

# How Windows Update works

Let's start things off by explaining exactly what Windows Update does – and how it works.

**W**indows Update is designed to keep your copy of Windows up to date through the delivery of special files that "patch" it. The most obvious updates are security hotfixes, which patch vulnerabilities and security holes that could be exploited by malware, as well as bug fixes to resolve specific issues.

Windows Update also delivers bigger updates—what once were Service Packs, then point releases (Windows 8.1), have now evolved into feature updates, delivered bi-annually to add new features, and change the way existing features work. The latest feature update is the April 2018 Update (version 1803), set to be superceded by the October 2018 update.

There are also "optional" updates, which include other Microsoft tools, such as the .NET Framework, as well as signed hardware drivers, which have been tested and verified to work well with Windows. Some updates are "recommended," and so sit alongside important updates by default. All optional and recommended updates can be clearly found in the Windows Update tool in Win 7 and 8.1, but they're hidden from view in Win 10. We'll show you how



to find, review, and install optional updates easily.

Windows Update can also be extended to include updates for other Microsoft products, such as Office, or software for controlling Microsoft keyboards and mice.

These days, updates are packaged up and delivered to reduce their size and number, based on what's installed on your PC. A "Full" update contains all the updates released since the last major version of Windows (such as Windows 8.1 or the Windows 10 April 2018 Update). This is typically required after you've just installed or reinstalled the latest version of Windows.

"Delta" and "Express" updates work in a similar way—so much so that Microsoft will be retiring Delta updates as of February 2019, so we'll focus on Express. Express updates are differential—they're generated on demand after Windows Update examines your PC, to contain only those updates not yet installed. This means they're smaller, so are faster to download and install.

Since 2016, Windows 7, 8.1, and 10 have received updates on a monthly basis—"Patch Tuesday." These contain all security and bug fixes developed over the past month, along with any updates missing from your PC from previous months.

## What's Delivery Optimisation?

 Windows 10 users need to be aware of a feature known as Delivery Optimisation, which affects how Microsoft delivers updates to PCs over the web. Head to "Settings > Windows Update > Advanced options," and click the "Delivery Optimisation" link. Here you'll see a setting called "Allow downloads from other PCs," which basically means that when the feature is switched on (as it is by default), it's possible to receive your Windows updates using peer-to-peer technology from files stored on other PCs across your network and the Internet. In

turn, these files can also be sent from your PC to other computers, too.

Click "Activity monitor" to review how much data is being transferred and how much bandwidth is being used, then click "Advanced options" to set manual limits that should help prevent your connection from becoming overwhelmed.

Better still, switch the feature off completely if you're the only PC user in your home. If not, change the setting to "PCs on my local network," so you can speed up deploying updates to other PCs without having to open them up to the wider web.

