

**Assignment Name: Introduction to Linux Administration**

**Duration : 2 weeks (Starting from July 6th , 2021)**

**Operation system: Ubuntu**

**Note:- Completed assignments should be submitted via <http://school.wso2.com>. Assignment answer file must be named as **Introduction\_to\_Linux\_Administration.pdf****

There is a company called “ABC” , ABC is going to form 2 devops teams , currently there are 6 devops in the company and divided them among the teams as below.

A->user1,user2,user3

B->user4,user5,user6

CTO-> user7

For Devops activities a new server is purchased and all agree to name it as “**prod-devops-master**”. So now we need to configure the server to achieve below requirements. So you need to provide all the steps required to achieve the below requirements considering **least** privileges principles.

Ultimately someone else should be able to configure the server as per company requirements by referring to your answers as a **GUIDE**.

1. Set the VM name as “prod-devops-master” and set timezone as “Asia/Colombo”
2. Add Linux users range from user1 to user7
3. Create 2 Linux user groups called grpA and grpB, add the above created users to Linux groups as below
  - a. grpA -> user1,user2,user3
  - b. grpB-> user4,user5,user6
4. Create a new disk partition using a loopback device and format it with XFS filesystem type. Mount it under /mnt and make sure to automount the partition during a reboot.

5. Create 3 folders inside /mnt as below
  - a. /mnt/share-grpA
  - b. /mnt/share-grpB
  - c. /mnt/share-common
  
6. Now configure the folder permissions to achieve below company requirements.
  - a. /mnt/share-grpA -> user1 is the owner . All members in grpA as well as the owner should be able to view files inside the folder and modify or create new files.
  - b. /mnt/share-grpB -> user4 is the owner . All members in grpB as well as the owner should be able to view files inside the folder and modify or create new files
  - c. /mnt/share-common -> user1 is the owner . All members in grpA and grpB should be able to view and create new files inside the folder. But they **should not be able to delete another user's file**. Anyone else should not be able to view,create or delete files inside this folder.
  
7. There is another requirement from higher management to allow CTO to **only view** the files inside the shared folder. Also he should not be added to either grpA or grpB linux groups. And still Anyone else other than the CTO / grpA /grpB should not be able to access files inside this folder.
  
8. Now in the devops server , we need to install the git command for cloning Github repositories.
  
9. The security team has been instructed to encrypt the /mnt partition as it contains sensitive data using the **cryptsetup** tool . Also to auto mount the /mnt partition on reboot.(hint - /etc/crypttab)
  
10. Finally , we need to monitor the shared folder to find and remove files older than 90 days using bash script. This script must be scheduled to run every day.