# Laboration 3 - Administration

During this laboration we will learn how to install, configure and test servers that will allow you to have access remote machines, copy files between computers and file sharing.

## Goals

- Install and configure a SSH server.
- Install and configure a FTP server.
- Install and configure a Samba server.
- Test each installation.

## Required material

You are required to print out this document. It will serve as guide during the laboration.

You are going to need your student user name and the password in order to login in the lab computers.

*Take with you the material from **previous** laboration exercises.*

*You may find the course book useful during the labs.*

## Preparation

**BEFORE** each laboration exercise, you will be required to prepare the PREPARATION assignment (Page 2).

Doing this preparation before the exercise will help you solve the exercises and, more important, understand what you are doing in the exercise.

# Preparations

1. Read about all the commands needed in this laboration. Document their function and arguments for typical use.

ssh

Sshd

/etc/ssh/sshd_config

ftp

vsftpd

/etc/vsftpd

samba

/etc/samba/smb.conf


**Check the course book / Internet / other sources about how to install and configure the following servers under GNU/Linux:**

1. **SSH**
2. **FTP**
3. **SAMBA**

# Laboration

1. **Setting up the environment**

   1.1. Check the course web page for information about where the virtual machine repository is located.
   1.2. Copy the virtual machine folder called DO2003 from the repository to D:\VMW\DO2003.
   1.3. Execute (double click) the file do2003.vmx (VMware virtual machine configuration).
   1.4. Log in to the system
   > User:            ide
   > Password:        ide

2. **Network configuration**
   2.1. Configure your network so you get Internet access (refer to the Lab 2 material).

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   2.2. Update list of available packages (sudo apt-get update).

3. **SSH server**
   3.1. Install the ssh server. Check the course book for more details about this process.

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   3.2. Change the default port to 1022. You will need to restart the server after that.

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4. **FTP Server**
   4.1. Install the vsftp server. Check the course book for more details about this process.

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   4.2. Turn on anonymous ftp access (edit the appropriate configuration file and restart the server).

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   4.3. By default, vsftpd uses /srv/ftp directory as the home directory for anonymous FTP user. Copy and/or create some files in this directory.

5. **Samba server**
   5.1. Install the samba server. Again, check the course book for more details about this process.

   5.2. Find the definition of "[homes]" share in /etc/samba/smb.conf file. Uncomment this section. Restart samba server afterwards.

   5.3. Make sure you have some files in your home directory (besides the hidden ones).

6. **Now it is time to test the server's installation.**
   6.1. Start by finding out the IP address of the virtual machine.

   6.2. On the windows computer, open the command-line prompt (by running cmd.exe). Use the ping command to verify that you can connect to the virtual machine.

   6.3. Use Google to find the "putty" utility (it's an ssh client for Windows). Download and execute it (it does not need to be installed). Connect to the ssh server on the virtual machine (remember to change default port to 1022). Log in and execute some commands to verify that your server is working properly.

   6.4. Use Windows ftp command line utility to test if your ftp server is working: connect and log in as user "anonymous".

   6.5. Download one of the files you have made available.

   6.6. On the windows machine, open "My Computer", click "Map Network Drive", enter "\\ubuntu\ide". Mark the "connect using different credentials" checkbox and specify user "ide" and empty password. Verify that your Linux home directory is now accessible from Windows.

**7. Finishing the exercise**

    7.1. Ask laboration assistant to check your work.
    7.2. Shut down your virtual machine. Which command do you use to shut down?

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    7.3. Did it succeed? Is there any problem? Remember, the command shutdown cannot be executed by the user so you will have to execute it as administrator.

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**8. After the virtual machine is closed down, REMOVE it from the host.**


**Congratulations**