Government College of Engineering, Jalgaon

(An Autonomous Institute of Govt. of Maharashtra)
Department of Computer Engineering

Student Name :_____ **PRN:** _____

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Experiment No. ____

Title: -Interconnections of computers in Local Area Network to share resources.

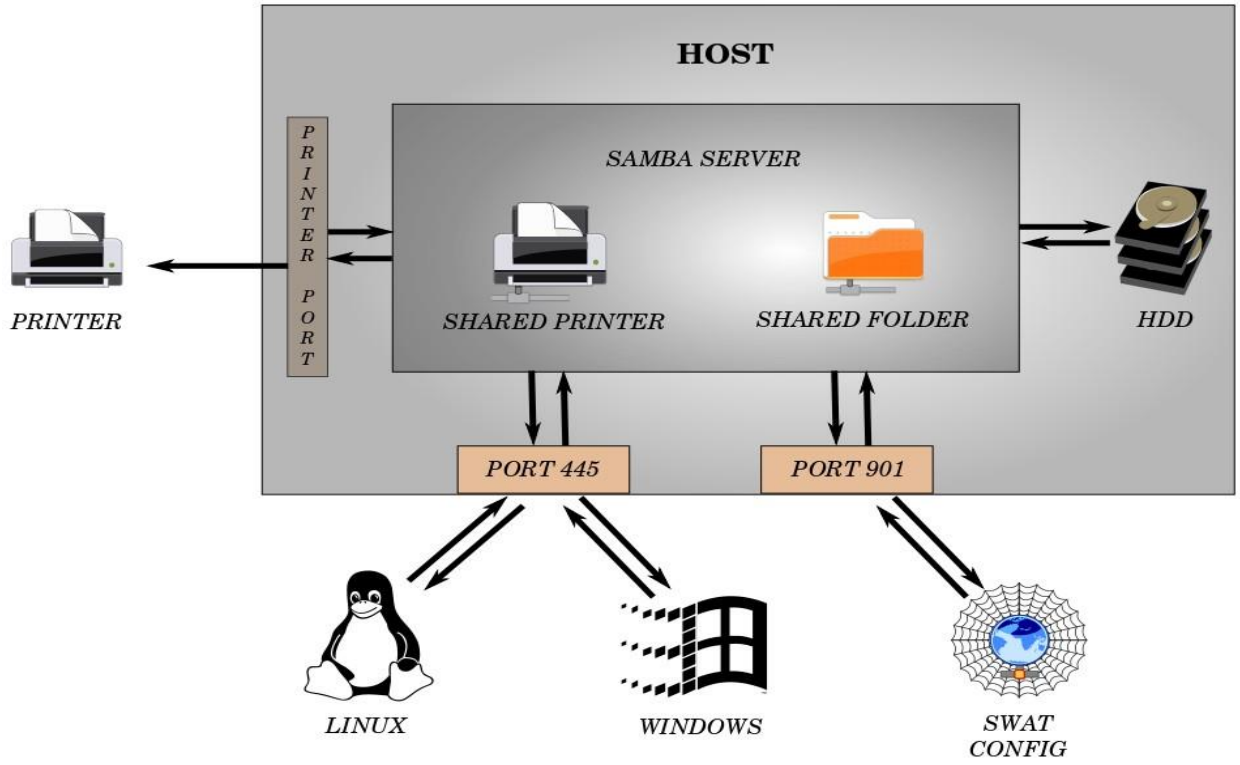
Aim: -To Study of concept of LAN & Shared resources, Interconnect computers in LAN, Share and make the use of shared resources.

THEORY:-

Linux SAMBA Server

Samba is a strong network service for file and print sharing that works on the majority of operating systems available today. When well implemented by the administrator, it's faster and more secure than the native file sharing services available on Microsoft Windows machines.

Apple Macs and some Web Browsers can speak this protocol as well. Alternatives to SMB include Netware, NFS, AppleTalk, Banyan Vines, Decnet etc. Many of these have advantages but none are public specifications and widely implemented in desktop machines by default. Samba software includes an SMB server, to provide Windows NT and LAN Manager-style file and print services to SMB clients such as Windows 95, Warp Server, smbfs and others, a NetBIOS, *rfc1001/1002* name server, which amongst other things gives browsing support, an ftp-like SMB client so that you can access PC resources; disks and printers from Unix, Netware and other operating systems, and finally, a tar extension to the client for backing up PCs



IN-LAB TASK:-

Steps to use samba file shared system in Ubuntu:

- First, you'll need to install Samba. Fire up a Terminal window and use this command:
- **sudo apt-get install samba**
- Follow the default prompts to install Samba. Now, Samba uses a separate set of passwords than the standard Linux system accounts (stored in /etc/samba/smbpasswd), so you'll need to create a Samba password for yourself with this command:
- **sudo smbpasswd -a USERNAME**
  (USERNAME, of course, is your actual username.)
- Type a suitably strong password (make sure it includes uppercase, lowercase, punctuation, and numbers). Once your password is created, the next step is to edit your

/etc/samba/smb.conf file, the configuration file for Samba. Begin by creating a folder named ‘test’ on your home folder; we’ll use that for our test shared folder (you can create other shared folders using the same method):

- **mkdir /home/USERNAME/test**
- Next, make a safe backup copy of the original smb.conf file to your home folder, in case you make an error:
- **sudo cp /etc/samba/smb.conf ~**
- Now use your text editor of choice to edit smb.conf:
  sudo gedit /etc/samba/smb.conf
  (New users will probably find gedit the easiest to use due to its GUI; but you can use emacs or vi just as readily, especially if you’re using the server version of Ubuntu, which doesn’t include X11 by default.)
- Once smb.conf has loaded, add this to the very end of the file:
- **[test]**
  path = /home/USERNAME/test
  available = yes
  valid users = USERNAME
  read only = no
  browsable = yes
  public = yes
  writable = yes
- (There should be no spaces between the lines, and note also that there should be a single space both before and after each of the equal signs.)
- These settings will share the test folder we created earlier, and give your username and your username alone permission to read and write to the folder. Once you have input the changes, save smb.conf, exit the text editor, and restart Samba with this command:
  sudo restart smbd
- Once Samba has restarted, use this command to check your smb.conf for any syntax errors:
  sudo testparm

- If you pass the testparm command, Samba should be working; try accessing the shared folder from another computer on your LAN.
- -JM

ADDITIONAL READING:

Open nautilius, press Ctrl+L, and put smb://ip.address(change ip.address with ip of PC you wanna connect to, like smb://192.168.1.1

POSTLAB TASK:-

1. **What is sharing?**

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2. **Advantages of sharing?**

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Mrs. Priyanka H. Gadade

Course Teacher