Overview

In this assessment you will be tested on the skills you have learned previously. You can use your notes, labs, and the Internet as resources. This assessment may be timed.

Objectives

Configure common Windows services to support a typical business infrastructure.

* Configure DNS on Windows server
* Plan a name resolution strategy.
* Configure DHCP service on Windows server

Implement an Active Directory infrastructure to support the needs of a typical business environment.

* Install Active Directory

Setup

**Download** and **run** the **Create-PA2-Topology.ps1** script **from** the Canvas assignment. This script will create the virtual machines necessary for this assessment.

Instructions

**Note**: The names of the VMs are used to reference the virtual machine on which the configurations are to occur. They are not the computer names of the systems.

1. (5 pts) Rename the network adapter on **PA2-SVR-01** & **PA2-SVR-02** to **LAN**.
2. (5 pts) Connect the network adapter for **PA2-SVR-02** to the **LAN** virtual switch
3. (10 pts) Configure the TCP/IP settings in the table below. (**Note**: You should have connectivity between these virtual machines but not the Internet.

|  |  |  |  |
| --- | --- | --- | --- |
| VM Name | PA2-SVR-01 | PA2-SVR-02 | PA-CLT-01 |
| Computer Name | SVR-01 | SVR-02 | PC-01 |
| Adapter Name | LAN | LAN | LAN |
| IP Address | 192.168.251.1 | 192.168.251.2 | Configured by DHCP |
| Subnet Mask | 255.255.255.0 | 255.255.255.0 | Configured by DHCP |
| Gateway | 192.168.251.254 | 192.168.251.254 | Configured by DHCP |
| Preferred DNS Server | As required by the scenario | As required by the scenario | Configured by DHCP |

1. (5 pts) Install the roles necessary to complete the steps below.
2. (10 pts) Install Active Directory on **PA2-SVR-01** in a new forest with the domain name **PA2.local** and the DSRM password **Password1**.
3. (10 pts) Configure **PA2-SVR-01** as a **DHCP** server for the internal network with the following settings:
   1. Scope Name: **PA2 Scope**
   2. Include all the available addresses for the network.
   3. Exclude any addresses that are statically assigned.
   4. Configure the router, DNS domain name, and DNS server options.
4. (5 pts) Join **PA2-SVR-02** and **PA2-CLT-01** to the domain
5. (5 pts) Create a reverse lookup zone for the network in the scenario on **PA2-SVR-01**.
6. (5 pts) Create a forward lookup zone named **PA2.com** on **PA2-SVR-01**.
   1. (10 pts) Create **A** records using the **LAN** adapter IPs of **PA2-SVR-01** and **PA2-SVR-02** in the **PA2.com** domain.
   2. (5 pts) Create an **alias** record for **PA2-SVR-01** so that it will be resolved to [**www.pa2.com**](http://www.pa2.com).
   3. (5 pts) Create **PTR** records for **PA2-SVR-01** and **PA2-SVR-02**.
7. (10 pts) Create a secondary lookup zone for **PA2.com** on **PA2-SVR-02**.
8. (10 pts) Create a conditional forwarder for the **ecpivab.edu** domain that forwards queries to the server at **10.254.7.1.**

# 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\Grade-Performance\_Assessment-2.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\Grade-Performance\_Assessment-2.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. You will be learning PowerShell during this term. **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, application, chat or text message

Description automatically generated

Text

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.**

**Extra Credit** – List the PowerShell command to complete a step. (1 point for each)

* You must include the step # for the command.

1. **Upload** the **document** in the submission area of the assignment as the submission for the assignment.