Experiment 1: SAMBA SHARE

AIM:

Installation and configuration of Samba share.

DATE: 06-06-2024

Description:

SAMBA

One of the most common ways to network Ubuntu and Windows computers is to configure Samba as a File Server. This section covers setting up a Samba server to share files with Windows clients.

The server will be configured to share files with any client on the network without prompting for a password. If your environment requires stricter Access Controls see Share Access Control

Port No: 139

Package name: samba

Configuration file: /etc/samba/smb.conf.

Procedure:

1. To install Samba, we can run:

    $sudo apt update

    $sudo apt install samba

2. We can check if the installation was successful by running:

    $whereis samba

3.Now that Samba is installed, we need to create a directory for it to share:

    $mkdir /home/<username>/sambashare/

The command above creates a new folder samba share in our home directory which we will share later.The configuration file for Samba is located at /etc/samba/smb.conf. To add the new directory as a share,we edit the file by running:

    $sudo nano /etc/samba/smb.conf

At the bottom of the file, add the following lines:

    [sambashare] comment = Samba on

    Ubuntu path =

    /home/username/sambashare read

    only = no

browsable = yes

4. Then press Ctrl-O to save and Ctrl-X to exit from the nano text editor.
5. Now that we have our new share configured, save it and restart Samba for it to take effect:

$sudo service smbd restart

6.Update the firewall rules to allow Samba traffic:

$sudo ufw allow samba

SETTING UP USER ACCOUNTS AND CONNECTING TO SHARE

7.Since Samba doesn't use the system account password, we need to set up a Samba password for our user account:

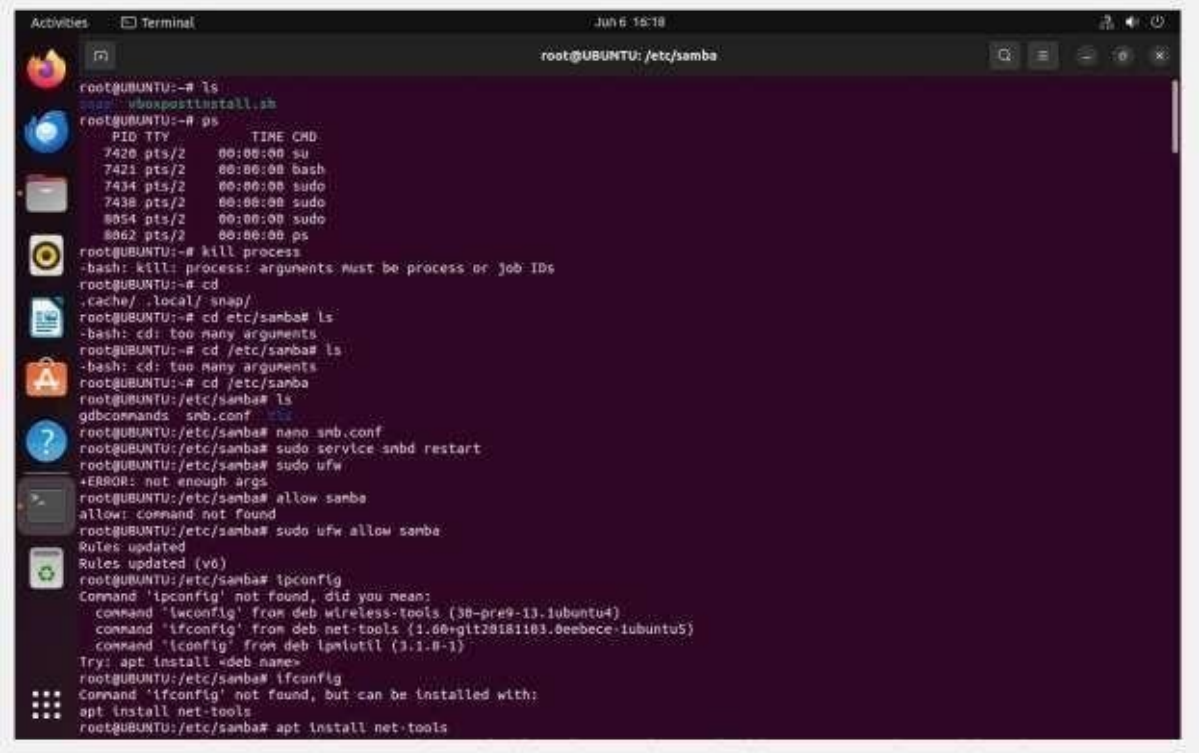
$sudo smbpasswd -a username

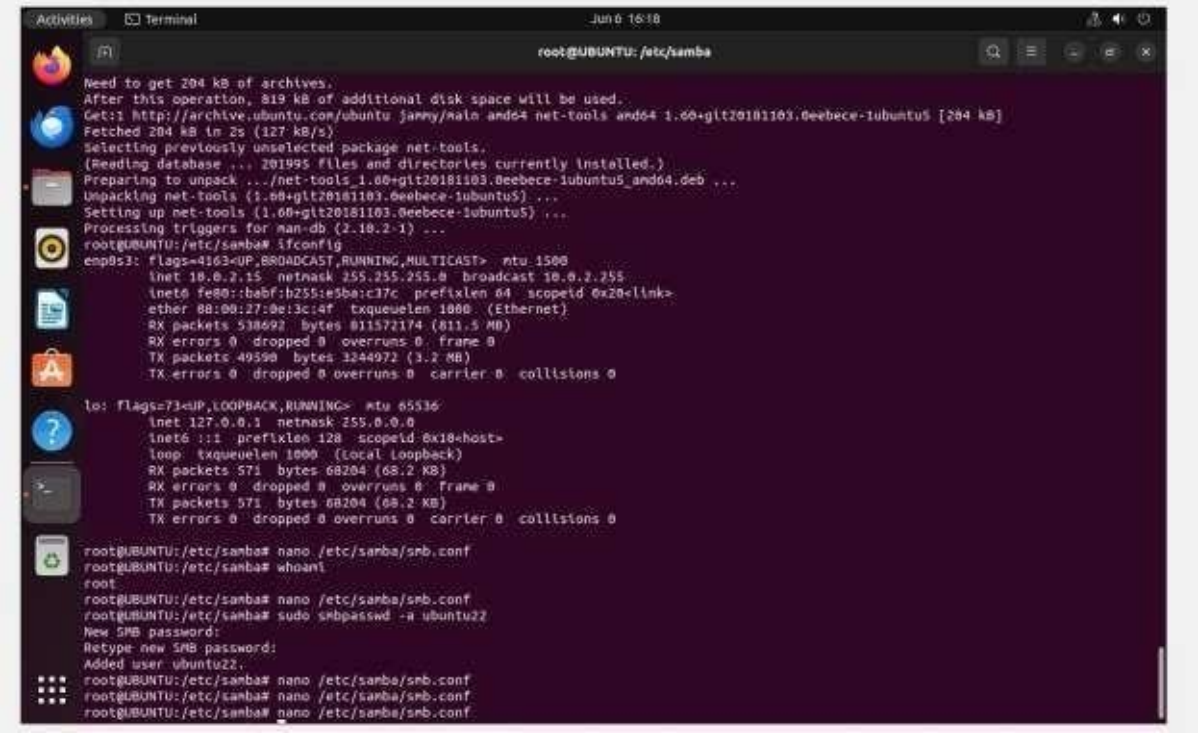
CONNECTING TO SHARE

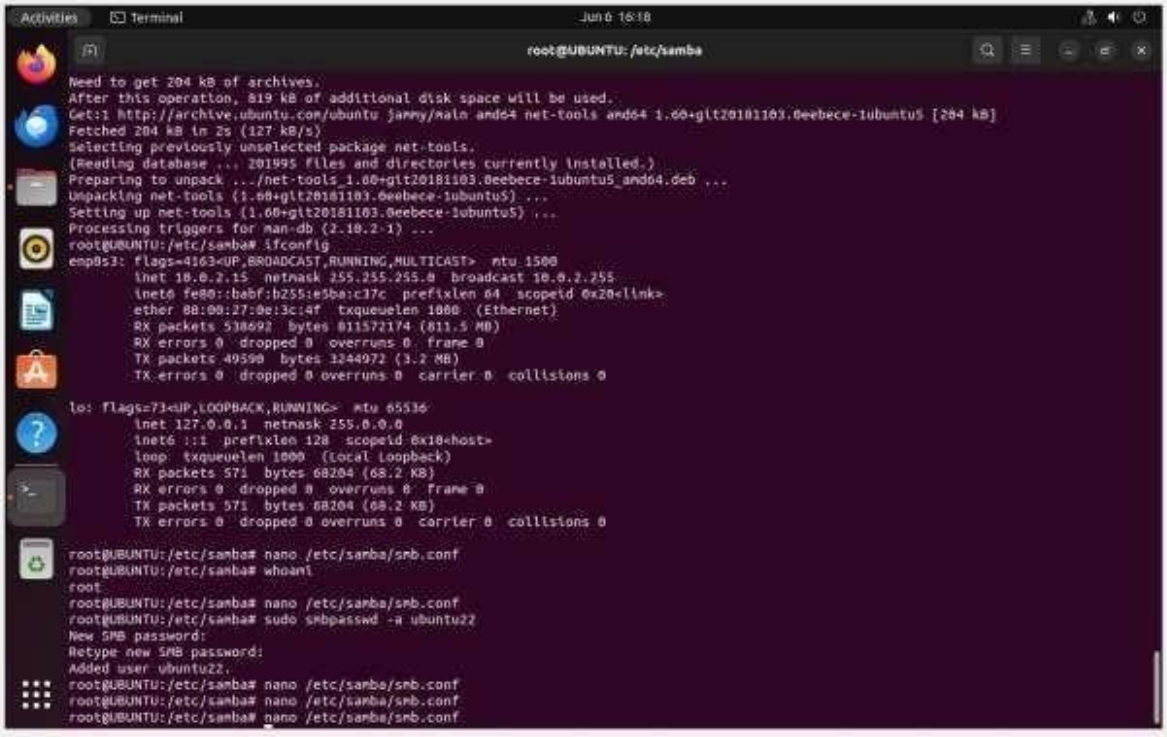
8. On Ubuntu: Open up the default file manager and click Connect to Server then enter: Connecting to samba via smb://127.0.0.1/sambashare

Note: ip-address is the Samba server IP address and sambashare is the name of the share. You'll be prompted for your credentials. Enter them to connect!

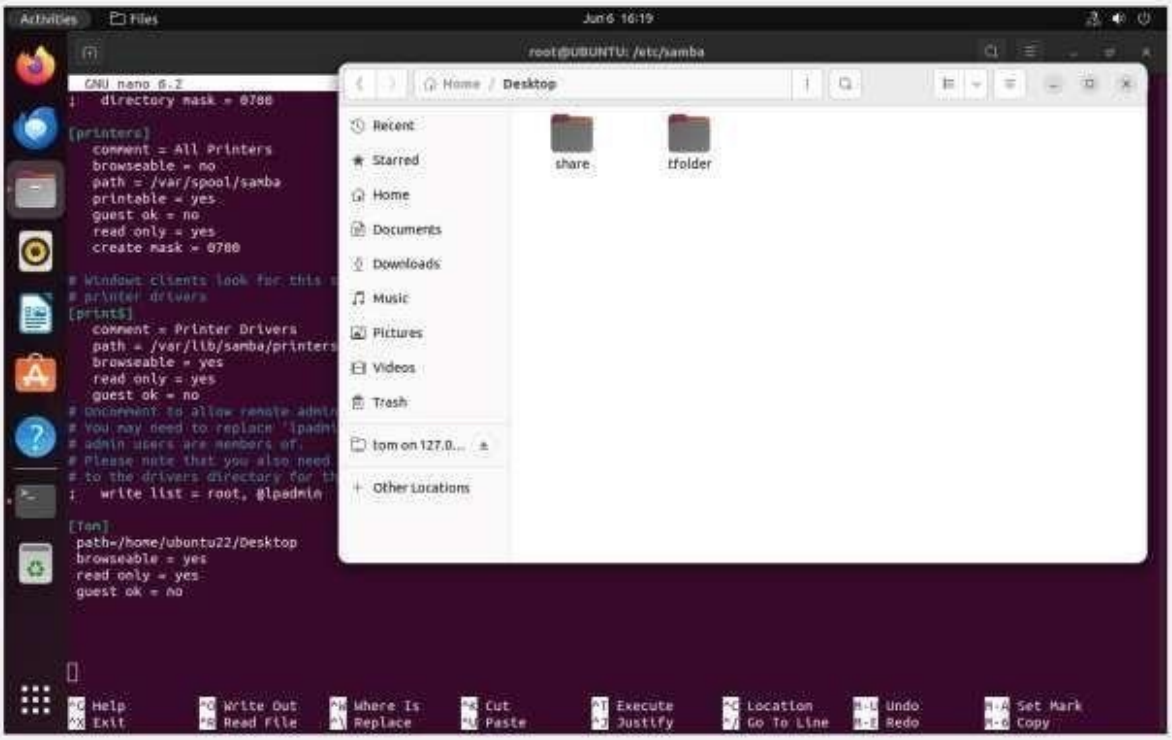
RESULT:

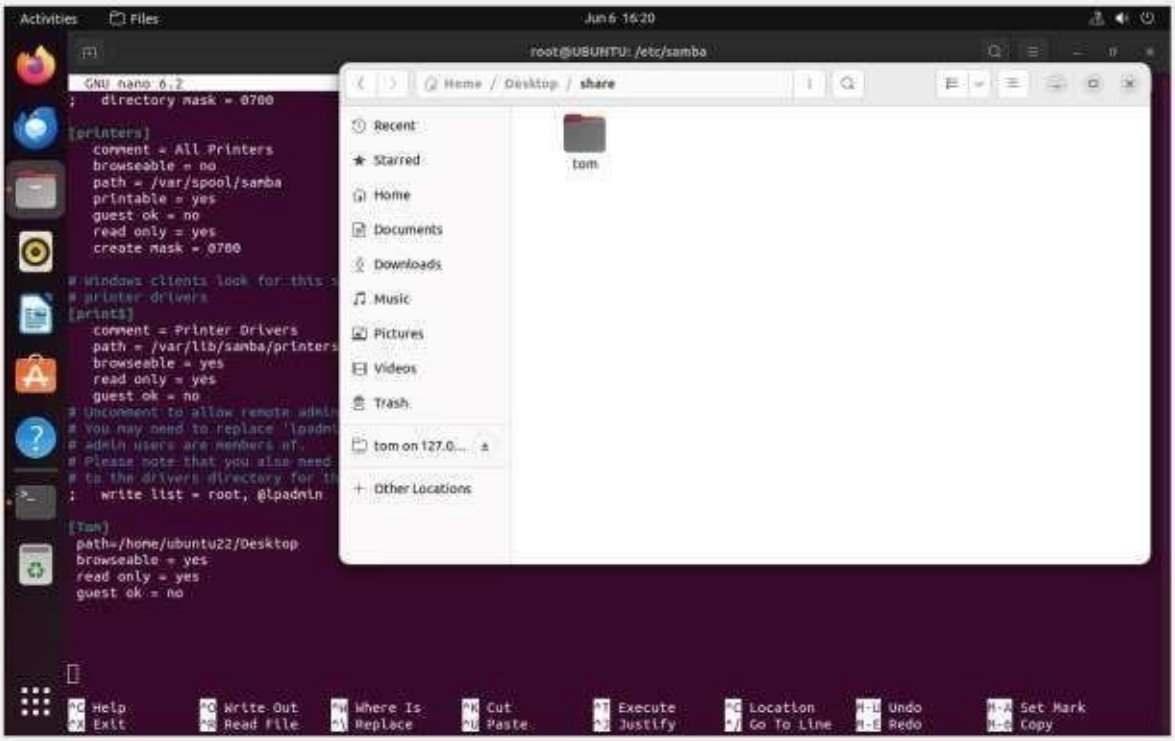

Activities
Terminal
Jun 6 16:18
root@UBUNTU: /etc/samba
root@UBUNTU:~# ls
snap vboxpostinstall.sh
root@UBUNTU:~# ps
PID TTY TIME CMD
7420 pts/2 00:00:00 su
7421 pts/2 00:00:00 bash
7434 pts/2 00:00:00 sudo
7438 pts/2 00:00:00 sudo
8054 pts/2 00:00:00 sudo
8062 pts/2 00:00:00 ps
root@UBUNTU:~# kill process
-bash: kill: process: arguments must be process or job IDs
root@UBUNTU:~# cd
.cache/ .local/ snap/
root@UBUNTU:~# cd etc/samba# ls
-bash: cd: too many arguments
root@UBUNTU:~# cd /etc/samba# ls
-bash: cd: too many arguments
root@UBUNTU:~# cd /etc/samba
root@UBUNTU:/etc/samba# ls
gdbcommands smb.conf tls
root@UBUNTU:/etc/samba# nano smb.conf
root@UBUNTU:/etc/samba# sudo service smbd restart
root@UBUNTU:/etc/samba# sudo ufw
ERROR: not enough args
root@UBUNTU:/etc/samba# allow samba
allow: command not found
root@UBUNTU:/etc/samba# sudo ufw allow samba
Rules updated
Rules updated (v6)
root@UBUNTU:/etc/samba# ipconfig
Command 'ipconfig' not found, did you mean:
command 'iwconfig' from deb wireless-tools (30~pre9-13.1ubuntu4)
command 'ifconfig' from deb net-tools (1.60+git20181103.0eebece-1ubuntu5)
command 'iconfig' from deb lpmiutil (3.1.0-1)
Try: apt install <deb name>
root@UBUNTU:/etc/samba# ifconfig
Command 'ifconfig' not found, but can be installed with:
apt install net-tools
root@UBUNTU:/etc/samba# apt install net-tools

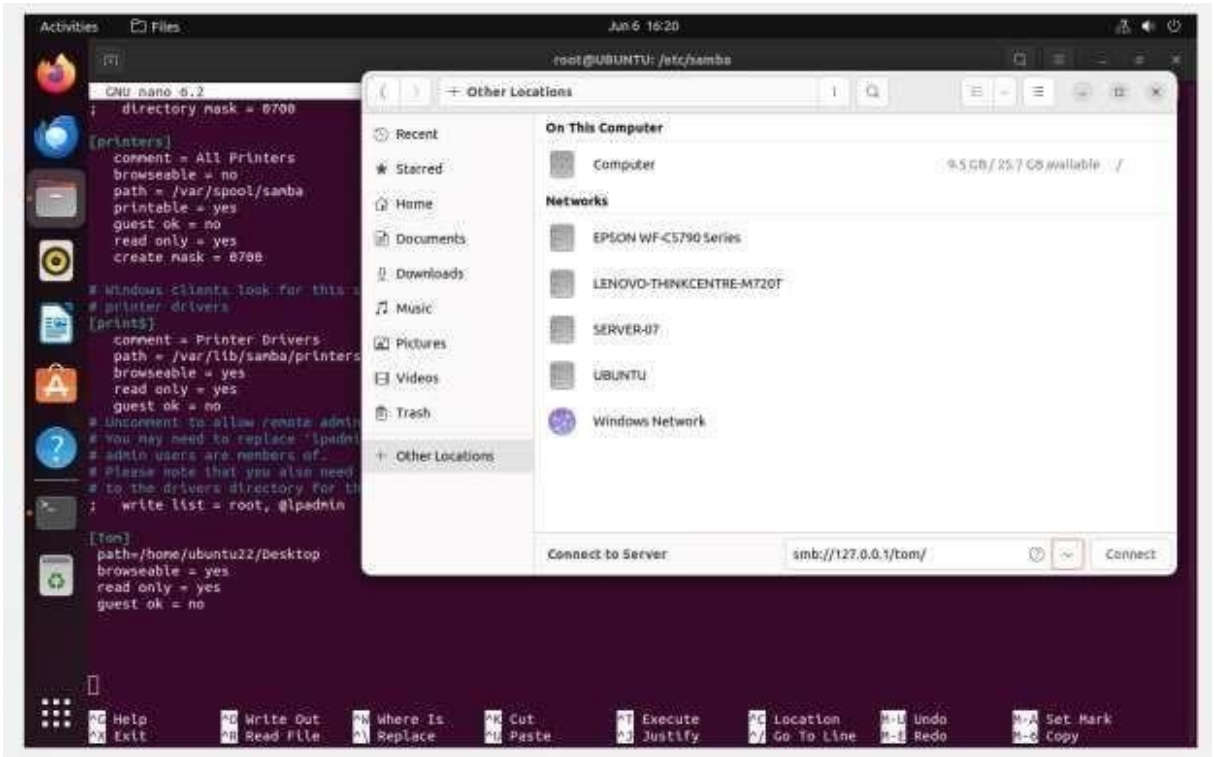

Activities
Terminal
Jun 6 16:18
root@UBUNTU: /etc/samba
Need to get 204 kB of archives.
After this operation, 819 kB of additional disk space will be used.
Get:1 http://archive.ubuntu.com/ubuntu jammy/main amd64 net-tools amd64 1.60+git20181103.0eebece-1ubuntu5 [204 kB]
Fetched 204 kB in 2s (127 kB/s)
Selecting previously unselected package net-tools.
(Reading database ... 201995 files and directories currently installed.)
Preparing to unpack .../net-tools_1.60+git20181103.0eebece-1ubuntu5_amd64.deb ...
Unpacking net-tools (1.60+git20181103.0eebece-1ubuntu5) ...
Setting up net-tools (1.60+git20181103.0eebece-1ubuntu5) ...
Processing triggers for man-db (2.10.2-1) ...
root@UBUNTU:/etc/samba# ifconfig
enp0s3: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
inet 10.0.2.15 netmask 255.255.255.0 broadcast 10.0.2.255
inet6 fe80::babf:b255:e5ba:c17c prefixlen 64 scopeid 0x20<link>
ether 08:00:27:0e:3c:4f txqueuelen 1000 (Ethernet)
RX packets 538692 bytes 811572174 (811.5 MB)
RX errors 0 dropped 0 overruns 0 frame 0
TX packets 49590 bytes 3244972 (3.2 MB)
TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
inet 127.0.0.1 netmask 255.0.0.0
inet6 ::1 prefixlen 128 scopeid 0x10<host>
loop txqueuelen 1000 (Local Loopback)
RX packets 571 bytes 68204 (68.2 KB)
RX errors 0 dropped 0 overruns 0 frame 0
TX packets 571 bytes 68204 (68.2 KB)
TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
root@UBUNTU:/etc/samba# nano /etc/samba/smb.conf
root@UBUNTU:/etc/samba# whoami
root
root@UBUNTU:/etc/samba# nano /etc/samba/smb.conf
root@UBUNTU:/etc/samba# sudo smbpasswd -a ubuntu22
New SMB password:
Retype new SMB password:
Added user ubuntu22.
root@UBUNTU:/etc/samba# nano /etc/samba/smb.conf
root@UBUNTU:/etc/samba# nano /etc/samba/smb.conf
root@UBUNTU:/etc/samba# nano /etc/samba/smb.conf

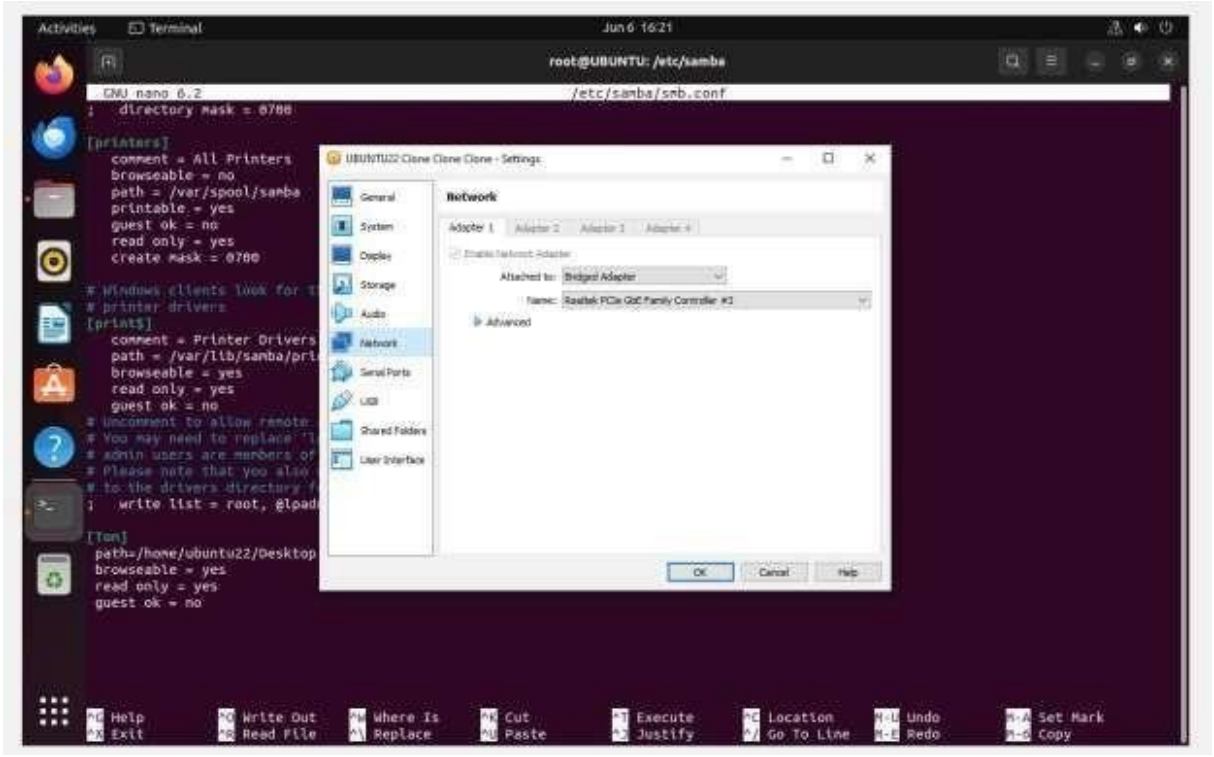

Activities
Terminal
Jun 6 16:18
root@UBUNTU: /etc/samba
Need to get 204 kB of archives.
After this operation, 819 kB of additional disk space will be used.
Get:1 http://archive.ubuntu.com/ubuntu jammy/main amd64 net-tools amd64 1.60+git20181103.0eebece-1ubuntu5 [204 kB]
Fetched 204 kB in 2s (127 kB/s)
Selecting previously unselected package net-tools.
(Reading database ... 201995 files and directories currently installed.)
Preparing to unpack .../net-tools_1.60+git20181103.0eebece-1ubuntu5_amd64.deb ...
Unpacking net-tools (1.60+git20181103.0eebece-1ubuntu5) ...
Setting up net-tools (1.60+git20181103.0eebece-1ubuntu5) ...
Processing triggers for man-db (2.10.2-1) ...
root@UBUNTU:/etc/samba# ifconfig
enp0s3: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
inet 10.0.2.15 netmask 255.255.255.0 broadcast 10.0.2.255
inet6 fe80::ba8f:b255:e5ba:c17c prefixlen 64 scopeid 0x20<link>
ether 08:00:27:0e:3c:4f txqueuelen 1000 (Ethernet)
RX packets 538692 bytes 811572174 (811.5 MB)
RX errors 0 dropped 0 overruns 0 frame 0
TX packets 49590 bytes 3244972 (3.2 MB)
TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
inet 127.0.0.1 netmask 255.0.0.0
inet6 ::1 prefixlen 128 scopeid 0x10<host>
loop txqueuelen 1000 (Local Loopback)
RX packets 571 bytes 68204 (68.2 KB)
RX errors 0 dropped 0 overruns 0 frame 0
TX packets 571 bytes 68204 (68.2 KB)
TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
root@UBUNTU:/etc/samba# nano /etc/samba/smb.conf
root@UBUNTU:/etc/samba# whoami
root
root@UBUNTU:/etc/samba# nano /etc/samba/smb.conf
root@UBUNTU:/etc/samba# sudo smbpasswd -a ubuntu22
New SMB password:
Retype new SMB password:
Added user ubuntu22.
root@UBUNTU:/etc/samba# nano /etc/samba/smb.conf
root@UBUNTU:/etc/samba# nano /etc/samba/smb.conf
root@UBUNTU:/etc/samba# nano /etc/samba/smb.conf


Activities
Terminal
Jun 6 16:19
root@UBUNTU: /etc/samba
GNU nano 6.2 /etc/samba/smb.conf
; directory mask = 0700
[printers]
comment = All Printers
browseable = no
path = /var/spool/samba
printable = yes
guest ok = no
read only = yes
create mask = 0700
Windows clients look for this share name as a source of downloadable
printer drivers
[print$]
comment = Printer Drivers
path = /var/lib/samba/printers
browseable = yes
read only = yes
guest ok = no
Uncomment to allow remote administration of Windows print drivers.
You may need to replace 'lpadmin' with the name of the group your
admin users are members of.
Please note that you also need to set appropriate Unix permissions
to the drivers directory for these users to have write rights in it
; write list = root, @lpadmin
[Tom]
path=/home/ubuntu22/Desktop
browseable = yes
read only = yes
guest ok = no
^G Help
^O Write Out
^W Where Is
^K Cut
^T Execute
^C Location
M-U Undo
M-A Set Mark
^X Exit
^R Read File
^\ Replace
^U Paste
^J Justify
^/ Go To Line
M-E Redo
M-6 Copy


Activities
Files
Jun 6 16:19
root@UBUNTU: /etc/samba
GNU nano 6.2
; directory mask = 0700
[printers]
comment = All Printers
browseable = no
path = /var/spool/samba
printable = yes
guest ok = no
read only = yes
create mask = 0700
Windows clients look for this
printer drivers
[print$]
comment = Printer Drivers
path = /var/lib/samba/printers
browseable = yes
read only = yes
guest ok = no
Uncomment to allow remote admi
You may need to replace 'lpadmi
admin users are members of.
Please note that you also need
to the drivers directory for t
; write list = root, @lpadmin
[Tom]
path=/home/ubuntu22/Desktop
browseable = yes
read only = yes
guest ok = no
Home / Desktop
Recent
Starred
Home
Documents
Downloads
Music
Pictures
Videos
Trash
tom on 127.0...
Other Locations
share
tfolder
^G Help
^X Exit
^O Write Out
^R Read File
^W Where Is
^\ Replace
^K Cut
^U Paste
^T Execute
^J Justify
^C Location
^/ Go To Line
M-U Undo
M-E Redo
M-A Set Mark
M-6 Copy


Activities
Files
Jun 6 16:20
root@UBUNTU: /etc/samba
GNU nano 6.2
; directory mask = 0700
[printers]
comment = All Printers
browseable = no
path = /var/spool/samba
printable = yes
guest ok = no
read only = yes
create mask = 0700
Windows clients look for this
printer drivers
[print$]
comment = Printer Drivers
path = /var/lib/samba/printers
browseable = yes
read only = yes
guest ok = no
Uncomment to allow remote admi
You may need to replace 'lpadmi
admin users are members of.
Please note that you also need
to the drivers directory for t
; write list = root, @lpadmin
[Tom]
path=/home/ubuntu22/Desktop
browseable = yes
read only = yes
guest ok = no
Home / Desktop / share
Recent
Starred
Home
Documents
Downloads
Music
Pictures
Videos
Trash
tom on 127.0...
Other Locations
tom
^G Help
^X Exit
^O Write Out
^R Read File
^W Where Is
^\ Replace
^K Cut
^U Paste
^T Execute
^J Justify
^C Location
^/ Go To Line
M-U Undo
M-E Redo
M-A Set Mark
M-6 Copy





All the commands have been executed and the output has been obtained successfully.