Understanding the /etc/shadow file in Linux

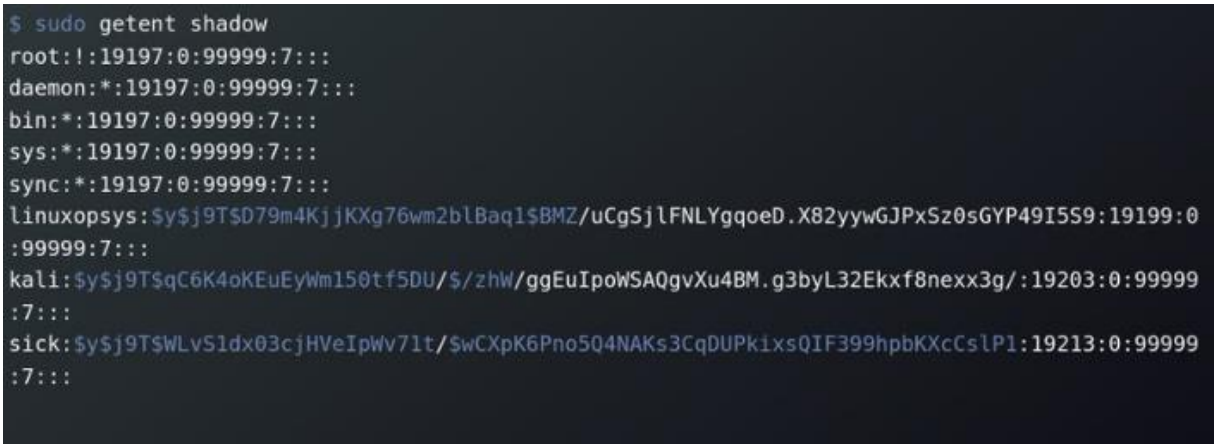
As a Linux super user understanding the /etc/shadow file is very crucial for managing Linux users.

/etc/shadow is a plain text file that stores information about the passwords of the system's users. It has 640 permissions and is owned by user root and group shadow.

This file is only readable by the root user, so you must be root or have root privileges to view its contents.

Any file viewer on Linux can be used to view the contents of this file, such as cat, more, less, etc. Alternatively, you can use the "sudo getent shadow" command.

Here is an example of what the contents of the /etc/shadow file looks like:



Each line in the /etc/shadow file represents a different user account. The root user is generally described on the first line, followed by the system accounts and normal user accounts.

Any new entry is always append at the end of the file.

1. **Username or Login name**

The first field stores a username or unique login name. The login process compares the value stored in this field with the value we entered into the Username field at the login prompt.

2. **Encrypted Password**

The second field contains the encrypted password in the $type$salt$hashed format. The method cryptographic hash algorithm is represented by $type, which can take the following values:

- 1 – MD5
- $2a$ – Blowfish
- $2y$ – Eksblowfish
- 5 – SHA-256
- 6 – SHA-512

If the password field contains an asterisk (*) or an exclamation point (!), the user will be unable to log in using password authentication.

3. **Last password change**

The third field stores the last time the password was changed, which is represented as the number of days since January 1, 1970.

4. **Minimum password age**

This field stores the minimum number of days before the password can be changed. It is usually set to zero, indicating that there is no minimum password age.

5. **Maximum password age**

The number of days before the password must be changed. By default, this number is set to `99999`

6. **Warning period**

The number of days before password expiration that the user is warned to change the password.

7. **Inactivity period**

The number of days after a password expires before the account will be disabled.

8. **Expiration date**

The date (stored as the number of days since January 1, 1970) since the user account was disabled

9. **Unused**

This field is reserved for future use.