Linnaeus University

Laboration 2

1DV720 – Server Administration

January 15, 2018

1 Introduction

For this lab we will look into filesystems, partitioning, permissions and how these can be applied in a server environment. We will modify the lab environment, you can reuse some machine or start from scratch and delete all machines from lab 1. Before you delete any machine make sure that you have passed Lab 1.

2 Deadline

There are two laboratory sessions connected to this module, at these sessions you are given the opportunity to get help if so needed. To be able to finish the modules you are likely needed to spend more time on your own.

Accounting You will show your work and demonstrate your progress at any of these lab session, prepare a small document with an overview of your configuration/setup if needed for overview.

3 Assignment

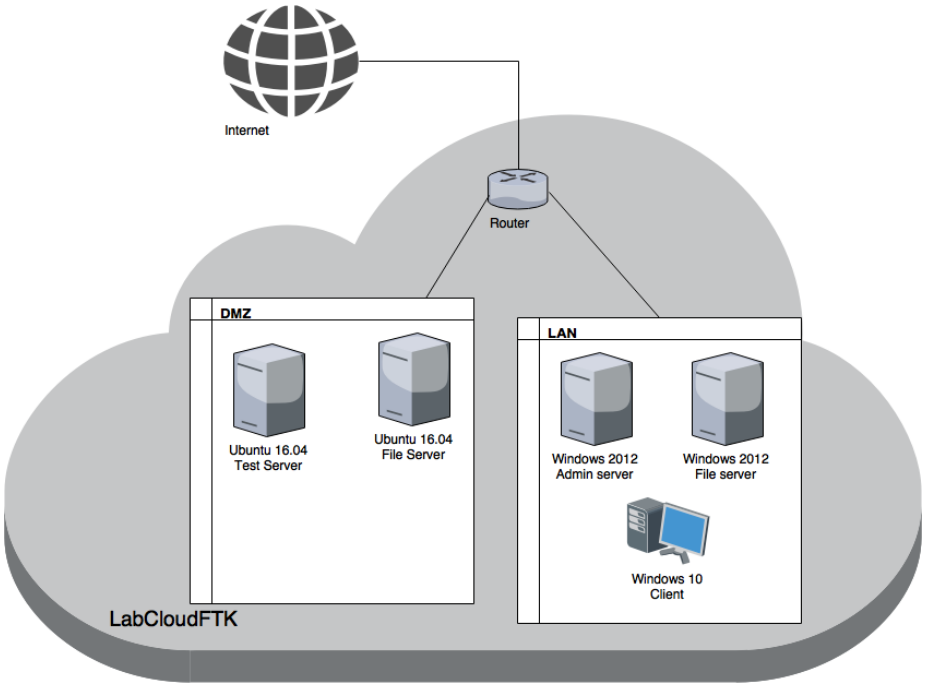

Figure 1: The network as it should be setup in Lab 2.

Now that you have set up the basic network and made sure the machines can communicate, it's time to move on and configure some file servers. In Figure1 you should see how the network should look when you are done with lab 2.

The topology contains two separated networks, one is for the internal network witch shouldn't be be able to contact from the outside. The other network is for servers that should be publicly access like Web servers and Name servers. In the internal network called LAN you should have three machines, one Admin Server from where you will manages all of the machine both in the LAN and the DMZ. The second server in the LAN should be a Windows file server and the last machine is a client machine that will be used to test the permissions on the file server. In the second network, DMZ, you should have two Linux server. One file server, that later on will be used for the web servers, and one server to test connectivity and permissions of the file server.

4 Requirements

As in the first lab, security is important and all machines should have there firewalls enabled. Firewall rules will be checked to be 'decent'. Remember that if (as it should be) your firewall is properly setup you will need to make exception for the protocols you are implementing. As previously your configuration should survive a reboot.

- All machines should:
  - should have internet access
  - within the same network be able to ping each other
  - not be able to contact each other if not in the same network, except for the Admin Server
  - have proper firewall rules. This includes both the linux and windows machines
  - have a proper naming convention.
- Specific machine requirements:
  - **LAN** - Admin Server
    - OS: Windows Server 2012 R2 **GUI**
    - This is the only machine that should be able to contact from Internet using RDP
    - Only RDP traffic should be allowed from Internet
    - It should have an strong an complex password.
    - You should be able to manage other servers/clients, both in LAN and DMZ, from this machine using SSH and RDP
  - **LAN** - File Server
    - OS: Windows Server 2012 R2 **Core**
    - should have 3 volume connected to it that should be configured as one volume with RAID 5 and formatted with NTFS. **Only use 1 GB volumes**.
    - this new volume should have a shared folder with different permissions for different users
    - you should have at least 3 different users with different file permissions on the share, they should not have access to other parts of the server.
  - **LAN** - Windows Client
    - OS: Windows 10
    - should be able to connect to the file server
    - you should be able to login with have at least 3 different users that should have different file permissions on the file server

- **DMZ** - File server
  - OS: Ubuntu 16.04
  - should have one extra volume configured and formatted with an appropriate file system
  - this volume should be used to share a folder with NFS
  - you should configure an extra user account that should have read and write permissions on the shared folder. That user should not have other permissions on the file server
- **DMZ** - Test server
  - OS: Ubuntu 16.04
  - should have the file server share mounted

5 Work Environment

You will be using FTK Lab Cloud to be able to accomplish this lab. You will find your credentials and tutorial on how to get started on this page: https://coursepress.lnu.se/kurs/serveradministration/lab-cloud/

For this lab I have also created a video tutorial on how to set up an admin server and the basics for this lab. You'll find it on the `course homepage`.