

What's an Operating System?

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Video: Module Introduction
2 min
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Video: Components of an Operating System
5 min
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Reading: Supplemental Reading for Chrome OS
10 min
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Video: Files and File Systems
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Reading: Supplemental Reading for ReFS File System
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Video: Process Management
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Video: Memory Management and Virtual Memory
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Video: I/O Management
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Video: Interacting with the OS: User Space
2 min
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Video: Logs
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Video: The Boot Process
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Reading: Boot Methods
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Reading: Boot Methods Best Practices
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Video: Mobile Operating Systems
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Video: Cindy: Drive and career path
1 min
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Practice Quiz: What is an Operating System?
5 questions

Installing an Operating System

Graded Assessments

Boot Methods

While the most common way to boot a computer is to simply push the power button and allow the normal process to run, there are many other boot options. This reading covers the various methods you can use to boot a computer.

Internal method

You can create partitions on the computer’s drive so that only one part of the drive runs the boot process. A common reason to partition your drive is to have two separate operating systems on your computer, such as both Windows and Linux. When you have two operating systems on your drive, you must choose which one will run the boot process. Having two possible systems to boot into is called dual booting.

While having two operating systems can be helpful for various reasons, it is especially helpful when one system is failing or unable to boot. If this happens, you can still boot the computer using the other system and troubleshoot from there.

External tools

External tools can be used to boot the computer. You can load the needed resources on an external tool to boot a system before any problems happen.

External bootable devices include:

- **USB drive:** You use a USB drive loaded with resources needed to boot the computer. This drive is inserted into a USB port and chosen at startup.
- **Optical Media:** You use a disk loaded with booting resources. This disk can be a DVD, CD, or Blu-ray disk and is loaded through the computer's optical drive.
- **Solid State Boot Drive:** You use a solid state drive to boot. Solid state drives do not use spinning discs or moving parts. This solid state drive can be installed in your computer or can be a smaller device such as a flash drive.
- **External hot-swappable drive:** You boot from an external hard drive that can be moved between computers without turning it off.
- **Network boot:** You boot the operating system directly from a local area network (LAN) without using a storage device. Your computer must be connected to a LAN for this option.
- **Internet-based boot:** You boot the computer from an internet source, as long as it is a secure source. Your computer must be connected to the internet for this option.

Window OS or Linux OS

In order to boot either Windows OS or Linux OS with an external tool, you’ll need to enter BIOS at startup by pressing F2/F12/Del keys. From there you can change the boot order so that the first option is the external tool you want to use.

macOS

If booting macOS, press and hold the Option key at startup. This will open up the Startup Manager, which will scan your computer and identify bootable devices. Then you can choose the bootable device you want to use.

Key Takeaways

There are multiple ways to boot a computer.

- A computer can be partitioned into different operating systems and you can select which OS to use when booting.
- You can boot from an external tool. External tools include USB drives, optical media, solid state boot drives, external hot-swappable drives, network booting, and internet-based booting.
- Choosing a boot method on startup varies depending on which operating system you use.

Mark as completed