CIT 371 Lab 14: Creating User and Group Accounts

Parts of this lab must be done using the Web Console. See the Student VM Access document for more information on accessing your VMs.

For the rest of the semester, once you have logged in to Coivcenter, select your CentOS 7 VM (VM2) and log in using your user account that you created in the installation lab. Open a terminal window and su to root. You will remain as root for the entire lab except for step 4e.

1. Creating users and groups. Here, you will use the User Manager GUI, useradd and groupadd.
   1. You might recall creating users in CIT 130. In that class, we used a GUI called the User Manager. By default, this software is not included in CentOS 7. Type which system-config-user and you will see it does not exist. Type **yum –y install system-config-users** to install it. This will take a few moments. Type **system-config-users &** to launch the process. The User Manager window opens. Select **Add User** and create the user **zappaf** with full name of **Frank Zappa**, leave the password blank and leave everything else as the default. Select **Ok**. You will be warned that there the password is too weak, **create the account anyway**. Select **Add Group** and create the group musicians. Select the **Groups** tab to see the groups. *Why are there three groups but only two users?* Close the User Manager window, we will use the command line to create other users and groups.

**There are three groups due to the two users we created which have their own group and then the musicians group. There is two users which is my account and then the zappaf account. Each member of a user has to be assigned to a group or it will make one for it.**

* 1. Type **useradd**. You are shown the instruction options. It requires at least new user’s username. We will commonly use –m to create a home directory. *Under what circumstance might you not want to create a home directory for a user?* Other useful useradd options are –c, -d, -e, -G, -p, and –s. *What do each of these options do?* *Under what circumstance(s) might you want to use the option –M? Under what circumstnace(s) might you want to use the option –u? Under what circumstance(s) might you want to use the options –u –o?*

**In some situations a home directory is not needed in cases of the user only having read access to everything. -c is a comment which will allow a GECOS field of the new account. -d is a home-directory which will be the home directory for the user created. -e is an expire date which will set an expiration date on the account. -G is groups and list of supplementary groups of the new account. -p is password, which will have an encrypted password for the new account. Lastly -s is a shell and will login shell into the new account. In some cases, the -M option will not create a home directory, and this can be used when creating a temporary account for someone. In some cases, the -u will allow you to create the user ID of the new account and you could use this when wanting to specify a users ID to be distinct from other accounts if need be. Using the -u -o options together will allow you to create non-unique user IDs, so in this case you could create duplicate accounts with the same user IDs.**

* 1. Use useradd and **create the user dukeg** (name **George Duke**), give him a home directory but leave all other options as the default. *What command did you enter?*

**Useradd -m -c “George Duke” dukeg**

* 1. To create a group, use groupadd. Type **groupadd** to see the options. This is a much simpler command. Create the group **cit371**, leaving all options as the default. *What command did you enter?* Use groupadd to create two groups: **students** and **minjas**. *What commands did you enter?* Create the group **dummies** and give the group the GID of 2000. *What command did you enter?*

**Groupadd cit371. Groupadd students. Groupadd minjas. Groupadd -g2000 dummies**

* 1. Add the following users giving them the non-default information as specified. *For each, place the instruction that you used into your answer file.*
     + - 1. Ruth Underwood (underwoodr), added to the group cit371

**Useradd -m -c “Ruth Underwood” -G cit371 underwoodr**

* + - * 1. Suzie Creamcheese (creamcheeses), default login shell /bin/tcsh

**Useradd –m –c “Suzie Creamcheese” –s /bin/tcsh creamcheeses**

* + - * 1. Eric Cartman (cartmane), groups of cit371 and students, UID of 1501

**Useradd –m –c “Eric Cartman” –G cit371,students –u 1501 cartmane**

* + - * 1. CIT 371 Student (cit371), no directory. *What error did this give you?* To fix the problem, create the account with no private group. *What command did you enter?*

**This gave me an error message about the group being named the same as the user account. To fix this I used useradd -M -c “cit371” CIT371 Student.**

1. None of our users have been given an initial password. As root, we can assign a password using the password command. The syntax is **password *username***. As root, we do not have to provide the current password, just the new one. **Give the users initial passwords** as follows. *For each one, report what error message you received, if any.*
   * + - 1. zappaf: gail

**bad password, the password is shorter than 8 characters**

* + - * 1. dukeg: abcd1234!

**Bad password, the password failed the dictionary check – it is too simplistic/systematic.**

* + - * 1. underwoodr: xylophone

**Bad password, the password failed the dictionary check – it is based on a dictionary word**

* + - * 1. cartmane: a!xx$#y1Zz

**N/A, no error**

* + - * 1. cit371: student

**bad password, the password is shorter than 8 characters**

1. Change directory to /root, create a subdirectory called scripts and cd into it. From there, write the shell script from chapter 9, page 360, to automatically generate user accounts. Add the following instructions before the done statement to automatically generate passwords for each new user.

**password=`tr -cd'[:alpha:]' </dev/urandom | head -c8`**

**echo $password | passwd --stdin $username**

**echo $username $password >> password\_file.txt**

These three instructions create a password, set the new user to have this password, and add the username and new password to a file so that the administrator can alert the new user of the password. Next, use wget to download this file: **www.nku.edu/~foxr/CIT371/accounts1.txt**. Place this file in the same directory as the script you wrote. Make sure your script is executable. Run the script on the file (if you call the script generate then it would be **./generate < accounts1.txt**). If you have errors, fix them and try again. When done, type **tail –n16** **/etc/passwd** to capture the last 16 accounts created and *add this to your answer file*.

Text

Description automatically generated

1. usermod allows you to modify an existing user with options much like useradd.
   1. Use a usermod instruction to add yourself to the group cit371. Use two usermod instructions to add hughesj1 and hughesj2 to the dummies group. *What three commands did you enter?* 
      * + 1. **Usermod -a -G cit371 alstottk**
          2. **Useradd -G dummies hughesj1**
          3. **Useradd -G dummies hughesj2**
   2. The –e option allows you to add or modify an expiration date for a user’s account. After –e, you supply the expiration date in the form YYYY-MM-DD (e.g., 2018-12-31). Change jonesb1 expiration date to January 31, 2019. *What command did you enter?* You can confirm that this worked correctly by running the User Manager (refer back to step 1a) and inspecting the properties for jonesb1. Do so. *Explain exactly how you located this information and what it says.* Close the properties window and the User Manager. Type **chage –l jonesb1***. What is the response and what does it say for Account expires?* 
      * + 1. **Usermod -e 2019-01-31 jonesb1. Running the user manager from step 1a we can locate the jonesb1 and the information that it says was when it was expired which was January 31, 2019. When we do chage -l jonesb1 the response is the day that we set for account expires which is January 31, 2019.**
2. userdel allows you to delete users. There are very few options, unlike useradd and usermod. Use userdel’s man page to explore them. By default, the user’s home directory is retained.
   1. Enter the appropriate command to delete smithm2. *What command did you enter?*
      * + 1. **Userdel smithm2**
   2. Enter the appropriate command to delete hughesj3 but deleting the user’s directory. *What command did you enter? Why might you want to retain a user’s directory even though you have deleted their account?*
      * + 1. **Userdel -r hughesj2. You might want to retain the users directory so you can look into files and or do what’s need as the root user, even though the account is deleted.**

NOTE: Some administrators prefer to leave the user’s account in the /etc/passwd file but disable the account (expire it) and delete the user’s directory to free up space. The rationale is that if a future user has a similar name, this would force the system administrator to use a different user name and thus prevent the two users from having the same email address.

Shut down your VM if desired, disconnect from the VPN if you are using it, and submit your lab report.