**ASSIGNMENT - 01**

**Q1. Change the Umask value for any user permanently.**

Umask is a command that determines the settings of a mask that controls which file permissions are set for files and directories when they are created.

When a user creates a file or a directory under Linux, there is a set of default permission which is applied on those files and directory. These pre-defined premissions are assigned as per the value of default umask.

Umask values can be changed temporary or permanently. Temporary change will apply only in current shell session. Once user is logged out, umask values will be restored to original values. Permanent change is done in configuration files, it does not affect from system reboot.

**Changing umask values permanently**

Linux is a multiuser network operating system where same Shell is being accessed by several users. To provide a customized version of same Shell to everyone (user, script or process), a layer is inserted between actual shell and end user. In this layer several configuration files are used to create a user specific environment. Permanent umask setting is also configured in this layer. Based on requirement, umas change the Umask value for any user permanently.k setting can be configured in multiple levels. In order to configure umask setting correctly, we have to understand how shell is being accessed. A shell can be accessed in two ways; login and non-login.

You can change your default umask value by making changes to the below files:  
#vi/etc/profile  
#By default, we want umask to get set. This sets it for login shell  
#Current threshold for system reserved uid/gids is 200  
#You could check uidgid reservation validity in  
# /usr/share/doc/setup-\*/uidgid file  
if [ $UID -gt 199 ] && [ "`id -gn`" = "`id -un`" ]; then  
    umask 022  
else  
    umask 022  
As you can see default umask value for all uid/gid less than/greater than 200 is having 0022. In case you want to change the same, change both the values as shown below  
if [ $UID -gt 199 ] && [ "`id -gn`" = "`id -un`" ]; then  
    umask 077  
else  
    umask 077  
Save and Exit the file

You can also set the command inside your ~/.bash\_profile or ~/.bashrc file so that everytime your machine boots or you open a new terminal the new umask value is updated.

**Q2. Add a new user without using adduser & useradd command.**

Follow these steps to create a user without using useradd command in Red Hat Linux.  
  
**Step 1**  
Add an entry of user details in /etc/passwd  
The field details are as shown below

username:password:UID:GID:Comments:Home\_Directory:Login Shell  
# vi /etc/passwd  
user:x:501:501:test user:/home/user:/bin/bash

**Step 2**  
You will have to create a group with same name. So add a new entry in /etc/group  
# vi /etc/group  
user:x:501:

**Step 3**  
Assign a password to the user  
# passwd user  
Changing password for user user.  
New password:  
Retype new password:  
passwd: all authentication tokens updated successfully.  
Now let us try to login with our newly created user  
# su - user  
-bash-4.1$  
You should see [user@test ~]$ instead of -bash-4.1$ prompt.   
Let us check the contents of its home directory  
-bash-4.1$ ls -al  
drwxr-xr-x 2 root root 4096 Jan 12 14:27 .  
drwxr-xr-x. 3 root root 4096 Jan 12 14:27 ..  
So, as you see none of the default contents of a normal user home directory is present like .bashrc, .bash\_profile etc.  
  
**Final Step 4**  
/etc/skel directory contains all the defaults files which are present inside the home folder of any user  
So, copy the contents from /etc/skel inside /home/user using the below command  
[root@test ~]# cp -v /etc/skel/.\* /home/user/  
cp: omitting directory `/etc/skel/.'  
cp: omitting directory `/etc/skel/..'  
`/etc/skel/.bash\_logout' -> `/home/user/.bash\_logout'  
`/etc/skel/.bash\_profile' -> `/home/user/.bash\_profile'  
`/etc/skel/.bashrc' -> `/home/user/.bashrc'  
`/etc/skel/.emacs' -> `/home/user/.emacs'  
cp: omitting directory `/etc/skel/.gnome2'  
cp: omitting directory `/etc/skel/.mozilla'  
Now re login to the user  
[root@test user]# su - user  
[user@test ~]$  
And you are good to go.

**Q3. Can we change the Umask value to 0888. If yes, then how. If no then why ?**

**Q4. How to add a new user with a Unique user id (e.g 1345) & check out the unique Id of that user.**

* A User ID is a unique identifier for each user that cannot change and is optional. We strongly suggest setting a User ID once the user has created an account, logged in, or is otherwise identified in your product.
* A user can only have one User ID and if it is changed, then Amplitude will treat that new User ID as a different user. It is fine to not set a User ID -- you should not set a User ID for anonymous users
* If you do not have a system of assigning User IDs (either client or server-side) then skip this section

Products that have some kind of login system can track users even if they switch devices. Though assigning User IDs is optional, we recommend that products with a login system or a UUID (unique user identifier) system assign a User ID.

With a User ID, Amplitude can match events across multiple devices under the same user (same User ID). Furthermore, a User ID does not need to be assigned immediately. A user's event data will be merged on the backend so that all anonymous events up to the point of User ID assignment will be connected to the assigned User ID (assuming the Device ID is consistent).

Important Recommendations on Setting User IDs

* Do not set User ID if there isn't one
* Do not assign a User ID that might change.
* Assigning User IDs properly can be tricky if you have a system that does it server-side.

**Q5. How to change the group of any folder?**

Use the following procedure to change the group of any file.

1. Become superuser or assume an equivalent role.
2. Change the group owner of a file by using the chgrp command.

|  |
| --- |
| $ **chgrp** group filename |

|  |  |
| --- | --- |
| group | Specifies the group name or GID of the new group of the file or directory. |
| filename | Specifies the file or directory. |

1. For information on setting up groups, see [“Managing User Accounts and Groups (Overview)” in System Administration Guide: Basic Administration](https://docs.oracle.com/docs/cd/E19683-01/817-1658/index.html).
2. Verify that the group owner of the file has changed.

|  |
| --- |
| $ **ls -l** filename |

**Q6. Try to change the group of the folder & the files present in the same folder using a single command.**

1. Use chmod -R 755 /opt/lampp/htdocs if you want to change permissions of all files and directories at once.
2. Use find /opt/lampp/htdocs -type d -exec chmod 755 {} \; if the number of files you are using is very large. ...
3. Use chmod 755 $(find /path/to/base/dir -type d) otherwise.
4. Better to use the first one in any situation.