WHAT IS LINUX

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.

The Linux kernel is the main component of the OS and is the core interface between a computer’s hardware and its processes. It communicates between the 2, managing resources as efficiently as possible.

Linux distributions do the hard work for you, taking all the code from the open-source projects and compiling it for you, combining it into a single operating system you can boot up and install. They also make choices for you, such as choosing the default desktop environment, browser, and other software.

USERS

This is the main user account in Linux system. It is automatically created during the installation. It has the highest privilege in system. It can do any administrative work and can access any service. This account is intended for system administration and should be used only for this purpose. It should not be used for routine activities. It can’t be deleted. But if require, it can be disabled.

This is the normal user account. During the installation, one regular user account is created automatically. After the installation, we can create as many regular user accounts as we need. This account has moderate privilege. This account is intended for routine works. It can perform only the tasks for which it is allowed and can access only those files and services for which it is authorized. As per requirement, it can be disabled or deleted.

GROUPS

User — A user has an account must belong to one primary group. Typically the the user’s primary group is also named after the user account name.

Primary Group — The primary group is created at the same time the user account is created and the user is automatically added to it. File created by the user automatically belongs to the user group.

Secondary Group — This group is not required and only there to give users access to other resources they’re don’t already have access to. Users can belong to none or as many secondary groups are possible.

By default, a new user is only in their own group which adduser creates along with the user profile. A user and its own group share the same name. In order to add the user to a new group, we can use the usermod command:

The -aG option here tells usermod to add the user to the listed groups.

FILE STRUCTURE

​​Ubuntu (like all UNIX-like systems) organizes files in a hierarchical tree, where relationships are thought of in teams of children and parent. Directories can contain other directories as well as regular files, which are the "leaves" of the tree. Any element of the tree can be referenced by a path name; an absolute path name starts with the character / (identifying the root directory, which contains all other directories and files), then every child directory that must be traversed to reach the element is listed, each separated by a / sign.

A relative path name is one that doesn't start with /; in that case, the directory tree is traversed starting from a given point, which changes depending on context, called the current directory. In every directory, there are two special directories called . and .., which refer respectively to the directory itself, and to its parent directory.

FilePermissions are another important part of the files organization system: they are superimposed to the directory structure and assign permissions to each element of the tree, ultimately decided by whom it can be accessed and how.

FIREWALL

The default firewall configuration tool for Ubuntu is ufw. By default UFW is disabled.

SOFTWARE UPDATES

apt-get is a command-line tool which helps in handling packages in Linux. Its main task is to retrieve the information and packages from the authenticated sources for installation, upgrade and removal of packages along with their dependencies.

apt-get update updates the list of available packages and their versions, but it does not install or upgrade any packages. apt-get upgrade actually installs newer versions of the packages you have. After updating the lists, the package manager knows about available updates for the software you have installed.

If you use the desktop version of Ubuntu, then the Software Updater is a more straightforward choice. Instead of typing commands, you can interact with the graphical user interface (GUI) by using your mouse to update your system, as you usually do on Windows or macOS. From the menu of Ubuntu, search for "Software Updater". Then click on the application icon to run it.

Whenever you install an application by using apt-get, the Ubuntu system will also install the packages that the application depends on. When you remove the application, the packages will stay on your Ubuntu system.

Answer: groups john

Answer: find ~/ -type f -name "passwordlist.txt" -> ls -l passwordlist.txt

Using . will only search the current directory. ~/ will search your entire home directory (likely where you downloaded it to). If you used wget as root, its possible it could be somewhere else so you could use / to search the whole filesystem.