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Linux: Delete / Remove User Account

by VIVEK GITE on JUNE 16, 2011 *last updated* SEPTEMBER 20, 2016

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How do I remove a user's access from my server? How do I delete a user account under Linux operating systems include home directory and running cron jobs?



You need to use the `userdel` command to delete a user account and related files from user account. The `userdel` command must be run as root user. The syntax is as follows:

```
userdel userName
userdel [options] userName
userdel -r userName
```

userdel command examples

To remove the user named `vivek` or account named `vivek` from the local Linux system / server / workstation, enter:

```
# userdel vivek
```

To remove the user's home directory and mail spool pass the `-r` option to `userdel`,

enter:

```
# userdel -r vivek
```

The above command will remove all files along with the home directory itself and the user's mail spool. Please note that files located in other file systems will have to be searched for and deleted manually. Pass the `--f` option once removal of files, even if not owned by user:

```
# userdel -r -f vivek
```

To remove any SELinux user mapping for the user pass the `-Z` option:

```
# userdel -Z -r -f vivek
```

A Note About /etc/login.defs File

Default values are taken from the information provided in the [/etc/login.defs](#) file for RHEL (Red Hat) based distros. Debian and Ubuntu Linux based system use [/etc/deluser.conf](#) file:

```
# /etc/deluser.conf: deluser configuration - Debian / Ubuntu Linux only.

# Remove home directory and mail spool when user is removed
REMOVE_HOME = 0

# Remove all files on the system owned by the user to be removed
REMOVE_ALL_FILES = 0

# Backup files before removing them. This options has only an effect if
# REMOVE_HOME or REMOVE_ALL_FILES is set.
BACKUP = 0

# target directory for the backup file
BACKUP_TO = "."

# delete a group even there are still users in this group
ONLY_IF_EMPTY = 0
```

```
# exclude these filesystem types when searching for files of a user to backup  
EXCLUDE_FSTYPES = "(proc|sysfs|usbfs|devpts|tmpfs)"
```

Complete example to remove user account from Linux

The following is recommend procedure to delete a user from the Linux server. First, lock user account, enter:

```
# passwd -l vivek
```

OR set the date on which the user account will be disabled (syntax is `usermod --expiredate YYYY-MM-DD userNameHere`):

```
# usermod --expiredate 1 vivek
```

If user try to login, he or she will get the following message:

```
Your account has expired; please contact your system administrator  
Authentication failure
```

Next, backup files from `/home/vivek` to `/nas/backup`

```
# tar -zcvf /nas/backup/account/deleted  
/v/vivek.$uid.$now.tar.gz /home/vivek/
```

Please replace `$uid`, `$now` with actual UID and date/time. The `userdel` command will not allow you to remove an account if the user is currently logged in. You must kill any running processes which belong to an account that you are deleting, enter:

```
# pgrep -u vivek  
# ps -fp $(pgrep -u vivek)
```

```
# killall -KILL -u vivek
```

Delete at jobs, enter

```
# find /var/spool/at/ -name "[^.]*" -type f -user vivek  
-delete
```

To remove cron jobs, enter:

```
# crontab -r -u vivek
```

To remove print jobs, enter:

```
# lprm vivek
```

To find all files owned by user vivek, enter:

```
# find / -user vivek -print
```

You can find file owned by a user called vivek and change its ownership as follows:

```
# find / -user vivek -exec chown newUserNme:newGroupName  
{ } \;
```

Finally, delete user account called vivek, enter:

```
# userdel -r vivek
```

Sample session:

```
root@server2:~# id vivek  
uid=1005(vivek) gid=1005(vivek) groups=1005(vivek)
```

```
root@server2:~# passwd -l vivek
passwd: password expiry information changed.
root@server2:~# tar -zcf /nas/backup/account/deleted/v/vivek.1005.1005.20-sep-20
16.tar.gz /home/vivek/
tar: Removing leading `/' from member names
root@server2:~# pgrep -u vivek
28610
root@server2:~# ps -fp $(pgrep -u vivek)
UID      PID  PPID  C  STIME TTY          TIME CMD
vivek    28610    1   0  09:28 pts/8      00:00:00 ping -q google.com
root@server2:~# killall -KILL -u vivek
root@server2:~# crontab -r -u vivek
no crontab for vivek
root@server2:~# userdel -r vivek
userdel: vivek mail spool (/var/mail/vivek) not found
root@server2:~#
```

Fig.01: Delete User Accounts with Home Directory and All Data In Linux

You can automate the entire procedure by writing a shell script (to remove any at/cron/print/file jobs etc), which is left as an exercise to the readers.

See also:

- [Help: Old Employees Accessing The Linux Server.](#)
- [/etc/passwd](#) – The basic attributes of users.
- [/etc/shadow](#) – The basic attributes of users password.
- [rm\(1\)](#), [crontab\(1\)](#), [find\(1\)](#), [userdel\(1\)](#), [ps\(1\)](#)

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About the author: Vivek Gite is a seasoned sysadmin and a trainer for the Linux/Unix & shell scripting. Follow him on [Twitter](#). OR **read more like this:**

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logicos June 26, 2011, 5:41 pm

The “userdel” command must be use at the end... not a the beginning.

REPLY LINK

Server management October 2, 2011, 7:02 pm

Before deleting a user (userdel) you should make sure that no processes running from this user. Otherwise, you can't delete this user.

REPLY LINK

Umair November 27, 2014, 10:48 pm

Hey,

How would you kill all the process from a user before deleting?

REPLY LINK

Mike DePaulo February 29, 2012, 6:36 pm

I believe you are mistaken about ubuntu/debian & deluser.conf.

basically, "adduser" != "useradd"

Ubuntu & debian have two config files:

deluser.conf

adduser.conf

which configure these 4 high-level debian-specific account management utilities

adduser

addgroup

deluser

delgroup

Debian/Ubuntu still have useradd & userdel, but I don't see those options in my login.defs & Debian officially discourages the use of useradd & userdel anyway.

<http://www.debian.org/doc/manuals/system-administrator/ch-sysadmin-users.html>

REPLY LINK

bagheera July 3, 2012, 9:21 am

thanks. this helped.

REPLY LINK

Joshua Garde August 1, 2012, 10:16 am

Thanks man! All your tutorials really help me when I'm managing my Linux systems. +1'd

REPLY LINK

Vineet Roy September 2, 2012, 12:56 pm

Really, it helped . Thanks.....

REPLY LINK

Sushil Panchal January 29, 2013, 6:47 pm

very useful notes

Thanks

REPLY LINK

Magesh M January 3, 2014, 9:58 am

@ Server management,

We can use the “userdel -rf username” to do it.

REPLY LINK

L. Priyambodo January 28, 2014, 12:40 am

I cannot kill

username 2516 1602 0 01:32 ? 00:00:00 php-fpm: pool username

everytime I kill it, it spawned with new PID

Is it safe to stop php5-fpm first then delete the username?

REPLY LINK

Wolf September 11, 2015, 4:42 pm

Article refers to disabling user account with passwd -l. This will stop someone's password from working but if they have access to the machine by some other auth method this won't prevent access. According to passwd manpage, you should instead use usermod --expiredate 1 (this set the account's expire date to Jan 2, 1970)

REPLY LINK

shashi April 14, 2016, 6:06 am

Nice tutorial, thanks .

REPLY LINK

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