

The ssh command has an option to display its version number. Use man to find out what is the correct command line option. – ssh -V

```
[bob@centos-host ~]$ man
What manual page do you want?
[bob@centos-host ~]$ man ssh
[bob@centos-host ~]$ ssh -V
OpenSSH_8.0p1, OpenSSL 1.1.1k  FIPS 25 Mar 2021
[bob@centos-host ~]$
```

Find out using which command you can change the static hostname of your Linux system? Hostnamectl  
Run apropos hostname command and find out using which command you can change the hostname of your Linux system.

```
[bob@centos-host ~]$ apropos hostname
BIO_ADDR_hostname_string (3ssl) - BIO_ADDR routines
BIO_get_conn_hostname (3ssl) - connect BIO
BIO_set_conn_hostname (3ssl) - connect BIO
freehostent (3) - get network hostnames and addresses
gethostname (2) - get/set hostname
gethostname (3p) - get name of current host
getipnodebyaddr (3) - get network hostnames and addresses
getipnodebyname (3) - get network hostnames and addresses
hostname (1) - show or set the system's host name
hostname (5) - Local hostname configuration file
hostname (7) - hostname resolution description
hostnamectl (1) - Control the system hostname
hosts (5) - static table lookup for hostnames
libnss_myhostname.so.2 (8) - Provide hostname resolution for the locally configured system ho...
libnss_mymachines.so.2 (8) - Provide hostname resolution for local container instances.
libnss_resolve.so.2 (8) - Provide hostname resolution via systemd-resolved.service
nss-myhostname (8) - Provide hostname resolution for the locally configured system hostname.
nss-mymachines (8) - Provide hostname resolution for local container instances.
nss-resolve (8) - Provide hostname resolution via systemd-resolved.service
sethostname (2) - get/set hostname
SSL_SESSION_get0_hostname (3ssl) - get and set SNI and ALPN data associated with a session
SSL_SESSION_set1_hostname (3ssl) - get and set SNI and ALPN data associated with a session
Sys::Hostname (3pm) - Try every conceivable way to get hostname
systemd-hostnamed (8) - Host name bus mechanism
systemd-hostnamed.service (8) - Host name bus mechanism
[bob@centos-host ~]$
```

If the apropos command does not work because your manual pages are not indexed, what command you can use to manually refresh these?

mandb command is used If the apropos command does not work, because your manual pages are not indexed.

You are trying to use ssh alex@localhost to log in through SSH. Your connection is refused. ssh has a command line option to show you the verbose output. That will show a lot more status messages and help you debug why this connection is failing. What is the correct option for that? (you need not to make ssh connection work at this point)

Man ssh , ssh -v alex@localhost

You type host in the terminal. What keys do you press to see some suggestions about what you can type here?  
Tab tab

What section of the manual pages deals with System administration commands? Section 8 of the manual pages deals with System administration commands.

How many hidden files are there in /home/bob/data/ directory? 2

```
[bob@centos-host ~]$ cd /home/bob/data
[bob@centos-host data]$ ls
data.txt
[bob@centos-host data]$ ls -a
.  ..  .myfile1  .myfile2  data.txt
[bob@centos-host data]$
```

SSH into dev-host01 host from centos-host and create a blank file called /home/bob/myfile in dev-host01 host. You should be able to create the file using touch /home/bob/myfile command.

Please find below the SSH credentials for dev-host01 host:

Host: dev-host01

Username: bob

Password: caleston123

Remember to type exit when you finish this task.

```
[bob@centos-host data]$ ssh bob@dev-host01
The authenticity of host 'dev-host01 (192.36.191.11)' can't be established.
ECDSA key fingerprint is SHA256:uCgHj5nFJhH23RtLaoQ0WbMLnERDygmFtVuF4/V7dJE.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'dev-host01,192.36.191.11' (ECDSA) to the list of known hosts.
bob@dev-host01's password:
[bob@dev-host01 ~]$ touch /home/bob/myfile
[bob@dev-host01 ~]$ ls
myfile
[bob@dev-host01 ~]$ pwd
/home/bob
[bob@dev-host01 ~]$
```

We are trying to run apropos ssh command to get some details about the commands related to ssh but we are getting this error:

ssh: nothing appropriate.

Look into the issue and fix the same to make apropos ssh command work.

Solution : sudo mandb

Using apropos command, find out the the configuration file for NFS mounts and save its name in /home/bob/nfs file.

```
[bob@centos-host ~]$ apropos "NFS mounts"
nfsmount.conf (5)      - Configuration file for NFS mounts
nfsrahead (5)         - Configure the readahead for NFS mounts
[bob@centos-host ~]$ vi /home/bob/nfs
[bob@centos-host ~]$
```

What is the top-level directory in Linux? /

In what form does Linux organise files and directories? Filesystem tree

What is the command to print your current working directory? Pwd

What is the command to climb up one directory? Cd ..

Absolute paths always start out with the root directory /. Then we specify the sub-directories we want to descend into, /home/bob/Documents/Invoice.pdf is an example of such a path. In this case, first home, then bob, then Documents. We can see the sub-directory names are separated by a / and we finally get to the file

we want to access i.e Invoice.pdf. An absolute path can end with the name of a file or a directory. As per the example given above If we'd want to delete the Documents directory, how would we specify the path?  
/home/bob/documneyts

Create a directory named lfcs under /home/bob directory.

```
[bob@centos-host ~]$ cd /home/bob
[bob@centos-host ~]$ ls
Documents  myfile.txt
[bob@centos-host ~]$ mkdir lfcs
[bob@centos-host ~]$
```

Create a blank file named lfcs.txt under /home/bob/lfcs directory.

```
[bob@centos-host ~]$ cd lfcs/
[bob@centos-host lfcs]$ ls
[bob@centos-host lfcs]$ touch lfcs.txt
[bob@centos-host lfcs]$
```

Copy /tmp/Invoice directory (including all its contents) to /home/bob directory.

```
[bob@centos-host lfcs]$ cp -r /tmp/Invoice /home/bob
[bob@centos-host lfcs]$
```

Copy /home/bob/myfile.txt file to /home/bob/data/ directory, make sure to preserve its attributes.

```
[bob@centos-host lfcs]$ cp -a /home/bob/myfile.txt /home/bob/data/
[bob@centos-host lfcs]$
```

Copy the /home/bob/lfcs directory (including all its content) into /home/bob/old-data/ directory.

```
[bob@centos-host lfcs]$ cp -a /home/bob/lfcs /home/bob/old-data/
[bob@centos-host lfcs]$
```

Delete /home/bob/lfcs/lfcs.txt file.

```
[bob@centos-host lfcs]$ rm -rf /home/bob/lfcs/lfcs.txt
[bob@centos-host lfcs]$
```

Move all content of /home/bob/lfcs directory to /home/bob/new-data/ directory.

```
[bob@centos-host lfcs]$ mv /home/bob/lfcs /home/bob/new-data/
[bob@centos-host lfcs]$
```

Delete directory /home/bob/lfcs .

Create a soft link to /tmp directory. Create this link in /home/bob directory and call it link\_to\_tmp.

```
[bob@centos-host lfcs]$ rm -rf /home/bob/lfcs
[bob@centos-host lfcs]$ ln -s /tmp /home/bob/link_to_tmp
[bob@centos-host lfcs]$
```

Create a hard link to /tmp/hlink file. Create this link in /home/bob/ directory and call it hlink.

```
[bob@centos-host lfcs]$ ln -s /tmp/hlink /home/bob/hlink
[bob@centos-host lfcs]$
```

There is a file called /home/bob/new\_file, rename this to /home/bob/old\_file.

```
[bob@centos-host lfcs]$ mv /home/bob/new_file /home/bob/old_file
[bob@centos-host lfcs]$
```

Create a directory named 9 under /tmp/1/2/3/4/5/6/7/8 directory. Please note that the structure of sub-directories, from 1 to 8 does not exist. However, mkdir has a command line option to automatically create all of

these sub-directories automatically in one shot, instead of 9 consecutive commands. This option is described in the help output or manual pages as make parent directories as needed. Find out what the correct option is and use it to create the directory in one shot.

```
[bob@centos-host lfc$] $ mkdir -p /tmp/1/2/3/4/5/6/7/8/9
```

ls -l shows you the time when a file has been last modified, but it only shows you the hour and the minute, usually in a form like 17:53. Find another way to make ls display the full/exact last modified time for the files in /home/bob directory.

At what exact time was important\_file created/modified?

```
[bob@centos-host ~]$ ls --full-time
total 24
drwxr-xr-x 2 root root 4096 2023-04-24 16:38:25.878630159 +0000 Documents
drwxr-xr-x 3 bob bob 4096 2023-04-24 16:50:58.347341570 +0000 Invoice
drwxr-xr-x 2 bob bob 4096 2023-04-24 16:51:36.678841884 +0000 data
-rw-r--r-- 2 bob bob 0 2023-04-24 16:55:31.060244864 +0000 hlink
-rw-r--r-- 1 root root 0 2015-12-18 01:30:09.000000000 +0000 important_file
lrwxrwxrwx 1 bob bob 4 2023-04-24 16:55:18.835128506 +0000 link_to_tmp -> /tmp
-rw-r--r-- 1 bob bob 0 2023-04-24 16:36:43.705300403 +0000 myfile.txt
drwxr-xr-x 3 bob bob 4096 2023-04-24 16:53:46.942737177 +0000 new-data
drwxrwxr-x 5 bob bob 4096 2023-04-24 16:52:43.040901861 +0000 old-data
-rw-r--r-- 1 root root 28 2023-04-24 16:56:26.493306842 +0000 old_file
```

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