Lab Assignment

Cybersecurity Professional Program

Linux Security

Services and Hardening

LNX-05-L2

Install and Configure Samba

Lab Objective

Understand how to transfer files between Windows and Linux using Samba and FTP.

Lab Mission

Perform a basic configuration of Samba, provide access to Samba shares via an MS Windows client machine, and create an FTP server to transfer files from another machine.

Lab Duration

30–40 minutes

Requirements

- Knowledge of FTP commands
- Knowledge of the Samba protocol
- Working knowledge of operating systems

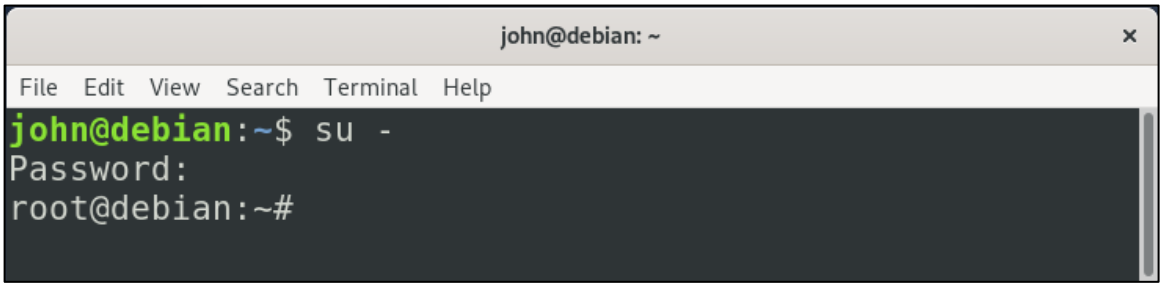
Resources

- Environment & Tools
    - VirtualBox
        - Debian
    - Windows

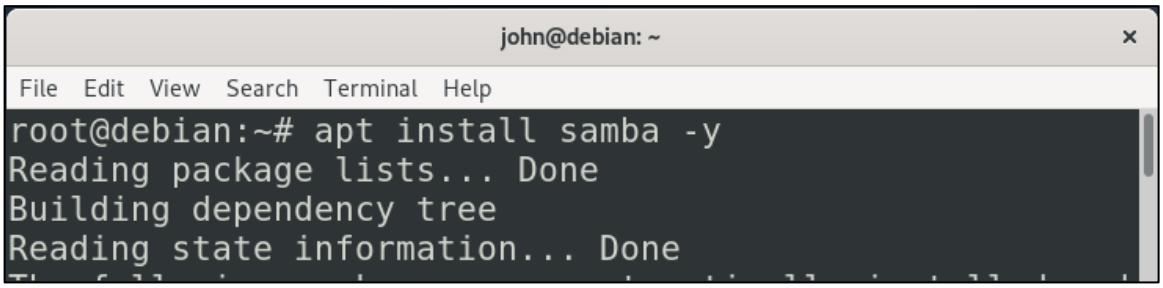
Lab Task 1: Samba Setup

In this task, you will install the Samba service in the Debian VM.

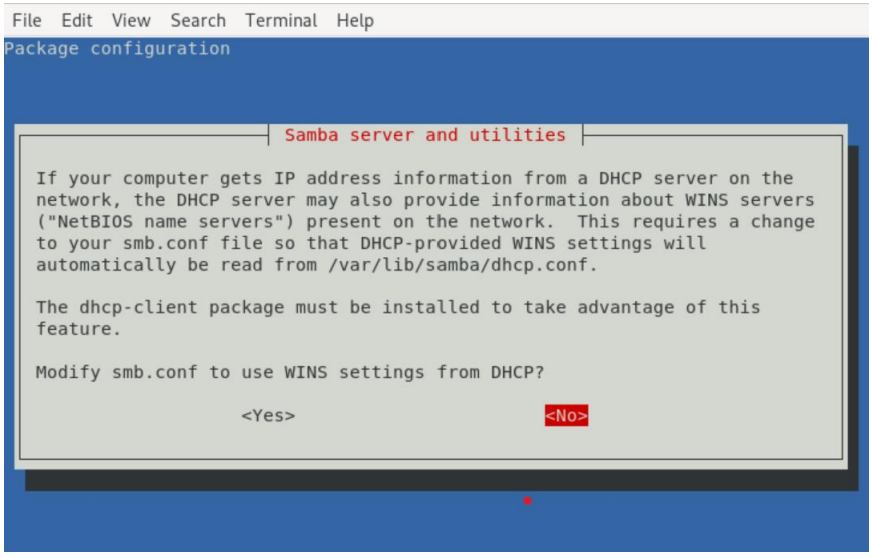
1. Open the terminal in the Debian machine and use the command ***su –*** to switch to the root user.



2. Use the command ***apt install samba -y*** to install the Samba service.

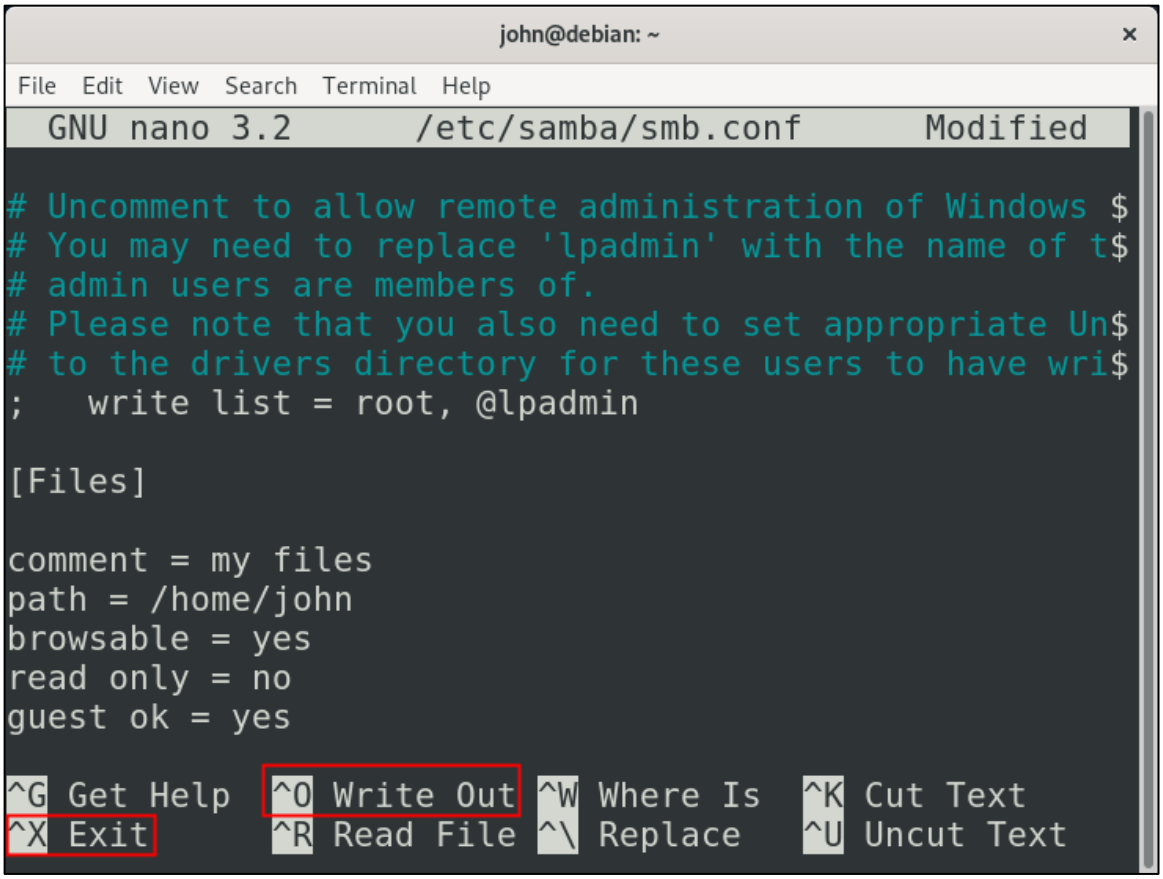


3. When prompted, select ***No***.

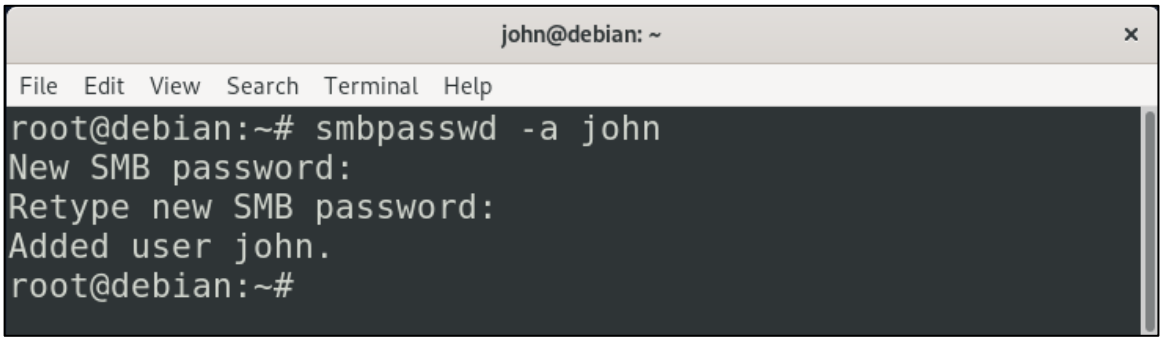


4 Use the command ***nano /etc/samba/smb.conf*** to access the service configuration file.

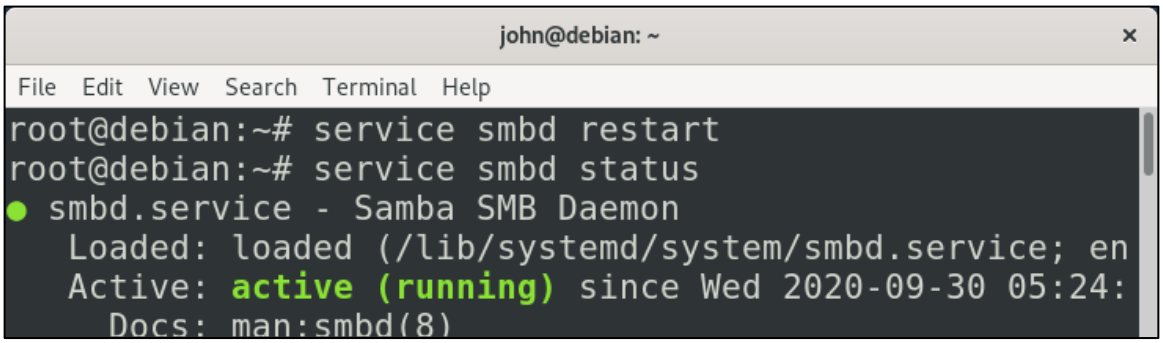
5 Scroll to the end of the file and add the following information:
[Files]: The name of the share
comment = my files: Brief comment describing the share
path = /home/<your user>: Absolute path to the share
browsable = yes: If users can browse to the share
read only = no: If users can write to the share
guest ok = yes: If guests can access the share
Save and exit the file.



6 Use the command ***smbpasswd -a <user>*** to add your user to the SMB service. Enter a new password when asked.



7 Use the command ***service smbd restart*** to activate the service. Use the command ***service smbd status*** to verify it is active.

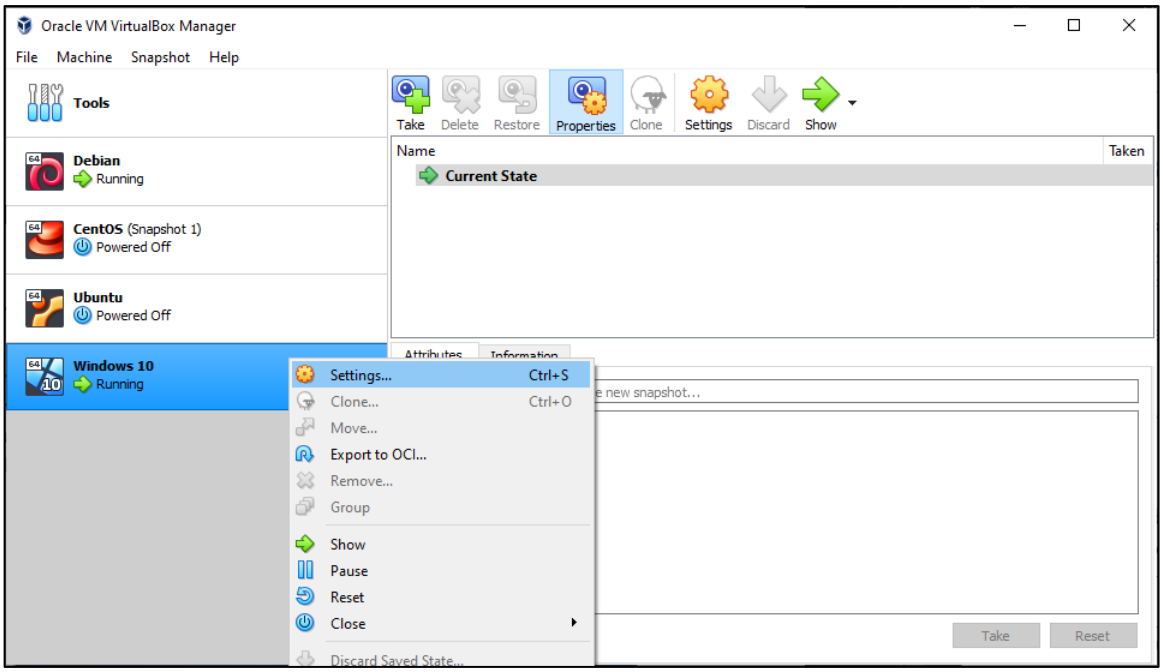


Lab Task 2: Connect to the Share

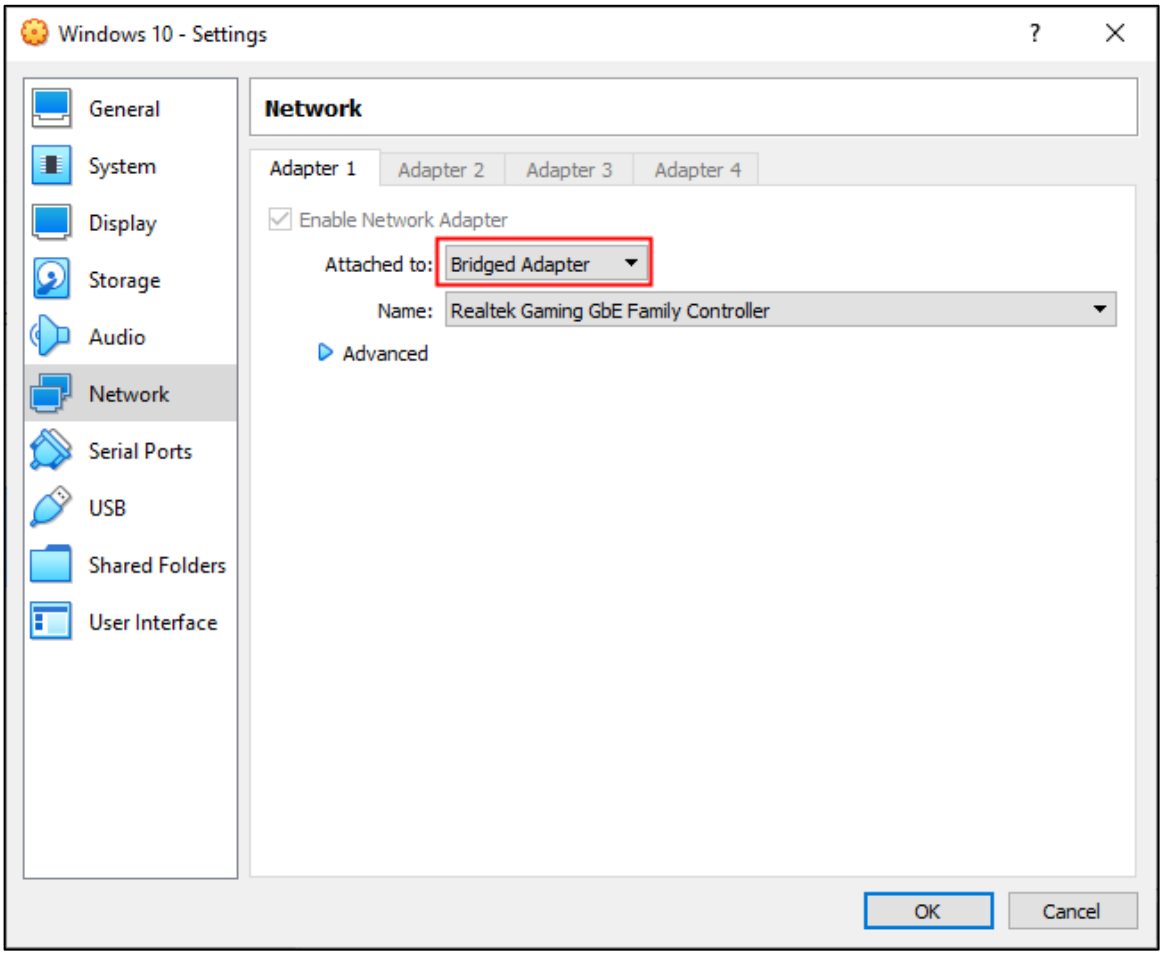
In this task, you will connect to the directory shared in Debian from a Windows machine. Use an existing Windows machine (virtual or host). If you don't have a Windows machine, follow the Windows 10 installation guide to create one.

Note: If you install a new Windows VM, follow only the first three procedures in the installation guide.

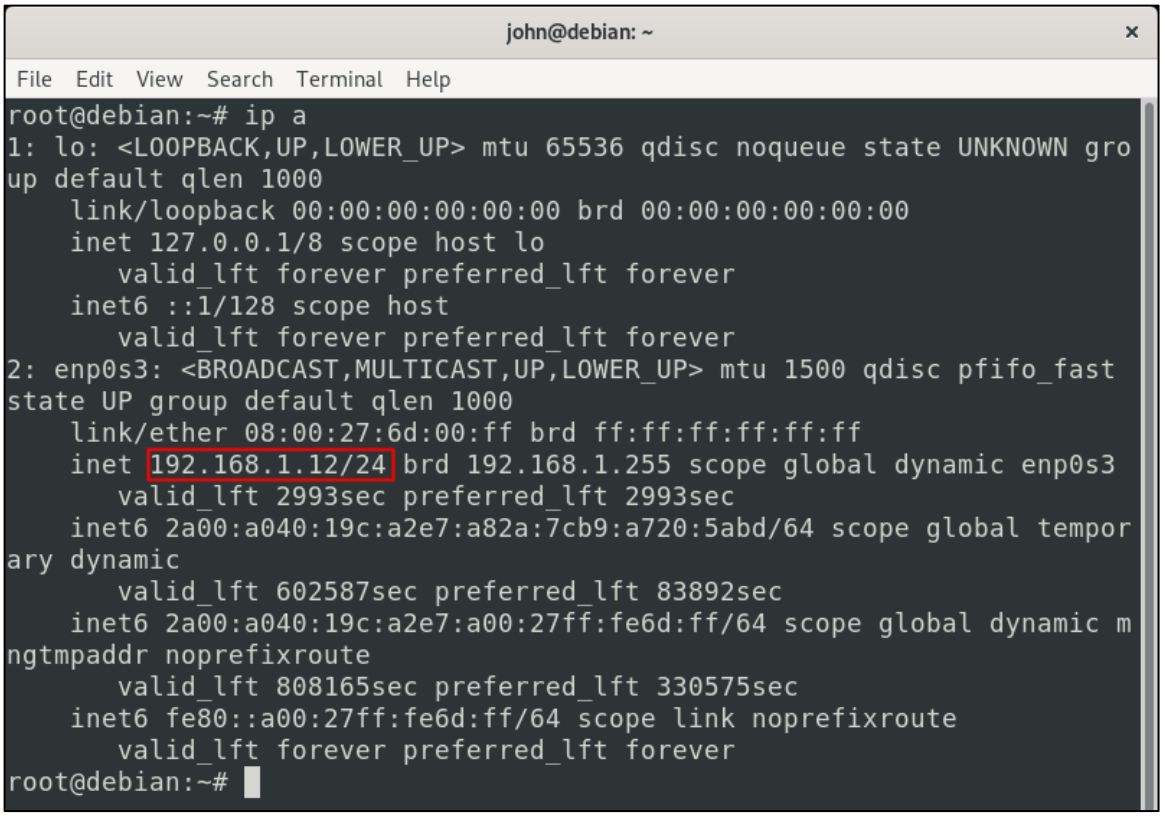
1 Open your Windows VM settings by right-clicking the VM and selecting ***Settings…***



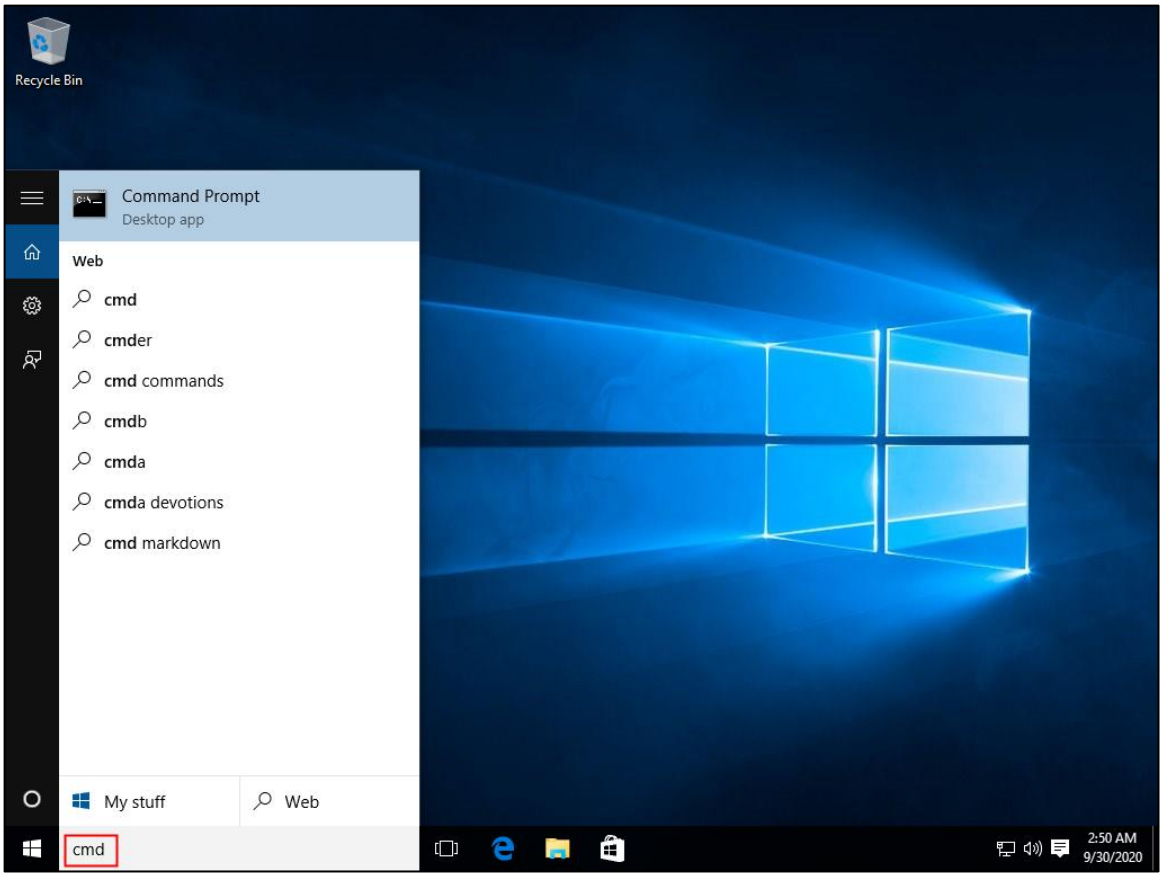
2 In the settings window, navigate to **Network** and ensure the adapter is set to ***Bridged Adapter***.



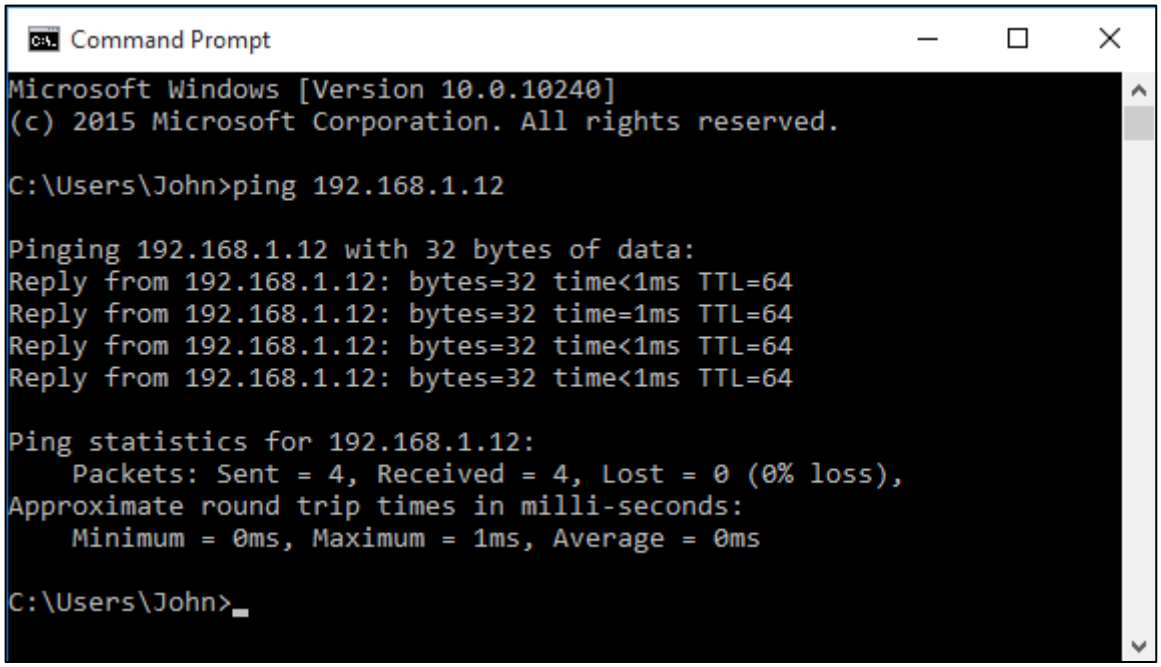
3 In your Debian machine, use the command ***ip a*** to check its IP address.



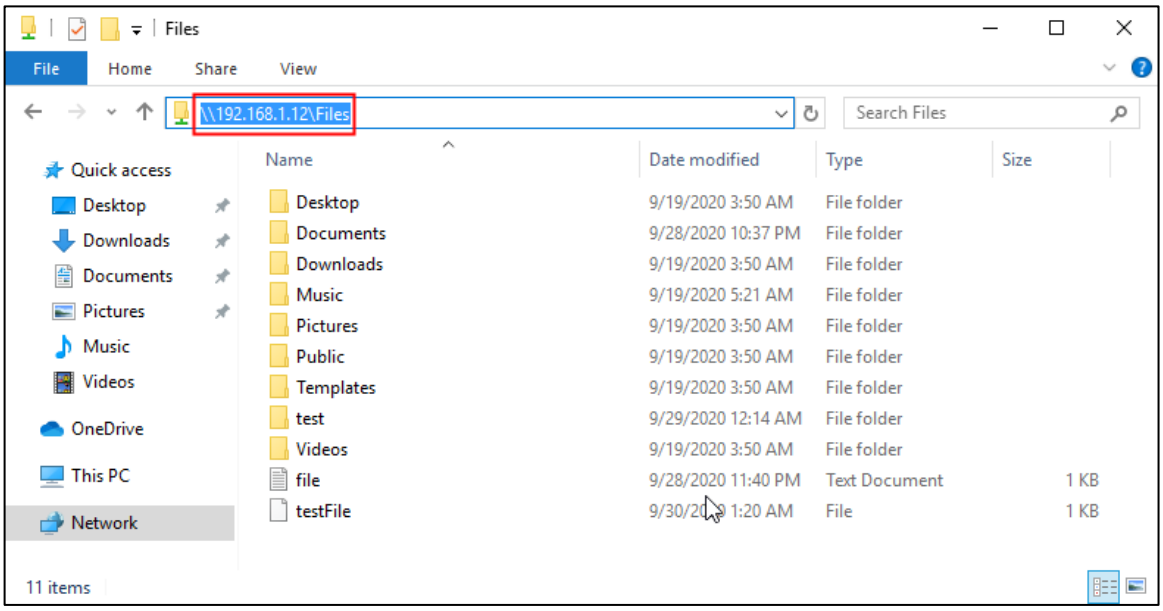
4 Open the CMD in the Windows machine.



5 Use the command ***ping <Debian IP>*** to verify both machines can communicate.



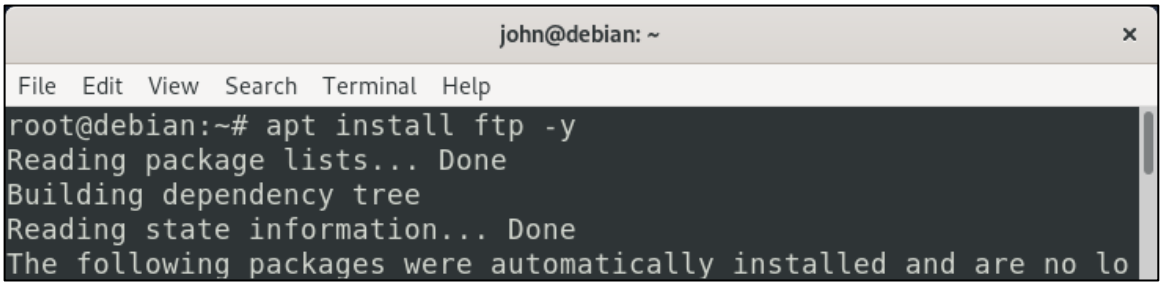
6 Open the File Explorer in Windows and insert the path to the Debian's shared file as follows: ***\\<IP>\Files***



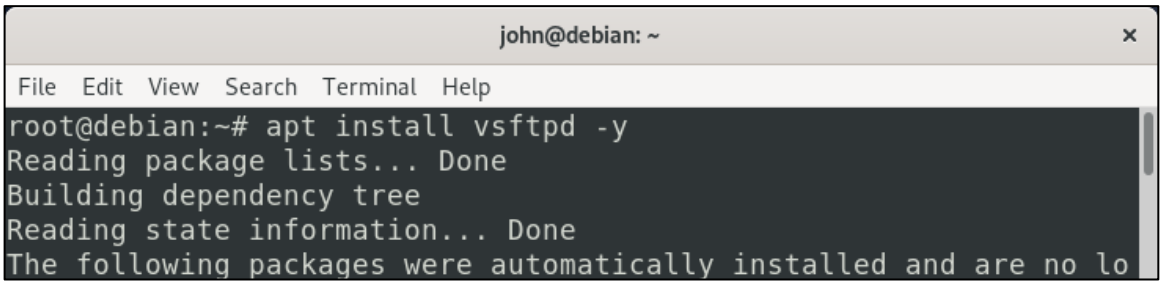
Lab Task 3: Install the FTP Server

Create an FTP server and transfer files to it.

1. In the Debian machine, use the command ***apt install ftp -y*** to install the FTP service.

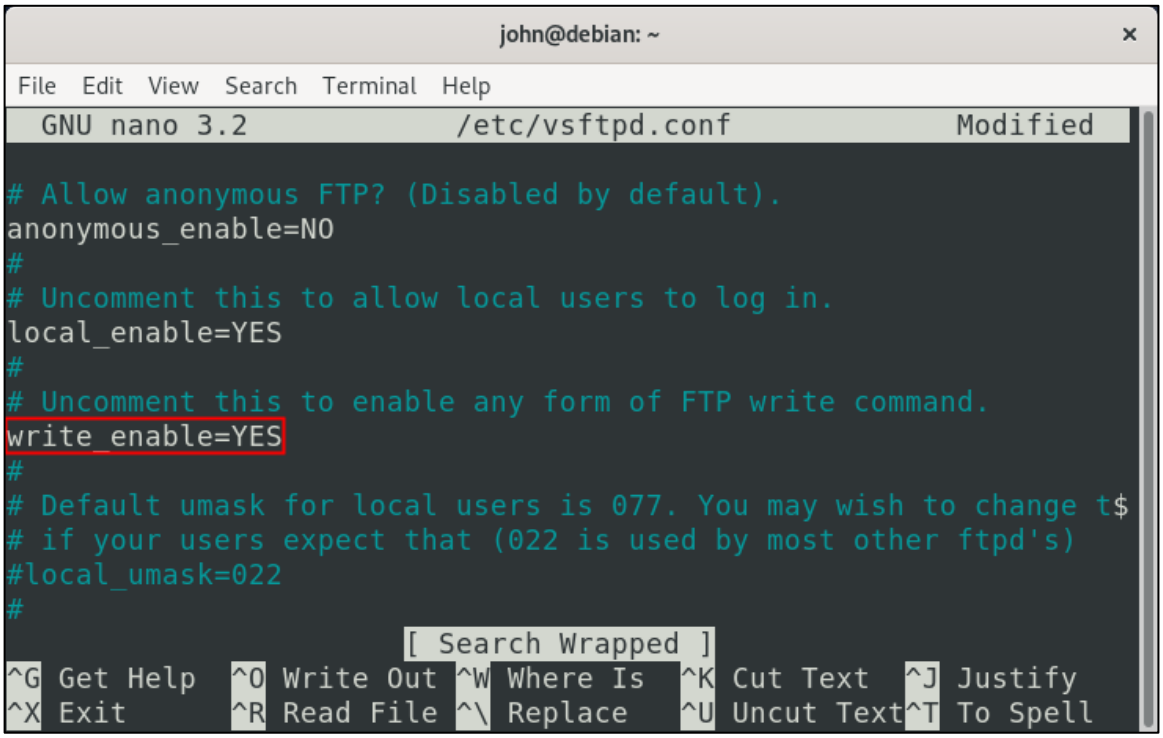


2. Use the command ***apt install vsftpd -y*** to install the vsftpd service.

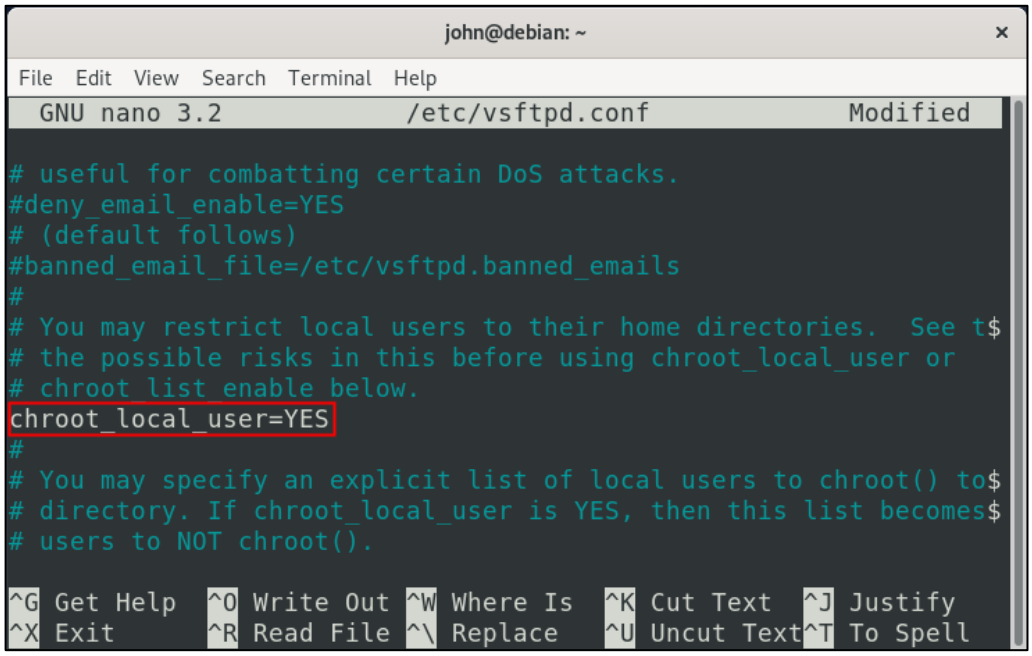


3. Use the command ***nano /etc/vsftpd.conf*** to open the service's configuration file.

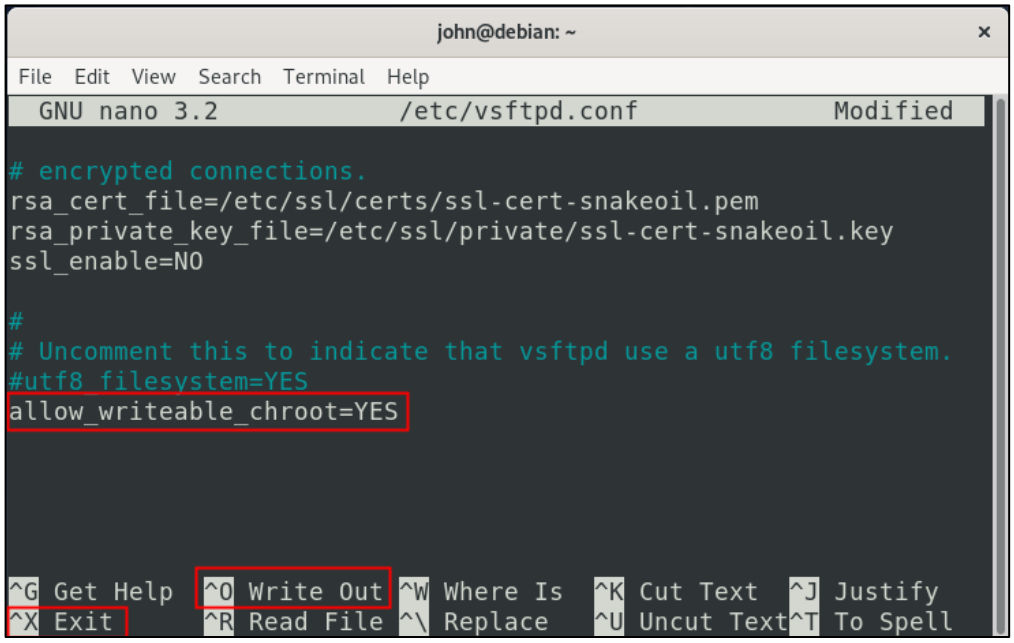
4 Use ***Ctrl + w*** to search for the option ***write_enable=YES*** and uncomment it. This option enables uploading files to Debian.



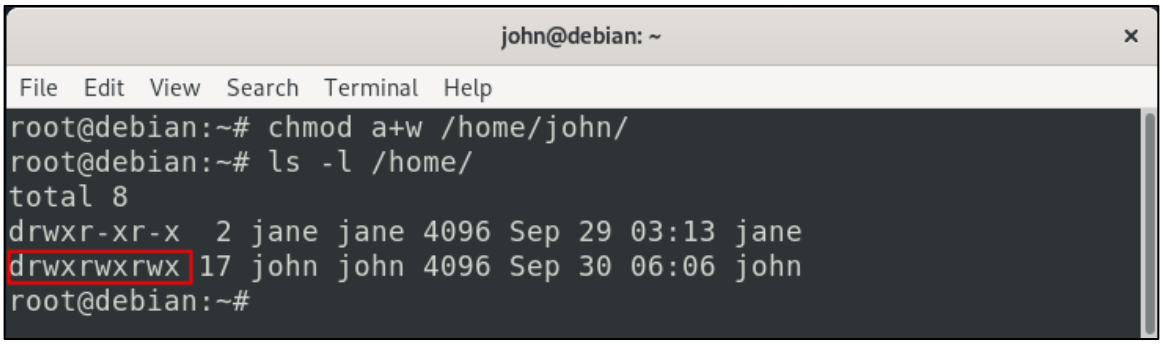
5 Use ***Ctrl + w*** to search for the option ***chroot_local_user=YES*** and uncomment it. This option prevents all local users from leaving their home directory.



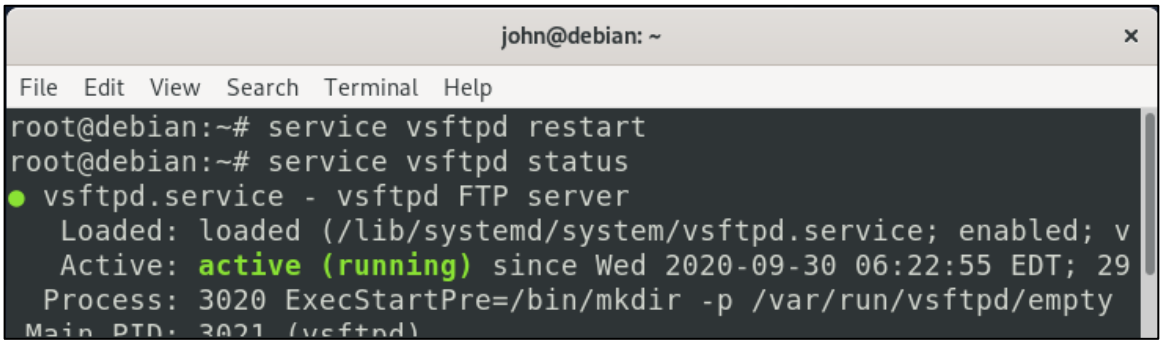
6 Add the option ***allow_writeable_chroot=YES*** to the end of the file and uncomment it. This option bypasses the check for write permission in the vsftpd config file. Save and exit the file.



7 Use the command ***chmod a+w /home/<your user>*** to provide everyone with write permission to your home directory. Verify it with the ***ls -l /home/*** command.



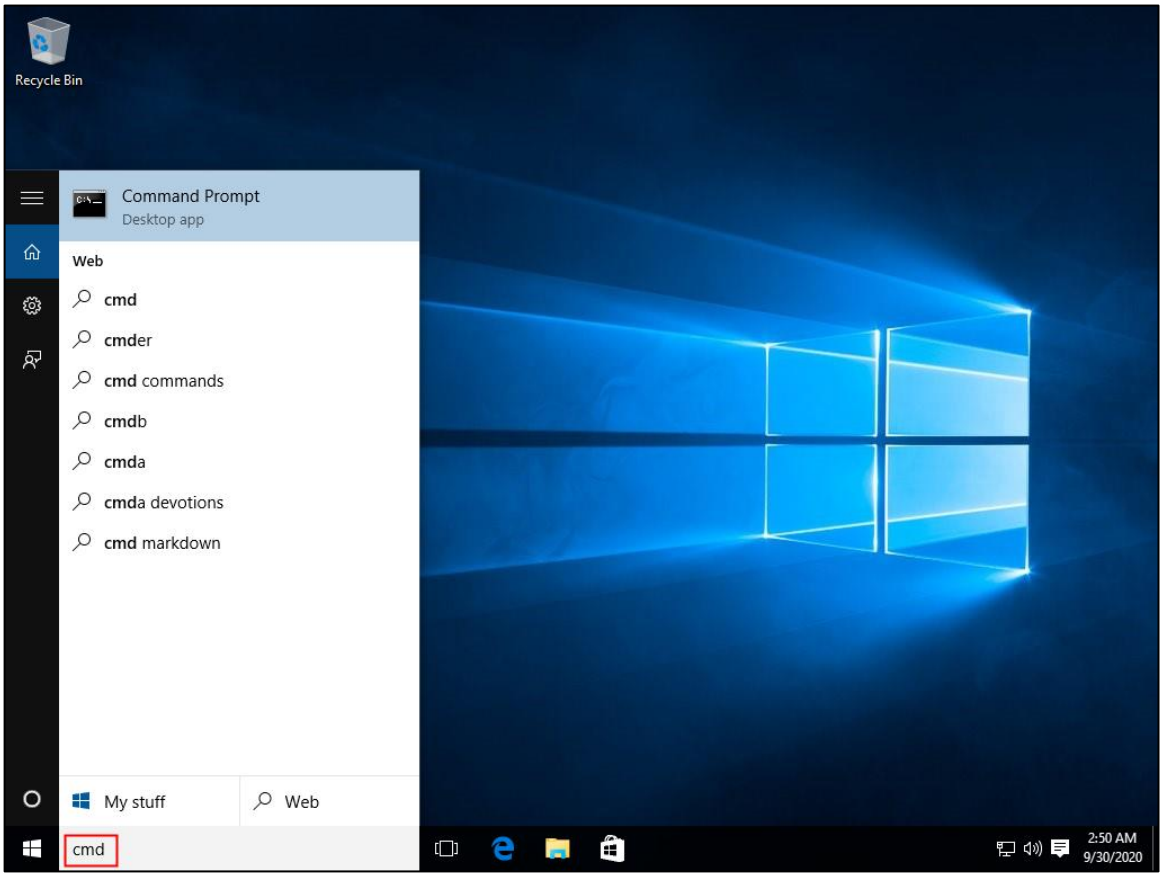
8 Use the command ***service vsftpd restart*** to restart the service. Then use the command ***service vsftpd status*** to verify the service is active.



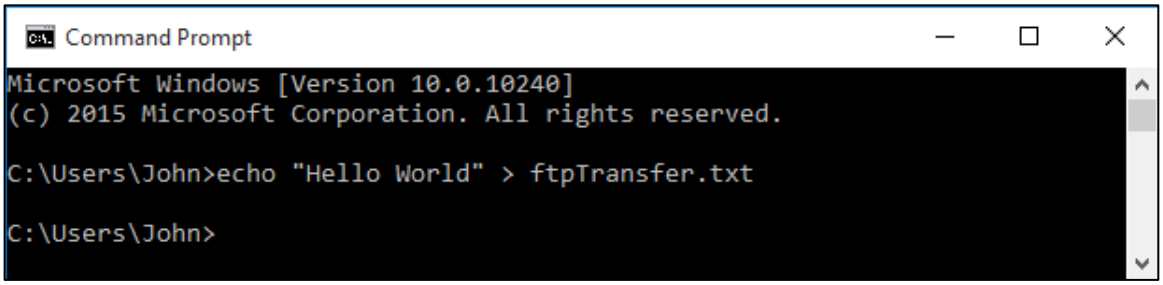
Lab Task 4: Connect to the FTP Server

In this task, you will connect from the Windows machine to the FTP service installed on the Debian machine.

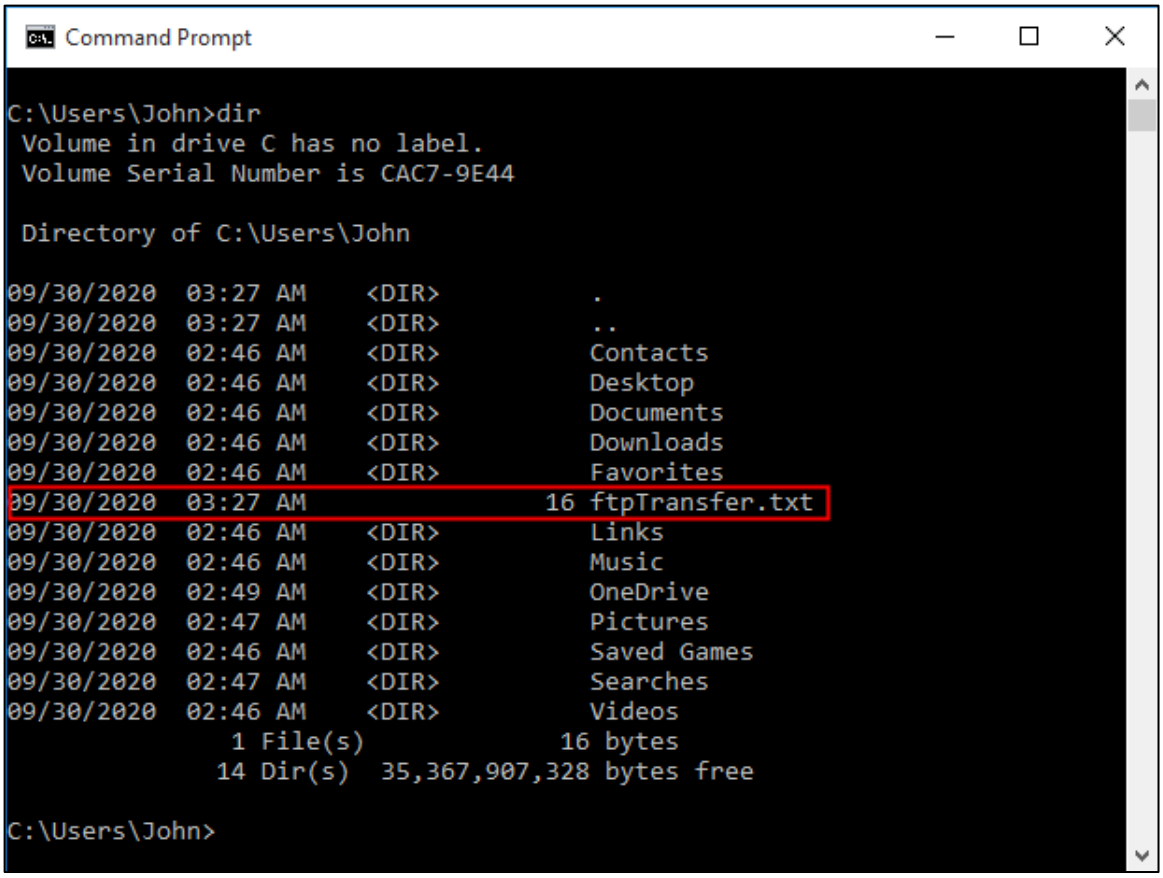
1 In the Windows machine, open the CMD.



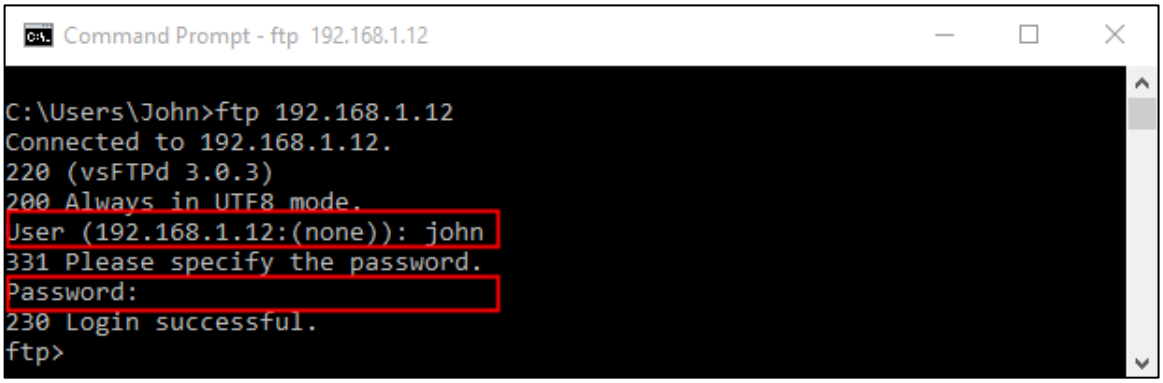
2 Use the command ***echo "Hello World" > ftpTransfer.txt*** to create a new file with the “Hello World” text.



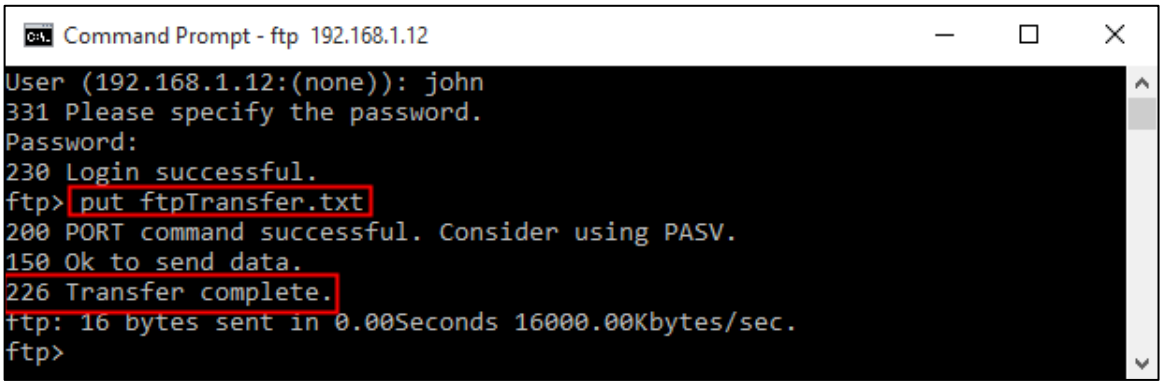
3 In the CMD, use the command ***dir*** to verify the file was created.



4 In the CMD, use the command ***ftp <Debian IP>*** to open the connection to the FTP server. Specify your username and password when requested.



5 Use the command ***put ftpTransfer.txt*** to upload the ***ftpTransfer.txt*** file to the FTP server.



6 In the Debian machine, check if the file exists in your home directory by running the ***ls -l /home/[user]*** command.