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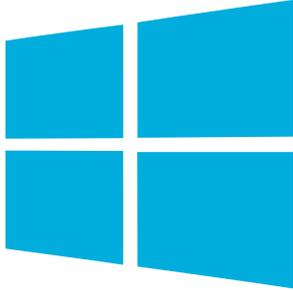
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Introducing Windows 10

*This chapter introduces
Microsoft's latest operating
system, Windows 10.
We see the new features,
what editions are available,
and take a look at some free
Microsoft software.*

- 12** Windows releases
- 13** Windows 10 compatibility
- 14** New features in Windows 10
- 16** Editions of Windows 10
- 18** Microsoft OneDrive
- 20** Windows 10 connectivity
- 22** Microsoft Office Online
- 24** Windows Essentials



The original IBM PC was supported by PC-DOS and MS-DOS operating systems, developed for IBM-compatible PCs.



Windows 10 for PCs and larger tablets comes in four editions:

- Windows 10 Home
- Windows 10 Pro
- Windows 10 Enterprise
- Windows 10 Education

Windows releases

There have been many versions of Microsoft Windows. The operating system was initially designed for IBM-compatible PCs, but was later extended to support larger computers such as servers and workstations. A derivative version, Windows CE, was also developed for smaller devices such as PDAs and cell phones.

The main versions of Windows that have been released include:

Date	Client PC	Server	Mobile
1985	Win 1.0		
1987	Win 2.0		
1990	Win 3.0		
1993		Win NT 3.1	
1995	Win 95		
1996		Win NT 4.0	Win CE 1.0
1998	Win 98		
2000	Win ME	Win 2000	Win CE 3.0, Pocket PC 2000
2001	Win XP		Pocket PC 2002
2003		Win Server 2003	Win Mobile 2003
2006	Win Vista		
2007		Win Home Server	Win Mobile 6
2009	Win 7	Win Server 2008	
2010			Win Phone 7
2012	Win 8	Win Server 2012	Win Phone 8
2015	Win 10		Win 10 Mobile

The first three versions of Windows listed were designed for the 16-bit processor featured in the PCs of the day. Windows 95, 98 and ME added support for 32-bit processors. Windows NT was for 32-bit only while XP and 2000 added 64-bit support. Windows Vista, Windows 7, Windows 8, Windows 10, and the newer server editions, support both 32-bit or 64-bit processors. Each version of Windows builds on the functions and features included in the previous versions, so that the knowledge and experience you have gained will still be valuable, even though the appearance and the specifics of the operations may have changed.

Windows 10 compatibility

With Windows 10, Microsoft has created an operating system designed to be compatible with a range of different devices. To make this possible, Windows 10 has a new feature called “Continuum” that helps the operating system work better with devices that support both a mouse and keyboard, and touch input. For example: Microsoft’s Surface tablet or Lenovo’s Yoga laptops. Continuum offers two operating modes for each type of device:

Tablet Mode

When a device is in Tablet Mode the layout of the operating system is appropriate for touchscreen input. This means that the Start screen has tiles that you can tap to launch apps, the apps appear full-screen, and you can navigate using touch gestures. When you connect a mouse and keyboard, or flip your laptop around, you are prompted to change into Desktop Mode.

Desktop Mode

When a device is in Desktop Mode the layout of the operating system is appropriate for mouse and keyboard input. This means that the Start menu has an A-Z list that you can click to launch apps, the apps appear in windows, and you can navigate using the mouse buttons or keyboard shortcuts. When you disconnect a mouse and keyboard, or flip your laptop around, you are prompted to change into Tablet Mode.

Tablet mode is less demanding of system resources and its introduction in Windows 10 clearly indicates that Microsoft considers mobile devices to be where the future lies.

Windows 10 shares its styling and kernel code with multiple platforms including smartphones, tablets, PCs and even the Xbox games console. This move towards cross-compatibility is one which is intended to establish Microsoft in the mobile market.

A key element in this is the OneDrive app, which we’ll look at later. OneDrive enables users to store all their data and apps online and synchronize that data across all their devices. As a result, they will be able to log into OneDrive on any Windows 10 device and immediately access their data, preference settings, etc. Whatever or whoever’s device they are using, it will be as though they are using their own.



The New icon pictured above indicates a new or enhanced feature introduced with the latest version of Windows. The Continuum feature is new in Windows 10.



OneDrive is the original SkyDrive facility. It was renamed for copyright reasons. Its features and functions remain unchanged.



The customizable Start Menu is a new and welcome feature in Windows 10.



InstantGo is a hardware-dependent feature and Trusted Platform Module support requires TPM1.2.



Cortana is a new feature in Windows 10 and requires you to have a Microsoft account. Performance may vary by region and device.

New features in Windows 10

Each new version of Windows adds new features and facilities. In Windows 10, these include:

Familiar and improved

- **Customizable Start Menu** – a welcome return after the controversial removal of the Start menu in Windows 8.
- **Windows Defender & Windows Firewall** – integral anti-virus defense against malware and spyware.
- **Hiberboot and InstantGo** – fast startup and ready to instantly resume from Sleep mode.
- **Trusted Platform Module (TPM)** – secure device identification, authentication, and encryption.
- **Battery Saver** – limits background activity to make the most out of your battery.
- **Windows Update** – automatically helps keep your device safer and running smoothly.

Cortana Personal Digital Assistant

- **Talk or type naturally** – lets you ask for assistance by typing into a text box or by speaking into a microphone.
- **Personal proactive suggestions** – provides intelligent recommendations based upon your personal information.
- **Reminders** – prompts you according to the time of day, your location, or the person you are in contact with.
- **Search web, device, and Cloud** – find help, apps, files, settings, or anything, anywhere.
- **“Hey Cortana” hands-free activation** – passive voice activation recognizes your voice.

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Windows Hello

- **Native fingerprint recognition** – the ability to log in to the operating system using a fingerprint reader.
- **Native facial and iris recognition** – the ability to log in to the operating system using a camera.
- **Enterprise level security** – the ability to log in to the operating system using a 4-digit PIN code or picture.

Multi-doing

- **Virtual desktops** – multiple desktops to separate related tasks into their own workspaces.
- **Snap assist** – easily position up to four apps on the screen.
- **Snap across** – easily position apps across different monitors.

Continuum

- **Tablet Mode** – an interface appropriate for touch input and navigation using gestures.
- **Desktop Mode** – an interface appropriate for mouse and keyboard input, and navigation clicks and shortcuts.

Microsoft Edge

- **Web browser** – streamlined for compliance with the latest HTML5 web standards.
- **Reading view** – instantly remove formatting distractions from web pages to make reading easier.
- **Built-in ink support** – add Web Notes to existing web pages then save or share the edited page.
- **Cortana integration** – search the device, web, and Cloud to quickly find what you need.



Windows Hello is new in Windows 10. Facial recognition requires a camera that has RGB, infrared, and 3D lenses.



Virtual desktops and Continuum are both new features in Windows 10.



Microsoft Edge is new in Windows 10. It lets you write Web Notes with your finger on touchscreen devices.

Editions of Windows 10

There are four editions of Windows 10 for PCs and tablets of screen size over 8 inches – Home, Pro, Enterprise, and Education.

Windows 10 Home edition is the consumer-focused desktop version that includes a broad range of Universal Windows Apps, such as Photos, Maps, Mail, Calendar, and Groove Music. Windows 10 Pro edition is the desktop version for small businesses, whereas Windows 10 Enterprise edition is the desktop version for large organizations. Windows 10 Education edition builds on the Enterprise edition to meet the needs of schools.

The table below shows the features in Windows 10 and, as you can see, some of the features are specific to certain editions:



Windows 10 also brings Xbox gaming to the PC.

Features	Home	Pro	Enterprise	Education
Customizable Start Menu	Y	Y	Y	Y
Windows Defender & Windows Firewall	Y	Y	Y	Y
Fast start with Hiberboot & InstantGo	Y	Y	Y	Y
TPM support	Y	Y	Y	Y
Battery Saver	Y	Y	Y	Y
Windows Update	Y	Y	Y	Y
Cortana Personal Digital Assistant	Y	Y	Y	Y
Windows Hello login	Y	Y	Y	Y
Virtual desktops	Y	Y	Y	Y
Snap Assist	Y	Y	Y	Y
Continuum Tablet & Desktop Modes	Y	Y	Y	Y
Microsoft Edge	Y	Y	Y	Y
Device Encryption	Y	Y	Y	Y
Domain Join	-	Y	Y	Y
Group Policy Management	-	Y	Y	Y
BitLocker	-	Y	Y	Y
Enterprise Mode Internet Explorer	-	Y	Y	Y
Assigned Access 8.1	-	Y	Y	Y
Remote Desktop	-	Y	Y	Y
Client Hyper-V	-	Y	Y	Y
Direct Access	-	Y	Y	Y
Windows To Go Creator	-	-	Y	Y

cont'd

Features	Home	Pro	Enterprise	Education
AppLocker	-	-	Y	Y
Branch Cache	-	-	Y	Y
Start Screen Control with Group Policy	-	-	Y	Y
Side-loading Line of Business Apps	Y	Y	Y	Y
Mobile Device Management	Y	Y	Y	Y
Join Azure Active Directory	-	Y	Y	Y
Business Store for Windows 10	-	Y	Y	Y
Granular UX Control	-	-	Y	Y
Easy Upgrade Pro to Enterprise	-	Y	Y	-
Easy Upgrade Home to Education	Y	-	-	Y
Microsoft Passport	Y	Y	Y	Y
Enterprise Data Protection	-	Y	Y	Y
Credential Guard	-	-	Y	Y
Device Guard	-	-	Y	Y
Windows Update	Y	Y	Y	Y
Windows Update for Business	-	Y	Y	Y
Current Branch for Business	-	Y	Y	Y
Long Term Servicing Branch	-	-	Y	-

There are two editions of Windows 10 for smartphones and tablets of screen size under 8 inches – Windows 10 Mobile, and Windows 10 Mobile Enterprise.

Windows 10 Mobile edition is designed to deliver the best user experience on smaller touch-centric devices. It provides the same universal Windows Apps that are included in the versions for PC and larger tablets. In addition, Windows 10 Mobile enables some new devices to take advantage of Continuum for Phone – so you can use your phone like a PC when connected to a larger screen. Windows 10 Mobile Enterprise edition is designed for businesses, so has extra security and mobile device management capabilities.

There are also special versions of Windows 10 Enterprise and Windows 10 Mobile Enterprise for industry devices, such as ATMs, retail point of sale, handheld terminals, and robotics, plus Windows 10 IoT Core for smaller devices, such as gateways.



Windows 10 is available in 111 languages!



You need to have a Microsoft account to sign in to OneDrive.



Storage allowances discussed here are correct at the time of printing.



You can log in to access OneDrive with any web browser. Go online to onedrive.live.com

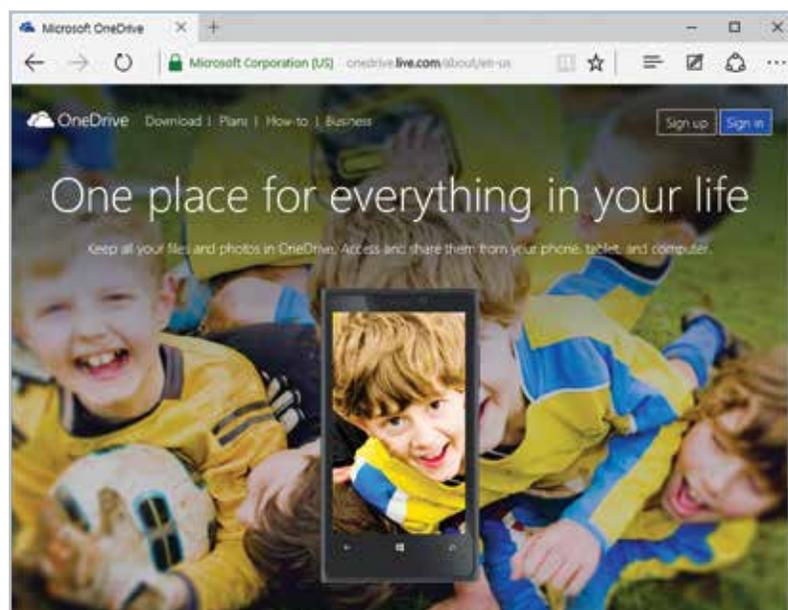
Microsoft OneDrive

A very important function built-in to Windows 10 is its ability to utilize what is commonly known as “The Cloud”. Essentially, cloud computing is a technology that uses the internet and centralized remote servers to maintain data and applications. It allows consumers and businesses to use applications they don’t own, and to access their personal files on any computer that has internet access. The technology enables much more efficient computing by centralizing data storage, processing and bandwidth.

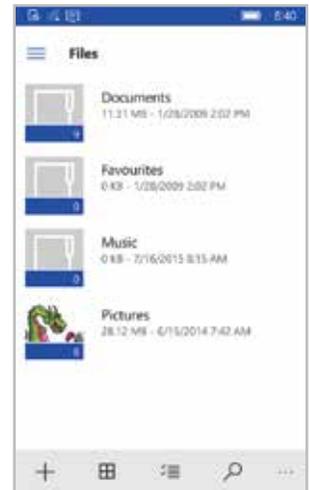
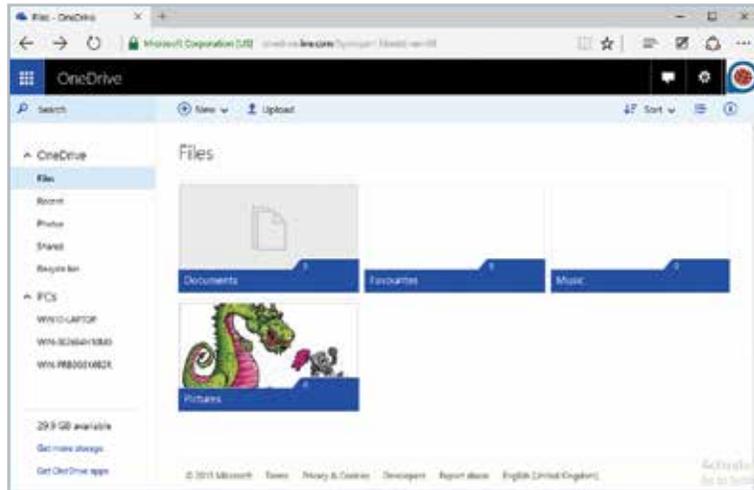
So how do you get into the Cloud? There are actually several ways: One is to open an account with a dedicated service such as DropBox. You will be given a free amount of storage space, typically up to 18GB in which you can store virtually anything you choose to. If you need more, you will be charged a fee depending on the amount required.

A second way is to buy a product from a major software manufacturer. A typical example is True Image from Acronis – a data backup program. Buy this, and you are given 250GB of online storage that enables you to create Cloud-based backups.

A third way is courtesy of Microsoft OneDrive, which can be accessed online. OneDrive is basically a portal that allows you to access 15GB of online storage.



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Once logged in, you will see that OneDrive has started you off with a number of pre-configured folders. Windows 10 is supplied configured to automatically synchronize these folders on OneDrive. You can delete these folders, rename them, create more folders, nest folders within folders, and upload/download files.

Once uploaded, your data can be accessed from any smartphone, tablet, or PC, from anywhere in the world and at any time. You can also access and upload data from within programs in Microsoft's Essentials suite of applications, and Microsoft Office.

One of the coolest features of OneDrive is that it enables online sharing and collaboration. For example, you can share your holiday snaps with friends and family regardless of where they are, while business applications provide access to documents while on the move or sharing documents between offices.

A key aspect of OneDrive is that it enables data to be synchronized across a range of devices. For example, emails on your PC can be automatically loaded onto your smartphone or tablet, and vice versa. You can also synchronize various settings, such as personalization, e.g. desktop background, theme, colors, passwords, app settings, and many more. This enables users to maintain the computing environment they are comfortable in across all their computing devices.

OneDrive on Windows 10 Home (above left) and on Windows 10 Mobile (above).



If you access OneDrive directly from a browser, you will have a "lite" version of Microsoft Office with which to create documents while online.



Miracast is a wireless technology your PC can use to project the screen to a TV that also supports Miracast.



Cortana and the Groove Music app are new features in Windows 10.



You must use the same Microsoft account on your PC, phone, and tablet to automatically synchronize your content across these devices.

Windows 10 connectivity

Windows 10 is terrific at connecting all your devices – whether it's a 3-year-old printer or projecting to your brand new TV with Miracast. Windows 10 is built on a common core and includes Universal Windows Apps so people using Windows 10 for both their PC and smartphone devices will get an optimal, seamless experience as they transition devices throughout the day.

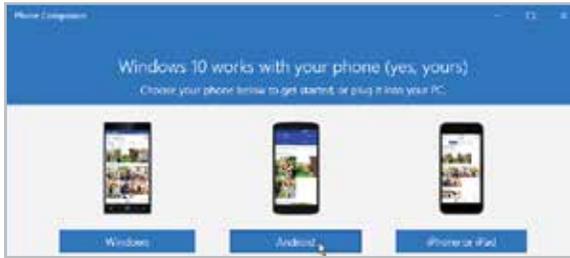
Microsoft recognizes that many people also use iPhone, iPad or Android devices but want to ensure their Windows 10 content remains available to them across all the devices they own, regardless of the operating system. So Microsoft has produced a number of apps for Android, iPad and iPhone devices to make them work great with a Windows 10 PC.

So, whatever the operating system, this means that all your files and content can be magically available on your PC and phone:

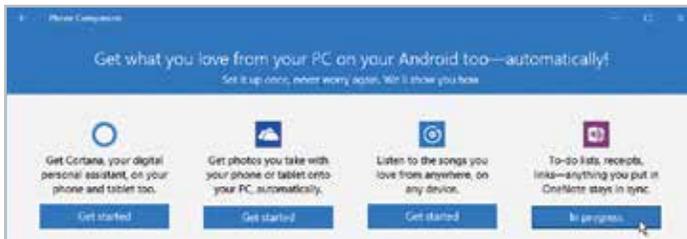
- With the Cortana app on your phone you can have your Personal Digital Assistant always available.
- With the OneDrive app on your phone every photo you take shows up automatically on your phone and Windows 10 PC.
- With the Groove Music app you can access and play your music from OneDrive on your phone or Windows 10 PC.
- With the OneNote app on your phone any note you write on your Windows 10 PC will show up on your phone – and any note you write on your phone will show up on your PC.
- With the Skype app on your phone you can make video calls and messages – free over Wi-Fi.
- With Word, Excel, and PowerPoint apps on your phone you can work on Office documents without moving files around.
- With the Outlook app on your phone you can get your email messages and calendar reminders everywhere.

To help people figure out how to make everything work together Windows 10 includes a Phone Companion app, which will help you connect your Windows 10 PC to your phone or tablet.

...cont'd



- 1 The Phone Companion app begins by asking you to pick which type of device you have – here **Android** is chosen
- 2 Next, the app asks to pick which app you would like to install on the selected device – here **OneNote** is chosen



- 3 Now, you are asked to sign in with a Microsoft account, if not already signed in to the PC with a Microsoft account
- 4 You are then given the opportunity to send an email containing a link to the chosen app
- 5 After opening the email on the chosen device the link will allow you to install the chosen app – here from **Google Play**



With a Windows phone nothing else is needed – the apps are already installed on that device.



The Phone Companion app and support for other operating system connectivity is new in Windows 10.



You can, of course, search for the OneNote app on Google Play but the Phone Companion app makes life simple.



You will need a Microsoft account to sign in to Office Online apps.

Microsoft Office Online

Microsoft Office is a very important application for many people so here we will take a brief look at Microsoft Office Online and see how it fits in with Windows 10.

Office Online includes the core apps: Word, Excel, PowerPoint, Outlook and OneNote for both PC and touchscreen. Your completed documents, spreadsheets, and presentations can be saved online in your OneDrive for easy access or sharing. Alternatively, they can be downloaded to your computer and saved as a local file – just as you would with an installed app.

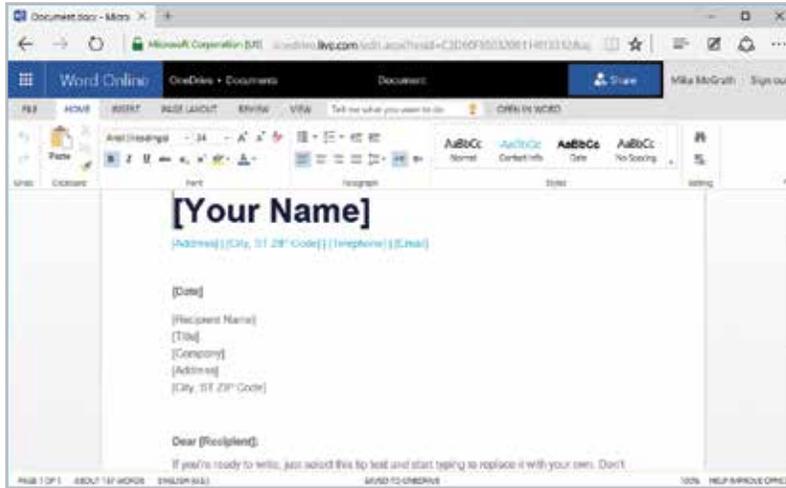
- 1 Open the Microsoft Edge web browser and navigate to office.live.com/start/default.aspx
- 2 Click the **Sign in** button at the top-right of the page then type the email address for your Microsoft account



Other versions of Office can be compared at products.office.com/en-us/compare-microsoft-office-products

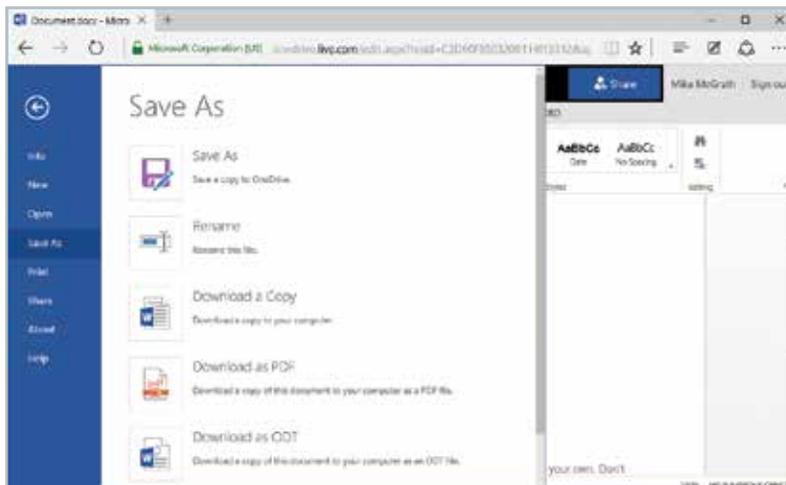
- 3 Choose the online app you wish to use. For example, choose the **Word** app to create a cover letter
- 4 When the Word app opens in the browser, you are presented with a number of ready-made templates. Choose the **Simple cover letter** template

...cont'd



The Start menu in Windows 10 includes a **Get Office** item that makes it easy to start using Office apps.

- 5 Edit the template to suit your requirements by inserting your name and address details, etc.
- 6 When you are happy with the letter, click the **FILE** tab at the top-left of the window
- 7 Now, choose where you would like to save the letter and in what document format



Use the **Rename** option before saving unless you are happy to use the automatically assigned default name.



The latest version is Windows Essentials 2012 (correct at the time of printing).

Windows Essentials

The mention of free Microsoft applications brings us to the Windows Essentials suite. This is a collection of free Microsoft applications that offer email, photo-sharing, blog publishing, security services, and more. Applications in the suite are designed to integrate with each other, with Microsoft Windows operating systems, and also with Microsoft web-based services such as OneDrive and Outlook.com, with the intention of providing a seamless computing experience.

Windows Essentials includes the following applications:

- Mail
- OneDrive
- Movie Maker
- Photo Gallery
- Writer

Windows Essentials is available for free download at windows.microsoft.com/en-us/windows-live/essentials. Further free downloads are available to customize, protect, and enhance your computer. You can get desktop wallpapers and even language packs to see Windows in the language of your choice at windows.microsoft.com/en-us/windows/downloads.

