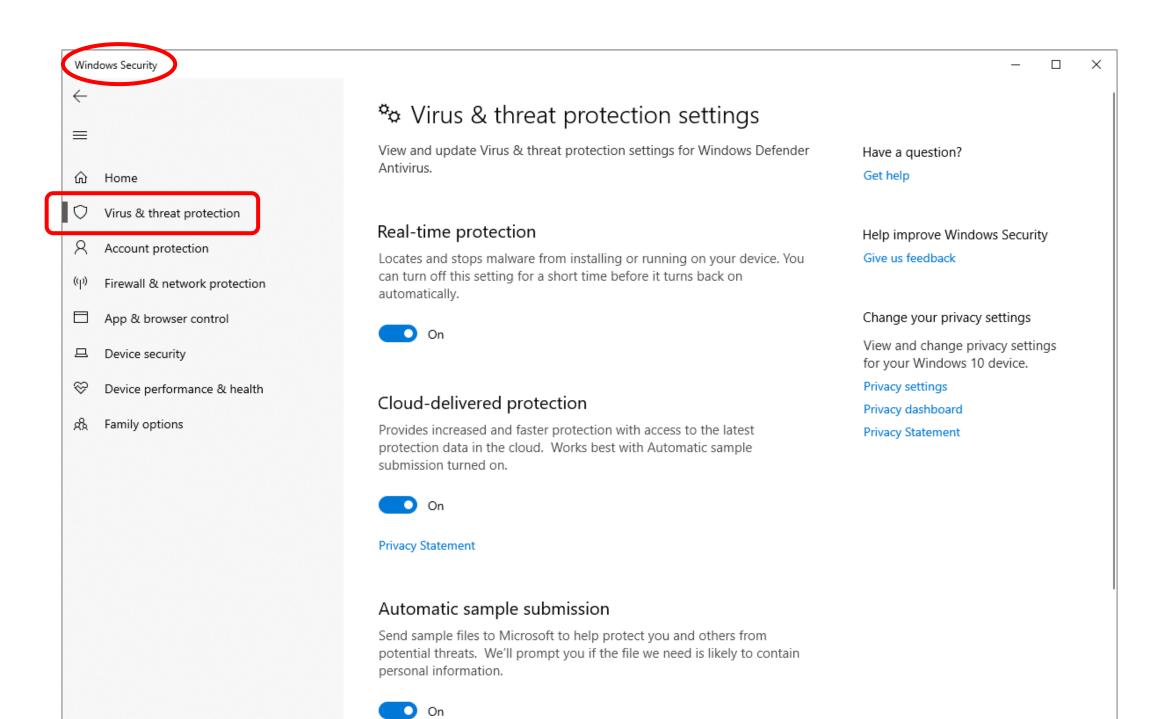
No action needed.



Family options
Manage how your family
their devices.

Select "No action needed"

These settings may not be what you want.

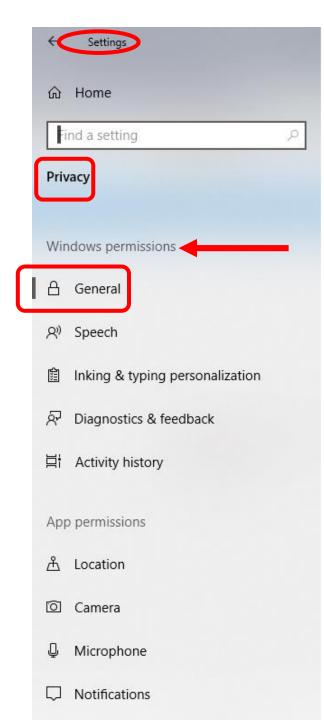


New Privacy Updates

Windows 10 Version 1809

Privacy settings after updating Windows 10

- It's important to make sure privacy settings are right.
- Review or choose privacy settings after each Windows update,
 - sign in with an 'administrator' account.
- 'Preselected' settings are based on before updating Windows.
 - Adjust them by turning any toggle "ON" or "OFF".
- Change them at any time by selecting:
 - Start > Settings > Privacy.
- https://privacy.microsoft.com/en-US/windows10privacy
 - http://bit.ly/2MXDVQW



General

Change privacy options

Let apps use advertising ID to make ads more interesting to you hased on your app activity (Turning this off will reset your ID.)

Resets your Advertising ID based on your app activity (Turning this off will reset your ID.)

Let websites provide locally relevant content by accessing my language list

Off

Off

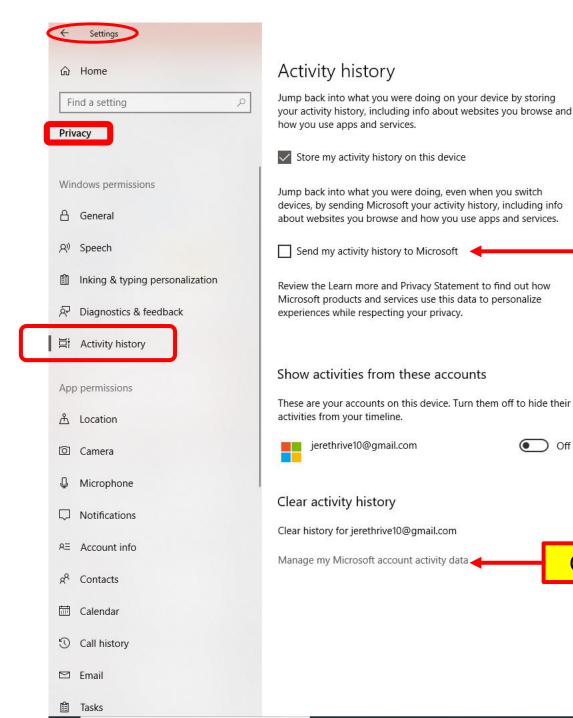
Let Windows track app launches to improve Start and search results

Off

Show me suggested content in the Settings app

On

It won't block ads in apps, but future advertisements you see won't be personalized, based on App Activity.



I have shown 2 examples.
(General & Activity History)
Check them <u>all</u> under Windows permissions.

Have a question? Get help

> Make Windows better Give us feedback

Know your privacy option

Learn how this setting im

privacy.

Learn more

Privacy dashboard

Privacy statement

Checked by default

Click here to manage MS account activity data.

MS Account activity data

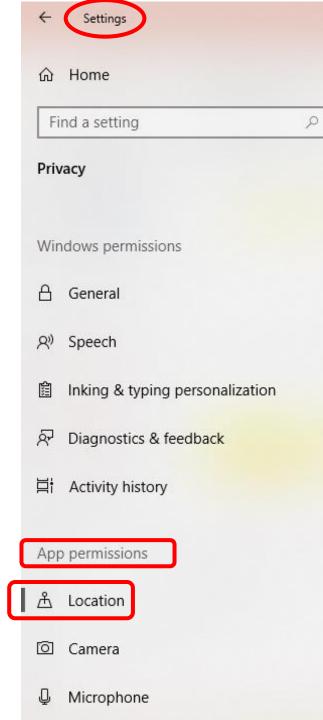
The following data can be adjusted/edited/viewed in Account Activity Data.

- Browsing History
- Location Activity
- Voice Activity
- Media Activity
- Apps and services
- Cortana's Notebook
- MS Health Activity
- Ad Settings
- Search History

- Promotional communications
- SKYPE
- Xbox
- Linkedin
- Product and service performance data
- Product and service activity
 - Microsoft Says:
- When we do collect data, we will use it to benefit you and to make your experiences better.

Set app permissions

- A handy list of your installed apps and set permissions for each app.
- Choose what Apps can: access your camera, precise location, your contacts, your account info., run in the background, etc.
 - run in the background can help conserve power when on battery.
- How to get there:
 - 1. Go to Settings > Privacy > Apps Permissions
 - 2. Select an App
 - 3. Move, Modify or Uninstall each App.



Location

Allow access to location on this device

If you allow access, you will enable Windows to use your device's capabilities to determine your location and Microsoft will use your location data to improve location services. People using this device will be able to choose if their apps have access to location by using the settings on this page. Denying access blocks Windows from providing location to Windows features, Microsoft Store apps, and most desktop apps.

Allow apps to access your location

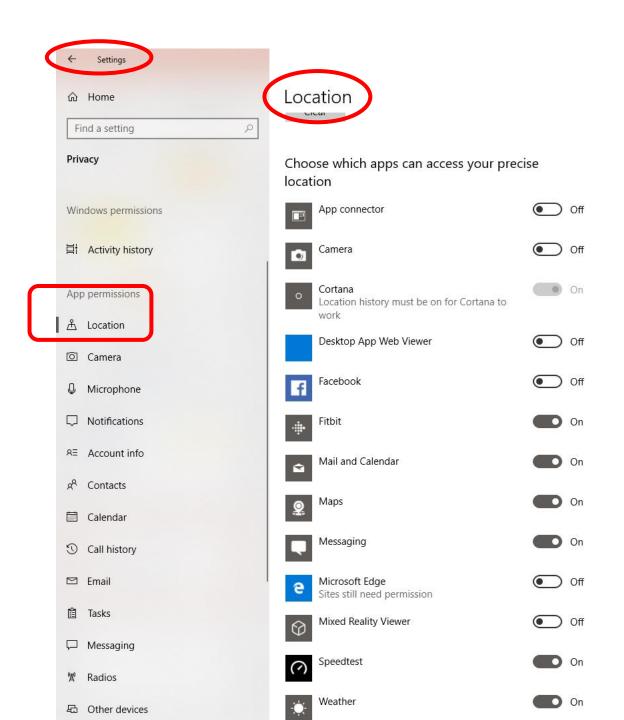
If you allow access, you can use the settings on this page to choose which apps can access your device's precise location and location history to enable location-based experiences such as directions and weather. If you are signed in with a Microsoft account on this device, your last known location is saved to the cloud, and shared with other devices where you are signed in with your Microsoft account. Denying access only blocks the apps listed on this page from accessing your location.



On

Some desktop apps may still be able to determine your location when settings on this page are off. Find out why

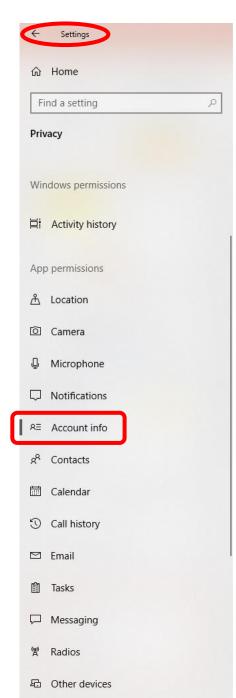
If an app is using your location, you'll see this icon:



This list of Apps are ones who want access to your location.

If the App requires this info, it will alert with a popup, and allow changes to this setting.

Screenshot from my Laptop.



Account info

Allow apps to access your account info

If you allow access, you can choose which apps can access your name, picture, and other account info by using the settings on this page. Denying access blocks apps from accessing your account

On On

Choose which apps can access your account info

Some apps need to access your account info to work as intended. Turning off an app here might limit what it can do.

Microsoft Content

Email and accounts



Off

Microsoft Edge



(?)

Speedtest



Apps that want access to your account information. e.g.:

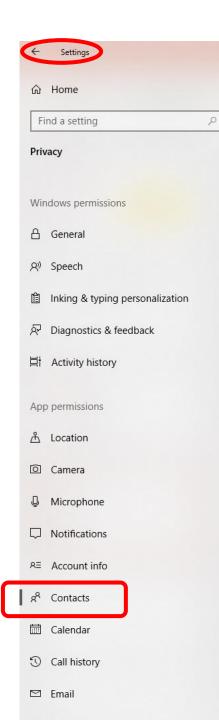
- record of your sign-in (date and time),
- info about the service you signed into,
- your sign-in name,
- your IP address (location),
- your operating system,
- browser version.

If the App requires this info, it will alert with a popup, and allow changes to this setting.

Know your privacy optio Learn how this setting in privacy.

soft accou

better



Contacts

Allow apps to access your contacts

If you allow access, you can choose which apps can access your contacts by using the settings on this page. Denying access blocks apps from accessing your contacts.

On

Choose which apps can access your contacts

Some apps need to access your contacts to work as intended. Turning off an app here might limit what it can do. The following built-in app always has access to your contacts: People.



Off

Off

Off

PowerPoint Mobile

Skype

Xbox

This list will indicate all the Apps that want access to your Contacts.

Know your privacy options

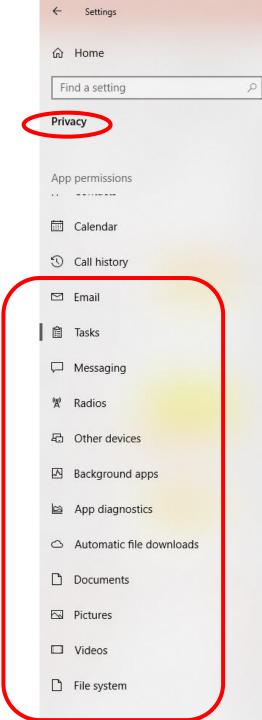
Learn how this setting impa privacy.

Learn more Privacy dashboard Privacy statement

Have a question? Get help

Make Windows better Give us feedback

If the App requires this info, it will alert with a popup, and allow changes to this setting.



Tasks

Allow apps to access your tasks

If you allow access, you can choose which apps can access your tasks by using the settings on this page. Denying access blocks apps from accessing your tasks.



Choose which apps can access your tasks

Some apps need to access your tasks to work as intended. Turning off an app here might limit what it can do. The following built-in apps always have access to your tasks: Mail and Calendar.

> Check each App permissions category and set your own privacy.

Password Managers

Any Device.

Password Managers

- People use very weak passwords.
 - And reuse them on different websites.
- How are you supposed to use strong, unique passwords on all the websites you use?
- The solution is a **password manager**.

Password managers What do they Do?

- Store login information for all the websites in use.
 - User ID and Password.
 - Two-Factor Authentication
- Help log into the Web Site automatically.
- Encrypt your password database:
 - with a master password
 - only one you have to remember.

How do password managers Work?

- A software app or Browser extension that is used to store and manage:
 - the passwords for various online accounts.
- Store the **passwords** in an encrypted format.
- Provide secure access to all the **password** information
 - Controlled by a user-devised master password.
- Passwords are saved to a protected 'vault'.
- Far safer than reusing passwords or writing them down.

Why Browser-Based Password Managers Aren't Ideal

- Web browsers all have integrated password managers.
 - Chrome, Mozilla Fire Fox, Edge, Safari, Opera.
- They can't compete with dedicated password managers.
- Example:
 - Chrome stores your passwords on your computer in an unencrypted form.
 - People could access the password files on the PC and view them, unless you <u>encrypt</u> your computer's hard drive.
- Mozilla Firefox has a "master password" feature:
 - encrypts your saved passwords with a single "master" password,
 - storing them on your computer in an encrypted format.
 - The browser software doesn't generate random passwords.
 - No cross-platform syncing (Firefox password manager can't sync to iOS devices).

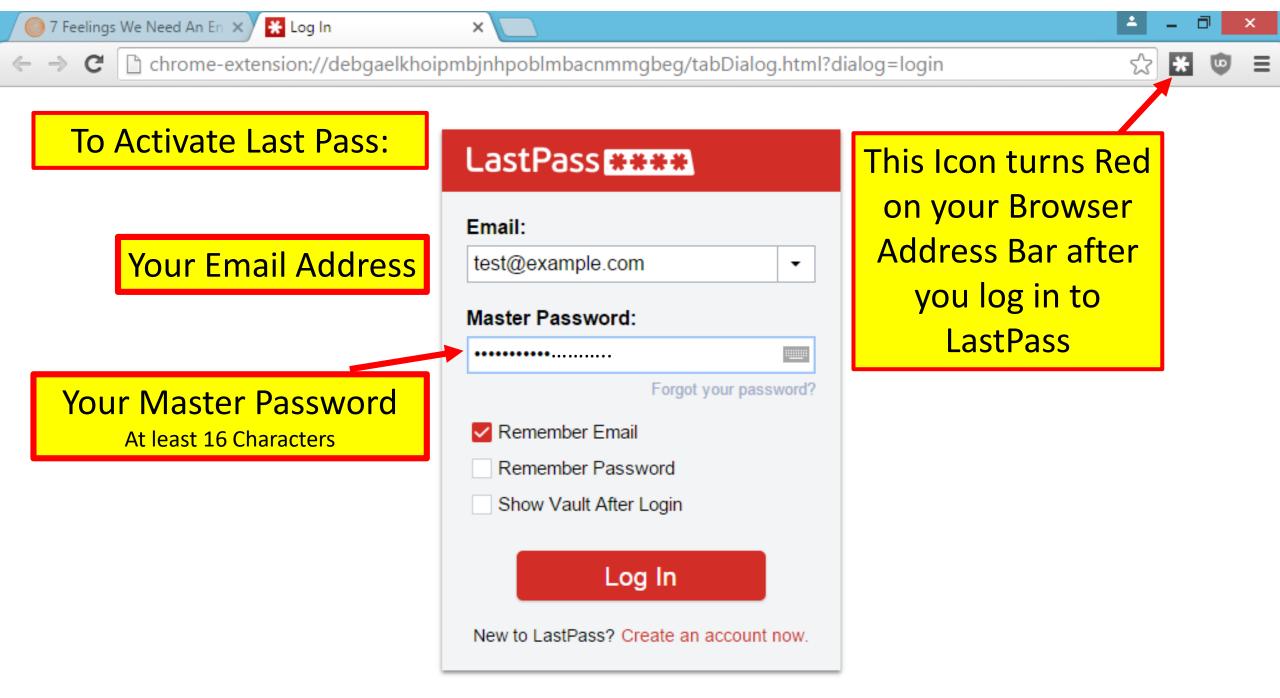
Types of password managers include:

- Locally installed software applications.
 - reside on the user's personal computer or mobile device.
 - in the form of a software app.
- Online services accessed through a specially designed website
 - content is login protected and user-specific.
 - a website that securely stores login details.
 - used on any computer with a web browser.
 - user trusts the hosting site.
- Locally accessed <u>hardware devices</u> that serve as keys
 - a form of token-based password manager.
 - such as smart cards or secure USB flash devices.
 - still require software loaded on the PC.

LastPass:

The password manager I have used for 6 years.

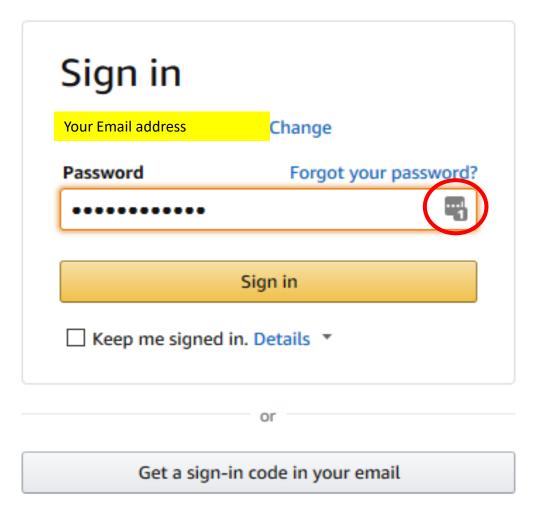
- A cloud-based password manager with:
 - extensions, (added to my Browser Mozilla Firefox)
 - mobile apps, (on my iPad and iPhone)
 - desktop apps.
- For all the browsers and operating systems you could want.
 - Windows (browser Extension)
 - iOS, Android, Mac (App)
- It's extremely powerful:
 - two-factor authentication options
 - stores your passwords in the cloud, (must have internet to use)
 - on LastPass's servers in an encrypted form, (they can not read it)
 - the extension or app locally decrypts and encrypts them when you log in,





What Pass Word Managers Do

Example from my Laptop



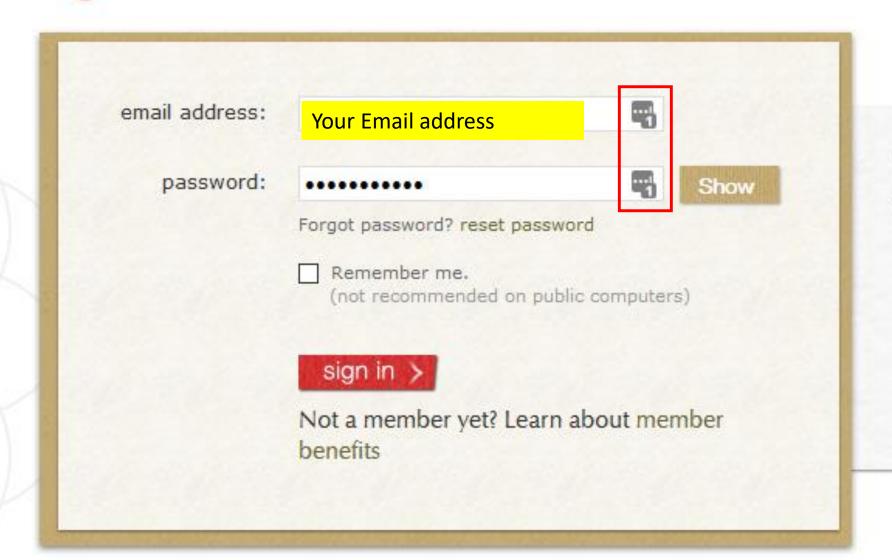
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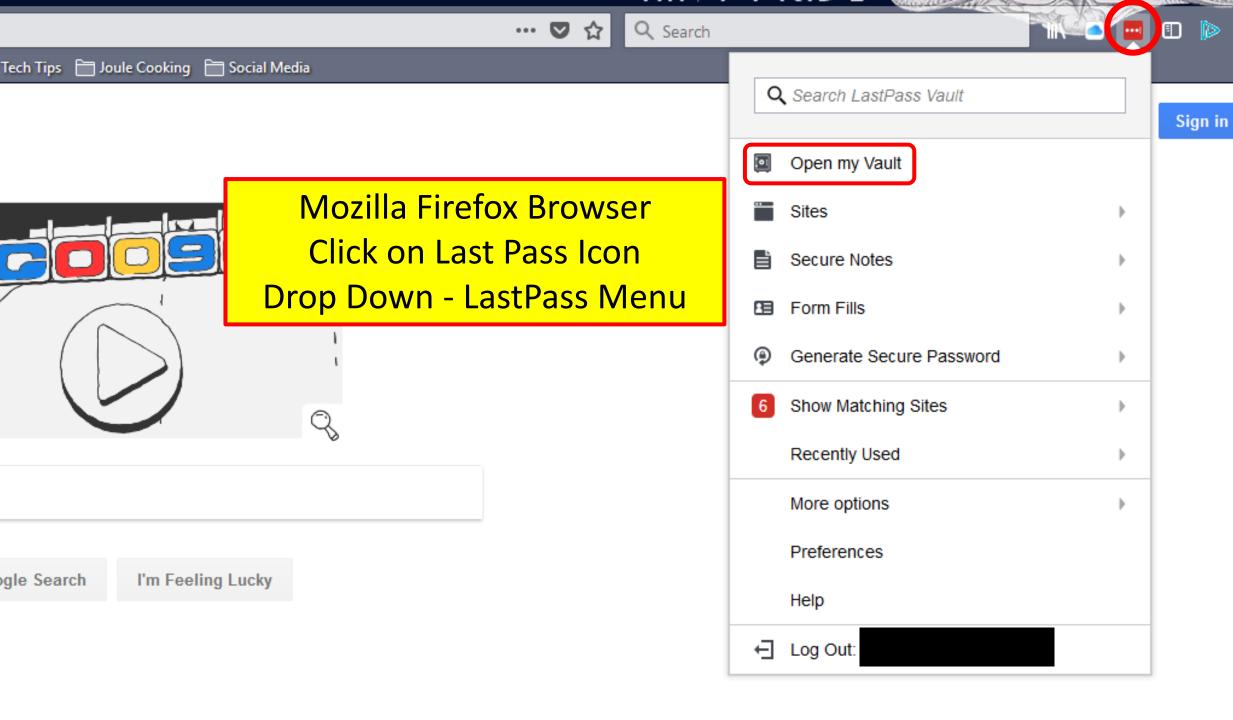
Sign In

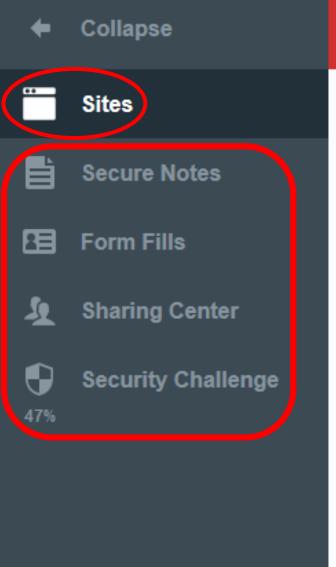
Sample 'Log in' to a greeting card web site



questio

- Call us
 Friday
- Email (
- Visit ou freque







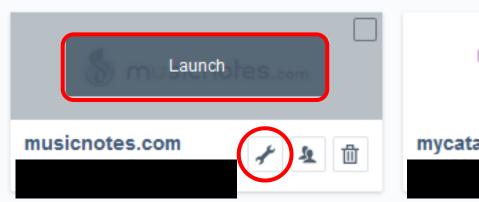
Q search my vault

Sites

Favorites (4) ▼

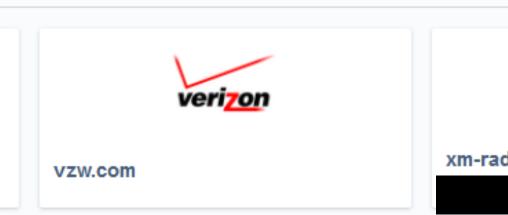
We have 132 Web Sites and **104 Secure Notes in Last Pass**

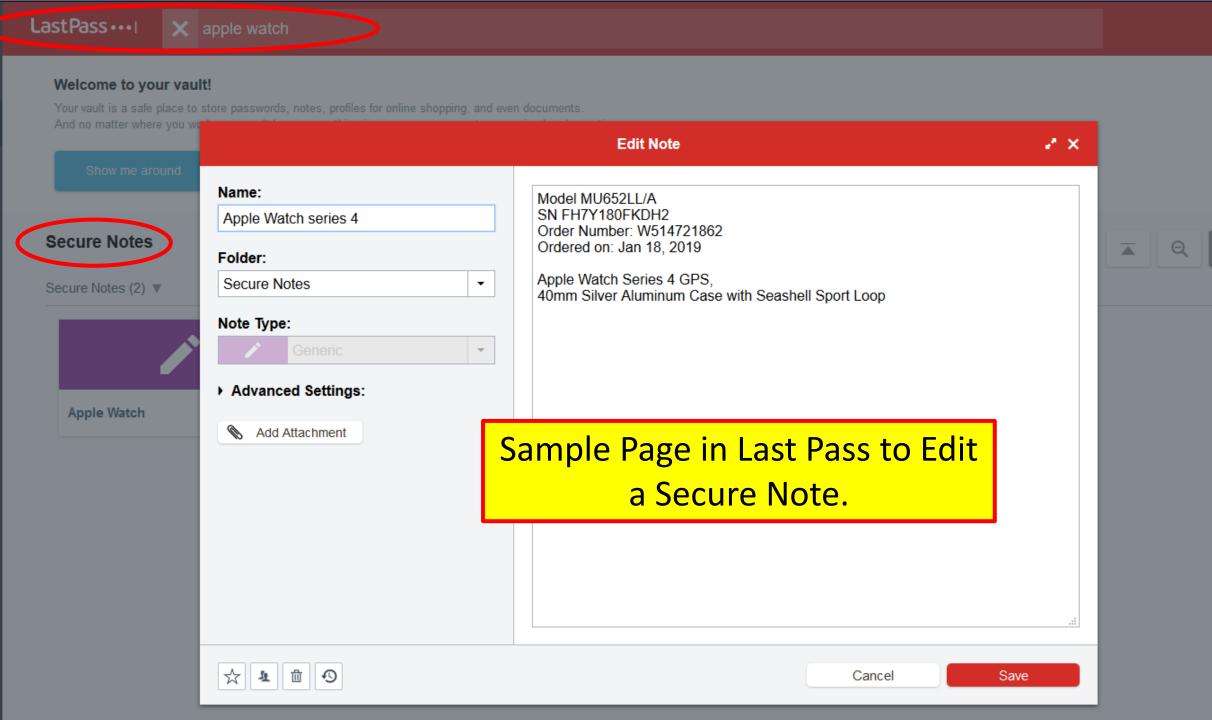




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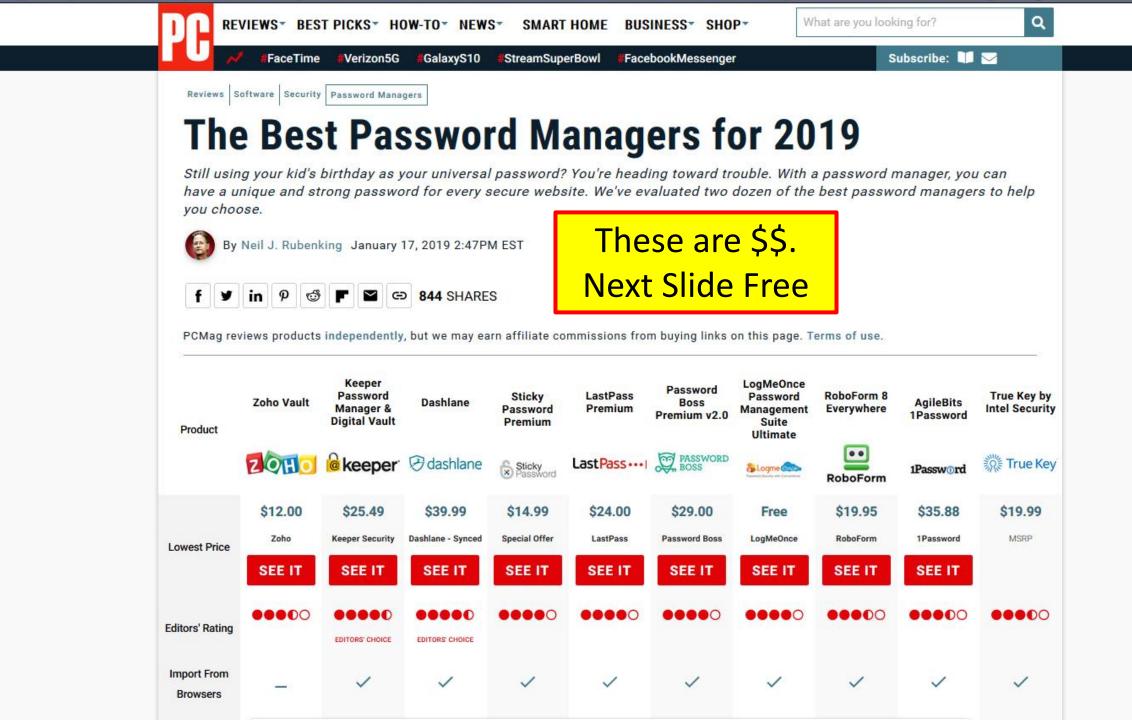
The best free password manager 2018

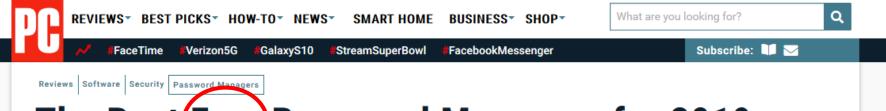
- LastPass. Free, secure password creation and storage for all your accounts. ...
- **Dashlane**. Superb password security for all web browsers and devices. ...
- **RoboForm.** A superb desktop password manager with free mobile apps. ...
- **KeePass Password Safe.** A customizable password manager for more experienced users. ...

What do these Password Managers Offer:

They offer additional features including:

- Auto-fill functionality, so you don't have to waste time entering individual usernames and passwords.
- Online syncing across devices for a more streamlined user experience.
- Two-factor authentication, so you can bolster your account's security with an additional code required to finish the login process.
- Secure sharing features, so you can share information with trusted friends and family members.







Fill Web Forms

The End

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