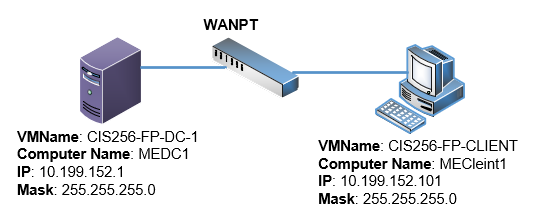
# Overview

This is your final practical exam. You can use your notes, the Internet, and your textbook to complete this exam.

# setup

1. Remove all **your** virtual machines from the computer that are **not required by this or other classes to complete labs**.
2. Run the virtual machine setup script from the course website to create the virtual machines and switch for this exam. See image below.



# Tasks

**NOTE: Read the entire exam before starting. Some steps you may not be able to complete in the order provided.**

## **CIS256-FP-DC1**

1. (**5 pts**) Rename your network adapter to **LAN.**
   1. Configure your TCP/IP settings as follows:
      1. IP address – **10.199.152.1/24**
      2. Default Gateway – **10.199.152.254**
      3. DNS – To support Active Directory.
2. **(5 pts)** Rename your computer to **MEDC1**
3. **(20 pts)** Install **Active Directory Domain Services** on your server.  It is the first installation of **Active Directory Domain Services** in your organization.  There are no DNS servers currently installed in your organization. This server will support DNS for the organization.
   1. Domain name –**medical-emr.com**
   2. **Administrator** password**: Password1**
4. **(10 pts)** Create the OU structure as shown below:
   1. **Pickens**
      1. **IT**
      2. **Medical**
   2. **Greenville**
      1. **IT**
      2. **Medical**
5. **(10 pts)** Import the users from the **memr-employees.csv** file.
6. (**10 pts**) Create the following groups
   1. **Greenville-IT**
      1. Group type and scope appropriate for members of a department.
      2. Contains the users from **Greenville** **IT** department.
      3. Location – **Greenville** OU.
   2. **Greenville-Medical**
      1. Group type and scope appropriate for members of a department.
      2. Contains the users from **Greenville** **Medical** department.
      3. Location – **Greenville** OU.
   3. **Greenville**
      1. Group type and scope appropriate for members of a department.
      2. Contains the users from **Greenville Medical** and **IT** departments and uses group nesting.
      3. Location – **Greenville** OU.
   4. **Pickens-IT**
      1. Group type and scope appropriate for members of a department.
      2. Contains the users from **Pickens** **IT** department.
      3. Location – **Pickens** OU
   5. **Pickens-Medical**
      1. Group type and scope appropriate for members of a department.
      2. Contains the users from **Pickens** **Medical** department.
   6. **Pickens**
      1. Group type and scope appropriate for members of a department.
      2. Contains the users from **Pickens** **Medical** and **IT** departments, uses group nesting.
      3. Location – **Pickens** OU.
   7. **Medical-Emr**
      1. Group type and scope appropriate for members of a department/organization.
      2. Contains all employees, uses group nesting.
      3. Location – **Users** container.
   8. **MEDC1-Medapps-R**
      1. Group type and scope appropriate for assignment permissions to file system resources.
      2. Contains all employees, uses group nesting.
      3. Location – **Users** container.
   9. **MEDC1-Medapps-FC**
      1. Group type and scope appropriate for assignment permissions to file system resources.
      2. Contains the users from **Greenville** **IT** department and uses group nesting.
      3. Location – **Users** container.
7. Create and apply GPOs to meet the following requirements:
   1. **(10 pts)** A policy is required to whitelist applications (only allow personnel to run these applications)
      1. Name – **Application Allow List**
      2. Allow users in the **Medical** OUs to only run the following applications: (This setting is in the **Users  Policies 🡪 Administrative Templates  System** node of group policy)
         1. The command prompt - **cmd.exe**
         2. Google Chrome – **chrome.exe**.
   2. **(10 pts)** A policy is required to configure Windows updates on all computers in the **Greenville** and **Pickens** organizations
      1. Name – **Windows Update Policy**
      2. Configure **Windows Updates** with the following settings: (These settings are in the **Computers  Administrative Templates  Windows Components  Windows Update** node of group policy)
         1. **Automatic Updates** are enabled, Auto download and schedule the install, Every **Saturday** at **02:00**
         2. Specify **Intranet Microsoft update service** location  **http://192.168.13.1**
8. **(10 pts)** Personnel in the **Greenville IT** department are responsible for resetting passwords for all users in the domain. Delegate control for this permission.
9. **(10 pts)** Create a folder named **Medapps** in the root folder of your **C:**\ drive.
   1. The folder must be accessible over the network. All permissions must be assigned to groups using the AGDLP strategy. Permissions will be configured using NTFS permissions.
   2. Disable Inherited permissions on the folder and remove **Users** group access to the folder.
   3. All users in the organization require read access to the **Medapps** folder. Use groups created above when assignment permissions.
   4. The members of the **IT** department in **Greenville** and members of the **Administrators** group must have Full Control of the **Medapps** folder. Use groups created above when assignment permissions.
10. **(10 pts)** **Pickens** and **Greenville** locations will be in separate geographical locations and connected with a T-1 connection.
    1. Create a site for **Greenville** and **Pickens.**
    2. Create a new site link object named **Greenville-Pickens** to configure the replication between the sites.
       1. Replication should occur every **45** minutes.
    3. Create a subnet object for the subnet that the DC is on and associate it with the **Greenville** site.
    4. Create a subnet object for the **10.200.152.0/24** subnet and associate it with the **Pickens** site.

## **CIS256-FP-Client**

1. Configure your **TCP/IP** settings as follows:
   1. Adapter Name – **LAN.**
   2. IP address – **10.199.152.101/24.**
   3. Default Gateway – **10.199.152.254.**
   4. DNS – To support joining the **Medical-EMR** Domain.
   5. Name your computer to **MEClient1.**
2. (**10 pts**) Join the **Medical-Emr** domain.

## Submission requirements

1. **Download** the **grading** **script** from the assignment page to the **C:\Scripts** folder.
2. Check your lab by running the following command:

Invoke-Pester -Path C:\Scripts\CIS256-Exam-Final-Practical.test .ps1

**Note**: You will see a security warning when running the script. Enter **R** to run the script.

If you want to see more detail, add **-Output Detailed** to the command. This may assist you with troubleshooting

Invoke-Pester -Path C:\Scripts\CIS256-Exam-Final-Practical.test .ps1 -Output Detailed

1. You should not see any red in the output. Red in the PowerShell way of telling you that an error condition exists. Most of the time, the output will tell you what is wrong. If it is not obvious, contact your teacher and ask for assistance. **Correct** any **errors** you may have and run the script until all the output has no red. You should see the output like the images below.

Graphical user interface, text, chat or text message

Description automatically generated

1. Capture a snippet that shows the PowerShell Command and all its output. If you must use more than one snippet to capture the output, you must have at least **one line of overlap** in the snippets. The text in the snippets **must be legible** when pasted into the Word document. Paste the snippet(s) into a **new** **Word** **document.** Save the file as **FinalPA\_*Firstname*\_*LastName*** (where ***Firstname*** is your first name and ***Lastname*** is your last name).
2. **Upload** the **document** in the submission area of this assignment.