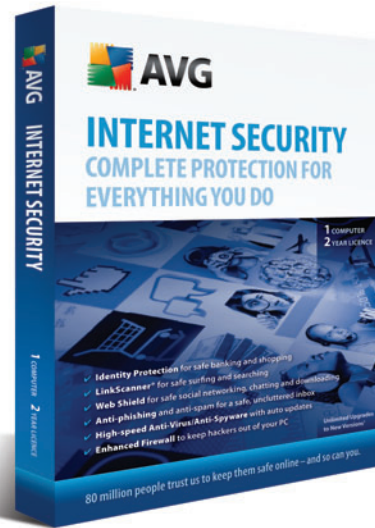


# Security software: what do I need?



When it comes to protecting your PC, the built-in tools in Windows aren't enough. We show you what additional software you'll need to stay safe



**Y**ou've just read that Windows includes security tools of its own but, unfortunately, these are far from perfect. While Windows Security features have improved over the years – especially with Windows Vista – some vital elements, such as **anti-virus** protection, aren't included at all, and the Windows **firewall**, for example, isn't particularly powerful. In order to make sure your PC is properly protected you will inevitably need to turn to third-party tools and utilities. So what exactly do you need to get hold of in order to stay safe, and how much do you need to pay for protection? In this section we will explain all.

▼ **AVG's free anti-virus program** provides effective protection

The screenshot shows the AVG Anti-Virus Free Edition website. At the top, it says "Trusted by 80 million users". There are navigation buttons for "Homepage", "Get basic protection", and "Get complete Internet security". The main heading is "AVG Anti-Virus Free Edition - trusted by 80 million users". Below this, it says "Antivirus and antispyware protection for Windows available to download for free". A "NEW!" banner highlights "LinkScanner® Active Surf-Shield checks web pages for threats at the only time that matters - when you're about to click that link." There is a list of features: "Award-winning antivirus and antispyware", "Real time safe internet surfing and searching", "Quality proven by 80 million of users", "Easy to download, install and use", "Protection against viruses and spyware", and "Compatible with Windows 7, Windows Vista and Windows XP". At the bottom, there are buttons for "Choose your protection level", "Extra protection", and "System requirements".

## The magic number

There are dozens of different types of security products available on the market, but at the very least you will need to ensure that your computer is protected by three key tools: an anti-virus program, a firewall and an anti-spyware tool.

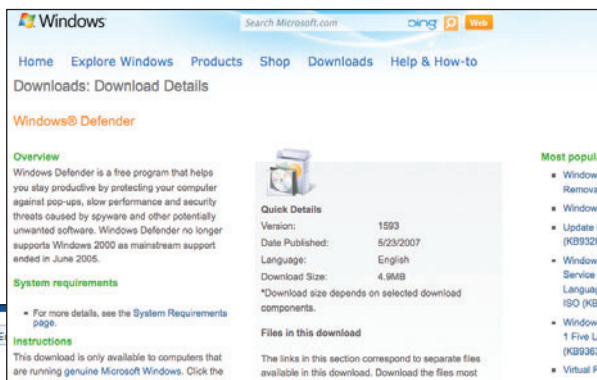
Anti-virus tools are probably the most familiar type of security software to the average user. At their most basic these scan for

viruses, examining each and every file on the computer to discover whether or not any infections lurk inside. They do this by looking for a set of known 'definitions' – snippets of virus code that can be used to identify malicious software. Anti-virus tools will require updating on a

▲ **Download Defender for free** if you're using XP

daily basis to ensure your computer has the definitions for the latest virus threats. Most modern anti-virus tools also use a technique called 'heuristics' to watch out for new and unknown threats; but simply this involves watching out for programs that appear to behave like a virus.

While anti-virus programs are designed to find and remove any nasties that have made their way onto your computer, a firewall is meant to stop malicious software or hackers from getting onto it in the first place. It monitors the computer's connection to a **network** (either a home network or the internet itself) and examines information as it passes back and forth. Some of the most dangerous virus attacks of the last decade, including the Sasser

The screenshot shows the Windows Defender download page on Microsoft's website. The page title is "Windows Defender". It includes a "Quick Details" section with the following information: Version: 1593, Date Published: 5/23/2007, Language: English, Download Size: 4.9MB, and a note that "Download size depends on selected download components." There is also a "Files in this download" section and a "Most popular" list on the right side.

**worm** that infected high-profile computer systems (such as those of the British Coast Guard and US flight company Delta Airlines) through their network connection, can be easily blocked by a properly installed firewall.

Anti-spyware software works in much the same way as an anti-virus tool does, but with a very specific target. An anti-spyware tool will scan for, and remove, any malicious software that seeks to gather information about your computer use or your personal details. Many anti-spyware tools can also spot and remove **cookies** being used by websites to track your visits. As is also the case with anti-virus programs, anti-spyware tools need regular updates to remain effective at combatting these ever-present threats to your privacy.

As we explained on the previous pages of this Ultimate Guide, Microsoft has provided two of these tools free of charge to every Windows XP and Vista user. Both have a built-in firewall that can be set up to monitor any connection to a network while Windows Defender, which is included in Vista and is a free download for XP, can be used to scan for spyware. If these two tools are running properly you can, therefore, simply add an anti-virus tool. This isn't always the best or easiest way to protect your PC, though.

### Suite dreams

There are two main problems with adding an anti-virus program to complement the tools already included by Microsoft. For starters, the Microsoft tools just aren't that good: the firewall, for example, is rather limited and somewhat difficult to configure. Second, it leaves you with three separate security tools to keep an eye on, and two different scans to remember to run. For this reason, many people prefer to install one completely new piece of software that covers all the bases: otherwise known as a security suite.

Almost every major security company makes an all-in-one security suite. To confuse matters, though, most of these companies have settled on the same name for this kind of product: AVG ([www.avg.com.au](http://www.avg.com.au)), Norton ([www.symantec.com](http://www.symantec.com)), Kaspersky Labs ([www.kaspersky.com.au](http://www.kaspersky.com.au)) and McAfee ([www.mcafee.com](http://www.mcafee.com)), for example, all sell a product called Internet Security.

At the very least, most security suites include an anti-virus tool, a firewall and anti-spyware protection, although many add much more to the equation. Some include parental control software in order to limit what children can access on the computer or the internet. Many include anti-spam programs to delete annoying junk emails, and some will automatically block the websites used by so-called **phishing** scams. Some even go as far as including a few **gigabytes** of online space for you to store backup copies of your most precious files.

▲ Some banks offer free security software to their members

▲ As well as anti-virus software you'll need a good firewall

The quality of the tools and services included in these suites varies, but they tend to have several advantages over the security features built into Windows. Most importantly, they usually include a two-way firewall. This monitors not only what information is coming into your computer through the network connection, but also what information is going out to the internet. This allows the software to watch out for programs that are acting suspiciously, and means that even if spyware does get onto the computer it'll have a hard time sending any information back to its criminal owners. The standard firewall built into Windows XP can't do this and, although Vista's firewall can, you'll need to delve deep into its settings to find the necessary options.

## Route to success

If your computer connects to the internet via a **USB broadband modem** or **dial-up** connection, you'll need to rely on your computer and software for protection from viruses and other threats. If you connect via a **router**, though, it might be able to help.

Most routers include some sort of internet firewall. This will help to block any intruders or malicious software that attempts to enter your network from the internet. We don't recommend relying on a router's firewall alone – it's best to have a two-way software firewall to

prevent any programs passing information out to the internet – but your router firewall can be a useful second line of defence.

Another handy security feature built into some routers is the ability to block Ping messages. A Ping is a message sent across a network to see whether a network address is active, and normally a computer will respond to acknowledge that it is there. These signals are sometimes used by hackers scanning for possible targets, though, so blocking or ignoring them can be useful.



▲ AVG's all-in-one Internet Security package allows you to monitor your protection in one place

### Keep it together

Besides having more tools and a better firewall, the key advantage of any security suite should be the convenience that it offers. A good security suite will allow you to manage all the security tools on your computer in one place, and should take care of just about everything for you by updating itself daily and scheduling automatic scans from time to time. It will also allow you to keep an eye on your computer's security by checking just one program window rather than those of three or more different tools.

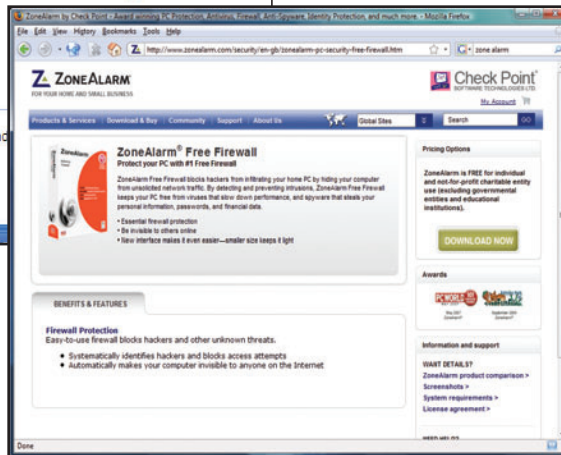
For most users, then, an all-in-one security suite will provide great protection, but as always there's a price to pay for convenience: most internet security suites cost around \$100. Most companies sell products that are valid for use on three computers, and if you have three PCs these work out at a very reasonable \$33 per computer per year. If you only have one computer, though, the price can seem annoy-

ingly high. Not to worry, though – if \$100 is just too much for you to swallow, all the software you need can be found for free, and much of it has been provided on the CD accompanying this guide.

### Free for all

Sadly we're not aware of any completely free security suites for Windows computers. Although many companies make free security products, and some also make security suites, in most cases the full suite is an upgrade that you'll need to pay for. If you want a free security system that's a bit more effective than what Windows has to offer then, you'll need to rely on finding a selection of individual programs that can be found on the web.

We mentioned earlier on in this Ultimate Guide that, at the very least, every single Windows computer needs an anti-virus program to work alongside the firewall and anti-spyware tools built into Windows. Fortunately there are several good anti-virus tools that can be used at no cost.



▲ Zone Alarm monitors the information going in and out of a PC

Perhaps the best known free anti-virus tool is AVG Free. AVG sells its anti-virus tools to both home users and businesses, but for years now it has also given away a basic version of its anti-virus tool for free. It has some limitations compared with the suite software, and doesn't scan for rootkits – nasty infections that hide deep within Windows – but as long as you set up AVG to scan your computer regularly it's an effective prevention against most computer infections. You'll find a copy ready to install on the cover CD included with this Ultimate Guide, as well as a 90-day trial of the AVG Internet Security suite 9.0 software so you can see what a full suite is like.

### Great walls of fire

With AVG installed your computer will be protected against viruses, but we recommend going at least one step further by adding a two-way firewall. Like the firewalls included with paid-for security suites, these will monitor any communications from your computer to the internet, as well as any nasties or **hackers** that might attempt to come in from the other direction.

The best-known free firewall is Zone Alarm. This monitors the information going in and out of the computer, keeping a list of which programs are allowed to contact the internet and which shouldn't be talking to anyone. If a new program attempts to contact the outside world, Zone Alarm will ask if you want to stop it. We've shown you how to set up and use Zone Alarm on page 24 of this guide.

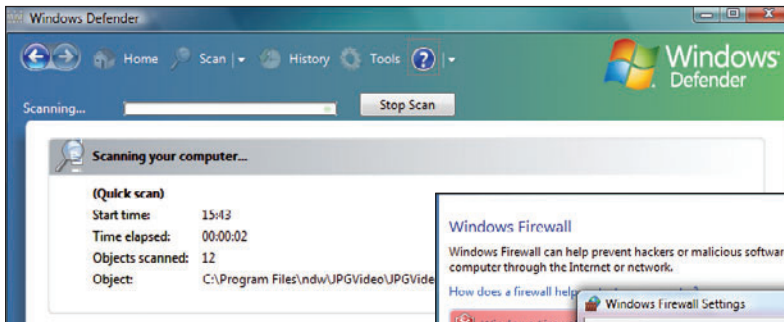
## Something for nothing

Before buying or downloading security software, it's worth taking a minute to check that you haven't been offered any for free.

Some **ISPs** offer security software to their customers, so check yours first. Remember that switching from one ISP to another can take a fair bit of time, and if you are on a fixed-term contract you'll be liable for your current fees until the end of that contract, so switching ISP to one that gives you free software won't always be the cheapest option.

Similarly, check your bank and credit card providers to see if they offer anything. With card-not-present (CNP) fraud currently costing financial companies huge sums of money, some may be prepared to pay for software to limit the risk to their customers.

Either way, the best recommendation we can provide is to do a little bit of research online before going out and buying the latest security package. Find out what will suit you best and then go from there!



▲ Windows Defender guards against spyware

## Counter intelligence

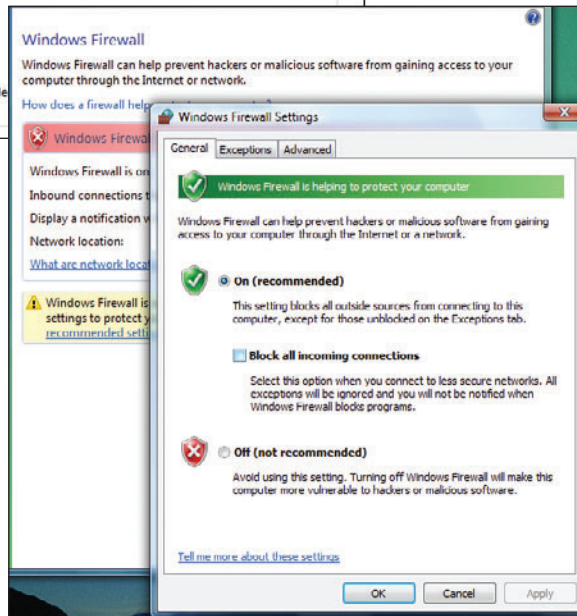
Finally, don't forget to protect against spyware. Microsoft's own Windows Defender works fairly well, and Vista users should be sure to scan with it every few weeks – click Start and type Defender to find the program. The Windows Update tool will automatically keep Defender up to date with the latest definitions, and a quick scan of your computer will only take a few minutes. Windows XP users can download Defender from the Windows website at [www.tinyurl.com/dakdan](http://www.tinyurl.com/dakdan).

Besides Defender, there are several good free anti-spyware tools. Lavasoft's Ad-Aware is one of the best known, and you'll find a full version of Ad-Aware 2009 on the CD with this Ultimate Guide. We've also included a full version of PC Tools' excellent Spyware Doctor.

## Anything else?

Whether you choose to purchase an all-in-one security suite or install a hand-picked collection of free tools, your PC should be in pretty safe hands with the right mix of third-party applications. There are, however, a couple of other security matters that you might want to consider.

For starters, remember that no matter how good your security software may be, there's still a chance that you might lose files from your PC – a new and particularly virulent attack might bypass your software or – something



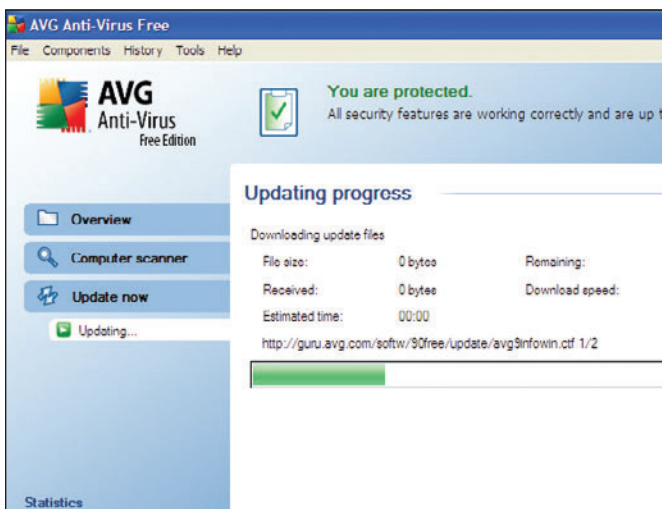
▼ The Windows Firewall provides basic one-way protection

which is more likely to happen – your **hard disk** itself may simply fail. With this in mind, it's vital to ensure that you have a backup copy of all your most important documents to ensure you don't have to face the heartache of lost files. We've included a copy of Paragon's Drive Backup software on the free CD included with this guide, and you'll find advice on how to use the program starting on page 68.

There may also be occasions when you will want to remove all the files from a hard disk completely – if you're selling a computer, for example, and don't want the new owners to get a glimpse into your private PC world. If that's the case, we've also included Paragon's Disk Wiper tool on the CD to help you delete information permanently.

Finally, remember that your computer is not the only place from which confidential information might be stolen. If you store documents on a portable disk, such as a USB memory key or portable hard disk, it's worth taking precautions to protect them in case the disk is lost or stolen. In our increasingly mobile world, this is becoming more of a problem every day. Truecrypt ([www.truecrypt.org](http://www.truecrypt.org)), a free scrambling software package, can be used to securely **encrypt** all the data stored on a portable disk.

So now that you know exactly what kind of tools you'll need to ensure maximum protection for your computer, you can turn the page to start finding out how to use them.



▲ All-in-one security suites update regularly, saving you the hassle

## Jargon buster

- ▶ **Anti-virus** Software that detects, repairs, cleans, or removes virus-infected files from a computer.
- ▶ **Cookies** Text files generated by websites and stored on your hard disk.
- ▶ **Dial-up** A component of Windows that allows PCs to connect to the internet using a modem.
- ▶ **Encrypt** To scramble data so it can only be read by the sender and authorised recipient.
- ▶ **Firewall** Software or hardware that prevents unauthorised access to a computer over a network.
- ▶ **GB** Gigabyte. A measurement of storage.
- ▶ **Hackers** People who break into computers.
- ▶ **Hard disk** A high-capacity disk fitted in almost all PCs and used to store files.
- ▶ **Internet Service Provider (ISP)** A company that provides you with an internet connection.
- ▶ **Modem** Device enabling computers to communicate over a phone line.
- ▶ **Network** A way of connecting several computers and devices.
- ▶ **Phishing** Internet fraud that tries to trick you into revealing personal details.
- ▶ **Router** A device used to connect more than one computer to the internet.
- ▶ **Spyware** Software installed to monitor and report back on a computer's use.
- ▶ **Universal Serial Bus (USB)** A standard that allows quick and easy connection of peripherals.
- ▶ **Worm** A program that transmits and copies itself over a network.

# Glossary

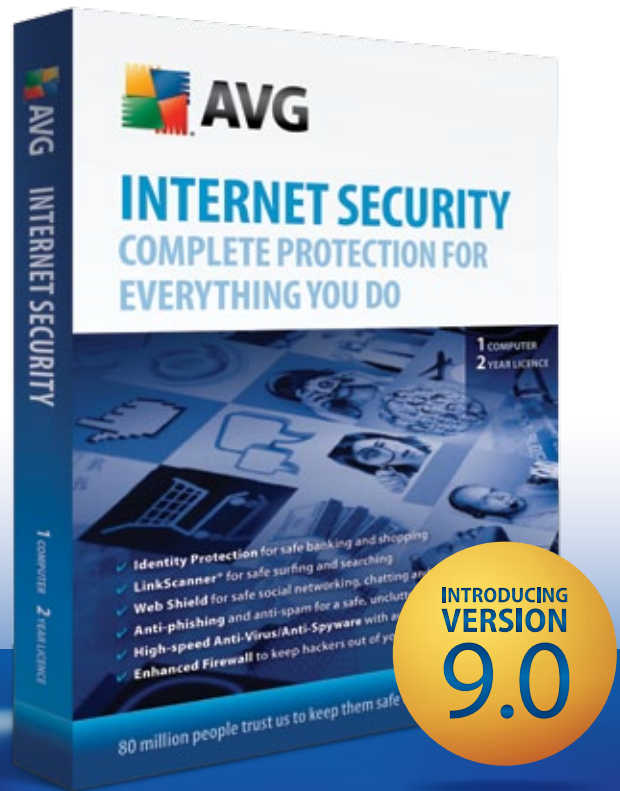
## Jargon buster

- ▶ **Add-on** Program that adds features to a web browser or applications, and is loaded only when needed.
- ▶ **Adware** Advert-supported software. Often installed surreptitiously on a PC and can compromise privacy.
- ▶ **Anti-virus** Software that detects repairs, cleans, or removes virus-infected files.
- ▶ **Bandwidth** The maximum amount of data that can be transferred over a connection at one time.
- ▶ **Beta** Version of software still in development.
- ▶ **Bios** Basic Input Output System. Software built into all PCs to control the basic operation of devices.
- ▶ **Bittorrent** File sharing software that enables users to download data from PCs anywhere in the world.
- ▶ **Boot** The process a PC goes through after it is switched on.
- ▶ **Broadband** A fast internet connection, such as ADSL.
- ▶ **Cache** Store for frequently used data or files.
- ▶ **Compression** The process of reducing a file's size by encoding the data.
- ▶ **Cookies** Text files generated by websites and stored on your hard disk.
- ▶ **CPU** Central processing unit. The brain of a PC.
- ▶ **Cursor** A moving pointer indicating a user's position on the screen
- ▶ **Dialogue box** A window that pops up to display or request information.
- ▶ **Disk image** A file containing all the contents of a floppy disk CD or DVD.
- ▶ **DNS** Domain name service. Translates website addresses into a language computers understand.
- ▶ **Domain name** The name used to identify a site on the internet.
- ▶ **Dropdown menu** A list of options that appears beneath a menu bar when you select a menu option.
- ▶ **Encryption** The science of scrambling data to hide it from prying eyes.
- ▶ **Firewall** Software or hardware that prevents unauthorised access to a computer over a network.
- ▶ **Floppy disk** A small, rigid square of plastic used to store data.
- ▶ **Format** To prepare a disk for use.
- ▶ **GB** Gigabyte. A measurement of storage capacity.
- ▶ **Hackers** People who break into computers, often in an attempt to steal information.
- ▶ **Hard disk** A high-capacity disk in almost all PCs, used to store data.
- ▶ **Icon** Image used by Windows to identify a file.
- ▶ **Internet Service Provider (ISP)** A company that provides you with an internet connection.
- ▶ **Internet Protocol (IP) address** An identifying number of a computer attached to a network.
- ▶ **JPEG** A common format for image files.
- ▶ **Keylogger** A malicious program that tracks your key presses and then sends them back to criminals, allowing them to commit fraud.
- ▶ **Malware** Software that performs harmful or surreptitious acts.
- ▶ **MB** Megabytes. A measurement of storage capacity, usually for computer memory.
- ▶ **Memory key** A thumb-sized USB storage device.
- ▶ **Modem** A device that enables two computers to communicate with each other over a telephone line.
- ▶ **Network** A way of connecting several computers and devices so they can share data.
- ▶ **Network Adapter** A socket for connecting a PC to an office network or some broadband internet connections.
- ▶ **Optical drive** Disc drive that uses a laser light to read and write data.
- ▶ **Partition** A large hard disk can be split into partitions or 'virtual' drives, which are treated by Windows as separate, smaller hard disks.
- ▶ **Phishing** A type of internet fraud that has the aim of tricking you into revealing your personal details to cyber criminals.
- ▶ **Plug-in** A program that adds extra features to your web browser or to other applications, and is loaded only when it's needed.
- ▶ **Reboot** To restart a computer.
- ▶ **Registry** A file in Windows that stores information on all hardware and software installed on your PC.
- ▶ **Rootkit** Software that gives a malicious user administration rights and access to a computer.
- ▶ **Router** A device used to connect more than one device to the internet.
- ▶ **Server** A computer on a network that distributes information.
- ▶ **Spyware** Software installed to monitor a computer's use.
- ▶ **SSID** Service Set Identifier. A naming convention for wireless networks.
- ▶ **Trojan** A malicious program disguised as a harmless one.
- ▶ **Universal Serial Bus (USB)** A standard that allows quick and easy connection of external peripherals to your PC.
- ▶ **URL** Uniform Resource Locator. The unique address of a web page.
- ▶ **Virus** A malicious computer program designed to cause damage to computer data.
- ▶ **Web browser** A program developed for navigating the internet.
- ▶ **Webmail** An email account accessed via a website.
- ▶ **Wep** Wired Equivalent Privacy. A security standard for wireless networks.
- ▶ **Wifi** An umbrella term for various standards for wireless networking.
- ▶ **Wireless network** Several computers connected without network cables.
- ▶ **Wizard** A step-by-step process that helps you choose settings.
- ▶ **WPA** Secure protection for wireless networks.
- ▶ **Zip file** A file that has been compressed to save disk space or so it is quicker to email.



# SAY HELLO TO AVG 9.0

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AVG Internet Security with Identity Protection

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- 1-year and 2-year licence options available
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- ✓ Won't slow your PC down
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