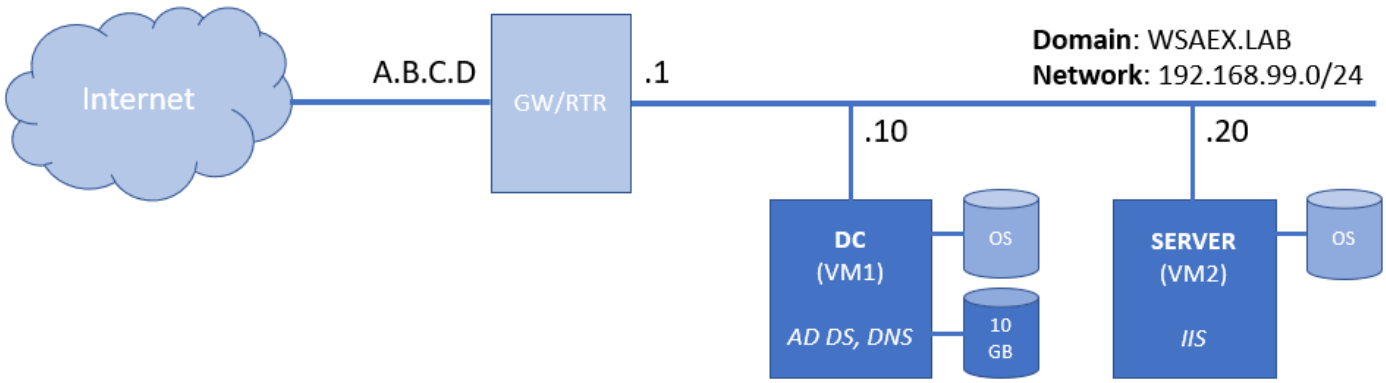
Practice M8: Exam Preparation

1. Sample Exam

Infrastructure

You will have to accomplish a set of tasks in the following infrastructure



All machines are of the same type (in terms of OS and hardware parameters).

Pease note that if your IP address is **A.B.C.D** then the following port-forwarding rules are in place:

A.B.C.D:10001 -> 192.168.99.10:3389	A.B.C.D:10002 -> 192.168.99.20:3389	A.B.C.D:10003 -> 192.168.99.20:80

Be sure to **follow strictly** the **naming conventions** specified in the checklist.

Tasks execution order should not be derived from the order in which they are listed below. Please note that there are tasks that depend on the successful completion of one or more other tasks.

Usually, all steps could be achieved by following different paths and using different tools. In the end, not the means, but the **results** are being **measured**, **except stated otherwise**.

Tasks checklist

Infrastructure (on VM1 and VM2) [14pts]

- (T101 / 2pts) On **VM1** install **Active Directory Domain Services** and **DNS** roles
- (T102 / 2pts) Promote **VM1** as a domain controller for **WSAEX.LAB** domain
- (T103 / 3pts) **Join** the second virtual machine (**VM2**) to the **domain**
- (T104 / 1pts) Create a **CNAME** DNS record named **WEB** for the **second** machine
- (T105 / 2pts) Initialize the **spare** (**second**) hard disk on **VM1** and set the partitioning table to be **GPT**
- (T106 / 2pts) On the second hard disk, create a partition that is **4096 MB**, format it with **NTFS**, set the label to **VOLUME1**, and assign drive letter **P** to it
- (T107 / 2pts) On the second hard disk, create a partition that is **5120 MB**, format it with **FAT32**, set the label to **VOLUME2**, and assign drive letter **Q** to it

Users and Groups (on VM1) [15pts]

- (T201 / 2pts) Create organizational unit **Exam Users** and then create two nested (child) organizational units - **IT** and **Sales**
- (T202 / 1pts) Change the **default container** for ***new users*** to **Exam Users**. All users created during the exam, ***should be under this organizational unit***

- (T203 / 2pts) Create organizational unit **Exam Computers** and then create two nested (child) organizational units - **IT** and **Sales**
- (T204 / 1pts) Change the **default container** for ***new computers*** to **Exam Computers**. All computers created or joined during the exam ***should be children of this organizational unit***
- (T205 / 1pts) Create new user **Ivan Todorov** in **IT** organizational unit with account name **ivan.todorov**
- (T206 / 1pts) Create new user **Milena Petrova** in **Sales** organizational unit with account name **milena.petrova**
- (T207 / 1pts) Create new organizational unit **Exam Groups** which **should** contain **all security groups created during the exam**
- (T208 / 2pts) Create new global security group **GS IT** and add user **Ivan** as a member
- (T209 / 2pts) Create new global security group **GS Sales** and add user **Milena** as a member
- (T210 / 2pts) Create new global security group **GS Servers** and add computer **SERVER (VM2)** as a member

Additional Services (on VM1 and VM2) [13pts]

- (T301 / 2pts) On **VM2** install the **IIS** role
- (T302 / 2pts) On **VM2**, create an **index.html** file for the **Default Web Site** that contains the text **WSA Exam for student: @student** where ***@student*** is your ***SoftUni username***
- (T303 / 2pts) On **VM2** download the service archive from **https://zahariev.pro/files/wsa-service.zip** , **install** it and **start** it (*make sure it is running – a C:\WSA.log file must appear*)
- (T304 / 3pts) On **VM1**, install **File Server** role if needed, so you can create and manage file shares. Then create folder **P:\Shared** and share it as **Exam** with both **Share** and **NTFS** permissions set to **Full** for **Everyone**
- (T305 / 2pts) Create folder **P:\Shared\IT** and set **NTFS** permissions to **allow full** access for **GS IT** and **deny full** access for **GS Sales**
- (T306 / 2pts) Create folder **P:\Shared\Sales** and set **NTFS** permissions to **allow full** access for **GS Sales** and **deny full** access for **GS IT**

GPO and Security (on VM1) [10pts]

- (T401 / 3pts) Create a group policy named **GPO-Remote** that enables the following rules - **Windows Remote Management** and **Windows Management Instrumentation**
- (T402 / 3pts) Create a group policy named **GPO-IIS** that enables port **80/tcp** and make it applicable **only** to **VM2** by using security filtering
- (T403 / 2pts) Create a group policy named **GPO-Drive** that maps **\\DC\Exam** as local drive **X:**
- (T404 / 2pts) Create a group policy named **GPO-Wallpaper** that changes the wallpaper with the one from here **https://zahariev.pro/files/wsa-wallpaper.jpg** (*it must be downloaded and stored on the Exam share first*)

** Link all GPOs on Domain level*

Scripting (on VM1) [8pts]

- (T501 / 2pts) Create a PowerShell script named **C:\Code\Name.ps1** that when executed asks the user for his/her name and then **stores** (**appends**) it in a file **C:\Temp\Name.txt**. The resulting file should contain as many rows as many times the script was executed.
  *For example, when executed, it **should** ask:*
  *What is your name? **Student***
  And then, a new row should appear in the file with the following content:
  Student
- (T502 / 3pts) Create a PowerShell script named **C:\Code\Track-CPU.ps1** that extracts **total % processor time** counter and **stores** (**appends**) the result to the **C:\Temp\Track-CPU.log** file. Data should be formatted like

TIMESTAMP => VALUE where TIMESTAMP and VALUE are the ones coming from the counter. The resulting file should contain as many rows as many times the script was executed.

*For example, if the script is executed on **2023.05.24 10:55:05** and the processor load at the time is **3.5***
Then, a new row should appear in the file with the following content:
2023.05.24 10:55:05 => 3.5 %
Please note, that the sample shows not the formatting of the time and value but how they shod be arranged (date time => value %)

- (T503 / 3pts) Create a new **schedule** named **Track-CPU** for the script from ***T502*** and set it to execute **every 3 minutes**

** Folders do not exist, you must create them first, and then the files.*