**Technical Operations (TechOps)**

OS Admin

Linux Narrative Exercises

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# User Management Exercises

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| **Perform the following tasks** |
| 1. (Your instructor will explain how to RDP to a remote Windows system. Once there you can PuTTy to a Linux machine using the same IP address as the Windows system plus 1.) 2. Log in the Linux machine as user “instructor”. Run the command “sudo -i” in order to run the series of administrative commands you need to perform the exercises. 3. Check /etc/passwd for any entries associated with ‘cynthia’ or ‘geoff’. There should not be any.   grep ‘geoff’ /etc/passwd  grep ‘cynthia’ /etc/passwd  If, in fact you do find either the ‘geoff’ or ‘cynthia’ accounts already exist, please run the following commands  userdel –r geoff  userdel –r cynthia  groupdel geoff  groupdel cynthia     1. Create two or more user accounts, cynthia and geoff   Leave all user attributes to default except for the comment, which should be:- “user for test purposes”  useradd –c “user for test purposes” cynthia  useradd –c “user for test purposes” geoff   1. Check /etc/passwd for the new user accounts. In which field is the comment?   grep ‘geoff’ /etc/passwd  grep ‘cynthia’ /etc/passwd  field 5   1. Check /etc/group. Are there two new groups present? What is their group IDs?   tail -2 /etc/group  Two new groups, geoff & Cynthia, 1009 & 1010 resp  (your values may vary slightly)   1. In which field are the respective groups ids present in cynthia and geoff’s passwd file entries?   field 4   1. What does this field specify for the user account in question?   It specifies which group is the user’s primary group. |
| 1. Add a new group called “cluster” (Use defaults)   groupadd cluster   1. Check /etc/group for the new entry. What is the new group ID?   grep cluster /etc/group  10001   1. Leaving the private primary groups alone for Cynthia and Geoff, modify ‘cluster’ to include geoff & cynthia as group members.   either  usermod –G cluster Cynthia  usermod –G cluster Geoff  or  gpasswd –M Cynthia,Geoff cluster   1. Check /etc/group for changes.   grep cluster /etc/group |
| 1. Check the entries for ‘cynthia’ & ‘geoff’ in /etc/shadow. The second field contains the user’s encrypted password. At present no passwords are set for the new users.   grep ‘geoff’ /etc/shadow  grep ‘cynthia’ /etc/shadow  :!!: in field 2   1. Set passwords for ‘geoff’ & ‘cynthia’.   passwd geoff … [interaction]  passwd cynthia … [interaction]   1. Check /etc/shadow. What is the length of the password encryption?   98 characters   1. Check /etc/login.defs for the password hashing algorithm. Which is it?   sha512 |
| 1. Using a fresh putty instance, login as geoff. (This session is used just for the step).   Using the touch command create a file called apple. Use “ls –l “. Which group is associated with this file?  touch apple  ls –l apple  geoff  Use the command “newgrp cluster”. Type “id” to confirm your primary group is now cluster. Use the touch command to create a file called “mac”, followed by “ls –l”. With which group is mac associated?  touch mac  ls –l mac  cluster  **If you are in the Azure environment stop here.** |

1. Please use the putty session where you are root.

The pbis software needed to allow your Linux machine become an Active Directory client

has already been installed. For it to work your machine must use a static ipaddress as opposed to one dynamically assigned by the DHCP mechanism. The machines you have get their IP address via DHCP. **To change this run the script**

/usr/local/bin/static

If you reboot your machine, the effect of this script will be lost and you may need to run the ‘static’ script again.

1. Join your machine to fdm1.local, the windows A.D. server domain. The domain instructor account on the windows A.D. server is Administrator, password Redferd4rd.(Be sure to run the /usr/local/bin/static script before attempting to join the domain).

domainjoin-cli join fdm1.local Administrator

1. To check the join worked we use the ‘getent’ command. This is like the ‘cat’ command in that is displays the whole set of information. Unlike ‘cat’ it does not display just one file but information from multiple sources. (You want to see the ‘passwd’ entries from all sources.)

getent passwd

1. This should show a username FDM1\arnold. What is the home directory path for this user.

/home/local/FDM1/arnold

1. What is arnold’s (primary) group ID?

1843397121 (or similar)

1. Use the command ‘getent group | grep 1843397121’ to see arnold’s primary group name. (Use the GID you actually have.)

What is the group’s name?

FDM1\domain^users

1. Create arnold’s home directory using the command

‘mkdir –p xxxxx’ The –p directs mkdir to create the whole path of nested directories. (Substitute the correct pathname)

mkdir –p /home/local/FDM1/arnold

1. This object currently belongs to ‘root’ & group ‘root’. The ownership and associated group should be changed to the correct values, so Arnold can actually use the directory. Use
   * 1. chown ‘FDM1\arnold’ /home/local/FDM1/arnold
     2. chgrp ‘FDM1\domain^users’ /home/local/FDM1/arnold

Note the ‘\’ is a special character and needs to be quoted. If you do not use the single quotation marks, you will need to type FDM1\\domain^users instead of FDM1\domain^users. The first backslash quotes the second.

chown 'FDM1\arnold' /home/local/FDM1/arnold

chgrp 'FDM1\domain^users' /home/local/FDM1/arnold

1. You are currently a superuser. As such you may use the su command to switch user identity *without having to enter a password*. The form of command ‘su –‘ switches both environment and identity. Try

su – ‘FDM1\arnold’ It should work.

su – 'FDM1\arnold'

1. Type ‘pwd’. Which directory are you in?

/home/local/FDM1/arnold

1. Type ‘id’. Does ‘arnold’ belong to any secondary groups? If so, which?

Yes - FDM1\unix

1. Create a file using ‘touch apple’. With which group is the file associated?

touch apple

ls –l apple

FDM1\domain^users

1. Using the putty tool on the windows server, login to your Linux client as ‘FDM1\arnold`, password ‘Redferd4rd’. Did you login successfully? If so, logout! Oh, just one thing, you maybe asked to change the password. Try a new password of Fish123$! If you cannot think of a better one.

Login successful!