**Operating systems. Linux**

An operating system is the core set of software on a device that keeps everything together. Operating systems communicate with the device’s hardware. They handle everything from your keyboard and mice to the Wi-Fi radio, storage devices, and display. In other words, an operating system handles input and output devices. Operating systems use device drivers written by hardware creators to communicate with their devices.

The operating system sits in between the applications you run and the hardware, using the hardware drivers as the interface between the two. For example, when an application wants to print something, it hands that task off to the operating system. The operating system sends the instructions to the printer, using the printer’s drivers to send the correct signals. The application that’s printing doesn’t have to care about what printer you have or understand how it works. The OS handles the details.

Linux® is an open source operating system (OS). An operating system is the software that directly manages a system’s hardware and resources, like CPU, memory, and storage. The OS sits between applications and hardware and makes the connections between all of your software and the physical resources that do the work. Think about an OS like a car engine. An engine can run on its own, but it becomes a functional car when it’s connected with a transmission, axles, and wheels. Without the engine running properly, the rest of the car won’t work.

What does Linux OS include?

### Kernel - the base component of the OS. Without it, the OS doesn’t work. The kernel manages the system’s resources and communicates with the hardware. It’s responsible for memory, process, and file management.

* **System user space** - the administrative layer for system level tasks like configuration and software install. This includes the shell, or command line, daemons, processes that run in the background, and the desktop environment, the interface the users interacts with.
* **Apps** - a type of software that lets you perform a task. Apps include everything from desktop tools and programming languages to multiuser business suites. Most Linux distributions offer a central database to search for and download additional apps.