



A Complete Guide to Usage of ‘usermod’ command – 15 Practical Examples with Screenshots

Babin Lonston | Last Updated: January 2, 2015 | Linux Commands | 21 Comments

In Unix/Linux distributions, the command ‘usermod’ is used to modify or change any attributes of a already created user account via command line. The command ‘usermod’ is similar to that ‘useradd’ or ‘adduser’ but the login granted to an existing user.



15 usermod Command Examples

The command 'useradd' or 'adduser' is used for creating user accounts in Linux systems. To know more about on how to create system users, read our complete guide at:

- [A Complete Guide to "useradd" Command in Linux](#)

After creating user accounts, in some scenarios where we need to change the attributes of an existing user such as, change user's home directory, login name, login shell, password expiry date, etc, where in such case 'usermod' command is used.

When we execute 'usermod' command in terminal, the following files are used and affected.

- /etc/passwd – User account information.
- /etc/shadow – Secure account information.
- /etc/group – Group account information.
- /etc/gshadow – Secure group account information.
- /etc/login.defs – Shadow password suite configuration..

Basic syntax of command is:

```
usermod [options] username
```

Requirements



- We must have existing user accounts to execute usermod command.
- Only superuser (root) is allowed to execute usermod command.
- The usermod command can be executed on any Linux distribution.
- Must have basic knowledge of usermod command with options

Options of Usermod

The 'usermod' command is simple to use with lots of options to make changes to an existing user. Let us see how to use usermod command by modifying some existing users in Linux box with the help of following options.

- -c = We can add comment field for the useraccount.
- -d = To modify the directory for any existing user account.
- -e = Using this option we can make the account expiry in specific period.
- -g = Change the primary group for a User.
- -G = To add a supplementary groups.
- -a = To add anyone of the group to a secondary group.
- -l = To change the login name from tecmint to tecmint_admin.
- -L = To lock the user account. This will lock the password so we can't use the account.
- -m = moving the contents of the home directory from existing home dir to new dir.
- -p = To Use un-encrypted password for the new password. (NOT Secured).
- -s = Create a Specified shell for new accounts.
- -u = Used to Assigned UID for the user account between 0 to 999.
- -U = To unlock the user accounts. This will remove the password lock and allow us to use the user account.

In this article we will see '15 usermod commands' with their practical examples and usage in Linux, which will help you to learn and enhance your command-line skills using these options.

1. Adding Information to User Account

The '-c' option is used to set a brief comment (information) about the user account. For example, let's add information on 'tecmint' user, using the following command.

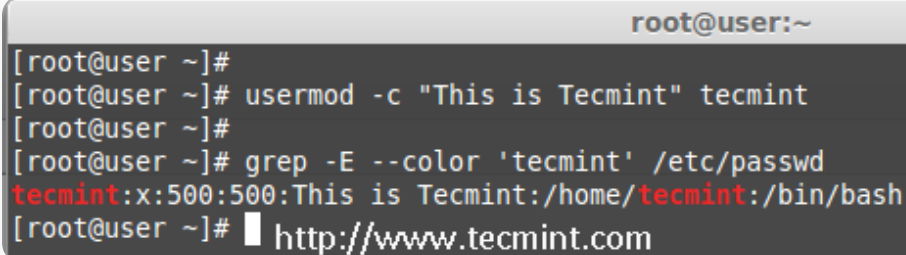


```
# usermod -c "This is Tecmint" tecmint
```

After adding information on user, the same comment can be viewed in /etc/passwd file.

```
# grep -E --color 'tecmint' /etc/passwd
```

```
tecmint:x:500:500:This is Tecmint:/home/tecmint:/bin/sh
```



```
root@user:~  
[root@user ~]#  
[root@user ~]# usermod -c "This is Tecmint" tecmint  
[root@user ~]#  
[root@user ~]# grep -E --color 'tecmint' /etc/passwd  
tecmint:x:500:500:This is Tecmint:/home/tecmint:/bin/bash  
[root@user ~]# http://www.tecmint.com
```

Add Information to User

2. Change User Home Directory

In the above step we can see that our home directory is under /home/tecmint/, If we need to change it to some other directory we can change it using -d option with usermod command.

For example, I want to change our home directory to /var/www/, but before changing, let's check the current home directory of a user, using the following command.

```
# grep -E --color '/home/tecmint' /etc/passwd
```

```
tecmint:x:500:500:This is Tecmint:/home/tecmint:/bin/sh
```

Now, change home directory from /home/tecmint to /var/www/ and confirm the home director after changing.

```
# usermod -d /var/www/ tecmint  
# grep -E --color '/var/www/' /etc/passwd
```



```
tecmin:x:500:500:This is Tecmint:/var/www:/bin/sh
```

```
root@user:~  
[root@user ~]#  
[root@user ~]# grep -E --color '/home/tecmin' /etc/passwd  
tecmin:x:500:500:This is Tecmint:/home/tecmin:/bin/bash  
[root@user ~]#  
[root@user ~]# usermod -d /var/www/ tecmin  
[root@user ~]#  
[root@user ~]# grep -E --color '/var/www/' /etc/passwd  
tecmin:x:500:500:This is Tecmint:/var/www:/bin/bash  
[root@user ~]#  
[root@user ~]# http://www.tecmint.com
```

Change User Home Directory

3. Set User Account Expiry Date

The option '-e' is used to set expiry date on a user account with the date format YYYY-MM-DD. Before, setting up an expiry date on a user, let's first check the current account expiry status using the 'chage' (change user password expiry information) command.

```
# chage -l tecmin
```

Last password change	: Nov 02, 2014
Password expires	: never
Password inactive	: never
Account expires	: Dec 01, 2014
Minimum number of days between password change	: 0
Maximum number of days between password change	: 99999
Number of days of warning before password expires	: 7

The expiry status of a 'tecmin' user is Dec 1 2014, let's change it to Nov 1 2014 using 'usermod -e' option and confirm the expiry date with 'chage' command.

```
# usermod -e 2014-11-01 tecmin  
# chage -l tecmin
```



```
Last password change           : Nov 02, 2014
Password expires               : never
Password inactive              : never
Account expires                : Nov 01, 2014
Minimum number of days between password change : 0
Maximum number of days between password change : 99999
Number of days of warning before password expires : 7
```

```
root@user:~
[root@user ~]#
[root@user ~]# chage -l tecmint
Last password change           : Nov 02, 2014
Password expires               : never
Password inactive              : never
Account expires                : Dec 01, 2014
Minimum number of days between password change : 0
Maximum number of days between password change : 99999
Number of days of warning before password expires : 7
[root@user ~]#
[root@user ~]#
[root@user ~]# usermod -e 2014-11-01 tecmint
[root@user ~]#
[root@user ~]# chage -l tecmint
Last password change           : Nov 02, 2014
Password expires               : never
Password inactive              : never
Account expires                : Nov 01, 2014
Minimum number of days between password change : 0
Maximum number of days between password change : 99999
Number of days of warning before password expires : 7
[root@user ~]#
[root@user ~]# http://www.tecmint.com
```

Set User Account Expiry Date

4. Change User Primary Group

To set or change a user primary group, we use option '-g' with usermod command. Before, changing user primary group, first make sure to check the current group for the user tecmint_test.

```
# id tecmint_test

uid=501(tecmint_test) gid=502(tecmint_test) groups=502(tecmint_test)
```

Now, set the babin group as a primary group to user tecmint_test and confirm the changes.

```
# usermod -g babin tecmint_test
```

```
# id tecmint_test
```

```
uid=501(tecmint_test) gid=502(babin) groups=502(tecmint_test)
```

```
[root@user ~]# id tecmint_test
uid=501(tecmint_test) gid=502(tecmint_test) groups=502(tecmint_test)
[root@user ~]#
[root@user ~]# id babin
uid=502(babin) gid=503(babin) groups=503(babin)
[root@user ~]#
[root@user ~]# usermod -g babin tecmint_test
[root@user ~]#
[root@user ~]# id tecmint_test
uid=501(tecmint_test) gid=503(babin) groups=503(babin)
[root@user ~]# http://www.tecmint.com
```

Change User Primary Group

5. Adding Group to an Existing User

If you want to add a new group called 'tecmint_test0' to 'tecmint' user, you can use option '-G' with usermod command as shown below.

```
# usermod -G tecmint_test0 tecmint
```

```
# id tecmint
```

```
root@user:~
[root@user ~]#
[root@user ~]# usermod -G tecmint_test0 tecmint
[root@user ~]#
[root@user ~]# id tecmint
uid=500(tecmint) gid=501(test) groups=501(test),504(tecmint_test0)
[root@user ~]#
[root@user ~]# http://www.tecmint.com
```

Add Group to User

Note: Be careful, while adding a new groups to an existing user with '-G' option alone, will remove all existing groups that user belongs. So, always add the '-a' (append) with '-G' option to add or

append new groups.

6. Adding Supplementary and Primary Group to User

If you need to add a user to any one of the supplementary group, you can use the options '-a' and '-G'. For example, here we going to add a user account tecmint_test0 with the wheel user.

```
# usermod -a -G wheel tecmint_test0
# id tecmint_test0
```

So, user tecmint_test0 remains in its primary group and also in secondary group (wheel). This will make my normal user account to execute any root privileged commands in Linux box.

```
eg : sudo service httpd restart
```

```
[root@user ~]#
[root@user ~]# usermod -a -G wheel tecmint_test0
[root@user ~]#
[root@user ~]# id tecmint_test0
uid=503(tecmint_test0) gid=504(tecmint_test0) groups=504(tecmint_test0),10(wheel)
[root@user ~]#
```

<http://www.tecmint.com>

Add Multiple Groups to User

7. Change User Login Name

To change any existing user login name, we can use '-l' (new login) option. In the example below, we changing login name tecmint to tecmint_admin. So the username tecmint has been renamed with the new name tecmint_admin.

```
# usermod -l tecmint_admin tecmint
```

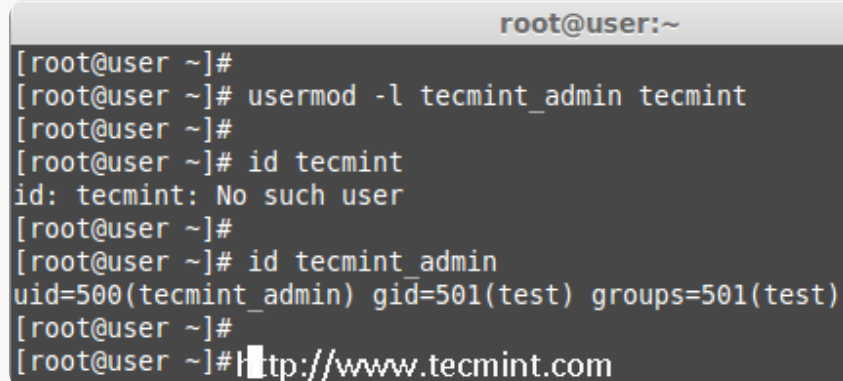
Now check for the tecmint user, It will not be present because we have changed it to tecmint_admin.




```
# id tecmint
```

Check for the tecmint_admin account it will be there with same UID and with existing group what we have added before.

```
# id tecmint_admin
```



A terminal window titled 'root@user:~' showing the following commands and output:

```
[root@user ~]#  
[root@user ~]# usermod -l tecmint_admin tecmint  
[root@user ~]#  
[root@user ~]# id tecmint  
id: tecmint: No such user  
[root@user ~]#  
[root@user ~]# id tecmint_admin  
uid=500(tecmint_admin) gid=501(test) groups=501(test)  
[root@user ~]#  
[root@user ~]# http://www.tecmint.com
```

Change User Login Name

8. Lock User Account

To Lock any system user account, we can use '-L' (lock) option, After the account is locked we can't login by using the password and you will see a ! added before the encrypted password in /etc/shadow file, means password disabled.

```
# usermod -L babin
```

Check for the locked account.

```
# grep -E --color 'babin' cat /etc/shadow
```

```
root@user:~  
[root@user ~]#  
[root@user ~]# usermod -L babin  
[root@user ~]#  
[root@user ~]#  
[root@user ~]# grep -E --color 'babin' cat /etc/shadow  
grep: cat: No such file or directory  
/etc/shadow:babin:!  
$6$45J2snMK$er7Db0/xxAD0ycEoW7hJGJmmj0pwnWagnBkVE/XW4  
Gm.nZsGeTzAkRYKM70zux7lNtw0NnxSJcKqXhm5wUu1X.:16376:0:99999:7:::  
[root@user ~]#  
[root@user ~]#
```

<http://www.tecmint.com>

Lock User Account

9. Unlock User Account

The '-U' option is used to unlock any locked user, this will remove the ! before the encrypted password.

```
# grep -E --color 'babin' /etc/shadow  
# usermod -U babin
```

Verify the user after unlock.

```
# grep -E --color 'babin' /etc/shadow
```

```
root@user:~  
[root@user ~]#  
[root@user ~]# grep -E --color 'babin' /etc/shadow  
babin:!  
$6$C06mEya5$8h8XouKl2rCeYUuie8cUTI0tbbngBn56aIzZ6iB/XEYYiTvrll9hP  
aGgnt6vi0j9nZP5kYkxM4D0wkSkQNLc60:16376:0:99999:7:::  
[root@user ~]#  
[root@user ~]#  
[root@user ~]# usermod -U babin  
[root@user ~]#  
[root@user ~]#  
[root@user ~]# grep -E --color 'babin' /etc/shadow  
babin:$6$C06mEya5$8h8XouKl2rCeYUuie8cUTI0tbbngBn56aIzZ6iB/XEYYiTvrll9hPa  
Ggnt6vi0j9nZP5kYkxM4D0wkSkQNLc60:16376:0:99999:7:::  
[root@user ~]#  
[root@user ~]#
```

<http://www.tecmint.com>

Unlock User Account

10. Move User Home Directory to New location

Let's say you've a user account as 'pinky' with home directory '/home/pinky', you want to move to new location say '/var/pinky'. You can use the options '-d' and '-m' to move the existing user files from current home directory to a new home directory.

Check for the account and it's current home directory.

```
# grep -E --color 'pinky' /etc/passwd
```

Then list the files which is owned by user pinky.

```
# ls -l /home/pinky/
```

Now we have to move the home directory from /home/pinky to /var/pinky.

```
# usermod -d /var/pinky/ -m pinky
```

Next, verify the directory change.

```
# grep -E --color 'pinky' /etc/passwd
```

Check for the files under '/home/pinky'. Here we have moved the files using -m option so there will be no files. The pinky user files will be now under /var/pinky.

```
# ls -l /home/pinky/  
# ls -l /var/pinky/
```

```

root@user:~
[root@user ~]# grep -E --color 'pinky' /etc/passwd
pinky:x:505:506::/home/pinky:/bin/bash
[root@user ~]#
[root@user ~]# ls -l /home/pinky/
total 0
-rw-r--r-- 1 root root 59768832 Nov  2 13:41 test-files1
-rw-r--r-- 1 root root 6291456 Nov  2 13:40 test-files2
-rw-r--r-- 1 root root 0 Nov  2 13:40 test-files3
-rw-r--r-- 1 root root 10485760 Nov  2 13:40 test-files4
-rw-r--r-- 1 root root 136314880 Nov  2 13:40 test-files5
[root@user ~]#
[root@user ~]# usermod -d /var/pinky/ -m pinky
[root@user ~]#
[root@user ~]#
[root@user ~]# grep -E --color 'pinky' /etc/passwd
pinky:x:505:506::/var/pinky:/bin/bash
[root@user ~]#
[root@user ~]#
[root@user ~]# ls -l /home/pinky/
ls: cannot access /home/pinky/: No such file or directory
[root@user ~]#
[root@user ~]# ls -l /var/pinky/
total 0
-rw-r--r-- 1 root root 59768832 Nov  2 13:41 test-files1
-rw-r--r-- 1 root root 6291456 Nov  2 13:40 test-files2
-rw-r--r-- 1 root root 0 Nov  2 13:40 test-files3
-rw-r--r-- 1 root root 10485760 Nov  2 13:40 test-files4
-rw-r--r-- 1 root root 136314880 Nov  2 13:40 test-files5
[root@user ~]#
[root@user ~]# http://www.tecmint.com

```

Move User Home Directory

11. Create Un-encrypted Password for User

To create an un-encrypted password, we use option '-p' (password). For demonstration purpose, I'm setting a new password say 'redhat' on a user pinky.

```
# usermod -p redhat pinky
```

After setting password, now check the shadow file to see whether its in encrypted format or un-encrypted.

```
# grep -E --color 'pinky' /etc/shadow
```

Create Unencrypted User Password

Note: Did you see in the above image, the password is clearly visible to everyone. So, this option is not recommended to use, because the password will be visible to all users.

12. Change User Shell

The user login shell can be changed or defined during user creation with `useradd` command or changed with `usermod` command using option `-s` (shell). For example, the user `'babin'` has the `/bin/bash` shell by default, now I want to change it to `/bin/sh`.

```
# grep -E --color 'babin' /etc/passwd
# usermod -s /bin/sh babin
```

After changing user shell, verify the user shell using the following command.

```
# grep -E --color 'babin' /etc/passwd
```

Change User Login Shell

13. Change User ID (UID)

In the example below, you can see that my user account 'babin' holds the UID of 502, now I want to change it to 888 as my UID. We can assign UID between 0 to 999.

```
# grep -E --color 'babin' /etc/passwd
OR
# id babin
```

Now, let's change the UID for user babin using '-u' (uid) option and verify the changes.

```
# usermod -u 888 babin
# id babin
```

Change User UID

14. Modifying User Account with Multiple Options

Here we have a user jack and now I want to modify his home directory, shell, expiry date, label, UID and group at once using one single command with all options as we discussed above.

The user Jack has the default home directory /home/jack, Now I want to change it to /var/www/html and assign his shell as bash, set expiry date as December 10th 2014, add new label as This is jack, change UID to 555 and he will be member of apple group.

Let we see how to modify the jack account using multiple option now.

```
# usermod -d /var/www/html/ -s /bin/bash -e 2014-12-10 -c "This is Jack" -u 5
```

Then check for the UID & home directory changes.

```
# grep -E --color 'jack' /etc/passwd
```



Account expire check.

```
# chage -l jack
```

Check for the group which all jack have been member.

```
# grep -E --color 'jack' /etc/group
```

Using Multiple Options with usermod

15. Change UID and GID of a User



We can change UID and GID of a current user. For changing to a New GID we need an existing group. Here already there is an account named as orange with GID of 777.

Now my jack user account want to be assigned with UID of 666 and GID of Orange (777).

Check for the current UID and GID before modifying.

```
# id jack
```

Modify the UID and GID.

```
# usermod -u 666 -g 777 jack
```

Check for the changes.

```
# id jack
```

Change User UID and GID

Conclusion

Here we have seen how to use usermod command with its options in very detailed fashion, Before knowing about usermod command, one should must know 'useradd' command and its options to use the usermod. If I've missed any point in the article do let me know via comments and don't forget to add your valuable comments.

🔖 [Usermod](#)

◀ [Installing Windows 7 over PXE Network Boot Server on RHEL/CentOS 7 using WinPE ISO Image – Part 2](#)

[Creating RAID 5 \(Striping with Distributed Parity\) in Linux – Part 4](#) ▶

If you liked this article, then do [subscribe to email alerts](#) for Linux tutorials. If you have any questions or doubts? do [ask for help in the comments](#) section.



If You Appreciate What We Do Here On TecMint, You Should Consider:

TecMint is the fastest growing and most trusted community site for any kind of Linux Articles, Guides and Books on the web. Millions of people visit TecMint! to search or browse the thousands of published articles available FREELY to all.

If you like what you are reading, please consider buying us a coffee (or 2) as a token of appreciation.



Buy me a coffee

We are thankful for your never ending support.

Related Posts

How to Work with Date and Time in Bash Using date Command

How to Switch (su) to Another User Account without Password

How to Force cp Command to Overwrite without Confirmation

How to Add or Remove a User from a Group in Linux

Install Linux from USB Device or Boot into Live Mode Using Unetbootin and dd Command

6 Best CLI Tools to Search Plain-Text Data Using Regular Expressions

21 thoughts on “A Complete Guide to Usage of ‘usermod’ command – 15 Practical Examples with Screenshots”



salha ismael

September 23, 2020 at 1:42 pm

How can I add multiple user example 200 users and the user should have a default password, must be forced to change password soon she logs in password expire after 30 days, and must have a sudo privilege and include user details

Reply

dragonmouth

December 27, 2018 at 10:57 pm

“We can assign UID between 0 to 999.”

As far as I know, you cannot. UID of “0” is reserved for ‘root’ while UIDs 1-499 are reserved for system accounts.

Reply

Babin Lonston

January 2, 2019 at 1:27 pm

@gragonmouth,

As per security standard it advised to use above 1000 UID/GID. Moreover, 0-1000 reserved for System users by default in Systemd (RHEL 7, CentOS 7, Oracle Linux 7 etc.)Linux servers. Try to create a user and notice you will find UID/GID will be above >1000.



Thanks & Regards,
Babin Lonston

Reply

dragonmouth

January 2, 2019 at 7:08 pm

Then the UID number assignment depends on the distro you are using. I use PCLinuxOS and the default starting UID number is 500. From my distro-hopping days, I remember that some distros allow the admin to set the lowest allowable UID and/or the highest allowable UID.

Reply

torino

October 30, 2019 at 2:08 pm

Actually you can, but it is not recommended anyway...

try,

```
$ sudo usermod -o -u 0 username
```

and this user will have now the same id as the root user.

Yep, the issue could happen if you assign that id, try on a virtual machine, and everything should be fine...

Reply



Ankit

November 8, 2018 at 10:04 am

I changed the user home directory by usermod but bash_profile is not get there in the new home. Since I tried to create it manually and did the changes in the file but the changes that I needed for is not working. the bash profile worked fine in default home.

Reply

Ravi Saive

November 8, 2018 at 11:54 am

@Ankit,

Try to change the user default shell using following command.

```
# usermod -s /bin/bash <username>
```

Reply

Anurag

October 6, 2018 at 6:24 pm

What is the difference between passwd and usermod command, even passwd command can do the same things that usermod does. for example if we want to lock the user account we can use either “#passwd -l username” or “#usermod -L username”.

Reply



Ravi Saive

October 8, 2018 at 11:15 am

@Anurag,

The passwd command change user password and whereas usermod command modified or rename username.

Reply

[← Older Comments](#)

Got something to say? Join the discussion.

Have a question or suggestion? Please leave a comment to start the discussion. Please keep in mind that all comments are moderated and your email address will NOT be published.

Name *

Email *

Website

☐ Save my name, email, and website in this browser for the next time I comment.



☐ Notify me of followup comments via e-mail. You can also subscribe without commenting.

Post Comment

This site uses Akismet to reduce spam. [Learn how your comment data is processed.](#)

Over 3,500,000+ Readers



[A Beginners Guide To Learn Linux for Free \[with Examples\]](#)

[Red Hat RHCSA/RHCE 8 Certification Study Guide \[eBooks\]](#)

[Linux Foundation LFCS and LFCE Certification Study Guide \[eBooks\]](#)

Learn Linux Commands and Tools

[How to List All Running Services Under Systemd in Linux](#)

[How to Use Conspy to View and Control Remote Linux Virtual Consoles in Real Time](#)

[10 Useful Chaining Operators in Linux with Practical Examples](#)



[How to Find a Process Name Using PID Number in Linux](#)

[Linux Uptime Command With Usage Examples](#)

[How to Extract Tar Files to Specific or Different Directory in Linux](#)



TECMINT

#1 WORLD'S LEADING LINUX BLOG

DO YOU WANT TO LEARN LINUX?

Get weekly Linux tutorials, tricks & tips
and other useful Open Source resources
in your INBOX.

JOIN NOW ... IT'S FREE!

If You Appreciate What We Do Here On TecMint, You Should Consider:



Buy me a coffee

Linux Server Monitoring Tools

[How to Add Hosts in OpenNMS Monitoring Server](#)



[How to Limit the Network Bandwidth Used by Applications in a Linux System with Trickle](#)

[Install Munin \(Network Monitoring\) in RHEL, CentOS and Fedora](#)

[GoAccess \(A Real-Time Apache and Nginx\) Web Server Log Analyzer](#)

[Install OpenNMS Network Monitoring Tool in CentOS/RHEL 7](#)

[Sysmon – A Graphical System Activity Monitor for Linux](#)

Learn Linux Tricks & Tips

[How to Run or Repeat a Linux Command Every X Seconds Forever](#)

[5 Ways to Empty or Delete a Large File Content in Linux](#)

[10 Useful Sudoers Configurations for Setting ‘sudo’ in Linux](#)

[Assign Read/Write Access to a User on Specific Directory in Linux](#)

[How to Disable SELinux Temporarily or Permanently](#)

[How to Configure Custom SSH Connections to Simplify Remote Access](#)

Best Linux Tools

[4 Good Open Source Log Monitoring and Management Tools for Linux](#)

[6 Best Mail Transfer Agents \(MTA's\) for Linux](#)

[8 Best PDF Document Viewers for Linux Systems](#)

[My Favorite Command Line Editors for Linux – What's Your Editor?](#)

[6 Best Email Clients for Linux Systems](#)

[12 Best Notepad++ Alternatives For Linux](#)

The material in this site cannot be republished either online or offline, without our permission.

Hosting Sponsored by : [Linode Cloud Hosting](#)

