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Roll no: 2021-BSE-032
Section : BSE (3A)

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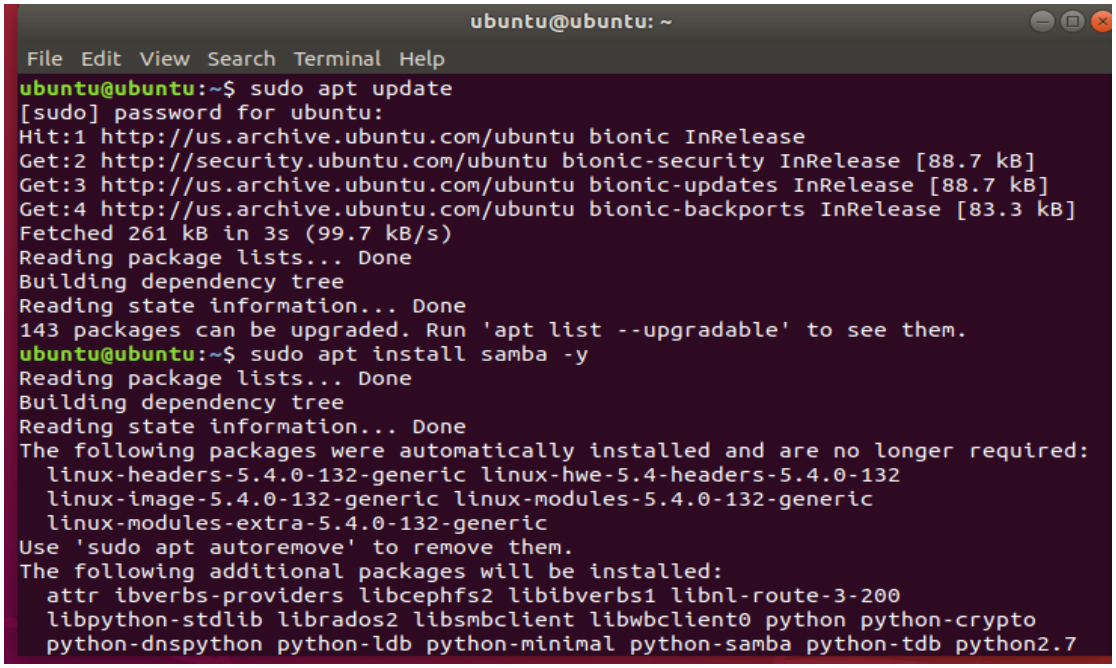
Project E:

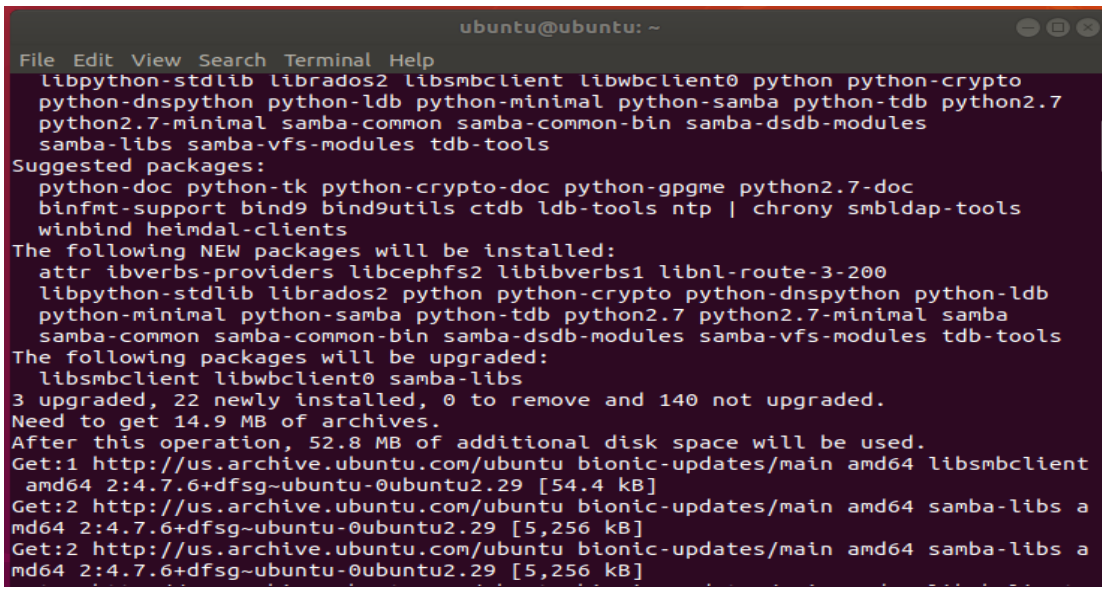
Samba server configuration:

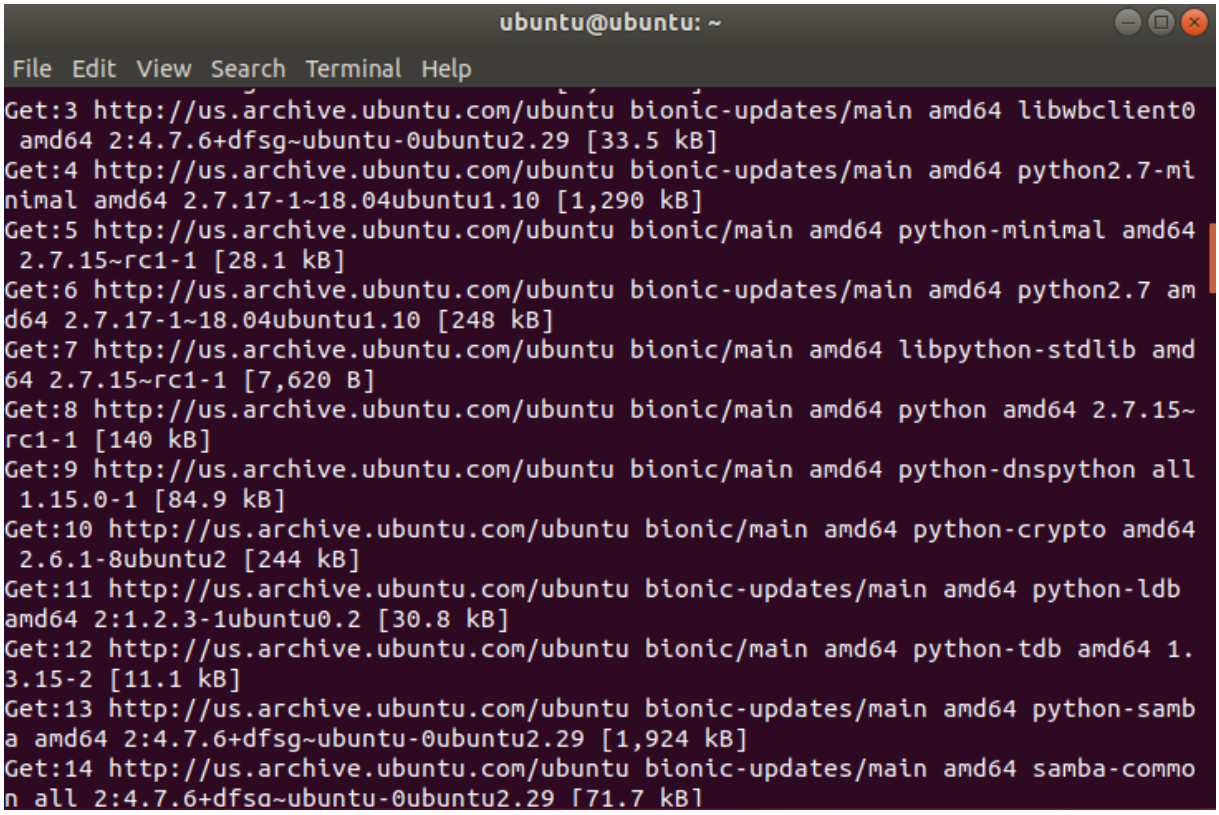
Introduction:

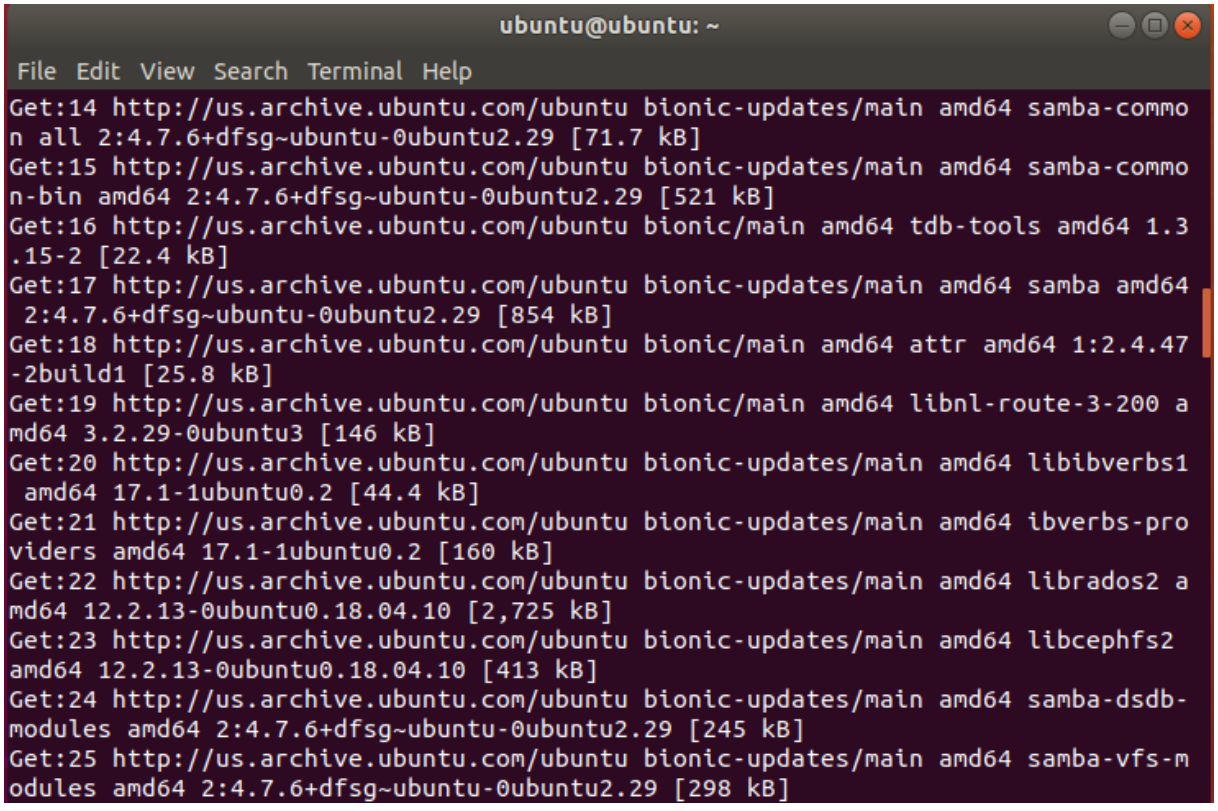
Samba is one of the many ways to share files and directories across a network on Linux. With a Samba share up and running, any machine within your LAN can access the contents of the shared directory–so long as the user has access.

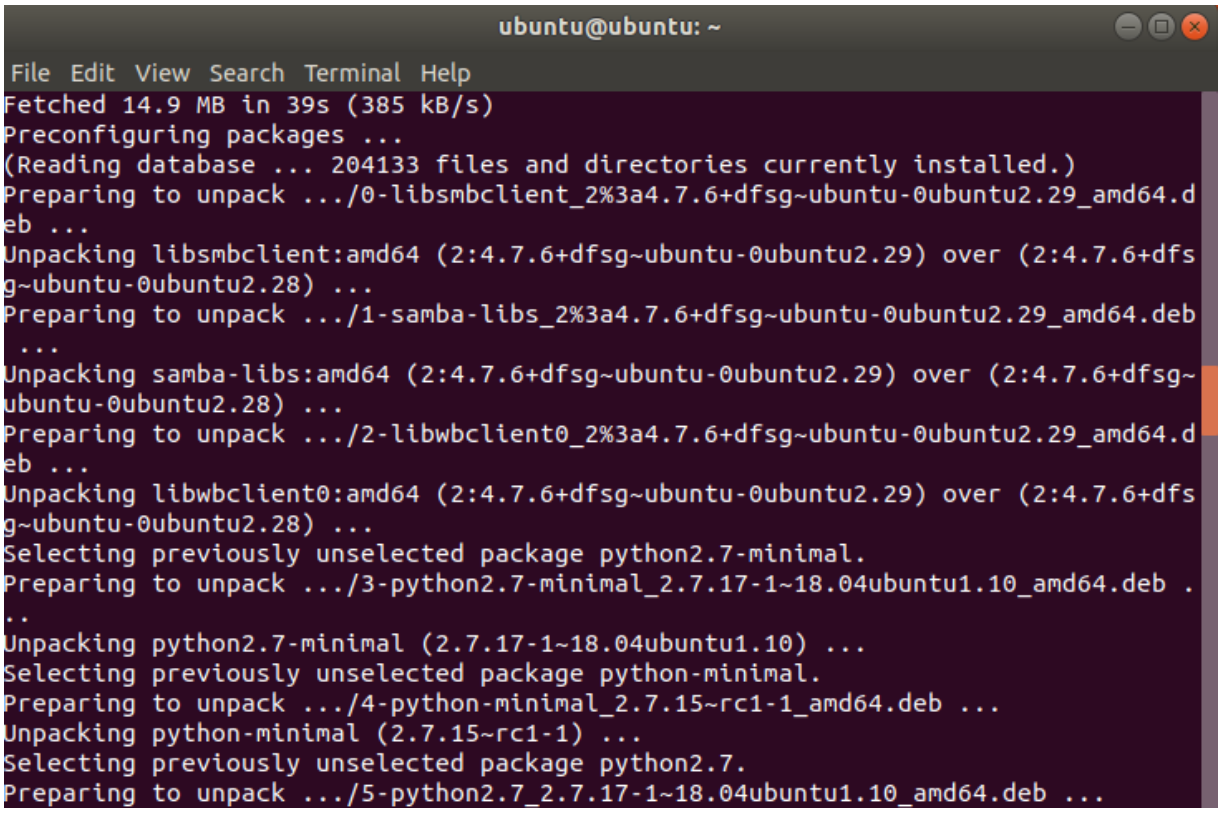
The first step is to install the samba package. From a terminal prompt enter:

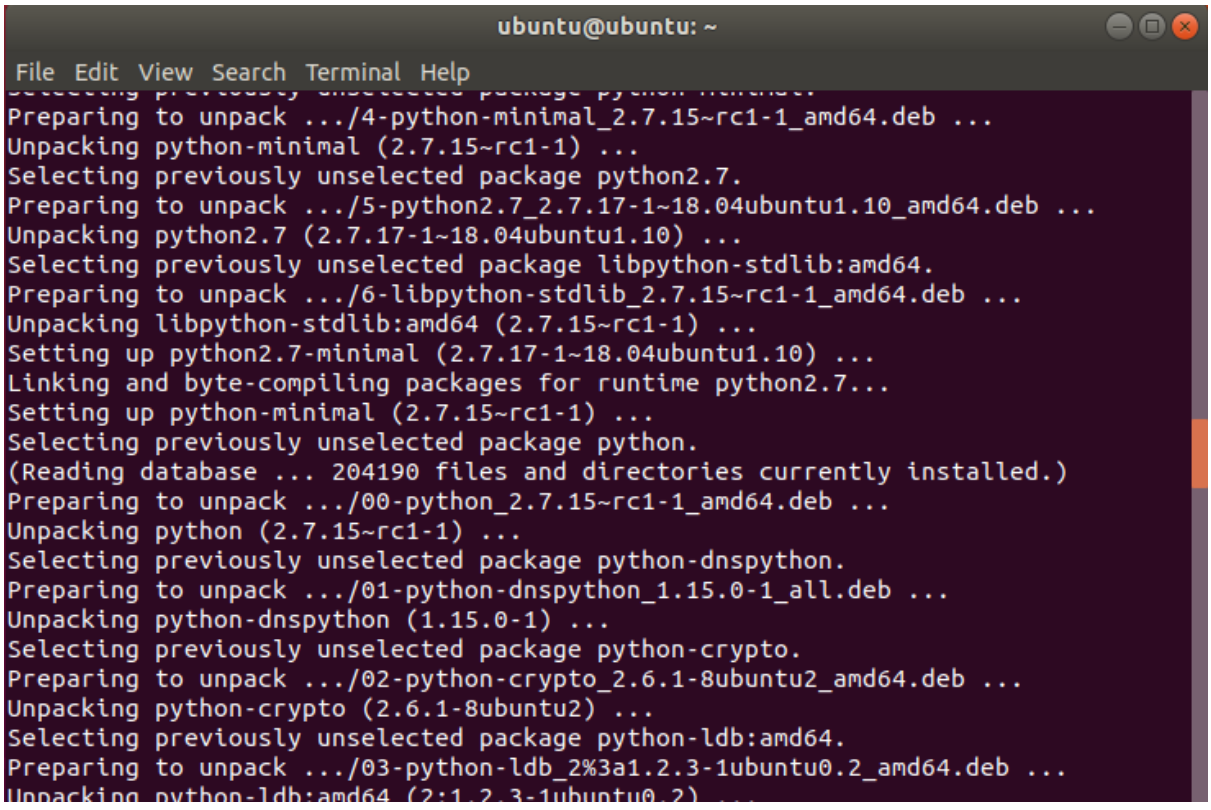

ubuntu@ubuntu: ~
File Edit View Search Terminal Help
ubuntu@ubuntu:~$ sudo apt update
[sudo] password for ubuntu:
Hit:1 http://us.archive.ubuntu.com/ubuntu bionic InRelease
Get:2 http://security.ubuntu.com/ubuntu bionic-security InRelease [88.7 kB]
Get:3 http://us.archive.ubuntu.com/ubuntu bionic-updates InRelease [88.7 kB]
Get:4 http://us.archive.ubuntu.com/ubuntu bionic-backports InRelease [83.3 kB]
Fetched 261 kB in 3s (99.7 kB/s)
Reading package lists... Done
Building dependency tree
Reading state information... Done
143 packages can be upgraded. Run 'apt list --upgradable' to see them.
ubuntu@ubuntu:~$ sudo apt install samba -y
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following packages were automatically installed and are no longer required:
linux-headers-5.4.0-132-generic linux-hwe-5.4-headers-5.4.0-132
linux-image-5.4.0-132-generic linux-modules-5.4.0-132-generic
linux-modules-extra-5.4.0-132-generic
Use 'sudo apt autoremove' to remove them.
The following additional packages will be installed:
attr ibverbs-providers libcephfs2 libibverbs1 libnl-route-3-200
libpython-stdlib librados2 libsmbclient libwbclient0 python python-crypto
python-dnspython python-ldb python-minimal python-samba python-tdb python2.7

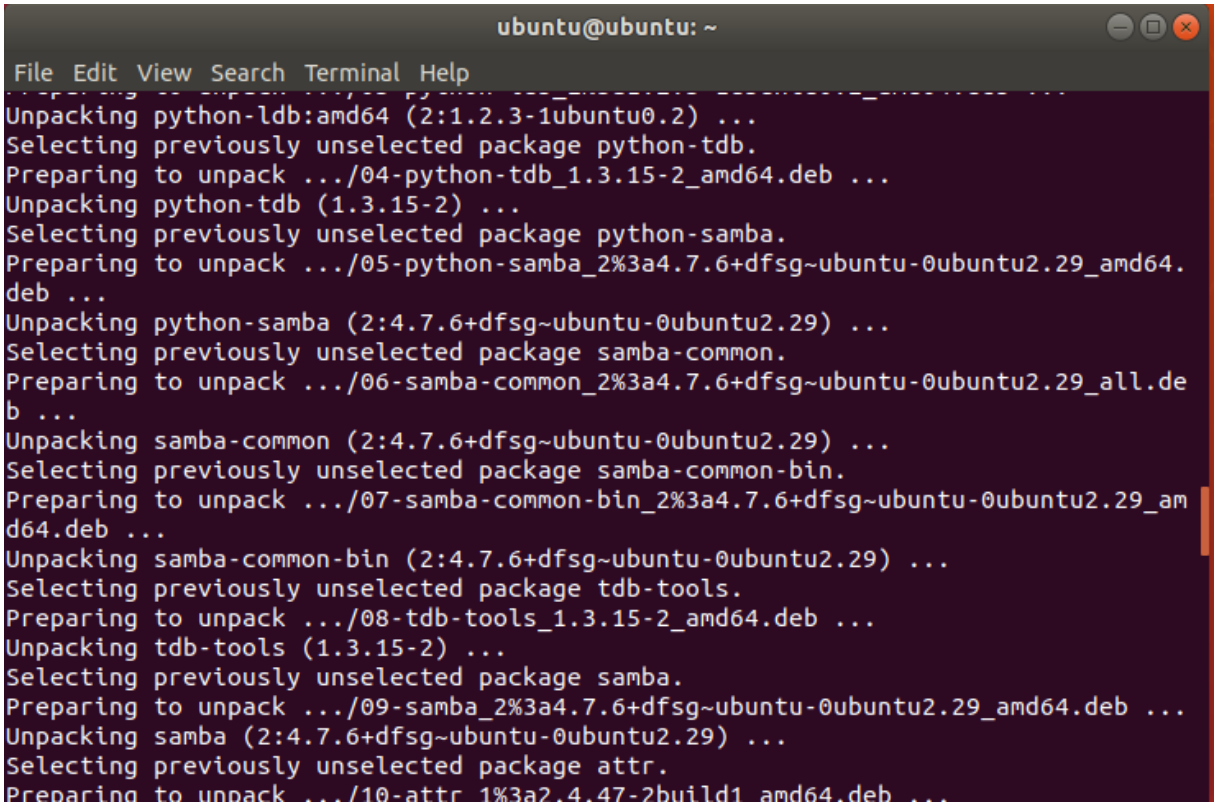

ubuntu@ubuntu: ~
File Edit View Search Terminal Help
libpython-stdlib librados2 libsmbclient libwbclient0 python python-crypto
python-dnspython python-ldb python-minimal python-samba python-tdb python2.7
python2.7-minimal samba-common samba-common-bin samba-dsdb-modules
samba-libs samba-vfs-modules tdb-tools
Suggested packages:
python-doc python-tk python-crypto-doc python-gpgme python2.7-doc
binfmt-support bind9 bind9utils ctdb ldb-tools ntp | chrony smbldap-tools
winbind heimdal-clients
The following NEW packages will be installed:
attr ibverbs-providers libcephfs2 libibverbs1 libnl-route-3-200
libpython-stdlib librados2 python python-crypto python-dnspython python-ldb
python-minimal python-samba python-tdb python2.7 python2.7-minimal samba
samba-common samba-common-bin samba-dsdb-modules samba-vfs-modules tdb-tools
The following packages will be upgraded:
libsmbclient libwbclient0 samba-libs
3 upgraded, 22 newly installed, 0 to remove and 140 not upgraded.
Need to get 14.9 MB of archives.
After this operation, 52.8 MB of additional disk space will be used.
Get:1 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libsmbclient
amd64 2:4.7.6+dfsg~ubuntu-0ubuntu2.29 [54.4 kB]
Get:2 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 samba-libs a
md64 2:4.7.6+dfsg~ubuntu-0ubuntu2.29 [5,256 kB]
Get:2 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 samba-libs a
md64 2:4.7.6+dfsg~ubuntu-0ubuntu2.29 [5,256 kB]

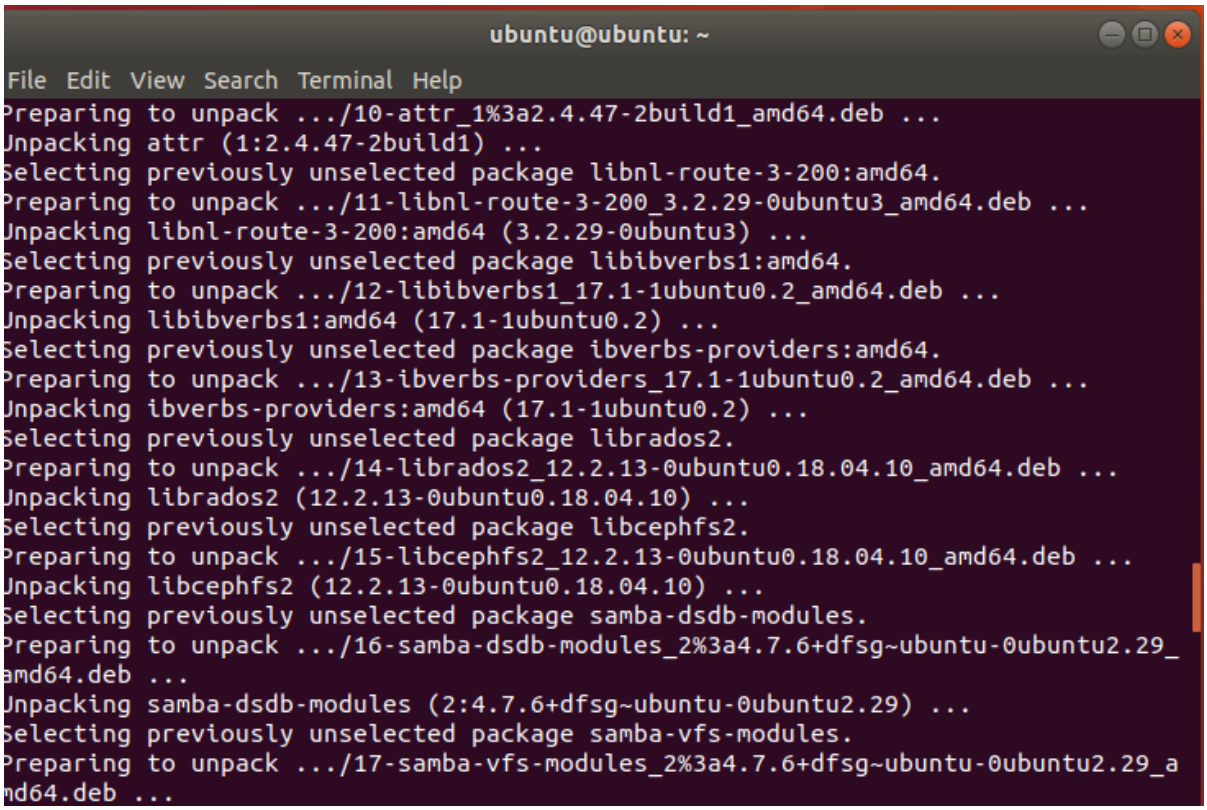

ubuntu@ubuntu: ~
File Edit View Search Terminal Help
Get:3 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libwbclient0 amd64 2:4.7.6+dfsg~ubuntu-0ubuntu2.29 [33.5 kB]
Get:4 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 python2.7-minimal amd64 2.7.17-1~18.04ubuntu1.10 [1,290 kB]
Get:5 http://us.archive.ubuntu.com/ubuntu bionic/main amd64 python-minimal amd64 2.7.15~rc1-1 [28.1 kB]
Get:6 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 python2.7 amd64 2.7.17-1~18.04ubuntu1.10 [248 kB]
Get:7 http://us.archive.ubuntu.com/ubuntu bionic/main amd64 libpython-stdlib amd64 2.7.15~rc1-1 [7,620 B]
Get:8 http://us.archive.ubuntu.com/ubuntu bionic/main amd64 python amd64 2.7.15~rc1-1 [140 kB]
Get:9 http://us.archive.ubuntu.com/ubuntu bionic/main amd64 python-dnspython all 1.15.0-1 [84.9 kB]
Get:10 http://us.archive.ubuntu.com/ubuntu bionic/main amd64 python-crypto amd64 2.6.1-8ubuntu2 [244 kB]
Get:11 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 python-ldb amd64 2:1.2.3-1ubuntu0.2 [30.8 kB]
Get:12 http://us.archive.ubuntu.com/ubuntu bionic/main amd64 python-tdb amd64 1.3.15-2 [11.1 kB]
Get:13 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 python-samba amd64 2:4.7.6+dfsg~ubuntu-0ubuntu2.29 [1,924 kB]
Get:14 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 samba-common all 2:4.7.6+dfsg~ubuntu-0ubuntu2.29 [71.7 kB]

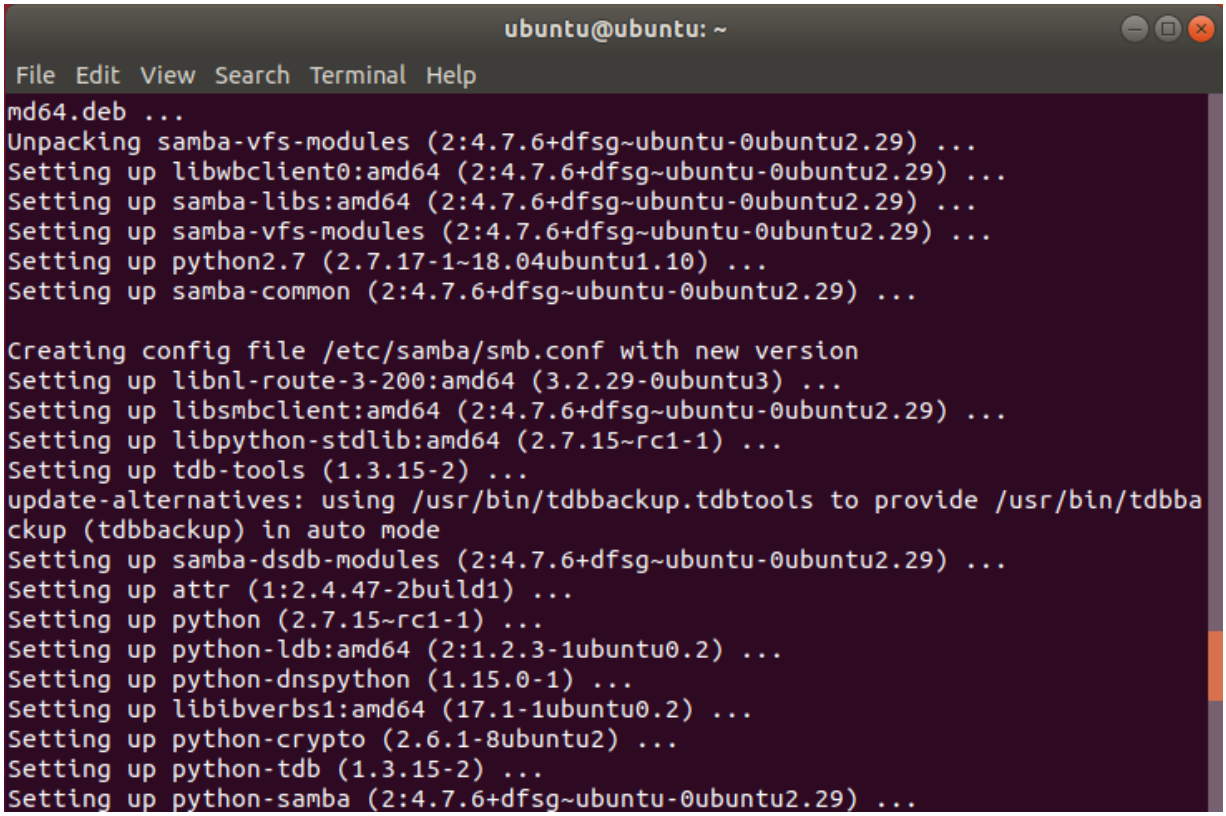

ubuntu@ubuntu: ~
File Edit View Search Terminal Help
Get:14 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 samba-common all 2:4.7.6+dfsg~ubuntu-0ubuntu2.29 [71.7 kB]
Get:15 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 samba-common-bin amd64 2:4.7.6+dfsg~ubuntu-0ubuntu2.29 [521 kB]
Get:16 http://us.archive.ubuntu.com/ubuntu bionic/main amd64 tdb-tools amd64 1.3.15-2 [22.4 kB]
Get:17 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 samba amd64 2:4.7.6+dfsg~ubuntu-0ubuntu2.29 [854 kB]
Get:18 http://us.archive.ubuntu.com/ubuntu bionic/main amd64 attr amd64 1:2.4.47-2build1 [25.8 kB]
Get:19 http://us.archive.ubuntu.com/ubuntu bionic/main amd64 libnl-route-3-200 amd64 3.2.29-0ubuntu3 [146 kB]
Get:20 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libibverbs1 amd64 17.1-1ubuntu0.2 [44.4 kB]
Get:21 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 ibverbs-providers amd64 17.1-1ubuntu0.2 [160 kB]
Get:22 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 librados2 amd64 12.2.13-0ubuntu0.18.04.10 [2,725 kB]
Get:23 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libcephfs2 amd64 12.2.13-0ubuntu0.18.04.10 [413 kB]
Get:24 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 samba-dsdb-modules amd64 2:4.7.6+dfsg~ubuntu-0ubuntu2.29 [245 kB]
Get:25 http://us.archive.ubuntu.com/ubuntu bionic-updates/main amd64 samba-vfs-modules amd64 2:4.7.6+dfsg~ubuntu-0ubuntu2.29 [298 kB]

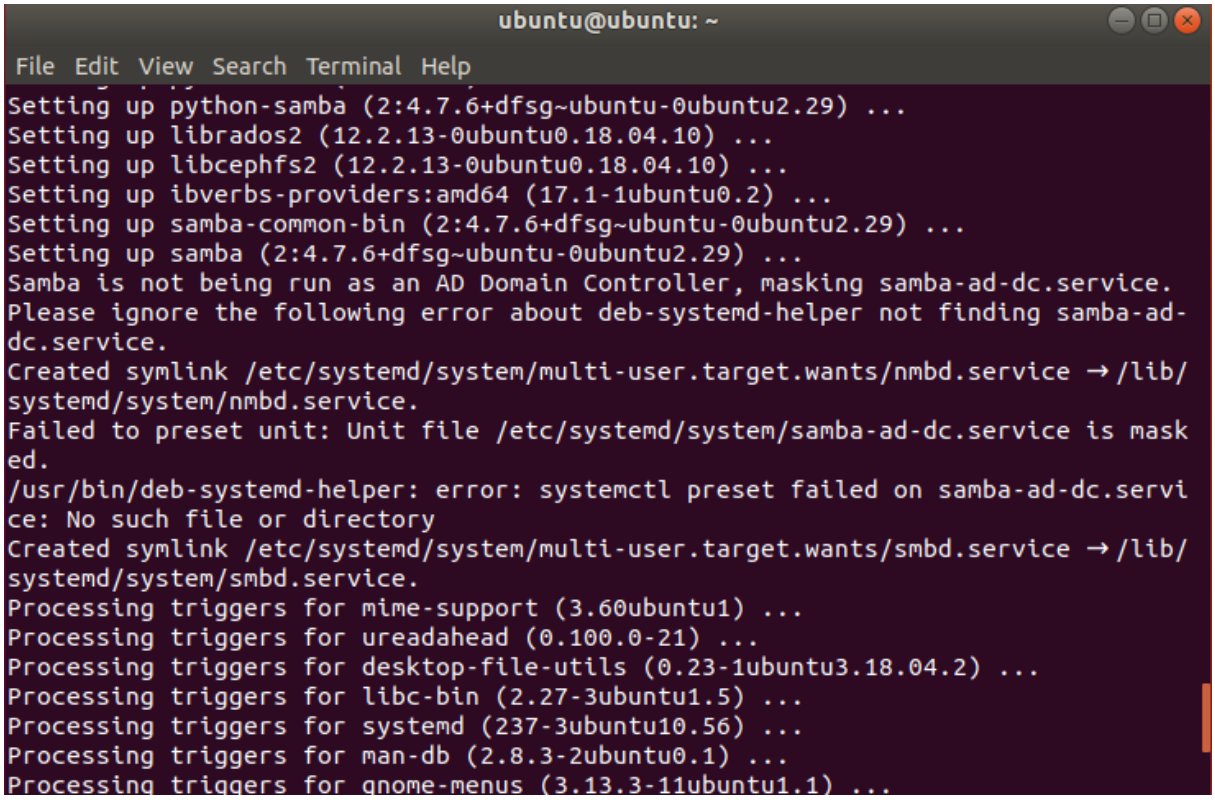

ubuntu@ubuntu: ~
File Edit View Search Terminal Help
Fetched 14.9 MB in 39s (385 kB/s)
Preconfiguring packages ...
(Reading database ... 204133 files and directories currently installed.)
Preparing to unpack .../0-libsmbclient_2%3a4.7.6+dfsg~ubuntu-0ubuntu2.29_amd64.deb ...
Unpacking libsmbclient:amd64 (2:4.7.6+dfsg~ubuntu-0ubuntu2.29) over (2:4.7.6+dfsg~ubuntu-0ubuntu2.28) ...
Preparing to unpack .../1-samba-libs_2%3a4.7.6+dfsg~ubuntu-0ubuntu2.29_amd64.deb ...
Unpacking samba-libs:amd64 (2:4.7.6+dfsg~ubuntu-0ubuntu2.29) over (2:4.7.6+dfsg~ubuntu-0ubuntu2.28) ...
Preparing to unpack .../2-libwbclient0_2%3a4.7.6+dfsg~ubuntu-0ubuntu2.29_amd64.deb ...
Unpacking libwbclient0:amd64 (2:4.7.6+dfsg~ubuntu-0ubuntu2.29) over (2:4.7.6+dfsg~ubuntu-0ubuntu2.28) ...
Selecting previously unselected package python2.7-minimal.
Preparing to unpack .../3-python2.7-minimal_2.7.17-1~18.04ubuntu1.10_amd64.deb ...
Unpacking python2.7-minimal (2.7.17-1~18.04ubuntu1.10) ...
Selecting previously unselected package python-minimal.
Preparing to unpack .../4-python-minimal_2.7.15~rc1-1_amd64.deb ...
Unpacking python-minimal (2.7.15~rc1-1) ...
Selecting previously unselected package python2.7.
Preparing to unpack .../5-python2.7_2.7.17-1~18.04ubuntu1.10_amd64.deb ...

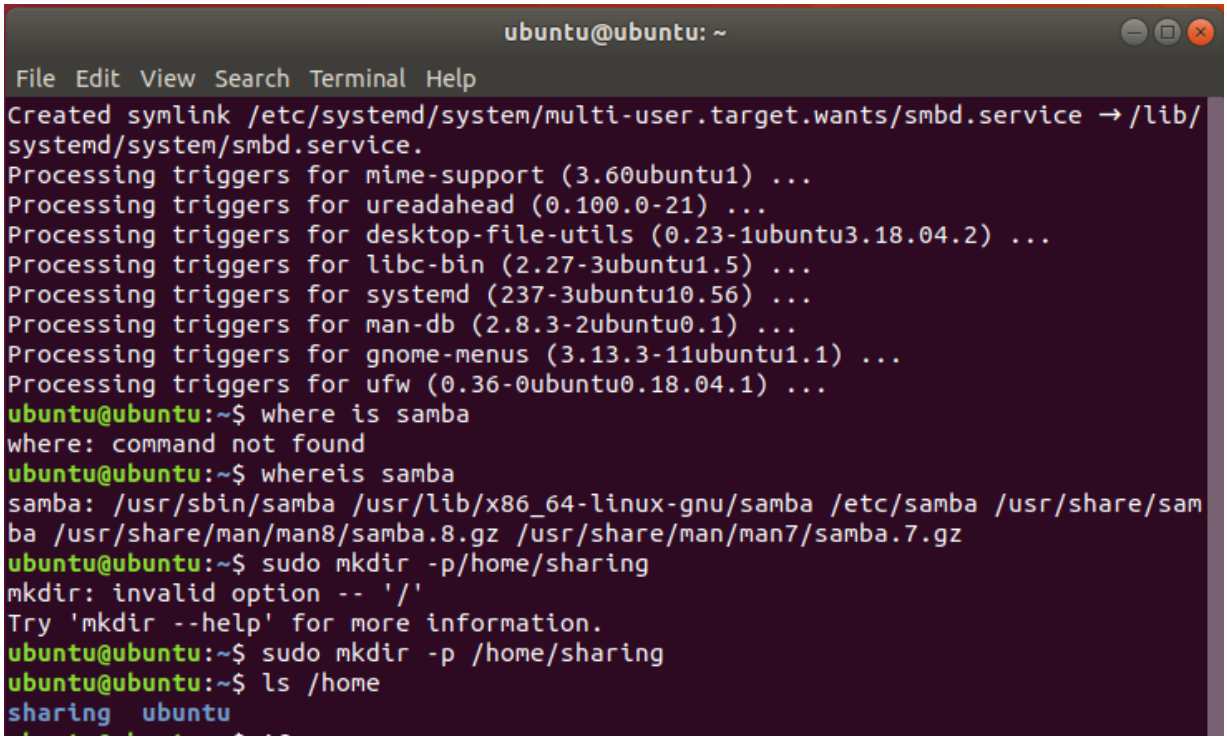

ubuntu@ubuntu: ~
File Edit View Search Terminal Help
Preparing to unpack .../4-python-minimal_2.7.15~rc1-1_amd64.deb ...
Unpacking python-minimal (2.7.15~rc1-1) ...
Selecting previously unselected package python2.7.
Preparing to unpack .../5-python2.7_2.7.17-1~18.04ubuntu1.10_amd64.deb ...
Unpacking python2.7 (2.7.17-1~18.04ubuntu1.10) ...
Selecting previously unselected package libpython-stdlib:amd64.
Preparing to unpack .../6-libpython-stdlib_2.7.15~rc1-1_amd64.deb ...
Unpacking libpython-stdlib:amd64 (2.7.15~rc1-1) ...
Setting up python2.7-minimal (2.7.17-1~18.04ubuntu1.10) ...
Linking and byte-compiling packages for runtime python2.7...
Setting up python-minimal (2.7.15~rc1-1) ...
Selecting previously unselected package python.
(Reading database ... 204190 files and directories currently installed.)
Preparing to unpack .../00-python_2.7.15~rc1-1_amd64.deb ...
Unpacking python (2.7.15~rc1-1) ...
Selecting previously unselected package python-dnspython.
Preparing to unpack .../01-python-dnspython_1.15.0-1_all.deb ...
Unpacking python-dnspython (1.15.0-1) ...
Selecting previously unselected package python-crypto.
Preparing to unpack .../02-python-crypto_2.6.1-8ubuntu2_amd64.deb ...
Unpacking python-crypto (2.6.1-8ubuntu2) ...
Selecting previously unselected package python-ldb:amd64.
Preparing to unpack .../03-python-ldb_2%3a1.2.3-1ubuntu0.2_amd64.deb ...


ubuntu@ubuntu: ~
File Edit View Search Terminal Help
Unpacking python-ldb:amd64 (2:1.2.3-1ubuntu0.2) ...
Selecting previously unselected package python-tdb.
Preparing to unpack .../04-python-tdb_1.3.15-2_amd64.deb ...
Unpacking python-tdb (1.3.15-2) ...
Selecting previously unselected package python-samba.
Preparing to unpack .../05-python-samba_2%3a4.7.6+dfsg~ubuntu-0ubuntu2.29_amd64.deb ...
Unpacking python-samba (2:4.7.6+dfsg~ubuntu-0ubuntu2.29) ...
Selecting previously unselected package samba-common.
Preparing to unpack .../06-samba-common_2%3a4.7.6+dfsg~ubuntu-0ubuntu2.29_all.deb ...
Unpacking samba-common (2:4.7.6+dfsg~ubuntu-0ubuntu2.29) ...
Selecting previously unselected package samba-common-bin.
Preparing to unpack .../07-samba-common-bin_2%3a4.7.6+dfsg~ubuntu-0ubuntu2.29_amd64.deb ...
Unpacking samba-common-bin (2:4.7.6+dfsg~ubuntu-0ubuntu2.29) ...
Selecting previously unselected package tdb-tools.
Preparing to unpack .../08-tdb-tools_1.3.15-2_amd64.deb ...
Unpacking tdb-tools (1.3.15-2) ...
Selecting previously unselected package samba.
Preparing to unpack .../09-samba_2%3a4.7.6+dfsg~ubuntu-0ubuntu2.29_amd64.deb ...
Unpacking samba (2:4.7.6+dfsg~ubuntu-0ubuntu2.29) ...
Selecting previously unselected package attr.

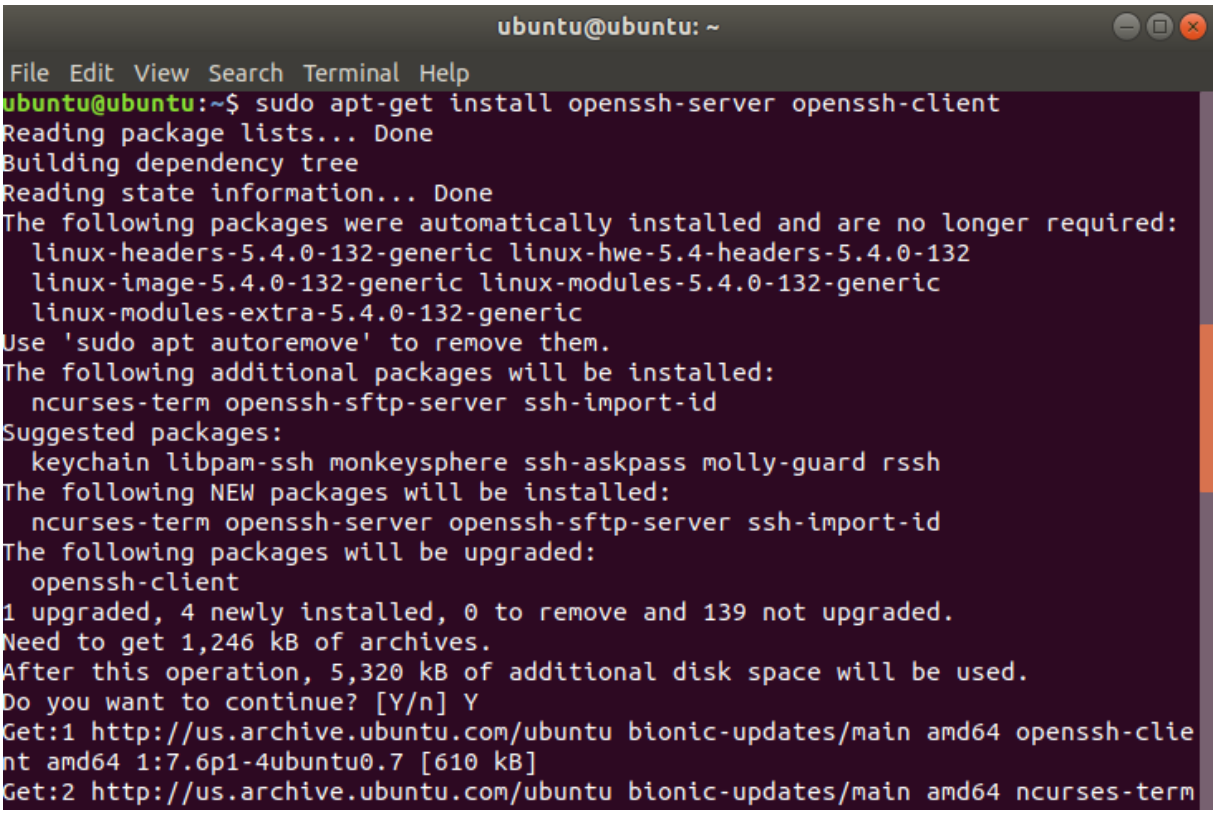

ubuntu@ubuntu: ~
File Edit View Search Terminal Help
Preparing to unpack .../10-attr_1%3a2.4.47-2build1_amd64.deb ...
Unpacking attr (1:2.4.47-2build1) ...
Selecting previously unselected package libnl-route-3-200:amd64.
Preparing to unpack .../11-libnl-route-3-200_3.2.29-0ubuntu3_amd64.deb ...
Unpacking libnl-route-3-200:amd64 (3.2.29-0ubuntu3) ...
Selecting previously unselected package libibverbs1:amd64.
Preparing to unpack .../12-libibverbs1_17.1-1ubuntu0.2_amd64.deb ...
Unpacking libibverbs1:amd64 (17.1-1ubuntu0.2) ...
Selecting previously unselected package ibverbs-providers:amd64.
Preparing to unpack .../13-ibverbs-providers_17.1-1ubuntu0.2_amd64.deb ...
Unpacking ibverbs-providers:amd64 (17.1-1ubuntu0.2) ...
Selecting previously unselected package librados2.
Preparing to unpack .../14-librados2_12.2.13-0ubuntu0.18.04.10_amd64.deb ...
Unpacking librados2 (12.2.13-0ubuntu0.18.04.10) ...
Selecting previously unselected package libcephfs2.
Preparing to unpack .../15-libcephfs2_12.2.13-0ubuntu0.18.04.10_amd64.deb ...
Unpacking libcephfs2 (12.2.13-0ubuntu0.18.04.10) ...
Selecting previously unselected package samba-dsdb-modules.
Preparing to unpack .../16-samba-dsdb-modules_2%3a4.7.6+dfsg~ubuntu-0ubuntu2.29_amd64.deb ...
Unpacking samba-dsdb-modules (2:4.7.6+dfsg~ubuntu-0ubuntu2.29) ...
Selecting previously unselected package samba-vfs-modules.
Preparing to unpack .../17-samba-vfs-modules_2%3a4.7.6+dfsg~ubuntu-0ubuntu2.29_amd64.deb ...

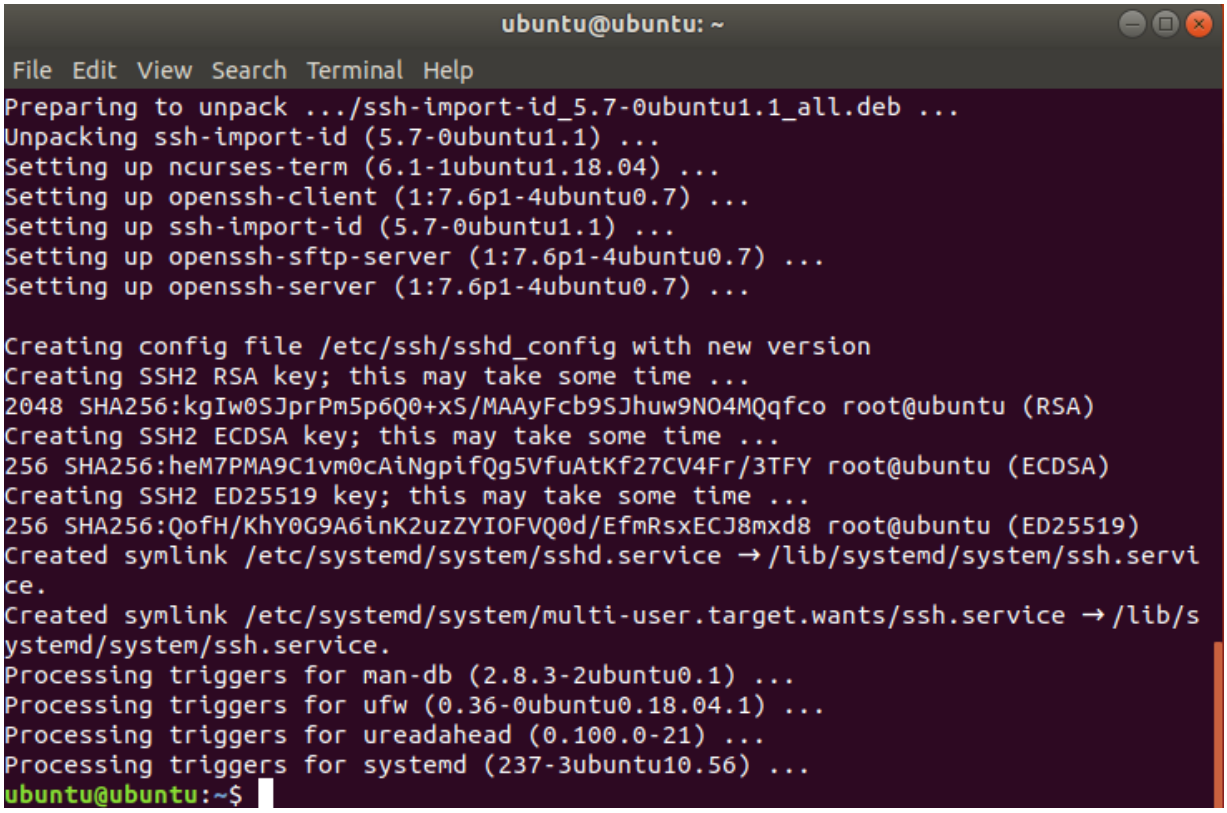

ubuntu@ubuntu: ~
File Edit View Search Terminal Help
md64.deb ...
Unpacking samba-vfs-modules (2:4.7.6+dfsg~ubuntu-0ubuntu2.29) ...
Setting up libwbclient0:amd64 (2:4.7.6+dfsg~ubuntu-0ubuntu2.29) ...
Setting up samba-libs:amd64 (2:4.7.6+dfsg~ubuntu-0ubuntu2.29) ...
Setting up samba-vfs-modules (2:4.7.6+dfsg~ubuntu-0ubuntu2.29) ...
Setting up python2.7 (2.7.17-1~18.04ubuntu1.10) ...
Setting up samba-common (2:4.7.6+dfsg~ubuntu-0ubuntu2.29) ...
Creating config file /etc/samba/smb.conf with new version
Setting up libnl-route-3-200:amd64 (3.2.29-0ubuntu3) ...
Setting up libsmbclient:amd64 (2:4.7.6+dfsg~ubuntu-0ubuntu2.29) ...
Setting up libpython-stdlib:amd64 (2.7.15~rc1-1) ...
Setting up tdb-tools (1.3.15-2) ...
update-alternatives: using /usr/bin/tdbbackup.tdbtools to provide /usr/bin/tdbba
ckup (tdbbackup) in auto mode
Setting up samba-dsdb-modules (2:4.7.6+dfsg~ubuntu-0ubuntu2.29) ...
Setting up attr (1:2.4.47-2build1) ...
Setting up python (2.7.15~rc1-1) ...
Setting up python-ldb:amd64 (2:1.2.3-1ubuntu0.2) ...
Setting up python-dnspython (1.15.0-1) ...
Setting up libibverbs1:amd64 (17.1-1ubuntu0.2) ...
Setting up python-crypto (2.6.1-8ubuntu2) ...
Setting up python-tdb (1.3.15-2) ...
Setting up python-samba (2:4.7.6+dfsg~ubuntu-0ubuntu2.29) ...


ubuntu@ubuntu: ~
File Edit View Search Terminal Help
Setting up python-samba (2:4.7.6+dfsg~ubuntu-0ubuntu2.29) ...
Setting up librados2 (12.2.13-0ubuntu0.18.04.10) ...
Setting up libcephfs2 (12.2.13-0ubuntu0.18.04.10) ...
Setting up ibverbs-providers:amd64 (17.1-1ubuntu0.2) ...
Setting up samba-common-bin (2:4.7.6+dfsg~ubuntu-0ubuntu2.29) ...
Setting up samba (2:4.7.6+dfsg~ubuntu-0ubuntu2.29) ...
Samba is not being run as an AD Domain Controller, masking samba-ad-dc.service.
Please ignore the following error about deb-systemd-helper not finding samba-ad-
dc.service.
Created symlink /etc/systemd/system/multi-user.target.wants/nmbd.service → /lib/
systemd/system/nmbd.service.
Failed to preset unit: Unit file /etc/systemd/system/samba-ad-dc.service is mask
ed.
/usr/bin/deb-systemd-helper: error: systemctl preset failed on samba-ad-dc.servi
ce: No such file or directory
Created symlink /etc/systemd/system/multi-user.target.wants/smbd.service → /lib/
systemd/system/smbd.service.
Processing triggers for mime-support (3.60ubuntu1) ...
Processing triggers for ureadahead (0.100.0-21) ...
Processing triggers for desktop-file-utils (0.23-1ubuntu3.18.04.2) ...
Processing triggers for libc-bin (2.27-3ubuntu1.5) ...
Processing triggers for systemd (237-3ubuntu10.56) ...
Processing triggers for man-db (2.8.3-2ubuntu0.1) ...
Processing triggers for gnome-menus (3.13.3-11ubuntu1.1) ...

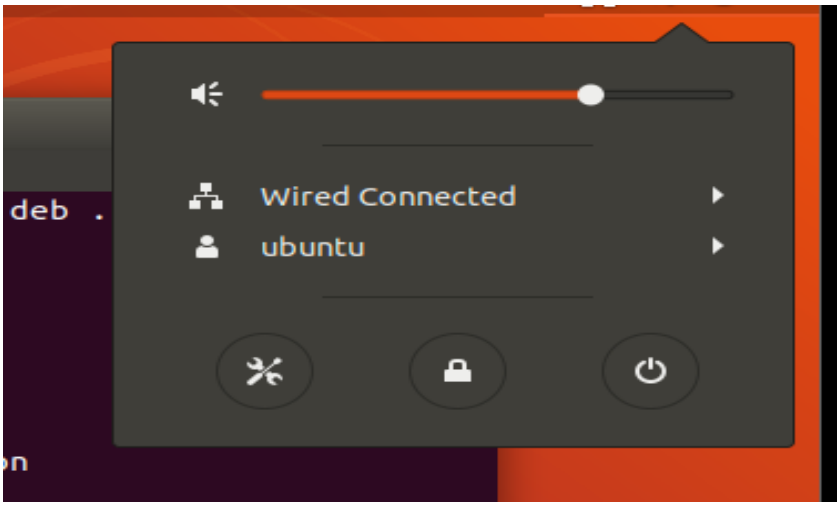


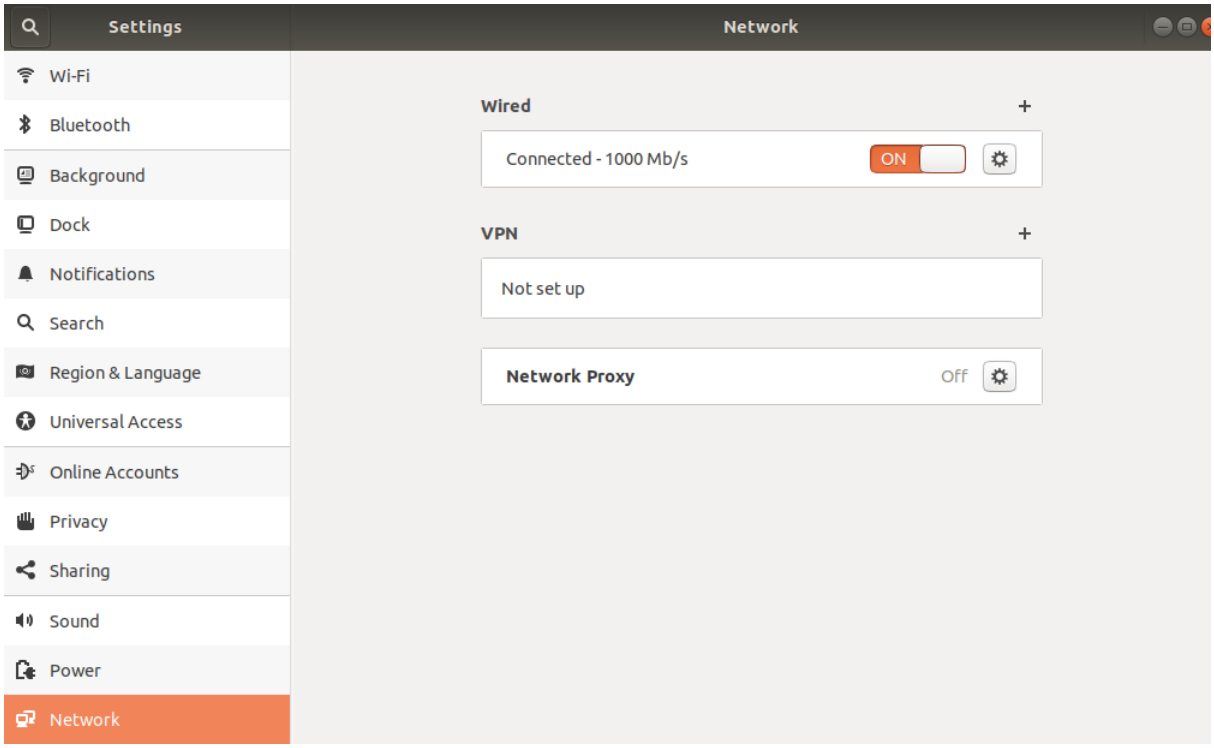
Installing openssh-server openssh-client on a virtual machine



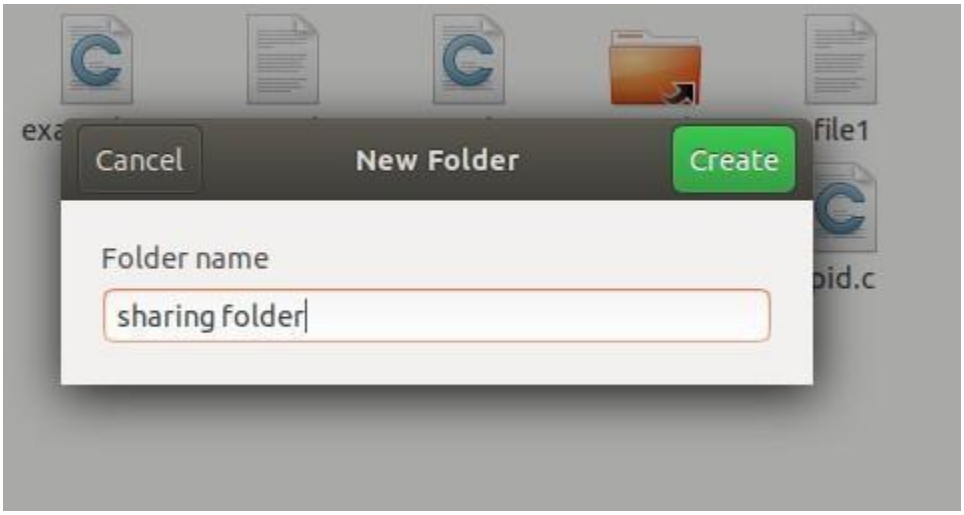


Check the IP address of virtual machine 1.



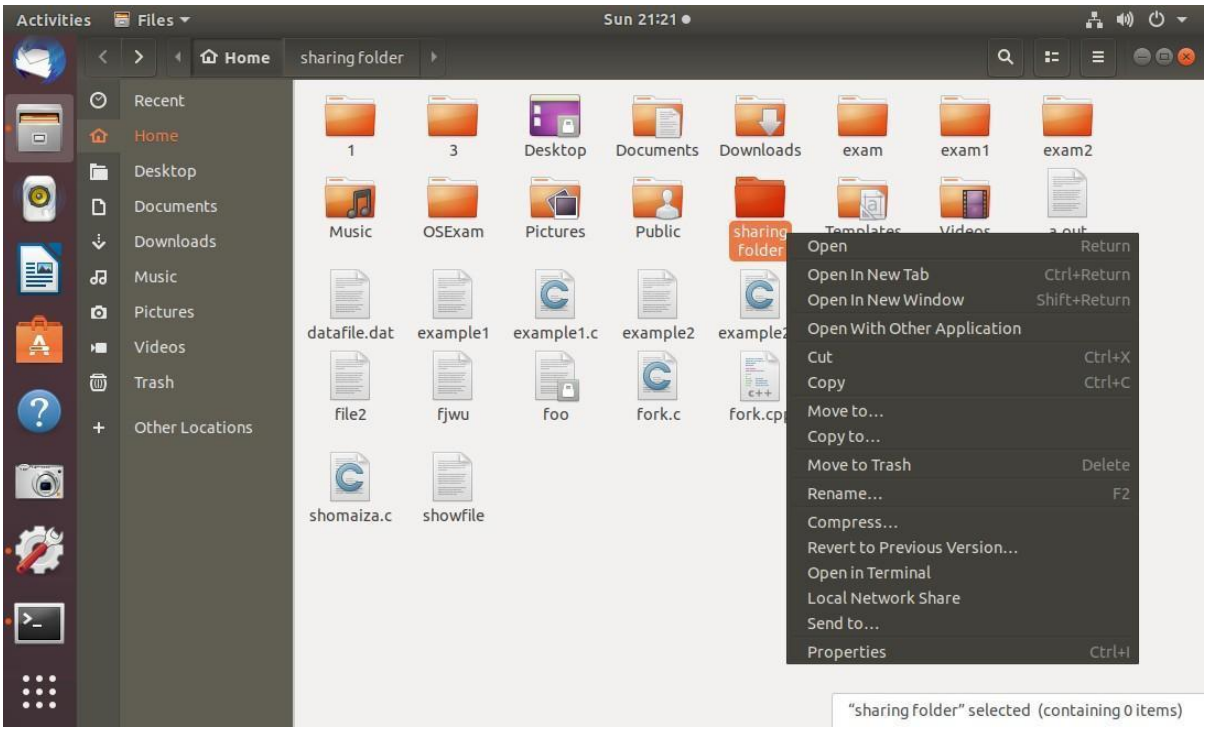

Settings
Network
Wi-Fi
Bluetooth
Background
Dock
Notifications
Search
Region & Language
Universal Access
Online Accounts
Privacy
Sharing
Sound
Power
Network
Wired
Connected - 1000 Mb/s
ON
VPN
Not set up
Network Proxy
Off

Create a folder “Sharing Folder”.



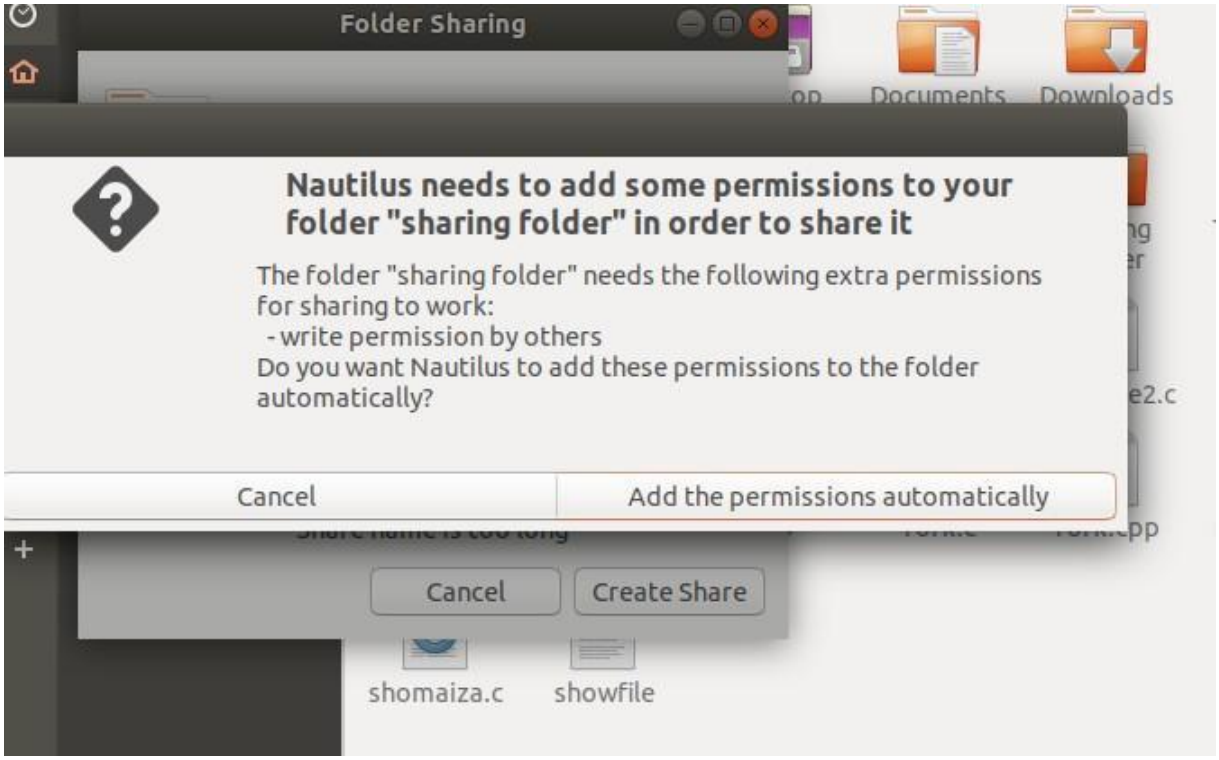
Right click on the folder

click on “**Local share network option.”**

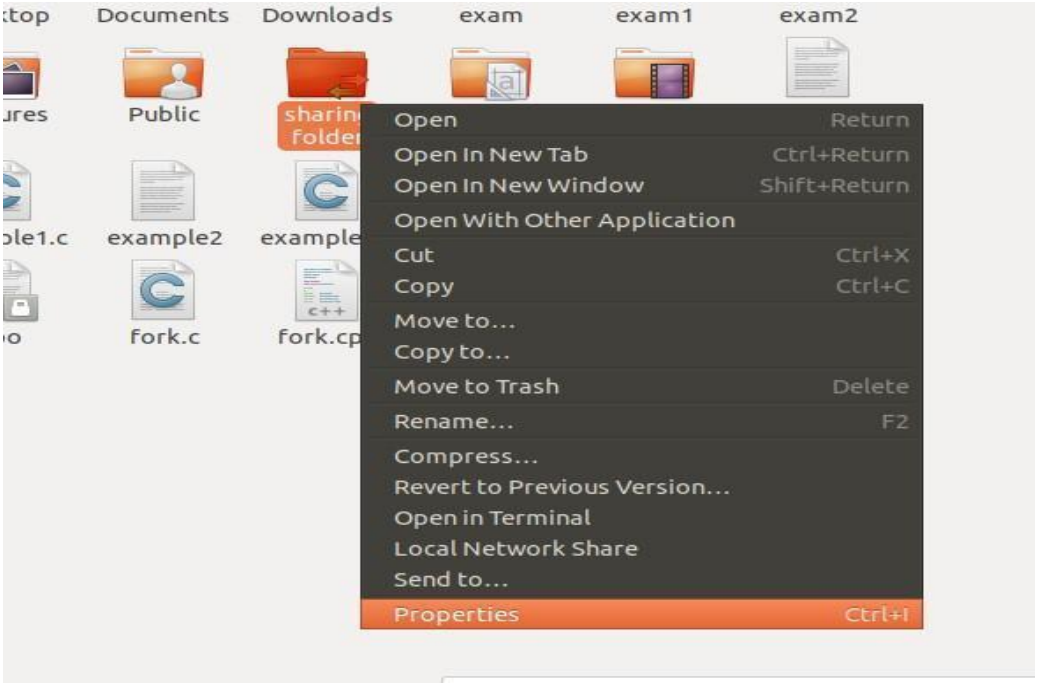


Click on "**Share this folder".**

Click on "**add the permission automatically**".

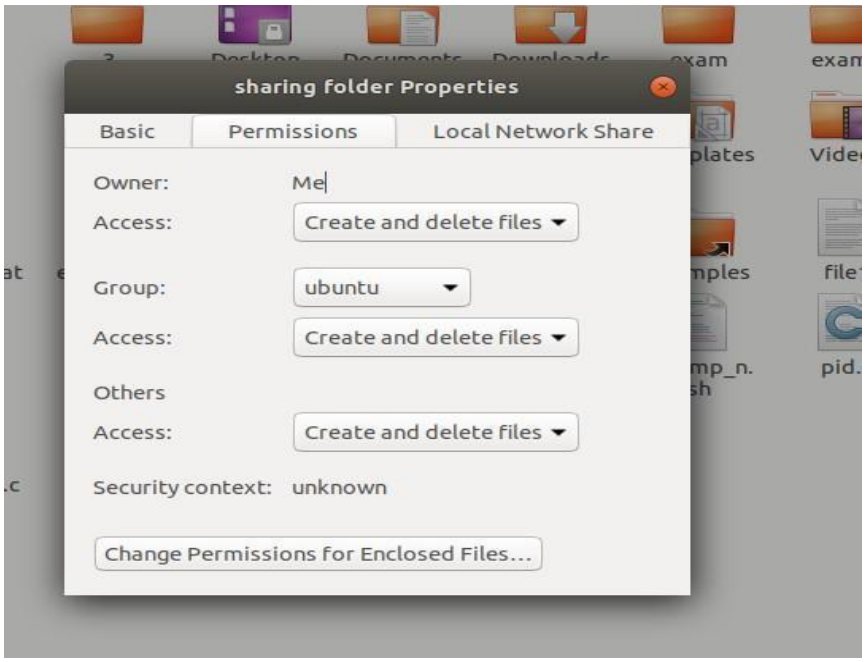


For permissions right click on "**sharing folder".**
And then go on to **properties.**

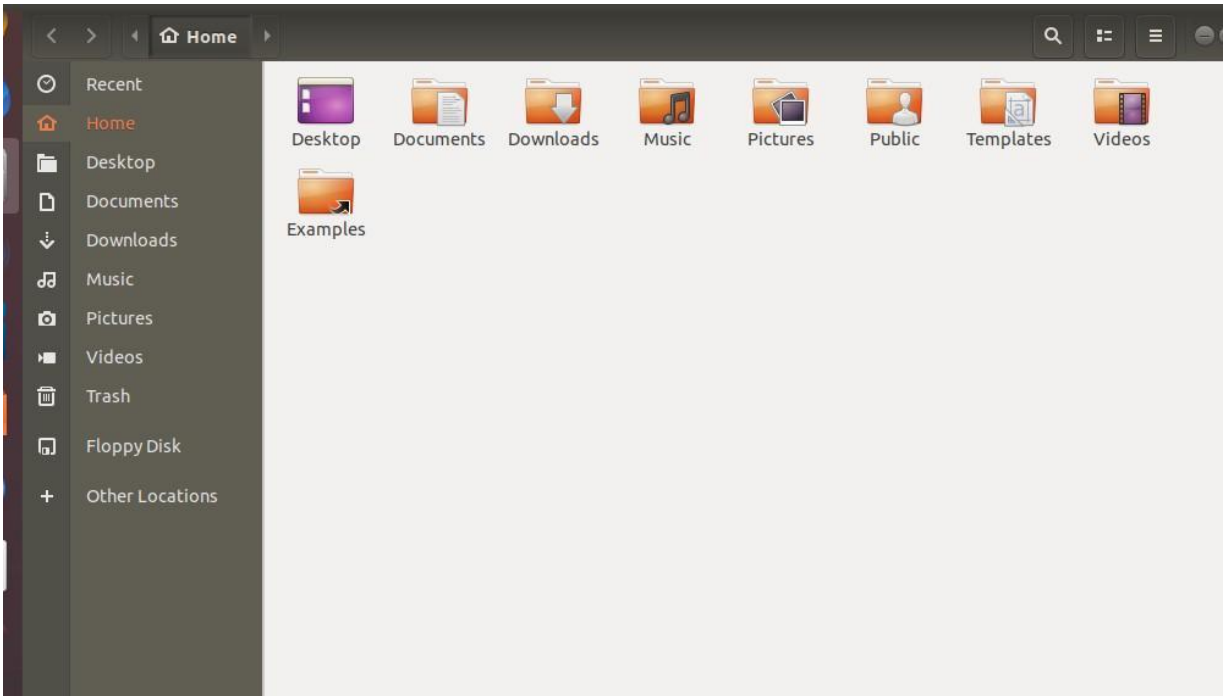


Sharing folder properties dialogue box will open.
in permissions we gave create and files

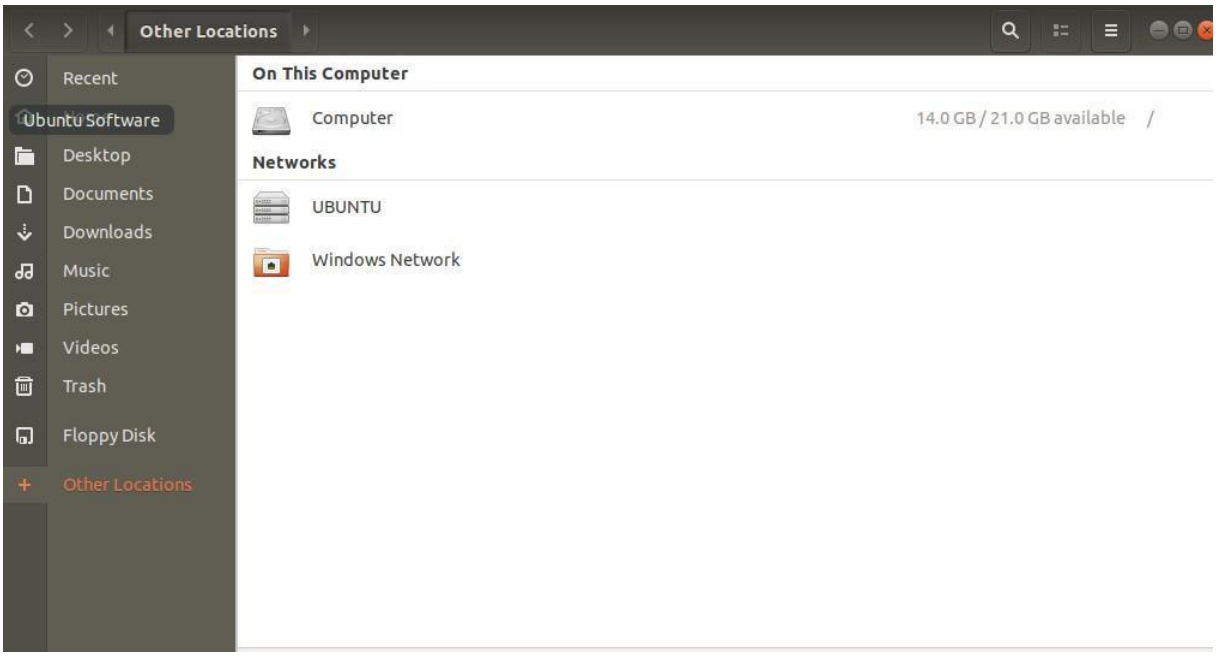
permissions.



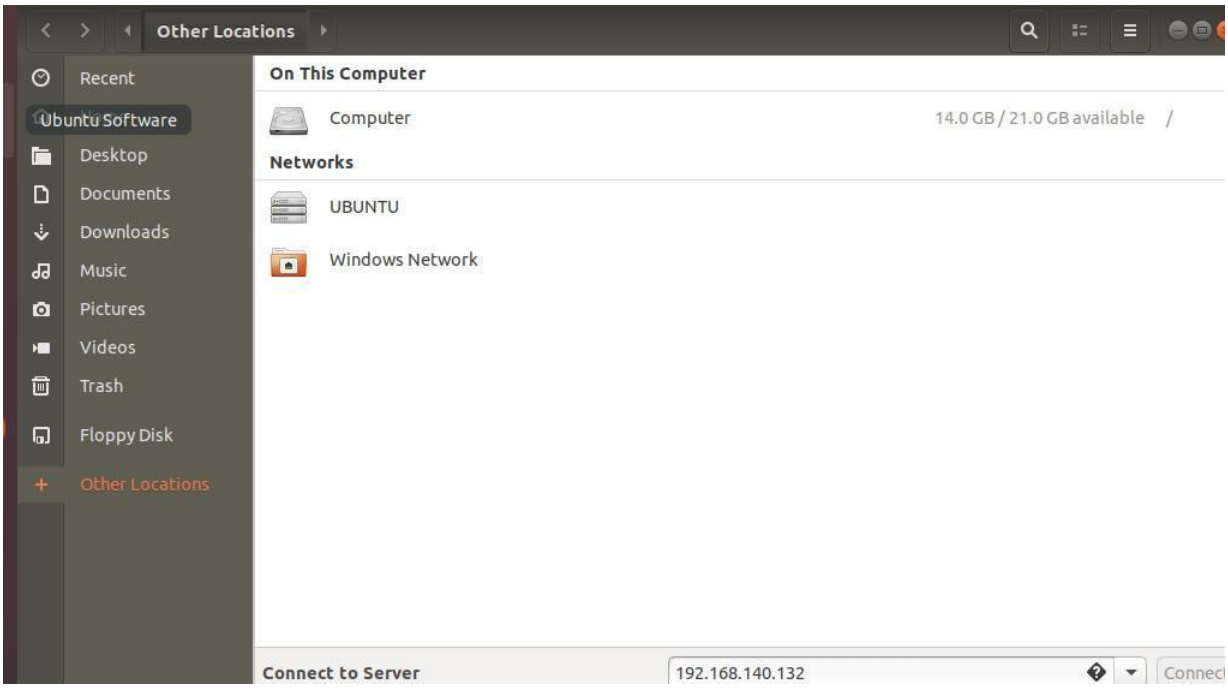
SECOND VIRTUAL MACHINE



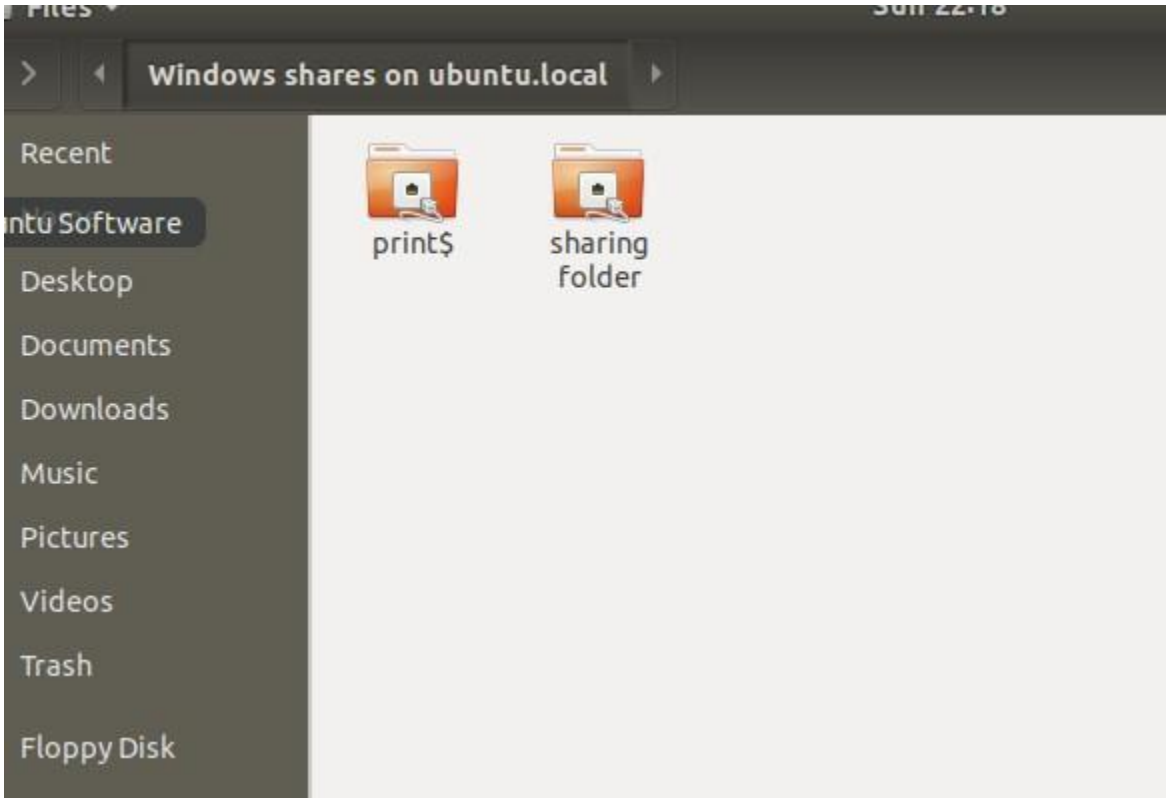
Click on **“other locations”.**



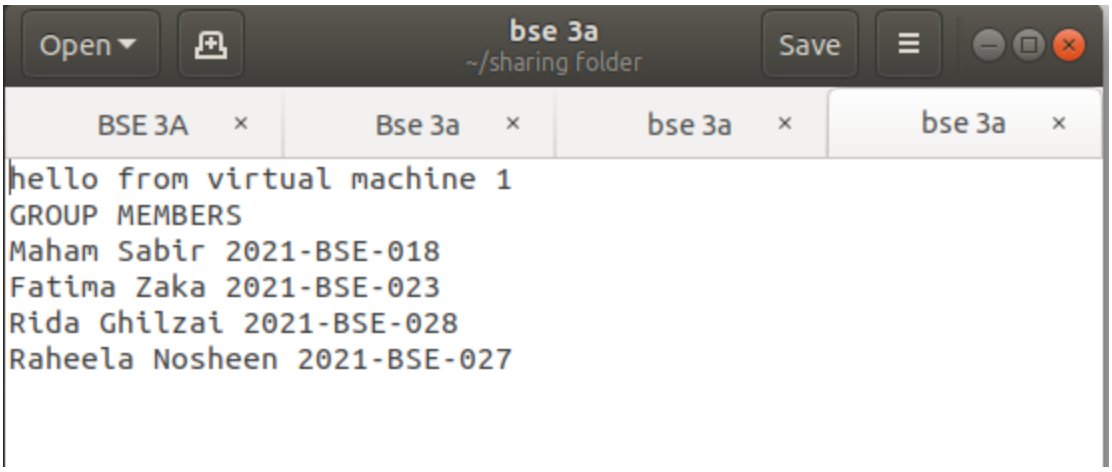
Write the IP address of virtual machine 1.



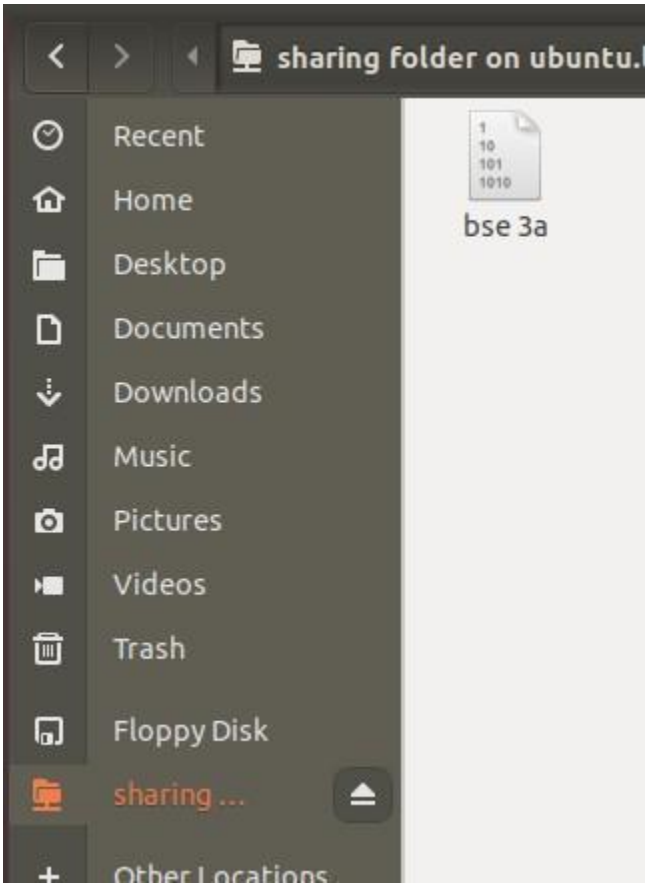
“Sharing folder” will be shown.



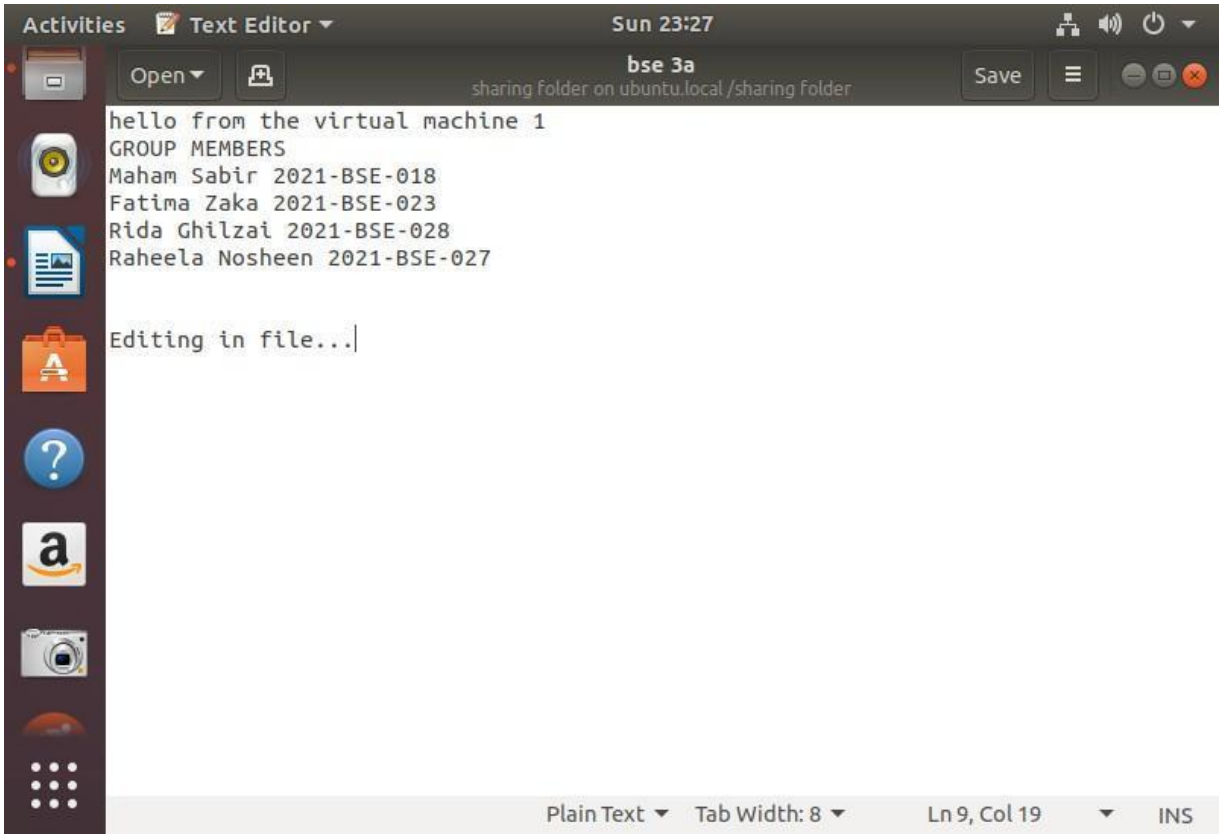
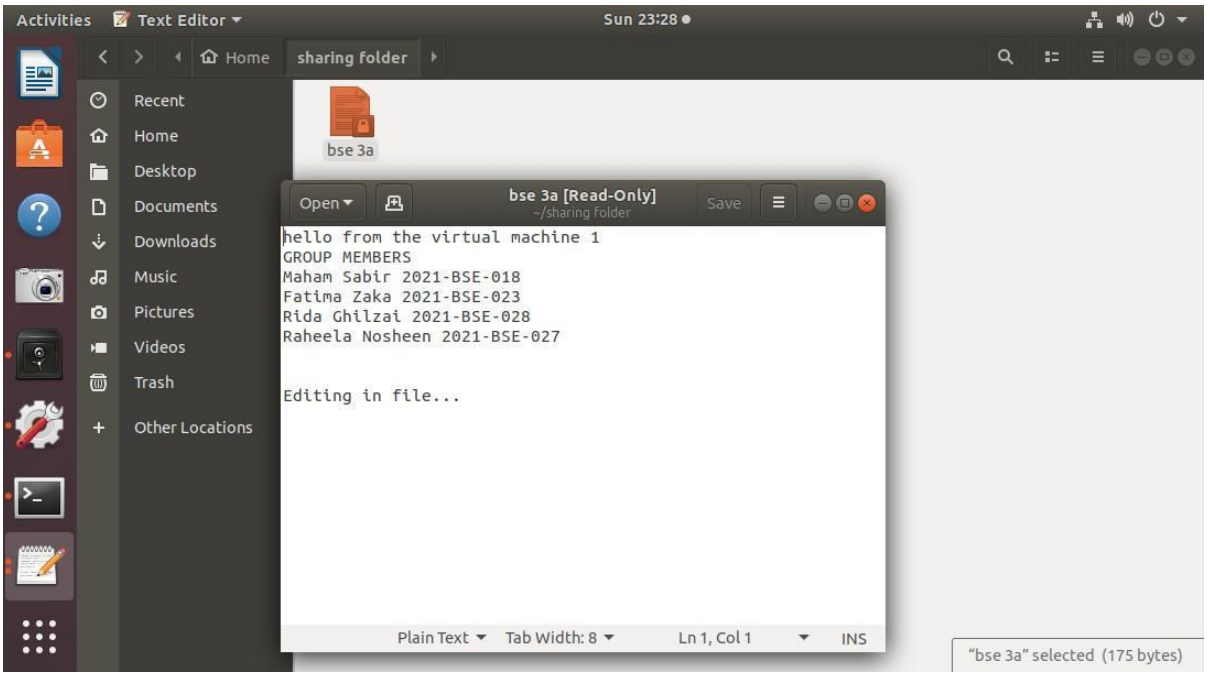
Creating a file in Virtual machine 1 in a folder name “**Sharing folder”**



Automatically it will be created in **virtual machine 2**



Edit in shared file using **Virtual machine 2**



Automatically it will be updated in a file that is in **Virtual Machine 1**