User Administration with Customization

[root@localhost ~]# vim /etc/default/useradd

useradd defaults file

GROUP=100

HOME=/home

INACTIVE=-1

EXPIRE=

SHELL=/bin/bash

SKEL=/etc/skel

CREATE_MAIL_SPOOL=yes

SYNTAX:

 # useradd <option> <argument> <username>

 # OPTIONS:

        -o →   non unique
        -u → uid
        -g → gid
        -d → home directory
        -b → base directory
        -c → comment
        -s → login shell
        -p → password
        -f → inactive password
        -G → group assign|
        -e → account expiry
        -r → system user

#eg:

                            -u → user id

 [root@servera ~]# **useradd   user1   -u   2020**

 [root@servera ~]# tail /etc/passwd

sushmita:x:1000:1000:sushmita:/home/sushmita:/bin/bash

user1:x:2020:2020::/home/user1:/bin/bash

[root@servera ~]# **id user1**

uid=2020(user1) gid=2020(user1)   groups=2020(user1)

[root@servera ~]# tail -1 /etc/group

user1:x:2020:

[root@servera ~]# ls /home/

sushmita **user1**

-g → users primary group

[root@servera ~]# useradd -g 4000 user2

useradd: group '4000' does not exist

[root@servera ~]# **groupadd -g 4000 samplegroup**

[root@servera ~]# **tail -1 /etc/group**

samplegroup:x:4000:

[root@servera ~]# **useradd -g 4000 user2**

[root@servera ~]# **tail -1 /etc/passwd**

user2:x:2021:4000::/home/user2:/bin/bash

[root@servera ~]# **tail /etc/group**

sgx:x:979:

systemd-oom:x:978:

sushmita:x:1000:

testing:x:1006:

sales:x:1212:

devops:x:1213:

redhatlinux:x:1213:

rhcsabatch:x:1214:

user1:x:2020:

samplegroup:x:4000:

 [root@servera ~]# **id user2**

uid=2021(user2) <mark>**gid=4000(samplegroup)**</mark> groups=4000(samplegroup)

-N → Do not create users primay group

 [root@servera ~]# **useradd   -N user3**

[root@servera ~]# tail /etc/passwd

user1:x:2020:2020::/home/user1:/bin/bash

user2:x:2021:4000::/home/user2:/bin/bash

<mark>user3</mark>:x:2022:<mark>**100**</mark>::/home/user3:/bin/bash

 [root@servera ~]# tail /etc/group

sgx:x:979:

systemd-oom:x:978:

sushmita:x:1000:

testing:x:1006:

sales:x:1212:

devops:x:1213:

redhatlinux:x:1213:

rhcsabatch:x:1214:

user1:x:2020:

samplegroup:x:4000:

[root@servera ~]# **id user3**

uid=2022(user3) <mark>**gid=100(users)**</mark> groups=100(users)

> **Note : If we are not creating users primary group, then 100(users)   group will be set as an primary group as it is mention is /etc/default/useradd file**

```
[root@servera ~]# cat  /etc/default/useradd
# useradd defaults file
```
GROUP=100
```
HOME=/home
INACTIVE=-1
EXPIRE=
SHELL=/bin/bash
SKEL=/etc/skel
CREATE_MAIL_SPOOL=yes
```

-d → home directory

```
 [root@servera ~]# useradd    -d    /userdata    user4
[root@servera ~]# tail  -1 /etc/passwd
```
user4:x:2023:2023::/userdata :/bin/bash

```
 [root@servera ~]# ls   /
afs boot etc lib   media opt  root sample.txt srv tmp      usr
bin dev home lib64 mnt   proc run  sbin      sys userdata var

[root@servera ~]# ls   /userdata  -ld
drwx------. 3 user4 user4 78 Jul 10 18:43 /userdata

 [root@servera ~]# su  -   user4
[user4@servera ~]$ pwd
```
/userdata
```
[user4@servera ~]$ touch  abc
[user4@servera ~]$ ls
abc
[user4@servera ~]$ exit
```

logout

-b → base directory

[root@servera ~]# **mkdir /base**

[root@servera ~]# ls /base/

[root@servera ~]# **useradd   -b /base   user5**

[root@servera ~]# **tail -1 /etc/passwd**

==user5==:x:2024:2024::==/base/user5==:/bin/bash

[root@servera ~]# ls /base/

user5

[root@servera ~]# ls -ld   /base/user5/

drwx------. 3 user5 user5 78 Jul 10 18:48 /base/user5/

[root@servera ~]# **su - user5**

[user5@servera ~]$ pwd

==/base/user5==

[user5@servera ~]$ touch test

[user5@servera ~]$ ls

test

[user5@servera ~]$ exit

logout

-c   → comment

[root@servera ~]# **useradd   -c   "redhat user"   user6**

[root@servera ~]# **tail -1 /etc/passwd**

==user6==:x:2025:2025:==redhat user:==/home/user6:/bin/bash

-s → login shell

[root@servera ~]# **useradd -s /bin/sh user7**

[root@servera ~]# **tail -1 /etc/passwd**

user7:x:2026:2026::/home/user7:/bin/sh

-f → inactive password

[root@servera ~]# **useradd   -f   10   user8**

[root@servera ~]# **tail -1 /etc/passwd**

user8:x:2027:2027::/home/user8:/bin/bash

[root@servera ~]# **tail -1 /etc/shadow**

user8:!!:20279:0:99999:7:10::

-e → account expiry

[root@servera ~]# **useradd   -e   "30 july 2025"   user9**

[root@servera ~]# **tail -1 /etc/passwd**

user9:x:2028:2028::/home/user9:/bin/bash

[root@servera ~]# **tail -1 /etc/shadow**

user9:!!:20279:0:99999:7::20299:

-r → system user

[root@servera ~]# **useradd -r   user10**

[root@servera ~]# tail -1 /etc/passwd

user10:x:977:977::/home/user10:/bin/bash

-G → secondary group memebership

[root@servera ~]# groupadd   groupA ; groupadd   groupB

[root@servera ~]# tail   -2 /etc/group

groupA:x:4001:

groupB:x:4002:

[root@servera ~]# tail   /etc/group

groupA:x:4001:

groupB:x:4002:

[root@servera ~]# **useradd -G groupA user11**

[root@servera ~]# **tail -1 /etc/passwd**

<mark>user11</mark>**:x:2029:2029::/home/user11:/bin/bash**

[root@servera ~]# **tail /etc/group**

user4:x:2023:

user5:x:2024:

user6:x:2025:

user7:x:2026:

user8:x:2027:

user9:x:2028:

user10:x:977:

groupA:x:4001:<mark>user11</mark>   → *__Users membership in groupA__*

groupB:x:4002:

user11:x:2029:   → *__Users Primary group__*

 [root@servera ~]# **useradd   user12 -G   groupA,groupB**   → *__Adding users in multiple group__*

[root@servera ~]# **tail -1 /etc/passwd**

user12:x:2030:2030::/home/user12:/bin/bash

 [root@servera ~]# **tail /etc/group**

user5:x:2024:

user6:x:2025:

user7:x:2026:

user8:x:2027:

user9:x:2028:

user10:x:977:

groupA:x:4001:user11,<mark>user12</mark>

groupB:x:4002:<mark>user12</mark>

user11:x:2029:

user12:x:2030:

 [root@servera ~]# **id user11 user12**

uid=2029(user11) gid=2029(user11) groups=2029(user11),4001(groupA)

uid=2030(user12) gid=2030(user12) groups=2030(user12),4001(groupA),4002(groupB)

-o → non-unique

[root@servera ~]# tail -1 /etc/passwd

user12:x:2030:2030::/home/user12:/bin/bash

 [root@servera ~]# **useradd   -o   -u 2030   lukesh**   → *Creating users Lukesh and as a*
                                                                   duplicate user of user 'user12(2030)'

[root@servera ~]# **tail -2 /etc/passwd**

user12:x:<mark>2030</mark>:2030::/home/user12:/bin/bash

lukesh:x:<mark>2030</mark>:4003::/home/lukesh:/bin/bash

[root@servera ~]# **tail /etc/group**

user6:x:2025:

user7:x:2026:

user8:x:2027:

user9:x:2028:

user10:x:977:

groupA:x:4001:user11,user12

groupB:x:4002:user12

user11:x:2029:

user12:x:2030:

lukesh:x:4003:

 [root@servera ~]# **id lukesh**

uid<mark>=2030(user12)</mark>   gid=2030(user12) groups=2030(user12),4001(groupA),4002(groupB)

 [root@servera ~]# **su - user12**

[user12@servera ~]$ pwd

/home/user12

[user12@servera ~]$ exit

logout

 [root@servera ~]# **su - lukesh**

[user12@servera ~]$

[user12@servera ~]$ pwd

/home/lukesh

[user12@servera ~]$

[user12@servera ~]$ exit

logout

Customizing single user with multiple options

 [root@servera ~]# **useradd   -u 5000   -g 4000   -c "system admin"   -d /riteshhome   -f 12 -e "31 dec 2025"   -G groupA   -s /bin/sh   ritesh**

 [root@servera ~]# **tail -1 /etc/passwd**

ritesh:x:5000 :4000 :system admin :/riteshhome :/bin/sh

             ↓   ↓   ↓   ↓   ↓

            -u   -g   -c   -d   -s

[root@servera ~]# **tail -1 /etc/shadow**

ritesh:!!:20279:0:99999:7: 12: 20453:

                              ↓   ↓

                             -f   -e

 [root@servera ~]# ls /

afs bin dev home lib64 mnt proc   root sample.txt srv tmp   usr

base boot etc lib media opt **riteshhome** run sbin   sys userdata var

                              ▶
                             -d

```
[root@servera ~]# ls -ld  /riteshhome/

drwx------. 3 ritesh samplegroup 78 Jul 10 19:12 /riteshhome/

 [root@servera ~]# tail   /etc/group

user7:x:2026:

user8:x:2027:

user9:x:2028:

user10:x:977:

groupA:x:4001:user11,user12,ritesh          -G

groupB:x:4002:user12

user11:x:2029:

user12:x:2030:

lukesh:x:4003:


[root@servera ~]# su - ritesh

[ritesh@servera ~]$ pwd

/riteshhome

[ritesh@servera ~]$ touch  apple

[ritesh@servera ~]$ ls

apple

[ritesh@servera ~]$ exit

logout
```

USER MODIFICATION

useradd command will create default settings, but you can customize user properties with usermod command

cmd: usermod

 # SYNTAX:

#usermod <option>   <argument> <existing username>

#OPTIONS:

> **-u → userid**
> **-g → groupid**
> **-c → comment**
> **-d → home directory**
> **-e → account expiry**
> **-G → group assign**
> **-o → non unique**
> **-l → login name**
> **-s → login shell**
> **-L → lock user account**
> **-U → unlock user account**
> **-a → append**

EG:

[root@servera ~]# useradd nishant

[root@servera ~]# passwd   nishant

Changing password for user nishant.

New password:

BAD PASSWORD: The password is shorter than 8 characters

Retype new password:

passwd: all authentication tokens updated successfully.

 [root@servera ~]# tail -1 /etc/passwd

nishant:x:5001:5001::/home/nishant:/bin/bash

 [root@servera ~]# tail -1 /etc/shadow

nishant:6riNXmQ4y1incT30a$FUkdKIQ2FLKo/KapFuz361QsyMVAiCU0Jm2V0dW/uvUtScOA/cIfPm
PXDH8SDn.Gco8mHsB2hvJAg7l04kiFo/:20279:0:99999:7:::

[root@servera ~]# tail -1 /etc/group

nishant:x:5001:

[root@servera ~]# **usermod   -u 3030 nishant**

[root@servera ~]# tail -1 /etc/passwd

nishant:x:<mark>3030</mark>:5001::/home/nishant:/bin/bash

-d → home directory

[root@servera ~]# **usermod   -d /nishanthome   nishant**

[root@servera ~]# tail -1 /etc/passwd

nishant:x:3030:5001::/nishanthome:/bin/bash

[root@servera ~]# ls /

afs bin dev home lib64 mnt proc   root sample.txt srv tmp   usr

base boot etc lib media opt riteshhome run sbin   sys userdata var

[root@servera ~]# **su -   nishant**

su: warning: cannot change directory to /nishanthome: No such file or directory

[nishant@servera root]$

[nishant@servera root]$ exit

logout

[root@servera ~]# **mkdir   /nishanthome**   → *need to create home directory manually*

[root@servera ~]# su - nishant

[nishant@servera ~]$ pwd

/nishanthome

[nishant@servera ~]$ touch test

```
touch: cannot touch 'test': Permission denied

[nishant@servera ~]$ exit

logout


 [root@servera ~]# ls -ld /nishanthome/

drwxr-xr-x. 2 root root 6 Jul 10 19:28 /nishanthome/


 [root@servera ~]# chmod  700  /nishanthome/           → applying permission of user

[root@servera ~]# chown  nishant:nishant   /nishanthome/


[root@servera ~]# ls -ld /nishanthome/

drwx------. 2 nishant nishant 6 Jul 10 19:28 /nishanthome/


 [root@servera ~]# su - nishant

[nishant@servera ~]$ pwd

/nishanthome

 [nishant@servera ~]$ touch test

[nishant@servera ~]$ ls

test

[nishant@servera ~]$ exit

logout


 [root@servera ~]# usermod  -g 4000  -c  "Linux user"  -s  /bin/sh  -f  10  -e  "30 july 2025"  -G
groupA   nishant


[root@servera ~]# tail  -1  /etc/passwd

nishant:x:3030:4000:Linux user:/nishanthome:/bin/sh


 [root@servera ~]# tail  -1 /etc/shadow

nishant:$6$riNXmQ4y1incT30a$FUkdKIQ2FLKo/KapFuz361QsyMVAiCU0Jm2V0dW/uvUtScOA/cIfPm
PXDH8SDn.Gco8mHsB2hvJAg7l04kiFo/:20279:0:99999:7:10:20299:
```

[root@servera ~]# tail   /etc/group

user7:x:2026:

user8:x:2027:

user9:x:2028:

user10:x:977:

groupA:x:4001:user11,user12,ritesh,nishant

groupB:x:4002:user12

user11:x:2029:

user12:x:2030:

lukesh:x:4003:

nishant:x:5001:

[root@servera ~]# **usermod   -G groupB nishant**

[root@servera ~]# tail /etc/group

user7:x:2026:

user8:x:2027:

user9:x:2028:

user10:x:977:

groupA:x:4001:user11,user12,ritesh

groupB:x:4002:user12,<mark>nishant</mark>

user11:x:2029:

user12:x:2030:

lukesh:x:4003:

nishant:x:5001:

[root@servera ~]# **usermod   -aG groupA nishant**   → *use –a   to append the secondary group list otherwise it will remove from the existing group*

[root@servera ~]# **tail /etc/group**

user7:x:2026:

user8:x:2027:

user9:x:2028:

user10:x:977:

groupA:x:4001:user11,user12,ritesh,nishant

groupB:x:4002:user12,nishant

user11:x:2029:

user12:x:2030:

lukesh:x:4003:

nishant:x:5001:

-l → login name

[root@servera ~]# **usermod -l jerry nishant**

[root@servera ~]# **tail -1 /etc/passwd**

jerry:x:3030:4000:Linux user:/nishanthome:/bin/sh

[root@servera ~]# **tail -1 /etc/shadow**

jerry:6riNXmQ4y1incT30a$FUkdKIQ2FLKo/KapFuz361QsyMVAiCU0Jm2V0dW/uvUtScOA/cIfPmPX
DH8SDn.Gco8mHsB2hvJAg7l04kiFo/:20279:0:99999:7:10:20299:

LOCK UNLOCK

[root@servera ~]# **tail -1 /etc/shadow**

jerry:6riNXmQ4y1incT30a$FUkdKIQ2FLKo/KapFuz361QsyMVAiCU0Jm2V0dW/uvUtScOA/cIfPmPX
DH8SDn.Gco8mHsB2hvJAg7l04kiFo/:20279:0:99999:7:10:20299:

Alt+Ctrl+F3

```
Red Hat Enterprise Linux 9.0 (Plow)
Kernel 5.14.0-70.22.1.el9_0.x86_64 on an x86_64

Activate the web console with: systemctl enable --now cockpit.socket

servera login: jerry
Password:
Login incorrect

servera login: jerry
Password:
Last failed login: Thu Jul 10 19:41:16 IST 2025 on tty3
There was 1 failed login attempt since the last successful login.
Last login: Thu Jul 10 19:31:24 on pts/0
[jerry@servera ~]$
[jerry@servera ~]$ setfont sun12x22
[jerry@servera ~]$
[jerry@servera ~]$ _
```

User logged in terminal tty3

[root@servera ~]# **usermod   -L   jerry**   → *Locking user account*

[root@servera ~]# **tail -1 /etc/shadow**

jerry:**!**6riNXmQ4y1incT30a$FUkdKIQ2FLKo/KapFuz361QsyMVAiCU0Jm2V0dW/uvUtScOA/cIfPmPX
DH8SDn.Gco8mHsB2hvJAg7l04kiFo/:20279:0:99999:7:10:20299:

> **!** before the encrypted password in /etc/shadow file denotes the password is locked
>
> And if account/password is locked that means user cannot logged in account

Alt + Ctrl + F5

```
Red Hat Enterprise Linux 9.0 (Plow)
Kernel 5.14.0-70.22.1.el9_0.x86_64 on an x86_64

Activate the web console with: systemctl enable --now cockpit.socket

servera login: jerry
Password:
Login incorrect

servera login: jerry
Password:
Login incorrect

servera login:
```

User Cannot logged in as the account is locked

Alt+Ctrl +F3

```
Red Hat Enterprise Linux 9.0 (Plow)
Kernel 5.14.0-70.22.1.el9_0.x86_64 on an x86_64

Activate the web console with: systemctl enable --now cockpit.socket

servera login: jerry
Password:
Login incorrect

servera login: jerry
Password:
Last failed login: Thu Jul 10 19:41:16 IST 2025 on tty3
There was 1 failed login attempt since the last successful login.
Last login: Thu Jul 10 19:31:24 on pts/0
[jerry@servera ~]$
[jerry@servera ~]$ setfont sun12x22
[jerry@servera ~]$
[jerry@servera ~]$ touch   abc
[jerry@servera ~]$ ls
abc  test
[jerry@servera ~]$ passwd
Changing password for user jerry.
Current password:
Current Password:
passwd: Authentication token manipulation error
[jerry@servera ~]$
```

PassWord cannot be changed to previously logged in account. After locking the users account

[root@servera ~]# **usermod -U jerry**   → *Unlock user account*

[root@servera ~]# **tail -1 /etc/shadow**

jerry:==6riNXmQ4y1incT30a$FUkdKIQ2FLKo/KapFuz361QsyMVAiCU0Jm2V0dW/uvUtScOA/cIfPmPX== ==DH8SDn.Gco8mHsB2hvJAg7l04kiFo/:==20279:0:99999:7:10:20299:

Alt +Ctrl +F5

```
Red Hat Enterprise Linux 9.0 (Plow)
Kernel 5.14.0-70.22.1.el9_0.x86_64 on an x86_64

Activate the web console with: systemctl enable --now cockpit.socket

servera login: jerry
Password:
Last failed login: Thu Jul 10 19:43:23 IST 2025 on tty5
There were 2 failed login attempts since the last successful login.
Last login: Thu Jul 10 19:41:23 on tty3
[jerry@servera ~]$
[jerry@servera ~]$
```

Successfully logged in to terminal tty5 after unlocking acount