

What is an operating system? What are the common types of operating systems today?

What is an operating system? How many types are there? What are the functions of each type? Let's learn about Windows and Android operating systems.

Almost everyone has heard of the term 'operating system'. But perhaps not everyone knows what an operating system is or what role it plays on their desktop computer or phone. So, let's explore this together in this article!

What is an operating system?

Operating system, abbreviated as OS, is software installed on computers and mobile devices to manage hardware components such as CPUs, RAM, hard drives, and other software resources. It acts as an intermediary in communication between the user and the device.

Components of the operating system

After understanding what an operating system is, let's explore its components. An operating system comprises many different components and features. However, the three easiest components to identify are: - **Kernel:** Provides basic control over all computer hardware devices. Its main roles include: reading and writing data to memory, processing executed instructions, determining how data is received and sent by devices such as the monitor, keyboard, and mouse, and determining how data received from the network is interpreted.

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- **User Interface:** Allows user interaction through graphical icons and a desktop or through a command line. - **Application Programming Interfaces :** Allows application developers to write modular code.

What is the function of an operating system?

The operating system (OS) is where hardware information is managed, including **memory management**, **CPU management**, **network management**, **device management**, and **file system management**. It provides users with a suitable interface to use software on the computer. The operating system optimizes the computer's operation, including operations and data input. So what is the function of the operating system? It acts as an intermediary connecting the hardware to the user, allowing us to quickly access and operate other resources. It handles conflicts that occur between system programs and other programs used by the user.

Common types of operating systems on phones and computers.

Now that we understand what an operating system is and its useful functions, let's explore the most popular operating systems today:

Computer operating system

Now that you understand what an operating system is, here's a list of popular computer operating systems that you should check out!

What is the Windows operating system?

What is the Windows operating system? Windows has always been the most widely used operating system, first released in 1980 by Microsoft and most recently Windows 10 (released in 2015).

Windows 10 and Windows 7 are the two most widely used versions. Windows 7 focuses on integrating many outstanding features and has a beautiful interface. Currently, Windows 7 has three versions: Ultimate, Professional, and Windows 7 Home, each with different features.

The Windows 10 user interface is optimized and its security features are significantly improved compared to Windows 7.

1. **Advantages:** Popular, easy to use, highly stable, and fully featured to serve both work and entertainment needs.
2. **Disadvantage:** It's not free; you need to purchase a license to use it.

What is the macOS operating system?

Previously known as OS X, macOS was created by Apple and pre-installed on all Apple computers. Compared to Windows, it offers superior speed and smoothness, and users rate it as stable with minimal lag. However, macOS is quite device-specific, with many devices incompatible, resulting in fewer users.

1. **Advantages:** Beautiful interface, pre-installed on computers sold by Apple, and free of charge.
2. **Disadvantage:** Because the number of macOS users is small, many software programs have not yet been released for this operating system.

What is the Linux operating system?

Linux is an open-source operating system; you can modify and do anything with it. Similar to Windows and macOS, Linux is a collection of software including servers, programming languages, database management systems, desktop environments (GNOME and KDE), and office applications (OpenOffice, LibreOffice). Linux is also highly secure, protecting against many threats, malware, and viruses.

1. **Advantages:** Free, highly secure, good flexibility, and runs smoothly even on low-spec computers.
2. **Disadvantages:** Few applications support Linux, and it takes time to get used to Linux if you are previously familiar with other operating systems.

Phone operating system

What is the Android operating system?

Developed by Android Inc. and acquired by Google in 2005, what exactly is the Android operating system? Android is the most widely used mobile operating system in the world (accounting for 87.7% of the market share) in 2017.

In addition, Android is also more versatile and customizable for use on TVs and gaming consoles. Smartphone brands using the Android operating system include: Samsung , Xiaomi , Oppo, Nokia, LG, Huawei, Vsmart, etc.

1. **Advantages:** As an open operating system, and because most smartphones use it, Android has a huge Google Play app store, high customization capabilities, and it's easy to reset the device if you forget your password.
2. **Disadvantage:** Android's security is quite high, but it's not as good as iOS.

What is the iOS operating system?

iOS is software launched in 2007, specifically designed for Apple's smart devices such as iPhones , iPads , iPods, and Macbooks. iOS has revolutionized software technology, and today the number of devices using the iOS operating system is second only to Android, dominating nearly half of the market.

1. **Advantages:** High security, good software optimization, stable performance without requiring as much hardware configuration as Android.
2. **Disadvantages:** Exclusive to iPhones and cannot be used on other phones, the app store is relatively smaller compared to Android.

In conclusion, what is an operating system?

So, the Windows tips above have helped you understand more about **what an operating system is** and what functions it has on our phones and computers. Hopefully, this information is useful to you!

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