The Linux FS

Presentation

Article

File System Navigation Commands

1. pwd - Print Working Directory

- **Description** The pwd command displays the full path of the current directory you are in.
- **Usage/Formula**

```
pwd
```

- **Examples**

```
* $ pwd
    /home/user/Documents

* $ pwd
    /usr/local/bin

* $ pwd
    /var/log
```

2. cd - Change Directory

- **Description** The `cd` command is used to change the current working directory to another specified directory.
- **Usage/Formula**

```
cd [directory]
```

- **Examples**

```
* $ cd /home/user/Documents
    (This changes the current directory to /home/user/Documents)

* $ cd ..
    (The .. represents the parent directory. This command moves the
user one level up in the directory structure)
```

```
  * $ cd ~
      (The ~ symbol represents the user's home directory. This command
changes the directory to the home directory of the current user.)
```

3. ls - List Directory Contents

- **Description** Description: The `ls` command lists all files and directories in the current directory or a specified directory.
- **Usage/Formula**

```
  ls [options] [directory]
```

- **Examples**

```
  * $ ls
      (This command lists the contents of the current directory:
file1.txt, file2.txt, and directory1.)

  * $ ls -l
      (The -l option provides detailed information about each file and
directory, such as permissions, owner, size, and modification time.)

  *   $ ls -a
      (The -a option lists all files in the directory, including
hidden files (those starting with a dot .))
```

Definitions

File system

- A **file system** is the method and structure used by an operating system (OS) to store, organize, and manage files and directories on storage devices.

Pathname

- A **pathname** refers to the complete address or location of a file or directory in the file system. It specifies how to traverse the file system to reach a specific file or directory.

Absolute path

- An **absolute path** is the full path to a file or directory, starting from the root directory (`/`). It provides the complete address to a file or directory without depending on the current directory.

Relative path

- A **relative path** is the path to a file or directory relative to the current working directory. It does not begin from the root directory, but instead from the directory you're currently in.

The difference between your home directory and the home directory

- **Home directory**: The home directory is a directory on the file system where user data and configuration files are stored. It is typically represented as `/home/username` on Linux systems. Each user has their own home directory.
- **Your home directory**: Refers specifically to the directory assigned to the current user. It can be accessed by the `~` symbol.

Parent directory

- The **parent directory** is the directory that contains the current directory. It is represented by `..`. Moving to the parent directory means moving one level up in the file system hierarchy.

Child directory or subdirectory

- A **child directory** (or **subdirectory**) is a directory that resides inside another directory (its parent directory). It is a directory located one level down in the hierarchy from the parent.

Bash special characters

- **Bash special characters** are symbols with specific meanings or uses in shell commands. These characters often control the behavior of the shell or the interpretation of command arguments.

Environment variables

- **Environment variables** are variables defined by the operating system or the shell that store configuration information about the system environment. They are available to any process running in that environment.

User-defined variables

- **User-defined variables** are variables created by the user in the shell, typically for storing values that can be referenced within a script or during a session.