macOS Gatekeeper & XProtect review: How well does Apple's free antivirus defend a Mac from malware

Apple's security layers fight the good fight, but malware and suspect applications can still be installed if warnings are ignored.

By Chris Barylick Contributor, Macworld OCT 6, 2025 5:08 am PDT

Image: Foundry

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At a glance

Expert's Rating

★★★★☆

Macworld EDITORS' CHOICE

Pros

- macOS' Gatekeeper and XProtect functions work well together to block or quarantine the most obvious malware and throw up multiple warning prompts before harmful software can be installed.
- Good automatic cleanup, and in many cases, the Gatekeeper function quarantines and deletes suspect software, and even uninstalls fake copies of Adobe Flash Player.

Cons

- With enough determination—or carelessness—users can override warnings and install malware that compromises core system functions.
- Questionable applications can be installed in the Applications folder with no warnings whatsoever.
- Risk to sensitive systems, such as your webcam, microphone, keystroke data, and other functions, should all warnings be ignored, and you continue to plow ahead and install malware.

Our Verdict

- macOS's Gatekeeper and XProtect functions provide a strong baseline for security and block the vast majority of malware and questionable apps. Still, determined or careless users can bypass protections and grant dangerous levels of access to malware, placing your Mac's data and functions at risk. For most users, these safeguards are enough, but a third-party security suite can also offer peace of mind.

With the rise of third-party antiviral and anti-malware applications for the Mac, the question of how macOS defends against malware on its own has surfaced. Apple includes built-in antivirus software as part of macOS, but is it enough? To this end, is it safe to use macOS on its own and rely exclusively on macOS and security updates from Apple, or are you better off using a well-reviewed antiviral/anti-malware suite in conjunction with the native macOS layers of protection?

Being somewhere between brave, curious, and outright idiotic, I backed up everything on my MacBook Pro as a Time Machine volume on my external hard drive, removed all third-party protection software, and then proceeded to run all of the Objective-See Mac Malware Collection across my operating system, throwing more than 130 chunks of questionable software at macOS 15.6.1 to see how things would hold up. The results were surprising. (Even more surprising is the fact that I ran the same tests again once macOS Tahoe launched, as you can see from the macOS Tahoe malware protection section below.)

At the heart of the macOS security layer is its Gatekeeper system, which collaborates with its Xprotect feature to ensure that only certain applications have permission to run and/or install background functions on macOS. These security layers can be altered to allow for software that's been signed by developers or approved by the Mac App Store, macOS offering warnings galore through its Privacy and Security preference pane.

For the most part, this works well; macOS often deletes suspect malware and moves it to the trash before it can be installed as the system scans it, along with throwing up warning messages after warning messages not to install the software, which it deems

to be questionable. This is the good part, and the safeguards are in place, but the developers and the operating system also know they can't completely stand in the way of the users' goals and that suspect software occasionally has to be installed and tested. As such, it's still possible to bypass the warnings, execute questionable software, and install chunks of malware deep within macOS to become login items, background functions, and override core elements such as your web browser's search engine and start page.

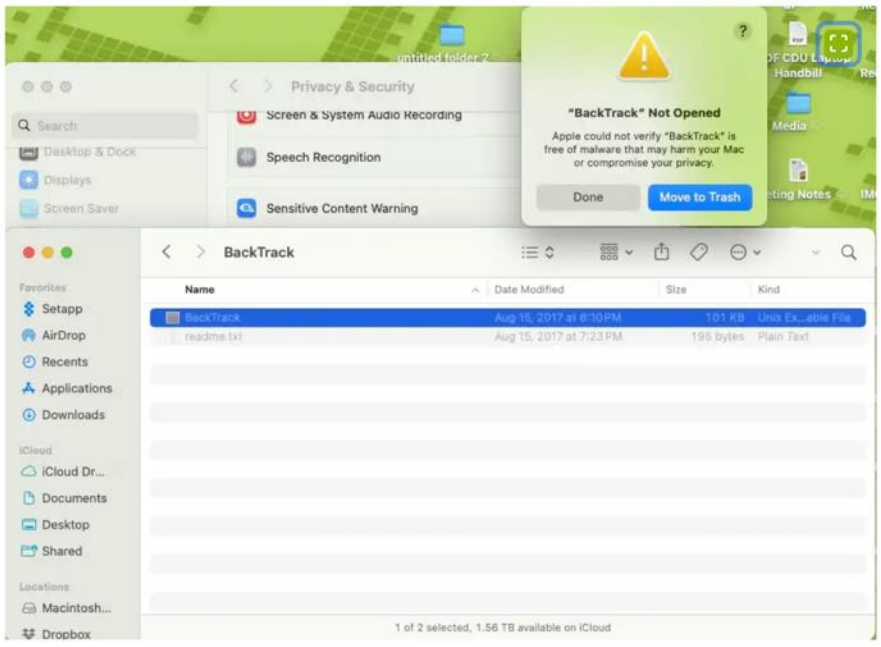
…

It got heady from there.

How well does XProtect and Gatekeeper protect your Mac?

Going through the malware archive and ignoring/bypassing protection screens, I was able to install third-party software that requested access to my microphone, webcam, keystrokes, and other system functions. During testing, I was allowed to install the NRKIH88 background function, which functions as a trojan; the infamous MacSecurity suite was installed and created background functions, and the LamePyre malware created a mock Discord app that requested permission to record audio and video data. By the end, my Safari start page had been compromised and switched to a website offering Viagra for sale.

Although macOS works to keep malware from being installed and throws up warning message after warning message to try to prevent this from happening, it's the native applications that the operating system allows to be installed in the Applications folder without batting an eye that can be disturbing.

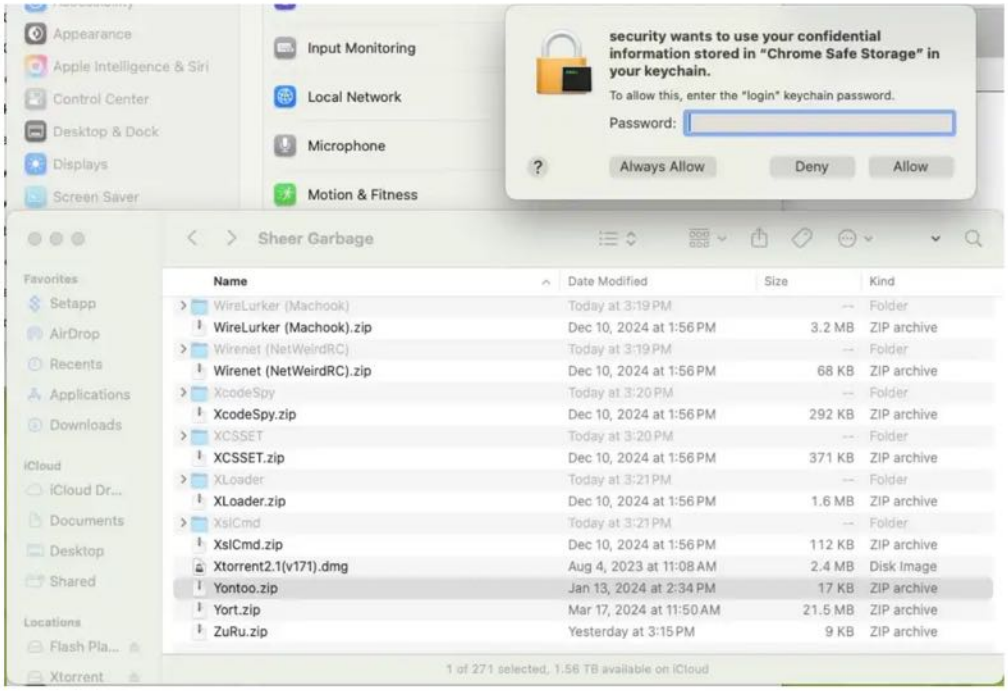


Apple attempts to verify if an app is safe.
Foundry

In addition to two fake copies of Adobe Flash Player that were allowed to be installed (but, to macOS' credit, automatically uninstalled later), the operating system allowed questionable software to be installed, such as MixPad, Free Download Manager, Wondershare, Movavi Screen Recorder (which allows full access to your photo libraries), Spedal, VideoPad, and borderline BitTorrent clients such as Vuze and Bigly BT. Granted, many of these applications have undergone

updates over the years that took them out of consideration as malware, but the Gatekeeper system still allowed them to be copied into the Applications folder with no warning whatsoever.

So what's the result of this? By the end of my testing, the MacSecurity suite was flashing notifications of viral infection and demanding to be registered, I had granted permission over core system functions to several questionable applications, and after seeing that my search engine and start page preferences had been altered, I was hesitant to log into anything sensitive, such as online banking or health insurance, and entirely glad that I had backed everything up so I could boot my MacBook Pro into Recovery Mode, wipe the drive several times, reinstall macOS Sequoia, reimport my data from Time Machine, and start over again.



Apple warns you when an app wants to access areas of your Mac.
Foundry

macOS' Gatekeeper and XProtect systems fight the good fight and put up considerable resistance to malware infection, but it's still entirely possible to bypass these protections and put some extremely questionable software on your Mac; it just takes a fair amount of effort to do so. Like deciding you're going to head to Home Depot, take off your shoes and socks as you walk over to the construction materials section, and then proceed to drop cinder blocks onto your bare feet over and over again for fun and amusement, it's entirely possible to completely infect your Mac with dangerous malware provided you ignore all the warning signs and press ahead.

The system will warn you about what an app tries to access.
Foundry

This, coupled with how easy it is to install some questionable applications with no warning, gives one a bit of pause, but the native protection layer within macOS still holds its own, provided you heed the warnings and veer away from questionable software.

In conclusion, macOS' Gatekeeper function does its job, and does it well with a few exceptions, but there's nothing that can completely keep you from installing some of the worst software on the planet, designed by some of the most sociopathic developers on the planet to line their pockets, if your heart's set on it.

That being said, I'm REALLY glad I made that backup.

Testing Gatekeeper and XProtect in macOS Tahoe

Not content with wrecking my system once already, with the arrival of macOS Tahoe I gave macOS another challenge.

In the interest of addressing Apple's newly-released macOS 26 (Tahoe) operating system, and fully acknowledging that early adopters like myself were hanging on the macOS' "Software Update" pane, frenetically clicking the refresh button until the update became available, I've decided to test the malware against the new operating system's Gatekeeper security layer.

This is either brilliant or stupid, but given that Apple has highlighted a significant number of changes via its Liquid Glass user interface and several under-the-hood changes, this raises the question as to whether the new operating system is more or less secure against the malware that's out there and is currently being developed.

I once again installed the entire Objective-See Mac malware archive, because once is bad enough, twice is just plain ridiculous. Following a few hours of testing the malware archive against macOS Tahoe's Gatekeeper system, the end result over the malware security found in macOS Sequoia was only marginally better. However, the newer version of the operating system was better at not allowing questionable versions of applications to be installed into the Applications folder, and stopped a questionable version of the Transmission client from running, deleting it instead. macOS Tahoe also stopped fake versions of Adobe Flash Player from installing, and seemed better at heading certain malware installations off at the pass.

Still, if you bypass enough warning screens and messages, macOS Tahoe's Gatekeeper feature will still let malware such as AdWind, Conduit, DazzleSpy, DevilRobber, and Dockster through. The most significant events occurred when, after bypassing multiple warning screens, Elite Keylogger was allowed through, wherein it could be given background task privileges and assigned full access to monitor just about everything, including Dropbox, Xcode, macOS traffic, etc. The MacSecurity client could also be added once you'd ignored enough warnings, given access to background tasks (it's now sporadically popping up with "VORRRRRRRP!!!"/sci-fi sounds and assuring me that it can clean off various infections on my Mac, and just asked for full access to my Photos library, which it has no business asking for.)

Finally, the Exodus spyware, once again, opened Safari and pointed me towards LGBTQIA+ porn, and the XCSSET malware was able to install a false copy of Xcode tools onto my system, wherein it opened a Safari website guiding me to buy Viagra while a MacSecurity pop-up is asking me to register and pay for the MacSecurity utility. And, to cap off the day, a Safari website just opened to ask if I was 18 or over and interested in athletic models. Once again, the macOS Gatekeeper features fought the good fight and provided ample warnings, but I wound up in the exact same position as I was when I finished my testing under macOS Sequoia.

Simply put, I'm glad I created a Time Machine archive, and it's time to put it to good use (again).

Should you rely on Apple's Gatekeeper antivirus protection?

You can't argue with something that's free and part of macOS, and if you're the kind of Mac user who mostly sticks to the Mac App Store, trusted developer downloads, and pays attention to Apple's warning prompts, macOS' built-in protections are generally enough to keep you safe. There are safeguards in place that honestly do a great job of blocking or quarantining the most obvious malware and raising red flags before shady software can do real harm.

Still, nothing's entirely bulletproof, and in the face of an idiot-proof system, nature always finds a way to craft a greater idiot. You can still override every warning and offer over your camera, microphone, keystroke data, and core system settings to some of the sketchiest malware on Earth, and if you handle sensitive data, then a well-reviewed third-party antiviral or anti-malware tool can provide the safety net you're looking for, even if you have to pay for it.

Finally, Time Machine is free. Hook up an external drive, use it, and it may just be the ticket back from the crash or viral infection that could have annihilated your work and driven you crazy.

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Chris Barylick is a D.C.-based technology journalist, loves writing about emerging technologies, video games, DIY projects, hardware, utilities, politics, and upgrades, and has written for Macworld since 2007. He is the owner of East Bay Mac Menders, SnarkFish T-Shirts, the Mistakes Were Made Dinocast, and has masters degrees in both Business Administration (George Washington University ’05) and Journalism (The University of Maryland ’23), and inadvertently wound up in the Guinness Book of World Records for being the “4 AM Guy” at the first Apple Store opening in 2001. He has accidentally set two hard drives on fire to date.