

# Windows 10 Updating and Windows 10 Maintenance

By Bob Primak, for the Lexington

Science and Technology Interest Group

Wednesday, February 13, 2019

General Plan:

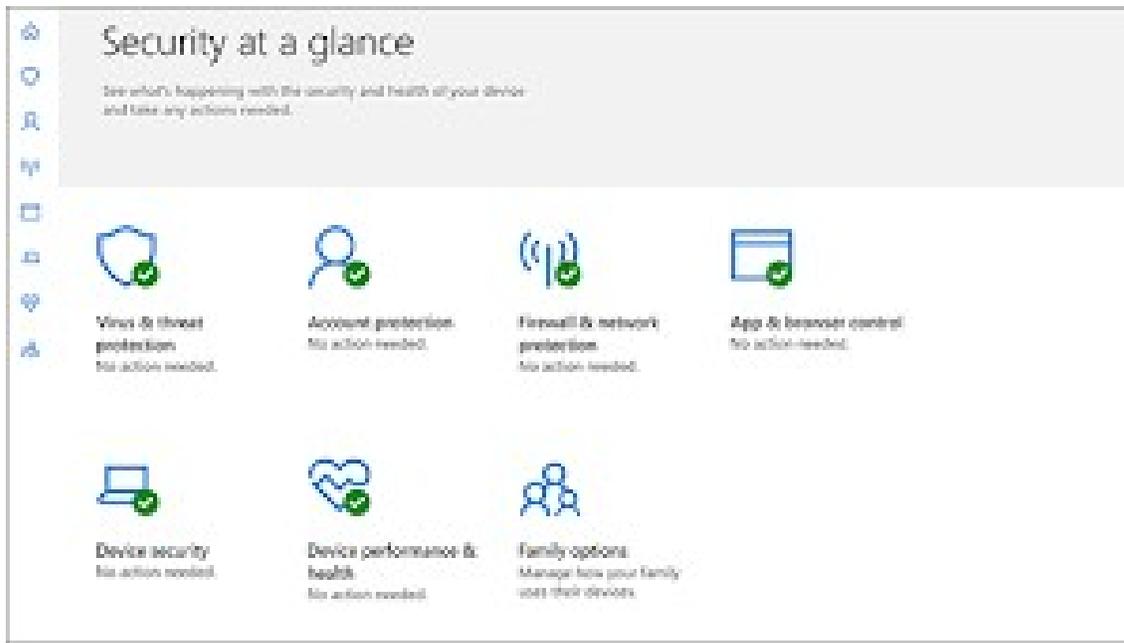
1) Things to do BEFORE anything gets changed:

a) SCAN EVERYTHING with at least two antivirus and antimalware scanning engines. How exactly you choose which engines to use, and in what form (online scans, stand alone scanners, active antivirus/antimalware scanners) is a personal choice.

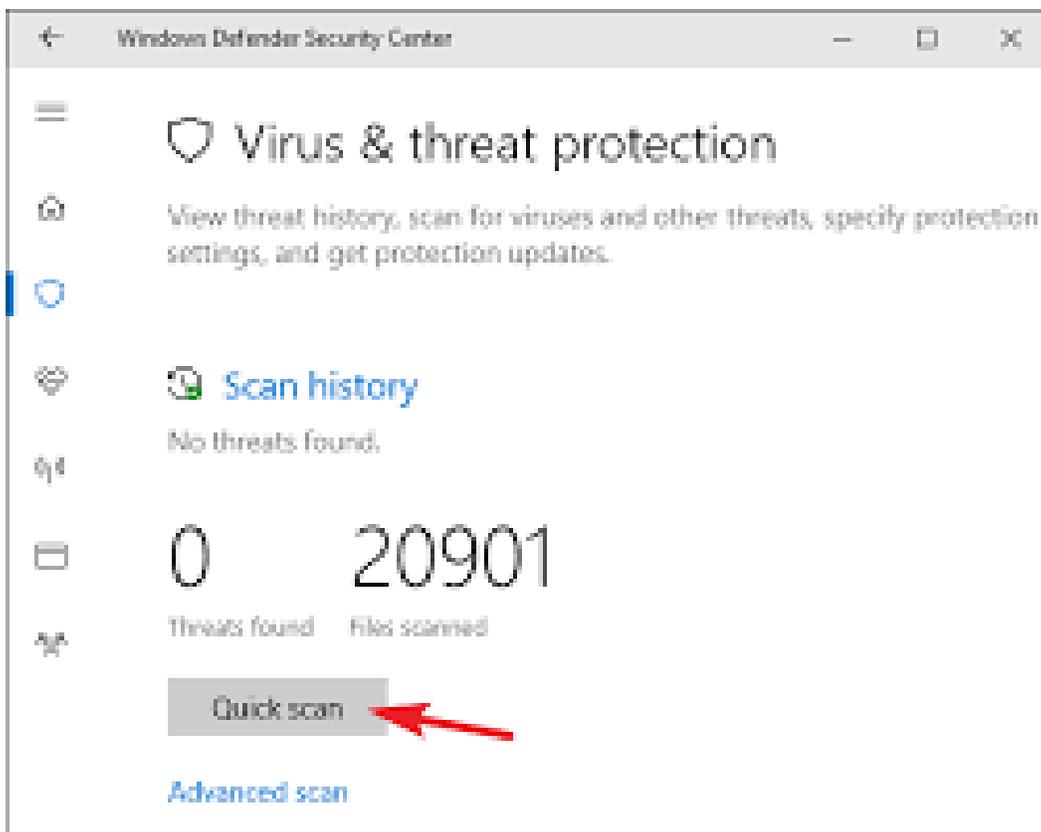
*(Note: many tech writers discourage the use of any third party ACTIVE antivirus or firewall which disables the ACTIVE elements of Windows Defender.)*

Full scans of the file system and attached data drives take a long time. But I do run full scans with several products after my version of Patch Tuesday, after updating all my third party software, checking my drivers and cleaning my system.

Virus scans run typically half an overnight.



Windows 10 Security Center



Windows Defender Scan Pane

Eyes Above The Waves

Robert O'Callahan. Christian. Repatriate Kiwi. Hacker.

THURSDAY, 26 JANUARY 2017

Disable Your Antivirus Software (Except Microsoft's)

<https://robert.ocallahan.org/2017/01/disable-your-antivirus-software-except.html>

*(A former Mozilla Firefox developer assesses the value of third party antivirus products.)*

Comparisons of these sorts of products were presented earlier this year by Gary Patrick. Visit the Lexington Technology Group Yahoo Groups documents page to download a copy of his presentation. This document may also be available elsewhere. Ask group members about this.

Web References:

Microsoft Windows Defender Security Center

<https://www.pcmag.com/article2/0,2817,1926596,00.asp>

Microsoft Windows Defender: Finally Good Enough

<https://www.tomsguide.com/us/windows-defender,review-2209.html>

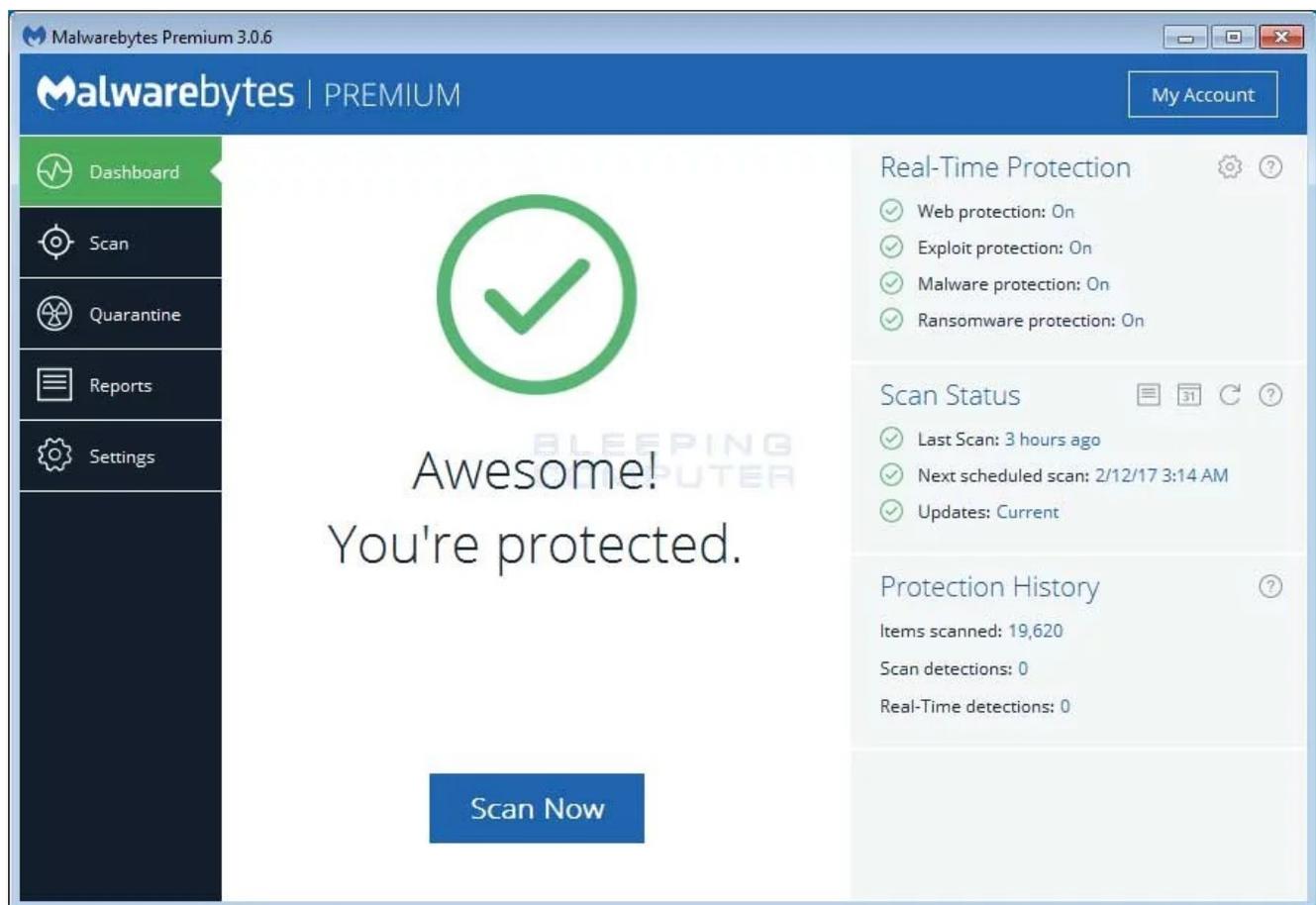
Malwarebytes Free

<https://www.malwarebytes.com/mwb-download/>

Antivirus versus Anti Malware: Which One Should I Choose?

Why antivirus and antim malware can help users fight against cyber attacks

<https://heimdalsecurity.com/blog/antivirus-versus-anti-malware/>



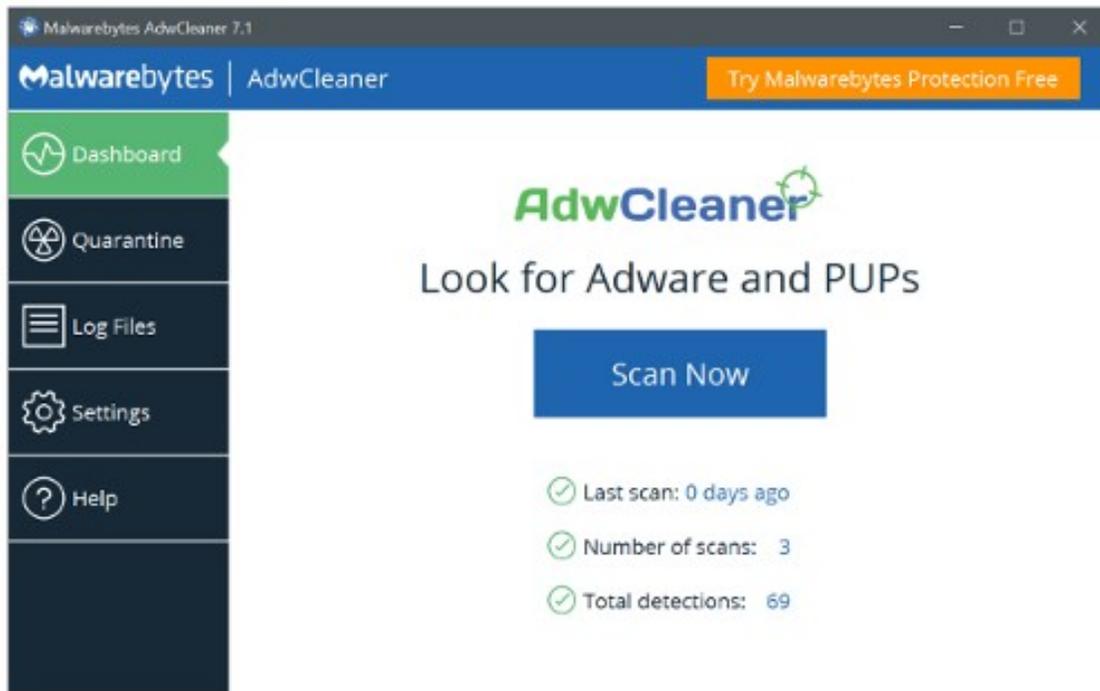
Malwarebytes Free

It's not either/or. You should use at least one of each.

And here's a bonus:

Anti-Adware product: AdwCleaner

<https://www.malwarebytes.com/adwcleaner/>



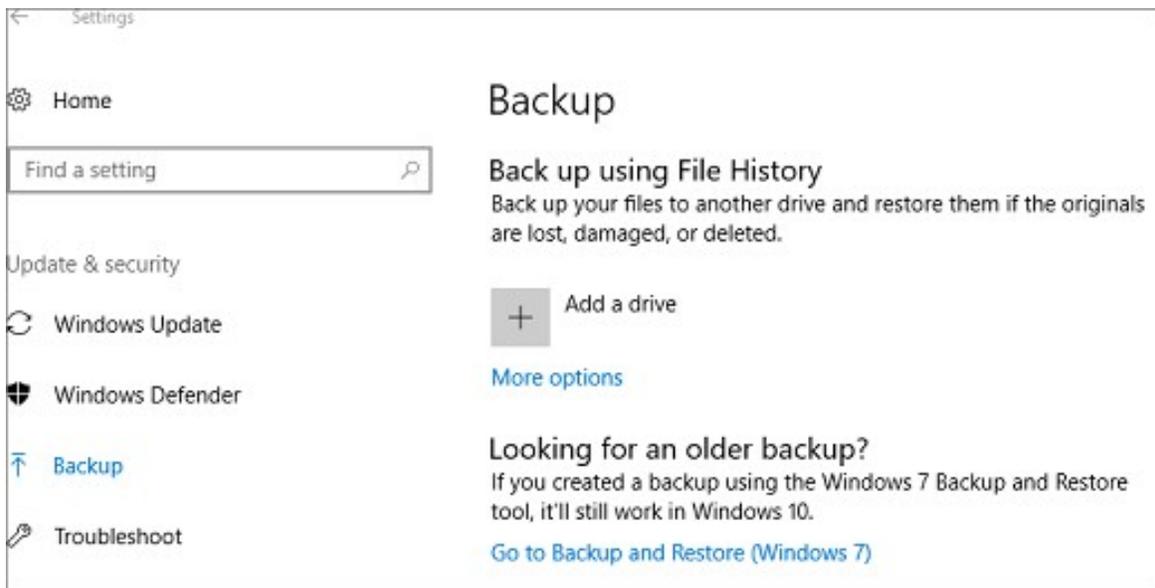
AdwCleaner current main interface

See also: <https://support.malwarebytes.com/docs/DOC-1160>

Purpose and usage:

<https://www.bleepingcomputer.com/download/adwcleaner/>

b) Back up Data – this should be happening all the time. Two mechanical hard drives, external. Only one connected to the computer at any one time, except when duplicating contents from one to the other.



Windows 10 File History

## Web References:

### Back up and restore your files (File History)

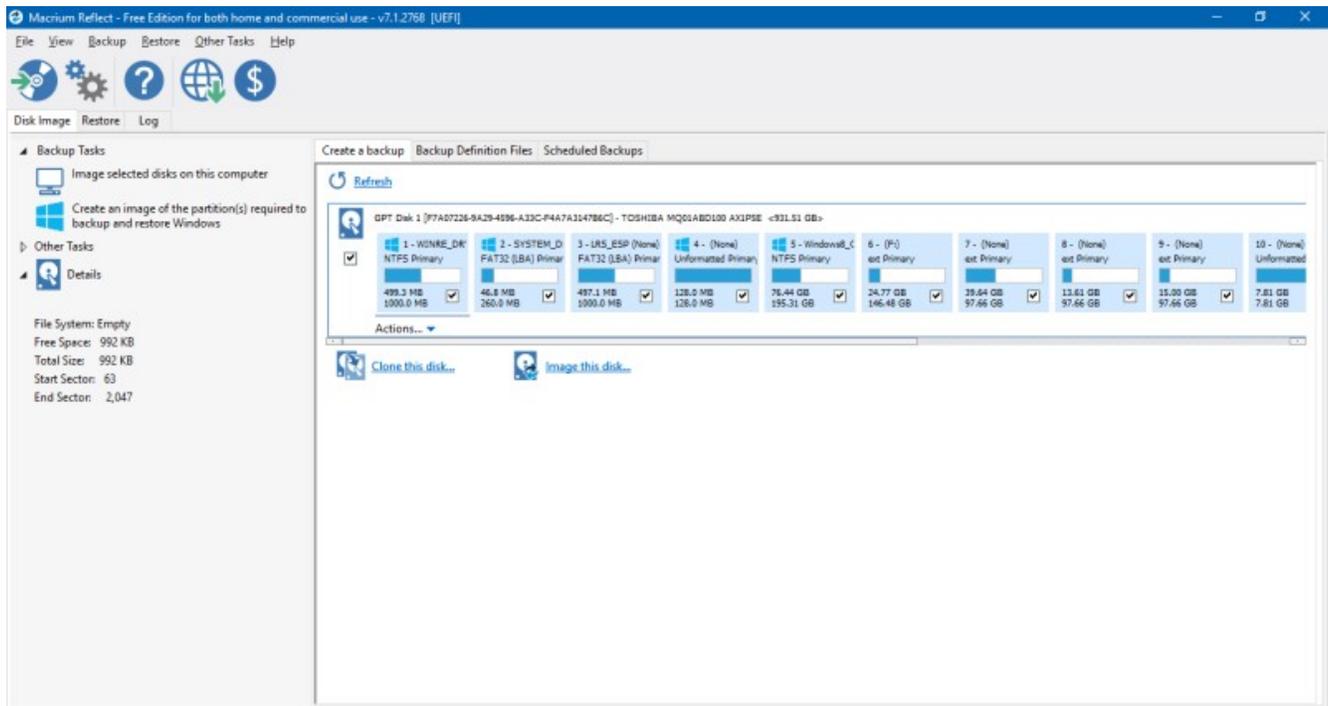
<https://support.microsoft.com/en-us/help/17143/windows-10-back-up-your-files>

I use simple copy and paste. I recommend two separate external drives. That's in case one fails.

c) Image the System – two critical times. Microsoft Patch Tuesday – the weekend before. About the Third Weekend of a month, before updating third party software and performing manual maintenance.

<https://www.macrium.com/reflectfree>

Also has excellent tutorials and a knowledge base including general information about the types of image backups and their uses.



Macrium Reflect Free Main Interface

<https://www.easeus.com/backup-software/tb-free.html>

<https://www.backup-utility.com/>

(Aomei BackUpper. This product is used in a WinPE environment from boot media. This makes it unique among this group of products.)

d) Back up Windows 10 Drivers. This isn't as difficult as it may seem. All you need is a copy of the Windows Driver Store Repository:

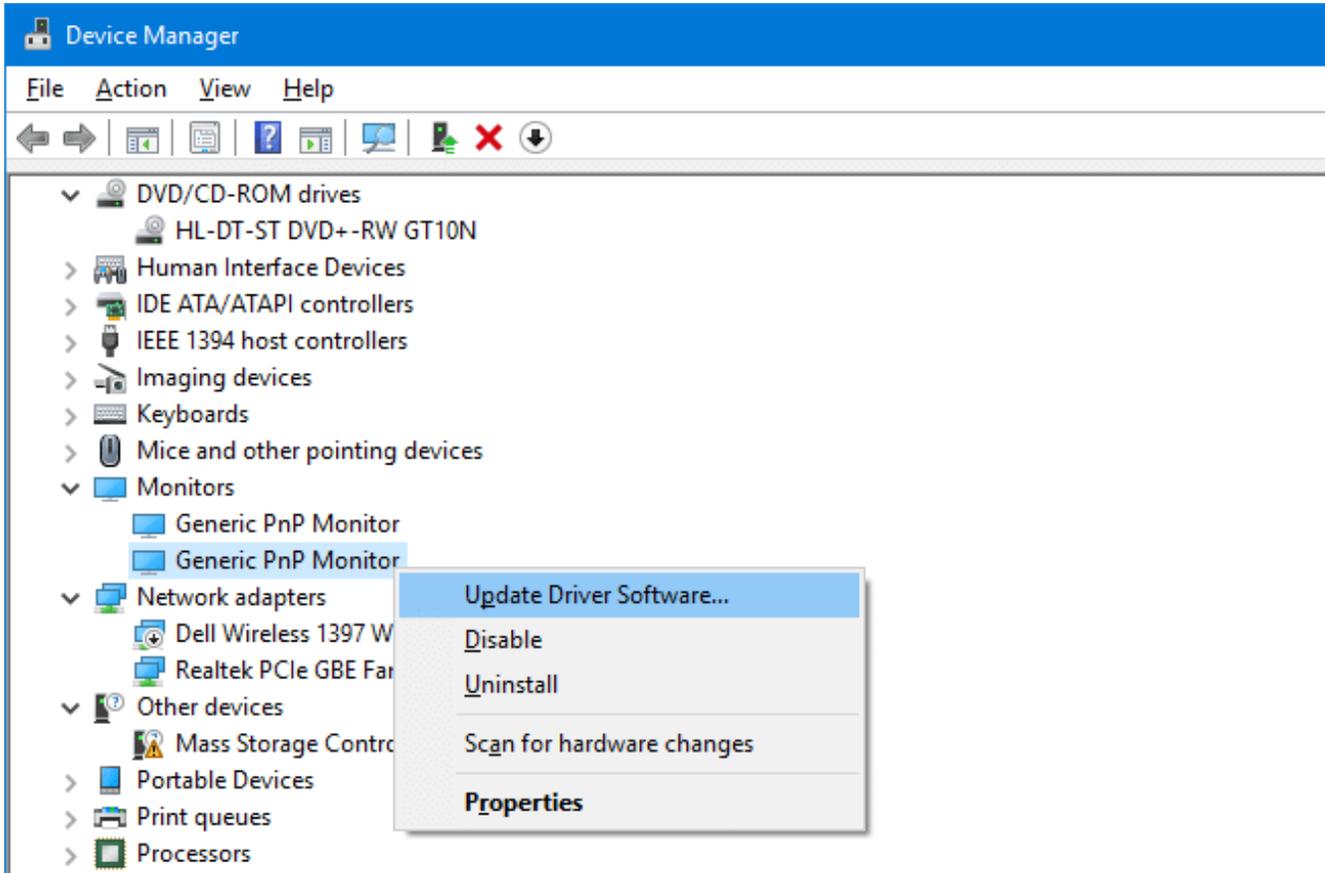
Windows 10 tip: Back up your third-party hardware drivers

<https://www.zdnet.com/article/windows-10-tip-back-up-your-third-party-hardware-drivers/>

Tracking down drivers and control software for internal and external hardware devices after a clean reinstall doesn't have to be a tedious job. The secret is to back up the driver file repository that Windows 10 maintains. Here's where you'll find it.

(insert my own screenshot here. Nobody does this right online.)

Restore Drivers using a local folder in Windows 10 Device Manager:





How do you want to search for driver software?

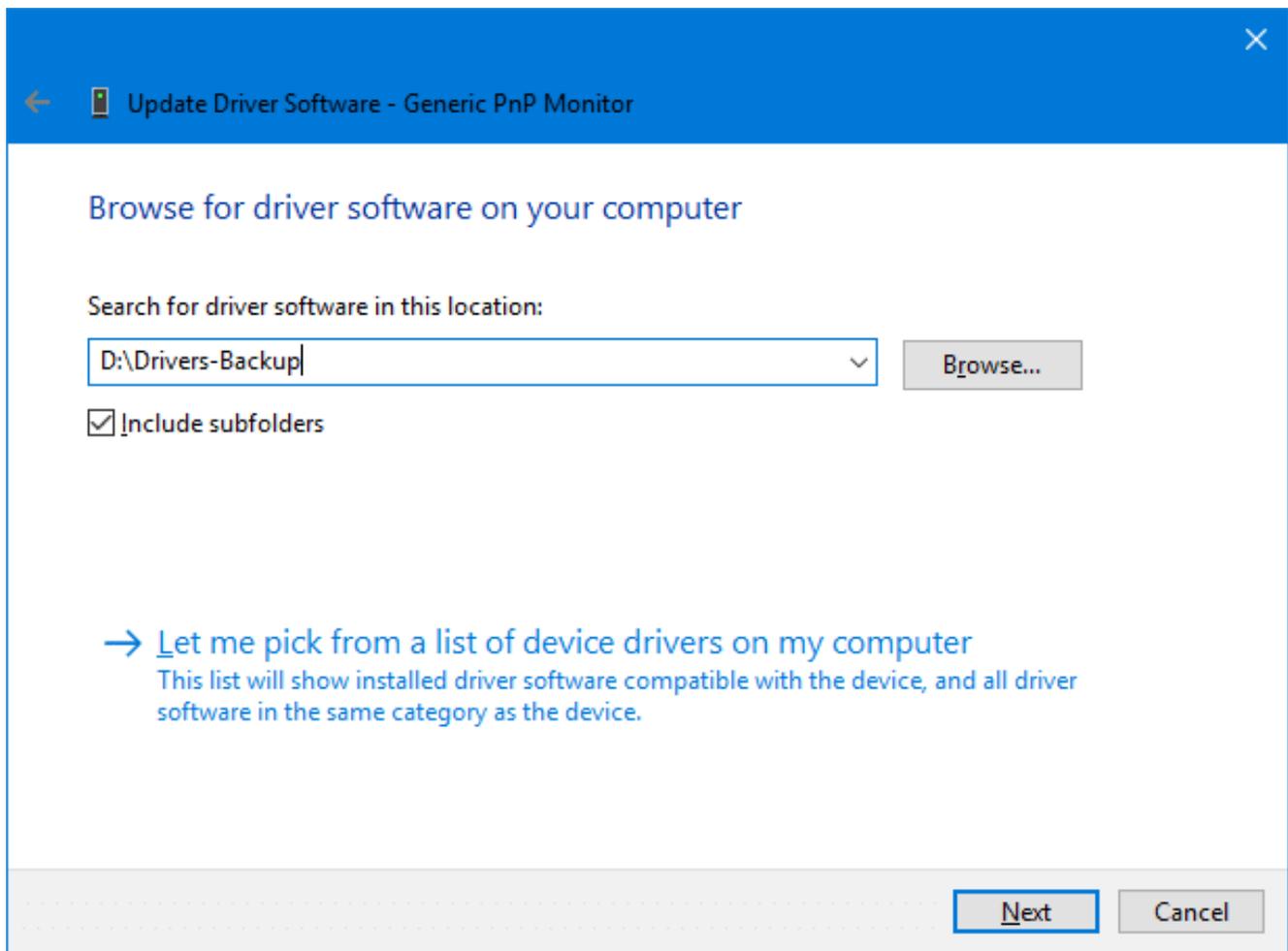
→ Search automatically for updated driver software

Windows will search your computer and the Internet for the latest driver software for your device, unless you've disabled this feature in your device installation settings.

→ Browse my computer for driver software

Locate and install driver software manually.

Cancel



from: How to Backup and Restore Device Drivers in Windows 10?

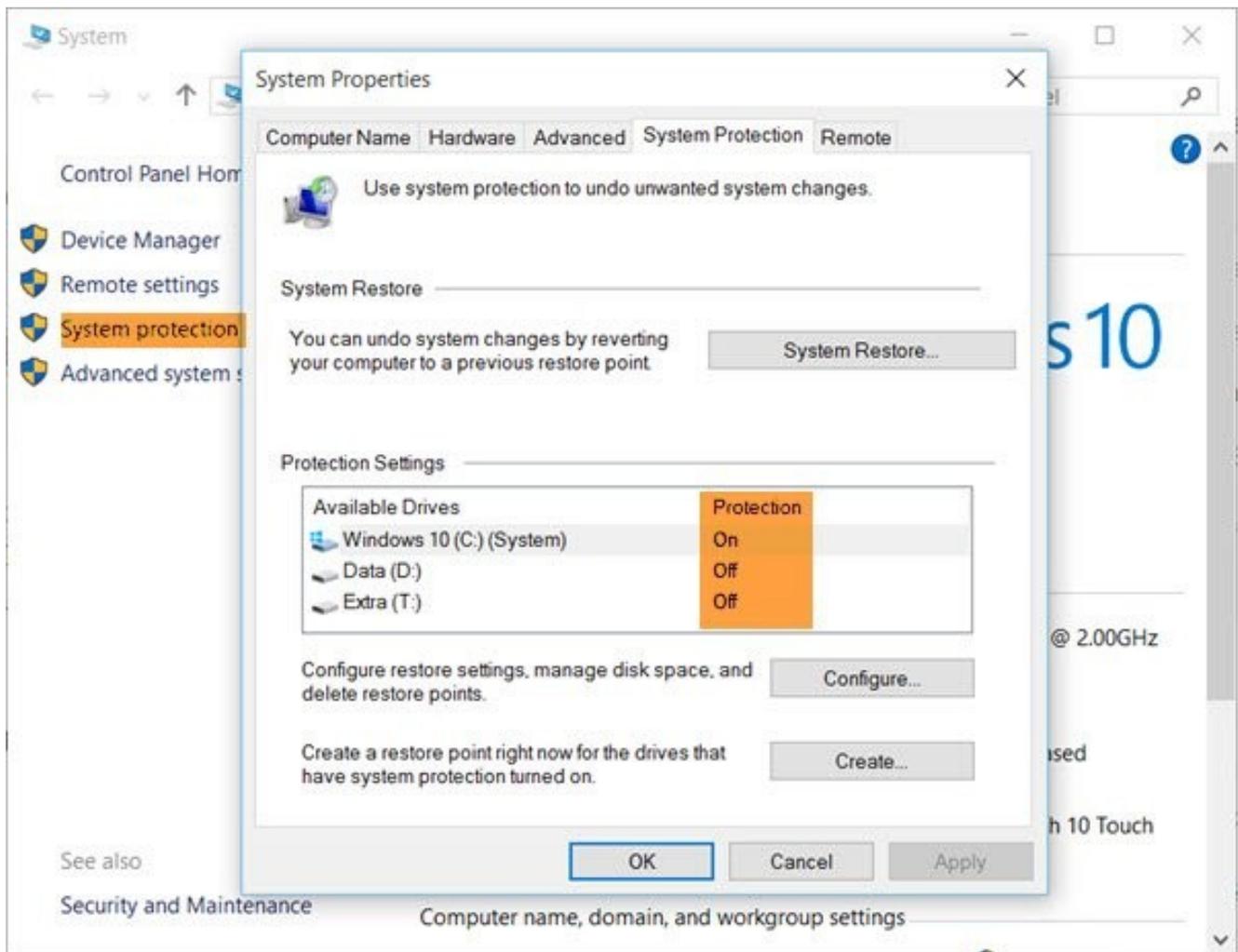
<https://www.winhelponline.com/blog/drivers-backup-restore-windows-10/>

How to set up System Restore in Windows 10

It isn't turned on by default.

Turn On System Restore in Windows 10

<https://www.thewindowsclub.com/system-restore-disabled-turn-on-system-restore-windows>



(Questions about Backup before changing anything.)

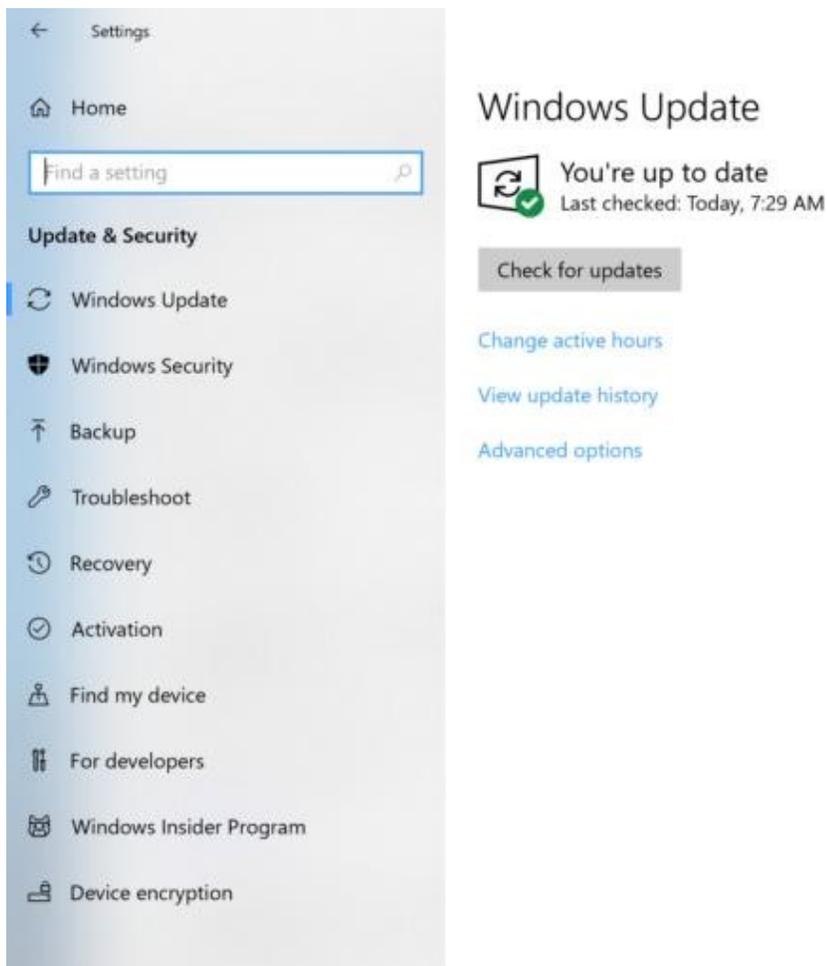
BOOKMARK Next meeting here.

## 2) Update Software

It is important to keep Windows, web browsers and third party software up to date. Important security updates often occur. Even if an update has no security components, out of date software is a major cause of system instability.

Windows Update: Automatic for most folks in Windows 10. Happens most likely on the Second Tuesday of the month. Prepare accordingly.

If you want to control Windows Update behavior, there are ways. Most require paying for an upgrade to the Windows 10 Pro Edition.



How to manage Windows 10 updates to prevent them from ruining your life

Buying or upgrading to Windows 10 Pro allows you more options to manage Windows 10 updates on your terms.

<https://www.pcworld.com/article/3311868/windows/how-to-manage-windows-10-updates.html>

## Advanced options

### Update Options

Give me updates for other Microsoft products when I update Windows.



Automatically download updates, even over metered data connections (charges may apply)



We'll show a reminder when we're going to restart. If you want to see more notifications about restarting, turn this on.



You can set a wireless connection to “metered” to help limit unwanted Windows updates. Your router name will appear at the top.

## Your\_Router

### Connect automatically when in range



### Network profile

Public

Your PC is hidden from other devices on the network and can't be used for printer and file sharing.

Private

For a network you trust, such as at home or work. Your PC is discoverable and can be used for printer and file sharing if you set it up.

[Configure firewall and security settings](#)

### Metered connection

If you have a limited data plan and want more control over data usage, make this connection a metered network. Some apps might work differently to reduce data usage when you're connected to this network.

Set as metered connection



If you set a data limit, Windows will set the metered connection setting for you to help you stay under your limit.

Settings

Home

Find a setting

Update & Security

- Windows Update
- Windows Security
- Backup
- Troubleshoot
- Recovery
- Activation
- Find my device
- For developers
- Windows Insider Program
- Device encryption

## Windows Update



You're up to date

Last checked: Today, 7:29 AM

Check for updates

[Change active hours](#)

[View update history](#)

[Advanced options](#)

### Active hours

Set active hours to let us know when you typically use this device. We won't automatically restart it during active hours, and we won't restart without checking if you're using it.

Start time

8	00	AM
---	----	----

End time (max 18 hours)

5	00	PM
---	----	----

Save

Cancel

## Advanced options

### Update Options

Give me updates for other Microsoft products when I update Windows.

On

Automatically download updates, even over metered data connections (charges may apply)

Off

We'll show a reminder when we're going to restart. If you want to see more notifications about restarting, turn this on.

On

### Pause Updates

Temporarily pause updates from being installed on this device for up to 35 days. When updates resume, this device will need to get the latest updates before it can be paused again.

Off

Pausing now will pause updates until 11/13/2018

### Choose when updates are installed

Choose the branch readiness level to determine when feature updates are installed. 'Semi-Annual Channel (Targeted)' means the update is ready for most people, and 'Semi-Annual Channel' means it's ready for widespread use in organizations.

Semi-Annual Channel (Targeted) ▾

A feature update includes new capabilities and improvements. It can be deferred for this many days:

0 ▾

A quality update includes security improvements. It can be deferred for this many days:

0 ▾

[Delivery Optimization](#)

[Privacy settings](#)

The additional options circled in red are made available with Windows 10 Pro.

## Schedule the restart

\*Some settings are managed by your organization

[View configured update policies](#)

Have a question?

[Get help](#)

### Schedule a time

We'll restart to finish installing updates when you tell us to. Just turn this on and pick a time.

On

Pick a time:

7 11 PM

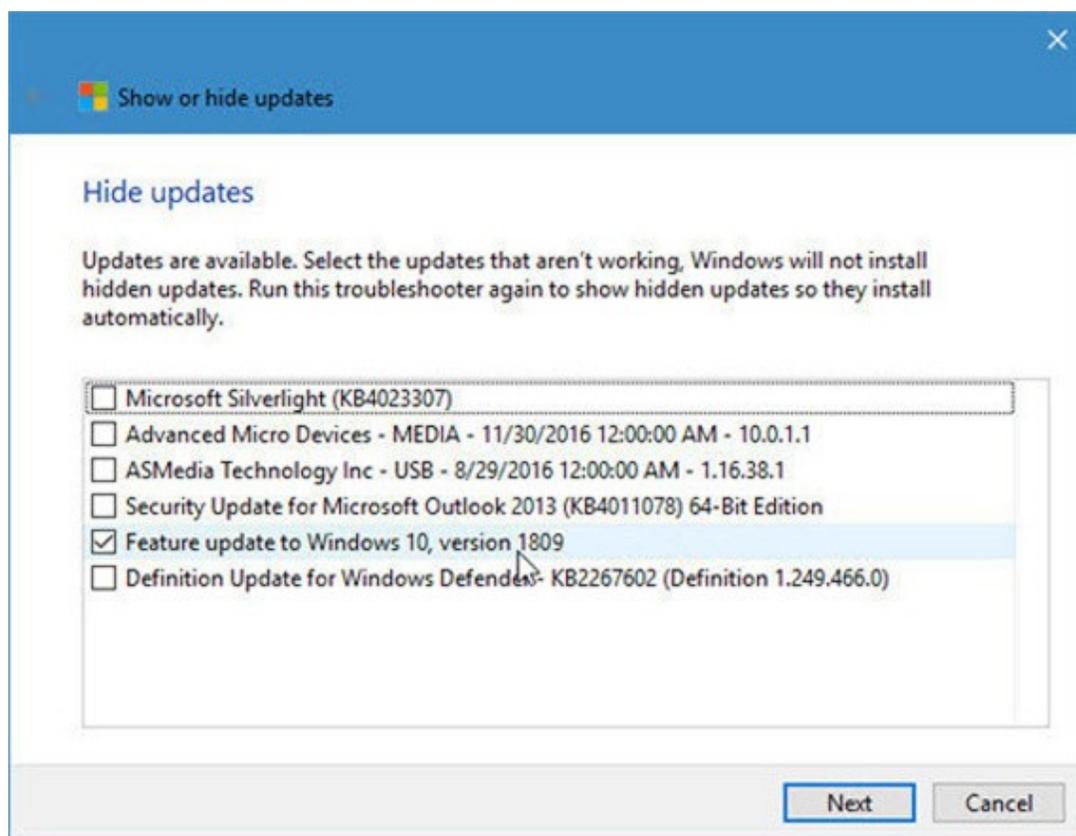
Pick a day:

Tomorrow ▾

How to block the Windows 10 October 2018 Update, version 1809, from installing

<https://www.computerworld.com/article/3232632/microsoft-windows/how-to-block-the-windows-10-october-2018-update-version-1809-from-installing.html>

Wushowhide: an “odd bird” from Microsoft



Combined with a metered connection and the Pro deferral settings, these tools can keep a major Feature Update at bay for months. But eventually you will want to apply all MS Updates except drivers, Silverlight and certain other runtimes your PC may not need.

This bears repeating: Drivers need attention only when:

- 1) something is not working
- 2) your manufacturer has been notified of a security issue with one of their drivers.

Let me be clear – only update drivers from your whole computer's manufacturer – not individual components. And do not use third party driver update utilities.

The one exception I know of is graphics cards. And of course anything not physically inside your computer, or added inside and not part of the original configuration.

But always go to the manufacturer's site. (I have an Intel Driver and Support Utility which automates this process.)

There may be third party or Microsoft runtimes on your computer. Some items which are generally no longer used by anything include:

Java Runtimes

Microsoft Silverlight

for many users, .NET Framework

Adobe Flash Player (a few exceptions)

certain other Microsoft Windows runtimes don't remove older versions.

Removal of these items is usually a matter of going through Programs and Features and removing items you are very sure you won't need. If you need something after all, it can usually be found somewhere, even old versions, and installed.

To remove things like Java, more than the program's uninstaller may help prevent Windows and programs from experiencing difficulties based on disconnected remnants. I use Geek Uninstaller (although Revo Uninstaller is just fine) to fully remove the various tentacles things like Java runtimes can leave behind throughout a Windows system.

<https://geekuninstaller.com/>



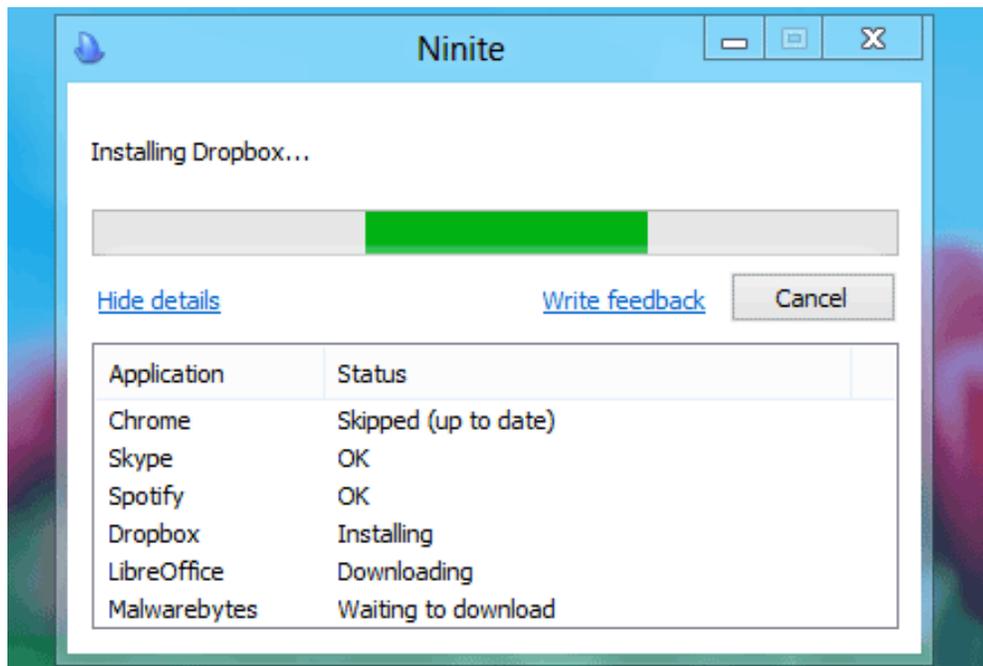
Geek Uninstaller interface

Third Party Software is difficult to keep track of. But there are a few good and safe software update programs.

START HERE WEEK TWO *Selectively* go over the rest.

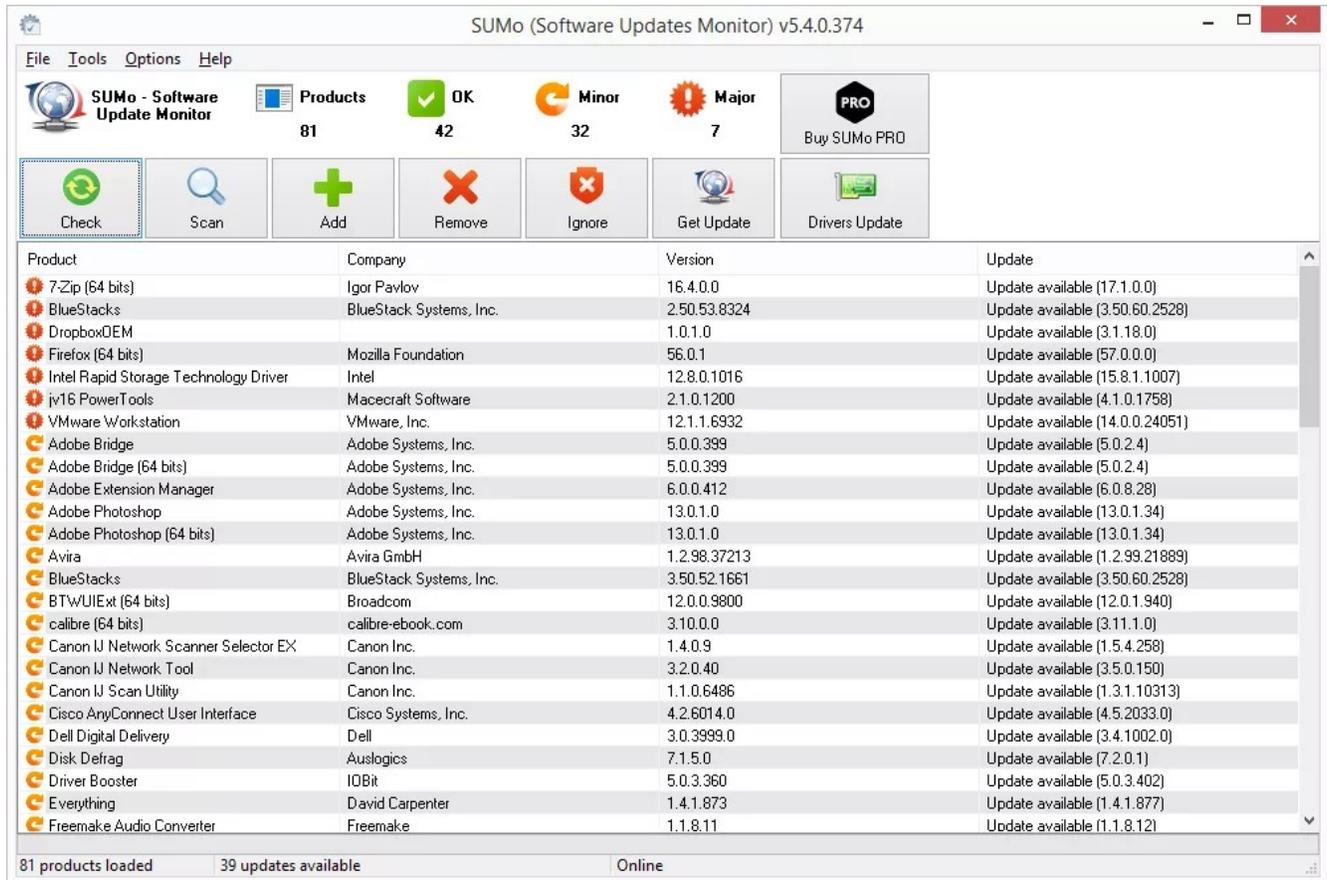
# Ninite

<https://ninite.com/>



# SUMo Lite

<https://www.kcsoftwares.com/?sumo>



Reference:

## 9 Free Software Updater Programs

Update your outdated software with one of these free tools

<https://www.lifewire.com/free-software-updater-programs-2625200>

(Questions and Answers about Microsoft Updates and Software and Driver Updating, and removing obsolete programs and runtimes.)

We may be near the end of Session One at this point. The next and final part of this presentation is about Windows 10 system maintenance.

First, some things NOT to do:

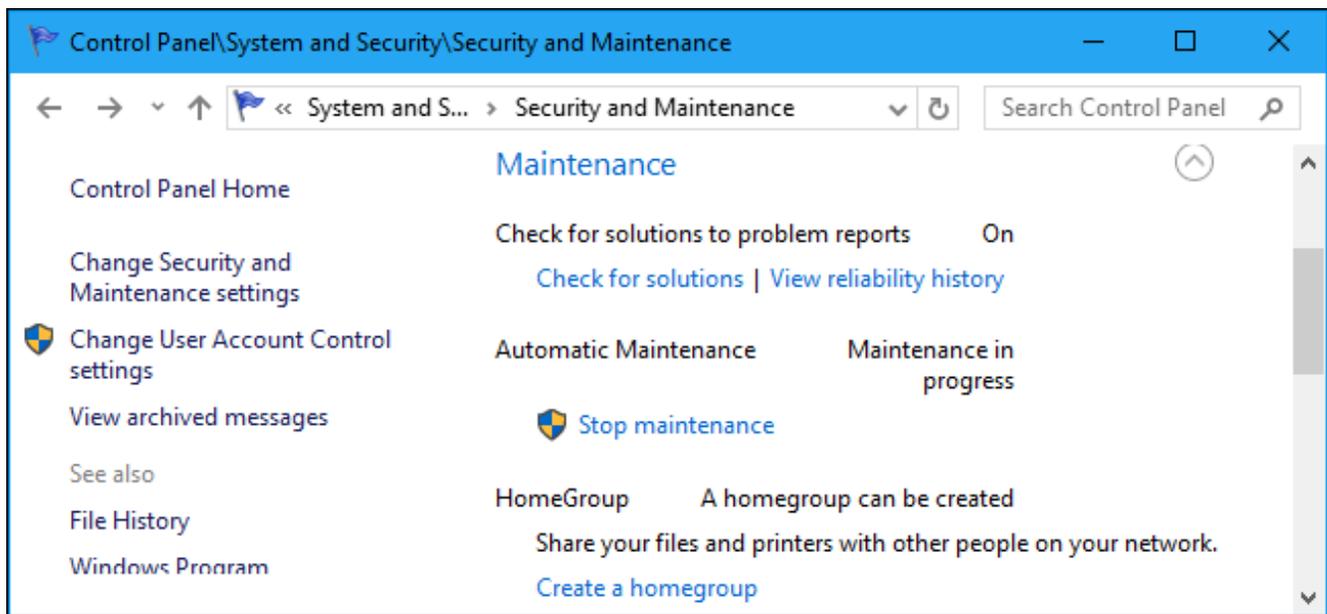
Do not manually defragment hard drives, or apply Trim to SSDs. Windows 10 does this automatically if you let it happen. It's part of Windows 10 Scheduled Automatic Maintenance:

Every two weeks, you should let your computer stay on, in an Administrator Account, with Internet access, and idle (in Standby is OK, as you can set things up so that the PC will be awakened, maintenance will be performed, and the PC will go back to sleep when all maintenance is finished. A report is always available as to what has been done or attempted, and there are notifications if there's something found which automatic maintenance was unable to resolve.

Reference:

How to Schedule Automatic Maintenance on Windows 10  
(and What It Does)

<https://www.howtogeek.com/127078/how-to-change-and-manually-start-and-stop-automatic-maintenance-in-windows-8/>



## Windows 10 Automatic Maintenance

The default time is 2:00 AM, any day when things need to be done. Usually, this happens only every two weeks or so. But when you first let it run, it only makes a one-hour window for itself. If longer time is needed, you will need to let this task run over several nights. So it's best at first to leave your computer idle but on overnight for about a week. After that, you should be able to get away with leaving the computer on just for one weekend per month, preferably a week or two after the monthly Microsoft Updates. Sooner would deprive you of the ability to fully restore your system if a monthly update goes sideways on you. (This is rare, in spite of the publicity such events can generate.)

Do not clean the Windows Registry, unless there's a malware episode, a runtime needs to be fully removed, or some such dire emergency.

Aggressive Registry cleaners are third only to driver updaters and third party antivirus programs on the list of causes of Windows instabilities or inability to successfully apply updates or Feature updates (upgrades). Some “system optimizers” also do damages which may not show up for months or even years after the damage has been done.

What can be done: Windows Maintenance

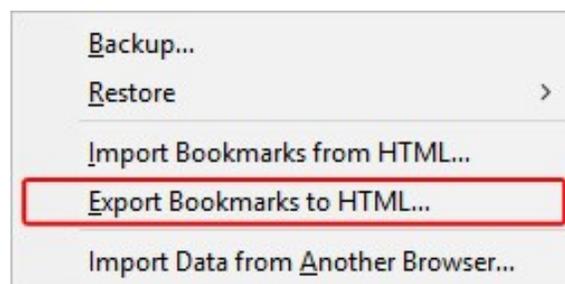
Every day to every week, clean up your web browser.

You can export Bookmarks or Favorites, and History to backup sets, with as many folders as you want. Bookmarks and History for major browsers export to HTML files. Entire Chrome or Firefox user profiles can be copied and restored, if you know where they are.

Reference:

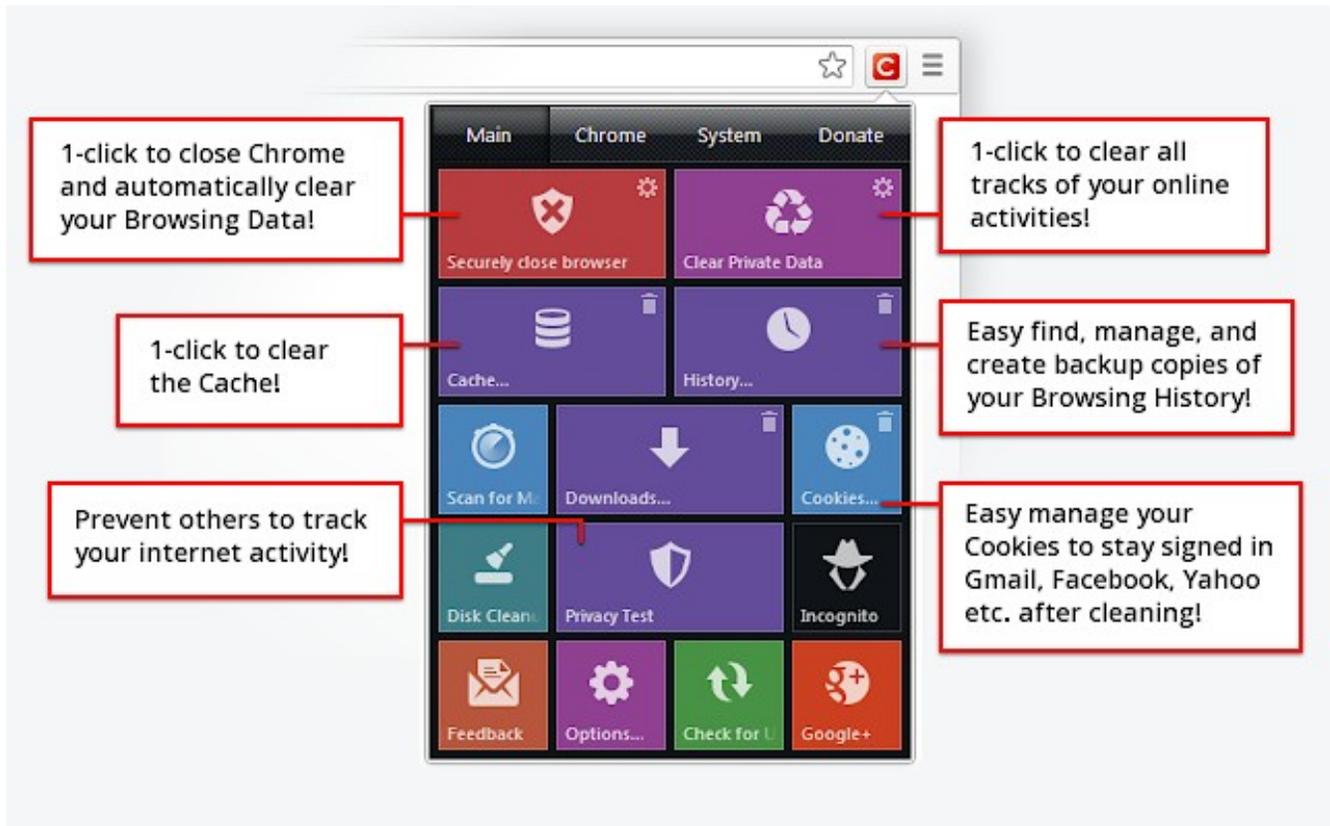
How to import and export browser bookmarks or favorites

<https://www.computerhope.com/issues/ch000524.htm>



This is from Firefox, but others are similar. Note the HTML format is used.

The point of exporting all the user data we can, is to be able to clean up the browser thoroughly. I use an Extension in Chrome, but you could find the settings and do all of this by hand.



What Click and Clean (HotCleaner) can cleanup (among other things) are:

Cookies, including tracking cookies. (I do not save login cookies.)

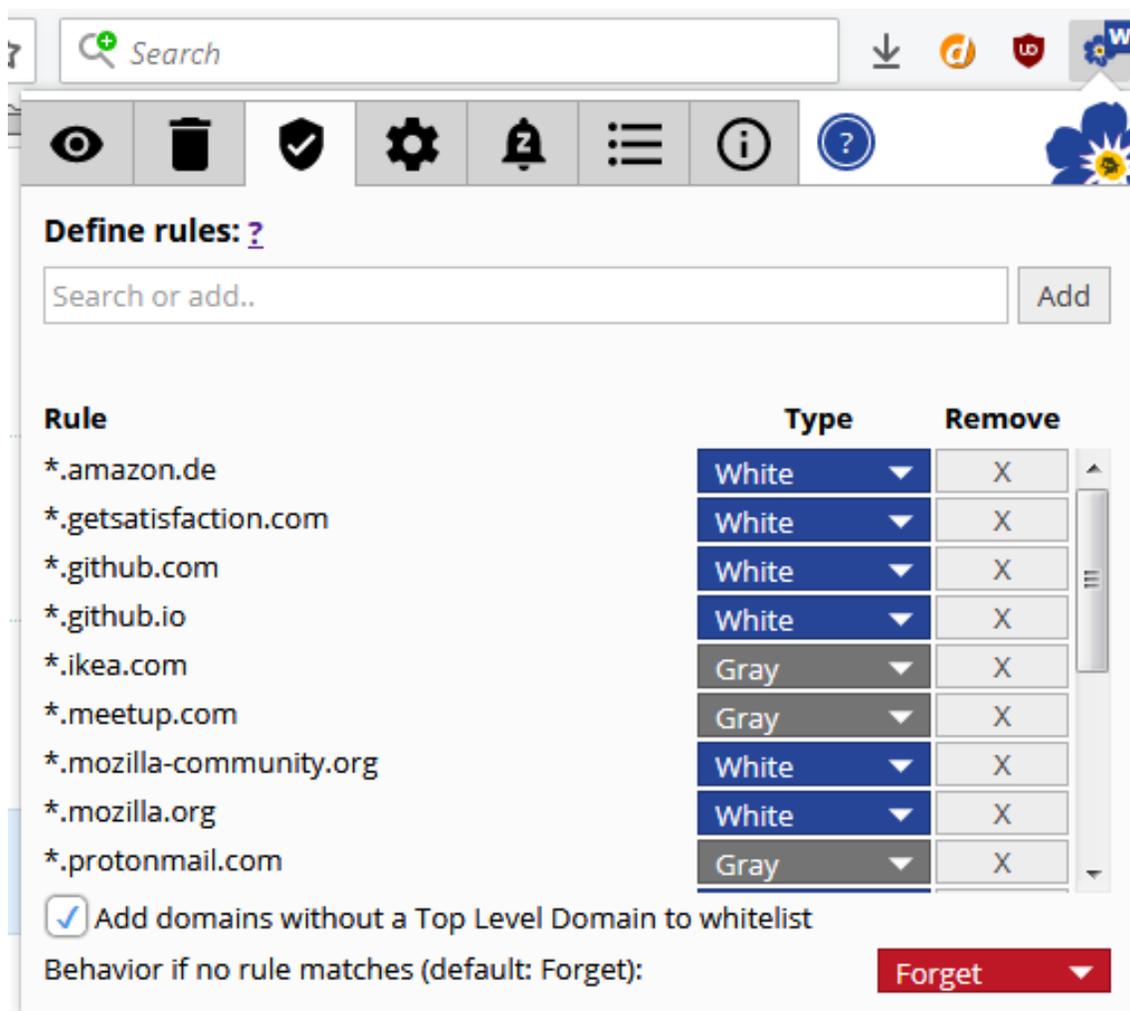
Cache (a cause of browser slowdowns and “memory leaks”)

History (clutter I don’t like to keep around)

Passwords (never store these in a browser)

plugin caches and histories

I like to clean out unused bookmarks myself. But some extensions and some system cleaners can do this for you as well. For Firefox I use Forget Me Not, which replaced Eraser.



By doing all this cleanup, my browser gets less cluttered and performs better. Removing unused extensions and not using multiple ad blockers each with its own databases can also help with browser performance.

AdwCleaner also removes trackers and adware which may be slowing your browser and causing unnecessary distractions.

## Startup Management and System Cleanup

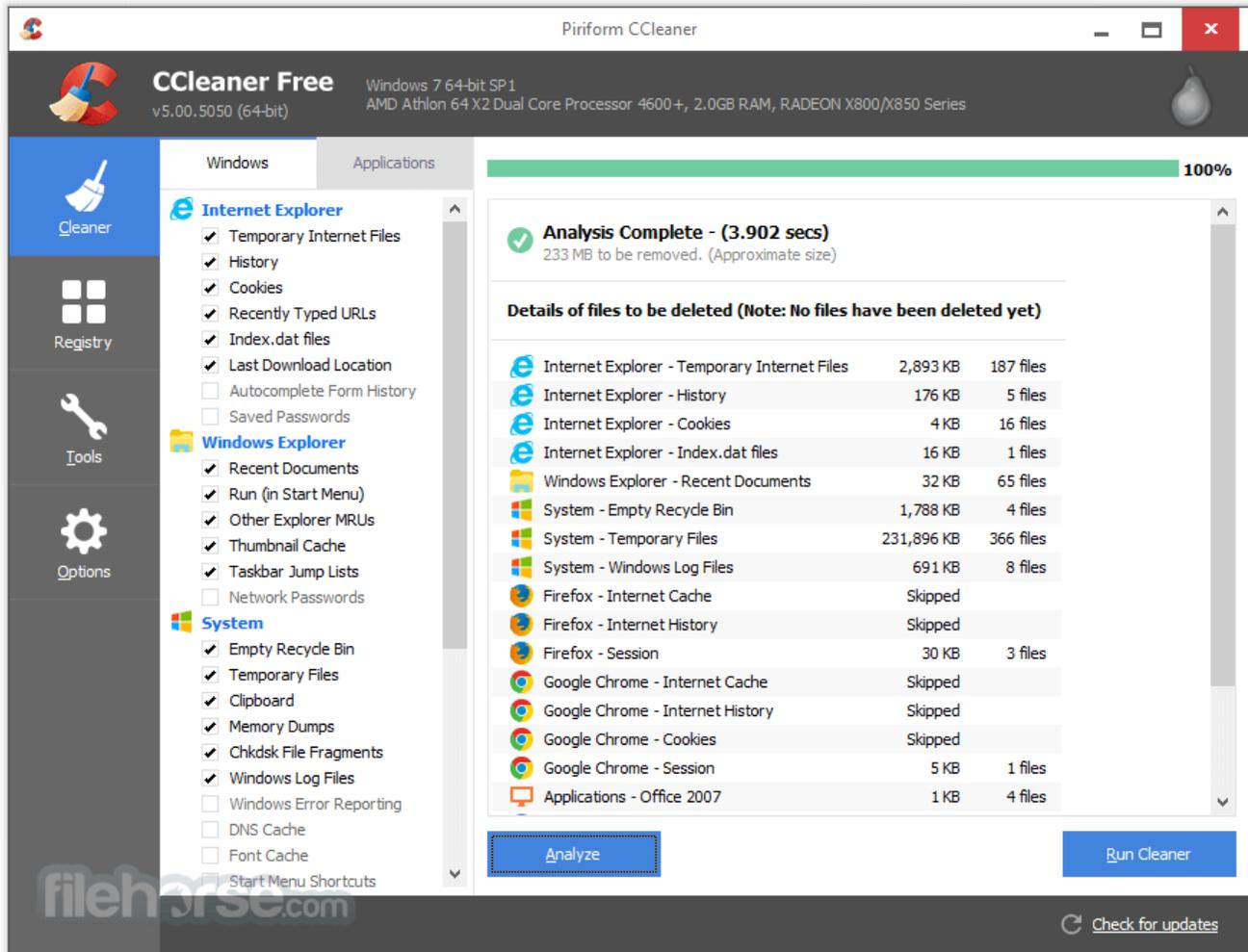
I use two different non-aggressive system cleanup tools: Glary Utilities and Ccleaner.

The important thing to keep in mind is to know what each checkbox you have enabled in a cleaner is going to remove. This avoids many unpleasant surprises down the road. Explaining all of these things to be cleaned is beyond the scope of this presentation, but the main purposes are to improve system stability and performance where possible, and to reduce distractions and clutter. Browsers and some third party apps can be added to the cleanup routines in these cleaners, but some of us do not want third party utilities doing the cleanup in some of our software.

So here's what these two utilities look like in action:

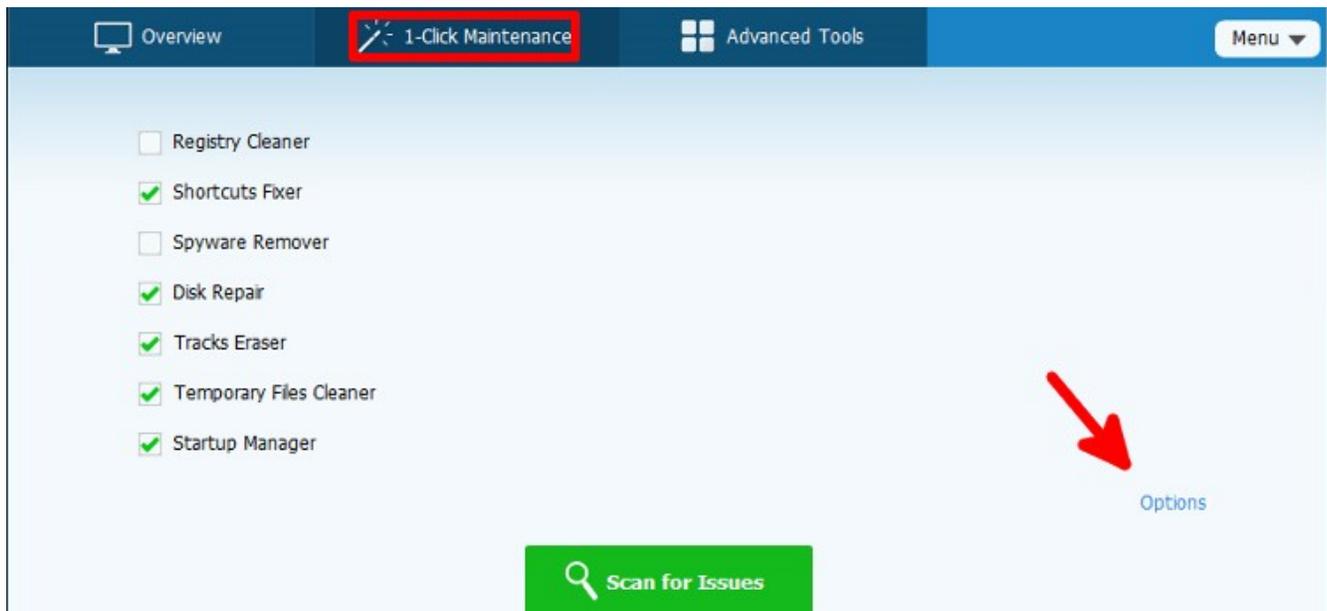
# Ccleaner

<https://www.ccleaner.com/ccleaner>



# Glary Utilities

<https://www.glarysoft.com/glary-utilities/>



One thing to note: Both Glary Utilities and Ccleaner have Tray Items which you have to right-click on and select Quit or Exit to stop background system monitoring. This is very important, as these processes don't obey a Disable command. You'll have to quit these programs at every startup and every login.

But there are Startups which can be managed.

## Windows 10 Startups management

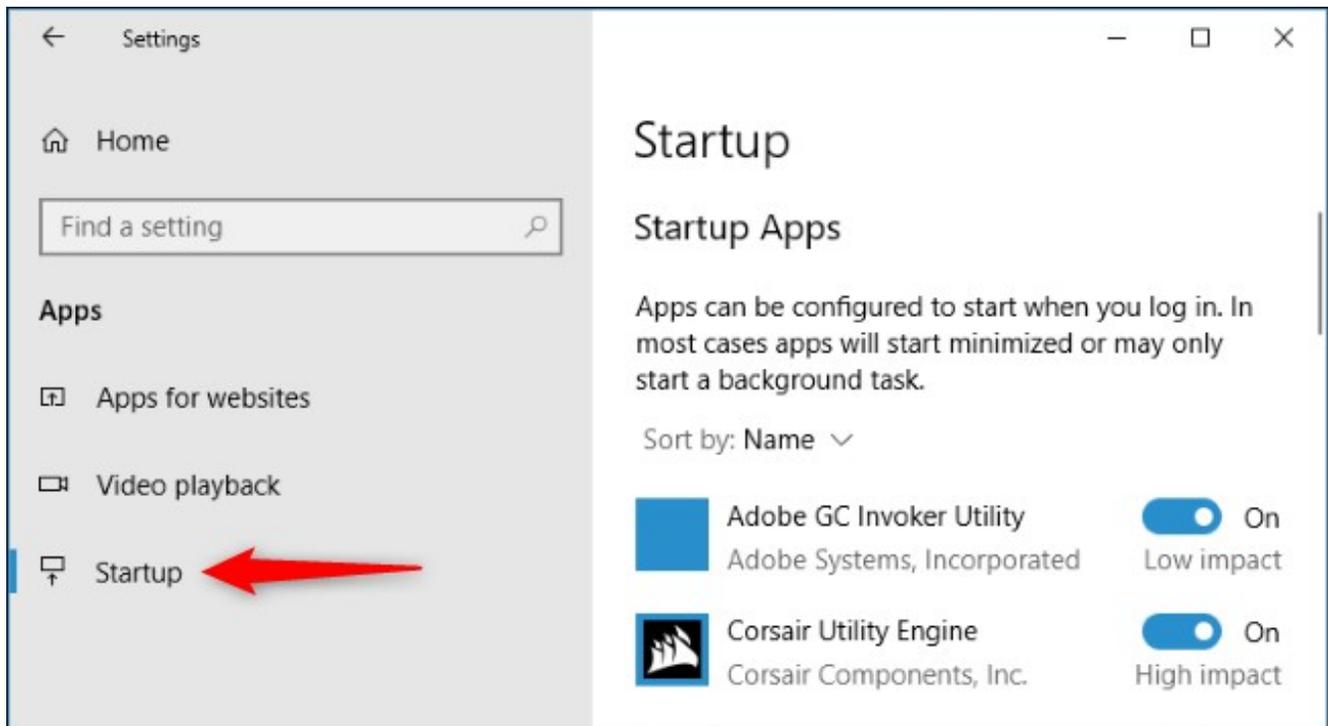
This can be done with the two system cleanup utilities, or Windows 10 has a way to do this the Windows way:

By the way, if you need to find a Windows 10 setting, just use Cortana Search. When set up for local results only, this is your best friend in finding the often hidden and scattered Windows 10 settings.

Reference:

How to Manage Startup Programs in Windows 10's Settings App

<https://www.howtogeek.com/351537/how-to-manage-startup-programs-in-windows-10s-settings-app/>



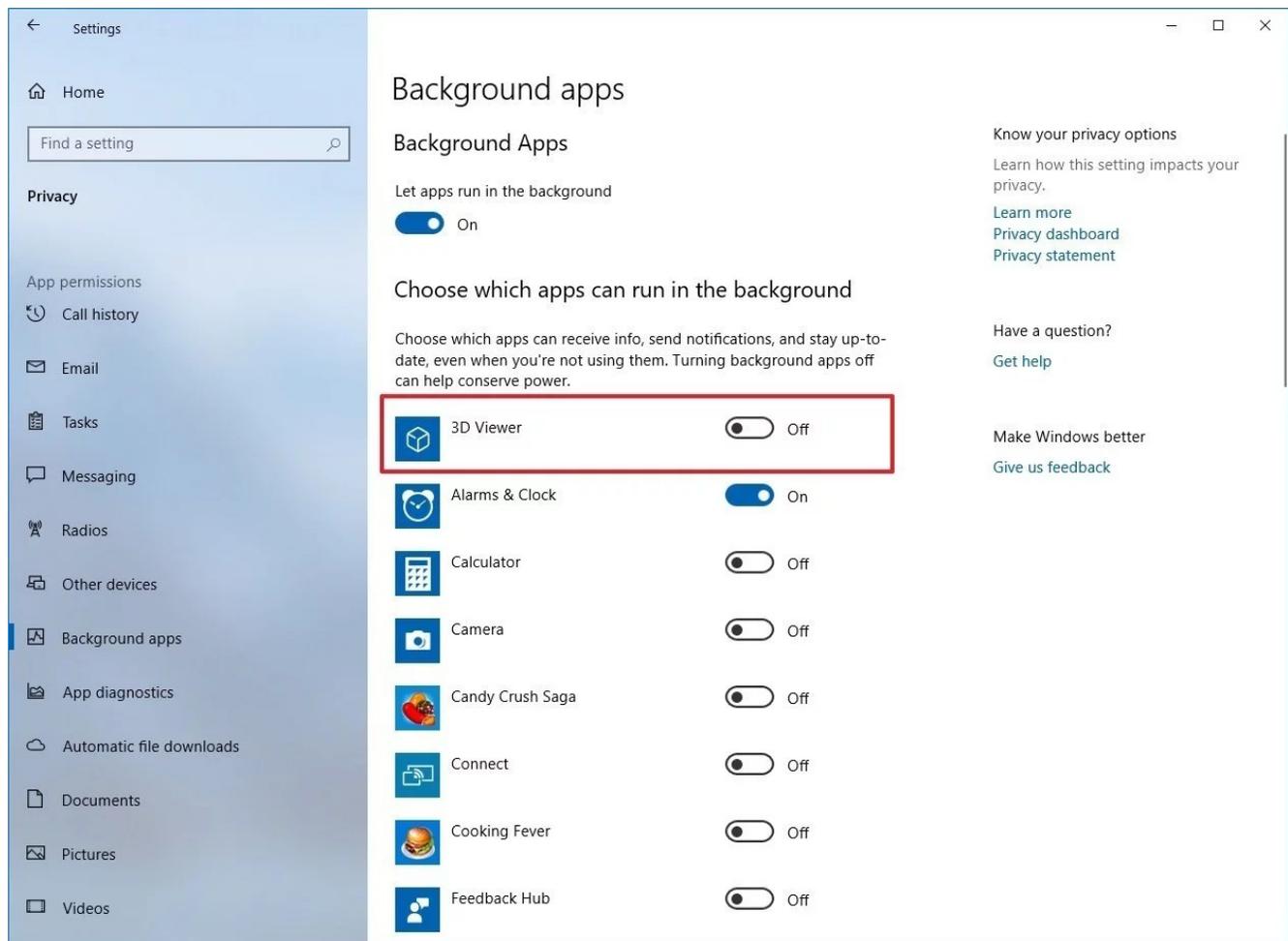
The Windows 10 Startups Manager setting pane.

There are also background processes which you can manage in several ways in Windows 10, but this is getting pretty technical. And it's easy to make a mistake if you don't know exactly what you are doing. No one likes to have to reset or restore Windows because of an error we did to ourselves.

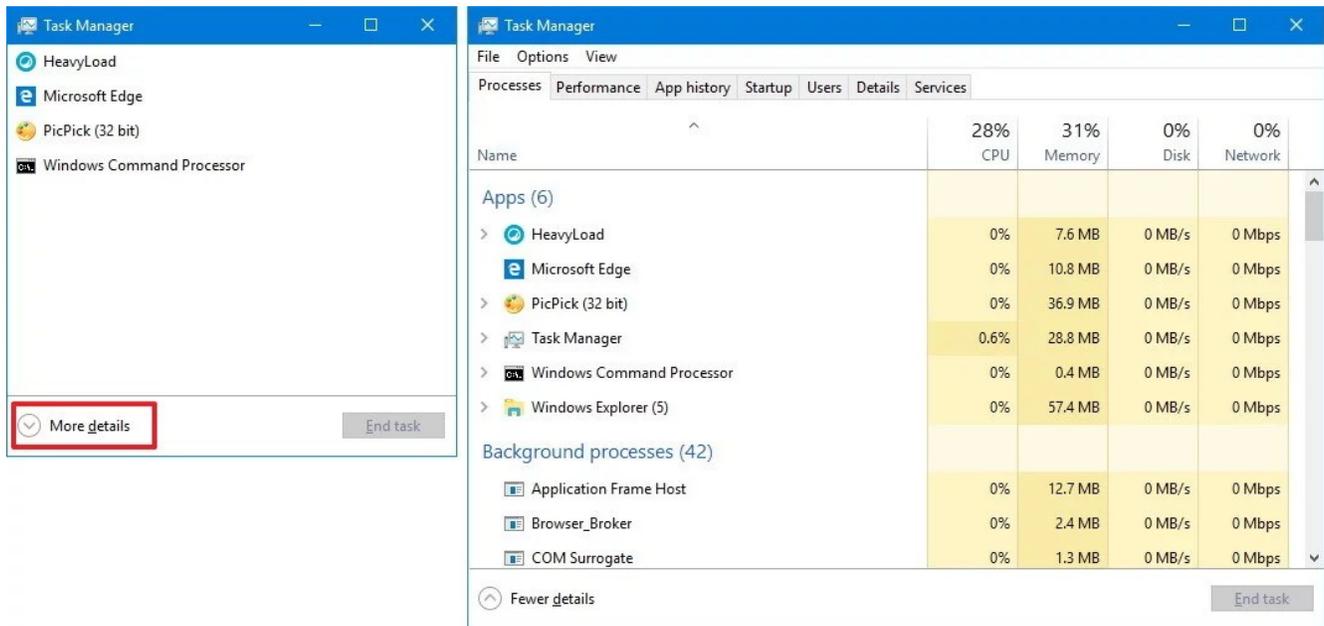
# How to stop apps from running in the background on Windows 10

You can stop apps from running in the background to save battery, data usage, and (some) system resources, and in this guide, we'll show you how on Windows 10.

<https://www.windowscentral.com/how-prevent-apps-running-background-windows-10>



Controls for Apps which run in the background in Windows 10.



Windows 10 Task Manager Processes Tab.

References:

How to use Windows 10 Task Manager to kill processes that drain resources

If your PC is slowing down or apps stop responding, this guide can help find and terminate the processes that are causing the problem, using Task Manager on Windows 10.

<https://www.windowcentral.com/how-identify-and-terminate-high-resource-processes-using-task-manager-windows-10>

How to fix too many background processes in Windows 10

<https://windowsreport.com/too-many-background-processes-windows-10>

*(Questions and Answers about system cleanup and browser cleanup.)*

This brings us to (nearly) the end of this presentation.

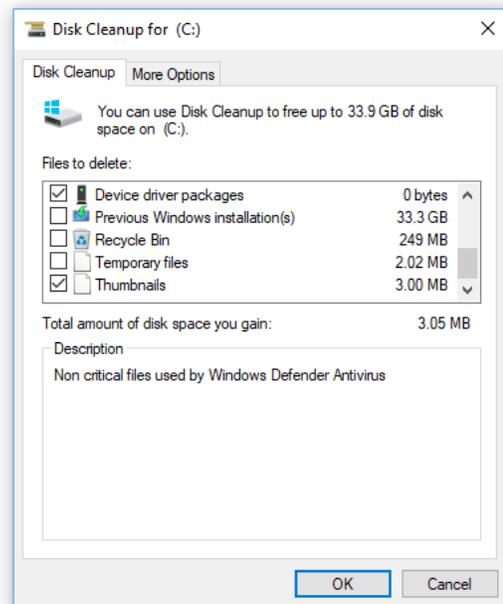
As I said upfront, there is way too much material available to handle in one, or even two, group meetings. And things change frequently with Windows 10. Just look what has become of Windows Disk Cleanup (which can be run two weeks after a Feature Update, but is too powerful to use on a monthly basis):

Here's the Version 1803 Disk Cleanup pane:

← Settings

### Free up space now

<input type="checkbox"/>	<b>Recycle Bin</b> 249 MB
The Recycle Bin contains files you have deleted from your computer. These files are not permanently removed until you empty the Recycle Bin.	
<input type="checkbox"/>	<b>Previous Windows installation(s)</b> 33.3 GB
Files from a previous Windows installation. Files and folders that may conflict with the installation of Windows have been moved to folders named Windows.old. You can access data from the previous Windows installations in this folder.	
<input checked="" type="checkbox"/>	<b>Temporary Internet Files</b> 49.5 KB
The Temporary Internet Files folder contains webpages stored on your hard disk for quick viewing. Your personalized settings for webpages will be left intact.	
<input type="checkbox"/>	<b>Delivery Optimization Files</b> 168 MB
Delivery Optimization files are files that were previously downloaded to your computer and can be deleted if currently unused by the Delivery Optimization service.	
<input checked="" type="checkbox"/>	<b>DirectX Shader Cache</b> 66.8 KB
Clean up files created by the graphics system which can speed up application load time and improve responsiveness. They will be re-generated as needed.	



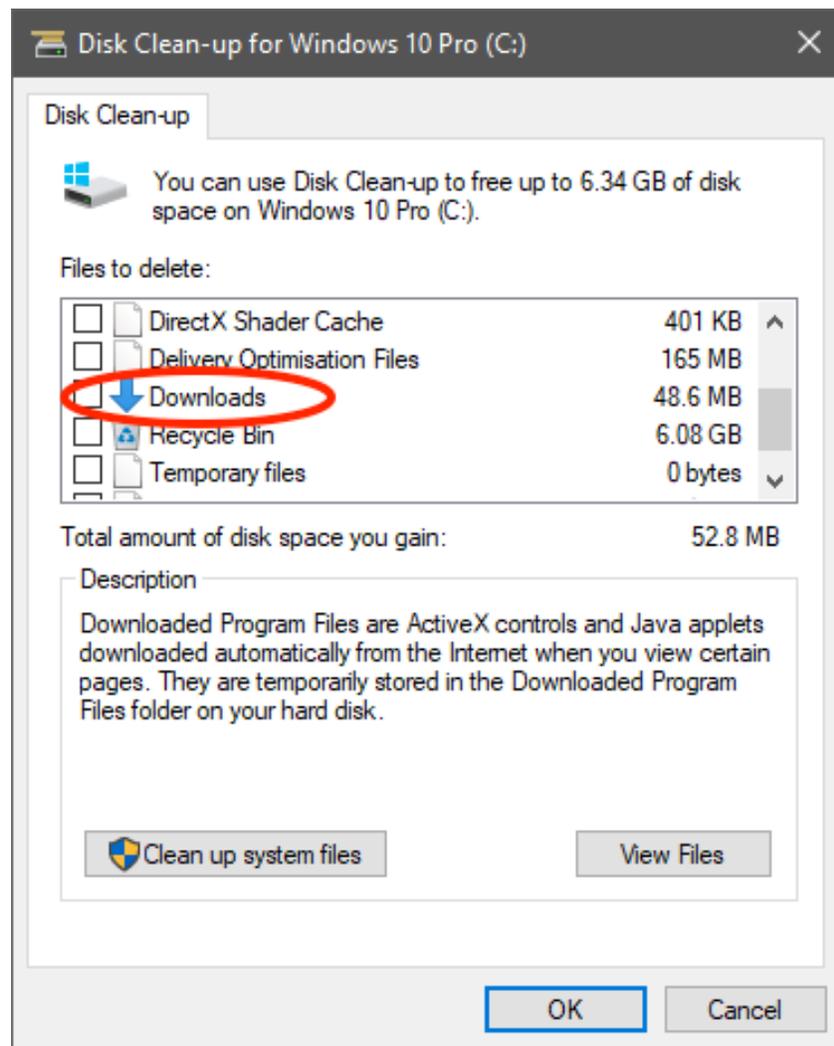
Windows 10 1809 (l) vs. 1803 (r) Disk Cleanup GUI.

But in Version 1809, this is part of Windows 10 Storage Sense.

One more change:

Beware! Disk Cleanup in Windows 10 October 2018 Update Can Empty Your Downloads Folder

<https://wccftech.com/disk-cleanup-windows-10-october-2018-update-empty-downloads-folder/>



So either uncheck the Downloads Folder in Storage Sense or move your more permanent downloads to other folders and make backup copies before running disk cleanup in Windows 10 Version 1809.

For this and other reasons, I would not let Storage Sense automatically perform Disk Cleanup in Windows 10. I would do it selectively when I choose to do it.

As with automatic updates, don't let Windows run anything automatically in the middle of the night unless you really trust whatever it is that Windows is trying to do to...er, *for* you now.

Reference:

Microsoft confirms Disk Cleanup tool deprecation in Windows 10

<https://www.ghacks.net/2018/09/14/microsoft-confirms-disk-cleanup-tool-deprecation-in-windows-10/>

So that's a rundown from a bird's eye view of Windows 10 updating and maintenance. There are many other things you can do, but these actions on this schedule should take care of most of the issues which maintenance and updating can deal with. The main objectives are not to lose anything important, but to get rid of clutter and performance-killers. Then also to make the system safer and more private.

Again, privacy controls can be dealt with much more aggressively than I am presenting here. But that is another topic entirely.

If we have any time left, or maybe next meeting, we can continue this discussion.

– Bob Primak –

– Feb. 13, 2019 –

for the Lexington Science and Technology Interest Group

Notes for next time: Bring the whole setup

TreeSize Free – find what’s taking up how much space.

Find how Windows 10 finds what’s using space and how this is managed. It’s in Settings. Disk Cleanup – show old vs. new and when to do this.

Ccleaner and Glary Utilities. Managing Startups – Windows and Ccleaner ways. Background processes – Windows ways to find what’s using resources in the background. Briefly, processes can also be looked at.

We stopped before Updating Third Party Software and using system cleanup tools. Ninite slide.

Updated 07:45:02 AM EST Thursday, February 14, 2019

– Bob Primak –

