7.2.2 Managing Users

Click one of the buttons to take you to that part of the video.

Manage Users 0:00-0:16

In this demonstration we're going to discuss how to create users on the Linux system from the shell prompt. We'll talk about how to create users, modify users, and delete users. Let's begin by talking about how to create a new user.

Create User with useradd 0:17-4:02

You create a new user using the useradd command; you enter 'useradd', followed by the name of the user account that you want to create. In this case, we would create a user named 'jlander'. Before we can do that, we do have to switch to the root user account because I cannot create users as the rtracy user.

I also need to point out that if you just type useradd and then the username that you want to add and don't supply any other options, then a series of default values will be automatically applied to that user account to configure its environment. These default values are contained in the '/etc/default/useradd file'.

For example, the group ID that will be assigned to specify the location of the user's /home directory is identified right here. Whether or not the account will be inactive or not is specified right here.

There's also an option here that is blank, currently, to set an automatic expiration date for the user account. If you needed to, you could actually edit this file and supply a date right here that would cause all the user accounts that you create from that point on to be automatically expired on a particular date.

You can also specify the default shell that will be used by the user account. You can specify the skeleton directory that you want to use; we will talk about what that means more in just a second. You can also specify whether or not an email account on the system is created.

You can also view these default values using the useradd command. By entering 'useradd -D', you can see that the same information is displayed. The important thing to remember, as I said a minute ago, is if you don't supply any options with the useradd command, these values will be used.

On the other hand, if you do explicitly use options with the useradd command, then whatever you specify with those options will automatically override the corresponding value located here in the defaults file.

Remember when we create a user account with a useradd command, it will be automatically assigned a user ID number. The user ID number that's used is defined by the '/etc/login.defs' file. If we scroll up here, we can see the UID_MIN and the UID_MAX parameters here.

As you can see, on this system, the first user account that is created--the standard user account--that is created on the system will have a UID of 1000 assigned to it, the next one will be 1001, the next 1002, and so on.

Likewise, the first group that is created on the system will have a group ID number assigned of 1000, the next one will be 1001, the next one 1002, and so on. Also notice that this file specifies that the user's /home directory be created by default as well.

Remember, we said just a minute ago, that by default the /etc/scale directory is going to be used for the skeleton directory for the user account's home directory. When the user account's home directory is created a series of files and sub-directories are going to be automatically added for you by the system. However, you can modify this.

For example, let's say you want a certain file to appear in every single user's home directory whenever you create them or you want a particular sub-folder to be created in their home directory whenever a user is created. You can go into the '/etc/scale' directory and add whatever files and folders you want automatically added to your user accounts.

Notice right now that it's blank. I don't have anything in there to customize my user account folders with, but if I wanted to, I could put them in there and they would be added to the user's /home directory. They would be added only for users that you create after you put the files and folders in the /scale directory. It won't be added to users who already have been created, only those who are created from this point on.

View useradd man Page 4:03-6:58

With that in mind, let's go ahead and add a user account with the useradd command. Before we do that, let's review the 'man' page for 'useradd' so we can see what the different options are that we can use. Remember, if we use any of the options, it will override whatever

corresponding option is located in the defaults file that we looked at earlier.

We can use the -c option to add a comment to the user account. We typically use -c to add a full name--to assign a full name to a user account. We can use the -e option to add an automatic expiration date for the user account, after which the account will be disabled. We can use the -f option to specify the number of days after password expires that the account will become permanently disabled.

Two options that you need to be very familiar with are -g and the -G options. The -g option is used to identify either the name or the ID number of the group that will be that user's default group--the primary group assigned to that user account. While the -G option is used to assign a list of additional groups that the user account will be a member of, the -m option specifies that we create a /home directory for the user account.

The -M option, on the other hand, says don't create a /home directory for the user account. If we go back up here to the -d option, you can use -d to create a /home directory somewhere else in the file system outside of the default /home directory folder, which is /home.

You can use the -r option to create a system user account. You can use the -s option to specify the default login shell that will be used by the account. You can use the -u option to specify, manually, a user ID number that you want assigned to that account.

A user ID will be automatically assigned if you don't use the -u option, and it will be the next available user ID number. Using this option, you can manually specify a user ID number that you want. But as noted right here, it must be unique, meaning no other user account can already be using that number.

Let's get out of the man page, and let's create a user account. We want to create a user account for the 'jlander' user. We don't want to use all of the defaults. We want to manually specify some of the parameters for this account.

For example, we want to specify a full name for this account. We'll use the '-c' option to do that, and we also want to specify that a /home directory be created for the user, so we use the '-m' option. Enter and the user account has been created.

Let's go ahead and look at the 'passwd' file in the '/etc/' directory, and we see that the jlander user account has been created. Here's its user ID number, here's the group ID number of the primary group that's been assigned to the account, here's the full name of the user, here's the user's /home directory, and here's the default shell that will be used by the user account. So that's how you create a user account.

Modify user account 6:59-8:38

Now there may be times when you need to modify an existing user account, changing some particular attribute of that account. You do that using the usermod command. Let's take a look at the 'man' page for 'usermod' to see what options we can use.

Most of the options used by usermod are the same or at least very similar to those used by useradd. For example, if we want to change the name assigned to the account, we can use the -c option. We can use -e to change the expiration date of the account.

We can use the -g option to change the primary group assigned to the user account. We can use the -G option to specify a list of additional groups that we want the user account to be a member of.

Here's a very useful one: we can use the -l option to change the username assigned to the account. For example, if somebody were to get married or otherwise change their last name, then we would want to use the -l option to change their username to match.

You can use the -m option to move the contents of the user's /home directory to a new location. You can use the -s option to modify the user's default shell, and you can use the -u option to modify the user's user ID number. Let's get out of the man page and let's use 'usermod' to change the full name we've assigned to the jlander user account.

Let's say that instead of going by Jessica Lander, she prefers to go by Jess Lander. We enter '-c "Jess Lander"' in quotations, and then we have to specify the name of the account we want to modify, which is 'jlander'. Let's view the 'passwd' file again. You can see that the whole name assigned to the account has been modified.

Delete user account 8:39-9:55

The last thing we are going to do is learn how to remove an existing user account. Let's say that Jess Lander no longer works for the company. She has moved on to a new job and we need to remove her account from the system.

This is done using the userdel command. Let's look at the 'man' page for 'userdel'. There aren't as many options for userdel. Probably the most important one that you need to keep in mind is the -r option, which specifies that the /home directory of the user account be removed as the user account is deleted from the system.

You want to be very careful with this option, because more than likely that user's /home directory has proprietary information within it that you don't want to get rid of. If they've been working on an important project, you want to copy that information out before you delete the user's /home directory.

Therefore, if you just run userdel followed by the username, it will delete the user account without deleting that /home directory.

If you do want to remove the /home directory, then you need to use the -r option. Let's try it. Let's do 'userdel jlander' and specify '-r' to remove jlander's /home directory. If we 'tail' the 'passwd' file again, we see that the jlander account is gone.

Summary 9:56-10:03

That's it for this demonstration. In this demo we talked about how to manage user accounts. We first looked at how to add a user account. We talked about how to modify a user account, and then we talked about how to delete a user account.
