



Linux and the Operating System

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Kernel vs. Operating System and Tools

Kernel

- The word **Linux** is often sloppily applied to the entire operating system and environment on computers which are equipped with a complete Linux distribution; but in fact, there are quite a few components which are necessary in order to have a fully functional platform
- Narrowly defined, Linux is only the **kernel** of the operating system (OS)
 - The kernel is the central component that connects the hardware to the software, and manages the system's resources, such as memory, CPU time sharing among competing applications and services
 - It handles all the devices that are connected to the computer by including so-called device drivers, and makes them available for the operating system to use
- A system running only a kernel has limited functionality, and the only place you will see that is in a dedicated device (often termed an **embedded device**) such as inside an **appliance**