Samba

Introduction and/or Background

The smb.conf file is a configuration file for the Samba suite.

smb.conf contains runtime configuration information for the Samba programs. The complete description of the file format and possible parameters held within are here for reference purposes.

Objectives

In this project/lab the student will:

- Gain familiarity with the Samba protocol

Equipment/Supplies Needed

- As specified in Lab 0.0.1.
- Debian client VMPC1, Debian server VMSVR1

Procedure

Perform the steps in this lab in the order they are presented to you. Answer all questions and record the requested information. Use the Linux Virtual Machine to perform lab activities as directed. Unless otherwise stated, all tasks done as a non-root user. If root access is needed use the sudo command.

Assignment

Installation

1. Open a terminal session. Search for the Samba code in repositories

   aptitude search samba

   Select and install

   aptitude install samba samba-common samba

   Samba by default upon a successful installation is automatically running. The configuration will not be complete by default however.

2. Test that your Samba daemon is available:

   samba -V

   You should receive a canned response from the server that Samba is installed. Validate that the port is open on VMSVR1 using nmap. Is it?

   Take a screen shot of the terminal screen. Add that to your document.

   Samba depends on two daemons, smbd and nmbd, both must be running as these are the two software components as they support the CIFS protocol.

3. Let's see if they are running:

   cd /etc/init.d
   service nmbd status
   service smbd status

   You should receive a negative response that these are running. Whenever you make changes to Samba you should run the services above in exactly that order. Turn those services on thusly:

   cd /etc/init.d
   service nmbd start
   service smbd start

   Validate that the port is open on VMSVR1 using nmap. Is it?

Take a screen shot of the terminal screen. Add that to your document.

Save Yourself

1. Unlike a lot of programs when a update is done on the configuration file a backup file is automatically generated. Samba does not. Soooo... when working with Samba ALWAYS make a copy of your current running configuration before you do any edits!

   sudo cp smb.conf smb.conf.bak

   We have to sudo this command since we are working in the /etc subdirectory remember?

Samba Share Setup

1. Make a directory on the VMSVR1 server.

   sudo mkdir /home/Shares

   Change ownership.

   chown user:user /home/Shares

   Where user:user is your user id : group id on the system.

Configuration

1. Time to start configuring the system

   cd /etc/samba
   sudo nano smb.conf

   You made your backup of this file, right???

   Look for the following line,

   workgroup = WORKGROUP

   If your Windows PC uses WORKGROUP make no changes. If the PC is in a different workgroup name then change it to match the same in the smb.conf file. Case is important here.

Look for the following,

#====================== Share Definitions ==================

1. You will see several examples of [shares] and [printers] for your consideration. Drift down to the Share Definitions sections and add the following:

   ```
   [Shares]
   comment = Shared Files
   path = /home/Shares
   browsable = yes
   read only = no
   ```

   Leave the printer definitions as is if you want printer support. Save the file.

Validate
Before we restart the server, the Samba folks provide a nice tool to test your new configuration.

1. The tool is testparm and it must be run as root to work,

   ```
   testparm
   ```

   The program very nicely will provide a read out of the status of various attributes in the file and at the end state where it is a valid smb.conf file to use. If there are errors it will state them. Good to go? Great!

   Snapshot the screen and add to your Word or Writer file.

2. Now complete the following:

   ```
   cd /etc/init.d
   service nmbd restart
   service smbd restart
   ```

   If you receive no errors then you are ready to go to the next section. Otherwise, you will need to retrace your steps to find the error.

   One last item, adding a user:

   ```
   smbpasswd -a username
   ```

   Where username is the user name you use on the VMSVR1 server.

Test It

With the server running Samba it is time now to turn our attention to the Windows PC.

First thing, if the PC is in a domain you will need to switch it to WORKGROUP mode. Within the family of Win versions there are various ways to navigate. Go to your control panel and select System. On the computer name entry click to change. In the computer name panel select the WORKGROUP option and provide the name you provided in the smb.conf file previously. If you are using a VMWare instance of Windows it will be necessary to validate that the PC can reach the server (ping).

Save your changes, close all pending programs and reboot the PC. When the PC returns, login. Navigate to file explorer and access the remote share. You will be prompted for a login/password. Provide the credentials you set up with smbpassword.

Take a screen shot of the terminal screen. Add that to your document.

Note:
This was a simple case, it can get more complex and is beyond the scope of this course. But Samba can do the following:

- Workgroup shares
- Global printer services
- Participate in a domain
- Perform as a domain controller replacing the windows server

Lab Submissions Proof: Provide screenshots as indicated in the lab; upload your proof to Canvas for grading.

Rubric

Checklist/Single Point Mastery

Concerns Working Towards Proficiency	Criteria Standards for This Competency	Accomplished Evidence of Mastering Competency
	Criteria #1: Recorded screenshot of samba -V command indicating daemon is running (25 points)	
	Criteria #2: Recorded screenshot of nmdb and smdb status command indicating daemon is running (25 points)	
	Criteria #3: Recorded screenshot of	

	sudo testparm validating configuration is correct (25 points)	
	Criteria #4: Recorded screenshot of Windows PC login using smbpassword credentials (25 points)	