

**nixCraft**

Linux and Unix tutorials for new and seasoned sysadmin

Linux List All Users In The System

last updated January 2, 2018 in [CentOS](#), [Debian](#) / [Ubuntu](#), [Linux](#), [RedHat](#) and [Friends](#), [Suse](#)

I 'm a new Linux sys admin and I'm unable to find the command to list all users on my RHEL server. What is the command to list users under Linux operating systems?



[/etc/passwd](#) file contains one line for each user account, with seven fields delimited by colons This is a text file. You can easily list users using the [cat command](#) or other commands such as [grep command](#)/[egrep command](#) and more. This page describes various Linux commands to list all users on Linux operating system.



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Linux list all users command

Type any one of the following command:

```
$ cat /etc/passwd
```

Sample outputs:

```

root:x:0:0:root:/root:/bin/bash
daemon:x:1:1:daemon:/usr/sbin:/bin/sh
bin:x:2:2:bin:/bin:/bin/sh
sys:x:3:3:sys:/dev:/bin/sh
sync:x:4:65534:sync:/bin:/bin/sync
games:x:5:60:games:/usr/games:/bin/sh
man:x:6:12:man:/var/cache/man:/bin/sh
....
..
...
```

OR use pagers such as more/less command as follows to view /etc/passwd file:

```
$ more /etc/passwd
```

```
$ less /etc/passwd
```

Sample outputs:

```

root:x:0:0:root:/root:/bin/bash
daemon:x:1:1:daemon:/usr/sbin:/bin/sh
bin:x:2:2:bin:/bin:/bin/sh
sys:x:3:3:sys:/dev:/bin/sh
sync:x:4:65534:sync:/bin:/bin/sync
games:x:5:60:games:/usr/games:/bin/sh
man:x:6:12:man:/var/cache/man:/bin/sh
lp:x:7:7:lp:/var/spool/lpd:/bin/sh
mail:x:8:8:mail:/var/mail:/bin/sh
news:x:9:9:news:/var/spool/news:/bin/sh
uucp:x:10:10:uucp:/var/spool/uucp:/bin/sh
proxy:x:13:13:proxy:/bin:/bin/sh
www-data:x:33:33:www-data:/var/www:/bin/sh
backup:x:34:34:backup:/var/backups:/bin/sh
list:x:38:38:Mailng List Manager:/var/list:/bin/sh
irc:x:39:39:ircd:/var/run/ircd:/bin/sh
gnats:x:41:41:Gnats Bug-Reporting System (admin):/var/lib/gnats:/bin/sh
nobody:x:65534:65534:nobody:/nonexistent:/bin/sh
libuuid:x:100:101::/var/lib/libuuid:/bin/sh
messagebus:x:101:103::/var/run/dbus:/bin/false
Debian-exim:x:102:104::/var/spool/exim4:/bin/false
statd:x:103:65534::/var/lib/nfs:/bin/false
avahi-autoipd:x:104:107:Avahi autoip daemon,,,:/var/lib/avahi-autoipd:/bin/false
avahi:x:105:108:Avahi mDNS daemon,,,:/var/run/avahi-daemon:/bin/false
usbmux:x:106:46:usbmux daemon,,,:/home/usbmux:/bin/false
Debian-gdm:x:107:115:Gnome Display Manager:/var/lib/gdm3:/bin/false
saned:x:108:117::/home/saned:/bin/false
hplip:x:109:7:HPLIP system user,,,:/var/run/hplip:/bin/false
vivek:x:1000:1000:Vivek Gite,,,:/home/vivek:/bin/bash
/etc/passwd
```

*The first field is the user name.
The user's login username. So
root, daemon, bin, sync, games
vivek, etc all are usernames.*

All
fields
are

Fig.01: List users using /etc/passwd

separated by a colon (:) symbol. Total seven fields exists. The first field is username. It is used when user logs in. It should be between 1 and 32 characters in length.

How to only List user names on Linux

To list only usernames type the following awk command:

```
$ awk -F':' '{ print $1}' /etc/passwd
```

Sample outputs:

```
root
daemon
bin
sys
sync
games
man
lp
mail
news
....
..
..hplip
vivek
bind
haldaemon
sshd
mysql
radvd
```

Another option is to use the cut command:

```
$ cut -d: -f1 /etc/passwd
```

Say hello to getent command

To get a list of all Linux users you type the following command:

```
$ getent passwd
$ getent passwd | grep tom
```

One can use the [compgen command to list all users and other resources](#) too:

```
$ compgen -u
```

A Note About System and General Users

Each user has numerical user ID called UID. It is defined in `/etc/passwd` file. The UID for each user is automatically selected using `/etc/login.defs` file when you use `useradd` command. To see current value, enter:

```
$ grep "^UID_MIN" /etc/login.defs
$ grep UID_MIN /etc/login.defs
```

Sample outputs:

```
UID_MIN          1000
#SYS_UID_MIN      100
```

1000 is minimum values for automatic uid selection in `useradd` command. In other words all normal system users must have `UID >= 1000` and only those users are allowed to login into system if shell is `bash/csh/tcsh/ksh` etc as defined [/etc/shells file](#). Type the following command to list all login users:

```
## get UID limit ##
l=$(grep "^UID_MIN" /etc/login.defs)
## use awk to print if UID >= $UID_LIMIT ##
awk -F':' -v "limit=${l##UID_MIN}" '{ if ( $3 >= limit ) print $1}' /etc/passwd
```

To see maximum values for automatic uid selection in `useradd` command, enter:

```
awk -F':' -v "min=${l##UID_MIN}" -v "max=${l##UID_MAX}" '{ if ( $3 >= min && $3 <= max ) print $0}' /etc/passwd
```

```
$ grep "^UID_MAX" /etc/login.defs
```

Sample outputs:

```
UID_MAX          60000
```

In other words all normal system users must have UID \geq 1000 (MIN) and UID \leq 60000 (MAX) and only those users are allowed to login into system if shell is bash/csh/tcsh/ksh etc as defined [/etc/shells file](#). Here is an updated code:

```
## get mini UID limit ##
l=$(grep "^UID_MIN" /etc/login.defs)

## get max UID limit ##
l1=$(grep "^UID_MAX" /etc/login.defs)

## use awk to print if UID  $\geq$  $MIN and UID  $\leq$  $MAX ##
awk -F':' -v "min=${l##UID_MIN}" -v "max=${l1##UID_MAX}" '{ if ( $3  $\geq$  min && $
```

Sample outputs:

```
vivek:x:500:500:./home/vivek:/bin/bash
raj:x:501:501:./home/raj:/bin/ksh
ash:x:502:502:./home/ash:/bin/zsh
jadmin:x:503:503:./home/jadmin:/bin/sh
jwww:x:504:504:./htdocs/html:/sbin/nologin
wwwcorp:x:505:505:./htdocs/corp:/sbin/nologin
wwwint:x:506:506:./htdocs/intranet:/bin/bash
scpftp:x:507:507:./htdocs/ftpjail:/bin/bash
rsynftp:x:508:508:./htdocs/projets:/bin/bash
mirror:x:509:509:./htdocs:/bin/bash
jony:x:510:510:./home/jony:/bin/ksh
amyk:x:511:511:./home/amyk:/bin/ksh
```

/sbin/nologin is used to politely refuse a login i.e. /sbin/nologin displays a message that an account is not available and exits non-zero. It is intended as a replacement shell field for accounts that have been disabled or you do not want user to login into system using ssh. To filter /sbin/nologin, enter:

```
#!/bin/bash
```

```
# Name: listusers.bash
# Purpose: List all normal user accounts in the system. Tested on RHEL / Debian
# Author: Vivek Gite <www.cyberciti.biz>, under GPL v2.0+
# -----
_l="/etc/login.defs"
_p="/etc/passwd"

## get mini UID limit ##
l=$(grep "^UID_MIN" $_l)

## get max UID limit ##
l1=$(grep "^UID_MAX" $_l)

## use awk to print if UID >= $MIN and UID <= $MAX and shell is not /sbin/nologin
awk -F':' -v "min=${l##UID_MIN}" -v "max=${l1##UID_MAX}" '{ if ( $3 >= min && $3 <= max && $7 != "/sbin/nologin" ) print $1, $2, $3, $7 }'
```

Sample outputs:

```
vivek:x:500:500:./home/vivek:/bin/bash
raj:x:501:501:./home/raj:/bin/ksh
ash:x:502:502:./home/ash:/bin/zsh
jadmin:x:503:503:./home/jadmin:/bin/sh
wwwint:x:506:506:./htdocs/intranet:/bin/bash
scpftp:x:507:507:./htdocs/ftpjail:/bin/bash
rsynftp:x:508:508:./htdocs/projets:/bin/bash
mirror:x:509:509:./htdocs:/bin/bash
jony:x:510:510:./home/jony:/bin/ksh
amyk:x:511:511:./home/amyk:/bin/ksh
```

Finally, this script lists both system and users accounts:

```
#!/bin/bash
# Name: listusers.bash
# Purpose: List all normal user and system accounts in the system. Tested on RHEL / Debian
# Author: Vivek Gite <www.cyberciti.biz>, under GPL v2.0+
# -----
_l="/etc/login.defs"
_p="/etc/passwd"

## get mini UID limit ##
l=$(grep "^UID_MIN" $_l)

## get max UID limit ##
l1=$(grep "^UID_MAX" $_l)

## use awk to print if UID >= $MIN and UID <= $MAX and shell is not /sbin/nologin
echo "-----[ Normal User Accounts ]-----"
awk -F':' -v "min=${l##UID_MIN}" -v "max=${l1##UID_MAX}" '{ if ( $3 >= min && $3 <= max && $7 != "/sbin/nologin" ) print $1, $2, $3, $7 }'
```

```
echo ""
echo "-----[ System User Accounts ]-----"
awk -F':' -v "min=${1##UID_MIN}" -v "max=${11##UID_MAX}" '{ if ( !($3 >= min &&
```

Sample outputs:

```
-----[ Normal User Accounts ]-----
```

```
vivek:x:500:500:~/home/vivek:/bin/bash
raj:x:501:501:~/home/raj:/bin/ksh
ash:x:502:502:~/home/ash:/bin/zsh
jadmin:x:503:503:~/home/jadmin:/bin/sh
wwwint:x:506:506:~/htdocs/intranet:/bin/bash
scpftp:x:507:507:~/htdocs/ftpjail:/bin/bash
rsynftp:x:508:508:~/htdocs/projets:/bin/bash
mirror:x:509:509:~/htdocs:/bin/bash
jony:x:510:510:~/home/jony:/bin/ksh
amyk:x:511:511:~/home/amyk:/bin/ksh
```

```
-----[ System User Accounts ]-----
```

```
root:x:0:0:root:/root:/bin/bash
bin:x:1:1:bin:/bin:/sbin/nologin
daemon:x:2:2:daemon:/sbin:/sbin/nologin
adm:x:3:4:adm:/var/adm:/sbin/nologin
lp:x:4:7:lp:/var/spool/lpd:/sbin/nologin
sync:x:5:0:sync:/sbin:/bin/sync
shutdown:x:6:0:shutdown:/sbin:/sbin/shutdown
halt:x:7:0:halt:/sbin:/sbin/halt
mail:x:8:12:mail:/var/spool/mail:/sbin/nologin
uucp:x:10:14:uucp:/var/spool/uucp:/sbin/nologin
operator:x:11:0:operator:/root:/sbin/nologin
games:x:12:100:games:/usr/games:/sbin/nologin
gopher:x:13:30:gopher:/var/gopher:/sbin/nologin
ftp:x:14:50:FTP User:/var/ftp:/sbin/nologin
nobody:x:99:99:Nobody:/:/sbin/nologin
dbus:x:81:81:System message bus:/:/sbin/nologin
vcsa:x:69:69:virtual console memory owner:/dev:/sbin/nologin
abrt:x:173:173:~/etc/abrt:/sbin/nologin
haldaemon:x:68:68:HAL daemon:/:/sbin/nologin
ntp:x:38:38:~/etc/ntp:/sbin/nologin
saslauth:x:499:499:"Saslauthd user":/var/empty/saslauth:/sbin/nologin
postfix:x:89:89:~/var/spool/postfix:/sbin/nologin
```

```
apache:x:48:48:Apache:/var/www:/sbin/nologin
webalizer:x:67:67:Webalizer:/var/www/usage:/sbin/nologin
sshd:x:74:74:Privilege-separated SSH:/var/empty/sshd:/sbin/nologin
tcpdump:x:72:72:::/sbin/nologin
mysql:x:27:27:MySQL Server:/var/lib/mysql:/bin/bash
memcached:x:498:496:Memcached daemon:/var/run/memcached:/sbin/nologin
squid:x:23:23::/var/spool/squid:/sbin/nologin
rpc:x:32:32:Rpcbind Daemon:/var/cache/rpcbind:/sbin/nologin
rpcuser:x:29:29:RPC Service User:/var/lib/nfs:/sbin/nologin
nfsnobody:x:65534:65534:Anonymous NFS User:/var/lib/nfs:/sbin/nologin
```

See also: [How to check list of users in Unix](#)

Posted by: Vivek Gite

The author is the creator of nixCraft and a seasoned sysadmin, DevOps engineer, and a trainer for the Linux operating system/Unix shell scripting. Get the **latest tutorials on SysAdmin, Linux/Unix and open source topics** via [RSS/XML feed](#) or [weekly email newsletter](#).

GOT FEEDBACK? CLICK HERE TO JOIN THE DISCUSSION

 24 comment

John Eisenhower April 10, 2012 at 12:02 am

I would change it to ``cat /etc/passwd | grep -v nologin`` which gives a clearer view into which users can actually login and execute.

nixCraft April 10, 2012 at 2:09 pm

Thanks for the feedback! The faq has been updated with more info.

Carlos Ruiz July 17, 2013 at 7:19 pm

This is one of the most common mistakes of unexperimented people on UNIX-like utilities.

Instead of 'cat \$file | grep \$pattern' you should use 'grep \$pattern \$file' which is much clearer and allows for easier sudoing.

Nevertheless, I'll take note of the 'nologin' advice. Thanks!

JOhn Doe January 27, 2017 at 8:49 am

"Instead of 'cat \$file | grep \$pattern' you should use 'grep \$pattern \$file' "
I'm one more mistaken user :)

Claudio Nanni April 10, 2012 at 5:16 pm

I would also have a look at:

last

lastb

lastlog

quite interesting commands on users activity on a host.

Claudio

nixCraft April 10, 2012 at 5:28 pm

Good call. Appreciate your comment.

marc May 4, 2012 at 7:07 am

ldap enviroment, whats about:

```
# getent passwd |egrep -v 'nologin|false'
```

i recommend this to get a userlist

maarten May 22, 2012 at 5:35 pm

The ldap and nis scenarios for centralized login administration are omitted here.

The local passwd file may be just the tip of the login iceberg if either of those is set in /etc/nsswitch.conf

For example:

```
# ypcat passwd
```

would be the common command if nis is set up.

LuÃs Pedro Algarvio May 22, 2013 at 12:31 am

new version, with columns

```
#!/bin/bash
# Name: listusers.bash
# Purpose: List all normal user and system accounts in the system. Tested on RHE
# Author: Vivek Gite , under GPL v2.0+
# https://www.cyberciti.biz/faq/linux-list-users-command/
# -----
_l="/etc/login.defs"
_p="/etc/passwd"

## get mini UID limit ##
l=$(grep "^UID_MIN" $_l)

## get max UID limit ##
l1=$(grep "^UID_MAX" $_l)

## use awk to print if UID >= $MIN and UID = min && $3 = min && $3 <= max && $7

echo " "

## use awk to print if UID $MAX ##
echo "-----[ System User Accounts ]-----"
printf "%-15s %-5s %-5s %-25s %-10sn" "Login" "UID" "GID" "Home" "Shell"
echo "-----"
#awk -F':' -v "min=${l##UID_MIN}" -v "max=${l1##UID_MAX}" '{ if ( !( $3 >= min &
```

LuÑs Pedro Algarvio May 22, 2013 at 12:32 am

and a group list script

```
#!/bin/bash
# Name: listgroups.bash
# Purpose: List all normal user and system groups in the system. Tested on RHEL
# Author: Vivek Gite , under GPL v2.0+
# https://www.cyberciti.biz/faq/linux-list-users-command/
# -----
_l="/etc/login.defs"
_g="/etc/group"

## get mini GID limit ##
l=$(grep "^GID_MIN" $_l)

## get max GID limit ##
l1=$(grep "^GID_MAX" $_l)

## use awk to print if GID >= $MIN and GID = min && $3 = min && $3 <= max ) prin

echo " "

## use awk to print if GID $MAX ##
echo "-----[ System User Groups ]-----"
printf "%-15s %-5s %-10sn" "Group" "GID" "Logins"
echo "-----"
#awk -F':' -v "min=${l##GID_MIN}" -v "max=${l1##GID_MAX}" '{ if ( !( $3 >= min &
```

LuÑs Pedro Algarvio May 22, 2013 at 12:34 am

hummm looks like it got cut.

drop me an email and ill send both scripts

theresa May 29, 2013 at 8:56 am

hi there,

great script, really helps me a lot, and it's also very well documented! great work!

however, since i'm a newbie when it comes to shell scripting, how do I direct the output from stdout into a file?

I've found something like this:

```
2>&1 | tee -a users.txt
```

but somehow this doesn't quite work :(

any help would be appreciated!

thanks!

Tyler June 14, 2013 at 3:17 am

Redirect the output to a file with the first command and then append the second command output:

...

```
## use awk to print if UID >= $MIN and UID < $MAX to /tmp/userlist
awk -F':' -v "min=${1##UID_MIN}" -v "max=${1##UID_MAX}" '{ if ( $3 >= min && $3 < max ) print $1, $2, $3 }' >> /tmp/userlist

echo "" >> /tmp/userlist
echo "-----[ System User Accounts ]-----" >> /tmp/userlist
awk -F':' -v "min=${1##UID_MIN}" -v "max=${1##UID_MAX}" '{ if ( !($3 >= min && $3 < max) ) print $1, $2, $3 }' >> /tmp/userlist
```

rk September 8, 2013 at 3:09 am

can some body help me with the following question?

Find the number of users on your system whose user ids are greater than 8?

Liviu September 13, 2013 at 7:55 am

Thanks. Short and to the point.

Sanchit March 19, 2014 at 2:58 pm

Can even use this!

```
cat /etc/passwd | grep "/home/" | awk -F':' '{ print $1}'
```

Martin March 2, 2015 at 7:06 pm

Thanks for this!

rahul kumar April 21, 2014 at 4:47 pm

how can see only system users in linux using command

Robert Nix June 9, 2014 at 12:53 pm

Note that none of this accounts for systems using an external source for its users. If you are using ldap or (gasp!) Active Directory to source your users, then listing `/etc/passwd` will not yield the desired results, as you won't see the bulk of your users.

The command we use, insted of "`cat /etc/passwd`", is "`getent passwd`", which returns the combined list of users from `/etc/passwd` (local users) and other sources. The `getent` command will give you a more realistic view of your users, on any system you encounter.

BobH November 5, 2014 at 6:45 pm

Could you show how I would use your command in the final script as posted by the original poster? I think that is the issue I'm having where it is only showing the users with Local Authentication, not AD Users (yes ack.. AD).

Thanks,
Bob

aaron April 16, 2015 at 8:12 am

Excellent explanation and script of list users in linux! Congrats Mate!

Aaron

Harsh Jain May 7, 2015 at 11:26 am

Thanks for detailed tutorial.

I configured the VNC as per given step. How to access the same GUI from host machine as we accessing from VNC client.

anonymous March 5, 2016 at 12:33 am

Regular user accounts:

```
cat /etc/passwd | grep ":[0-9][0-9][0-9][0-9]:"
```

System user accounts:

1) without "nologin"

```
cat /etc/passwd | egrep ":[0-9][0-9][0-9]:|:[0-9][0-9]:|:[0-9]:" | egrep -v  
'nologin|false'
```

2) with "nologin"

```
cat /etc/passwd | egrep ":[0-9][0-9][0-9]:|:[0-9][0-9]:|:[0-9]:"
```

OR (if you like a separate, clean UIDs listing of one, two or three digits):

```
cat /etc/passwd | grep ":[0-9]:"  
cat /etc/passwd | grep ":[0-9][0-9]:"  
cat /etc/passwd | grep ":[0-9][0-9][0-9]:"
```

anonymous March 5, 2016 at 11:50 pm

I actually improved this a little bit; here are some useful aliases which you can put in the ~/.bashrc file:

```
# 'getus'           &gt; Get REGULAR Users
# 'getsysus'       &gt; Get SYSTEM Users
# 'getgr'          &gt; Get USER Groups
# 'getsysgr'       &gt; Get SYSTEM Groups
# 'getwheel'       &gt; Get WHEEL's Users
alias getus='getent passwd | egrep ":[0-9][0-9][0-9][0-9]:|[0-9][0-9][0-9][0-9]'
alias getsysus='getent passwd | egrep -v ":[0-9][0-9][0-9][0-9]:|[0-9][0-9][0-9][0-9]'
alias getgr='getent group | egrep ":[0-9][0-9][0-9][0-9]:|[0-9][0-9][0-9][0-9]'
alias getsysgr='getent group | egrep -v ":[0-9][0-9][0-9][0-9]:|[0-9][0-9][0-9][0-9]'
alias getwheel='getent group | grep ^wheel'
```

Also if you like to 'egrep' the 'nologin' out of 'getsysus' and 'getsysgr' above:
getsysus | **egrep** -v nologin
getsysgr | **egrep** -v nologin

Or, simply add them altogether on the above aliases like so:

```
alias getsysus='getent passwd | egrep -v ":[0-9][0-9][0-9][0-9]:|[0-9][0-9][0-9][0-9]'
alias getsysgr='getent group | egrep -v ":[0-9][0-9][0-9][0-9]:|[0-9][0-9][0-9][0-9]'
```

Have a question? Post it on our forum!

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