

Linux File System

Introduction of File System

In terms of computer operating system, all the data are organized into file. All the files are organized into directories are organized into tree structure called the 'File System'.

In Linux, everything is configured as a file. This includes not only text files, images and compiled programs, but also directories, partitions and hardware device drivers.

Linux supports numerous file systems, Microsoft NTFS, VFAT, and many other file systems. Every item stored in a Linux file system belongs to one of four types.

Ordinary Files

An ordinary file is a file on the system that contains data, text or program instructions. (Unlike other operating systems, Linux filenames are not broken into a name part and an extension part (although extensions are still frequently used as a means to classify files). Instead they can contain any keyboard character except for '/' and be up to 256 characters long.

Special File

Some special files provide access to hardware such as hard drives, CD-drives, modems.

Directories

Directories are containers or folders that hold files and other directories. For users, it is similar with Windows OS, Mac OS (Unix directories are equivalent to folders.)

Devices

They provide applications with easy access to hardware devices. Linux allows them to be used in much the same way as ordinary files. There are two types of devices in Linux: block-oriented devices which transfer data in blocks and character-oriented devices that transfer data on a byte-by-byte basis.

Links

A link is a pointer to another file. There are two types of link - a hard link to a file is indistinguishable from the file itself. A soft link provides an indirect pointer or shortcut to a file. A soft link is implemented as a directory file entry containing a pathname.